2025年 11月 1 0日
此文件在 _____ 收到。城市規劃委員會
只會在 _____ 後才正式確認收到
申請的

This document is ... 2025 -11- 1 0
The Town Planning Board will formally acknowledge the date of receipt of the application only upon receipt of all the required information and documents.

Form No. S16-I
表格第 S16-I 號

APPLICATION FOR PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131)

根據《城市規劃條例》(第131章)第16條遞交的許可申請

Applicable to proposals not involving or not only involving:
適用於建議不涉及或不祇涉及:

(i) Construction of "New Territories Exempted House(s)";
興建「新界豁免管制屋宇」;

(ii) Temporary use/development of land and/or building not exceeding 3 years in rural areas or Regulated Areas; and
位於鄉郊地區或受規管地區土地上及/或建築物內進行為期不超過三年的臨時用途/發展;及

(iii) Renewal of permission for temporary use or development in rural areas or Regulated Areas
位於鄉郊地區或受規管地區的臨時用途或發展的許可續期

Applicant who would like to publish the notice of application in local newspapers to meet one of the Town Planning Board's requirements of taking reasonable steps to obtain consent of or give notification to the current land owner, please refer to the following link regarding publishing the notice in the designated newspapers: https://www.tpb.gov.hk/en/plan_application/apply.html

申請人如欲在本地報章刊登申請通知，以採取城市規劃委員會就取得現行土地擁有人的同意或通知現行土地擁有人所指定的其中一項合理步驟，請瀏覽以下網址有關在指定的報章刊登通知：https://www.tpb.gov.hk/tc/plan_application/apply.html

General Note and Annotation for the Form
填寫表格的一般指引及註解

"Current land owner" means any person whose name is registered in the Land Registry as that of an owner of the land to which the application relates, as at 6 weeks before the application is made
「現行土地擁有人」指在提出申請前六星期，其姓名或名稱已在土地註冊處註冊為該申請所關乎的土地的擁有人的人

& Please attach documentary proof 請夾附證明文件

^ Please insert number where appropriate 請在適當地方註明編號

Please fill "NA" for inapplicable item 請在不適用的項目填寫「不適用」

Please use separate sheets if the space provided is insufficient 如所提供的空間不足，請另頁說明

Please insert a「✔」at the appropriate box 請在適當的方格內上加上「✔」號

For Official Use Only 請勿填寫此欄	Application No. 申請編號	A/LT7/189
	Date Received 收到日期	2025-11-10

1. The completed form and supporting documents (if any) should be sent to the Secretary, Town Planning Board (the Board), 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong.
申請人須把填妥的申請表格及其他支持申請的文件 (倘有)，送交香港北角渣華道 333 號北角政府合署 15 樓城市規劃委員會(下稱「委員會」)秘書收。

2. Please read the "Guidance Notes" carefully before you fill in this form. The document can be downloaded from the Board's website at http://www.tpb.gov.hk/. It can also be obtained from the Secretariat of the Board at 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong (Tel: 2231 4810 or 2231 4835), and the Planning Enquiry Counters of the Planning Department (Hotline: 2231 5000) (17/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong and 14/F, Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin, New Territories).
請先細閱《申請須知》的資料單張，然後填寫此表格。該份文件可從委員會的網頁下載 (網址：http://www.tpb.gov.hk/)，亦可向委員會秘書處 (香港北角渣華道 333 號北角政府合署 15 樓 – 電話：2231 4810 或 2231 4835)及規劃署的規劃資料查詢處(熱線：2231 5000) (香港北角渣華道 333 號北角政府合署 17 樓及新界沙田上禾輋路 1 號沙田政府合署 14 樓)索取。

3. This form can be downloaded from the Board's website, and obtained from the Secretariat of the Board and the Planning Enquiry Counters of the Planning Department. The form should be typed or completed in block letters. The processing of the application may be refused if the required information or the required copies are incomplete.
此表格可從委員會的網頁下載，亦可向委員會秘書處及規劃署的規劃資料查詢處索取。申請人須以打印方式或以正楷填寫表格。如果申請人所提交的資料或文件副本不齊全，委員會可拒絕處理有關申請。

1. Name of Applicant 申請人姓名/名稱

(☐ Mr. 先生 /☐ Mrs. 夫人 /☐ Miss 小姐 /☐ Ms. 女士 /☑ Company 公司 /☐ Organisation 機構)

South China Athletic Association

2. Name of Authorised Agent (if applicable) 獲授權代理人姓名/名稱（如適用）

(☐ Mr. 先生 /☐ Mrs. 夫人 /☐ Miss 小姐 /☐ Ms. 女士 /☑ Company 公司 /☐ Organisation 機構)

KTA Planning Limited

3. Application Site 申請地點

(a) Full address / location / demarcation district and lot number (if applicable) 詳細地址／地點／丈量約份及地段號碼（如適用）	South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung
(b) Site area and/or gross floor area involved 涉及的地盤面積及／或總樓面面積	☑Site area 地盤面積 6,132 sq.m 平方米 ☑About 約 ☑Gross floor area 總樓面面積 31,327.12 sq.m 平方米 ☑About 約
(c) Area of Government land included (if any) 所包括的政府土地面積（倘有）	Nil sq.m 平方米 ☐About 約

(d)	Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	Approved Wong Nai Chung OZP No. S/H7/21
(e)	Land use zone(s) involved 涉及的土地用途地帶	"Other Specified Uses" annotated "Sports and Recreation Club"
(f)	Current use(s) 現時用途	Vacant (If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)

4. "Current Land Owner" of Application Site 申請地點的「現行土地擁有人」

The applicant 申請人 –

☑ is the sole "current land owner"#& (please proceed to Part 6 and attach documentary proof of ownership).
是唯一的「現行土地擁有人」#& (請繼續填寫第 6 部分，並夾附業權證明文件)。

☐ is one of the "current land owners"#& (please attach documentary proof of ownership).
是其中一名「現行土地擁有人」#& (請夾附業權證明文件)。

☐ is not a "current land owner"#.
並不是「現行土地擁有人」#。

☐ The application site is entirely on Government land (please proceed to Part 6).
申請地點完全位於政府土地上（請繼續填寫第 6 部分）。

5. Statement on Owner's Consent/Notification
就土地擁有人的同意/通知土地擁有人的陳述

(a) According to the record(s) of the Land Registry as at ..... (DD/MM/YYYY), this application involves a total of ..... "current land owner(s)"#.
根據土地註冊處截至 ..... 年 ..... 月 ..... 日的記錄，這宗申請共牽涉 ..... 名「現行土地擁有人」#。

(b) The applicant 申請人 –

☐ has obtained consent(s) of ..... "current land owner(s)"#.
已取得 ..... 名「現行土地擁有人」#的同意。

Details of consent of "current land owner(s)"# obtained 取得「現行土地擁有人」#同意的詳情		
No. of 'Current Land Owner(s)' 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where consent(s) has/have been obtained 根據土地註冊處記錄已獲得同意的地段號碼／處所地址	Date of consent obtained (DD/MM/YYYY) 取得同意的日期 (日/月/年)

(Please use separate sheets if the space of any box above is insufficient. 如上列任何方格的空間不足，請另頁說明)

☐ has notified ..... "current land owner(s)"#
已通知 ..... 名「現行土地擁有人」#。

Details of the "current land owner(s)" # notified 已獲通知「現行土地擁有人」#的詳細資料		
No. of 'Current Land Owner(s)' 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where notification(s) has/have been given 根據土地註冊處記錄已發出通知的地段號碼／處所地址	Date of notification given (DD/MM/YYYY) 通知日期(日/月/年)

(Please use separate sheets if the space of any box above is insufficient. 如上列任何方格的空間不足，請另頁說明)

☐ has taken reasonable steps to obtain consent of or give notification to owner(s):
已採取合理步驟以取得土地擁有人的同意或向該人發給通知。詳情如下：

Reasonable Steps to Obtain Consent of Owner(s) 取得土地擁有人的同意所採取的合理步驟

☐ sent request for consent to the "current land owner(s)" on _____ (DD/MM/YYYY)#&
於_____(日/月/年)向每一名「現行土地擁有人」#郵遞要求同意書&

Reasonable Steps to Give Notification to Owner(s) 向土地擁有人發出通知所採取的合理步驟

☐ published notices in local newspapers on _____ (DD/MM/YYYY)&
於_____(日/月/年)在指定報章就申請刊登一次通知&

☐ posted notice in a prominent position on or near application site/premises on _____ (DD/MM/YYYY)&
於_____(日/月/年)在申請地點／申請處所或附近的顯明位置貼出關於該申請的通知&

☐ sent notice to relevant owners' corporation(s)/owners' committee(s)/mutual aid committee(s)/management office(s) or rural committee on _____ (DD/MM/YYYY)&
於_____(日/月/年)把通知寄往相關的業主立案法團/業主委員會/互助委員會或管理處，或有關的鄉事委員會&

Others 其他

☐ others (please specify)
其他（請指明）

_____

_____

_____

_____

Note: May insert more than one「✔」.
Information should be provided on the basis of each and every lot (if applicable) and premises (if any) in respect of the application.
註: 可在多於一個方格內加上「✔」號
申請人須就申請涉及的每一地段（倘適用）及處所（倘有）分別提供資料

6. Type(s) of Application 申請類別

☐	Type (i) 第(i)類	Change of use within existing building or part thereof 更改現有建築物或其部分內的用途
☐	Type (ii) 第(ii)類	Diversion of stream / excavation of land / filling of land / filling of pond as required under Notes of Statutory Plan(s) 根據法定圖則《註釋》內所要求的河道改道／挖土／填土／填塘工程
☐	Type (iii) 第(iii)類	Public utility installation / Utility installation for private project 公用事業設施裝置/私人發展計劃的公用設施裝置
☐	Type (iv) 第(iv)類	Minor relaxation of stated development restriction(s) as provided under Notes of Statutory Plan(s) 略為放寬於法定圖則《註釋》內列明的發展限制
☑	Type (v) 第(v)類	Use / development other than (i) to (iii) above 上述的(i)至(iii)項以外的用途／發展

Note 1: May insert more than one「✓」.
註 1： 可在多於一個方格內加上「✓」號
Note 2: For Development involving columbarium use, please complete the table in the Appendix.
註 2： 如發展涉及靈灰安置所用途，請填妥於附件的表格。

(i) For Type (i) application 供第(i)類申請

(a) Total floor area involved 涉及的總樓面面積	sq.m 平方米		
(b) Proposed use(s)/development 擬議用途/發展	(If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)		
(c) Number of storeys involved 涉及層數		Number of units involved 涉及單位數目	
(d) Proposed floor area 擬議樓面面積	Domestic part 住用部分 ..... sq.m 平方米 ☐About 約		
	Non-domestic part 非住用部分..... sq.m 平方米 ☐About 約		
	Total 總計 ..... sq.m 平方米 ☐About 約		

(e) Proposed uses of different floors (if applicable) 不同樓層的擬議用途(如適用) (Please use separate sheets if the space provided is insufficient) (如所提供的空間不足，請另頁說明)	Floor(s) 樓層	Current use(s) 現時用途	Proposed use(s) 擬議用途

(ii) For Type (ii) application 供第(ii)類申請

(a) Operation involved 涉及工程	☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☐ Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☐ Excavation of land 挖土 Area of excavation 挖土面積 ..... sq.m 平方米 ☐About 約 Depth of excavation 挖土深度 ..... m 米 ☐About 約 (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用圖則顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍))
(b) Intended use/development 有意進行的用途／發展	

(iii) For Type (iii) application 供第(iii)類申請

(a) Nature and scale
性質及規模

☐ Public utility installation 公用事業設施裝置

☐ Utility installation for private project 私人發展計劃的公用設施裝置

Please specify the type and number of utility to be provided as well as the dimensions of each building/structure, where appropriate
請註明有關裝置的性質及數量，包括每座建築物/構築物(倘有)的長度、高度和闊度

Name/type of installation 裝置名稱／種類	Number of provision 數量	Dimension of each installation /building/structure (m) (LxWxH) 每個裝置／建築物／構築物的尺寸 (米) (長 x 闊 x 高)

(Please illustrate on plan the layout of the installation 請用圖則顯示裝置的布局)

(iv) For Type (iv) application 供第(iv)類申請

(a) Please specify the proposed minor relaxation of stated development restriction(s) and **also fill in the proposed use/development and development particulars in part (v) below** –
請列明擬議略為放寬的發展限制**並填妥於第(v)部分的擬議用途/發展及發展細節** –

☐ Plot ratio restriction 地積比率限制	From 由 ..... to 至 .....
☐ Gross floor area restriction 總樓面面積限制	From 由 .....sq. m 平方米 to 至 .....sq. m 平方米
☐ Site coverage restriction 上蓋面積限制	From 由 .....% to 至 ..... %
☐ Building height restriction 建築物高度限制	From 由 .....m 米 to 至 ..... m 米 From 由 ..... mPD 米 (主水平基準上) to 至 .....mPD 米 (主水平基準上) From 由 ..... storeys 層 to 至 ..... storeys 層
☐ Non-building area restriction 非建築用地限制	From 由 .....m to 至 ..... m
☐ Others (please specify) 其他（請註明）	.....

(v) For Type (v) application 供第(v)類申請

(a) Proposed use(s)/development 擬議用途/發展	Proposed SCAA Sport Link (Place of Recreation, Sports or Culture) (Please illustrate the details of the proposal on a layout plan 請用平面圖說明建議詳情)

(b) Development Schedule 發展細節表

Proposed gross floor area (GFA) 擬議總樓面面積 ....31,327.12.... sq.m 平方米 ☑About 約

Proposed plot ratio 擬議地積比率 About 5.11 (based on notional application site boundary); About 2.96 (based on the overall SCAA Complex)

Proposed site coverage 擬議上蓋面積 About 69% (based on notional application site boundary); about 41.7% (based on the overall SCAA Complex)

Proposed no. of blocks 擬議座數 .....1.....

Proposed no. of storeys of each block 每座建築物的擬議層數 .....4..... storeys 層

☐ include 包括.....storeys of basements 層地庫

☐ exclude 不包括.....storeys of basements 層地庫

Proposed building height of each block 每座建築物的擬議高度 .....45.4..... mPD 米(主水平基準上) ☑About 約

38.205 (from a mean site formation level of +7.195) m 米 ☑About 約

☐ Domestic part 住用部分

GFA 總樓面面積 ..... sq. m 平方米 ☐About 約

number of Units 單位數目 .....

average unit size 單位平均面積 .....sq. m 平方米 ☐About 約

estimated number of residents 估計住客數目 .....

☑ Non-domestic part 非住用部分

GFA 總樓面面積

☐ eating place 食肆 ..... sq. m 平方米 ☐About 約

☐ hotel 酒店 ..... sq. m 平方米 ☐About 約

(please specify the number of rooms 請註明房間數目) .....

☐ office 辦公室 ..... sq. m 平方米 ☐About 約

☐ shop and services 商店及服務行業 ..... sq. m 平方米 ☐About 約

☐ Government, institution or community facilities 政府、機構或社區設施

(please specify the use(s) and concerned land area(s)/GFA(s) 請註明用途及有關的地面面積／總樓面面積)

.....

.....

.....

☑ other(s) 其他

(please specify the use(s) and concerned land area(s)/GFA(s) 請註明用途及有關的地面面積／總樓面面積)

Sports and Recreation: About 31,327.12 sq.m

.....

.....

☐ Open space 休憩用地

(please specify land area(s) 請註明地面面積)

☐ private open space 私人休憩用地 ..... sq. m 平方米 ☐ Not less than 不少於

☐ public open space 公眾休憩用地 ..... sq. m 平方米 ☐ Not less than 不少於

(c) Use(s) of different floors (if applicable) 各樓層的用途 (如適用)

[Block number] [座數]	[Floor(s)] [層數]	[Proposed use(s)] [擬議用途]
.....	....2-3/F.....	Ball Courts / Ancillary Uses (e.g. WC & Changing Rooms) / Plant Room
.....	.....	
.....	1/F	Multi-purposes Rooms / Ancillary Office / Ancillary Uses (e.g. WC & Changing Rooms) / Ball Courts
.....	.....	
.....	G/F	Car Park / E&Mlace

(d) Proposed use(s) of uncovered area (if any) 露天地方（倘有）的擬議用途

Landscaped Area, Maintenance Roof

.....

.....

.....

.....

7. Anticipated Completion Time of the Development Proposal 擬議發展計劃的預計完成時間

Anticipated completion time (in month and year) of the development proposal (by phase (if any)) (e.g. June 2023)
擬議發展計劃預期完成的年份及月份 (分期 (倘有)) (例：2023 年 6 月)
(Separate anticipated completion times (in month and year) should be provided for the proposed public open space and Government, institution or community facilities (if any))
(申請人須就擬議的公眾休憩用地及政府、機構或社區設施 (倘有) 提供個別擬議完成的年份及月份)

12/2030

8. Vehicular Access Arrangement of the Development Proposal 擬議發展計劃的行車通道安排

Any vehicular access to the site/subject building? 是否有車路通往地盤／有關建築物？	Yes 是	☑ There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用)) Caroline Hill Road ☐ There is a proposed access. (please illustrate on plan and specify the width) 有一條擬議車路。（請在圖則顯示，並註明車路的闊度）
	No 否	☐
Any provision of parking space for the proposed use(s)? 是否有為擬議用途提供停車位？	Yes 是	☑ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) Private Car Parking Spaces 私家車車位: 63 Motorcycle Parking Spaces 電單車車位: 9 Light Goods Vehicle Parking Spaces 輕型貨車泊車位: Medium Goods Vehicle Parking Spaces 中型貨車泊車位: Heavy Goods Vehicle Parking Spaces 重型貨車泊車位: Others (Please Specify) 其他 (請列明): _____: _____ _____: _____
	No 否	☐
Any provision of loading/unloading space for the proposed use(s)? 是否有為擬議用途提供上落客貨車位？	Yes 是	☑ (Please specify type(s) and number(s) and illustrate on plan) 請註明種類及數目並於圖則上顯示) Taxi Spaces 的士車位: Coach Spaces 旅遊巴車位: Light Goods Vehicle Spaces 輕型貨車車位: Medium Goods Vehicle Spaces 中型貨車車位: Heavy Goods Vehicle Spaces 重型貨車車位: 1 Others (Please Specify) 其他 (請列明): General pick-up/drop off layby: 1 _____: _____
	No 否	☐

9. Impacts of Development Proposal 擬議發展計劃的影響

If necessary, please use separate sheets to indicate the proposed measures to minimise possible adverse impacts or give justifications/reasons for not providing such measures.
如需要的話，請另頁註明可盡量減少可能出現不良影響的措施，否則請提供理據/理由。

Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動?	Yes 是	☐ Please provide details 請提供詳情 ....
	No 否	☑
Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程? (Note: where Type (ii) application is the subject of application, please skip this section. 註：如申請涉及第(ii)類申請，請跳至下一條問題。)	Yes 是	☐ (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用地盤平面圖顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍) ☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約 ☐ Filling of land 填土 Area of filling 填土面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填土厚度 ..... m 米 ☐About 約 ☐ Excavation of land 挖土 Area of excavation 挖土面積..... sq.m 平方米 ☐About 約 Depth of excavation 挖土深度 .....m 米 ☐About 約
	No 否	☑

Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響？			
	On environment 對環境	Yes 會 ☐	No 不會 ☑
	On traffic 對交通	Yes 會 ☐	No 不會 ☑
	On water supply 對供水	Yes 會 ☐	No 不會 ☑
	On drainage 對排水	Yes 會 ☐	No 不會 ☑
	On slopes 對斜坡	Yes 會 ☐	No 不會 ☑
	Affected by slopes 受斜坡影響	Yes 會 ☐	No 不會 ☑
	Landscape Impact 構成景觀影響	Yes 會 ☐	No 不會 ☑
	Tree Felling 砍伐樹木	Yes 會 ☐	No 不會 ☑
	Visual Impact 構成視覺影響	Yes 會 ☐	No 不會 ☑
	Others (Please Specify) 其他 (請列明)	Yes 會 ☐	No 不會 ☐
	_____		
	_____		

Please state measure(s) to minimise the impact(s). For tree felling, please state the number, diameter at breast height and species of the affected trees (if possible)
請註明盡量減少影響的措施。如涉及砍伐樹木，請說明受影響樹木的數目、及胸高度的樹幹直徑及品種(倘可)

Please refer to the Supporting Planning Statement.
.....
.....
.....
.....

11. Declaration 聲明

I hereby declare that the particulars given in this application are correct and true to the best of my knowledge and belief.
本人謹此聲明，本人就這宗申請提交的資料，據本人所知及所信，均屬真實無誤。

I hereby grant a permission to the Board to copy all the materials submitted in this application and/or to upload such materials to the Board's website for browsing and downloading by the public free-of-charge at the Board's discretion. 本人現准許委員會酌情將本人就此申請所提交的所有資料複製及/或上載至委員會網站，供公眾免費瀏覽或下載。

Signature 簽署 ..... ☐ Applicant 申請人 / ☑ Authorised Agent 獲授權代理人

PAULINE LAM — Name in Block Letters 姓名（請以正楷填寫）

Deputy Managing Director — Position (if applicable) 職位 （如適用）

Professional Qualification(s) 專業資格
☑ Member 會員 / ☐ Fellow of 資深會員
☑ HKIP 香港規劃師學會 / ☐ HKIA 香港建築師學會 /
☐ HKIS 香港測量師學會 / ☐ HKIE 香港工程師學會 /
☐ HKILA 香港園境師學會/ ☐ HKIUD 香港城市設計學會
☐ RPP 註冊專業規劃師
Others 其他 .....

on behalf of 代表 KTA Planning Limited

☑ Company 公司 / ☐ Organisation Name and Chop (if applicable) 機構名稱及蓋章（如適用）

Date 日期 17/10/2025 (DD/MM/YYYY 日/月/年)

Remark 備註

The materials submitted in this application and the Board's decision on the application would be disclosed to the public. Such materials would also be uploaded to the Board's website for browsing and free downloading by the public where the Board considers appropriate.
委員會會向公眾披露申請人所遞交的申請資料和委員會對申請所作的決定。在委員會認為合適的情況下，有關申請資料亦會上載至委員會網頁供公眾免費瀏覽及下載。

Warning 警告

Any person who knowingly or wilfully makes any statement or furnish any information in connection with this application, which is false in any material particular, shall be liable to an offence under the Crimes Ordinance.
任何人在明知或故意的情況下，就這宗申請提出在任何要項上是虛假的陳述或資料，即屬違反《刑事罪行條例》。

Statement on Personal Data 個人資料的聲明

1. The personal data submitted to the Board in this application will be used by the Secretary of the Board and Government departments for the following purposes:
委員會就這宗申請所收到的個人資料會交給委員會秘書及政府部門，以根據《城市規劃條例》及相關的城市規劃委員會規劃指引的規定作以下用途：
   (a) the processing of this application which includes making available the name of the applicant for public inspection when making available this application for public inspection; and
   處理這宗申請，包括公布這宗申請供公眾查閱，同時公布申請人的姓名供公眾查閱；以及
   (b) facilitating communication between the applicant and the Secretary of the Board/Government departments.
   方便申請人與委員會秘書及政府部門之間進行聯絡。

2. The personal data provided by the applicant in this application may also be disclosed to other persons for the purposes mentioned in paragraph 1 above.
申請人就這宗申請提供的個人資料，或亦會向其他人士披露，以作上述第 1 段提及的用途。

3. An applicant has a right of access and correction with respect to his/her personal data as provided under the Personal Data (Privacy) Ordinance (Cap. 486). Request for personal data access and correction should be addressed to the Secretary of the Board at 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong.
根據《個人資料(私隱)條例》(第 486 章)的規定，申請人有權查閱及更正其個人資料。如欲查閱及更正個人資料，應向委員會秘書提出有關要求，其地址為香港北角渣華道 333 號北角政府合署 15 樓。

10. Justifications 理由

The applicant is invited to provide justifications in support of the application. Use separate sheets if necessary.
現請申請人提供申請理由及支持其申請的資料。如有需要，請另頁說明。

Please refer to the Supporting Planning Statement.

For Developments involving Columbarium Use, please also complete the following:
如發展涉及靈灰安置所用途，請另外填妥以下資料:

Ash interment capacity 骨灰安放容量@

Maximum number of sets of ashes that may be interred in the niches
在龕位內最多可安放骨灰的數量 _____

Maximum number of sets of ashes that may be interred other than in niches
在非龕位的範圍內最多可安放骨灰的數量 _____

Total number of niches 龕位總數 _____

Total number of single niches
單人龕位總數 _____

Number of single niches (sold and occupied)
單人龕位數目 (已售並佔用) _____

Number of single niches (sold but unoccupied)
單人龕位數目 (已售但未佔用) _____

Number of single niches (residual for sale)
單人龕位數目 (待售) _____

Total number of double niches
雙人龕位總數 _____

Number of double niches (sold and fully occupied)
雙人龕位數目 (已售並全部佔用) _____

Number of double niches (sold and partially occupied)
雙人龕位數目 (已售並部分佔用) _____

Number of double niches (sold but unoccupied)
雙人龕位數目 (已售但未佔用) _____

Number of double niches (residual for sale)
雙人龕位數目 (待售) _____

Total no. of niches other than single or double niches (please specify type)
除單人及雙人龕位外的其他龕位總數 (請列明類別)

_____

Number. of niches (sold and fully occupied)
龕位數目 (已售並全部佔用) _____

Number of niches (sold and partially occupied)
龕位數目 (已售並部分佔用) _____

Number of niches (sold but unoccupied)
龕位數目 (已售但未佔用) _____

Number of niches (residual for sale)
龕位數目 (待售) _____

Proposed operating hours 擬議營運時間 _____

_____

@ Ash interment capacity in relation to a columbarium means --
就靈灰安置所而言，骨灰安放容量指：
- the maximum number of containers of ashes that may be interred in each niche in the columbarium;
每個龕位內可安放的骨灰容器的最高數目；
- the maximum number of sets of ashes that may be interred other than in niches in any area in the columbarium; and
在該靈灰安置所並非龕位的範圍內，總共最多可安放多少份骨灰；以及
- the total number of sets of ashes that may be interred in the columbarium.
在該骨灰安置所內，總共最多可安放多少份骨灰。

Gist of Application 申請摘要

(Please provide details in both English and Chinese as far as possible. This part will be circulated to relevant consultees, uploaded to the Town Planning Board's Website for browsing and free downloading by the public and available at the Planning Enquiry Counters of the Planning Department for general information.)
(請盡量以英文及中文填寫。此部分將會發送予相關諮詢人士、上載至城市規劃委員會網頁供公眾免費瀏覽及下載及於規劃署規劃資料查詢處供一般參閱。)

Application No. 申請編號	(For Official Use Only) (請勿填寫此欄)
Location/address 位置／地址	South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung
Site area 地盤面積	6,132 sq. m 平方米 ☑ About 約 (includes Government land of 包括政府土地 Nil sq. m 平方米 ☐ About 約)
Plan 圖則	Approved Wong Nai Chung OZP No. S/H7/21
Zoning 地帶	"Other Specified Uses" annotated "Sports and Recreation Club"
Applied use/ development 申請用途/發展	Proposed SCAA Sport Link (Place of Recreation, Sports or Culture)

(i) Gross floor area and/or plot ratio 總樓面面積及／或地積比率		sq.m 平方米	Plot Ratio 地積比率
	Domestic 住用	☐ About 約 ☐ Not more than 不多於	☐About 約 ☐Not more than 不多於
	Non-domestic 非住用	31,327.12 ☑ About 約 ☐ Not more than 不多於	About 5.11 (based on notional application site boundary); About 2.96 (based on the overall SCAA Complex)
(ii) No. of blocks 幢數	Domestic 住用		
	Non-domestic 非住用	1	
	Composite 綜合用途		

(iii)	Building height/No. of storeys 建築物高度／層數	Domestic 住用	m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Non-domestic 非住用	About 38.205 (from a mean site formation level of +7.195) m 米 ☐ (Not more than 不多於)
			About 45.4 mPD 米(主水平基準上) ☐ (Not more than 不多於)
			4 Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
		Composite 綜合用途	m 米 ☐ (Not more than 不多於)
			mPD 米(主水平基準上) ☐ (Not more than 不多於)
			Storeys(s) 層 ☐ (Not more than 不多於) *(☐Include 包括/☐ Exclude 不包括* ☐ *Carport 停車間* ☐ *Basement 地庫* ☐ *Refuge Floor 防火層* ☐ *Podium 平台)*
(iv)	Site coverage 上蓋面積	About 69% (based on notional application site boundary); about 41.7% (based on the overall SCAA Complex) ☑ About 約	
(v)	No. of units 單位數目		
(vi)	Open space 休憩用地	Private 私人	sq.m 平方米 ☐ Not less than 不少於
		Public 公眾	sq.m 平方米 ☐ Not less than 不少於

(vii) No. of parking spaces and loading / unloading spaces 停車位及上落客貨車位數目	Total no. of vehicle parking spaces 停車位總數	72
	Private Car Parking Spaces 私家車車位	63
	Motorcycle Parking Spaces 電單車車位	9
	Light Goods Vehicle Parking Spaces 輕型貨車泊車位	
	Medium Goods Vehicle Parking Spaces 中型貨車泊車位	
	Heavy Goods Vehicle Parking Spaces 重型貨車泊車位	
	Others (Please Specify) 其他 (請列明)	
	Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數	2
	Taxi Spaces 的士車位	
	Coach Spaces 旅遊巴車位	
	Light Goods Vehicle Spaces 輕型貨車車位	
	Medium Goods Vehicle Spaces 中型貨車位	
	Heavy Goods Vehicle Spaces 重型貨車車位	1
	Others (Please Specify) 其他 (請列明)	
	General pick-up/drop off layby	1

Submitted Plans, Drawings and Documents 提交的圖則、繪圖及文件

	Chinese 中文	English 英文
Plans and Drawings 圖則及繪圖		
Master layout plan(s)/Layout plan(s) 總綱發展藍圖／布局設計圖	☐	☑
Block plan(s) 樓宇位置圖	☐	☐
Floor plan(s) 樓宇平面圖	☐	☑
Sectional plan(s) 截視圖	☐	☑
Elevation(s) 立視圖	☐	☐
Photomontage(s) showing the proposed development 顯示擬議發展的合成照片	☐	☑
Master landscape plan(s)/Landscape plan(s) 園境設計總圖／園境設計圖	☐	☑
Others (please specify) 其他（請註明）	☐	☐
Reports 報告書		
Planning Statement/Justifications 規劃綱領/理據	☐	☑
Environmental assessment (noise, air and/or water pollutions) 環境評估（噪音、空氣及／或水的污染）	☐	☑
Traffic impact assessment (on vehicles) 就車輛的交通影響評估	☐	☑
Traffic impact assessment (on pedestrians) 就行人的交通影響評估	☐	☑
Visual impact assessment 視覺影響評估	☐	☑
Landscape impact assessment 景觀影響評估	☐	☑
Tree Survey 樹木調查	☐	☑
Geotechnical impact assessment 土力影響評估	☐	☑
Drainage impact assessment 排水影響評估	☐	☑
Sewerage impact assessment 排污影響評估	☐	☑
Risk Assessment 風險評估	☐	☐
Others (please specify) 其他（請註明）	☐	☑
Air Ventilation Assessment - Expert Evaluation		

Note: May insert more than one「✔」. 註：可在多於一個方格內加上「✔」號

Note: The information in the Gist of Application above is provided by the applicant for easy reference of the general public. Under no circumstances will the Town Planning Board accept any liabilities for the use of the information nor any inaccuracies or discrepancies of the information provided. In case of doubt, reference should always be made to the submission of the applicant.

註： 上述申請摘要的資料是由申請人提供以方便市民大眾參考。對於所載資料在使用上的問題及文義上的歧異，城市規劃委員會概不負責。若有任何疑問，應查閱申請人提交的文件。

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S16 PLANNING APPLICATION
APPROVED WONG NAI CHUNG OUTLINE ZONING PLAN NO. S/H7/21

Proposed SCAA Sports Link
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

SUPPORTING PLANNING STATEMENT

October 2025

Applicant:
South China Athletic Association

Consultancy Team:
Design 2 (HK) Limited
KTA Planning Limited
ADI Limited
Allied Environmental Consultants Limited
LLA Consultancy Limited
Fugro (Hong Kong) Limited

PLANNING LIMITED
規劃顧問有限公司

Executive Summary

This Planning Application is prepared and submitted on behalf of South China Athletic Association ("SCAA"/ the "Applicant") to seek approval from the Town Planning Board ("TPB") for the Proposed Place of Recreation, Sports or Culture ("SCAA Sports Link"/ the "Proposed Development") at 88 Caroline Hill Road in Wong Nai Chung (the "Site"). The Site falls within an area zoned "Other Specified Uses" annotated "Sports and Recreation Club" ("OU(Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21 ("Approved OZP"). The proposed uses and facilities, including multi-function rooms (tentatively referring to activities rooms and multi-purposes rooms), tennis ball courts, 5-a-side soccer ball courts and other ancillary facilities, can be categorised as 'Place of Recreation, Sports or Culture' use which is always permitted in the "OU(Sports and Recreation Club)" zone.

As stated in the Remarks of the subject "OU(Sports and Recreation Club)" zone, "*for land where no maximum building height is stipulated on the Plan, any new development, or redevelopment of an existing building (except in-situ redevelopment of an existing building up to its existing building height) requires permission from the Town Planning Board under S.16 of the Town Planning Ordinance*". Thus, a planning permission from the TPB is required.

The Site, with an area of about 6,132m^2, is situated at the northeastern section of the SCAA complex, abutting the Caroline Hill Road. SCAA aims to establish a dedicated quality facility for a variety of sports events. With that in mind, the Proposed Development aims to make use of the idled land parcel to create a new comprehensive sports & recreation centre (to be named 'SCAA Sports Link') within the existing SCAA complex in Causeway Bay. The Proposed Development would accommodate a variety of spaces and facilities within the proposed 4-storey building (+45.4mPD at main roof level), for example, multi-function rooms, tennis ball courts, 5-a-side soccer ball courts and other ancillary facilities, to support a range of recreational and sports activities. The Proposed Development would yield a total Gross Floor Area (GFA) of about 31,327.12m^2.

The proposed SCAA Sports Link is fully justified for the following main reasons:

- The proposed SCAA Sports Link is In Line with the policy directives for promoting sports development;
- The proposed development adheres to the planning intention of "OU(Sports and Recreation Club)" Zone on the Approved OZP;
- The proposed recreational use and proposed development intensity are compatible with the surrounding area;
- The Site is suitable for the development of SCAA Sports Link;
- The proposal achieves a more efficient use of land;
- The proposal enhances the existing landscape condition; and
- The proposed development scheme would not cause unacceptable/adverse impacts

on visual, traffic, noise, air quality, air ventilation, drainage and sewerage.

With the justifications and merits presented above, we sincerely request the TPB to give favourable consideration to this planning application.

行政摘要

（內文如有差異，應以英文版本為準）

申請人南華體育會擬根據《城市規劃條例》第 16 條向城市規劃委員會（「城規會」）申請於黃泥涌加路連山道 88 號（下稱「申請地點」）擬議作康體文娛場所（「擬議發展」）。申請地點位於黃泥涌分區計劃大綱核准圖編號 S/H7/21 中的「其他指定用途」註明「體育及康樂會所」（「其他指定用途（體育及康樂會所）」）地帶內。擬議設施包括多功能室（可為活動室和多用途室）、網球場、五人足球場及其他配套設施，均屬「其他指定用途（體育及康樂會所）」地帶中經常准許的「康體文娛場所」用途。

根據「其他指定用途（體育及康樂會所）」地帶的註釋 --「在圖則沒有訂定最高建築物高度的土地上，任何新發展或現有建築物的重建（原地重建現有建築物而高度不超過現有高度除外），須根據《城市規劃條例》第 16 條向城市規劃委員會提出申請。」因此，擬議發展需從城規會取得規劃許可。

申請地點面積約 6,132 平方米，座落於加路連山道南華體育會內的東北面。申請人南華體育會的目標是建立一個專門用於舉辦各種體育賽事的優質設施。為此，擬議發展旨在利用閒置已久的地塊建造一所新的綜合體育及康樂中心（名為「SCAA Sports Link」）。擬議發展包含在一幢四層高（建築物高度為主水平基準以上 45.4 米）的建築物內提供多功能室、網球場、五人足球場及其他配套設施。總樓面面積約為 31,327.12 平方米。

此外，基於以下各點，擬議發展應被城規會採納：

- 擬議發展符合政策指引，有助促進體育發展；
- 擬議發展遵從核准分區計劃大綱圖中「其他指定用途（體育及康樂會所）」地帶的規劃意向；
- 擬議的康樂用途及發展參數與周邊的土地用途和環境相容；
- 申請地點適合作擬議發展；
- 擬議發展能更好地利用土地資源；
- 擬議發展能改善當區景觀；及
- 申請人已進行各種技術性的評估，而評估結果顯示是次發展計劃將不會對視覺、交通、環境、空氣流通、渠務及排污造成負面影響。

根據上述各方面的分析，我們懇請城市規劃委員會在規劃及技術方面，支持本規劃申請。

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S16 Planning Application
Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture") at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

Supporting Planning Statement

1. INTRODUCTION

1.1. Purpose

1.1.1. This Planning Application is prepared and submitted on behalf of South China Athletic Association ("SCAA"/ the "Applicant") to seek approval from the Town Planning Board ("TPB") for the Proposed Place of Recreation, Sports or Culture ("SCAA Sports Link"/ the "Proposed Development") at 88 Caroline Hill Road in Wong Nai Chung (the "Site"). The Site falls within an area zoned "Other Specified Uses" annotated "Sports and Recreation Club" ("OU(Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21 ("Approved OZP"). Remarks (3) of the "OU(Sports and Recreation Club)" states the following,

"*For land where no maximum building height is stipulated on the Plan, any new development, or redevelopment of an existing building (except in-situ redevelopment of an existing building up to its existing building height) requires permission from the Town Planning Board under section 16 of the Town Planning Ordinance.*"

This Supporting Planning Statement is to provide the TPB with the necessary information to facilitate consideration of this Application.

1.1.2. SCAA aims to establish a dedicated quality facility for a variety of sports events. With that in mind, the Proposed Development aims to make use of the idled land parcel to create a new comprehensive sports & recreation centre (to be named 'SCAA Sports Link') within the existing SCAA complex in Causeway Bay. The Proposed Development would accommodate a variety of spaces and facilities, for example, multi-function rooms (tentatively referring to activities rooms and

multi-purposes rooms), tennis ball courts, 5-a-side soccer ball courts and other ancillary facilities, to support a range of recreational and sports activities.

1.2. Report Structure

1.2.1. Following this Introductory Section, the background of this application will be briefly set out in Section 2, followed by some site and planning context in Section 3. Details of the Proposed Development Scheme – SCAA Sports Link will be included in Section 4. The planning merits and justifications for this Planning Application will be found in Section 5 and Section 6 will conclude and summarise this Supporting Planning Statement.

2. BACKGROUND

2.1. The Applicant

2.1.1. The South China Athletic Association ("SCAA") has been serving local communities for about 115 years and has been operating at the current since 1920s. It is a non-profit organization which has been promoting sports and nurturing local talents with provision of quality infrastructure for sports development at community level for its approximately 78,000 members. SCAA also organizes local and international sports tournaments throughout the years. At the same time, SCAA also organises sports teams competiting in local and overseas tournaments and nurtures numerous athletes to represent Hong Kong to the international sports arena.

2.1.2. SCAA provides a variety of sports facilities at its main site at Caroline Hill Road, such as bowling centre, golf driving range, artificial turf pitch, swimming pool, sports hall and sports activity rooms.

2.2. Existing Facilities of the SCAA Complex

2.2.1. SCAA Complex currently provides a wide range of facilities, e.g. Bowling Centre, Gymnasium Block (South Block), Artificial Rugby Football Pitch, Golf Centre, Swimming Pool and a Sports Complex (**Figures 2.1** & **2.2** refer). However, there are still notable gaps in its facility provision. Firstly, some of the popular sports facilities are insufficient or lacking, such as tennis courts and indoor sports options like turf pitches, limiting the choices available to members. Secondly, there is a need for more flexible indoor spaces, such as activities rooms and multi-purposes rooms. To address these limitations, it is vital to expand and diversify the facilities at the complex, ensuring a broader range of options for all users.





Figure 2.2 Floor Directory of the Sports Complex (High Block)

Condition of Facilities

2.2.2. With a long development history, the existing facilities within the SCAA Complex have declined in quality over time. Despite regular maintenance, the outdated equipment may affect the user experience, potentially failing to meet users' needs. The Applicant is facing challenges in meeting the growing expectations for high-quality facilities along with the rising in number of members.

2.3. The Application Site

2.3.1. The spectator stand occupying the Site was demolished and planned for redevelopment in around 1999. As part of this effort, a temporary bored pile wall, a temporary golf fence erected on top of the bored pile wall and a raft footing foundation were constructed in 2002. However, subsequent progress on the redevelopment has been halted since these initial undertakings, resulting in the Site remaining vacant for over 20 years. Nonetheless, regular maintenance and monitoring activities have been conducted to ensure the ongoing functionality and stability of the completed structures.

2.3.2. In 2022, the Site was subject to a S16 planning application (TPB Ref.: A/H7/182) for a proposed E-Sports Complex with ancillary “Eating Place” and “Shop and Services”. However, the Applicant later withdrew the application primarily due to the proposed scale and comments received concerning the anticipated adverse traffic impacts caused by the proposed E-Sports Complex. The Applicant has taken the past application into consideration and devised the proposed schematic designs to reflect and address public concerns.

3. SITE AND PLANNING CONTEXT

3.1. Site Location and Context

3.1.1. The Site, with an area of about 6,132m^2, is situated at the northeastern section of the SCAA complex, abutting the Caroline Hill Road (**Figure 3.1** refers).

3.1.2. The Site is currently vacant with a temporary bored pile wall, temporary golf fence (built on top of the bored pile wall), the raft footing foundation, and with part of the existing slope covered with weeds and grasses in the south (**Figure 3.2** refers).

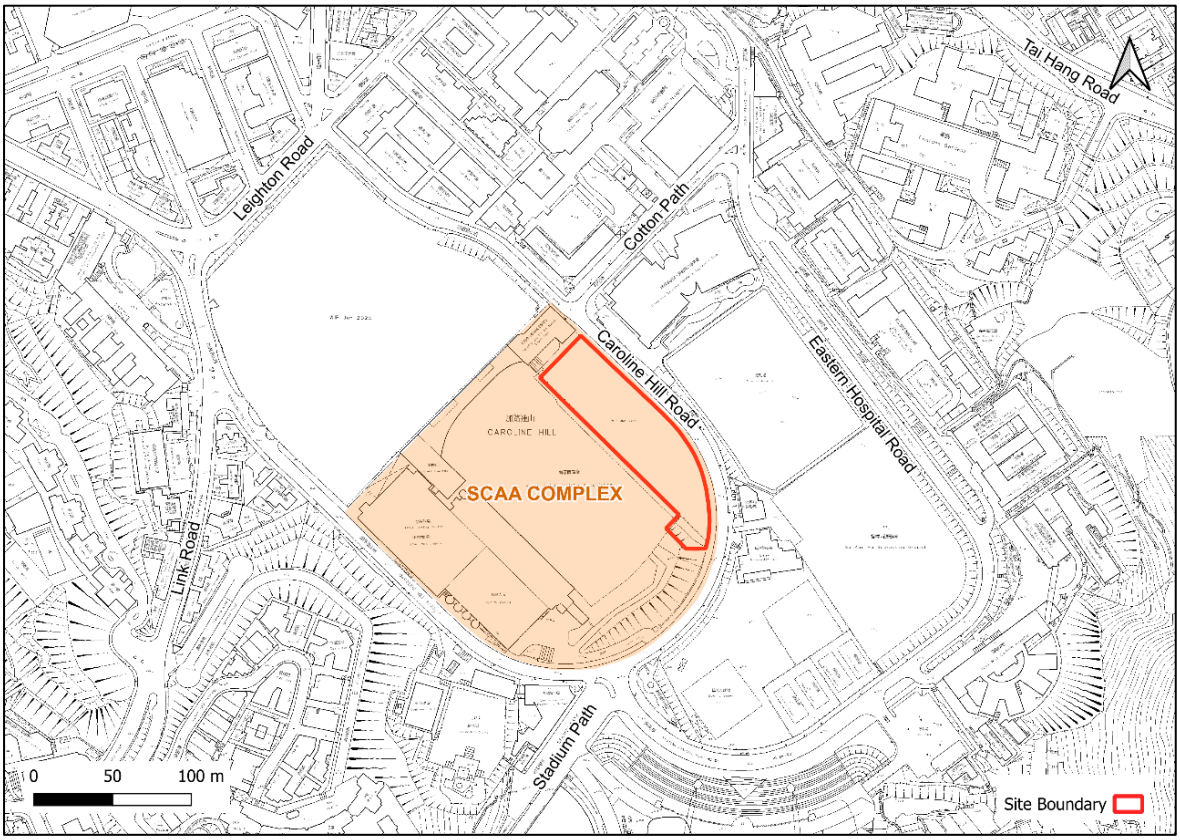


Figure 3.1 Site Location Plan



Figure 3.2 Site Photos

3.2. Land Status

3.2.1. The Site forms part of the SCAA complex registered as Inland Lot ("IL") 9041 (**Figure 3.3** refers), which has been leased to SCAA for fifteen years starting in 2011. The entire lot covers an area of about 32,478.89m^2, while the Site occupies approximately 6,132m^2.

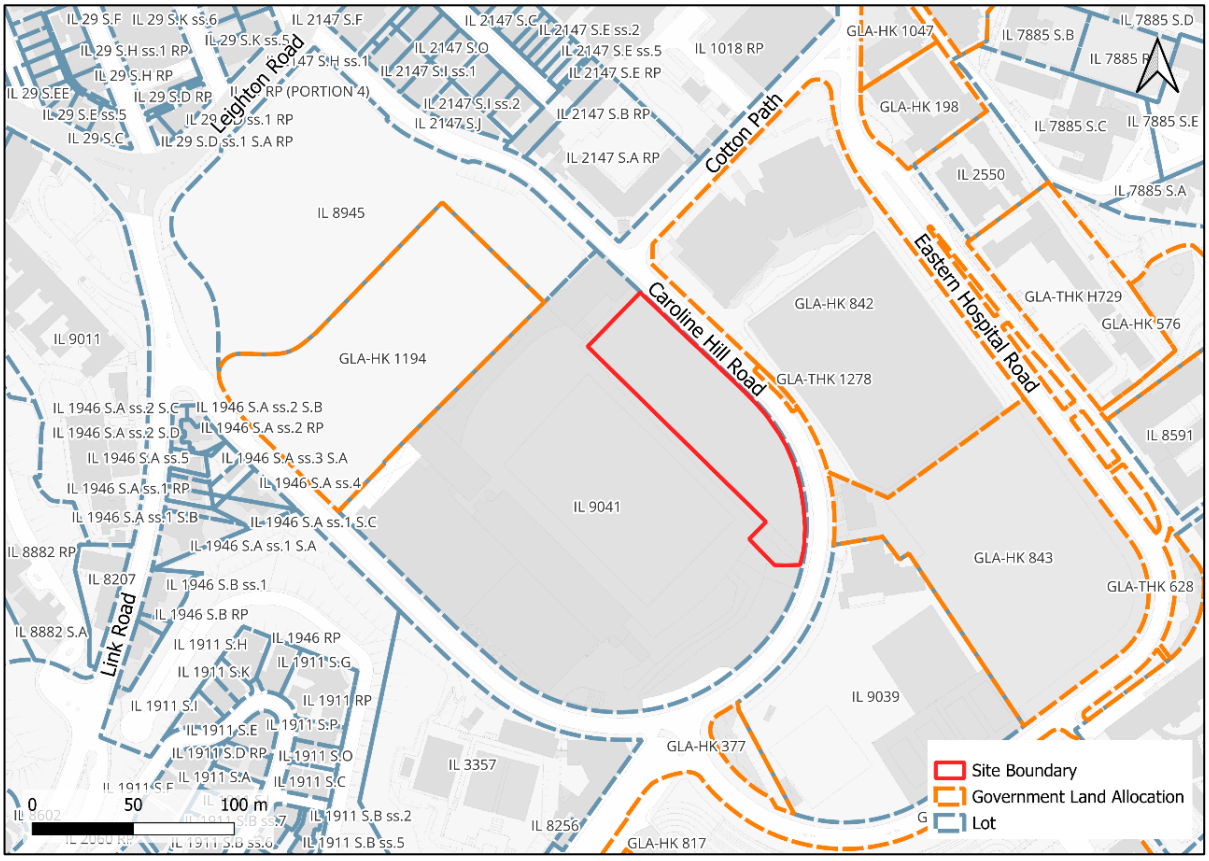


Figure 3.3 Lot Index Plan

3.3. Surrounding Land Use Pattern

3.3.1. The Site is located in a well-established mixed-use neighbourhood, characterised by nearby recreational uses, GIC uses, residential buildings as well as the commercial developments in Causeway Bay.

3.3.2. Existing developments nearby include (**Figure 3.4** refers):

- To the immediate northwest of the Site is a large piece of vacant land zoned "Government, Institution or Community" ("G/IC") and "Commercial", which is currently being worked on for two large-scale developments, namely the Government's District Court Buildings and a commercial development. The majority of the area to the north and northeast of this to-be-developed commercial site across Caroline Hill Road is currently occupied by medium-rise residential developments and some GIC facilities (e.g. schools with a

convent, hospital complex and etc.).

- To the east and south of the Site are some recreation clubs and open space, including the Disciplined Services Sports and Recreation Club, the Indian Recreation Club and So Kon Po Recreation Ground. To the further south of the Site across Eastern Hospital Road is the Hong Kong Stadium.

- To the immediate west of the Site is the main part of the SCAA complex, which includes the Bowling Centre, Gymnasium Block (South Block), Artificial Rugby Football Pitch, Golf Centre, Swimming Pool, and the two newest additions of the South-side Grand Stand and the Northwest Training Pool completed in 2020. The area to the further west and southwest is predominantly occupied by some medium to high-rise residential developments, such as Caroline Garden, Beverly Hill, Happy View Court, and Leighton Hill.

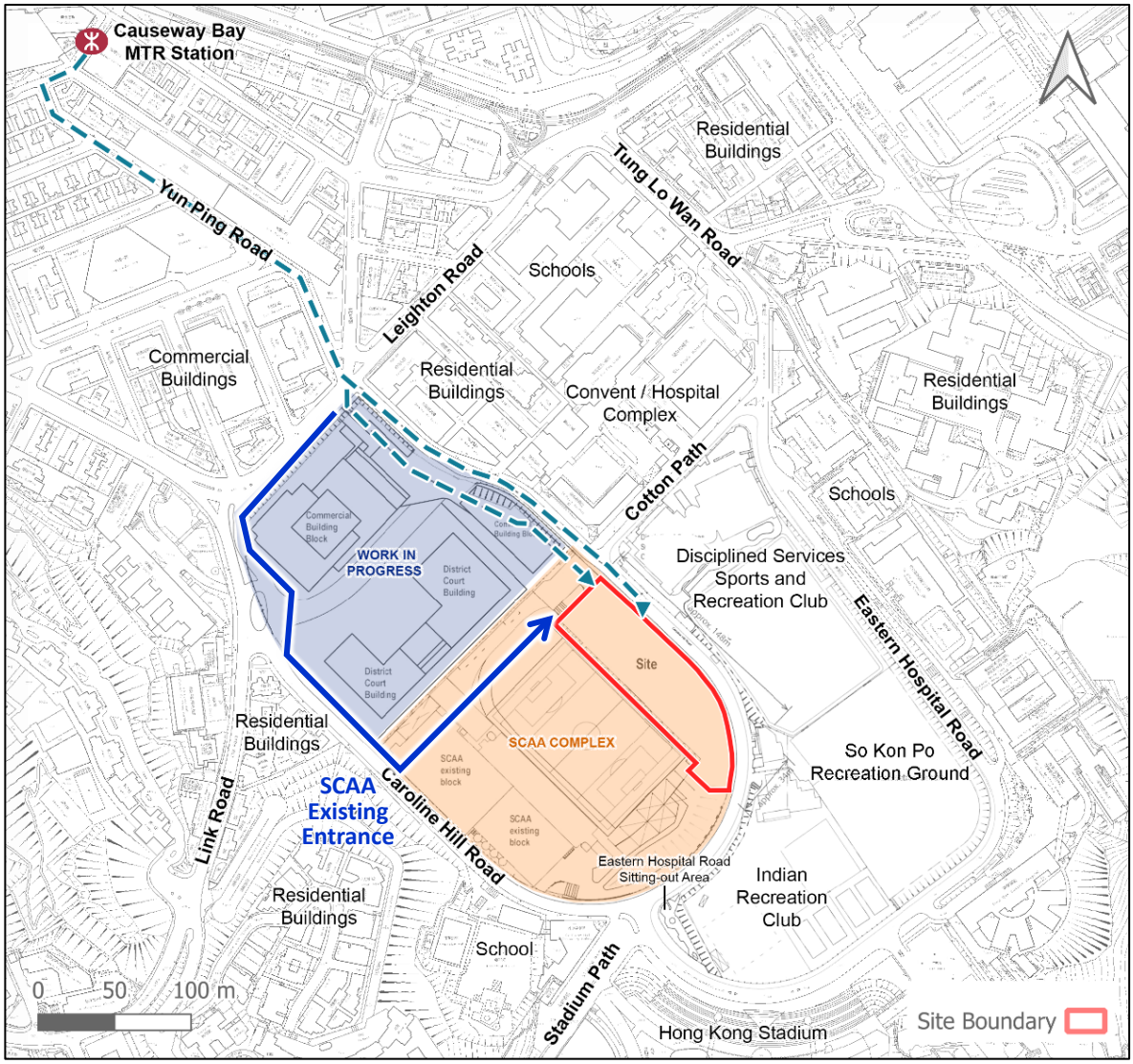


Figure 3.4 Surrounding Land Use Context

3.4. Accessibility

3.4.1. The Site is easily accessible by public transportation, with a direct route to Caroline Hill Road via Yun Ping Road (**Figure 3.4** refers). There are various franchised bus and scheduled minibus services ("GMB") running in the vicinity of the Site along Leighton Road and Caroline Hill Road. Not least, the Site is also located within the walking distance to the MTR Causeway Bay Station, which is about 650m in the northwest.

3.4.2. In addition, visitors may also get access to the Site via the existing SCAA entrance at the western corner of SCAA Complex.

3.5. Statutory Planning Context

3.5.1. The Site falls within an area zoned "Other Specified Uses" annotated "Sports and Recreation Club" ("OU(Sports and Recreation Club)") on the Approved Wong Nai Chung OZP No. S/H7/21 (**Figure 3.5** refers). According to the Statutory Notes of the Approved OZP, the planning intention of the "OU(Sports and Recreation Club)" zone is as follows,

"*This zone is primarily to provide/reserve land for sports and recreation club uses.*"

3.5.2. 'Place of Recreation, Sports or Culture' and 'Private Club' are some Column 1 Uses that are always permitted in the "OU(Sports and Recreation Club)" zone. The proposed uses and facilities, including multi-function rooms (tentatively referring to activities rooms and multi-purposes rooms), tennis ball courts, 5-a-side soccer ball courts and other ancillary facilities, can be categorised as 'Place of Recreation, Sports or Culture' use which is always permitted in the "OU(Sports and Recreation Club)" zone.

3.5.3. While part of the SCAA complex is subject to a Building Height Restriction of not more than seven storeys on the Approved OZP (**Figure 3.5** refers), there is no specific Building Height Restriction stipulated on the Site. As stated in the Remarks of the subject "OU(Sports and Recreation Club)" zone, "*for land where no maximum building height is stipulated on the Plan, any new development, or redevelopment of an existing building (except in-situ redevelopment of an existing building up to its existing building height) requires permission from the Town Planning Board under S.16 of the Town Planning Ordinance*". Therefore, a planning application to the TPB is required for the Proposed Development.

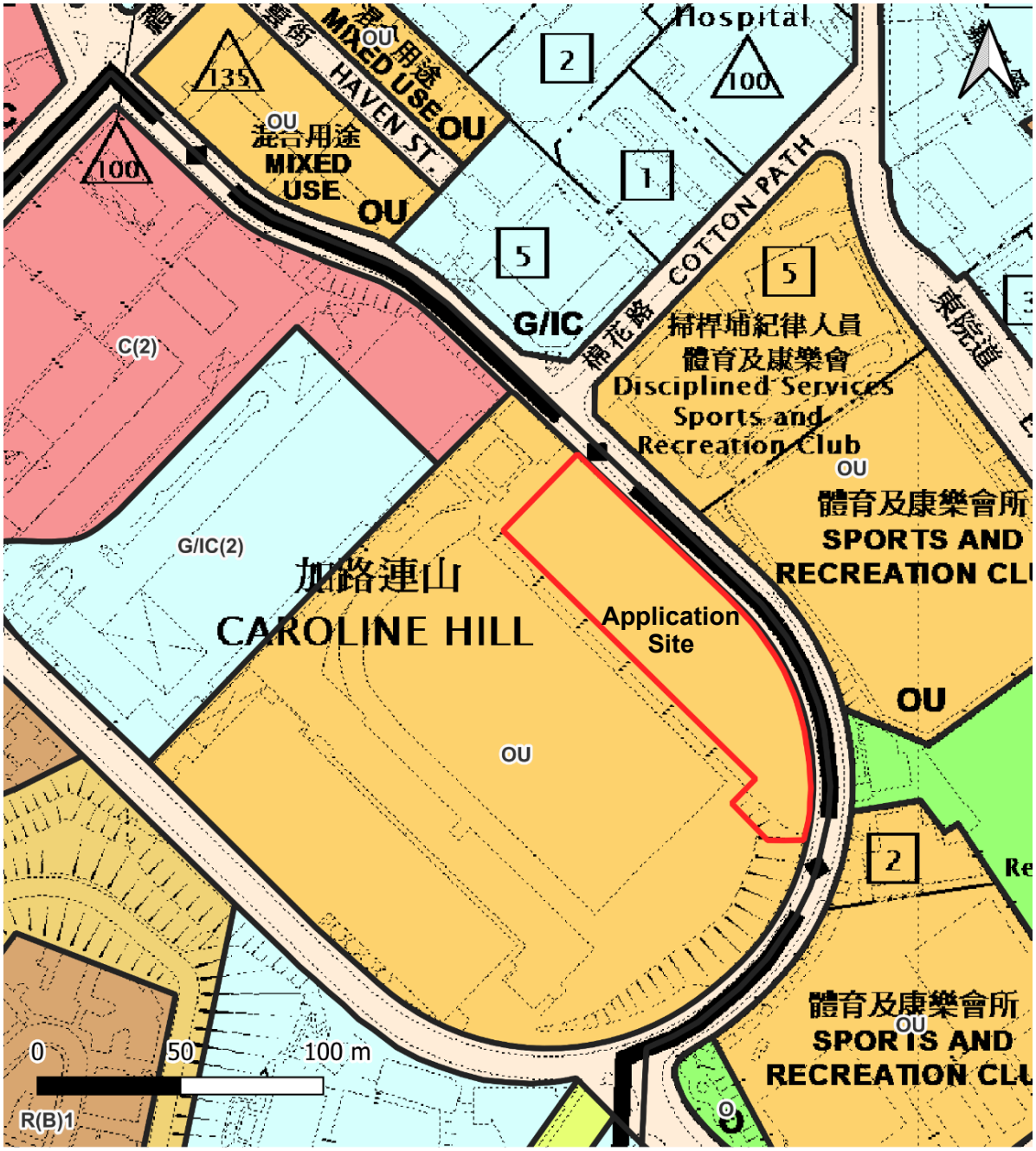


Figure 3.5 Zoning Context Plan

3.6. Site History

3.6.1. Currently, the Site has been left vacant with part of the existing slope covered with weeds and grasses in the south. The Site was the subject of five previous planning applications (see **Table 3.1**). Around 1999, the original building at the Site was demolished for redevelopment. By 2002, a temporary bored pile wall, a temporary golf fence and raft footing foundation had been completed, however, the redevelopment process was not carried forward. Also, domestic use for staff quarters, which was approved in 2002, had not been materialised.

3.6.2. Later in 2006, the Applicant submitted a S12 Amendment of Plan application to include 'Hotel' and 'Residential Institution' under Column 1 or Column 2 of the subject “OU(Sports and Recreation Club)" zone. However, TPB did not agree with this application as the application failed to comply with the planning intention.

3.6.3. In 2022, the Applicant submitted a S16 application (i.e., No. A/H7/182) for the proposed E-Sports Complex with ancillary eating place and shops and services. However, there were objections to the application due to the anticipated traffic impact to be caused by the proposed E-Sports Complex. The Applicant withdrew the application subsequently.

Table 3.1 Previous Planning Applications within the Site

	Application No.	Proposed Use(s)	Decision (Decision Date)
1	A/H7/110	Staff Quarters	Rejected/ Not agreed (16/05/1997)
2	A/H7/113	Staff Quarters	Approved with condition(s) (06/11/1998)
3	A/H7/123	Staff Quarters	Approved with condition(s) (10/05/2002)
4	Y/H7/1	Propose incorporation of 'Hotel' and 'Residential Institution' into Column 1 or Column 2 uses under the Notes of the "OU" annotated "Sports and Recreation Club" zone	Rejected/ Not agreed (07/04/2006)
5	A/H7/182	Proposed Place of Recreation, Sports or Culture (E-Sports Complex) with Ancillary Eating Place and Shop and Services	Withdrawn by the Applicant

3.7. Non-Statutory Planning Context

Policy Addresses

3.7.1. As outlined in the recent Policy Addresses between 2023 and 2025, the Government continues to promote and support sports development by various ways. The Chief Executive announced in his Policy Address 2025 that the Government will promote sports development through (1) ensure the successful delivery of the National Games, (2) promote synergy among sports venues, (3) promote “Sports for All” and urban sports and (4) enhance the governance of National Sports Associations and strengthen support for athletes.

3.7.2. Additional resources have been allocated to advance sports development by the Government, including implementing the 10-year Development Blueprint for Sports and Recreation Facilities to provide diversified facilities by phases such as sports centres, sports grounds and parks and encouraging community organisations to participate in organising various sports activities and competitions. These initiatives underscore Government’s commitment to advancing sports development in Hong Kong.

4. PROPOSED DEVELOPMENT SCHEME – SCAA Sports Link

4.1. The Proposed Development Scheme

4.1.1. Schematic drawings for the Proposed Development are presented in *Appendix I* of this Supporting Planning Statement. The Site of an area of 6,132m^2 yields a total Gross Floor Area (GFA) of about 31,327.12m^2. The Proposed Development comprises one single block with a total of 4 storeys with a building height of 45.4mPD (at main roof level). The Proposed Development will provide a new golf fence that would extend a further 16.2m above the main building roof of the proposed building to align with the height of the existing Golf Fence rising 40m from the existing Artificial Rugby Football Pitch.

4.1.2. The ball courts (convertible into tennis or 5-a-side soccer courts) will mainly be located on 2 & 3/F, where 1/F (which would have a lower floor-to-floor height) will be reserved for multi-function rooms and ball courts for leisure/recreation purposes. G/F will be reserved solely for car parking and loading/unloading uses in order to maximise the internal transport facilities to be provided. There will be a landscaped area and a sitting-out garden along Caroline Hill Road.

4.1.3. It is anticipated that the Proposed Development would be completed by 2030. **Table 4.1** below summarises the key development parameters of the Site.

Table 4.1 Major Development Parameters

Proposed Development	
Application Site Area (notional)	About 6,132m^2
GFA*	About 31,327.12m^2
Building Height (at main roof level)	45.4mPD
No. of Storeys	4
Overall SCAA Complex (i.e. the whole site) – For reference only [Not for approval]	
Site Area (about)	32,478.89m^2
Total (existing + proposed) Non-domestic GFA (about)	96,055.23m^2
Plot Ratio (about)	2.96
Internal Transport Facilities	
No. of private car parking space	63 (including 2 nos. of parking space for disabled users)
No. of motorcycle parking space	9
No. of pick-up/drop-off lay-by	1
No. of goods vehicle loading/unloading bay	1 HGV

* This includes multiplications of area over the void of the high headroom ball courts (subject to approval by the Building Authority)

Table 4.2 Proposed Usage

Floor	Usage
G/F	Car Park / E&M
1/F	Multi-Function Rooms / Ancillary Office / Ancillary Uses (e.g. WC & Changing Rooms) / Ball Courts
2 & 3/F	Ball Courts / Ancillary Uses (e.g. WC & Changing Rooms) / Plant Room

4.1.4. The Proposed Development will be opened from Monday to Sunday including Public Holidays, from 7:00am to 10:00pm. The number of visitors will be controlled as advance booking will be required.

4.2. Major Design Elements

4.2.1. In developing the Proposed Development Scheme for the Proposed Development, the schematic design has considered site constraints and characteristics of the surrounding environment. The key design elements that have been incorporated into the Proposed Development Scheme are as follows:

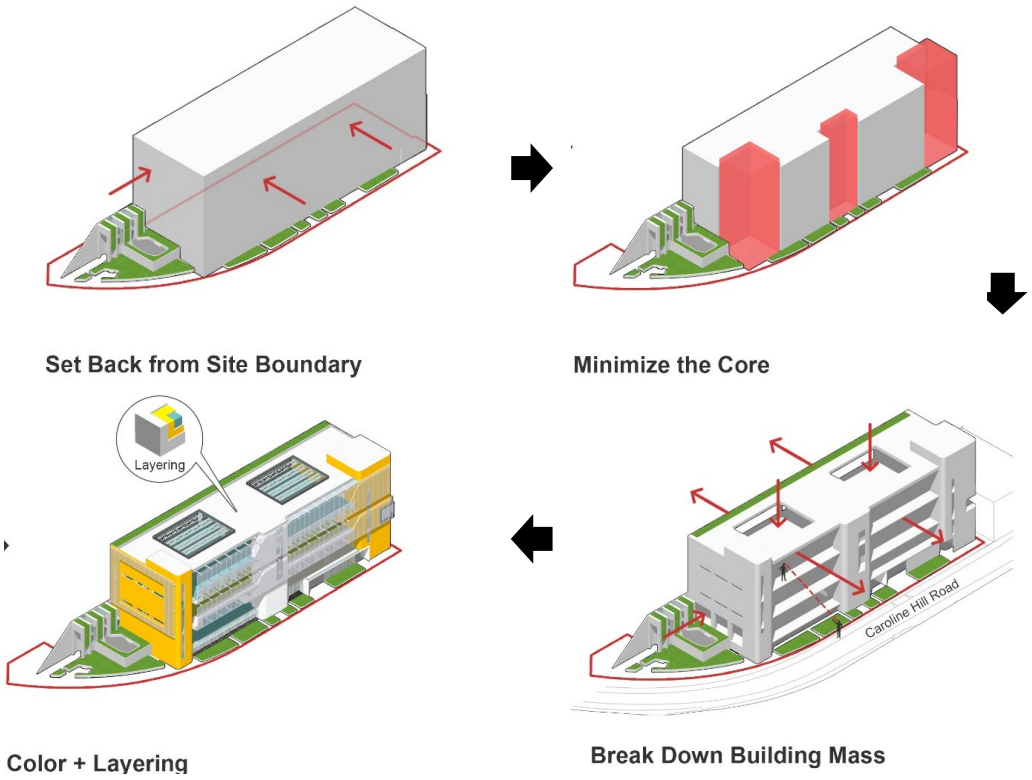


Figure 4.1 Design Process

Building Form

4.2.2. Having considered the space requirements of various sports activities, a regular and elongated massing has been adopted to maximise the sports facilities provision. At the same time, the Proposed Development Scheme allows sufficient building set-back from the site boundary and open air space to provide landscape space along Caroline Hill Road. A minimal number of cores, including three lifts and four staircases (coloured red in **Figure 4.1**), have been provided to meet relevant statutory requirements while maximising space for sports and functional areas. Subsequently, to improve permeability, the proposed scheme has incorporated large openings with perforated fence and glass walls on the façade and skylight at the roof. These allow natural sunlight to penetrate and facilitate cross ventilation.

4.2.3. Lastly, reference has been made to the design language of the new Grand Stand on the south side (opened in 2021), as well as other existing buildings within the SCAA complex. The incorporation of vibrant colors and layered elements echo with the design of the Grand Stand and contribute to a coherent and lively aesthetic atmosphere to the proposed building.

Building Height and Connections

4.2.4. Consideration of the proposed building height starts with the possible connection with the existing Artificial Rugby Football Pitch (at +21.6mPD) to the southwest of the Site. Taking into account the headroom requirements of loading/unloading spaces on G/F, there remains about 10.54m and 7.74m for ball courts (for leisure/recreation purposes) and multi-function rooms respectively. Adding two storeys of ball courts with a floor-to-floor height of 11.9m to enable a clear headroom of 9.1m for tennis, the total building height reaches +45.4mPD at main roof level.

4.2.5. SCAA also intends to provide two 5-a-side soccer ball courts on 2/F, featuring the same floor finish and artificial turf, to potentially connects with the existing Artificial Rugby Football Pitch. When the movable curtains are opened, these pitches can be connected together, which allows the opportunity to organise collaborative events if required.

4.2.6. While visitors may get access to the Site directly from Caroline Hill Road and/or the existing entrance at the High Block, there is also a possible connection with the adjoining developments. There is a tentative proposal about building a footbridge that would connect the SCAA complex to the adjoining commercial development via the Training Pool. The 2/F of the Proposed Development has been made ready to incorporate this potential linkage. The footbridge would be able to enhance pedestrian flow and safety by offering a seamless connection to and from MTR Causeway Bay Station.

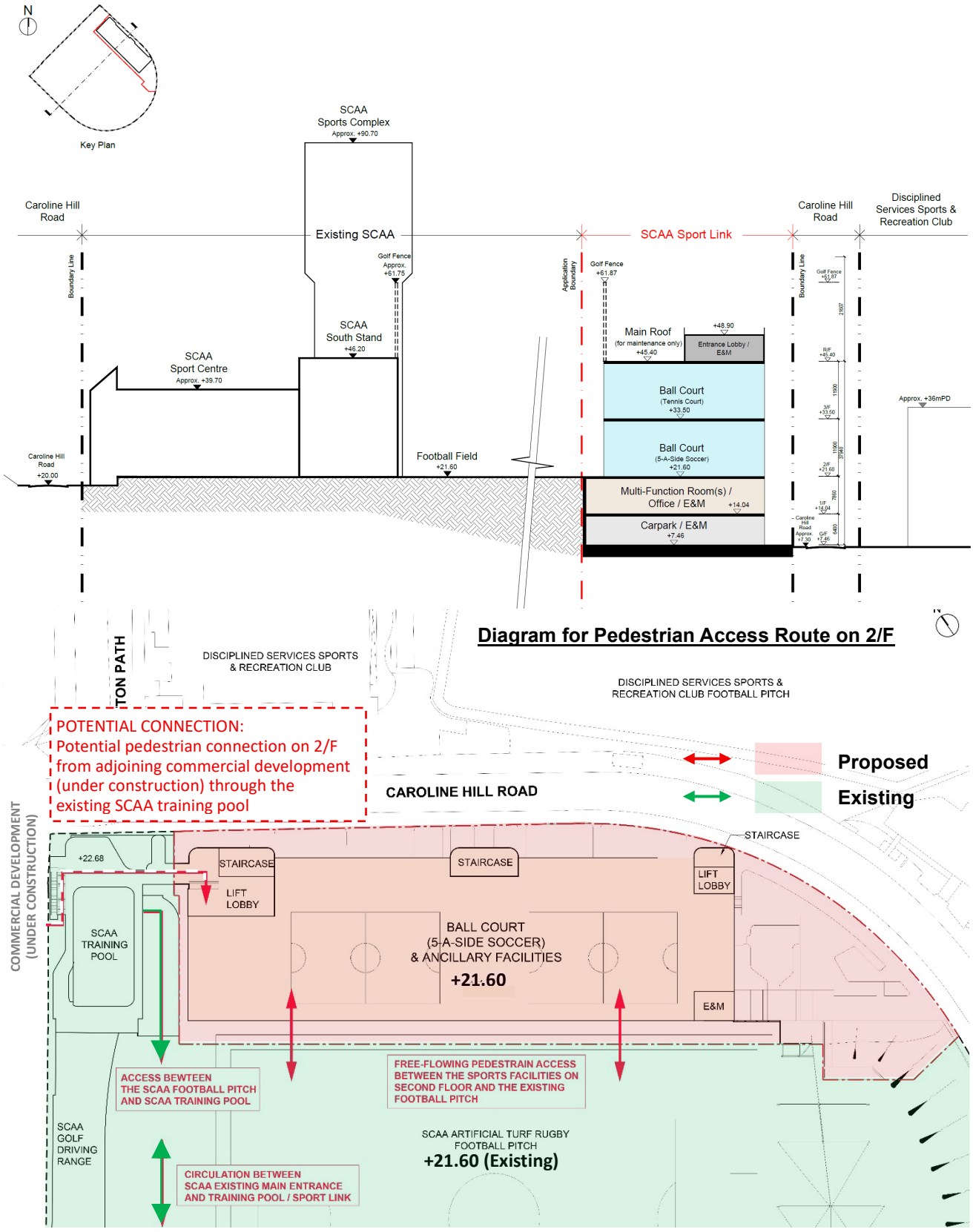


Figure 4.2 Connections with Existing Facilities and Future Development

4.3. Access and Provision of Internal Transport Facilities

4.3.1. The proposed vehicular access for the Proposed Development will be located on Caroline Hill Road. Taking into consideration the location of vehicular access of the Disciplined Services Sports & Recreation Club on the opposite side of the Site, the proposed vehicular access has been positioned to stagger with the opposite vehicular access.

4.3.2. Internal transport facilities of any developments shall be provided in accordance with the Hong Kong Planning Standards and Guidelines ("HKPSG") and/or the conditions stipulated in the respective land grant. As there is no specific guideline set in the HKPSG for the proposed sports/recreational uses nor stated in the land grant, the design objective is to maximise car parking spaces on G/F for an efficient use of land. There will be a total of 63 car parking spaces, 9 motorcycle parking spaces, 1 pick-up/drop-off layby and 1 goods vehicle loading/unloading bay on G/F.

4.4. Tree Preservation and Landscape Design Proposal

4.4.1. According to the topographical and tree survey carried out, there are 12 existing trees (including 1 no. of *Leucaena leucocephala*) within the Site and these are all self-seeded trees. Due to their self-seeded, weedy, and prolific nature, along with poor form, structural defects, low amenity value, and unrecoverable defects, these trees are considered to be removed. High-quality new trees will be planted in the landscape area of the Proposed Development to compensate for the loss of these low-value landscape resources. A total of 11 new trees will be planted in the landscape areas associated with the proposed building, achieving a replanting ratio of 1:1 (11 fell trees : 11 new trees), excluding the replacement of weedy trees, *Leucaena leucocephala* (LL). Once the planting proposal is fully established, there will be no net loss of trees.

4.4.2. The concept underpinning the Landscape Design Proposal in *Appendix II* is to provide a synthesis between contemporary design philosophy and sustainable development principles. The main objectives are as follows.

- Integration of the proposed SCAA Sports Link from landscape and visual perspectives with the surrounding recreational context and its sloping background;
- Provide a quality and sustainable environment for the enjoyment of future users and visitors with provision of outdoor passive recreational space;
- Maximise opportunities for the greenery within the Site;
- Maximise tree planting within the Site to provide shade for pedestrians;
- Soften the built form and development edge through the use of tree and shrub planting. Use of alternative greening measure at where tree planting

and/or conventional planting is not technically feasible, e.g. green wall and climbing plants will be applied on retaining structures. Green roofs will be incorporated on top of building, and

- Through selection of suitable plants in suitable place and use of combination of localized/native and ornamental plants to enrich the diversity of species combination in the context. Utilise a combination of evergreen and/or ornamental and/or flowering tree and shrub species with an interesting form, colour and foliage texture to enrich the landscape experiences and provide architectural highlights.

4.4.3. The proposed SCAA Sports Link will include a setback along Caroline Hill Road to incorporate street plantings, enhancing the streetscape with trees and shrubs that provide shade for pedestrians and visitors to the SCAA. The southernmost part of the Site will feature a sitting-out garden, while the sloping area at the interface to the existing south will be reformed following the sloping topography; the engineered appearance of the new retaining structure to the sloping area will be disguised with green roofs and green walls. Besides, green roof will be added on the maintenance roof to enhance visual amenity looking from the elevated neighbourhoods.

4.4.4. The proposed design emphasises greenery coverage with an area targeting 20% of the Site (i.e. a minimum of 1,226.4m² of greenery), where over 50% out of the 20% greenery areas is allocated at primary zone and will be accessible by future users and pedestrians.

4.5. Air Ventilation Consideration (*Appendix VI* refers)

4.5.1. According to RAMS wind data, annual prevailing winds are the incoming winds flowing from the northeast quadrant (i.e. NE, ENE, E) while summer prevailing winds are flowing from southwest quadrant (i.e S, SSW, SW) and from E directions.

4.5.2. The Proposed Development Scheme has incorporated good design features, such as provision of building setback and increased building permeability. Building setback could reduce blockage in particular the perimeter of a development. The landscape garden at the southeastern portion on G/F sets back the building façade from the site boundary for over 20m (**Figure 4.**3 refers). The building setback allows more wind penetration at pedestrian level to flow across the site along Caroline Hill Road, thus improving wind environment along the road and local areas to the south of the Site.



Figure 4.3 Building Setback on G/F

4.5.3. There will be perforated movable curtain and fence for the ball courts on 2/F and 3/F respectively to further increase the wind penetration and decrease the bulkiness of the building. These will help to facilitate the penetration of both incoming annual and summer prevailing winds to benefit the wind environment in the surrounding area.

4.6. Vehicular and Pedestrian Traffic Considerations

Vehicular Traffic

4.6.1. Caroline Hill Road connects the local areas of Caroline Hill and So Kon Po with the district distributor Leighton Road in the area. The eastern end of Leighton Road intersects with Causeway Road and Tung Lo Wan Road that leads to the Tin Hau and Tai Hang areas respectively. The western end of Leighton Road links to Morrison Hill Road that leads to the local road network in Wan Chai and Canal Road Flyover.

4.6.2. According to the Traffic Impact Assessment in *Appendix III*, most visitors are anticipated to use public transport services, only those who use taxis will be considered as the vehicular traffic generation of the proposed development. It is anticipated that the proposed SCAA Sports Link would generate two-way traffic flows of 22 pcu/hr in the weekday AM, weekday PM and weekend peak hours.

4.6.3. Junction capacity assessments were carried out at the key junctions in the vicinity for the year 2036. The results have indicated that all nearby junctions will operate satisfactorily for both reference and design scenarios.

Pedestrian Traffic

4.6.4. To ascertain the adequacy of footpath width for walking between the proposed development, bus/GMB stops and the MTR Causeway Bay Station, a pedestrian count survey was conducted.

4.6.5. The proposed development is estimated to generate 2-way pedestrian flows of 895 person/ hour during weekday AM, weekday PM and weekend peak hours. The condition of the key footpaths will be satisfactory after accommodating the pedestrians generated and attracted by the proposed development in all scenarios with LOS “C” or above, similar to the existing condition.

4.7. Environmental Considerations

Air Quality

4.7.1. During the construction stage, good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation will be implemented to prevent adverse dust impact.

4.7.2. According to HKPSG, the recommended minimum buffer distance from the nearby roads (i.e Caroline Hill Road, a local distributor) is 5m. No air sensitive uses have been placed within this zone.

4.8. Drainage and Sewerage Considerations

Drainage

4.8.1. The Site is currently fully paved. The current peak runoff from the Site area is 0.447 m^3/s whereas the anticipated peak runoff upon completion of the proposed SCAA Sports Link would be reduced to 0.406 m^3/s.

4.8.2. According to the DSD drainage record plans, public stormwater pipes of 375mm in diameters are available along Caroline Hill Road. The reduction in surface runoff would post no negative impact to the public drainage system.

Sewerage

4.8.3. According to the Sewerage Impact Assessment, the estimated Average Dry Weather Flow (“ADWF”) to be generated by the proposed SCAA Sports Link would be 27.02m^3/day. The existing public sewerage system would have sufficient capacity to cater for the anticipated flow.

5. PLANNING MERITS AND JUSTIFICATIONS

5.1. In Line with the Policy Directives for Promoting Sports Development

5.1.1. In accordance with the recent Policy Addresses between 2023 and 2025, the Government continues to promote and support sports development by various ways. The Chief Executive announced in his Policy Address 2025 that the Government will promote sports development through (1) ensure the successful delivery of the National Games, (2) promote synergy among sports venues, (3) promote "Sports for All" and urban sports and (4) enhance the governance of National Sports Associations and strengthen support for athletes. Additional resources have been allocated to further support and promote these objectives, as evidenced by the implementation of the 10-Year Development Blueprint for Sports and Recreation Facilities, which offers diversified facilities in phases, such as sports centres, swimming pools, sports grounds, and parks.

5.1.2. Acknowledging the Government's policy directives on promoting sports development, the proposed SCAA Sports Link will be able to offer a range of quality sports venues for users, including tennis ball courts, 5-a-side soccer ball courts and multi-function rooms. The provision of diverse top-grade sports and recreation facilities aligns with the relevant objectives of advancing sports development, fostering and promoting sports participation.

5.2. Adhere to the Planning Intention of "OU(Sports and Recreation Club)" Zone on the Approved OZP

5.2.1. The Site falls within an area zoned "Other Specified Uses" annotated "Sports and Recreation Club" ("OU(Sports and Recreation Club)") on the Approved Wong Nai Chung OZP No. S/H7/21. According to the Statutory Notes of the Approved OZP, the planning intention of the "OU(Sports and Recreation Club)" zone is as follows,

"*This zone is primarily to provide/reserve land for sports and recreation club uses.*"

5.2.2. The Site has been left vacant for over 2 decades. The proposed SCAA Sports Link is planned to provide various sports and recreation facilities and spaces, including multi-function rooms, tennis ball courts and 5-a-side soccer ball courts. Thus, the proposed development at the Site is considered in line with the planning intention of the "OU(Sports and Recreation Club)" zone. Situated at the northeastern part of the SCAA complex, the proposed SCAA Sports Link will extend to integrate with existing facilities to offer more diverse sports and recreation club amenities. As illustrated in **Section 4.2**, the proposed buildings have been thoughtfully designed to complement the overall SCAA complex.

5.3. The Proposed Recreational Use and Proposed Development Intensity are Compatible with the Surrounding Area

5.3.1. As highlighted in **Sections 3.2** and **3.3**, the Site is located within an easily accessible area, characterised by a mixture of residential buildings and recreational and sports facilities. The proposed use would naturally integrate into the immediate surroundings in view of its recreational and sports nature. With careful attention to building height, mass, and scale as described in **Section 4.2**, the proposed building would merely serves as a small extension of the existing SCAA Complex. Additionally, green roofs and permeable design help to soften and break down the building mass. The overall architectural expression is considered in line with the very green nature of Caroline Hill Road. As such, the proposed SCAA Sports Link development is considered to be in harmony with the surrounding land use context, complementing the recreational landscape character of existing SCAA as well as the wider recreational neighbourhoods.

5.4. Suitability of the Site for the Proposed Development

Good Accessibility

5.4.1. The Site is situated in a prime location, benefiting from excellent access by both road and rail transport. Besides being well served by franchised buses and GMBs, MTR Causeway Bay Station is about 650 metres away from the Site. Visitors will benefit from the wide variety of nearby public transport options, which encourage and facilitate the use of the proposed SCAA Sports Link.

5.4.2. Additionally, a tentative proposal for a footbridge connecting the building to the adjoining commercial development (under construction) via Training Pool has been discussed, which will further enhance pedestrian flow and safety by providing a seamless linkage. An opening on 2/F of the proposed development has been resesrved to incorporate this potential linkage.

Synergy with Other Facilities of the SCAA Complex As a Whole

5.4.3. As discussed in **Section 2.2**, there is a need to expand and enhance the facilities provided by the SCAA complex to provide quality services and better meet the needs of its members. Upon completion, the proposed SCAA Sports Link will provide multi-function rooms, tennis ball courts and 5-a-side soccer ball courts, serving as an extension to the existing SCAA complex. The proposed SCAA Sports Link will enhance the SCAA Complex by providing additional space and facilities that encourage a variety of physical activities.

5.4.4. The second floor of the proposed SCAA Sports Link has been designed to match the level of the existing Artificial Rugby Football Pitch in the SCAA complex. The proposed 5-a-side soccer ball courts on 2/F, will be situated next to the existing Artificial Rugby Football Pitch, sharing the same floor finish level. When the

movable curtains are opened, these pitches can be connected, providing opportunities for collaborative events and movement of pedestrians to other areas of the overall SCAA Complex.

5.4.5. Overall, the proposed SCAA Sports Link will create synergy with other existing facilities within the SCAA complex, enhancing the user experience and offering more flexible space for organising activities for its members.

5.5. Achieve a More Efficient Use of Land

5.5.1. As discussed in **Section 2.3**, following the completion of a temporary bored pile wall, a temporary golf fence built on top of the bored pile wall, and the raft footing foundation in 2002, the previous redevelopment of the Site did not proceed, and the Site has remained vacant since then. The long-vacated site will be turned into SCAA Sports Link, which will provide more and diverse comprehensive sports and recreation facilities, including multi-function rooms, tennis ball courts, 5-a-side soccer ball courts and a sitting-out garden. All these would provide members with varieties and choices of new facilities to enjoy.

5.5.2. Located in a prime area with excellent accessibility, the Site holds significant potential for redevelopment. However, it has remained vacant and unused for an extended period. The proposed SCAA Sports Link, which aims to transform this underutilised site into a comprehensive sports and recreation centre, thereby unlocking its full potential and enabling a far more efficient and beneficial use of the area.

5.6. Enhancement of Existing Landscape Condition

5.6.1. The landscape and planting proposal for the proposed SCAA Sports Link seeks to improve and expand the green recreational landscape character from SCAA to the south and north, while preserving SCAA as a green hub within Caroline Hill. Careful selection of appropriate species and good quality planting would help to improve the landscape value of the Site and provide greenery for pedestrians along Caroline Hill Road, as well as for users of SCAA recreational facilities. Furthermore, tree preservation and planting opportunities will be maximised within the Site. Overall, the proposed building and associated planting initiative will harmonise with the recreational landscape character of the existing SCAA and adjacent recreational neighbourhoods. Upon the completion of the landscape planting scheme, the local landscape context and visual amenity are anticipated to be significantly enhanced.

5.6.2. The proposed building is designed to set back from Caroline Hill Road to incorporate greenery along with the footpath. Together with the sitting-out garden at the southernmost part of the Site, the overall architectural expression is considered in line with the very green nature of Caroline Hill Road, which is characterised by nearby open recreational grounds and generally medium-rise

buildings.

5.7. No Unacceptable Visual Impact

5.7.1. The Visual Impact Assessment in *Appendix IX* has reviewed the potential visual impact of the proposed development onto 9 selected public viewpoints. The assessment report concluded that, though proposed building would have some slightly visual impacts to the public viewers, with responsive building height, mass and scale, building setback andplanting proposal at street level, green wall and greening on the roof etc., all these would help to alleviate the impact to an acceptable level, and proposed building is therefore compatible with the existing urbanised and recreational landscape and visual context. Proposed building is acceptable from visual perspective.

5.8. No Adverse Technical Impacts

Traffic Impact

5.8.1. Noted the concern from the previous planning application, the design of the proposed SCAA Sports Link has been refined with careful attention on traffic impact. The current plan positions the proposed SCAA Sports Link to provide sports facilities and operate according to its current operation mode. This proposed SCAA Sports Link is expected to generate significantly less vehicle and pedestrian traffic than the previous proposal.

5.8.2. A Traffic Impact Assessment has been carried out and the results revealed that all junctions and key footpths will have sufficient capacity to accommodate the expected traffic growth and the traffic generated by the Proposed Development. The TIA concluded that the proposed SCAA Sports Link would not induce adverse traffic impact on the adjacent road networks and should be acceptable from traffic viewpoint (*Appendix III* refers).

Noise Impact

5.8.3. According to the Noise Impact Assessment in *Appendix V*, the proposed SCAA Sports Link would not be subject to or generate any adverse noise impact.

Air Quality Impact

5.8.4. During the construction stage, with the implementation of good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, significant dust generated from the construction of the proposed SCAA Sports Link would not be anticipated.

5.8.5. During the operational phase, the Proposed Development Scheme has reserved sufficient horizontal buffer distance from nearby road sections as promulgated in the HKPSG to minimise the air quality impacts of vehicular emissions and

industrial emissions. Thus, no adverse air quality impact would be anticipated at the Site during the operational phase.

Impact on Air Ventilation

5.8.6. An Air Ventilation Assessment – Expert Evaluation (*Appendix IV* refers) has been carried out to to provide qualitative evaluation of wind performance of the proposed SCAA Sports Link under the Proposed Development Scheme. With the good design features to improve air ventilation performance, including building setback, and perforated fence adopted in the proposed SCAA Sports Link, it is anticipated that there shall be insignificant impact to the wind environment in the surrounding area.

Drainage and Sewerage Impacts

5.8.7. Results of the Drainage Impact Assessment in *Appendix VII* confirm that there would be reduction in contribution of stormwater surface runoff upon completion of the proposed SCAA Sports Link. Therefore, the assessment concluded that there would be no adverse drainage impact on existing stormwater system.

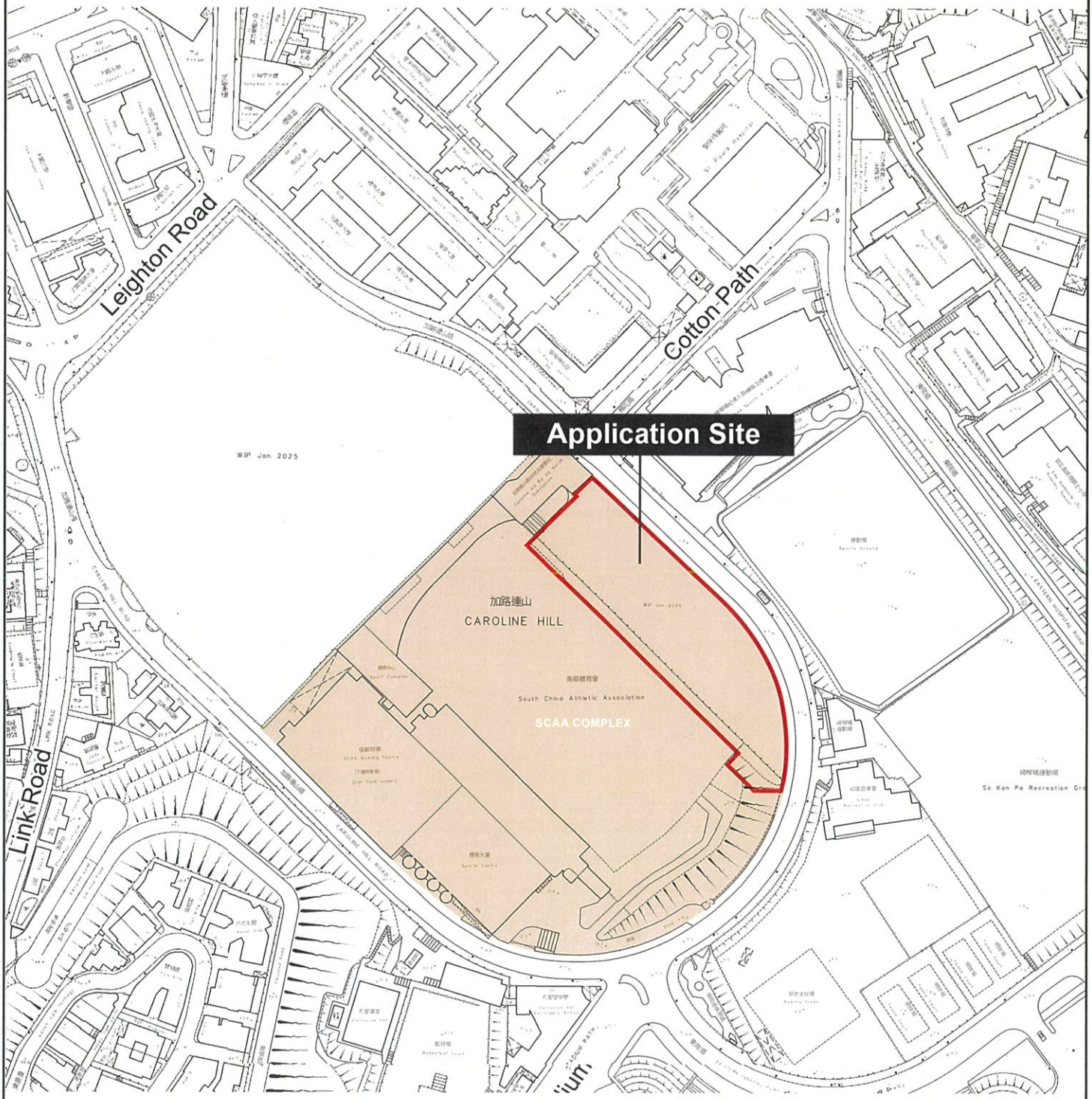
5.8.8. According to the Sewerage Impact Assessment in *Appendix VIII*, the estimated Average Dry Weather Flow ("ADWF") to be generated by the proposed SCAA Sports Link would be 27.02m^3/day. The existing public sewerage system would have sufficient capacity to cater for the anticipated flow, therefore no adverse sewerage impact would be anticipated.

6. SUMMARY AND CONCLUSION

6.1. The Applicant, South China Athletic Association, is seeking permission from the TPB for the proposed SCAA Sports Link development ("Place of Recreation, Sports or Culture" Use) at 88 Caroline Hill Road in Wong Nai Chung. The Site forms part of the SCAA complex and falls within the area zoned "Other Specified Uses" annotated "Sports and Recreation Club" on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21.

6.2. The Planning Department and Members of the TPB are respectfully requested to give favourable consideration to support the proposed SCAA Sports Link development based on the followings:

- The proposed SCAA Sports Link is In Line with the policy directives for promoting sports development;
- The proposed development adheres to the planning intention of "OU(Sports and Recreation Club)" Zone on the Approved OZP;
- The proposed recreational use and proposed development intensity are compatible with the surrounding area;
- The Site is suitable for the development of SCAA Sports Link;
- The proposal achieves a more efficient use of land;
- The proposal enhances the existing landscape condition; and
- The proposed development scheme would not cause unacceptable/adverse impacts on visual, traffic, noise, air quality, air ventilation, drainage and sewerage.



PLANNING LIMITED
規劃顧問有限公司

LOCATION PLAN

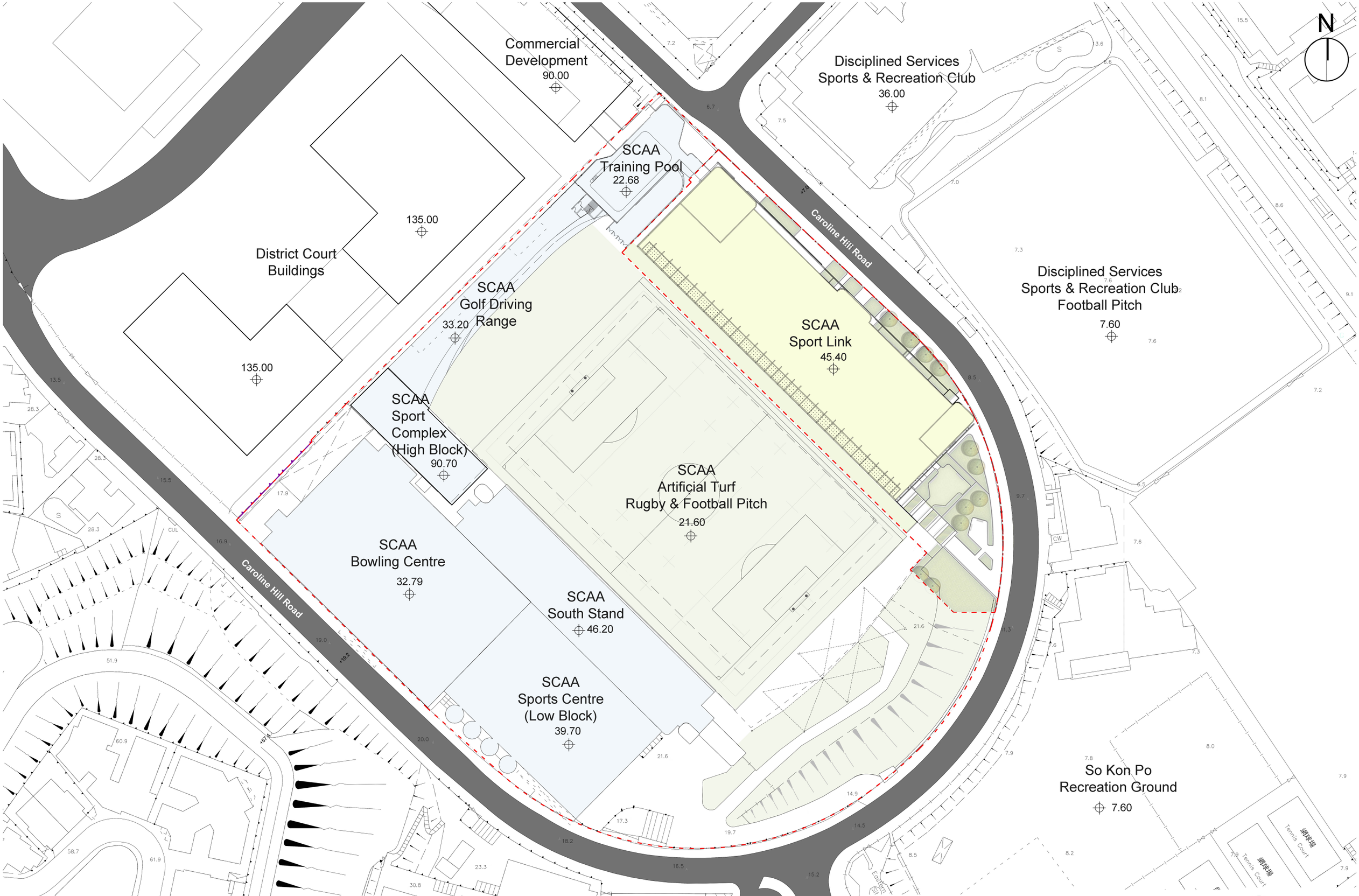
Scale 1:2,500

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION
88 CAROLINE HILL ROAD IN WONG NAI CHUNG

Date: 29 September 2025

Appendix I

Architectural Drawings



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

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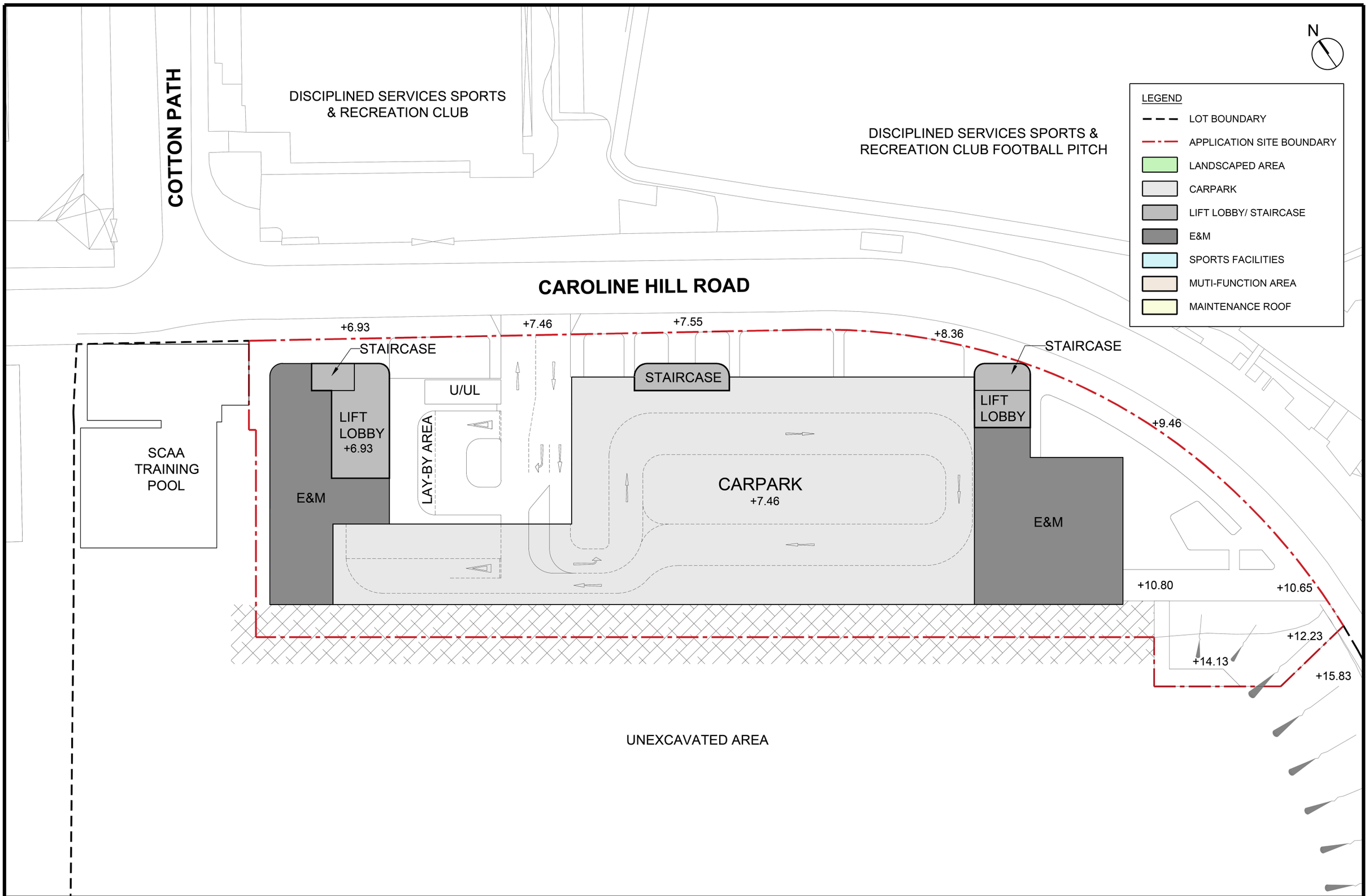
Design 2 Architects



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

G/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

SCAA TRAINING POOL

STAIRCASE

LIFT LOBBY

STAIRCASE

MUTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.06

STAIRCASE

LIFT LOBBY

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

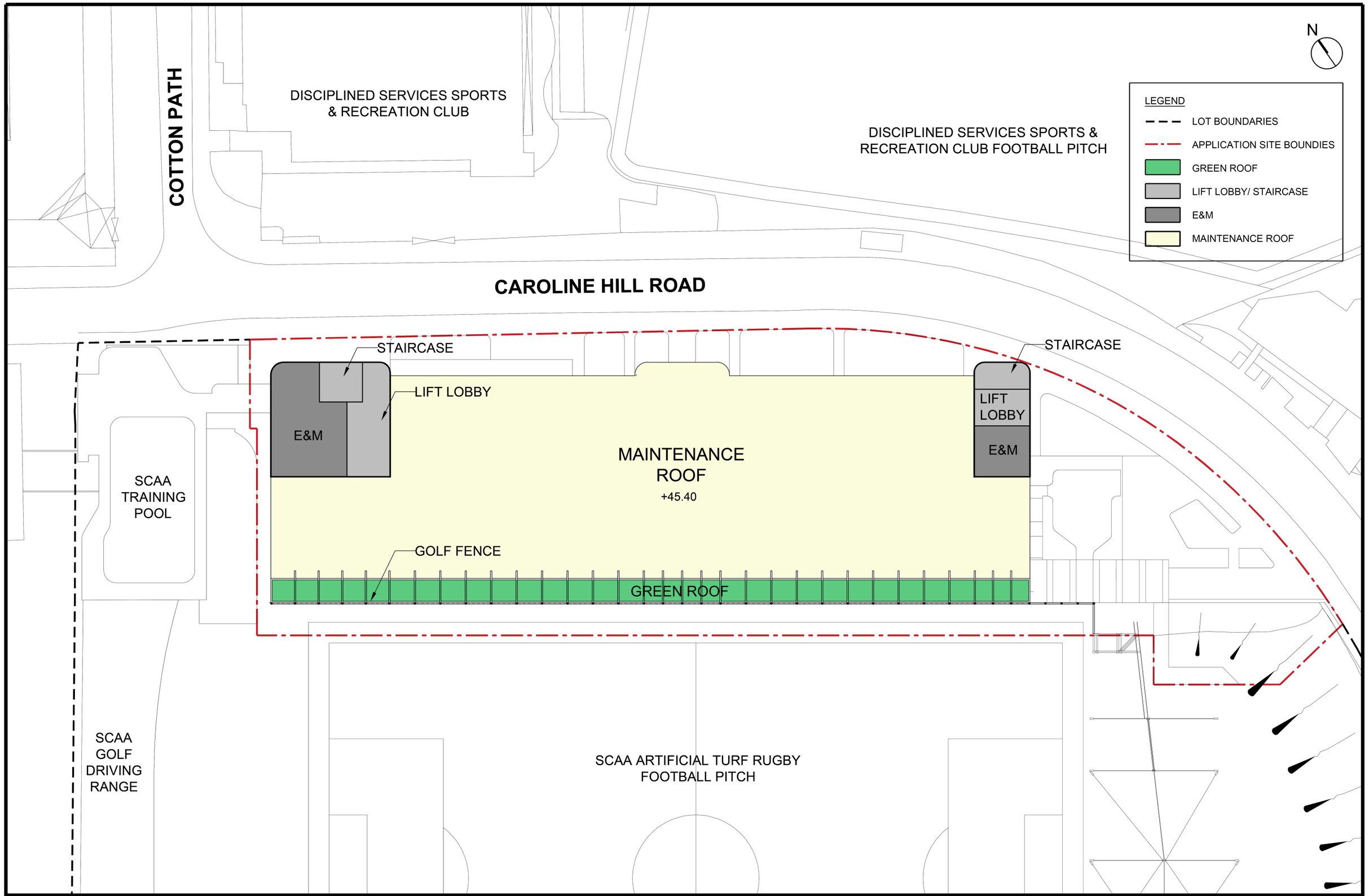
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

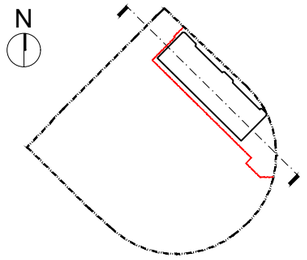
Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

UR/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- MAINTENANCE ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

11900

10540

3600

37940

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Main Roof (for maintenance only) +45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

7560

6580

Caroline Hill Road

Existing Slope

Approx. +10.65

Landscape Garden

+10.65

+8.811

Mean Street Level of North Site

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 13 Oct 2025

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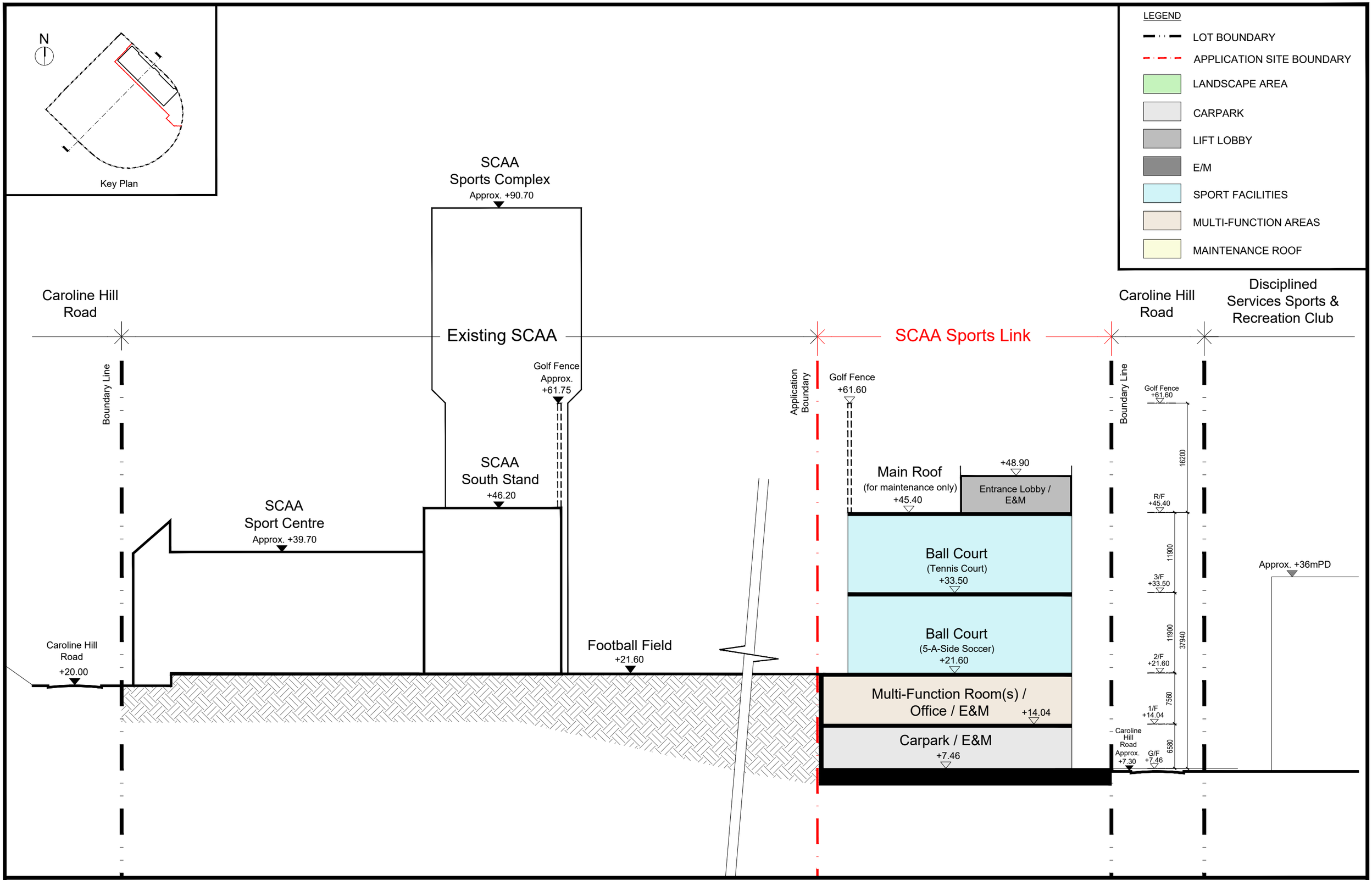


Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

Appendix II

Landscape Proposal and Tree Survey Report

Proposed SCAA Sports Link
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

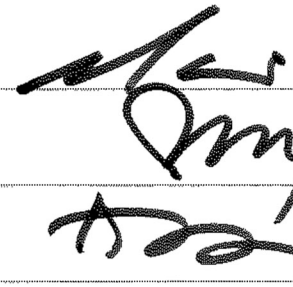
Landscape Proposal
and
Tree Survey Report

October 2025

Prepared By:
ADI Limited

ADI

Project Title	Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung
Report Title	Landscape Proposal and Tree Survey Report
Date of Issue	13th October 2025

	Name	**Signature**	**Date**
Compiled by	Elsa Kwong		13th October 2025
Checked by	Barry Lo		13th October 2025
Approved by	Alison Lee		13th October 2025

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Annexes

Annex A Tree Survey Report

1.0 Introduction

1.1 The report presents the Landscape Proposal (LP) which forms part of the planning statement in support of the Section 16 Planning Application for proposed development at the north side of South China Athletic Association (SCAA) on I.L. No. 9041 at 88 Caroline Hill Road in Wong Nai Chung on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. This submission seeks to establish the landscape design objectives and design principles of landscape treatment for each component of the proposed development at the north side of SCAA.

1.2 The LP figures demonstrate the quality and the character of the future exterior environment of proposed building, its structure and its relationship to the surrounding context including **Figure 1.0 Landscape Proposal**, **Figure 2.0 Landscape Elevation**, **Figure 3.0 Greenery Coverage** and **Figure 4.1 to 4.3 Typical Landscape Detail**.

2.0 Existing Site Conditions

2.1 The application site is at the north part of the SCAA and situated on the southwest of the Caroline Hill Road, it is a rectangular shape of land abutting the road. The site has an area of approximately 6,132m^2 and falls within the “OU” zone annotated with “Sports and Recreation Club”. The SCAA football field/golf practising ground bounded to the southwest of the site and the existing training pool in the north are located at a higher elevation of about +21.6 to +22mPD. Thus, retaining structures have been built in between the site and the above existing built-up areas to transit the level from higher elevation to existing ground level of the site at about +7.50mPD abutting Caroline Hill Road. An existing golf net is built along the edge between the football field/golf practising ground and the site.

Landscape Context and Resources

Existing Trees

2.2 The site is vacant pending for development. 10 self-seeded trees are observed in the north of the site which are in a narrow strip of soiling area remaining on top of the sheet piling structures attached to the existing staircase and the training pool. Another 2 self-seeded trees are attached on the existing retaining wall in the west of the site. A tree survey is prepared, their condition and tree treatment recommendation are discussed in **Annex A Tree Survey Report** of this report.

2.3 These 12 self-seeded trees will be affected by the building and retaining structure modification works. Regards of their self-seeded, weedy and prolific nature, their poor form and structure condition with unrecoverable defects, and their low amenity value, therefore they have been considered to be removed. Quality new trees will be planted in new landscape areas associated with the new building to compensate the loss of these low value landscape resources. The landscape areas associated with the proposed building would able to accommodate 11 new trees, and would achieve a replanting ratio of 1:1 (11 fell trees : 11 new trees) excluding the compensation for one weedy tree, *Leucaena leucocephala* (LL). Upon full establishment of the planting proposal, there is no net loss of landscape resource.

2.4 The south portion of the site is a remnant rock cut slope. It is covered with wild glass and shrub, no tree exists. The slope is extended to the further south of the site holding the existing football field/golf practising ground at higher elevation from Caroline Hill Road. This portion of existing slope outside the site is planted with vegetation with some trees on the slope crest and will not be affected by the proposed building works.

2.5 Portion of slope within the site will be modified and will be grassed with planting of new trees on the slope crest to create a seamless transition from the sloping green in the south. New retaining structures will be built to hold the slope, these structures will be integrated with the building design, and with green roof and green wall to disguise its functional appearance and provides weatherproof passageway to the proposed building.

2.6 The landscape and planting proposal associated with the proposed building tend to integrate and extend the green recreational landscape character from SCAA south to the north and maintained SCAA as a green hub in Caroline Hill. The selection of suitable species and good quality planting will enhance the landscape value of the site and provides greening amenity for pedestrians along Caroline Hill Road as well as for the users of SCAA recreational facilities. Tree planting opportunities have been maximised within the site which have considered the necessary safety measures for the operation of the sports facilities. The proposed building and associated planting proposal will fit into the recreational landscape character of existing SCAA recreation grounds as well as the recreational neighbourhoods. With the full establishment of the planting proposal, the local landscape context and visual amenity would be enhanced. The new tree planting concept refers to **Appendix V of Tree Survey Report.**

3.0 Project Description

3.1 The development proposal will introduce a 4-storey new building of SCAA Sports Link with a proposed height of +45.40mPD. Entrance lobbies, car parking and E&M utilities are located at G/F. 1/F & 2/F & 3/F will accommodate multi-function rooms, ancillary office/ ancillary uses, ball courts such as tennis court and 5-a-side soccer, and plant rooms etc. The roof is reserved for maintenance and utilities and green roof. The existing golf net along the west edge will be reconstructed to integrate with the building design.

3.2 A sitting-out garden is proposed at the southernmost of the site and at street level along Caroline Hill Road to soften the development edge and enhances the streetscape amenity.

3.3 Main vehicular entrance is from Caroline Hill Road at about +7.46mPD. Pedestrians and visitors would also able to enter the proposed building from Caroline Hill Road via the sitting-out garden and the lift lobbies. Pedestrian connections are also available at elevated levels from 2/F of the new building to access the existing SCAA football field/golf practising ground and the training pool.

3.4 Part rock cut slope located at the south within the site, where currently covered by weedy vegetation, will be reformed with new tree planting on slope top and hydroseeding on slope for enhancing the visual “green” of the SCAA. The new retaining structure associated with the reformed slope will be integrated with green roof and green wall to disguise its functional appearance.

4.0 Landscape Design Proposal

4.1 The concept underpinning the landscape design of proposed building is to provide a synthesis between the contemporary design philosophy and sustainable development principles. **Figure 1.0 Landscape Proposal and Figure 2.0 Landscape Elevation** demonstrate the landscape design principles.

4.2 The landscape design proposal is described in terms of the main design objectives followed by a description of the key landscape components, and finally the landscape elements including the proposed hard and soft landscape, which form the palette of materials.

4.3 Proposed building has been set back along Caroline Hill Road to accommodate street plantings. Trees and shrubs will be planted to enhance the streetscape, provide shade for the pedestrians and visitors to SCAA and soften the development edge. The southernmost of the site is reserved for a sitting-out garden. The sloping area will be reformed following existing topography and replants with trees and grass. Engineered appearance of the new retaining structure to the sloping area will be disguised with green roofs and green walls. Besides, green roof will be added on the maintenance roof to enhance visual amenity looking from the elevated neighbourhoods.

4.4 Regards of operational and safety concerns of the existing football field/golf practising ground to the new building, high protection fence is unavoidable and has been integrated with the building design. Responsive non-reflective and permeable mesh materials would be used to alleviate the visual intrusion of these protection fences. Material used for fence set around the existing football field/golf practising ground is a good example of high permeable fence.

4.5 The landscape design proposal is described in terms of the main design objectives followed by a description of the key landscape components, and finally the landscape elements including the proposed hard and soft landscape, which form the palette of materials.

5.0 Landscape Design Objectives

5.1 The following design objectives are considered in the formulation of architectural scheme and landscape proposal:

- Integration of the proposed building from a landscape and visual perspectives with the surrounding recreational context and its sloping background;
- Provide a quality and sustainable environment for the enjoyment of future users and visitors with provision of outdoor passive recreational space;
- Maximise opportunities for the greenery within the site;
- Maximise tree planting within the site to provide shade for pedestrians;
- Soften the built form and development edge through the use of tree and shrub planting. Use of alternative greening measure at where tree planting and/or conventional planting is not technically feasible, e.g. green roof/green wall will be applied on the roof and on retaining structures; and
- Through selection of suitable plants in suitable place and use of combination of localised/native and ornamental plants to enrich the diversity of species combination in the context. Utilise a combination of evergreen and/or ornamental and/or flowering tree and shrub species with an interesting form, colour and foliage texture to enrich the landscape experiences and provide architectural highlights.

6.0 Greenery Coverage

6.1 Greenery/planting areas associated with the proposed building are shown in **Figure 3.0 Greenery Coverage**. Greenery areas of not less than 1,226.4m^2 (i.e. 20% of the site area of 6,132m^2) will be provided. Over 50% out of the 20% greenery areas is allocated at primary zone and accessible by future users and pedestrians. Proposed greenery mentioned above is designed in form of at-grade planting or in planters. Typical detail of the planter is shown in **Figure 4.1.**

6.2 Other green features such as green wall and green roof (inaccessible) are accommodated on retaining structure and on the roof. Typical details of the green roof and green wall are shown in **Figure 4.2 and 4.3**.

7.0 Landscape Design Components

Enhanced Streetscape

7.1 Tree and shrub plantings at street level create a green entrance threshold to the proposed building which establishes the character of the proposed building fitting into the overall SCAA recreational landscape context. Leisure lawn and benches designed in the proposed sitting-out garden in the south of the site also contribute to the streetscape amenity.

Sitting-out Garden

7.2 A sitting-out Garden is designed at the southernmost of the site to integrate with the retaining structures to the sloping area in the further south. Leisure lawn and sitting-out area framed by trees and planting areas are designed for the enjoyment of the future users and visitors to the proposed building. Green roof and green wall are designed on the retaining structures to disguise their functional appearance and provide weatherproof passageway to the proposed building. Ornamental trees and shrub plantings in the garden will create a welcoming sense and acts as green entrance to the building and contribute to the streetscape amenity.

Replanting on Vegetated Slope

7.3 To the south corner of the site, a portion of sloping area will be reformed to enhance the sloping green and integrates with existing vegetated slope in the further south. The slope will follow the existing topography in a suitable gradient for planting with grass and tree planting on the slope crest. Proposed plantations aim to enhance the streetscape amenity and create seamless transition from the south to the proposed building.

Enhanced Landscape Feature

7.4 In addition to the planting proposal mentioned above, there is another engineering feature to be dressed up to alleviate their visual intrusion to the context. Regards of safety concerns, high protection fence is required in between the existing football field/golf practising ground and proposed building. Non-reflective and permeable mesh materials would be used to alleviate the visual intrusion of these protection fences. Material used for existing fence set around the football field/golf practising ground is a good example of the proposed fence.

7.5 Green roofs will be accommodated on the maintenance roof and on the retaining structures to enhance the visual amenity in views of the elevated neighbourhoods.

8.0 Landscape Design Elements

Soft Landscape

8.1 The landscape design has been maximised the opportunities for tree and shrub planting to enhance the character of proposed building in the urbanised and recreational context. The basis for the proposed planting proposal would be providing a green and comfortable environment for the users and the pedestrians.

8.2 Whilst the soft landscape design is subject to review during the detailed design stage of the project, the following description seeks to establish some guiding principles that are important for implementing the landscape as part of the overall scheme and in ensuring

its feasibility.

8.3 The planting scheme for the proposed building tends to create layering of different greening effects through the use of evergreen/broadleaf/ornamental/native/localised species. Suitable plant species provide colour throughout the year with seasonal variation. The selection of species with an interesting form, colour and texture of their foliage and flower provides architectural highlights. Shade tolerant species will be considered in the planting area with less exposure of sunlight or covered planting area. Climbing /trailing plants will be used on the planter edge. Green walls are proposed on/against walls.

8.4 To achieve the recreational landscape character, to achieve greening effect at initial stage and planting of suitable species and sizes in suitable locations, new trees will be specified in a combination of various sizes. The following species in **Table 8.1** form the basis of the planting design proposal and subject to further develop at detailed design stage.

Table 8.1: Planting Mix

Botanical Name	Size (mm)	Spacing (mm)
Tree Species		
**Cinnamomum burmannii*	Heavy Standard	4000
Terminalia mantaly		4000

Note:* denotes native tree species.

Botanical Name	Height x Spread (mm)	Spacing (mm)
Shrub Species		
Aglaia odorata	450 x 400	350
Alternanthera dentata 'Ruby'	200 x 200	300
Camellia japonica	600 x 500	700
Codiaeum variegatum	450 x 300	450
Duranta repen	300 x 300	200
Fagraea ceilanica	500 x 400	400
Ixora chinensis	450 x 300	250
Phyllanthus myrtifolius	200 x 300	150
Rhododendron pulchrum	300 x 300	200
Russelia equisetiformis	450 x 500	600
Schefflera arboricola	400 x 350	300
Syngonium auritum	250 x 150	200

Botanical Name	Height x Spread (mm)	Spacing (mm)
Ground Cover Species		
Alternanthera dentata	200 x 200	300
Cuphea hyssopifolia	150 x 150	200
Lantana mista	200 x 300	500
Ophiopogon japonicus 'variegatum'	100 x 150	250
Syngonium podophyllum 'Variegatum'	250 x 150	300

Botanical Name	Height x Spread (mm)	Spacing (mm)
Lawn Species (Leisure Lawn & Green Roof)		
Hybrid Bermudagrass (cross of *Cynodon dactylon x C. transvaalensis germplasma*)	300 x 300 Turf	even density

Botanical Name	Height x Spread (mm)	Spacing (mm)
Green Wall Planting		
Asparagus densiflorus 'Meyeri'	250 x 250	150
Chlorophytum comosum 'variegatum'	250 x 250	150
Epipremnum aureum 'marble green'	150 x 250	150
Nephrolepis exaltata 'bostoniensis'	250 x 250	150
Schefflera arboricola	250 x 250	150
Tradescantia zebrina Heynh.	100 x 200	150

Botanical Name	Height x Spread (mm)	Spacing (mm)
Climbing Plants (on wall attached to planter/planting area)		
Ficus pumila	At least 3 Shoots per Plant. Each Shoot at Least 1000mm Long	250
Parthenocissus dalzielii	At least 3 Shoots per Plant. Each Shoot at Least 1000mm Long	250

Soil Depth for Planting Areas

8.5 In order to ensure that these planting proposals are feasible, it is proposed that an adequate planting media is incorporated into the design of the planting areas. For example, tree planting in planter or planting area will utilise a minimum 1200mm depth of planting medium, 600mm depth of soil will be required for shrub areas and a minimum soil depth of 300mm for lawn. To ensure enough growing space for healthy plant establishment, sufficient soil depth and soil volume are required in all planting areas and planters with exclusion of structural and drainage layers. Planting spacing and soiling requirement follow the guidelines for tree planting published by DEVB GLTM and have considered the mature size of proposed species to ensure enough space is reserved for healthy establishment of the new planted trees.

Irrigation and Drainage

8.6 The proposed irrigation system will be via automatic/ manual water point operation, covering the entire planting areas within the site. The proposed source of water supply is subject to final approval from the Water Supplies Department. Sub-Soil drainage shall be provided for all planting areas.

Landscape Hardwork Materials

8.7 Paving is an important element of the landscape design both in aesthetic terms and in terms of producing a hardwearing landscape for the usage by all ages and by disabilities. Paved areas would be constructed with high quality materials.

8.8 Paving design would highlight entrance areas, key nodal points and major pedestrian routes and create a hierarchy for pedestrian movement. Colour and pattern changes for establishing different theme/character zones across the development site.

8.9 Non-slip paving materials will be selected to suit the various function of recreational area/open space and the proposed finishes and materials are summarised below:

- Driveway: Concrete paving modular;
- Landscape Garden: A combination of natural and artificial granite and/or recycled pavers with different sizes and colours to form attractive patterns;

8.10 Wherever possible all gardens will cater for multiple use needs including people with impaired ability and access for the disabled provided in accordance with Building Department's Design Manual on 'Barrier Free Access, 2008' and suitable for all ages including children and elderly.

Lighting

8.11 The lighting design concept for the landscaped areas will be designed to contribute to the quality of the development in nocturnal views providing an aesthetically pleasing environment through the creation of mood and highlighting of landscape elements. All the accessible points and open space areas will be provided with sufficient illumination to meet the lighting standards and requirement. Lighting designed for all open space will be carefully designed to avoid glare and shall be effective in energy saving. A timer switch control system shall be provided and where possible the lighting will be designed to avoid spillage and potential glare impacts.

8.12 The lighting concept includes the following types of lighting:

- Amenity lighting provides spot lighting for feature trees and planting;
- Area lighting involves low level lighting like wall recessed within the gardens and other recreational areas to create more sensual experience and to minimise visual intrusion of high lamp poles to visitors;
- Spot/Flood light with the minimum lux level lighting required for sports shall be provided in the areas of ball courts, directional light fixture shall be considered to minimise the light spill to the neighbourhoods; and
- Safety lighting with the minimum lux level lighting for safety which will last between midnight until early morning.

Street Furniture and Landscape Structures

8.13 The landscape design will include the provision of street furniture such as benches and railing which in addition to its functional attributes would also contribute to the perceived quality of the landscape.

Treatment of Engineering Structures/Slopes

8.14 Engineering structures such as retaining wall/slope will be aesthetically enhanced through the use of soft landscape works to give man-made structures a more naturalistic appearance blending into the naturalistic setting adjacent to the site. Planting of climbing plants abuts to the wall/built structure/ on slope to soften the hard edges and disguise its functional appearance.

9.0 Landscape Management and Maintenance

9.1 Upon completion of the construction works, a 12-months defect liability period will be implemented which applies to both hard and soft landscaping works. The soft landscape specialist contractor will be responsible for the maintenance of planting during this first year following practical completion to ensure proper establishment of planting works. Ultimately the property management team of proposed development will employ maintenance staff to take care of all landscape areas including hard and soft landscape works as described below:

Hard Landscape Elements

I - Routine Maintenance (Daily –Weekly)

a. Rubbish and litter removal;
b. Sweeping and cleaning; and
c. Damage inspection and repair for site furniture and light bulb replacement.

II – Annual / Long Term Maintenance

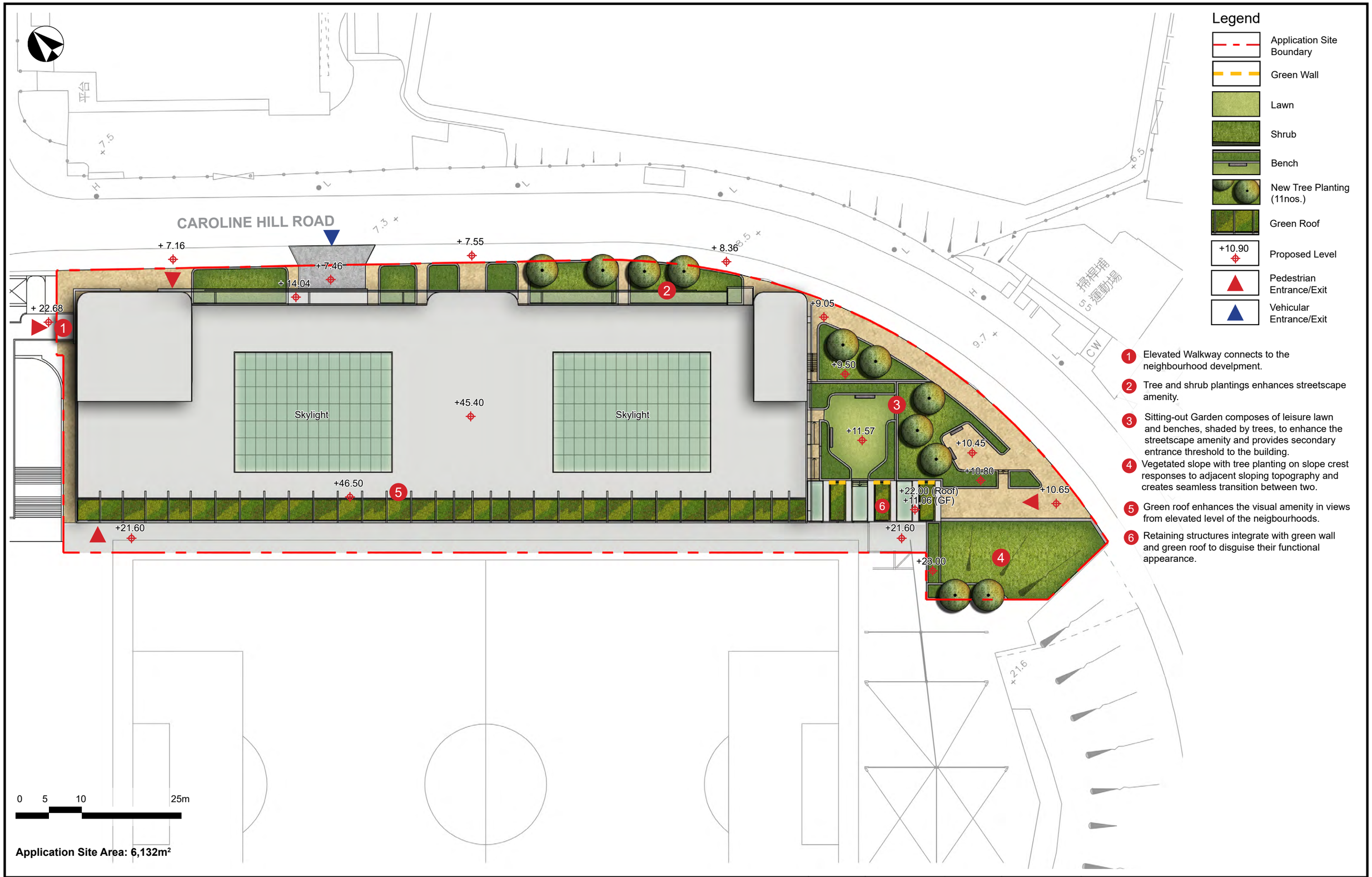
a. Repainting;
b. Resurfacing of worn pavements;
c. Replacing worn parts site furniture, lighting fixture and other facilities;
d. Replacement of worn landscape furniture; and
e. Soft Landscape Elements

Soft Landscape Elements

9.2 The softworks contractor will be responsible for a 12-month establishment period of plants after practical completion of the planting works. It allows a period of time for proper establishment of the plants.

9.3 Upon the end of the 12-months establishment period, the developer will employ maintenance staff to take care of all landscape areas within the development.

Figures



1. Elevated Walkway connects to the neighbourhood develpment.
2. Tree and shrub plantings enhances streetscape amenity.
3. Sitting-out Garden composes of leisure lawn and benches, shaded by trees, to enhance the streetscape amenity and provides secondary entrance threshold to the building.
4. Vegetated slope with tree planting on slope crest responses to adjacent sloping topography and creates seamless transition between two.
5. Green roof enhances the visual amenity in views from elevated level of the neigbourhoods.
6. Retaining structures integrate with green wall and green roof to disguise their functional appearance.

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Landscape Proposal

SCALE	AS SHOWN	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	Figure 1.0	REV	-

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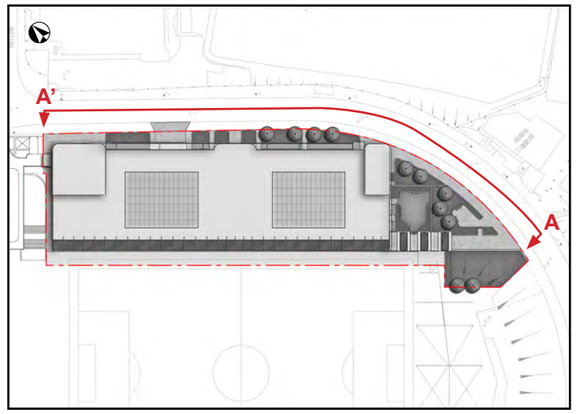
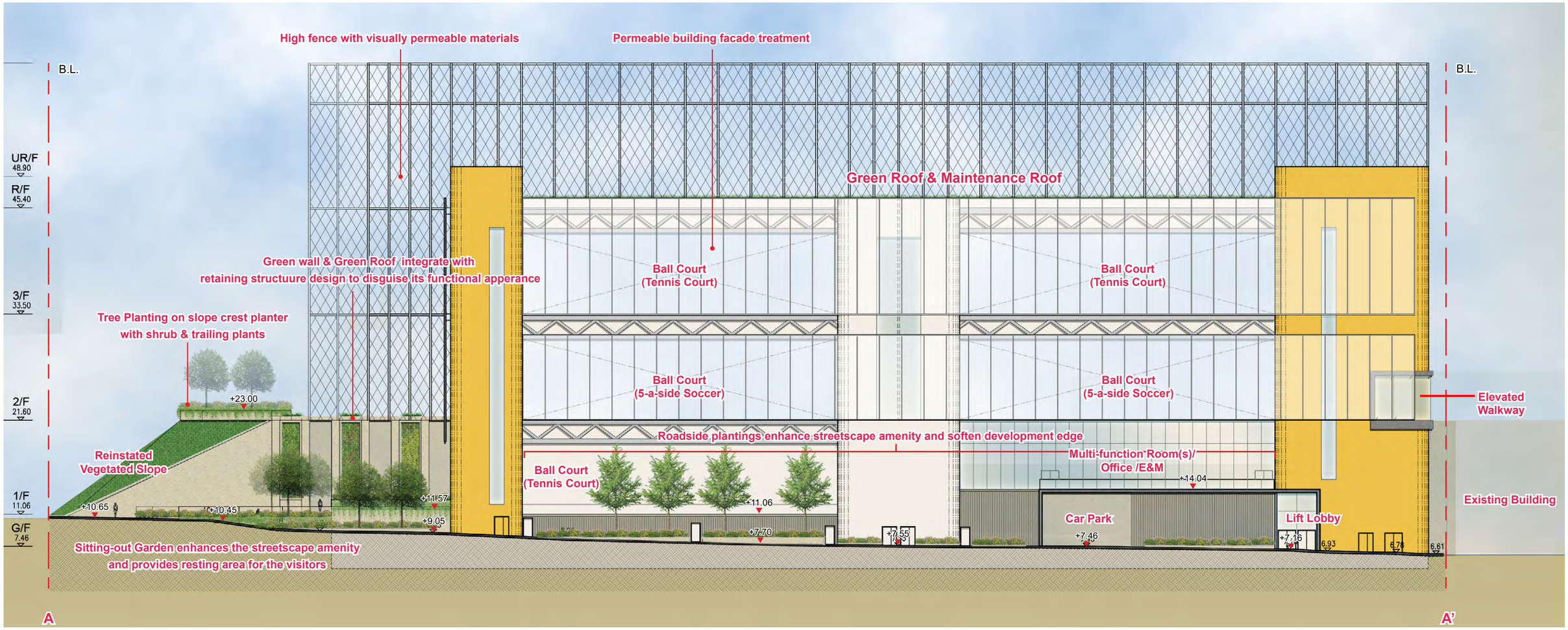


KEY PLAN



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Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Landscape Elevation A-A'

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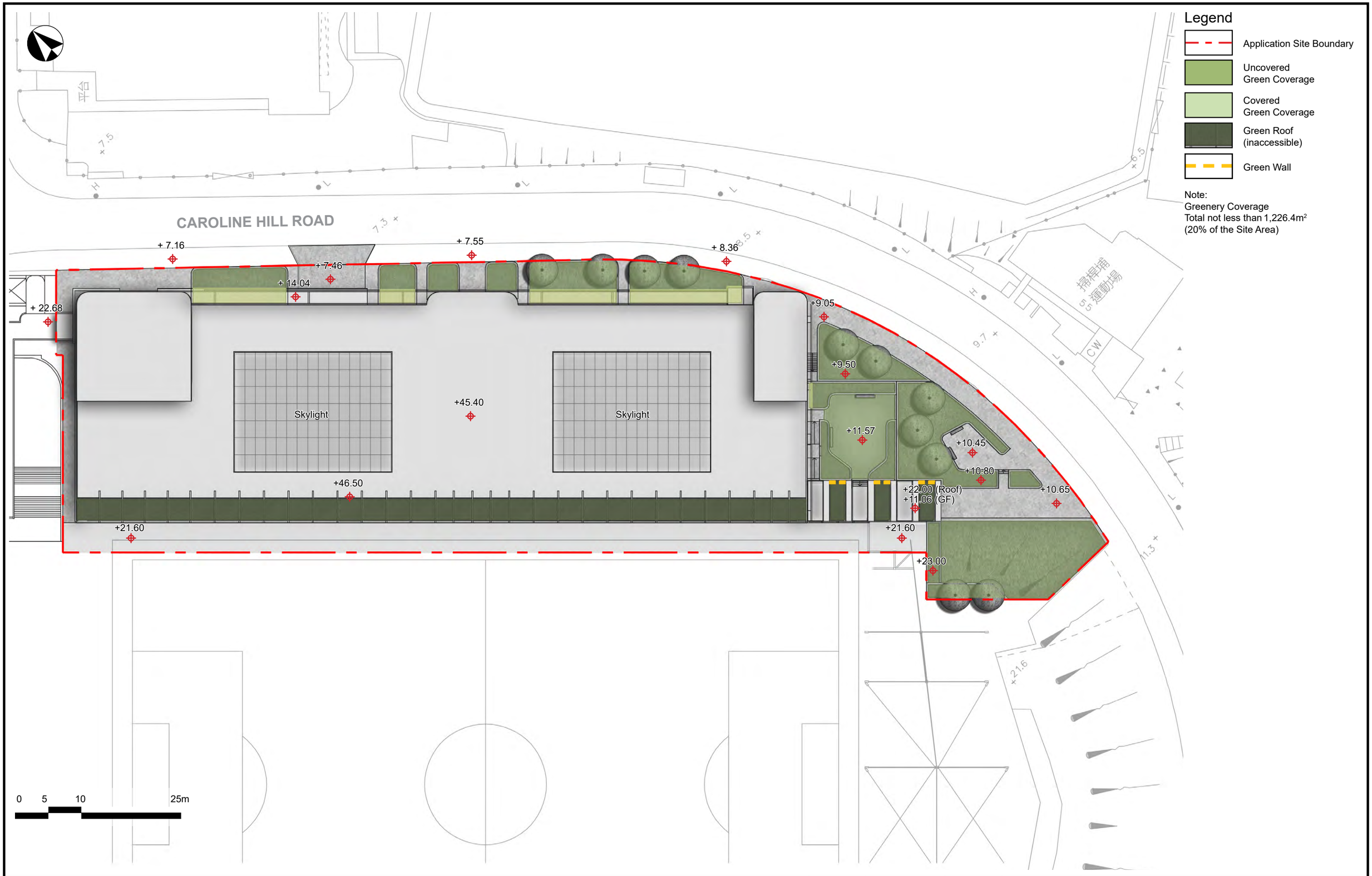

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Greenery Coverage

SCALE	AS SHOWN	DATE	October 2025
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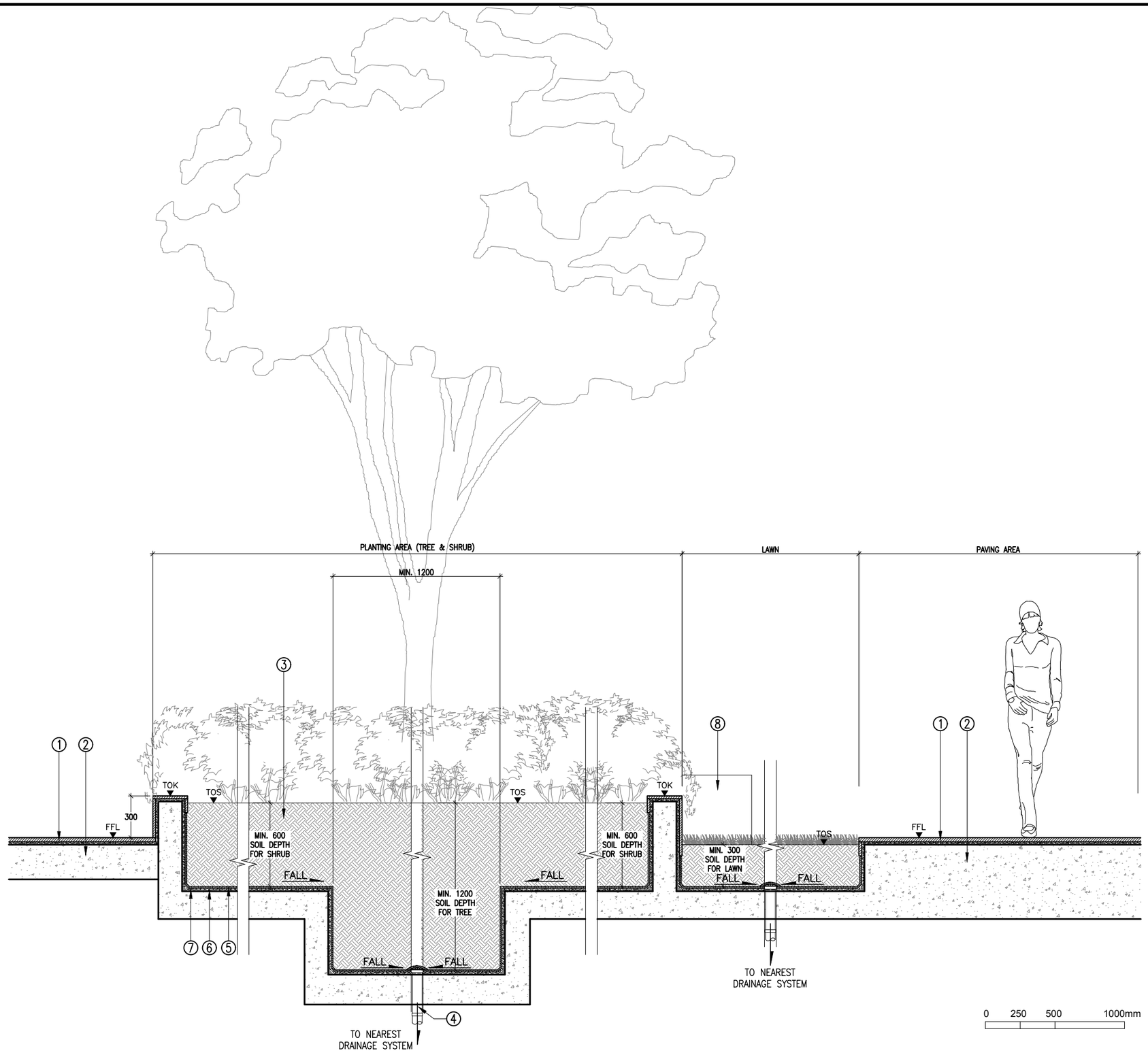

① ADJACENT PAVING AS SPECIFIED

② REINF. CONCRETE TO ENGINEER'S DETAIL

③ PLANTING SOIL MIXTURE

④ DRAINAGE PIPE CONNECTED TO DRAINAGE SYSTEM

⑤ COMPOSITE DRAINAGE CELL LAYER

⑥ C/S FILLET

⑦ WATERPROOFING

⑧ BENCH

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Typical Landscape Detail - Planter

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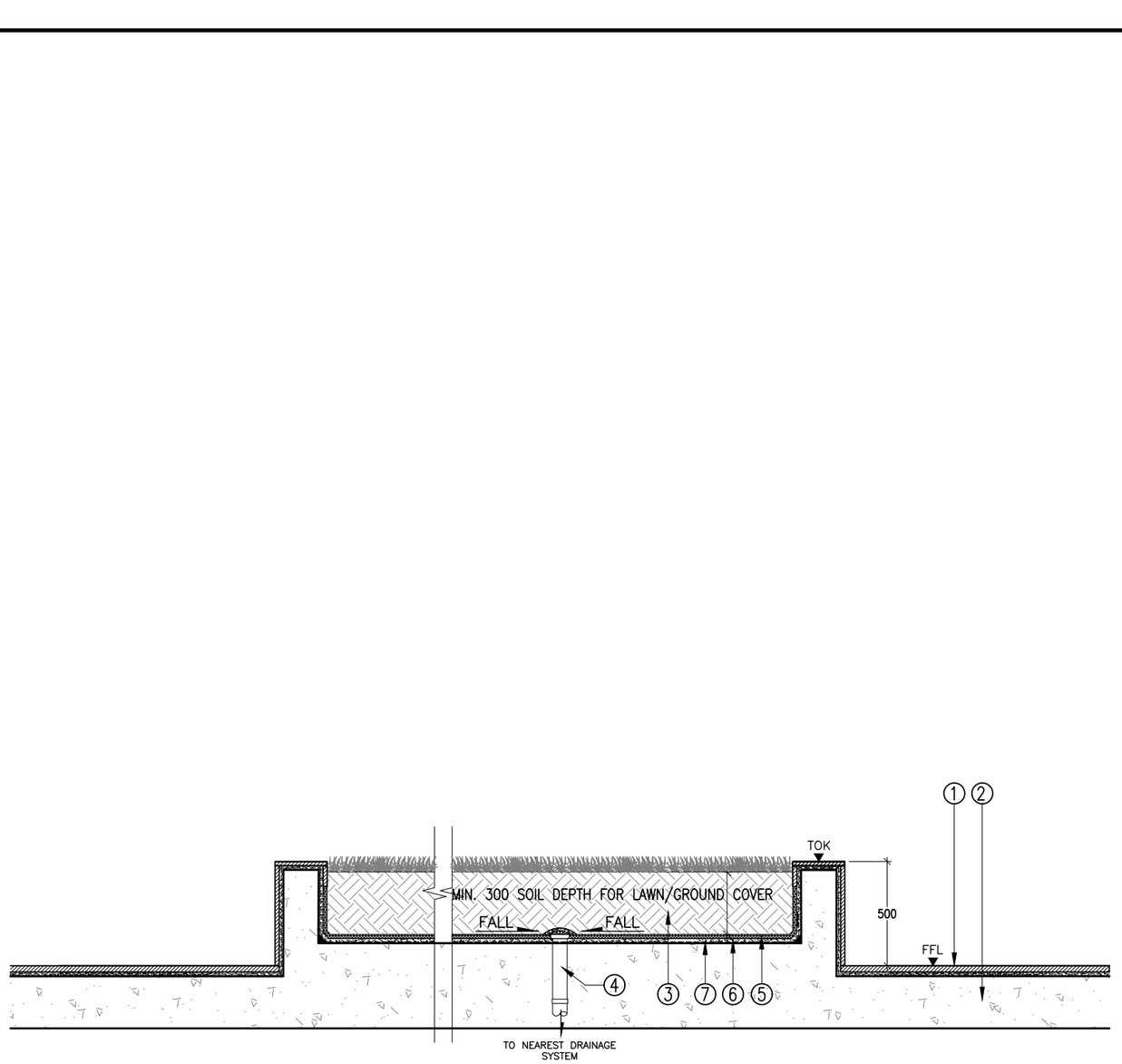
⑤ COMPOSITE DRAINAGE CELL LAYER

⑥ C/S FILLET

⑦ WATERPROOFING



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Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Typical Landscape Detail - Green Roof

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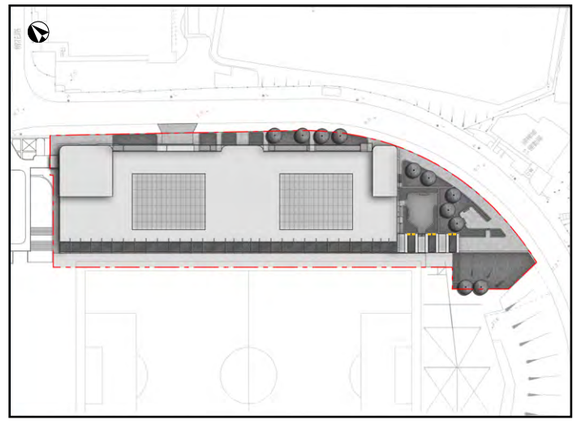
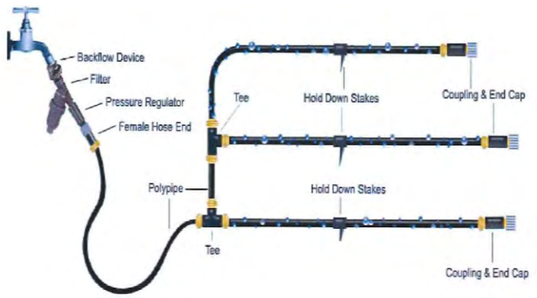


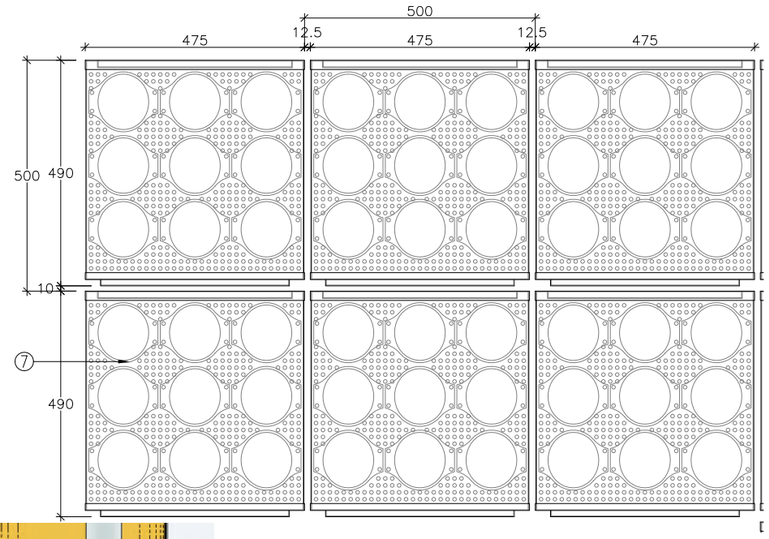
KEY PLAN

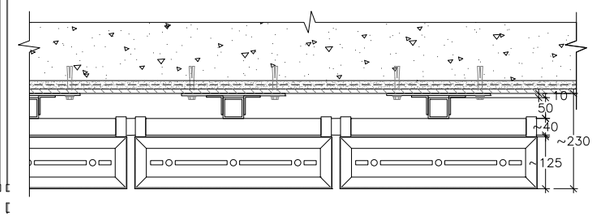
Proprietary Green Wall System





Drip Irrigation System







Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Typical Landscape Detail - Green Wall

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Annex A
Tree Survey Report

Annex A Tree Survey Report

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3.0 Recommendations

4.0 New Tree Planting Proposal

5.0 Conclusion

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Table A4.1 Tree Planting Mix

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Figure A2.1 Existing Tree Size Distribution

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Appendix II Tree Treatment Schedule

Appendix III Photographic Record of Existing Trees

Appendix IV Tree Treatment Plan

Appendix V New Tree Planting Concept

1.0 Introduction

1.1 This report is prepared in support of the Section 16 Planning Application for proposed development at the north side of South China Athletic Association (SCAA) on I.L. No. 9041 at 88 Caroline Hill Road in Wong Nai Chung on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The application site (hereafter the site) is at the north part of the SCAA and situated on the southwest of the Caroline Hill Road. The objective of the tree survey is to provide a more definite picture of the existing trees on the site and hence make recommendations to their treatment aiming for eventual setting with high quality landscape with minimal disturbance to the existing trees. This report should be read in conjunction with the architectural drawings and landscape proposal.

1.2 The tree survey has been completed in broad accordance with Practice Note for Professional Persons No. 1/2019 Processing and Compliance Checking of Landscape Submissions related to Planning Applications. This report outlines the approach and findings of the tree survey, the type and extent of vegetation that will be affected by the proposed development and the proposed treatment of the vegetation. A formal Tree Preservation and Removal Proposal according to LAO Practice Note Issue No. 6/2023 Tree Preservation and Removal Proposal for Building Development in Private Projects will be prepared during the detailed design stage of the project and will submit to the relevant government departments for approval at that time. The survey approach is presented as **Appendix I – Tree Survey Methodology**.

1.3 The tree survey is conducted in November 2024 to reflect the current condition of existing trees within the site boundary of the proposed development. Details of existing trees are presented in **Appendix II – Tree Treatment Schedule, Appendix III - Photographic Record of Existing Tree and Appendix IV – Tree Treatment Plan.**

2.0 Existing Vegetation

2.1 The site is vacant pending for redevelopment. 12 trees are found within the site, majority of them are self-seeded trees, 10 of 12 trees are observed in the north of the site which are in a narrow strip of soiling area remaining on top of the sheet piling structures attached to the existing staircase and the training pool. Another 2 self-seeded trees are attached on the existing retaining wall in the west of the site.

2.2 6 tree species are identified, of which 4 are native species and the other 2 are exotic species which account for 83% and 17% of the total tree number respectively**. Table A2.1** below listed the tree species surveyed and their relative abundance. The existing self-seeded tree species are commonly found in Hong Kong, such as *Broussonetia papyrifera* (33.4%) and *Macaranga tanarius* (33.4%) etc.

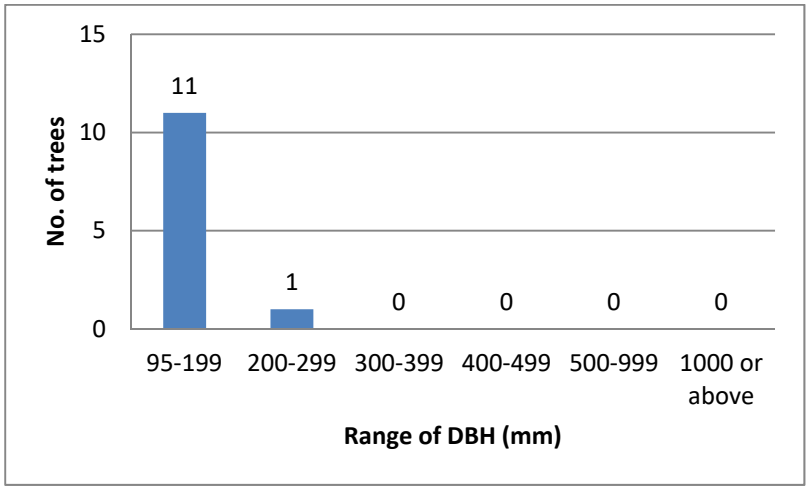
Table A2.1 Summary of Existing Tree Species

Botanical Name	Chinese Name	No. of Trees	%	Native (N)/ Exotic (E)
Broussonetia papyrifera	構樹	4	33.4%	N
Cinnamomum camphora	樟樹	1	8.3%	N
Ficus microcarpa	細葉榕	1	8.3%	N
Leucaena leucocephala	銀合歡	1	8.3%	E
Macaranga tanarius	血桐	4	33.4%	N
Roystonea regia	王棕	1	8.3%	E
	Total	**12**	**100%**	

2.3 There is no registered Old and Valuable Tree (DEVB TC(W) No. 5/2020 Registration and Preservation of Old and Valuable Trees); rare or protected tree species (based on Forests and Countryside Ordinance, Cap. 96) or Champion Tree (identified in the book 'Champion Trees in Urban Hong Kong') found to exist on site.

2.4 The average DBH of the surveyed trees is 148mm, with average height of 4m and average crown spread of 3.71m, which indicates their immaturity in size and age, and are growing in dense and constrained condition. **Figure A2.1 Existing Tree Size Distribution** below shows that the range of size is mainly less than 200 mm.

Figure A2.1 Existing Tree Size Distribution



2.5 In general, the form and structural condition of existing trees are poor regards of their self-seeded and prolific in nature and the constrained growing condition in narrow strip of soil on top of the sheet piles or attached to retaining structures at high elevation. Majority of them are weedy trees and suppressed by adjacent trees with evidence of leaning form, broken branches and die back. **Table A2.2** below shows the summary of existing tree conditions.

Table A2.2 Summary of Existing Tree Condition

Assessment Criteria	Status of Trees	% Trees
Form	Good	0%
	Fair	25%
	Poor	75%
Health Condition	Good	0%
	Fair	67%
	Poor	33%
Structural Condition	Good	0%
	Fair	8%
	Poor	92%
Anticipated Survival Rate after Transplanting	High	0%
	Medium	0%
	Low	100%

2.6 Identification of tree species, tree condition review and the recommendation of tree treatment are reviewed in the following paragraphs and listed in **Appendix II – Tree Treatment Schedule**.

3.0 Recommendations

3.1 The proposed building recognises the existing and planned recreational landscape context and character of the site. Having considered majority of existing trees are weedy species and in poor form with low amenity value, and they are inevitably to be affected by the building and retaining structure/slope modification works, therefore they are recommended to be removed. The recommendation for the treatment of existing trees is illustrated in **Appendix II – Tree Treatment Schedule** and **Appendix IV - Tree Treatment Plan.**

3.2 Though tree removal is inevitable, they will be compensated and replaced by a combination of high-quality replacement trees and suitable greening treatment by maximising the landscape and greening opportunities for the site. Upon full establishment of proposed planting, the local landscape context will be enhanced through the introduction of good quality planting.

4.0 New Tree Planting Proposal

4.1 As described above, the loss of existing trees will be replaced by broadleaf/evergreen/ ornamental trees creating a good quality landscape that would enhance the visual amenity of the local context, benefiting to both the future users and their neighbourhoods. The **New Tree Planting Concept** is presented as **Appendix V**. The planting proposal has sought to:

- Provides physical and visual integration with the overall recreational landscape;
- Provides screening to the built-form and softening the development edge;
- Enhances streetscape amenity of Caroline Hill Road;
- Provides compensation for felling of existing trees; and
- Maximises opportunities for the planting of new trees as well as other form of greening measures.

4.2 The planting proposal provides the green environment and good quality planting establishment for the proposed building. The current scheme would be able to accommodate 11 nos. of new tree planting within the site. New tree planting will utilise heavy standard sized stock. This proposal has maximised the opportunity of greening within the site.

4.3 As described above, the landscape areas associated with the proposed building would able to accommodate 11 new trees, and would achieve a replanting ratio of 1:1 (11 fell trees : 11 new trees) excluding the compensation for one weedy tree, *Leucaena leucocephala* (LL). Upon full establishment of the planting proposal, there is no net loss of landscape resource.

4.4 All planting areas are designed either at-grade or in planters which will reserve adequate planting soil depth and soil volume for healthy tree establishment. A minimum of 1200mm soil depth (exclusion of structural and drainage layers) will be reserved in the new tree planting areas. Planting spacing and soiling requirement follow the guidelines for tree planting published by DEVB GLTM and have considered the mature size of proposed species to ensure enough space is reserved for healthy establishment of the new planted trees.

4.5 The selection of good quality species will enhance the landscape context upon full establishment. These trees form part of the overall landscape design proposal which will be developed during the detailed design stage of the project. A summary of the new tree planting proposal is provided in **Table A4.1** below. The planting proposal is subject to be further developed at detailed design stage.

Table A4.1: Tree Planting Mix

Botanical Name	**Size (mm)**	**Spacing (mm)**
Tree Species		
**Cinnamomum burmannii*	Heavy Standard	4000
Terminalia mantaly		4000

Note:* denotes native tree species.

4.6 Heavy standard sized trees are defined as follows:

- A sturdy straight stem with stem at least 2000mm high from the root collar to the lowest branch;
- Total height above the root collar exceeding 3500mm but not exceeding 6000mm;
- Stem diameter exceeding 75mm but not exceeding 150mm measured at a

height of 1300mm from the root collar;
- According to the species, either well-balanced branching head, or a well-defined straight and upright leader with branches growing out from the stem with good symmetry, and a minimum length of 800mm;
- A root ball not less than 750mm in diameter and 400mm in depth;
- Grown in a container not less than 750mm in diameter and 600mm in depth; and
- Free from any kind of pest, fungi, disease and parasitic plants.

4.7 The height of all trees shall be measured above root collar, and the diameter of all stems to be measured at a height of 1300m above ground level.

5.0 Conclusion

5.1 The site is vacant pending for redevelopment. 12 existing trees are found within the site according to the tree survey conducted in November 2024. 10 of existing trees are observed in the north of the site which are in a narrow strip of soiling area remaining on top of the sheet piling structures attached to the existing staircase and the training pool and another 2 self-seeded trees are attached on the existing retaining wall in the west of the site.

5.2 Majority of these self-seeded trees are weedy species and prolific in nature, they have poor form and structure condition with uncoverable defects, and their amenity value is low. Tree species are commonly found in Hong Kong. No rare or protected tree species (Cap. 96 refers) is found to exist on site. No registered Old and Valuable Tree (DEVB TC(W) No. 5/2020 Registration and Preservation of Old and Valuable Trees) is found.

5.3 Intending to improve sustainability and to enrich the local landscape context, together with the consideration of existing tree poor condition as well as justifying by several factors, including health, form, structural condition, species, size, maturity and the character of local landscape context, and cost-effectiveness, these weedy trees are recommended to be removed. The removal of trees will be replaced by a combination of high-quality broadleaf and ornamental trees.

5.4 The new tree planting proposal have considered the building disposition, spatial and safety requirements for sports facilities operation, proper planting area for good quality planting establishment and hence been maximised within the site. A total of 11 new trees in heavy standard sized stock would be accommodated within the site. The replanting ratio of 1:1 (11 fell trees : 11 new trees) excluding the compensation for one weedy tree, *Leucaena leucocephala* (LL). Upon full establishment of the planting proposal, there is no net loss of landscape resource.

5.5 Proposed planting proposal will fit into the SCAA recreational grounds and surrounding recreational landscape context. With the full establishment of the planting proposal, the local landscape context and the streetscape amenity of Caroline Hill Road would be enhanced.

Appendices

Appendix I

Tree Survey Methodology

Appendix I

1.0 Tree Identification Survey Methodology

The method of the tree survey adheres to the guidelines stipulated in the following guidelines and practice notes:

- Practice Note for Professional Persons No. 1/2019 Processing and Compliance Checking of Landscape Submissions related to Planning Applications
- DEVB TC(W) No. 4/2020 Tree Preservation
- LAO Practice Note Issue No. LAO PN No. 2/2020 Tree Preservation and Removal Proposal for Building Development in Private Projects.
- DEVB TC(W) No. 5/2020 Registration and Preservation of Old and Valuable Trees.

1.1 **Key**

Trees surveyed individually are included in schedule following the methodology and identify the following information:

Tree ID:	A plant is defined as a “tree” to be surveyed if its trunk diameter measures 95mm or more at a height of 1.3m (i.e. Diameter at Breast Height (DBH)) above ground level. Tree ID determined by ADI Limited and corresponding to the Tree Survey Plan for identification.
Photo No.:	The photo number shows in the existing tree photographic record.
Tree Species:	The botanical name in scientific and Chinese names is used and refers to the Guidance on proper use of scientific name of plants is given in the AFCD’s Nature Conservation Practice Note (NCPN) No. 3 “The Use of Plant Names”
DBH:	Trunk diameter of a tree refers to its diameter at breast height (DBH); i.e. measured at 1.3m above ground level. Measured in millimetres (mm). DBH Measuring method refers to the Nature Conservation Practice Note No. 2 Measurement of Diameter at Breast Height (DBH).
Overall height:	Measured in metres (m).
Average Crown spread:	Diameter of the tree canopy at its widest extent. Measured in metres (m). Tree canopy should be drawn proportional to the spread of the tree with reasonable presentation of its physical form.

The date of completion of the tree treatment/assessment schedule and tree survey plan should be within 2 years (24 months) prior to initial submission.

2.0 Effects of Development on Existing Trees and Treatment of Trees

2.1 Key

Recommended tree treatment are described in the written report and schedule following the methodology and identify the following information:

Proposed Treatment	Identified as Retain, Transplant or Fell.
Remarks	Indicated special features/character/defect observed on tree, poor tree form and health condition, hazardous tree, registered/potential OVT, amenity and historical significance, growing condition etc..

2.2 Possible Treatment for Trees

The treatment proposed for tree is dependent on the following considerations:

a) Retain

The feasibility of tree retention has been considered with regard to the followings:

- Proximity to the area of building works/ site formation works and associated slope stabilisation and/or road works and/or utilities works and potential damage to trees as a result of the works.
- Change to ground level on a macro scale which affects the ground water table and may cause severe stress.
- Special construction and protection method to maintain the existing ground level surround the tree are also considered.
- Conflict between tree roots and construction works.
- Existing trees to be retained will be protected during construction in accordance with DEVB GLTM Guidelines on Tree Preservation during Development.

b) Transplant

In situations where it is impossible to retain trees then transplanting them is the first consideration. The criteria upon which the assessment of transplanting trees base on the following:

- **Species:** Previous experience and arboriculture knowledge point to some species having a higher tolerance to the effects of transplantation than others. Rare Hong Kong species are particularly important considered to be preserved or transplanted.

- **Condition of the tree:** Trees with balanced form, good health and with high amenity value are considered for transplantation. Trees growing on slopes or in close proximity to one another generally have a poor form, and trees with unrecoverable defects or poor vigour with low ability to withstand changes, do not make good specimens for transplant.

- **Tree age:** There is a direct correlation between the age of a tree and its predicted survival rate post transplantation: older trees are sensitive to disturbance and resulting physiological stress associated with the transplanting operation; younger trees have greatest vigour to tolerate change and to recover from root and crown pruning required during the operation. As the tree matures, its ability to tolerate change decreases and so the maintenance of a stable environment around the tree is vital to its continued health.

- **Access:** Large machinery is required to lift trees as part of the transplantation procedure and so ease of access is important. Access to trees on steep slope for transplanting and related preparation works might not be technically feasible, and with high risk and not cost-effective.

- **Extent of the roots:** Tree root development and its disposition respond to site condition and are often unique to each situation. For some situations, it is not technically feasible to prepare a viable root ball for transplanting and lower the survival rate. Trees on slopes have a higher proportion of roots uphill for anchoring and sloping root system as the root ball usually forms itself to the angle of the slope. Irregular and structurally less stable root ball is resulted in restricted rooting area such as being close to built structure, underground utility, with limiting growing medium or at hard-paved location. In addition the roots of trees growing in close proximity to one another often share the same space within the ground and so the excavation required as part of the rootball preparation is likely to cause significant damage to the adjacent trees.

- **Construction Programme:** Large trees require adequate time for the phased pruning of the roots so as to allow the tree to recover between pruning episodes and hence the impact of physiological stress to the trees.

- **Future character of the site:** Also considered was the future landscape character of the site.

- **Cost-effectiveness for transplanting operation:** considered the size of the tree, machinery accessibility to the transplant tree, transport limitation from the existing tree location to final tree recipient site, setting up of temporary holding nursery for transplant tree and their maintenance cost before replanting to final location.

When considering the need for transplanting tree described above there is no need to transplant tree with the following features under normal circumstances:

- Low amenity value;
- Poor health, structure or form;
- Irrecoverable form after transplanting (e.g. transplanting requires substantial
- crown and root pruning);
- Low chance of survival upon transplanting;
- undesirable weedy species (e.g. *Leucaena leucocephala* which is an invasive, exotic and self-seeding tree);
- Trees grown under poor conditions which have limited the formation of proper root ball necessary for transplanting.
- Preservation or transplanting is unsuitable or impracticable;
- The tree has been irreparably damaged by inclement weather/ insect/fungus/disease which unrecoverable defects observed.
- Dead tree(s); or
- Any other justifications or circumstances.

c) Fell

Trees in direct conflict with building, site formation, associated slope stabilisation and/or road works, such as required change of ground level, are not technical viable for tree retention/ transplanting and having no option other than to be felled.

Trees that are not directly in conflict with the works shall be considered in terms of their form, health and structural condition. Dead, hazardous or trees with contiguous disease or unrecoverable defects are also proposed to be felled. Woodland trees which have adjacent trees removed and with unbalanced form or which are at risk of being blown over due to loss of supporting trees are considered for felling.

Appendix II

Tree Treatment Schedule

Tree Treatment Schedule
Address: Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road in Wong Nai Chung
Prepared by Pang Shun Chin, Howard Pang (Certified ISA No. HK-0520A)
Field Survey conducted in November 2024
To be read in conjunction with drawing numbers: D2HK07A-TT01

Tree ID	Photo No.	Tree Species		Tree Size			Top of soil level above root collar (mPD)	Form			Health Condition			Structural Condition			Anticipated Survival Rate after Transplanting			Location		Conservation Status	Proposed Treatment			Justification	Remarks
		Scientific Name	Chinese Name	Trunk diameter (mm)	Overall Height (m)	Average Crown Spread (m)		Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor	High	Med	Low	Flat	Slope		Retain	Transplant	Fell		
T1	T1	*Leucaena leucocephala*	銀合歡	130	4	4	18.04			1		1				1			1	1		not listed			1	B,E	Self-seeded weedy tree on narrow strip of soil on top of sheet piles. Crown: Imbalance crown. Trunk: With broken branches. Root: Contained by concrete wall and sheet piling.
T2	T2	*Broussonetia papyrifera*	構樹	120	4	3	18.23			1		1				1			1	1		not listed			1	B,E	Self-seeded weedy tree on narrow strip of soil on top of sheet piles. Crown: Crossed and supressed by adjacent trees. Trunk: Withered branches and Twigs. Wounds on trunk. Root: Contained by concrete wall and sheet piling.
T3	T3	*Macaranga tanarius*	血桐	190	3	4.5	18.20			1			1			1			1	1		not listed			1	B,E	Self-seeded weedy tree on narrow strip of soil on top of sheet piles. Crown: Crossed and supressed by adjacent trees. Trunk: Leaning; many wounds and decay broken branches. Root: Contained by concrete wall and sheet piling.
T4	T4	*Macaranga tanarius*	血桐	180	4	4	18.46			1			1			1			1	1		not listed			1	B,E	Self-seeded weedy tree on narrow strip of soil on top of sheet piles. Crown: Imbalance crown. Trunk: Leaning; contorted trunk. Dead branches. Root: Contained by concrete wall and sheet piling. Fungal infestation.
T5	T5	*Broussonetia papyrifera*	構樹	110	4	2	18.46			1			1			1			1	1		not listed			1	B,E	Self-seeded weedy tree on narrow strip of soil on top of sheet piles. Crown: Small crown. Trunk: Seriously withered branch and twigs. Root: Contained by concrete wall and sheet piling. Die back.
T6	T6	*Roystonea regia*	王棕	140	3	3	18.45			1		1			1				1	1		not listed			1	B,E	Tree on narrow strip of soil on top of sheet piles. Crown:Supressed by adjacent trees. Root: Contained by concrete wall and sheet piling.
T7	T7	*Macaranga tanarius*	血桐	200	4	7	18.56		1			1				1			1	1		not listed			1	B,E	Self-seeded weedy tree on narrow strip of soil on top of sheet piles. Crown: Imbalance crown. Trunk: Leaning towards site direction. Root: Contained by concrete wall and sheet piling.
T8	T8	*Broussonetia papyrifera*	構樹	180	8	5	21.39		1			1				1			1	1		not listed			1	B,E	Self-seeded weedy tree on narrow strip of soil on top of sheet piles. Crown: Imbalance crown. Trunk: Leaning; contorted trunk. Wounds. Root: Contained by concrete wall and sheet piling.
T8A	T8A	*Cinnamomum camphora*	樟樹	100	4	2	21.56		1			1				1			1	1		not listed			1	B,E	Self-seeded tree on narrow strip of soil on top of sheet piles. Crown: Imbalance crown. Supressed by adjacent trees. Root: Contained by concrete wall and sheet piling.
T9	T9	*Macaranga tanarius*	血桐	170	3	4	21.48			1		1				1			1	1		not listed			1	B,E	Self-seeded weedy tree on narrow strip of soil on top of sheet piles. Crown: Imbalance crown. Supressed by adjacent trees. Trunk: Leaning; contorted trunk. Root: Contained by concrete wall and sheet piling.

Tree ID	Photo No.	Tree Species		Tree Size			Top of soil level above root collar (mPD)	Form			Health Condition			Structural Condition			Anticipated Survival Rate after Transplanting			Location		Conservation Status	Proposed Treatment			Justification	Remarks
		Scientific Name	Chinese Name	Trunk diameter (mm)	Overall Height (m)	Average Crown Spread (m)		Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor	High	Med	Low	Flat	Slope		Retain	Transplant	Fell		
T10	T10	*Ficus microcarpa*	細葉榕	131	3	2	18.79			1			1			1			1		1	not listed			1	B,E	Self-seeded tree on retaining wall attached to beam structures. Crown: Imbalance crown. Trunk: No formal tree trunk; main trunk broken. Bent remnant branch. Root: Contained and deformed by structures.
T10A	T10A	*Broussonetia papyrifera*	構樹	120	3.5	4	20.77			1		1				1			1		1	not listed			1	B,E	Self-seeded weedy tree on retaining wall edge attached to beam structures. Crown: Imbalance crown. Trunk: Leaning; multi-trunk. Root: Contained and deformed by structures.
								0	3	9	0	8	4	0	1	11	0	0	12	10	2		0	0	12		**12**
								0%	25%	75%	0%	67%	33%	0%	8%	92%	0%	0%	100%	83%	17%		0%	0%	100%		
								Good	**Fair**	**Poor**	**Good**	**Fair**	**Poor**	**Good**	**Fair**	**Poor**	**High**	**Med**	**Low**	**Flat**	**Slope**		**Retain**	**Trans**	**Fell**		**Total of existing trees surveyed**

Summary Table

	Within Site
Tree to be Retained	0
Tree to be Transplanted	0
Tree to be Felled	12
Total Number of Existing Trees	**12**
Weedy Leucaena leucocephala (LL)	1
New Tree Replanting Ratio Exclusion (LL)	**11 Fell: 11 New Trees Replanting Ratio 1:1**

Legend

Tree Species
Guidance on proper use of scientific name of plants is give in the AFCD's Nature Conservation Practice Note (NCPN) No. 3 "The Use of Plant Names"

DBH
DBH of a tree refers to its diameter at breast height (i.e. measured at 1.3m above ground level).
"mm" stands for millimetre and "m" stands for metre.

Top of soil level above root collar
This figure provides the existing soil level; when trees retained in-situ, the soil level should be maintained and not cover the root collar.

Tree Form/ Health Condition/ Structural Condition
- **G** Good
- **F** Fair
- **P** Poor

Form of a tree will take account of the overall tree size, shape and any special feature.

Anticipated Survival Rate after Transplanting
- High: Very likely to survive after transplant
- Medium: >50% possibility of survival after transplantation
- Low: Unlikely to survive due to poor health/form; or tree species has little tolerance to the effects of transplanting; or difficult to transplant

Location
Location of tree if it is growing on flat or sloping location.

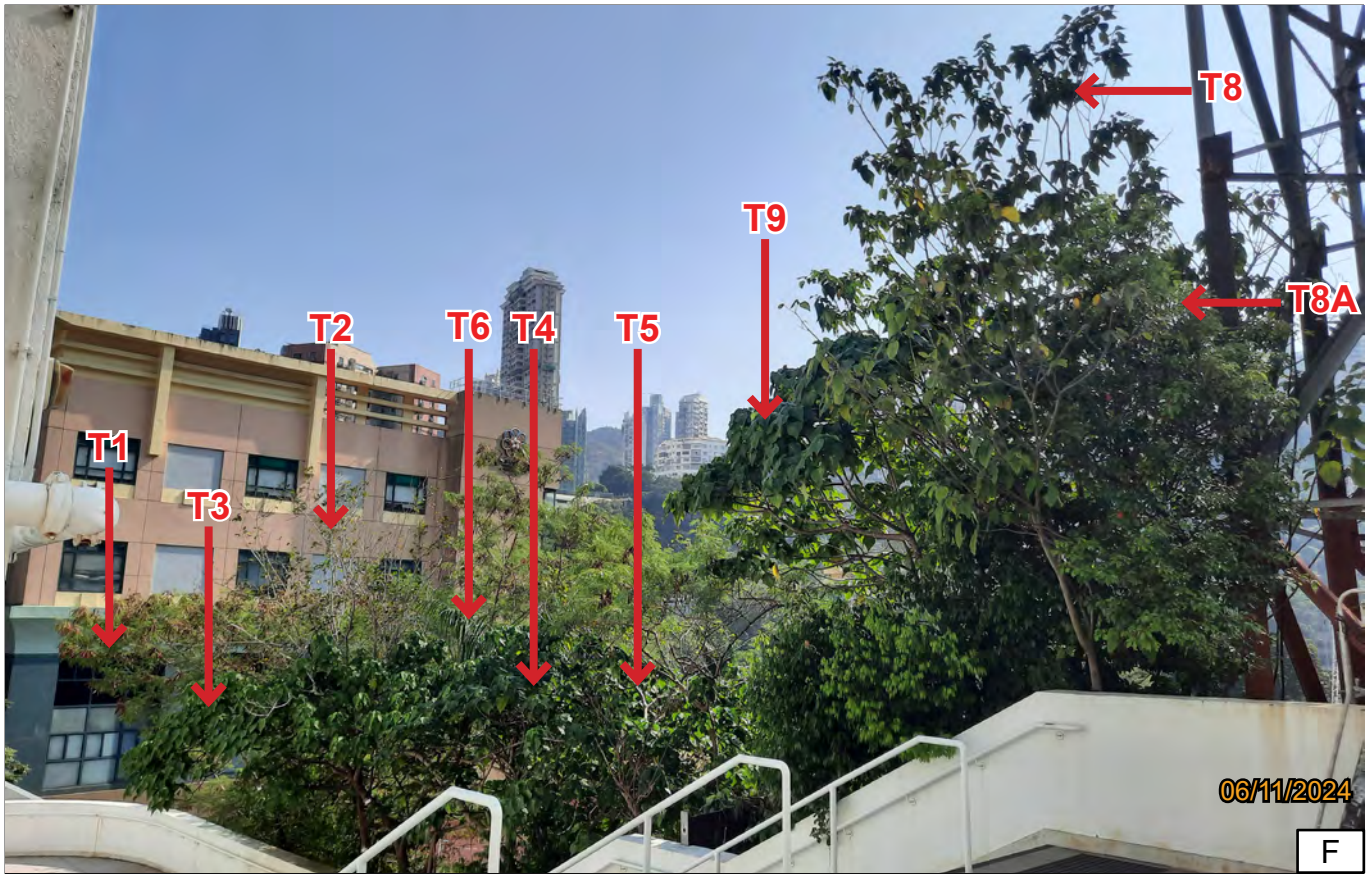
Conservation Status
Indicated rarity and protection status under relevant ordinances of a species in Hong Kong/ in Mainland China/ of nationally importance.

Justification for Tree Recommendation
- A Tree retention recommended
- B Felling recommended as tree is directly in conflict with the building and/or site formation works and/or access road works
- C Tree transplanting recommended as tree is affected by the building and/or site formation works
- D Dead tree to be removed
- E Weedy species or tree has unrecoverable defect

Remarks
The tree status whether the registered OVT, the TPI, the Precious or rare or endangered species; amenity or ecological value; anticipated root-ball size to be preserved (with Ø. x depth in mm); historical significance and any other on-site conditions, etc. within and/or adjacent to the site is likely to be affected by the proposed development.
Special characteristics of tree form and health condition, any evidence of broken trunk/ leaning trunk/ trunk decay or water sprouts will be recorded in the remarks of the Tree Survey Schedule.

Appendix III

Photographic Record of Existing Trees



T1 to T9 (Overall)



T1 to T9 (Overall)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung Photographic Record of Tree Survey	SCALE	N.T.S.	DATE	October 2025
	CHECKED	ELK	DRAWN	TEAM
	FIGURE NO.	D2HK07A-TS001	REV	-

ADI



T1 (OVERALL)



T1 (BASE)



T1 (TRUNK)



T1 (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS002	REV	-

ADI



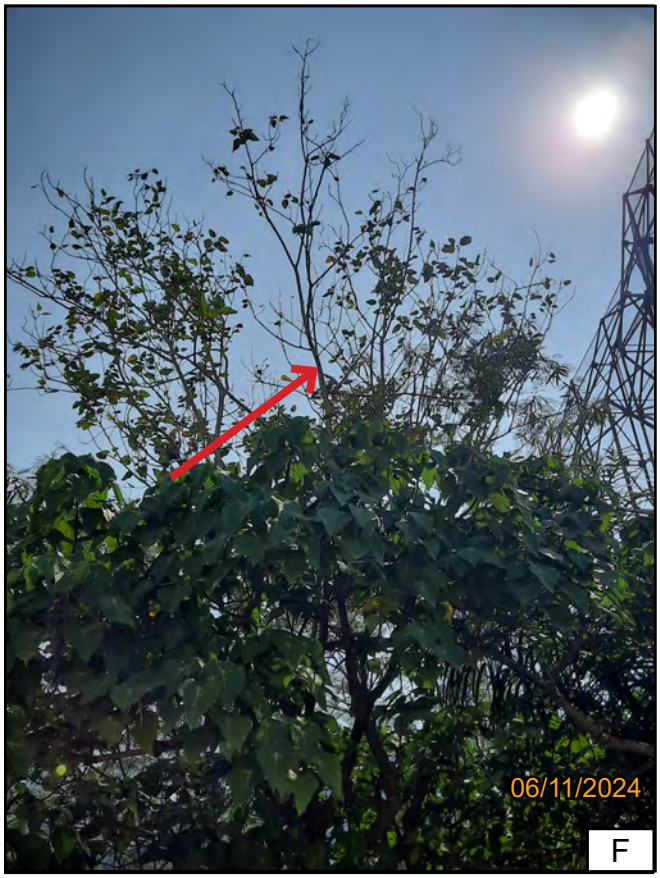
T2 (OVERALL)



T2 (BASE)



T2 (TRUNK)



T2 (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS003	REV	-

ADI



T2 (DEFECT A)



T2 (DEFECT B)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung Photographic Record of Tree Survey	SCALE	N.T.S.	DATE	October 2025
	CHECKED	ELK	DRAWN	TEAM
	FIGURE NO.	D2HK07A-TS004	REV	-

ADI



T3 (OVERALL)



T3 (BASE)



T3 (TRUNK)



T3 (CROWN)

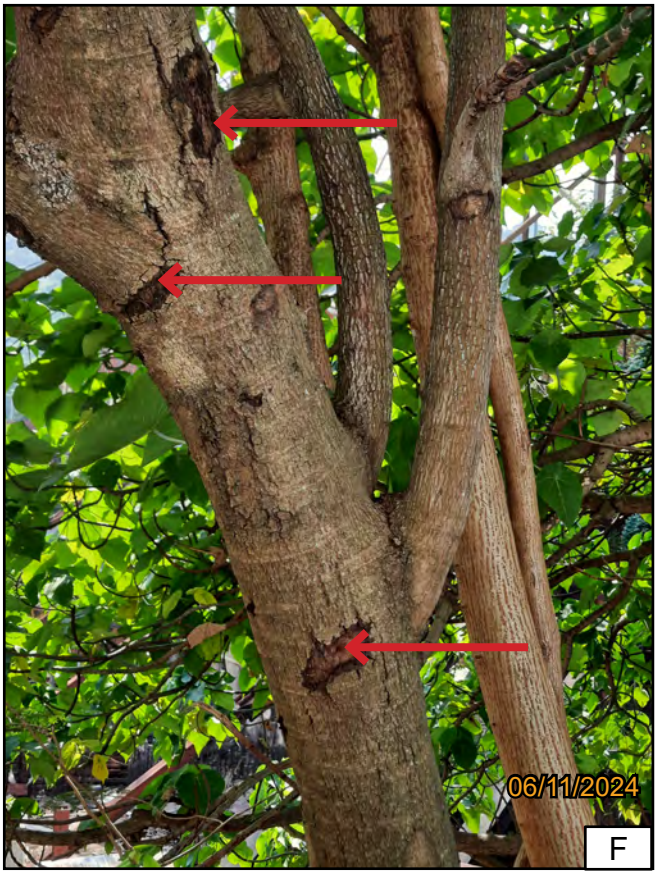
R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS005	REV	-

ADI



T3 (DEFECT A)



T3 (DEFECT B)



T3 (DEFECT C)



T3 (DEFECT D)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS006	REV	-

ADI



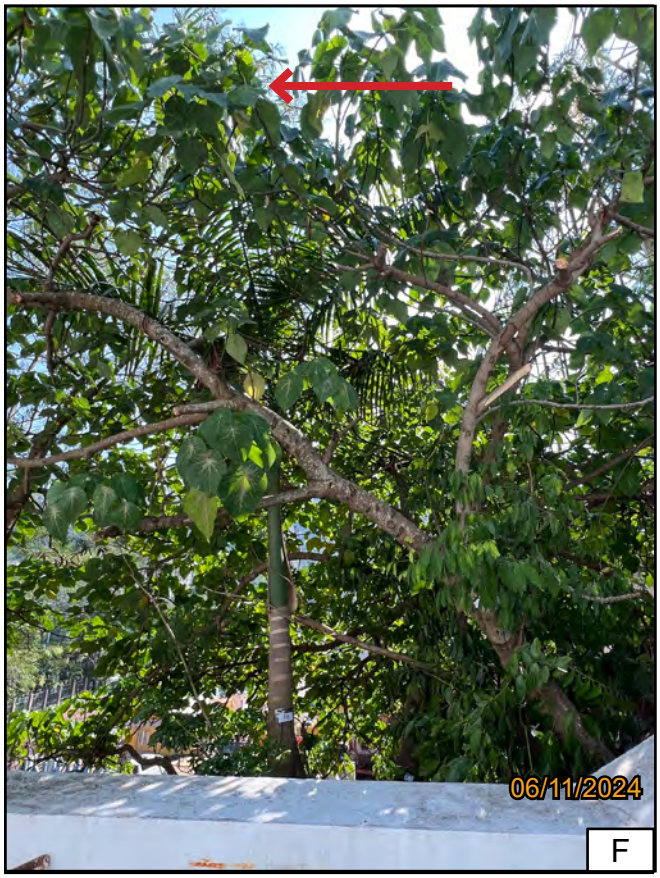
T4 (OVERALL)



T4 (BASE)



T4 (TRUNK)



T4 (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS007	REV	-

ADI



T4 (DEFECT)

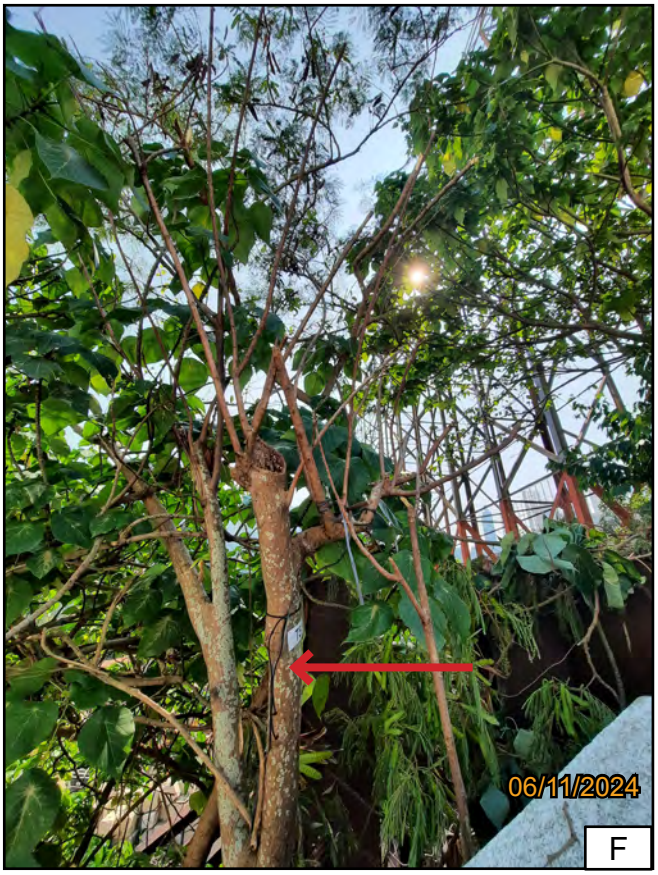
R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS008	REV	-

ADI



T5 (OVERALL)



T5 (BASE)



T5 (TRUNK)



T5 (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS009	REV	-

ADI



T5 (DEFECT)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung Photographic Record of Tree Survey	SCALE	N.T.S.	DATE	October 2025
	CHECKED	ELK	DRAWN	TEAM
	FIGURE NO.	D2HK07A-TS010	REV	-

ADI



T6 (OVERALL)



T6 (BASE)



T6 (TRUNK)



T6 (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS011	REV	-

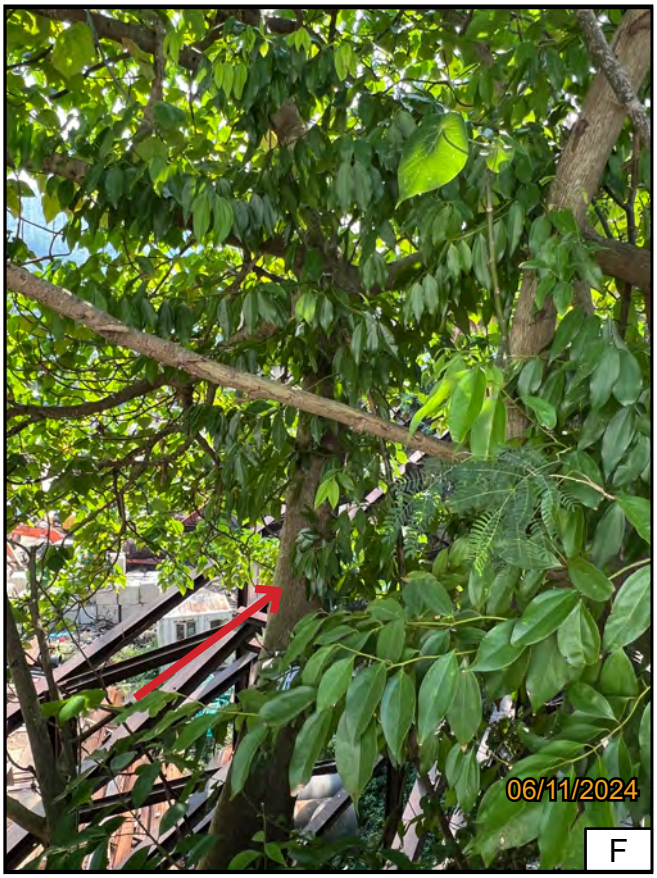
ADI



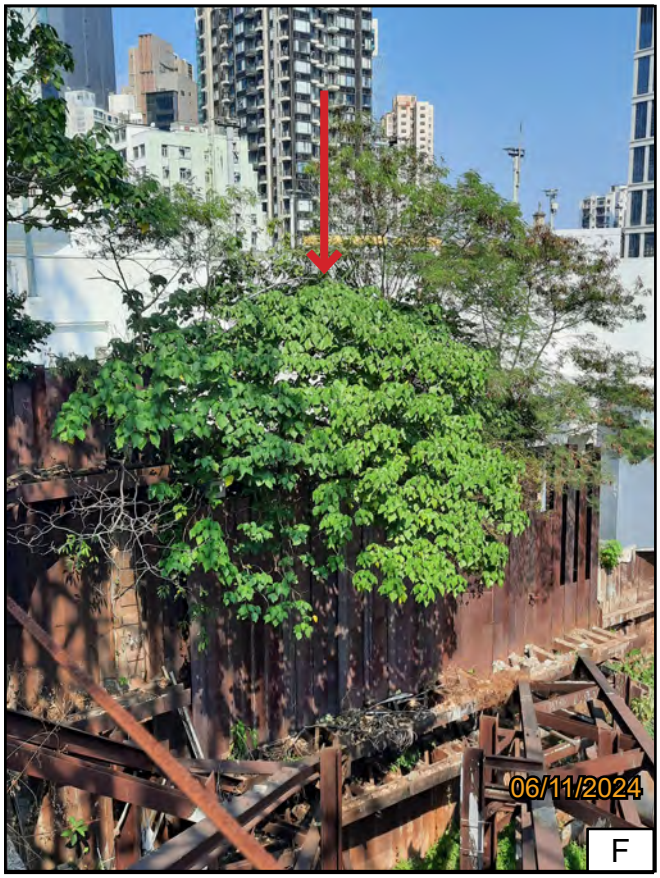
T7 (OVERALL)



T7 (BASE)



T7 (TRUNK)



T7 (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS012	REV	-

ADI



T8 (OVERALL)



T8 (BASE)



T8 (TRUNK)



T8 (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS013	REV	-

ADI



T8 (DEFECT)

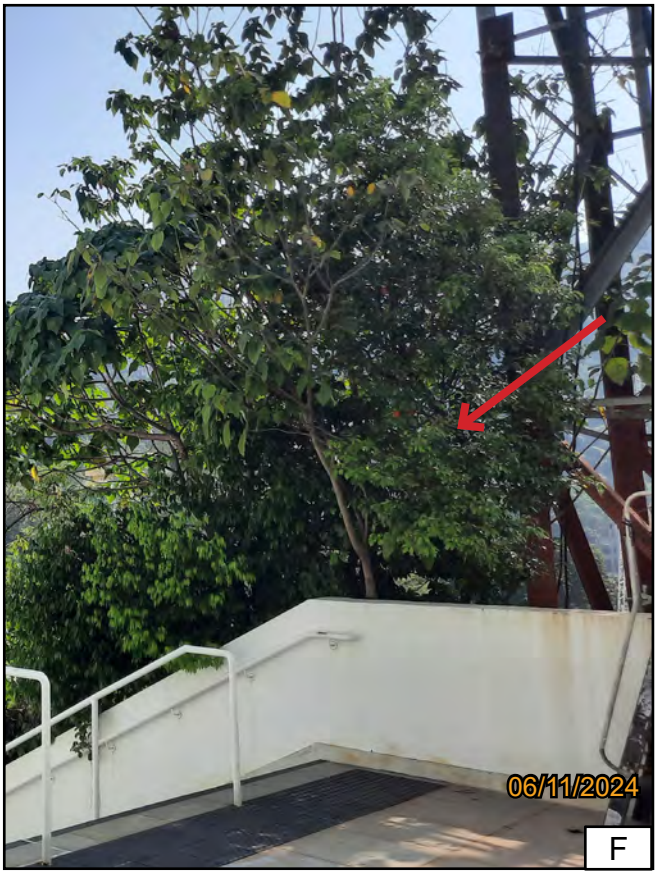
R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS014	REV	-

ADI



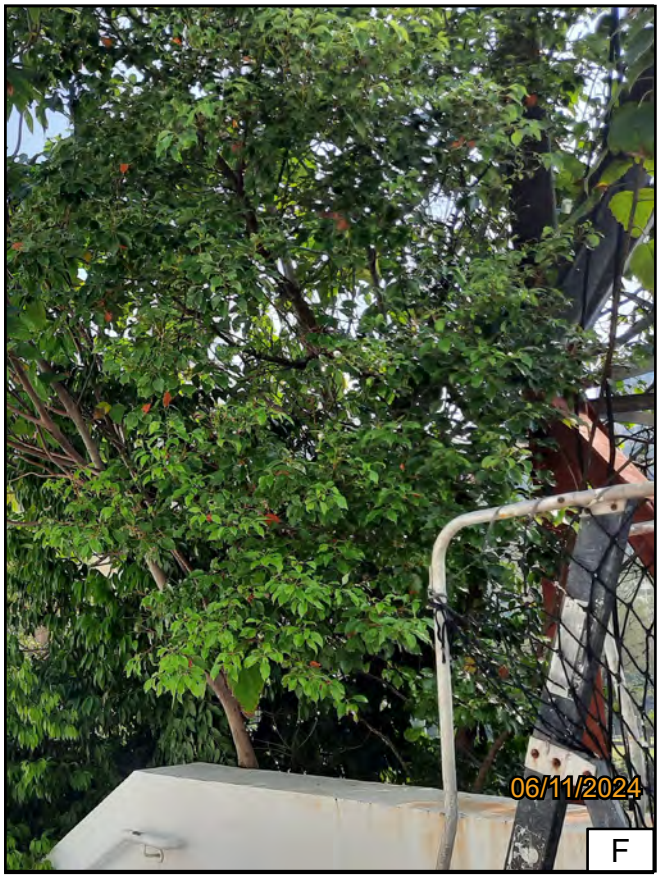
T8A (OVERALL)



T8A (BASE)



T8A (TRUNK)



T8A (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS015	REV	-

ADI



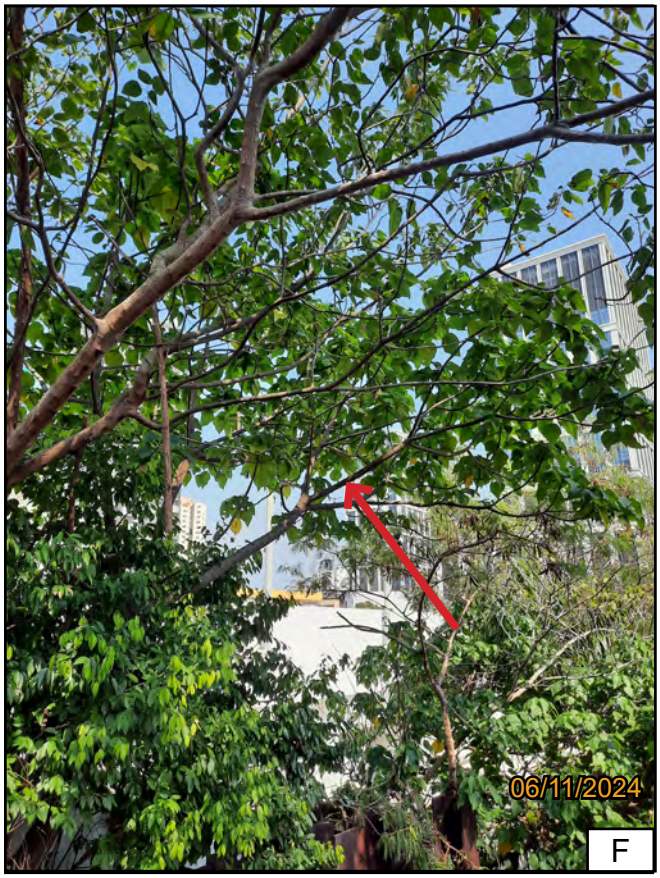
T9 (OVERALL)



T9 (BASE)



T9 (TRUNK)



T9 (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS016	REV	-

ADI



T10 (OVERALL)



T10 (BASE)



T10 (TRUNK)



T10 (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

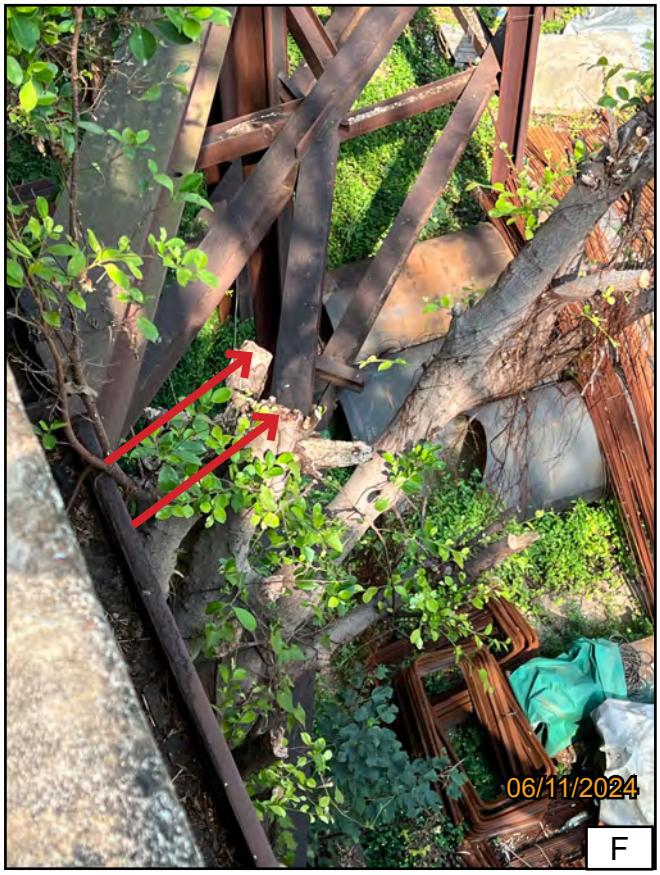
Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS017	REV	-

ADI



T10 (DEFECT A)



T10 (DEFECT B)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung Photographic Record of Tree Survey	SCALE	N.T.S.	DATE	October 2025
	CHECKED	ELK	DRAWN	TEAM
	FIGURE NO.	D2HK07A-TS018	REV	-

ADI



T10A (OVERALL)



T10A (BASE)



T10A (TRUNK)



T10A (CROWN)

R-Retain T-Transplant F-Fell

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

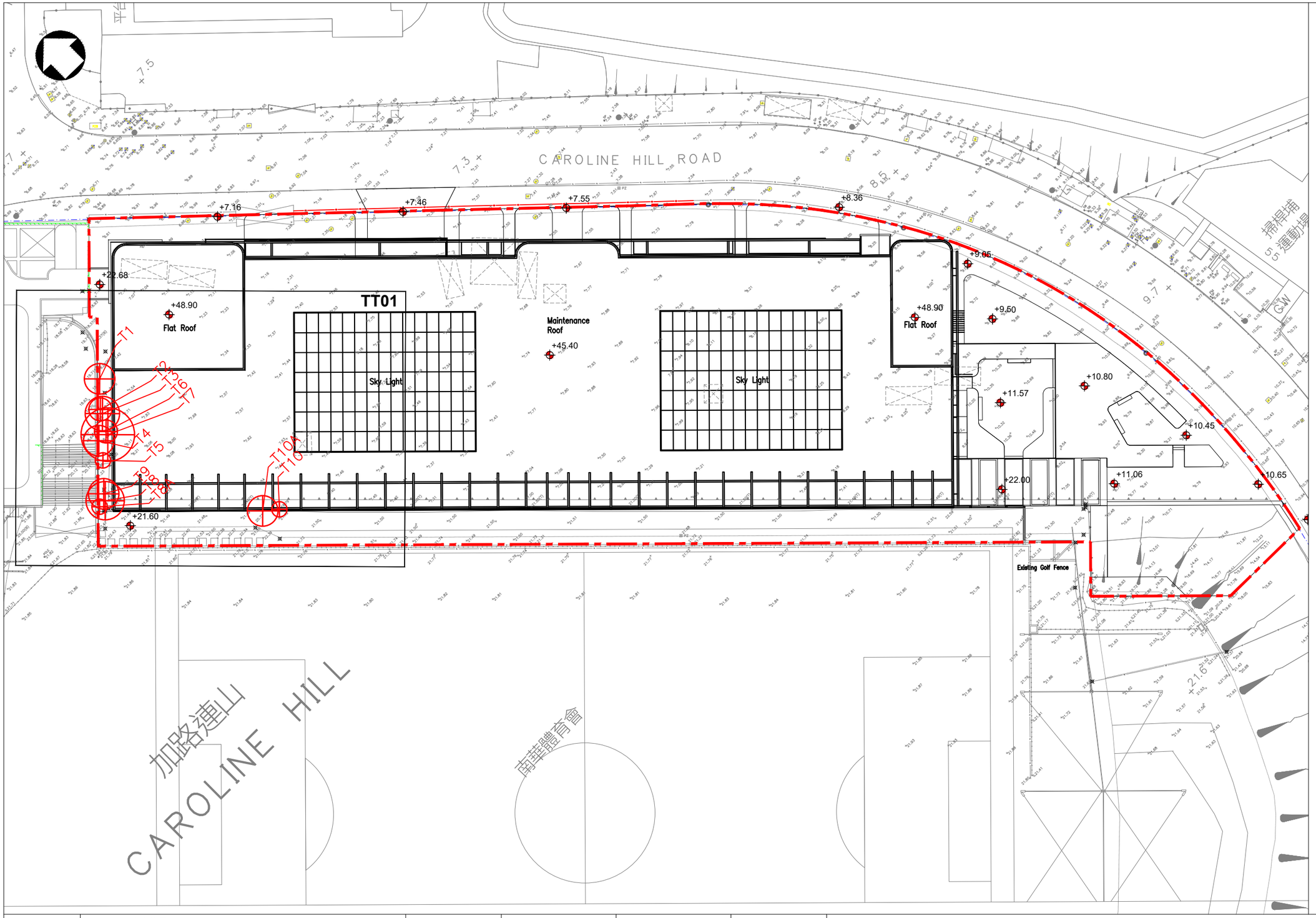
Photographic Record of Tree Survey

SCALE	N.T.S.	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	D2HK07A-TS019	REV	-

ADI

Appendix IV

Tree Treatment Plan



LEGEND

- THE APPLICATION SITE BOUNDARY
- T98 — FELL TREE
- +20.6 — EXISTING LEVEL
- +7.67 — PROPOSED LEVEL
- PROPOSED BUILDING

REVISION 校訂	DESCRIPTION 內容摘要	DRAWN 繪圖	DATE 日期	CHECKED 審核	APPROVED 審批

DO NOT SCALE FROM THIS DRAWING 勿按圖量比例

PROJECT 工程項目
PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION
88 CAROLINE HILL ROAD IN WONG NAI CHUNG

SCALE 比例: 1:500 @ A3
DATE 日期: OCTOBER 2025
REVISION 校訂:
DRAWING NUMBER 圖號: D2HK07A–TT00

DESIGNED 設計: TEAM
DRAWN 繪圖: CADD
CHECKED 審核: ELK
APPROVED 審批: ALL

DRAWING TITLE 圖紙名稱
KEY PLAN

ADI

ADI LIMITED 雅博奧頓國際設計有限公司
INTERNATIONAL SERVICES IN ENVIRONMENTAL MANAGMENT, PLANNING, URBAN DESIGN AND LANDSCAPE ARCHITECTURE 國際環境管理,城市規劃及設計,園境建築顧問服務
10/F BANGKOK BANK BUILDING, 18 BONHAM STRAND WEST, HONG KONG 香港上環文咸西街十八號盤谷銀行大廈十樓
TELEPHONE 2131 8630 FACSIMILE 2131 8609 電話: (八五二) 二一三一 八六三零 傳真: (八五二) 二一三一 八六零九

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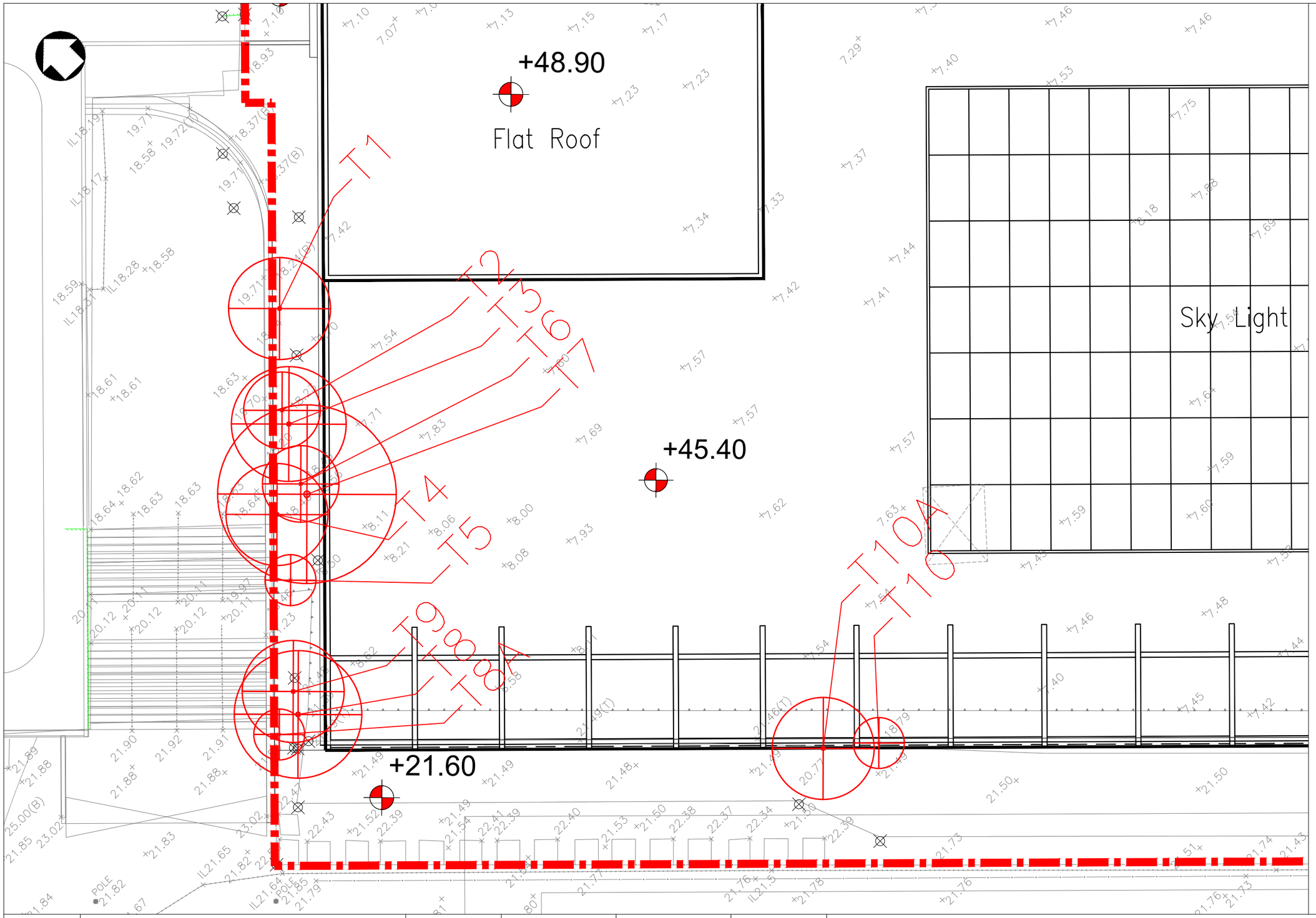

REVISION 校訂	DESCRIPTION 內容摘要	DRAWN 繪圖	DATE 日期	CHECKED 審核	APPROVED 審批

DO NOT SCALE FROM THIS DRAWING 勿按圖量比例

PROJECT 工程項目
PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION
88 CAROLINE HILL ROAD IN WONG NAI CHUNG

SCALE 比例: 1:150 @ A3
DATE 日期: OCTOBER 2025
REVISION 校訂:
DRAWING NUMBER 圖號: D2HK07A–TT01

DESIGNED 設計: TEAM
DRAWN 繪圖: CADD
CHECKED 審核: ELK
APPROVED 審批: ALL

DRAWING TITLE 圖紙名稱
TREE TREATMENT PLAN

ADI

ADI LIMITED 雅博奧頓國際設計有限公司
INTERNATIONAL SERVICES IN ENVIRONMENTAL MANAGMENT, PLANNING, URBAN DESIGN AND LANDSCAPE ARCHITECTURE
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CAD FILENAME : TT_20251013.dwg

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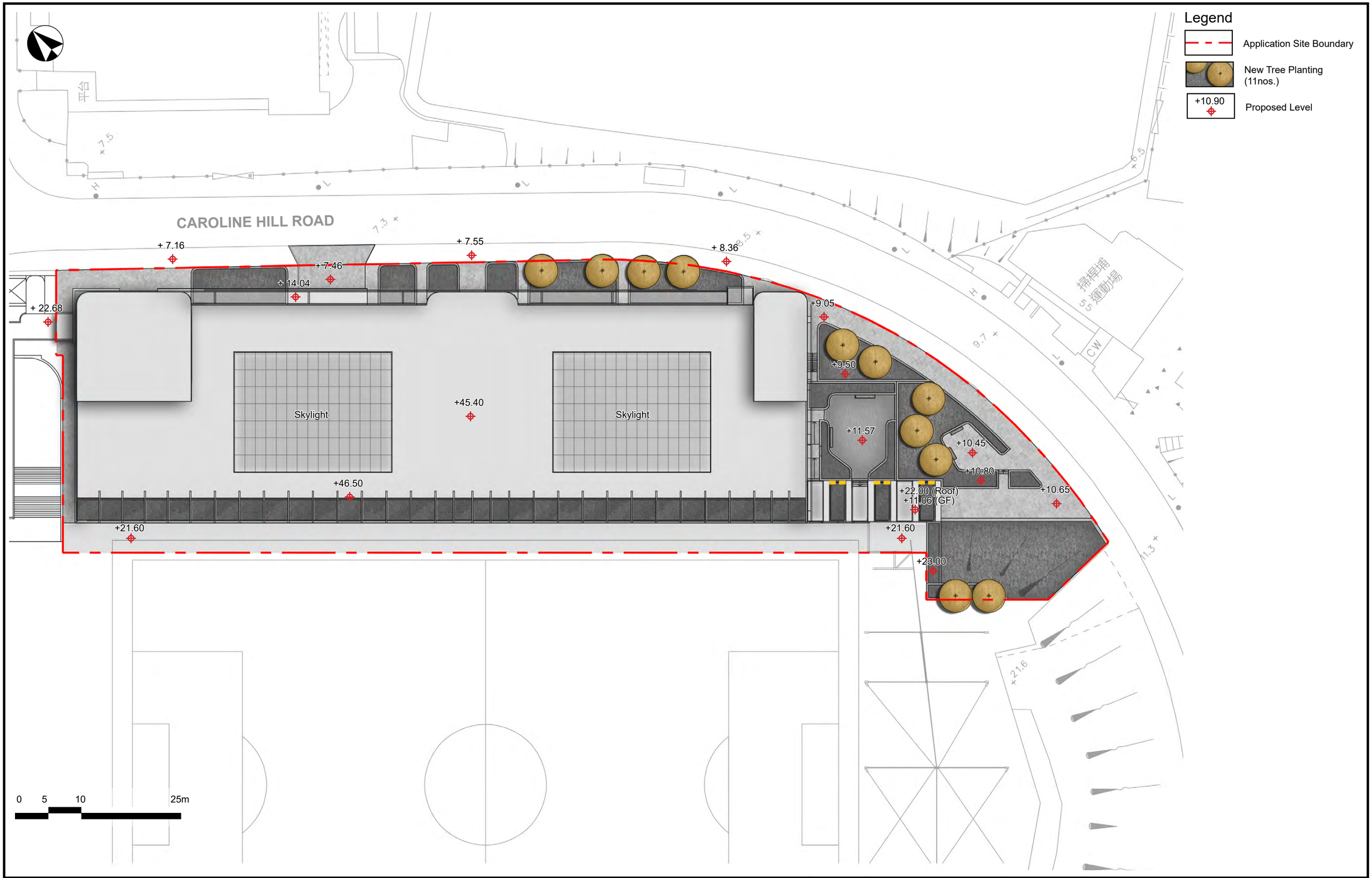
Appendix V

New Tree Planting Concept



Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
New Tree Planting Concept

SCALE	AS SHOWN	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	Appendix V	REV	-

ADI LIMITED
LANDSCAPE ARCHITECTURE, URBAN DESIGN AND MASTER PLANNING
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Appendix III

Traffic Impact Assessment

Document Status Control Record

Proposed SCAA Sports Link
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Traffic Impact Assessment Study

Originating Organisation : [redacted]	Prepared by: SKL	SKL	Date: 14 October 2025
	Approved by: SLN		Date: 14 October 2025
	Revision No.: -		Date of Issue: 14 October 2025

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1 INTRODUCTION

1.1 Background

1.1.1 The South China Athletic Association ("SCAA") intends to develop a comprehensive sports and recreation centre ("the proposed development") at the northern part of SCAA site in Caroline Hill Road, Causeway Bay ("the Site"). A S16 planning application will be required for taking forward the implementation of the proposed development. In this regard, a traffic impact assessment ("TIA") study is required to support the S16 planning application.

1.1.2 LLA Consultancy Limited was commissioned to conduct the TIA study for the proposed development. This report presents the findings of this study.

1.2 Objectives

1.2.1 The objectives of this study are as follows:

- to review the existing traffic conditions in the vicinity of the Site;
- to estimate the traffic generation of the proposed development;
- to project the future traffic flows in the surrounding road network;
- to appraise the potential traffic impact of the proposed development, and to propose road improvement proposals, if required;
- to recommend the internal transport facilities for the proposed development; and
- to review the pedestrian traffic arrangement of the proposed development.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 As shown in **Figure 2.1**, the Site is situated on the northside of the SCAA site in Caroline Hill Road, Causeway Bay and the site area is about 6,132 m^2.

2.2 Development Schedule

2.2.1 The proposed development will provide tennis courts, 5-a-side artificial turf pitches, activities rooms, muti-purposes rooms and ancillary facilities. The key development parameters are summarised in **Table 2.1**.

Table 2.1 Proposed Development Schedule

Item	Parameter
Site Area	About 6,132 m^2
Total GFA	About 31,327.12 m^2
No. of Storeys	G/F, 1/F, 2/F and 3/F
Tennis Count	6 Nos.
5-a-side Artificial Turf Pitch	2 Nos.
Activities rooms, muti-purposes rooms and ancillary facilities	1/F: Activities Rooms + Multi-purposed Rooms + WC + Corridor = about 1840m^2
Internal transport facilities	63 private car parking spaces, 9 Motorcycle parking spaces, 1 pick-up/drop-off lay-by and 1 MGV loading/unloading bay

2.3 Vehicular Access Arrangement

2.3.1 The Site has a single frontage at Caroline Hill Road only and the proposed vehicular access for the proposed development must be located at Caroline Hill Road. Taking into consideration of the location of the Disciplined Services Sports & Recreation Club vehicular access at the opposite side, the proposed vehicular access is being positioned to stagger with the opposite vehicular access.

2.4 Proposed Transport Facilities

2.4.1 The internal transport facilities for the proposed development use should be provided in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG) or the land grant. As there is no specific guideline set in the HKPSG or land grant for the proposed sports and recreation uses, the design objective is to provide maximum parking space numbers on ground floor in formulating the carpark layout because there will be neither basement floor nor upper floor for carparks. The proposed ground floor plan is enclosed in **Appendix A** and a total of 63 car parking spaces, 9 motorcycle parking spaces, 1 pick-up/drop-off layby and 1 goods vehicle loading/unloading space can be provided. The car parking provision is equivalent to 1 car parking space per 124 m^2 and the provision level can meet the proposed operational needs.

2.4.2 **Table 2.2** lists out the details of the transport facilities provided within the proposed development.

Table 2.2 Summary of Overall Transport Facilities Provision

Facilities	Dimensions	Proposed Provision	
Car Parking Space	2.5m (W) x 5.0m (L) x 2.4 (H)	61	63
Disabled Car Parking Space	3.5m (W) x 5.0m (L) x 2.4 (H)	2	
Motorcycle Parking Space	1.0m (W) x 2.5m (L) x 2.4 (H)	9	
Pick-up/drop-off Lay-by	-	1	
Goods Vehicle Loading / Unloading Bay	HGV: 3.5m (W) x 11.0m (L) x 4.7m (H)	1	

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

3.1.1 Caroline Hill Road connects the local areas of Caroline Hill and So Kon Po with the district distributor Leighton Road in the area. The eastern end of Leighton Road intersects with Causeway Road and Tung Lo Wan Road that leads to the Tin Hau and Tai Hang areas respectively. The western end of Leighton Road links to Morrison Hill Road that leads to the local road network in Wan Chai and Canal Road Flyover.

3.1.2 Caroline Hill Road is a single 2-lane road with a short section adjoining the Disciplined Services Sports and Recreation Club near Cotton Path operating as one-way northbound. According to the 2023 Annual Traffic Census published by the Transport Department ("TD"), the section of Caroline Hill Road between Leighton Road and Yun Ping Road carried an annual average daily traffic ("AADT") of 5,330 vehicles per day.

3.2 Traffic Count Surveys

3.2.1 Having considered that the proposed development will have different traffic generation patterns during weekdays and weekends. For assessment purpose, both weekday and weekend are being considered.

3.2.2 Classified vehicles count surveys were carried out at the following locations in the vicinity of the Site on 17 June 2025 (Tuesday) for the time period of 08:00 – 10:00, 17:30 – 19:30 and 14 June 2025 (Saturday) for the time period of 11:30 to 13:30. The locations of the surveyed junctions are presented in **Figure 3.1**.

J1 – Caroline Hill Road (West) / Link Road

J2 – Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

J3 – Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

J4 – Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

J5 – Tung Lo Wan Road / Eastern Hospital Road

J6 – Eastern Hospital Road / Cotton Path

J7 – Caroline Hill Road/Cotton Path

J8 – Tung Lo Wan Road / Moreton Terrace

J9 – Moreton Terrace / Causeway Road

J10 – Leighton Road / Hysan Avenue / Leighton Lane

J11 – Leighton Road / Percival Street / Hysan Avenue

3.2.3 The identified weekday AM, weekday PM and weekend peak hours were 08:15 – 09:15, 17:45 – 18:45 and 11:30 – 12:30, respectively and the surveyed traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

3.3.1 Based on the existing traffic flows, the performance of key junctions adjacent to the proposed development was assessed. The assessment results are in **Table 3.1**, and the detailed calculation sheets are attached in **Appendix B**.

Table 3.1 Existing Junction Performance

No.	Junction Location	Type/Capacity Index(1)	Identified Peak Hour		
			AM	PM	Weekend
J1	Caroline Hill Road (West) / Link Road	Priority/DFC	0.32	0.41	0.51
J2	Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	Signalised/RC	26%	32%	27%
J3	Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street	Signalised/RC	50%	33%	31%
J4	Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road	Signalised/RC	71%	52%	49%
J5	Tung Lo Wan Road / Eastern Hospital Road	Signalised/RC	63%	83%	74%
J6	Eastern Hospital Road / Cotton Path	Priority/DFC	0.27	0.22	0.30
J7	Caroline Hill Road/Cotton Path	Priority/DFC	0.10	0.06	0.11
J8	Tung Lo Wan Road / Moreton Terrace	Signalised/RC	44%	31%	72%
J9	Moreton Terrace / Causeway Road	Signalised/RC	45%	25%	28%
J10	Leighton Road / Hysan Avenue / Leighton Lane	Signalised/RC	313%	267%	164%
J11	Leighton Road / Percival Street / Hysan Avenue	Signalised/RC	68%	62%	40%

Note: (1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio.

3.3.2 It can be seen from **Table 3.1** that all of the key junctions performed satisfactorily during the peak hours.

3.4 Existing Footpath Capacity Assessment

3.4.1 To ascertain the adequacy of footpath width for walking between the proposed development, bus/GMB stops and the MTR Causeway Bay Station, a pedestrian count survey was conducted on 17 June 2025 (Tuesday) for the time period of 08:00 – 10:00, 17:30 – 19:30 and 14 June 2025 (Saturday) for the time period of 11:30 to 13:30. The locations of surveyed footpaths are shown in **Figure 3.3** and the assessment results are shown in **Table 3.2**.

Table 3.2 Capacity Analysis of Existing Footpaths

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Flow Rate(2) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE
P1	Southern footpath of Caroline Hill Road (between Eastern Hospital Road and Cotton Path)	3.0	2.0	90	38	41	0.8 [A]	0.3 [A]	0.3 [A]
P2	Eastern footpath of Cotton Path (between Caroline Hill Road and Eastern Hospital Road)	4.0	2.0	116	190	204	0.6 [A]	1.1 [A]	1.1 [A]
P3	Northern footpath of Caroline Hill Road (between Cotton Path and Leighton Road)	3.0	2.0	490	724	867	4.1 [A]	6.0 [A]	7.2 [A]
P4	Eastern footpath of Yun Ping Road(between Leighton Road and Hysan Avenue)	2.5	1.5	337	694	653	3.7 [A]	7.7 [A]	7.3 [A]
P5	Western footpath of Pennington Street (between Leighton Road and Keswick Street)	2.2	1.2	867	1,071	1,092	12.0 [A]	14.9 [A]	15.2 [A]
P6	Eastern footpath of Leighton Road (between Caroline Hill Road and Haven Street)	3.3	2.3	908	1,336	1,377	6.6 [A]	9.7 [A]	10.0 [A]
C1	Signalised Crossing	6.4	6.4	1,234	1,785	1,989	3.8 [A]	5.5 [A]	6.1 [A]
C2	Signalised Crossing	4.2	4.2	1,336	1,765	1,979	7.0 [A]	9.2 [A]	10.3 [A]
C3	Signalised Crossing	4.0	4.0	1,020	1,275	1,326	5.7 [A]	7.1 [A]	7.4 [A]

Notes: (1) Clearances of 0.5m on either side were subtracted from the actual widths to produce effective widths, and clearance was increased to 1m for shopping frontage.
(2) For LOS "C" or above, flow rates should be less than 33 pedestrians/metre/minute.

3.4.2 The assessment results indicate that the existing footpath condition is satisfactory during the identified peak hours on weekday and weekend with LOS "C" or above.

3.5 Existing Public Transport Facilities

3.5.1 There are various franchised bus and scheduled minibus ("GMB") services running in the vicinity of the Site along Leighton Road and Caroline Hill Road and the walking distance to the MTR Causeway Bay Station is about 650m. **Table 3.3** and **Figure 3.4** show the public transport services operated in the vicinity of the Site.

Table 3.3 Existing Public Transport Services near the Proposed Development

Mode	Route No.	Origin-Destination	Frequency (min)
Bus	1	Central (Macau Ferry) – Happy Valley (Upper)	12 – 25
	1M	Exhibition Centre Station – Wong Nai Chung Gap (Circular)	15 – 30
	1P	Wong Nai Chung Road (Broadwood Road) – Central	4 trips per day
	2	Grand Promenade – Central (Macau Ferry)	20 – 30
	2A	Yiu Tung Estate – Exhibition Centre Station	5 – 20
	2X	Grand Promenade – Exhibition Centre Station	6 – 20
	5B	Felix Villas – Hong Kong Stadium	7 – 30
	5X	Causeway Bay (Whitfield Road) – Kennedy Town	20 – 30
	8	Heng Fa Chuen – Exhibition Centre Station	12 – 25
	8H	Siu Sai Wan (Island Resort) – Tung Wah Eastern Hospital	30
	8P	Siu Sai Wan (Island Resort) – Exhibition Centre Station	5 – 20
	8X	Siu Sai Wan (Island Resort) – Happy Valley (Upper)	6 – 20
	10	North Point Ferry Pier – Kennedy Town	8 – 25
	11	Central (Ferry Piers) – Jardine's Lookout (Circular)	15 – 30
	15B	The Peak – Wan Chai (Convention Centre)	2 trips per day
	19P	Shau Kei Wan – Tai Hang Road	1 trip per day
	23	North Point Ferry – Pokfield Road	7 – 20
	23B	Braemar Hill – Park Road / Robinson Road	7 trips per day
	25	Central (Piers 3) – Braemar Hill (Circular)	10 – 20
	25A	Exhibition Centre Station – Braemar Hill (Circular)	12 – 25
	26	Lai Tak Tsuen – Hollywood Road (Circular)	10 – 25
	38	Chi Fu Fa Yuen – North Point Ferry (Omit Wai Fu)	6 – 15
	42	Wah Fu (South) – North Point Ferry	10 – 20
	42C	Cyberport – North Point Ferry	4 trips per day
	63	North Point Ferry – Stanley Market	30
	65	North Point Ferry – Stanley Market	12 – 20
	72	Wah Kwai – Causeway Bay (Moreton Terrace)	6 – 20
	72A	Shum Wan Public Transport Terminus – Causeway Bay (Moreton Terrace)	20 – 30
	76	Shek Pai Wan – Causeway Bay (Pennington Street)(Circular)	30
	77	Tin Wan Estate – Shau Kei Wan	12 – 25
	81	Hing Wah Estate – Lai Tak Tsuen	15 – 20
	99	South Horizons – Shau Kei Wan	12 – 25
	102	Shau Kei Wan – Mei Foo	5 – 20

Mode	Route No.	Origin-Destination	Frequency (min)
	103	Chuk Yuen Estate – Pokfield Rd	15 – 30
	106	Wong Tai Sin – Siu Sai Wan (Island Resort)	6 – 24
	108	Kai Yip – Braemar Hill	10 – 30
	112	North Point – So Uk	5 – 30
	116	Tsz Wan Shan (Central) – Quarry Bay	4 – 20
	117	Sham Shui Po (Yen Chow St) – Happy Valley (Lower)	12 – 23
	170	Shatin Station – Wah Fu (Central)	15 – 30
	307	Tai Po Central – Central (Central Ferry Piers)	8 – 30
	511	Tai Hang Drive – Central (Central Ferry Piers)	4 trips per day
	592	South Horizons – Causeway Bay (Moreton Terrace)	8 – 30
	600	Anderson – Central (Rumsey Street)	20 – 30
	601	Po Tat – Admiralty Station (East)	7 – 23
	601P	Sheung Wan – Po Tat	4 – 10
	603	Ping Tin – Central Ferry Piers	10 – 30
	603A	Ping Tin – Central Market	4 trips per day
	619	Shun Lee – Central (Macau Ferry)	7 – 27
	619X	Shun Lee – Central (Macau Ferry)	7 trips per day
	621	Laguna City – Central (Hong Kong Station)	10 trips per day
	671	Diamond Hill Station – Ap Lei Chau Lee Lok St	15 – 30
	673	Sheung Shui – Central (Hong Kong Station)	20 – 30
	673A	Central (Hong Kong Station) – Sheung Shui	2 trips per day
	678	Sheung Shui – Causeway Bay	16 trips per day
	679	Queen'S Hill Fanling – Central (Hong Kong Station)	3 trips per day
	680	Lee On – Admiralty Station (East) (Via Chung On Estate)	12 – 30
	680B	Chevalier Garden Bus Terminus – Admiralty Station (East)	2 trips per day
	680P	Wu Kai Sha Station – Admiralty Station (East)	3 trips per day
	680X	Wu Kai Sha Station – Central (Macau Ferry)	8 trips per day
	681	Central (Hong Kong Station) – Ma On Shan Town Centre	9 – 30
	681P	Yiu On – Sheung Wan	5 trips per day
	690	Hong Sing Garden – Central (Exchange Square) (Via Leighton Road)	20 – 30
	690S	Hang Hau – Central (Exchange Square) (Via Lohas Park)	14 trips per day
	914	Hoi Lai Estate – Causeway Bay (Tin Hau)	13 – 30
	914P	Hoi Lai Estate – Causeway Bay (Tin Hau)	1 trip per day
	914X	Hoi Lai Estate – Causeway Bay (Tin Hau)	3 trips per day
	930B	Kwai Shing Circuit – Causeway Bay (Moreton Terrace)	1 trip per day
	930X	Causeway Bay (Moreton Terrace) – Tsuen Wan (Discovery Park) (Via Nina Tower On Journey To Causeway Bay)	8 – 25
	936	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	15 – 30
	936A	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	7 trips per day

Mode	Route No.	Origin-Destination	Frequency (min)
	948	Tsing Yi (Cheung On Estate) – Causeway Bay (Tin Hau)	8 – 30
	948A	Cheung On Estate – Causeway Bay (Tin Hau)	5 – 7
	948B	Greenfield Garden – Causeway Bay (Tin Hau)	2 trips per day
	948P	Cheung On Estate – Causeway Bay (Tin Hau)	5 trips per day
	948X	Cheung Wang – Causeway Bay (Tin Hau)	5 trips per day
	952	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	10 – 30
	952P	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	8 – 15
	960C	Causeway Bay – Fu Tai Estate	3 trips per day
	960P	Causeway Bay – Hung Shui Kiu	10 – 35
	960S	Tuen Mun (Fu Tai Estate) – Causeway Bay (Victoria Park)	10
	961	Tuen Mun (Shan King Estate) – Wan Chai (Hkcece)	7 – 25
	962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	8 – 25
	962G	Causeway Bay (Moreton Terrace) – Tuen Mun (Yuet Wu Villa)	3 trips per day
	962P	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	4 – 9
	962X	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	12 – 30
	967X	Tin Shui Wai (Tin Yan Estate) – Causeway Bay (Via Tin Shui Wai North)	12 – 20
	968	Yuen Long (West) – Causeway Bay (Tin Hau)	5 – 25
	968A	Yuen Long (West) – Causeway Bay (Tin Hau)	2 trips per day
	969	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	7 – 30
	969N	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	1 trip per day
	969P	Tin Shui Wai Town Centre – Causeway Bay (Moreton Terrace)	7 – 13
	A11	North Point Ferry Pier – Airport (Ground Transportation Centre)	15 – 60
	A17	Sham Wan – Airport	6 trips per day
	E11	Tin Hau Station – SKYCITY	20 – 40
	E11A	Tin Hau Station – SKYCITY	40
	E11B	Tin Hau Station – Tung Chung (Mun Tung Estate)	40
	E11S	Tung Chung (Mun Tung Estate) – Tin Hau Station	5 – 7
	N8P	Siu Sai Wan (Island Resort) – Wan Chai (Harbour Road) (Circular)	15 – 20
	N8X	Siu Sai Wan (Island Resort) – Kennedy Town	30
	N11	Central (Macau Ferry) – Airport (Ground Transportation Centre)	60
	N72	Wah Kwai – Quarry Bay (Hoi Chak Street)	25 – 30
	N122	Mei Foo – Shau Kei Wan	17 – 30
	N170	Shatin Central – Wah Fu (Central)	22 – 30
	N182	Kwong Yuen – Central (Macau Ferry)	20 – 30
	N307	Tai Wo – Sheung Wan	20 – 30
	N368	Yuen Long (West) – Central (Macau Ferry)	20 – 30
	N373	Fanling (Luen Wo Hui) – Central (Macau Ferry)	20 – 30
	N619	Shun Lee – Central (Macau Ferry)	20 – 30
	N680	Kam Ying Court – Central (Macau Ferry)	20 – 30

Mode	Route No.	Origin-Destination	Frequency (min)
	N691	Tiu Keng Leng – Central (Macau Ferry)	20 – 35
	N930	Tsuen Wan (Discovery Park) – Causeway Bay (Moreton Terrace)	3 trips per day
	N952	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	4 trips per day
	N962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	25 – 45
	N969	Tin Shui Wai Town Centre – Causeway Bay (Moreton Terrace)	20 – 45
	P968	Yuen Long (West) – Causeway Bay (Tin Hau)	16 trips per day
	NA11	North Point Ferry Pier – HZMB Hong Kong Port	3 trips per day
GMB	14M	Causeway Bay (Lan Fong Road) – Moorsom Road (Circular route)	4 – 12
	21A	Causeway Bay (Lan Fong Road) – Lai Tak Tsuen (Circular route)	4 – 12
	21M	Causeway Bay (Lan Fong Road) – Tai Hang Drive (Circular route)	4 – 12
	26	Causeway Bay (Lee Garden Road) – Stubbs Road (Hong Kong Adventist Hospital) (Circular route)	15 – 30
	28	Baguio Villa (Upper) – Causeway Bay (Sun Wui Road)	15 – 20
	28S	Baguio Villa (Upper) – Causeway Bay (Sun Wui Road)	15 – 20
	30	Happy Valley (Holly Road) – Causeway Bay (Lan Fong Road)	6 – 10
	36X	Ap Lei Chau (Ping Lan Street) – Causeway Bay (Jardine's Bazaar)	15 – 20
	39M	Yue On Court (Ap Lei Chau) – Tin Hau Station	60
	40	Stanley Village – Causeway Bay	10 – 20
	40X	Stanley (Stanley Prison) – Causeway Bay	3 – 9
	49S	Tuen Mun Siu Hong Court – Wan Chai	30
	56	Mid-Levels (Robinson Road) – North Point (Marble Road)	20
	56A	Mid-Levels (Robinson Road) – Tin Hau Station	8 – 15
	56B	Mid-levels (Robinson Road) – Wan Chai (Circular route)	20 – 25
	N40	Stanley – Causeway Bay	20

4 FUTURE TRAFFIC SITUATION

4.1 Design Year for Traffic Forecast

4.1.1 The completion year of the proposed development is expected to be 2030. As a result, the design year of the traffic impact assessment should be three years after the completion year, i.e., 2033.

4.2 Traffic Generation of the Proposed Development

Tennis Court

4.2.1 6 tennis courts are provided and the users will be 15 persons/court during a one-hour period. As a result, a total of 60 persons one-way trips will be generated.

5-a-side Artificial Turf Pitch

4.2.2 2 pitches are provided and the users will be 80 persons/court during a 1.5-hour period. As a result, a total of 160 persons one-way trips will be generated.

Activities rooms, Muti-purposes Rooms and Ancillary Facilities

4.2.3 According to the architectural layout, the holding capacity of all these facilities will be about 455 persons. As a result, a total of 455 persons one-way trips will be generated.

4.2.4 The total trips generated from the proposed development is summarized in **Table 4.1**.

Table 4.1 Number of Visitors of the Proposed Development

Use	Generation (in persons)			Attraction (in persons)		
	AM	PM	Weekend	AM	PM	Weekend
Tennis Court	60	60	60	60	60	60
5-a-side Artificial Turf Pitch	160	160	160	160	160	160
Activities rooms, Muti-purposes Rooms and Ancillary Facilities	0	455	228	455	0	227
Total	**220**	**675**	**448**	**675**	**220**	**447**

4.2.5 As there is no established trip rate published in Transport Planning and Design Manual (TPDM) for the proposed use, therefore, the traffic generation of the proposed development will be derived from basic principles and assumptions as described in the ensuing paragraphs.

4.2.6 The following assumptions were made in estimating the traffic and pedestrian movements generated by the proposed development:

- Having considered the good accessibility of the Site, most visitors are anticipated to use public transport services in the vicinity.
- The operation hour of the proposed development would be from 07:00 to 22:00.

4.2.7 In order to establish the pedestrian flow pattern to the different public transport facilities, reference was made to the number of passenger journeys by public transport operators recorded in the Monthly Traffic and Transport Digest (MTTD) 2025. The modal split of the public transport for the proposed development was estimated as shown in **Table 4.2**.

Table 4.2 Estimated Modal Split for the Proposed Development

Mode	Distribution of Average Daily Public Transport Passenger Journeys by Mode [1]	Adjusted Modal Split for the Proposed Development
Rail-based PT	45.00%	45.50%
Road-based PT (excluding Taxi)	48.30%	48.80%
Taxi	5.70%	5.80%
Total	**99.0% [2]**	**100.0%**

Notes: (1) Source: Chart 2.7 in Monthly Traffic and Transport Digest (May 2025).
(2) Marine transport is omitted.

4.2.8 The passenger generation to / from the MTR Stations, the bus / mini-bus stops and the taxi stands / the roadside available for taxi passenger pick-up & drop-off in the vicinity of the proposed development in the AM and PM peak hours is estimated in **Table 4.3**.

Table 4.3 Estimated Pedestrian Generation to the Public Transport Facilities

Public Transport Facilities[1]	Adjusted Modal Split	Estimated Peak Hour Pedestrian Flows (person / hr)								
		Weekday AM			Weekday PM			Weekend		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
MTR Station	45.50%	100	307	407	307	100	407	203	203	406
Bus / Mini-bus Stops	48.80%	107	329	436	329	107	436	219	218	437
Taxi Stand / Roadside	5.80%	13	39	52	39	13	52	26	26	52
Total	**100.0%**	**220**	**675**	**895**	**675**	**220**	**895**	**448**	**447**	**895**

Note: Gen. – Generation; Att. - Attraction

4.2.9 Since most visitors are anticipated to use public transport services, only those who use taxis will be considered as the vehicular traffic generation of the proposed development. The vehicular traffic generated and attracted by the proposed development are estimated based on the above presented in **Table 4.4**.

Table 4.4 Estimated Traffic Generation and Attraction of the Proposed Development

Mode of Transport	Modal Split	Vehicle Capacity	Estimated No. of Vehicle (veh/hr[pcu/hr[2]])								
			Weekday AM			Weekday PM			Weekend		
			Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Taxi Stand / Roadside	5.8%	2.5[1]	6 [6]	16 [16]	22 [22]	16 [16]	6 [6]	22 [22]	11 [11]	11 [11]	22 [22]

Notes: Gen. – Generation; Att. – Attraction.
(1) According to the traffic survey, the average occupancy of taxis to the Existing SCAA is 2.5 passengers per vehicle and is adopted for estimating the future traffic generation and attraction.
(2) 1 pcu is adopted for each taxi.

4.2.10 As shown in **Table 4.4**, the proposed development would generate two-way traffic flows of 22 pcu/hr during the weekday AM, weekday PM and weekend peak hours. The development traffic was distributed onto the road work with reference to surveyed traffic flows and presented in **Figure 4.1**.

4.3 Traffic Generation of the Planned Developments

4.3.1 To estimate the future traffic flows, updated information has been obtained from various sources regarding the planned developments in the vicinity of the study area. Although peak hours of the planned developments are not anticipated to coincide with the identified peak hours, for conservative assessment purposes, the traffic generations and attractions induced by these developments during highway peaks are assumed to occur in the identified peak hours.

4.3.2 The corresponding traffic generations and attractions by these adjacent developments are summarised in **Table 4.5,** and these generations and attractions will be considered in the junction capacity analysis for the design year.

Table 4.5 Traffic Generation by Planned Developments in the Vicinity

Proposed Use	Unit / Content	Event Start Peak Hour			Event End Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total
Mean Trip rates from TPDM(1)							
Retail	pcu/hr/ 100m^2	0.2296	0.2434	-	0.3100	0.3563	-
Office	pcu/hr/flat	0.1703	0.2452	-	0.1573	0.1175	-
Traffic Generation/Attraction							
Redevelopment at Po Leung Kuk Headquarter	37,725 m^2 GFA for G/IC use	14(2)	15(2)	29(2)	7(2)	6(2)	13(2)
Redevelopment at 5-19 Jardine's Bazaar	4,756 m^2 GFA for retail use	11	12	23	15	17	32
Redevelopment at 36 Jardine's Bazaar	979m^2 GFA for office use	2	3	5	2	2	4
Redevelopment of the Ex-EMSD headquarter at Caroline Hill Road, Causeway Bay	102,000 m^2 GFA for commercial and G/IC use	272(3)	398(3)	670(3)	308(3)	239(3)	547(3)
District Court Site	70,000 m^2 GFA	42(3)	64(3)	106(3)	33(3)	31(3)	64(3)
Commercial Development in 1- 5 Irving Street and 14 Pennington Street	7,548.8 m^2 GFA for office use	13	19	32	12	9	21
Total		**394**	**551**	**945**	**417**	**344**	**761**

Notes: (1) For conservative assessment purpose, AM peak hour trip rates are adopted for event start peak hour and PM peak hour trip rates are adopted for event end peak hour.
(2) Figures extracted from the TIA report enclosed in the Metro Planning Committee paper no. 1/19.

4.4 Future Road Network

4.4.1 According to the approved planning application no. A/H7/181, it is understood that two junction improvement schemes will be implemented at the junctions of Caroline Hill Road / Link Road and Leighton Road / Caroline Hill Road / Hoi Ping Road as part of the development of the adjoining Site. The junction improvements are expected to be completed by 2026 and therefore included in the traffic assessment of the proposed development. The proposed junction improvement schemes are enclosed in **Appendix C**.

4.5 Traffic Growth

ATC Data

4.5.1 Reference was made to the ATC reports published by the TD for the years from 2019 to 2023 (5 years) to determine the traffic growth rate of the local road network in the vicinity of the proposed development. The annual average daily traffic flow ("AADT") recorded at the counting stations in the vicinity of the Site are set out in **Table 4.6**.

Table 4.6 Annual Traffic Census Data

Stn. No.	Road Section			AADT(1)					Avg Growth %
	Road	From	To	2019	2020	2021	2022	2023	
1212	Irving St & Pennington St	Leighton Rd	Yee Wo St	12,290	11,730 (-4.6%)	12,250 (4.4%)	11,690 (-4.6%)	10,590 (-9.4%)	-3.7%
1213	Causeway Rd	Tung Lo Wan Rd	Shelter St	30,490	29,090 (-4.6%)	30,410 (4.5%)	29,010 (-4.6%)	29,000 (0%)	-1.2%
1414	Leighton Rd	Tung Lo Wan Rd	Irving St	22,970	21,040 (-8.4%)	21,990 (4.5%)	20,980 (-4.6%)	21,590 (2.9%)	-1.5%
1436	Percival St	Hennessy Rd	Leighton Rd	12,180	12,170 (-0.1%)	12,410 (2%)	11,760 (-5.2%)	12,340 (4.9%)	0.3%
1438	Tung Lo Wan Rd & Tai Hang Rd	Causeway Rd	Ka Ning Path	11,000	10,130 (-7.9%)	10,340 (2.1%)	9,740 (-5.8%)	9,950 (2.2%)	-2.5%
1612	Tai Hang Rd FO <H134>	St. John Ambulance Brigate Wan Rd Headquarters	Ramp to Tung Lo Wan Rd	19,140	19,280 (0.7%)	17,750 (-7.9%)	16,930 (-4.6%)	17,430 (3%)	-2.3%
2035	Leighton Rd	Wong Nai Chung Rd	Percival St	27,830	26,470 (-4.9%)	27,000 (2%)	21,860 (-19%)	23,770 (8.7%)	-3.9%
2036	Leighton Rd	Irving St	Percival St	14,950	14,220 (-4.9%)	14,510 (2%)	13,940 (-3.9%)	16,170 (16%)	2.0%
2214	Causeway Rd	Shelter St	Hing Fat St	33,760	31,440 (-6.9%)	34,000 (8.1%)	34,190 (0.6%)	33,940 (-0.7%)	0.1%
2608	Caroline Hill Rd	Leighton Rd	Yun Ping Rd	4,550	4,800 (5.5%)	4,610 (-4%)	4,890 (6.1%)	5,330 (9%)	4.0%
			Total	**189,160**	**180,370 (-4.6%)**	**185,270 (2.7%)**	**174,990 (-5.5%)**	**180,110 (2.9%)**	**-1.2%**

Note: (1) Figures in bracket indicated the % increase between two years.

4.5.2 **Table 4.6** shows that the AADT at the concerned ATC stations has an overall annual growth of negative 1.2% in between the years 2019 to 2023.

TPEDM Data

4.5.3 Reference was also made to the 2021–based Territorial Population and Employment Data Matrix ("TPEDM") released by the Planning Department. The population and employment data of year 2021 and 2031 in Wan Chai District are summarised in **Table 4.7**.

Table 4.7 Population and Employment Data in Wan Chai District

Year	2021	2026	2031
Population	166,700	156,000	145,700
Employment	299,700	301,700	287,250
Total	466,400	457,700	432,950
Average Growth per annum (%)		-0.4% (2021 to 2026)	-1.1% (2026 to 2031)

4.5.4 As shown in **Table 4.7**, the average annual growth rates for the population and the employment total between 2021–2026 and 2026–2031 are -0.4% and -1.1%, respectively. Having considered the ATC and TPEDM data, a nominal growth rate of +0.5% is adopted for subsequent assessments.

4.6 Reference and Design Flows

4.6.1 The 2033 Reference Flows, i.e., the traffic flows in the vicinity **without** the traffic flows generated by the proposed development, were estimated based on the following equation.

2033 Reference Flows = 2025 Existing Flows x $(1 + 0.5\%)^8$ + Traffic Flows Generated by the Planned/Committed Developments

4.6.2 The 2033 Design Flows, i.e., the traffic flows in the vicinity **with** the traffic flows generated by the proposed development, were estimated based on the following equation:

2033 Design Flows = 2033 Reference Flows + Traffic Flows Generated by the Proposed Development

4.6.3 The 2033 Reference and Design Flows are shown in **Figures 4.2** and **4.3**, respectively.

4.7 Junction Capacity Assessment

4.7.1 Capacity assessments were carried out for the major junctions in the local road network for both the Reference and Design scenarios. The results are summarised and presented in **Table 4.8** with detailed calculation sheets attached in **Appendix D**.

Table 4.8 Year 2033 Junction Capacity Assessment

No.	Junction Location	Type /Capacity Index(1)	2033 Reference			2033 Design		
			AM	PM	WE	AM	PM	WE
J1	Caroline Hill Road (West) / Link Road (2)	Signalised/ RC	36%	39%	38%	36%	39%	38%
J2	Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	Signalised/ RC	24%	33%	25%	22%	32%	25%
J3	Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street	Signalised/ RC	29%	17%	16%	29%	17%	16%
J4	Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road	Signalised/ RC	49%	37%	35%	48%	37%	35%
J5	Tung Lo Wan Road / Eastern Hospital Road	Signalised/ RC	39%	59%	52%	39%	58%	51%
J6	Eastern Hospital Road / Cotton Path	Priority/DFC	0.41	0.31	0.40	0.41	0.31	0.40
J7	Caroline Hill Road/Cotton Path	Priority/DFC	0.35	0.21	0.27	0.35	0.21	0.27
J8	Tung Lo Wan Road / Moreton Terrace	Signalised/ RC	32%	21%	58%	32%	21%	57%
J9	Moreton Terrace / Causeway Road	Signalised/ RC	34%	16%	19%	34%	16%	19%
J10	Leighton Road / Hysan Avenue / Leighton Lane	Signalised/ RC	289%	245%	149%	289%	245%	149%
J11	Leighton Road / Percival Street / Hysan Avenue	Signalised/ RC	43%	33%	20%	42%	32%	19%

Notes: AM – Weekday AM; PM – Weekday PM; WE - Weekend
(1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio.
(2) Junction improvement scheme to be implemented under planning application A/H7/181 is incorporated.

4.7.2 **Table 4.8** shows that all junctions will operate with positive RCs and DFCs<1.0 for both the reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce any adverse traffic impact to its surrounding road network.

4.8 Pedestrian Traffic Generation of the Other Planned Developments

4.8.1 It is understood that there are some planned and committed developments in vicinity of the Site. The pedestrian flows that would be induced by these developments have been considered. The pedestrian flows of these planned development are estimated by adopting the in-house pedestrian trip rates and presented in **Table 4.9**.

Table 4.9 Estimated Pedestrian Generation/Attraction of Planned Developments

Use	Unit	AM Peak Hour			PM Peak Hour		
		GEN	ATT	Total	GEN	ATT	Total
Adopted Pedestrian Trip Rates(1)							
Headquarter	ped/hr/quota	0.31	0.52	-	0.59	0.08	-
Court	ped/hr/100 m^2	0.25	0.71	-	1.22	0.43	-
Office	ped/hr/100 m^2	0.27	2.74	-	2.66	0.33	-
Estimated Pedestrian Generation							
Redevelopment at Po Leung Kuk Headquarter	322 quotas	100	168	268	190	26	216
Redevelopment of the Ex-EMSD headquarter at Caroline Hill Road, Causeway Bay(2)	102,000 m^2 GFA	549	2,727	3,276	2,844	1,064	3,908
District Court Site	70,000 m^2 GFA	175	1,897	2,072	854	301	1,155
Commercial Development in 1- 5 Irving Street and 14 Pennington Street	7,548.8 m^2 GFA	21	207	228	201	25	226
	Total	**845**	**4,999**	**5,844**	**4,089**	**1,416**	**5,505**

Notes: (1) In house pedestrian trip rates are adopted.
(2) Pedestrian generation and attraction were abstracted from the approved TIA report of the development.

4.8.2 The planned developments are estimated to generate 2-way pedestrian flows of 5,844 and 5,505 person/ hour during AM and PM peak hours respectively.

4.9 Reference and Design Pedestrian Flows

4.9.1 The 2033 Reference Pedestrian Flows, i.e., the pedestrian flows in the local pedestrian network, based on future walkway network **without** the proposed development pedestrian flows, were estimated based on the following equation.

2033 Reference Pedestrian Flows = 2025 Existing Flows x $(1 + 0.5\%)^8$ + Pedestrian Flows Generated by the Planned/Committed Developments

4.9.2 The 2033 Design Pedestrian Flows, i.e., the pedestrian flows in the local pedestrian network, based on future walkway network **with** the proposed development pedestrian flows, were estimated based on the following equation.

2033 Design Pedestrian Flows = 2033 Reference Flows + Pedestrian Flows Generated by the Proposed Development

4.9.3 The future walkway serviceability is assessed, and the results are shown in **Table 4.10**. The results showed that all of the concerned footpaths will operate satisfactorily with LOS level "C" or above.

Table 4.10 Future Capacity Analysis of Footpaths

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Flow Rate(2) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE
2033 Reference Scenario									
P1	Southern footpath of Caroline Hill Road	3.0	2.0	94	40	43	0.8 [A]	0.3 [A]	0.4 [A]
P2	Eastern footpath of Cotton Path	4.0	2.0	121	198	212	0.7 [A]	1.1 [A]	1.2 [A]
P3	Northern footpath of Caroline Hill Road	3.0	2.0	2,055	2,215	2,364	17.1 [B]	18.5 [B]	19.7 [B]
P4	Eastern footpath of Yun Ping Road	2.5	1.5	1,007	1,335	1,293	11.2 [A]	14.8 [A]	14.4 [A]
P5	Western footpath of Pennington Street	2.2	1.2	1,513	1,694	1,715	21.0 [B]	23.5 [C]	23.8 [C]
P6	Eastern footpath of Leighton Road	3.3	2.3	946	1,396	1,439	6.9 [A]	10.1 [A]	10.4 [A]
C1	Signalised Crossing	6.4	6.4	2,829	3,320	3,532	8.7 [A]	10.2 [A]	10.9 [A]
C2	Signalised Crossing	4.2	4.2	3,607	3,939	4,162	18.8 [B]	20.5 [B]	21.7 [B]
C3	Signalised Crossing	4.0	4.0	2,918	3,079	3,132	16.2 [B]	17.1 [B]	17.4 [B]
2033 Design Scenario									
P1	Southern footpath of Caroline Hill Road	3.0	2.0	937	883	886	7.8 [A]	7.4 [A]	7.4 [A]
P2	Eastern footpath of Cotton Path	4.0	3.0	339	416	431	1.9 [A]	2.3 [A]	2.4 [A]
P3	Northern footpath of Caroline Hill Road	3.0	2.0	2,680	2,840	2,989	22.3 [B]	23.7 [C]	24.9 [C]
P4	Eastern footpath of Yun Ping Road	2.5	1.5	1,211	1,539	1,496	13.5 [A]	17.1 [B]	16.6 [B]
P5	Western footpath of Pennington Street	2.2	1.2	1,717	1,898	1,918	23.8 [C]	26.4 [C]	26.6 [C]
P6	Eastern footpath of Leighton Road	3.3	2.3	1,164	1,614	1,658	8.4 [A]	11.7 [A]	12.0 [A]
C1	Signalised Crossing	6.4	5.4	3,236	3,727	3,938	10.0 [A]	11.5 [A]	12.2 [A]
C2	Signalised Crossing	4.2	3.2	4,014	4,346	4,568	20.9 [B]	22.6 [B]	23.8 [C]
C3	Signalised Crossing	4.0	3.0	3,325	3,486	3,538	18.5 [B]	19.4 [B]	19.7 [B]

Notes: AM – Weekday AM; PM – Weekday PM; WE – Weekend
(1) Clearances of 0.5m on either side were subtracted from the actual widths to produce effective widths, and clearance was increased to 1m for shopping frontage.
(2) For LOS "C" or above, flow rates should be less than 33 pedestrians/metre/minute.

4.9.4 **Table 4.10** shows that all of the concerned footpaths and walkway will operate satisfactorily with LOS level “C” or above.

4.9.5 Having considered that the MTR is one of the main modes of transport of the proposed development, to facilitate the visitors travelling between the site and the Causeway Bay MTR Station, the applicant has liaised with the adjacent commercial development for the feasibility of establishing a footbridge between the proposed development and the adjacent commercial development. With this footbridge proposal, visitors can reach the proposed development more conveniently and comfortably and relieve the burden of the at-grade walkway network.

5 SUMMARY AND CONCLUSION

5.1 Summary

5.1.1 The South China Athletic Association intends to develop a comprehensive sports and recreation centre at the northern part of SCAA site in Caroline Hill Road, Causeway Bay.

5.1.2 As there is no specific guideline set in the HKPSG or land grant for the proposed uses, the proposed car parking provisions is based on the proposed operational needs. The proposed development will provide a total of 66 private car parking spaces (including 2 nos. of parking space for disabled users), 9 motorcycle parking spaces, 1 pick-up/drop-off layby and 1 goods vehicle loading/unloading bay.

5.1.3 Existing junction capacity assessments were carried out for the identified peak hours and the results show that all of the key junctions performed satisfactorily during the surveyed peak hours.

5.1.4 The proposed development would generate two-way traffic flows of 22 pcu/hr in the weekday AM, weekday PM and weekend peak hours. By assigning the additional development traffic to the 2033 Reference Flows, the 2033 Design Flows were obtained.

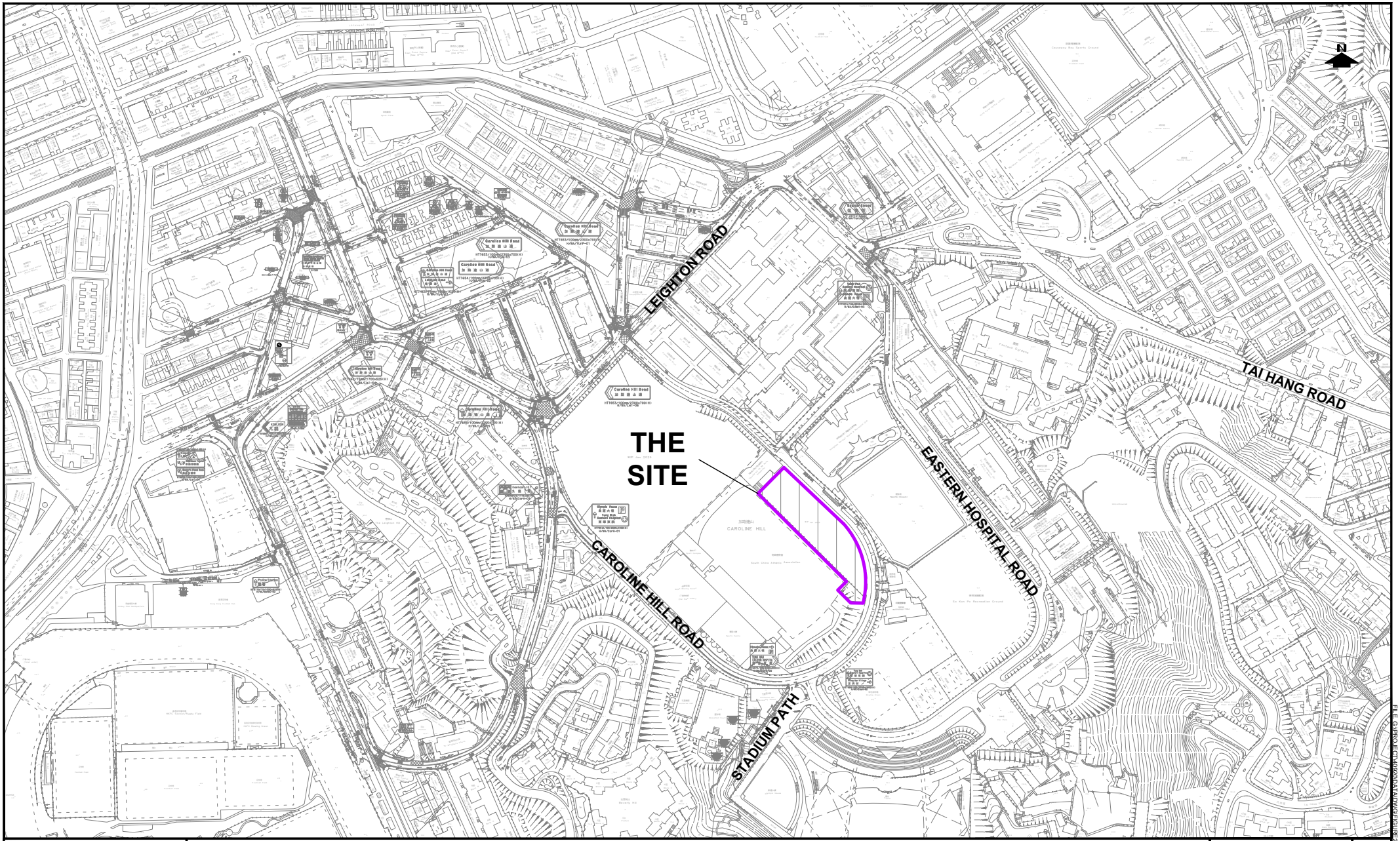
5.1.5 Junction capacity assessments were carried out at the key junctions in the vicinity for the year 2033. The results have indicated that all junctions will operate satisfactorily for both reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce significant traffic impact to the surrounding road network.

5.1.6 The proposed development is estimated to generate 2-way pedestrian flows of 895 person/ hour during weekday AM, weekday PM and weekend peak hours. The condition of the key footpaths will be satisfactory after accommodating the pedestrians generated and attracted by the proposed development in all scenarios with LOS “C” or above.

5.1.7 Having considered that MTR is one of the main modes of transport of the proposed development to facilitate the visitors travelling between the Site and the Causeway Bay MTR Station, the applicant has liaised with the adjacent commercial development for the feasibility of establishing a footbridge between the proposed development and the adjacent commercial development. With this footbridge proposal, visitors can reach the proposed development more conveniently and comfortably and relieve the burden of the at-grade walkway network.

5.2 Conclusion

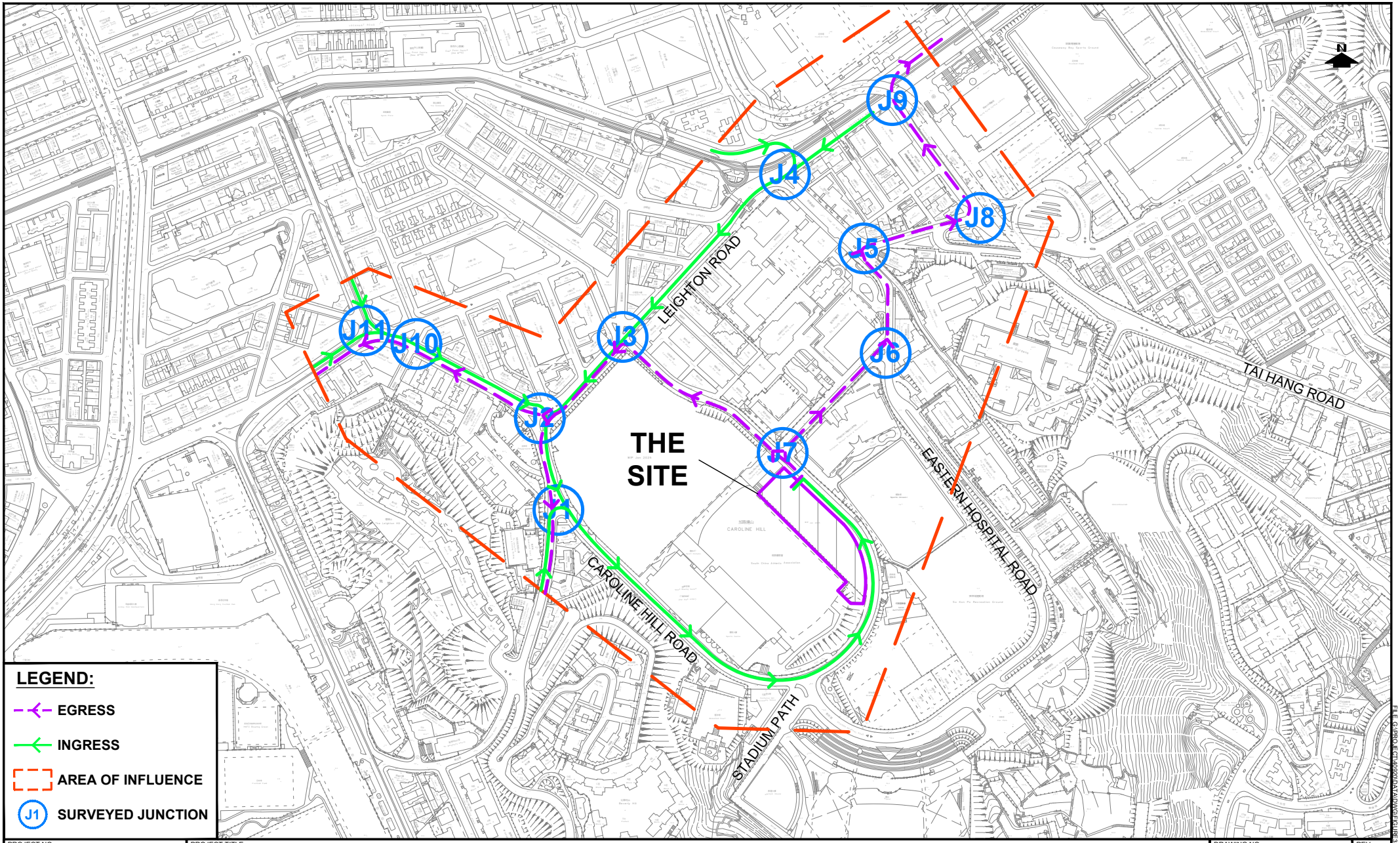
5.2.1 From the assessment results, it can be concluded that the proposed development will not induce significant traffic impact on the surrounding road network and the development proposal is considered acceptable from traffic engineering point of view.



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 2.1	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE SEP 2025 / SCALE 1:5000	DRAWING TITLE: LOCATION PLAN	LLA 顧問有限公司 Consultancy Limited

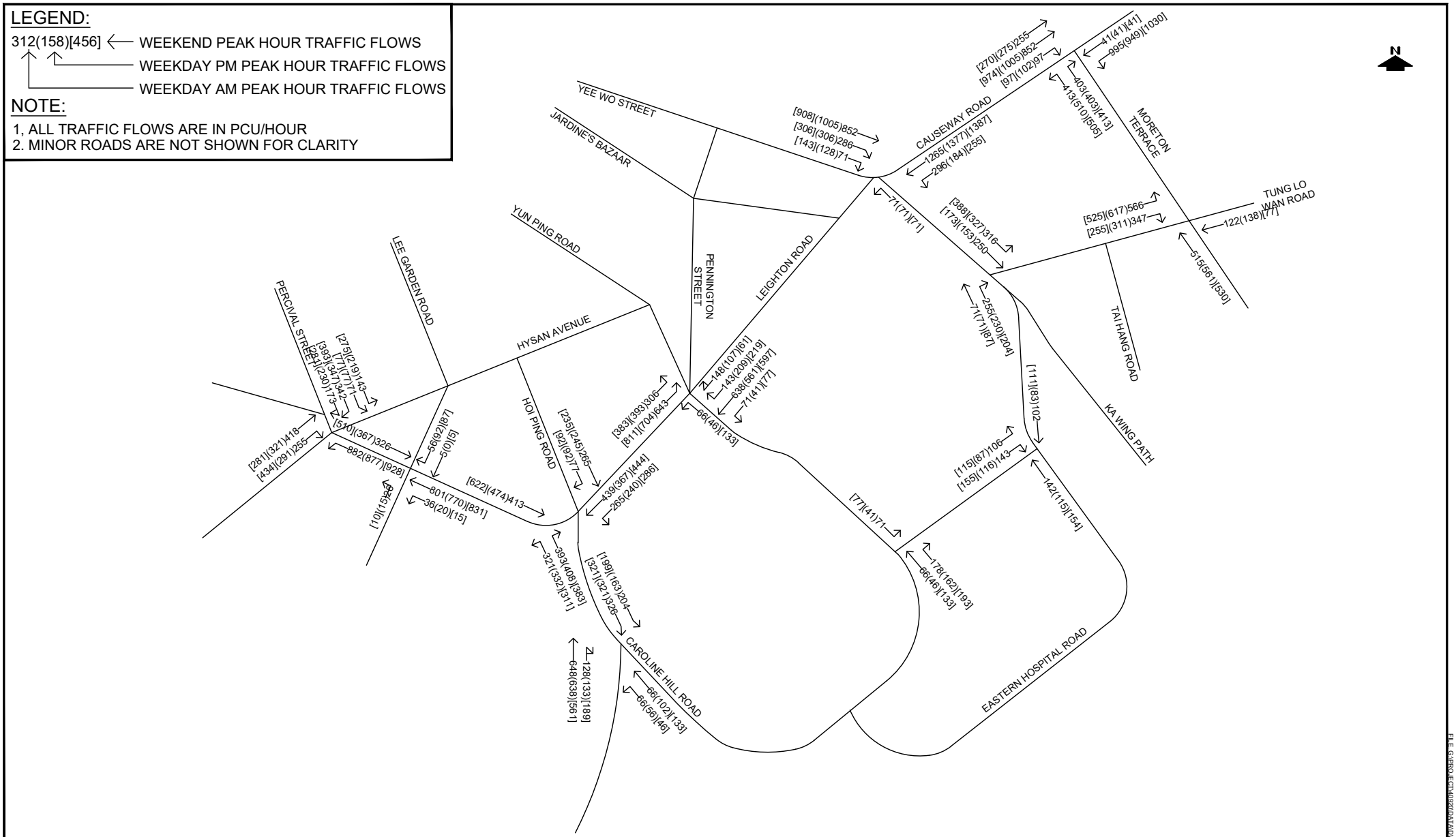
FILE: G:\PROJECT\40920\DATA\DWG\FIGURE2.1.DWG PLOT SCALE : 1 = 1

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE2.1.DWG PLOT SCALE : 1 = 1



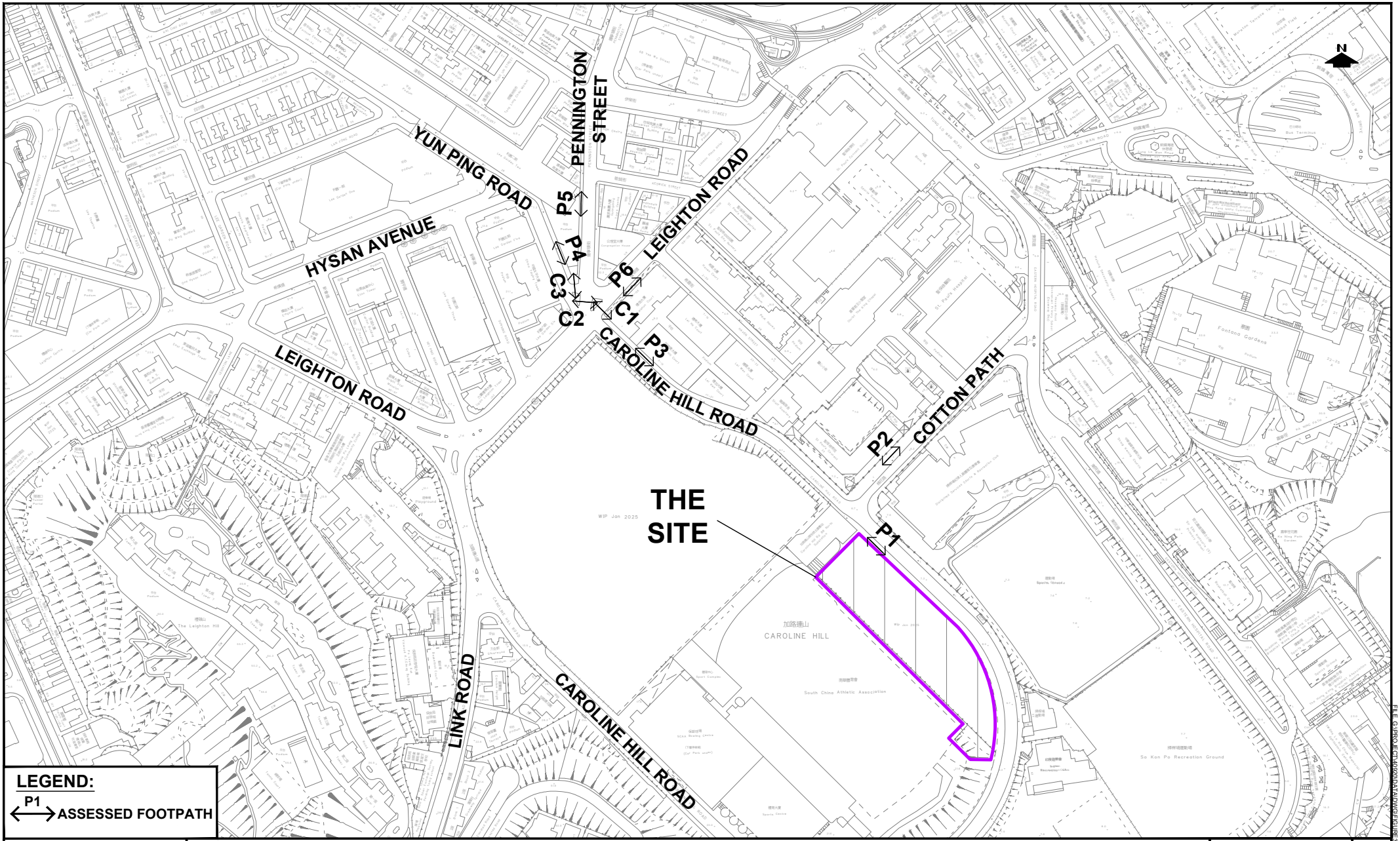
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.1	REV. -
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE SEP 2025 / SCALE 1:5000	DRAWING TITLE: LOCATION OF SURVEYED JUNCTIONS AND AREA OF INFLUENCE	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.1.DWG PLOT SCALE : 1 = 1



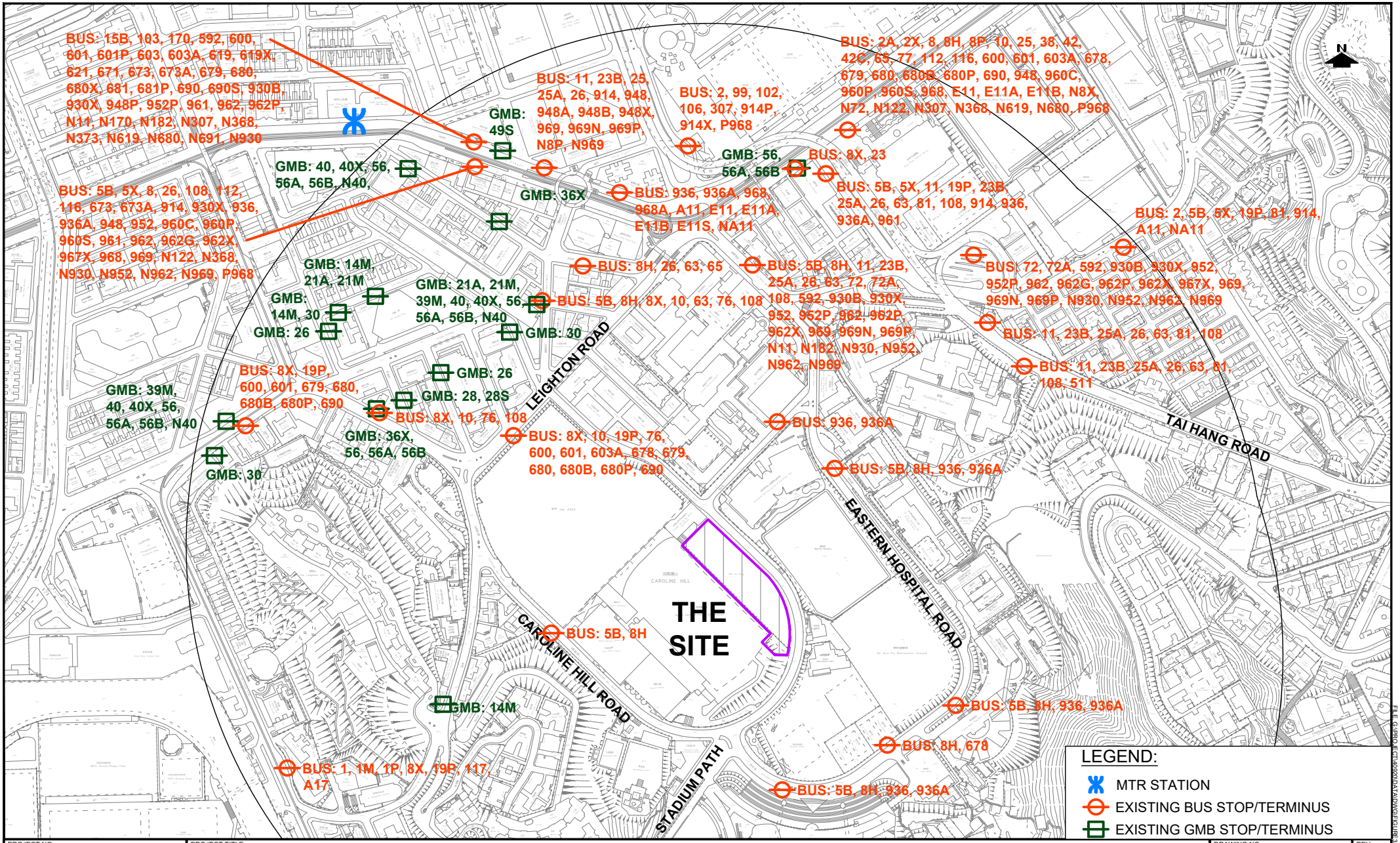
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.2	REV. -
DESIGNED SLN / DATE SEP 2025	DRAWING TITLE: **2025 EXISTING TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN			

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.2.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.3	REV. -
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE SEP 2025; SCALE 1:3000	DRAWING TITLE: LOCATION OF SURVEYED FOOTPATHS	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.3.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.4	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE SEP 2025 / SCALE 1:5000	DRAWING TITLE: EXISTING PUBLIC TRANSPORT FACILITIES	LLA 顧問有限公司 Consultancy Limited

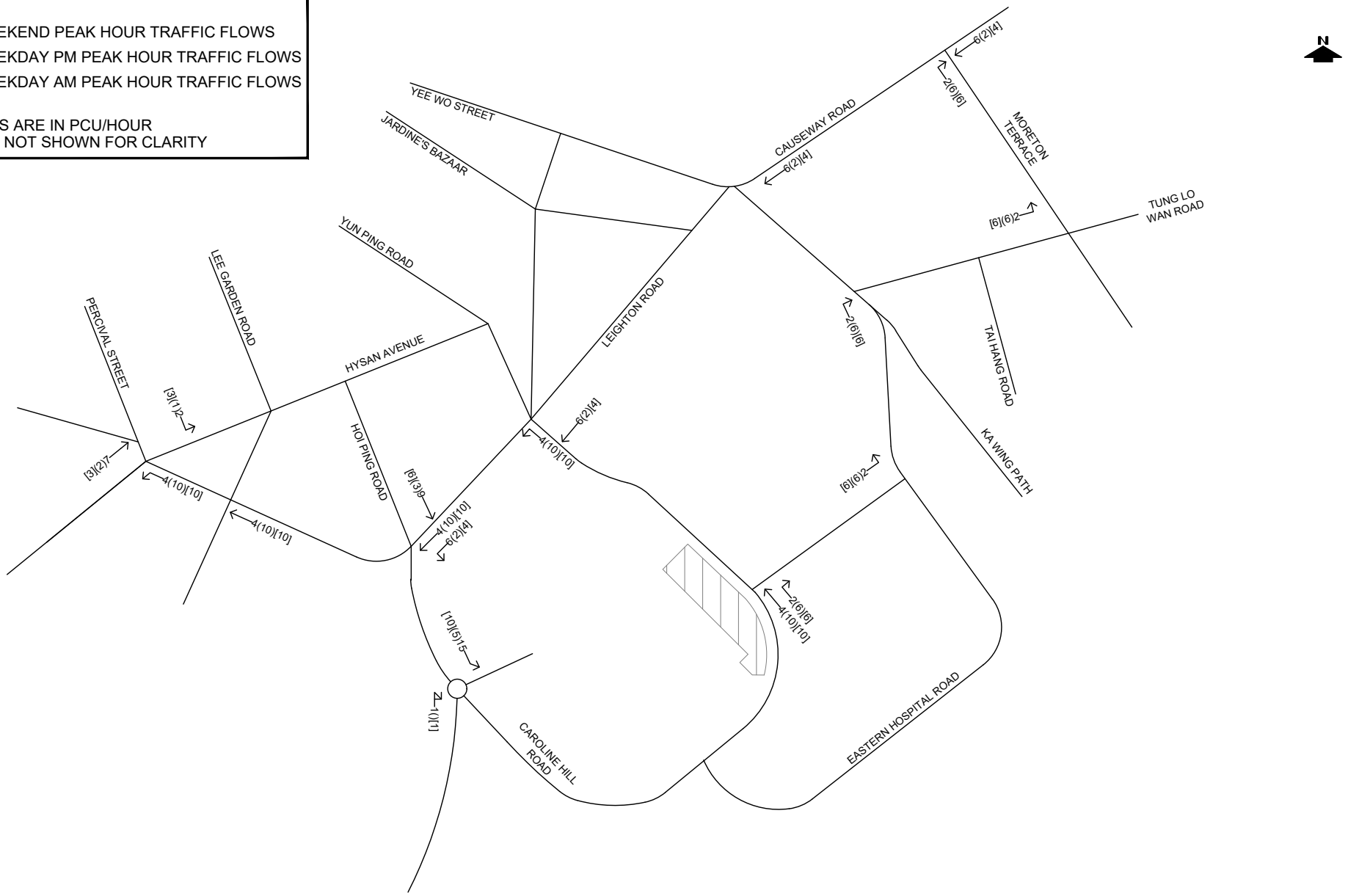
FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.4.DWG PLOT SCALE : 1 = 1

LEGEND:

312(158)[456] ← WEEKEND PEAK HOUR TRAFFIC FLOWS
WEEKDAY PM PEAK HOUR TRAFFIC FLOWS
WEEKDAY AM PEAK HOUR TRAFFIC FLOWS

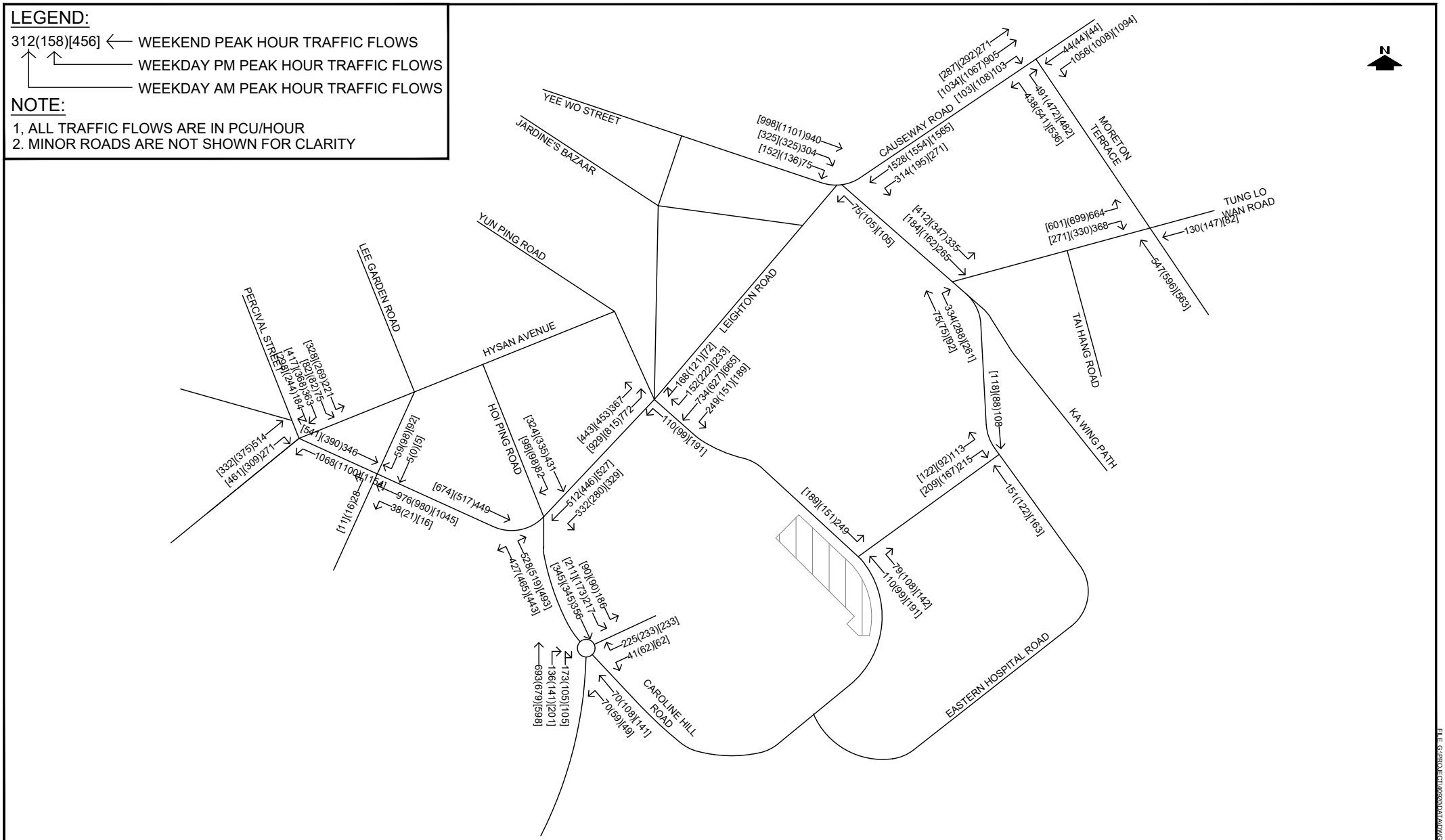
NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 4.1	REV. -
DESIGNED SLN / DATE SEP 2025	DRAWING TITLE: **DEVELOPMENT TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN			

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.1.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 4.2	REV. -
DESIGNED SLN / DATE SEP 2025	DRAWING TITLE: **2033 REFERENCE TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN			

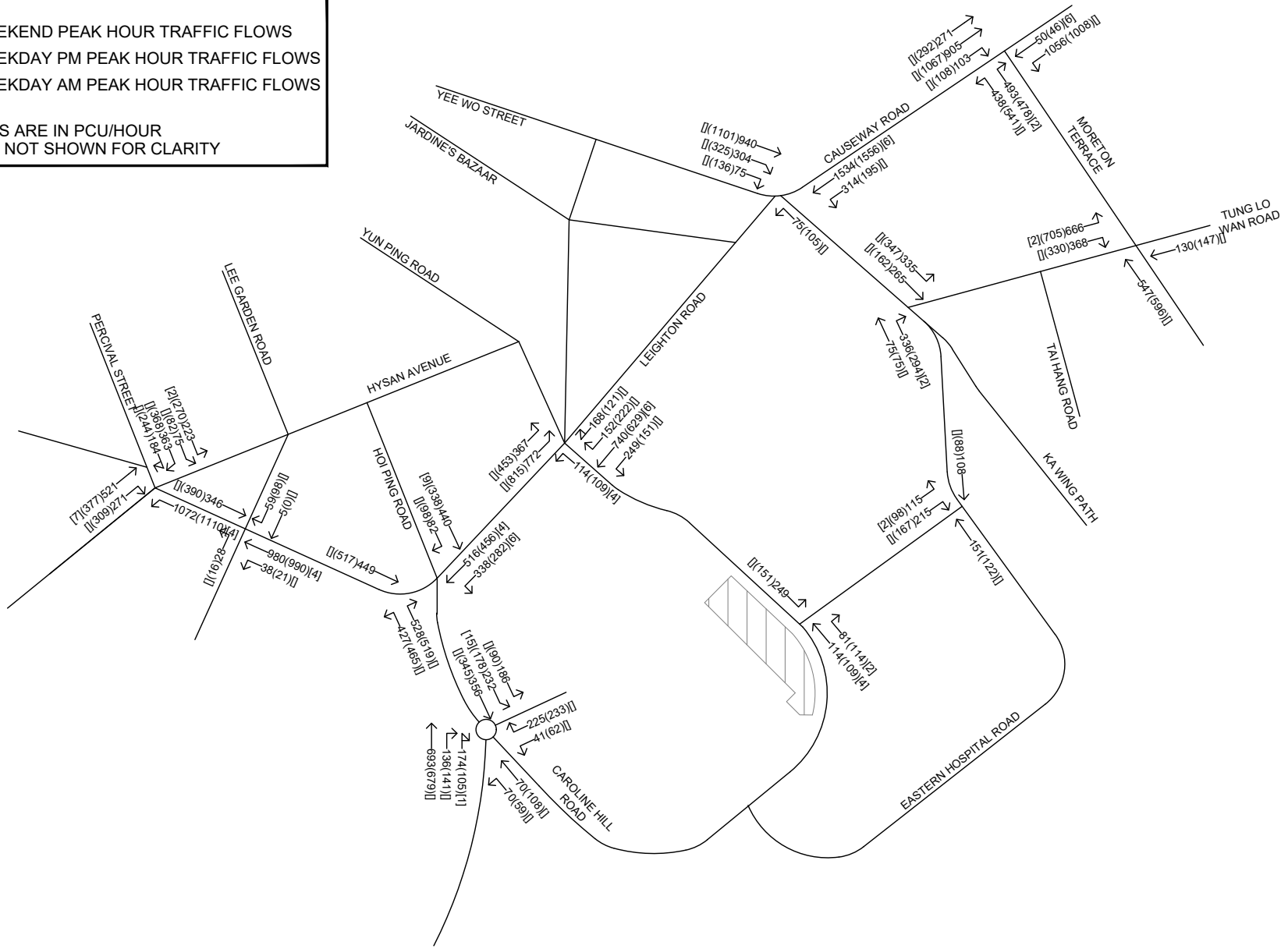
FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.2.DWG PLOT SCALE : 1 = 1

LEGEND:

312(158)[456] ← WEEKEND PEAK HOUR TRAFFIC FLOWS
← WEEKDAY PM PEAK HOUR TRAFFIC FLOWS
← WEEKDAY AM PEAK HOUR TRAFFIC FLOWS

NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

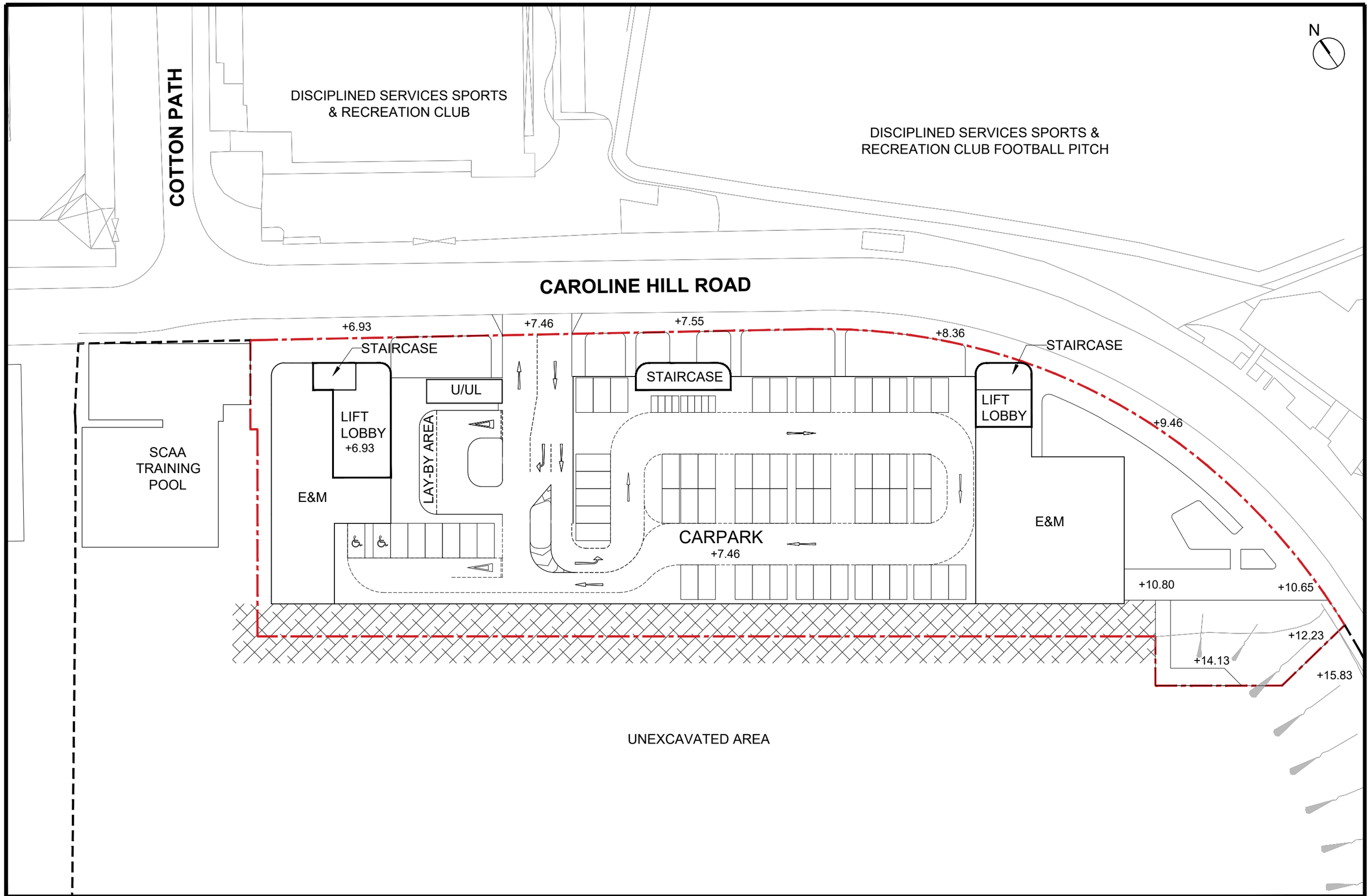


PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 4.3	REV. -
DESIGNED SLN / DATE SEP 2025	DRAWING TITLE: **2033 DESIGN TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN			

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.3.DWG PLOT SCALE : 1 = 1

APPENDIX A

Proposed Car Park Layout



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Car Park Layout ○ 1 : 500 (A3) ○ 13 Oct 2025

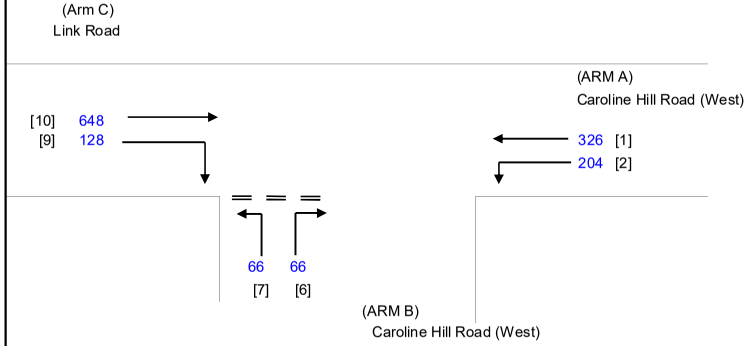
Design 2 (HK) Limited

APPENDIX B

Detail Calculation Sheets

- Existing Scenario

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_CHRW_LR	CHECKED BY:	SLN	Oct-25
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	204	(pcu/hr)
q a-c	=	326	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	648	(pcu/hr)
q c-b	=	128	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	66	(pcu/hr)
q b-c	=	66	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.5

THE CAPACITY OF MOVEMENT :

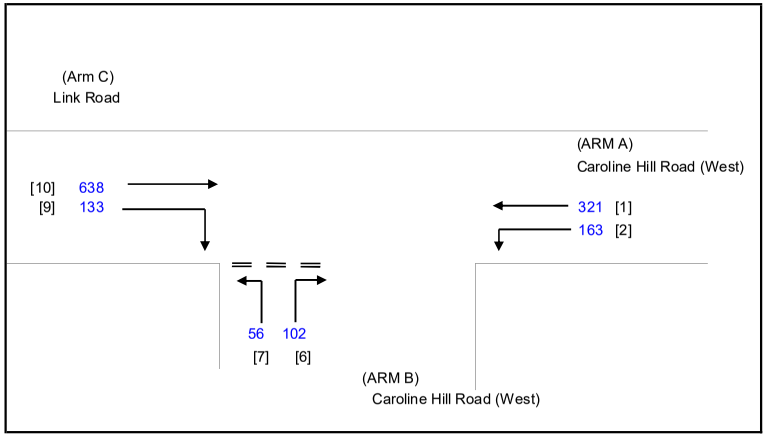
Q b-a	=	316			
Q b-c	=	574	Q b-c (O) =	544	
Q c-b	=	502			
Q b-ac	=	408			
TOTAL FLOW	=	1438	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2089
DFC b-c	=	0.1150
DFC c-b	=	0.2550
DFC b-c (share lane)	=	0.3238

CRITICAL DFC = 0.32

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_CHRW_LF	CHECKED BY:	SLN	Oct-25
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	163	(pcu/hr)
q a-c	=	321	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	638	(pcu/hr)
q c-b	=	133	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	102	(pcu/hr)
q b-c	=	56	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.35443038

THE CAPACITY OF MOVEMENT :

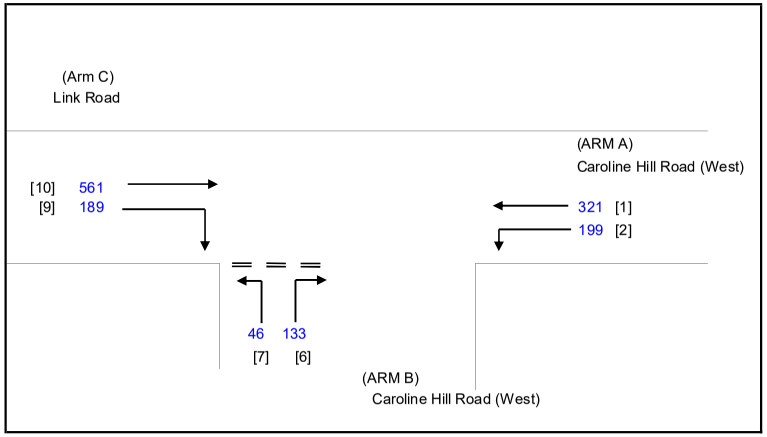
Q b-a	=	321			
Q b-c	=	579	Q b-c (O) =	533	
Q c-b	=	513			
Q b-ac	=	381			
TOTAL FLOW	=	1413	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3178
DFC b-c	=	0.0967
DFC c-b	=	0.2593
DFC b-c (share lane)	=	0.4145

CRITICAL DFC = 0.41

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_CHRW_LF	CHECKED BY:	SLN	Oct-25
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	199	(pcu/hr)
q a-c	=	321	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	561	(pcu/hr)
q c-b	=	189	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	133	(pcu/hr)
q b-c	=	46	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.25698324

THE CAPACITY OF MOVEMENT :

Q b-a	=	310		
Q b-c	=	576	Q b-c (O) =	514.2
Q c-b	=	505		
Q b-ac	=	352		
TOTAL FLOW	=	1449	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4290
DFC b-c	=	0.0799
DFC c-b	=	0.3743
DFC b-c (share lane)	=	0.5089

CRITICAL DFC = 0.51

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

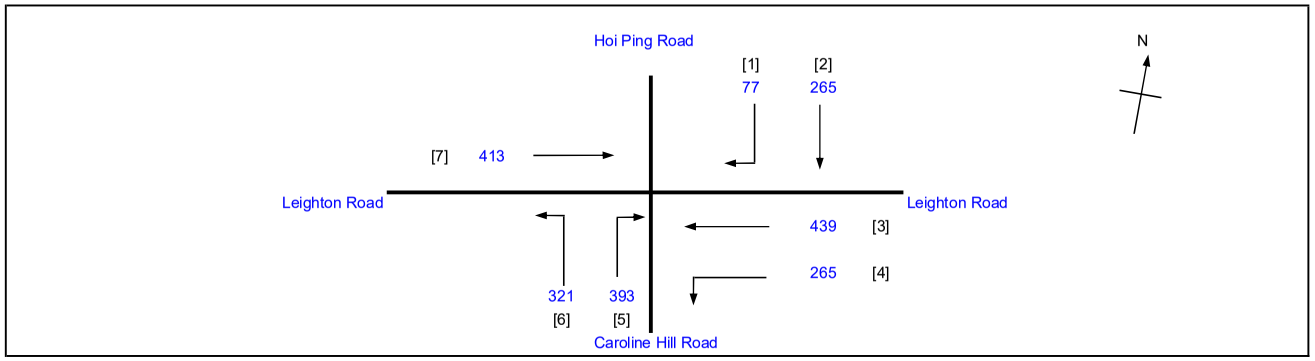
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

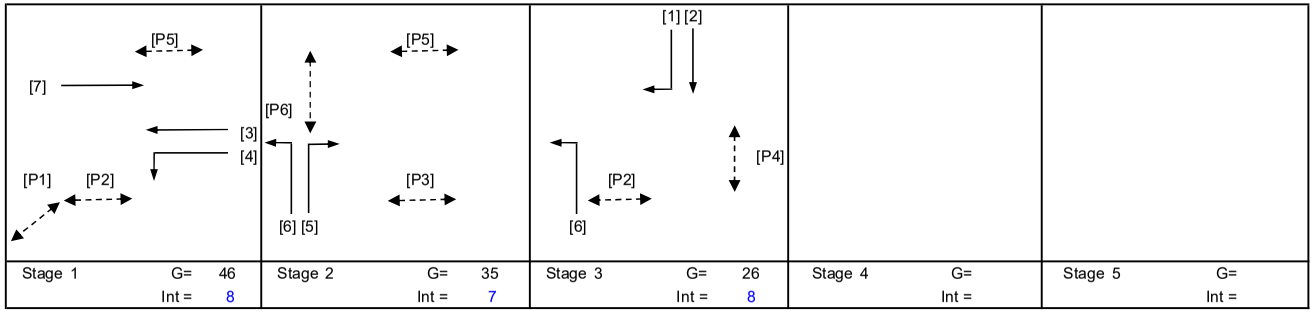
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.602
Loss time		L =	20 sec
Total Flow		=	2173 pcu
Co	= (1.5*L+5)/(1-Y)	=	88.0 sec
Cm	= L/(1-Y)	=	50.3 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	24.5 %
Cp	= 0.9*L/(0.9-Y)	=	60.5 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**26 %**



Stage 1	G= 46	Int = 8
Stage 2	G= 35	Int = 7
Stage 3	G= 26	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

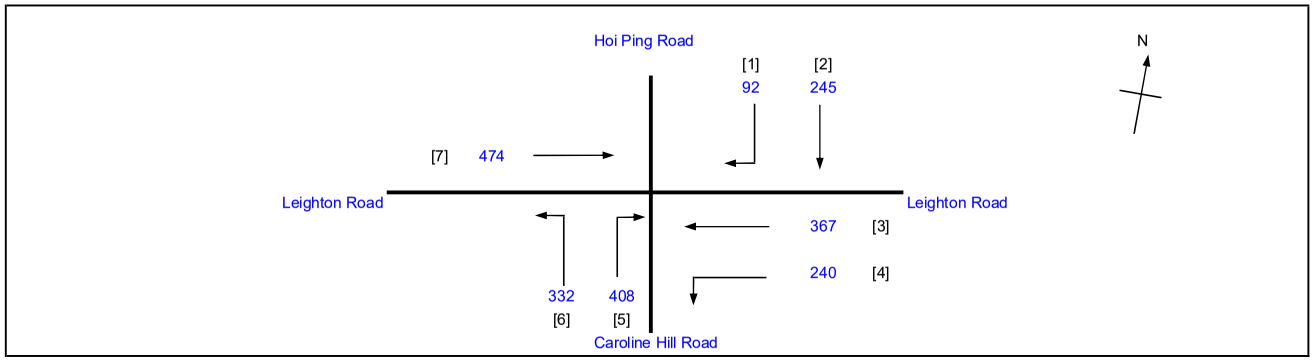
Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	47	5
P2	1,3	4	14	5	0	83	5
P3	2	4.5	14	5	3	34	5
P4	3	15	10	7	4	23	7
P5	1,2	7	11	6	1	89	6
P6	2	15	10	7	4	31	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		413		413	0.00	4020							4020	0.103			19	47	0.712	36	55
3*	1	3.00	1				2055		370		370	0.00	2055			0.7	-617			1438	0.257	0.257		47	47	0.712	48	40
3,4*	1	3.50	1	20		N	1965	265	69		334	0.79	1855			0.7	-556			1299	0.257			47	47	0.712	42	41
6	2,3	3.00	1	30		N	1915	321			321	1.00	1824							1824	0.176			32	42	0.712	48	49
5	2	4.00	1	20			2155			393	393	1.00	2005							2005	0.196	0.196		36	36	0.712	60	45
1,2	3	3.00	1	10		N	1915		265	77	342	0.23	1852	20	444					2297	0.149	0.149		27	27	0.712	54	51

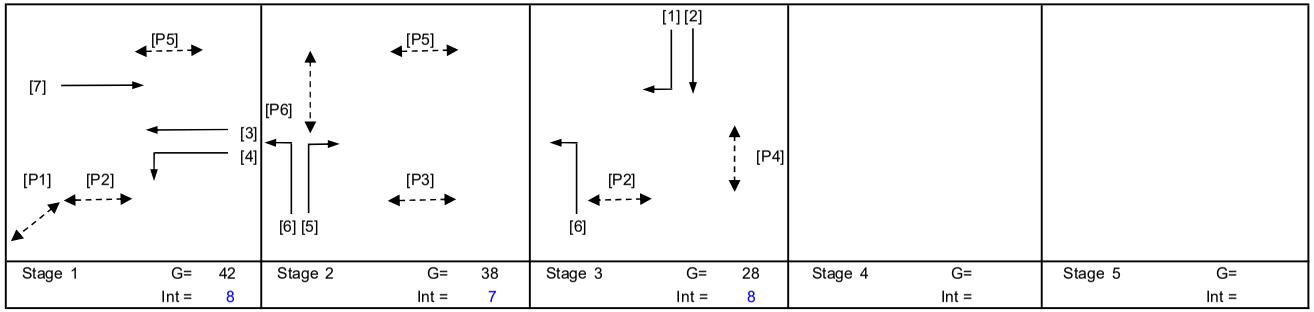
* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road		FILENAME : J2_LR_CHR_HPR.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.576
Loss time	L =	20 sec
Total Flow	=	2158 pcu
Co = (1.5*L+5)/(1-Y)	=	82.5 sec
Cm = L/(1-Y)	=	47.1 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	30.3 %
Cp = 0.9*L/(0.9-Y)	=	55.5 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**32 %**



Stage 1	G= 42	Int = 8
Stage 2	G= 38	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	Green Time Required FG	Green Time Required Delay	Green Time Provided SG	Green Time Provided FG
P1	1	4.5	10	5	2	43	5
P2	1,3	4	14	5	0	80	5
P3	2	4.5	14	5	3	37	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Movement Straight pcu/h	Movement Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		474		474	0.00	4020							4020	0.118			23	43	0.680	42	50
3*	1	3.00	1				2055		319		319	0.00	2055			0.7	-617			1438	0.222			42	43	0.680	42	41
3,4*	1	3.50	1	20		N	1965	240	48		288	0.83	1849			0.7	-555			1294	0.222	0.222		43	43	0.680	36	42
6	2,3	3.00	1	30		N	1915	332			332	1.00	1824							1824	0.182			35	45	0.680	48	45
5	2	4.00	1	20			2155			408	408	1.00	2005							2005	0.204	0.204		39	39	0.680	60	42
1,2	3	3.00	1	10		N	1915		245	92	337	0.27	1840	20	414					2253	0.150	0.150		29	29	0.680	54	49

* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

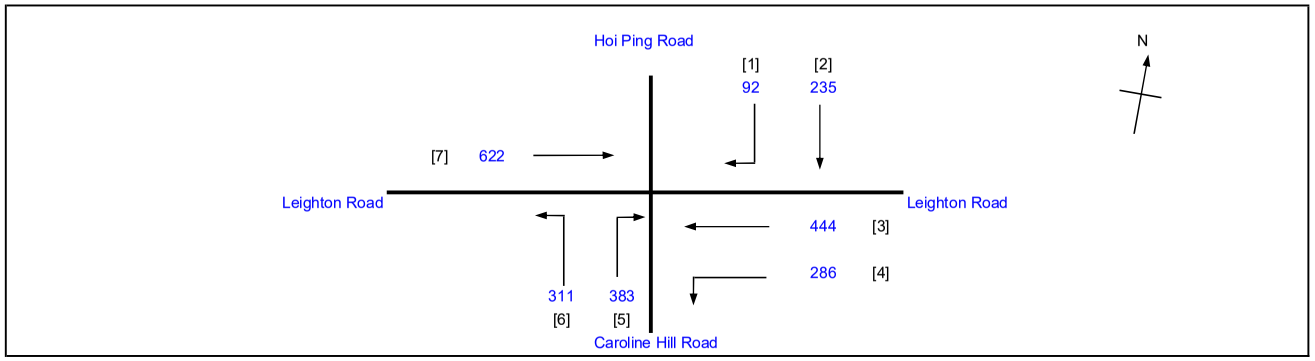
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

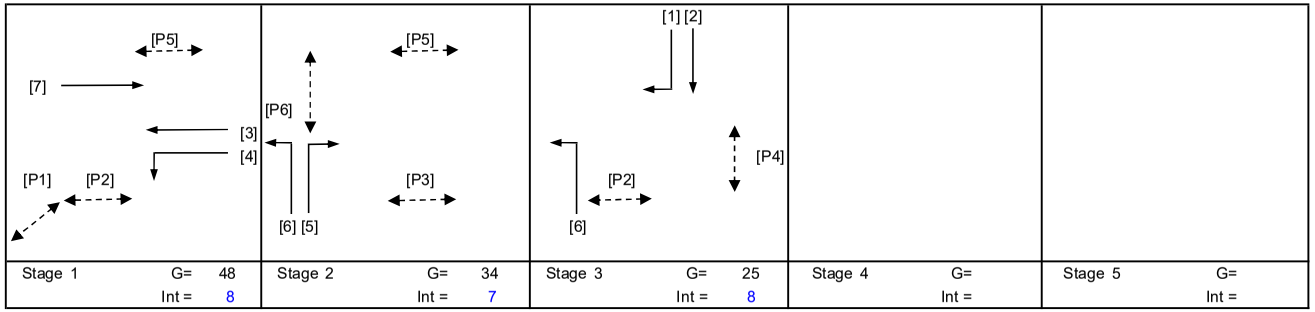
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.600
Loss time		L =	20 sec
Total Flow		=	2373 pcu
Co	= (1.5*L+5)/(1-Y)	=	87.6 sec
Cm	= L/(1-Y)	=	50.1 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	24.9 %
Cp	= 0.9*L/(0.9-Y)	=	60.1 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**27 %**



Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	49	5
P2	1,3	4	14	5	0	84	5
P3	2	4.5	14	5	3	33	5
P4	3	15	10	7	4	22	7
P5	1,2	7	11	6	1	90	6
P6	2	15	10	7	4	30	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		622		622	0.00	4020							4020	0.155			28	49	0.710	51	47
3*	1	3.00	1				2055		384		384	0.00	2055			0.7	-617			1438	0.267			49	49	0.710	48	38
3,4*	1	3.50	1	20		N	1965	286	60		346	0.83	1850			0.7	-555			1295	0.267	0.267		49	49	0.710	42	39
6	2,3	3.00	1	30		N	1915	311			311	1.00	1824							1824	0.171			31	41	0.710	48	50
5	2	4.00	1	20			2155			383	383	1.00	2005							2005	0.191	0.191		35	35	0.710	60	46
1,2	3	3.00	1	10		N	1915		235	92	327	0.28	1837	20	462					2299	0.142	0.142		26	26	0.710	54	52

* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

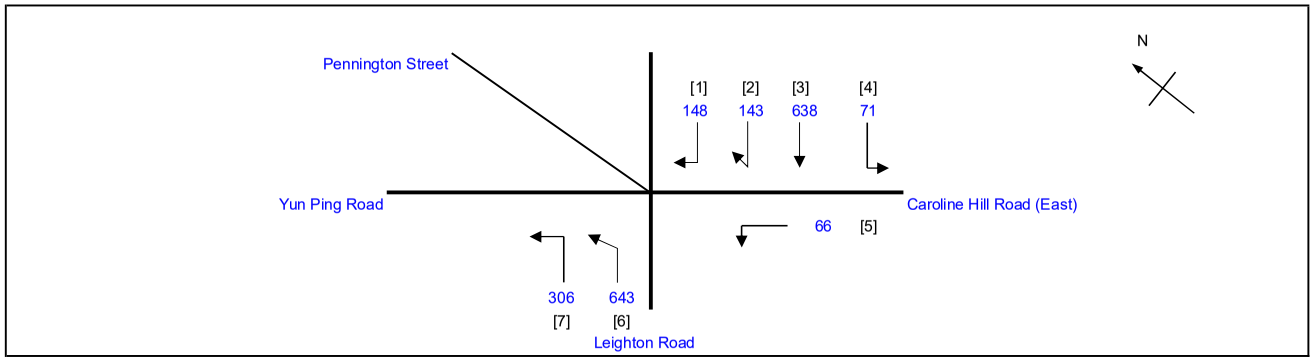
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

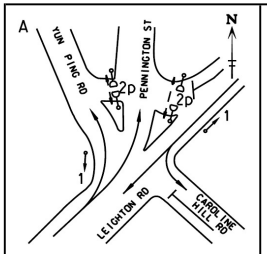
2025 Existing AM

PROJECT NO.: 40920

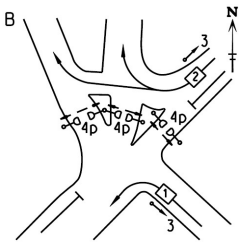
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.550
Loss time		L =	11 sec
Total Flow		=	2015 pcu
Co	= (1.5*L+5)/(1-Y)	=	47.8 sec
Cm	= L/(1-Y)	=	24.4 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	48.6 %
Cp	= 0.9*L/(0.9-Y)	=	28.3 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**50 %**



Stage 1 G= 71 Int = 6



Stage 2 G= 46 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	67	8
4P	2		10	8	2	43	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							11		
3	1	2.50	1				2005		461		461	0.00	2005							2005	0.230			50	72
3,4	1	3.00	1	7		N	1915	71	177		248	0.29	1804			0.6	-722			1082	0.229			50	72
6	1	3.00	1				2055		508		508	0.00	2055			0.7	-534			1521	0.334	0.334		72	72
6,7	1	3.00	1	15		N	1915	306	135		441	0.69	1791			0.7	-466			1325	0.333			72	72
1,2	2	3.50	1	9		N	1965			291	291	1.00	1684			0.8	-337			1347	0.216	0.216		47	47
5	2	4.00	1	5		N	2015	66			66	1.00	1550			0.6	-620			930	0.071			15	47

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

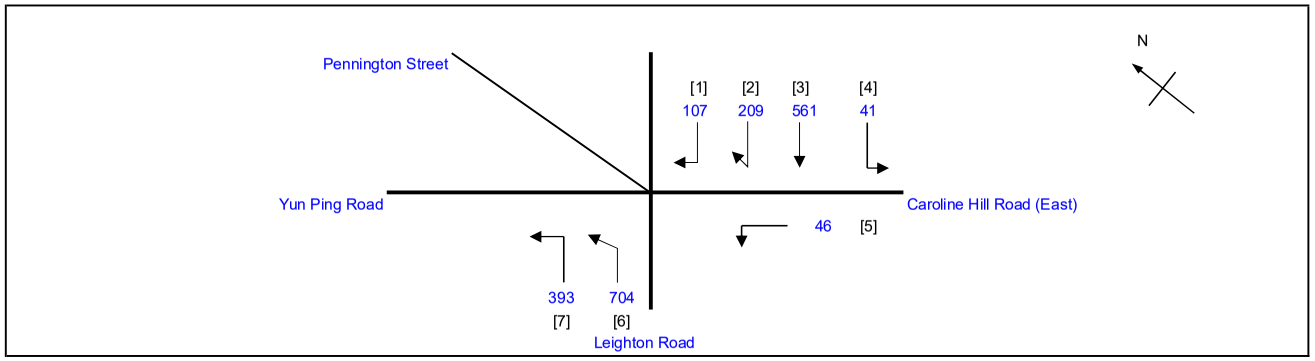
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

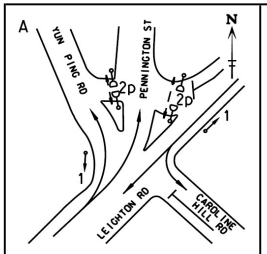
2025 Existing PM

PROJECT NO.: 40920

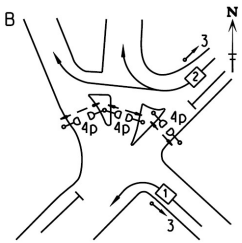
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.621
Loss time		L =	11 sec
Total Flow		=	2061 pcu
Co	= (1.5*L+5)/(1-Y)	=	56.8 sec
Cm	= L/(1-Y)	=	29.1 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	31.6 %
Cp	= 0.9*L/(0.9-Y)	=	35.5 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**33 %**



Stage 1 G= 73 Int = 6



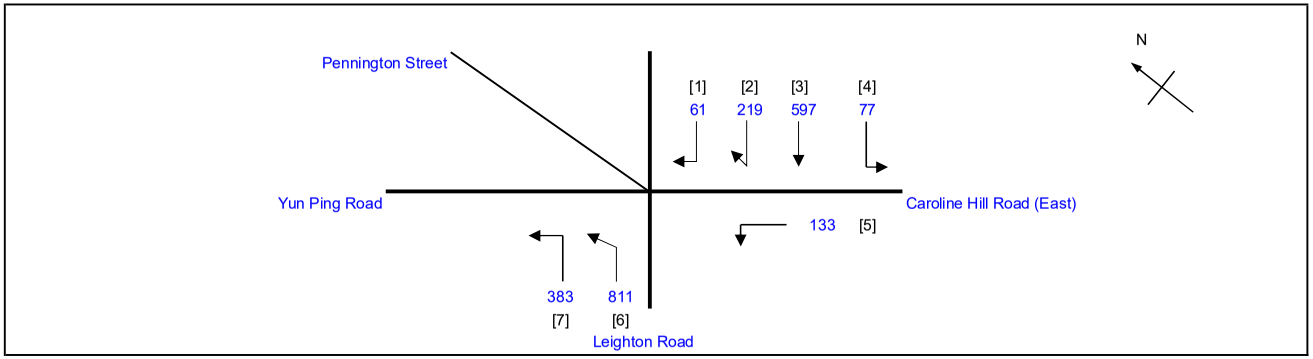
Stage 2 G= 44 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	69	8
4P	2		10	8	2	41	8

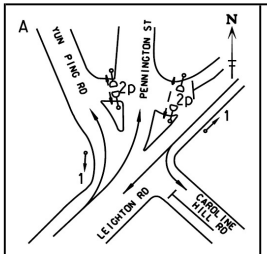
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		388		388	0.00	2005							2005	0.194			37	74
3,4	1	3.00	1	7		N	1915	41	173		214	0.19	1839			0.6	-736			1103	0.194			37	74
6	1	3.00	1				2055		588		588	0.00	2055			0.7	-534			1521	0.387			74	74
6,7	1	3.00	1	15		N	1915	393	116		509	0.77	1778			0.7	-462			1316	0.387	0.387		74	74
1,2	2	3.50	1	9		N	1965			316	316	1.00	1684			0.8	-337			1347	0.235	0.235		45	45
5	2	4.00	1	5		N	2015	46			46	1.00	1550			0.6	-620			930	0.049			9	45

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

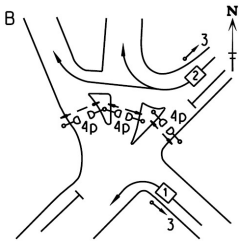
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.627
Loss time	L =	11 sec
Total Flow	=	2281 pcu
Co = (1.5*L+5)/(1-Y)	=	57.7 sec
Cm = L/(1-Y)	=	29.5 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	30.3 %
Cp = 0.9*L/(0.9-Y)	=	36.3 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**31 %**



Stage 1 G= 79 Int = 6



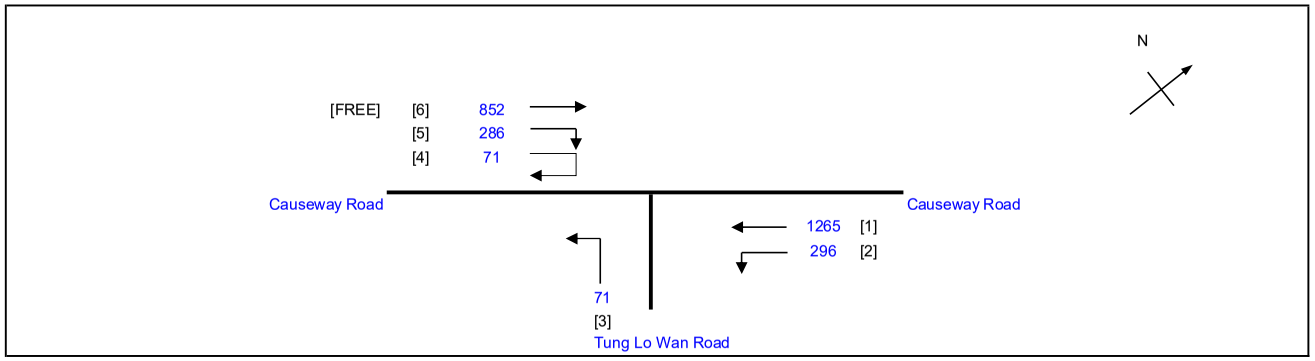
Stage 2 G= 38 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	75	8
4P	2		10	8	2	35	8

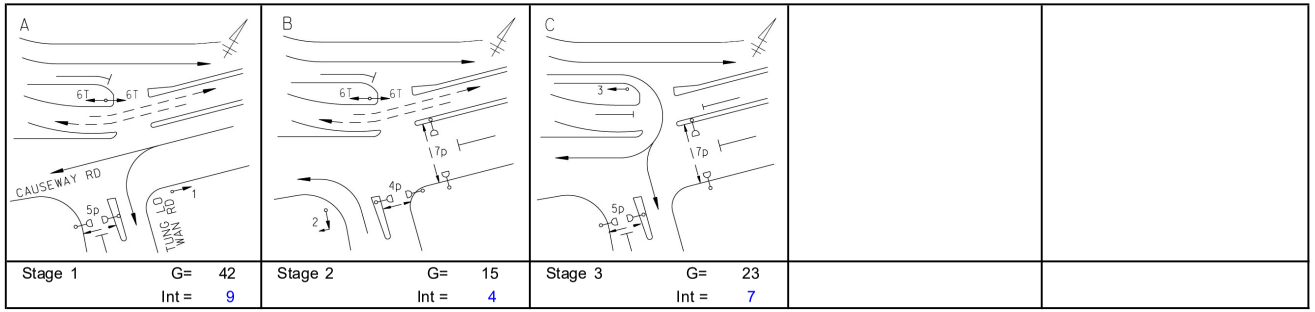
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		439		439	0.00	2005							2005	0.219			42	80
3,4	1	3.00	1	7		N	1915	77	158		235	0.33	1789			0.6	-716			1073	0.219			42	80
6	1	3.00	1				2055		638		638	0.00	2055			0.7	-534			1521	0.419	0.419		80	80
6,7	1	3.00	1	15		N	1915	383	173		556	0.69	1792			0.7	-466			1326	0.419			80	80
1,2	2	3.50	1	9		N	1965			280	280	1.00	1684			0.8	-337			1347	0.208	0.208		39	39
5	2	4.00	1	5		N	2015	133			133	1.00	1550			0.6	-620			930	0.143			27	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.352
Loss time	L =	33 sec
Total Flow	=	1989 pcu
Co = (1.5*L+5)/(1-Y)	=	84.2 sec
Cm = L/(1-Y)	=	51.0 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	85.2 %
Cp = 0.9*L/(0.9-Y)	=	54.2 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**71 %**



Stage 1	G= 42	Stage 2	G= 15	Stage 3	G= 23
	Int = 9		Int = 4		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		38	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		343		343	0.00	1915			0.8	-383			1532	0.224			43	43
1	1	3.00	2				4110		922		922	0.00	4110							4110	0.224			43	43
2	1	3.00	1	9		N	1915	296			296	1.00	1641			0.8	-328			1313	0.225	0.225		43	43
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			9	15
4,5	3	4.00	1	12		N	2015			182	182	1.00	1791			0.8	-358			1433	0.127	0.127		24	24
4,5	3	4.50	1	8		N	2065			175	175	1.00	1739			0.8	-348			1391	0.126			24	24
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

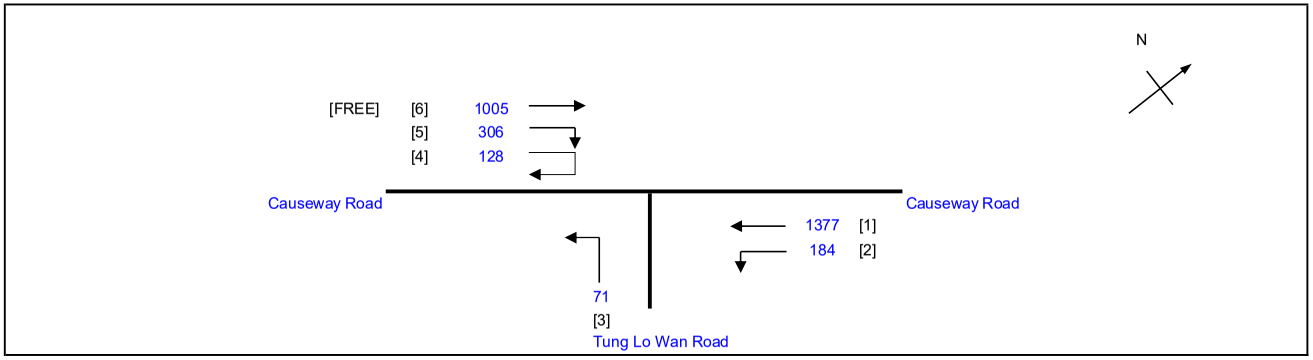
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

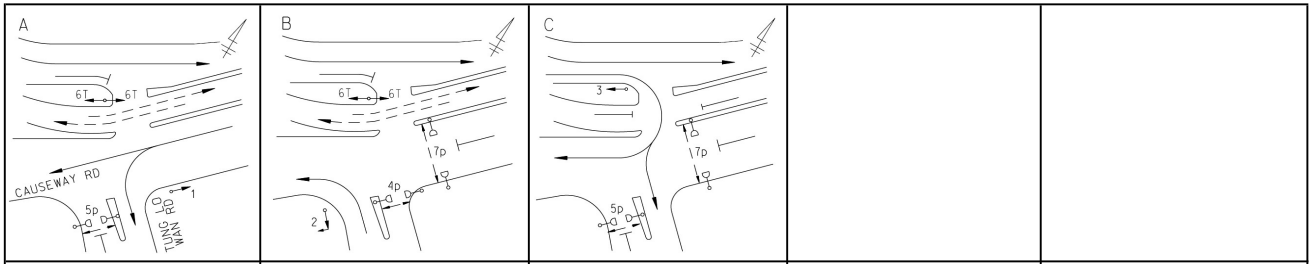
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.398
Loss time		L =	33 sec
Total Flow		=	2066 pcu
Co	= (1.5*L+5)/(1-Y)	=	90.5 sec
Cm	= L/(1-Y)	=	54.8 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	64.0 %
Cp	= 0.9*L/(0.9-Y)	=	59.2 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**52 %**



Stage 1	G= 40	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 25	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		40	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		374		374	0.00	1915			0.8	-383			1532	0.244	0.244		41	41
1	1	3.00	2				4110		1003		1003	0.00	4110							4110	0.244			41	41
2	1	3.00	1	9		N	1915	184			184	1.00	1641			0.8	-328			1313	0.140			24	41
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			8	15
4,5	3	4.00	1	12		N	2015			220	220	1.00	1791			0.8	-358			1433	0.154			26	26
4,5	3	4.50	1	8		N	2065			214	214	1.00	1739			0.8	-348			1391	0.154	0.154		26	26
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

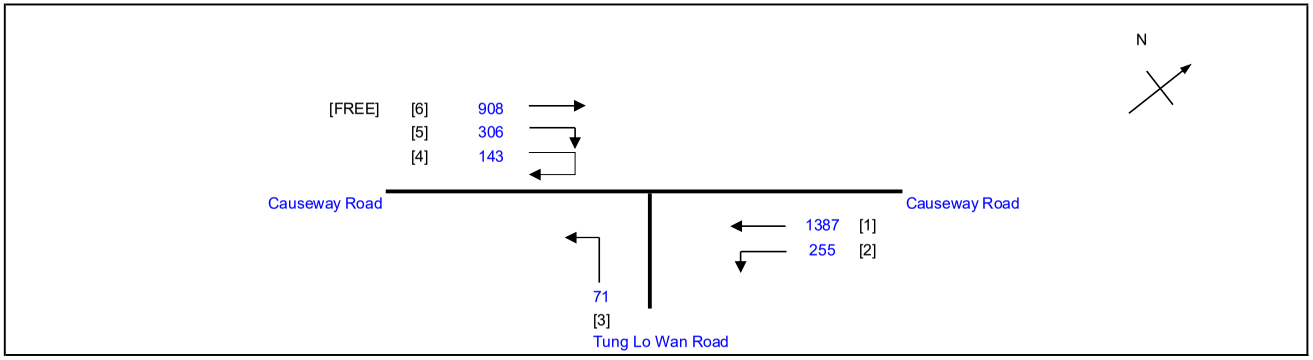
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

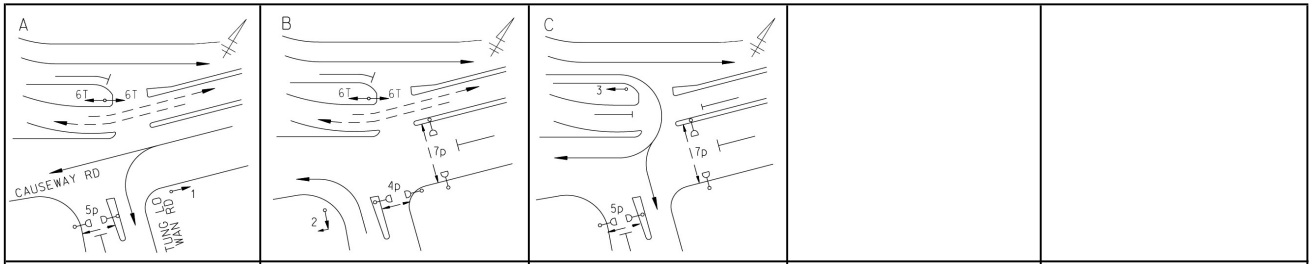
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.405
Loss time		L =	33 sec
Total Flow		=	2162 pcu
Co	= (1.5*L+5)/(1-Y)	=	91.6 sec
Cm	= L/(1-Y)	=	55.5 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	61.0 %
Cp	= 0.9*L/(0.9-Y)	=	60.0 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**49 %**



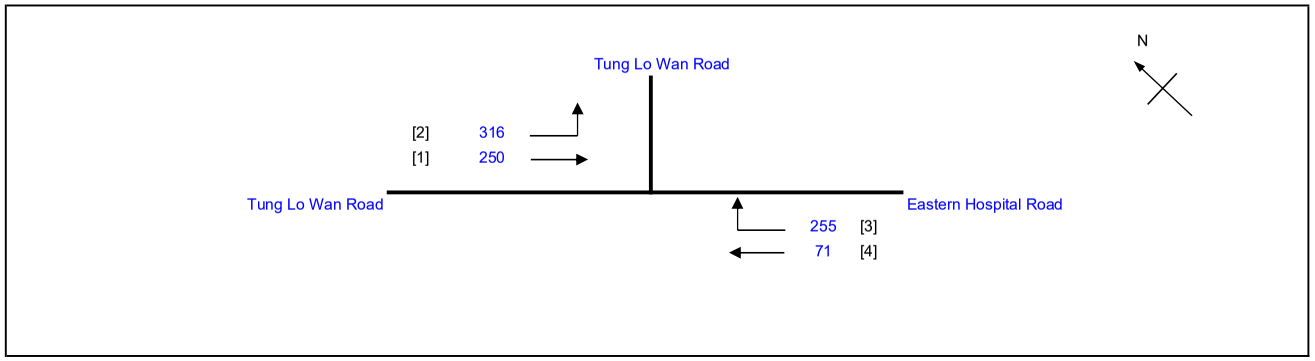
Stage 1	G=	40	
	Int =	9	
Stage 2	G=	15	
	Int =	4	
Stage 3	G=	25	
	Int =	7	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		40	11

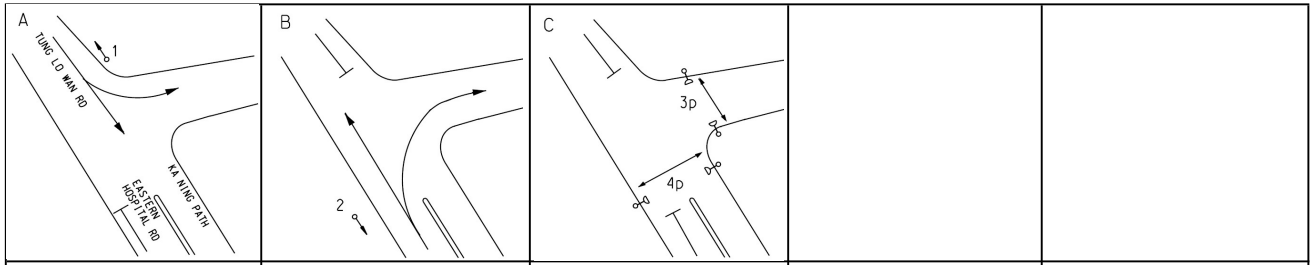
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		377		377	0.00	1915			0.8	-383			1532	0.246	0.246		41	41
1	1	3.00	2				4110		1010		1010	0.00	4110							4110	0.246			41	41
2	1	3.00	1	9		N	1915	255			255	1.00	1641			0.8	-328			1313	0.194			32	41
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			8	15
4,5	3	4.00	1	12		N	2015			228	228	1.00	1791			0.8	-358			1433	0.159	0.159		26	26
4,5	3	4.50	1	8		N	2065			221	221	1.00	1739			0.8	-348			1391	0.159			26	26
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.326
Loss time	L =	41 sec
Total Flow	=	892 pcu
Co = (1.5*L+5)/(1-Y)	=	98.7 sec
Cm = L/(1-Y)	=	60.8 sec
Yult	=	0.593
R.C.ult = (Yult-Y)/Y*100%	=	81.7 %
Cp = 0.9*L/(0.9-Y)	=	64.3 sec
Ymax = 1-L/C	=	0.590
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**63 %**



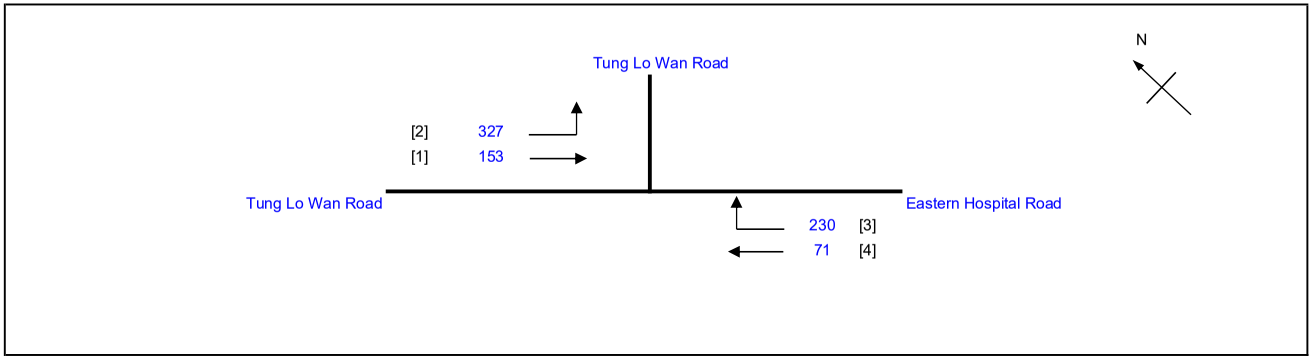
Stage 1	G= 25	Int = 5
Stage 2	G= 32	Int = 3
Stage 3	G= 33	Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

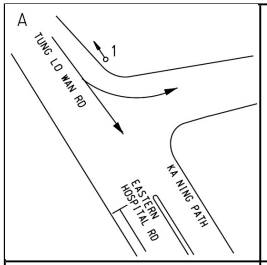
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	50	250		300	0.17	2064							2064	0.145	0.145		26	26
4	1	3.30	1	25		N	1945	266			266	1.00	1835							1835	0.145			26	26
1,2	2	3.65	1	12		N	1980		71	255	326	0.78	1804							1804	0.181	0.181		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

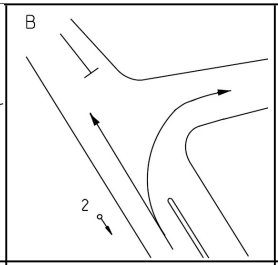
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Oct-25
J5 Tung Lo Wan Road / Eastern Hospital Road			Reviewed By:	SLN	Oct-25



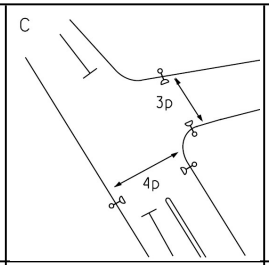
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.291
Loss time	L =	41 sec
Total Flow	=	781 pcu
Co = (1.5*L+5)/(1-Y)	=	93.8 sec
Cm = L/(1-Y)	=	57.8 sec
Yult	=	0.593
R.C.ult = (Yult-Y)/Y*100%	=	103.8 %
Cp = 0.9*L/(0.9-Y)	=	60.6 sec
Ymax = 1-L/C	=	0.590
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**83 %**



Stage 1 G= 24 Int = 5



Stage 2 G= 33 Int = 3



Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
3,4	1	3.30	1	25			2085	99	153		252	0.39	2037							2037	0.124			25	25			
4	1	3.30	1	25		N	1945	228			228	1.00	1835							1835	0.124	0.124		25	25			
1,2	2	3.65	1	12		N	1980		71	230	301	0.76	1807							1807	0.167	0.167		34	34			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

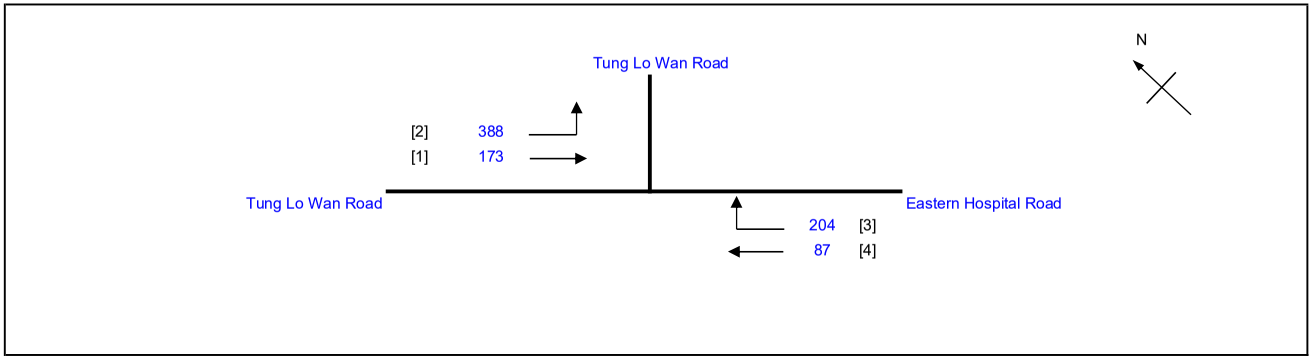
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

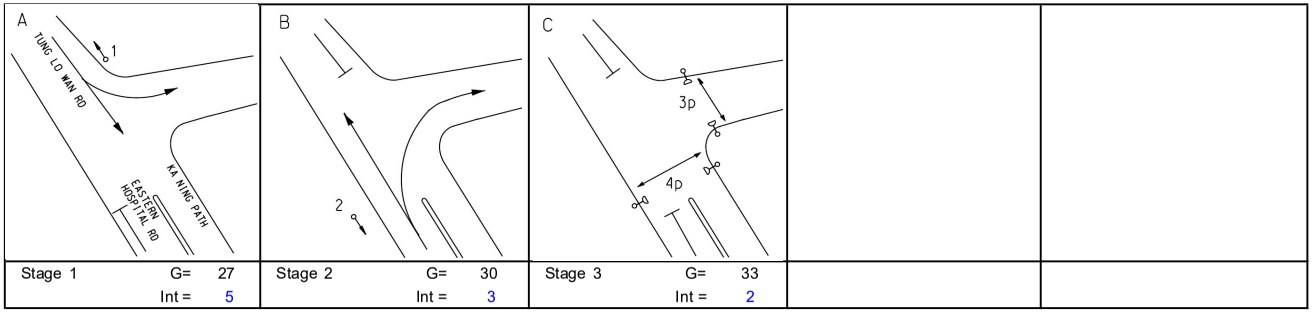
J5 Tung Lo Wan Road / Eastern Hospital Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.305
Loss time		L =	41 sec
Total Flow		=	852 pcu
Co	= (1.5*L+5)/(1-Y)	=	95.7 sec
Cm	= L/(1-Y)	=	59.0 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	94.4 %
Cp	= 0.9*L/(0.9-Y)	=	62.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**74 %**



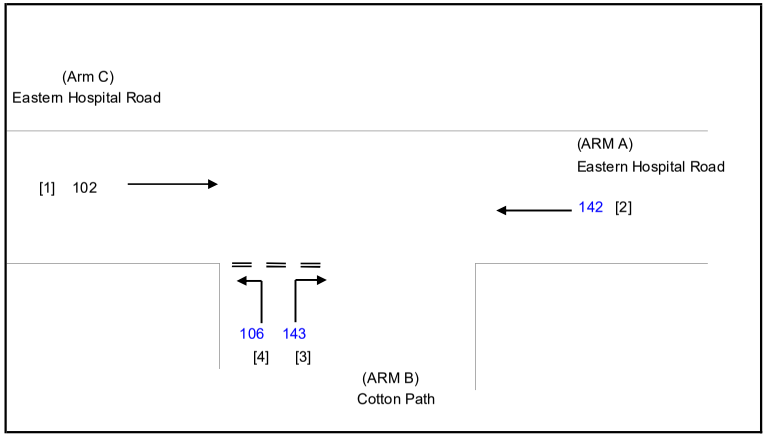
Stage 1	G=	27	
	Int =	5	
Stage 2	G=	30	
	Int =	3	
Stage 3	G=	33	
	Int =	2	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
3,4	1	3.30	1	25			2085	122	173		295	0.41	2035							2035	0.145	0.145		28	28			
4	1	3.30	1	25		N	1945	266			266	1.00	1835							1835	0.145			28	28			
1,2	2	3.65	1	12		N	1980		87	204	291	0.70	1820							1820	0.160	0.160		31	31			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	102	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	143	(pcu/hr)
q b-c	=	106	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.42570281

THE CAPACITY OF MOVEMENT :

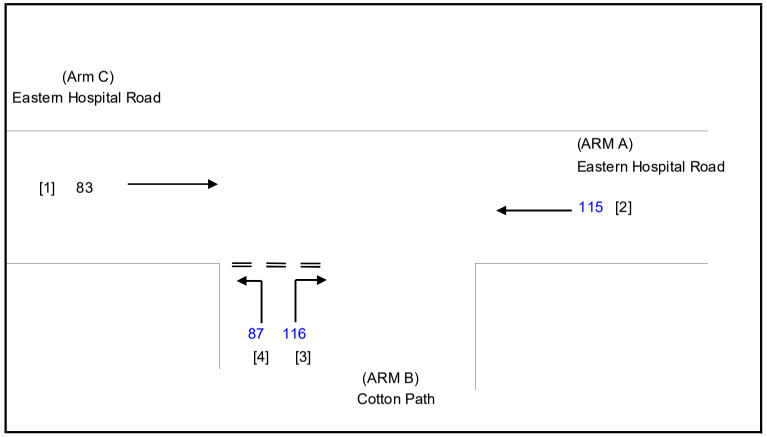
Q b-a	=	528		
Q b-c	=	728	Q b-c (O) =	678.7
Q c-b	=	414		
Q b-ac	=	598		
TOTAL FLOW	=	493	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2708
DFC b-c	=	0.1456
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1773

CRITICAL DFC = 0.27

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	115	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	83	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	116	(pcu/hr)
q b-c	=	87	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.42857143

THE CAPACITY OF MOVEMENT :

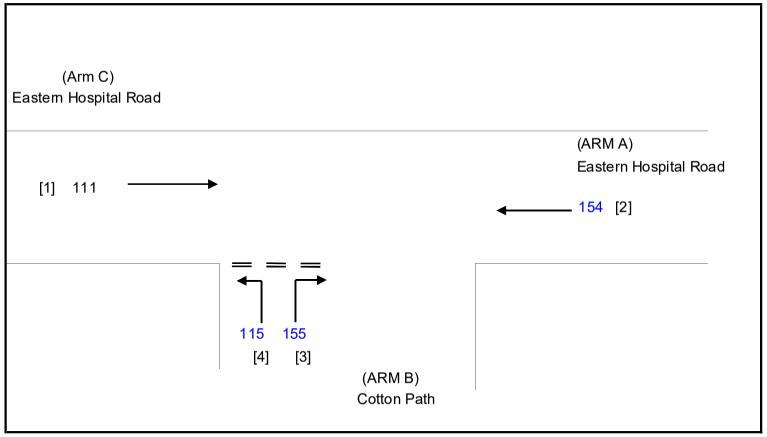
Q b-a	=	538		
Q b-c	=	735	Q b-c (O) =	695.4
Q c-b	=	418		
Q b-ac	=	608		
TOTAL FLOW	=	401	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2156
DFC b-c	=	0.1184
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1431

CRITICAL DFC = 0.22

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	154	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	111	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	155	(pcu/hr)
q b-c	=	115	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.42592593

THE CAPACITY OF MOVEMENT :

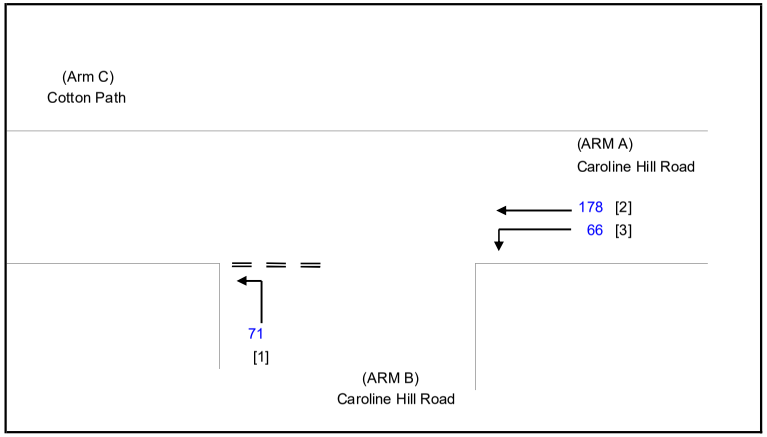
Q b-a	=	524		
Q b-c	=	725	Q b-c (O) =	671.4
Q c-b	=	412		
Q b-ac	=	594		
TOTAL FLOW	=	535	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2958
DFC b-c	=	0.1586
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1936

CRITICAL DFC = 0.30

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	66	(pcu/hr)
q a-c	=	178	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	71	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

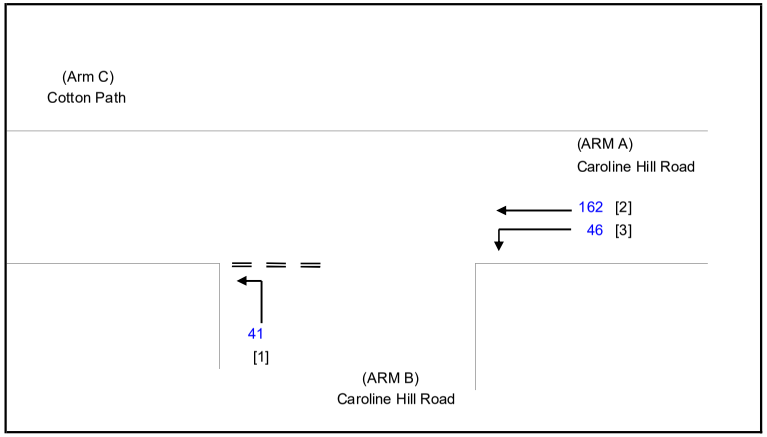
Q b-a	=	303			
Q b-c	=	696	Q b-c (O) =	696	
Q c-b	=	395			
Q b-ac	=	696			
TOTAL FLOW	=	315	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1020
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1020

CRITICAL DFC = 0.10

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	46	(pcu/hr)
q a-c	=	162	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	41	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

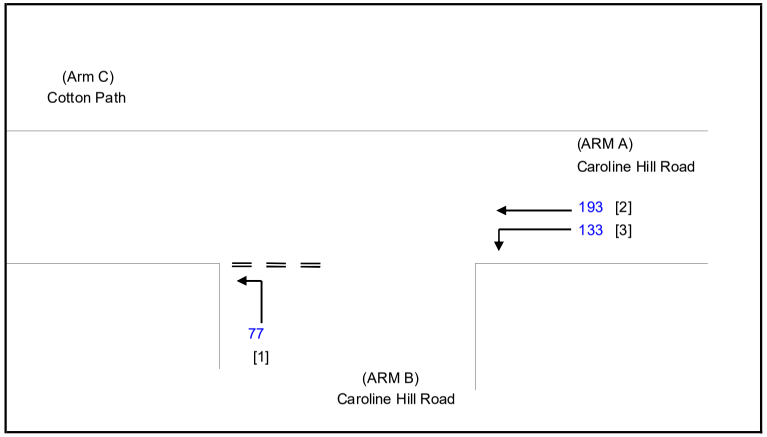
Q b-a	=	307			
Q b-c	=	703	Q b-c (O) =	703	
Q c-b	=	401			
Q b-ac	=	703			
TOTAL FLOW	=	249	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0583
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.0583

CRITICAL DFC = 0.06

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	133	(pcu/hr)
q a-c	=	193	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	77	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

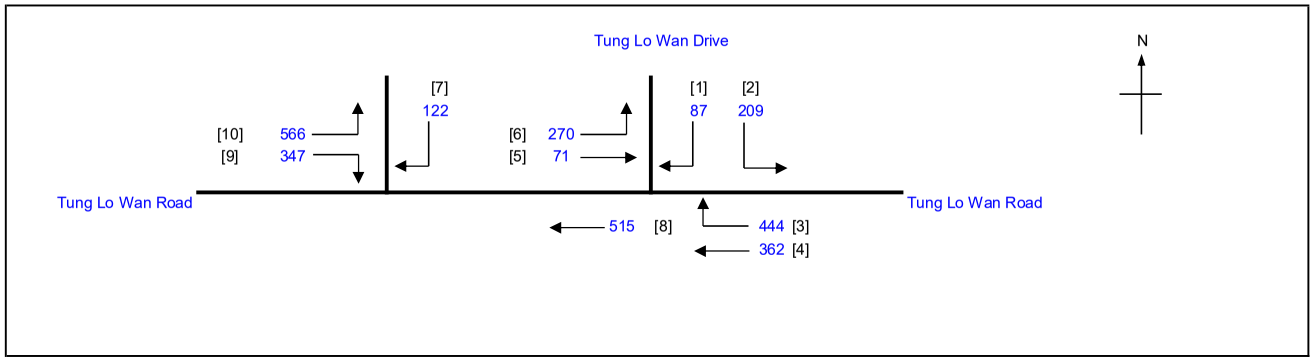
Q b-a	=	297			
Q b-c	=	684	Q b-c (O) =	684	
Q c-b	=	381			
Q b-ac	=	684			
TOTAL FLOW	=	403	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

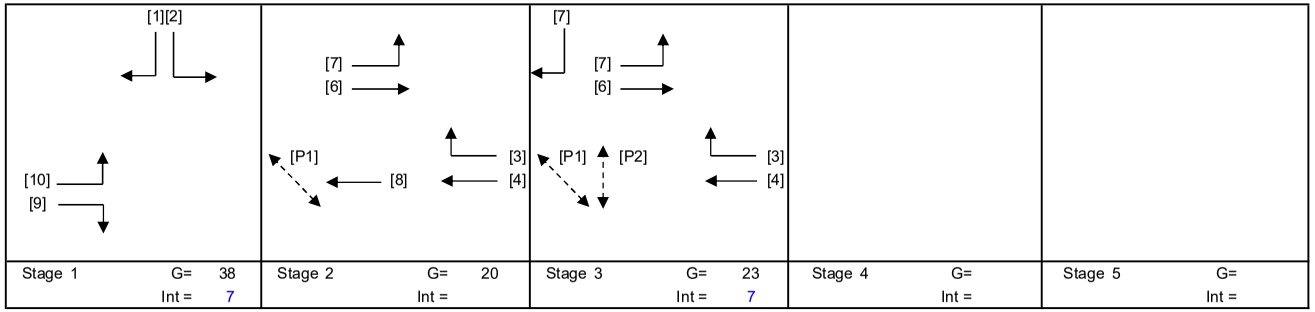
DFC b-a	=	0.0000
DFC b-c	=	0.1126
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1126

CRITICAL DFC = 0.11

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J8 Tung Lo Wan Road / Moreton Terrace		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.546
Loss time	L =	12 sec
Total Flow	=	2993 pcu
Co = (1.5*L+5)/(1-Y)	=	50.6 sec
Cm = L/(1-Y)	=	26.4 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	48.5 %
Cp = 0.9*L/(0.9-Y)	=	30.5 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**44 %**



Stage 1	G= 38	Stage 2	G= 20	Stage 3	G= 23	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		42	8
P2	3		9	8		22	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		515		515	0.00	3970							3970	0.130			20	20	0.624	30	34
10	1	3.70	1	8		N	1985	429			429	1.00	1672							1672	0.257	0.257		39	39	0.624	36	24
9,10	1	3.50	1	13			2105	137		347	484	1.00	1887							1887	0.256			39	39	0.624	42	23
7	3	5.00	1	27		N	2115			122	122	1.00	2004							2004	0.061			9	24	0.624	18	51
4	2,3	3.70	1			N	1985		362		362	0.00	1985							1985	0.182			28	44	0.624	36	31
3,4	2,3	3.00	1	8	O		2055			444	444	1.00	1537							1537	0.289	0.289		44	44	0.624	36	21
5,6	2,3	5.00	1	13		N	2115	270	71		341	0.79	1938							1938	0.176			27	44	0.624	36	32
1,2	1	3.50	1	8		N	1965	209		87	296	1.00	1655							1655	0.179			27	39	0.624	30	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

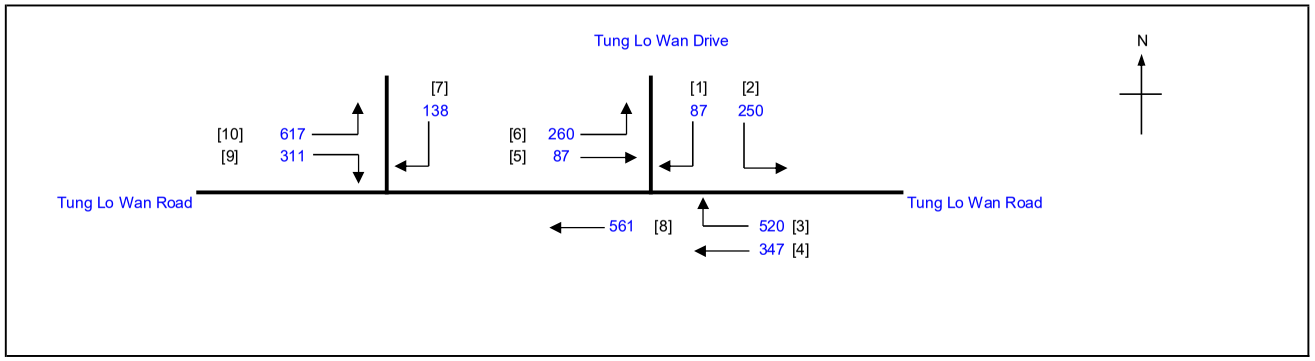
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
PROJECT NO.:	40920	Prepared By:	SKL	Oct-25
FILENAME :	J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
		Reviewed By:	SLN	Oct-25

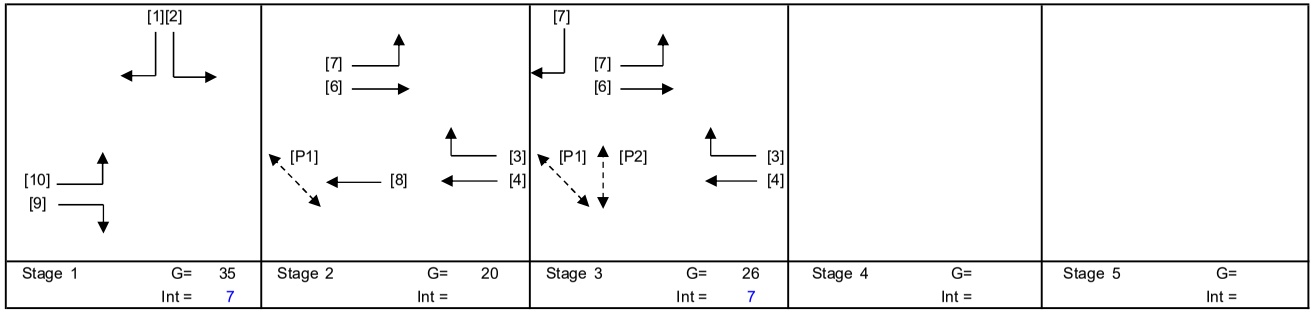
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J8 Tung Lo Wan Road / Moreton Terrace

2025 Existing PM



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.599
Loss time	L =	12 sec
Total Flow	=	3178 pcu
Co = (1.5*L+5)/(1-Y)	=	57.4 sec
Cm = L/(1-Y)	=	29.9 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	35.2 %
Cp = 0.9*L/(0.9-Y)	=	35.9 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**31 %**



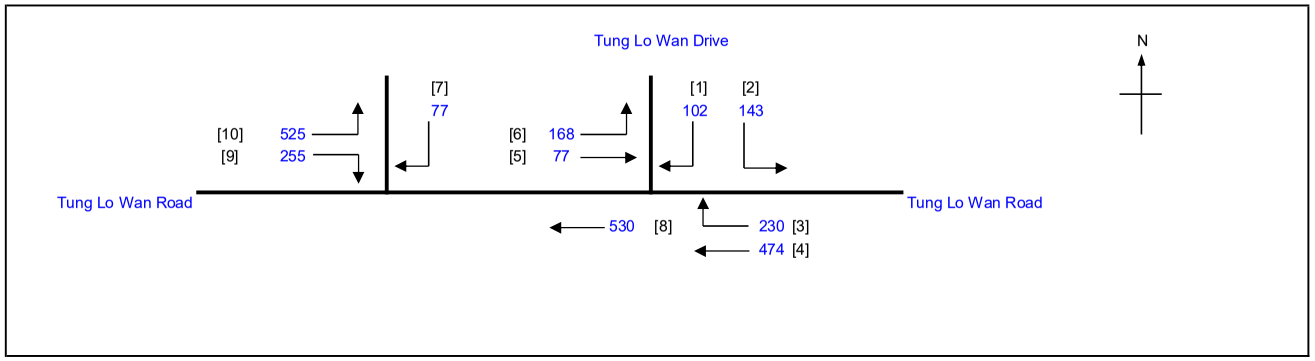
Stage 1	G= 35	Stage 2	G= 20	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		45	8
P2	3		9	8		25	8

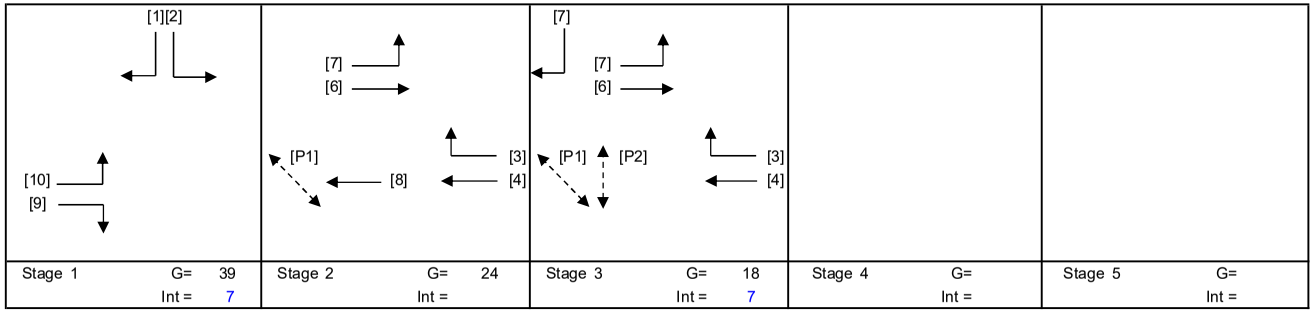
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		561		561	0.00	3970							3970	0.141			20	20	0.686	33	36
10	1	3.70	1	8		N	1985	436			436	1.00	1672							1672	0.261	0.261		36	36	0.686	42	28
9,10	1	3.50	1	13			2105	181		311	492	1.00	1887							1887	0.261			36	36	0.686	48	27
7	3	5.00	1	27		N	2115			138	138	1.00	2004							2004	0.069			10	27	0.686	18	55
4	2,3	3.70	1			N	1985		347		347	0.00	1985							1985	0.175			24	47	0.686	36	36
3,4	2,3	3.00	1	8	O		2055			520	520	1.00	1537							1537	0.338	0.338		47	47	0.686	36	21
5,6	2,3	5.00	1	13		N	2115	260	87		347	0.75	1947							1947	0.178			25	47	0.686	36	35
1,2	1	3.50	1	8		N	1965	250		87	337	1.00	1655							1655	0.204			28	36	0.686	36	34

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.458
Loss time	L =	12 sec
Total Flow	=	2581 pcu
Co = (1.5*L+5)/(1-Y)	=	42.4 sec
Cm = L/(1-Y)	=	22.1 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	76.8 %
Cp = 0.9*L/(0.9-Y)	=	24.4 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**72 %**



Stage 1	G= 39	Stage 2	G= 24	Stage 3	G= 18	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		17	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		530		530	0.00	3970							3970	0.134			24	24	0.524	30	29
10	1	3.70	1	8		N	1985	366			366	1.00	1672							1672	0.219			40	40	0.524	30	21
9,10	1	3.50	1	13			2105	159		255	414	1.00	1887							1887	0.219	0.219		40	40	0.524	36	21
7	3	5.00	1	27		N	2115			77	77	1.00	2004							2004	0.038			7	19	0.524	12	50
4	2,3	3.70	1			N	1985		474		474	0.00	1985							1985	0.239	0.239		43	43	0.524	36	19
3,4	2,3	3.00	1	8	O		2055			230	230	1.00	1537							1537	0.150			27	43	0.524	24	30
5,6	2,3	5.00	1	13		N	2115	168	77		245	0.69	1960							1960	0.125			23	43	0.524	24	32
1,2	1	3.50	1	8		N	1965	143		102	245	1.00	1655							1655	0.148			27	40	0.524	24	30

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

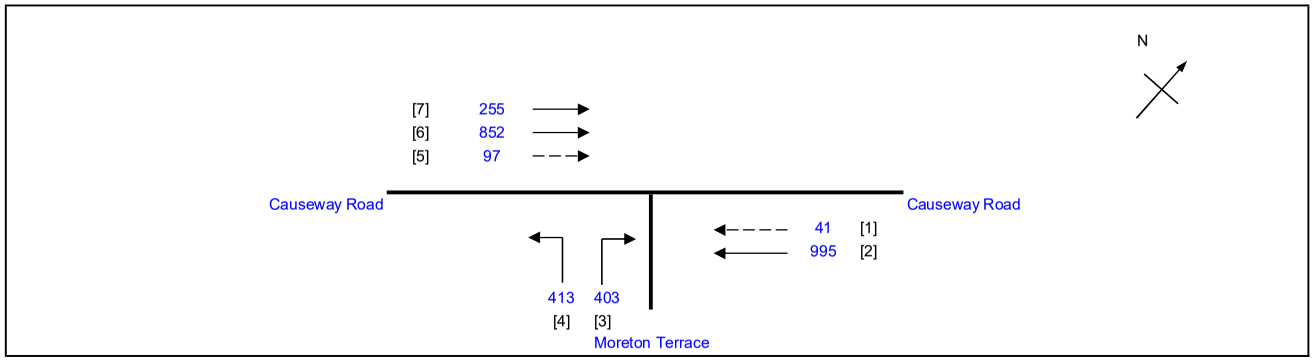
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

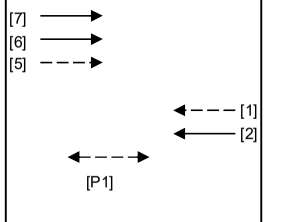
J9 Moreton Terrace / Causeway Road

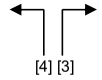
2025 Existing AM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.554
Loss time	L =	10 sec
Total Flow	=	3056 pcu
Co = (1.5*L+5)/(1-Y)	=	44.8 sec
Cm = L/(1-Y)	=	22.4 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	49.0 %
Cp = 0.9*L/(0.9-Y)	=	26.0 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**45 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		268		268	0.00	1985			0.4	-1191			794	0.338			52	62	0.619	18	19
2	1	4.00	1				2155		727		727	0.00	2155							2155	0.337			52	62	0.619	48	16
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	62	0.619	6	80
4	2	3.50	1	9		N	1965	251			251	1.00	1684							1684	0.149	0.149		23	23	0.619	30	35
3,4	2	3.30	1	15			2085	162		119	281	1.00	1895							1895	0.148			23	23	0.619	30	35
3	2	3.50	1	15			2105			284	284	1.00	1914							1914	0.148			23	23	0.619	30	35
7	1	3.50	1			N	1965		255		255	0.00	1965							1965	0.130			20	62	0.619	30	37
6	1	3.50	1				2105		852		852	0.00	2105							2105	0.405	0.405		62	62	0.619	42	11
5	1	3.00	1				2055		97		97	0.00	2055							2055	0.047			7	62	0.619	12	55

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

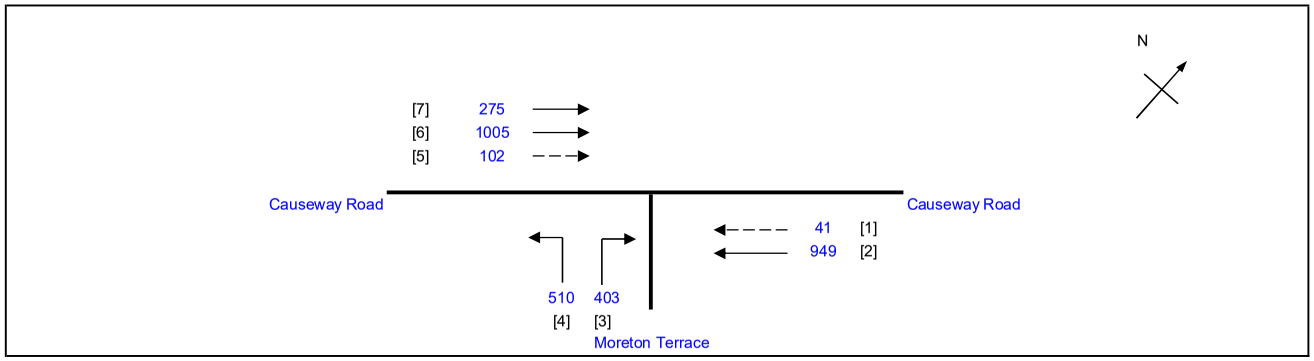
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

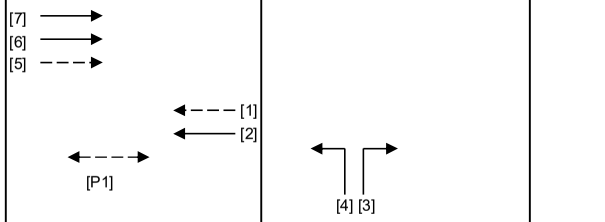
J9 Moreton Terrace / Causeway Road

2025 Existing PM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.644
Loss time	L =	10 sec
Total Flow	=	3285 pcu
Co = (1.5*L+5)/(1-Y)	=	56.1 sec
Cm = L/(1-Y)	=	28.1 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	28.2 %
Cp = 0.9*L/(0.9-Y)	=	35.1 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**25 %**



Stage 1 G= 62 Int = 5
Stage 2 G= 21 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		57	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		256		256	0.00	1985			0.4	-1191			794	0.322			43	63	0.719	24	31
2	1	4.00	1				2155		693		693	0.00	2155							2155	0.322			42	63	0.719	60	24
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	63	0.719	6	114
4	2	3.50	1	9		N	1965	280			280	1.00	1684							1684	0.166	0.166		22	22	0.719	36	41
3,4	2	3.30	1	15			2085	230		85	315	1.00	1895							1895	0.166			22	22	0.719	36	40
3	2	3.50	1	15			2105			318	318	1.00	1914							1914	0.166			22	22	0.719	36	40
7	1	3.50	1			N	1965		275		275	0.00	1965							1965	0.140			18	63	0.719	36	43
6	1	3.50	1				2105		1005		1005	0.00	2105							2105	0.477	0.477		63	63	0.719	48	12
5	1	3.00	1				2055		102		102	0.00	2055							2055	0.050			7	63	0.719	18	68

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

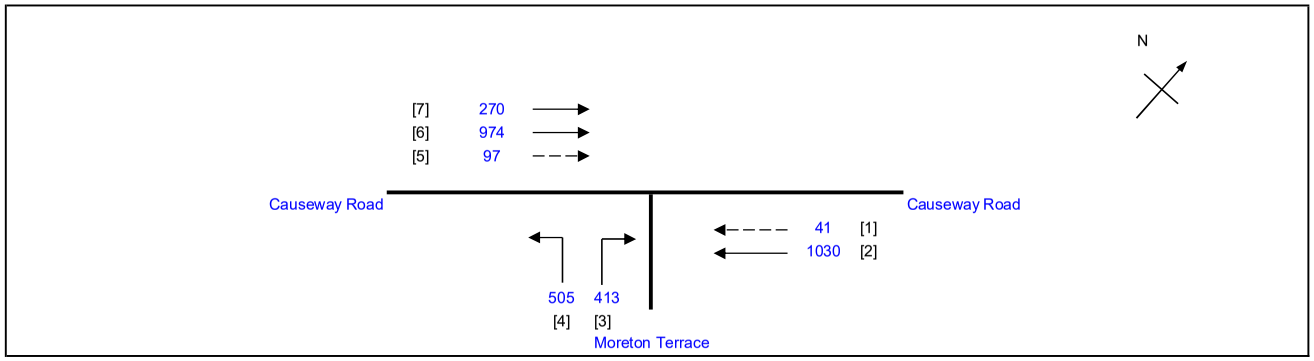
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
FILENAME : J9_MT_CR.xlsx	Checked By:	SLN	Oct-25
	Reviewed By:	SLN	Oct-25

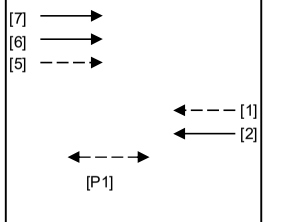
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

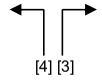
J9 Moreton Terrace / Causeway Road

2025 Existing Weekend



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.630
Loss time	L =	10 sec
Total Flow	=	3330 pcu
Co = (1.5*L+5)/(1-Y)	=	54.0 sec
Cm = L/(1-Y)	=	27.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	31.0 %
Cp = 0.9*L/(0.9-Y)	=	33.3 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**28 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		277		277	0.00	1985			0.4	-1191			794	0.349			47	62	0.704	18	27
2	1	4.00	1				2155		753		753	0.00	2155							2155	0.349			47	62	0.704	60	20
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	62	0.704	6	107
4	2	3.50	1	9		N	1965	281			281	1.00	1684							1684	0.167			23	23	0.704	30	40
3,4	2	3.30	1	15			2085	224		93	317	1.00	1895							1895	0.167	0.167		23	23	0.704	36	38
3	2	3.50	1	15			2105			320	320	1.00	1914							1914	0.167			23	23	0.704	36	38
7	1	3.50	1			N	1965		270		270	0.00	1965							1965	0.137			19	62	0.704	36	42
6	1	3.50	1				2105		974		974	0.00	2105							2105	0.463	0.463		62	62	0.704	48	12
5	1	3.00	1				2055		97		97	0.00	2055							2055	0.047			6	62	0.704	18	67

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

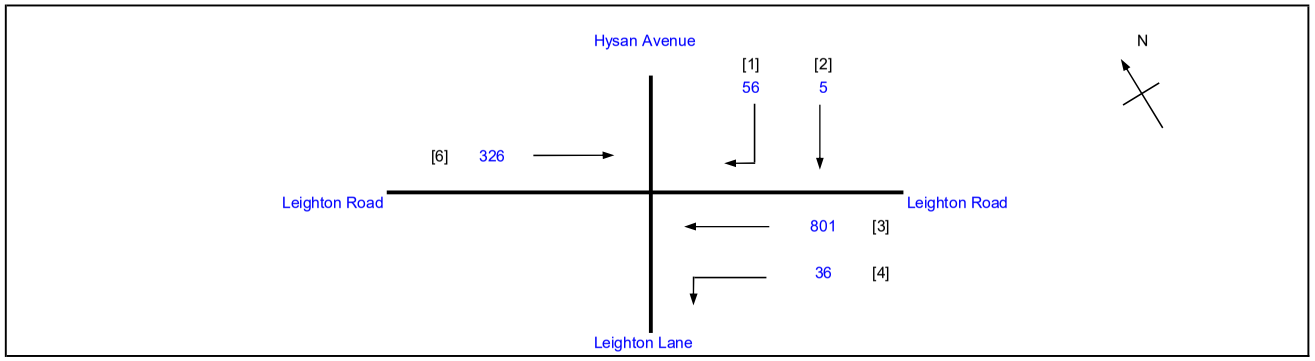
		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

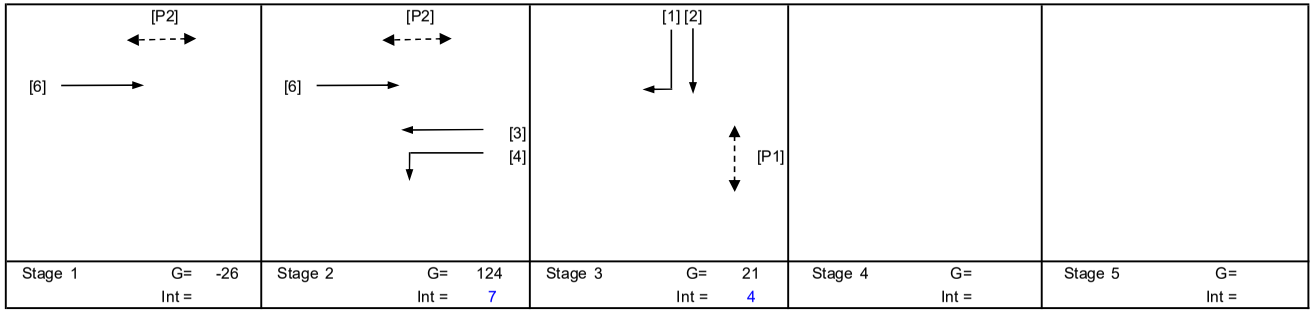
J10 Leighton Road / Hysan Avenue / Leighton Lane

2025 Existing AM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.166
Loss time		L =	31 sec
Total Flow		=	1224 pcu
Co	= (1.5*L+5)/(1-Y)	=	61.7 sec
Cm	= L/(1-Y)	=	37.2 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	302.3 %
Cp	= 0.9*L/(0.9-Y)	=	38.0 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**313 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	36	365		401	0.09	1913							1913	0.210			125	125	0.218	0	0
3	2	3.20	1				2075		436		436	0.00	2075							2075	0.210			125	125	0.218	0	0
6	1,2	3.50	1			N	1965		326		326	0.00	1965							1965	0.166	0.166		99	99	0.218	12	4
1,2	3	3.30	1	17		N	1945		5	27	32	0.84	1810							1810	0.018			11	21	0.218	6	53
1	3	3.00	1	10	O		2055			29	29	1.00	1587							1587	0.018			11	21	0.218	0	53
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

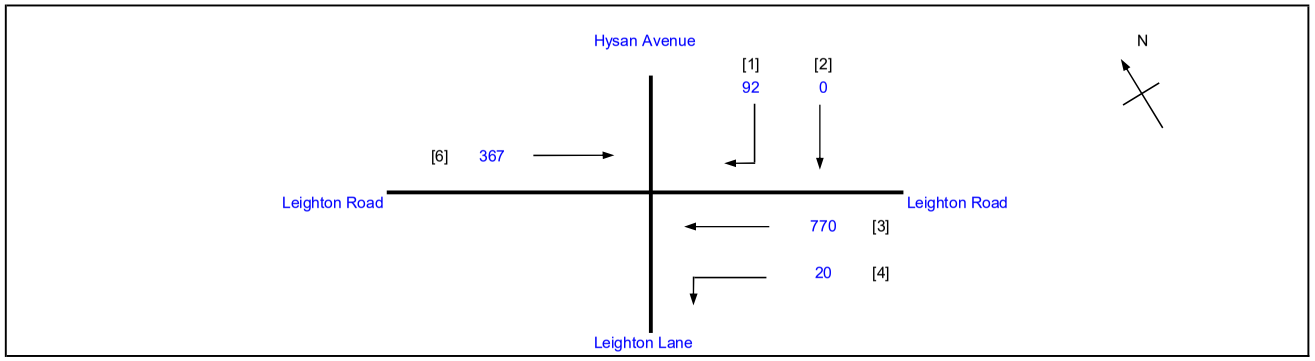
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

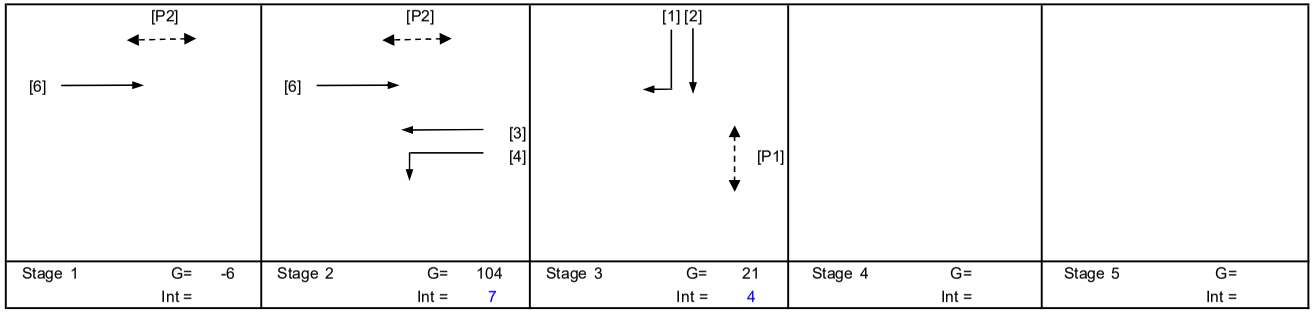
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.187
Loss time		L =	31 sec
Total Flow		=	1249 pcu
Co	= (1.5*L+5)/(1-Y)	=	63.3 sec
Cm	= L/(1-Y)	=	38.1 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	257.4 %
Cp	= 0.9*L/(0.9-Y)	=	39.1 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**267 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	20	362		382	0.05	1935							1935	0.197			105	105	0.245	12	3
3	2	3.20	1				2075		408		408	0.00	2075							2075	0.197			104	105	0.245	12	3
6	1,2	3.50	1			N	1965		367		367	0.00	1965							1965	0.187	0.187		99	99	0.245	18	4
1,2	3	3.30	1	17		N	1945		0	48	48	1.00	1787							1787	0.027			14	21	0.245	6	50
1	3	3.00	1	10	O		2055			44	44	1.00	1587							1587	0.028			15	21	0.245	6	50
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

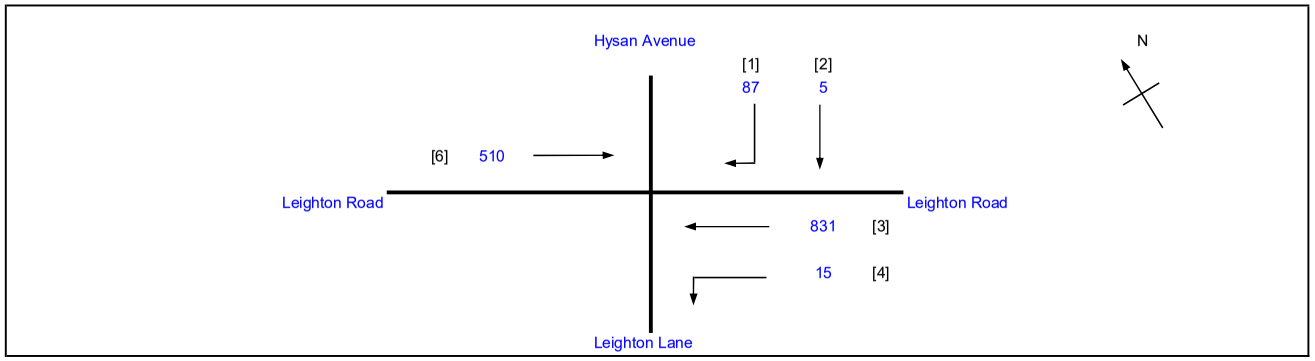
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

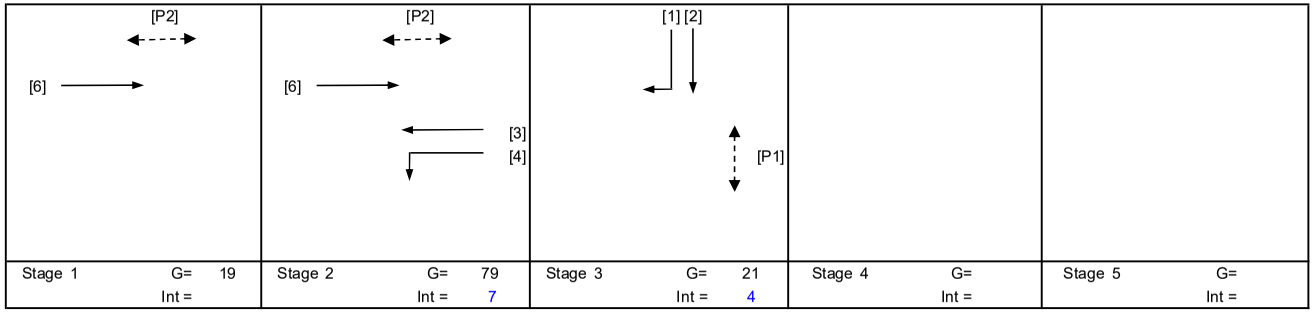
J10 Leighton Road / Hysan Avenue / Leighton Lane

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.260
Loss time		L =	31 sec
Total Flow		=	1448 pcu
Co	= (1.5*L+5)/(1-Y)	=	69.6 sec
Cm	= L/(1-Y)	=	41.9 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	157.2 %
Cp	= 0.9*L/(0.9-Y)	=	43.6 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**164 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	15	395		410	0.04	1944							1944	0.211			80	80	0.341	30	11
3	2	3.20	1				2075		436		436	0.00	2075							2075	0.210			80	80	0.341	36	12
6	1,2	3.50	1			N	1965		510		510	0.00	1965							1965	0.260	0.260		99	99	0.341	24	5
1,2	3	3.30	1	17		N	1945		5	44	49	0.90	1802							1802	0.027			10	21	0.341	6	57
1	3	3.00	1	10	O		2055			43	43	1.00	1587							1587	0.027			10	21	0.341	6	58
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

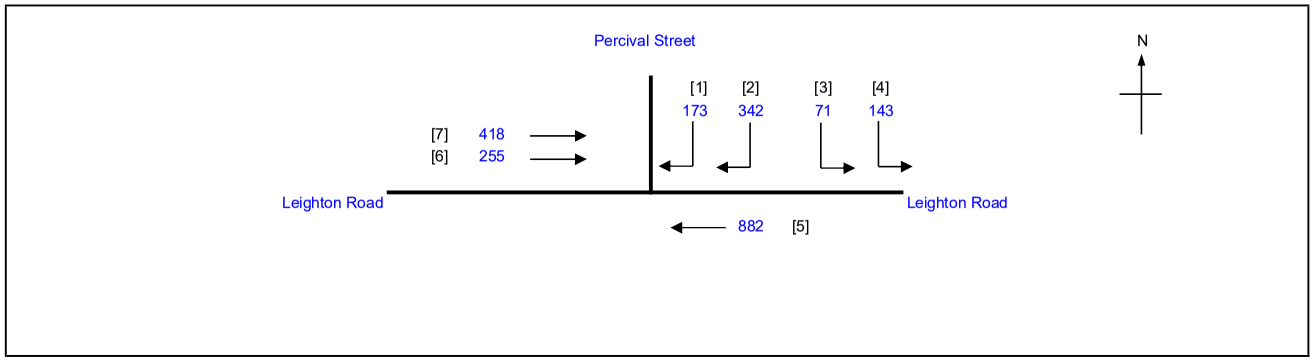
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

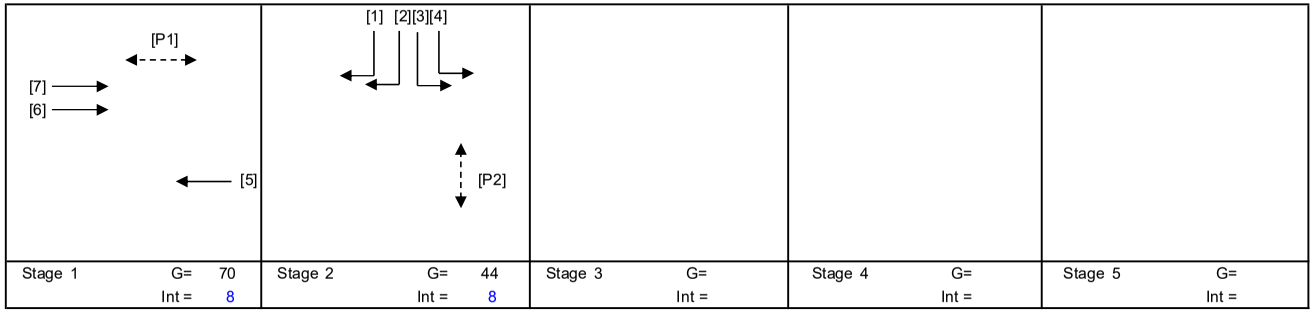
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.477
Loss time	L =	14 sec
Total Flow	=	2284 pcu
Co = (1.5*L+5)/(1-Y)	=	49.7 sec
Cm = L/(1-Y)	=	26.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	66.7 %
Cp = 0.9*L/(0.9-Y)	=	29.8 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**68 %**



Stage 1	G= 70	Int = 8
Stage 2	G= 44	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		71	7
P2	2		5	12		40	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		431		431	0.00	1965			0.8	-393			1572	0.274			67	71	0.534	42	21
5	1	3.00	1				2055		451		451	0.00	2055			0.8	-411			1644	0.274			67	71	0.534	42	21
6,7	1	2.50	1			N	1865		324		324	0.00	1865			0.6	-746			1119	0.290			70	71	0.534	30	20
6,7	1	2.50	1				2005		349		349	0.00	2005			0.6	-802			1203	0.290	0.290		71	71	0.534	30	20
3,4	2	4.00	1	25		N	2015	214			214	1.00	1901			0.7	-570			1331	0.161			39	45	0.534	30	39
1,2	2	5.00	1	25		N	2115			298	298	1.00	1995			0.8	-399			1596	0.187	0.187		45	45	0.534	42	34
1,2	2	3.30	1	20			2085			217	217	1.00	1940			0.6	-776			1164	0.187			45	45	0.534	30	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

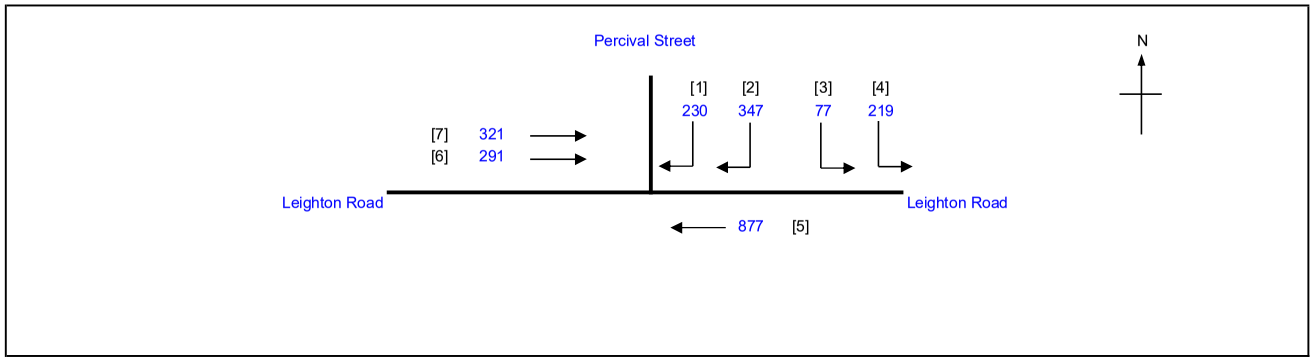
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

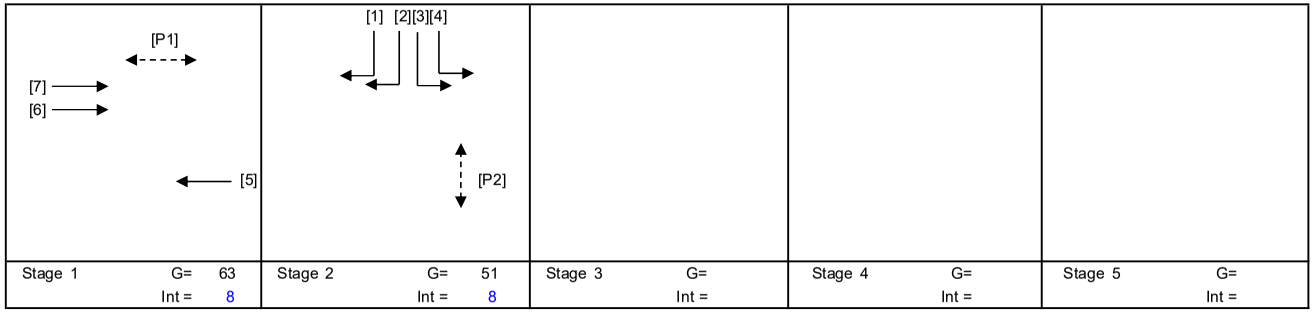
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.495
Loss time	L =	14 sec
Total Flow	=	2362 pcu
Co = (1.5*L+5)/(1-Y)	=	51.5 sec
Cm = L/(1-Y)	=	27.7 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	60.5 %
Cp = 0.9*L/(0.9-Y)	=	31.1 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**62 %**



Stage 1	G= 63	Int = 8
Stage 2	G= 51	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		64	7
P2	2		5	12		47	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		429		429	0.00	1965			0.8	-393			1572	0.273	0.273		64	64	0.555	42	23
5	1	3.00	1				2055		448		448	0.00	2055			0.8	-411			1644	0.273			64	64	0.555	48	23
6,7	1	2.50	1			N	1865		295		295	0.00	1865			0.6	-746			1119	0.264			62	64	0.555	30	26
6,7	1	2.50	1				2005		317		317	0.00	2005			0.6	-802			1203	0.264			62	64	0.555	36	25
3,4	2	4.00	1	25		N	2015	296			296	1.00	1901			0.7	-570			1331	0.222	0.222		52	52	0.555	36	31
1,2	2	5.00	1	25		N	2115			334	334	1.00	1995			0.8	-399			1596	0.209			49	52	0.555	42	32
1,2	2	3.30	1	20			2085			243	243	1.00	1940			0.6	-776			1164	0.209			49	52	0.555	30	33

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

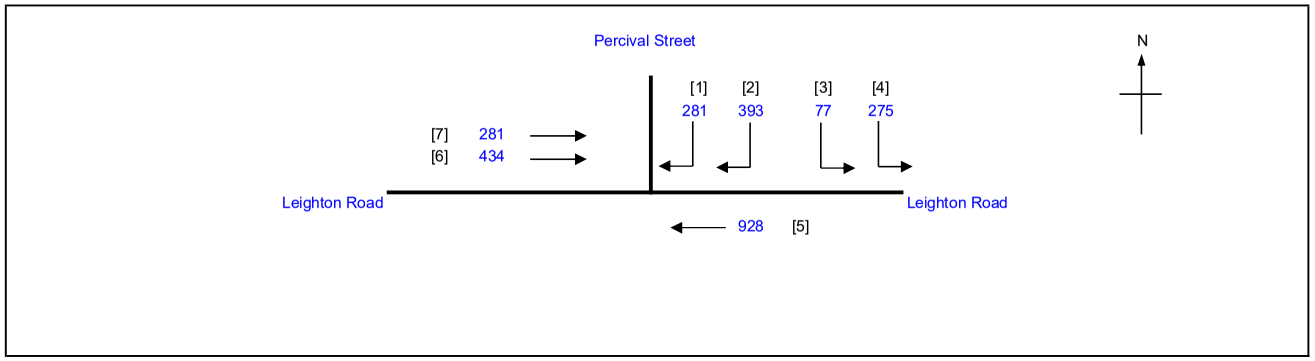
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

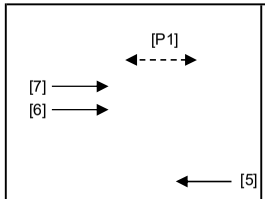
2025 Existing Weekend

PROJECT NO.: 40920

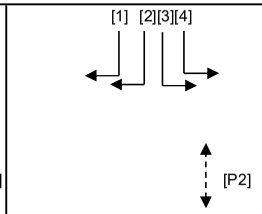
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.573
Loss time	L =	14 sec
Total Flow	=	2669 pcu
Co = (1.5*L+5)/(1-Y)	=	60.9 sec
Cm = L/(1-Y)	=	32.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	38.8 %
Cp = 0.9*L/(0.9-Y)	=	38.5 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**40 %**



Stage 1 G= 61 Int = 8



Stage 2 G= 53 Int = 8

Stage 3 G= Int =

Stage 4 G= Int =

Stage 5 G= Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		62	7
P2	2		5	12		49	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		454		454	0.00	1965			0.8	-393			1572	0.289			58	62	0.642	54	29
5	1	3.00	1				2055		474		474	0.00	2055			0.8	-411			1644	0.288			58	62	0.642	54	29
6,7	1	2.50	1			N	1865		345		345	0.00	1865			0.6	-746			1119	0.308	0.308		62	62	0.642	36	28
6,7	1	2.50	1				2005		370		370	0.00	2005			0.6	-802			1203	0.308			62	62	0.642	36	28
3,4	2	4.00	1	25		N	2015	352			352	1.00	1901			0.7	-570			1331	0.264	0.264		54	54	0.642	42	33
1,2	2	5.00	1	25		N	2115			390	390	1.00	1995			0.8	-399			1596	0.244			49	54	0.642	48	34
1,2	2	3.30	1	20			2085			284	284	1.00	1940			0.6	-776			1164	0.244			49	54	0.642	36	36

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

APPENDIX C

Proposed Road Schemes

at Adjacent Junctions

HOI PING ROAD

SUNNING ROAD

LEIGHTON ROAD

CAROLINE HILL ROAD

Caroline Hill Road
加路連山道

649/100mm/3200×700(H)
H/WA/Lei/705

24-HR COVERED PEDESTRIAN WALKWAY

TO 1/F

PEDESTRIAN LINK TO B1/F

COMMERCIAL / E&M +8.25

TO LOADING / & LIGHT LAYE

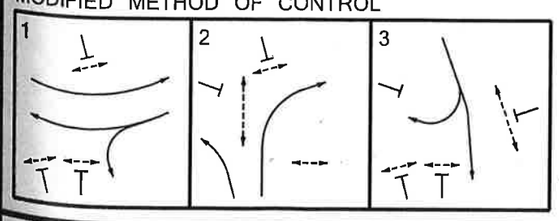
DROP-OFF

PRIVATE L/UL

TO CARPARK

Except goods vehicles loading/unloading
貨車上落貨除外

MODIFIED METHOD OF CONTROL



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	CHC	14APR22
A	TD'S COMMENTS INCORPORATED	CHC	25FEB22

CHK50603110/TIA/F61-B.DWG/KCM/14APR22

Project Title

PROPOSED COMMERCIAL DEVELOPMENT ON
INLAND LOT NO. 8945, CAUSEWAY BAY, HONG KONG
TRAFFIC REVIEW REPORT

Drawing Title

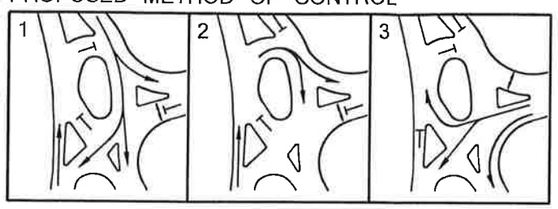
FUTURE JUNCTION LAYOUT OF LEIGHTON ROAD / CAROLINE HILL ROAD (WEST) (J5)

Designed	Checked	Scale	Date	Drawing No.	Rev.
TCW	CHC	1:500(A3)	DEC 2021	6.1	B

SYSTRA MVA

Original Size : A3

PROPOSED METHOD OF CONTROL



NOTE:

THE LAYOUT, MOC, ROAD MARKING AND SIGNAGE ARRANGEMENTS ARE SUBJECT TO FURTHER REFINEMENT/ADJUSTMENT IN THE DETAIL DESIGN STAGE

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	CHC	12APR22
A	TD'S COMMENTS INCORPORATED	CHC	25FEB22

Project Title

PROPOSED COMMERCIAL DEVELOPMENT ON INLAND LOT NO. 8945, CAUSEWAY BAY, HONG KONG TRAFFIC REVIEW REPORT

Drawing Title

PROPOSED LAYOUT AND ARRANGEMENT FOR JUNCTION OF CAROLINE HILL ROAD (WEST) / LINK ROAD / NEW ACCESS ROAD (J6)

Designed	Checked	Scale	Date	Drawing No.	Rev.
TCW	CHC	1:500(A3)	DEC 2021	6.2	B

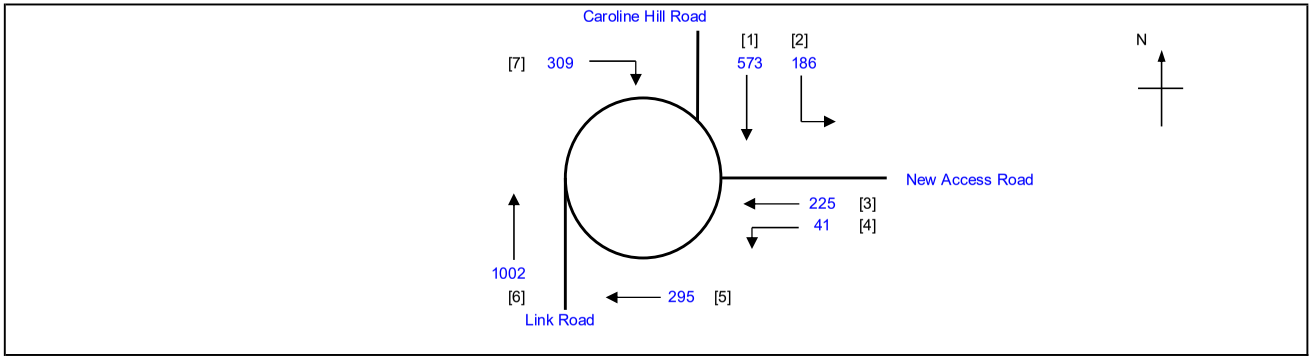
CHK50603110/TIA/F62-B.DWG/KCM/12APR22

APPENDIX D

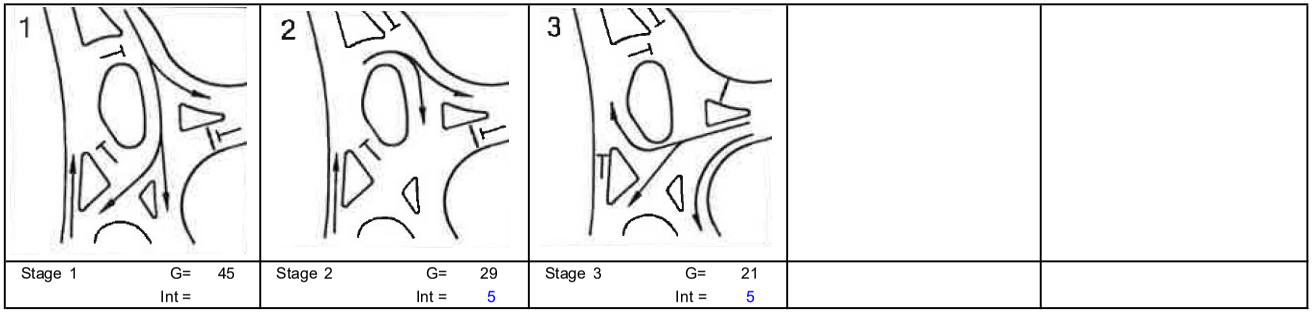
Detail Calculation Sheets

- Reference & Design Scenarios

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.612
Loss time	L =	8 sec
Total Flow	=	2631 pcu
Co = (1.5*L+5)/(1-Y)	=	43.8 sec
Cm = L/(1-Y)	=	20.6 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	37.2 %
Cp = 0.9*L/(0.9-Y)	=	25.0 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**36 %**

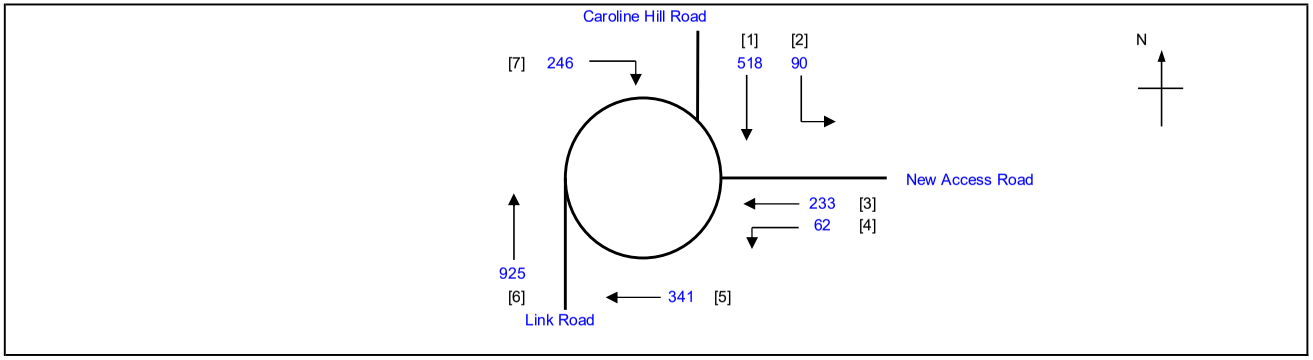


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		21	5
P2	1,2		9	5		74	5

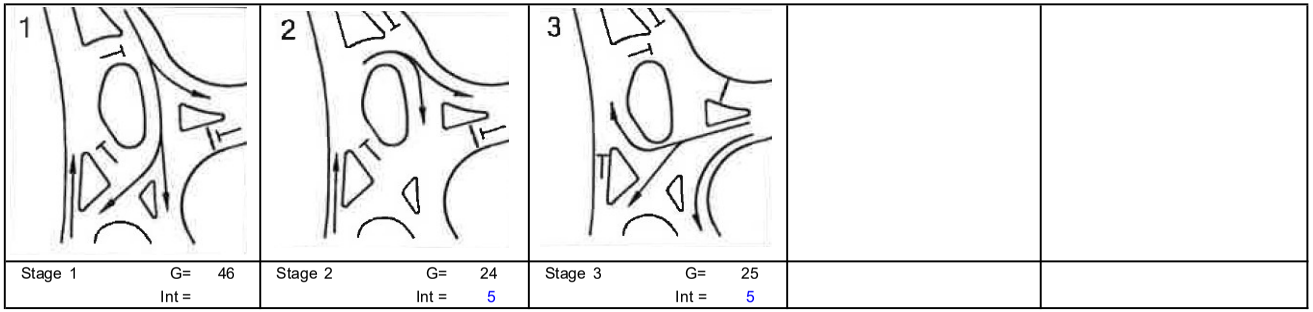
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		1002		1002	0.00	2120							2120	0.473	0.473		75	75	0.663	48	9
7	2	5.00	1	5		N	2115			309	309	1.00	1627							1627	0.190			30	30	0.663	36	37
3	3	3.65	1				2120		225		225	0.00	2120							2120	0.106			17	22	0.663	30	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	22	0.663	6	97
1,2	1	3.65	1	20		N	1980	186	174		360	0.52	1906							1906	0.189			30	45	0.663	42	36
1	1	3.65	1				2120		399		399	0.00	2120							2120	0.188			30	45	0.663	48	35
5	3	5.00	1			N	2115		295		295	0.00	2115							2115	0.139	0.139		22	22	0.663	36	41

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle		N =	3
Cycle time		C =	105 sec
Sum(y)		Y =	0.598
Loss time		L =	8 sec
Total Flow		=	2415 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.2 sec
Cm	= L/(1-Y)	=	19.9 sec
Yult		=	0.840
R.C.ult	= (Yult-Y)/Y*100%	=	40.6 %
Cp	= 0.9*L/(0.9-Y)	=	23.8 sec
Ymax	= 1-L/C	=	0.924
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**

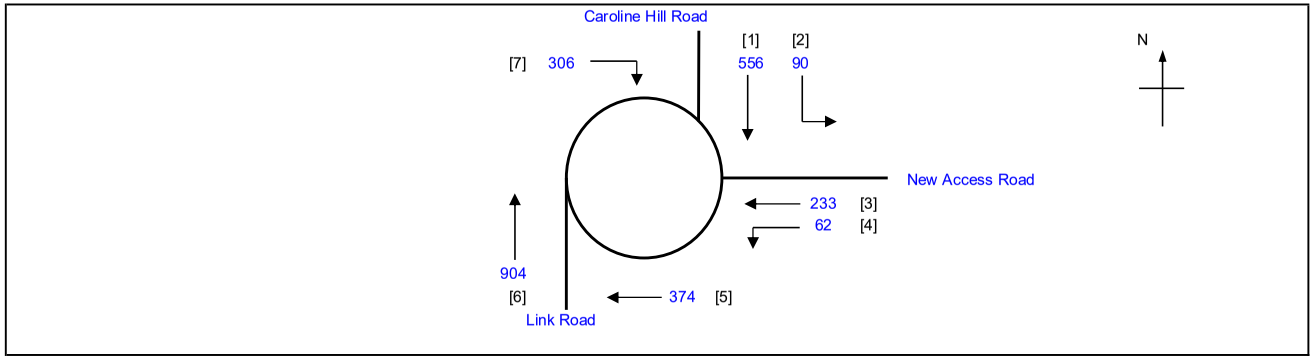


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

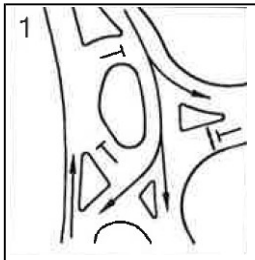
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		925		925	0.00	2120							2120	0.436	0.436		71	71	0.647	48	11
7	2	5.00	1	5		N	2115			246	246	1.00	1627							1627	0.151			25	25	0.647	30	40
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	26	0.647	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	26	0.647	12	75
1,2	1	3.65	1	20		N	1980	90	200		290	0.31	1935							1935	0.150			24	46	0.647	36	39
1	1	3.65	1				2120		318		318	0.00	2120							2120	0.150			24	46	0.647	42	39
5	3	5.00	1			N	2115		341		341	0.00	2115							2115	0.161	0.161		26	26	0.647	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

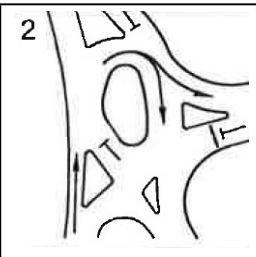
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



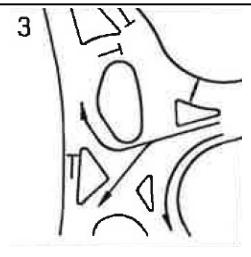
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.603
Loss time	L =	8 sec
Total Flow	=	2525 pcu
Co = (1.5*L+5)/(1-Y)	=	42.8 sec
Cm = L/(1-Y)	=	20.2 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	39.2 %
Cp = 0.9*L/(0.9-Y)	=	24.3 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**38 %**



Stage 1 G= 38
Int =



Stage 2 G= 29
Int = 5



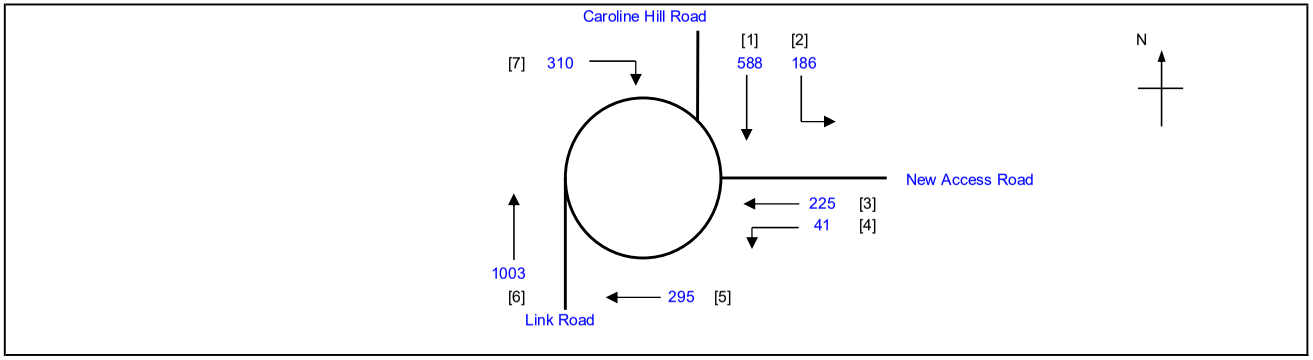
Stage 3 G= 27
Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		27	5
P2	1,2		9	5		68	5

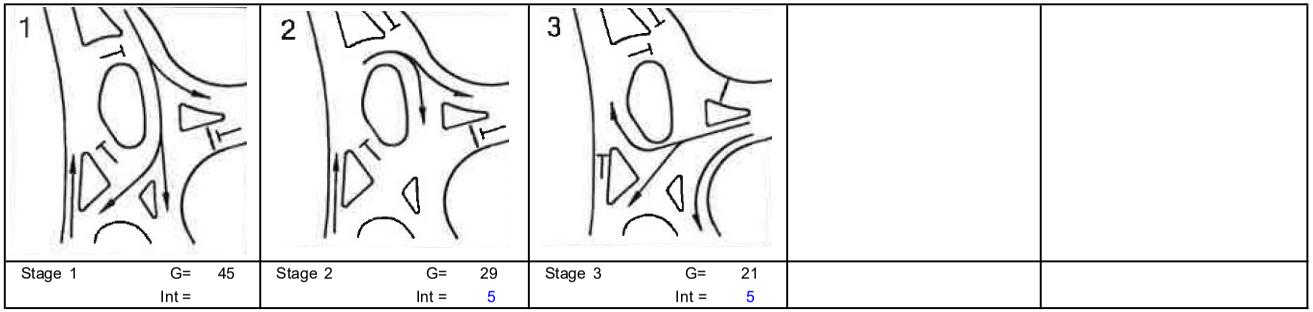
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		904		904	0.00	2120							2120	0.426	0.426		69	69	0.653	54	12
7	2	5.00	1	5		N	2115			306	306	1.00	1627							1627	0.188			30	30	0.653	36	36
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	28	0.653	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	28	0.653	12	76
1,2	1	3.65	1	20		N	1980	90	219		309	0.29	1938							1938	0.159			26	38	0.653	36	39
1	1	3.65	1				2120		337		337	0.00	2120							2120	0.159			26	38	0.653	42	38
5	3	5.00	1			N	2115		374		374	0.00	2115							2115	0.177	0.177		28	28	0.653	42	36

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.613
Loss time	L =	8 sec
Total Flow	=	2648 pcu
Co = (1.5*L+5)/(1-Y)	=	43.9 sec
Cm = L/(1-Y)	=	20.7 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	37.1 %
Cp = 0.9*L/(0.9-Y)	=	25.1 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**36 %**

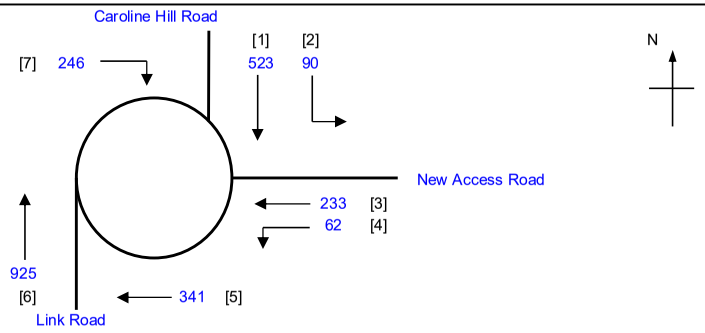


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		21	5
P2	1,2		9	5		74	5

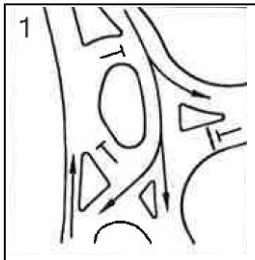
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		1003		1003	0.00	2120							2120	0.473	0.473		75	75	0.663	48	9
7	2	5.00	1	5		N	2115			310	310	1.00	1627							1627	0.191			30	30	0.663	36	36
3	3	3.65	1				2120		225		225	0.00	2120							2120	0.106			17	22	0.663	30	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	22	0.663	6	97
1,2	1	3.65	1	20		N	1980	186	181		367	0.51	1907							1907	0.192			30	45	0.663	42	35
1	1	3.65	1				2120		407		407	0.00	2120							2120	0.192			30	45	0.663	48	35
5	3	5.00	1			N	2115		295		295	0.00	2115							2115	0.139	0.139		22	22	0.663	36	41

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

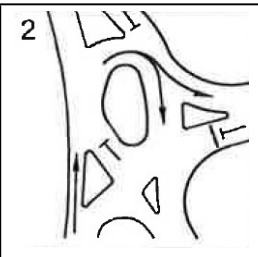
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



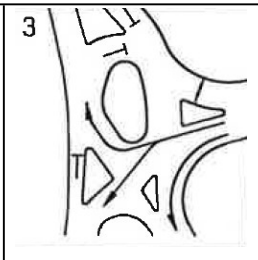
No. of stages per cycle		N =	3
Cycle time		C =	105 sec
Sum(y)		Y =	0.598
Loss time		L =	8 sec
Total Flow		=	2420 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.2 sec
Cm	= L/(1-Y)	=	19.9 sec
Yult		=	0.840
R.C.ult	= (Yult-Y)/Y*100%	=	40.6 %
Cp	= 0.9*L/(0.9-Y)	=	23.8 sec
Ymax	= 1-L/C	=	0.924
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**39 %**



Stage 1 G= 46 Int =



Stage 2 G= 24 Int = 5



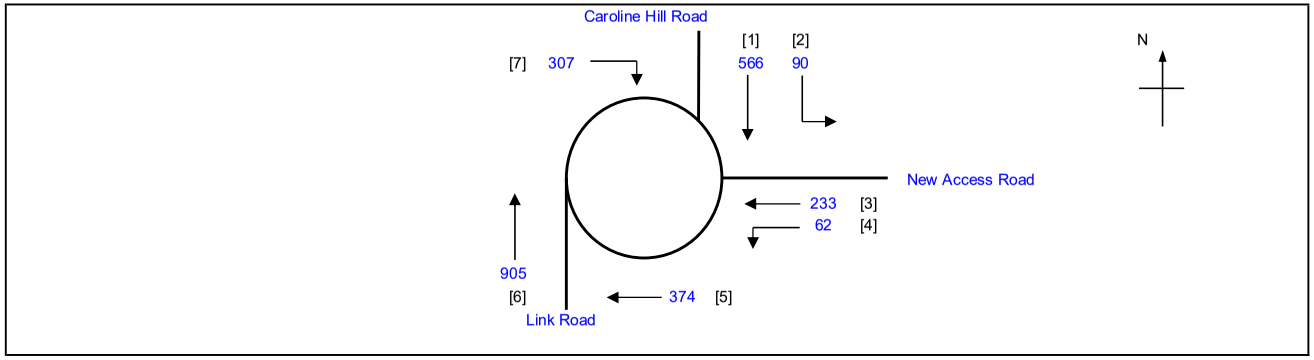
Stage 3 G= 25 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

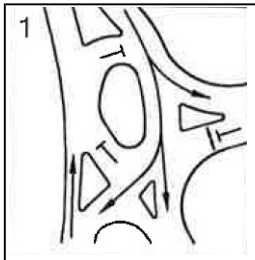
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		925		925	0.00	2120							2120	0.436	0.436		71	71	0.647	48	11
7	2	5.00	1	5		N	2115			246	246	1.00	1627							1627	0.151			25	25	0.647	30	40
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	26	0.647	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	26	0.647	12	75
1,2	1	3.65	1	20		N	1980	90	203		293	0.31	1935							1935	0.151			25	46	0.647	36	39
1	1	3.65	1				2120		320		320	0.00	2120							2120	0.151			25	46	0.647	42	39
5	3	5.00	1			N	2115		341		341	0.00	2115							2115	0.161	0.161		26	26	0.647	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

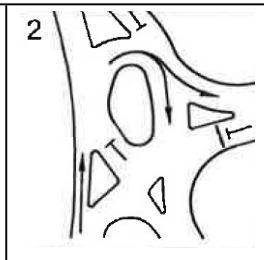
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



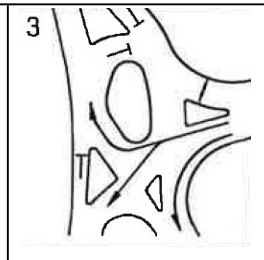
No. of stages per cycle		N =	3
Cycle time		C =	105 sec
Sum(y)		Y =	0.604
Loss time		L =	8 sec
Total Flow		=	2537 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.9 sec
Cm	= L/(1-Y)	=	20.2 sec
Yult		=	0.840
R.C.ult	= (Yult-Y)/Y*100%	=	39.1 %
Cp	= 0.9*L/(0.9-Y)	=	24.3 sec
Ymax	= 1-L/C	=	0.924
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**38 %**



Stage 1 G= 38 Int =



Stage 2 G= 29 Int = 5



Stage 3 G= 27 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		27	5
P2	1,2		9	5		68	5

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		905		905	0.00	2120							2120	0.427	0.427		69	69	0.654	54	12
7	2	5.00	1	5		N	2115			307	307	1.00	1627							1627	0.189			30	30	0.654	36	36
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	28	0.654	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	28	0.654	12	76
1,2	1	3.65	1	20		N	1980	90	224		314	0.29	1938							1938	0.162			26	38	0.654	36	38
1	1	3.65	1				2120		342		342	0.00	2120							2120	0.161			26	38	0.654	42	38
5	3	5.00	1			N	2115		374		374	0.00	2115							2115	0.177	0.177		28	28	0.654	42	36

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

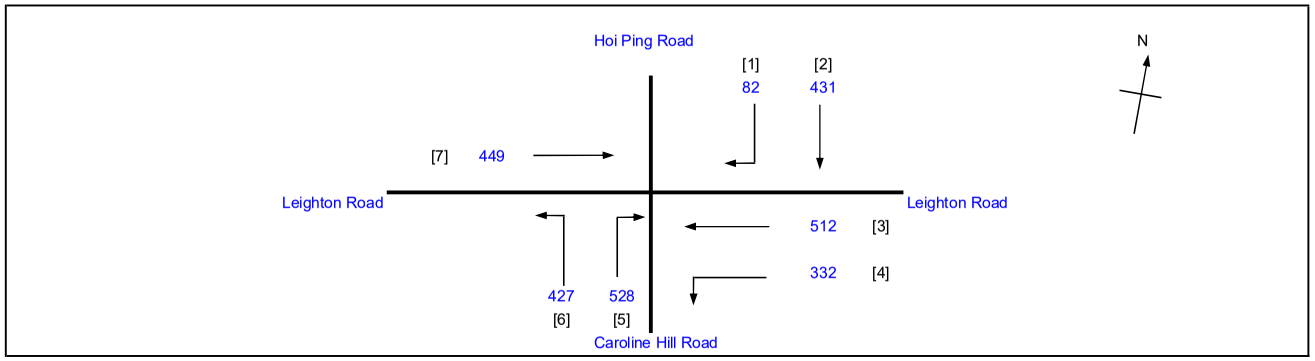
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

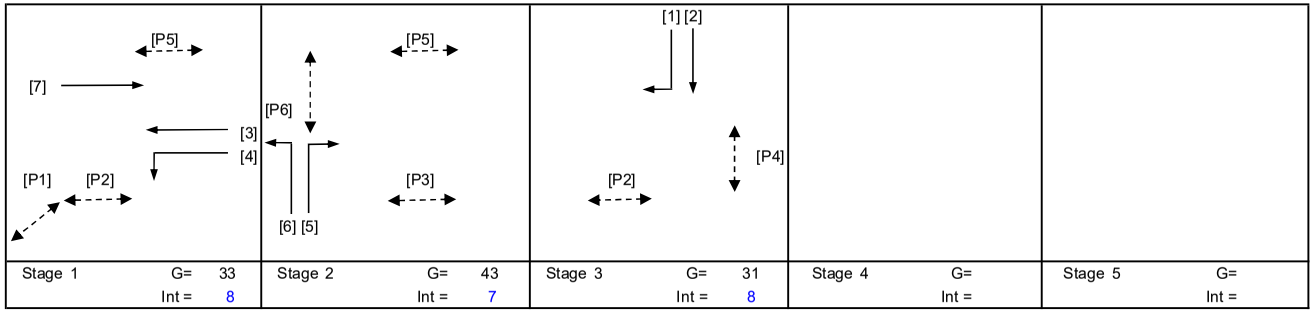
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.616
Loss time		L =	20 sec
Total Flow		=	2761 pcu
Co	= (1.5*L+5)/(1-Y)	=	91.2 sec
Cm	= L/(1-Y)	=	52.1 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	21.7 %
Cp	= 0.9*L/(0.9-Y)	=	63.4 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**24 %**



Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	34	5
P2	1,3	4	14	5	0	75	5
P3	2	4.5	14	5	3	42	5
P4	3	15	10	7	4	28	7
P5	1,2	7	11	6	1	84	6
P6	2	15	10	7	4	39	7

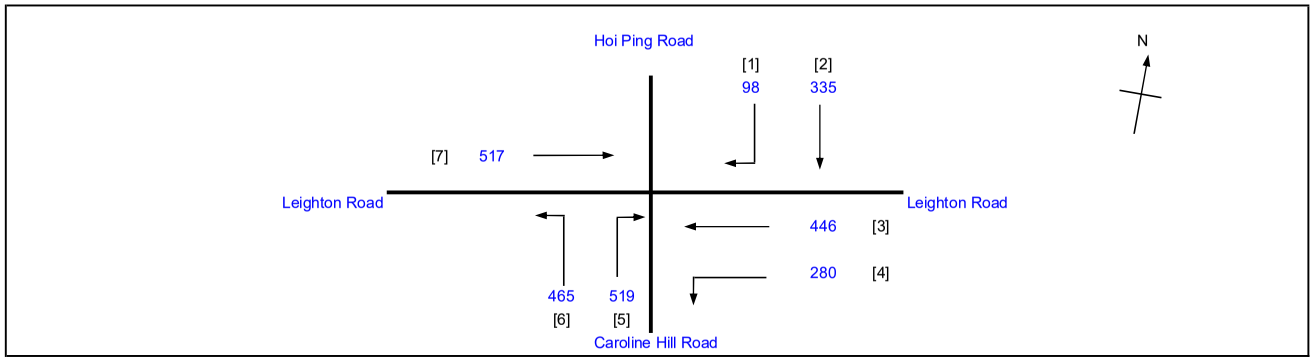
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	175			175	1.00	1828			0.5	-914			914	0.191			34	34	0.728	30	57
3,4	1	3.50	1	25			2105	157	117		274	0.57	2035			0.7	-611			1424	0.192	0.192		34	34	0.728	42	51
3	1	3.00	1				2055		395		395	0.00	2055							2055	0.192			34	34	0.728	60	47
5,6	2	3.50	1	65		N	1965	427		46	473	1.00	1921							1921	0.246	0.246		44	44	0.728	66	41
5	2	3.50	1	20			2105			482	482	1.00	1958							1958	0.246			44	44	0.728	66	41
7	1	3.50	1			N	1965		144		144	0.00	1965			0.5	-983			982	0.147			26	34	0.728	24	66
7	1	3.30	1				2085		305		305	0.00	2085							2085	0.146			26	34	0.728	48	54
2	3	3.50	1			N	1965		349		349	0.00	1965							1965	0.178	0.178		32	32	0.728	54	50
1,2	3	3.50	1	12		N	1965		82	82	164	0.50	1849			0.5	-925			924	0.177			32	32	0.728	24	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

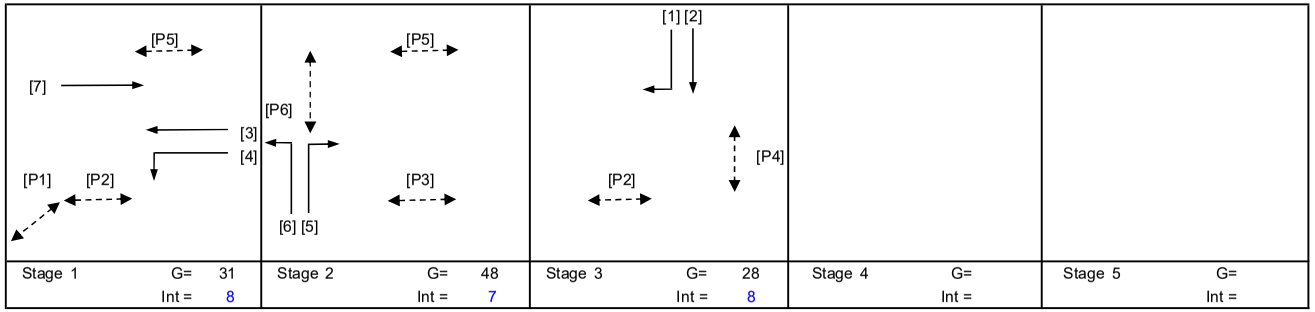
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	**2033 Reference PM**		
	PROJECT NO.: 40920	Prepared By:	SKL Oct-25
	FILENAME : J2_LR_CHR_HPR.xlsx	Checked By:	SLN Oct-25
		Reviewed By:	SLN Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.574
Loss time	L =	20 sec
Total Flow	=	2660 pcu
Co = (1.5*L+5)/(1-Y)	=	82.2 sec
Cm = L/(1-Y)	=	46.9 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	30.7 %
Cp = 0.9*L/(0.9-Y)	=	55.2 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**33 %**



Stage 1	G= 31	Int = 8
Stage 2	G= 48	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	32	5
P2	1,3	4	14	5	0	70	5
P3	2	4.5	14	5	3	47	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	44	7

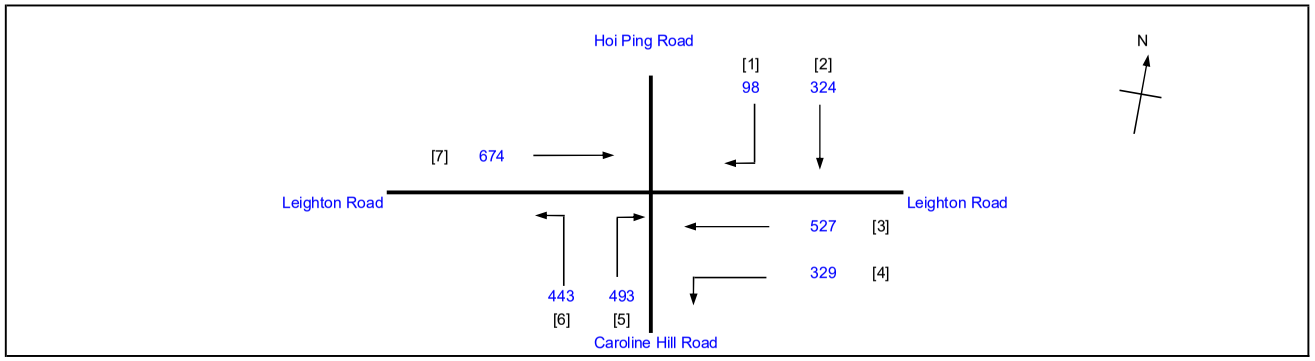
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	151			151	1.00	1828			0.5	-914			914	0.165			32	32	0.678	24	55
3,4	1	3.50	1	25			2105	129	107		236	0.55	2038			0.7	-611			1427	0.165			32	32	0.678	36	50
3	1	3.00	1				2055		339		339	0.00	2055							2055	0.165			32	32	0.678	54	47
5,6	2	3.50	1	65		N	1965	465		22	487	1.00	1921							1921	0.254			49	49	0.678	66	35
5	2	3.50	1	20			2105			497	497	1.00	1958							1958	0.254	0.254		49	49	0.678	66	35
7	1	3.50	1			N	1965		166		166	0.00	1965			0.5	-983			982	0.169	0.169		32	32	0.678	24	54
7	1	3.30	1				2085		351		351	0.00	2085							2085	0.168			32	32	0.678	54	46
2	3	3.50	1			N	1965		297		297	0.00	1965							1965	0.151	0.151		29	29	0.678	48	49
1,2	3	3.50	1	12		N	1965		38	98	136	0.72	1803			0.5	-901			902	0.151			29	29	0.678	24	59

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

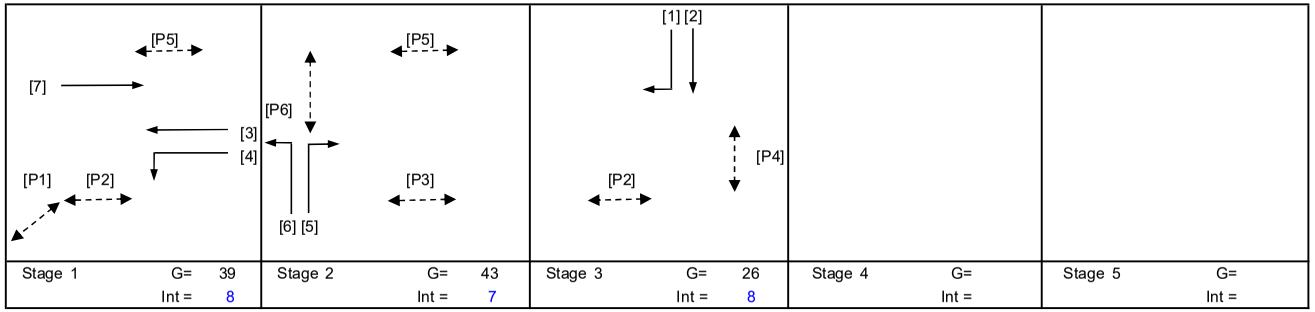
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
2033 Reference Weekend	PROJECT NO.: 40920 — Prepared By:	SKL	Oct-25
	FILENAME : J2_LR_CHR_HPR.xlsx — Checked By:	SLN	Oct-25
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.609
Loss time	L =	20 sec
Total Flow	=	2888 pcu
Co = (1.5*L+5)/(1-Y)	=	89.5 sec
Cm = L/(1-Y)	=	51.2 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	23.1 %
Cp = 0.9*L/(0.9-Y)	=	61.9 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**25 %**



Stage 1	G= 39	Int = 8
Stage 2	G= 43	Int = 7
Stage 3	G= 26	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	40	5
P2	1,3	4	14	5	0	75	5
P3	2	4.5	14	5	3	42	5
P4	3	15	10	7	4	23	7
P5	1,2	7	11	6	1	89	6
P6	2	15	10	7	4	39	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	178			178	1.00	1828			0.5	-914			914	0.195			35	40	0.720	30	55
3,4	1	3.50	1	25			2105	151	127		278	0.54	2039			0.7	-612			1427	0.195			35	40	0.720	42	49
3	1	3.00	1				2055		400		400	0.00	2055							2055	0.195			35	40	0.720	60	46
5,6	2	3.50	1	65		N	1965	443		21	464	1.00	1921							1921	0.242	0.242		44	44	0.720	66	41
5	2	3.50	1	20			2105			472	472	1.00	1958							1958	0.241			44	44	0.720	66	40
7	1	3.50	1			N	1965		216		216	0.00	1965			0.5	-983			982	0.220	0.220		40	40	0.720	30	50
7	1	3.30	1				2085		458		458	0.00	2085							2085	0.220			40	40	0.720	66	43
2	3	3.50	1			N	1965		290		290	0.00	1965							1965	0.148	0.148		27	27	0.720	48	54
1,2	3	3.50	1	12		N	1965		34	98	132	0.74	1798			0.5	-899			899	0.147			27	27	0.720	24	66

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

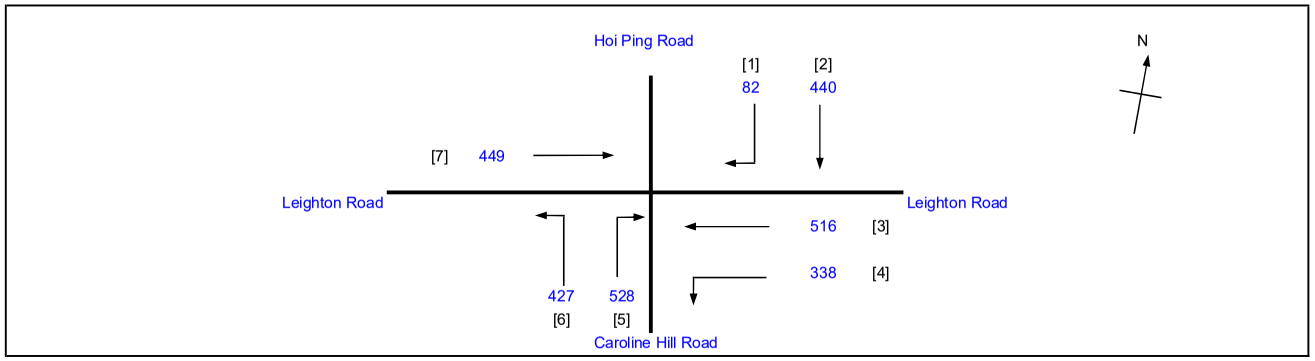
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

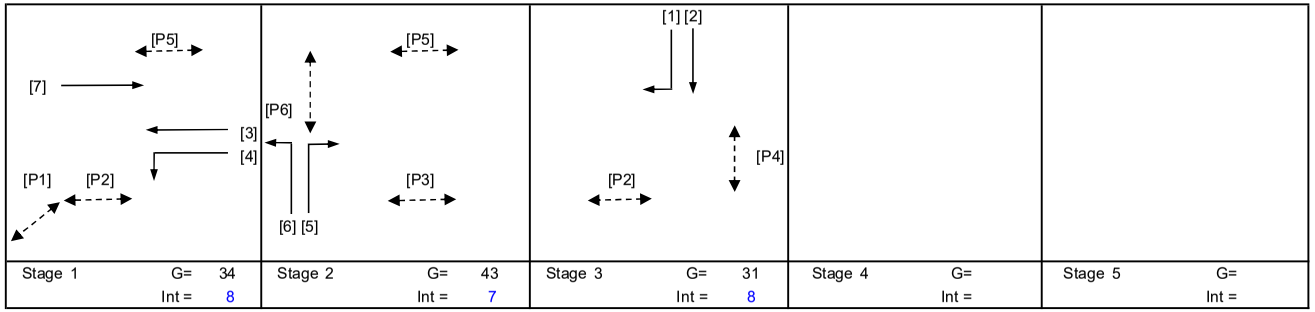
2033 Design AM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.622
Loss time		L =	20 sec
Total Flow		=	2780 pcu
Co	= (1.5*L+5)/(1-Y)	=	92.6 sec
Cm	= L/(1-Y)	=	52.9 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	20.6 %
Cp	= 0.9*L/(0.9-Y)	=	64.8 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**22 %**



Stage 1	G= 34	Int = 8
Stage 2	G= 43	Int = 7
Stage 3	G= 31	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	35	5
P2	1,3	4	14	5	0	75	5
P3	2	4.5	14	5	3	42	5
P4	3	15	10	7	4	28	7
P5	1,2	7	11	6	1	84	6
P6	2	15	10	7	4	39	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	177			177	1.00	1828			0.5	-914			914	0.194			34	35	0.735	30	58
3,4	1	3.50	1	25			2105	161	117		278	0.58	2034			0.7	-610			1424	0.195	0.195		35	35	0.735	42	51
3	1	3.00	1				2055		399		399	0.00	2055							2055	0.194			34	35	0.735	60	48
5,6	2	3.50	1	65		N	1965	427		46	473	1.00	1921							1921	0.246	0.246		44	44	0.735	66	41
5	2	3.50	1	20			2105			482	482	1.00	1958							1958	0.246			44	44	0.735	66	41
7	1	3.50	1			N	1965		144		144	0.00	1965			0.5	-983			982	0.147			26	35	0.735	24	67
7	1	3.30	1				2085		305		305	0.00	2085							2085	0.146			26	35	0.735	54	55
2	3	3.50	1			N	1965		355		355	0.00	1965							1965	0.181	0.181		32	32	0.735	54	50
1,2	3	3.50	1	12		N	1965		85	82	167	0.49	1851			0.5	-926			925	0.180			32	32	0.735	30	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

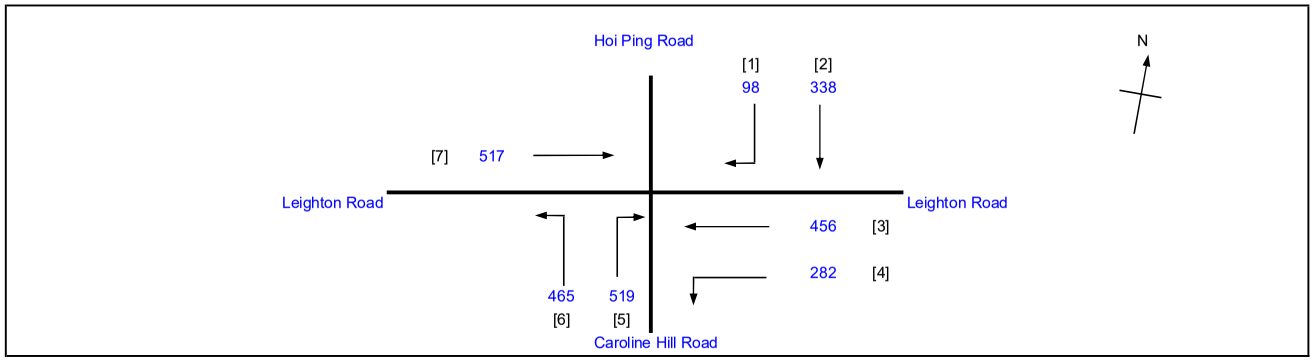
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

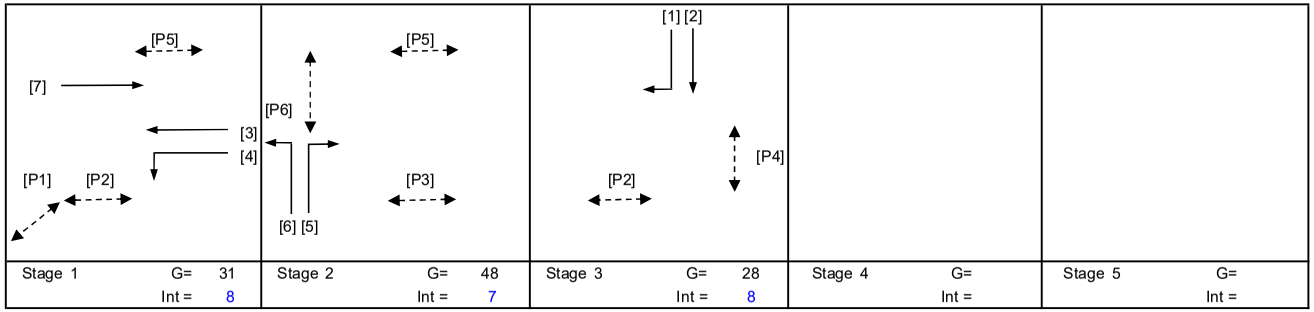
2033 Design PM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.575
Loss time	L =	20 sec
Total Flow	=	2675 pcu
Co = (1.5*L+5)/(1-Y)	=	82.4 sec
Cm = L/(1-Y)	=	47.1 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	30.4 %
Cp = 0.9*L/(0.9-Y)	=	55.4 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**32 %**



Stage 1	G= 31	Int = 8
Stage 2	G= 48	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	32	5
P2	1,3	4	14	5	0	70	5
P3	2	4.5	14	5	3	47	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	44	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	153			153	1.00	1828			0.5	-914			914	0.167			32	32	0.680	24	55
3,4	1	3.50	1	25			2105	129	111		240	0.54	2039			0.7	-612			1427	0.168			32	32	0.680	36	50
3	1	3.00	1				2055		345		345	0.00	2055							2055	0.168			32	32	0.680	54	47
5,6	2	3.50	1	65		N	1965	465		22	487	1.00	1921							1921	0.254			49	49	0.680	66	36
5	2	3.50	1	20			2105			497	497	1.00	1958							1958	0.254	0.254		49	49	0.680	66	35
7	1	3.50	1			N	1965		166		166	0.00	1965			0.5	-983			982	0.169	0.169		32	32	0.680	24	54
7	1	3.30	1				2085		351		351	0.00	2085							2085	0.168			32	32	0.680	54	46
2	3	3.50	1			N	1965		299		299	0.00	1965							1965	0.152	0.152		29	29	0.680	48	49
1,2	3	3.50	1	12		N	1965		39	98	137	0.72	1804			0.5	-902			902	0.152			29	29	0.680	24	59

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

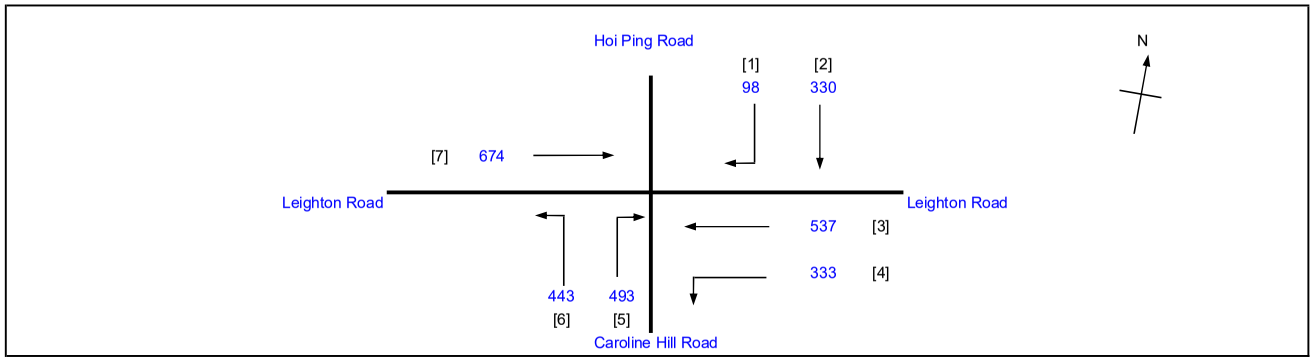
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

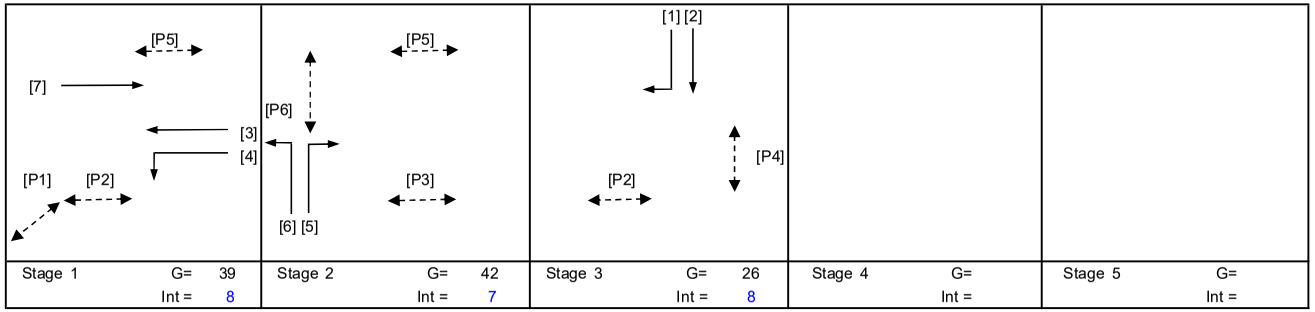
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.611
Loss time		L =	20 sec
Total Flow		=	2908 pcu
Co	= (1.5*L+5)/(1-Y)	=	90.0 sec
Cm	= L/(1-Y)	=	51.4 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	22.7 %
Cp	= 0.9*L/(0.9-Y)	=	62.3 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**25 %**



Stage 1	G= 39	Int = 8
Stage 2	G= 42	Int = 7
Stage 3	G= 26	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	40	5
P2	1,3	4	14	5	0	76	5
P3	2	4.5	14	5	3	41	5
P4	3	15	10	7	4	23	7
P5	1,2	7	11	6	1	89	6
P6	2	15	10	7	4	38	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	181			181	1.00	1828			0.5	-914			914	0.198			36	40	0.722	30	55
3,4	1	3.50	1	25			2105	152	131		283	0.54	2039			0.7	-612			1427	0.198			36	40	0.722	42	49
3	1	3.00	1				2055		406		406	0.00	2055							2055	0.198			36	40	0.722	60	46
5,6	2	3.50	1	65		N	1965	443		21	464	1.00	1921							1921	0.242	0.242		43	43	0.722	66	41
5	2	3.50	1	20			2105			472	472	1.00	1958							1958	0.241			43	43	0.722	66	41
7	1	3.50	1			N	1965		216		216	0.00	1965			0.5	-983			982	0.220	0.220		40	40	0.722	30	50
7	1	3.30	1				2085		458		458	0.00	2085							2085	0.220			40	40	0.722	66	43
2	3	3.50	1			N	1965		294		294	0.00	1965							1965	0.150	0.150		27	27	0.722	48	54
1,2	3	3.50	1	12		N	1965		36	98	134	0.73	1800			0.5	-900			900	0.149			27	27	0.722	24	66

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

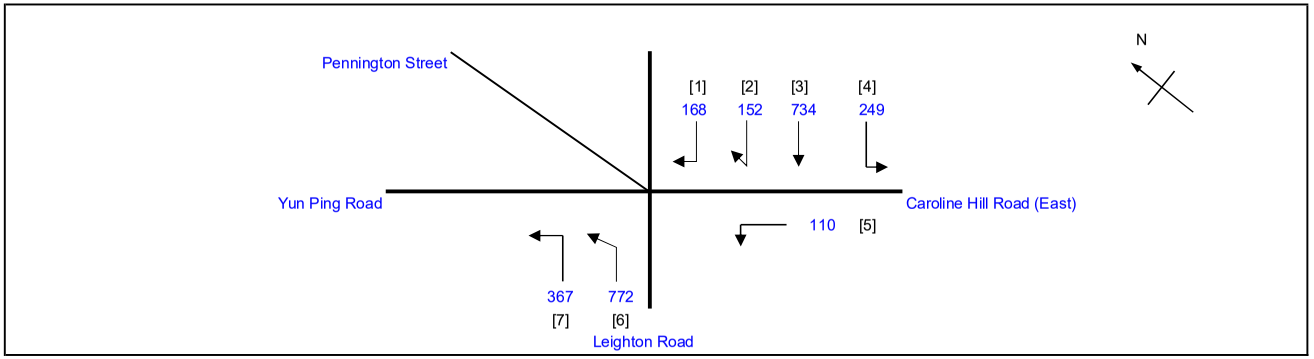
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

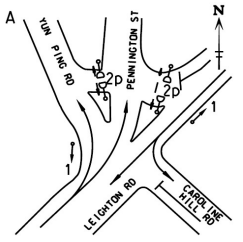
2033 Reference AM

PROJECT NO.: 40920

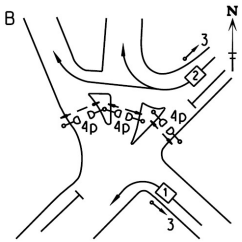
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.638
Loss time		L =	11 sec
Total Flow		=	2552 pcu
Co	= (1.5*L+5)/(1-Y)	=	59.4 sec
Cm	= L/(1-Y)	=	30.4 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	28.2 %
Cp	= 0.9*L/(0.9-Y)	=	37.8 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**29 %**



Stage 1 G= 74 Int = 6



Stage 2 G= 43 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	70	8
4P	2		10	8	2	40	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		659		659	0.00	2005							2005	0.329			61	75
3,4	1	3.00	1	7		N	1915	249	75		324	0.77	1644			0.6	-658			986	0.329			61	75
6	1	3.00	1				2055		609		609	0.00	2055			0.7	-534			1521	0.400	0.400		75	75
6,7	1	3.00	1	15		N	1915	367	163		530	0.69	1791			0.7	-466			1325	0.400			75	75
1,2	2	3.50	1	9		N	1965			320	320	1.00	1684			0.8	-337			1347	0.238	0.238		44	44
5	2	4.00	1	5		N	2015	110			110	1.00	1550			0.6	-620			930	0.118			22	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

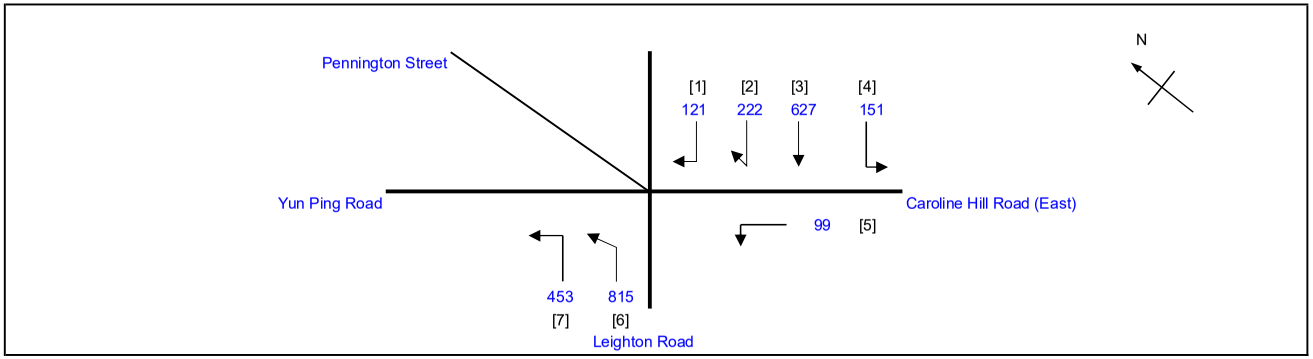
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

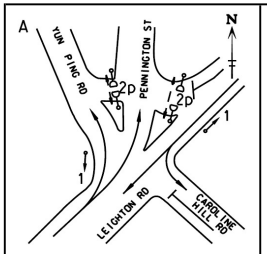
2033 Reference PM

PROJECT NO.: 40920

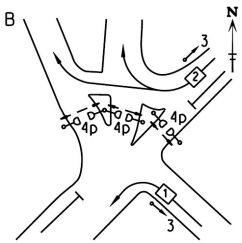
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.702
Loss time		L =	11 sec
Total Flow		=	2488 pcu
Co	= (1.5*L+5)/(1-Y)	=	72.1 sec
Cm	= L/(1-Y)	=	36.9 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	16.5 %
Cp	= 0.9*L/(0.9-Y)	=	49.9 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**17 %**



Stage 1 G= 75 Int = 6



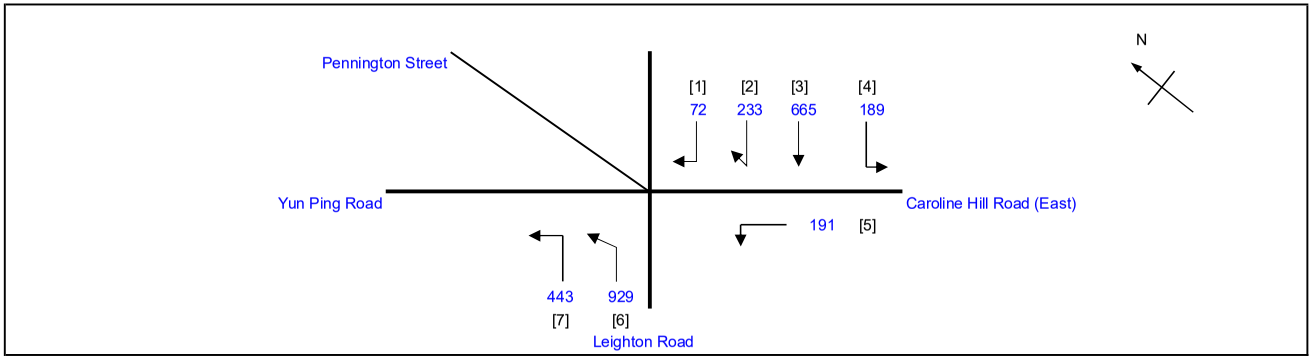
Stage 2 G= 42 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	71	8
4P	2		10	8	2	39	8

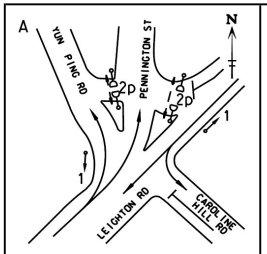
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		515		515	0.00	2005							2005	0.257			44	76
3,4	1	3.00	1	7		N	1915	151	112		263	0.57	1705			0.6	-682			1023	0.257			44	76
6	1	3.00	1				2055		680		680	0.00	2055			0.7	-534			1521	0.447	0.447		76	76
6,7	1	3.00	1	15		N	1915	453	135		588	0.77	1778			0.7	-462			1316	0.447			76	76
1,2	2	3.50	1	9		N	1965			343	343	1.00	1684			0.8	-337			1347	0.255	0.255		43	43
5	2	4.00	1	5		N	2015	99			99	1.00	1550			0.6	-620			930	0.106			18	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

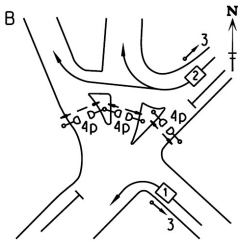
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.709
Loss time	L =	11 sec
Total Flow	=	2722 pcu
Co = (1.5*L+5)/(1-Y)	=	73.8 sec
Cm = L/(1-Y)	=	37.8 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	15.4 %
Cp = 0.9*L/(0.9-Y)	=	51.8 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**



Stage 1 G= 80 Int = 6



Stage 2 G= 37 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	76	8
4P	2		10	8	2	34	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		569		569	0.00	2005							2005	0.284			48	81
3,4	1	3.00	1	7		N	1915	189	96		285	0.66	1677			0.6	-671			1006	0.283			48	81
6	1	3.00	1				2055		733		733	0.00	2055			0.7	-534			1521	0.482			81	81
6,7	1	3.00	1	15		N	1915	443	196		639	0.69	1791			0.7	-466			1325	0.482	0.482		81	81
1,2	2	3.50	1	9		N	1965			305	305	1.00	1684			0.8	-337			1347	0.226	0.226		38	38
5	2	4.00	1	5		N	2015	191			191	1.00	1550			0.6	-620			930	0.205			34	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

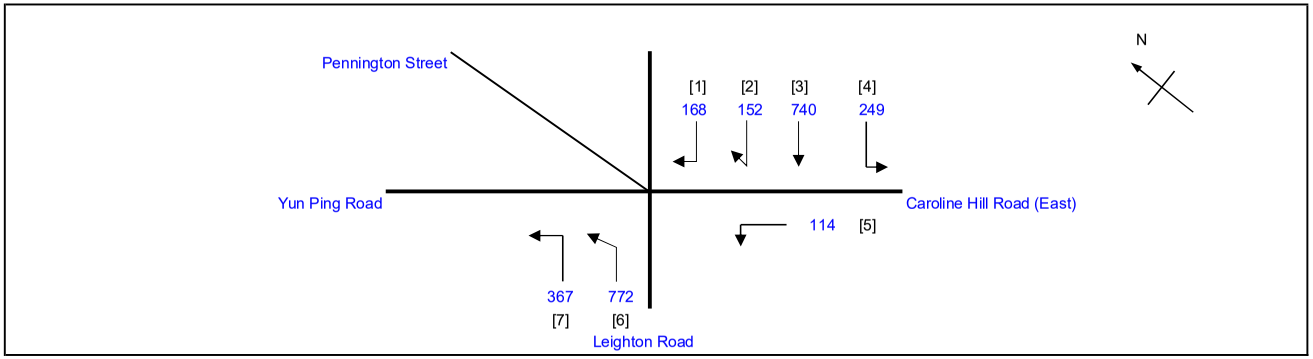
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

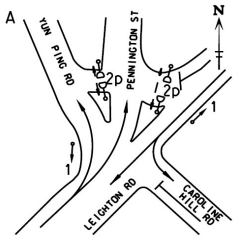
2033 Design AM

PROJECT NO.: 40920

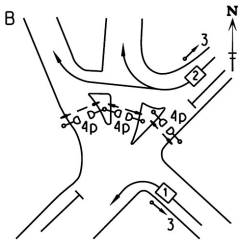
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.638
Loss time		L =	11 sec
Total Flow		=	2562 pcu
Co	= (1.5*L+5)/(1-Y)	=	59.4 sec
Cm	= L/(1-Y)	=	30.4 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	28.2 %
Cp	= 0.9*L/(0.9-Y)	=	37.8 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**29 %**



Stage 1 G= 74 Int = 6



Stage 2 G= 43 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	70	8
4P	2		10	8	2	40	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		663		663	0.00	2005							2005	0.331			62	75
3,4	1	3.00	1	7		N	1915	249	77		326	0.76	1646			0.6	-658			988	0.330			62	75
6	1	3.00	1				2055		609		609	0.00	2055			0.7	-534			1521	0.400	0.400		75	75
6,7	1	3.00	1	15		N	1915	367	163		530	0.69	1791			0.7	-466			1325	0.400			75	75
1,2	2	3.50	1	9		N	1965			320	320	1.00	1684			0.8	-337			1347	0.238	0.238		44	44
5	2	4.00	1	5		N	2015	114			114	1.00	1550			0.6	-620			930	0.123			23	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

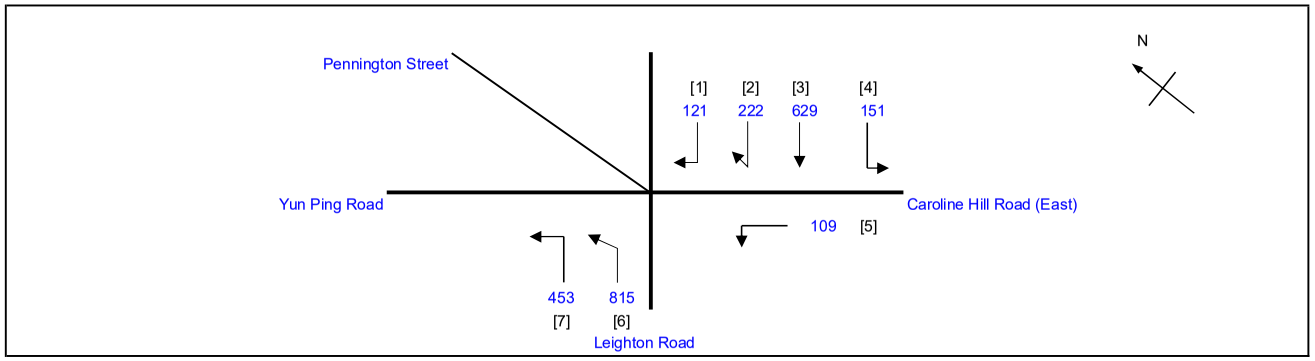
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

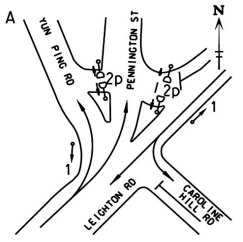
2033 Design PM

PROJECT NO.: 40920

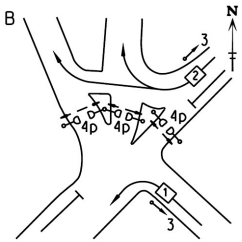
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.702
Loss time		L =	11 sec
Total Flow		=	2500 pcu
Co	= (1.5*L+5)/(1-Y)	=	72.1 sec
Cm	= L/(1-Y)	=	36.9 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	16.5 %
Cp	= 0.9*L/(0.9-Y)	=	49.9 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**17 %**



Stage 1 G= 75 Int = 6



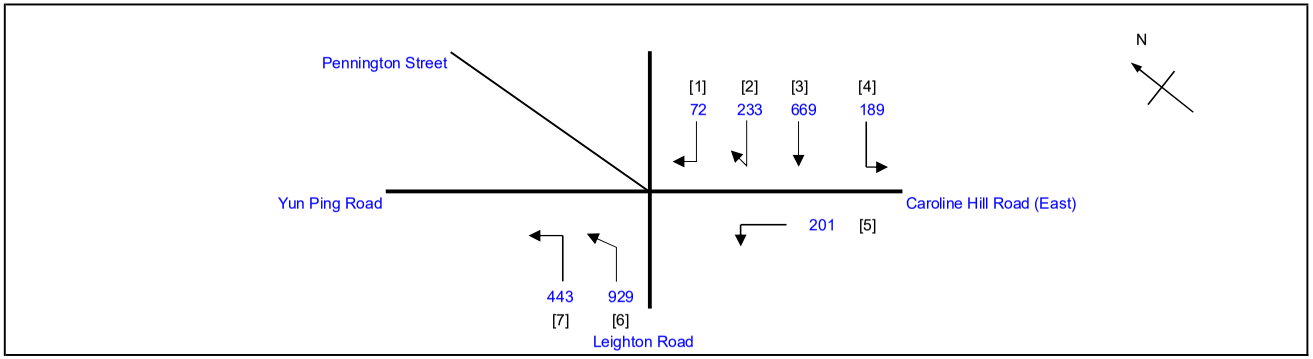
Stage 2 G= 42 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	71	8
4P	2		10	8	2	39	8

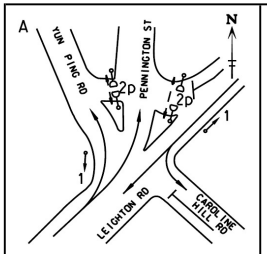
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		517		517	0.00	2005							2005	0.258			44	76
3,4	1	3.00	1	7		N	1915	151	112		263	0.57	1705			0.6	-682			1023	0.257			44	76
6	1	3.00	1				2055		680		680	0.00	2055			0.7	-534			1521	0.447	0.447		76	76
6,7	1	3.00	1	15		N	1915	453	135		588	0.77	1778			0.7	-462			1316	0.447			76	76
1,2	2	3.50	1	9		N	1965			343	343	1.00	1684			0.8	-337			1347	0.255	0.255		43	43
5	2	4.00	1	5		N	2015	109			109	1.00	1550			0.6	-620			930	0.117			20	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

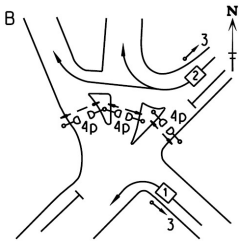
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.709
Loss time		L =	11 sec
Total Flow		=	2736 pcu
Co	= (1.5*L+5)/(1-Y)	=	73.8 sec
Cm	= L/(1-Y)	=	37.8 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	15.4 %
Cp	= 0.9*L/(0.9-Y)	=	51.8 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**16 %**



Stage 1 G= 80
Int = 6



Stage 2 G= 37
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	76	8
4P	2		10	8	2	34	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		571		571	0.00	2005							2005	0.285			48	81
3,4	1	3.00	1	7		N	1915	189	98		287	0.66	1678			0.6	-671			1007	0.285			48	81
6	1	3.00	1				2055		733		733	0.00	2055			0.7	-534			1521	0.482			81	81
6,7	1	3.00	1	15		N	1915	443	196		639	0.69	1791			0.7	-466			1325	0.482	0.482		81	81
1,2	2	3.50	1	9		N	1965			305	305	1.00	1684			0.8	-337			1347	0.226	0.226		38	38
5	2	4.00	1	5		N	2015	201			201	1.00	1550			0.6	-620			930	0.216			36	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

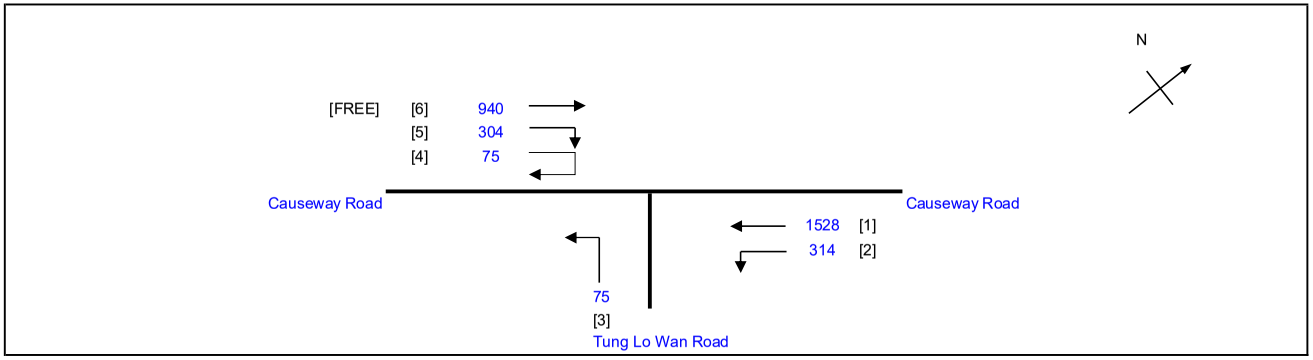
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

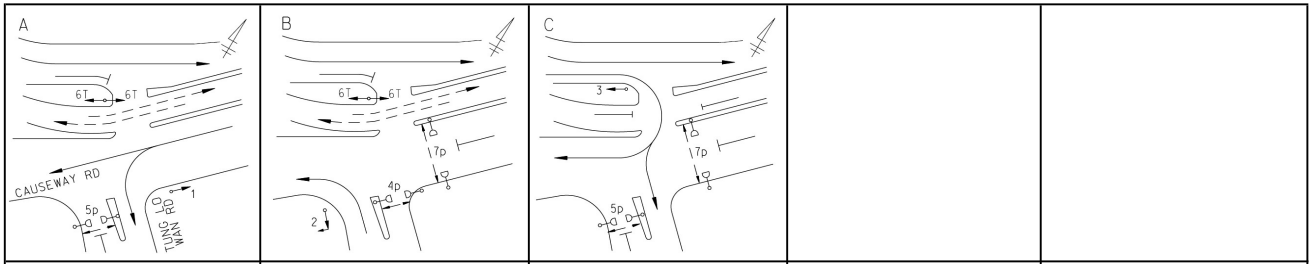
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.405
Loss time	L =	33 sec
Total Flow	=	2296 pcu
Co = (1.5*L+5)/(1-Y)	=	91.6 sec
Cm = L/(1-Y)	=	55.5 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	61.0 %
Cp = 0.9*L/(0.9-Y)	=	60.0 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**49 %**



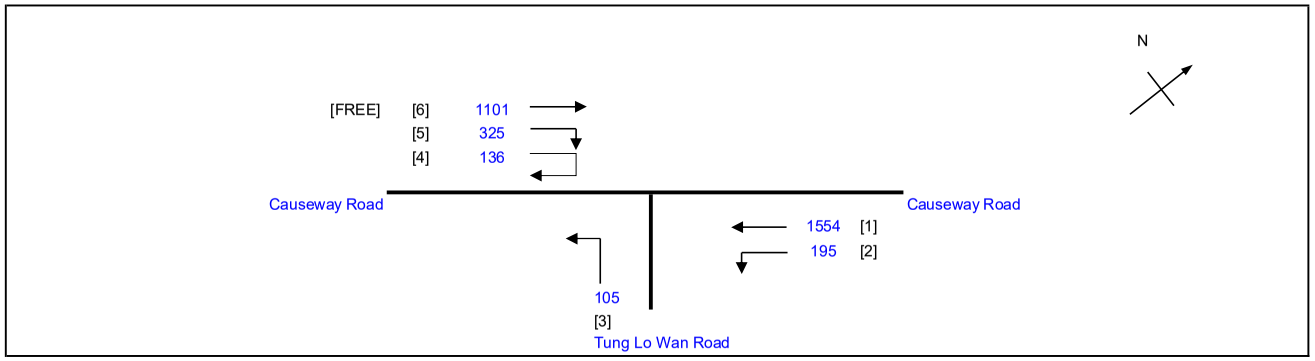
Stage 1	G= 44	Int = 9	
Stage 2	G= 15	Int = 4	
Stage 3	G= 21	Int = 7	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		36	11

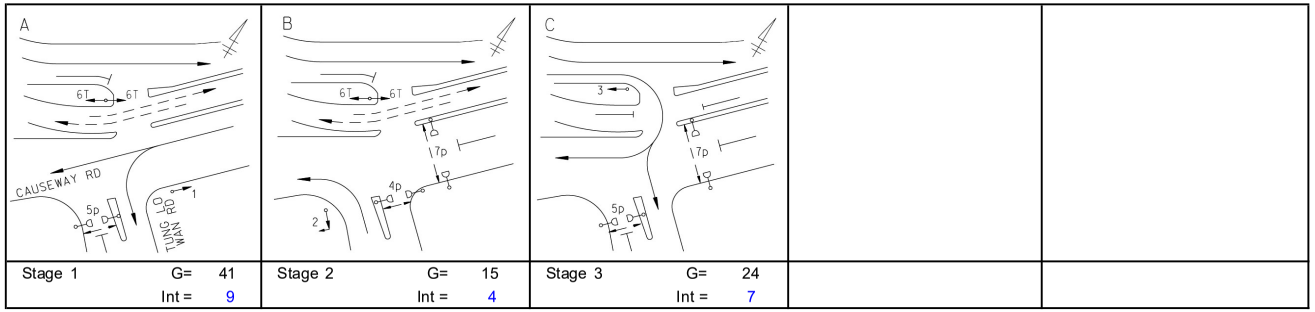
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		415		415	0.00	1915			0.8	-383			1532	0.271	0.271		45	45
1	1	3.00	2				4110		1113		1113	0.00	4110							4110	0.271			45	45
2	1	3.00	1	9		N	1915	314			314	1.00	1641			0.8	-328			1313	0.239			40	45
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			8	15
4,5	3	4.00	1	12		N	2015			192	192	1.00	1791			0.8	-358			1433	0.134			22	22
4,5	3	4.50	1	8		N	2065			187	187	1.00	1739			0.8	-348			1391	0.134	0.134		22	22
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.439
Loss time	L =	33 sec
Total Flow	=	2315 pcu
Co = (1.5*L+5)/(1-Y)	=	97.1 sec
Cm = L/(1-Y)	=	58.8 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	48.7 %
Cp = 0.9*L/(0.9-Y)	=	64.4 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**37 %**

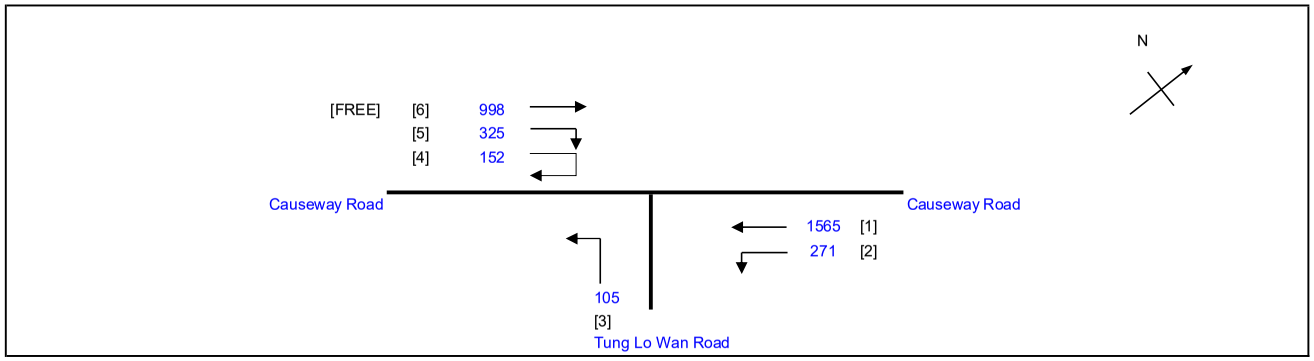


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

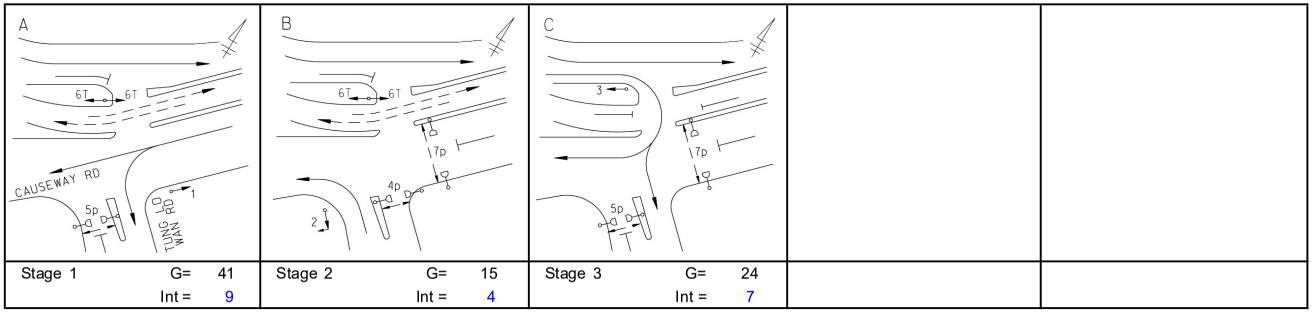
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		422		422	0.00	1915			0.8	-383			1532	0.275	0.275		42	42
1	1	3.00	2				4110		1132		1132	0.00	4110							4110	0.275			42	42
2	1	3.00	1	9		N	1915	195			195	1.00	1641			0.8	-328			1313	0.148			23	42
3	2	4.00	1	25		N	2015	105			105	1.00	1901			0.8	-380			1521	0.069			11	15
4,5	3	4.00	1	12		N	2015			234	234	1.00	1791			0.8	-358			1433	0.163	0.163		25	25
4,5	3	4.50	1	8		N	2065			227	227	1.00	1739			0.8	-348			1391	0.163			25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.446
Loss time	L =	33 sec
Total Flow	=	2418 pcu
Co = (1.5*L+5)/(1-Y)	=	98.4 sec
Cm = L/(1-Y)	=	59.6 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	46.2 %
Cp = 0.9*L/(0.9-Y)	=	65.5 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**35 %**



Stage 1	G= 41	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 24	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		425		425	0.00	1915			0.8	-383			1532	0.277	0.277		42	42
1	1	3.00	2				4110		1140		1140	0.00	4110							4110	0.277			42	42
2	1	3.00	1	9		N	1915	271			271	1.00	1641			0.8	-328			1313	0.206			31	42
3	2	4.00	1	25		N	2015	105			105	1.00	1901			0.8	-380			1521	0.069			10	15
4,5	3	4.00	1	12		N	2015			242	242	1.00	1791			0.8	-358			1433	0.169			25	25
4,5	3	4.50	1	8		N	2065			235	235	1.00	1739			0.8	-348			1391	0.169	0.169		25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

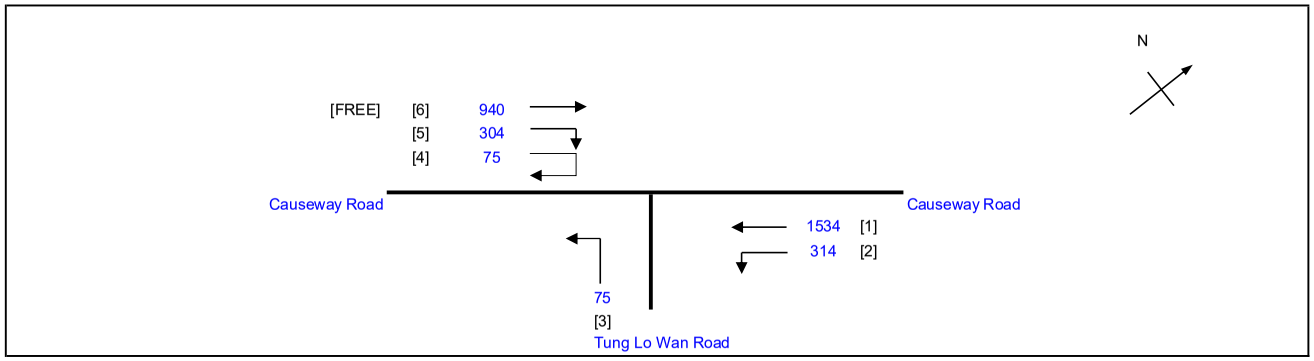
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

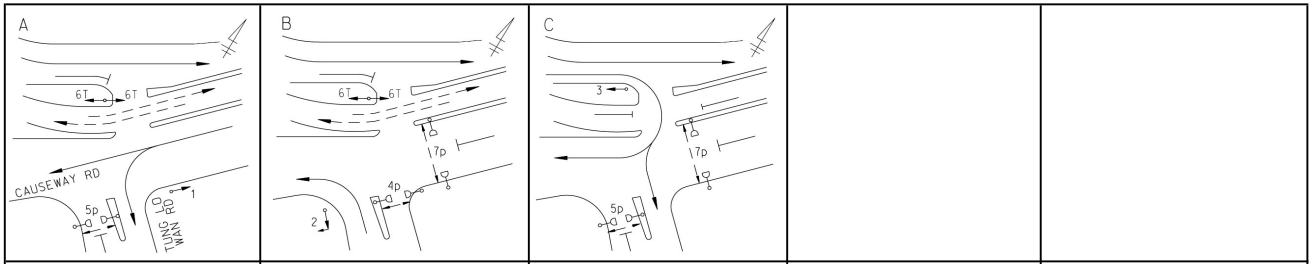
2033 Design AM

PROJECT NO.: 40920

FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.407
Loss time		L =	33 sec
Total Flow		=	2302 pcu
Co	= (1.5*L+5)/(1-Y)	=	91.8 sec
Cm	= L/(1-Y)	=	55.6 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	60.5 %
Cp	= 0.9*L/(0.9-Y)	=	60.2 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**48 %**



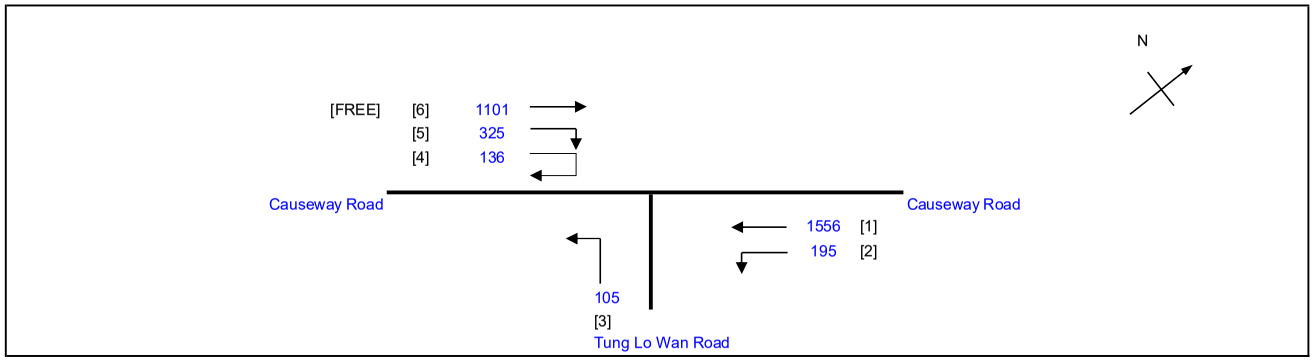
Stage 1	G= 44	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 21	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		36	11

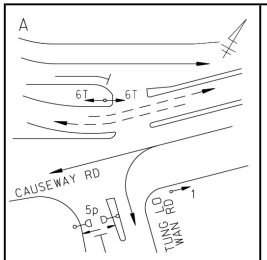
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		417		417	0.00	1915			0.8	-383			1532	0.272	0.272		45	45
1	1	3.00	2				4110		1117		1117	0.00	4110							4110	0.272			45	45
2	1	3.00	1	9		N	1915	314			314	1.00	1641			0.8	-328			1313	0.239			39	45
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			8	15
4,5	3	4.00	1	12		N	2015			192	192	1.00	1791			0.8	-358			1433	0.134			22	22
4,5	3	4.50	1	8		N	2065			187	187	1.00	1739			0.8	-348			1391	0.134	0.134		22	22
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

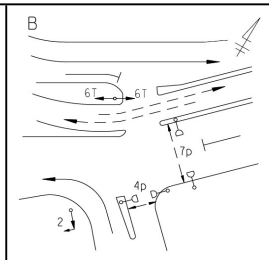
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



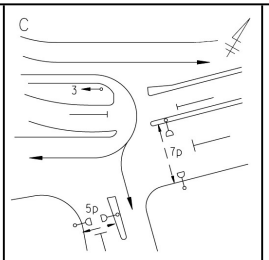
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.439
Loss time	L =	33 sec
Total Flow	=	2317 pcu
Co = (1.5*L+5)/(1-Y)	=	97.2 sec
Cm = L/(1-Y)	=	58.9 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	48.5 %
Cp = 0.9*L/(0.9-Y)	=	64.5 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**37 %**



Stage 1 G= 41 Int = 9



Stage 2 G= 15 Int = 4



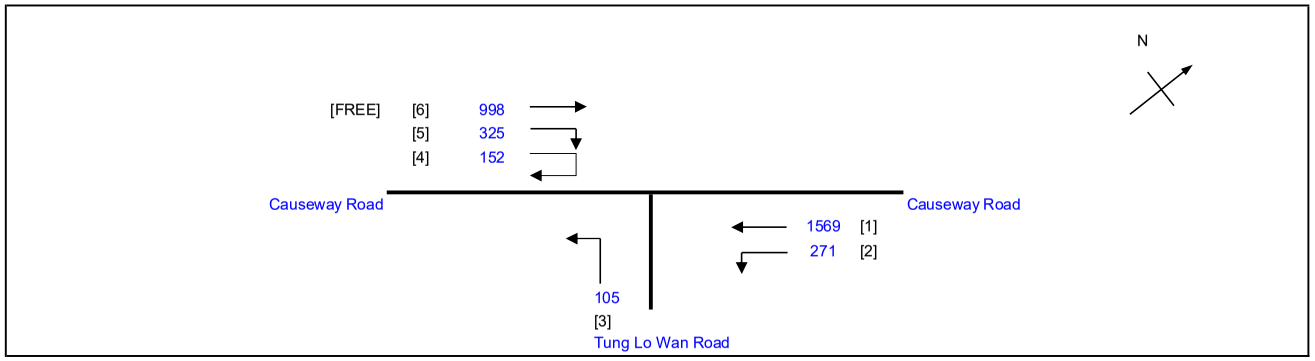
Stage 3 G= 24 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

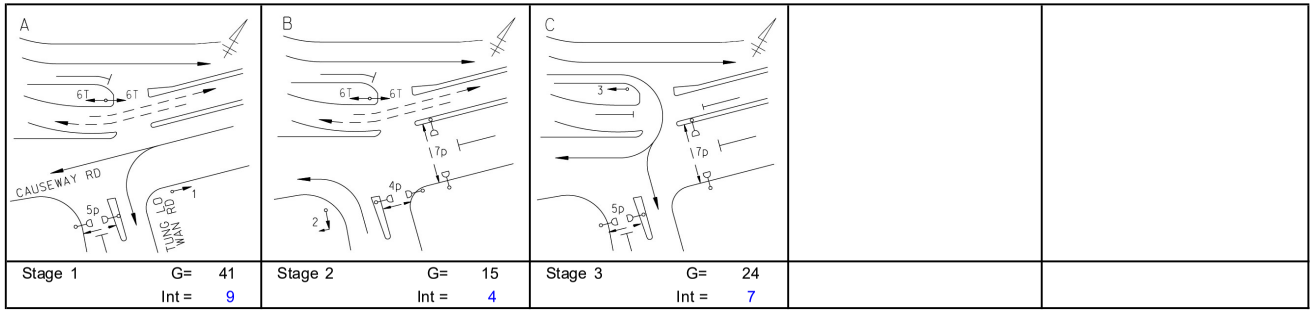
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		423		423	0.00	1915			0.8	-383			1532	0.276	0.276		42	42
1	1	3.00	2				4110		1133		1133	0.00	4110							4110	0.276			42	42
2	1	3.00	1	9		N	1915	195			195	1.00	1641			0.8	-328			1313	0.148			23	42
3	2	4.00	1	25		N	2015	105			105	1.00	1901			0.8	-380			1521	0.069			11	15
4,5	3	4.00	1	12		N	2015			234	234	1.00	1791			0.8	-358			1433	0.163	0.163		25	25
4,5	3	4.50	1	8		N	2065			227	227	1.00	1739			0.8	-348			1391	0.163			25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.447
Loss time	L =	33 sec
Total Flow	=	2422 pcu
Co = (1.5*L+5)/(1-Y)	=	98.6 sec
Cm = L/(1-Y)	=	59.7 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	46.0 %
Cp = 0.9*L/(0.9-Y)	=	65.6 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**35 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		426		426	0.00	1915			0.8	-383			1532	0.278			42	42
1	1	3.00	2				4110		1143		1143	0.00	4110							4110	0.278	0.278		42	42
2	1	3.00	1	9		N	1915	271			271	1.00	1641			0.8	-328			1313	0.206			31	42
3	2	4.00	1	25		N	2015	105			105	1.00	1901			0.8	-380			1521	0.069			10	15
4,5	3	4.00	1	12		N	2015			242	242	1.00	1791			0.8	-358			1433	0.169			25	25
4,5	3	4.50	1	8		N	2065			235	235	1.00	1739			0.8	-348			1391	0.169	0.169		25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

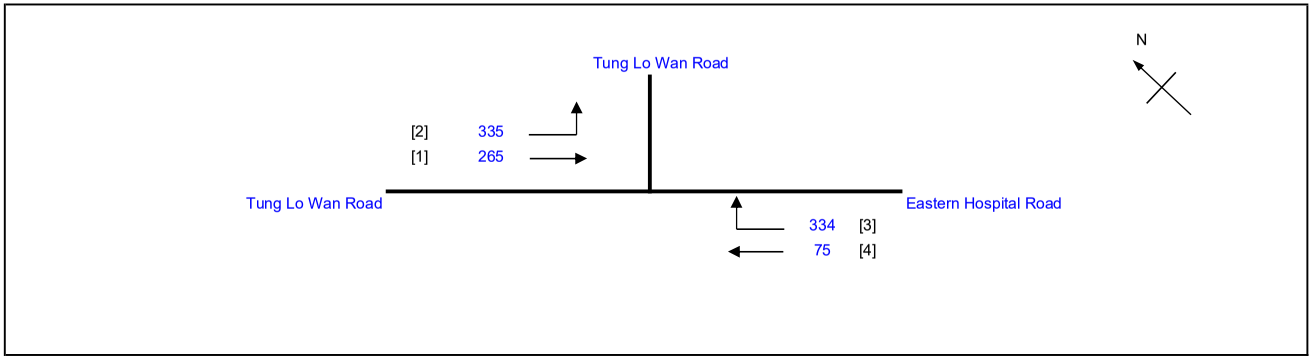
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

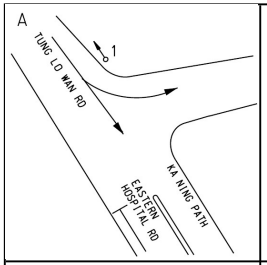
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Reference AM

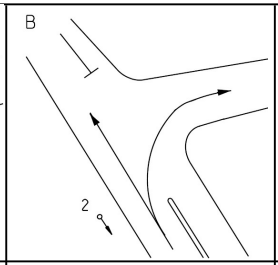
PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



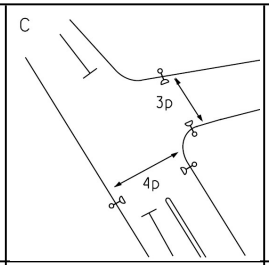
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.382
Loss time		L =	41 sec
Total Flow		=	1009 pcu
Co	= (1.5*L+5)/(1-Y)	=	107.6 sec
Cm	= L/(1-Y)	=	66.3 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	55.2 %
Cp	= 0.9*L/(0.9-Y)	=	71.2 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**



Stage 1 G= 23 Int = 5



Stage 2 G= 34 Int = 3



Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	53	265		318	0.17	2064							2064	0.154	0.154		24	24
4	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			24	24
1,2	2	3.65	1	12		N	1980		75	334	409	0.82	1797							1797	0.228	0.228		35	35
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

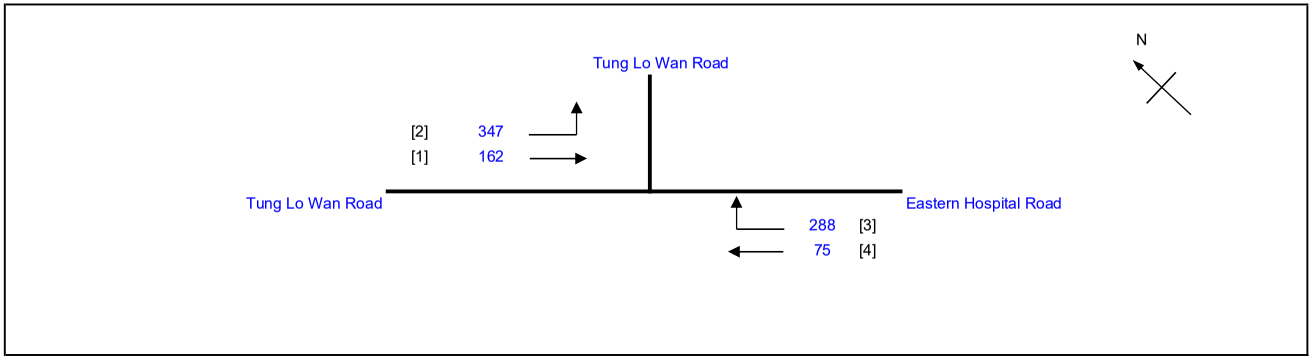
		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

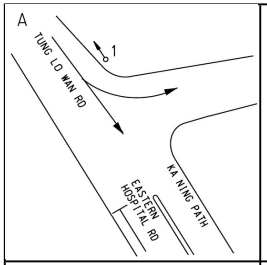
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Reference PM

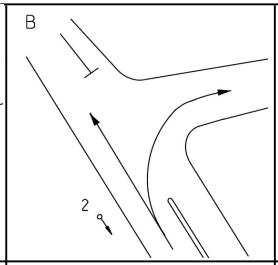
PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



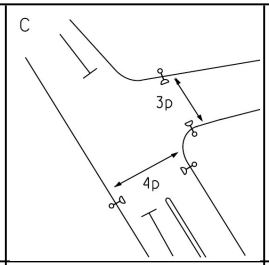
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.333
Loss time		L =	41 sec
Total Flow		=	872 pcu
Co	= (1.5*L+5)/(1-Y)	=	99.7 sec
Cm	= L/(1-Y)	=	61.5 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	77.9 %
Cp	= 0.9*L/(0.9-Y)	=	65.1 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**59 %**



Stage 1 G= 22 Int = 5



Stage 2 G= 35 Int = 3



Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
3,4	1	3.30	1	25			2085	106	162		268	0.40	2037							2037	0.132	0.132		23	23			
4	1	3.30	1	25		N	1945	241			241	1.00	1835							1835	0.131			23	23			
1,2	2	3.65	1	12		N	1980		75	288	363	0.79	1801							1801	0.202	0.202		36	36			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

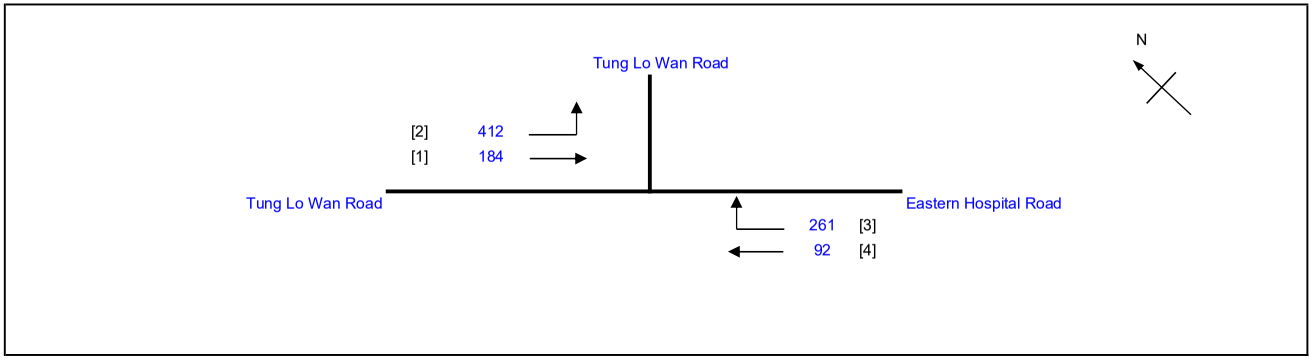
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

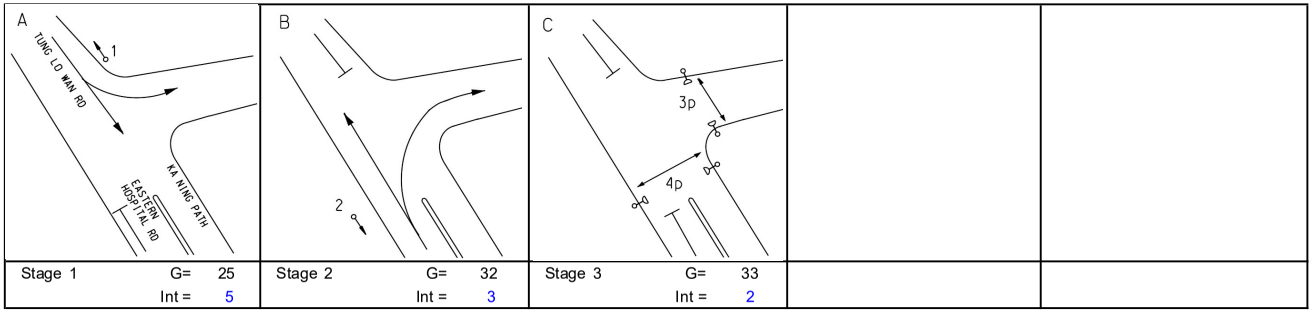
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.349
Loss time		L =	41 sec
Total Flow		=	949 pcu
Co	= (1.5*L+5)/(1-Y)	=	102.2 sec
Cm	= L/(1-Y)	=	63.0 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	69.7 %
Cp	= 0.9*L/(0.9-Y)	=	67.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**52 %**



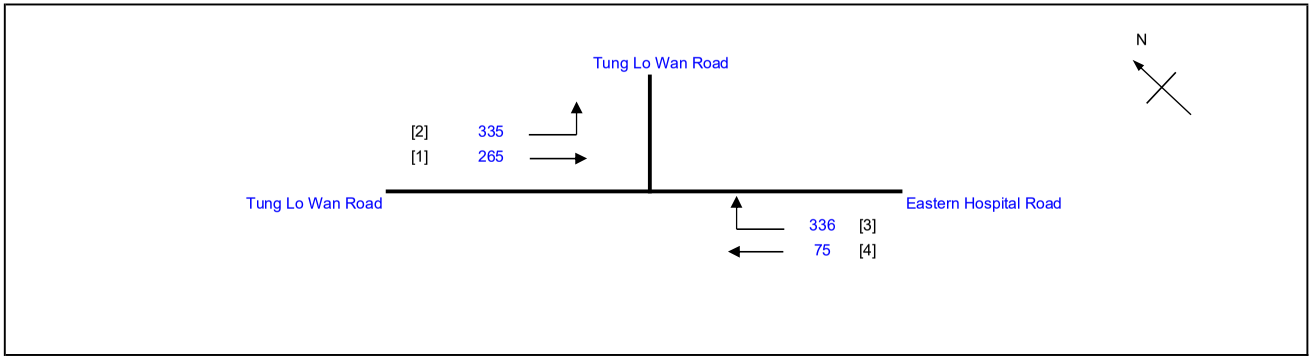
Stage 1 G= 25 Int = 5
Stage 2 G= 32 Int = 3
Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

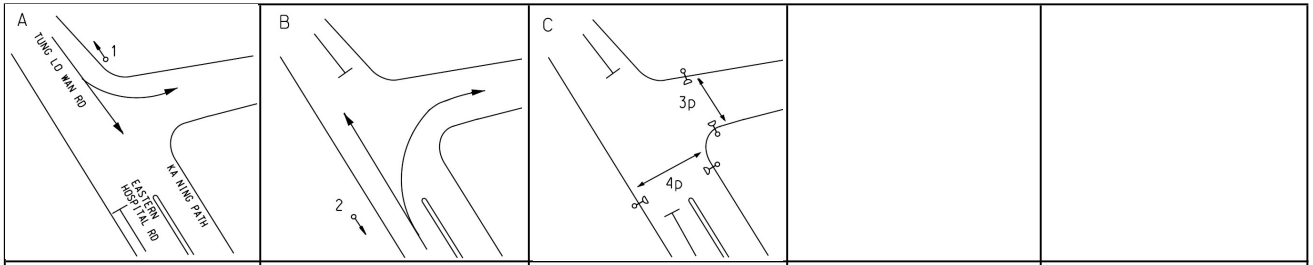
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	130	184		314	0.41	2034							2034	0.154	0.154		26	26
4	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			26	26
1,2	2	3.65	1	12		N	1980		92	261	353	0.74	1812							1812	0.195	0.195		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.383
Loss time		L =	41 sec
Total Flow		=	1011 pcu
Co	= (1.5*L+5)/(1-Y)	=	107.8 sec
Cm	= L/(1-Y)	=	66.5 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	54.7 %
Cp	= 0.9*L/(0.9-Y)	=	71.4 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**



Stage 1	G= 23	Int = 5
Stage 2	G= 34	Int = 3
Stage 3	G= 33	Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						8		
3,4	1	3.30	1	25			2085	52	265		317	0.16	2065							2065	0.154			24	24
4	1	3.30	1	25		N	1945	283			283	1.00	1835							1835	0.154	0.154		24	24
1,2	2	3.65	1	12		N	1980		75	336	411	0.82	1796							1796	0.229	0.229		35	35
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

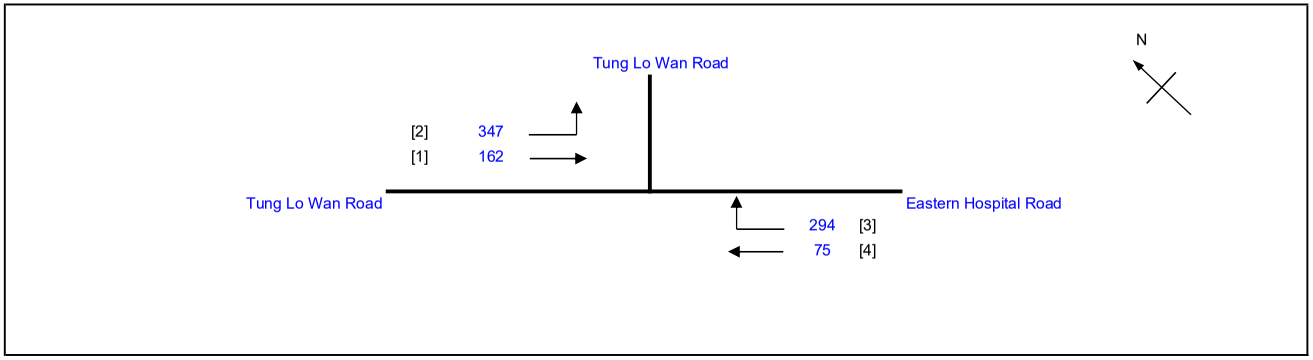
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

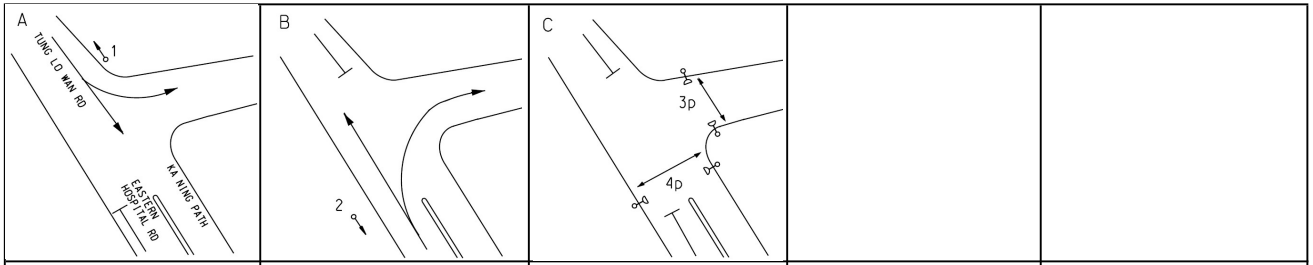
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Design PM

PROJECT NO.:	40920
FILENAME :	J5_TLWR_EHR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.337
Loss time	L =	41 sec
Total Flow	=	878 pcu
Co = (1.5*L+5)/(1-Y)	=	100.2 sec
Cm = L/(1-Y)	=	61.8 sec
Yult	=	0.593
R.C.ult = (Yult-Y)/Y*100%	=	76.1 %
Cp = 0.9*L/(0.9-Y)	=	65.5 sec
Ymax = 1-L/C	=	0.590
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**58 %**



Stage 1	G=	22	Int =	5	
Stage 2	G=	35	Int =	3	
Stage 3	G=	33	Int =	2	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	106	162		268	0.40	2037							2037	0.132	0.132		23	23
4	1	3.30	1	25		N	1945	241			241	1.00	1835							1835	0.131			23	23
1,2	2	3.65	1	12		N	1980		75	294	369	0.80	1801							1801	0.205	0.205		36	36
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

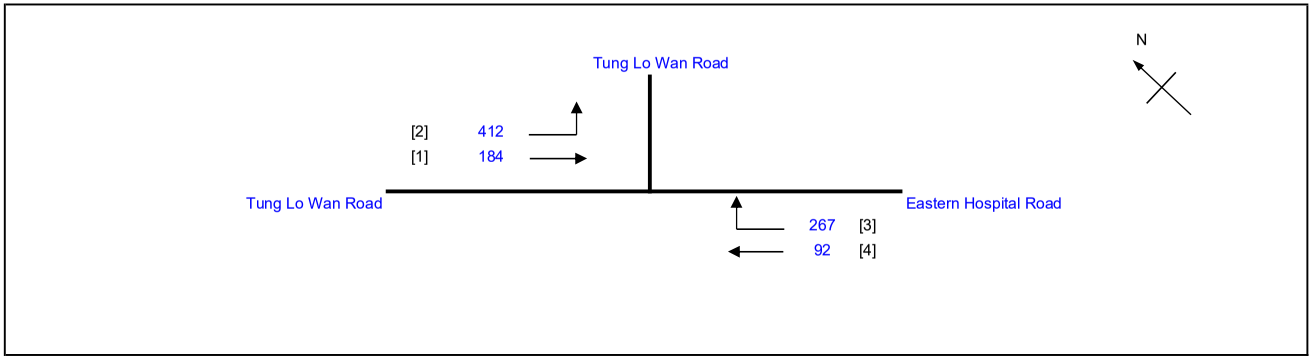
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

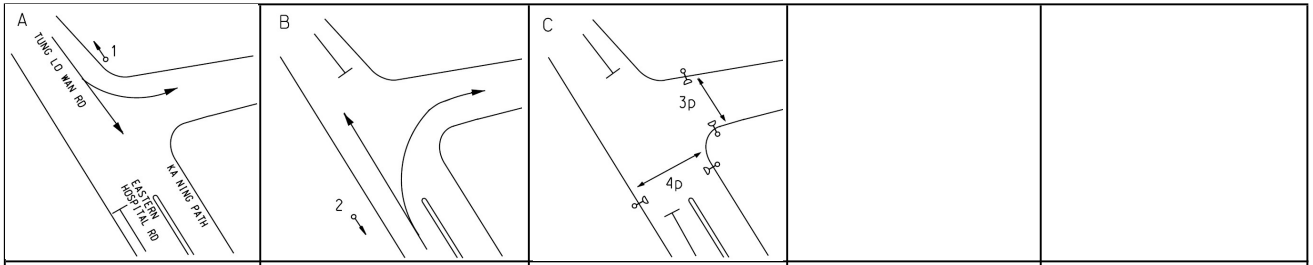
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.353
Loss time		L =	41 sec
Total Flow		=	955 pcu
Co	= (1.5*L+5)/(1-Y)	=	102.7 sec
Cm	= L/(1-Y)	=	63.3 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	68.1 %
Cp	= 0.9*L/(0.9-Y)	=	67.4 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**51 %**



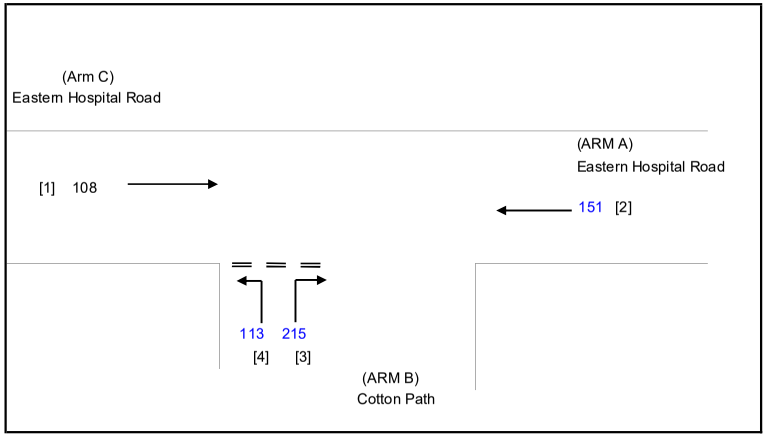
Stage 1	G=	25	Stage 2	G=	32
	Int =	5		Int =	3
Stage 3	G=	33			
	Int =	2			

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	130	184		314	0.41	2034							2034	0.154	0.154		26	26
4	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			26	26
1,2	2	3.65	1	12		N	1980		92	267	359	0.74	1812							1812	0.198	0.198		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	151	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	108	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	215	(pcu/hr)
q b-c	=	113	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.3445122

THE CAPACITY OF MOVEMENT :

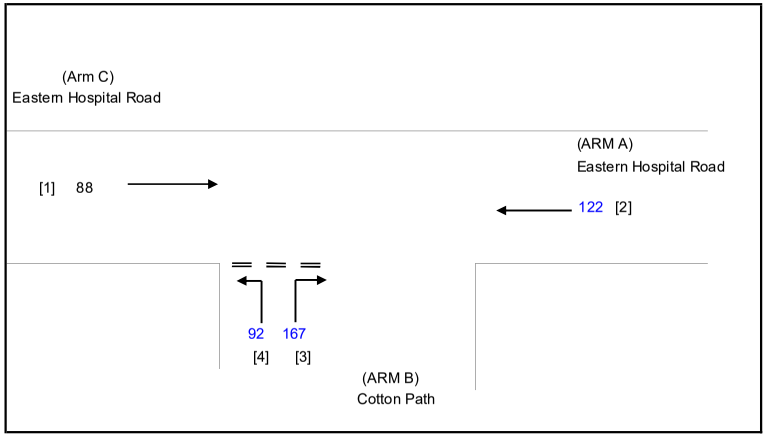
Q b-a	=	525		
Q b-c	=	725	Q b-c (O) =	650.8
Q c-b	=	412		
Q b-ac	=	580		
TOTAL FLOW	=	587	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4095
DFC b-c	=	0.1559
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1948

CRITICAL DFC = 0.41

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	122	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	88	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	167	(pcu/hr)
q b-c	=	92	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.35521236

THE CAPACITY OF MOVEMENT :

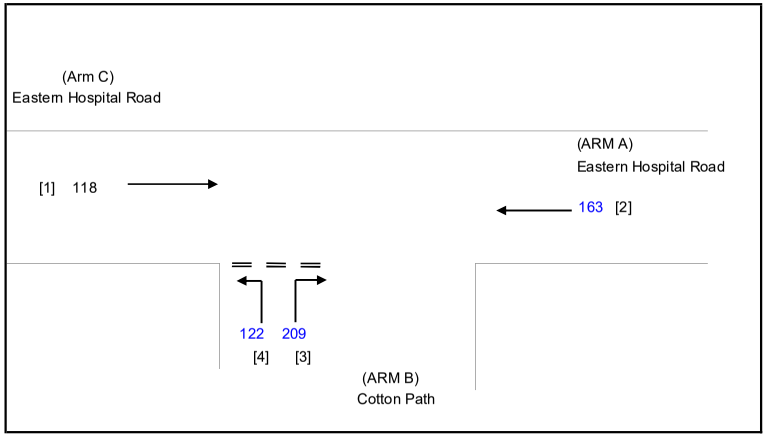
Q b-a	=	535		
Q b-c	=	734	Q b-c (O) =	676.7
Q c-b	=	417		
Q b-ac	=	592		
TOTAL FLOW	=	469	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3121
DFC b-c	=	0.1253
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1554

CRITICAL DFC = 0.31

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	163	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	118	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	209	(pcu/hr)
q b-c	=	122	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.36858006

THE CAPACITY OF MOVEMENT :

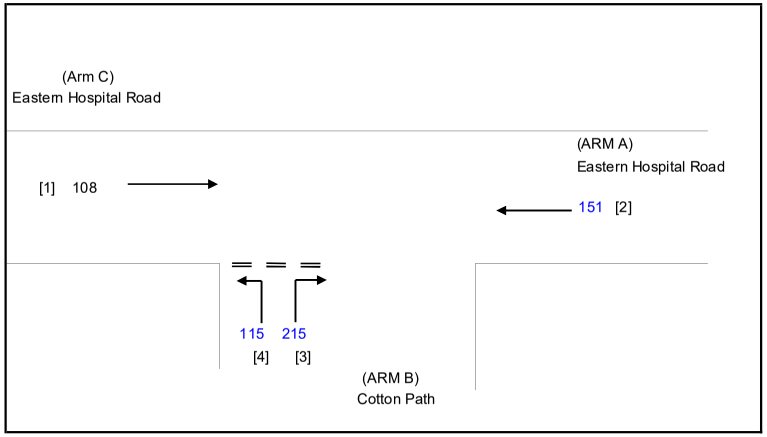
Q b-a	=	520		
Q b-c	=	722	Q b-c (O) =	649.5
Q c-b	=	411		
Q b-ac	=	580		
TOTAL FLOW	=	612	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4019
DFC b-c	=	0.1690
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2104

CRITICAL DFC = 0.40

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	151	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	108	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	215	(pcu/hr)
q b-c	=	115	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.34848485

THE CAPACITY OF MOVEMENT :

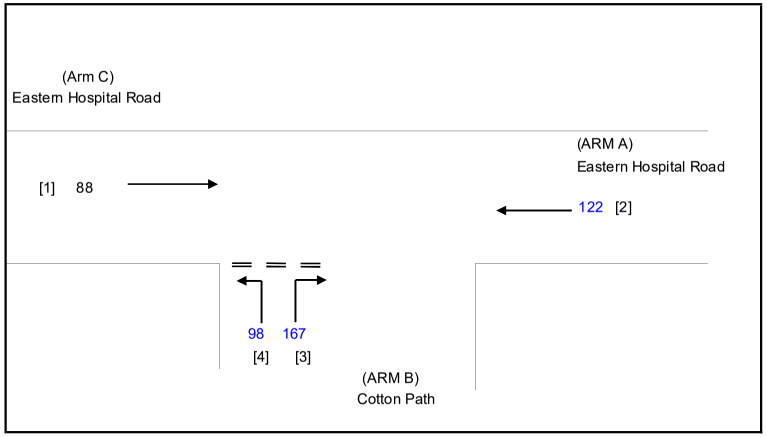
Q b-a	=	525		
Q b-c	=	725	Q b-c (O) =	650.8
Q c-b	=	412		
Q b-ac	=	581		
TOTAL FLOW	=	589	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4095
DFC b-c	=	0.1586
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1980

CRITICAL DFC = 0.41

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	122	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	88	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	167	(pcu/hr)
q b-c	=	98	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.36981132

THE CAPACITY OF MOVEMENT :

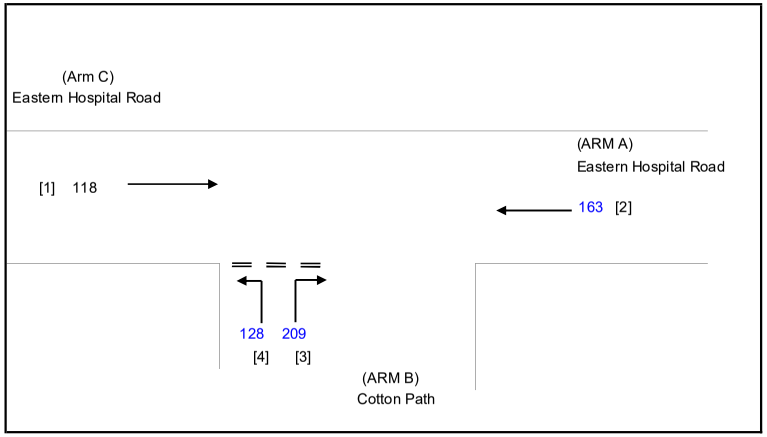
Q b-a	=	535		
Q b-c	=	734	Q b-c (O) =	676.7
Q c-b	=	417		
Q b-ac	=	595		
TOTAL FLOW	=	475	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3121
DFC b-c	=	0.1335
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1648

CRITICAL DFC = 0.31

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	163	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	118	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	209	(pcu/hr)
q b-c	=	128	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.37982196

THE CAPACITY OF MOVEMENT :

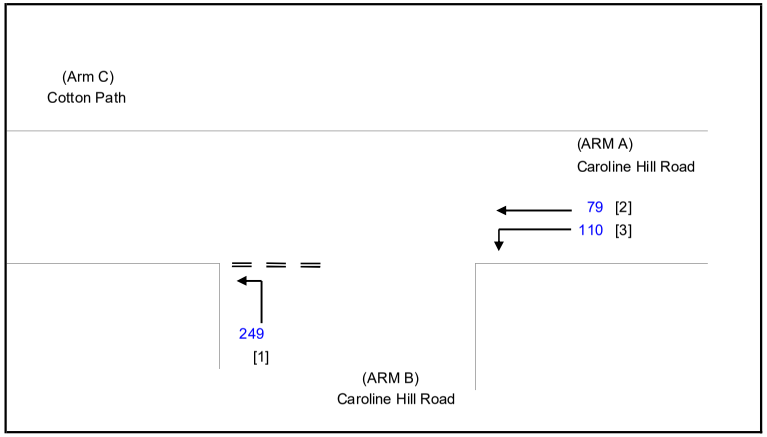
Q b-a	=	520		
Q b-c	=	722	Q b-c (O) =	649.5
Q c-b	=	411		
Q b-ac	=	582		
TOTAL FLOW	=	618	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4019
DFC b-c	=	0.1773
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2200

CRITICAL DFC = 0.40

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	110	(pcu/hr)
q a-c	=	79	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	249	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

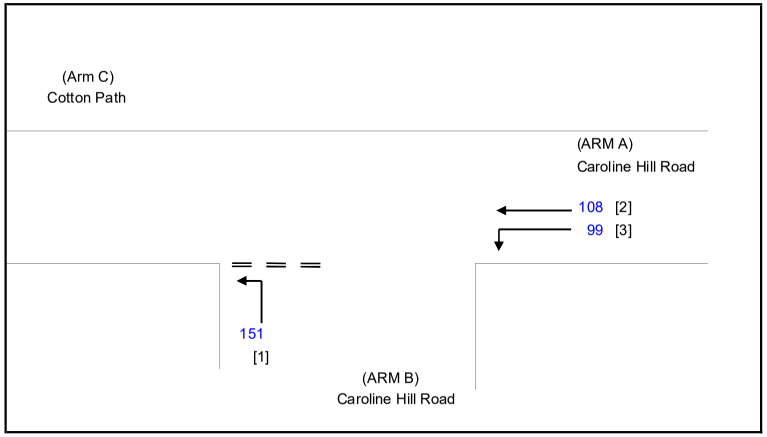
Q b-a	=	315			
Q b-c	=	720	Q b-c (O) =	720	
Q c-b	=	405			
Q b-ac	=	720			
TOTAL FLOW	=	438	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.3458
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3458

CRITICAL DFC = 0.35

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	99	(pcu/hr)
q a-c	=	108	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	151	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

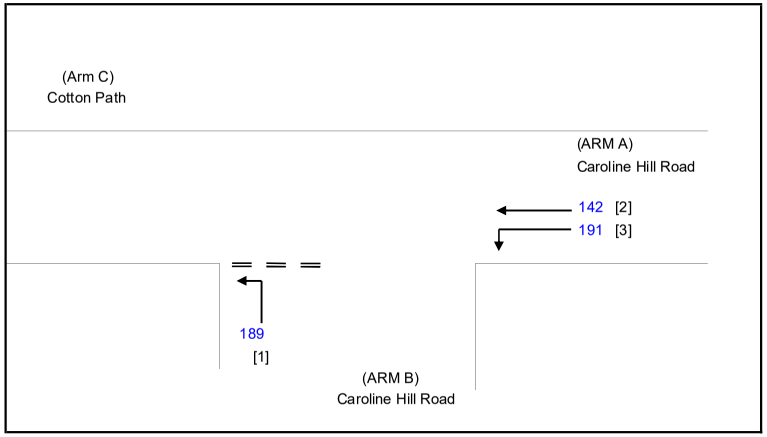
Q b-a	=	312			
Q b-c	=	713	Q b-c (O) =	713	
Q c-b	=	402			
Q b-ac	=	713			
TOTAL FLOW	=	358	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2118
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2118

CRITICAL DFC = 0.21

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	191	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	189	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

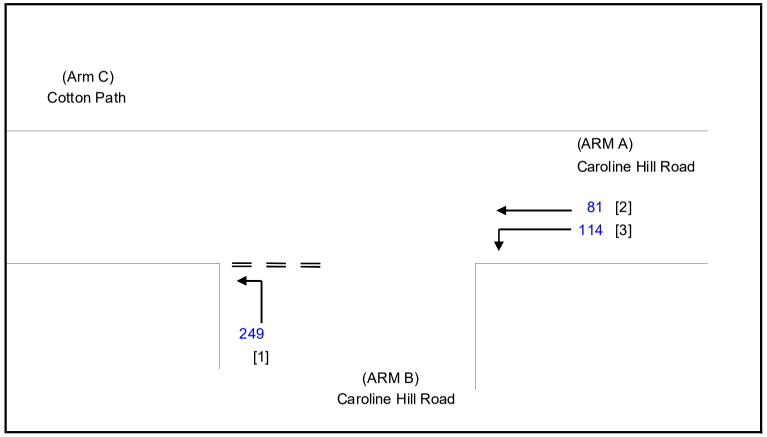
Q b-a	=	301		
Q b-c	=	692	Q b-c (O) =	692
Q c-b	=	380		
Q b-ac	=	692		
TOTAL FLOW	=	522	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2731
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2731

CRITICAL DFC = 0.27

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	114	(pcu/hr)
q a-c	=	81	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	249	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

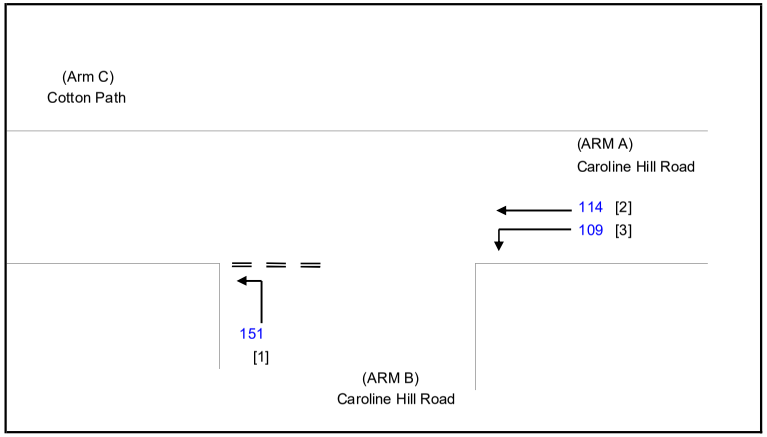
Q b-a	=	315		
Q b-c	=	719	Q b-c (O) =	719
Q c-b	=	404		
Q b-ac	=	719		
TOTAL FLOW	=	444	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.3463
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3463

CRITICAL DFC = 0.35

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	109	(pcu/hr)
q a-c	=	114	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	151	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

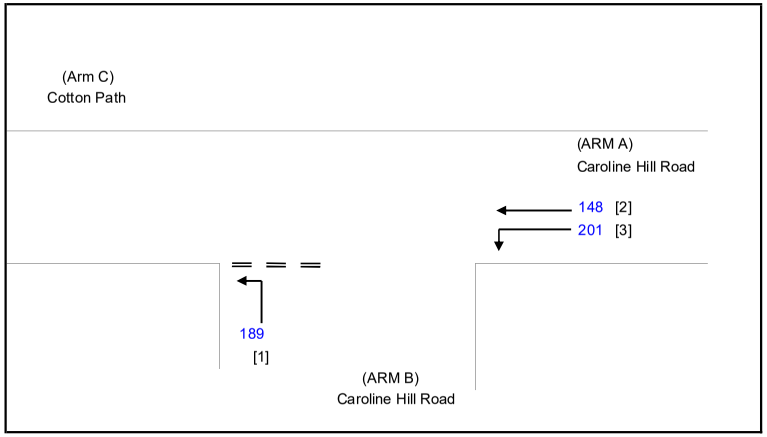
Q b-a	=	310			
Q b-c	=	710	Q b-c (O) =	710	
Q c-b	=	399			
Q b-ac	=	710			
TOTAL FLOW	=	374	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2127
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2127

CRITICAL DFC = 0.21

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	201	(pcu/hr)
q a-c	=	148	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	189	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

Q b-a	=	299			
Q b-c	=	689	Q b-c (O) =	689	
Q c-b	=	378			
Q b-ac	=	689			
TOTAL FLOW	=	538	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2743
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2743

CRITICAL DFC = 0.27

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

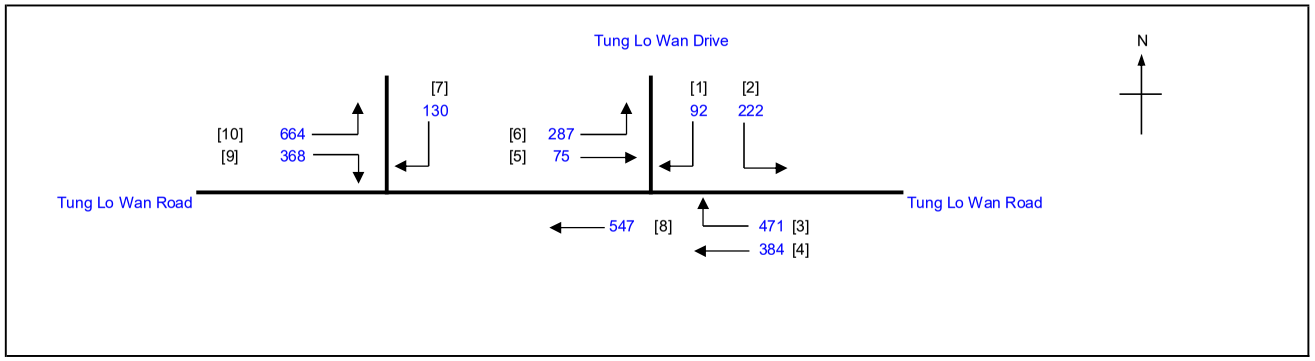
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J8 Tung Lo Wan Road / Moreton Terrace

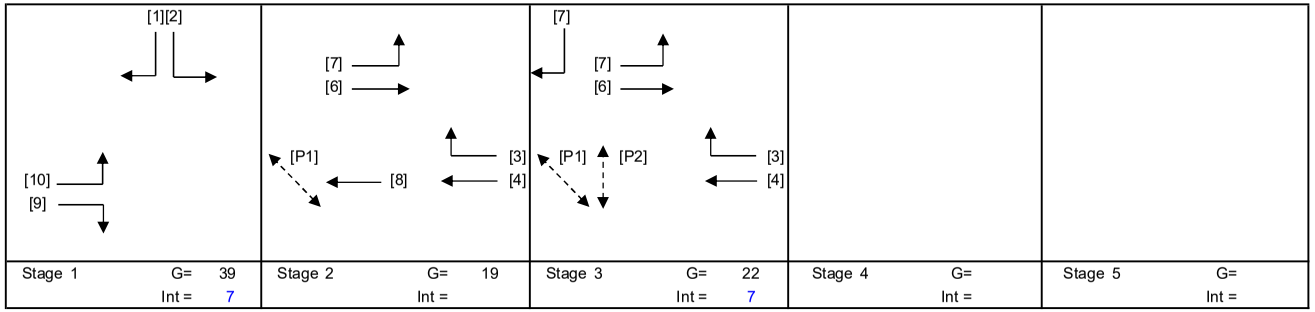
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J8_TLWR_MT.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.597
Loss time	L =	12 sec
Total Flow	=	3240 pcu
Co = (1.5*L+5)/(1-Y)	=	57.0 sec
Cm = L/(1-Y)	=	29.7 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	35.8 %
Cp = 0.9*L/(0.9-Y)	=	35.6 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**32 %**



Stage 1	G= 39	Stage 2	G= 19	Stage 3	G= 22	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		21	8

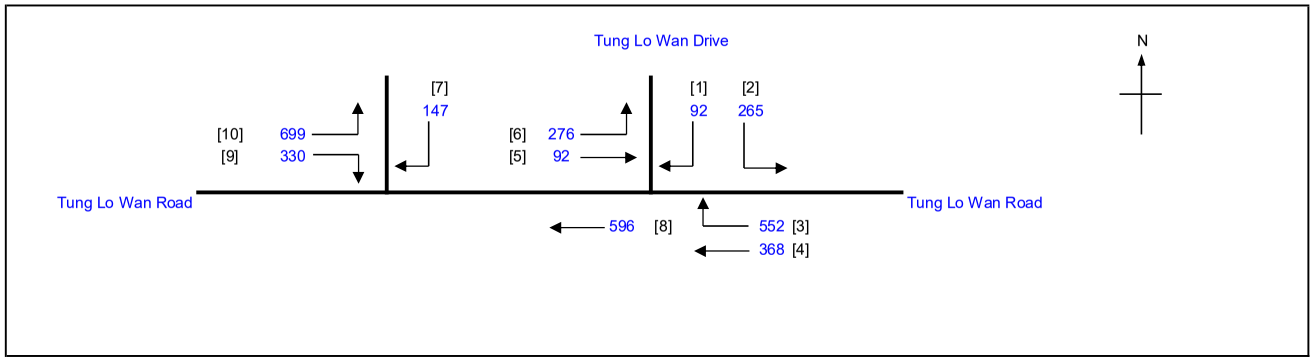
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		547		547	0.00	3970							3970	0.138			19	19	0.683	33	36
10	1	3.70	1	8		N	1985	485			485	1.00	1672							1672	0.290	0.290		40	40	0.683	42	25
9,10	1	3.50	1	13			2105	179		368	547	1.00	1887							1887	0.290			40	40	0.683	48	24
7	3	5.00	1	27		N	2115			130	130	1.00	2004							2004	0.065			9	23	0.683	18	56
4	2,3	3.70	1			N	1985		384		384	0.00	1985							1985	0.193			27	43	0.683	42	33
3,4	2,3	3.00	1	8	O		2055			471	471	1.00	1537							1537	0.306	0.306		43	43	0.683	36	24
5,6	2,3	5.00	1	13		N	2115	287	75		362	0.79	1938							1938	0.187			26	43	0.683	36	34
1,2	1	3.50	1	8		N	1965	222		92	314	1.00	1655							1655	0.190			26	40	0.683	36	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

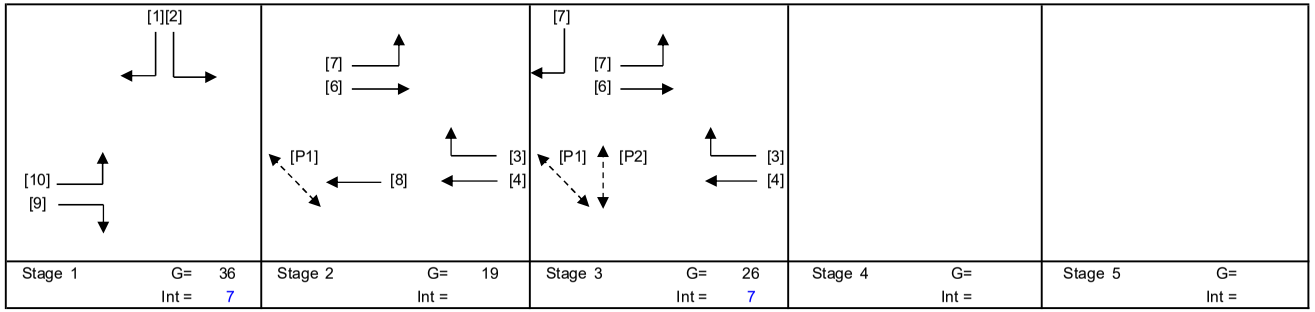
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2033 Reference PM**		
PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
	Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.648
Loss time	L =	12 sec
Total Flow	=	3417 pcu
Co = (1.5*L+5)/(1-Y)	=	65.4 sec
Cm = L/(1-Y)	=	34.1 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	24.9 %
Cp = 0.9*L/(0.9-Y)	=	42.9 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**21 %**



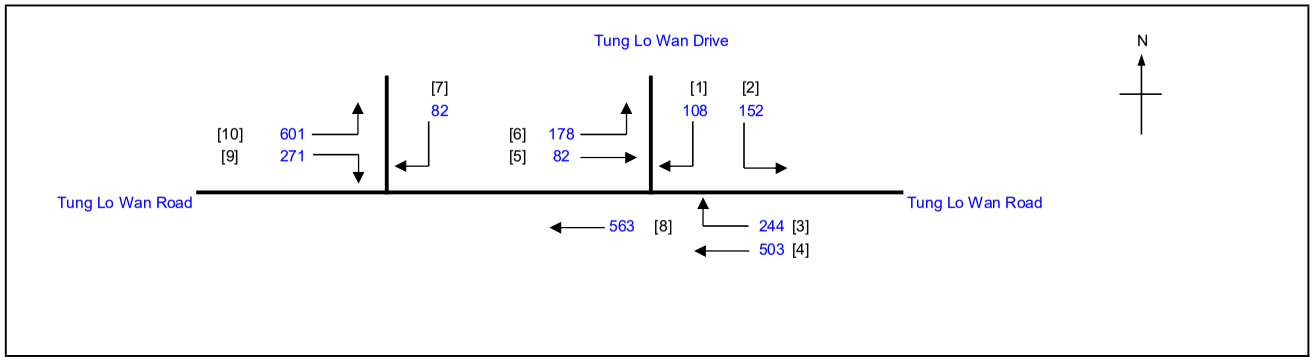
Stage 1	G= 36	Stage 2	G= 19	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		44	8
P2	3		9	8		25	8

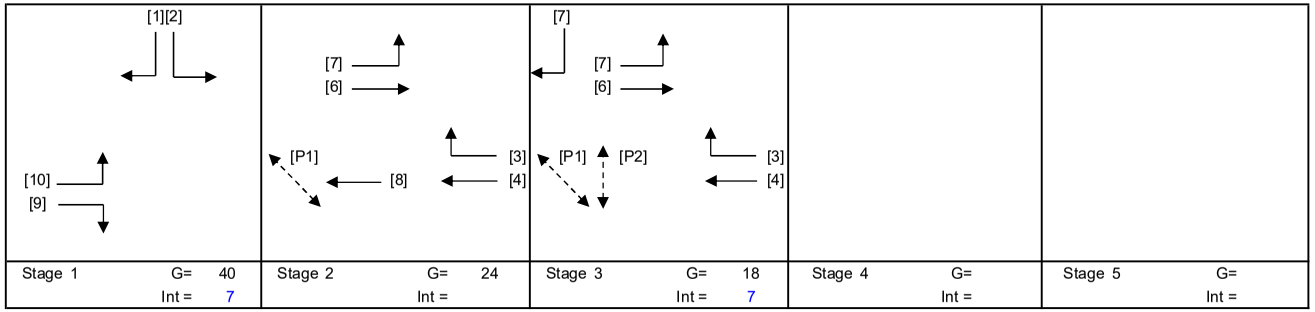
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		596		596	0.00	3970							3970	0.150			19	19	0.742	36	38
10	1	3.70	1	8		N	1985	483			483	1.00	1672							1672	0.289			37	37	0.742	42	30
9,10	1	3.50	1	13			2105	216		330	546	1.00	1887							1887	0.289	0.289		37	37	0.742	48	29
7	3	5.00	1	27		N	2115			147	147	1.00	2004							2004	0.073			9	27	0.742	24	61
4	2,3	3.70	1			N	1985		368		368	0.00	1985							1985	0.185			24	46	0.742	42	39
3,4	2,3	3.00	1	8	O		2055			552	552	1.00	1537							1537	0.359	0.359		46	46	0.742	42	24
5,6	2,3	5.00	1	13		N	2115	276	92		368	0.75	1947							1947	0.189			24	46	0.742	42	39
1,2	1	3.50	1	8		N	1965	265		92	357	1.00	1655							1655	0.216			28	37	0.742	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.499
Loss time	L =	12 sec
Total Flow	=	2784 pcu
Co = (1.5*L+5)/(1-Y)	=	45.9 sec
Cm = L/(1-Y)	=	23.9 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	62.4 %
Cp = 0.9*L/(0.9-Y)	=	26.9 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**58 %**



Stage 1	G= 40	Stage 2	G= 24	Stage 3	G= 18	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		40	8
P2	3		9	8		17	8

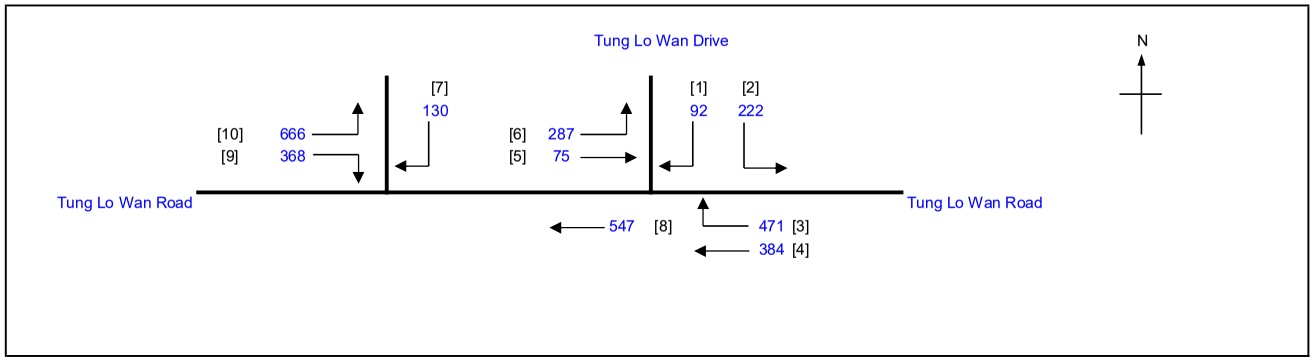
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		563		563	0.00	3970							3970	0.142			24	24	0.571	33	30
10	1	3.70	1	8		N	1985	410			410	1.00	1672							1672	0.245	0.245		41	41	0.571	36	21
9,10	1	3.50	1	13			2105	191		271	462	1.00	1887							1887	0.245			41	41	0.571	36	21
7	3	5.00	1	27		N	2115			82	82	1.00	2004							2004	0.041			7	19	0.571	12	53
4	2,3	3.70	1			N	1985		503		503	0.00	1985							1985	0.253	0.253		42	42	0.571	42	20
3,4	2,3	3.00	1	8	O		2055			244	244	1.00	1537							1537	0.159			26	42	0.571	24	32
5,6	2,3	5.00	1	13		N	2115	178	82		260	0.68	1960							1960	0.133			22	42	0.571	30	34
1,2	1	3.50	1	8		N	1965	152		108	260	1.00	1655							1655	0.157			26	41	0.571	24	31

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

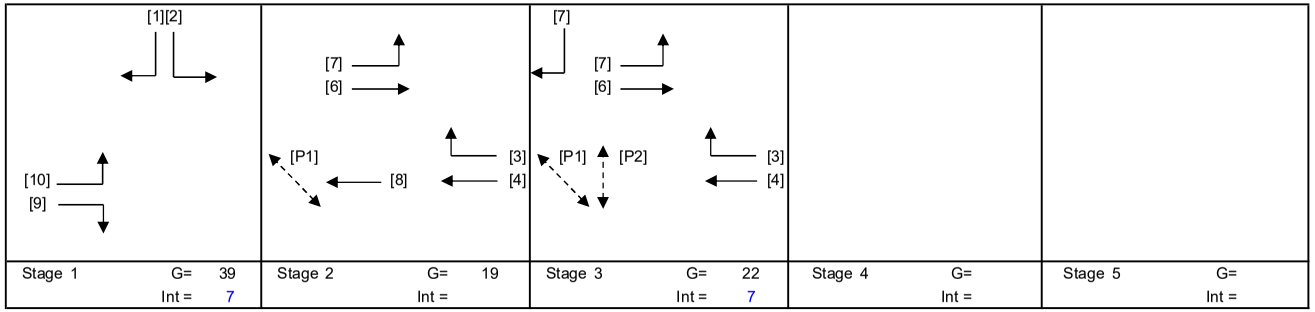
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Oct-25



No. of stages per cycle		N =	3
Cycle time		C =	95 sec
Sum(y)		Y =	0.597
Loss time		L =	12 sec
Total Flow		=	3242 pcu
Co	= (1.5*L+5)/(1-Y)	=	57.1 sec
Cm	= L/(1-Y)	=	29.8 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	35.6 %
Cp	= 0.9*L/(0.9-Y)	=	35.7 sec
Ymax	= 1-L/C	=	0.874
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**32 %**



Stage 1	G= 39	Stage 2	G= 19	Stage 3	G= 22	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		21	8

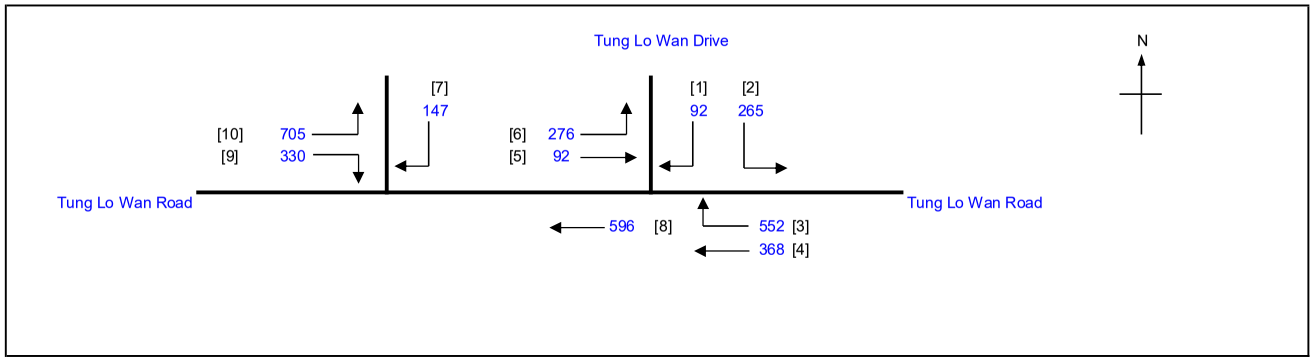
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		547		547	0.00	3970							3970	0.138			19	19	0.684	33	36
10	1	3.70	1	8		N	1985	486			486	1.00	1672							1672	0.291	0.291		40	40	0.684	42	25
9,10	1	3.50	1	13			2105	180		368	548	1.00	1887							1887	0.290			40	40	0.684	48	24
7	3	5.00	1	27		N	2115			130	130	1.00	2004							2004	0.065			9	23	0.684	18	56
4	2,3	3.70	1			N	1985		384		384	0.00	1985							1985	0.193			27	43	0.684	42	33
3,4	2,3	3.00	1	8	O		2055			471	471	1.00	1537							1537	0.306	0.306		43	43	0.684	36	24
5,6	2,3	5.00	1	13		N	2115	287	75		362	0.79	1938							1938	0.187			26	43	0.684	36	34
1,2	1	3.50	1	8		N	1965	222		92	314	1.00	1655							1655	0.190			26	40	0.684	36	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

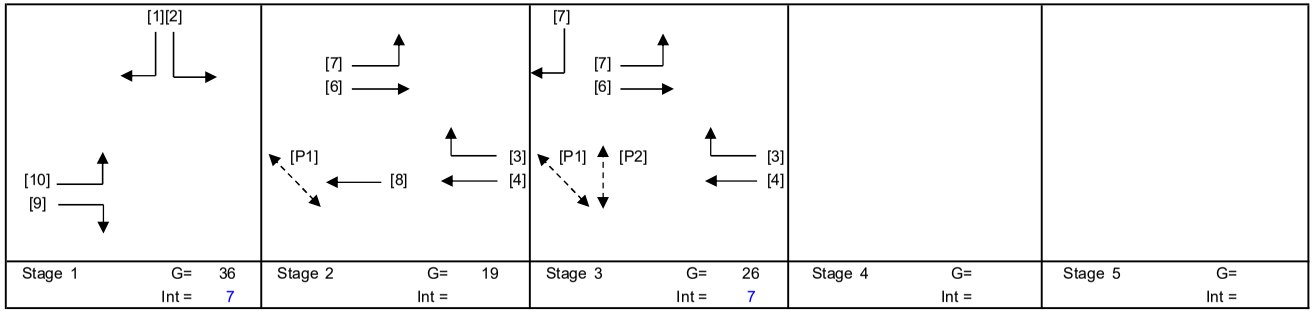
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Oct-25



No. of stages per cycle		N =	3
Cycle time		C =	95 sec
Sum(y)		Y =	0.650
Loss time		L =	12 sec
Total Flow		=	3423 pcu
Co	= (1.5*L+5)/(1-Y)	=	65.7 sec
Cm	= L/(1-Y)	=	34.3 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	24.6 %
Cp	= 0.9*L/(0.9-Y)	=	43.2 sec
Ymax	= 1-L/C	=	0.874
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**21 %**



Stage 1	G= 36	Stage 2	G= 19	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		44	8
P2	3		9	8		25	8

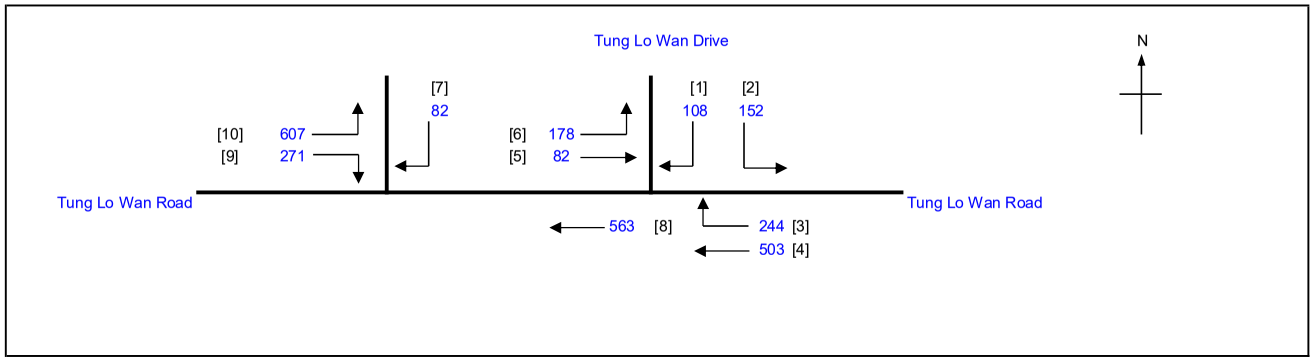
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		596		596	0.00	3970							3970	0.150			19	19	0.744	36	38
10	1	3.70	1	8		N	1985	486			486	1.00	1672							1672	0.291			37	37	0.744	42	30
9,10	1	3.50	1	13			2105	219		330	549	1.00	1887							1887	0.291	0.291		37	37	0.744	48	29
7	3	5.00	1	27		N	2115			147	147	1.00	2004							2004	0.073			9	27	0.744	24	61
4	2,3	3.70	1			N	1985		368		368	0.00	1985							1985	0.185			24	46	0.744	42	39
3,4	2,3	3.00	1	8	O		2055			552	552	1.00	1537							1537	0.359	0.359		46	46	0.744	42	24
5,6	2,3	5.00	1	13		N	2115	276	92		368	0.75	1947							1947	0.189			24	46	0.744	42	39
1,2	1	3.50	1	8		N	1965	265		92	357	1.00	1655							1655	0.216			28	37	0.744	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

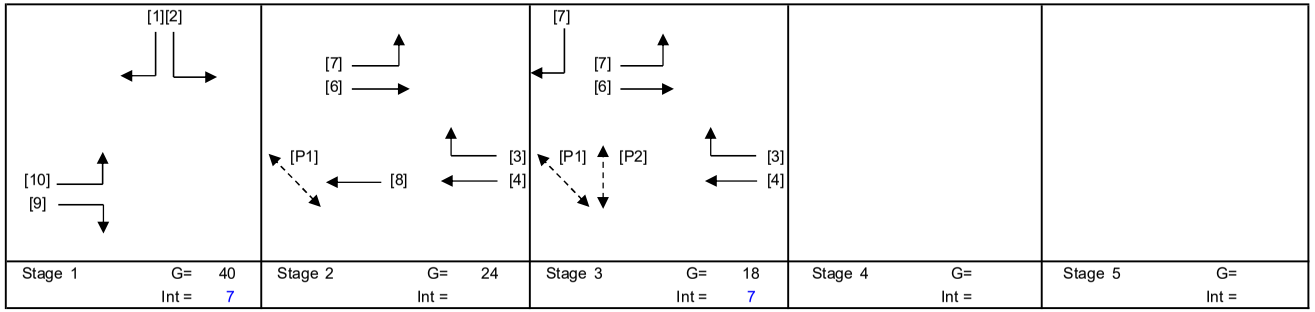
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.500
Loss time	L =	12 sec
Total Flow	=	2790 pcu
Co = (1.5*L+5)/(1-Y)	=	46.0 sec
Cm = L/(1-Y)	=	24.0 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	61.8 %
Cp = 0.9*L/(0.9-Y)	=	27.0 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**57 %**



Stage 1	G= 40	Stage 2	G= 24	Stage 3	G= 18	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		40	8
P2	3		9	8		17	8

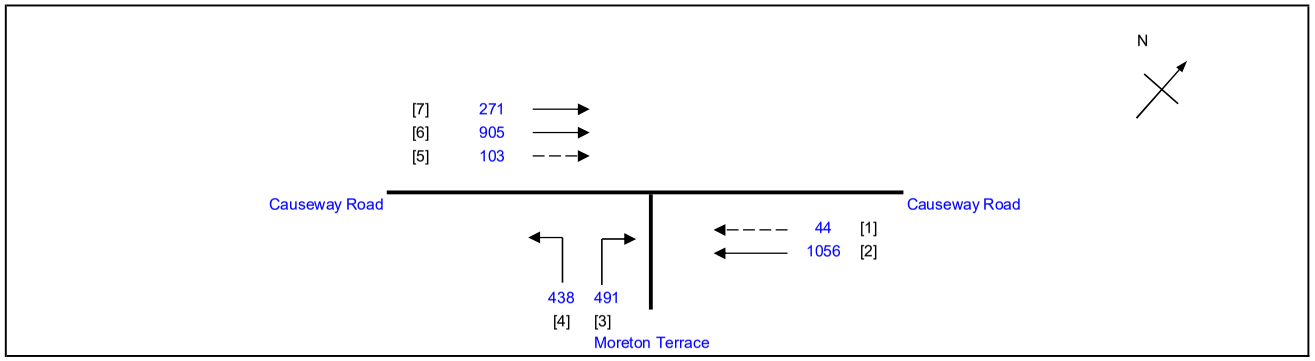
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		563		563	0.00	3970							3970	0.142			24	24	0.573	33	30
10	1	3.70	1	8		N	1985	413			413	1.00	1672							1672	0.247	0.247		41	41	0.573	36	21
9,10	1	3.50	1	13			2105	194		271	465	1.00	1887							1887	0.246			41	41	0.573	36	21
7	3	5.00	1	27		N	2115			82	82	1.00	2004							2004	0.041			7	19	0.573	12	54
4	2,3	3.70	1			N	1985		503		503	0.00	1985							1985	0.253	0.253		42	42	0.573	42	20
3,4	2,3	3.00	1	8	O		2055			244	244	1.00	1537							1537	0.159			26	42	0.573	24	32
5,6	2,3	5.00	1	13		N	2115	178	82		260	0.68	1960							1960	0.133			22	42	0.573	30	34
1,2	1	3.50	1	8		N	1965	152		108	260	1.00	1655							1655	0.157			26	41	0.573	24	31

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

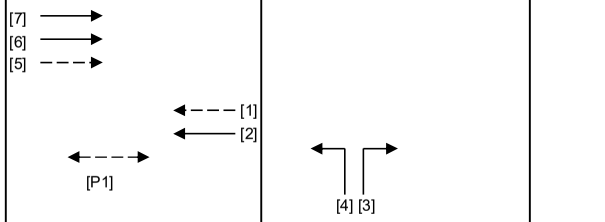
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J9 Moreton Terrace / Causeway Road	**2033 Reference AM**		
PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
FILENAME : J9_MT_CR.xlsx	Checked By:	SLN	Oct-25
	Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.599
Loss time	L =	10 sec
Total Flow	=	3308 pcu
Co = (1.5*L+5)/(1-Y)	=	49.9 sec
Cm = L/(1-Y)	=	25.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	37.7 %
Cp = 0.9*L/(0.9-Y)	=	29.9 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**34 %**



Stage 1	G= 60	Stage 2	G= 23
	Int = 5		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

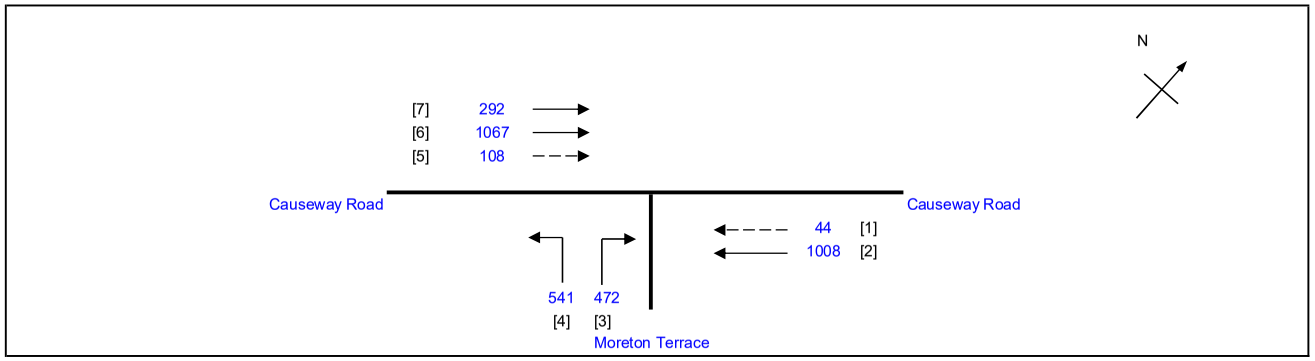
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		284		284	0.00	1985			0.4	-1191			794	0.358			51	61	0.670	18	22
2	1	4.00	1				2155		772		772	0.00	2155							2155	0.358			51	61	0.670	54	17
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	61	0.670	6	91
4	2	3.50	1	9		N	1965	284			284	1.00	1684							1684	0.169			24	24	0.670	30	37
3,4	2	3.30	1	15			2085	154		167	321	1.00	1895							1895	0.169	0.169		24	24	0.670	36	36
3	2	3.50	1	15			2105			324	324	1.00	1914							1914	0.169			24	24	0.670	36	36
7	1	3.50	1			N	1965		271		271	0.00	1965							1965	0.138			20	61	0.670	30	39
6	1	3.50	1				2105		905		905	0.00	2105							2105	0.430	0.430		61	61	0.670	48	12
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			7	61	0.670	12	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J9 Moreton Terrace / Causeway Road	**2033 Reference PM**		
PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
FILENAME : J9_MT_CR.xlsx	Checked By:	SLN	Oct-25
	Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.692
Loss time	L =	10 sec
Total Flow	=	3532 pcu
Co = (1.5*L+5)/(1-Y)	=	64.8 sec
Cm = L/(1-Y)	=	32.4 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	19.3 %
Cp = 0.9*L/(0.9-Y)	=	43.2 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**



Stage 1	G= 61	Stage 2	G= 22
	Int = 5		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

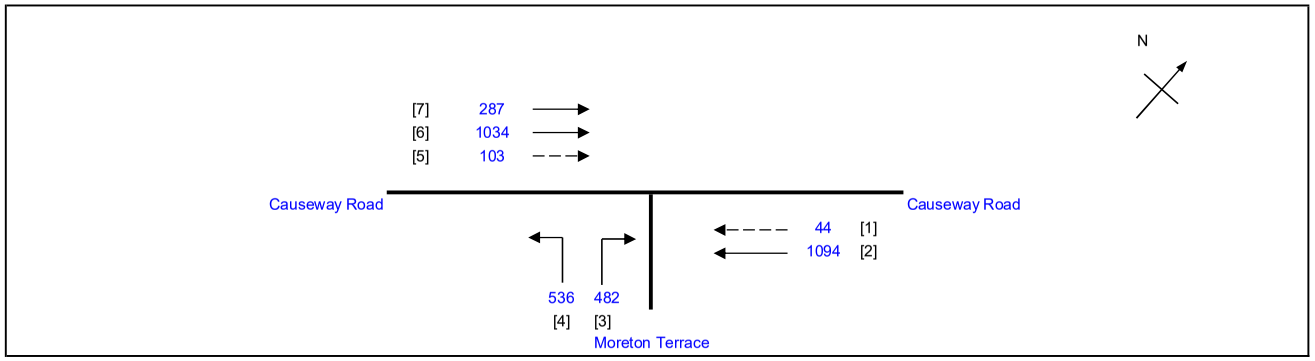
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		271		271	0.00	1985			0.4	-1191			794	0.341			42	62	0.773	24	36
2	1	4.00	1				2155		737		737	0.00	2155							2155	0.342			42	62	0.773	60	26
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.773	12	138
4	2	3.50	1	9		N	1965	311			311	1.00	1684							1684	0.185	0.185		23	23	0.773	36	44
3,4	2	3.30	1	15			2085	230		119	349	1.00	1895							1895	0.184			23	23	0.773	42	43
3	2	3.50	1	15			2105			353	353	1.00	1914							1914	0.184			23	23	0.773	42	42
7	1	3.50	1			N	1965		292		292	0.00	1965							1965	0.149			18	62	0.773	36	47
6	1	3.50	1				2105		1067		1067	0.00	2105							2105	0.507	0.507		62	62	0.773	54	14
5	1	3.00	1				2055		108		108	0.00	2055							2055	0.053			6	62	0.773	18	79

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

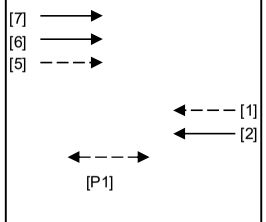
LLA CONSULTANCY LIMITED

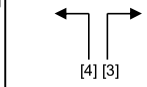
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
2033 Reference Weekend	PROJECT NO.: 40920 — Prepared By:	SKL	Oct-25
	FILENAME : J9_MT_CR.xlsx — Checked By:	SLN	Oct-25
J9 Moreton Terrace / Causeway Road	Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.677
Loss time	L =	10 sec
Total Flow	=	3580 pcu
Co = (1.5*L+5)/(1-Y)	=	61.9 sec
Cm = L/(1-Y)	=	31.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	21.9 %
Cp = 0.9*L/(0.9-Y)	=	40.3 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**19 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		294		294	0.00	1985			0.4	-1191			794	0.370			46	62	0.757	24	31
2	1	4.00	1				2155		800		800	0.00	2155							2155	0.371			47	62	0.757	60	22
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.757	12	128
4	2	3.50	1	9		N	1965	312			312	1.00	1684							1684	0.185			23	23	0.757	36	42
3,4	2	3.30	1	15			2085	224		128	352	1.00	1895							1895	0.186	0.186		23	23	0.757	42	41
3	2	3.50	1	15			2105			354	354	1.00	1914							1914	0.185			23	23	0.757	42	41
7	1	3.50	1			N	1965		287		287	0.00	1965							1965	0.146			18	62	0.757	36	46
6	1	3.50	1				2105		1034		1034	0.00	2105							2105	0.491	0.491		62	62	0.757	54	14
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			6	62	0.757	18	76

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

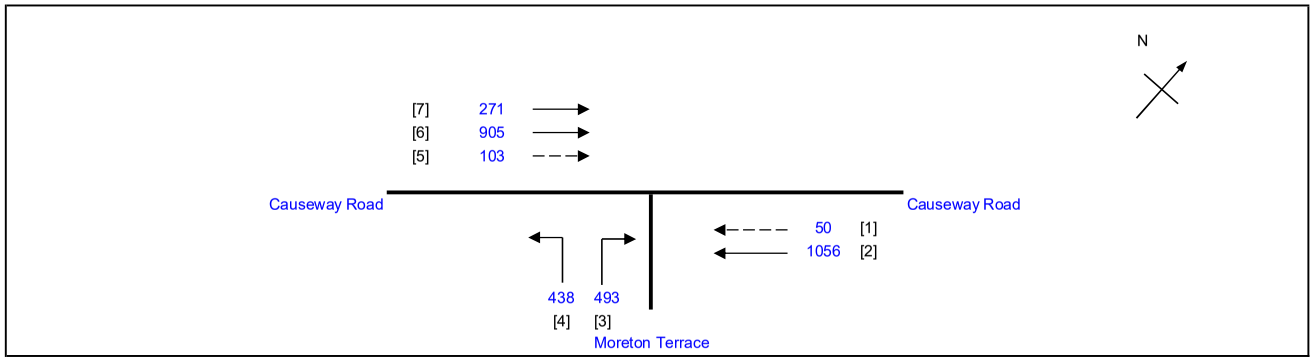
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J9 Moreton Terrace / Causeway Road

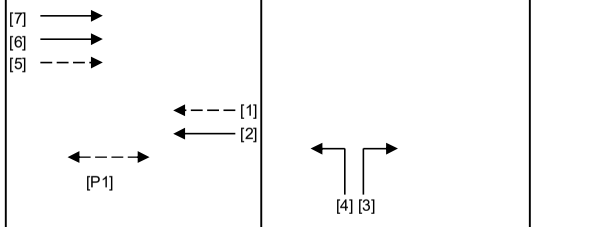
2033 Design AM

PROJECT NO.: 40920

FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.600
Loss time	L =	10 sec
Total Flow	=	3316 pcu
Co = (1.5*L+5)/(1-Y)	=	50.0 sec
Cm = L/(1-Y)	=	25.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	37.6 %
Cp = 0.9*L/(0.9-Y)	=	30.0 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**34 %**



Stage 1 G= 60 Int = 5

Stage 2 G= 23 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		284		284	0.00	1985			0.4	-1191			794	0.358			51	61	0.670	18	22
2	1	4.00	1				2155		772		772	0.00	2155							2155	0.358			51	61	0.670	54	17
1	1	3.00	1			N	1915		50		50	0.00	1915							1915	0.026			4	61	0.670	6	85
4	2	3.50	1	9		N	1965	286			286	1.00	1684							1684	0.170	0.170		24	24	0.670	30	36
3,4	2	3.30	1	15			2085	152		169	321	1.00	1895							1895	0.169			24	24	0.670	36	36
3	2	3.50	1	15			2105			324	324	1.00	1914							1914	0.169			24	24	0.670	36	36
7	1	3.50	1			N	1965		271		271	0.00	1965							1965	0.138			20	61	0.670	30	39
6	1	3.50	1				2105		905		905	0.00	2105							2105	0.430	0.430		61	61	0.670	48	12
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			7	61	0.670	12	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

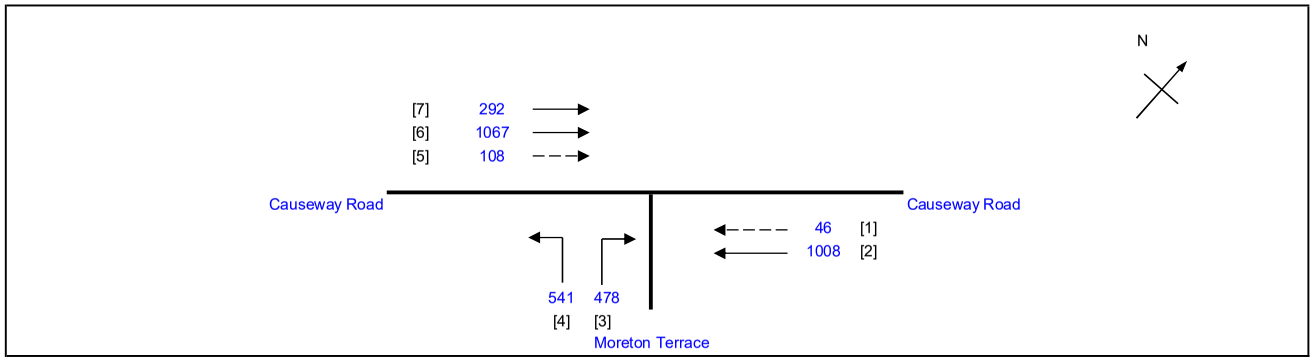
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J9 Moreton Terrace / Causeway Road

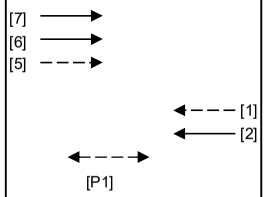
2033 Design PM

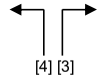
PROJECT NO.: 40920

FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.693
Loss time	L =	10 sec
Total Flow	=	3540 pcu
Co = (1.5*L+5)/(1-Y)	=	65.1 sec
Cm = L/(1-Y)	=	32.5 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	19.1 %
Cp = 0.9*L/(0.9-Y)	=	43.4 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		271		271	0.00	1985			0.4	-1191			794	0.341			42	62	0.774	24	36
2	1	4.00	1				2155		737		737	0.00	2155							2155	0.342			42	62	0.774	60	26
1	1	3.00	1			N	1915		46		46	0.00	1915							1915	0.024			3	62	0.774	12	135
4	2	3.50	1	9		N	1965	313			313	1.00	1684							1684	0.186	0.186		23	23	0.774	36	44
3,4	2	3.30	1	15			2085	228		123	351	1.00	1895							1895	0.185			23	23	0.774	42	43
3	2	3.50	1	15			2105			355	355	1.00	1914							1914	0.186			23	23	0.774	42	42
7	1	3.50	1			N	1965		292		292	0.00	1965							1965	0.149			18	62	0.774	36	48
6	1	3.50	1				2105		1067		1067	0.00	2105							2105	0.507	0.507		62	62	0.774	54	14
5	1	3.00	1				2055		108		108	0.00	2055							2055	0.053			6	62	0.774	18	79

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

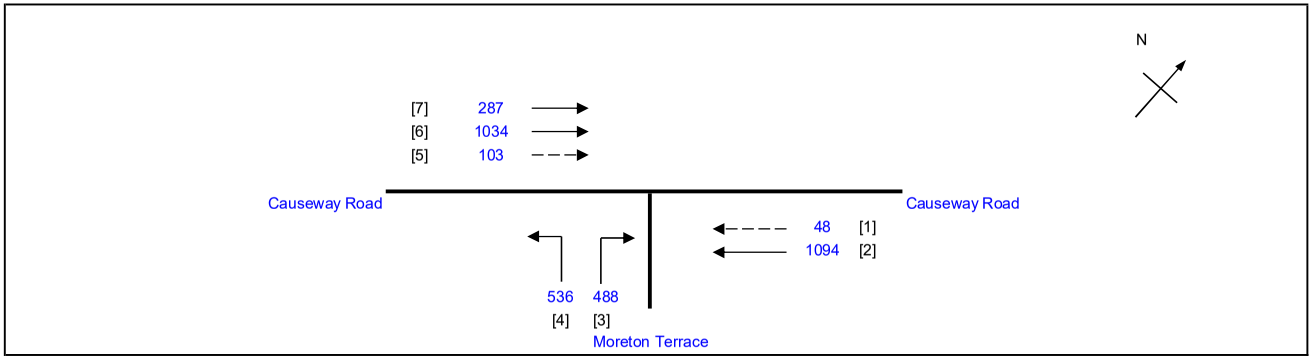
		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

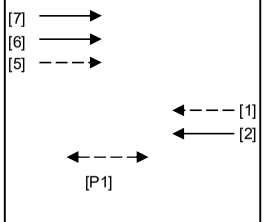
J9 Moreton Terrace / Causeway Road

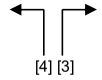
2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.678
Loss time	L =	10 sec
Total Flow	=	3590 pcu
Co = (1.5*L+5)/(1-Y)	=	62.2 sec
Cm = L/(1-Y)	=	31.1 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	21.6 %
Cp = 0.9*L/(0.9-Y)	=	40.6 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**19 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		294		294	0.00	1985			0.4	-1191			794	0.370			46	62	0.758	24	31
2	1	4.00	1				2155		800		800	0.00	2155							2155	0.371			47	62	0.758	60	23
1	1	3.00	1			N	1915		48		48	0.00	1915							1915	0.025			3	62	0.758	12	121
4	2	3.50	1	9		N	1965	315			315	1.00	1684							1684	0.187	0.187		23	23	0.758	36	42
3,4	2	3.30	1	15			2085	221		132	353	1.00	1895							1895	0.186			23	23	0.758	42	41
3	2	3.50	1	15			2105			356	356	1.00	1914							1914	0.186			23	23	0.758	42	41
7	1	3.50	1			N	1965		287		287	0.00	1965							1965	0.146			18	62	0.758	36	46
6	1	3.50	1				2105		1034		1034	0.00	2105							2105	0.491	0.491		62	62	0.758	54	14
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			6	62	0.758	18	77

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

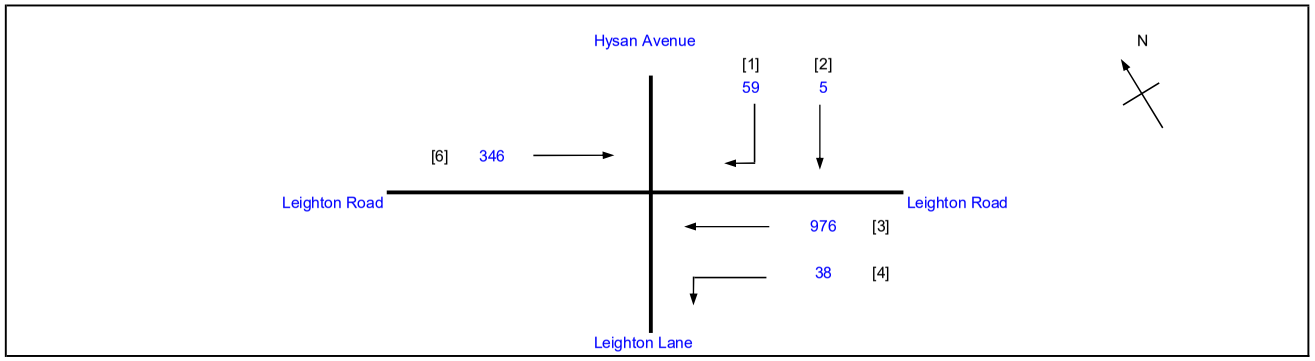
		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

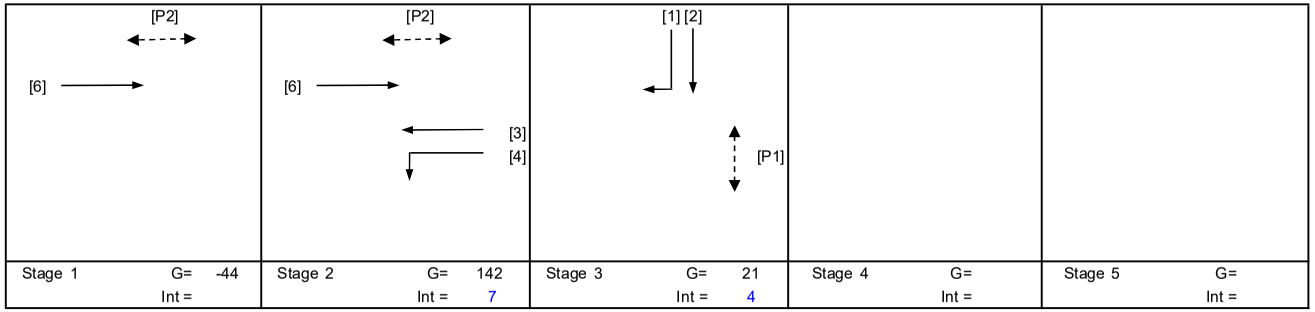
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Reference AM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.176
Loss time		L =	31 sec
Total Flow		=	1424 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.5 sec
Cm	= L/(1-Y)	=	37.6 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	279.1 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**289 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	38	449		487	0.08	1920							1920	0.254			143	143	0.231	-6	1
3	2	3.20	1				2075		527		527	0.00	2075							2075	0.254			143	143	0.231	-6	1
6	1,2	3.50	1			N	1965		346		346	0.00	1965							1965	0.176	0.176		99	99	0.231	12	4
1,2	3	3.30	1	17		N	1945		5	29	34	0.85	1809							1809	0.019			11	21	0.231	6	54
1	3	3.00	1	10	O		2055			30	30	1.00	1587							1587	0.019			11	21	0.231	0	54
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

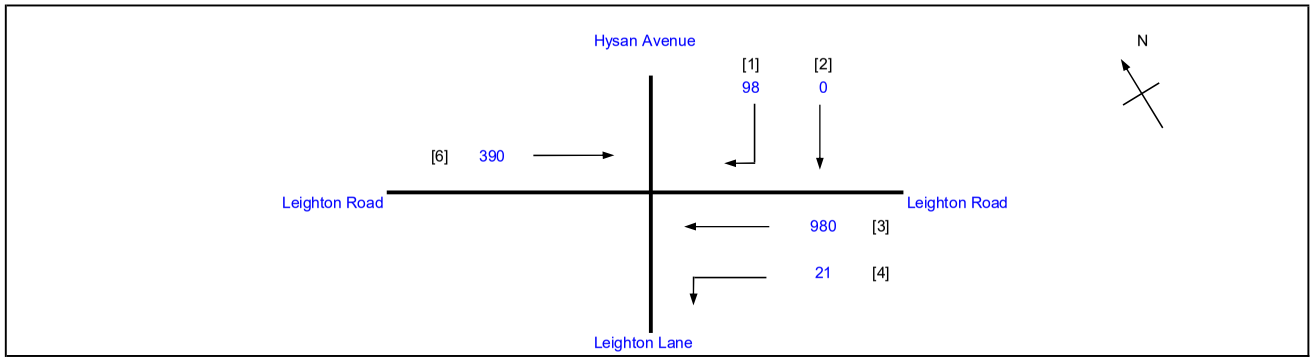
		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

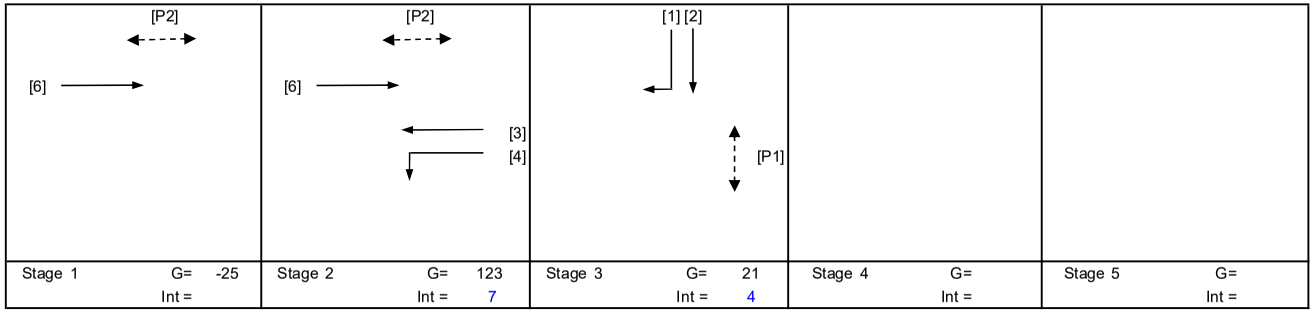
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Reference PM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.198
Loss time		L =	31 sec
Total Flow		=	1489 pcu
Co	= (1.5*L+5)/(1-Y)	=	64.3 sec
Cm	= L/(1-Y)	=	38.7 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	236.3 %
Cp	= 0.9*L/(0.9-Y)	=	39.8 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**245 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	21	463		484	0.04	1940							1940	0.250			124	124	0.261	0	0
3	2	3.20	1				2075		517		517	0.00	2075							2075	0.249			124	124	0.261	0	0
6	1,2	3.50	1			N	1965		390		390	0.00	1965							1965	0.198	0.198		99	99	0.261	18	5
1,2	3	3.30	1	17		N	1945		0	51	51	1.00	1787							1787	0.029			14	21	0.261	6	51
1	3	3.00	1	10	O		2055			47	47	1.00	1587							1587	0.030			15	21	0.261	6	51
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

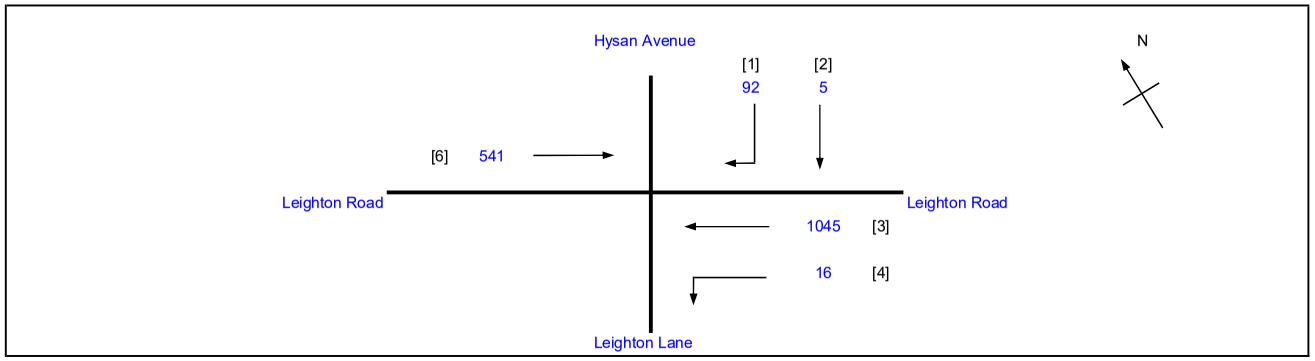
		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

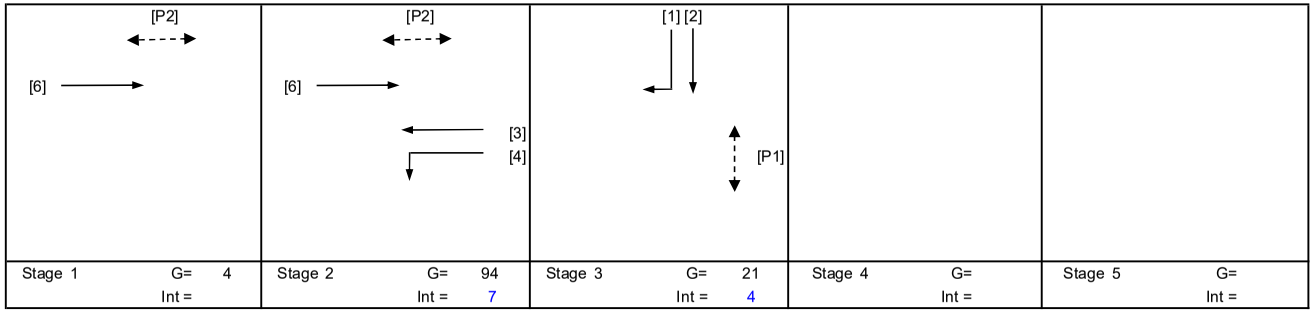
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.275
Loss time		L =	31 sec
Total Flow		=	1699 pcu
Co	= (1.5*L+5)/(1-Y)	=	71.1 sec
Cm	= L/(1-Y)	=	42.8 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	142.4 %
Cp	= 0.9*L/(0.9-Y)	=	44.7 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**149 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	16	498		514	0.03	1947							1947	0.264			95	95	0.362	30	6
3	2	3.20	1				2075		547		547	0.00	2075							2075	0.264			95	95	0.362	30	6
6	1,2	3.50	1			N	1965		541		541	0.00	1965							1965	0.275	0.275		99	99	0.362	24	5
1,2	3	3.30	1	17		N	1945		5	47	52	0.90	1801							1801	0.029			10	21	0.362	6	57
1	3	3.00	1	10	O		2055			45	45	1.00	1587							1587	0.028			10	21	0.362	6	59
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

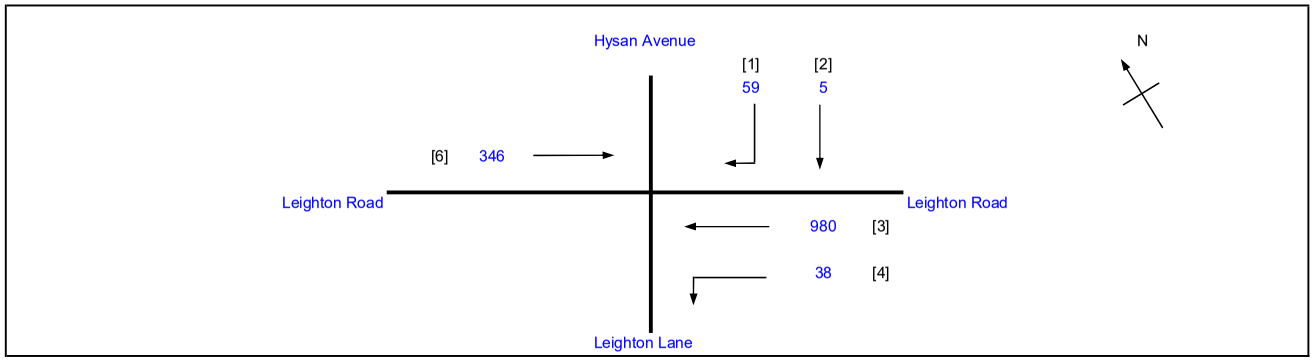
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

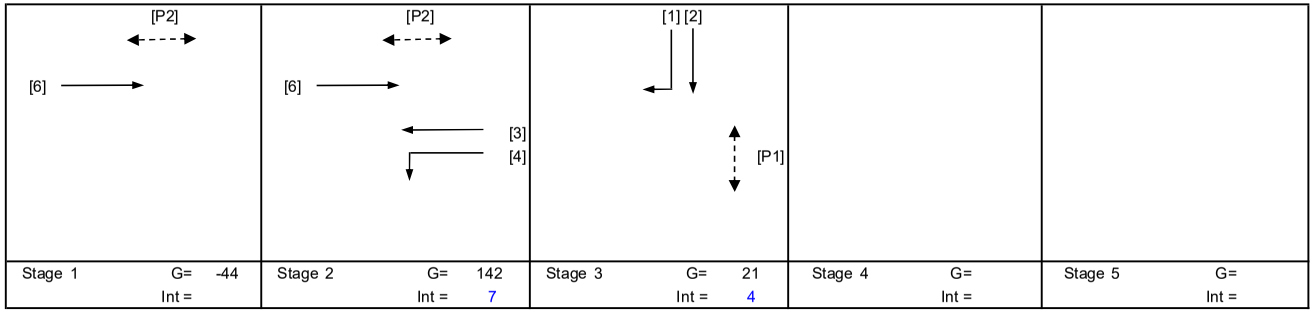
2033 Design AM

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.176
Loss time		L =	31 sec
Total Flow		=	1428 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.5 sec
Cm	= L/(1-Y)	=	37.6 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	279.1 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**289 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	38	451		489	0.08	1920							1920	0.255			143	143	0.231	-6	1
3	2	3.20	1				2075		529		529	0.00	2075							2075	0.255			143	143	0.231	-6	1
6	1,2	3.50	1			N	1965		346		346	0.00	1965							1965	0.176	0.176		99	99	0.231	12	4
1,2	3	3.30	1	17		N	1945		5	29	34	0.85	1809							1809	0.019			11	21	0.231	6	54
1	3	3.00	1	10	O		2055			30	30	1.00	1587							1587	0.019			11	21	0.231	0	54
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

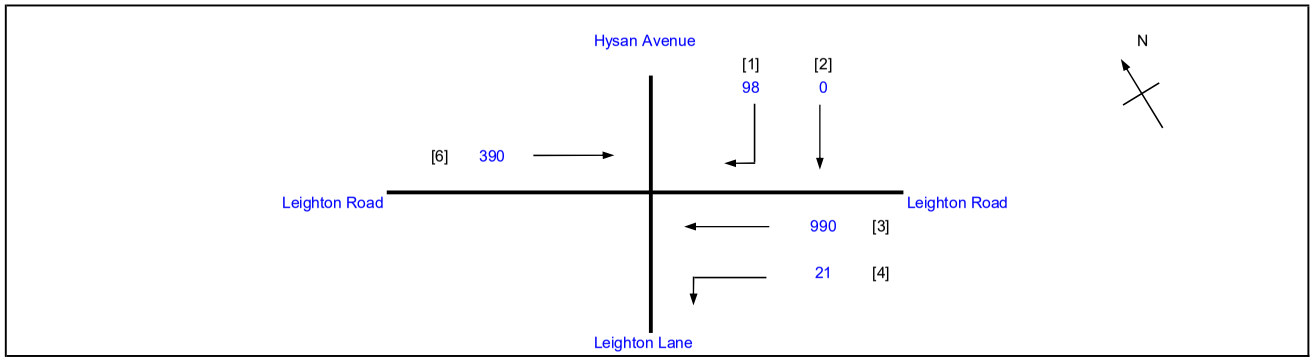
		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

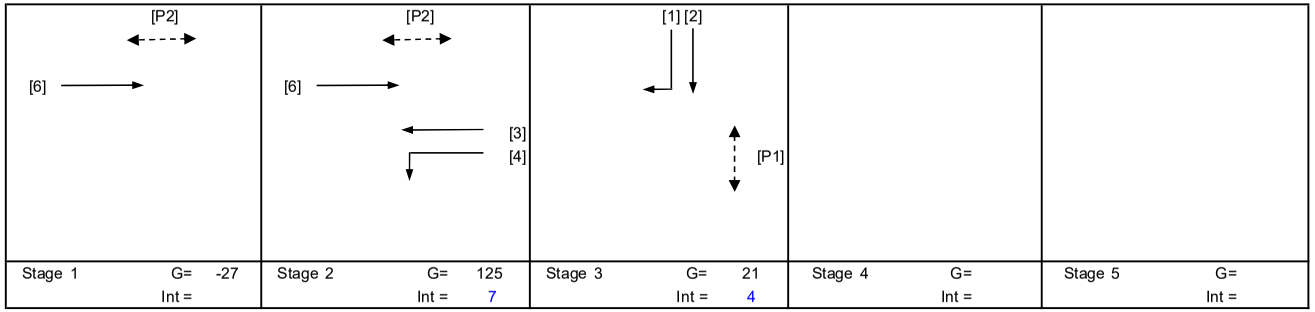
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Design PM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.198
Loss time		L =	31 sec
Total Flow		=	1499 pcu
Co	= (1.5*L+5)/(1-Y)	=	64.3 sec
Cm	= L/(1-Y)	=	38.7 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	236.3 %
Cp	= 0.9*L/(0.9-Y)	=	39.8 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**245 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	21	467		488	0.04	1940							1940	0.252			125	126	0.261	0	0
3	2	3.20	1				2075		523		523	0.00	2075							2075	0.252			126	126	0.261	0	0
6	1,2	3.50	1			N	1965		390		390	0.00	1965							1965	0.198	0.198		99	99	0.261	18	5
1,2	3	3.30	1	17		N	1945		0	51	51	1.00	1787							1787	0.029			14	21	0.261	6	51
1	3	3.00	1	10	O		2055			47	47	1.00	1587							1587	0.030			15	21	0.261	6	51
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

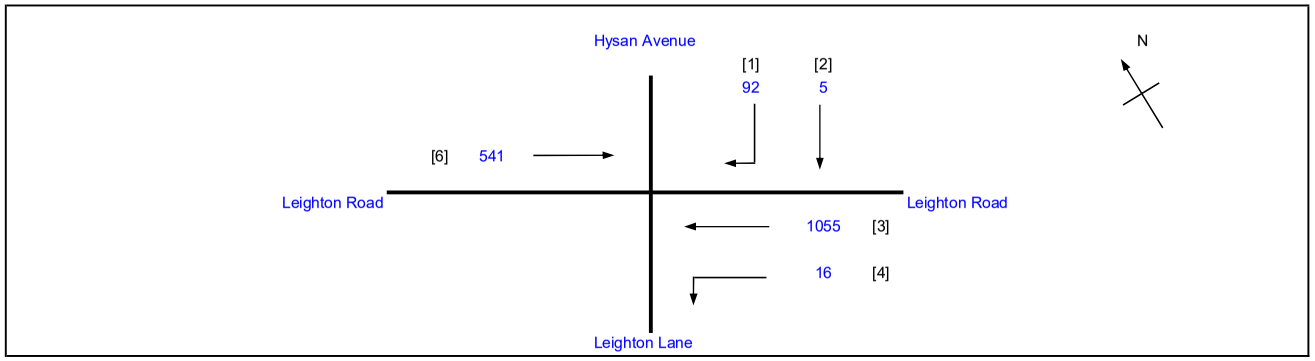
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

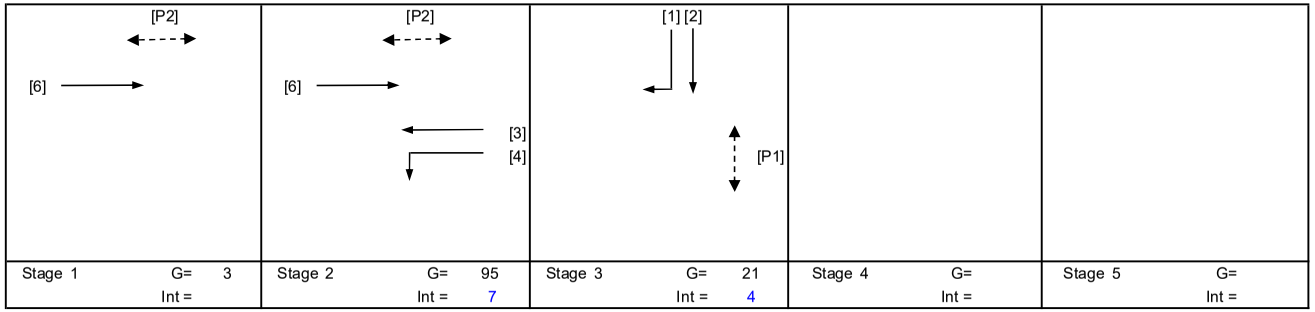
2033 Design Weekend

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.275
Loss time		L =	31 sec
Total Flow		=	1709 pcu
Co	= (1.5*L+5)/(1-Y)	=	71.1 sec
Cm	= L/(1-Y)	=	42.8 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	142.4 %
Cp	= 0.9*L/(0.9-Y)	=	44.7 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**149 %**



Stage 1	G= 3	Int =	Stage 2	G= 95	Int = 7	Stage 3	G= 21	Int = 4	Stage 4	G=	Int =	Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	16	503		519	0.03	1947							1947	0.267			96	96	0.362	24	6
3	2	3.20	1				2075		552		552	0.00	2075							2075	0.266			96	96	0.362	30	6
6	1,2	3.50	1			N	1965		541		541	0.00	1965							1965	0.275	0.275		99	99	0.362	24	5
1,2	3	3.30	1	17		N	1945		5	47	52	0.90	1801							1801	0.029			10	21	0.362	6	57
1	3	3.00	1	10	O		2055			45	45	1.00	1587							1587	0.028			10	21	0.362	6	59
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

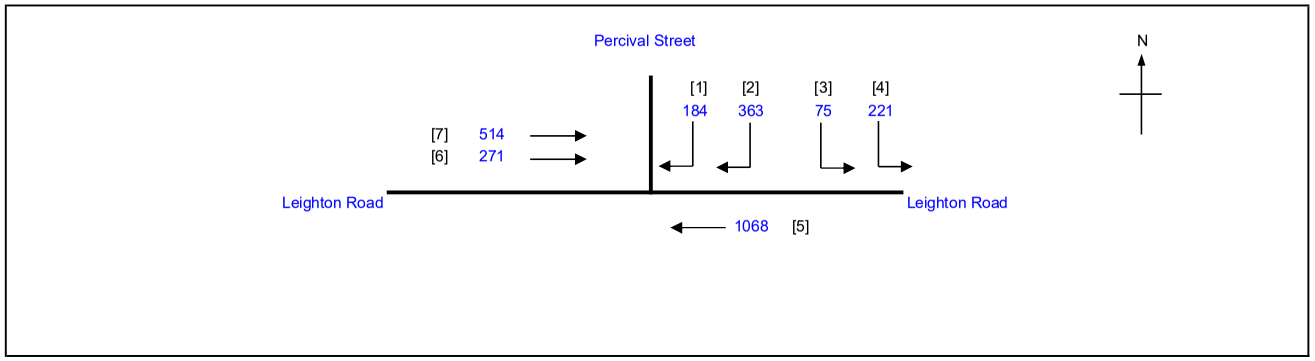
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

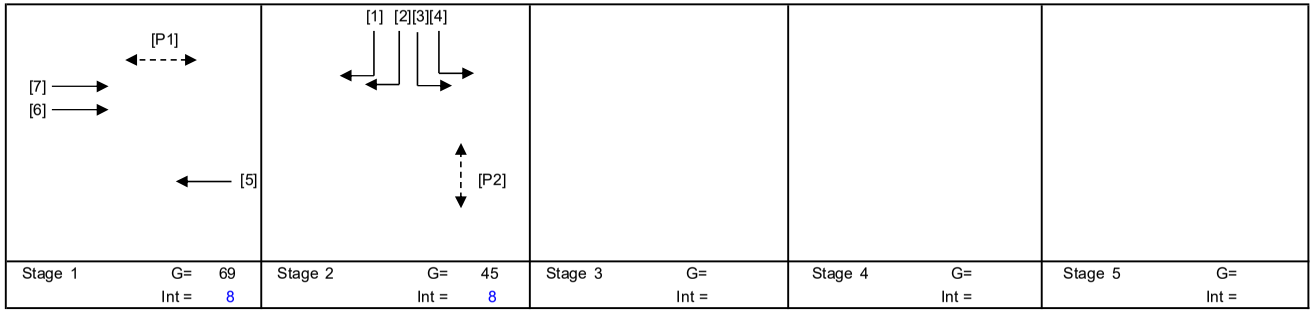
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.561
Loss time	L =	14 sec
Total Flow	=	2696 pcu
Co = (1.5*L+5)/(1-Y)	=	59.2 sec
Cm = L/(1-Y)	=	31.9 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	41.8 %
Cp = 0.9*L/(0.9-Y)	=	37.1 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**43 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 69	G= 45	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		70	7
P2	2		5	12		41	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		522		522	0.00	1965			0.8	-393			1572	0.332			69	70	0.628	48	23
5	1	3.00	1				2055		546		546	0.00	2055			0.8	-411			1644	0.332			69	70	0.628	54	23
6,7	1	2.50	1			N	1865		378		378	0.00	1865			0.6	-746			1119	0.338			70	70	0.628	36	23
6,7	1	2.50	1				2005		407		407	0.00	2005			0.6	-802			1203	0.338	0.338		70	70	0.628	36	23
3,4	2	4.00	1	25		N	2015	296			296	1.00	1901			0.7	-570			1331	0.222	0.222		46	46	0.628	36	37
1,2	2	5.00	1	25		N	2115			317	317	1.00	1995			0.8	-399			1596	0.199			41	46	0.628	42	40
1,2	2	3.30	1	20			2085			230	230	1.00	1940			0.6	-776			1164	0.198			41	46	0.628	30	42

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

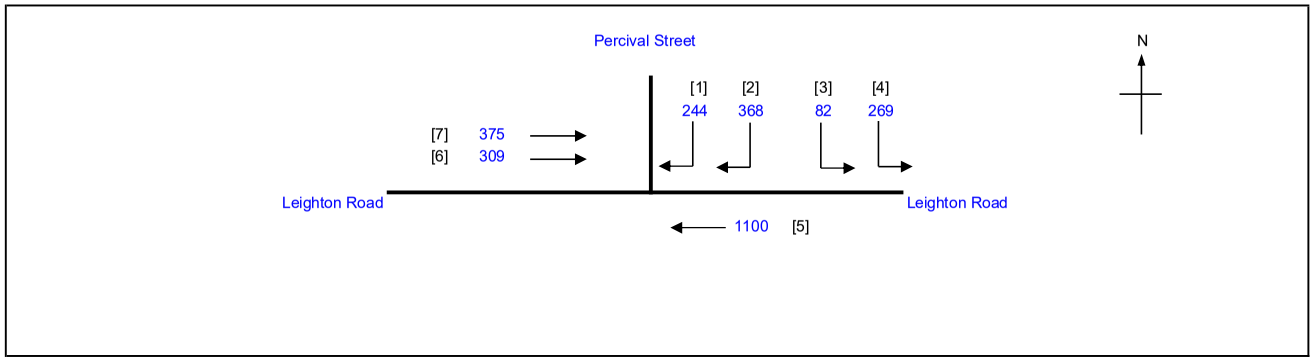
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

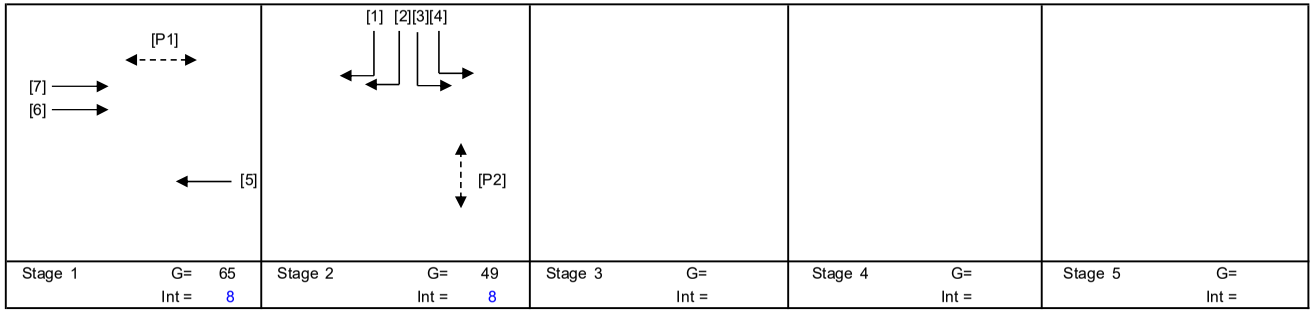
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.606
Loss time	L =	14 sec
Total Flow	=	2747 pcu
Co = (1.5*L+5)/(1-Y)	=	66.0 sec
Cm = L/(1-Y)	=	35.5 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	31.2 %
Cp = 0.9*L/(0.9-Y)	=	42.9 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**33 %**



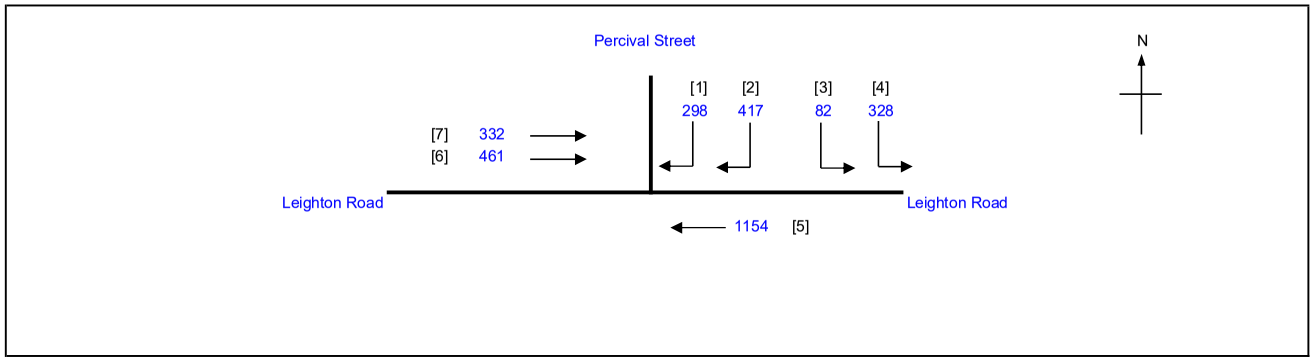
Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 65	G= 49	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		66	7
P2	2		5	12		45	12

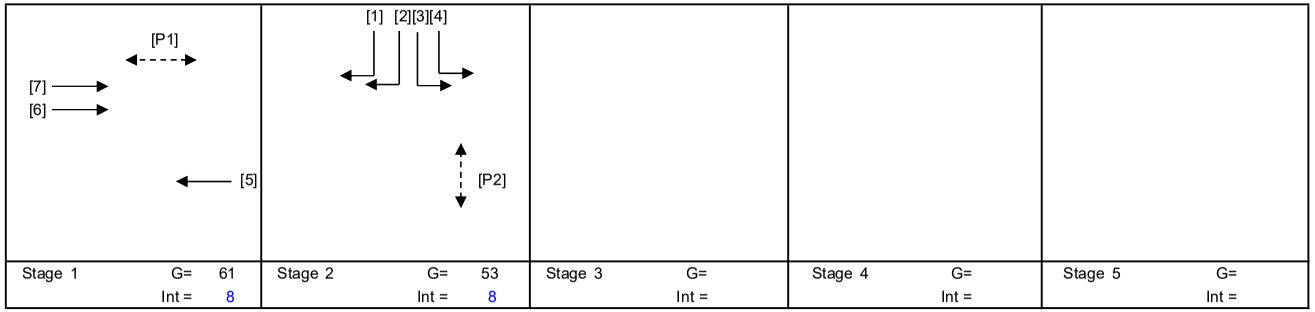
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		538		538	0.00	1965			0.8	-393			1572	0.342	0.342		66	66	0.679	54	26
5	1	3.00	1				2055		562		562	0.00	2055			0.8	-411			1644	0.342			65	66	0.679	60	26
6,7	1	2.50	1			N	1865		330		330	0.00	1865			0.6	-746			1119	0.295			56	66	0.679	36	34
6,7	1	2.50	1				2005		354		354	0.00	2005			0.6	-802			1203	0.294			56	66	0.679	42	33
3,4	2	4.00	1	25		N	2015	351			351	1.00	1901			0.7	-570			1331	0.264	0.264		50	50	0.679	42	36
1,2	2	5.00	1	25		N	2115			354	354	1.00	1995			0.8	-399			1596	0.222			42	50	0.679	48	41
1,2	2	3.30	1	20			2085			258	258	1.00	1940			0.6	-776			1164	0.222			42	50	0.679	36	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J11 Leighton Road / Percival Street / Hysan Avenue		FILENAME : J11_LR_PS_HA.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.667
Loss time	L =	14 sec
Total Flow	=	3072 pcu
Co = (1.5*L+5)/(1-Y)	=	78.1 sec
Cm = L/(1-Y)	=	42.0 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	19.2 %
Cp = 0.9*L/(0.9-Y)	=	54.1 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**20 %**



Stage 1	G= 61	Stage 2	G= 53	Stage 3	G=	Stage 4	G=	Stage 5	G=
	Int = 8		Int = 8		Int =		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		62	7
P2	2		5	12		49	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		564		564	0.00	1965			0.8	-393			1572	0.359			62	62	0.747	60	31
5	1	3.00	1				2055		590		590	0.00	2055			0.8	-411			1644	0.359	0.359		62	62	0.747	66	31
6,7	1	2.50	1			N	1865		383		383	0.00	1865			0.6	-746			1119	0.342			60	62	0.747	42	35
6,7	1	2.50	1				2005		410		410	0.00	2005			0.6	-802			1203	0.341			59	62	0.747	48	35
3,4	2	4.00	1	25		N	2015	410			410	1.00	1901			0.7	-570			1331	0.308	0.308		54	54	0.747	48	38
1,2	2	5.00	1	25		N	2115			414	414	1.00	1995			0.8	-399			1596	0.259			45	54	0.747	54	42
1,2	2	3.30	1	20			2085			301	301	1.00	1940			0.6	-776			1164	0.259			45	54	0.747	42	46

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

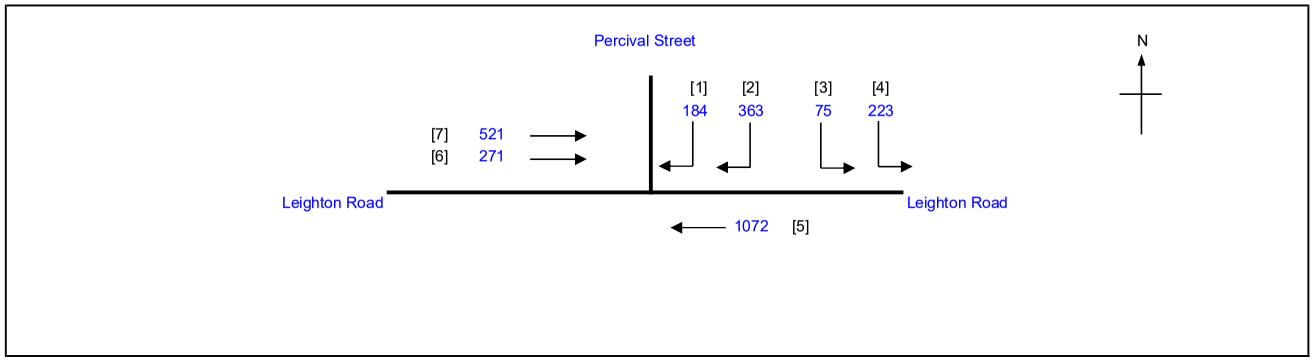
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

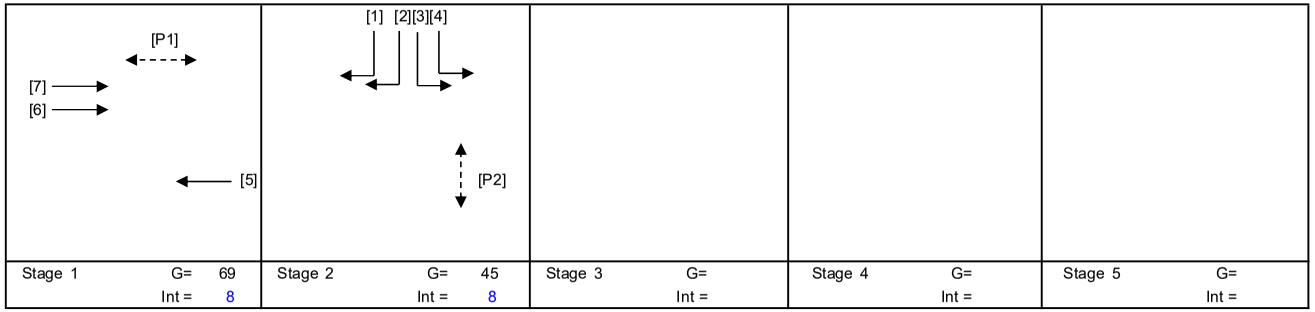
2033 Design AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.565
Loss time	L =	14 sec
Total Flow	=	2709 pcu
Co = (1.5*L+5)/(1-Y)	=	59.8 sec
Cm = L/(1-Y)	=	32.2 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	40.6 %
Cp = 0.9*L/(0.9-Y)	=	37.6 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**42 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 69	G= 45	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		70	7
P2	2		5	12		41	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		524		524	0.00	1965			0.8	-393			1572	0.333			68	70	0.634	48	23
5	1	3.00	1				2055		548		548	0.00	2055			0.8	-411			1644	0.333			68	70	0.634	54	23
6,7	1	2.50	1			N	1865		382		382	0.00	1865			0.6	-746			1119	0.341	0.341		70	70	0.634	36	24
6,7	1	2.50	1				2005		410		410	0.00	2005			0.6	-802			1203	0.341			70	70	0.634	36	23
3,4	2	4.00	1	25		N	2015	298			298	1.00	1901			0.7	-570			1331	0.224	0.224		46	46	0.634	36	37
1,2	2	5.00	1	25		N	2115			317	317	1.00	1995			0.8	-399			1596	0.199			41	46	0.634	42	40
1,2	2	3.30	1	20			2085			230	230	1.00	1940			0.6	-776			1164	0.198			41	46	0.634	30	42

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

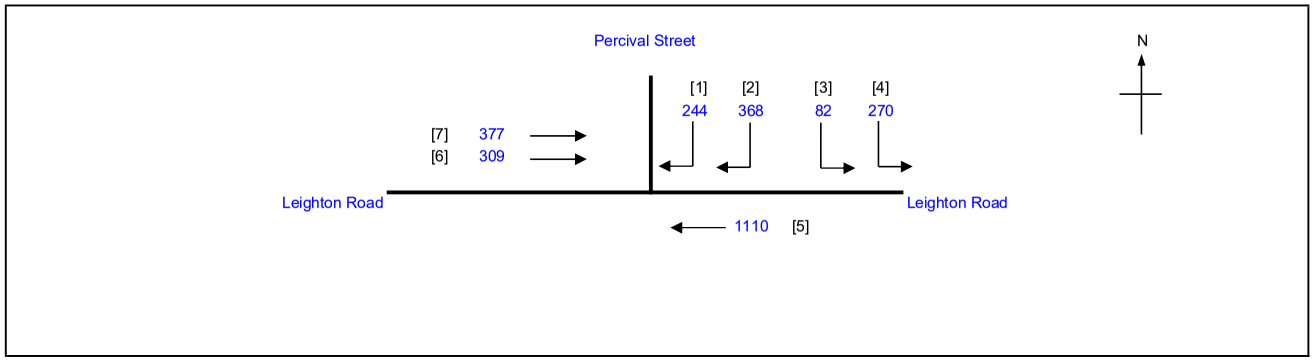
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

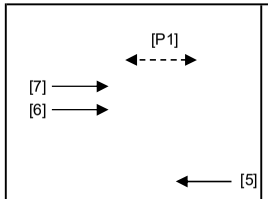
J11 Leighton Road / Percival Street / Hysan Avenue

2033 Design PM

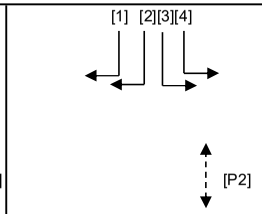
PROJECT NO.: 40920
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.610
Loss time	L =	14 sec
Total Flow	=	2760 pcu
Co = (1.5*L+5)/(1-Y)	=	66.7 sec
Cm = L/(1-Y)	=	35.9 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	30.3 %
Cp = 0.9*L/(0.9-Y)	=	43.4 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**32 %**



Stage 1 G= 65 Int = 8



Stage 2 G= 49 Int = 8

Stage 3 G= Int =

Stage 4 G= Int =

Stage 5 G= Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		66	7
P2	2		5	12		45	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		542		542	0.00	1965			0.8	-393			1572	0.345			66	66	0.684	54	26
5	1	3.00	1				2055		568		568	0.00	2055			0.8	-411			1644	0.345	0.345		66	66	0.684	60	26
6,7	1	2.50	1			N	1865		331		331	0.00	1865			0.6	-746			1119	0.296			56	66	0.684	36	34
6,7	1	2.50	1				2005		355		355	0.00	2005			0.6	-802			1203	0.295			56	66	0.684	42	34
3,4	2	4.00	1	25		N	2015	352			352	1.00	1901			0.7	-570			1331	0.264	0.264		50	50	0.684	42	37
1,2	2	5.00	1	25		N	2115			354	354	1.00	1995			0.8	-399			1596	0.222			42	50	0.684	48	41
1,2	2	3.30	1	20			2085			258	258	1.00	1940			0.6	-776			1164	0.222			42	50	0.684	36	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

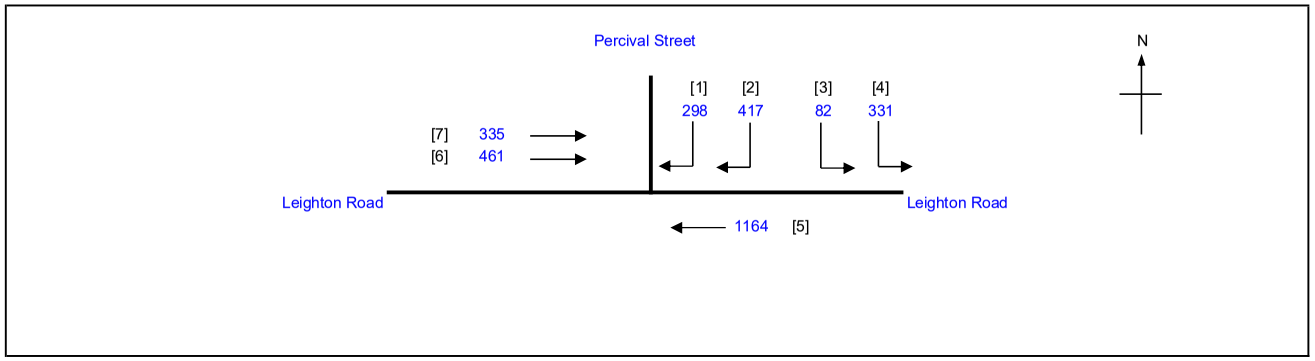
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

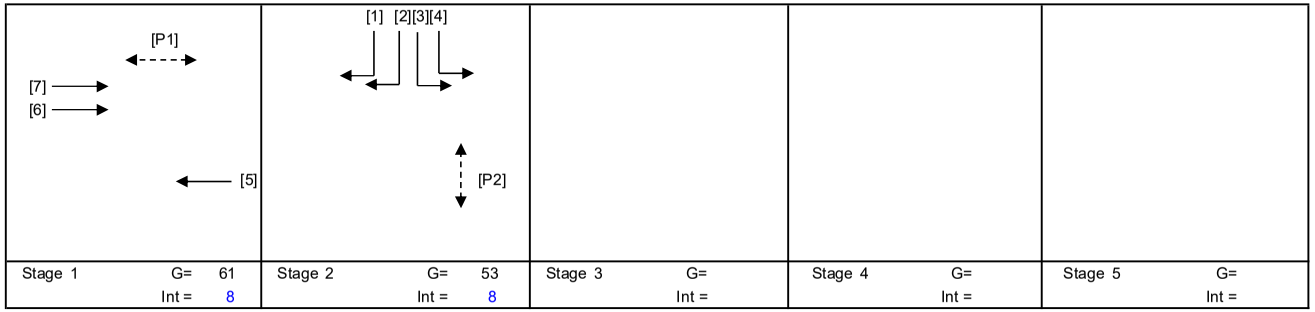
2033 Design Weekend

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.672
Loss time	L =	14 sec
Total Flow	=	3088 pcu
Co = (1.5*L+5)/(1-Y)	=	79.3 sec
Cm = L/(1-Y)	=	42.7 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	18.3 %
Cp = 0.9*L/(0.9-Y)	=	55.3 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**19 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 61	G= 53	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		62	7
P2	2		5	12		49	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		569		569	0.00	1965			0.8	-393			1572	0.362	0.362		62	62	0.753	60	31
5	1	3.00	1				2055		595		595	0.00	2055			0.8	-411			1644	0.362			62	62	0.753	66	31
6,7	1	2.50	1			N	1865		384		384	0.00	1865			0.6	-746			1119	0.343			59	62	0.753	42	36
6,7	1	2.50	1				2005		412		412	0.00	2005			0.6	-802			1203	0.342			59	62	0.753	48	36
3,4	2	4.00	1	25		N	2015	413			413	1.00	1901			0.7	-570			1331	0.310	0.310		54	54	0.753	48	38
1,2	2	5.00	1	25		N	2115			414	414	1.00	1995			0.8	-399			1596	0.259			45	54	0.753	54	43
1,2	2	3.30	1	20			2085			301	301	1.00	1940			0.6	-776			1164	0.259			45	54	0.753	42	46

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

Appendix IV

Air Ventilation Assessment – Expert Evaluation

Issue No.	:	1
Issue Date	:	October 2025
Project No.	:	2215

AIR VENTILATION ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.**	2215
Document Title	Air Ventilation Assessment		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	October 2025	1st Submission	Toby Lam	Joanne Ng	Grace Kwok



[redacted]

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Appendix 4.1 Site Layout Plan

1. Executive Summary

1.1.1. An Air Ventilation Assessment – Expert Evaluation (AVA-EE) study was conducted for the Section 16 Planning Application for Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong to provide qualitative evaluation of wind performance under Baseline and Proposed Scheme.

2. Introduction

2.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare an Air Ventilation Assessment ("AVA") in support of the Section 16 Planning Application for Proposed SCAA Sports Link ("Proposed Development") at South China Athletic Association, 88 Caroline Hill Road, Hong Kong ("Subject Site").

3. Objectives

3.1.1. The main objective of the study is to evaluate potential air ventilation impacts associated with the Proposed Development on pedestrian wind environment within and in the vicinity of the Subject Site using the methodology framework as set out by relevant government standard, guidelines and technical circulars.

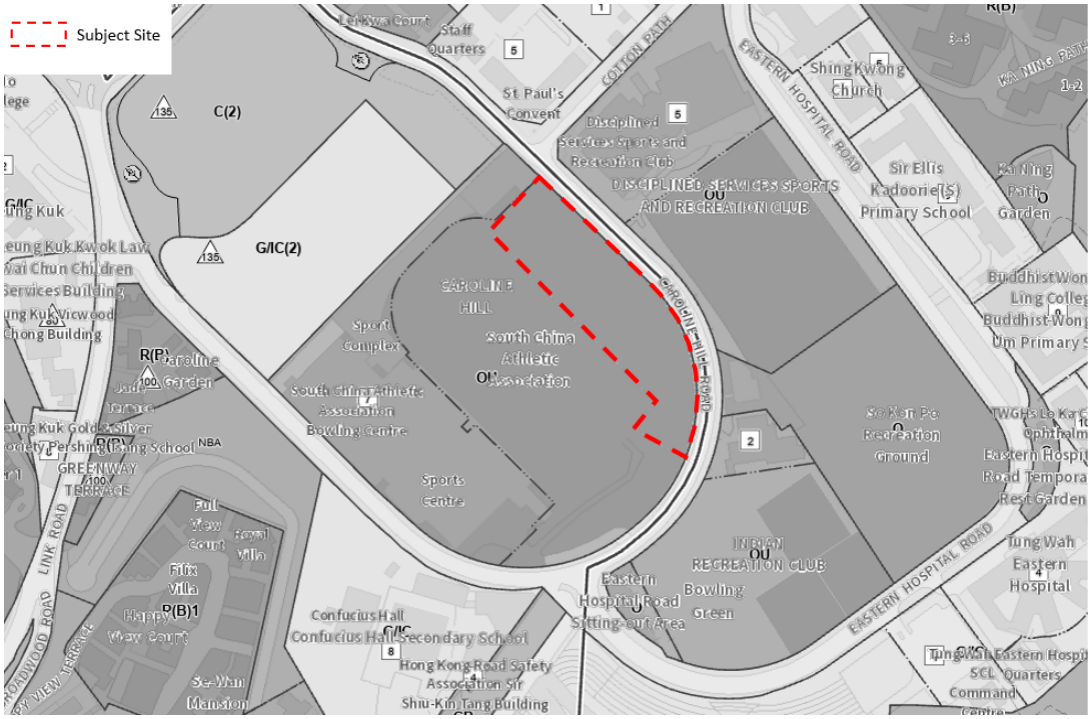
4. Description of the Proposed Development

4.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in ***Appendix 4.1***.

4.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

4.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 4.1*** shows the location of the Subject Site.

Figure 4.1 Subject Site Location



5. Methodology

5.1.1. The methodology framework of this study is set out in the Technical Circular No. 1/06 and its Annex A - Technical Guide for Air Ventilation Assessment for Development in Hong Kong. The Technical Circular is jointly issued by Housing, Planning and Lands Bureau (HPLB) and Environment, Transport and Work Bureau (ETWB) in July 2006 (Technical Guide).

5.1.2. The scope of this study shall cover the following:

- To identify any major wind corridors which should be preserved or reserved;
- To identify any potentially affected areas due to the Proposed design including the layout and deposition;
- To identify good design features; and
- To provide recommendations for alleviating the potential air ventilation impact identified.

6. Assessment Methodology

6.1. Wind Availability Data

Hong Kong Observatory

6.1.1. The Hong Kong Observatory records the metrological data in Hong Kong. Among all the weather stations in Hong Kong, wind data from Hong Kong Observatory station shall be used for the discussion on overall wind environment in the region.

6.1.2. According to the wind availability data from Hong Kong Observatory station from 1991 - 2020, the annual wind rose revealed winds flowing from the east throughout the year. The wind data from July to September is adopted as the summer prevailing wind, where predominant summer winds are flowing from the east and west. The wind rose during annual and summer conditions are shown in ***Figure 6.1*** and ***Figure 6.2*** respectively.

Figure 6.1 Annual Wind Rose for Hong Kong Observatory Station, 1991 - 2020

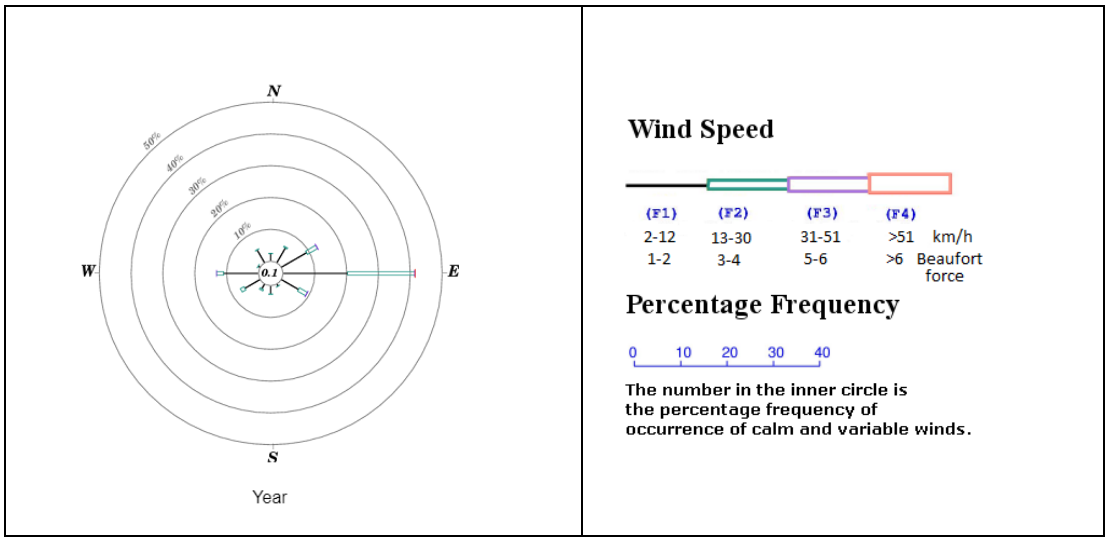
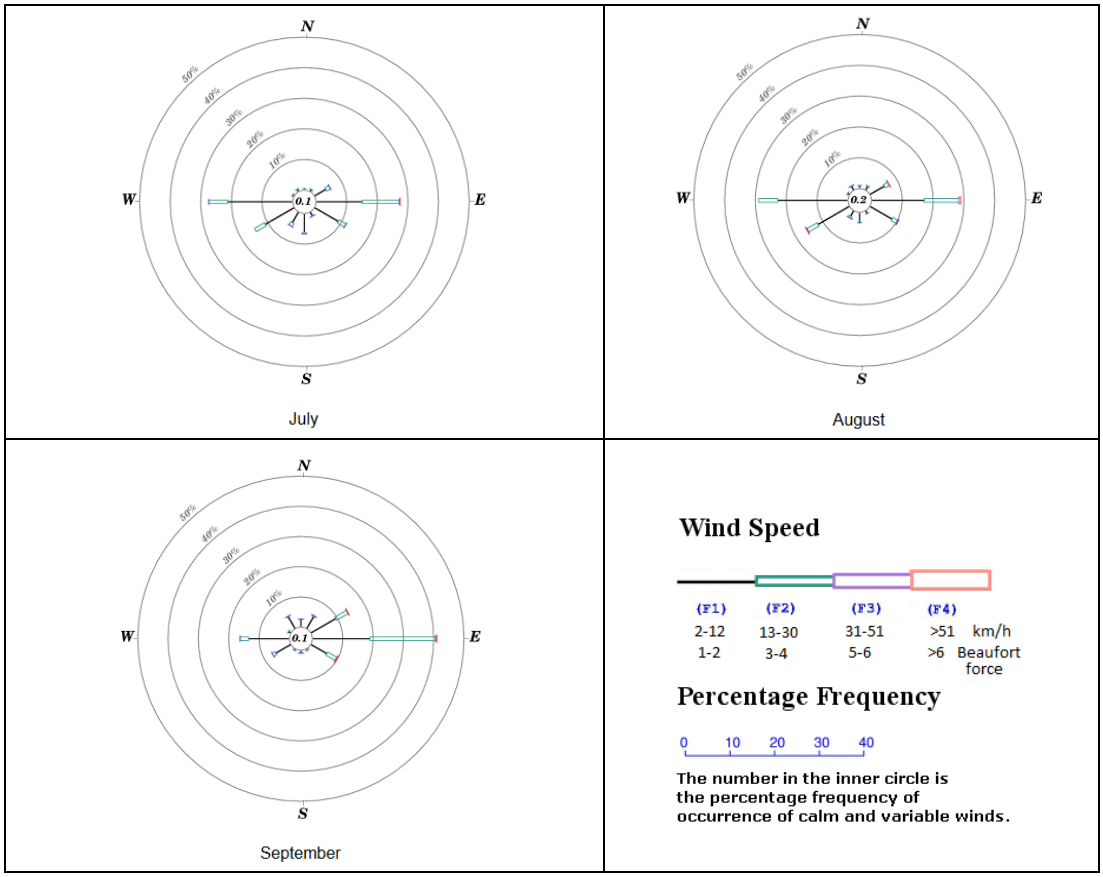


Figure 6.2 Summer Wind Rose for Hong Kong Observatory Station, 1991 - 2020



Regional Atmospheric Modelling System (RAMS)

6.1.3. Wind availability to the Subject Site is evaluated with reference to the "Consultancy Study on Establishment of Simulated Site Wind Availability Data for Air Ventilation Assessments in Hong Kong" simulated by the meso-scale model of Regional Atmospheric Modelling System (RAMS) Version 6.0 at the horizontal resolution of 0.5km * 0.5km.

6.1.4. The Subject Site is located within grid (083,033) in Causeway Bay. Wind availability data at 200m was adopted in this assessment. According to PlanD's simulated data, wind roses, wind direction and wind probability data are provided in ***Figure 6.3*** and ***Table 6.1***.

Figure 6.3 Wind Rose at Grid (083,033)

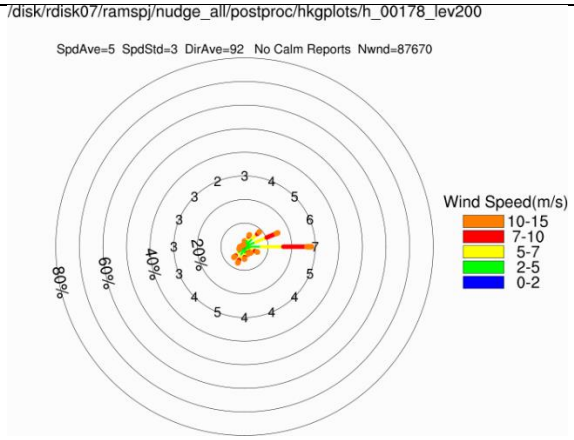
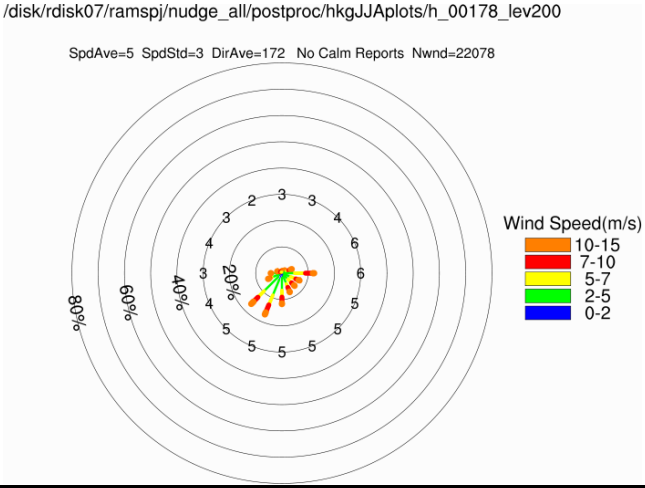
Wind Rose – Annual	
200m	
Wind Rose – Summer	
200m	

Table 6.1 Wind Probability at 200m (Grid 083,033)

Wind Direction	Annual Probability	Summer Probability
N	2%	1%
NNE	5%	1%
NE	**9%**	2%
ENE	**15%**	4%
E	**29%**	**12%**
ESE	6%	7%
SE	4%	7%
SSE	4%	8%
S	5%	**12%**
SSW	7%	**17%**
SW	6%	**17%**
WSW	3%	6%
W	2%	4%
WNW	1%	2%
NW	1%	1%
NNW	1%	1%

6.1.5. According to RAMS wind data, annual prevailing winds are the incoming winds flowing from the northeast quadrant (i.e. NE, ENE, E) while summer prevailing winds are flowing from southwest quadrant (i.e S, SSW, SW) and from E directions.

6.1.6. Among the two sets of wind data, ***Table 6.2*** summarises the identified prevailing wind conditions of in Causeway Bay area. For a comprehensive discussion on air ventilation performance of the Subject Site and the wind environment at pedestrian level, RAMS data is more appropriate as it is the most updated.

Table 6.2 Wind Data Summary

Sources	Annual Wind	Summer Wind
Hong Kong Observatory (Hong Kong Observatory station from 1991 -2020)	E	E, W
RAMS data (Grid 083,033)	NE, ENE, E	E, S, SSW, SW

7. Surrounding Environment

Urban Morphology

7.1.1. The Subject Site is surrounded by low to mid-rise GIC developments (approx. 20-50mPD) and sport centre (approx. 40-90mPD). The building heights near the surrounding and the land use in surroundings are summarized in ***Table 7.1*** and ***Figure 7.1*** respectively.

Table 7.1 Building Heights of Major Development in the Surroundings

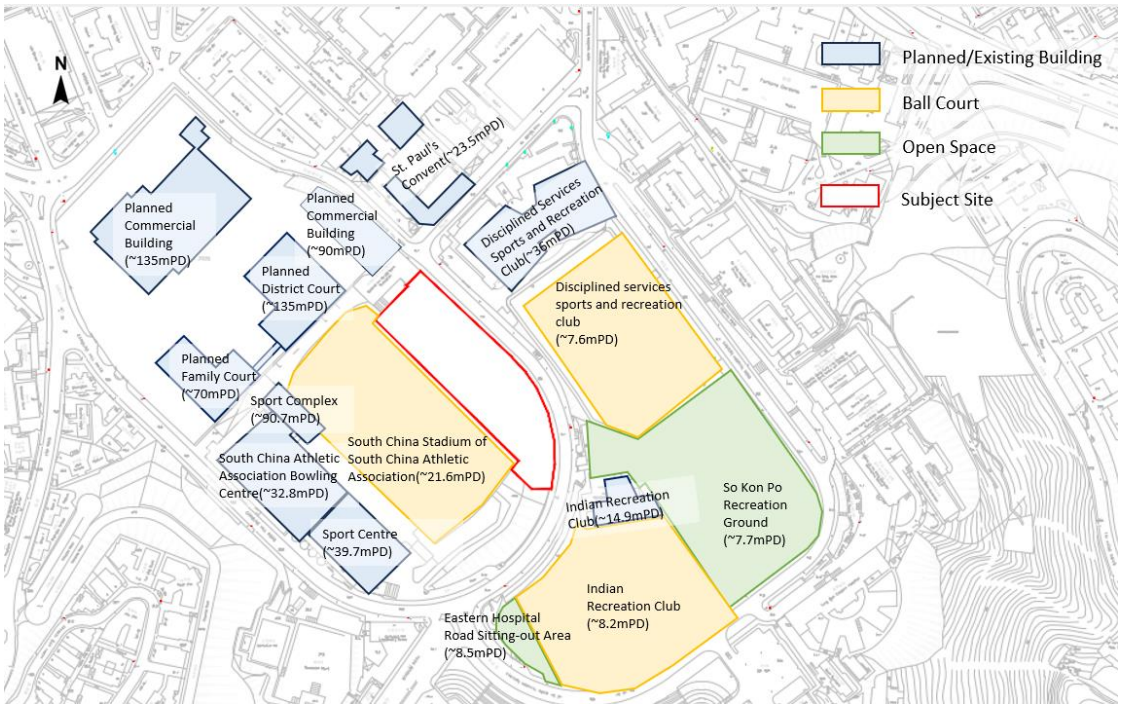
Surrounding Buildings	Building Heights (mPD)
Sport Complex	~90.7
Sports Centre	~39.7
South China Athletic Association Bowling Centre	~32.8
Indian Recreation Club	~8.2-14.9
Disciplined Services Sports and Recreation Club	~36
South China Athletic Association	~21.6
Disciplined services sports and recreation club	~7.6
So Kon Po Recreation Ground	~7.7
Eastern Hospital Road Sitting-out Area	~8.5
St. Paul's Convent	~23.5
Staff Quarters	~16.7
Planned Commercial Buildings	~90-135[1]
Planned District/Family Court	~70-135[2]

Note:

[1] Reference to Application for Permission under Section 16 of The Town Planning Ordinance (A/H7/181).

[2] Reference to Legco Paper "Item for Public Works Subcommittee of Finance Committee (PWSC(2022-23)3) on 33LJ – Construction of a District Court Building at Caroline Hill Road".

Figure 7.1 Surrounding Environment



8. Baseline Scheme and Proposed Scheme

7.1.2. The Subject Site falls within an area of OU (Sports and Recreation Club) on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The existing condition of the site is incorporated in Baseline Scheme and compared with the Proposed Scheme in the discussion of this report.

7.1.3. The major design parameters of Proposed Scheme are summarized in ***Table 8-1.*** Layout plans and section drawing under Proposed schemes are shown in ***Appendix 3.1.*** Comparison between Baseline Scheme (OZP-Compliant Scheme) and Proposed Scheme are made to evaluate any impacts on the overall air ventilation performance in its surrounding area.

Table 8-1 Major design parameters of Proposed Scheme

	Proposed Scheme
Site Area (m^2)	About 6,132
Gross Floor Area (m^2)	About 31,327.12
No. of Storey	4
Building Height (mPD)	45.4

7.1.4. Special design considerations have been adopted in Proposed Scheme. In particular, good design features including the provision of building setback and increased building permeability have been incorporated in the Proposed Scheme upon the consideration of site and design constraint criterion. These good design features are discussed in the following sections.

Building Setback

7.1.5. Building setback could reduce blockage in particular the perimeter of a development. The landscape garden at the southeastern portion is located at G/F which setbacks the building façade from the site boundary of over 20m. The building setback allows more wind at pedestrian level to flow across the site along Caroline Hill Road, thus improving wind environment along the road and local areas at the south of the Subject Site. The building setback is indicated in ***Figure 8.1.***

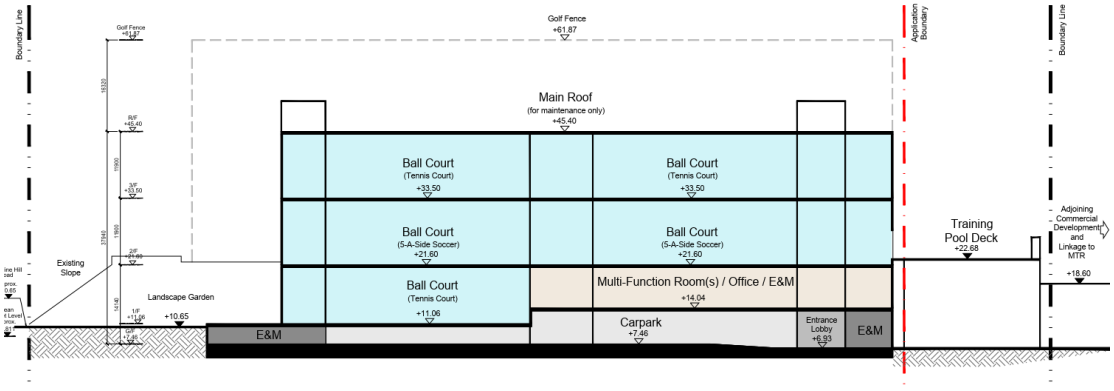
Figure 8.1 Building Setback at G/F



Increased building permeability

7.1.6. Under the Proposed Scheme, perforated movable curtain and fence are adopted for Ball Court from 2/F to 3/F to further increase the wind penetration and decrease the bulkiness of the Proposed Development. It facilitate the penetration of both incoming annual and summer prevailing winds to benefit the wind environment in the surrounding area. The section of the Proposed Development is shown in ***Figure 8.2.***

Figure 8.2 Section of the Proposed Development



9. Expert evaluation

E, ENE and NE wind

9.1.1. Under annual prevailing wind condition, incoming E, ENE and NE wind would flow through the Sport Ground of Disciplined Services Sports and Recreation Club (~7.6mPD) and So Kon Po Recreation Ground (~7.7mPD) at the east of the Subject Site and reach the Subject Site as shown in ***Figure 9.1.***

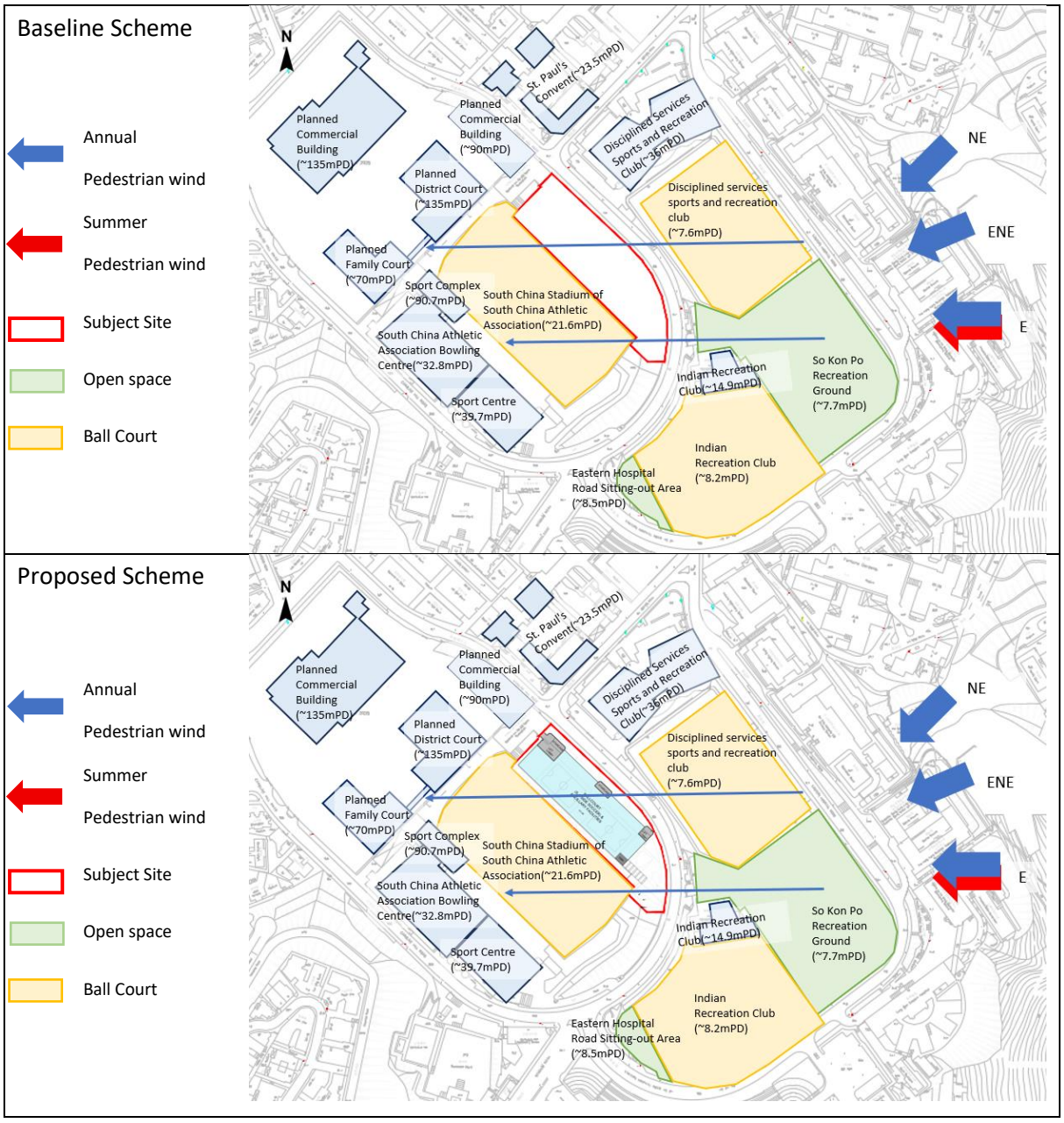
9.1.2. Under the Baseline Scheme, the existing condition of the Subject Site with no obstruction is beneficial to the wind flow from easterly direction. Incoming E, ENE and NE wind could easily penetrate through the Subject Site and reach the downwind area of South China Stadium and Planned GIC building (i.e. Planned Family Court).

9.1.3. Under the Proposed Scheme, the Proposed Development adopt perforated movable curtain and fence at 2/F to 3/F (i.e. 2/F is about 22mPD), which is the same level of the South China Stadium of South China Athletic Association. The perforated fence could allow incoming wind to penetrate across the Proposed Development to reach the downwind area of South China Stadium of South China Athletic Association at pedestrian level. It is expected that the adverse impact on downwind areas will be reduced due to its minimal obstruction.

9.1.4. In addition, the southeastern portion of the Proposed Development is optimized under the Proposed Scheme to facilitate the flow of easterly wind. Under the Proposed Scheme, at least 20m setback from the southeastern site boundary will be provided. The building setback allows more incoming wind to penetrate through the Subject Site at pedestrian level, thus improving wind environment along the road and local areas at the west of the Subject Site.

9.1.5. With the increased building permeability and the provision of building setback from the southeastern site boundary, it is expected that the impacts on wind environment at downwind areas including South China Stadium of South China Athletic Association and Planned family Court under the Proposed Scheme could be minimized.

Figure 9.1 Wind Environment under E, ENE, NE wind



SSW, SW & S Wind

9.1.1. Under summer prevailing wind condition, the incoming SSW, SW and S wind would flow from the South China Stadium of Sports Centre South China Athletic Association at the southeast of the Subject Site and to reach the Subject Site as shown in ***Figure 9.2***.

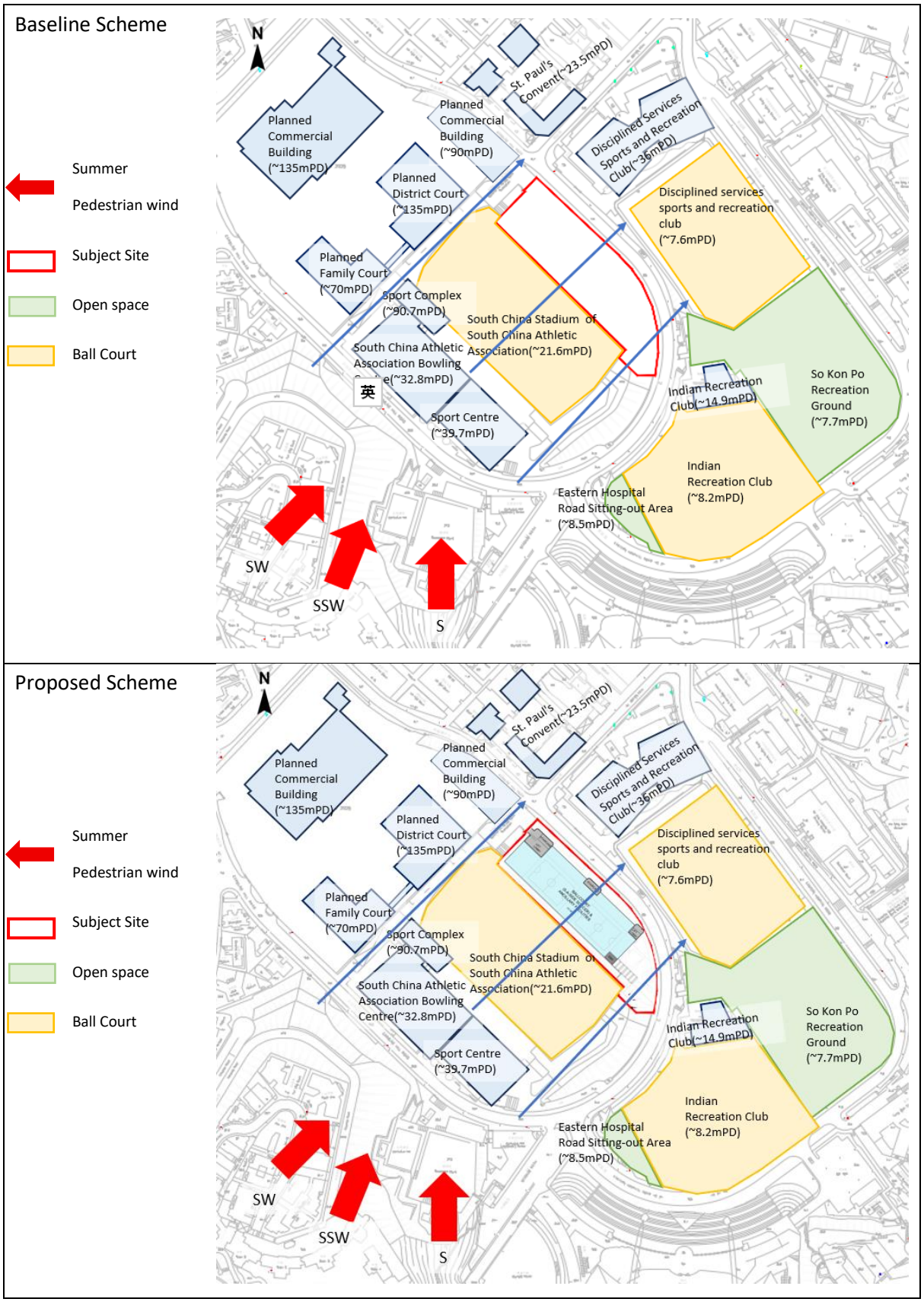
9.1.6. Under the Baseline Scheme, Incoming SSW, SW and S wind could skim over the low-rise South China Athletic Association Bowling Centre (~32.8mPD) and the building gap between the Planned Family Court and Sport Complex Sports Centre. The existing condition of the Subject Site with no obstruction is beneficial to the wind flow from southwestern direction, further reach the downwind area of the Subject Site, Sport Ground of Disciplined Services Sports and Recreation Club and So Kon Po Recreation Ground.

9.1.7. Under the Proposed Scheme, the Proposed Development adopt perforated movable curtain and fence at 2/F to 3/F (i.e. 2/F is about 22mPD), which is the same level of the upwind area of the South China Stadium of South China Athletic Association. The perforated fence could allow incoming wind to penetrate across the Proposed Development to reach the downwind area of Sport Ground of Disciplined Services Sports and Recreation Club at pedestrian level. It is expected that the adverse impact on downwind areas will be reduced due to its minimal obstruction.

9.1.8. In addition, the southeastern portion of the Proposed Development is optimized under the Proposed Scheme to facilitate the flow of southwestern wind. Under the Proposed Scheme, at least 20m setback from the southeastern site boundary will be provided. The building setback allows more incoming SW, SSW, and S wind to penetrate through the Subject Site at pedestrian level, thus improving wind environment along the road and local areas at the east of the Subject Site.

9.1.9. With the increased building permeability and the provision of building setback from the southeastern site boundary, it is expected that the impacts on wind environment at downwind areas including Sport Ground of Disciplined Services Sports and Recreation Club and So Kon Po Recreation Ground under the Proposed Scheme could be minimized.

Figure 9.2 Wind Environment under SW, SSW and S wind



10. Conclusion

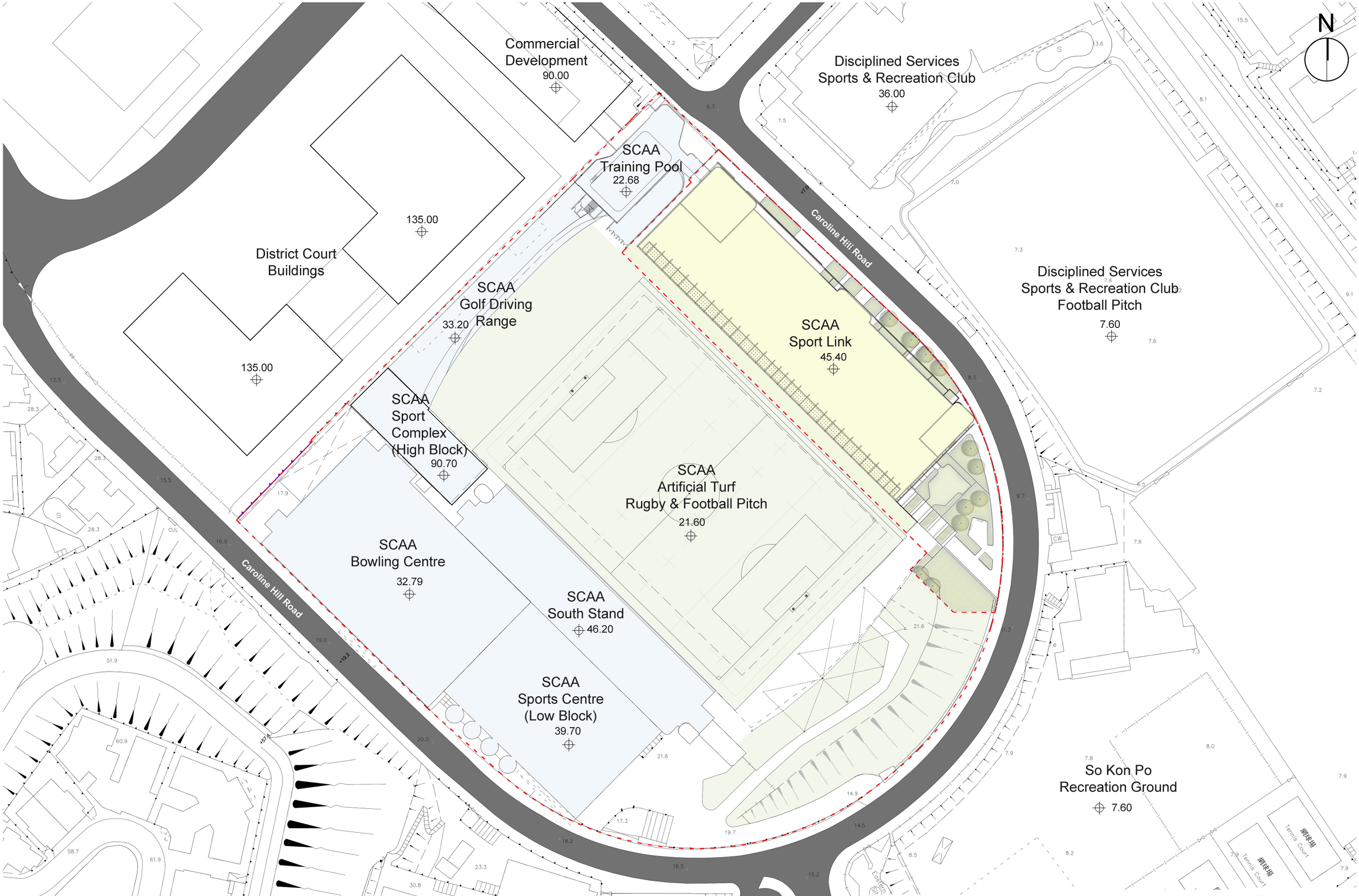
10.1.1. An AVA-EE study was conducted for the for Development of Comprehensive Sports & Recreation Centre to provide qualitative evaluation of wind performance of the proposed development under the Baseline and the Proposed Scheme.

10.1.2. The Proposed Scheme adopts perforated movable curtain and fence at 2/F to 3/F and building setback from the southeastern site boundary. It further increases the wind penetration and decrease the bulkiness of the Proposed Development, facilitating the penetration of both incoming annual and summer prevailing winds to benefit the wind environment in the surrounding area. The incoming winds further reach the downwind areas of South China Stadium of South China Athletic Association and Planned family Court under annual prevailing E, ENE and NE wind, and the Sport Ground of Disciplined Services Sports and Recreation Club and So Kon Po Recreation Ground under summer prevailing SW, SSW and S winds.

10.1.3. With the good design features to improve air ventilation performance, including building setback, and perforated fence adopted in the Proposed Development, it is anticipated that there shall be insignificant impact to the wind environment in the surrounding area associated with the Subject Site.

Appendix 4.1

Site Layout Plan



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

m 10 20 30 50 100

Design 2 Architects

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93
+7.46
+7.55
+8.36
+9.46
+10.80
+10.65
+12.23
+14.13
+15.83

STAIRCASE
STAIRCASE
STAIRCASE
LIFT LOBBY
+6.93
LIFT LOBBY
U/UL
LAY-BY AREA
CARPARK
+7.46
E&M
E&M
SCAA TRAINING POOL

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong
G/F Plan ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

SCAA TRAINING POOL

STAIRCASE

LIFT LOBBY

STAIRCASE

MUTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.06

STAIRCASE

LIFT LOBBY

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
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- E&M
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- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
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- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
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- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

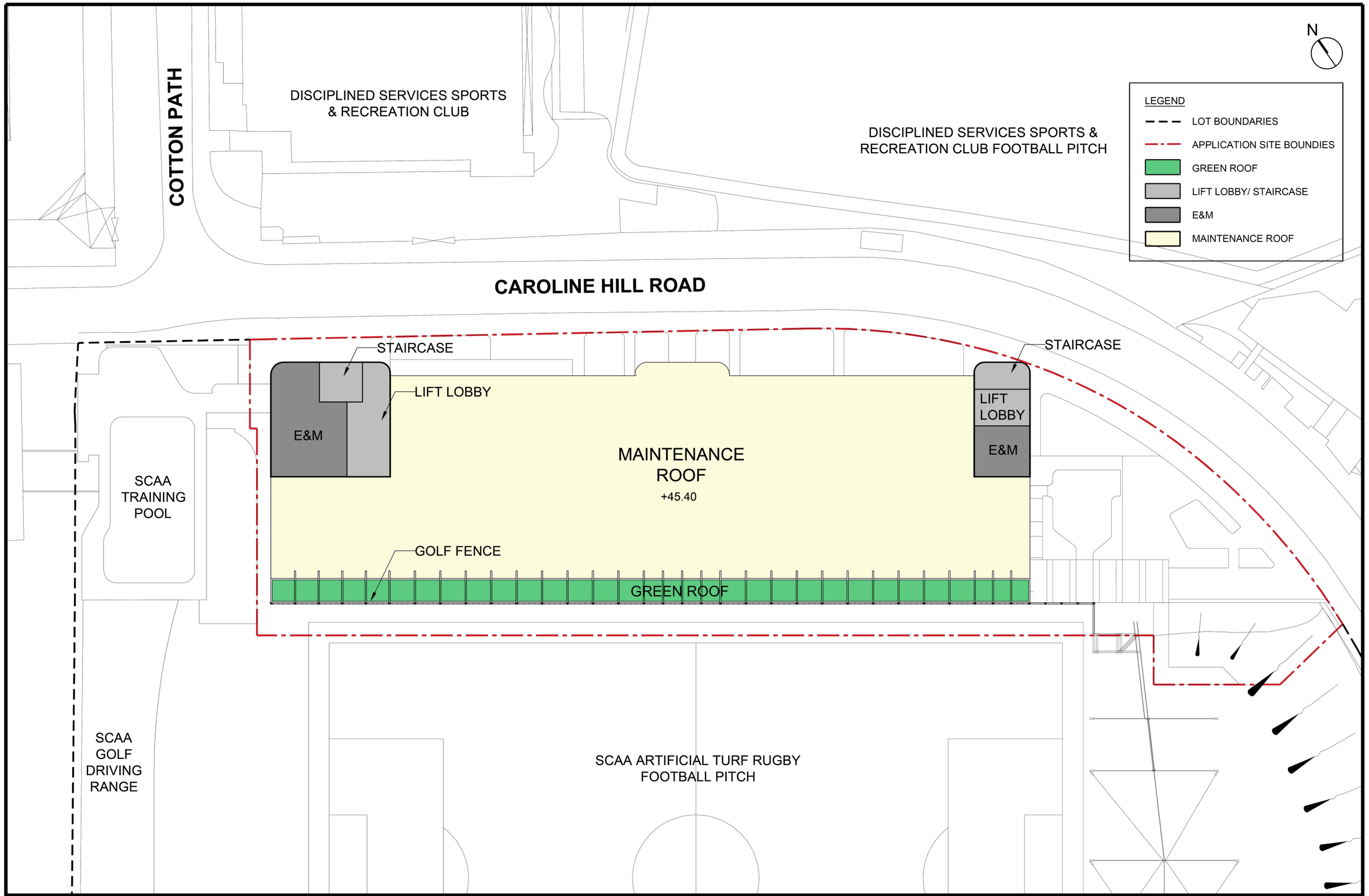
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

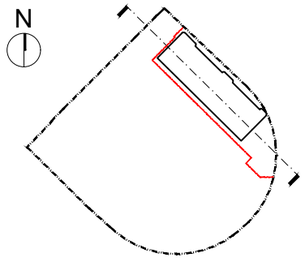
Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

UR/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- MAINTENANCE ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

11900

10540

3600

37940

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Main Roof (for maintenance only) +45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

7560

6580

Caroline Hill Road

Existing Slope

Approx. +10.65

Landscape Garden

+10.65

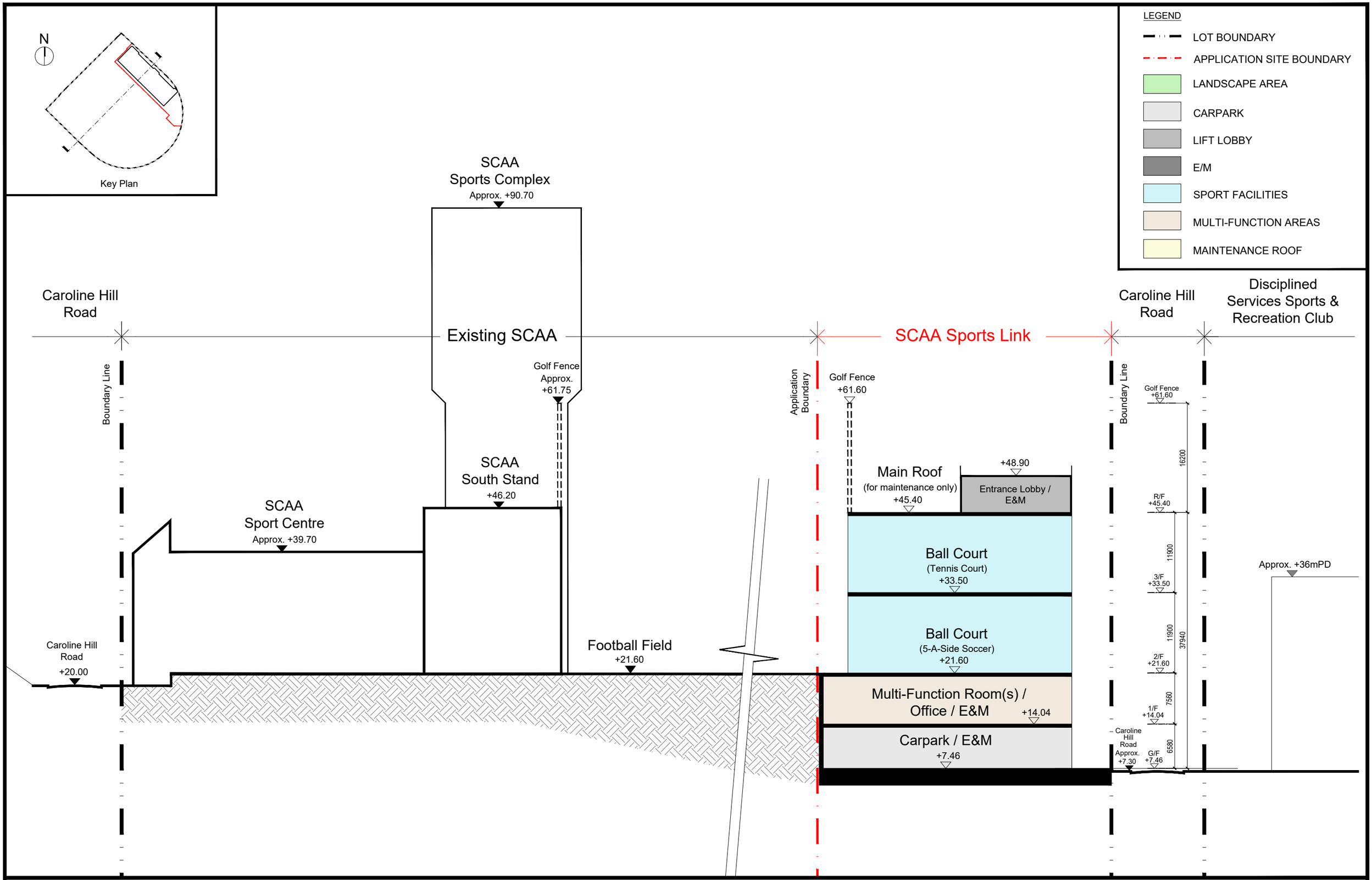
+8.811

Mean Street Level of North Site

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

Appendix V

Noise Impact Assessment

Issue No.	:	1
Issue Date	:	October 2025
Project No.	:	2215

NOISE IMPACT ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

[redacted]

Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.**	2215
Document Title	Noise Impact Assessment		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	October	1st Submission	Matthew Shiu	Joanne Ng	Grace Kwok

[redacted]

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4. Environmental Legislation, Standards and Criteria 5

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4.2. Existing and Planned Fixed Plant Noise 5

5. Potential Environmental Noise Impact 5

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Figure 3.1 Subject Site Location

List of Appendices

Appendix 3.1 Site Layout Plan

1. Introduction

1.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare a Noise Impact Assessment ("NIA") in support of the Section 16 Planning Application for Proposed SCAA Sports Link ("Proposed Development") at South China Athletic Association, 88 Caroline Hill Road, Hong Kong ("Subject Site").

2. Objectives

2.1.1. Main objective of the study is to evaluate potential noise impacts associated with the Proposed Development. Where necessary, appropriate mitigation measures are recommended to reduce the impacts from the Proposed Development and the nearby sources at the Noise Sensitive Receivers to satisfy the relevant environmental ordinance, standards and guidelines.

3. Description of the Proposed Development

3.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in ***Appendix 3.1***.

3.1.2. Application Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

3.1.3. The Subject Site area is approximately 6132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 3.1*** shows the location of the Application Site.

4. Environmental Legislation, Standards and Criteria

4.1. Traffic Noise

4.1.1. Noise standards are recommended in Chapter 9, "Environmental" of the HKPSG for planning against noise impact from sources such as road traffic, railway and aircraft. The applicable standard based on the proposed use is road traffic standard on offices, which is $L_{10(1\text{-hour})}$ 70dB(A). The noise standard applies to uses which rely on openable windows for ventilation.

4.2. Existing and Planned Fixed Plant Noise

4.2.1. Existing Fixed Plant Noise is controlled under the NCO's Technical Memorandum on Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM), which shall not exceed the Acceptable Noise Level (ANL) for a Noise Sensitive Receiver.

4.2.2. More stringent criteria are applicable for planned fixed plants, as stipulated in the Chapter 9, "Environmental" of the HKPSG with the following requirements: 5dB(A) below the appropriate ANLs in the IND-TM; or the prevailing background noise levels, whichever is lower.

5. Potential Environmental Noise Impact

5.1. Potential Traffic Noise and Existing Fixed Plant Noise on the Proposed Development

5.1.1. Based on the current design, the noise sensitive uses including will be provided with air conditioning units and mechanical ventilation, and will not rely on opened windows for ventilation. By means of sound insulation provided by wall and glazing, they are protected from outdoor noise, they are not classified as Noise Sensitive Receivers.

5.1.2. Adverse traffic and existing fixed plant noise impact to the Proposed Development is not anticipated.

5.2. Planned Fixed Plant Noise from the Proposed Development

5.2.1. Potential fixed plant noise associated with the Proposed Development will include noise from the operation of mechanical ventilation and air-conditioning (MVAC), building services equipment and mechanical ventilation provisions for the plant rooms in the Proposed Development.

5.2.2. In general, building services equipment, such as pump units, MVAC units, transformers, emergency generator as well as lift machines will be placed at enclosed plant rooms with concrete building envelop. Typical acoustic treatment such as acoustic louvers and silencers will be provided at air intake and exhaust louvres of the plant rooms whenever necessary. Noise emission will also be controlled by appropriate selection of equipment.

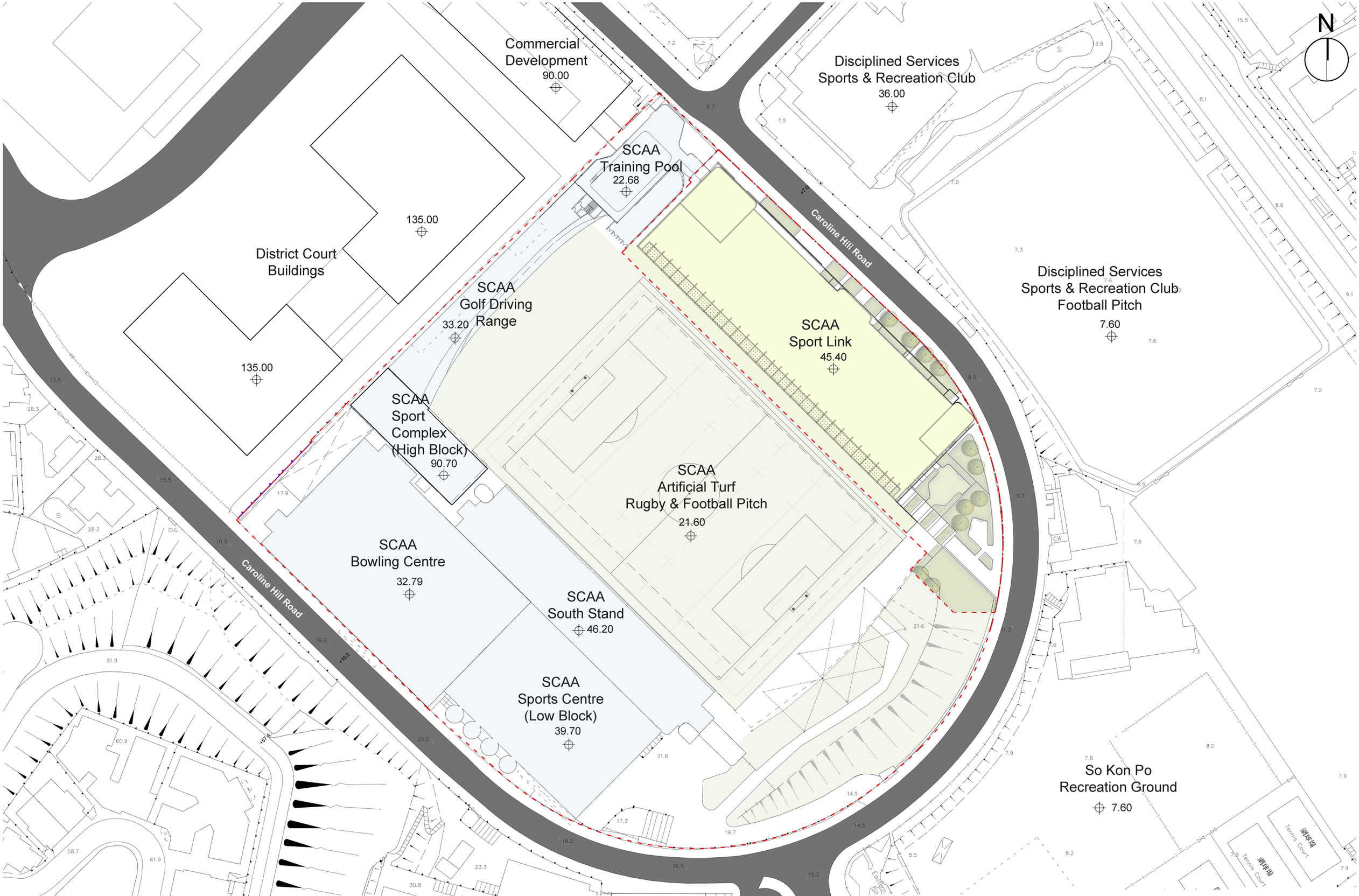
5.2.3. No insurmountable planned fixed plant noise impact from the Proposed Development is anticipated.

6. Conclusion

6.1.1. This NIA has been prepared in support of the Section 16 Planning Application of the Proposed Development. The report concludes that the Proposed Development is unlikely to cause any insurmountable noise impact during operational phase of the Proposed Development.

Appendix 3.1

Site Layout Plan



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

m 10 20 30 50 100

Design 2 Architects

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
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- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93
+7.46
+7.55
+8.36
+9.46
+10.80
+10.65
+12.23
+14.13
+15.83

STAIRCASE
STAIRCASE
STAIRCASE
LIFT LOBBY
+6.93
LIFT LOBBY
U/UL
LAY-BY AREA
CARPARK
+7.46
E&M
E&M
SCAA TRAINING POOL

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong
G/F Plan ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

N

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- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

SCAA TRAINING POOL

STAIRCASE

LIFT LOBBY

STAIRCASE

MUTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.06

STAIRCASE

LIFT LOBBY

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

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- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
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- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

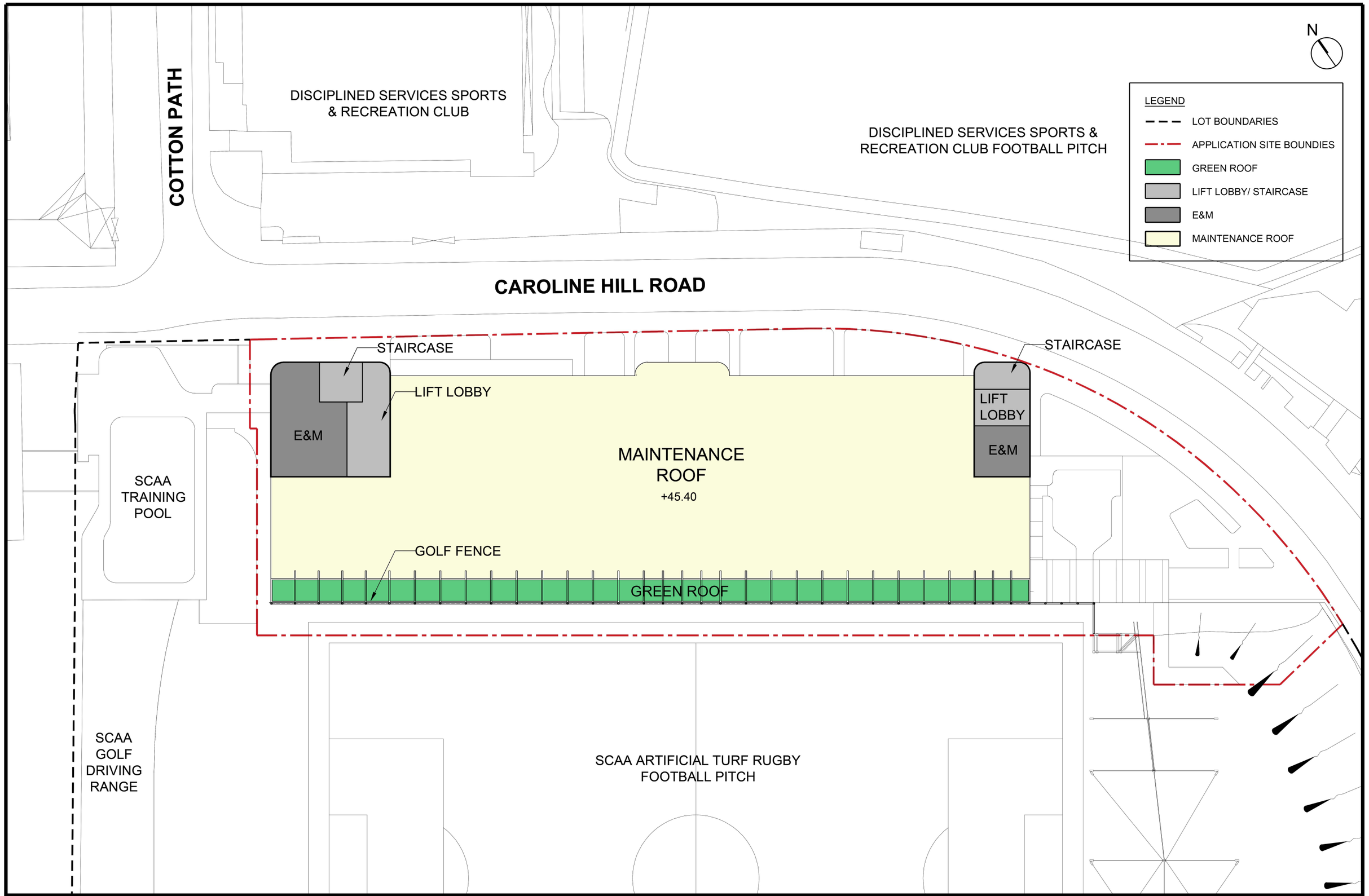
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

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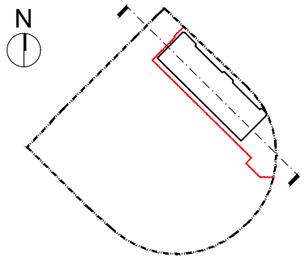
UR/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- MAINTENANCE ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

11900

10540

3600

37940

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Main Roof (for maintenance only) +45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

7560

6580

Caroline Hill Road

Existing Slope

Approx. +10.65

Landscape Garden

+10.65

+8.811

Mean Street Level of North Site

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 13 Oct 2025

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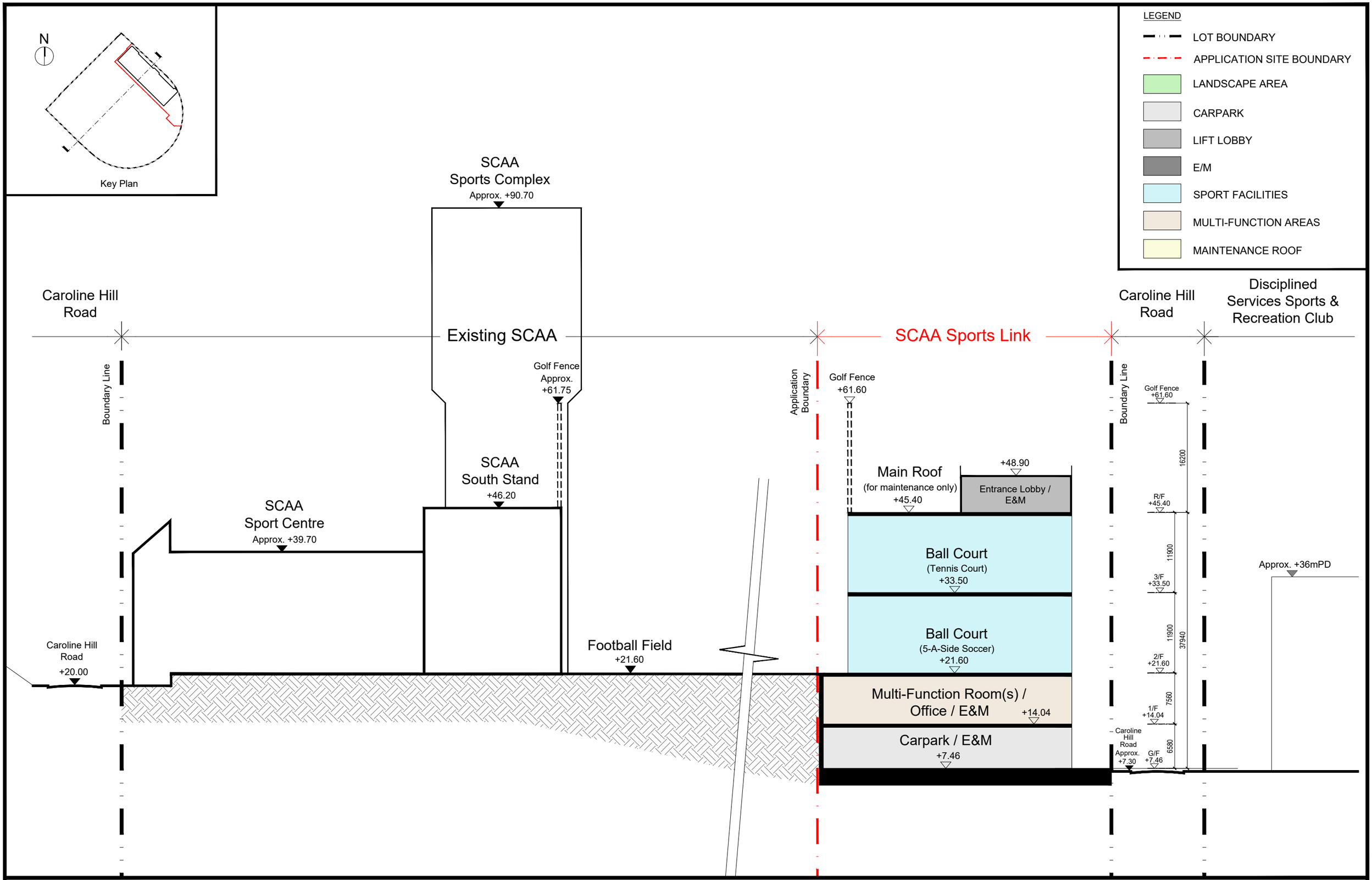

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

Appendix VI

Air Quality Impact Assessment

Issue No. : Issue 1
Issue Date : October 2025
Project No. : 2215

AIR QUALITY IMPACT ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

[redacted]

Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.**	2215
Document Title	Air Quality Impact Assessment		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	October 2025	1st Submission	Coco Chin	Joanne Ng	Grace Kwok

[redacted]

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Figure 6-1 Buffer Distance between the Subject Site and Adjacent Roads
Figure 6-2 Map of Industrial Chimney Survey within 200m Assessment Area

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Appendix 3-1 Site Layout Plan

1. Introduction

1.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare an Air Quality Impact Assessment ("AQIA") in support of the Section 16 Planning Application for the Proposed SCAA Sports Link ("Proposed Development") at South China Athletic Association, 88 Caroline Hill Road, Hong Kong ("Subject Site").

2. Objectives

2.1.1. Main objective of the study is to evaluate potential air quality impacts associated with the Proposed Development during construction and operation phase. Where necessary, appropriate mitigation measures are recommended to reduce the impacts from the Proposed Development and the nearby sources at the Air Sensitive Receivers to satisfy the relevant environmental ordinance, standards and guidelines.

3. Description of the Proposed Development

3.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in ***Appendix 3-1***.

3.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

3.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 3-1*** shows the location of the Subject Site.

4. Environmental Legislation, Standards and Guidelines

4.1. Hong Kong Air Quality Objectives

4.1.1. Air quality in Hong Kong is governed under the Air Pollution Control Ordinance ("APCO") (Cap. 311) and its subsidiary Regulations. Under this legislation, the Government has designated Air Control Zones ("ACZ") for the whole territory, along with the new Air Quality Objectives ("AQOs") which was taken effect in 2025. The AQOs stipulate the statutory limits for 7 pollutants and dictate the maximum number of allowable exceedances over specified time periods. For details, please refer to ***Table 4-1*** below.

Table 4-1 Hong Kong Air Quality Objectives (AQOs)

Pollutant	Averaging Time	Concentration Limit (ug/m^3)[1]	Number of Exceedances to be allowed
Sulphur Dioxide (SO_2)	10-minute	500	3
	24-hour	50	3
RSP or PM_{10}[2]	24-hour	100	9
	Annual	50	N/A
FSP or $PM_{2.5}$[3]	24-hour	50	18
	Annual	25	N/A
Nitrogen Dioxide (NO_2)	1-hour	200	18
	Annual	40	N/A
Ozone (O_3)	8-hour	160	9
Carbon monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
Lead (Pb)	Annual	0.5	N/A

Note:
[1] All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.
[2] Respirable suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.
[3] Fine suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

4.2. Hong Kong Planning Standards and Guidelines

4.2.1. General design guidelines are stated in the Hong Kong Planning Standards and Guidelines ("HKPSG") as indicated in ***Table 4-2***.

Table 4-2 Guidelines on Usage of Open Space Site under HKPSG

Polluting Uses	Sensitive Uses	Recommended Buffer Distance
Multi-storey industrial building	(a) residential areas, schools (b) commercial and GIC uses	100m 30m
Industrial areas	hospitals	500m
Industrial chimneys	(a) sensitive uses (b) high-rise buildings (c) active open spaces	Within 500m, consult EPD 200m 10 – 100m
Odour sources	sensitive uses	200m
Dusty uses	sensitive uses	100m
Trunk roads	(a) active and passive recreational uses (b) passive recreational uses (c) amenity areas	>20m 3-20m < 3m
Primary distributors	(a) active and passive recreational uses (b) passive recreational uses	>20m 3-20m
District distributors	(a) active and passive recreational uses (b) passive recreational uses	>10m <10m
Local distributors	(a) active and passive recreational uses (b) passive recreational uses	>5m <5m
Construction and Earth Moving Activities	(a) active and passive recreational uses (b) passive recreational uses	>50m <50m

5. Potential Air Quality Impact in Construction Phase

5.1.1. To assess the air quality impact associated with the construction works of the Proposed Development, the ASRs in the vicinity have been identified as summarised in ***Table 5-1***.

Table 5-1 The Separation Distance between Nearby ASRs and the Proposed Development

ASR	Separation distance (m)
Proposed Commercial Development on IL No.8945 at Caroline Hill Road, Causeway Bay, Hong Kong	~25
Proposed District Court at Caroline Hill Road	~28
St. Paul's Convent	~32
Disciplined Services Sports and Recreation Club	~22
So Kon Po Recreation Ground	~14
Indian Recreation Club	~22
Eastern Hospital Road Sitting-Out Area	~76
Confucius Hall Secondary School	~114
Existing South China Athletic Association	~8

5.1.2. As the Subject Site is currently a vacant site, no extensive site formation work or excavation work are expected. Only foundation and superstructure works during construction phase are anticipated. Hence, dust emission associated with the construction activities will be limited to localized at-grade construction works.

5.1.3. Nonetheless, dust mitigation measures to minimize dust impacts at nearby ASRs during construction phase is recommended as below:

- Plan site layout so that machinery and dust causing activities (e.g. haul roads and stockpiling areas) are located away from ASRs as far as possible;
- Erect solid screens or barriers around dusty activities;
- Erect hoarding with sufficient height from ground level along the site boundary;
- Connecting construction plant and equipment to mains electricity supply and avoid use of diesel generators and diesel-powered equipment can be considered as far as practicable to minimize air quality impact arising from construction machinery.

5.1.4. With the implementation of good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, significant dust generated from the construction of the Proposed Development is not anticipated. Hence, adverse dust impact during the construction phase would not be anticipated.

5.1.5. Construction-related machines employed in the Subject Site will follow the requirements as stipulated in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery. Therefore, gaseous emission from construction equipment would be minor and would not cause any adverse air quality impact.

6. Potential Air Quality Impact in Operation Phase

6.1.1. Study area for AQIA has been identified by a distance of 500m from the boundary of the Subject Site. ***Figure 3-1*** illustrates the extent of the study area. Vehicular emissions and industrial emissions are the key air pollution sources in the vicinity of the Subject Site that might impose air quality impacts during operation phase.

6.2. Vehicular Emissions from Open Road Traffic

6.2.1. The Subject Site is surrounded by an open road, namely Caroline Hill Road to the north. According to the information from the Annual Traffic Census (2023) published by Transport Department, the road section near to the Subject Site are classified as Local Distributor ("LD").

6.2.2. With reference to the HKPSG, recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions have been adopted as summarised in ***Table 6-1***. The buffer distance is illustrated in ***Figure 6-1.***

Table 6-1 Buffer distance from the Adjacent Roads

Road Name	Road Type	HKPSG Guideline Buffer Distance Requirement
Caroline Hill Road	Local Distributor	5m

6.2.3. The offices and multi-purpose rooms of the Proposed Development will rely on the centralized AC system whereas the sports facilities and carpark will rely on natural ventilation. As shown in ***Figure 6-1***, no air sensitive uses (including openable windows, open space for active recreation use, and fresh air intake of mechanical ventilation) will be located within the buffer zones from G/F to R/F during the operation phase. Hence, no significant air quality impact is anticipated during the operation phase.

6.3. Industrial Emissions from Chimneys

6.3.1. Site survey was carried out on 18 March 2025 to review the existing environmental conditions.

6.3.2. Chimneys were identified at Tung Wah Eastern Hospital and the Saint Paul's Hospital Main Block during the survey. According to the previous planning application (No. A/H7/182), a chimney was also present at Saint Paul's Convent, but it is noted that this chimney has been removed during the survey. Accordingly, sufficient buffer distance shall be provided between the chimneys and air sensitive use (including openable windows, open space for active recreation use, and fresh air intake of mechanical ventilation) of the Proposed Development as stipulated in HKPSG and as shown in ***Figure 6-2***.

6.3.3. There are 4 nos. of chimneys at Saint Paul's Hospital Main Block with a height of 124.7mPD. The Subject Site is located more than 100m away from the Saint Paul's Hospital Main Block. Area with 100-200m horizontal buffer distance from chimney required 20m difference in height between industrial chimney exit and fresh air intake location (i.e. allowable fresh air intake location at or below 104.7mPD). Hence, the associated buffer distance criteria (i.e. 104.7mPD) should be adopted. Details of the allowable fresh air intake location are enclosed in ***Figure 6-2***.

6.3.4. A diesel generator owned by Tung Wah Eastern was found during the site surveys within the 200m assessment area. The location of the diesel emergency generator is shown in ***Figure 6-2***. Verbal communication with Tung Wah Eastern Hospital confirmed that the diesel generator is for emergency purpose. In view of the diesel generator is for emergency use only, no adverse air quality impact to the Proposed Development and nearby air sensitive receivers is expected.

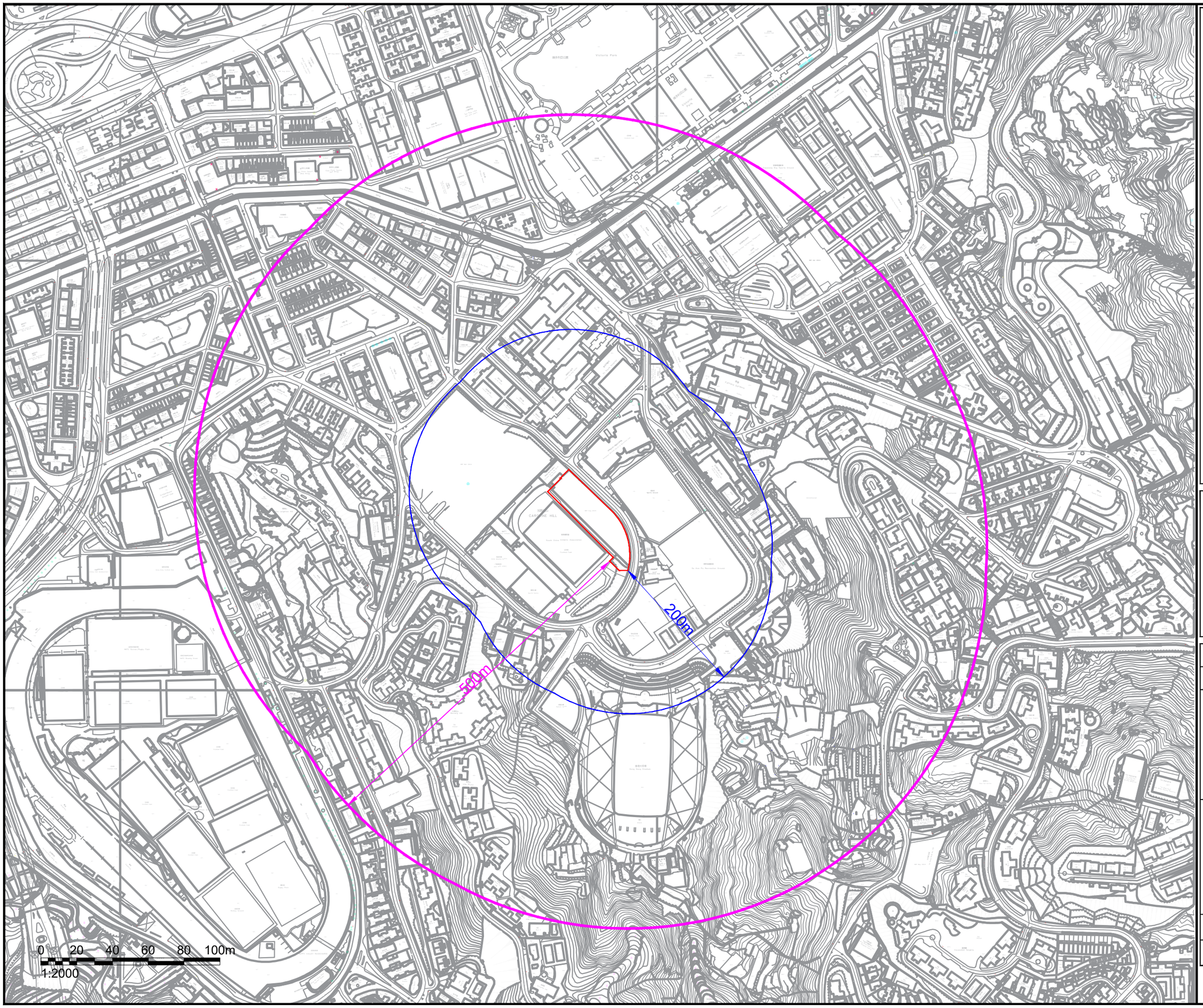
6.3.5. With compliance of the HKPSG recommendations, no air impact caused by the surrounding chimneys is anticipated.

6.3.6. Slaughterhouses, sewage treatment works facilities, village incinerators, odour sources and dusty uses are not found within 500m radius of the Proposed Development. Therefore, no adverse odour impact is expected.

7. Conclusions

7.1.1. Fugitive dust due to construction works and gaseous emission from construction equipment would make insignificant air quality impacts to the nearby air sensitive receivers, with the implementation of dust suppression measures and good site practice as stipulated under Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation.

7.1.2. Air sensitive uses (including openable windows, fresh air intake for mechanical ventilation and open space for active recreational use) in the Subject Site shall maintain sufficient buffer distance from nearby road sections and industrial chimney as promulgated in the HKPSG. No adverse air quality impact is anticipated at the Subject Site during operation phase.



NOTES :

SUBJECT SITE

200m ASSESSMENT AREA

500m ASSESSMENT AREA

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

SUBJECT SITE LOCATION AND ASSESSMENT AREA

Drawing No : FIGURE 3-1	Revision : 0
Scale : AS SHOWN	Date : OCT 2025

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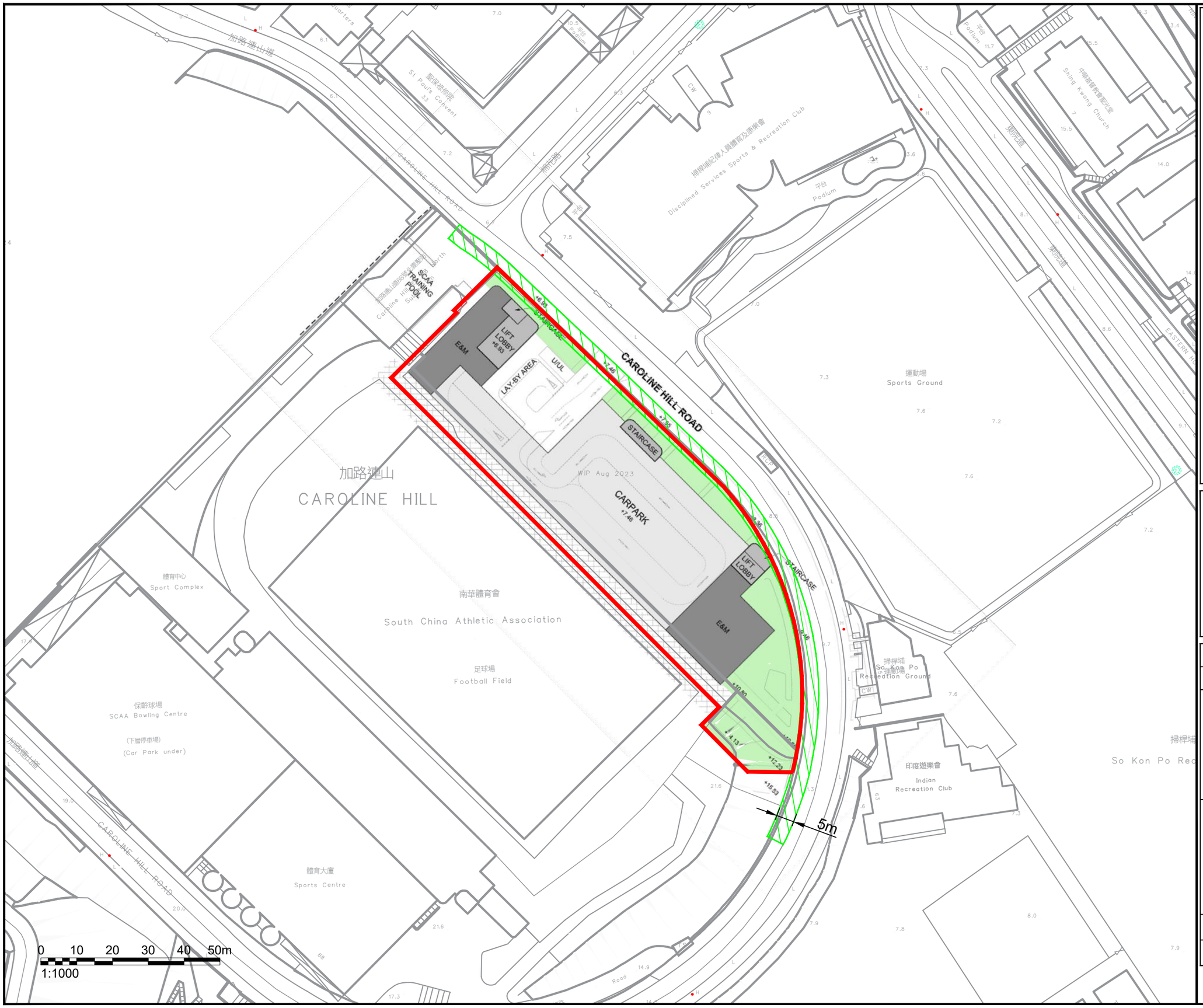

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG.

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT G/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-1	Revision : 0
Scale : AS SHOWN	Date : OCT 2025

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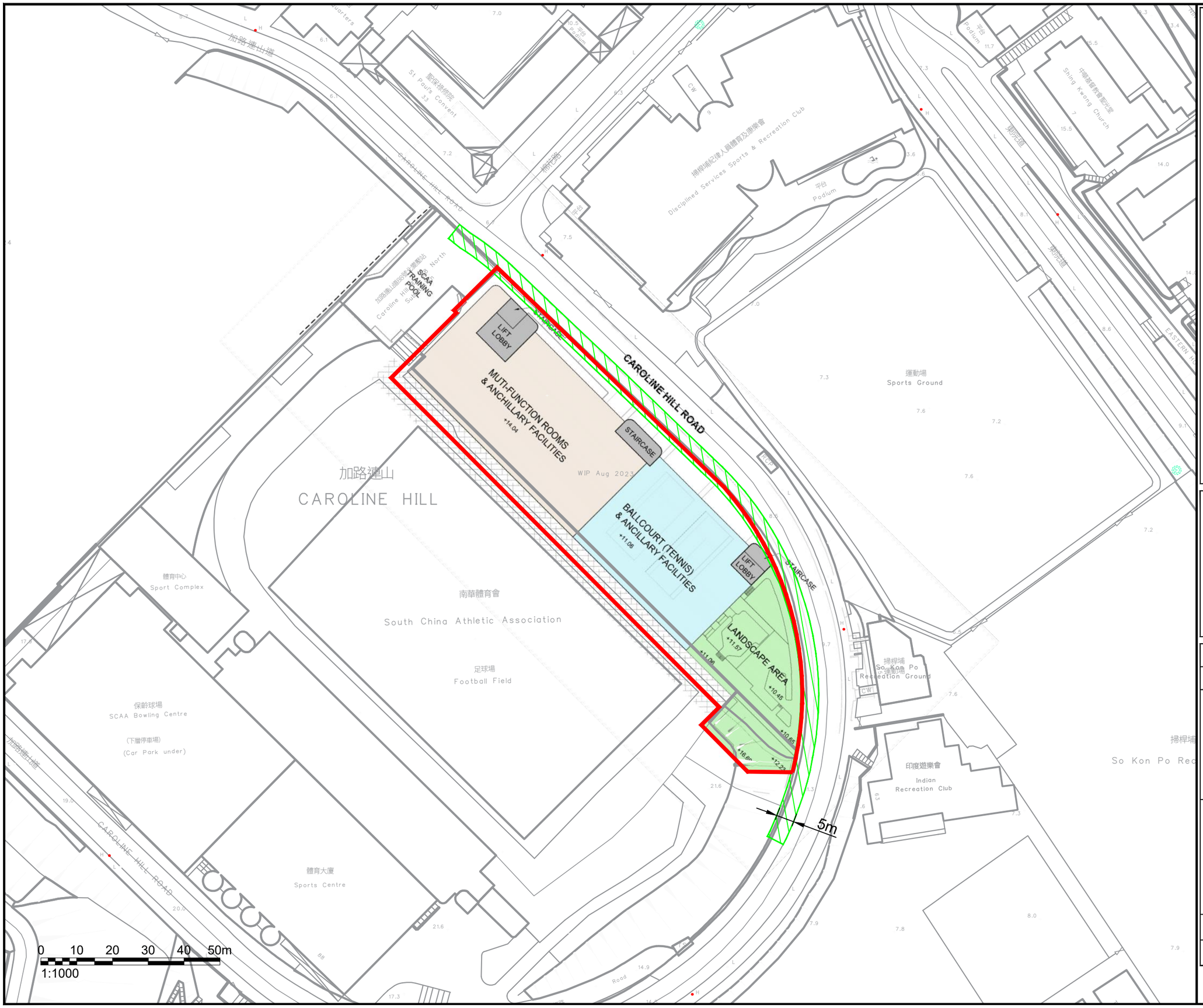

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 1/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-1	Revision : 0
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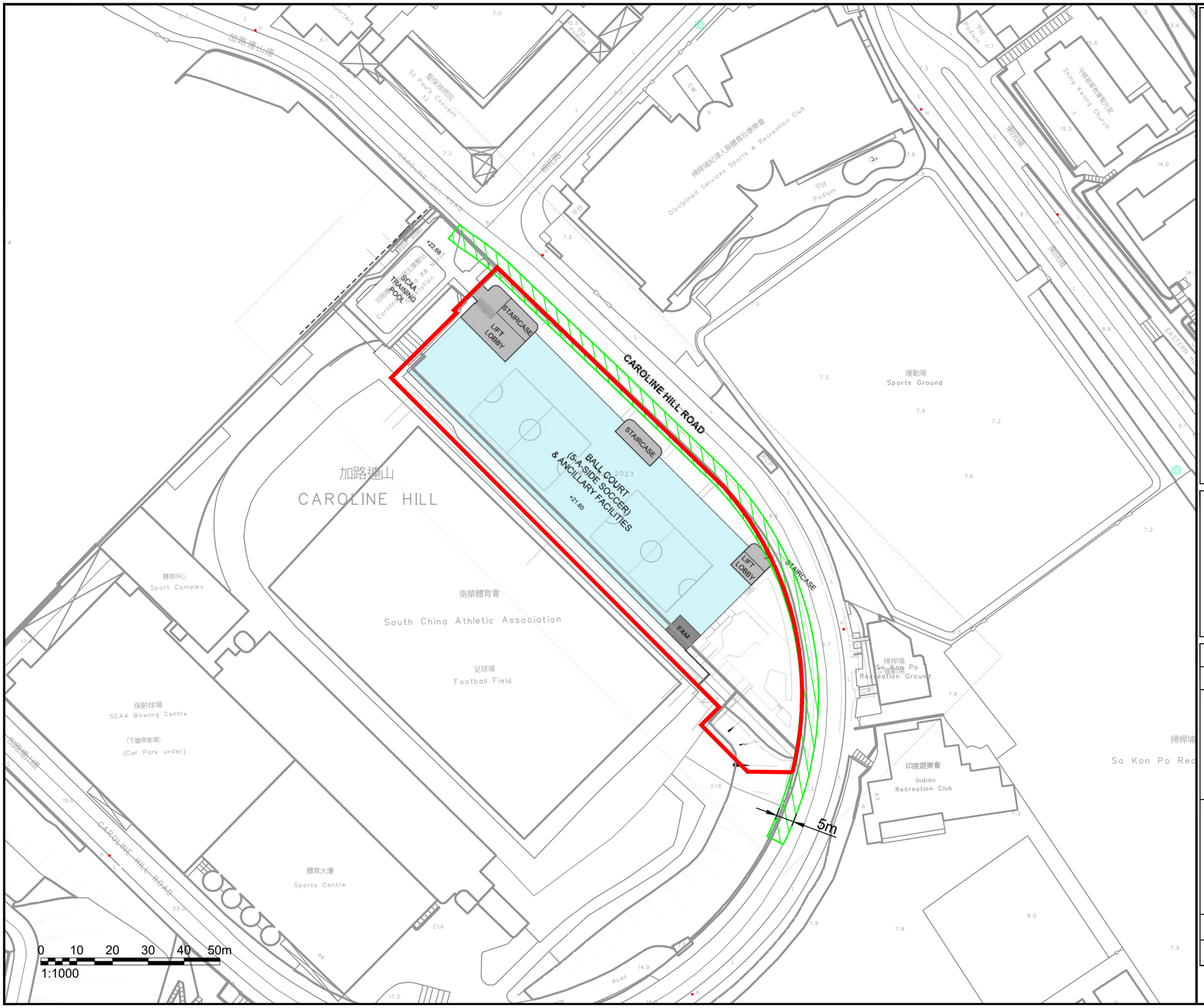

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 2/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-1	Revision : 0
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A3 420 x 297

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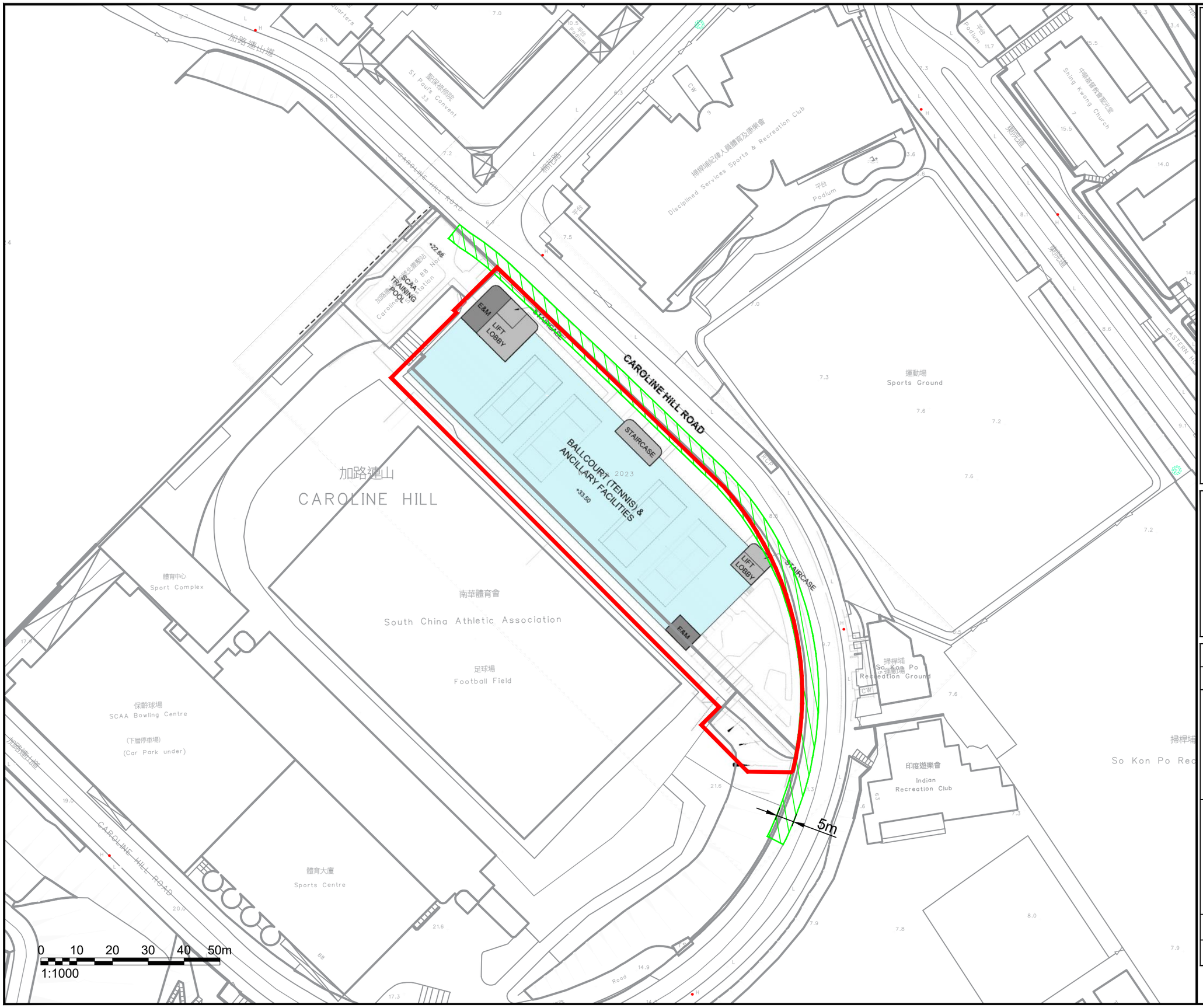

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 3/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-1	Revision : 0
Scale : AS SHOWN	Date : OCT 2025

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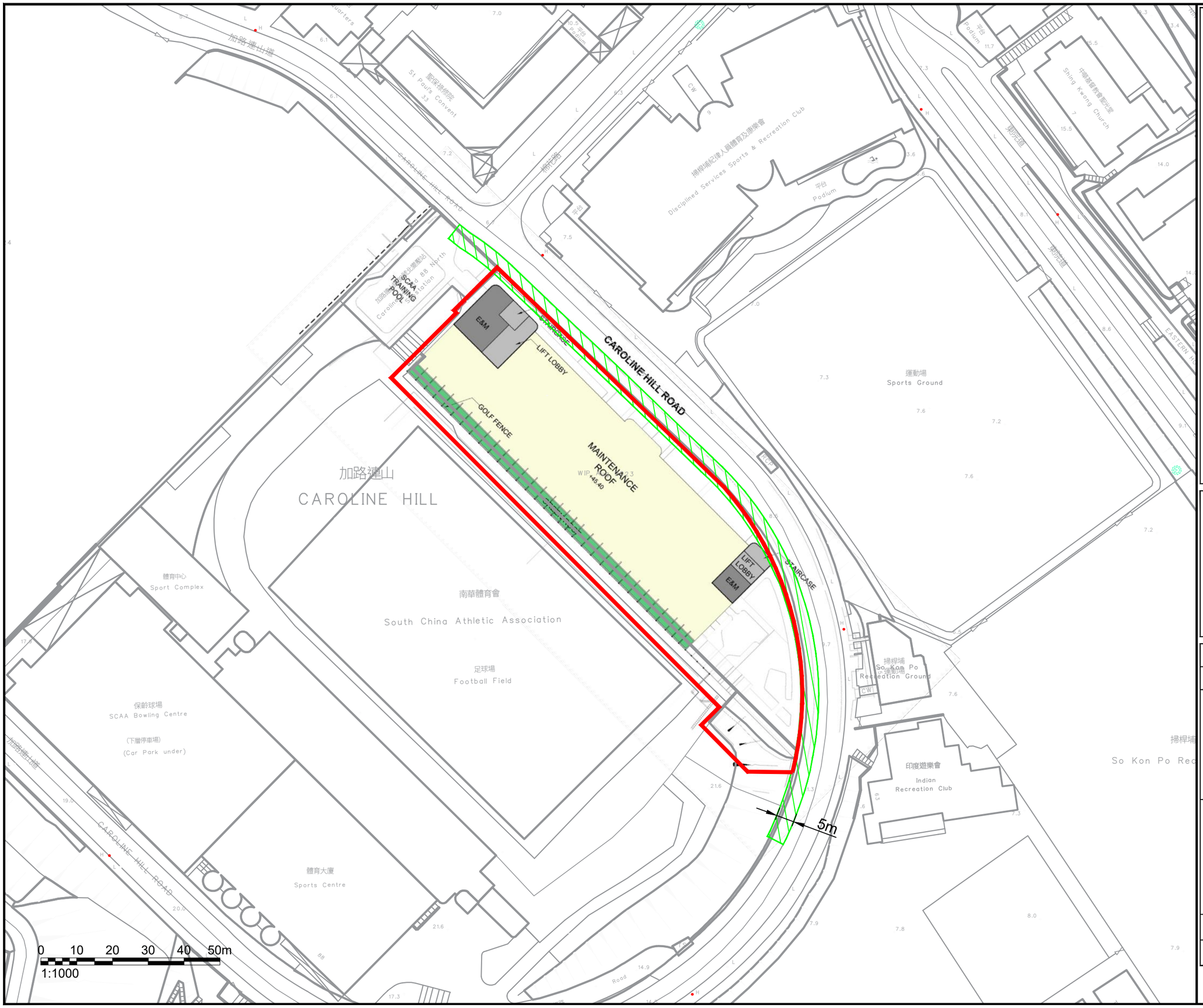

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT R/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-1	Revision : 0
Scale : AS SHOWN	Date : OCT 2025

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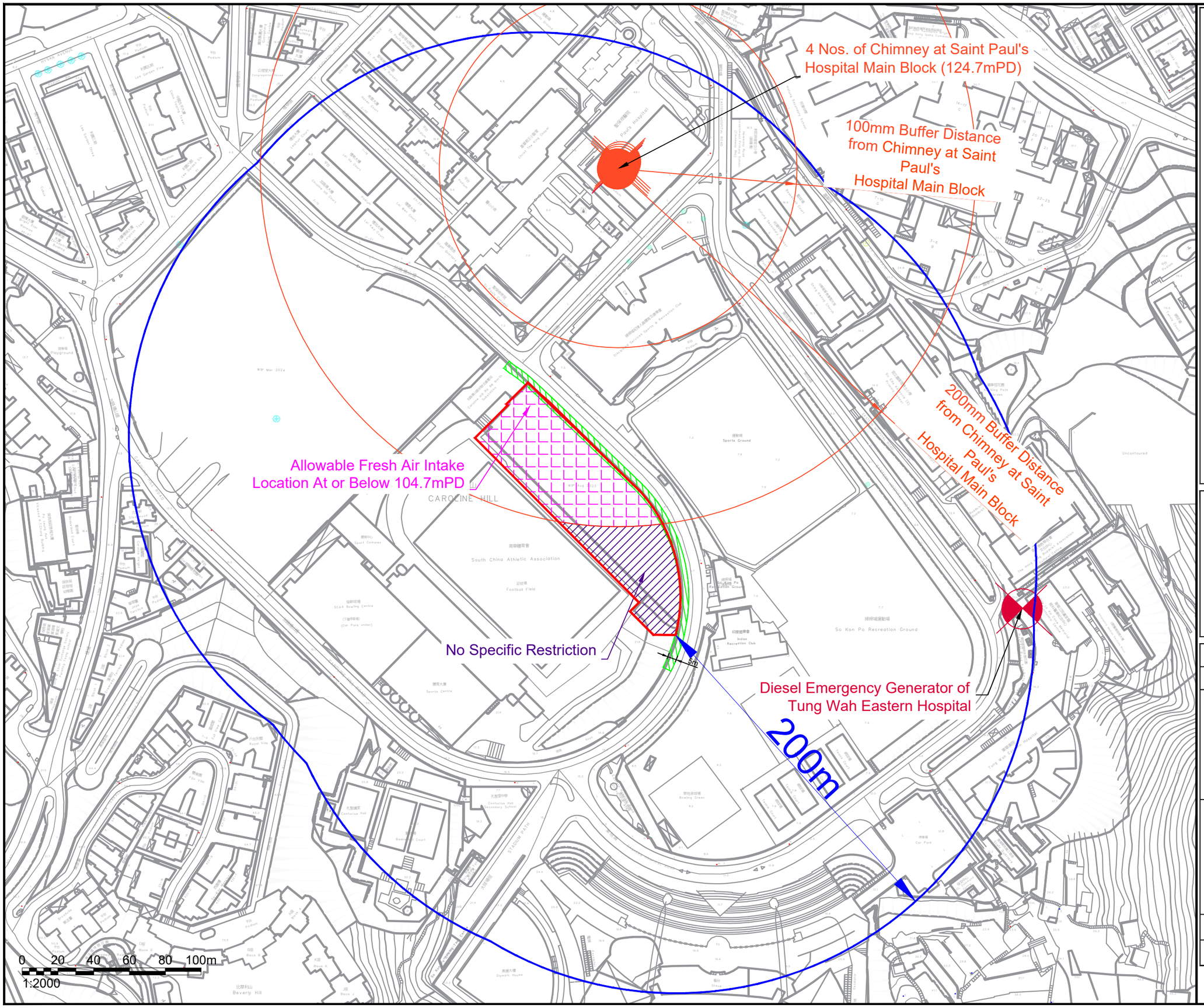

NOTES :

- SUBJECT SITE
- 200m ASSESSMENT AREA
- DIESEL EMERGENCY GENERATOR
- CHIMNEYS OF ST. PAUL'S HOSPITAL MAIN BLOCK
- ALLOWABLE FRESH AIR INTAKE LOCATION AT OR BELOW 104.7mPD
- NO SPECIFIC RESTRICTION FOR ALLOWABLE FRESH AIR INTAKE LOCATION
- ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

MAP OF INDUSTRIAL CHIMNEY SURVEY WITHIN 200M ASSESSMENT AREA

Drawing No : FIGURE 6-2	Revision : 0
Scale : AS SHOWN	Date : OCT 2025

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A3 420 x 297

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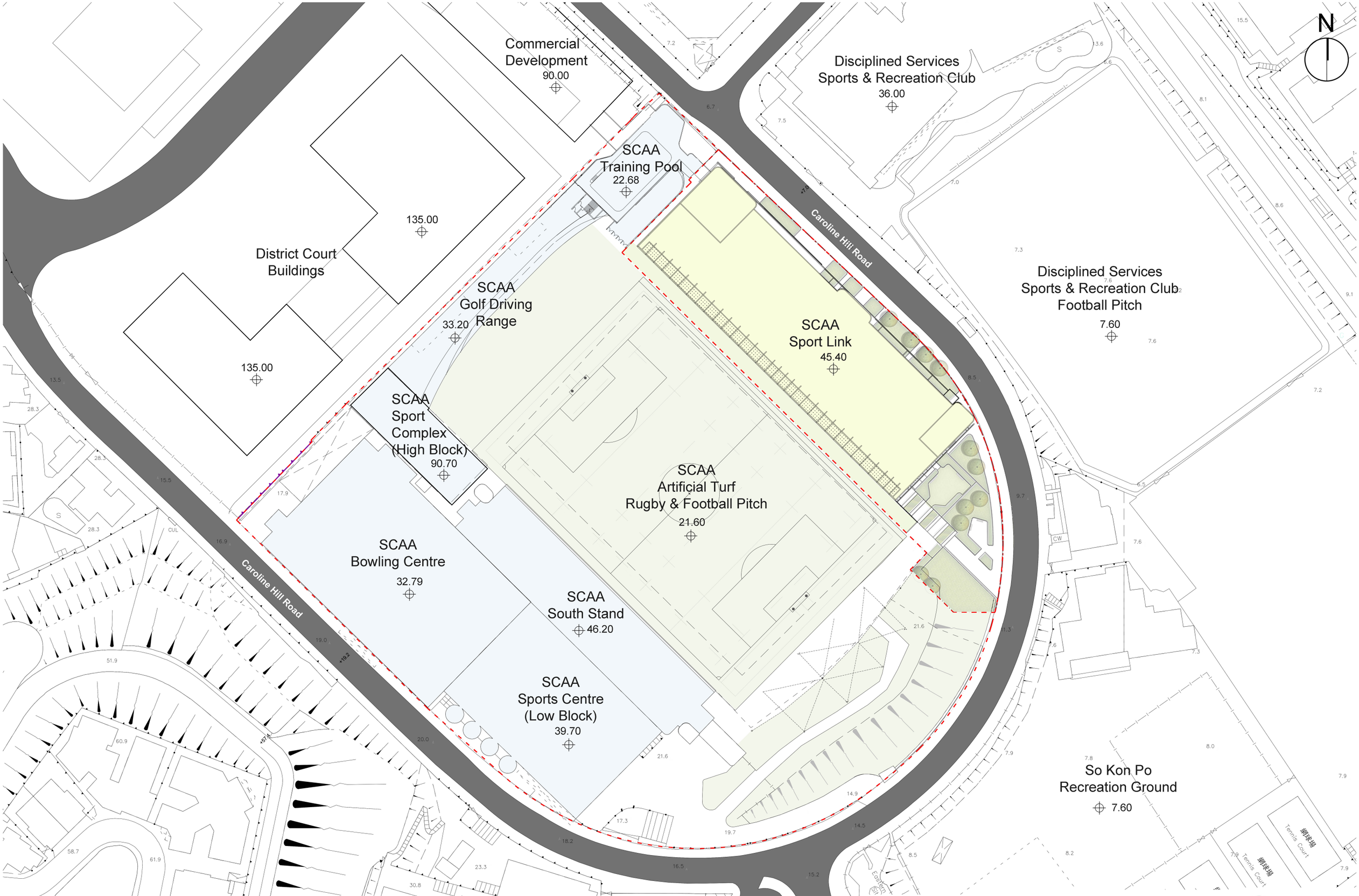
Appendix 3-1

Site Layout Plan



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

m 10 20 30 50 100

Design 2 Architects

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93
+7.46
+7.55
+8.36
+9.46
+10.80
+10.65
+12.23
+14.13
+15.83

STAIRCASE
STAIRCASE
STAIRCASE
LIFT LOBBY
+6.93
LIFT LOBBY
U/UL
LAY-BY AREA
CARPARK
+7.46
E&M
E&M
SCAA TRAINING POOL

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong
G/F Plan ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

SCAA TRAINING POOL

STAIRCASE

LIFT LOBBY

STAIRCASE

MUTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.06

STAIRCASE

LIFT LOBBY

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

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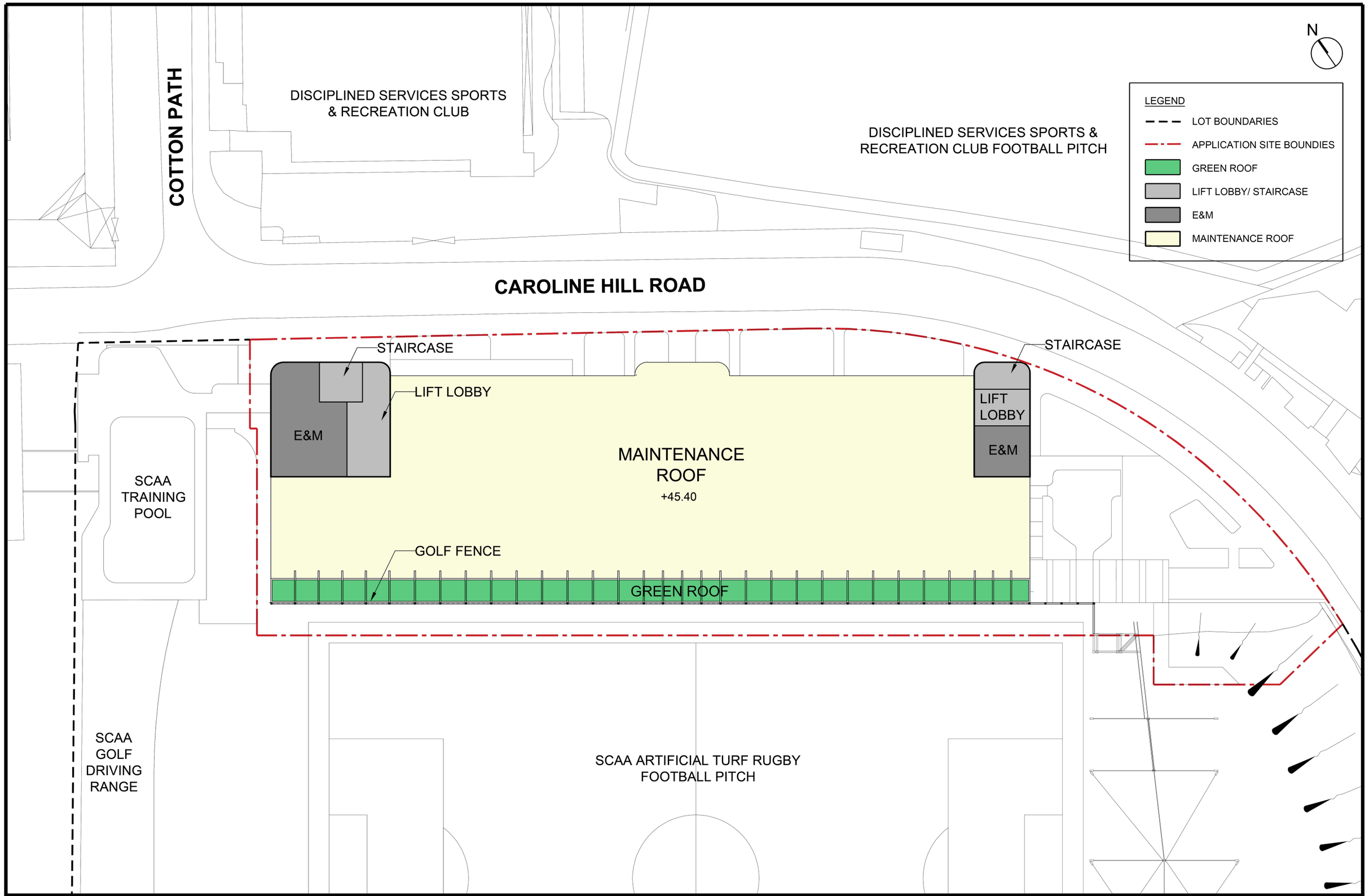
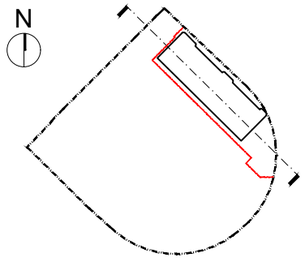


Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

UR/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- MAINTENANCE ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

11900

10540

3600

37940

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Main Roof (for maintenance only) +45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

7560

6580

Caroline Hill Road

Existing Slope

Approx. +10.65

Landscape Garden

+10.65

+8.811

Mean Street Level of North Site

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 13 Oct 2025

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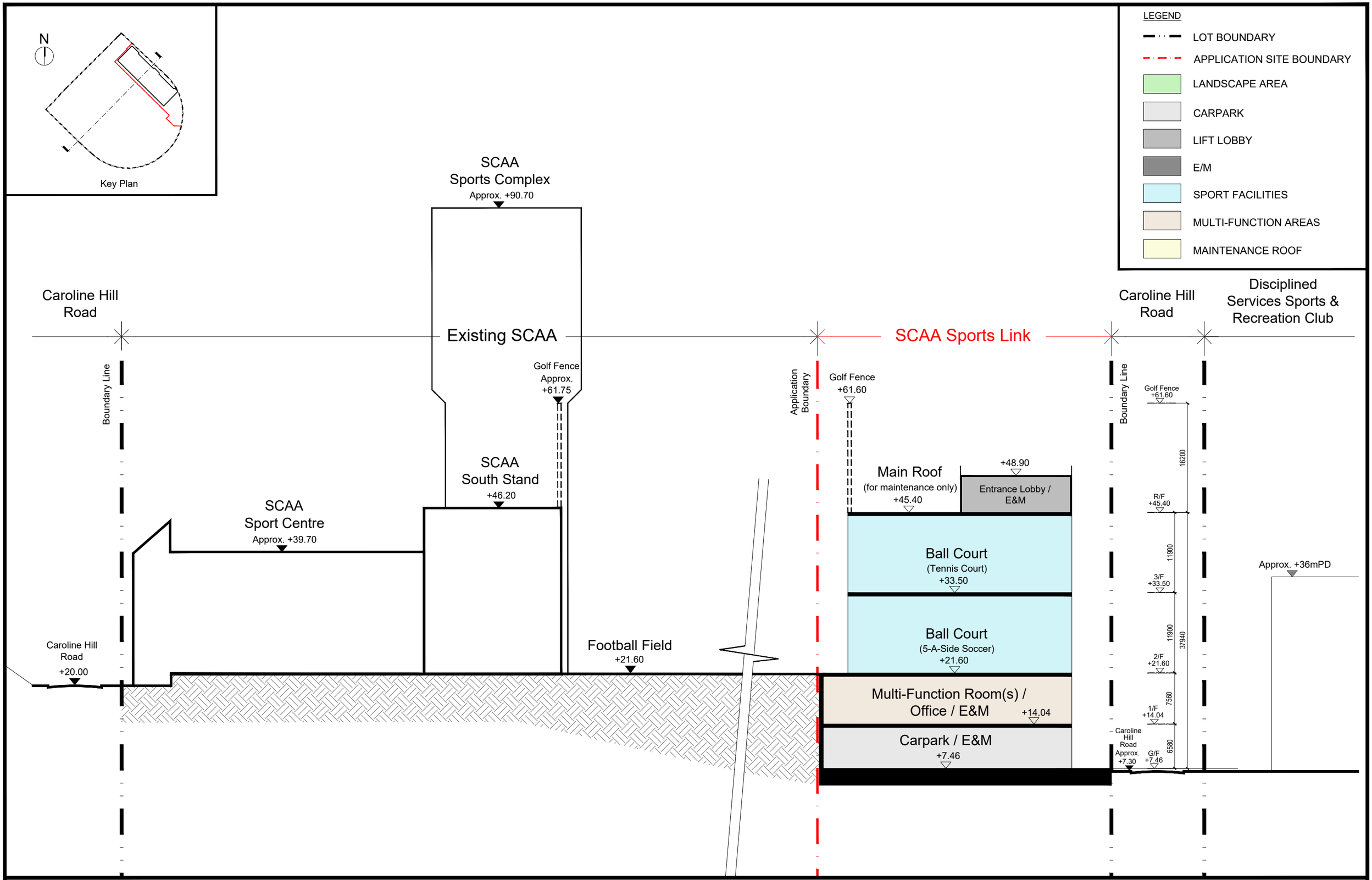

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

Appendix VII

Drainage Impact Assessment

Issue No. : 1

Issue Date : October 2025

Project No. : 2215

DRAINAGE IMPACT ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

[redacted]

Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.**	2215
Document Title	Drainage Impact Assessment		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	October 2025	1st Submission	Various	Joanne Ng	Grace Kwok

[redacted]

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5.2. Existing Drainage System 6
5.3. Catchment Area 6
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Figure 3-1 Subject Site Location and Existing Stormwater Drainage

List of Appendices

Appendix 3-1 Site Layout Plan
Appendix 6-1 Peak Runoff Estimation

1. Introduction

1.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare a Drainage Impact Assessment ("DIA") in support of the Section 16 Planning Application for Development of Comprehensive Sports & Recreation Centre ("Proposed Development") at North Site, South China Athletic Association, Caroline Hill Road, Causeway Bay, Hong Kong ("Subject Site").

2. Objectives

2.1.1. The objectives of this DIA are to review the existing drainage facilities in the vicinity of the Subject Site and to evaluate the potential impacts on the current drainage system due to the additional discharge from the Proposed Development, and proposed mitigation measures where appropriate to mitigate potential impacts.

3. Description of the Proposed Development

3.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in ***Appendix 3-1***.

3.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

3.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 3-1*** shows the location of the Subject Site and Existing Stormwater Drainage.

4. Drainage Impact Assessment

4.1. Legislation, Standards and Guidelines

4.1.1. Water quality in Hong Kong is legislated by the provisions of the Water Pollution Control Ordinance (Cap 358), 1980 ("WPCO"). Territorial Water has been subdivided into ten Water Control Zones ("WCZ") and four supplementary water control zones. The study area lies within the North Western WCZ. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be met during the construction and operation stages.

4.1.2. Besides as stipulated in the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 41(1), 40(2), 41(1), 90 and recap in ProPECC PN 5/93, domestic sewage should be discharged to a foul water sewer and surface water should be discharged via rainwater pipes to stormwater drains during operational phase.

5. Assessment Methodology

5.1.1. Surface runoff within the Subject Site will be collected and discharged to the stormwater drainage network located at the northeast of the Application Site, as shown in ***Figure 3-1***. Perimeter drains will be established at the site boundary to collect surface runoff from the Proposed Development during operation phase.

5.1.2. With reference to the Storm Water Drainage Manual, Planning, Design and Management published by Drainage Services Department (DSD), Rational Method shall be applied to estimate the peak surface runoff values. The idea behind the Rational Method is that for a spatially and temporally uniform intensity *i*, which continues indefinitely, the runoff at the outlet of a catchment will increase until the time concentration t_c, when the whole catchment is contributing flow to the outlet. The peak runoff is calculated as follows:

$$Q_P = 0.278\ C\ i\ A \quad \ldots\ldots (1)$$

Where

Q_p = *peak runoff in* m^3/s

C = *runoff coefficient (dimensionless)*

i = *rainfall intensity in mm/hr*

A = *catchment area in* km^2

5.1.3. Runoff coefficient C depends on the permeability, slope and pond character of the surface; rainfall intensity i, is the average rainfall intensity selected on the basis of the design rainfall duration and return period.

5.2. Existing Drainage System

5.2.1. According to the DSD drainage record plans, public stormwater pipes of 375mm in diameters are available on the north of the Subject Site along Caroline Hill Road.

5.2.2. As shown in ***Figure 3-1***, stormwater runoff generated from the Subject Site will be collected by the existing public stormwater network along Caroline Hill Road, via stormwater manhole SMH7021021. The location of the stormwater network is shown in ***Figure 3-1.***

5.3. Catchment Area

5.3.1. The coverage of the Subject Site before the Proposed Development is fully concrete paved. As advised by the Project Team, the Proposed Development will consist of approximately 14.6% of horizontal greenery area.

5.3.2. The details of the catchment area of the Subject Site before and after Proposed Development that contributes to the generation of stormwater generation is summarized in ***Table 5-1***.

Table 5-1 Catchment area of the Subject Site before and after Proposed Development

Catchment	Catchment Area (m^2)		
	Total	Concrete	Greenery
Subject Site Before Development	6,132	6,132	0
Subject Site After Development	6,132	5,235	897

6. Evaluation of Drainage Flow Rate

6.1.1. The surface runoff discharged from the Subject Site is calculated from equation (1) as mentioned in Section 5.1.2. The peak runoff from the Subject Site area before Proposed Development is 0.447 m^3/s whereas the peak runoff after Proposed Development is 0.406 m^3/s. Detailed calculation is tabulated in ***Appendix 6-1*** and summarized in ***Table 6-1*** below:

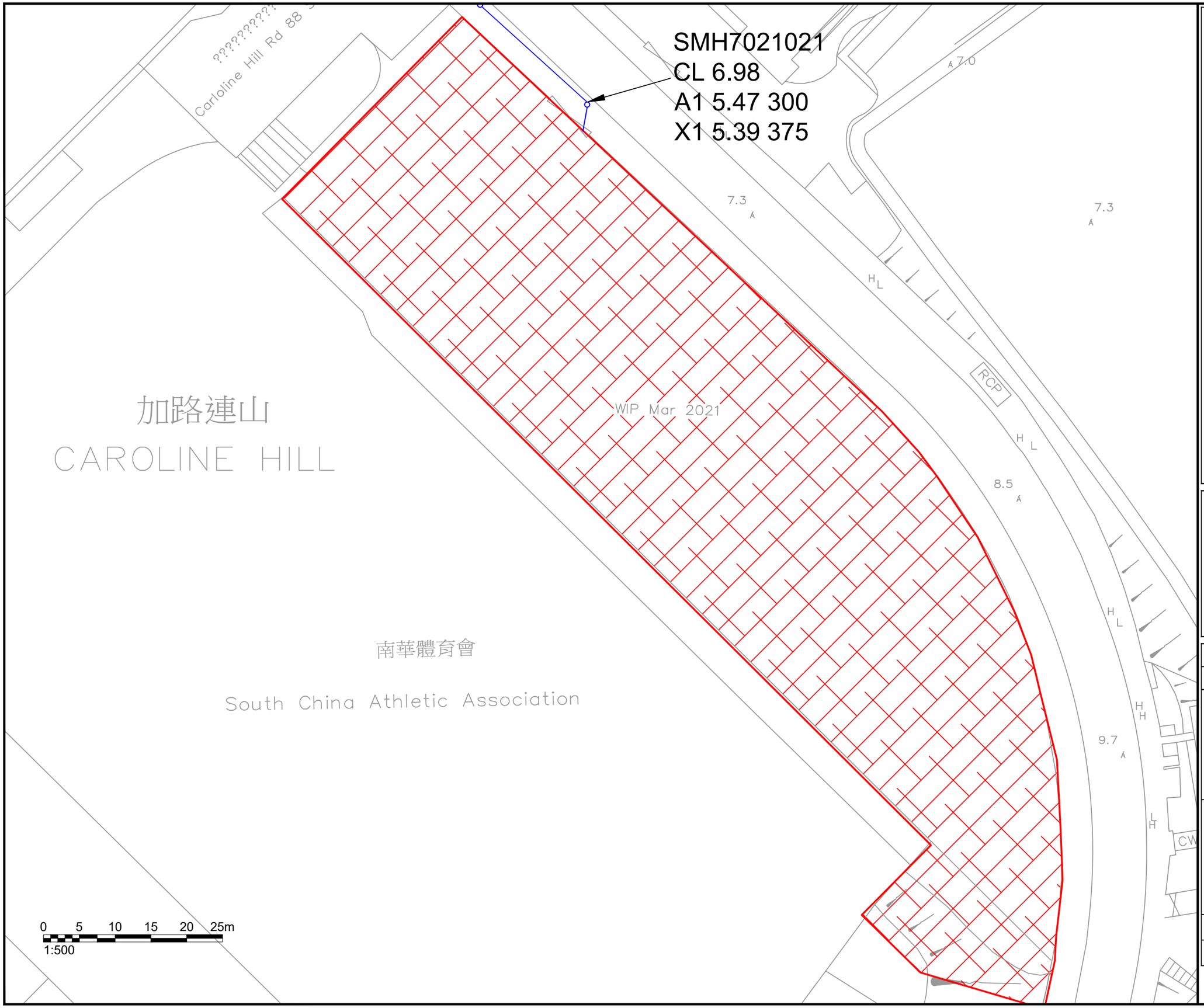
Table 6-1 Peak Flow of Subject Site

Catchment	Peak Flow (m^3/s)		Percentage (%)
	Before	After	
Subject Site	0.447	0.406	-9.17

6.1.2. Based on the calculation above, there is an anticipated 9.17% decrease in peak runoff from the Subject Site area after the Proposed Development. It is anticipated that no adverse stormwater drainage impact due to the Proposed Development would be imposed to the existing public drainage system at Caroline Hill Road.

7. Conclusion

7.1.1. A reduction in contribution of stormwater surface runoff associated with the proposed development is anticipated, it is therefore concluded that no potential drainage impact on existing stormwater system is anticipated.



NOTES :

Subject Site

Drainage Connection

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	ZX

Project :

Proposed SCAA Sports Link at
South China Athletic Association
88 Caroline Hill Road, Hong Kong

Drawing Title :

Subject Site Location and
Existing Stormwater Drainage

Drawing No :	Revision :
Figure 3-1	0
Scale : As Shown	Date : August 2025

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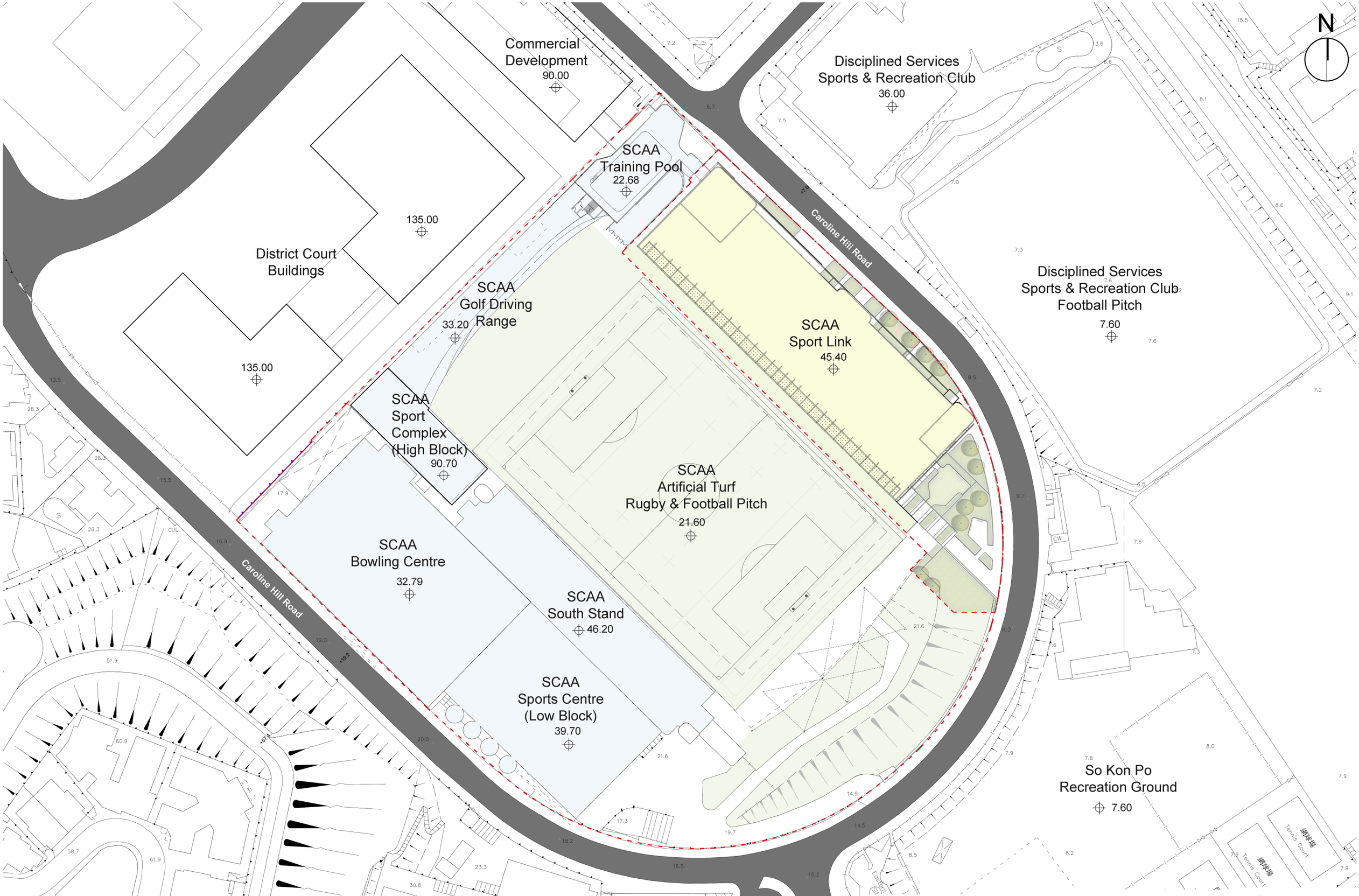
A3 420 x 297

Appendix 3-1

Site Layout Plans



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

m 10 20 30 50 100

Design 2 Architects

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93
+7.46
+7.55
+8.36
+9.46
+10.80
+10.65
+12.23
+14.13
+15.83

STAIRCASE
STAIRCASE
STAIRCASE
LIFT LOBBY
+6.93
LIFT LOBBY
U/UL
LAY-BY AREA
CARPARK
+7.46
E&M
E&M
SCAA TRAINING POOL

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong
G/F Plan ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
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- E&M
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- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

SCAA TRAINING POOL

STAIRCASE

LIFT LOBBY

STAIRCASE

MUTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.06

STAIRCASE

LIFT LOBBY

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
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COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
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COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

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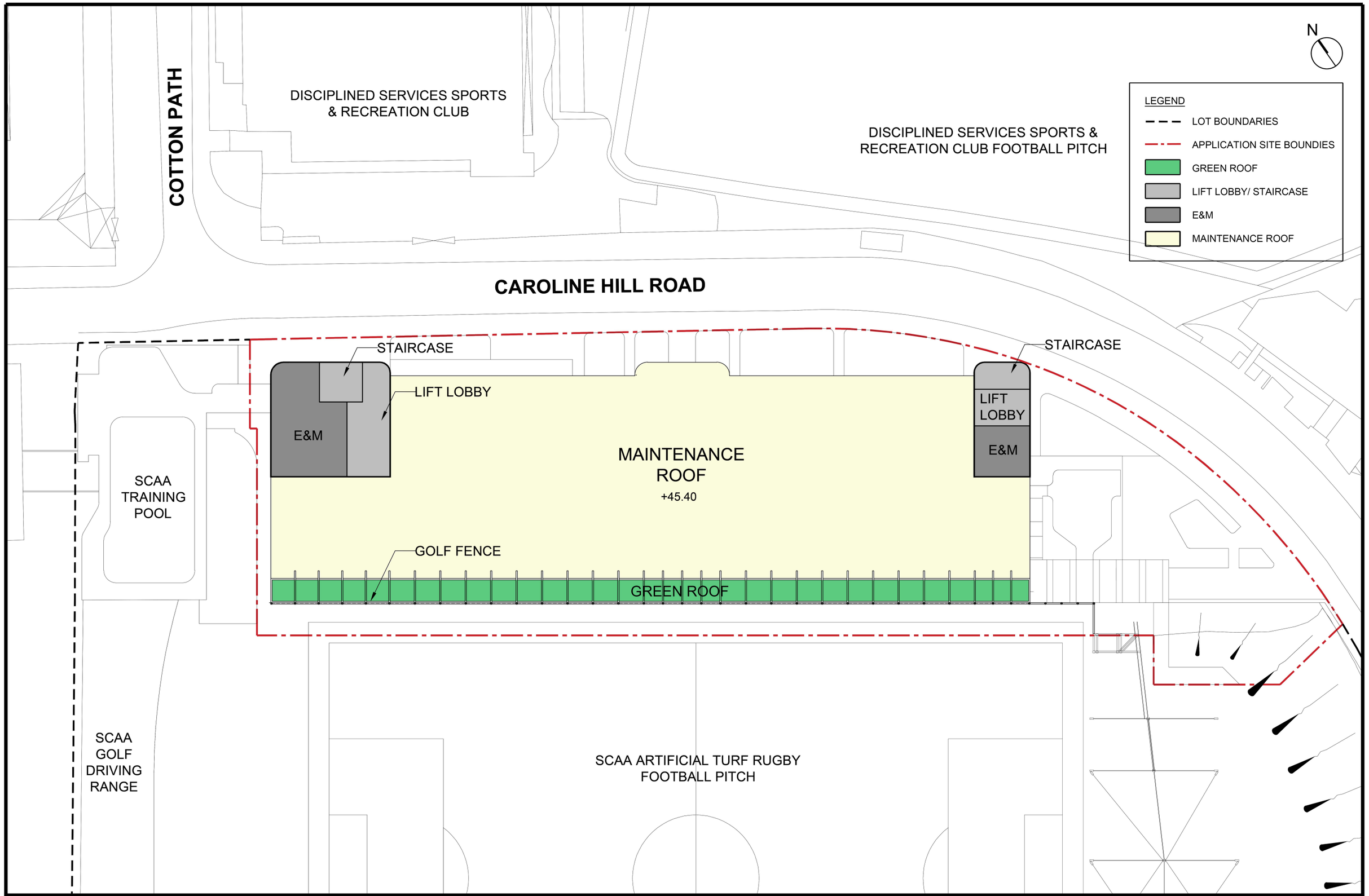

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

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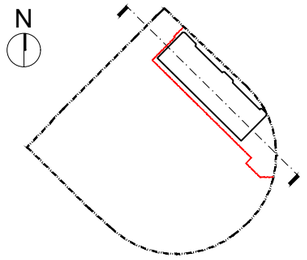
UR/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025



Key Plan

LEGEND

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- APPLICATION SITE BOUNDARY
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- CARPARK
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- SPORT FACILITIES
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- MAINTENANCE ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

11900

10540

3600

37940

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Main Roof (for maintenance only) +45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

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Multi-Function Room(s) / Office / E&M +14.04

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Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

7560

6580

Caroline Hill Road

Existing Slope

Approx. +10.65

Landscape Garden

+10.65

+8.811

Mean Street Level of North Site

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 13 Oct 2025

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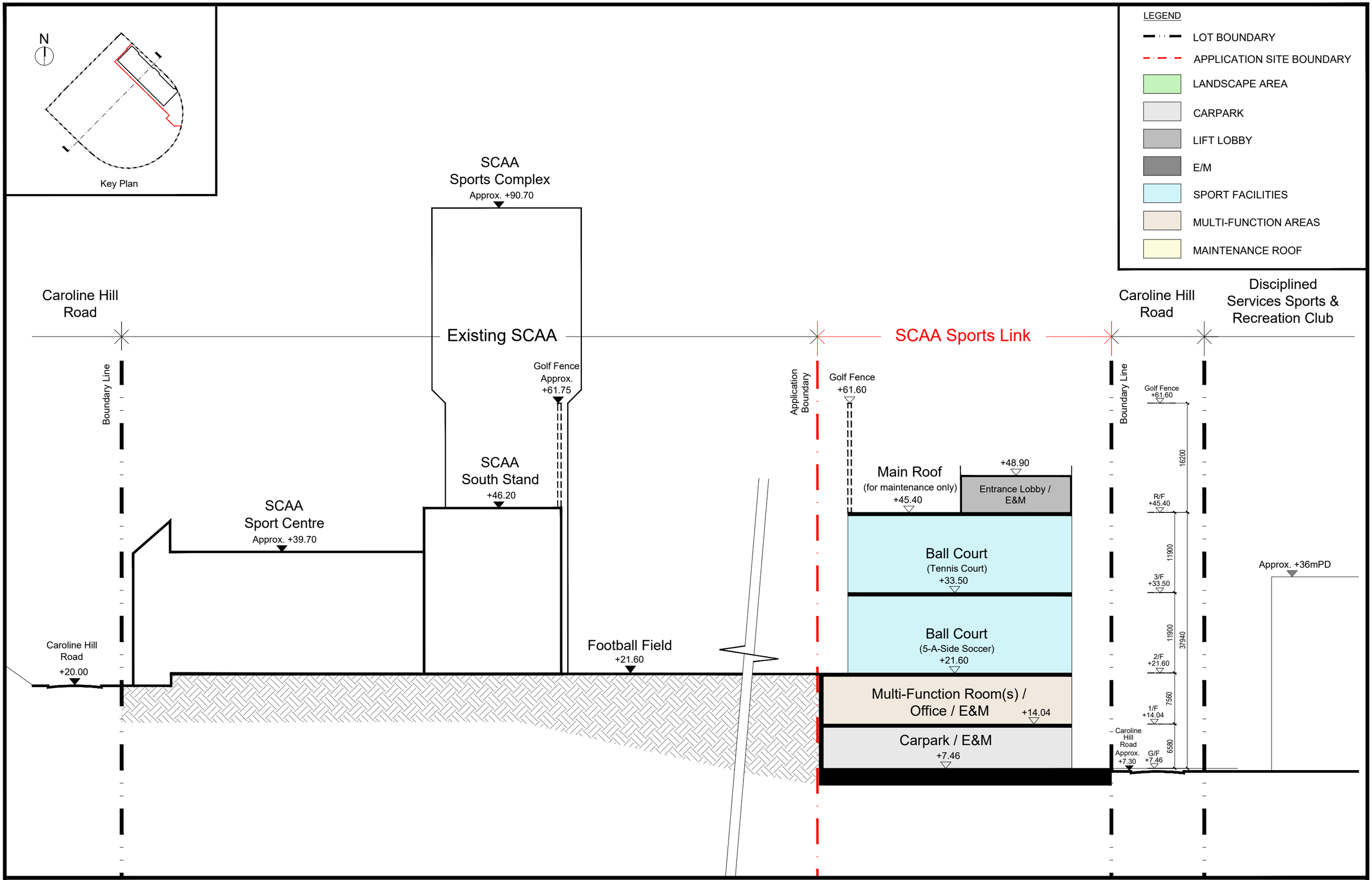

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 13 Oct 2025

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Appendix 6-1

Peak Runoff Estimation

50-year return period

Peak Runoff Estimation Before Proposed Development

Catchment	Topography		Average Slope, H (m per 100m)[1]	Total Catchment Area, A (m2)	Land Use	Catchment Area, A (m^2)	Flow Distance, L (m)	Inlet Time, t_o (min) [2]	Flow Time, t_f (min) [3]	Duration, t_c (min) [4]	50 - year return period			Extreme Mean Intensity, i (mm/hr) [6]	Runoff Coefficient, C [6]	Rainfall Increase due to Climate Change, % [8]	Rainfall Increase for Design Allowance [9]	50-year Return Period Peak Runoff, Q_p (m^3/s) [10]	Total Peak Runoff, Qp (m3/s) [9]
	Inlet invert level (mPD)	Outlet invert level (mPD)			Surface Characteristics						Storm Constant, a [5]	Storm Constant, b [5]	Storm Constant, c [5]					
Subject Site	11.3	6.7	2.91	6132	Concrete	6132	158	7.73	0	7.73	505.5	3.29	0.355	215.63	0.95	16.0	12.1	0.447	0.447
					Greenery	0									0.35	16.0	12.1	0.000	

Peak Runoff Estimation After Proposed Development

Catchment	Topography		Average Slope, H (m per 100m)[1]	Total Catchment Area, A (m2)	Land Use	Catchment Area, A (m^2)	Flow Distance, L (m)	Inlet Time, t_o (min) [2]	Flow Time, t_f (min) [3]	Duration, t_c (min) [4]	50 - year return period			Extreme Mean Intensity, i (mm/hr) [6]	Runoff Coefficient, C [7]	Rainfall Increase due to Climate Change, % [8]	Rainfall Increase for Design Allowance [9]	50-year Return Period Peak Runoff, Q_p (m^3/s) [10]	Total Peak Runoff, Qp (m3/s) [9]
	Inlet invert level (mPD)	Outlet invert level (mPD)			Surface Characteristics						Storm Constant, a [5]	Storm Constant, b [5]	Storm Constant, c [5]					
Subject Site	11.3	6.7	2.91	6132	Concrete	5235	158	7.73	0	7.73	505.5	3.29	0.355	215.63	0.95	16.0	12.1	0.382	0.406
					Greenery	897									0.35	16.0	12.1	0.024	

Note:

[1] Average slope, H is calculated using the highest and lowest elevations of the Subject Site and catchments as well as the flow distance. The elevation levels are referenced from the topographic survey map while the flow distance is measured between the highest and lowest elevation points.

[2] Brandsby William's equation is referenced from Section 4.3.3 in DSD Stormwater Drainage Manual (Fifth Edition).

$$t_o = \frac{0.14465L}{H^{0.2} A^{0.1}}$$

where t_o = time of concentration of a natural catchment (min.)

A = catchment area (m^2)

H = average slope (m per 100 m), measured along the line of natural flow, from the summit of the catchment to the point under consideration

L = distance (on plan) measured on the line of natural flow between the summit and the point under consideration (m)

[3] t_f is assumed to be 0 for conservative estimation.

[4] $$t_c = t_o + t_f$$

[5] Storm constants are referenced to Table 3a in DSD Stormwater Drainage Manual (Fifth Edition) based on corresponding return periods.

[6] Intensity-Duration-Frequency calculation is referenced from Section 4.3.3 in DSD Stormwater Drainage Manual (Fifth Edition).

$$i = \frac{a}{(t_d + b)^c}$$

where i = extreme mean intensity in mm/hr,

t_d = duration in minutes ($t_d \leq 240$), and

a, b, c = storm constants given in Tables 3a, 3b, 3c and 3d.

[7] Runoff coefficient is referenced from Section 7.5.2 in DSD Stormwater Drainage Manual (Fifth Edition). For conservative estimation, coefficient of 0.35 is assumed for unpaved area while that of 0.95 for paved area.

[8] Rainfall increase precentage due to climate change is referenced from Table 28 in Stormwater Drainage Manual Corrigendum No. 1/2022. 16.0% for End of 21st Century is adopted as worst case scenario.

[9] Rainfall increase precentage for design allowance calculation (i.e. 12.1%) is referenced from Table 31 in DSD Stormwater Drainage Manual - Corrigendum No. 1/2022.

[10] Rational method for peak runoff estimation is referenced from Section 4.3.3 in DSD Stormwater Drainage Manual (Fifth Edition).

$$Q_p = 0.278\, C\, i\, A$$

where Q_p = peak runoff in m^3/s

C = runoff coefficient (dimensionless)

i = rainfall intensity in mm/hr

A = catchment area in km^2

Appendix VIII

Sewerage Impact Assessment

Issue No. : 1
Issue Date : October 2025
Project No. : 2215

SEWAGE IMPACT ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

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Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.**	2215
Document Title	Sewage Impact Assessment		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	October 2025	1st Submission	Coco Chin	Joanne Ng	Grace Kwok

[redacted]

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Appendix 6-1 Estimation of Sewerage Flow from Proposed Redevelopment

1. Introduction

1.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare a Sewerage Impact Assessment ("SIA") in support of the Section 16 Planning Application for the Proposed SCAA Sports Link ("Proposed Development") at South China Athletic Association, 88 Caroline Hill Road, Hong Kong ("Subject Site").

2. Objectives

2.1.1. Main objectives of the study are to review the existing drainage facilities in the vicinity of the Proposed Development at the Subject Site, evaluate potential impacts based on the proposed sewerage drainage, recommend appropriate options for sewerage discharge, if necessary.

3. Site Description

3.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in ***Appendix 3-1***.

3.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

3.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 3-1*** shows the location of the Subject Site.

4. Relevant Government Standards

4.1.1. Water quality in Hong Kong is legislated by the provisions of the *Water Pollution Control Ordinance (Cap 358), 1980 (WPCO).* Territorial Water has been subdivided into ten Water Control Zones (WCZ) and four supplementary water control zones. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be met during the operation stage.

4.1.2. Besides as stipulated in the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 41(1), 40(2), 41(1), 90 and recap in ProPECC PN 1/23, domestic sewage should be discharged to a foul water sewer and surface water should be discharged via rainwater pipes to stormwater drains during operation phase.

5. Description of Sewerage System

5.1.1. Drainage record plans were obtained from the drawing office of the Drainage Services Department ("DSD") and the Proposed Development is indicated on the drainage record plans as shown in ***Figure 3-1***. Concerned sewerage network was identified for succeeding estimation of the potential sewerage impact to the downstream sewers associated with the Proposed Development.

5.1.2. The sewerage network of existing gravity sewers along Caroline Hill Road and Leighton Road collects sewage generated from the Proposed Development and the surrounding catchment areas. The sewage discharged from the corresponding catchment areas is conveyed to Wan Chai East Preliminary Treatment Works, and discharged to Stonecutter Island Sewage Treatment Works (SCISTW) for further treatment and ultimate disposal.

5.1.3. The sewage generated from Proposed Development will be conveyed to the existing manhole FMH7019720 as shown in ***Figure 3-1***.

5.1. Design Standard Guideline

5.1.1. This assessment has been prepared in accordance with the following documents:

- For the roughness of sewers, the recommended value in "Sewerage Manual Part 1" published by DSD has been adopted;
- The recommended unit flow factors ("UFF") and peaking factors in "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (Report No.:

EPD/TP1/05" ("GESF") published by Environmental Protection Department ("EPD") have been adopted to estimate the sewage generated from the Proposed Development.

5.2. Design Parameters and Assumptions

5.2.1. Based on the above reference documents, the UFF for different types of population as shown in ***Table 5-1*** have been used in calculating the sewerage flow from the Proposed Development.

Table 5-1 Global Unit Flow Factor

Development Type	Unit	UFF (m^3/day)
Commercial Flow[1]		
J11, Community, Social & Personal Services	Employee	0.28
Visitors[2]	Person	0.032

Notes:
[1] Category of UFFs is selected according to Table T-1 and Table T-2 of the GESF.
[2] The unit flow factor for visitors of recreational facility is made reference to Kai Tak Multi-purpose Sports Complex Environmental Impact Assessment Report (AEIAR-204/2017), 0.032 m3/person/d.

6. Evaluation of Sewage Flow Rate

6.1. Predicted Sewage Flow from Proposed Development

6.1.1. The total estimated Average Dry Weather Flow ("ADWF") from the Proposed Development is estimated to be 27.02 m^3/day. The sewage flow estimation for Proposed Development is summarized in ***Table 6-1***. The population estimated ADWF of Proposed Development is summarized in ***Appendix 6-1***.

Table 6-1 Sewage Flow Estimation for The Proposed Development

Type of Occupancy[1]	Population		Category[2]	UFF (m^3/day)	ADWF (m^3/day)
Office	14	Person	Community, Social & Personal Services	0.28	3.92
Visitors	722	Person	Visitors[3]	0.032	23.10
				Total (m^3/day)	**27.02**

Notes:

[1] Information extracted from SoA table received on 13 June 2025.

[2] UFFs for various occupancy types are adopted according to Table T-1 and Table T-2 of the GESF.

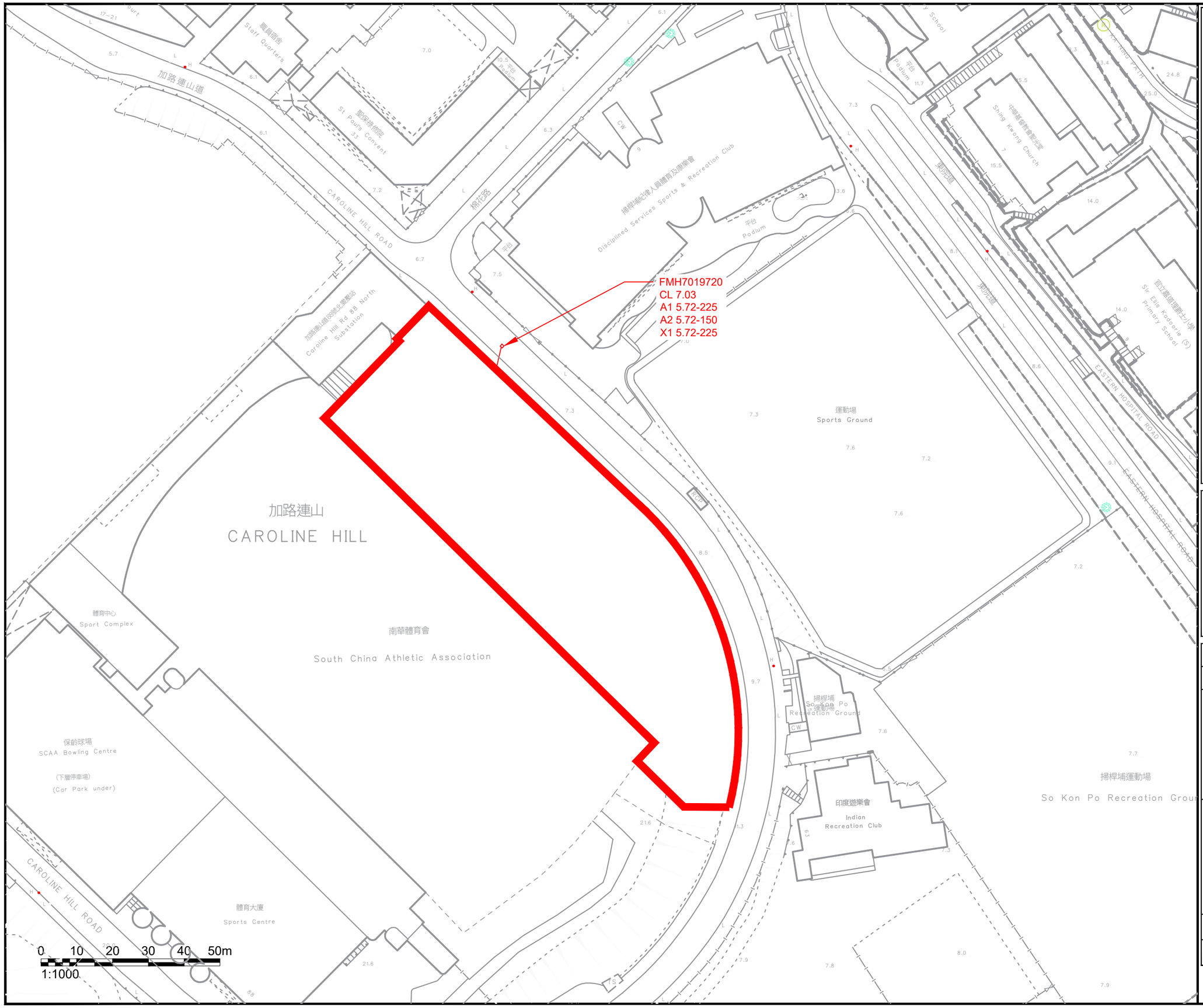
[3] The unit flow factor for visitors of recreational facility is made reference to Kai Tak Multi-purpose Sports Complex Environmental Impact Assessment Report (AEIAR-204/2017), 0.032 m3/person/d.

6.1.2. According to the previous approved SIA report dated 01 September 2022, the Subject Site was previously proposed for an E-Sport Complex development with ADWF of 198.4 m^3/day. In comparison, the current Proposed Development has a much smaller sewage generation, with an estimated ADWF of 27.02 m^3/day. This represents an approximate reduction of 86% when compared with the previous SIA. Despite the reduction in flow, the sewage from the Proposed Development will continue to discharge to the same terminal manhole as previous approved SIA. The upstream and downstream sewerage systems were also remained the same. Given the reduction in sewage flow by comparing to the previous approved SIA, no adverse sewerage impact is anticipated.

7. Conclusions

7.1.1. According to the sewage flow estimation, the Proposed Development will discharge in a substantially lower ADWF compared to the previous approved SIA.

7.1.2. As the sewerage from the Proposed Development will continue to discharge to the same terminal manhole with unchanged upstream and downstream sewerage systems compared to previous approved SIA, no adverse impact to public sewerage system associated with the Proposed Redevelopment is expected. No immediate upgrading or improvement works to the existing local sewerage system is required.



NOTES :

SUBJECT SITE

EXISTING SEWERAGE SYSTEM

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC
Project :	PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG
Drawing Title :	SUBJECT SITE LOCATION
Drawing No : FIGURE 3-1	Revision : 0
Scale : AS SHOWN	Date : OCT 2025

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A3 420 x 297

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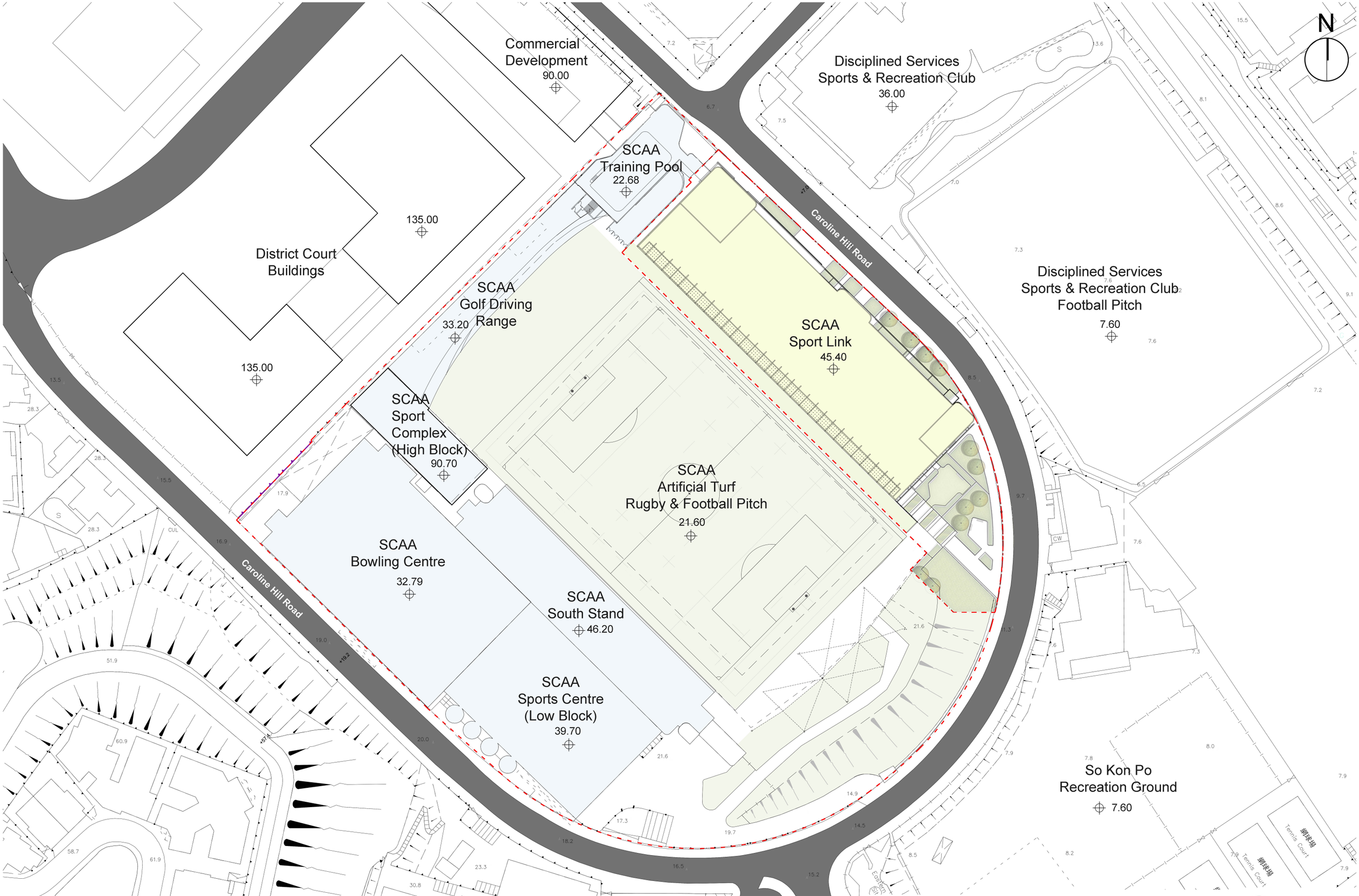
Appendix 3-1

Site Layout Plan



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

m 10 20 30 50 100

Design 2 Architects

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93
+7.46
+7.55
+8.36
+9.46
+10.80
+10.65
+12.23
+14.13
+15.83

STAIRCASE
STAIRCASE
STAIRCASE
LIFT LOBBY
+6.93
LIFT LOBBY
U/UL
LAY-BY AREA
CARPARK
+7.46
E&M
E&M
SCAA TRAINING POOL

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong
G/F Plan ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

SCAA TRAINING POOL

STAIRCASE

LIFT LOBBY

STAIRCASE

MUTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.06

STAIRCASE

LIFT LOBBY

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

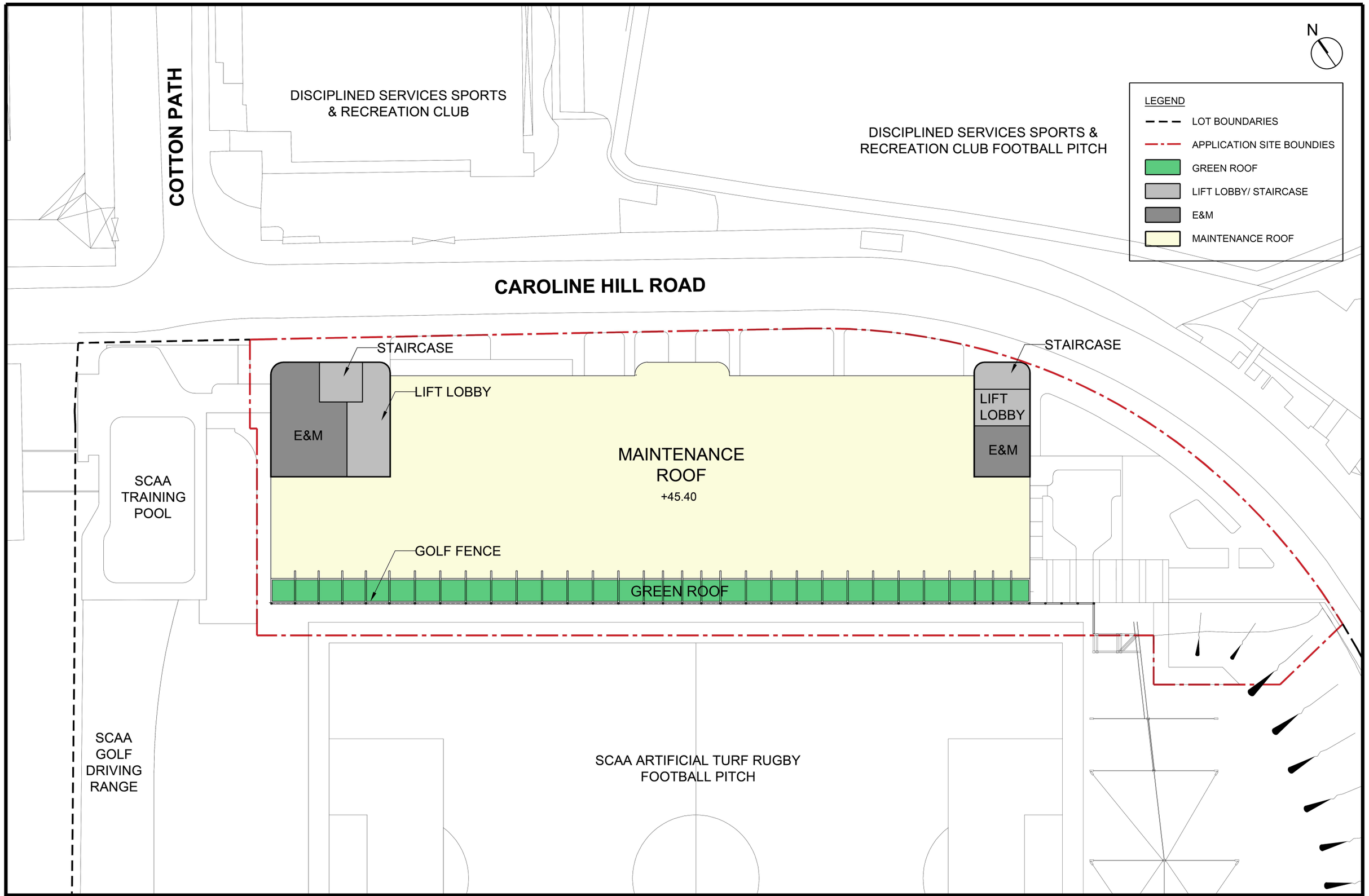
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

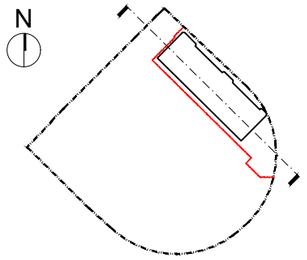
Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

UR/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- MAINTENANCE ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

11900

10540

3600

37940

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Main Roof (for maintenance only) +45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

7560

6580

Caroline Hill Road

Existing Slope

Approx. +10.65

Landscape Garden

+10.65

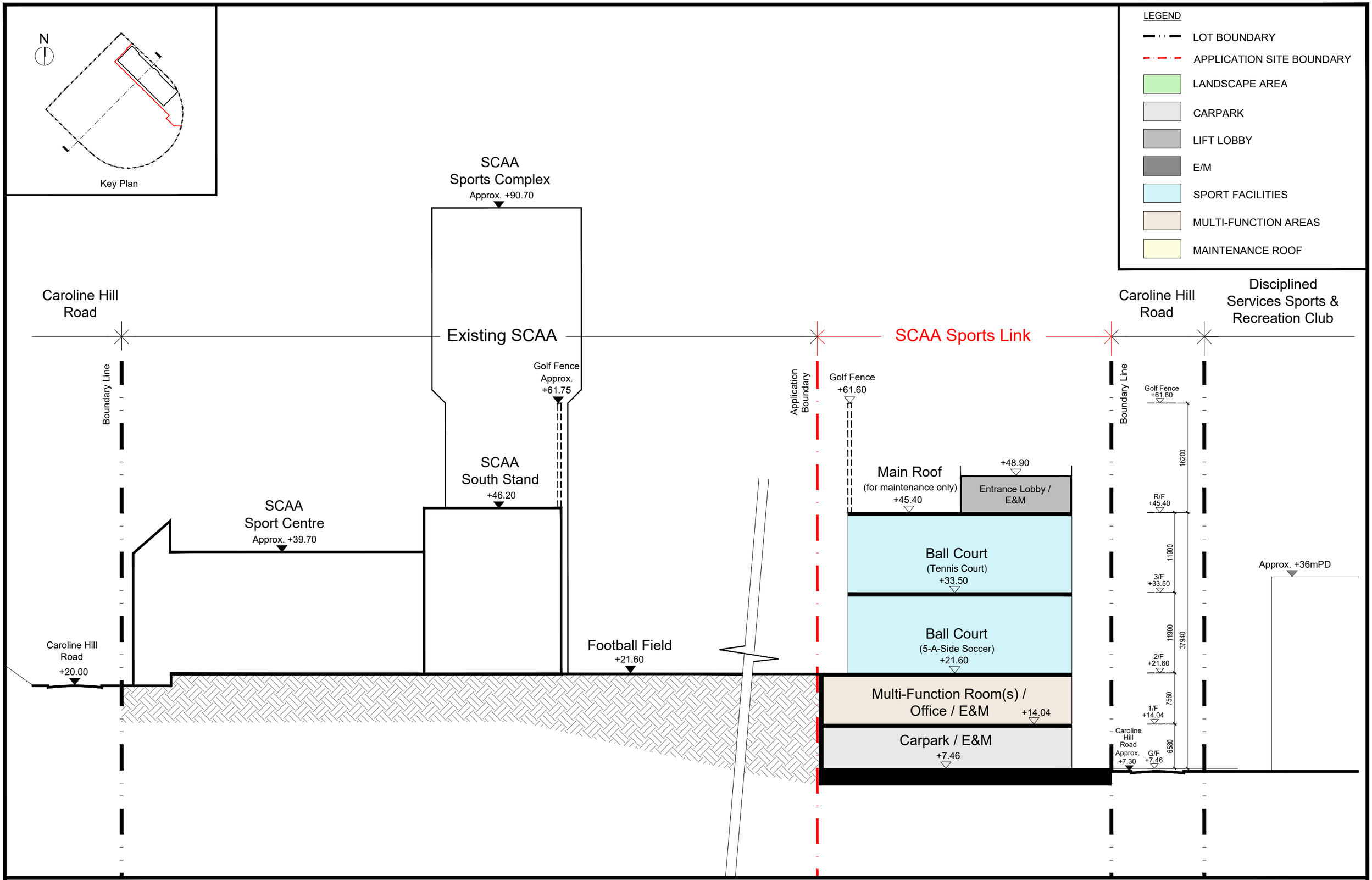
+8.811

Mean Street Level of North Site

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

Appendix 6-1

Estimation of Sewerage Flow from Proposed Redevelopment

Appendix 6-1 : Estimation of Sewage Flow from the Proposed Development

Proposed Development

Type of Occupancy[1]	No. of Occupancy	Unit Flow Factor[2]		Total Average Sewage Discharge (m^3/day)
		Category	m^3/day	
Office	14	Community, Social & Personal Services	0.28	3.92
Visitors	722	Visitors	0.032	23.10
Total	**736**			**27.02**
				0.0003 (m3/s)

Note:

[1] The information is extracted from SoA table received on 13 June 2025

[2] The unit flow factor is made reference to "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0)", published by EPD.

Appendix IX

Visual Impact Assessment

Proposed SCAA Sports Link
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Visual Impact Assessment

October 2025

Prepared By:
ADI Limited

ADI

Project Title	Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung
Report Title	Visual Impact Assessment
Date of Issue	13th October 2025

	Name	**Signature**	**Date**
Compiled by	Elsa Kwong		13th October 2025
Checked by	Barry Lo		13th October 2025
Approved by	Alison Lee		13th October 2025

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4.0 Visual Impact Assessment
5.0 Evaluation of Overall Visual Impact and Conclusion

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Table 5.1 Summary of Visual Impact

1.0 Introduction

1.1 This report sets out to assess the potential visual impacts of the proposed new building of SCAA Sports Link, at South China Athletic Association, 88 Caroline Hill Road in Wong Nai Chung. The proposed development falls within zone of "OU(Sports and Recreation Club)" in Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21 ("Approved OZP"). The visual impact assessment is prepared in support of the S16 planning application to review visual changes to key public viewers and on the visual resources in the visual context of South China Athletic Association (SCAA) and to appraise the potential impact of the proposed new building in the SCAA on the overall visual composition. This report is prepared in accordance with TPB PG-No.41 'Guidelines on Submission of Visual Impact Assessment for Planning Applications to the Town Planning Board'.

1.2 This report should be read in conjunction with the architectural drawings and landscape proposal in separate appendices of this application.

2.0 The Proposed Development

2.1 The application site has area of approximately 6,132m^2 at the north part of the SCAA at Caroline Hill Road and So Kon Po. SCAA is an enclave of sports, recreational and other institutional facilities. The surrounding area of at Caroline Hill Road is also characterised by sports and recreation clubs or open spaces including Disciplined Services Sports and Recreation Club, So Kon Po Recreation Ground, Indian Recreation Club and Hong Kong Stadium in the northeast and to south adjacent to the site. G/IC buildings – Confucius Hall Secondary School (+39.7mPD), planned G/IC District Court and commercial buildings (max. +135mPD) under construction are also located at Caroline Hill Road immediately in the south and to the northwest of the site. Three existing buildings within SCAA including Sports Complex, Bowling Centre and Sports Centre are located at the west part of SCAA. The site is vacant pending for development. Only a few "self-seeded" trees are found in a narrow strip of soil on the top of sheet pile structures in the north and on retaining structure in the west. The site lies on flat land abutting to Cariline Hill Road and surrounds by the SCAA football field/golf practicing ground in the west and the training pool in the north at a higher elevation of about + 21.60 to +22mPD. Main entrance to the site is via Caroline Hill Road at about +7.50mPD.

2.2 Under the Approved OZP, the site falls with zone of "OU", The proposed building is regarded as "Place of Recreation, Sports or Culture" use, which is always permitted in the "Other Specified Uses (Sports and Recreation Club)" ("OU (Sports and Recreation Club)") zone on the approved Wong Nai Chung Outline Zoning Plan (OZP) No. S/H7/21. There is no building height restriction is stipulated in the OZP.

2.3 The development proposal will introduce a 4-storey new building of SCAA Sports Link with a proposed height of +45.40mPD. Entrance lobbies, car parking and E&M utilities are located at G/F. 1/F & 2/F & 3/F will accommodate multi-function rooms, ancillary office/ ancillary uses, ball courts such as tennis court and 5-a-side soccer, and plant rooms etc. The roof is reserved for maintenance and utilities and green roof. The existing golf net along the west edge will be reconstructed to integrate with the building design.

2.4 A sitting-out garden is proposed at the southernmost of the site and at street level along Caroline Hill Road to soften the development edge and enhances the streetscape amenity.

2.5 Main vehicular entrance is from Caroline Hill Road at about +7.46mPD. Pedestrians and

visitors would also able to enter the proposed building from Caroline Hill Road via the sitting-out garden and the lift lobbies. Pedestrian connections are also available at elevated levels from 2/F of the new building to access the existing SCAA football field/golf practising ground and the training pool.

2.6 Part rock cut slope located at the south within the site, where currently covered by weedy vegetation, will be reformed with new tree planting on slope top and hydroseeding on slope for enhancing the visual “green” of the SCAA. The new retaining structure associated with the reformed slope will be integrated with green roof and green wall to disguise its functional appearance.

2.7 The design and disposition of the proposed building are making reference to existing recreational neighbourhoods, green sloping areas of So Kon Po, environmental concerns, needs for the operation of recreational facilities and various site constraints. To ameliorate the potential visual impact and to better integrate the proposed building with the existing and planned development context, in addition to the design measures mentioned above, the following design measures are also incorporated in the architectural scheme:

- Proposed a low building height profile (BH of +45.40mPD) responding the existing elevation of SCAA sports ground in the west and in the north and existing buildings of SCAA (BH from +32 to 90mPD). Responsive building mass and scale of proposed building are much lower and smaller than the commercial and the District Court high-rises under construction (BH from +70 to 135mPD) immediately to the further north of the site;
- Greenings and skylights on the maintenance roof at +45.40mPD added to enhance visual amenity in views from elevated level of the surrounding neighbourhoods;
- The proposed scheme Improves permeability of proposed building through incorporation of large openings with perforated fence and glass walls on the façade and skylight at the roof. These allow natural sunlight to penetrate and facilitate cross ventilation;
- Incorporation of vibrant colours and layered elements on proposed building echo with the design of the adjacent SCAA Grand Stand in the west that contribute to a coherent and lively aesthetic atmosphere to the overall SCAA identity and character;
- Regarding operational and safety concerns of the existing football field/golf practising ground, high protection fence is unavoidable and integrated into the building design. Responsive non-reflective and permeable mesh materials would be used to alleviate the visual intrusion of this feature. Material used for the fence set around the existing football field/golf practising ground is a good example of the permeable fence;
- Building setback along Caroline Hill Road will accommodate planting areas and new tree plantings to create a comfortable walking environment to the pedestrians;
- Proposed sitting-out garden and planting areas at street level integrate the green slope character from the south of the SCAA to the east along Caroline Hill Road, enhance streetscape amenity and soften the development edge;
- Engineered appearance of the new retaining structure to the sloping area will be disguised with green roofs and green walls, and
- Replanting new trees and greenings on slope enhance the visual integration with the surrounding vegetated slopes of So Kon Po.

3.0 Baseline Conditions

Assessment Area

3.1 The assessment area where the proposed building is pronouncedly visible by key sensitive viewers is determined by extent of works, site context and location of the viewers. Considering existing SCAA is located in dense urban developed area characterised by recreational grounds and buildings along Caroline Hill Road, G/IC medium and high-rises along Leighton Road and Eastern Hospital Road in the north and the east, in far encompassed by residential high-rises along Tai Hang Road and Broadwood Road on green slopes of Tai Hang and So Kon Po, the assessment area is shaped by the intervening topography and high-rises mentioned above. The site is located at +7.5mPD along Caroline Hill Road where edged by the existing football field/golf practising ground of the SCAA at about +21.60mPD in the west of the site and the existing training pool at about +22mPD in the north. Other SCAA buildings including Sports Centre (+39.7mPD), Bowling Centre (+32.79mPD) and SCAA Sport Complex (+90.7mPD) located to the west of the football field/ golf practising ground. Other surrounding developments adjacent to the site are low-rise buildings for sports and recreational uses including Disciplined Services Sports and Recreation Club (+36mPD) to the north; So Kon Po Recreation Ground (+19.5mPD) and Indian Recreation Club (+14.9mPD) to the southeast across Caroline Hill Road.

3.2 High-rises are under construction immediately to the northwest of the application site including a Planned C(2) Commercial development (max. BH of +90 & +135mPD) and Planned G/IC District Court buildings (max. BH of +70 & +135mPD), these high-rises will block the majority views from the north towards the site.

3.3 The assessment area/ visual envelope is generally defined by surrounding sloping topography, dense urban developments including residential, G/IC buildings, commercial and other sports and recreational buildings in the So Kon Po along Caroline Hill Road. The extent of the assessment area is presented in **Figure V2.1 and V2.2**.

Visual Context and Visual Resources

3.4 The visual context of SCAA and the proposed building is characterised by recreational grounds and buildings and is encompassed by medium to high-rises on green slopes of Tai Hang and So Kong Po. Key visual resources in the context are green slopes and managed grasslands in So Kon Po Recreation Ground, Indian Recreation Ground, Disciplined Services Sports and Recreation Club and Hong Kong Stadium, these are also key open spaces in the context. Mature trees are found at the periphery of these recreational grounds which contribute to the streetscape amenity surrounding these recreational grounds as well as SCAA. There is only a few street tree or plantings on pavement and at the edge of these recreational grounds. Green slopes of Tai Hang and So Kon Po and greenery in the recreational grounds mentioned above are valued resources in low level views within the context as well as key green features in elevated views of surrounding high-rises, the area is an “open breathing space” in dense urban context.

3.5 In the north of site, proposed building is edged by planned high-rises along Leighton Road mentioned above, high-rises of St. Paul Hospital and Lee Garden, which have building heights over +100mPD and low-rise St. Paul Convent School campus (+19.5mPD). To the east of the site along Caroline Hill Road are dominated by low-rise

recreational buildings and playgrounds which have building heights below +40mPD and high-rises along Eastern Hospital Road including Buddhist Wong Fung Ling College & Buddhist Wong Cheuk Um Primary School and Tung Wah Eastern Hospital (+92.2mPD). To the south, medium to low-rises include Confucius Hall Secondary School (+39.7mPD), Olympic House and Hong Kong Stadium. The context of Caroline Hill Road is encompassed by vegetated slopes of So Kon Po and Tai Hang, residential high-rises including Royal Villa, Full View Court, Greenway Terrace, Caroline Garden, Silverwood and The Leighton Hill in the far west of SCAA are located on top of the slopes at the edge of assessment area/visual envelope which have building heights ranged from +75mPD to +150mPD.

3.6 In summary, proposed building site in the context of recreational and urban visual elements. **Figure V1.0 Visual Context** shows the general setting of the site in urban context. **Figure V2.1 & V2.2 Assessment Area and Viewpoint Location for Photomontage** show the assessment area, key visual resources in the visual context and viewpoint locations of the photomontages.

Key Public Viewing Points

3.7 Having considered the location of the site and the scale of the proposed building and its surrounding visual context, as well as viewpoint popular and crucial among the public, 9 viewpoints are identified that represent key public viewers from different distances and major directions:

(1) Viewpoint A: View north from Hong Kong Stadium
(2) Viewpoint B: View west from Tai Hang Road
(3) Viewpoint C: View west from So Kon Po Recreation Ground
(4) Viewpoint D: View north from Caroline Hill Road
(5) Viewpoint E: View southwest from Moreton Terrace Temporary Playground
(6) Viewpoint F: View northeast from the Stubbs Road Lookout
(7) Viewpoint G: View northeast from Stadium Path
(8) Viewpoint H: View southeast from the junction of Caroline Hill Road and Cotton Path
(9) Viewpoint I: View northeast from Happy View Terrace

3.8 The location of viewpoints is shown in **Figure V2.1 and Figure V2.2**.

Viewpoint A – View north from the Hong Kong Stadium (Figure V3.1)

3.9 The entrance of **Hong Kong Stadium** is located to the south of the site approximately +20.7mPD with 170m viewing distance to the site. Hong Kong Stadium is a popular regional sports venue for general public. It represents a close to medium distance view at elevated level to the north site of SCAA. It represents views from visitors of the Hong Kong Stadium, who has occasional views to the site at the Stadium entrance plaza. The view is characterised by tree planting along Caroline Hill Road and grassed recreational facilities in the Indian Recreation Club, the SCAA is largely screened by these vegetation. Medium to high-rise residential/commercial buildings, including the planned District Court buildings (+70 & +135mPD) and planned commercial building (+90 & +135mPD) under construction are dominated in the Causeway Bay commercial high-rise urban background of the view. Regarding the lower building height profile of proposed building, it is largely screened by the tall street trees along Caroline Hill Road. Given to the viewing location is close to the site, the visual quality is high, number of viewers who visit the Hong Kong Stadium is intermediate, the visual sensitivity of these viewers is high.

Viewpoint B – View west from Tai Hang Road (Figure V3.2)

3.10 Given that the view looking towards the site from Tai Hang Road in the previous application has been blocked by overgrown vegetation on slope, this viewing location has been shifted to the north where view towards the site is available. This viewpoint is located on footpath of **Tai Hang Road** at an elevated level, at +75.3mPD. The viewpoint is at a distance 310m at elevated location to the east of the site. It represents medium viewing distance and transient view of pedestrians and vehicular travellers of Tai Hang Road. Views along Tai Hang Road are largely confined within the road corridor by trees and vegetation at the lower slope to the west and residential high-rises to the east, views of the SCAA in the middle ground, residential high-rises on Leighton Hill and in Causeway Bay in distance. Views looking outward are only available at a few locations between the gaps of existing vegetation. This image shows how proposed building integrated with the surrounding urbanised high-rise context and the recreational facilities in the SCAA and So Kon Po. The proposed building with a responsive lower building height profile integrates with surrounding urban context. Planned District Court buildings (BH of +70& +135mPD) and planned commercial buildings (BH of +90 & +135mPD) under construction are in view immediately next to the SCAA which will be dominant in the future visual context. The lower level of the proposed building will also be screened by trees along Caroline Hill Road and in So Kon Po recreational grounds. Quality of the view is medium and the nature of intermediate numbers of viewers is transient, the visual sensitivity is medium.

Viewpoint C – View west from So Kon Po Recreation Ground (Figure V3.3)

3.11 This viewpoint is located at **So Kon Po Recreation Ground**, at +11.6mPD. It represents close view with viewing distance of 165m from the east of the site. Viewers of this viewpoint are users of So Kon Po Recreation Ground. This recreational ground is open for visitors upon reservation only, nature of viewers in this recreational ground is occasional. This view is dominated by the grassed sports field in the foreground with the SCAA Sports Complex and the high-rises in Causeway Bay and on Leighton Hill, and planned District Court buildings (BH of +70 & +135mPD), and planned commercial buildings (BH of +90 & +135mPD) under construction in the background. The proposed building with a responsive lower building height profile, trees along Caroline Hill Road and in So Kon Po Recreation Ground screened out most of the proposed building. Views of the visitors are largely confined within the recreational grounds by trees. Given quality of the view is medium in the urbanised context, occasional nature of intermediate numbers of viewers, the visual sensitivity of the viewers at this viewport is medium.

Viewpoint D – View north from Caroline Hill Road (Figure V3.4)

3.12 The viewing location at Caroline Hill Road in the previous application has been shifted to show more extent of visual greenery proposed at the south of the site. This viewport is located at **Caroline Hill Road,** at +12mPD. It represents close view at pedestrian level with viewing distance of 20m immediately to the south of the site. Viewers of this viewpoint are pedestrians and vehicular travellers along Caroline Hill Road, also, the visitors of So Kon Po Recreational Ground and Indian Recreation Club opposite to the SCAA. Their views are largely confined within the road corridor which is characterised by vehicular traffic and trees. Given quality of the view is medium, transient nature of the small number of viewers and in close distance to the site, the visual sensitivity of the viewers at this viewpoint is medium.

Viewpoint E – View southwest from Moreton Terrace Temporary Playground (Figure V3.5)

3.13 This viewpoint is located at **Moreton Terrace Temporary Playground**, at +5.2mPD. It represents medium view with viewing distance of 430m from the northeast of the site. Viewers of this viewpoint are users of Moreton Terrace Temporary Playground. This recreational ground is open for public, nature of viewers in this recreational ground is occasional. This view is dominated by the sports field in the foreground and enclosed by the high-rises in Happy Valley and Causeway Bay in the background. Trees along Moreton Terrace and on Tai Hang Road, the newly built Moreton Terrace Activities Centre and the St. Paul Hospital screened out most of the existing SCAA Sports Complex and the proposed building. Views of the visitors are largely confined within the recreation grounds by trees and surrounding buildings. Given quality of the view is medium in the urbanised context, occasional nature of intermediate numbers of viewers, visual sensitivity of these viewers is low.

Viewpoint F – View northeast from the Stubbs Road Lookout (Figure V3.6)

3.14 **The Stubbs Road Lookout** is located to the southwest of the site at approximately +200mPD with about 1,360m viewing distance to the site. This is the most popular lookout in Hong Kong Island for public and tourists. This vantage point represents long range and transient view of visitors towards the proposed building. These viewers have wide open view of ridgelines of Hung Heung Lo Fung with high-rises developments at its lower slopes and high-rises on Leighton Hill and in Causeway Bay. A glimpse view of Kowloon Peak behind the vegetation in distance. Regarding the overgrown vegetation in the front of the Lookout, this wide-open view is only available in-between the gaps of the vegetation. The proposed building and the SCAA Sports Complex are largely screened by the overgrown vegetation and the dense urban context. Given quality of the view is medium, occasional nature of intermediate numbers of viewers, visual sensitivity of these viewers is low.

Viewpoint G – View northeast from Stadium Path (Figure V3.7)

3.15 The viewpoint is located in **Stadium Path**, at +16mPD. The viewpoint is at a distance of 146m at the street level to the southwest of the site. It represents close viewing distance and transient view of pedestrians and vehicular travellers of Stadium Path. Views along Stadium Path are largely confined trees and vegetation to the east and Confucius Hall Secondary School to the west which are in the foreground of the viewpoint. Regarding the lower building height profile of proposed building, it is largely screened by existing SCAA football field/golf practising ground at higher elevation on slope in front. Having considered the fair quality of view, transient nature of the intermediate numbers of viewers and in close distance to the site, the visual sensitivity of viewers at this viewpoint is medium.

Viewpoint H – View southeast from the junction of Caroline Hill Road and Cotton Path (Figure V3.8)

3.16 This viewport is located on footpath at **the junction of Caroline Hill Road and Cotton Path,** at +6.6mPD. It represents close view at pedestrian level with viewing distance of 20m immediately to the north of the site. Viewers of this viewpoint are pedestrians and vehicular travellers along Caroline Hill Road, also, the visitors of So Kon Po Recreational Ground. Their views are largely confined within the road corridor which is characterised

by vehicular traffic and street trees opposite to the site. Proposed building will be dominated in the view. Given quality of the view is medium, transient nature of the viewers and in close distance to the site, the visual sensitivity of small number of viewers at this viewpoint is medium.

Viewpoint I – View northeast from Happy View Terrace (Figure V3.9)

3.17 This viewpoint is located at ground floor of the north terrace of the **Happy View Terrace**, at +60mPD, at higher elevation immediately to the southwest of the site. It represents close view to the site with viewing distance of 200m. Viewers of this viewpoint are residents of Happy View Terrace whose properties are facing north having overall view towards the SCAA in front and are having views of high-rises in Tai Hang and on lower slopes of Hung Heung Lo Fung (+230mPD), and ridges from Siu Ma Shan (+424mPD) to Mount Butler (+436mPD) in the background. Vegetated slopes along Tai Hang Road are set in between the SCAA and Tai Hang high-rises. Regarding the lower building profile of the proposed building, it will be largely screened by the existing SCAA buildings.. Given quality of the view is medium in the urbanised context, permanent nature of small numbers of viewers, visual sensitivity of these viewers is medium.

4.0 Visual Impact Assessment

4.1 The effects of visual changes on the assessment area and sensitive public viewers as result of the proposed building is assessed, having considered the visual composition, its effect on visual obstruction, visual changes to public viewers and visual resources. Photomontages showing the proposed building vis-à-vis with the visual context of the viewpoints are presented in **Figures V3.1 to V3.9**. These photomontages demonstrate the proposed new sports facilities centre would be acceptable from visual perspectives and would not lead to significant adverse impact to the visual context and resources with implementation design mitigation measures.

Viewpoint A – View north from the Hong Kong Stadium (Figure V3.1)

Visual Composition – The visual composition of this viewpoint comprises of streetscape of Eastern Hospital Road, tree planting along Eastern Hospital Road and in Indian Recreation Club, low-rise recreational building and grassed recreation ground in are dominated in the foreground. Existing SCAA Sports Complex, medium-rise such as St. Paul Hospital, green knoll in Tai Hang observed in midground and other residential and commercial developments, including two planned high-rise developments under construction – District Court buildings (BH of +70 & +135mPD) and commercial buildings (BH of +90 & +135mPD) immediately next to the site , medium to high-rise building skyline of Causeway Bay and Tai Hang with open sky in the background. This viewpoint shows the integration of proposed building with existing SCAA buildings and sports facilities, and with its wider visual context of building skyline of Causeway Bay and Tai Hang. The proposed low-profile building will fit into the urbanised context of a mix of low to high-rises. Lower portion of the proposed building would be largely screened by existing trees and vegetation in the foreground, only the uppermost portion will be seen in this view. Although proposed building will replace some views to the developed background, it will not affect the building skyline of the urbanised background and only a small part of sky view in-between the building gap in the background will be replaced by the proposed building. With responsive building height, mass and scale, the proposed

building is hence considered compatible with the visual composition of the urbanised context.

4.2 Visual Obstruction – As demonstrated in **Figure V3.1**, only a portion of upper part of proposed building can be seen and replace some views to the urbanised background and a small part of sky view in-between the building gap in the background. Important visual access to the plantation, green slopes and building skyline will be largely maintained.

4.3 Effect on Visual Resources – The proposed building will not affect on the greenery in the view and the open sky view will be largely maintained. The grassed recreation ground and plantation in the foreground are maintained.

4.4 Effect on Public Viewers – By virtue of this low elevation view in close distance, the height and mass of proposed building would not affect visual resources in this viewpoint although some views to the urbanised background will be replaced by proposed building. Green resources in the foreground of this view will be maintained. Hence the change in overall urbanised context and visual amenity is minor; the proposed building forms a compatible component in the visual context of these viewers. Vegetation at front screened out most of lower part of the proposed building. With key visual resources largely maintained, the scale and mass of proposed building, the magnitude of change of visual amenity to this viewpoint is considered slight.

4.5 Having considered the slight magnitude of change, high sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in short distance view would be slightly adverse. It should be noted that the urbanised background will be changed upon the completion of planned commercial and District Court buildings right behind the SCAA.

Viewpoint B – View west from Tai Hang Road (Figure V3.2)

4.6 Visual Composition – The visual composition of this viewpoint comprises of vegetation on hill slope in front, grassed recreation grounds adjacent to the site, and urbanised building skyline on Leighton Hill and Broadwood Road in the background. Proposed low-profile building is set within a dense urbanised context; the lower part of the proposed building is screened by the existing plantation in recreation grounds along Caroline Hill Road. Regarding the elevated and medium distance of the view, proposed low-profile building will integrate with the existing SCAA buildings and surrounding recreational context in the midground of the view whilst the high-rise skyline and hilly landscape background will not be affected. Although the proposed building will replace the view to the existing football field/golf practising ground, proposed plantings at ground floor level of the proposed building will maintain the visual amenity in this view. With responsive building height, mass and scale, and greening measures, proposed building does not form a major component in the view, hence proposed building will fit into and considered compatible with the visual composition of the urbanised context.

4.7 Upon the completion of two high-rise developments under construction including District Court buildings (BH of +70 & +135mPD) and commercial buildings (BH of +90 & +135mPD) immediately next to the SCAA and to the north of the proposed building, cumulative impact with the introduction of proposed low-profile building in this visual context would be negligible.

4.8 Visual Obstruction – As demonstrated in **Figure V3.2**, although the proposed building will replace the view to the existing football field/golf practising ground, proposed plantings at ground floor level and greening on the roof of the proposed building will maintain the visual amenity in this view. Views to major greenery in front and building skyline and hilly landscape in the background will not be affected.

4.9 Effect on Visual Resources – Key visual resources including the vegetation on the hill slope in front, plantation along the road and in recreation grounds and building skyline will be maintained. Planting proposal at street level and greenings on the roof of proposed building will replace the view of existing football field/golf practising ground of SCAA.

4.10 Effect on Public Viewers – By virtue of high elevation view in medium distance from proposed building with responsive building height, mass and scale of proposed building and planting proposal associated with the proposed building, therefore the proposed building would be integrated with the urbanised and recreational neighbourhoods. Planting proposal at street level and greenings on the roof of proposed building will enhance the visual amenity in the context. With important visual resources are largely maintained or enhanced, responsive building design, the magnitude of change of visual context and visual amenity in these viewers is considered slight.

4.11 Having considered the slight magnitude of change, medium sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in medium distance would be slightly adverse. It should be noted that the urbanised background will be changed upon the completion of commercial and District Court buildings immediately adjacent to the SCAA.

Viewpoint C – View west from So Kon Po Recreation Ground (Figure V3.3)

4.12 Visual Composition – The visual composition of the viewpoint comprises of tree planting at the edge of the grassed recreation grounds and low-rise of recreational buildings in the foreground, medium-rise building of Disciplined Services Sports and Recreation Club in the midground and residential and commercial high-rise building skyline on Leighton Hill and in Causeway Bay and open sky view in the background. Existing trees and buildings at the edge of the recreation ground screened out most of lower part of proposed building, only the uppermost of the proposed building could be seen. Proposed building with responsive height, mass and scale is well integrated with urbanised background. Also, only a small portion of urbanised background will be replaced by proposed low-profile building. Proposed building will not reduce the visual openness of the visual context. With implementation of two high-rise developments under construction including District Court buildings (BH of +70 & +135mPD) and commercial buildings (BH of +90 & +135mPD) immediately next to the SCAA, the urbanised background will be changed following the on-going development process. With responsive building height, mass and scale, proposed building will fit into the existing and planned development context, and it is considered compatible to this urban context.

4.13 Visual Obstruction - As demonstrated in **Figure V3.3**, proposed building will replace only small portion of views to the existing buildings in SCAA and Causeway Bay in the background. Furthermore, small portion of view to the two high-rises developments under construction including District Court buildings (BH of +70 & +135mPD) and commercial buildings (BH of +90 & +135mPD) immediately next to the SCAA will be replaced by proposed low-profile building. Views of major greenery in front and building skyline in the background will not be affected.

4.14 Effect on Visual Resources – The proposed building will not affect the greenery in the view and the open sky view will be largely maintained.

4.15 Effect on Public Viewers – By virtue of this low elevation view in close distance, the height and mass of the proposed building would not affect visual resources in the context although some views to the urbanised background will be replaced by the proposed building. Hence the change in overall urbanised context and visual amenity is minor, the proposed building forms a compatible visual component in visual context. Existing trees and vegetation at front in the recreation ground screened out most of the proposed building. Proposed tree planting in the south of proposed building will contribute to the greenery amenity in the visual context. With key visual resources largely maintained, the scale and mass of proposed building, the magnitude of change of visual amenity to this viewpoint is considered slight.

4.16 Having considered the slight magnitude of change, medium sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in short distance view would be slightly adverse. It should be noted that the urbanised background will be changed upon the completion of the high-rises under construction, the District Court buildings and commercial buildings next to the site.

Viewpoint D – View north from Caroline Hill Road (Figure V3.4)

4.17 Visual Composition – The visual composition of the viewpoint comprises of roadside parking, plantation along Caroline Hill Road in the foreground, temporary hoarding of the site and open sky view interspersed with high-rises in the background. Visual context is confined along the road corridor and characterised by traffic and plantations. Proposed building setback for new tree planting along Caroline Hill Road, plantation in the proposed garden can be easily seen in this road corridor visual context. Besides greenings on modified slope will also contribute to the visual context. Streetscape amenity will be enhanced with planting proposal associated with the proposed building. These planting proposals would also soften the development edge. Regarding the close viewing distance, proposed building will be dominant in the view. However, with application of the above design measures and the implementation of the high-rises next to the site under construction, visual change of this road corridor and streetscape will not be substantial. Proposed building is therefore compatible to the existing visual context and on-going development process along the road.

4.18 Visual Obstruction - As demonstrated in **Figure V3.4**, with the implementation of the proposed building, although views to the buildings in the background and open sky view will be affected, it is unavoidable in this confined view and the on-going development process along the road.

4.19 Effect on Visual Resources – Existing trees and vegetation being seen along the road will not be affected. Although views to the buildings in the background and open sky view views will be affected, it is unavoidable in this confined view and the on-going development process along the road. Planting proposal associated with the proposed building introduces new visual resources in the context and enhances the streetscape amenity.

4.20 Effect on Public Viewers – By virtue of this low elevation view in close distance, although some views to buildings and open sky in the background will be replaced by proposed building, building setback and planting proposal associated with the proposed building will enhance the streetscape amenity. Key visual resources, roadside plantation opposite to

the site, will be maintained. Through the application of building setback and planting proposal, the magnitude of change of visual amenity to this viewpoint is considered slight.

4.21 Having considered the slight magnitude of change, medium sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in short distance view would be slightly adverse with design measures mentioned above.

Viewpoint E – View southwest from Moreton Terrance Temporary Playground (Figure V3.5)

4.22 Visual Composition –The visual composition of this viewpoint comprises of the newly built Moreton Terrace Activities Centre, sports grounds and vegetation in front, building skyline of Tai Hang at midground and open sky view which interspersed with high-rises on Leighton Hill at the background. The proposed low-profile building is screened by existing buildings and vegetation. With responsive building height, mass and scale, proposed building will well blend into the urbanised and recreational context. The proposed building is therefore considered compatible with the visual context of this view.

4.23 Visual Obstruction – As demonstrated in **Figure V3.5**, proposed building will not obstruct any views.

4.24 Effect on Visual Resources – No key visual resources such as open sky view, sport ground and vegetation will be affected.

4.25 Effect on Public Viewers – By virtue of medium view in low elevation view in a medium distance, the proposed building is being screened by intervening buildings and vegetation, therefore the proposed building well blends into the urbanised background. With responsive building height, mass and scale, proposed building will not result in any perceivable visual change in the view of these viewers.

4.26 Having considered a negligible magnitude of change and low sensitivity of these public viewers, visual impact brought by the proposal building to these viewers in distance would be negligible.

Viewpoint F – View northeast from Stubbs Road Lookout (Figure V3.6)

4.29 Visual Composition – The visual composition of this viewpoint comprises of dense overgrown vegetation on hill slope in front, urbanised context with medium to high-rise building skyline of Causeway Bay, Happy Valley and Tai Hang in midground, green knoll of ridgelines of Hung Heung Lo Fung in the background. Open sky view with Kowloon Peak behind the vegetation can also be seen in far distance. Proposed building is almost totally screened by existing buildings. Only very small portion of the uppermost of proposed building can be seen in gap between existing buildings. With responsive building height, mass and scale, proposed building will well blend into the urbanised context. The proposed building is therefore considered compatible with the visual context of this view.

4.30 Visual Obstruction – As demonstrated in **Figure V3.6**, proposed building will not obstruct any views.

4.31 Effect on Visual Resources – No key visual resources such as open sky view, sport ground and vegetation will be affected.

4.32 Effect on Public Viewers – By virtue of high elevation view in long distance from the proposed building, proposed building is being screened by intervening buildings and the proposed building well blends into the urbanised background. No perceivable change of visual amenity of these public viewers. The magnitude of change of visual context to these public viewers would be negligible.

4.33 Having considered the negligible magnitude of change and low sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers would be negligible**.**

Viewpoint G – View northeast from Stadium Path (Figure V3.7)

4.34 Visual Composition – The visual composition of this viewpoint comprises of streetscape of Stadium Path, roadside parking and Confucius Hall Secondary School in front, tree planning along Stadium Path and Eastern Hospital Road, SCAA existing golf net on vegetated slope can be seen in the midground, residential and institution high-rises and open sky view at the background. Majority of the lower part of the proposed building will be screened by the vegetated slope and the golf net of the SCAA. Comparing to the other buildings in the view, the proposed low-profile building well blends into the SCAA recreational facilities and the urbanised context. With responsive building height, mass and scale, proposed buildings is hence considered compatible with the visual composition of the urbanised and recreational context.

4.35 Visual Obstruction – As demonstrated in **Figure V3.7**, only a small portion of open sky view in between existing buildings where already obstructed by the golf fence in far distance will be screened by the proposed building.

4.36 Effect on Visual Resources – The proposed building will not affect the greenery in the view.

4.37 Effect on Public Viewers – By virtue of this low elevation view in close distance, the height and mass of proposed building would not affect visual resources in this viewpoint although some views to the urbanised background will be replaced by proposed building. Hence the change in overall urbanised context and visual amenity is minor, the proposed building forms a compatible visual component in visual context. Vegetation on slope of SCAA will screen out most of lower part of proposed building. With key visual resources largely maintained, the scale and mass of proposed building, the magnitude of change of visual amenity to this viewpoint is considered slight.

4.38 Having considered the slight magnitude of change, medium sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in short distance view would be slightly adverse.

Viewpoint H – View southeast from the junction of Caroline Hill Road & Cotton Path (Figure V3.8)

4.39 Visual Composition – Similar to viewpoint D, the visual composition of this viewpoint comprises of roadside parking, plantation along Caroline Hill Road, temporary hoarding of the site and open sky view interspersed with high-rises in the background. Visual context is confined along the road corridor and characterised by traffic and plantations. Proposed building setback and new tree planting along Caroline Hill Road can be easily seen in this

road corridor visual context. Streetscape amenity will be enhanced with planting proposal associated with the proposed building. These planting proposals would also soften the development edge. Regarding the close viewing distance, proposed building will be dominant in the view. However, with application of the above design measures, visual change of this road corridor and streetscape will not be substantial. Proposed building is therefore compatible to the existing visual context and on-going development process along the road.

4.40 Visual Obstruction - As demonstrated in **Figure V3.8**, although views to the buildings in the background and open sky view will be affected, it is unavoidable in this confined view and the on-going development process along the road.

4.41 Effect on Visual Resources – Existing trees and vegetation being seen along the road will not be affected. Although views to the buildings in the background and open sky view views will be affected, it is unavoidable in this confined view and the on-going development process along the road. Planting proposal associated with the proposed building introduces new visual resources in the context and enhances the streetscape amenity.

4.42 Effect on Public Viewers – By virtue of this low elevation view in close distance, although some views to buildings and open sky in the background will be replaced by proposed building, building setback and planting proposal associated with the proposed building will enhance the streetscape amenity. Key visual resources, roadside plantation opposite to the site, will be maintained. Through the application of building setback and planting proposal, the magnitude of change of visual amenity to this viewpoint is considered slight.

4.43 Having considered the slight magnitude of change, medium sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in short distance view would be slightly adverse with design measures mentioned above.

Viewpoint I – View northeast from Happy View Terrace (Figure V3.9)

4.44 Visual Composition – The visual composition of this viewpoint comprises of SCAA existing buildings and recreational facilities in front, high-rises in Tai Hang and on lower slopes of Hung Heung Lo Fung (+230mPD), and ridges from Siu Ma Shan (+424mPD) to Mount Butler (+436mPD) in the background. Vegetated slopes along Tai Hang Road are set in between the SCAA and Tai Hang high-rises. Proposed low-profile building is set behind the existing SCAA buildings, its view will be interrupted by the existing high fence. Regarding the elevated and short distance of the view, proposed low-profile building well blends into the existing SCAA buildings and surrounding recreational context in the midground of the view whilst the high-rise skyline and hilly landscape background will not be affected. Although the proposed building will replace the view to the existing buildings behind the fence in the background, proposed greening on the roof of the proposed building will enhance the visual amenity in the context. With responsive building height, mass and scale, and greening measures associated, proposed building forms a minor component in the view, hence proposed building will fit into and considered compatible with the visual composition of the urbanised context.

4.45 Upon the completion of the District Court buildings (BH of +70 & +135mPD) under construction immediately next to the SCAA Sports Complex (+90.7mPD), cumulative impact with the introduction of proposed low-profile building in this visual context would be negligible.

4.46 Visual Obstruction – As demonstrated in **Figure V3.9**, although the proposed building will replace the view to the existing buildings behind the fence, greening on the roof of the proposed building will maintain the visual amenity in this view. Views to SCAA buildings and facilities, building skyline and hilly landscape in the background will not be affected.

4.47 Effect on Visual Resources – Key visual resources including the vegetation on the hill slope of Tai Hang in the midground, building skyline and the ridges in background will be maintained. Greening on the roof of proposed building will enhance the visual amenity in the urbanised context.

4.48 Effect on Public Viewers – By virtue of high elevation view in short distance from proposed building, intervening effects by existing SCAA buildings and high fences, with responsive building height, mass and scale of proposed building and planting proposal associated with the proposed building, therefore the proposed building would be integrated with the urbanised and recreational neighbourhoods. With important visual resources are largely maintained, responsive building design, the magnitude of change of visual context and visual amenity in these viewers is considered slight.

4.49 Having considered the slight magnitude of change, medium sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in medium distance would be slightly adverse.

5.0 Evaluation of Overall Visual Impact and Conclusion

5.1 The proposed new building, SCAA Sports Link, is located at the northeast of the SCAA at Caroline Hill Road. SCAA is an enclave of sports, recreational and other institutional facilities. The site is vacant with part of existing slope covered with weeds and grasses in the south, retaining walls holding the existing football field/golf practising ground in the west, and the training pool in the north. Having considered that SCAA is in densely urbanised developed area characterised by adjacent recreation grounds, high-rises and vegetated slopes of Leighton Hill, Tai Hang and So Kon Po, the assessment area is shaped by intervening topography and buildings. The site is located at flat at +7.5mPD along Caroline Hill Road to the east. The site is edged by football field/golf practising ground and the training pool of SCAA at high elevation at +21.60 to +22mPD to the west and to the north.

5.2 The development proposal will introduce a 4-storey new building of SCAA Sports Link with a proposed height of +45.40mPD. Entrance lobbies, car parking and E&M utilities are located at G/F. 1/F & 2/F & 3/F will accommodate multi-function rooms, ancillary office/ ancillary uses, ball courts such as tennis court and 5-a-side soccer, and plant rooms etc. The roof is reserved for maintenance and utilities and green roof. The existing golf net along the west edge will be reconstructed to integrate with the building design.

5.3 Regards of operational and safety concerns of the existing football field/golf practising ground to the new building, high protection fence is unavoidable and has been integrated with the building design. Responsive non-reflective and permeable mesh materials would be used to alleviate the visual intrusion of these protection fences. Material used for fence set around the existing football field/golf practising ground is a good example of high permeable fence.

5.4 A sitting-out garden is proposed at the southernmost of the site and at street level along Caroline Hill Road to soften the development edge and enhances the streetscape amenity.

5.5 Part rock cut slope located at the south within the site, where currently covered by weedy vegetation, will be reformed with new tree planting on slope top and hydroseeding on slope for enhancing the visual “green” of the SCAA. The new retaining structure associated with the reformed slope will be integrated with green roof and green wall to disguise its functional appearance.

5.6 Due to the viewing distance and prominence of the proposed building to the public viewers, the proposed building would inevitably change of some visual context and amenity of the viewers in close proximity viewing distance to the site including viewers from Hong Kong Stadium, So Kon Po Recreation Ground, Stadium Path and Happy View Terrace. In these views, the lower portion of the proposed building will be screened by the existing buildings, existing vegetation in the recreation grounds or on slopes of SCAA. With responsive building height, mass and scale, proposed low-profile building well blends into the urbanised building background and it will only replace a small portion of views of existing buildings in the background. Although visual amenity of the viewers will be changed inevitably, the slightly adverse visual impact to these viewers would be alleviated with mitigation measures.

5.7 Even though visual amenity along Caroline Hill Road will be changed regarding the introduction of new building, some sky views at street level are inevitably being replaced, it is unavoidable in the on-going development process along the road, particularly after the implementation of the high-rises, including the District Court buildings (BH of +70 and +135mPD) and the commercial buildings (BH of +90 and +135mPD), immediately next to the SCAA and proposed building. The slightly adverse impact to the pedestrians along Caroline Hill Road would be alleviated by proposed building setback, tree planting and planting proposal at street level and in proposed sitting-out garden, replanting on slope and greening on retaining structures etc. With the implementation of these mitigation measures, the streetscape amenity would be enhanced, and the development edge would be soften.

5.8 For the viewers in medium distance from low level views to the proposed building, visual change on viewers at Moreton Terrance Temporary Playground is considered not perceivable and negligible regarding building height, mass and scale, proposed building is well blend into the urbanised context. Viewers from another medium distance view at elevated level at Tai Hang Road would experience a slightly adverse impact with introduction of proposed building in the recreational landscape context at So Kon Po. The lower portion of proposed building will be largely screened by existing vegetation in the recreation grounds. Replanting on slope, greening on retaining structures and greening on the roof will make the proposed building better integrated with the surrounding green amenity. Although some views to the urbanised background, football field/ golf practising ground of SCAA will be replaced by the proposed building, building skyline behind will not be affected. With responsive building height, mass and scale of proposed building, and having considered the implementation of the commercial and institutional high-rises under construction adjacent to the site, the visual impact will be further alleviated.

5.9 In distance elevated views from Stubbs Road Lookout, the wide-open view of the visitors is characterised by densely urbanised context with building skyline of Tai Hang, Causeway Bay and Happy Valley. Having considered the intervening effect of existing vegetation and existing buildings and viewing distance, proposed building is not

perceivable and negligible regarding its building height, mass and scale, proposed building well blends into the urbanised context. Visual impact to these public viewers is considered as negligible.

5.10 In overall terms, though proposed building would have some slightly visual impacts to the public viewers, with responsive building height, mass and scale, building setback and planting proposal at street level, green wall and greening on the roof etc. would alleviate the impact to an acceptable level, and proposed building is therefore compatible with the existing urbanised and recreational landscape and visual context. Proposed building is acceptable from visual perspectives.

Table 5.1 Summary of Visual Impact

Viewpoint	Visual Sensitivity	Resultant Visual Impact
Viewpoint A : View north from the Hong Kong Stadium	High	Slightly Adverse
Viewpoint B: View west from Tai Hang Road	Medium	Slightly Adverse
Viewpoint C: View west from So Kon Po Recreation Ground	Medium	Slightly Adverse
Viewpoint D: View north from Caroline Hill Road	Medium	Slightly Adverse
Viewpoint E: View southwest from Moreton Terrace Temporary Playground	Low	Negligible
Viewpoint F: View northeast from the Stubbs Road Lookout	Low	Negligible
Viewpoint G: View northeast from Stadium Path	Medium	Slightly Adverse
Viewpoint H: View southeast from the junction of Caroline Hill Road & Cotton Path	Medium	Slightly Adverse
Viewpoint I: View northeast from Happy View Terrace	Medium	Slightly Adverse

Figures



LEGEND

Application Site Boundary

Source: Survey & Mapping Office, Lands Department, HKSAR
Photo Taken Date: 6 Mar 2023; Viewing Height: 6900'

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Visual Context

SCALE	As Shown	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V1.0	REV	-

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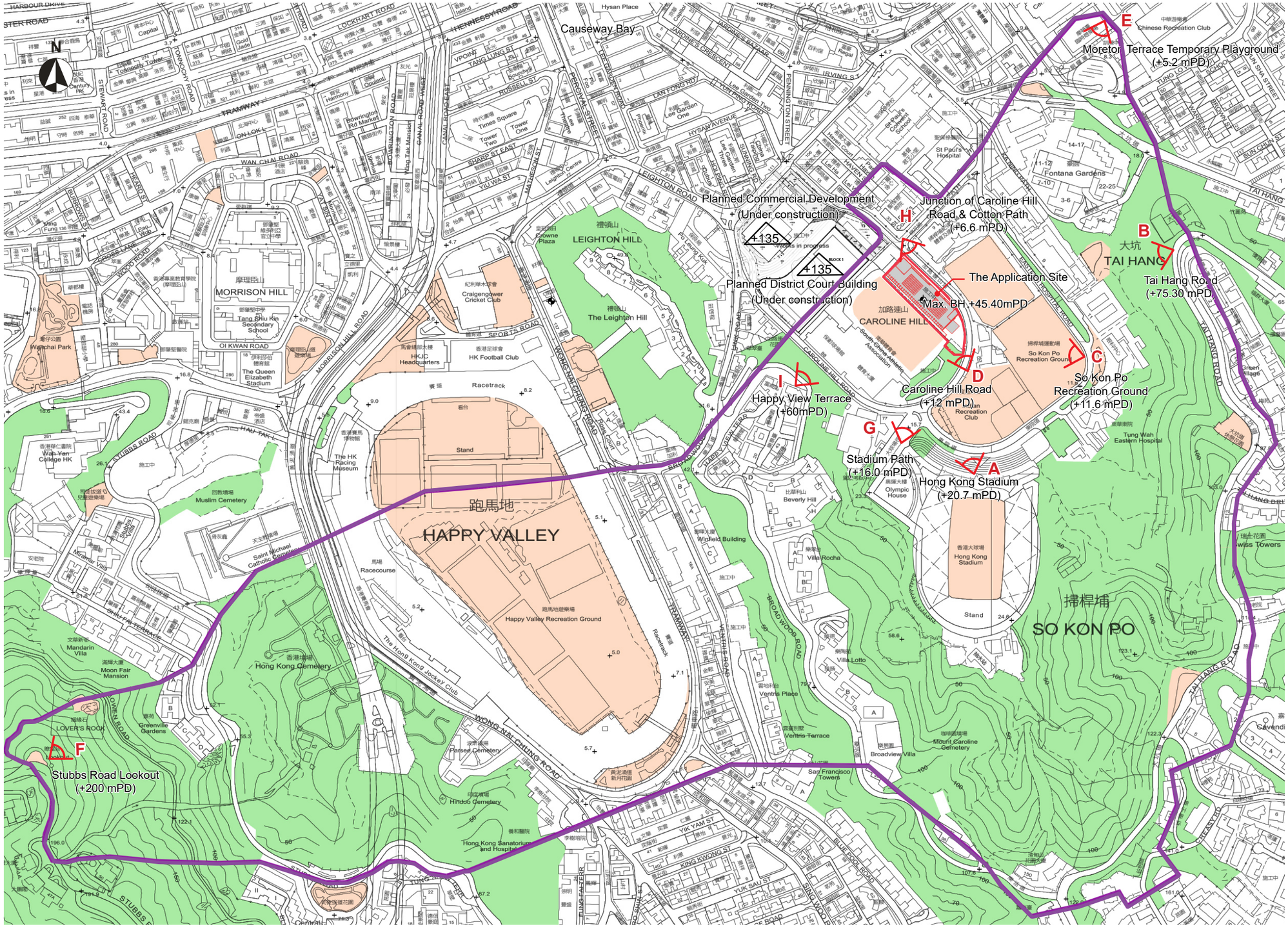

LEGEND

- Application Site Boundary
- Photomontage Viewpoint
- Assessment Area (Visual Envelope)
- Proposed Development
- +135 — Maximum Building Height (mPD) as stated in Approved Wong Nai Chung No. S/H7/21
- +80 — Building Heights (mPD)
- +54.22 — Proposed Building Heights (mPD)/ Formation Level

Visual Features

- Planting/ Vegetated Slope
- Open Space (Park, Garden and Sports Ground)

Viewpoint A - View north from Hong Kong Stadium

Viewpoint B - View west from Tai Hang Road

Viewpoint C - View west from So Kon Po Recreation Ground

Viewpoint D - View north from Caroline Hill Road

Viewpoint E - View southwest from Moreton Terrace Temporary Playground

Viewpoint F - View northeast from the Stubbs Road Lookout

Viewpoint G - View northeast from Stadium Path

Viewpoint H - View southeast from the junction of Caroline Hill Road & Cotton Path

Viewpoint I - View northeast from Happy View Terrace

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Assessment Area and Viewpoint Location of Photomontage

SCALE	As Shown	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V2.1	REV	-

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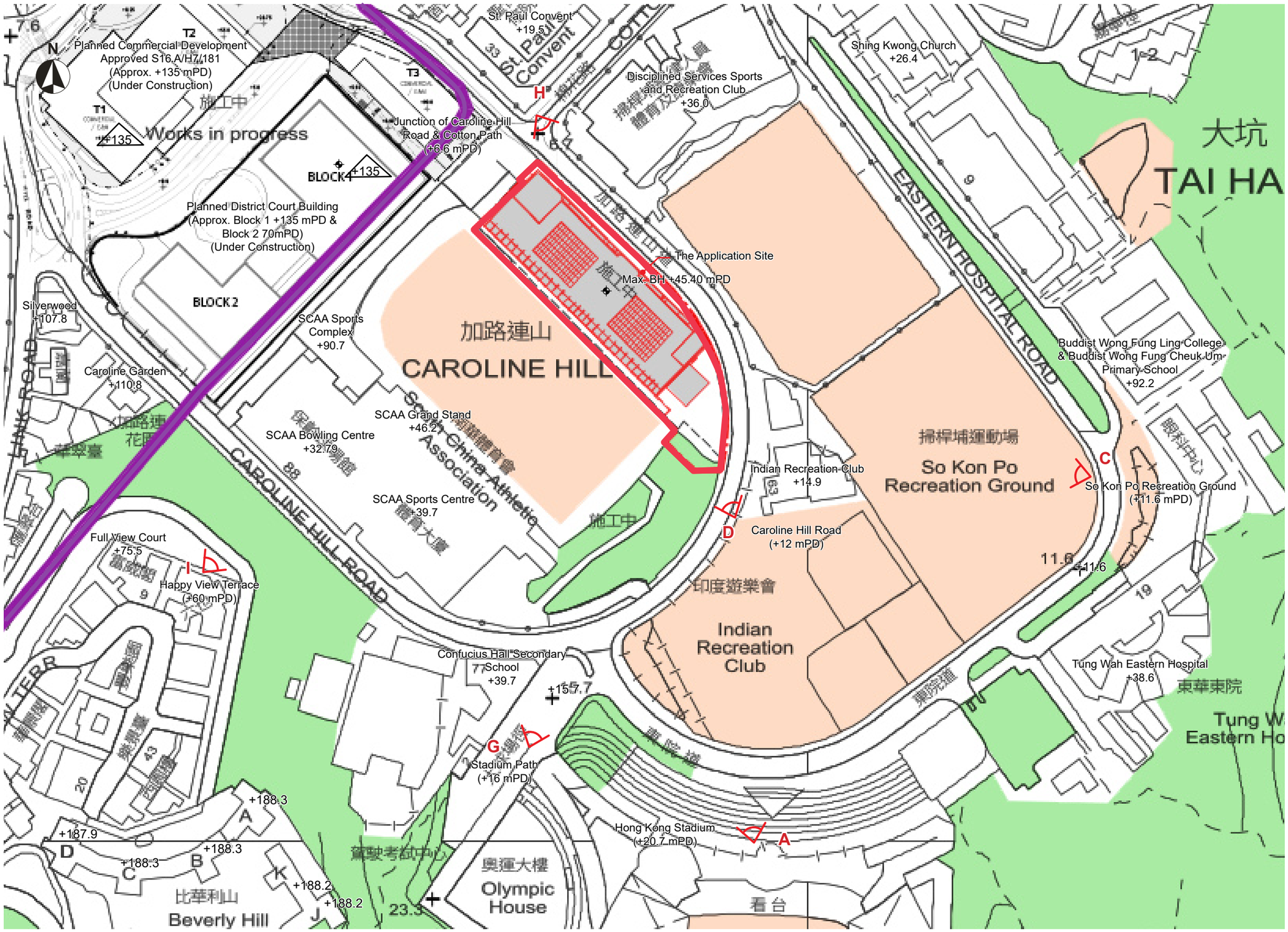

LEGEND

- Application Site Boundary
- Photomontage Viewpoint
- Assessment Area (Visual Envelope)
- Proposed Development
- +135 — Maximum Building Height (mPD) as stated in Approved Wong Nai Chung No. S/H7/21
- +80 — Building Heights (mPD)
- +54.22 — Proposed Building Heights (mPD)/ Formation Level

Visual Features

- Planting/ Vegetated Slope
- Open Space (Park, Garden and Sports Ground)

Viewpoint A - View north from Hong Kong Stadium

Viewpoint B - View west from Tai Hang Road

Viewpoint C - View west from So Kon Po Recreation Ground

Viewpoint D - View north from Caroline Hill Road

Viewpoint E - View southwest from Moreton Terrace Temporary Playground

Viewpoint F - View northeast from the Stubbs Road Lookout

Viewpoint G - View northeast from Stadium Path

Viewpoint H - View southeast from the junction of Caroline Hill Road & Caroline Hill Road & Cotton Path

Viewpoint I- View northeast from Happy View Terrace

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Assessment Area and Viewpoint Location of Photomontage

SCALE	As Shown	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V2.2	REV	-

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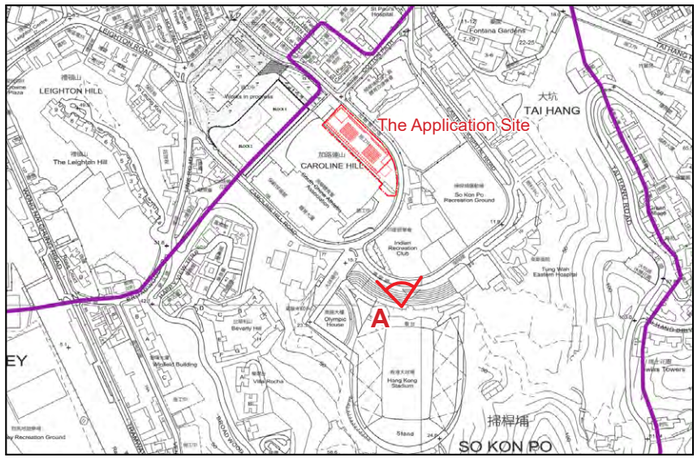
Existing View
View north from Hong Kong Stadium



Key Plan

Viewpoint A
Viewpoint Elevation: +20.70mPD at Hong Kong Stadium
Viewing Distance: 170m
Proposed Building Height: Approx. +45.40mPD



Photomontage

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint A - Existing View and Photomontage

SCALE	As Shown	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.1	REV	-

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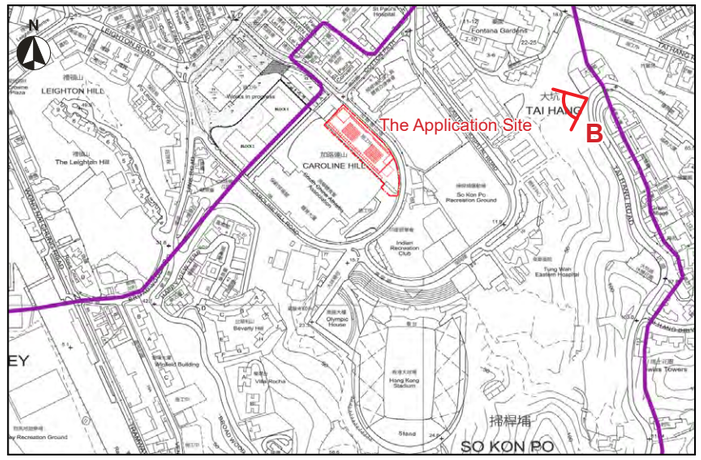
Existing View
View west from Tai Hang Road



Photomontage



Key Plan

0 50 100 200M

Viewpoint B
Viewpoint Elevation: +75.3mPD at Tai Hang Road
Viewing Distance: 310m
Proposed Building Height: Approx. +45.40mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint B - Existing View and Photomontage

SCALE	As Shown	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.2	REV	-

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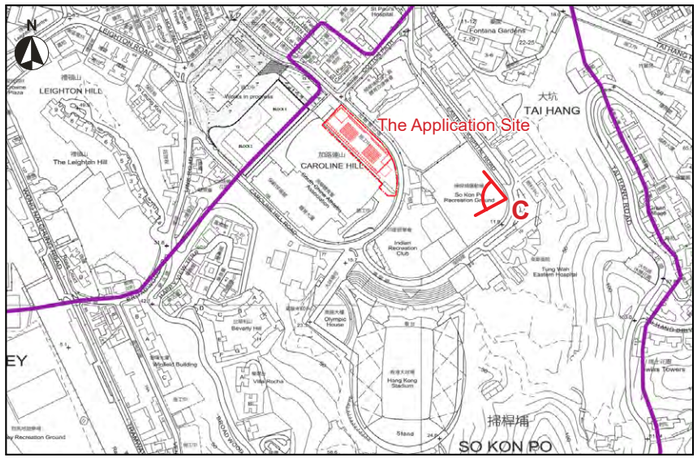
Existing View
View west from So Kon Po Recreation Ground



Key Plan

0 50 100 200M

Viewpoint C
Viewpoint Elevation: +11.6m PD at So Kon Po Recreation Ground
Viewing Distance: 165m
Proposed Building Height: Approx. +45.40mPD



Photomontage

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint C - Existing View and Photomontage

SCALE	As Shown	DATE	October 2025
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FIGURE NO.	FIGURE V3.3	REV	-

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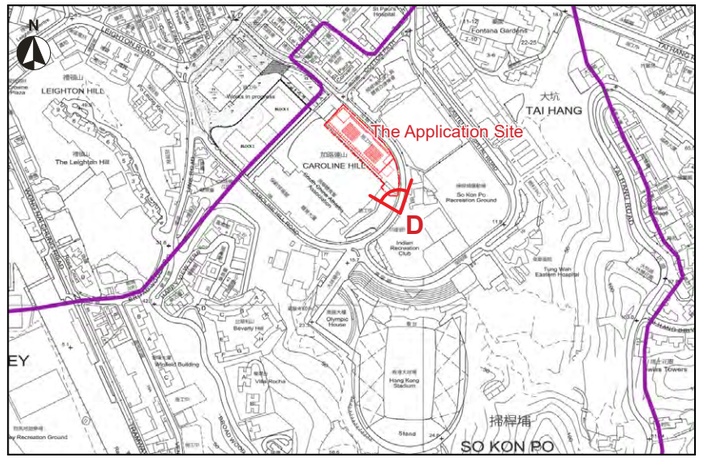
Existing View
View north from Caroline Hill Road



Photomontage



Key Plan

Viewpoint D
Viewpoint Elevation: +12mPD at Caroline Hill Road
Viewing Distance: 20m
Proposed Building Height: Approx. +45.40mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint D - Existing View and Photomontage

SCALE	As Shown	DATE	October 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.4		REV	-

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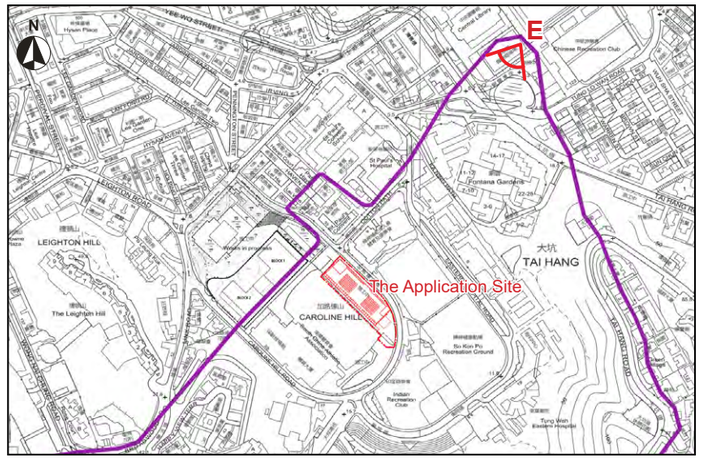
Existing View
View southwest from Moreton Terrace Temporary Playground



Photomontage



Key Plan

Viewpoint E
Viewpoint Elevation:
+5.2mPD at Moreton Terrace Temporary Playground
Viewing Distance: 430m
Proposed Building Height: Approx. +45.40mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint E - Existing View and Photomontage

SCALE	As Shown	DATE	October 2025
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FIGURE NO.	FIGURE V3.5	REV	-

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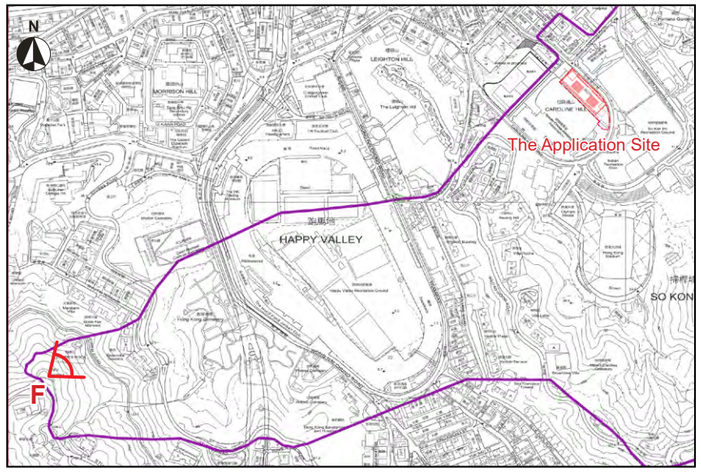
Existing View
View northeast from the Stubbs Road Lookout



Key Plan

Viewpoint F
Viewpoint Elevation: +200mPD at the Stubbs Road Lookout
Viewing Distance: 1,360m
Proposed Building Height: Approx. +45.40mPD



Photomontage

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint F - Existing View and Photomontage

SCALE	As Shown	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.6	REV	-

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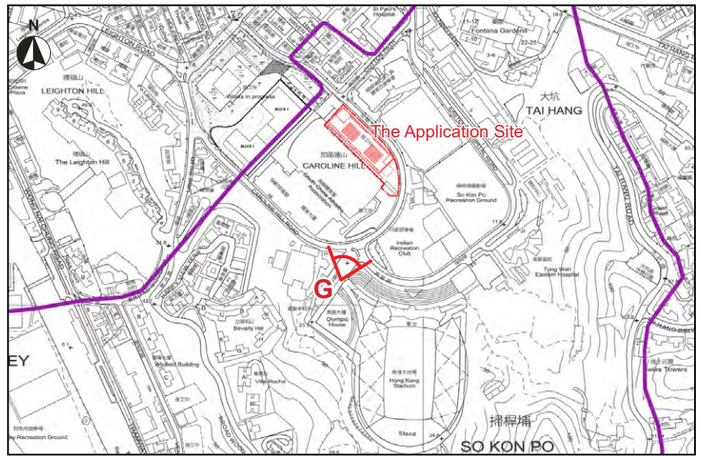
Existing View
View northeast from Stadium Path



Photomontage



Key Plan

0 50 100 200M

Viewpoint G
Viewpoint Elevation: +16mPD at the Stadium Path
Viewing Distance: 146m
Proposed Building Height: Approx. +45.40mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint G - Existing View and Photomontage

SCALE	As Shown	DATE	October 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.7			REV
				-

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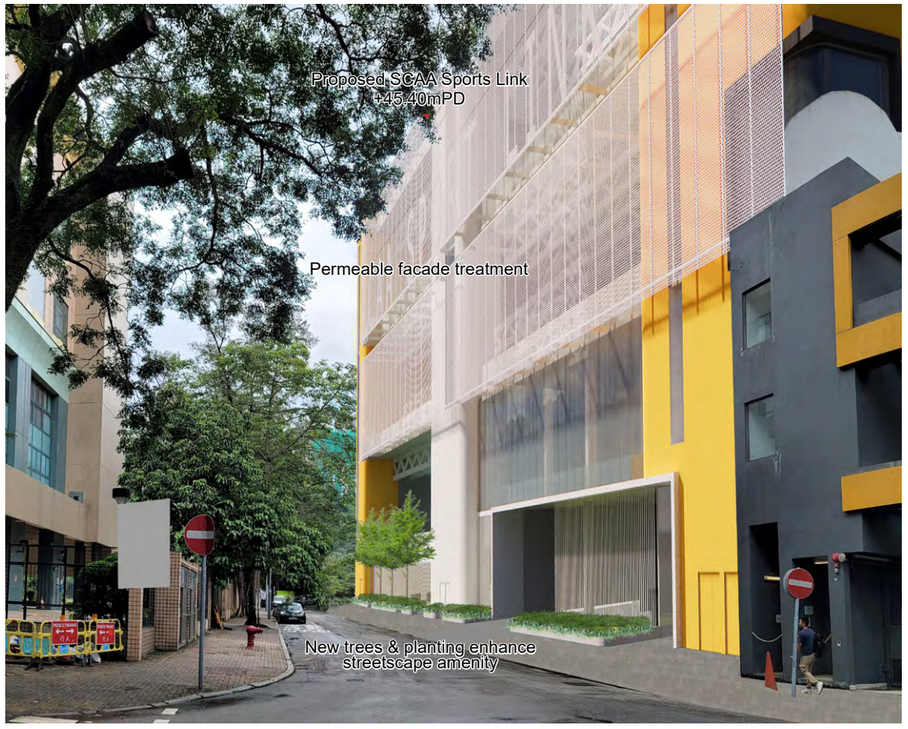
Existing View
View southeast from the junction of Caroline Hill Road & Cotton Path



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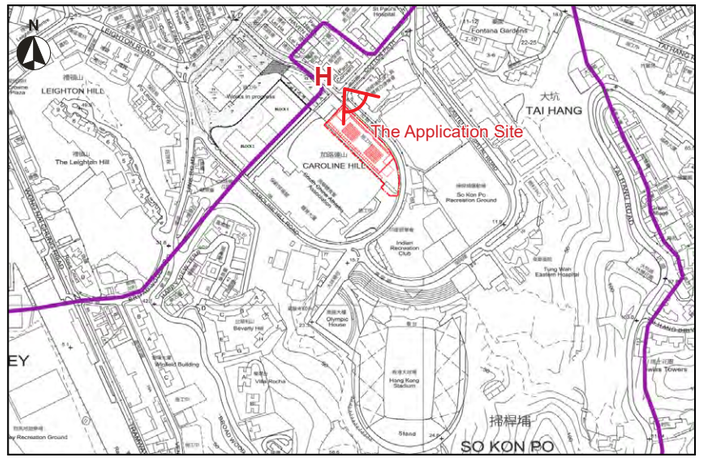

Key Plan

Viewpoint H
Viewpoint Elevation:
+6.6mPD at the junction of Caroline Hill Road and Cotton Path
Viewing Distance: 20m
Proposed Building Height: Approx. +45.40mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint H - Existing View and Photomontage

SCALE	As Shown	DATE	October 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.8		REV	-

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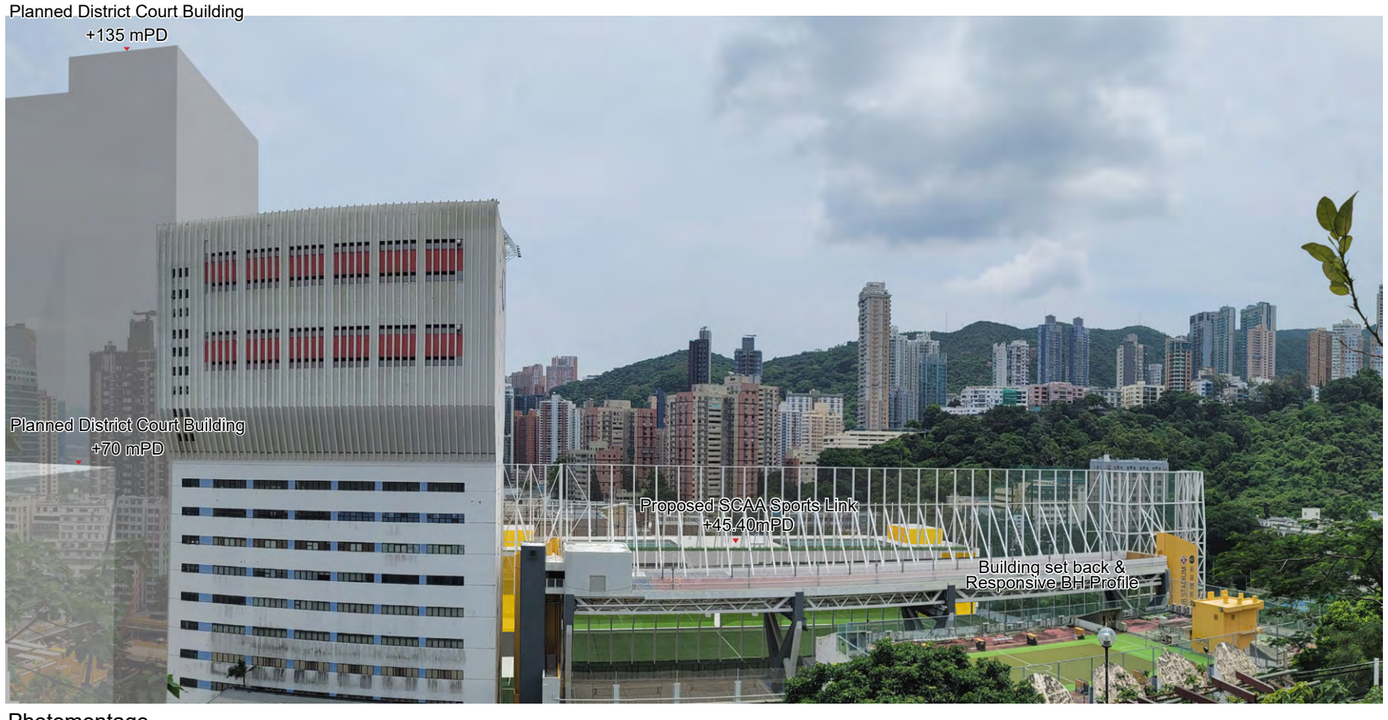
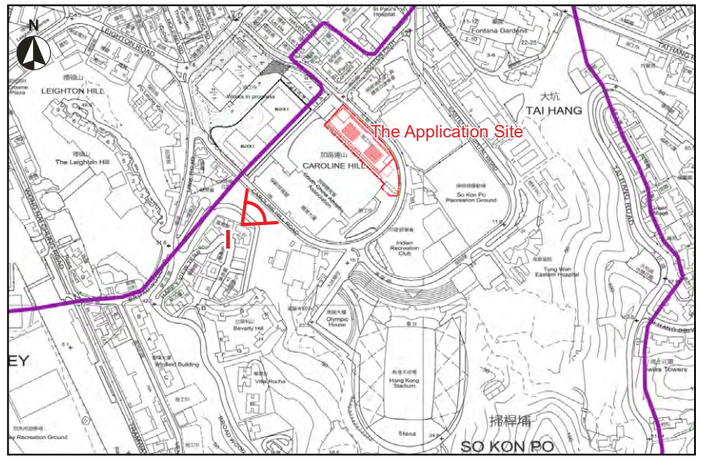
Existing View
View northeast from Happy View Terrace



Photomontage



Key Plan

Viewpoint I
Viewpoint Elevation: +60mPD at Happy View Terrace
Viewing Distance: 200m
Proposed Building Height: Approx. +45.40mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint I - Existing View and Photomontage

SCALE	As Shown	DATE	October 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.9	REV	-

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Appendix X

Geotechnical Planning Review Report

Geotechnical Planning Review Report for Proposed SCAA Sports Link at South China Athletic Association

Section 16 Application | 88 Caroline Hill Road, Hong Kong

B190171.GPR01 Rev. D | 17 September 2025
South China Athletic Association

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Plate 4	General View of the Bored Pile Wall

Figures

Figure 1	Site Location Plan
Figure 2	Site Layout Plan with Existing Ground Investigation and Structures
Figure 3	Geological Map

Appendices

Appendix A Proposed Development Layout

Appendix B SIS Record

Appendix C Relevant Site Formation Plans and Foundation Plans

Appendix D Relevant Ground Investigation Record

1. Introduction

1.1 The Project

The proposed development will be situated on the existing level platform at South China Athletic Association at 88 Caroline Hill Road, with a total area of approximately 6,131.97m^2. The site was once occupied by the North Stand and ancillary structures of the Sport Ground during the 1970s to 1990s. The proposed site is a developed area with land formed after demolition works in late 90s. In the 2000s, substantial reformation of the site was carried out after the clearance and demolition of the north stand of the sport ground.

The development site is bounded by Caroline Hill Road to the north and east. There is a football court supported mainly by a temporary anchored bored pile wall to the west and south, with precautionary raking strut supports against the wall face. Switch room and then staircase building are located to the northwest of the proposed site.

Location and layout of the Site are shown on **Figures 1 and 2**. General views of the development site is shown in **Plates 1 to 4**.

1.2 The Report

This Geotechnical Planning Review Report (GPRR) is prepared in conjunction with the planning application in view that the proposed development at the site may affect or be affected by man-made slopes.

The content of the GPRR is prepared to address the followings:-

a) There are geotechnical features located within and in the vicinity of the site. The stability of these features could affect and be affected by the development.

1.3 Employer

South China Athletic Association

1.4 Lead Architect / Consultant

Design 2 (HK) Limited

1.5 Planning Consultant

KTA Planning Limited

1.6 Structural and Geotechnical Engineers

Fugro (Hong Kong) Limited

2. The Proposed Development

The proposed development layout consists of a 4-storey complex with a total Construction Floor Area (CFA) of around 15,830m^2, and Gross Floor Area (GFA) of 31,327.12m^2. The maximum building height is about 36m from the Mean Street Level of +8.811mPD and is about 23.8m above the level of existing football field. A new golf fence extends a further 16.2m above the main building roof of the proposed building to align with the height of the existing Golf Fence rising 40m from the football field. The preliminary Development Layout Plan of the proposed complex is shown in **Appendix A**.

3. DESK STUDY

3.1 Topography

Based on the topographic survey plan prepared by Sam Mak & Associates Surveyors (HK) Ltd. in November 2024, the existing formed platform within the site area is about +7mPD. The existing football field to the west of the development site is about +21.6mPD. The level of Caroline Hill Road bounded to the north and east is varying from about +7 mPD to +11 mPD.

3.2 Geology

Based on the Hong Kong Geological Survey, 1:20,000-scale geological map, Series No. HGM20, Sheet No. 11 – Hong Kong and Kowloon (Edition II – 2012) published by the Geotechnical Engineering Office, majority of the Site is underlain by medium-grained Granite.

A part-print of the geological map extracted from the 1:20,000 Geological Survey Map is shown in **Figure 3**.

However, based on the site-specific GI, the site is underlain by a stratigraphic sequence of fill and saprolite of granite.

3.3 Man-made Features

There is only one registered geotechnical feature located in the vicinity of the subject site and the general information is summarized below:-

Table 1 : Summary of Existing Registered Man-made Feature

Feature No.	Type of Feature	Dimension (Length x Max. Height)	Average Angle (Degree)	Maintenance
11SW-B/C659 (BD 3/3053/96)	Soil Slope	80m x 7.9m	32˚	IL 9041 (SCAA)

The slope basic information extracted from Geotechnical Engineering Office (hereinafter refer as GEO) is presented in **Appendix B**.

Feature 11SW-B/C659 is located immediately to the south of the proposed development. The feature was modified in September 2002 in conjunction with the demolition of the north stand and associated retaining walls. Based on the available information, the existing slope possessed a FOS of 1.41.

Apart from the registered man-made feature, there are unregistered temporary retaining wall and cut slope located to the west and south of the proposed site area. The general information of the temporary geotechnical feature within the subject site is summarized below:

Table 2 : Summary of Existing Temporary Feature / Retaining Structures

Feature	Type of Feature	Dimension (Length x Max. Height)	Average Angle
Temporary Slope	Soil cut slope with 4 rows soil nails at 2m c/c	27m x 11.5m	65˚
Temporary Bored Pile Wall	2m Dia. Bored pile wall at 4m c/c with 4 levels of ground anchor tie back and precautionary raking struts	98m x 17m	90˚
Solider Pile Wall (Southern end)	305x305x158kg/m UC at 800mm c/c with 3 layers of tie bars	16m x 11.5m	90˚
Solider Pile Wall (Western corner)	305x305x158kg/m UC at 800mm &1000mm c/c with 4 layers of strut	23m x 17m	90˚

Temporary Cut Slope (BD Ref.: BD 3/3053/96)

The Temporary Cut Slope with 4 rows of soil nails is located to the south of the proposed development. The feature comprises an average angle of 65° cut slope with 4 layers of 10m to 12m long soil nail. Based on the available information, the existing slope possessed a min. FOS of 1.21.

Temporary Bored Pile Wall (BD Ref.: BD 3&6/3053/96)

The temporary Bored Pile Wall is located along the western bound of the proposed development, which was constructed in 1998. The temporary retaining wall comprises 25 numbers of Bored Piles of 2.0m diameter at 4.0m c/c with 4 levels of ground anchor of length varies from 26 to 31.5m. The Bored Pile Wall is 98m long align in parallel with the long side of the football pitch and founded at -7mPD. The retaining height of the pile wall varies from 17m at the northern and central portions to 11.5m at the southern end portion. Regular monitoring was carried out to the ground anchors.

In addition, precautionary works in the form of providing raking strutting system against the face of the bored pile wall were constructed in December 2013 under BD ref. 3/2053/96.

Temporary Soldier Pile Wall (BD Ref.: BD 3/3053/96)

The temporary Soldier Pile Walls constructed as part of the temporary ELS works for the development of north site in late 90s are located to the west and south of the proposed development. The pile walls are located at the corner of the football pitch with L"-Shaped on plan. The Solider Pile Walls are about 16m long at the southern end of the site and 23m long at the western corner of the site. Tie bars and struts were installed to the pile wall to provide lateral resistance.

Extracts of the latest site formation and ELS plans and associated man-made features are shown in **Appendix C** for reference.

3.4 Existing Foundation

Raft footing foundation was constructed at the proposed site location in early 2000s for the north site development. The founding level of the footing was +4.5mPD with the allowable bearing capacity of 350kPa.

3.5 Recorded Landslide Incident

No landslide incident within the vicinity of the site could be located at the GEO.

3.6 Existing Ground Investigation Information

Site-specific ground investigation works were carried out for the proposed redevelopment of the north stand, which are summarized as follows:

Table 3 : Summary of Available GI information

Project Title	Investigation Period	Details of Investigation in Vicinity of the Site
Re-Development of South China Athletic Association – Phase 1	September 1996	8 Drillholes (BH1 to BH7, BH3A)
Proposed Redevelopment of South China Athletic Association – Phase 1 (Additional Work)	June 1999	3 Drillholes (BHA1-BHA3)
Proposed Staircase ST-E5 at South China Athletic Association	June 2017	2 Drillholes (VH1 &VH2)
Proposed A & A Works to Steel Golf Fence at South China Athletic Association	November 2024	2 Drillholes (DHF1 & DHF2)

The drillhole logs indicated that the superficial geology is mainly composed of completely decomposed Granite. No adverse geotechnical feature was recorded from the existing drillhole records. The geological information obtained from the drillhole logs is consistent with that inferred in the Geological Map.

The site layout plan showing the existing drillholes within and in the vicinity of the sites are presented in **Figure 2**. The existing GI records relevant to the proposed Sites are given in **Appendix D**.

4. GEOTECHNIAL ASSESSMENT

4.1 Site Formation Works

For the existing slopes affecting/ being affected by the proposed development, stability of the slopes will be assessed to cater for the change of ground profiles and any service loading. Stabilization measures to the slopes will be provided, if necessary. Based on the proposed development layout, the existing temporary soil nailed slope shall be modified to a permanent registerable man-made feature up to current required safety standard to suit the proposed development. The slope could be modified with a L-shape retaining toe wall and no-fines concrete backfill slope at the crest, in order to maintain the required level difference for the pedestrian passage to the south-eastern entrance of the proposed building. The proposed L-shape retaining wall will be connected to the south-eastern end of the building screen wall.

Provision of top soil with erosion control mat on the concrete backfill slope could be utilized for landscaping purpose.

The existing registered slope 11SW-B/C659 with average gradient of 32° located to the south of proposed development is unlikely to be affected by the proposed development. Extracts of the slope stability with a min. of FOS of 1.4 under previous site formation design report approved by BD Ref no. 3/3053/96 in May 2000 is attached for reference. Nevertheless, the effect of the proposed development to adjacent man-made features including 11SW-B/C659 shall be reviewed in the detailed design stage. The effect of the Schematic site formation works associated with the development is presented in **Figure 3**.

Based on a review of the desk study information, assessment of the stability condition of existing man-made features and/or upgrading works are considered required:-

Table 4: Summary of Recommendation of Proposed Works for Features within Development

Feature	Location	Existing CTL	Proposed Works
Temporary soil nailed slope	South of proposed complex	-	Feature to be modified and registered

Table 5: Summary of Existing Feature outside the Development

Feature	Location	Existing CTL	Proposed Works
11SW-B/C659	South of proposed complex	2	Slope with average gradient of 32° with FoS= 1.4 min. will be retained and no site formation works required.

4.2 ELS Works

As discussed in Section 3.3 above, there are temporary ELS works at the west bound of the proposed development. The ELS work is supporting the existing football field at +21.5mPD. It is expected that the existing temporary ELS works including the anchored bored pile wall and soldier pile wall shall be replaced by permanent building screen wall or retaining structures under the proposed development. The temporary anchors and steel waling/strut shall be destressed and dismantled in a safety manner respectively. The existing bored pile wall will be abandoned after erection of the building.

Table 6 : Summary of Recommendation of Proposed ELS Works within Development

Feature	Location	Proposed Works
Bored pile wall (Temp. ELS)	Along western boundary of the site	Feature to be removed with erection of building screen wall and retaining structures, and destressing of anchors and dismantling of raking strut.
Soldier pile wall (Temp. ELS)	At southern portion and north-western corner of the site	Feature to be removed with erection of building screen wall and retaining structures, and dismantling of strut/waling.

The temporary ELS works shall be reviewed or modified to fulfill the stability requirements with due consideration of the staged construction of the foundation and building works.

4.3 Potential Natural Terrain Hazards

The development is situated at the build-up area and does not meet the alert criteria for carrying out a natural terrain hazard study (NTHS).

5. CONCLUSIONS AND RECOMMENDATONS

- A temporary soil nailed slope is located at the southern boundary of the development. The feature will be modified/upgraded to current safety standard under this development and registered after completion of the works.
- Existing feature 11SW-B/C659 is located to the south and adjoining the temporary slope. It is unlikely that the feature will be affected by the proposed development. Nevertheless, the effect of the proposed development to adjacent man-made features including 11SW-B/C659 shall be reviewed in the detailed design stage.
- The existing temporary ELS works including the anchored bored pile wall and soldier pile wall shall be replaced by permanent building screen wall or retaining structures under the proposed development. The temporary anchors and steel waling/strut shall be destressed and dismantled in a safety manner respectively. The existing bored pile wall will be abandoned after erection of the building.
- The development is situated at the build-up area and does not meet the alert criteria for natural terrain screening based on GEO Report No. 138 (2nd Edition). Therefore, NTH Study is not required.
- Based on the above discussions, it can be concluded that the construction of the proposed development is geotechnically feasible.

6. REFERENCES

1. Geotechnical Control Office (2012). "Solid and Superficial Geology. Hong Kong Geological Survey HGM20, Edition 2, Sheet No. 11, 1:20,000 scale". Government Press, Hong Kong.

2. Geotechnical Control Office (1987). "Geotechnical Area Study for Hong Kong Island and Kowloon. GASP Report I". Geotechnical Engineering Office, Hong Kong.

Plates

PROPOSED DEVELOPMENT FOR SCAA		LOCATION No. 88 CAROLINE HILL ROAD, HONG KONG	
REF. 190171	NEGATIVE NO. -	TAKEN IN October 2018	SHEET 1 OF 2



Plate 1: Top View of the Site



Plate 2: General View of the Site

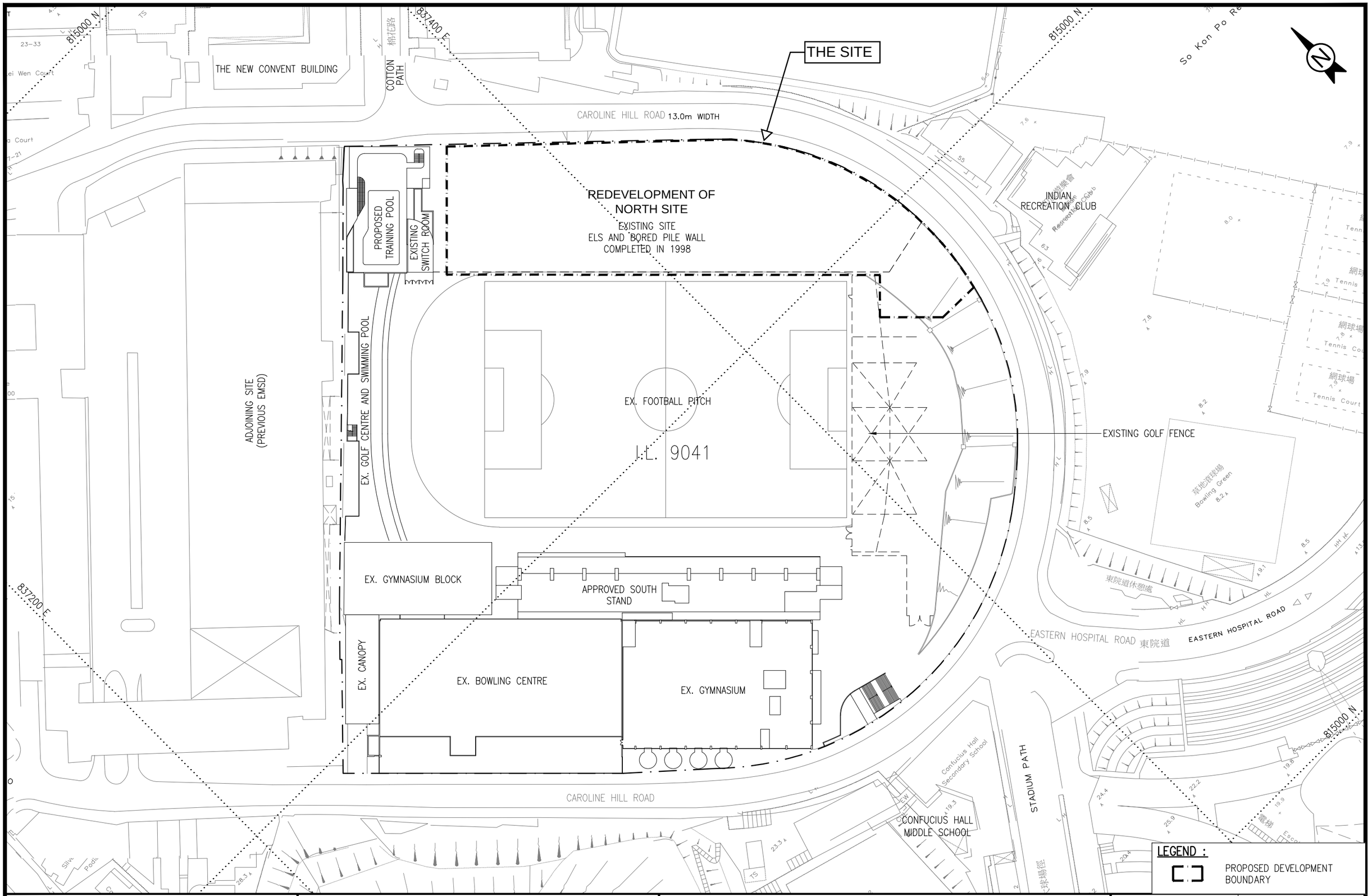


Plate 3: General View of the Southern End of the Site and the Existing Slope 11SW-B/C659



Plate 4: General View of the Bored Pile Wall

Figures



LEGEND :

PROPOSED DEVELOPMENT BOUNDARY

Checked by :

Drawn by :

Compiled by :

FUGRO (HONG KONG) LIMITED
10/F, Fugro House - KCC2,
1 Kwai On Road, Kwai Chung,
New Territories, Hong Kong. Tel : 2577 9023

Project
DEVELOPMENT OF SOUTH CHINA ATHELTIC ASSOCIATION AT 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title
SITE LOCATION PLAN

Job No.	Figure
190171	1
Scale	Date
1 : 1000	JAN-2022

CAD Reference : X:\WORKING\190171\GA REPORT (FOS)\190171-FIG01 (P01) (NPS-GAR).DWG Date & Time : 21-01-22 (6:58:16PM) Plotted By : L.NGAN

Checked by :

Drawn by :

Compiled by :

837400 E

837450 E

837350 E

815250 N

815200 N

THE SITE

EXISTING BORED PILE WALL AND RAKING STRUT UNDER BD 3/3053/96

EXISTING SOLDIER PILE WALL WITH DIAGONAL TIES UNDER BD 3053/96

TEMPORARY CUT SLOPE WITH SOIL NAIL

STAIRCASE E5 UNDER BD 2-3/3088/79/9(S)

DRAINAGE (A&A) WORKS UNDER BD 2-3/3088/79/8/10(D)

EXISTING GOLF FENCE UNDER BD 2/3053/96 (TB)

SITE FORMATION WORKS UNDER BD 3/3053/96

11SW-B/R976

11SW-B/C659

11SW-B

CAROLINE HILL ROAD

PAVEMENT

TEMPORARY 35° CUT SLOPE PROTECTED BY 75 mm THK. CHUNAM SURFACING

AS-BUILT FOOTING

EX. SWIMMING POOL

CONCRETE PADS

LAGGING WALL

EXTENT OF CAPPING BEAM

(EXISTING FOOTBALL PITCH) UNEXCAVATED

TEMPORARY 65° (MAX.) CUT SLOPE

TEMPORARY 30° (MAX.) CUT SLOPE

EXISTING 650 (W) x 150 (D) COVERED CHANNEL (1:100)

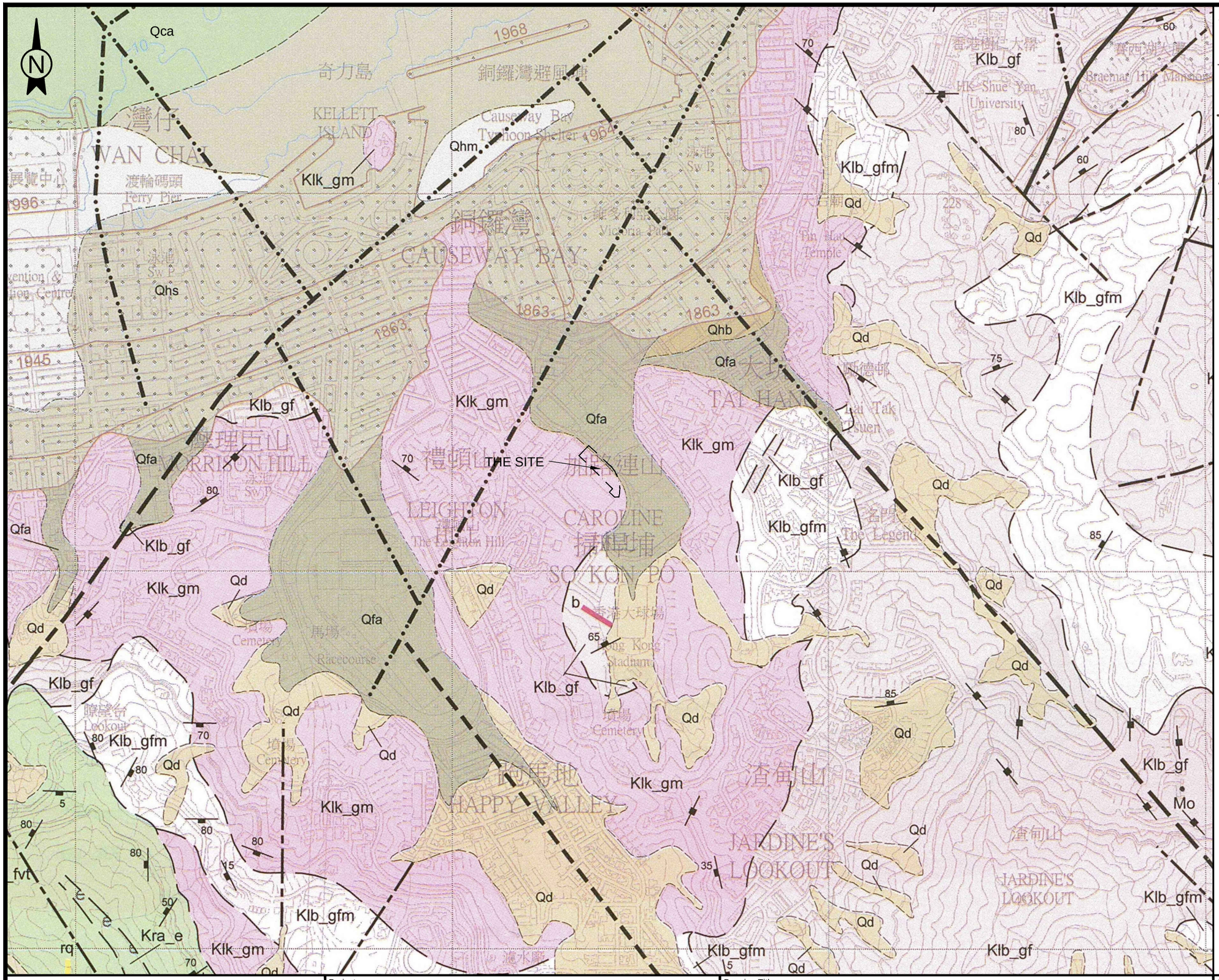
FOOTBALL FIELD

LEGEND :

- PROPOSED DEVELOPMENT BOUNDARY
- EXISTING FEATURE BOUNDARY
- BH1 EXISTING DRILLHOLES

FUGRO (HONG KONG) LIMITED 10/F, Fugro House - KCC2, 1 Kwai On Road, Kwai Chung, New Territories, Hong Kong. Tel : 2577 9023	Project DEVELOPMENT OF SOUTH CHINA ATHELTIC ASSOCIATION AT 88 CAROLINE HILL ROAD, HONG KONG	Drawing Title SITE LAYOUT PLAN WITH EXISTING GI AND STRUCTURES	Job No. 190171
			Figure 2
			Scale 1 : 500
			Date AUG-2025

CAD Reference : X:\WORKING\190171\GA REPORT (FOS)\190171-FIG02 (P01) (NPS-GAR).DWG Date & Time : 21-01-22 (6:58:00PM) Plotted By : L.NGAN



LEGEND :

- PROPOSED DEVELOPMENT BOUNDARY
- CONTACT (OBSERVED)
- CONTACT (APPROXIMATE)
- FAULT (CROSSMARK INDICATES DOWNTHROW SIDE) (OBSERVED)
- FAULT (CROSSMARK INDICATES DOWNTHROW SIDE) (APPROXIMATE)
- FAULT (CROSSMARK INDICATES DOWNTHROW SIDE) (INFERRED)
- 1982 — FILL BOUNDARY, WITH LIMIT OF RECLAMATION AT DATE SHOWN
- 60 — JOINT (INCLINED)
- JOINT (VERTICAL)
- b — UNDIFFERENTIATED MAFIC TO INTERMEDIATE DYKES, DOMINANTLY BASALTIC ANDESITE AND ANDESITE
- rq — UNDIFFERENTIATED QUARTZPHYRIC RHYOLITE TO QUARTZPHYRIC RHYODACITE DYKES
- NATURAL EARTH AND WASTE (FILL; SANITARY FILL)
- Qfa — CLAY, SLIT, SAND AND GRAVEL; WELL–SORTED TO SEMI–SORTED (ALLUVIUM)
- Qhb — SAND (BEACH DEPOSITS)
- Qhm — SOFT TO VERY SOFT MUD; SOME SAND (MARINE MUD)
- Qhs — SAND, SOME GRAVEL AND SAND (MARINE SAND)
- Qd — SILT, SAND, GRAVEL WITH BOULDERS (COLLUVIUM)
- Qca — SILT, SAND, GRAVEL AND BOULDERS (ALLUVIUM)
- Klb_gf — FINE GRAINED GRANITE
- Klb_gfm — FINE TO MEDIUM–GRAINED GRANITE
- Kra_fvt — FINE ASH VITRIC TUFF
- e Kra_e e — EUTAXITIC FINE ASH VITRIC TUFF
- Klk_gm — MEDIUM–GRAINED BIOTITE GRANITE

NOTE: BROKEN LINES ON MAP FACE DENOTE UNCERTAINTY

Checked by :

Drawn by :

Compiled by :

FUGRO (HONG KONG) LIMITED
10/F, Fugro House - KCC2,
1 Kwai On Road, Kwai Chung,
New Territories, Hong Kong. Tel : 2577 9023

Project
DEVELOPMENT OF SOUTH CHINA ATHELTIC ASSOCIATION AT 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title
REGIONAL GEOLOGICAL MAP
(H.K. Geological Survey, Series HGM20, Sheet 11, 2012 Edition)

Job No.	Figure
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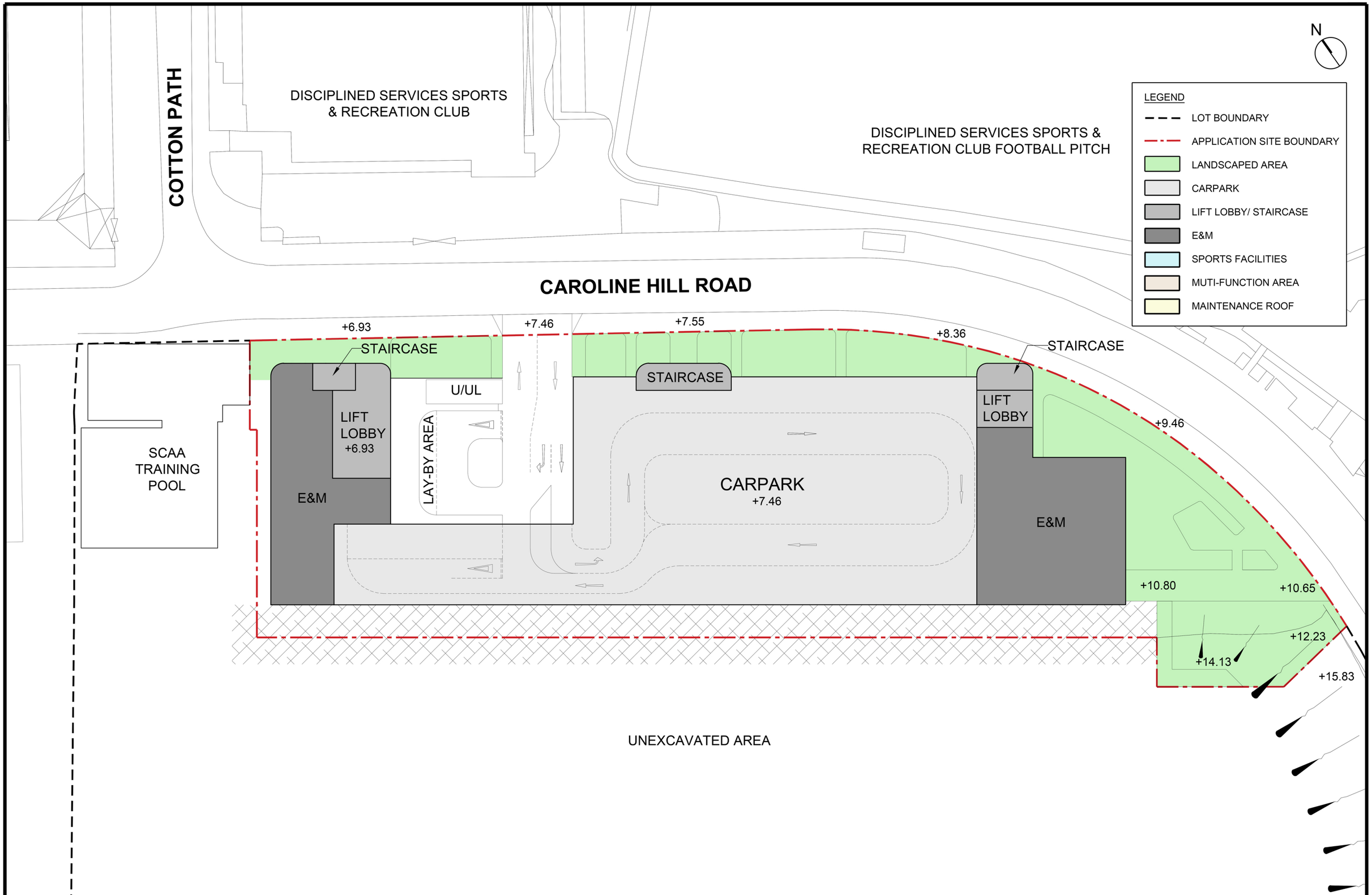
Scale	Date
1 : 10000	AUG-2025

CAD Reference : X:\WORKING\190171\GA REPORT (FOS)\190171-FIG04 (P01) (NPS-GAR).DWG Date & Time : 21-01-22 (7:02:54PM) Plotted By : L.NGAN

Appendix A

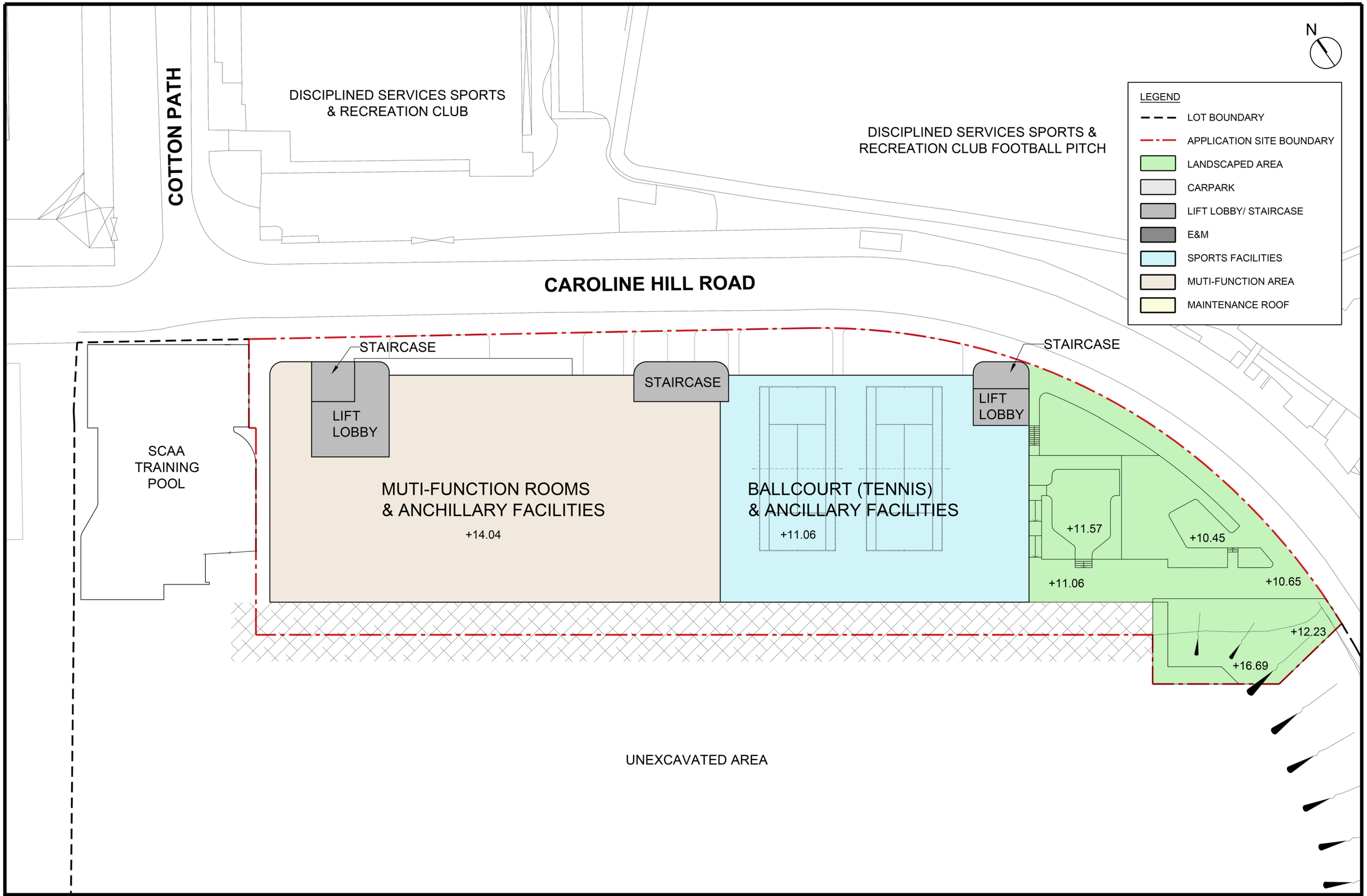
Proposed Development Layout



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

G/F Plan ◦ 1 : 500 (A3) ◦ 12 Sep 2025

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 12 Sep 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF CENTRE

FOOTBALL PITCH
SCAA ARTIFICIAL TURF RUGBY
FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 12 Sep 2025

Design 2 (HK) Limited

A-3

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

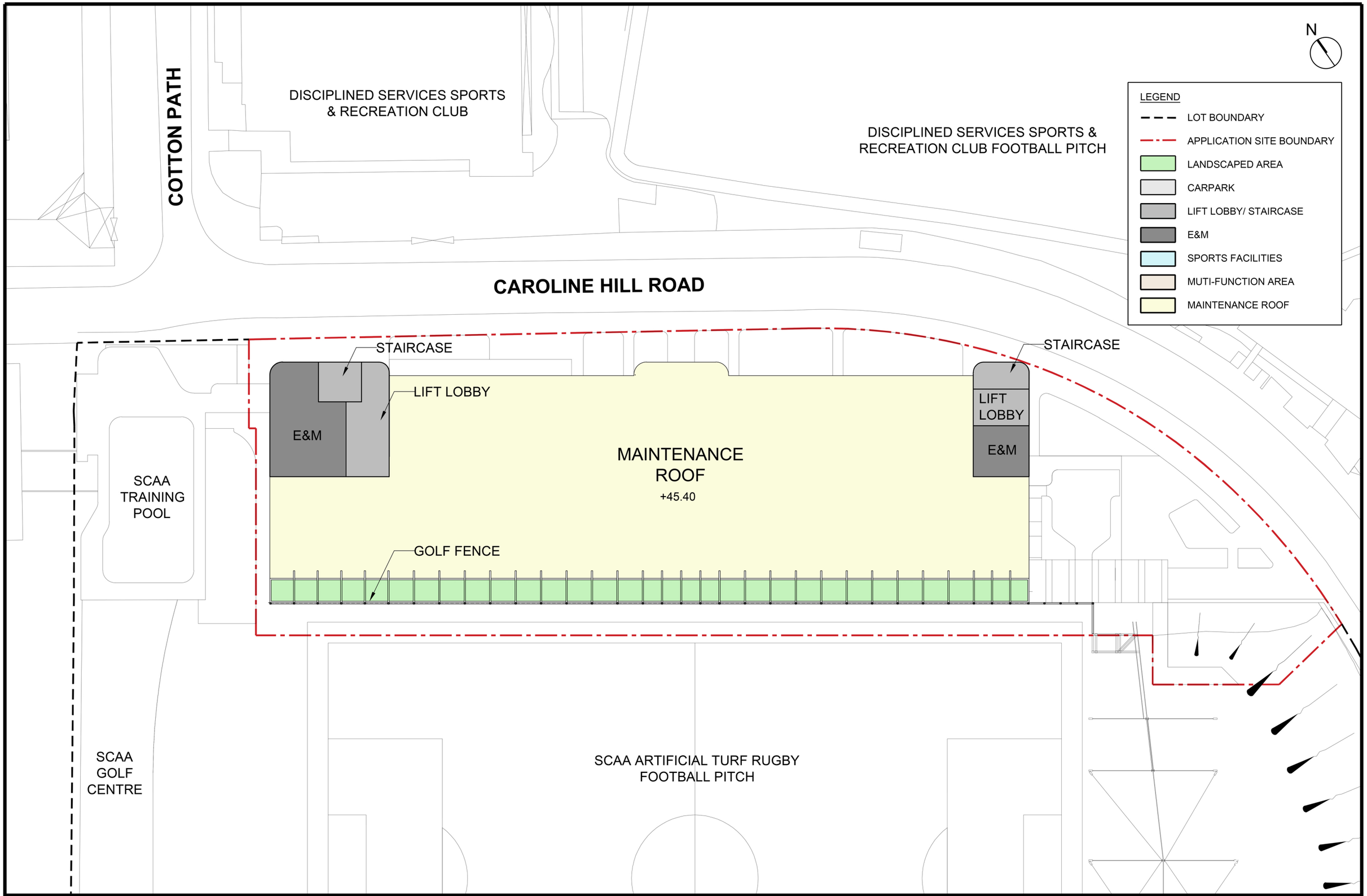
SCAA GOLF CENTRE

FOOTBALL PITCH
SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

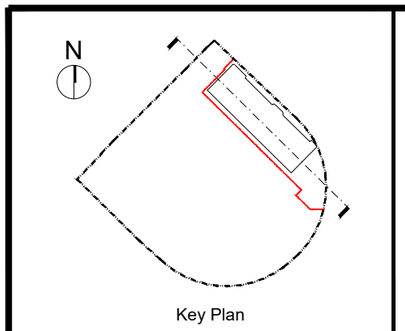
3/F Plan ○ 1 : 500 (A3) ○ 12 Sep 2025



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

UR/F Plan ◦ 1 : 500 (A3) ◦ 12 Sep 2025



LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- MAINTENANCE ROOF

Boundary Line

Golf Fence
+61.87

16320

R/F
+45.40

11900

3/F
+33.50

11900

37940

2/F
+21.60

14140

1/F
+11.06

G/F
+7.46

Existing Slope

Caroline Hill Road
Approx.
+10.65

Mean Street Level
Approx.
+8.811

Landscape Garden

+10.65

Golf Fence
+61.87

Main Roof
(for maintenance only)
+45.40

Ball Court
(Tennis Court)
+33.50

Ball Court
(Tennis Court)
+33.50

Ball Court
(5-A-Side Soccer)
+21.60

Ball Court
(5-A-Side Soccer)
+21.60

Ball Court
(Tennis Court)
+11.06

Multi-Function Room(s) / Office / E&M
+14.04

Carpark
+7.46

Entrance Lobby
+6.93

E&M

E&M

Application Boundary

Training Pool Deck
+22.68

Boundary Line

Adjoining Commercial Development and Linkage to MTR
+18.60

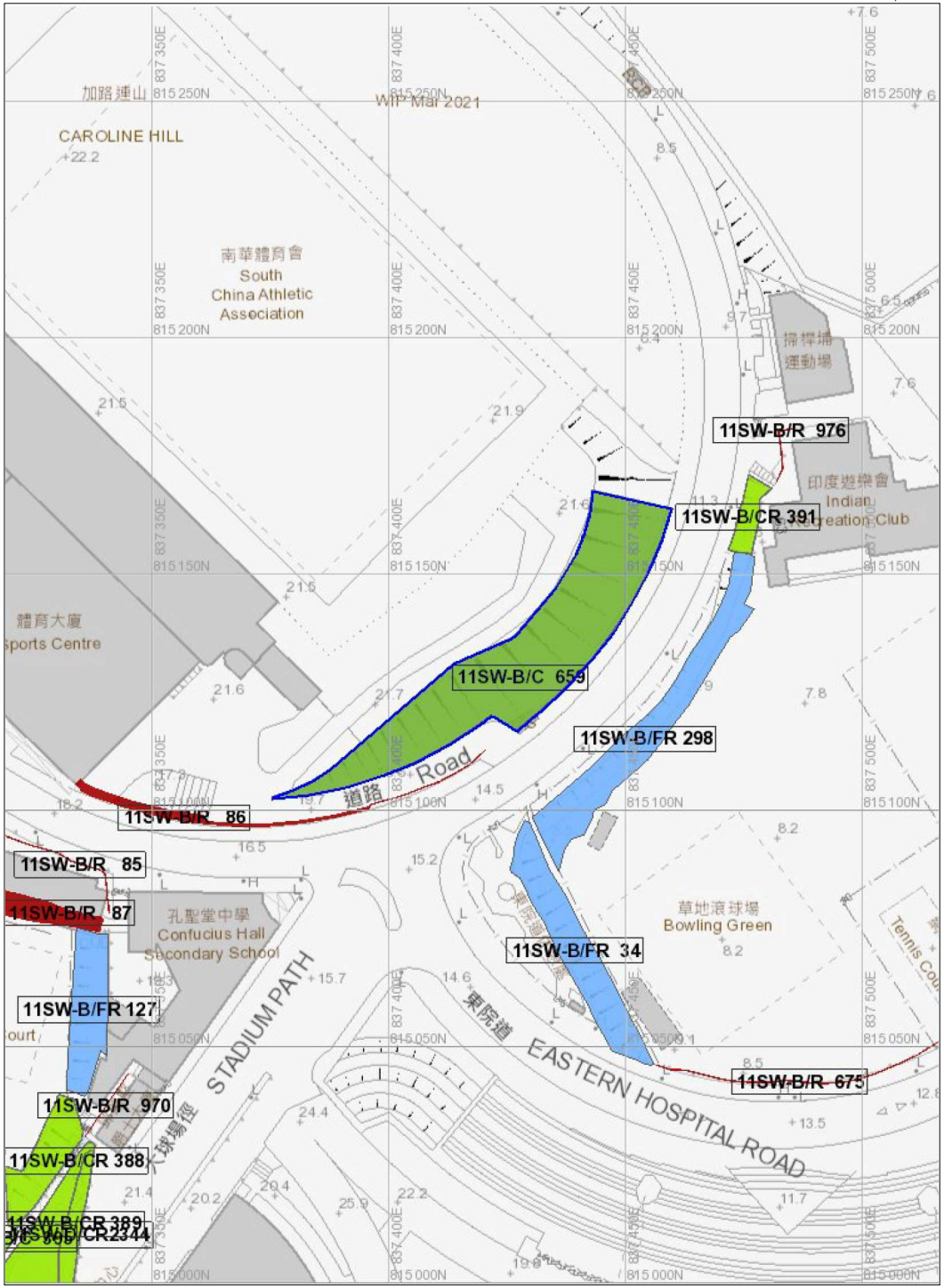
Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 18 Sept 2025

Design 2 (HK) Limited

Appendix B

SIS Record



SLOPE INFORMATION SYSTEM
GEOTECHNICAL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Feature No. 11SW-B/C 659

BASIC INFORMATION

Location: 88 Caroline Road, Causeway Bay, H.K.

Date of Formation: N/A

Date of Construction/ Modification: 02-09-2002

Approximate Coordinates: Easting : 837439 Northing : 815140

CONSEQUENCE-TO-LIFE CATEGORY

Facility at Crest: Densely-used open area/facilities

Distance of Facility from Crest (m): 18

Facility at Toe: Road/footpath with moderate traffic density

Distance of Facility from Toe (m): 3

Consequence-to-life Category: 2

Remarks: N/A

SLOPE PART

(1) Max. Height (m): 7.9 Length (m): 80 Average Angle (deg): 32

WALL PART

N/A

MAINTENANCE RESPONSIBILITY

Private Feature Party: IL 9041 Agent: N/A

DETAILS OF SLOPE / RETAINING WALL

Date of Inspection: 23-07-2019

Data Source: AP

Slope Part Drainage: (1) Position: Crest Size(mm): 300
(2) Position: On slope Size(mm): 300
(3) Position: Toe Size(mm): 300

Wall Part Drainage: N/A

SLOPE PART

Slope Part (1)
Surface Protection (%): Bare: 0 Vegetated: 100 Chunam: 0 Shotcrete: 0 Other Cover: 0
Material Description: Material type: Soil Geology: N/A
Berm: No. of Berms: N/A Min. Berm Width (m): N/A
Weepholes: Size (mm): N/A Spacing (m): N/A

SLOPE INFORMATION SYSTEM
GEOTECHNICAL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Feature No. 11SW-B/C 659

WALL PART

N/A

SERVICES

N/A

STAGE 1 STUDY REPORT

Inspected On:
Weather:
District: N/A

Section No: 1-1
Height(m):
Type of Toe Facility: Road/footpath with moderate traffic density

Distance from Toe(m): 3
Type of Crest Facility: Densely-used open area/facilities

Distance from Crest(m): 18
Consequence Category:
Engineering Judgement:

Section No: 2-2
Type of Toe Facility:

Distance from Toe(m):
Type of Crest Facility:

Distance from Crest(m):
Consequence Category:
Engineering Judgement:

SLOPE INFORMATION SYSTEM
GEOTECHNICAL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Feature No. 11SW-B/C 659

Sign of Seepage:

Criterion A satisfied:
Sign of Distress:

Criterion D satisfied:
Non-routine maintenance required:
Note:

Masonry wall/Masonry facing:
Note:

Consequence category (for critical section):
Observations: N/A
Emergency Action Required:
Action By: N/A

ACTION TO INITIATE PREVENTIVE WORKS

Criterion A/Criterion D: N/A
Action By: N/A
Further Study:
Action By: N/A

OTHER EXTERNAL ACTION

Check / repair Services:
Action By: N/A
Non-routine Maintenance:
Action By: N/A

PHOTO



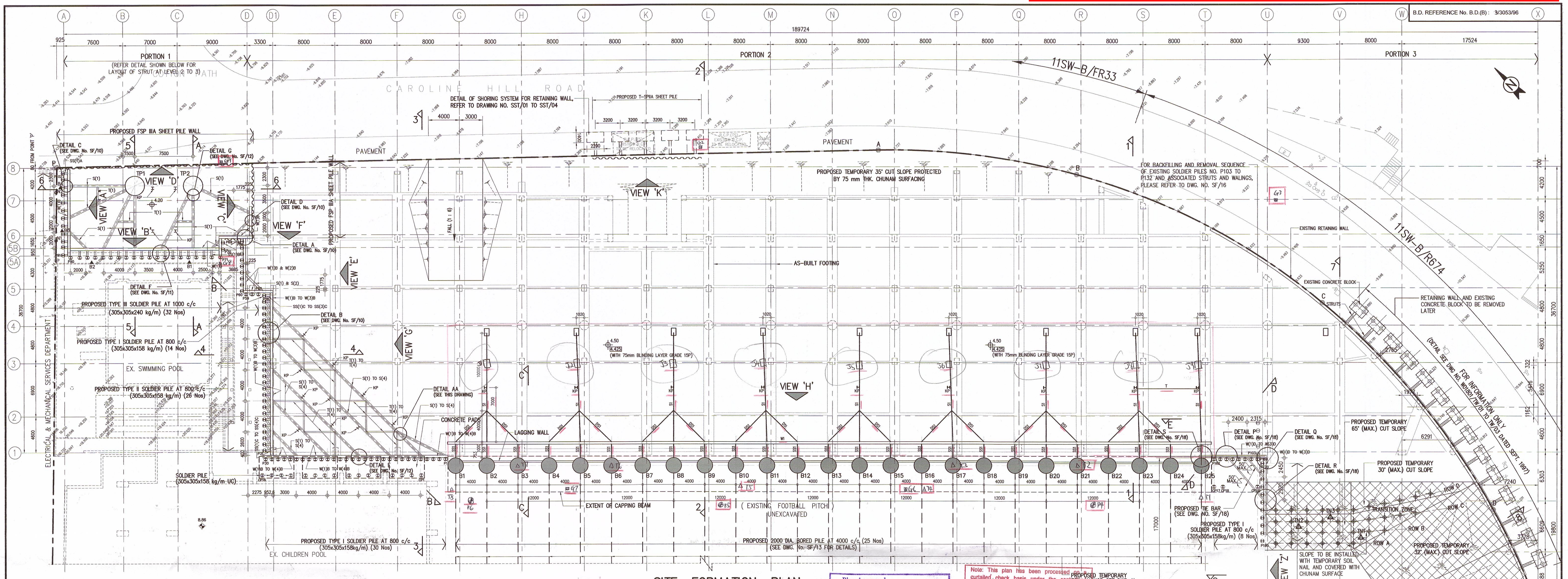


Appendix C

Relevant Site Formation Plans and Foundation Plans

1. Record Plan of Existing Bored Pile Wall and Strengthen Works under BD 3/3053/96 (2013)

B.D. REFERENCE No. B.D.(B) : 3/3053/96



SITE FORMATION PLAN

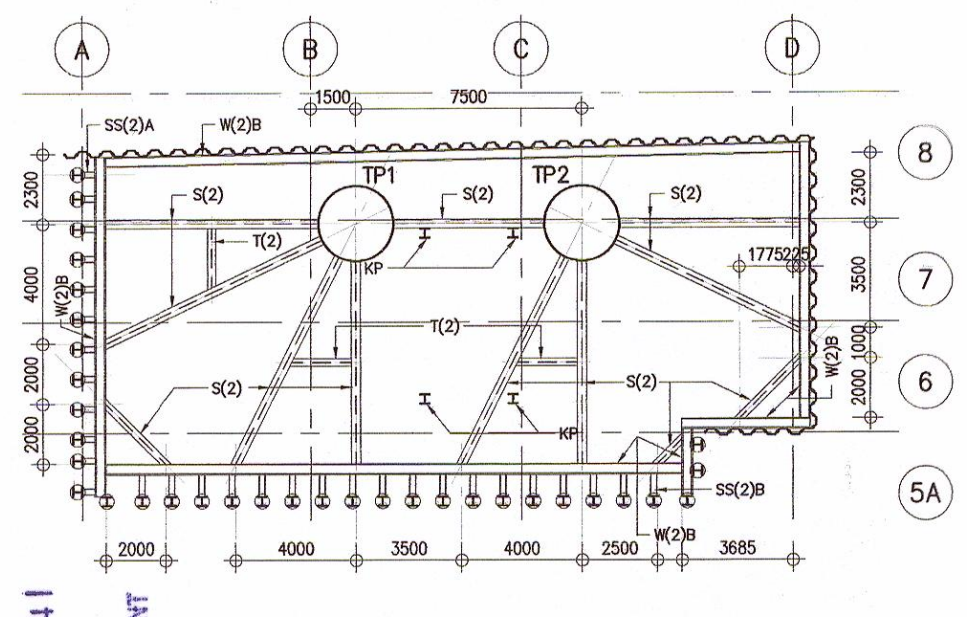
1 : 250

RECORD PLAN

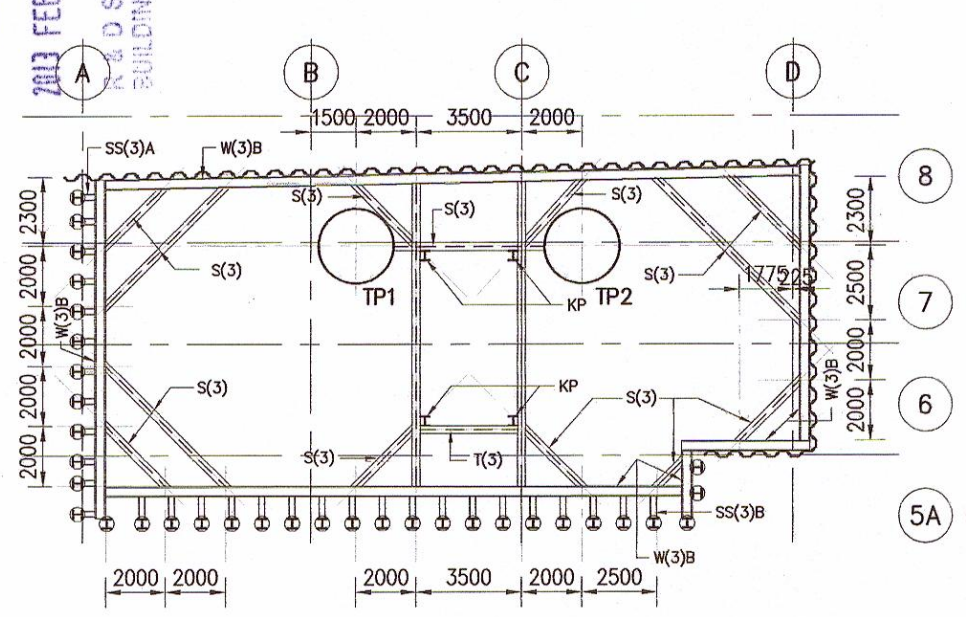
I CERTIFY THAT THE SUBMITTED RECORD PLAN IS IDENTICAL TO THOSE APPROVED BY THE BA ON 18-APR-2013

Plan Approved
CHENG Wai-kit
Building Surveyor
for BUILDING AUTHORITY
18 APR 2013

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

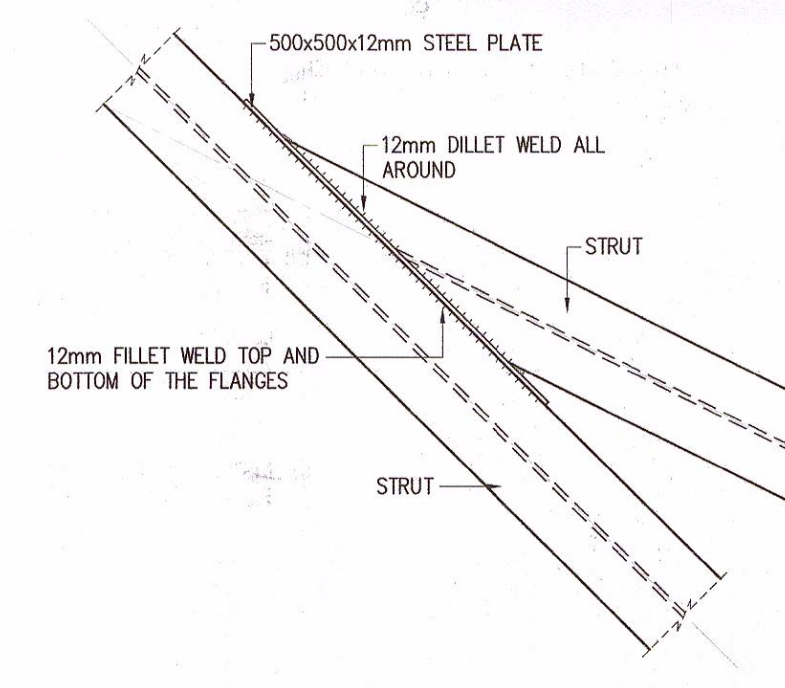


LAYOUT OF STRUT AT LEVEL 2



LAYOUT OF STRUT AT LEVEL 3

(PROPOSED TRANSFORMER ROOM)



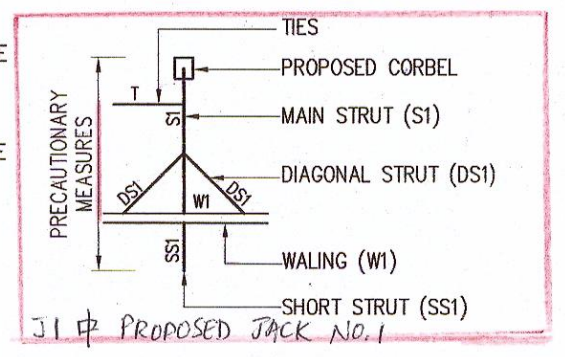
DETAIL AA

1 : 20

RECEIVED BY 2013 FEB 21 P 4:41 R & D Section BUILDINGS DEPARTMENT

LEGEND

- SITE BOUNDARY
- AS-BUILT FOOTING
- 4.00 PROPOSED SITE FORMATION LEVEL
- 7.269 EXISTING GROUND LEVEL
- WALL / COLUMN FOR PROPOSED BUILDING
- PROPOSED 35° TEMPORARY CUT SLOPE UNLESS OTHERWISE STATED
- PROPOSED STEEL SHEET PILE (FSP IIA)
- PROPOSED SOLDIER PILE
- B1 BORED PILE NO. B1
- TP1 TEMPORARY BORED PILE NO. TP1
- KP KING POST
- P1 SOLDIER PILE NO. P1
- B1 BUILDING MOVEMENT CHECKPOINT
- N1 MONITORING CHECK POINT IN FORM OF NAILING TO BE INSTALLED ATCOPING OF EXISTING RETAINING WALL
- PROPOSED TEMPORARY SOIL NAIL
- TN1 PROPOSED TRIAL NAIL NO. TN1
- PROPOSED 50 THK. CHUNAM
- S(1)1 STRUT (LAYER No, STRUT No.)
- SS(1)A SHORT STRUT (LAYER No, SHORT STRUT No.)
- W(1)A WALING (LAYER No, WALING No.)
- T(1) TIE (LAYER No)
- 4.425 FINAL EXCAVATION LEVEL



G1	EXISTING GROUND SETTLEMENT CHECK POINT
P4	EXISTING OBSERVATION WELL FOR GROUNDWATER MONITORING
T1 △	EXISTING SETTLEMENT CHECK POINT ON CAPPING BEAM
GG1 ▽	PROPOSED GROUND SETTLEMENT CHECK POINT

NOTES ON PRESTRESSED GROUND ANCHOR MONSTORING

MONSTORING OF PRESTRESSED GROUND ANCHORS IS TO BE CARRIED OUT FOR EACH 6 MONTHS. THE REQUIREMENTS FOR MONITORING ARE GIVEN IN GEOSPEC 1. MONTHLY SUPERVISION INSPECTION SHALL BE CARRIED OUT BY CATEGORY A ENGINEER. THE MONITORING/SUPERVISION REPORTS SHALL BE SUBMITTED TO BD.

NOTES

1. ALL DIMENSIONS ARE IN MILLMETERS AND LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.
3. ALL MEASUREMENTS MUST BE CHECKED ON SITE. DO NOT SCALE FROM THE DRAWINGS.
4. THE CONTRACTOR SHALL CONFIRM WITH THE ARCHITECT/ENGINEER ALL THE SETTING OUT DIMENSIONS PRIOR TO THE EXECUTION OF THE WORKS.
5. DESIGN SOIL STRENGTH PARAMETERS:

	DENSITY (kN/m³)	COHESION (kPa)	FRICTION ANGLE (ø ')
FILL	19	0	35
CDG	19	3	37
C/HDG	19	9	38

6. GENERAL LAYOUT OF THE SHORING SYSTEM SHALL REFER TO DRAWINGS SF/03, SF/04 AND SF/05.
7. GENERAL LAYOUT, DETAILS AND CONSTRUCTION SEQUENCE OF THE TEMPORARY SHORING SYSTEM SHALL REFER TO DRAWINGS SF/06, SF/07, SF/08, SF/11, SF/12 AND SF/13.
8. REFER TO OTHER RELEVANT DRAWINGS FOR DETAILS OF TEMPORARY FENCE, CONCRETE PADS AND CAPPING BEAM.
9. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED PLANS. IF THERE ARE ANY VARIATIONS OF WORKS WHICH ARE INCONSISTENT WITH THE APPROVED PLANS, THE SUPERVISORS SHALL NOTIFY THE AP/RSE/RGE/RSC OF SUCH VARIATIONS IMMEDIATELY. THE AP/RSE/RGE/RSC SHALL REVIEW THE SITUATIONS AND TAKE APPROPRIATE ACTIONS SO AS TO COMPLY WITH THE BUILDINGS ORDINANCE.

DEMOLITION OF EXISTING MASONRY RETAINING WALL

1. WHERE THE EXISTING RETAINING WALL ALONG CAROLINE HILL ROAD ~~IS TO BE~~ WAS DEMOLISHED WHOLLY OR PARTIALLY, THE MASONRY BLOCKS ~~SHALL BE~~ WAS REMOVED IN LAYERS STARTING FROM THE TOP.
2. THE BLOCKS IN EACH LAYER (MAXIMUM 1m HIGH) ~~ARE TO BE~~ WERE LOOSENED INDIVIDUALLY AND REMOVED. DUE CARE IS ~~TO BE~~ TAKEN TO MINIMIZE DISTURBANCE TO THE NEXT LOWER LAYER TO AVOID POSSIBLE COLLAPSE OF THE WALL.
3. THE CONTRACTOR ~~SHALL TAKE~~ TOOK EVERY PRECAUTION TO MAINTAIN THE MASONRY WALL AND SECURE LOOSE BLOCKS. ADEQUATE PRECAUTIONARY MEASURES SUCH AS SAFETY FENCES AND NETS, ~~ARE TO BE~~ WERE PROVIDED TO PREVENT UNCONTROLLED FALLING BLOCKS DURING DEMOLITION.
4. THE VOIDS FORMED OR FOUND ~~SHALL BE~~ WERE BACKFILLED WITH MASS CONCRETE.
5. A METHOD STATEMENT FOR DEMOLITION OF THE EXISTING MASONRY RETAINING WALL ~~SHALL BE~~ WAS SUBMITTED TO THE ARCHITECT/ENGINEER FOR PRIOR APPROVAL. NO HEAVY MACHINERY AND PLANT ~~ARE~~ WERE ALLOWED FOR THE WALL DEMOLITION.

NOTES ON SITE FORMATION WORKS

1. SITE FORMATION WORKS FOR THE ~~PROPOSED~~ AS-BUILT TRANSFORMER ROOM (PORTION 1) ~~SHALL BE~~ WERE CARRIED OUT IN ADVANCE THAN OTHER PARTS OF THE WORKS.
2. THE EXISTING TRANSFORMER ROOM ~~SHALL~~ WAS NOT BE DEMOLISHED UNTIL ALL THE EXISTING ELECTRIC UTILITIES ~~HAVE~~ HAD BEEN DIVERTED TO THE AS-BUILT ~~PROPOSED~~ TRANSFORMER ROOM.
3. BEFORE THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, THE CONTRACTOR ~~SHALL~~ WAS INSTALL ALL THE MONITORING CHECKPOINTS AT LOCATIONS AS SHOWN IN DWG. NO. SF/16. A SET OF THE INITIAL READINGS FOR THE CHECKPOINTS ~~SHALL BE~~ WAS SUBMITTED TO THE ARCHITECT/ENGINEER/BD FOR RECORD. DETAILS AND FREQUENCY OF MONITORING SHALL REFER TO DWG. NO. SF/16.
4. ~~THE PROPOSED SITE FORMATION WORKS SHALL BE COMMENCED BY~~ CONSTRUCTING BORED PILES, SOLDIER PILES ~~AND~~ STEEL SHEET PILES AND PRECAUTIONARY MEASURES FOR THE TEMPORARY SHORING SYSTEM AS PER THE LAYOUT SHOWN ON THE DRAWINGS.
5. ANY TEMPORARY ACCESS AND WORKING PLATFORMS TO BE FORMED WITHIN THE SITE TO FACILITATE THE CONSTRUCTION WORKS ~~SHALL BE~~ WERE SUBMITTED TO THE ENGINEER FOR APPROVAL THE CONTRACTOR'S ATTENTION IS DRAWN THAT AT ANY TIME EXCAVATION WORKS INVOLVED ~~SHALL BE~~ WAS KEPT TO A MINIMUM.
6. PRIOR TO THE COMMENCEMENT OF BULK EXCAVATION, AS-BUILT RECORD PLAN SHOWING FOUNDING LEVELS OF THE SOLDIER PILES, BORED PILES, SHEET PILES AND KING POSTS ~~SHALL BE~~ WERE SUBMITTED TO THE ARCHITECT/ENGINEER/BD FOR RECORD AND APPROVAL.
7. BULK EXCAVATION ~~SHALL~~ WAS ONLY ~~BE~~ COMMENCED AFTER THE SPECIFIED STRENGTH OF THE CONCRETE FOR THE SHORING SYSTEM ~~HAS~~ HAD BEEN ACHIEVED.
8. DURING AND AFTER THE BULK EXCAVATION WORKS, THE TEMPORARY SOIL ANCHORS ~~SHALL BE~~ WERE MONITORED AT FREQUENCY SPECIFIED IN DWG. NO. SF/14. WHERE ANY EXCESSIVE OVERSTRESS OF THE ANCHORS AND EXCESSIVE DEFORMATION OF THE BORED PILES ~~ARE~~ WERE NOTED, THE CONTRACTOR ~~SHALL~~ CEASEDALL THE EXCAVATION WORKS AND INFORM THE ARCHITECT/ENGINEER FOR NECESSARY ACTION.
9. EXCAVATION CAN PROCEED TO THE NEXT LEVEL ONLY WHEN THE AS-BUILT ~~PROPOSED~~ STRUTS AND/OR TEMPORARY SOIL ANCHORS FOR THE PREVIOUS EXCAVATION LEVEL ~~HAVE~~ HAD BEEN INSTALLED AS SPECIFIED AND APPROVED BY THE ARCHITECT/ENGINEER.
10. DIVIDE BULK EXCAVATION AT PORTION 2 AREA INTO STAGE I & II.
   a) STAGE I EXCAVATION ~~COMMENCES~~ COMMENCED AFTER COMPLETION OF BORED PILES B1-B25 AND SOLDIER PILES P103-P132, P162-P169 & CP17-CP19.
   b) STAGE II EXCAVATION ~~COMMENCES~~ COMMENCED AFTER COMPLETION OF SOLDIER PILES P1-P68, CP1-CP16 & PIPE PILES PP1-PP32 AND DEMOLITION OF EXISTING TRANSFORMER ROOM.
11. BULK EXCAVATION AT PORTION 3 AREA ~~COMMENCES~~ COMMENCED AFTER COMPLETION OF SOLDIER PILES P170 TO P180 AND DEMOLITION OF EXISTING BUILDING AT PORTION 3 AND BACKFILLING AT EASTERN END OF PORTION 2 AS INDICATED IN DRAWING NO. SF/16.
12. UPON COMPLETION OF SITE FORMATION AT PORTION 3, ADDITIONAL SHORING SYSTEM FOR FURTHER EXCAVATION BETWEEN GRIDLINE 1 AND 7 FROM +9.6 TO +4.5mPD TO FACILITATE THE CONSTRUCTION OF BUILDING FOUNDATION~~WILL BE~~ WAS SUBMITTED SEPARATELY.
   INSTALLATION OF SOIL ANCHOR NO. A4(25) ~~WILL BE~~ WAS INCORPORATED INTO THE CONSTRUCTION SEQUENCE FOR THE SHORING SYSTEM.
13. UPON COMPLETION OF BUILDING CONSTRUCTION UP TO LEVEL +21.8mPD, ADDITIONAL SHORING SYSTEM WILL BE PROVIDED AT STAIRCASES LOCATION BEYOND GRIDLINE 1 TO SUPPORT EXCAVATION FROM EXISTING GROUND TO +13.0 AND +9.6mPD. DETAILS OF THE SHORING SYSTEM WILL BE SUBMITTED SEPARATELY.

NOTES FOR TEMPORARY BORED PILE TP1 AND TP2

1. TEMPORARY BORED PILE OF DIAMETER 2500 ~~TO BE~~ WAS FOUND AT LEVEL -21mPD. FOR DETAILS, PLEASE REFER TO DRAWING NO. SF/12.
2. THESE PILES ARE TO RESIST TEMPORARY LATERAL LOADS ONLY. NO PERMANENT LOAD WILL BE IMPOSED.

Strutting System For Precautionary Measures

CONSTRUCTION PROCEDURES FOR PRECAUTIONARY WORK:-
(ELS AND FOOTINGS WORKS HAVE BEEN COMPLETED)

1. CONSTRUCT CORBEL AT THE AS-BUILT FOOTINGS.
2. ERECT SHORT STRUTS, WALINGS, MAIN STRUTS AND DIAGONAL STRUTS
3. CARRIED OUT PRELOADING TO THE MAIN STRUT IN ACCORDING TO THE "NOTES FOR PRELOADING OF STRUTS".

NOTES FOR PRELOADING OF STRUTS:-

1. JACKING FORCE TO BE APPLIED SYMMETRICALLY ABOUT THE CENTRE LINE OF EACH STRUT IN THREE STAGES AS SPECIFIED IN NOTE 3 BELOW.
2. PLATES AND WEDGES TO BE PACKED TIGHTLY AT THE GAP BETWEEN WALING AND STRUT CREATED AFTER JACKING AND THEN FIXED IN PLACE BY WELDING.
3. ADD 1/3 OF THE REQUIRED JACKING FORCE IN EACH OF THE THREE STAGES. ENSURE NO LOSS OF THE THREE STAGES OF PRELOADING.

J1→J7→J3→J9→J5
J1→J7→J3→J9→J5
J1→J7→J3→J9→J5

PRELOADING OF STRUTS

STAGES	LOAD/STRUT		HOLDING TIME
1 A	ADD 1/3 STRUT LOAD	PRELOAD=33.3kN	10 MIN.
2 A	ADD FURTHER 1/3 STRUT LOAD	PRELOAD=66.7kN	10 MIN.
~~FINAL~~ 3A	TOTAL LOAD	PRELOAD=100kN	10 MIN.

BD SUBMISSION

AMENDED PLAN

1B	PRELOAD = 33.3 KN	10 MIN
2B →	PRELOAD = 66.7 KN	10 MIN
3B →	PRELOAD = 100 KN	10 MIN

1B ADD 1/3 STRUT LOAD (J2→J8→J4→J6)
2B ADD FURTHER 1/3 STRUT LOAD (J2→J8→J4→J6)
3B TOTAL LOAD (J2→J8→J4→J6)

Notes for Structural Steel (Strutting System for precautionary Measures)

1. All structural stweel works shall comply with the Code of Practice for Structural Use of Steel 2011.
2. All structural steel shall be grade S275 J0 Class 1 to BSEN 10025.
3. All welding complies with BSEN 2560. All welding connections shall be 6mm thick continuous fillet welds or as stated.

Notes for concrete (Strutting System for precautionary Measures)

1. Concrete for the corbel shall be 30D
2. All concrete works shall comply with the Code of Practice for Structural Use of Concrete 2013 and CS1:2010 except clause 7.1.
3. Ultimate lap length and anchorage length shall be 34x bar diameter for grade 30D concrete
4. Concrete cover shall be 35.

DESIGN 2 (HK) LTD.
JOHANNES C.W. KUNG
AUTHORIZED PERSON

LIU Chi Kwun, ALBERT
B.Sc BE (Hon) CEng MIStructE MHKIE RSE
AUTHORIZED PERSON (ENGINEER)
Registered Structural Engineer

Description	Drawn / Designed / Checked / Approved	Date	Revision
PRECAUTIONARY WORKS (STRUTTED SYSTEM) ADDED; SUPPORTING STRUCTURE FOR TREE NO. 169 DEMOLISHED	/ / /	19.2.13	M
PROPOSED ACCESS RAMP ADDED	MON / MKS / GL / LC	20.1.00	L
SHORT STRUT ADDED AS PER BD APPROVED ON 11.1.00	MON / MKS / GL / LC	30.11.99	K
PREVIOUS REVISION OF DRAWING REFER TO DRG. NO. SF / 02J	- / - / - / -	-	-

PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE 1	Job No. U05511	Drawing No. SF / 02 M
LAYOUT PLAN OF PROPOSED SITE FORMATION WORKS	Scale AS SHOWN	Date 11 APR., 1997
FUGRO (HONG KONG) LIMITED, 7/F, Guardian House, 32 Oi Kwan Road, Wanchai, Hong Kong. Tel : 2577 9023	Drawn / Designed / Checked / Approved: MON / MKS / GL / LC	

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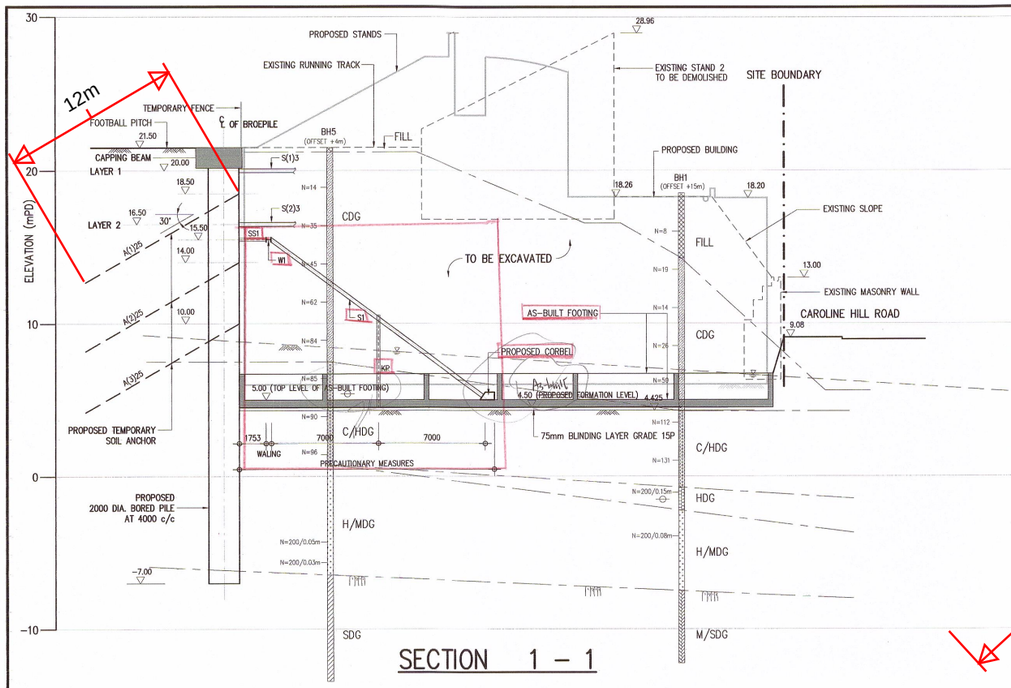
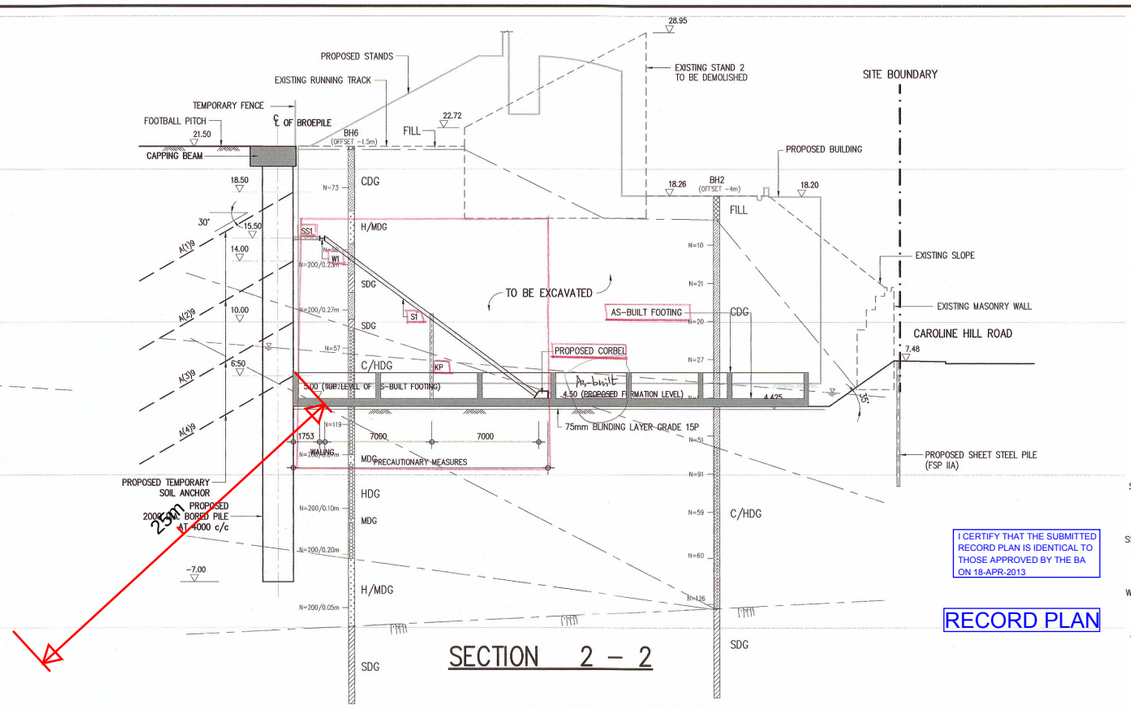
CAD. FILE NO. : X:\Working\U05511\Site Formation\U05501-SF02M (P01) (SF-PH1).dwg
PLOTTED BY : leonn, 19 Feb,2013 - 2:51pm

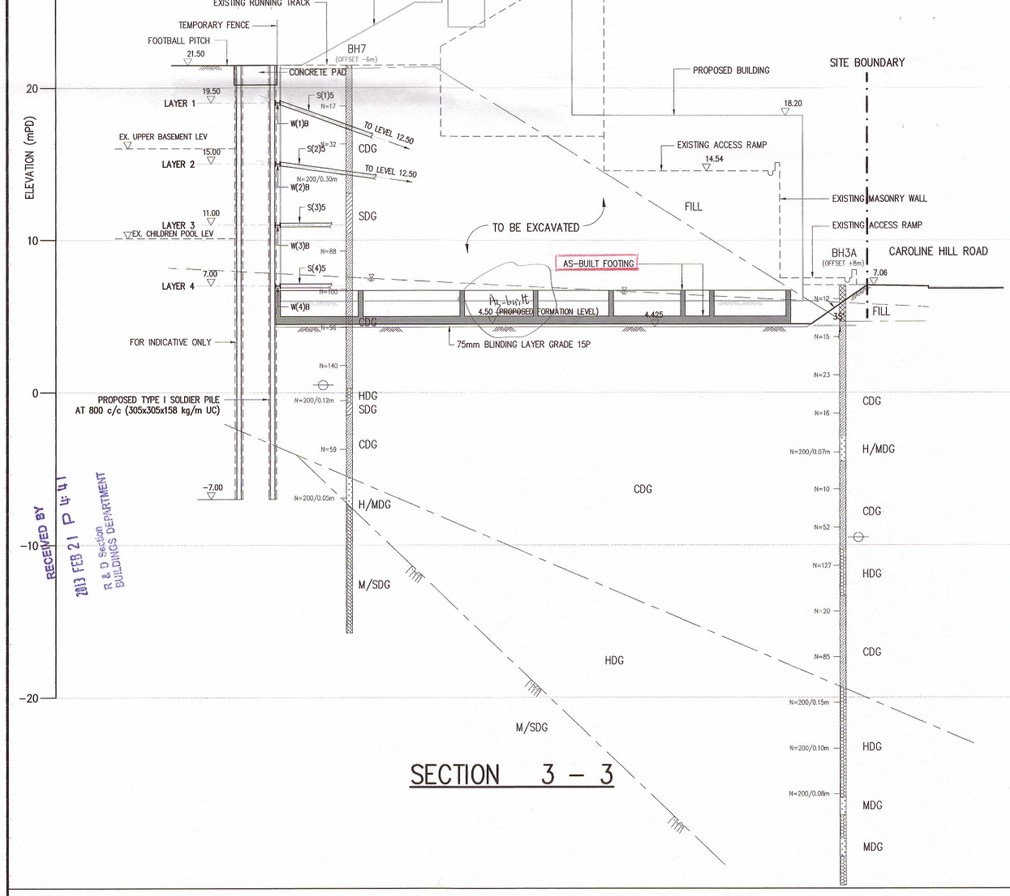
B.D. REFERENCE No. B.D.(B) : 3/3053/96



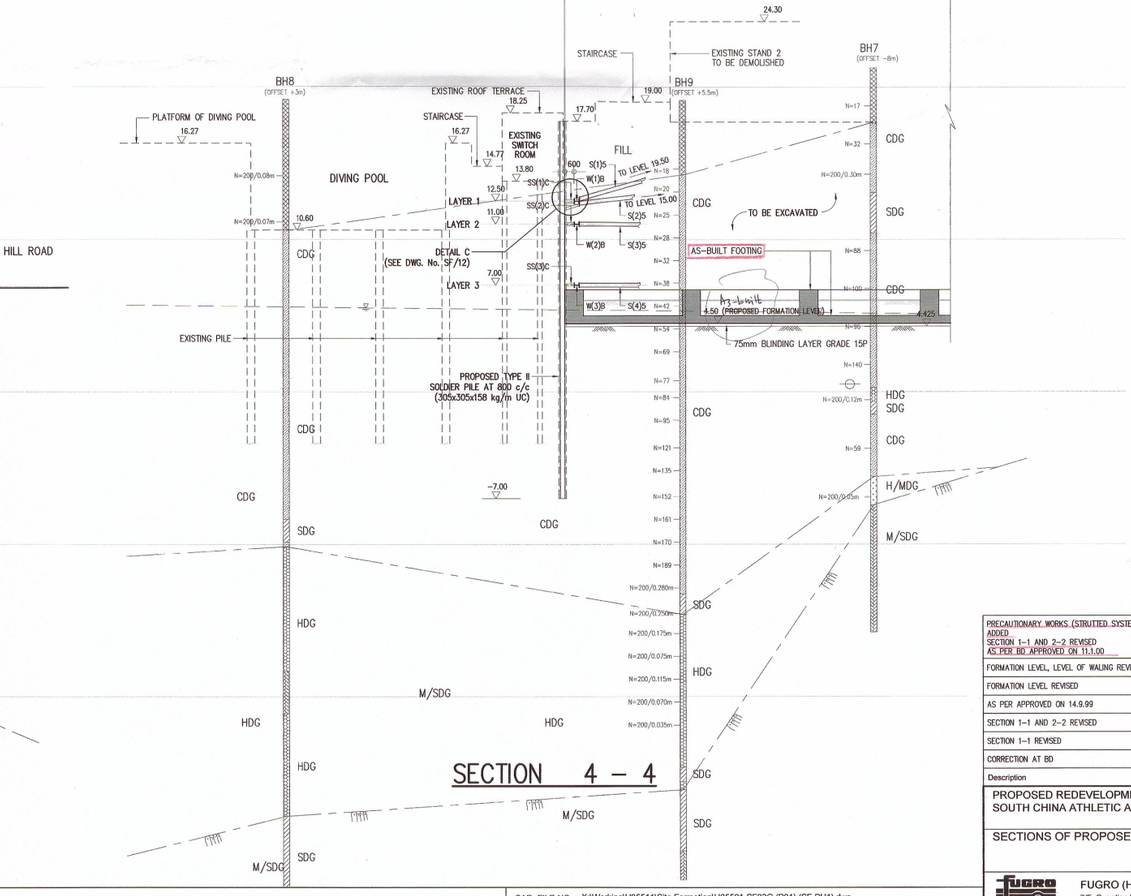
SECTION 1 – 1



SECTION 2 – 2



SECTION 3 – 3



SECTION 4 – 4

LEGEND :

- EXISTING FEATURES
- PROPOSED FEATURES
- INFERRED GEOLOGICAL BOUNDARY
- INFERRED ROCKHEAD LEVEL
- INFERRED GROUNDWATER LEVEL
- FILL (FILL)
- COMPLETELY DECOMPOSED GRANITE (CDG)
- COMPLETELY TO HIGHLY DECOMPOSED GRANITE (C/HDG)
- HIGHLY DECOMPOSED GRANITE (HDG)
- HIGHLY TO MODERATELY DECOMPOSED GRANITE (H/MDG)
- MODERATELY TO SLIGHTLY DECOMPOSED GRANITE (M/SDG)
- SLIGHTLY DECOMPOSED GRANITE (SDG)
- 14 — SPT 'N' VALUE
- DEPTH OF PIEZOMETER TIP
- S(1)1 — LAYER No / STRUT No. — STRUT
- SS(1)A — LAYER No / SHORT STRUT No. — SHORT STRUT
- W(1)A — LAYER No / WALING No. — WALING
- A(1)13 — LAYER No / SOIL ANCHOR No. — TEMPORARY SOIL ANCHOR
- KP — KING POST

I CERTIFY THAT THE SUBMITTED RECORD PLAN IS IDENTICAL TO THOSE APPROVED BY THE BA ON 18-APR-2013

RECORD PLAN

Plan Approved
CHENG Wai-kit
Building Surveyor
for BUILDING AUTHORITY
18 APR 2013

NOTES :–

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
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Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

DESIGN 2 (HK) LTD
DENNIS C.W. FUNG
AUTHORIZED PERSON

LIU Chi Kwun, ALBERT
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AUTHORIZED PERSON (ENGINEER)
Registered Structural Engineer

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2013 FEB 21 P 4:41
R & D Section
BUILDINGS DEPARTMENT

AMENDED PLAN BD SUBMISSION

Description	Drawn / Designed / Checked / Approved	Date	Revision
PRECAUTIONARY WORKS (STRUTTED SYSTEM) ADDED SECTION 1–1 AND 2–2 REVISED AS PER BD APPROVED ON 11.1.00	/ / /	19.2.13	G
FORMATION LEVEL, LEVEL OF WALING REVISED	MON / MKS / GL / LC	8.12.99	F
FORMATION LEVEL REVISED	MON / MKS / GL / LC	1.11.99	E
AS PER APPROVED ON 14.9.99	MON / MKS / GL / LC	6.10.99	D
SECTION 1–1 AND 2–2 REVISED	MON / MKS / GL / LC	14.7.99	C
SECTION 1–1 REVISED	MON / MKS / GL / LC	25.5.98	B
CORRECTION AT BD	MON / MKS / GL / LC	7.6.97	A

PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE 1

Job No. U05511 | Drawing No. SF / 03 G

SECTIONS OF PROPOSED WORKS

Scale AS SHOWN | Date 11 APR., 1997

FUGRO (HONG KONG) LIMITED
7/F, Guardian House, 32 Oi Kwan Road, Wanchai, Hong Kong. Tel : 2577 9023

Drawn / Designed / Checked / Approved
MON / MKS / GL / LC

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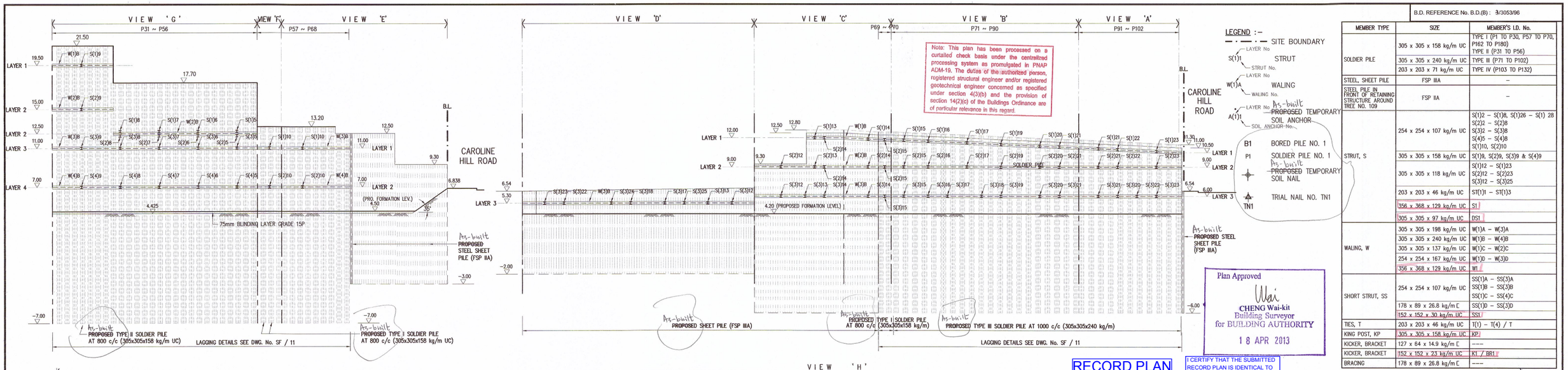
CAD. FILE NO. : X:\Working\U05511\Site Formation\U05501-SF03G (P01) (SF-PH1).dwg
PLOTTED BY : leonn, 19 Feb,2013 - 3:01pm

C-2

B.D. REFERENCE No. B.D.(B) : 3/3053/96



Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

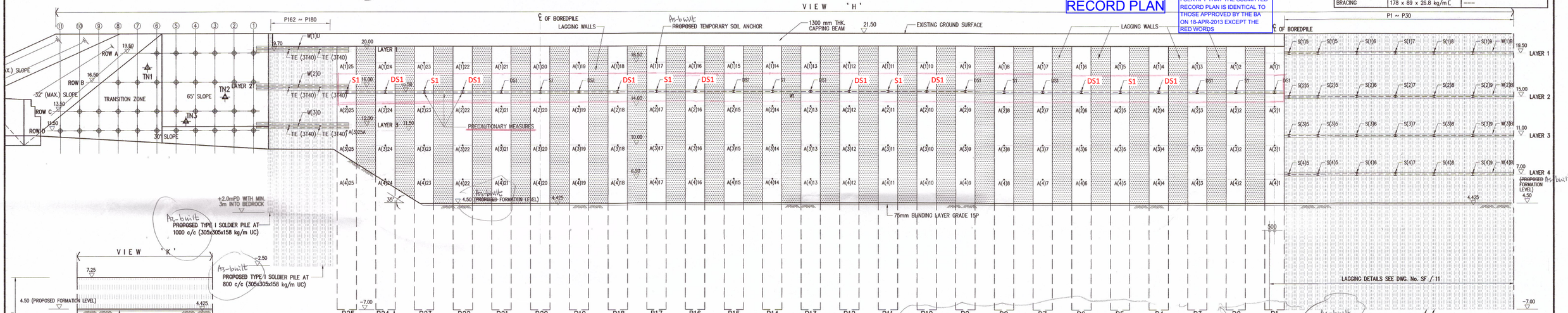
LEGEND :-
SITE BOUNDARY
STRUT
WALING
PROPOSED TEMPORARY SOIL ANCHOR
As-built PROPOSED TEMPORARY SOIL ANCHOR
PROPOSED TEMPORARY SOIL NAIL
BORED PILE NO. 1
SOLDIER PILE NO. 1
As-built PROPOSED TEMPORARY SOIL NAIL
TRIAL NAIL NO. TN1

MEMBER TYPE	SIZE	MEMBER'S I.D. No.
SOLDIER PILE	305 x 305 x 158 kg/m UC	TYPE I (P1 TO P30, P57 TO P70, P162 TO P180) TYPE II (P31 TO P56)
	305 x 305 x 240 kg/m UC	TYPE III (P71 TO P102)
	203 x 203 x 71 kg/m UC	TYPE IV (P103 TO P132)
STEEL, SHEET PILE	FSP IIIA	–
STEEL PILE IN FRONT OF RETAINING STRUCTURE AROUND TREE NO. 109	FSP IIA	–
STRUT, S	254 x 254 x 107 kg/m UC	S(1)2 – S(1)8, S(1)26 – S(1) 28 S(2)2 – S(2)8 S(3)2 – S(3)8 S(4)5 – S(4)8 S(1)10, S(2)10
	305 x 305 x 158 kg/m UC	S(1)9, S(2)9, S(3)9 & S(4)9
	305 x 305 x 118 kg/m UC	S(1)12 – S(1)23 S(2)12 – S(2)23 S(3)12 – S(3)25
	203 x 203 x 46 kg/m UC	ST(1)1 – ST(1)3
	356 x 368 x 129 kg/m UC	S1
	305 x 305 x 97 kg/m UC	DS1
WALING, W	305 x 305 x 198 kg/m UC	W(1)A – W(3)A
	305 x 305 x 240 kg/m UC	W(1)B – W(4)B
	305 x 305 x 137 kg/m UC	W(1)C – W(2)C
	254 x 254 x 167 kg/m UC	W(1)D – W(3)D
	356 x 368 x 129 kg/m UC	W1
SHORT STRUT, SS	254 x 254 x 107 kg/m UC	SS(1)A – SS(3)A SS(1)B – SS(3)B SS(1)C – SS(4)C
	178 x 89 x 26.8 kg/m [	SS(1)D – SS(3)D
	152 x 152 x 30 kg/m UC	SS1
TIES, T	203 x 203 x 46 kg/m UC	T(1) – T(4) / T
KING POST, KP	305 x 305 x 158 kg/m UC	KP
KICKER, BRACKET	127 x 64 x 14.9 kg/m [	----
KICKER, BRACKET	152 x 152 x 23 kg/m UC	KT / BR1
BRACING	178 x 89 x 26.8 kg/m [	----

Plan Approved
Wai
CHENG Wai-kit
Building Surveyor
for BUILDING AUTHORITY
18 APR 2013

RECORD PLAN

I CERTIFY THAT THE SUBMITTED RECORD PLAN IS IDENTICAL TO THOSE APPROVED BY THE BA ON 18-APR-2013 EXCEPT THE RED WORDS



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2013 FEB 21 P 4:41
B & D Division
BUILDINGS DEPARTMENT

NOTES ON BORED PILE CONSTRUCTION :-

1. PRIOR TO EXCAVATION OF EACH BORED PILE, THE SETTING-OUT OF BORED PILES SHALL BE RECHECKED AGAIN. DURING PILE EXCAVATION, TOLERANCE FOR VERTICALITY OF EACH BORED PILE SHALL BE FREQUENTLY CHECKED AS REQUIRED BY THE ENGINEER. THE SETTING OUT AND VERTICALITY OF PILES SHALL BE CHECKED BY A QUALIFIED LAND SURVEYOR. THE METHOD OF CHECKING SHALL BE WAS SUBMITTED AND SUBSEQUENTLY APPROVED BY THE ENGINEER PRIOR TO ANY BORED PILE EXCAVATION WORK. IN THE EVENT THAT THE VERICALITY EXCEEDS THE SPECIFIED ALLOWABLE LIMIT, THE PILE SHALL BE RECTIFIED BY AN APPROVED METHOD PRIOR TO ANY FURTHER EXCAVATION.
2. ALL PILES SHALL BE MACHINE BORED AND NO DEWATERING OF THE BORED PILE EXCAVATION WILL BE PERMITTED.
3. THE PILE EXCAVATION SHALL BE SUPPORTED CONTINUOUSLY OVER ITS FULL DEPTH IN SOIL BY TEMPORARY STEEL CASING OR OTHER APPROVED MEANS.
4. UNDERGROUND OBSTRUCTION SHALL BE PENETRATED THROUGH BY CHISELLING OR BY REVERSE CIRCULATION DRILLING.
5. THE VOLUME OF EXCAVATION FROM THE BORED PILE CASING SHALL BE CHECKED AGAINST THE PENETRATION RATE OF THE STEEL CASING TO AVOID EXCESSIVE EXCAVATION OF SURROUNDING MATERIALS. THE CONTRACTOR SHALL PROPOSE REMEDIAL MEASURES IF NECKING OCCURS.
6. THE CONTRACTOR SHALL EXERCISE DUE CARE TO PREVENT VIBRATION, HEAVING OF ADJACENT GROUND AND LOSS OF GROUND DUE TO THE DRAWING OF FINE MATERIALS FROM UNDER ANY ADJACENT SERVICES STRUCTURES AND THE PROPERTIES WITHIN AND ADJACENT THE SITE DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE AND THE CONSEQUENCE THEREOF WHICH MAY ARISE.
7. CUT-OFF AND FOUNDING LEVELS OF THE BORED PILE WALL SHOWN ARE TENTATIVE ONLY. FINAL FOUNDING LEVELS OF THE BORED PILES SHALL BE CONFIRMED ON SITE BY THE ENGINEER.
8. THE FOUNDING MATERIAL AND BASE CLEANLINESS HAVE TO BE APPROVED BY THE ENGINEER PRIOR TO THE INSTALLATION OF REINFORCEMENT AND CONCRETING.
9. CONCRETING SHALL BE CARRIED OUT CONTINUOUSLY UNDER WATER BY TREMIE METHOD. CONCRETED LEVEL SHALL BE EXTENDED TO ONE METRE ABOVE THE FINAL CUT-OFF LEVEL.
10. STARTER BARS PROTRUDING ABOVE CUT-OFF/CONCRETE TOP LEVEL SHALL BE PROTECTED WITH CEMENT PASTE.
11. NO PILE EXCAVATION SHALL BE CARRIED OUT WITHIN A DISTANCE OF FIVE TIMES THE SHAFT DIAMETER (CENTRE TO CENTRE) FROM AN OPEN PILE UNDER EXCAVATION OR A PILE WHICH HAS BEEN COMPLETED CONCRETING FOR LESS THAN 24 HOURS.

GENERAL NOTES ON BORED PILE, SOLIDER PILE AND STEEL SHEET PILE CONSTRUCTION :-

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.
2. ALL MEASUREMENTS MUST BE CHECKED ON SITE. DO NOT SCALE FROM THE DRAWINGS.
3. UNLESS OTHERWISE SPECIFICED, ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
4. UNLESS OTHERWISE SPECIFIED, CONCRETE USED FOR THE PILE CONSTRUCTION SHALL BE DESIGNED MIX GRADE 30D/20 TREMIE CONCRETE.
5. TESTING OF CONCRETE SHALL COMPLY WITH CS1:
6. REINFORCEMENT SHALL COMPLY WITH CS2:1995 WITH THE FOLLOWING MINIMUM YIELD STRENGTH:
   HIGH TENSILE BARS (TYPE T) 460 N/mm²
   MILD STEEL BARS (TYPE R) 250 N/mm²
7. UNLESS OTHERWISE SPECIFIED, CONCRETE COVER TO MAIN REINFORCEMENT SHALL BE 75mm FOR SURFACE CAST TO WITH DIRECT CONTACT TO SOIL AND 50mm FOR SURFACE CAST WITH FORMATION AND SUBSEQUENT EXPOSE TO SOIL.
8. UNLESS OTHERWISE SPECIFIED, LAP LENGTH FOR REINFORCEMENT SHALL BE 46 TIMES DIAMETER OF THE SMALLER BAR.
9. UNLESS OTHERWISE SPECIFIED, ANCHORAGE/BOND LENGTH FOR REINFORCEMENT SHALL BE 46 TIMES DIAMETER OF THE BAR.
10. ALL STRUCTURAL STEEL SHALL BE GRADE 43A CONFORMING TO BS4360.
11. PRIOR TO THE COMMENCEMENT OF ANY PILING WORKS, THE CONTRACTOR SHALL SUBMIT A METHOD STATEMENT FOR THE BORED PILE CONSTRUCTION TO THE ENGINEER FOR APPROVAL. THE CONSTRUCTOR SHALL INDICATE IN THE METHOD STATEMENT THE FOLLOWING :-
   * THE CONSTRUCTION SEQUENCE OF PILING WORKS.
   * METHODS TO OVERCOME BOULDERS, COBBLES AND OTHER OBSTRUCTION WITHIN THE SOIL PORTION.
12. ALL PILING WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATION.
13. ALL PILE CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT EDITION OF HONG KONG BUILDING (CONSTRUCTION) REGULATIONS AND RELEVANT PRACTICE NOTES FOR AUTHORIZED PERSONS AND REGISTERED STRUCTURAL ENGINEERS.
14. ALL PILES SHALL BE SET OUT BY AN INDEPENDENT LAND SURVEYOR PROVIDED BY THE CONTRACTOR. THE METHOD OF PILE SETTING OUT SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO COMMENCEMENT OF PILING WORKS. THE MAXIMUM OFFSET TO THE CENTER OF PILE SHALL NOT EXCEED 50mm ON PLAN AT THE PILE TOP LEVEL. THE VERTICALITY OF THE PILE SHALL NOT DIFFER BY MORE THAN THE GRADIENT OF 1:100 FROM THE VERTICAL.
15. PILING RECORDS SHALL BE SUBMITTED IN ACCORDANCE WITH THE SPECIFICATION.

NOTES ON KING POSTS INSTALLATION :-

1. A PRE-DRILLED HOLE OF 450mm DIAMETER DOWN TO THE FOUNDING LEVEL SHALL BE FORMED BY DRILLING MACHINE. THE DRILLING EQUIPMENT SHALL BE ADOPTED FOR DRILLING THROUGH OVERBURDEN, LOOSE FORMATION CONTAINING BOULDERS, GRAVELS, BEDROCK AND OTHER OBSTRUCTION.
2. THE FORMATION OF PRE-DRILLED HOLE SHALL BE ACCOMPANIED WITH THE USE OF TEMPORARY STEEL CASING AS TEMPORARY SUPPORT UNTIL THE PROPOSED FOUND LEVEL IS REACHED.
3. FILL THE HOLE WITH CEMENT GROUT WITHIN THE PROPOSED EMBEDMENT LENGTH. THE MINIMUM STRENGTH OF CEMENT GROUT SHALL BE 30MPa AT 28 DAYS. THE WATER / CEMENT RATIO SHALL NOT BE LESS THAN 0.45.
4. INSERT THE KING POST INTO THE HOLE BEFORE EXTRACTING THE TEMPORARY STEEL CASING. THE KING POST SHALL BE GRADE 43A STRUCTURAL STEEL COMPILING TO BS4360.
5. EXTEND THE KING POST BY WELDING WHERE NECESSARY.
6. WITHDRAW THE TEMPORARY STEEL CASING AND FILL BACK THE HOLES WITH BENTONITE CEMENT GROUT UP TO THE GROUND LEVEL.
   FOR EACH CUBIC METER OF BENTONITE-CEMENT GROUT :-
   BENTONITE 35kg
   CEMENT 350kg
   WATER 870 LITRE (APPROX.)

NOTES ON SOLDIER PILE INSTALLATION :-

1. A PRE-DRILLED HOLE OF 450mm DIAMETER DOWN TO THE FOUNDING LEVEL SHALL BE FORMED BY DRILLING MACHINE. THE DRILLING EQUIPMENT SHALL BE ADOPTED FOR DRILLING THROUGH OVERBURDEN, LOOSE FORMATION CONTAINING BOULDERS, GRAVELS, BEDROCK AND OTHER OBSTRUCTION.
2. WHERE THE PROPOSED SOLDIER PILES ARE TO BE INSTALLED IN CLOSE VICINITY TO THE EXISTING STRUCTURE, ROTARY DRILLING SHALL BE ADOPTED FOR FORMING THE PRE-DRILLED HOLE DOWN TO THE BOTTOM LEVEL OF THE STRUCTURE.
3. THE FORMATION OF PRE-DRILLED HOLE SHALL BE ACCOMPANIED WITH THE USE OF TEMPORARY STEEL CASING AS TEMPORARY SUPPORT UNTIL THE PROPOSED FOUNDING LEVEL IS REACHED.
4. FILL THE HOLES WITH CEMENT GROUT WITHIN THE PROPOSED EMBEDMENT LENGTH, THE MINIMUM STRENGTH OF CEMENT GROUT SHALL BE 30MPa AT 28 DAYS. THE WATER / CEMENT RATIO SHALL NOT BE LESS THAN 0.45.
5. INSERT THE SOLDIER PILE INTO THE HOLE BEFORE EXTRACTING THE TEMPORARY STEEL CASING. THE SOLDIER PILE SHALL BE GRADE 43A STRUCTURAL STEEL COMPILING TO BS4360.
6. EXTEND THE SOLDIER PILES BY WELDING WHERE NECESSARY.
7. WITHDRAW THE TEMPORARY STEEL CASING AND FILL BACK THE HOLES WITH CEMENT GROUT UP TO THE GROUND LEVEL
8. ALL PREDRILLED HOLES SHALL BE BACKFILLED AND GROUTED FOR AT LEAST 24 HRS. BEFORE COMMENCEMENT OF DRILLIING OF ADJACENT HOLE.
9. THE CONTRACTOR SHALL ENSURE WITH THE VERTICAL AND HORIZONTAL ALIGNMENT OF THE SOLDIER PILES THAT THEY ARE INSTALLED WITHIN THE SPECIFIED CLEARANCE FOR THE CONSTRUCTION OF WALLS AND COLUMNS.

NOTES :-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
2. ALL MEASUREMENTS MUST BE CHECKED ON SITE, DO NOT SCALE FROM THE DRAWINGS.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS.
4. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED PLANS. IF THERE ARE ANY VARIATIONS OF WORKS WHICH ARE INCONSISTENT WITH THE APPROVED PLANS, THE SUPERVISORS SHALL NOTIFY THE AP/RSE/RGE/RSC OF SUCH VARIATIONS IMMEDIATELY. THE AP/RSE/RGE/RSC SHALL REVIEW THE SITUATIONS AND TAKE APPROPRIATE ACTIONS SO AS TO COMPLY WITH THE BUILDINGS ORDINANCE.

LIU Chi Kwun, ALBERT
B.Sc BE (Hon) CEng MHKIE MIStructE MHKIE RSE
AUTHORIZED PERSON (ENGINEER)
Registered Structural Engineer

DESIGN 2 (HK) LTD.

BD SUBMISSION
AMENDED PLAN

MEMBER SIZE FOR PRECAUTIONARY WORKS ADDED AS PER BD APPROVED ON 11.1.00	/	/	/	19.2.13	L
FORMATION LEVEL, LEVEL OF WALING REVISED	MON / MKS	/ GL	/ LC	8.12.99	K
VIEW H REVISED	MON / MKS	/ GL	/ LC	30.11.99	J
FORMATION LEVEL, SOIL NAILS AND VIEW Z REVISED	MON / MKS	/ GL	/ LC	1.11.99	H
AS PER APPROVED ON 14.9.99	MON / MKS	/ GL	/ LC	6.10.99	G
VIEW A DELETED AND VIEW Y & Z ADDED	MON / MKS	/ GL	/ LC	14.7.99	F
VIEW K ADDED	MON / MKS	/ GL	/ LC	9.12.98	E
VIEW H REVISED	MON / MKS	/ GL	/ LC	20.10.98	D
VIEW H & J REVISED	MON / MKS	/ GL	/ LC	25.5.98	C
VIEW A TO D REVISED	MON / MKS	/ GL	/ LC	18.7.97	B
CORRECTION AT BD	MON / MKS	/ GL	/ LC	7.6.97	A
Description	Drawn / Designed	/ Checked	/ Approved	Date	Revision

PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE 1

Job No. U05511 | Drawing No. SF / 05 L

DEVELOPED ELEVATION OF PROPOSED WORKS

Scale AS SHOWN | Date 11 APR., 1997

FUGRO (HONG KONG) LIMITED
7/F, Guardian House, 32 Oi Kwan Road, Wanchai, Hong Kong. Tel : 2577 9023

Drawn / Designed / Checked / Approved
MON / MKS / GL / LC

NOTES: DO NOT SCALE FROM THIS DRAWING, FIGURED DIMENSIONS ARE TO BE FOLLOWED. READ THIS DRAWING IN CONJUNCTION WITH OTHER RELATED DRAWINGS; THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN. COPYRIGHT OF THIS DRAWING IS RESERVED BY THE ENGINEER.

CAD. FILE NO. : X:\Working\U05511\Site Formation\U05501-SF05L (P01) (SF-PH1).dwg
PLOTTED BY : leonn, 19 Feb,2013 - 3:04pm

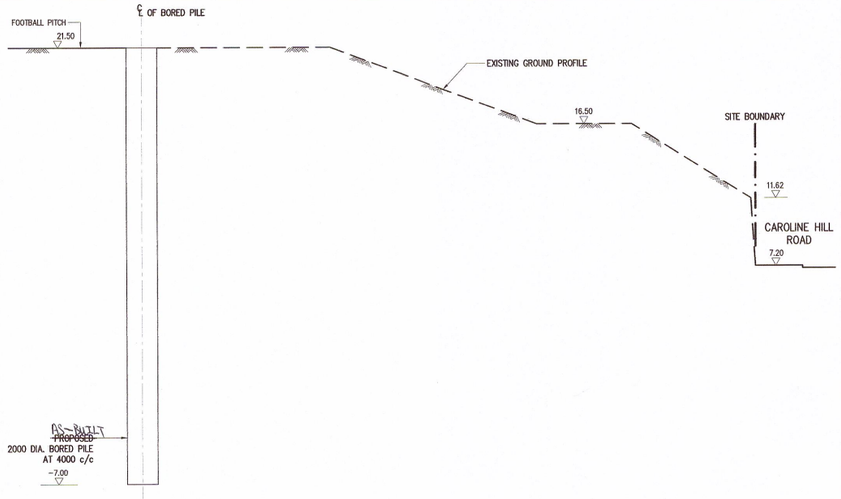
C-3

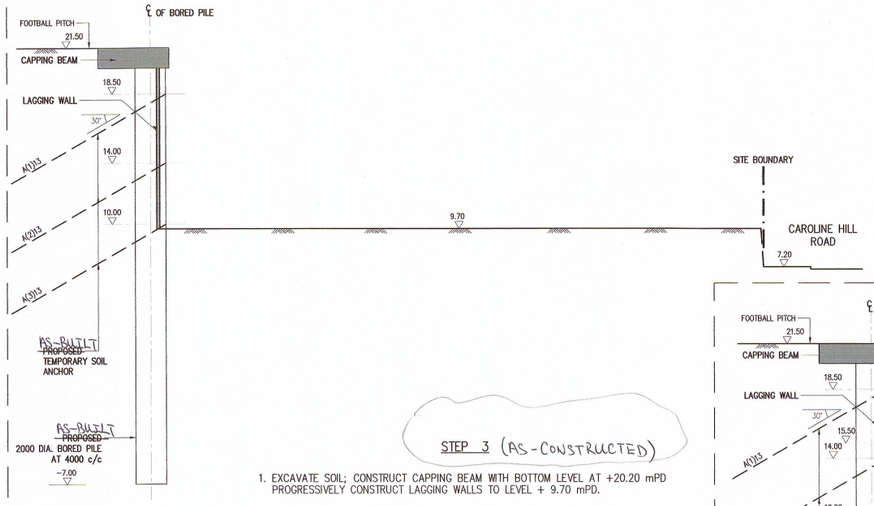
B.D. REFERENCE No. B.D.(B) : 3/3053/96

NOTES :-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
2. ALL MEASUREMENTS MUST BE CHECKED ON SITE, DO NOT SCALE FROM THE DRAWINGS.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS.
4. DETAILS OF LAGGING WALL SHALL REFER TO DWG. NO. SF / 13.
5. CONNECTION DETAILS OF TEMPORARY SOIL ANCHOR TO BORED PILE SHALL REFER TO DWG. NO. SF / 14. WAS
6. THE TEMPORARY SOIL ANCHOR SYSTEM SHALL BE APPROVED BY BD PRIOR TO THE COMMENCEMENT OF THE EXCAVATION WORKS.
7. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED PLANS. IF THERE ARE ANY VARIATIONS OF WORKS WHICH ARE INCONSISTENT WITH THE APPROVED PLANS, THE SUPERVISORS SHALL NOTIFY THE AP/RSE/RGE/RSC OF SUCH VARIATIONS IMMEDIATELY. THE AP/RSE/RGE/RSC SHALL REVIEW THE SITUATIONS AND TAKE APPROPRIATE ACTIONS SO AS TO COMPLY WITH THE BUILDINGS ORDINANCE.

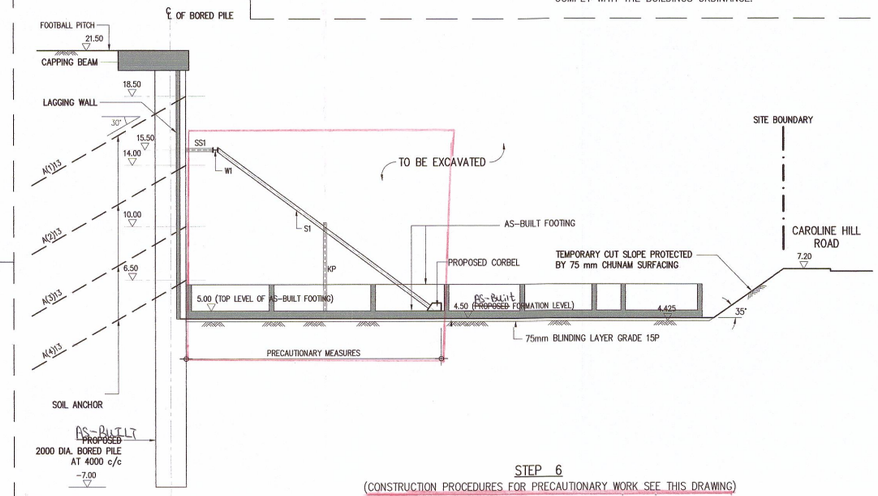
INITIAL STEP



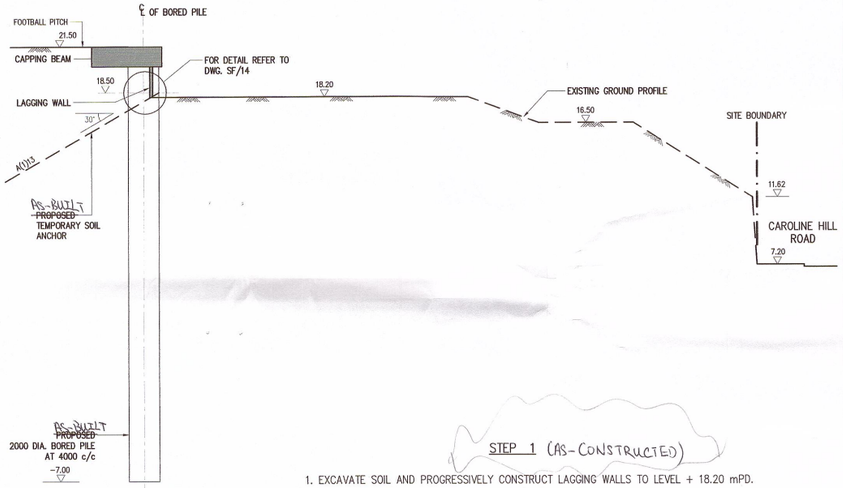


STEP 3 (AS-CONSTRUCTED)

1. EXCAVATE SOIL; CONSTRUCT CAPPING BEAM WITH BOTTOM LEVEL AT +20.20 mPD PROGRESSIVELY CONSTRUCT LAGGING WALLS TO LEVEL + 9.70 mPD.
2. INSTALL TEMPORARY SOIL ANCHORS AND PRESTRESS THE ANCHORS TO LOCK OFF LOAD.
3. CARRY OUT ANCHOR TESTS AS PER DWG. NO. SF / 15.

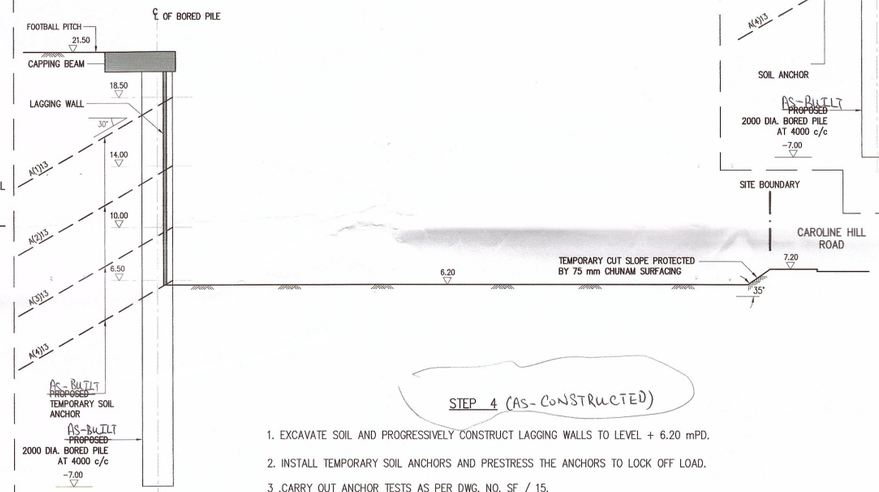


STEP 6
(CONSTRUCTION PROCEDURES FOR PRECAUTIONARY WORK SEE THIS DRAWING)



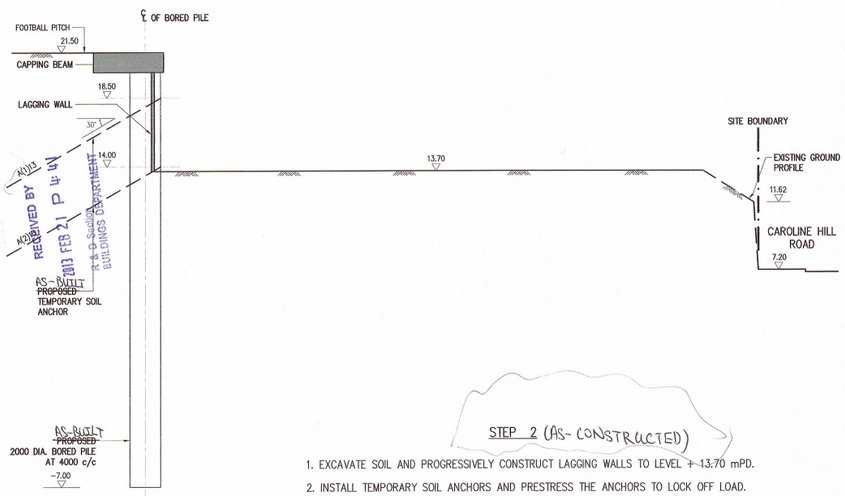
STEP 1 (AS-CONSTRUCTED)

1. EXCAVATE SOIL AND PROGRESSIVELY CONSTRUCT LAGGING WALLS TO LEVEL + 18.20 mPD.
2. INSTALL TEMPORARY SOIL ANCHORS AND PRESTRESS THE ANCHORS TO LOCK OFF LOAD.
3 .CARRY OUT ANCHOR TESTS AS PER DWG. NO. SF / 15.



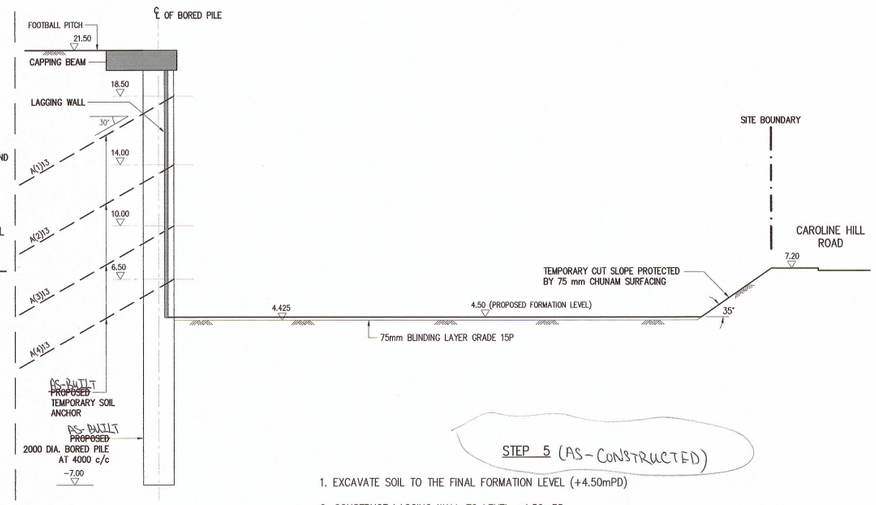
STEP 4 (AS-CONSTRUCTED)

1. EXCAVATE SOIL AND PROGRESSIVELY CONSTRUCT LAGGING WALLS TO LEVEL + 6.20 mPD.
2. INSTALL TEMPORARY SOIL ANCHORS AND PRESTRESS THE ANCHORS TO LOCK OFF LOAD.
3 .CARRY OUT ANCHOR TESTS AS PER DWG. NO. SF / 15.



STEP 2 (AS-CONSTRUCTED)

1. EXCAVATE SOIL AND PROGRESSIVELY CONSTRUCT LAGGING WALLS TO LEVEL + 13.70 mPD.
2. INSTALL TEMPORARY SOIL ANCHORS AND PRESTRESS THE ANCHORS TO LOCK OFF LOAD.
3 .CARRY OUT ANCHOR TESTS AS PER DWG. NO. SF / 15.



STEP 5 (AS-CONSTRUCTED)

1. EXCAVATE SOIL TO THE FINAL FORMATION LEVEL (+4.50mPD)
2. CONSTRUCT LAGGING WALL TO LEVEL +4.50mPD.

Plan Approved
CHENG Wai-kit
Building Surveyor
for BUILDING AUTHORITY
18 APR 2013

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

DESIGN 2 (HK) LTD.
JOHANNES C.W. KUNG
AUTHORIZED PERSON

I CERTIFY THAT THE SUBMITTED RECORD PLAN IS IDENTICAL TO THOSE APPROVED BY THE BA ON 18-APR-2013

RECORD PLAN

LIU Chi Kwun, ALBERT
B.Sc Hk (Hon) CEng MIStructE MICE RSE
AUTHORIZED PERSON (ENGINEER)
Registered Structural Engineer

RECEIVED BY BUILDINGS DEPARTMENT 2013 FEB 21 P 4:44

BD SUBMISSION
AMENDED PLAN

Description	Drawn / Designed / Checked / Approved	Date	Revision
MEMBER SIZE FOR PRECAUTIONARY WORKS ADDED. STEP 6 ADDED AS PER BD APPROVED ON 11.1.00	/ / /	19.2.13	C
FORMATION LEVEL AND LEVEL OF WALING REVISED	MON / MKS / GL / LC	8.12.99	B
CORRECTION AT BD	MON / MKS / GL / LC	7.6.97	A

PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE 1

Job No. U05511 | Drawing No. SF / 08C

EXCAVATION SEQUENCE OF SITE FORMATION (SECTION C-C)
(SHEET 3 OF 3)

Scale AS SHOWN | Date 11 APR., 1997

FUGRO (HONG KONG) LIMITED
7/F, Guardian House, 32 Oi Kwan Road, Wanchai, Hong Kong. Tel : 2577 9023

Drawn / Designed / Checked / Approved: MON / MKS / GL / LC

NOTES: DO NOT SCALE FROM THIS DRAWING, FIGURED DIMENSIONS ARE TO BE FOLLOWED. READ THIS DRAWING IN CONJUNCTION WITH OTHER RELATED DRAWINGS; THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.

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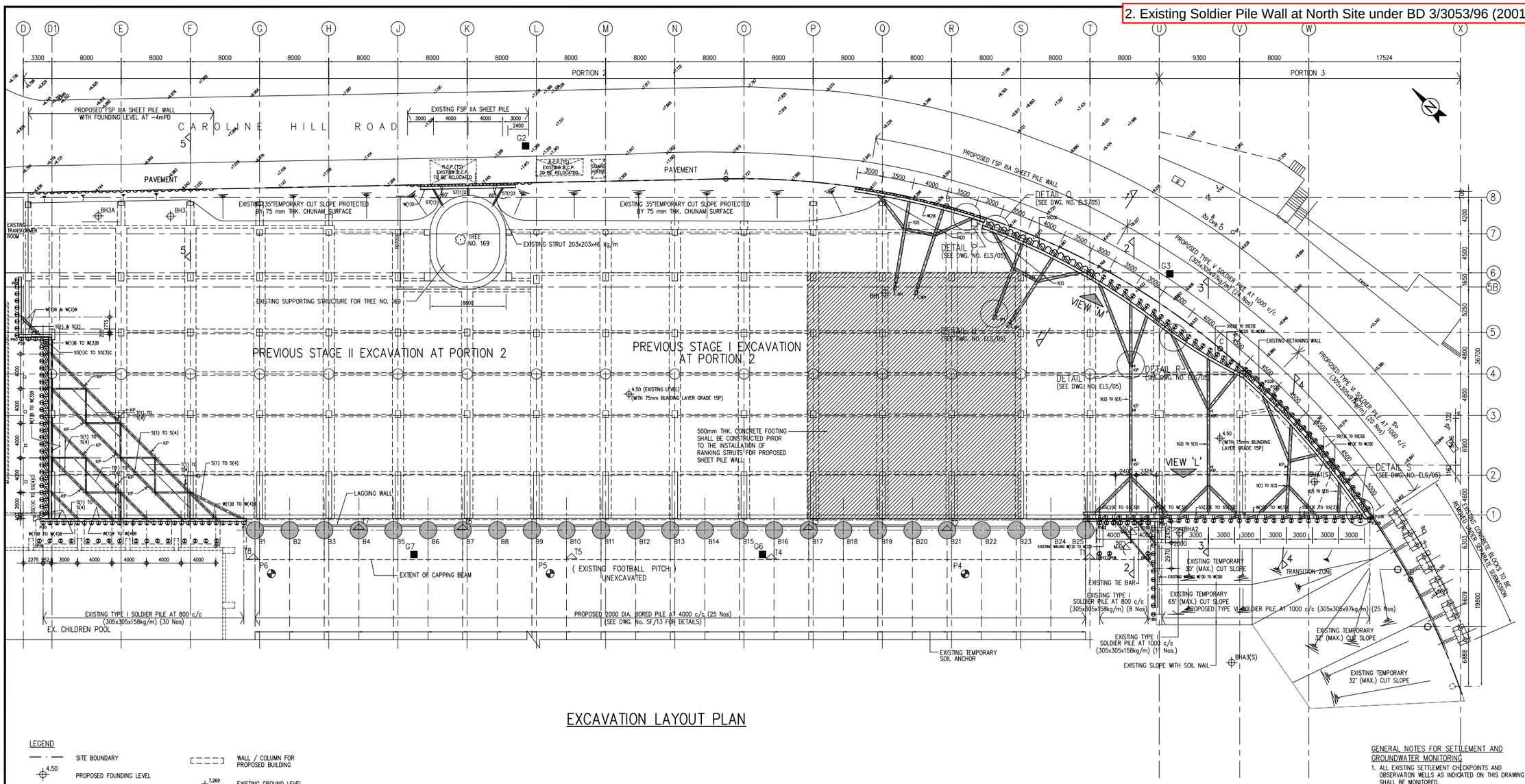
CAD. FILE NO. : X:\Working\U05511\Site Formation\U05501-SF08C (P01) (SF-PH1).dwg
PLOTTED BY : leonn, 19 Feb,2013 - 3:38pm

C-4

2. Existing Soldier Pile Wall at North Site under BD 3/3053/96 (2001)

B.D. REFERENCE No. B.D.(B) : 3 / 3053 / 96



EXCAVATION LAYOUT PLAN

LEGEND

- SITE BOUNDARY
- 4.50 PROPOSED FOUNDING LEVEL
- PROPOSED 35° TEMPORARY CUT SLOPE UNLESS OTHERWISE STATED
- PROPOSED STEEL SHEET PILE (FSP IIIA)
- SOLDIER PILE
- B1 EXISTING BORED PILE NO. B1
- KP KING POST
- P1 SOLDIER PILE NO. P1
- G2 EXISTING GROUND SETTLEMENT CHECK POINT
- P4 EXISTING OBSERVATION WELL FOR GROUNDWATER MONITORING
- T1 EXISTING SETTLEMENT CHECK POINT ON CAPPING BEAM
- EXTEND OF 500mm THK. CONCRETE FOOTING SHALL BE CONSTRUCTED PRIOR TO THE INSTALLATION OF RANKING STRUTS FOR PROPOSED SHEET PILE WALL
- WALL / COLUMN FOR PROPOSED BUILDING
- 7.269 EXISTING GROUND LEVEL
- BHA1(S) EXISTING BOREHOLE WITH STANDPIPE
- S(1)1 — LAYER No / STRUT No. — STRUT
- SS(1)A — LAYER No / SHORT STRUT No. — SHORT STRUT
- W(1)A — LAYER No / WALING No. — WALING
- T(1) — LAYER No — TIE

NOTES

1. ALL DIMENSIONS ARE IN MILLMETERS AND LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.
3. ALL MEASUREMENTS MUST BE CHECKED ON SITE. DO NOT SCALE FROM THE DRAWINGS.
4. THE CONTRACTOR SHALL CONFIRM WITH THE ARCHITECT/ENGINEER ALL THE SETTING OUT DIMENSIONS PRIOR TO THE EXECUTION OF THE WORKS.
5. DESIGN SOIL STRENGTH PARAMETERS:

	DENSITY (kN/m^3)	COHESION (kPa)	FRICTION ANGLE (ϕ')
FILL/RS	19	0	35
CDG	19	3	37
C/HDG	19	9	38

6. REFER TO DRAWING NO. SF/01 TO SF/18 FOR PREVIOUS SITE FORMATION WORKS.
7. REFER TO OTHER RELEVANT DRAWINGS FOR DETAILS OF TEMPORARY FENCE, CONCRETE PADS AND CAPPING BEAM.

GENERAL NOTES ON EXCAVATION WORKS

1. BEFORE THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, THE CONTRACTOR SHALL CHECK THE CONDITION OF THE EXISTING MONITORING CHECKPOINTS AT LOCATIONS AS SHOWN ON THIS DRAWING. RESPONSE TEST SHALL BE CARRIED OUT FOR ALL EXISTING OBSERVATION WELLS TO ENSURE THEY ARE FUNCTIONED PROPERLY. RECORDS OF THE RESPONSE TEST SHALL BE SUBMITTED TO ENGINEER FOR INFORMATION. DETAILS AND FREQUENCY OF MONITORING SHALL REFER TO GENERAL NOTES FOR SETTLEMENT AND GROUND WATER MONITORING IN THIS DRAWING.
2. THE PROPOSED EXCAVATION WORKS SHALL BE COMMENCED BY CONSTRUCTING SOLDIER PILES AND STEEL SHEET PILES FOR THE TEMPORARY SHORING SYSTEM AS PER THE LAYOUT SHOWN ON THE DRAWINGS.
3. ANY TEMPORARY ACCESS AND WORKING PLATFORMS TO BE FORMED WITHIN THE SITE TO FACILITATE THE CONSTRUCTION WORKS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR'S ATTENTION IS DRAWN THAT AT ANY TIME EXCAVATION WORKS INVOLVED SHALL BE KEPT TO A MINIMUM.
4. PRIOR TO THE COMMENCEMENT OF BULK EXCAVATION, AS-BUILT RECORD PLAN SHOWING FOUNDING LEVELS OF THE SOLDIER PILES, SHEET PILES AND KING POSTS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER/BD FOR RECORD AND APPROVAL.
5. BULK EXCAVATION SHALL ONLY BE COMMENCED AFTER THE CONCRETE OR CEMENT GROUT AT THE SHORING SYSTEM HAS REACHED. THE REQUIRED STRENGTH AT 28 DAYS AS SPECIFIED IN THE DRAWINGS.
6. EXCAVATION CAN PROCEED TO THE NEXT LEVEL ONLY WHEN THE PROPOSED WALINGS AND STRUTTINGS FOR THE PREVIOUS EXCAVATION LEVEL HAVE BEEN INSTALLED AS SPECIFIED AND APPROVED BY THE ARCHITECT/ENGINEER.

OVERALL CONSTRUCTION SEQUENCE

IN GENERAL, THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED.

1. INSTALL SHEET PILES FROM GRID D TO GRID F, GRID Q TO GRID T, SOLDIER PILES NO. P181 TO P249 AS SHOWN IN THIS DRAWING.
2. SUBMIT RECORD OF INSTALLED SHEET PILES AND SOLDIER PILE TO BD PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
3. AFTER OBTAINING EXCAVATION CONSENT FROM BD, EXCAVATION WORKS CAN BE CARRIED OUT IN FRONT OF SHEET PILE FROM GRID D TO GRID F AND IN FRONT OF SOLDIER PILES AT PORTION 3 (SEE DRAWING NO. ELS/04 FOR DETAIL EXCAVATION SEQUENCE).
4. AFTER EXCAVATION WORK AT PORTION 3 DOWN TO +9.1mPD, EXCAVATION WORK IN FRONT OF SHEET PILES FROM GRID Q TO GRID T CAN BE CARRIED OUT (SEE DRAWING NO. ELS/04 FOR DETAIL EXCAVATION SEQUENCE).

NOTES ON HEAVY RAINFALL PRECUATIONS DURING EXCAVATION

1. DURING PERIODS OF HEAVY RAINFALL THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXPOSED SURFACES OF CUT AND FILL SLOPES WITH HEAVY DUTY PLASTIC SHEETING. THE CONTRACTOR SHALL AT ALL TIME PROVIDE ON SITE SUFFICIENT HEAVY DUTY PLASTIC SHEETING TO PROTECT ALL THE EXPOSED SURFACES. ANY SURFACE EROSION THAT OCCURS SHALL BE MADE GOOD AT THE CONTRACTOR'S EXPENSE.
2. SURFACE WATER FLOWING INTO THE SITE SHALL BE INTERCEPTED AND CONDUCTED FROM THE SITE TO SAFE DISCHARGE POINTS. AT EACH INTERSECTION AND ABRUPT CHANGE IN DIRECTION OF SURFACE DRAINAGE CHANNELS AND ACCESSIBLE CATCHPITS SHALL BE PROVIDED. ALL DRAINAGE WORKS SHALL BE KEPT CLEAR OF DEBRIS.
3. ALL EARTHWORK PLATFORMS SHALL BE GRADED TO ENSURE RUN-OFF AND TO AVOID PONDING.
4. TEMPORARY PUMP PITS EQUIPPED WITH AUTOMATIC OPERATED PUMPS SHALL BE PROVIDED AT THE FINAL EXCAVATION LEVEL.
5. DURING HEAVY RAINFALL, ADEQUATE PUMPS SHALL BE PROVIDED AND PUMPS SHALL BE KEPT RUNNING 24 HOURS IF REQUIRED.
6. ALL PUMPED WATER SHALL BE SCREENED THROUGH A SEDIMENTATION OR SETTLING TANK AND QUANTITIES OF SEDIMENT SHALL BE MONITORED TO ENSURE THAT EXCESSIVE FINES ARE NOT REMOVED FROM THE SUBSOIL. SHOULD EXCESSIVE FINES BE OBSERVED, ALL PUMPING SHALL CEASE AND THE ENGINEER BE NOTIFIED.
7. A METHOD OF WORKING SHALL BE ADOPTED TO MINIMISE THE BARE SOIL TO BE EXPOSED AT ANY TIME.
8. WHERE TEMPORARY BARE EARTH SLOPE FACES ARE UNAVOIDABLE, THEY SHALL BE PROTECTED WITH HEAVY DUTY PLASTIC SHEETING WELL-SECURED AGAINST THE WIND, SEALED AT THE CREST AND LAPPED AT JOINTS.
9. WHERE SLOPE FACES ARE TO BE TEMPORARILY EXPOSED FOR MORE THAN 2 WEEKS, TEMPORARY HARD SURFACE PROTECTION SHALL BE PROVIDED AND TEMPORARY DRAINS SHALL BE INSTALLED.
10. TRENCHES ON OR ADJACENT TO SLOPES SHALL BE EXCAVATED WITH EXTREME CARE IN SHORT SECTIONS AT A TIME. THE METHOD OF WORKING AND THE EXACT SECTION LENGTHS SHALL BE AGREED WITH THE ENGINEER BEFOREHAND. PRECAUTIONS SHALL ALWAYS BE TAKEN TO PREVENT WATER FROM ENTERING AND COLLECTING IN TRENCHES. TRENCH EXCAVATIONS ON OR ADJACENT TO SLOPES SHALL BE LEFT OPEN FOR THE MINIMUM POSSIBLE TIME.

GENERAL NOTES FOR SETTLEMENT AND GROUNDWATER MONITORING

1. ALL EXISTING SETTLEMENT CHECKPOINTS AND OBSERVATION WELLS AS INDICATED ON THIS DRAWING SHALL BE MONITORED.
2. INITIAL READINGS OF ALL SETTLEMENT CHECKPOINTS AND OBSERVATION WELLS SHALL BE SUBMITTED TO THE ARCHITEST/ENGINEER AND THE BUILDINGS DEPARTMENT PRIOR TO THE COMMENCEMENT OF SITE WORKS.
3. ALL MONITORING RECORDS SHALL BE SUBMITTED TO THE ENGINEER NOT LATER THAN 1 DAY AFTER EACH SET OF READING IS OBTAINED, AND SHALL BE SUBMITTED TO BD REGULARLY.
4. THE MONITORING OF SETTLEMENT CHECKPOINTS AND OBSERVATION WELLS SHALL BE CARRIED OUT DAILY DURING THE SITE WORKS THROUGHOUT THE CONTRACT PERIOD. THE MONITORING RECORD WITH COMMENTS SHALL BE SUBMITTED TO THE ENGINEER AND THE BUILDINGS DEPARTMENT BI-WEEKLY.
5. IF UNDUE SETTLEMENT OF MOVEMENT OF ADJACENT STRUCTURES AND ROAD IS OBSERVED, SITE WORKS SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER, THE AUTHORIZED PERSON AND THE BUILDINGS DEPARTMENT SHALL BE NOTIFIED.
6. ACCESS/WORKING PLATFORM FOR CARRYING OUT MONITORING SHALL BE PROVIDED BY CONTRACTOR.

Revision	Drawn / Designed / Checked / Approved	Date	Reference
THE EXTENT OF SHEET PILE WALL AMENDED LOCATION OF SHEET PILE WALL AND SOLDIER PILES FROM GRID R TO GRID V AMENDED	/ / /	24.9.2001	D
THE EXTENT OF SHEET PILE WALL, SECTIONS OF SOLDIER PILES AND SHORING MEMBERS AMENDED	MON / SLC / GL / LC	27.4.2001	C
AS PER BD APPROVED ON 28.4.2000	MON / SLC / GL / LC	19.5.2000	B
EXTENT OF CONCRETE FOOTING REVISED	MON / MKS / GL / SHS	18.4.2000	A

PROPOSED REDEVELOPMENTOF SOUTH CHINA ATHLETIC ASSOCIATION – PHASE 1

Job No. U05501 | Drawing No. ELS / 02

LAYOUT PLAN OF PROPOSED EXCAVATION WORKS

Scale 1 : 250 | Date FEB. 2000

FUGRO (HONG KONG) LIMITED
22/F., Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong. Tel : 2577 9023

Drawn / Designed / Checked / Approved: MON / MKS / GL / LC

NOTES: DO NOT SCALE FROM THIS DRAWING, FIGURED DIMENSIONS ARE TO BE FOLLOWED. READ THIS DRAWING IN CONJUNCTION WITH OTHER RELATED DRAWINGS; THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.

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CAD FILE : U055E02D

PLOT SCALE : 1 : 250

C-5

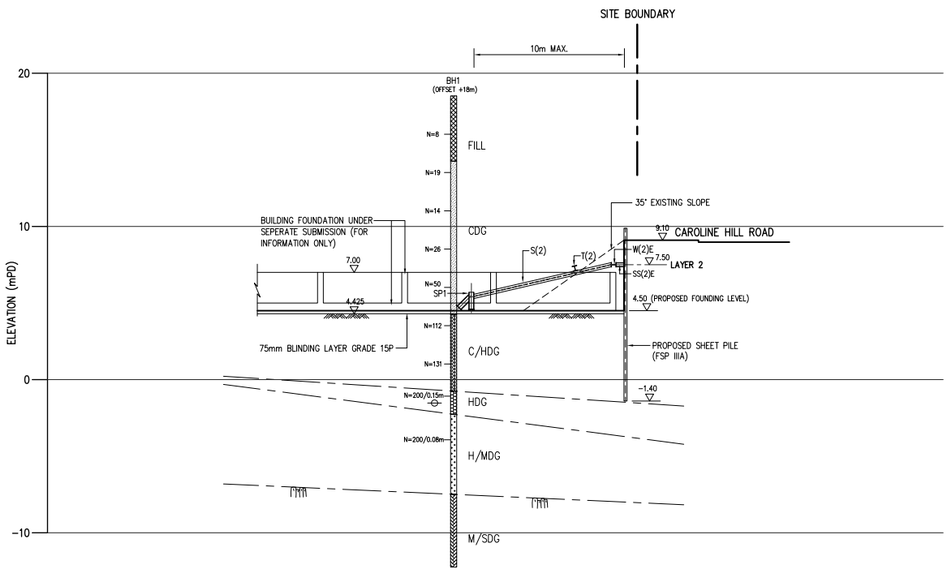
B.D. REFERENCE No. B.D.(B) : 3 / 3053 / 96

NOTES

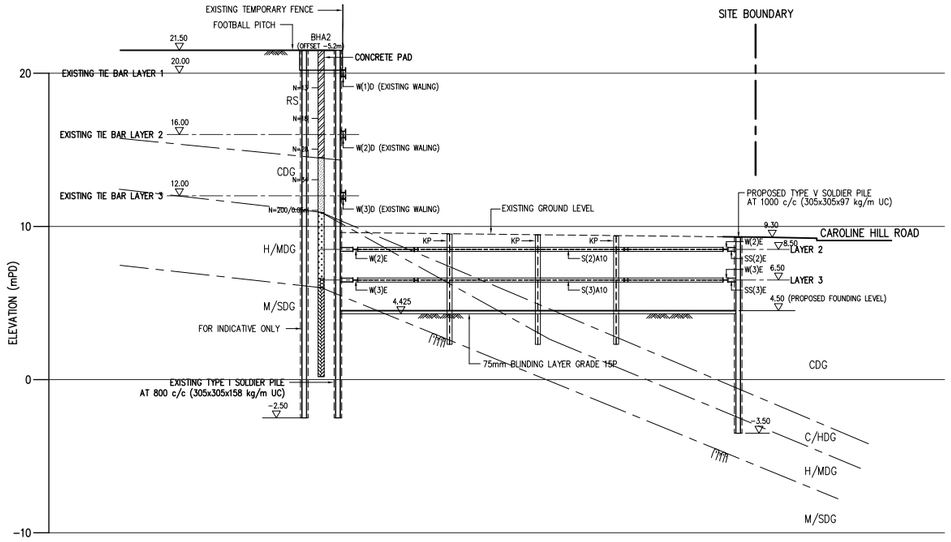
1. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRE ABOVE PRINCIPAL DATUM (mPD) UNLESS OTHERWISE STATED.
2. ALL MEASUREMENT MUST BE CHECKED ON SITE. DO NOT SCALE FROM THE DRAWINGS.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.

LEGEND :

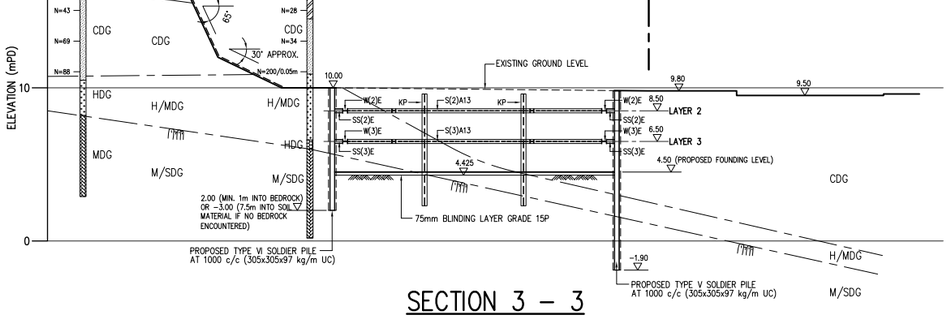
- EXISTING FEATURES
- PROPOSED FEATURES
- INFERRED GEOLOGICAL BOUNDARY
- INFERRED ROCKHEAD LEVEL
- INFERRED GROUNDWATER LEVEL
- FILL (FILL)
- COMPLETELY DECOMPOSED GRANITE (CDG)
- COMPLETELY TO HIGHLY DECOMPOSED GRANITE (C/HDG)
- HIGHLY DECOMPOSED GRANITE (HDG)
- HIGHLY TO MODERATELY DECOMPOSED GRANITE (H/MDG)
- MODERATELY TO SLIGHTLY DECOMPOSED GRANITE (M/SDG)
- SLIGHTLY DECOMPOSED GRANITE (SDG)
- 14 SPT 'N' VALUE
- DEPTH OF PIEZOMETER TIP
- S(1)1 — LAYER No. / STRUT No. — STRUT
- SS(1)A — LAYER No. / SHORT STRUT No. — SHORT STRUT
- W(1)A — LAYER No. / WALING No. — WALING
- A(1)13 — LAYER No. / SOIL ANCHOR No. — TEMPORARY SOIL ANCHOR



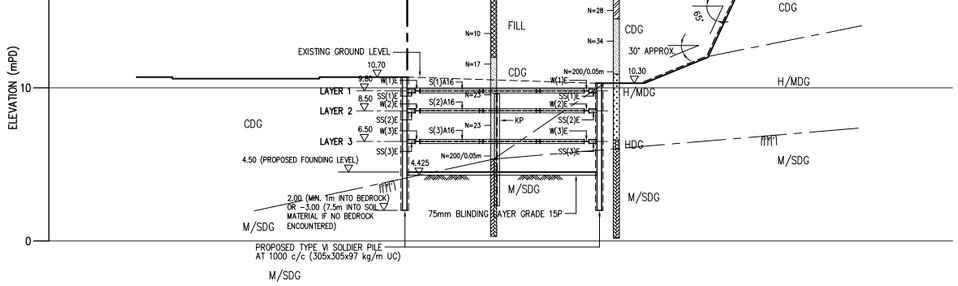
SECTION 1 – 1



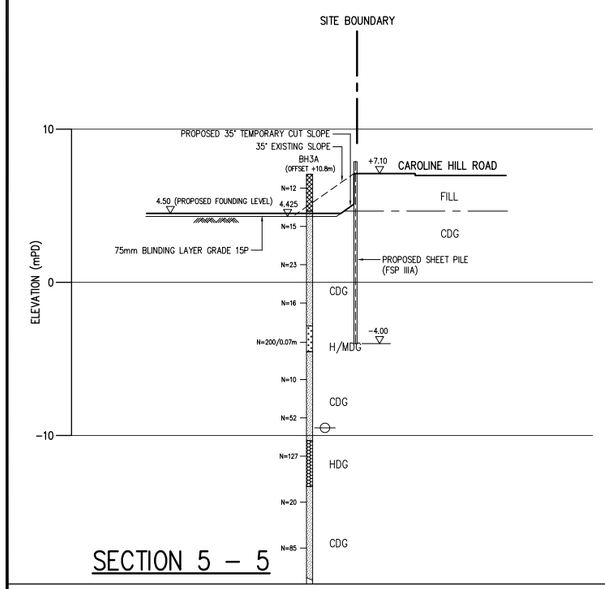
SECTION 2 – 2



SECTION 3 – 3



SECTION 4 – 4



SECTION 5 – 5

Revision	Drawn / Designed / Checked / Approved	Date	Reference
SECTIONS 6–6 AND 7–7 DELETED, LOCATION OF SHEET PILE WALL AND SOLDIER PILES FROM GRID R TO GRID V AMENDED	/ / /	24.9.2001	D
SECTION 6–6 & 7–7 ADDED, SECTIONS OF SOLDIER PILES AND SHORING MEMBERS AMENDED	MON / SLC / GL / LC	27.4.2001	C
AS PER BD APPROVED ON 28.4.2000	MON / SLC / GL / LC	19.5.2000	B
LENGTH OF PILES IN SECTION 2–2 AND 5–5 REVISED	MON / MKS / GL / SHS	18.4.2000	A

PROPOSED REDEVELOPMENTOF
SOUTH CHINA ATHLETIC ASSOCIATION – PHASE 1

Job No. U05501 | Drawing No. ELS / 03

SECTIONS OF PROPOSED WORKS (SECTIONS 1–1 TO 5–5)

Scale 1 : 200 | Date FEB. 2000

FUGRO (HONG KONG) LIMITED
22/F., Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong. Tel : 2577 9023

Drawn / Designed / Checked / Approved: MON / MKS / GL / LC

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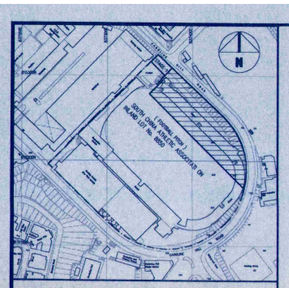
CAD FILE : U055E03D

PLOT SCALE : 1 : 200

C-6

B.D. REFERENCE No. : 3 / 3053 / 96 Pt. II



BLOCK PLAN

SCALE 1 : 3000

MONITORING NOTES :

1. 13 Nos. SETTLEMENT CHECK POINTS (Nos. CP1 TO CP13) SHALL BE INSTALLED AROUND THE BUILDING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORKS.
2. INITIAL MONITORING RESULTS OF ALL CHECK POINTS SHALL BE MEASURED AND SUBMITTED TO THE RSE AND BUILDINGS DEPARTMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORKS.
3. ALL CHECK POINTS SHALL BE MONITORED AND RECORDED DAILY. THE MONITORING RECORD SHALL BE KEPT ON SITE AND SUBMITTED TO THE RSE AND BUILDINGS DEPARTMENT ON A BIWEEKLY BASIS.
4. DURING THE CONSTRUCTION PERIOD, SHOULD ANY UNDUE SETTLEMENT AT CHECK POINTS BE RECORDED, THE CONSTRUCTION WORKS SHOULD BE SUSPENDED IMMEDIATELY AND THE RSE AND BUILDINGS DEPARTMENT SHOULD BE NOTIFIED. REMEDIAL PROPOSAL SHOULD BE SUBMITTED TO THE RSE AND BUILDINGS DEPARTMENT FOR APPROVAL BEFORE THE RESUMPTION OF THE CONSTRUCTION WORKS.

GENERAL NOTES :

1. BUILDING HEIGHT TO BE 45.0m.
2. PROPOSED GROUND FLOOR LEVEL TO BE +7.0mPD.
3. ALL LIFT PIT LEVEL TO BE +5.10mPD.
4. ALL CONCRETE MIX. OF COLUMNS & WALLS TO BE DESIGN MIX. GRADE 40 D.
5. 10.0 kPa OF IMPOSED LOAD ON GROUND FLOOR.
6. WEIGHT OF FOOTING, BACKFILL AND 200mm THK. ON-GRADE SLAB ARE EXCLUDED IN THE LOADING SCHEDULE.
7. PROPOSED BOTTOM LEVEL OF FOOTING IS TO BE +4.5mPD.
8. THE DESIGN IS COMPLYING WITH H.K. BUILDING (CONSTRUCTION) REGULATION 1990.
9. BEARING CAPACITY OF SOIL TO BE 350 kPa, IN WIND CASE TO BE 437.5 kPa. THE REPORT OF PLATE LOAD TEST SHALL BE SUBMITTED SEPARATELY.
10. CONCRETE MIX. OF FOOTING & BEAMS TO BE DESIGN MIX. GRADE 30 D.
11. EXCAVATION WORK & LATERAL SUPPORTS ARE TO BE SUBMITTED SEPARATELY.
12. SOIL ANCHORS IN BORED PILE WALL OR SOLDIER PILE WALL WILL NOT BE RELEASED UNTIL THE COMPLETION OF R.C. SUPERSTRUCTURE WORKS.
13. IN ORDER TO DRAIN THE CAVITIES OF THE RAFT FOUNDATION DURING PERMANENT AND TEMPORARY CONSTRUCTION STAGE, THE FOLLOWING SHALL BE INSTALLED INTO THE RAFT AS INDICATED IN THE DRAWINGS.
    a. 50mm DIAMETER WEEP-HOLES IN THE FORM OF PVC PIPES THROUGH THE CONCRETE MEMBERS OF THE RAFT AT THE MIDSPAN OF EACH INTERIOR FACE OF THE RAFT WALLS AT AN INVERT LEVEL OF +6.575mPD AND +5.0mPD CONNECTING EACH 200mm THICK HARDCORE LAYER.
    b. 50mm DIAMETER WEEP-HOLES (TWO Nos.) IN THE FORM OF PVC PIPES THROUGH THE CONCRETE MEMBERS OF THE RAFT AT EACH WALL OF THE 700x700 SUMP PITS AT AN INVERT LEVEL OF +6.575mPD AND +5.0mPD TO ENABLE WATER TO BE FREELY DRAINED INTO THE SUMP PITS.
    c. THE PVC PIPES SHALL BE WRAPPED WITH TWO LAYERS OF NON-WOVEN GEOTEXTILE FILTER FABRIC MATERIAL TO THE APPROVAL OF THE ENGINEER TO ENSURE THE WEEP-HOLES WILL NOT BE OBSTRUCTED.
    d. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE RAFT AND SUMP PIT IN A DRY CONDITION.

STAGE 1 / STAGE 2

COTTON PATH

CAROLINE HILL ROAD

EXISTING TX. ROOM

EXISTING BUILDING

UNEXCAVATED

RUN IN / OUT

25mm EXPANSION JOINT

2400 THK. RAFT FOOTING

1200 THK. RAFT FOOTING

700x700 SUMP PIT

400 THK. SCREEN WALL ABOVE

300 THK. SCREEN WALL ABOVE

100mm THK. MASS CONC. FILL TO LEVEL 5.10

200 R.C. WALL ABOVE

25m³ IRRIGATION TANK ABOVE

36m³ F.S. WATER TANK ABOVE (TOTAL 2 Nos. OF PANEL)

102m³ SPRINKLER WATER TANK ABOVE (TOTAL 6 Nos. OF PANEL)

RAFT F1 (FOOTING)

FOOTING LAYOUT PLAN

1 : 200

NOTES :-

1. UNLESS OTHERWISE STATED :
   ALL COLUMN SIZE TO BE 650 x 800
   ALL BEAM SIZE TO BE: 300 x 2200 & T.L.=6.70
   ALL RAFT FOOTING TO BE 500mm THK. & T.L.=5.00
2. SECTION A-A TO C-C REFER TO DWG. No. S/F02, SECTION 9-9 TO 14-14 REFER TO DWG No. S/F07.

LEGENDS :-

- PROPOSED STRUCTURAL LEVEL
- SITE BOUNDARY LINE
- EXISTING LEVEL
- CONTOUR OF HIGHLY DECOMPOSED GRANITE STRATUM AT +5mPD
- BORHOLE LOCATION
- PL1~PL4 PLATE LOAD TEST LOCATION (TEST RESULTS TO BE SUBMITTED PRIOR TO THE APPLICATION OF CONSENT)
- CP1~CP13 SETTLEMENT CHECK POINT
- I.L. INVERT LEVEL

SECTION 1 - 1

1 : 200

SECTION 2 - 2

1 : 200

SECTION 3 - 3

1 : 200

SECTION 4 - 4

1 : 200

SECTION 5 - 5

1 : 200

SECTION 6 - 6

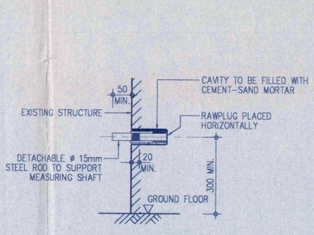
1 : 200

SECTION 7 - 7

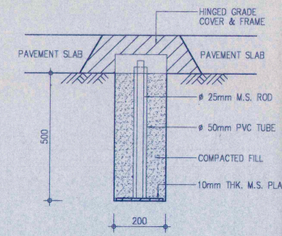
1 : 200

SECTION 8 - 8

1 : 50



ON EXISTING STRUCTURE



ON PAVEMENT

SETTLEMENT CHECK POINT DETAILS

N.T.S.

STATEMENT IN THE FORM SPECIFIED IN THESE PLANS ARE TYPE II (DES FOUNDATION WORKS) * IN RESPECT OF WHICH THE BUILDING AUTHORITY'S CONSENT IS APPLIED FOR.
* DELETED GRIDLINES D TO 5 AND GRIDLINES 1 TO 6
* DELETED GRIDLINES D TO F AND GRIDLINES 6 TO 8.

PETER K. F. SHUM
C.Eng., M.I.C.E., M.I. Struct.E., M.H.K.I.E.
Authorised Person &
Registered Structural Engineer

Plan Approved
TANG NGAR YIN
Senior Structural Engineer
for BUILDING AUTHORITY
15 OCT 2001

Revision	Drawn / Designed / Checked / Approved	Date	Reference
MINOR REVISION	K.K.S. C.W.M. P.S. P.S.	14-09-01	F
REVISED AS PER B.D. APPROVAL PLAN & MINOR REVISED	W.H.L. K.W.S. C.W.M. P.S.	21-03-01	E
REVISED AS PER B.D. APPROVAL PLAN & MINOR REVISED	W.H.L. C.W.M. P.S. P.S.	17-11-00	D
SPRINKLER WATER TANK & MINOR REVISION	K.S.F. T.P. C.W.M. P.S.	08-08-00	C
MINOR REVISION	K.S.F. T.P. P.S. P.S.	14-07-00	B
REVISED AS PER B.D. APPROVAL PLAN & GENERAL REVISION	K.S.F. C.W.M. P.S. P.S.	25-05-00	A

PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION ON I.L. No.8850 AT CAROLINE HILL ROAD, H.K.

Job No. U05502 — Drawing No. S / F01 F

RAFT FOOTING LAYOUT PLAN (STAGE 2)

Scale AS SHOWN — Date 18 AUG., 1999

FUGRO (HONG KONG) LIMITED
22/F., Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong. Tel : 2577 9023

Drawn / Designed / Checked / Approved: Y.C.Y. H.S.G. P.S. P.S.

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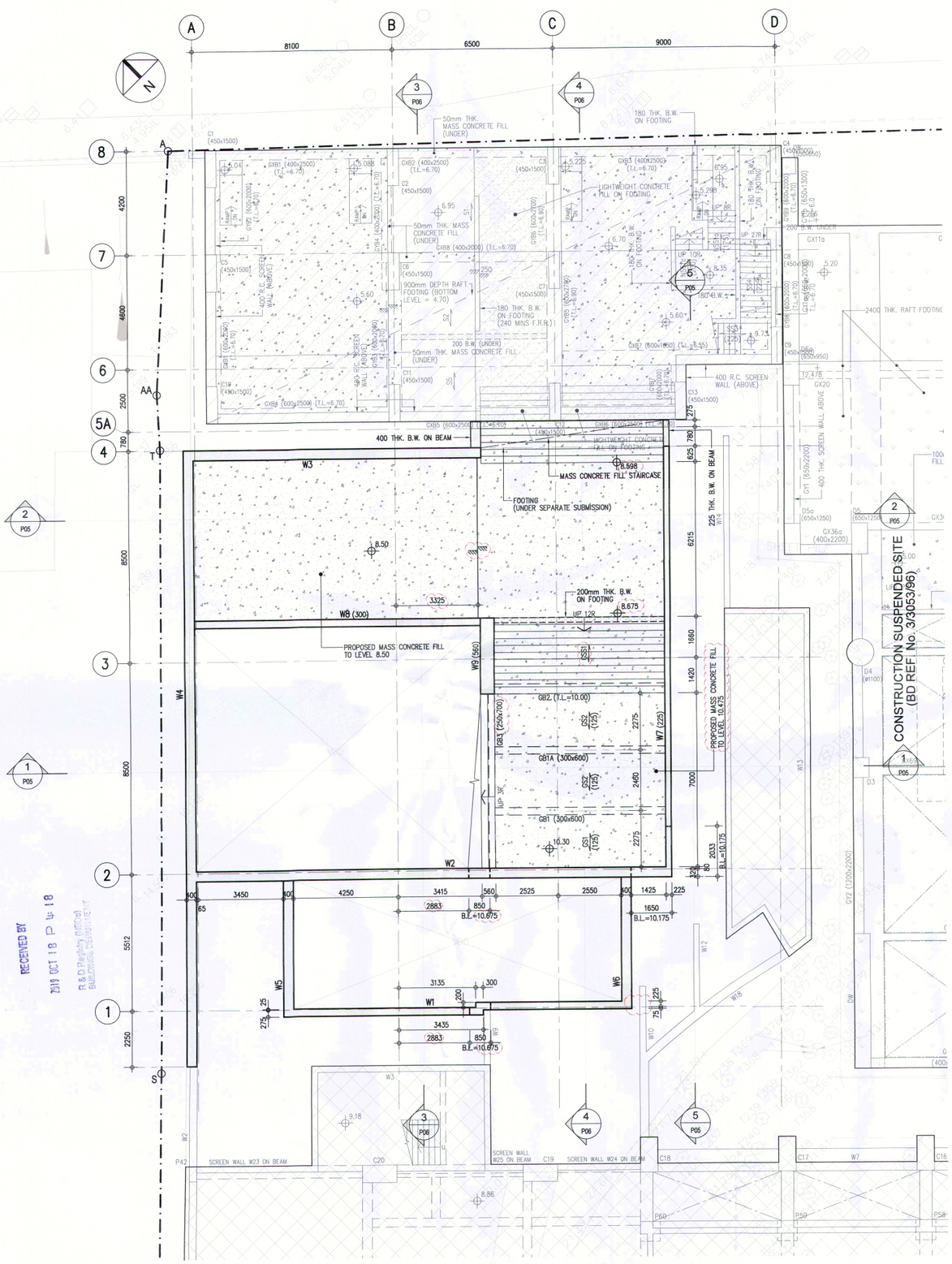
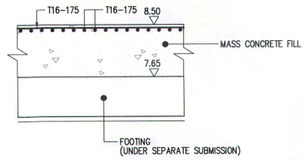
CAD FILE : U14SF01F.DWG

RECEIVED 20 SEP 2001 BUILDINGS DEPARTMENT R & B SECTION

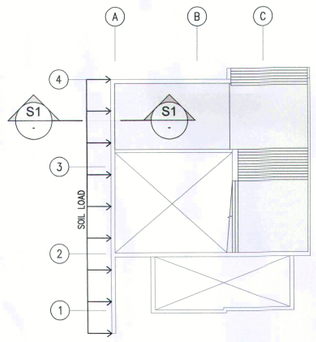
C-7



G/F FRAMING PLAN

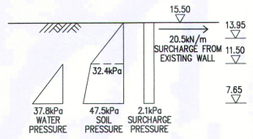


R.C. DETAIL FOR MASS CONCRETE FILL AT G/F



KEY PLAN OF LOADING INTENSITY

DESIGN LOADING SCHEDULE				
LEGEND	USAGE	LL (kN/m²)	IMPOSED D.L. (kN/m²)	F.R.R. (MINS.)
	STAIRCASE	5.0	1.2	120



SOIL PRESSURE SECTION S1-S1

STATEMENT II : THE WORKS SHOWN ON THESE PLANS ARE TYPE II STRUCTURAL (ALTERATIONS AND ADDITIONS) - STAIRCASE ST-E5 AND TRAINING POOL WORKS IN RESPECT OF WHICH THE BUILDING AUTHORITY'S CONSENT IS APPLIED FOR.

AMENDED PLAN

In accordance with paragraph 2 of the PNAP ADM-9, all amendments to the previously approved works have been highlighted, and shall be highlighted in case of further amendments, on all sets of plans submitted to the Buildings Department for approval.

B.D. REFERENCE No. : 2-3 / 3088 / 79 / 9

NOTES :

1. UNLESS OTHERWISE STATED :
   ALL WALL THICKNESS TO BE 400mm
   ALL SLAB THICKNESS TO BE 175mm
   ALL BEAM SIZE TO BE 400(B) x 600(D)
2. BEAM SIZE NOTATIONS ARE IN BREADTH (B) x DEPTH (D)
3. ABBREVIATION :
   T.L. TOP LEVEL
   B.L. BOTTOM LEVEL
   B.W. BEARING WALL
   H.W. HANGER WALL
4. LEGEND :
   - STRUCTURAL LEVEL
   - A & A WORKS AT EXISTING TRANSFORMER ROOM (UNDER SEPARATE SUBMISSION)
   - A & A WORKS AT EXISTING SWITCH ROOM, SWIMMING POOL, GOLF AND GYMNASIUM BUILDING (UNDER SEPARATE SUBMISSION)
   - CONSTRUCTION SITE SUSPENDED (BD REF. No. 3/3053/96) (FOR INFORMATION ONLY)
   - WALL UNDER

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

Plan Approved
YAM K[illegible]-kit
2019
Senior Structural Engineer
for BUILDING AUTHORITY
19 NOV 2019

Rev.	Date	Description	Drawn	Design	Ckd.	Appr.
C	05-07-19	REVISED AS PER B.D. APPROVED PLAN & MINOR REVISION	KKM	KAL	AW	AW
B	13-11-18	REVISED AS PER B.D. APPROVED PLAN & REVISED AS PER GBP DATED 24 AUG., 2018	KKM	KAL	AW	AW
A	26-02-18	REVISED AS PER GBP DATED 9 NOV. 2017	KKM	WYL	BY	AW

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R.S.E. / R.G.E.

Wong Yiu Wang Andes
BSc(Eng) MHKIE RPE
Registered Structural Engineer

For B.D. Approval

Job No.
120361

Project Title
PROPOSED NEW TRAINING POOL AND ST-E5 BLOCK AT S.C.A.A. ON I.L. No. 9041 AT CAROLINE HILL ROAD, HONG KONG

Drawing Title
G/F FRAMING PLAN
(NEW STAIRCASE ST-E5)

Scale	Date
1 : 100	27 JUL., 2017

Drawing No.	Revision
S/ST-E5/P01	C

E.F.	W.Y.L.	B.Y.	A.W.
Drawn	Designed	Checked	Approved

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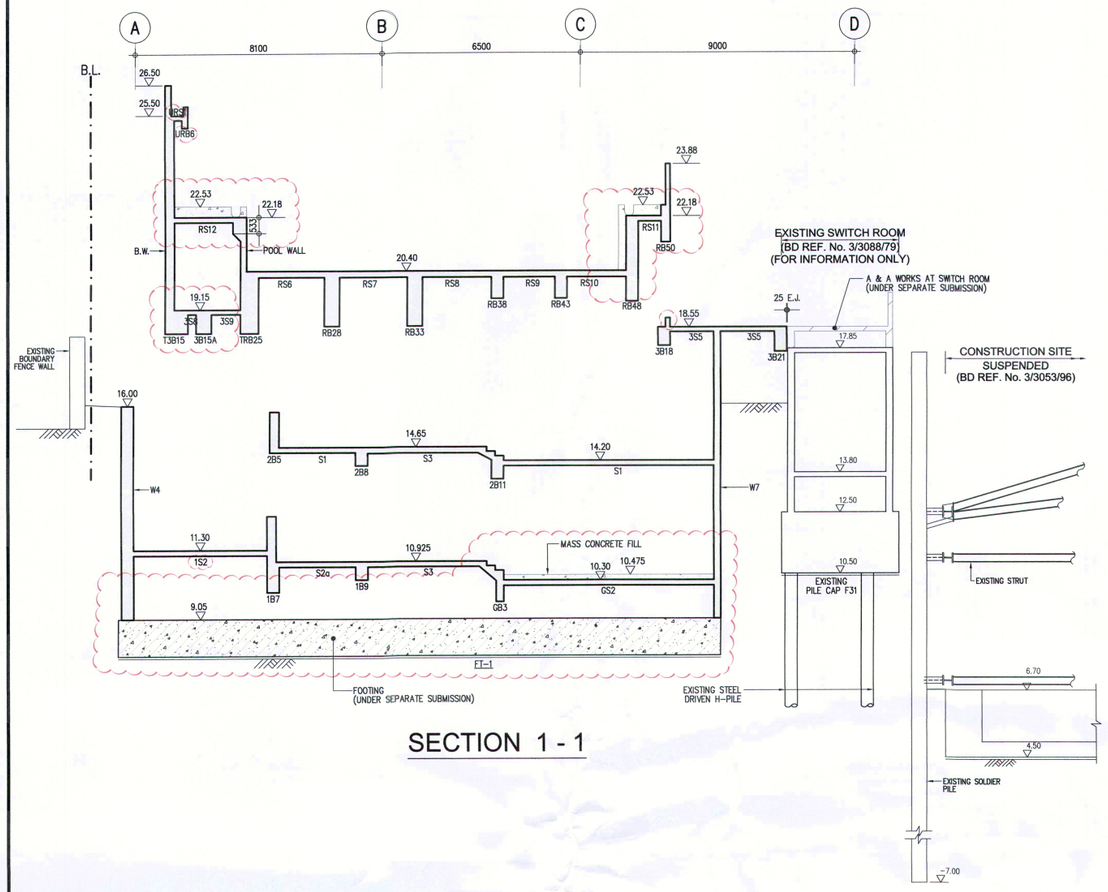
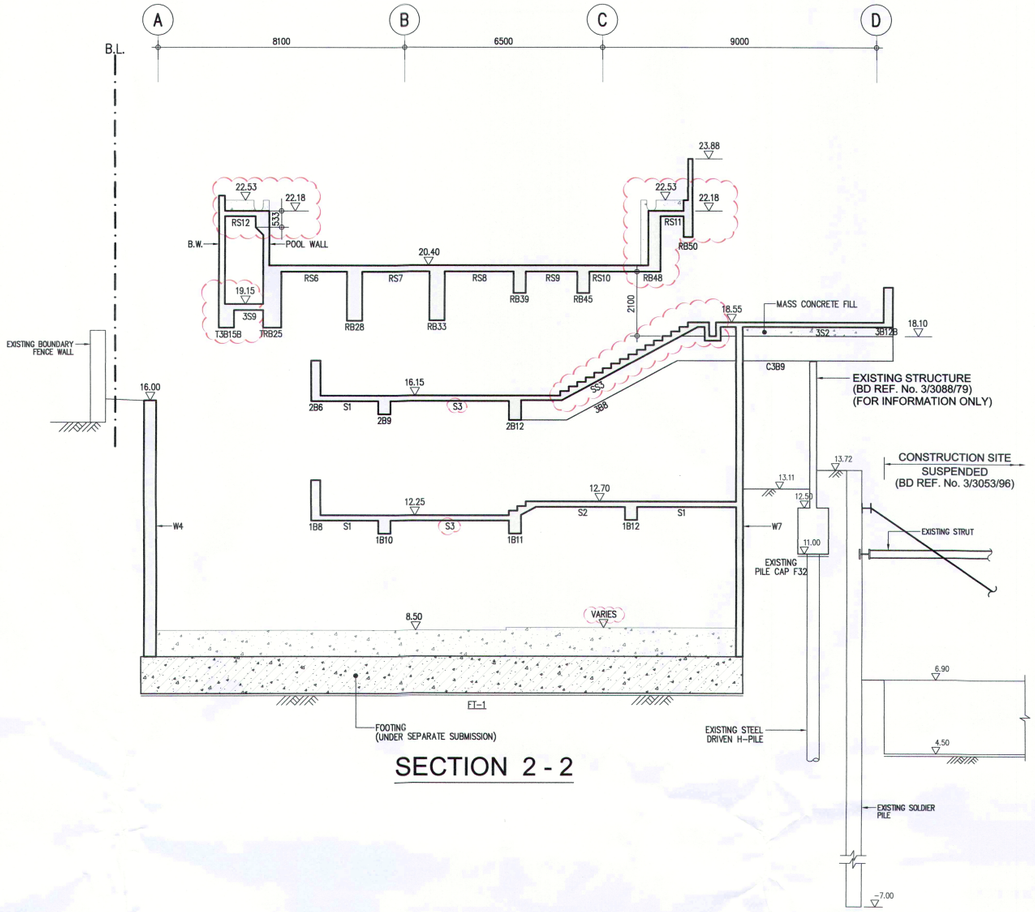
E-mail : fugro@fugro.com.hk
Website : www.fugro.com

CAD Reference : P:\B120361\15. DRAWINGS\CONTROL\STRUCTURAL\ST-E5\SUPERSTRUCTURE\FRAMING\120361_S-ST-E5-P01C (P02).DWG Date & Time : 18-10-19 (11:13:27AM) Plotted By : KM.FUNG



SECTION 1 - 1



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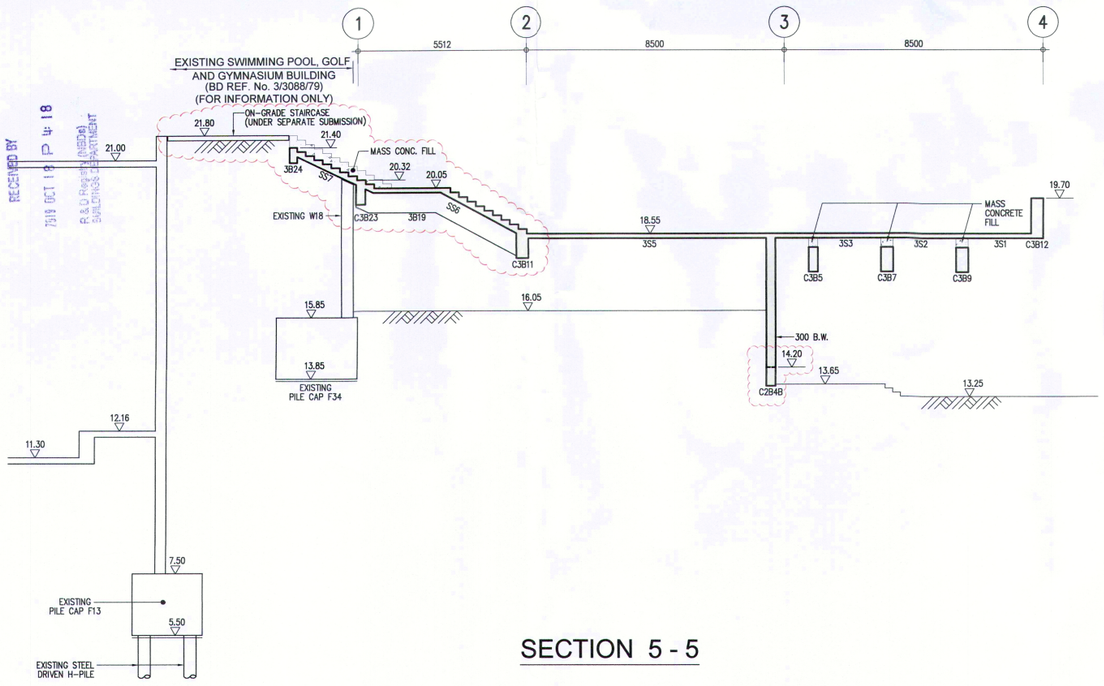
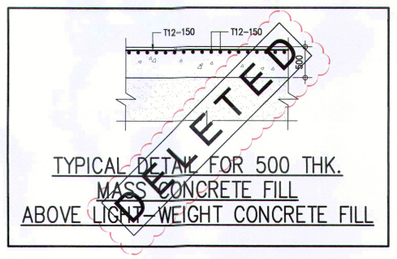


SECTION 5 - 5



STATEMENT II : THE WORKS SHOWN ON THESE PLANS ARE TYPE II STRUCTURAL (ALTERATIONS AND ADDITIONS) - STAIRCASE ST-E5 AND TRAINING POOL WORKS IN RESPECT OF WHICH THE BUILDING AUTHORITY'S CONSENT IS APPLIED FOR.

AMENDED PLAN

In accordance with paragraph 2 of the PNAP ADM-9, all amendments to the previously approved works have been highlighted, and shall be highlighted in case of further amendments, on all sets of plans submitted to the Buildings Department for approval.

B.D. REFERENCE No. : 2-3 / 3088 / 79 / 9

LEGEND :

PROPOSED MASS CONCRETE FILL

PROPOSED LIGHT WEIGHT CONCRETE FILL (DENSITY = 12kN/m³)

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

Plan Approved
YAM Kwok-kit
Senior Structural Engineer
for BUILDING AUTHORITY
19 NOV 2019

Rev.	Date	Description	Drawn	Design	Ckd.	Appr.
D	18-10-19	MINOR REVISION	KKM	KAL	AW	AW
C	05-07-19	REVISED AS PER B.D. APPROVED PLAN & MINOR REVISION	KKM	WYL	AW	AW
B	13-11-18	REVISED AS PER B.D. APPROVED PLAN & REVISED AS PER GBP DATED 24 AUG., 2018	KKM	KAL	AW	AW
A	26-02-18	REVISED AS PER GBP DATED 9 NOV., 2017	KKM	WYL	BY	AW

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R.S.E. / R.G.E.

Wong Yiu Kwong Andes
BSc(Eng) MHKIE RPE
Registered Structural Engineer

For B.D. Approval

Job No.
120361

Project Title
PROPOSED NEW TRAINING POOL AND ST-E5 BLOCK AT S.C.A.A. ON I.L. No. 9041 AT CAROLINE HILL ROAD, HONG KONG

Drawing Title
SECTIONS
(NEW STAIRCASE ST-E5)

Scale	Date
1 : 100	27 JUL., 2017

Drawing No.	Revision
S/ST-E5/P05	D

E.F.	W.Y.L.	B.Y.	A.W.
Drawn	Designed	Checked	Approved

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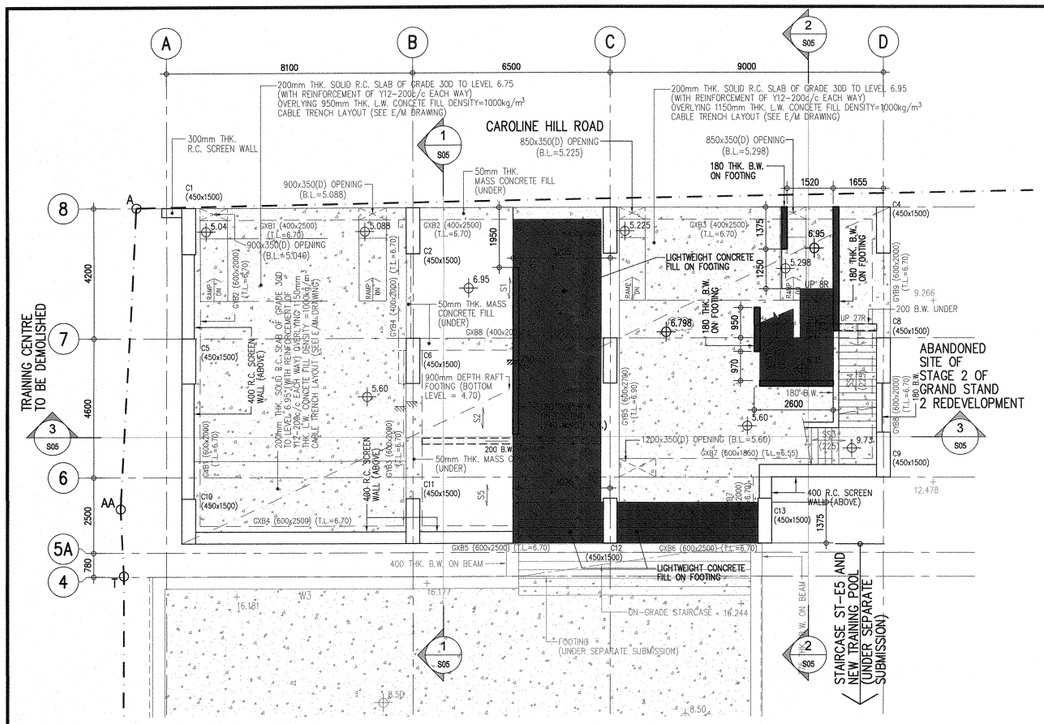
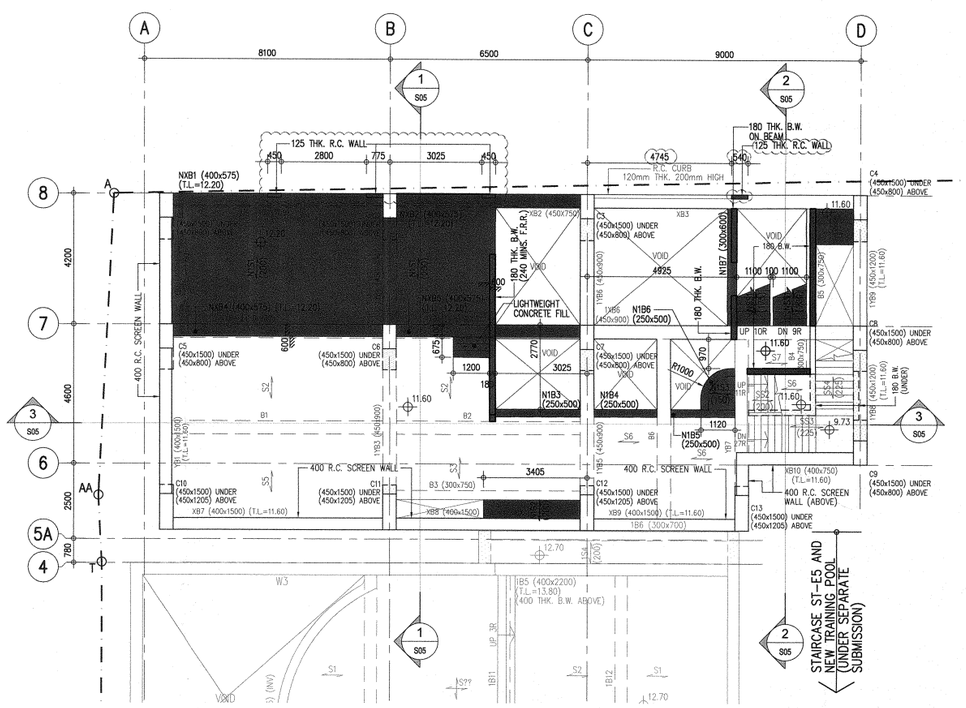
E-mail : fugro@fugro.com.hk
Website : www.fugro.com

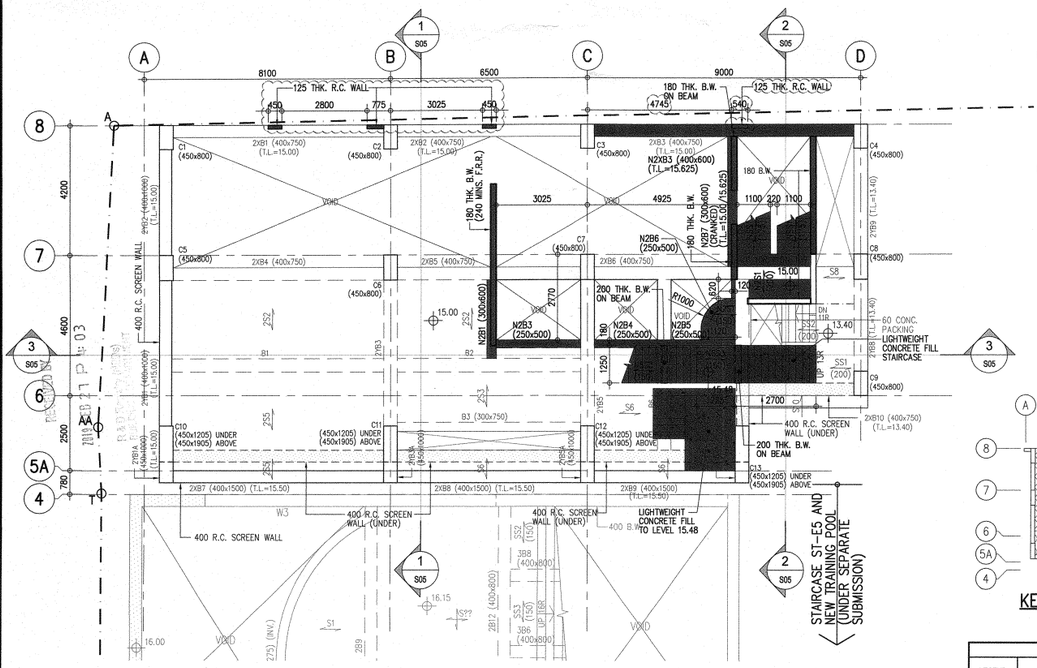
CAD Reference : X:\WORKING\120361\ST-E5\SUPERSTRUCTURE\FRAMING\120361_S-ST-E5-P05D (P01) (BD_ONLY).DWG Date & Time : 18-10-19 (11:12:44AM) Plotted By : KM.FUNG



G/F FRAMING PLAN



1/F FRAMING PLAN



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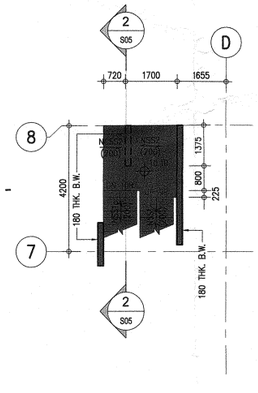
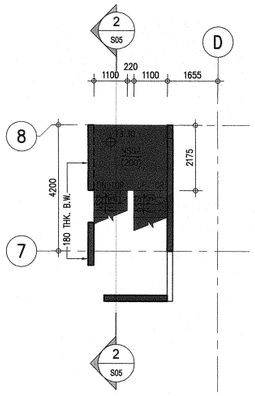
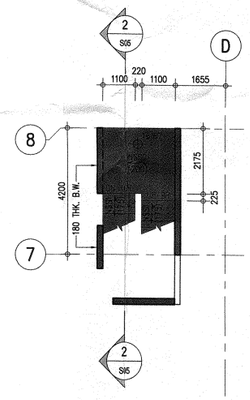


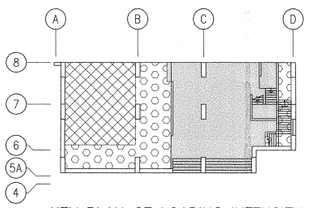
PART PLAN AT LEVEL 10.10



PART PLAN AT LEVEL 13.30



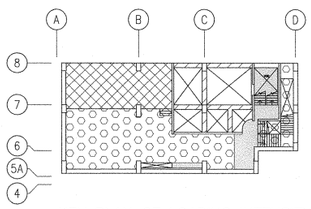
PART PLAN AT LEVEL 16.67



KEY PLAN OF LOADING INTENSITY (FOR G/F)

DESIGN LOADING SCHEDULE FOR G/F				
LEGEND	USAGE	LL (kN/m²)	IMPOSED DL (kN/m²)	F.R.R. (MINS.)
	STAIRCASE & CORRIDOR	5	1.2	120
	TRANSFORMER ROOM (EXISTING)	20	0.5	240
	SWITCH ROOM (EXISTING)	10	0.5	240

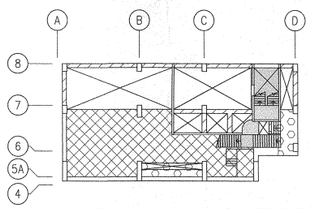
NOTES: # CONSTRUCTION LOAD IS NOT ALLOWED TO EXCEED THE DESIGN LIVE LOAD.



KEY PLAN OF LOADING INTENSITY (FOR 1/F)

DESIGN LOADING SCHEDULE FOR 1/F				
LEGEND	USAGE	LL (kN/m²)	IMPOSED DL (kN/m²)	F.R.R. (MINS.)
	STAIRCASE & CORRIDOR	5	1.2	120
	PUMP ROOM	7.5	1.2	120
	SWITCH ROOM (EXISTING)	10	0.5	240
	INACCESSIBLE AREA	2	–	120
	DOUBLE SLAB UNDER (EXISTING)	0.5*	0.5	–

NOTES: * FOR LEFT-IN FORMWORK.
CONSTRUCTION LOAD IS NOT ALLOWED TO EXCEED THE DESIGN LIVE LOAD.



KEY PLAN OF LOADING INTENSITY (FOR 2/F)

DESIGN LOADING SCHEDULE FOR 2/F				
LEGEND	USAGE	LL (kN/m²)	IMPOSED DL (kN/m²)	F.R.R. (MINS.)
	STAIRCASE & CORRIDOR	5	1.2	120
	VENT DUCT ROOM	5	1.2	120
	SWITCH ROOM (EXISTING)	10	0.5	240
	INACCESSIBLE AREA	2	–	120

NOTES: # CONSTRUCTION LOAD IS NOT ALLOWED TO EXCEED THE DESIGN LIVE LOAD.

B.D. REFERENCE No. : 2-3 / 3088 / 79 / 9(S)

NOTES :-

1. FOR GENERAL NOTES, REFER TO DWG. Nos. AA/TR/S01 AND AA/TR/S01-1.
2. UNLESS OTHERWISE STATED : ALL EXISTING SLAB THICK TO BE 200mm. ALL EXISTING BEAM TO BE 450(B) x 750(D).

LEGEND :-

PROPOSED MASS CONCRETE FILL

PROPOSED LIGHTWEIGHT CONCRETE FILL (DENSITY=1000 kg/m³)

3. ABBREVIATION:

N C X B X
- FLOOR No.
- B FOR BEAM; S FOR SLAB
- BEAM No.
- C FOR CANTILEVER; T FOR TRANSFER
- NEW STRUCTURE

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 14(2)(c) of the Buildings Ordinance are of particular relevance in this regard.

Rev	Date	Description	Drawn	Design	Ckd.	Appr.
B	26-02-19	REVISED AS PER B.D. APPROVED PLAN & MINOR REVISION	KKM	WYL	AW	AW
A	14-02-18	REVISED AS PER GBP DATED 9 NOV. 2017	KKM	WYL	BY	AW

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- Copyright of this drawing is reserved by the Engineer.

R.S.E. / R.G.E.

Wong Yiu Wang Andes
BSc(Eng) MHKIE RPE
Registered Structural Engineer

For B.D. Approval

Plan Approved
YEUNG Kwok-wai
Senior Structural Engineer
for BUILDING AUTHORITY
22 MAR 2019

Job No.
120361

Project Title
PROPOSED ALTERATION AND ADDITION WORKS OF EXISTING TRANSFORMER ROOM AT S.C.A.A. ON I.L. No. 9041 AT CAROLINE HILL ROAD, HONG KONG

Drawing Title
G/F TO 2/F FRAMING PLANS (TRANSFORMER ROOM)

Scale	Date
1 : 100	27 JUL., 2017

Drawing No.	Revision
AA/TR/S03	B

K.K.M.	W.Y.L.	B.Y.	A.W.
Drawn	Designed	Checked	Approved

AMENDED PLAN

STATEMENT II : THE WORKS SHOWN ON THESE PLANS ARE TYPE II STRUCTURAL (ALTERATIONS AND ADDITIONS) - TRANSFORMER ROOM WORKS IN RESPECT OF WHICH THE BUILDING AUTHORITY'S CONSENT IS APPLIED FOR.

In accordance with paragraph 2 of the PNAP ADM-9, all amendments to the previously approved works have been highlighted, and shall be highlighted in case of further amendments, on all sets of plans submitted to the Buildings Department for approval.

FUGRO (HONG KONG) LIMITED
7/F, Guardian House, 32 On Kwan Road, Wanchai, Hong Kong.
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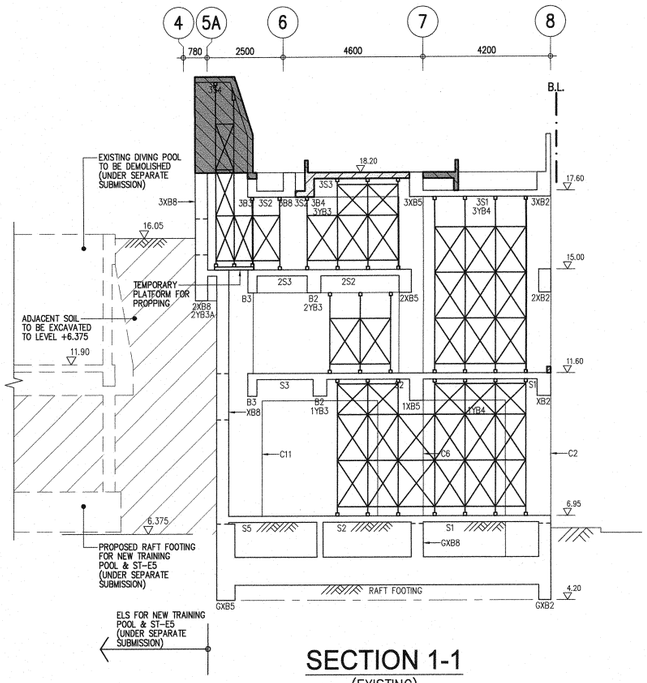
Website : www.fugro.com

CAD Reference : X:\WORKING\120361\AA&A_TX-ROOM\120361_AA-TR-S03B (P02)_604B (P02).DWG Date & Time : 27-02-19 (11:13:59AM) Plotted By : KM.FUNG



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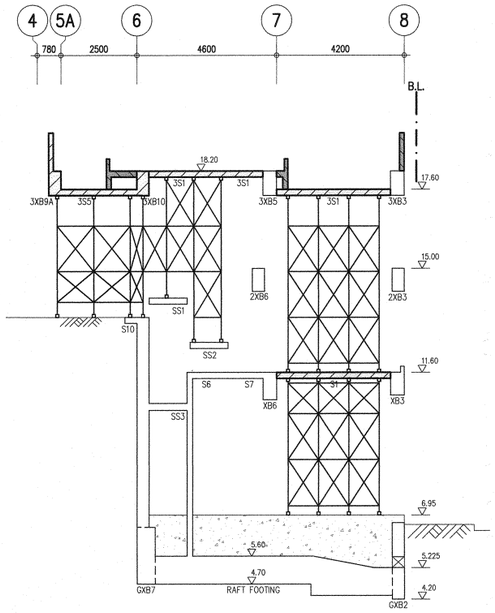
(EXISTING)

* DEMOLITION SEQUENCE REFERS TO PLAN AA/TR/S05-1



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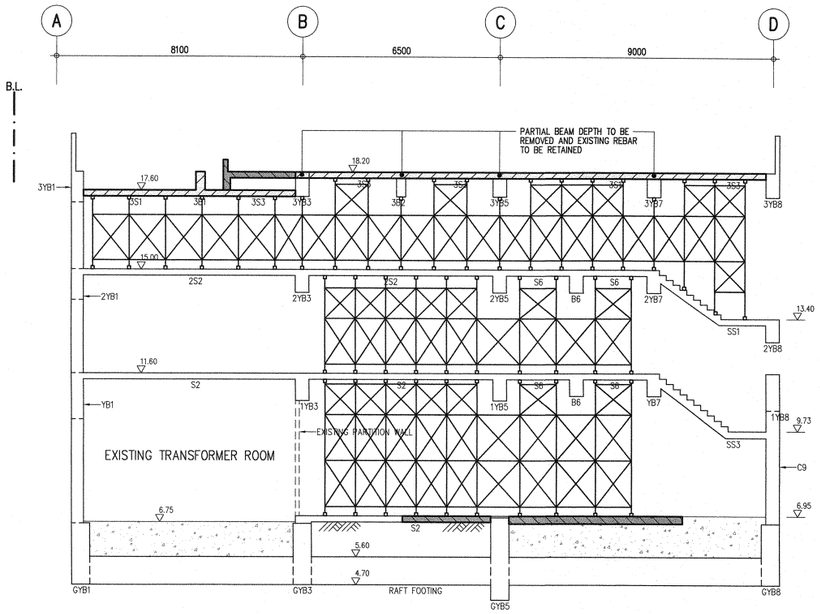

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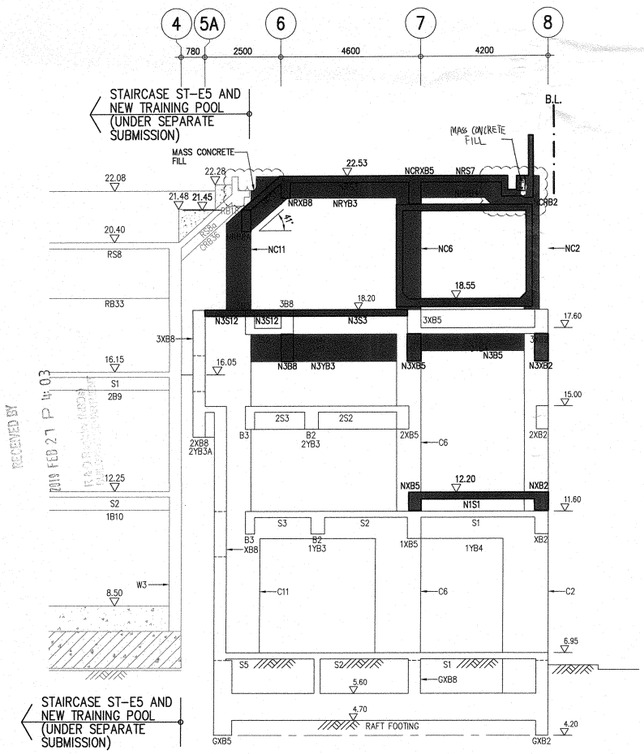
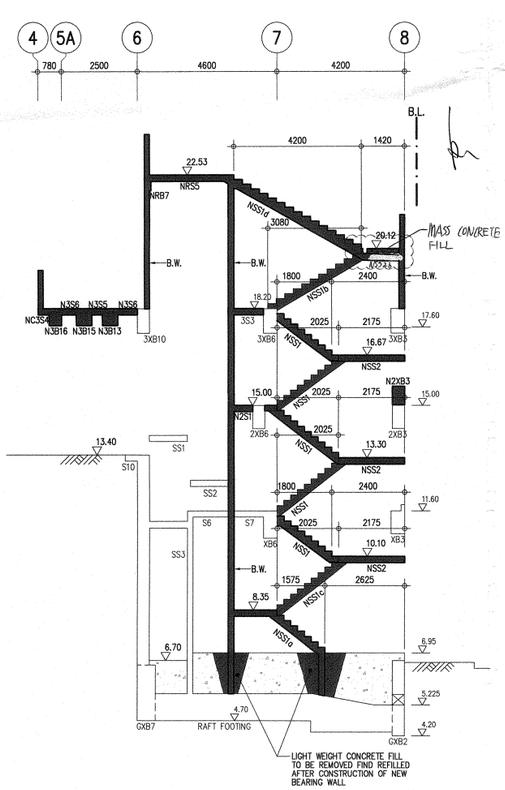


SECTION 1-1
(PROPOSED)



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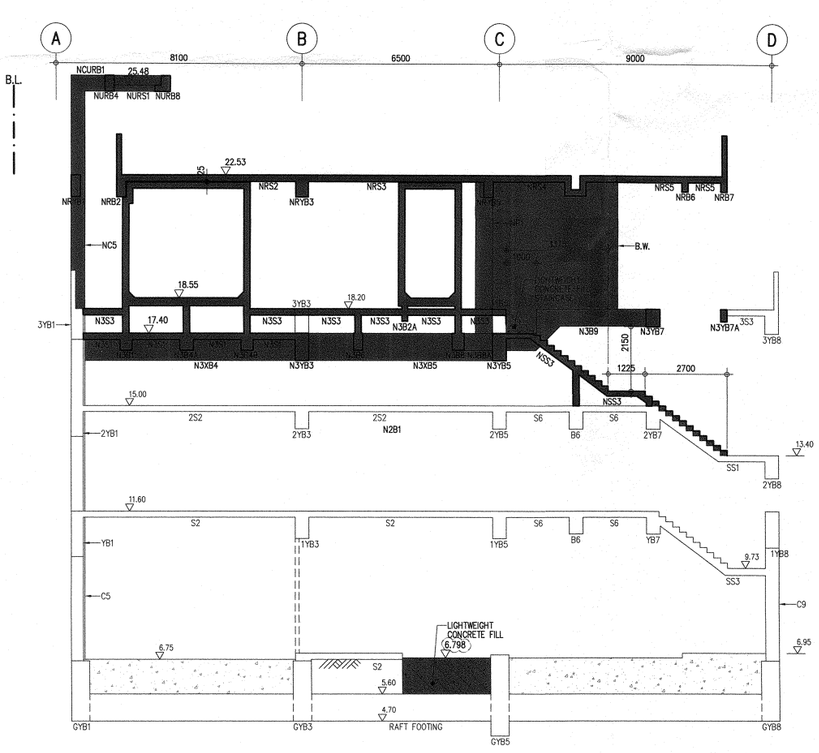

SECTION 3-3
(PROPOSED)

AMENDED PLAN

STATEMENT II : THE WORKS SHOWN ON THESE PLANS ARE TYPE II STRUCTURAL (ALTERATIONS AND ADDITIONS) - TRANSFORMER ROOM WORKS IN RESPECT OF WHICH THE BUILDING AUTHORITY'S CONSENT IS APPLIED FOR.

In accordance with paragraph 2 of the PNAP ADM-9, all amendments to the previously approved works have been highlighted, and shall be highlighted in case of further amendments, on all sets of plans submitted to the Buildings Department for approval.

B.D. REFERENCE No. : 2-3 / 3088 / 79 / 9(S)

LEGEND :-

- R.C. STRUCTURE TO BE DEMOLISHED AFTER THE ADJACENT SOIL OF A&A FOR ST-E5 AREA HAS BEEN EXCAVATED TO LEVEL +6.375 (WORK SEQUENCE REFERS TO STAGES 1b TO 5 AS SHOWN ON PLAN AA/TR/S05-1) (EXCAVATION UNDER SEPARATE SUBMISSION)
- R.C. STRUCTURE TO BE DEMOLISHED BEFORE EXCAVATION OF THE ADJACENT SOIL OF A&A FOR ST-E5 AREA (WORK SEQUENCE REFERS TO STAGE 1a AS SHOWN ON PLAN AA/TR/S05-1)
- PROPOSED NEW R.C. STRUCTURE
- PROPOSED MASS CONCRETE FILL
- PROPOSED LIGHTWEIGHT CONCRETE FILL (DENSITY = 1000 kg/m³)

Note: This plan has been processed on a curtailed check basis under the centralized processing system as promulgated in PNAP ADM-19. The duties of the authorized person, registered structural engineer and/or registered geotechnical engineer concerned as specified under section 4(3)(b) and the provision of section 16(1)(c) of the Buildings Ordinance are in no way relieved in this regard.

Rev.	Date	Description	Drawn	Design	Ckd.	Appr
B	26-02-19	REVISED AS PER B.D. APPROVED PLAN & MINOR REVISION	KKM	WYL	AW	AW
A	06-09-18	REVISED AS PER B.D. APPROVED PLAN AND MINOR REVISION	KKM	WYL	AW	AW

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- Read this drawing in conjunction with other related drawings, The Engineer shall be notified immediately of any discrepancy found therein.
- Copyright of this drawing is reserved by the Engineer.

R.S.E. / R.G.E.

Wong Ku Wang Andes
BSc(Eng) MHKIE RPE
Registered Structural Engineer

For B.D. Approval

Plan Approved
YEUNG Kwok-wei
Senior Structural Engineer
for BUILDING AUTHORITY
22 MAR 2019

Job No.
120361

Project Title
PROPOSED ALTERATION AND ADDITION WORKS OF EXISTING TRANSFORMER ROOM AT S.C.A.A. ON I.L. No. 9041 AT CAROLINE HILL ROAD, HONG KONG

Drawing Title
SECTIONS (TRANSFORMER ROOM)

Scale	Date
1 : 100	14 FEB., 2018

Drawing No.	Revision
AA/TR/S05	B

K.K.M.	W.Y.L.	B.Y.	A.W.
Drawn	Designed	Checked	Approved

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E-mail : fugro@fugro.com.hk
Website : www.fugro.com

RECEIVED BY 2019 FEB 27 PM 4:03

CAD Reference : X:\WORKING\120361\AA&A_TX-ROOM\120361_AA-TR-S05B (P02).DWG Date & Time : 27-02-19 (11:13:46AM) Plotted By : KM.FUNG

Extracts of Site Formation Design Report approved under BD Ref. 3/3053/96 in May 2000

REDEVELOPMENT OF
SOUTH CHINA ATHLETIC ASSOCIATION
- PHASE 1
PROPOSED SITE FORMATION WORKS AT AREA 4

Fugro Ref No. : U05501.14

March 2000

Rev	Date	Purpose of Issue	Prepared	Checked
--	7-03-2000	Original Issue		
A				
B				

Should you have any queries on the contents of this report, please contact Mr Gary Luk at 2577 9023.

1 INTRODUCTION

In the Area 4 redevelopment of the South China Athletic Association site, it is intended to erect a permanent 40m high fencing for the golf court drive, and demolish the existing non-standard retaining structures for the development of a corridor and permanent fences along the site boundary at Area 4 as shown in sketch no. SK950201/133 and 134.

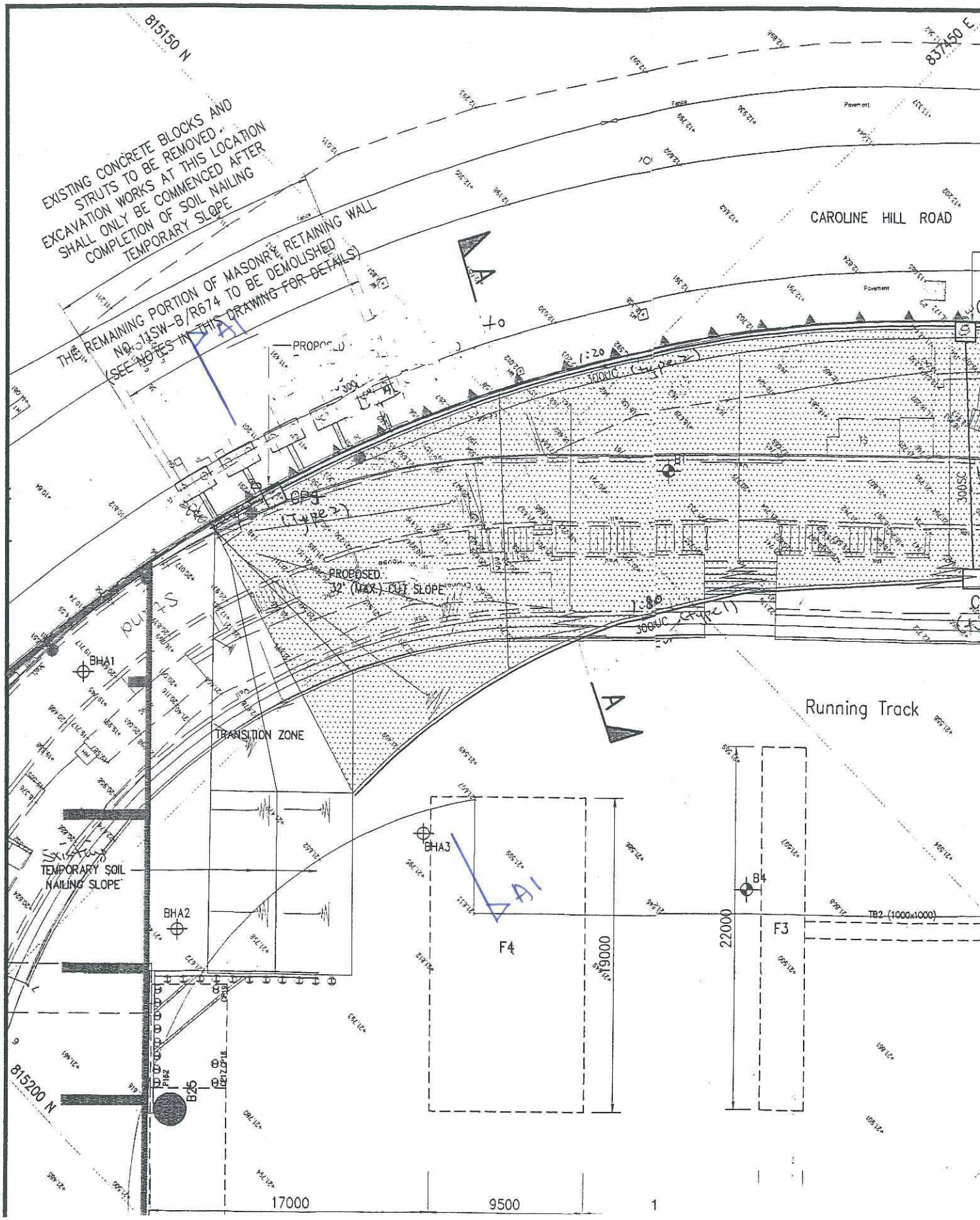
The site formation works for the redevelopment would comprise a cut slope formation below the Area 4, demolition of existing retaining structures during slope formation, upgrading of existing retaining structures next to the access ramp, and provision of a surface drainage system to the area. The layout of proposed site formation works is shown in the attached Drawing No. AS/01.

For the purpose to obtain additional geological information for design of site formation works at the Area 4, additional ground investigation works have been carried out to assess the subsurface ground conditions.

This geotechnical report covers the site formation for the Area 4. It presents the data obtained from the additional ground investigation field work and laboratory testing works, review the geotechnical parameters for design, design of the proposed cut slope and upgrading works for retaining structures. This report shall be read in conjunction with our previously submitted report Ref. U05501.13 for the adjoining portion 3 area.

2 GROUND INVESTIGATION AT EXTENDED AREA

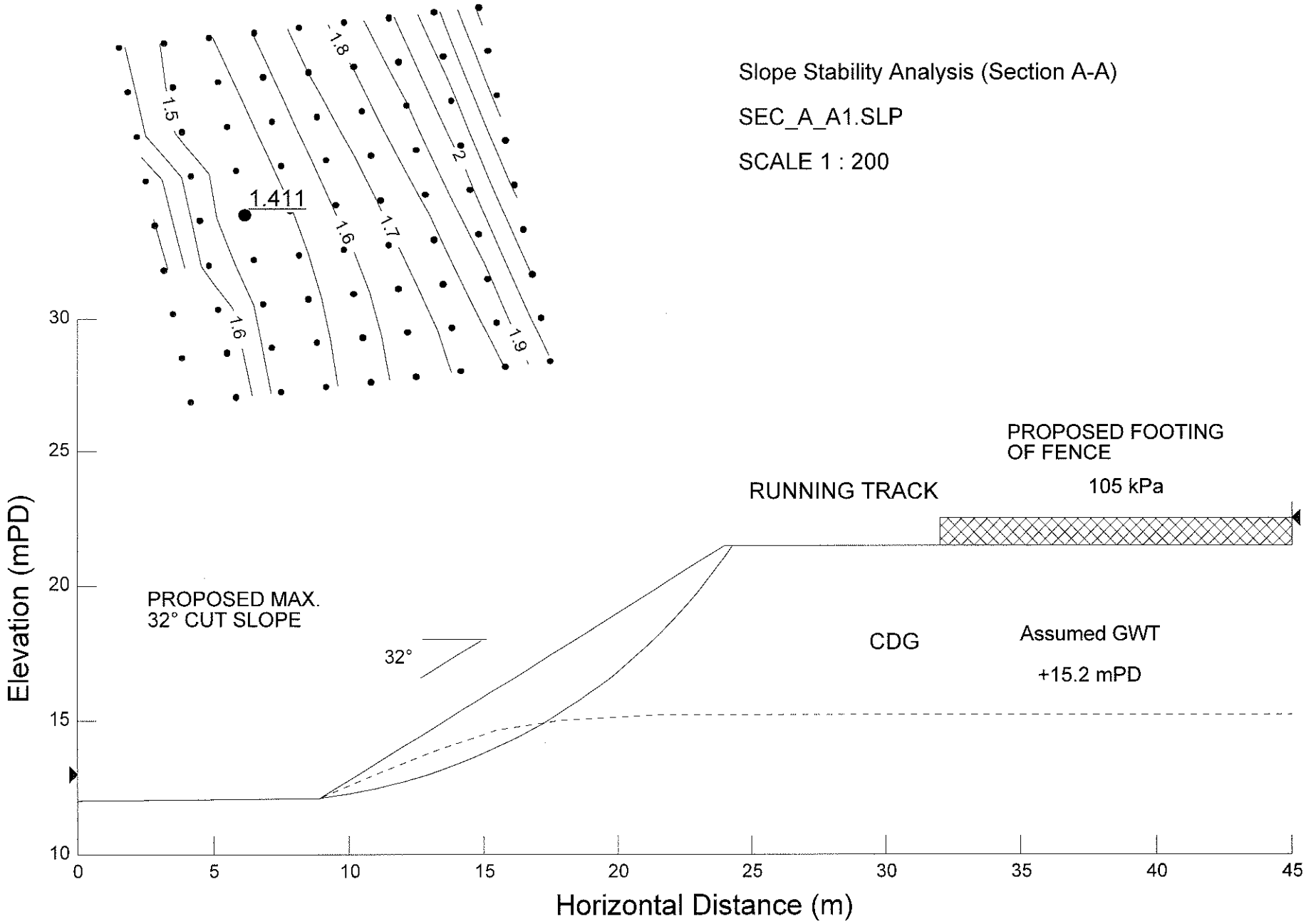
Ground investigation at the Area 4 area was carried out in October 1999 by Paul Y Construction and Engineering Co. Ltd. The investigation comprised 5 vertical boreholes (B1 to B5) and 4 coreholes (HC1 to HC4) through the existing masonry retaining wall. Records of ground investigation works are included in Appendix A.

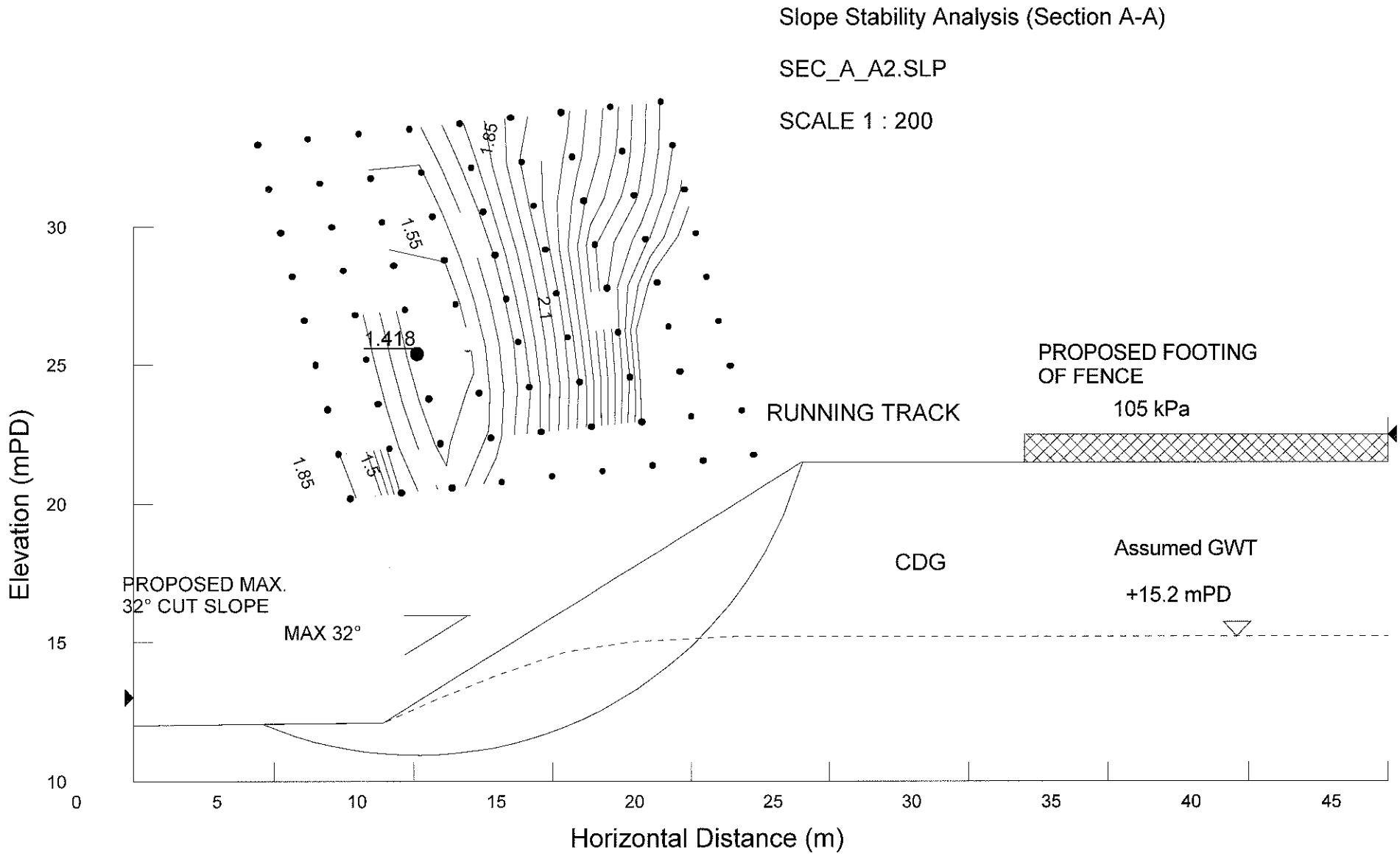

815150 N
837450 E
EXISTING CONCRETE BLOCKS AND STRUTS TO BE REMOVED. EXCAVATION WORKS AT THIS LOCATION SHALL ONLY BE COMMENCED AFTER COMPLETION OF SOIL NAILING TEMPORARY SLOPE
THE REMAINING PORTION OF MASONRY RETAINING WALL NO. 11SW-B/R674 TO BE DEMOLISHED (SEE NOTES IN THIS DRAWING FOR DETAILS)
CAROLINE HILL ROAD
PROPOSED
300UC (Type 2)
PROPOSED 32° (MAX.) CUT SLOPE
1:80
300SC
Running Track
TRANSITION ZONE
TEMPORARY SOIL NAILING SLOPE
BHA1
BHA2
BHA3
F4
F3
B4
TB2 (1000x1000)
22000
9000
815200 N
17000
9500
1

Appendix E

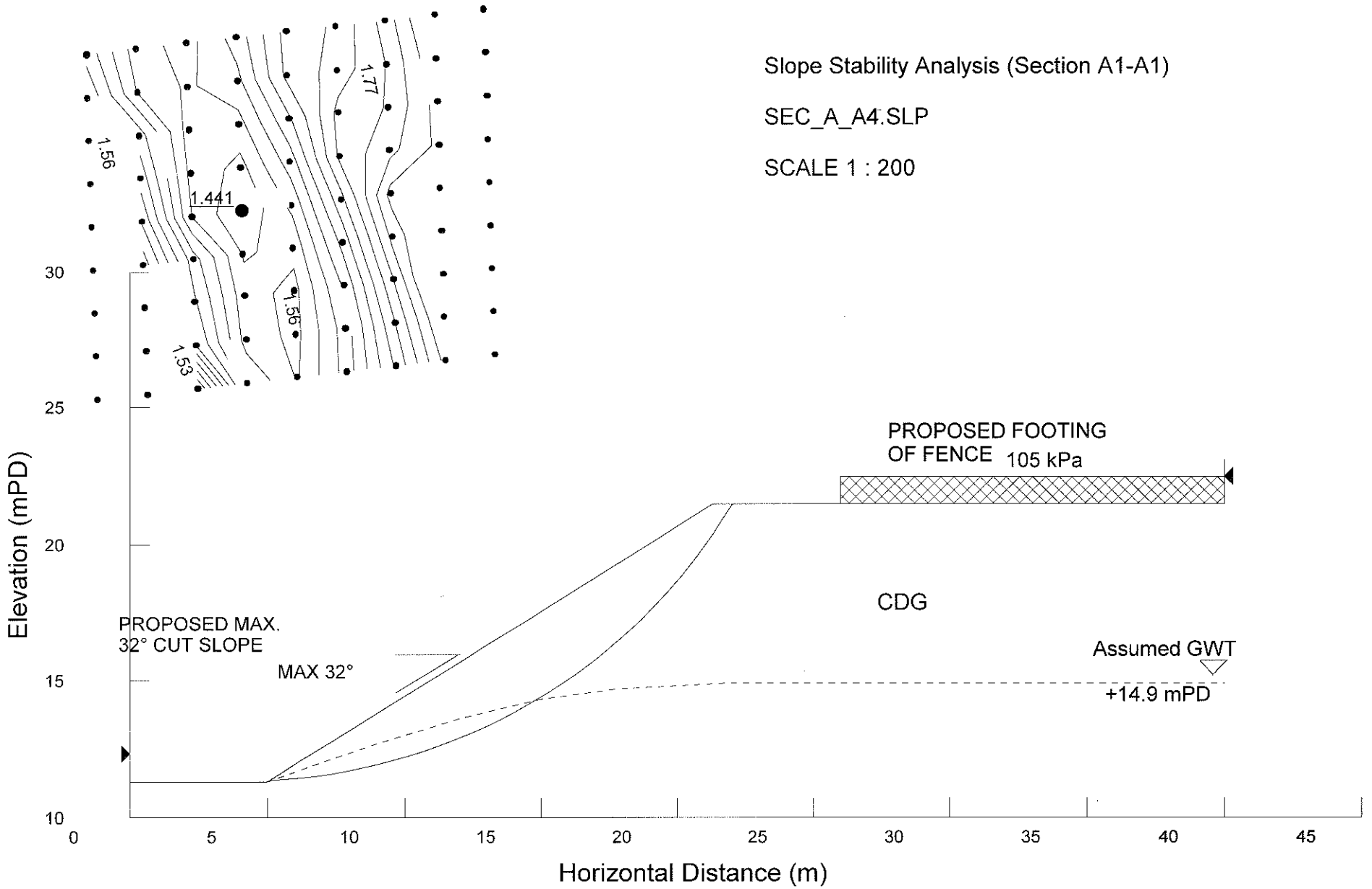
Stability Analysis for the 32° Soil Cut Slope

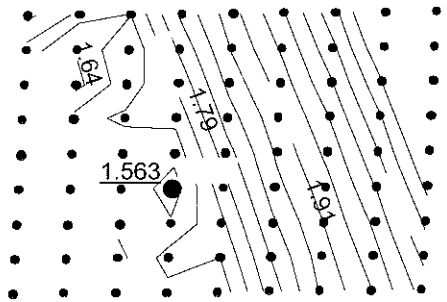
Section A – A


Slope Stability Analysis (Section A-A)
SEC_A_A1.SLP
SCALE 1 : 200
1.411
1.5
1.6
1.6
1.7
1.8
2
1.9
PROPOSED FOOTING
OF FENCE
105 kPa
RUNNING TRACK
PROPOSED MAX.
32° CUT SLOPE
32°
CDG
Assumed GWT
+15.2 mPD
Elevation (mPD)
Horizontal Distance (m)
30
25
20
15
10
0
5
10
15
20
25
30
35
40
45


Slope Stability Analysis (Section A-A)
SEC_A_A2.SLP
SCALE 1 : 200
1.85
1.55
2.1
1.418
1.85
1.5
PROPOSED FOOTING
OF FENCE
105 kPa
RUNNING TRACK
CDG
Assumed GWT
+15.2 mPD
PROPOSED MAX.
32° CUT SLOPE
MAX 32°
Elevation (mPD)
30
25
20
15
10
0
5
10
15
20
25
30
35
40
45
Horizontal Distance (m)

Section A1 - A1

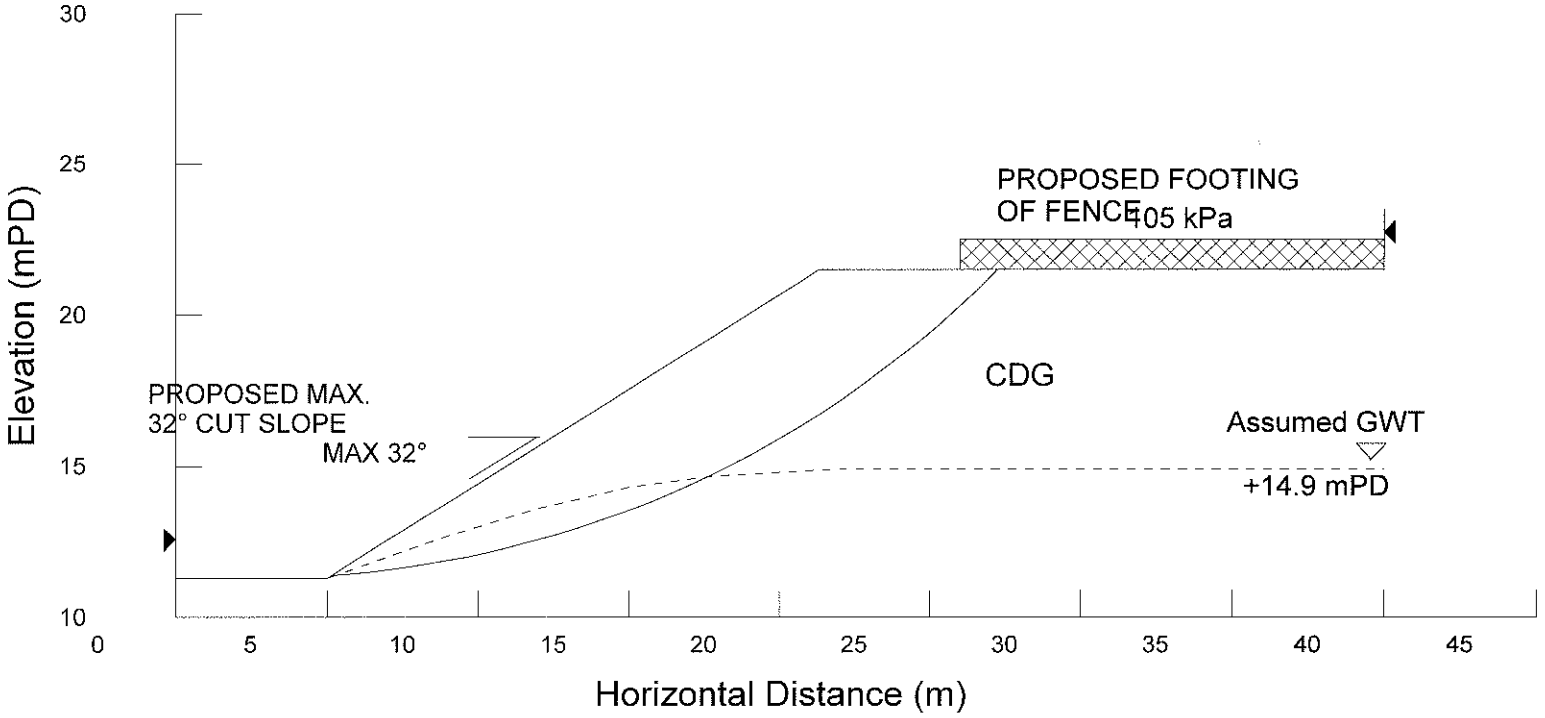

Slope Stability Analysis (Section A1-A1)
SEC_A_A4.SLP
SCALE 1 : 200
1.56
1.441
1.77
1.56
1.53
PROPOSED FOOTING
OF FENCE 105 kPa
CDG
PROPOSED MAX.
32° CUT SLOPE
MAX 32°
Assumed GWT
+14.9 mPD
Elevation (mPD)
Horizontal Distance (m)
10
15
20
25
30
0
5
10
15
20
25
30
35
40
45



Slope Stability Analysis (Section A1-A1)

SEC_A_A44.SLP

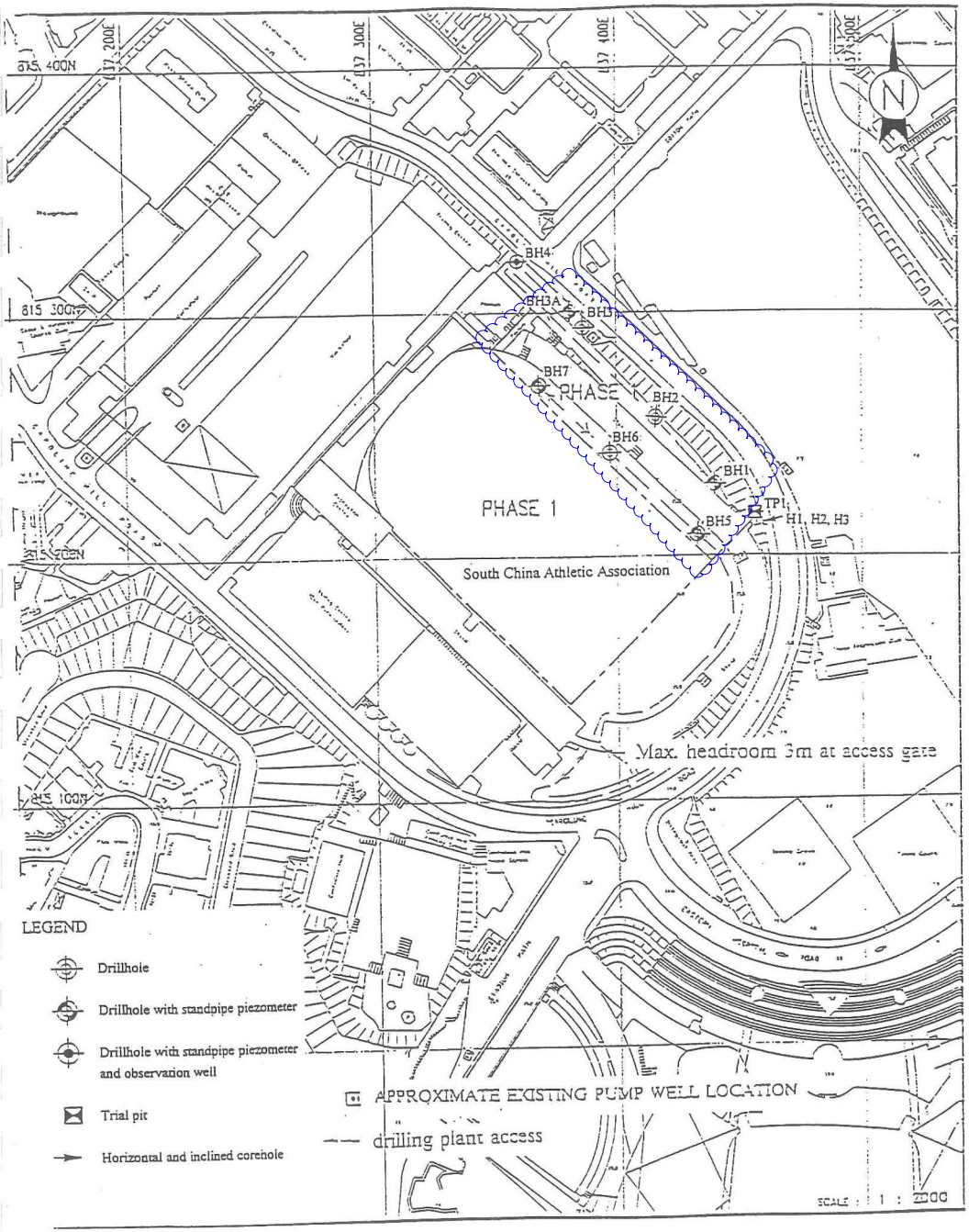
SCALE 1 : 250



Appendix D

Relevant Ground Investigation Record

B1



B2

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.

HOLE No. *BH-1* | DATE *from 04-09-96 To 06-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *1 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837439.90*	*T2-101*
MACHINE No. *DR.21*	N *815229.92*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+18.32mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
04-09-96	Inspection Pit	1.20m at 18:00	60	90				N=6	D1	18.32	0.00				CONCRETE
										18.12	0.20				Loose, brown, slightly gravelly, clayey, silty fine to coarse SAND. (FILL)
										16.82	1.50				Firm, brown, gravelly, very sandy SILT & CLAY. (FILL)
										14.32	4.00				Extremely weak, brown, completely decomposed, coarse-grained GRANITE (Medium dense, gravelly clayey silty fine to coarse SAND) (C.D.G.)
	Px			100					D3		5.00		V		
								N=18	D4	11.82	6.50				Extremely weak, yellowish pink, completely decomposed, coarse-grained GRANITE (Medium dense, gravelly slightly clayey, silty fine to coarse SAND.) (C.D.G.)
05-09-96		2.35m at 08:00		100				N=14	D5		7.50		V		
									D6		7.95				
				90					D7		9.00				
											10.00				

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
A piezometer is installed at 20m. (-1.48MPD)

D-1

B3

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-1* | DATE *from 04-09-96 To 06-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1*
SHEET *2 of 4*

METHOD *Rotary Drill*
MACHINE No. *DR.21*
CO-ORDINATES E *837439.90* N *815229.92*
ROCK COREBIT *T2-101*
HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*
ORIENTATION *Vertical*
GROUND-LEVEL *+18.32mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
05-09-96	Px							2.2 2.51 6.11 N=22	D 8	8.32	10.00				
										6.82	10.45		V		As sheet 1 of 4
				100							11.50				
								3.4 7.10 14.19 N=50	M 9 D 10		12.50		V		Extremely weak, yellowish brown to yellowish pink, completely decomposed coarse-grained GRANITE (Dense, gravelly, silty fine to coarse SAND) (C.D.G.)
											12.95				
										4.32	14.00				
				100				4.7 12.21 36.43 N=112	M 11 D 12		15.00		V/VI		Extremely to very weak, yellowish brown, completely to highly decomposed coarse-grained GRANITE. (Very dense, very gravelly, fine to coarse SAND) (C.D.G.–H.D.G.)
	Hx		60								15.45				
											16.50				
				88							17.50				
								5.8 12.24 41.54 N=131	M 13 D 14		17.95				
		3.40m at 18:00 7.25m at 08:00								-0.68	19.00				
06-09-96				0					M 15		20.00		IV		As sheet 3 of 4

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
A piezometer is installed at 20m. (-1.48MPD)

B4

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-1* | DATE *from 04-09-96 To 06-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1*
SHEET *3 of 4*

METHOD *Rotary Drill*
MACHINE No. *DR.21*
CO-ORDINATES E *837439.90* N *815229.92*
ROCK COREBIT *T2-101*
HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*
ORIENTATION *Vertical*
GROUND-LEVEL *+18.32mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
								39.161	D 16	-1.68	20.00				
										-2.18	20.15 20.50		IV		Very weak, yellow and pink mottled brown, highly decomposed coarse grained GRANITE. (Very dense, very gravelly fine to coarse SAND) (H.D.G.)
				41	30	26	5				21.10				
				44	44	42	3.3		T2-101				II		
										-3.68	22.00				Moderately strong to strong, partly very weak to weak, yellowish pink, moderately decomposed coarse-grained GRANITE with moderately spaced iron-stained rough planar joints dipping 10° and 30°. (M.D.G.)
				90							23.00				
	Hx		60						M 18 D		23.08		III		
											24.55				
06-09-96				100	0	0	NI			-6.43	24.75		II		Very weak to weak, yellowish pink to yellowish brown, highly decomposed coarse grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
										-6.70	25.02		IV		
				90	87	47	NI			-7.01	25.33		II		
										-7.43	25.75				
				100	100	37	9.6				26.18				Moderately strong, yellowish pink, moderately decomposed coarse-grained GRANITE with very closely spaced iron-stained, managanese coated rough planar joints dipping 10° and 30° with very weak to weak highly to moderately decomposed zone at 25.00–25.30. (H.D.G. to M.D.G.)
				100	100	82	3.8				27.16				
				100	100	32	6.6		T2-101		27.74		III/II		
				95	95	43	4.7				29.25				
				93	93	93	1.6				29.87				As sheet 4 of 4
				90	90	70	9								

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
A piezometer is installed at 20m. (-1.48MPD)

D-2

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-1* | DATE *from 04-09-96 To 06-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *4 of 4*

METHOD *Rotary Drill* | CO-ORDINATES E *837439.90* N *815229.92* | ROCK COREBIT *T2-101* | HOLE DIA. *Px Hx*

MACHINE No. *DR.21*

FLUSHING MEDIUM *Water* | ORIENTATION *Vertical* | GROUND-LEVEL *+18.32mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
06-09-96		6.50m at 18:00	60	90	90	70	9		T2-101	-11.68 / -12.44	30.00 / 30.76		III~II		Moderately strong to strong, yellowish pink to pink, moderately to slightly decomposed coarse-grained GRANITE with very closely (25.75-26.18m, 29.87-30.76m), moderately (26.18-29.26m) & widely (29.26-29.87m) spaced, iron-stained rough planar joints dipping 10°, 30° and 60°. (M.D.G. to S.D.G.)

DRILLHOLE COMPLETED

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
A piezometer is installed at 20m. (-1.48MPD)

Form No. PRO/05/03

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-2* | DATE *from 31-08-96 To 03-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *1 of 4*

METHOD *Rotary Drill* | CO-ORDINATES E *837415.96* N *815257.15* | ROCK COREBIT *T2-101* | HOLE DIA. *Px Hx*

MACHINE No. *DR.21*

FLUSHING MEDIUM *Water* | ORIENTATION *Vertical* | GROUND-LEVEL *+17.56MPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
31-08-96	Inspection Pit		60	100 / 100 / 100 / 100				N=10 / N=21 / N=28	1 / 2 / 3 / 4 / 5 / 6 / 7	17.56 / 17.36 / 16.06 / 8.56	0.00 / 0.20 / 1.50 / 2.50 / 2.95 / 4.00 / 5.00 / 5.45 / 6.50 / 7.50 / 7.95 / 9.00 / 10.00				CONCRETE Loose, reddish brown, gravelly, slightly clayey silty fine to coarse SAND. (FILL) Extremely weak, reddish brown, completely decomposed, coarse-grained GRANITE. (Medium dense, gravelly clayey silty fine to coarse SAND) (C.D.G.) As sheet 2 of 4

Px

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
One falling head permeability test is done at 15.0-15.6m.

Form No. PRO/05/03

D-3

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-2* | DATE *from 31-08-96 To 03-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *2 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837415.96*	*T2-101*
MACHINE No. *DR.21*	N *815257.15*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+17.56MPD*

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
31-08-96	Px	4.20m at 18:00 4.25m at 08:00	60	90				2.2 4.2 6.2 N=27; 3.4 7.7 10.15 N=36	S; M 9; 10	7.56	10.00		V		Extremely weak, brown, completely decomposed coarse-grained GRANITE. (Medium dense to dense, gravelly, silty, fine to coase SAND) (C.D.G.)
				87				3.5 8.9 14.25 N=81	M 11; 12	3.56	14.00		V		Extremely weak, brown, completely decomposed coarse-grained GRANITE. (Medium dense to dense, gravelly, slightly clayey, silty, fine to coarse SAND) (C.D.G.)
02-09-96	Hx	3.60m at 18:00 7.30m at 08:00		100				6.7 15.18 20.18 N=91	M 13; 14	1.06	16.50		V; IV		Very weak, pinkish brown, completed to highly decomposed coarse-grained GRANITE. (Very dense, very gravelly, slightly silty, fine to coarse SAND) (C.D.G.-H.D.G.)
				100					M	-1.44	19.00		V		As sheet 3 of 4
									15		20.00				

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
One falling head permeability test is done at 15.0-15.6m.

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-2* | DATE *from 31-08-96 To 03-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *3 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837415.96*	*T2-101*
MACHINE No. *DR.21*	N *815257.15*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+17.56MPD*

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
02-09-96	Hx		60	95				4.6 7.15 14.28 N=60; 5.5 9.13 22.36 N=80	M 16; 17; 15	-2.44	20.00		V		Extremely weak, pinkish brown, completely decomposed coarse-grained GRANITE. (Very dense, gravelly, clayey, silty, fine to coarse SAND) (C.D.G.)
				85					M 19; 20	-5.44	23.00		V		Extremely weak, yellowish brown, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, silty, fine to coarse SAND) (C.D.G.)
				90	90	60	8.4	7.9 12.80 33.58 N=120		-9.38	28.94		V		
03-09-96				89	80	56	>10	T2-101		-10.17	27.73		II		Strong to very strong, greyish pink, slightly decomposed coarse-grained GRANITE with moderately (29.77-30.70m) to closely-spaced iron-stained, rough planar joints dipping 10°, 30°, 45° & 60°. Highly decomposed GRANITE zone is found at 27.73-27.94m)
				90	90	65	7			-10.44	28.00		IV		
				95	95	70	3				28.76		II		
											29.77				

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
One falling head permeability test is done at 15.0-15.6m.

D-4

B9

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-2* | DATE *from 31-08-96 To 03-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *4 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837415.96*	*T2-101*
MACHINE No. *DR.21*	N *815257.15*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+17.56MPD*

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
										-12.44	30.00				
31 03-09-96			60	95	95	70	3		T2-101		30.70		II		As sheet 3 of 4
32				97	97	80	5			-14.55	32.11				
															— DRILLHOLE COMPLETED —
33															
34															
35															
36															
37															
38															
39															
40															

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
One falling head permeability test is done at 15.0–15.6m.

Form No. PRO/05/03

B10

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-3* | DATE *from 22-8-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *1 of 1*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary	E	*T2-101*
MACHINE No. *BR-21*	N	HOLE DIA. *Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
											0.00				
1 22-08-96	Inspection Pit										1.50				Medium dense, reddish brown, gravelly, clayey silty, fine to coarse SAND. Concrete surface is found at 0.00–0.1m. (FILL)
2			60	100							2.50				
3		NIL at 18:00		66				3.3 2.3 3.10 N=16	T2-101		2.95				CONCRETE
											3.70				— DRILLHOLE COMPLETED —
4															
5															
6															
7															
8															
9															
10															

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
Drilling terminated according to Engineer's instruction.

Form No. PRO/05/03

D-5

B11

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-3A* | DATE *from 11-09-96 To 17-09-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *1 of 6*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837381.34*	*T2-101*
MACHINE No. *BR.21*	N *815300.08*	HOLE DIA. *Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+8.65MPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
11-09-96	Inspection Pit									8.65	0.00				
				88				N=12			1.50				Medium dense, yellowish brown, gravelly, clayey silty, fine to coarse SAND. (FILL)
											2.50				
											2.95				
										4.65	4.00				
	Hx		60	100				N=15			5.00		V		Extremely weak, pinkish brown completely decomposed, coarse-grained GRANITE. (Medium dense, gravelly clayey silty fine to coarse SAND) (C.D.G.)
											5.45				
										2.15	6.50				
				100				N=13			7.50		V		Extremely weak, yellowish brown, completely decomposed, coarse-grained GRANITE. (Medium dense, gravelly clayey silty fine to coarse SAND) (C.D.G.)
											7.95				
											9.00				
				100							10.00				

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
A Piezometer is installed at 18m. (-9.35MPD)

Form No. PRO/05/0[illegible]

B12

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-3A* | DATE *from 11-09-96 To 17-09-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *2 of 6*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837381.34*	*T2-101*
MACHINE No. *BR.21*	N *815300.08*	HOLE DIA. *Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+8.65MPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
11-09-96								N=16		-1.35	10.00				
											10.45		V		As sheet 1 of 6
										-2.85	11.50				
		1.80m at 18:00		60									IV		Weak, yellowish brown, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
		3.30m at 06:00						N=200/0.07m		-3.92	12.67				
				50	50	34	8.7	T2-101		-4.55	13.20		III		Moderately strong to strong, yellowish brown to pinkish brown, moderately decomposed coarse-grained GRANITE with very closely spaced iron-stained manganese-coated rough planar joints dipping 10°. (M.D.G.)
12-09-96	Hx		60	90				N=18			14.00				
											15.00		V		Extremely weak, pinkish brown, completely decomposed coarse-grained GRANITE. (Medium dense to very dense, very gravelly, clayey, silty fine to coarse SAND) (C.D.G.)
				100				N=62			15.45				
											16.50				
											17.50				
											17.95				
				0						-10.35	19.00				
											20.00		IV		As sheet 3 of 6

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
A Piezometer is installed at 18m. (-9.35MPD)

Form No. PRO/05/03

D-6

B13

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

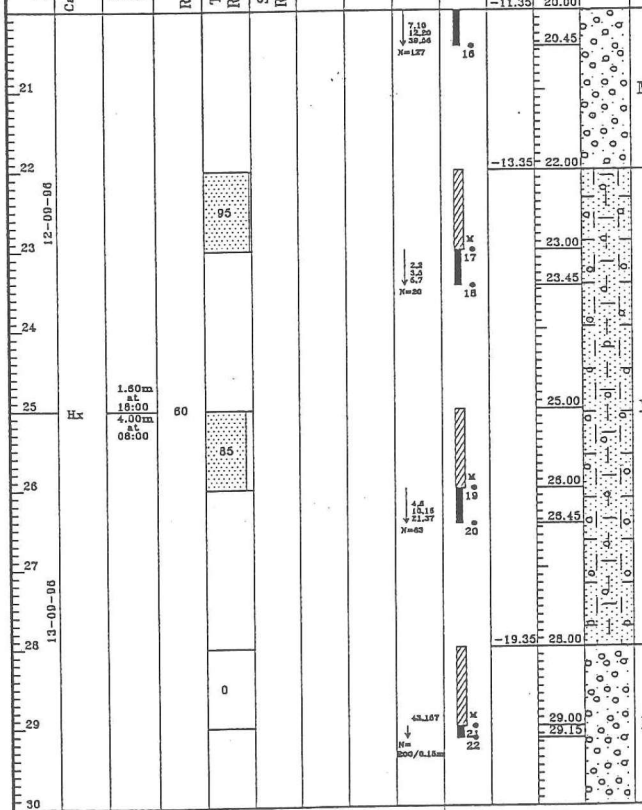
JOB No. | CONTRACT No.

HOLE No. *BH-3A* | DATE *from 11-09-96 To 17-09-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1*

SHEET *3 of 6*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837381.34*	*T2-101*
MACHINE No. *BR.21*	N *815300.08*	HOLE DIA. *Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+8.65MPD*



Description

Extremely weak to weak, yellowish brown, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)

Extremely weak, pinkish brown to yellowish brown, completely decomposed coarse-grained GRANTIE. (Medium dense to very dense, very gravelly clayey silty fine to coarse SAND) (C.D.G.)

Extremely weak to weak, pinkish brown to yellowish brown highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

REMARKS :
A Piezometer is installed at 18m. (-9.35MPD)

Form No. PRO/05/03

B14

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

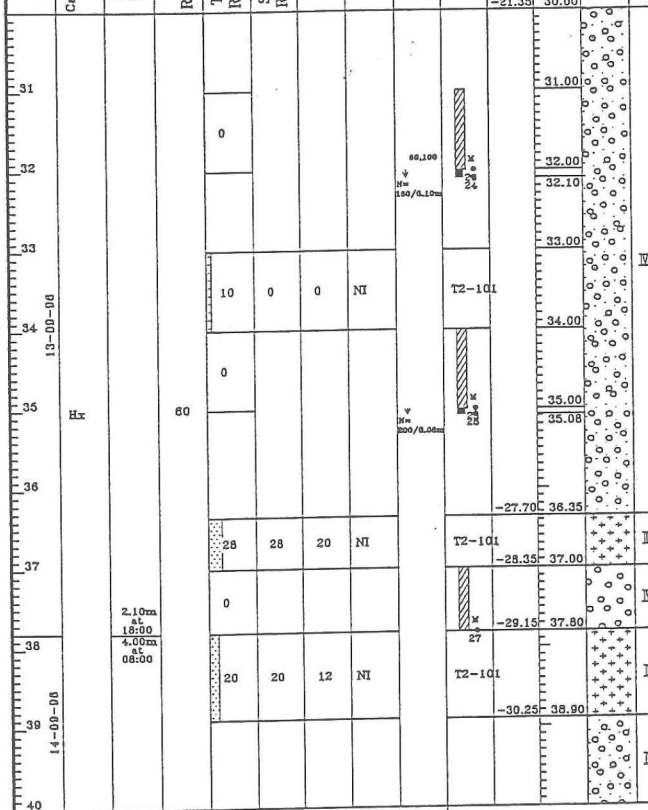
JOB No. | CONTRACT No.

HOLE No. *BH-3A* | DATE *from 11-09-96 To 17-09-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1*

SHEET *4 of 6*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837381.34*	*T2-101*
MACHINE No. *BR.21*	N *815300.08*	HOLE DIA. *Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+8.65MPD*



Description

As sheet 3 of 6

As sheet 5 of 6

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

REMARKS :
A Piezometer is installed at 18m. (-9.35MPD)

Form No. PRO/05/03

D-7

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-3A* | DATE *from 11-09-96 To 17-09-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *5 of 6*

METHOD *Rotary Drill* | CO-ORDINATES E *837381.34* N *815300.08* | ROCK COREBIT *T2-101* | HOLE DIA. *Hx*

MACHINE No. *BR.21*

FLUSHING MEDIUM *Water* | ORIENTATION *Vertical* | GROUND-LEVEL *+8.65MPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
				0				N= 200/0.00m		-31.35	40.00				
41											41.00		IV		Moderately weak to moderately strong yellowish brown to pinkish brown, moderately decomposed, coarse-grained GRANITE with very closely spaced, iron-stained, rough planar joints dipping 10° and 30°. Highly decomposed zones at 37-37.8m and 38.9-42m. (M.D.G. with H.D.G. zones)
											41.08				
42				13	0	0	NI		T2-101	-33.35	42.00		II		
										-33.95	42.50				
43											43.00				
				0											
44	14-09-96	Hx						N= 200/0.15m			44.00		IV		Weak to moderately weak pinkish brown, highly decomposed coarse grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
											44.15				
45			60												
46											46.00				
				0											
47								N= 200/0.03m		-38.38	47.03				
		1.55m at 18:00									47.50		III		Moderately weak to moderately strong pinkish brown moderately decomposed coarse grained GRANITE. (Very dense, sandy GRAVELS) (M.D.G.)
				100	0	0	NI			-39.21	47.86				
48	16-09-96	2.90m at 08:00													
		2.10m at 18:00		99	99	0	>10		T2-101		48.96		II		As sheet 6 of 6
49	17-09-96	3.05m at 08:00													
				100	100	49	>10								
50															

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
A Piezometer is installed at 18m. (-9.35MPD)

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-3A* | DATE *from 11-09-96 To 17-09-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *6 of 6*

METHOD *Rotary Drill* | CO-ORDINATES E *837381.34* N *815300.08* | ROCK COREBIT *T2-101* | HOLE DIA. *Hx*

MACHINE No. *BR.21*

FLUSHING MEDIUM *Water* | ORIENTATION *Vertical* | GROUND-LEVEL *+8.65MPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
										-41.35	50.00				
51	17-09-96			100	100	49	>10			-41.65	50.30		II		
				100	100	75	7.6		T2-101		50.40		III		Moderately strong to strong, pinkish brown, moderately to slightly decomposed coarse-granind GRANITE with closely to very closely spaced, iron-stained, rough planar joints dipping 10°, 30°, 45° & 80°. (M/S.D.G.)
52		2.80m at 18:00	60								51.90				
				100	100	80	8			-44.25	52.90				
53															DRILLHOLE COMPLETED
54															
55															
56															
57															
58															
59															
60															

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
A Piezometer is installed at 18m. (-9.35MPD)

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-4* | DATE *from 23-08-96 To 29-08-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *1 of 5*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837358.97*	*T2-101*
MACHINE No. *DR.21*	N *815322.57*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+11.24mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
23-08-96	Inspection Pit	2.00m at 18:00	60	100				N=9	1 2	11.24	0.00				Loose, reddish brown very gravelly, clayey, silty, fine to coarse SAND. (FILL)
	Px			0					3	7.24	4.00		V		Extremly weak, yellowish brown to pinkish brown, completely decomposed coarse-grained GRANITE. (Loose silty SAND with slightly decomposed pegmatite dyke at 5.0-6.5m) (C.D.G.)
				10						6.24	5.00				
				30					T2-101		4.50		II		
	Hx			100				N=5	4 5	4.74	6.50		V		Extremly weak, reddish brown, completely decomposed coarse-grained GRANITE. (Loose to medium dense very gravelly, clayey, silty, fine to coarse SAND). (C.D.G.)
				100					6		7.50 7.95 9.00 10.00				

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
A Standpipe piezometer is installed at 18m. (-6.28mPD) observation well is installed at 10m. (-1.72mPD)

Form No. PRO/05/03

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-4* | DATE *from 23-08-96 To 29-08-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *2 of 5*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837358.97*	*T2-101*
MACHINE No. *DR.21*	N *815322.57*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+11.24mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
24-08-96	Hx	3.10m at 06:00	60	98	98	100	0	N=16	7	1.24	10.00		V		As sheet 1 of 5
										0.62	10.45 10.62				
				100	100	100	1.2	T2-101 TNW		-1.15	11.55 12.39		II		Strong to very strong, greyish pink, slightly decomposed coarse-grained GRANITE with very widely spaced iron-stained joints dipping at 10°. (S.D.G.)
		2.50m at 18:00 4.85m at 06:00						N=23		-1.76	13.00		IV		Very weak, yellowish brown, inequigrnular, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS). (H.D.G.)
25-08-96				100				N=34	8 10		14.00 14.45 15.50 16.50 16.95 18.00 19.00 19.45		V		Extremely weak, pinkish brown, completely decomposed coarse-grained GRANITE. (Medium dense to dense, gravelly, slightly clayey, silty fine to coarse SAND.) (C.D.G.)
				100				N=28	12 13						

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
A Standpipe piezometer is installed at 18m. (-6.28mPD) observation well is installed at 10m. (-1.72mPD)

Form No. PRO/05/03

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.

HOLE No. *BH-4* | DATE *from 23-08-96 To 29-08-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1*

SHEET *3 of 5*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837358.97*	*T2-101*
MACHINE No. *DR.21*	N *815322.57*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+11.24mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
28-08-96	Hx		60	100 / 100 / 40				3.5 5.5 15.15 N=41; 3.4 9.19 14.20 N=50; 4.1 9.11 21.30 N=70	M 14 / 15; M 16 / 17; M 10 / 19	-8.76; -15.76	20.00; 21.00; 22.00; 22.45; 24.00; 25.00; 25.45; 27.00; 28.00; 28.45		V; V/VI		As sheet 2 of 5 Extremely weak to very weak yellowish brown, completely to highly decomposed coarse-grained GRANITE. (Very dense, very gravelly, silty, fine to coarse SAND.) (C/H.D.G.)

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

REMARKS :

A Standpipe piezometer is installed at 18m. (-6.28mPD) observation well is installed at 10m. (-1.72mPD)

Form No. PRO/05/03

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.

HOLE No. *BH-4* | DATE *from 23-08-96 To 29-08-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1*

SHEET *4 of 5*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837358.97*	*T2-101*
MACHINE No. *DR.21*	N *815322.57*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+11.24mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
26-08-96		3.90m at 18:00		0				7.10 13.31 64.57 N=186	M 20 / 21		30.00; 31.00; 31.45		V/VI		As sheet 3 of 5
27-08-96	Hx	5.20m at 08:00	60	0				53.143 N=231/0.15m	M 22 / 23	-18.76; -21.76	33.00; 34.00; 34.15		VI		Very weak, yellowish brown, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
				0							36.00; 37.00; 37.50; 38.00				
		4.10m at 18:00		63	0	0	NI	61.139 N=200/0.50m	M 24 / 25		39.00				
28-08-96		5.50m at 08:00		0					T2-101 / M 26		40.00				

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

REMARKS :

A Standpipe piezometer is installed at 18m. (-6.28mPD) observation well is installed at 10m. (-1.72mPD)

Form No. PRO/05/03

D-10

B21

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-4* | DATE *from 23-08-96 To 29-08-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *5 of 5*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837358.97*	*T2-101*
MACHINE No. *DR.21*	N *815322.57*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+11.24mPD*

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
								Nm 200/0.07m	27	-28.76	40.00 / 40.07				
41	Hx												IV		As sheet 4 of 5
42				0					M 28	-31.16	42.00 / 42.40				
43	29-08-96		60	90	80	33	>10				43.77				Moderately strong to strong, yellowish pink to greyish pink, moderately to slightly decomposed coarse-grained GRANITE with closely to medium spaced iron-stained, rough planar joints dipping at 10°, 45°, 65°. (M/S.D.G.)
44				91	91	66	6		T2-101				III/II		
45											45.30				
46				95	95	67	8.1				46.41				
47				95	95	62	7			-36.16	47.40				
48															— DRILLHOLE COMPLETED —
49															
50															

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
A Standpipe piezometer is installed at 18m. (-6.28mPD) observation well is installed at 10m. (-1.72mPD)

B22

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-5* | DATE *from 29-8-96 to 3-9-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *1 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary	E *837433.95*	*T2-101*
MACHINE No. *DR-17*	N *815208.02*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+21.41MPD*

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Totol core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
										21.41	0.00				
										21.31	0.10				Loose, grey, fine to coarse SAND. (FILL)
1	29-08-96										1.50				
2				80					M 1 2		2.50				
3		NIL at 16:00 5.91m at 08:00						3.5 4.3 3.4 N=14			2.95				
4											4.00				
5	Px		60	100				6.3 7.7 9.12 N=36	M 3 4		5.00		V		Extremely weak, pinkish brown, completely decomposed, coarse-grained GRANITE (Medium dense to dense, gravelly, clayey, silty fine to coarse SAND) (C.D.G.)
6	31-08-96										5.45				
7				100				5.8 8.9 14.14 N=45	M 5 6		6.50				
8											7.50				
9										12.41	7.95 / 9.00				
10				100					M 7		10.00		V		As sheet 2 of 4

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
Piezometer is installed at 16.0m. (+5.41MPD)

D-11

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-5* | DATE *from 29-8-96 to 3-9-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *2 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary	E *837433.95*	*T2-101*
MACHINE No. *DR-17*	N *815208.02*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+21.41MPD*

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
31-08-96	Px		60	100				8,10 12,14 14,19 N=42	8	11.41	10.00		V		Extremely weak, yellowish brown, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, clayey, silty fine to coarse SAND) (C.D.G.)
								7,11 18,20 24,25 N=84	9 10	7.41	10.45 11.50 12.50 12.95 14.00				
	Hx			100				8,10 14,19 20,27 N=86	11 12		15.00 15.45 16.50 17.50 17.95 19.00		V		Extremely weak, pinkish brown to yellowish brown, completely to highly decomposed coarse-grained GRANITE. (Very dense, very gravelly, clayey silty fine to coarse SAND) (C.D.G.)
				75				9,13 18,20 20,27 N=90	13 14						
				95					15		20.00				

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
Piezometer is installed at 16.0m. (+5.41MPD)

Form No. PRO/CE/...

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-5* | DATE *from 29-8-96 to 3-9-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *3 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary	E *837433.95*	*T2-101*
MACHINE No. *DR-17*	N *815208.02*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+21.41MPD*

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
31-08-96	Hx	7.63m at 16:00	60					15,14 18,24 24,28 N=86	16	1.41	20.00 20.45 20.75		V		As sheet 2 of 4
		14.00m at 08:00		100	100	76	6		T2-101	0.66	21.25		III		Moderately strong, yellowish brown to yellowish grey, moderately decomposed coarse-grained GRANITE with very closely spaced, iron-stained, rough planar joints dipping 10°,30°and 60°. Highly decomposed coarse-grained GRANITE zones are found at 21.25-21.7m, 22.2-23.05m,24.4-24.8m, 25.95-26.52m and 27.47-27.95m. (M.D.G.)
				0						0.16	21.70		IV		
				94	74	0	NI		T2-101	-0.29	22.20		III		
				0						-0.79	23.05		IV		
				100	80	42	NI		T2-101	-1.64	24.40		III		
				0						-2.99	24.80		IV		
02-09-96				90	90	47	8			-3.39	25.95		III		
		8.00m at 16:00		60	10	0	NI	V N= 200/0.05m		-4.54	26.10 26.15 26.52		IV		
		14.00m at 08:00		100	100	100	1.7			-5.11	27.20		III		
				100	100	97	1.1	V N= 200/0.03m		-6.06	27.47 27.50		IV		
03-09-96				100	100	80	4.5		T2-101	-6.54	27.95 28.90		II		As sheet 4 of 4
				100	98	70	>10		T2-101						

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

REMARKS :
Piezometer is installed at 16.0m. (+5.41MPD)

Form No. PRO/CE/...

D-12

B25

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.

HOLE No. *BH-5* | DATE *from 29-8-96 to 3-9-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *4 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary	E *837433.95*	*T2-101*
MACHINE No. *DR-17*	N *815208.02*	HOLE DIA. *Px Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+21.41MPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
										-8.59	30.00				
03-09-96		9.20m at 16:00	60	100	98	70	>10		T2-101		30.40		II		Strong to very strong, greyish pink, slightly decomposed coarse-grained GRANITE with very closely (28.9-30.82m), moderately(27.95-28.9m, 31.89-24.82m) and widely (30.82-31.89m) spaced, iron-stained, rough planar joints dipping 10° and 30°. (S.D.G.)
				100	100	85	7		T2-101		30.82				
				100	100	100	0		T2-101		31.89				
				100	100	99	3.3		T2-101		33.37				
				100	100	99	3.3		T2-101	-13.41	34.82				
															DRILLHOLE COMPLETED

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :

Piezometer is installed at 16.0m. (+5.41MPD)

B26

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.

HOLE No. *BH-6* | DATE *from 05-09-96 To 11-09-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *1 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837397.85*	*T2-101*
MACHINE No. *DR.17*	N *815242.68*	HOLE DIA. *Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+21.50mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
										21.50	0.00				
05-09-96										21.40	0.10		V		Loose, grey, fine to coarse SAND. (FILL)
				100							1.50				Extremely weak, yellowish brown, completely decomposed coarse-grained GRANITE. (Very dense, gravelly, slightly clayey, silty, fine to coarse SAND) (C.D.G)
											2.50				
											2.95				
		NIL at 16:00								17.50	4.00		IV		Weak to moderately strong, yellowish pink, moderately to highly decomposed coarse-grained GRANITE with very closely spaced, iron-stained rough planar joints joints dipping 10° and dipping 10° and 70°. (M.D.G. to H.D.G.)
		NIL at 06:00		0							4.20				
										16.70	4.80				
06-09-96	Hx		60	100	100	0	>10			16.35	5.15		III		
				88	52	52	5.1		T2-101	15.40	6.10		III		
										14.95	6.55		V		Extremely weak, yellowish brown, completely to highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS.) (C.D.G. to H.D.G.)
				95							7.55		IV		
		NIL at 16:00								13.35	7.78				
		NIL at 06:00									8.15				
07-09-96				97	96	91	2.5		T2-101	12.15	9.35		II		Very strong, yellowish brown to greyish pink, slightly decomposed coarse-grained GRANITE with widely spaced iron-stained, managanese coated rough planar joints dipping 10° & 30°. (S.D.G.)
											9.50				
				100									V		As sheet 2 of 4

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :

One falling head Permeability test is done at 6.5m to 7.5m.

D-13

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-6* | DATE *from 05-09-96 To 11-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *2 of 4*

METHOD *Rotary Drill* | CO-ORDINATES E *837397.85* | ROCK COREBIT *T2-101*

MACHINE No. *DR.17* | CO-ORDINATES N *815242.68* | HOLE DIA. *Hx*

FLUSHING MEDIUM *Water* | ORIENTATION *Vertical* | GROUND-LEVEL *+21.50mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
07-09-96 11	Hx		60	100				N=200/0.27m	K 7 8	11.50 10.40	10.00 10.50 10.77 11.10		V		Extremely weak, pinkish brown, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, slightly clayey, silty, fine to coarse SAND) (C.D.G.)
12		NIL at 18:00 NIL at 06:00		100	100	24	10	T2-101		9.70	11.80		III		
13				100				N=87	K 9 10		12.00 13.00 13.45		IV/V		Weak to moderately strong, yellowish brown, moderately (11.1–11.8m) to completely to highly (11.8–14.5m) decomposed coarse-grained GRANITE. (M.D.G. to C/H.D.G.)
09-09-96 14										7.00	14.50				
15				100					K 11 12		15.50 15.95		V		Extremely weak, yellowish to pinkish brown, completely decomposed coarse-grained GRANITE. (C.D.G.) (Very dense, very gravelly, slightly clayey silty, fine to coarse SAND)
16								N=119			17.00				
17				100					K 13 14	3.50	18.00				
18											18.45		IV/V		As sheet 3 of 4
19											19.50				
20				80					K 15		20.00				

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
One falling head Permeability test is done at 6.5m to 7.5m.

B27

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-6* | DATE *from 05-09-96 To 11-09-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *3 of 4*

METHOD *Rotary Drill* | CO-ORDINATES E *837397.85* | ROCK COREBIT *T2-101*

MACHINE No. *DR.17* | CO-ORDINATES N *815242.68* | HOLE DIA. *Hx*

FLUSHING MEDIUM *Water* | ORIENTATION *Vertical* | GROUND-LEVEL *+21.50mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
										1.50	20.00				
09-09-96 21	Hx	12.30m at 16:00 14.80m at 06:00	60	95	85	85	4.4	N=200/0.07m	T2-101	1.43 0.90	20.07 20.20 20.60		III/II		Extremely weak, yellowish brown to pinkish brown, highly to completely decomposed coarse grained GARNITE. (H.D.G.–C.D.G.) (Very dense, snady gravels.)
22				70					K 8 9		22.50 23.50		IV		Strong to very strong, yellowish brown to greyish pink, moderately to slightly decomposed coarse-grained GRANITE with moderately spaced iron-stained rough planar joints dipping 10°. (M.D.G. to S.D.G.)
23										-2.50	23.60 24.00				
24				93	68	56	>10		T2-101	-2.80	24.30		II		
25											25.50		IV		Extremely weak to weak, yellowish brown, highly (20.6–24m) to moderately(24–24.3m) decomposed coarse-grained GRANITE. (H.D.G. to M.D.G.)
10-09-96 26				80					K 10 11	-5.00	26.50				
								N=200/0.10m		-5.40	26.70 26.90		V		Extremely weak to weak, yellowish pink, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
27				90	48	8	>10						III		
28										-6.80	28.30				Extremely weak, yellowish pink, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, clayey, silty fine to coarse SAND) (C.D.G.)
29				33	0	0	NI		T2-101				III/IV		
30				0					K 20 21		29.80 30.00				As sheet 4 of 4

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
One falling head Permeability test is done at 6.5m to 7.5m.

D-14

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-6* | DATE *from 05-09-96 To 11-09-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *4 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary Drill	E *837397.85*	*T2-101*
MACHINE No. *DR.17*	N *815242.68*	HOLE DIA. *Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+21.50mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
10-09-96	Hx	10.80m at 16:00	60	100	100	100	1	N=200/0.05m	22	-8.50	30.00				Weak, moderately strong to strong, moderately to highly decomposed coarse-grained GRANITE with very closely spaced, iron-stained, manganese coated rough planar joints dipping 10°,30° and 60°. (M.D.G. to H.D.G.)
		14.07m at 08:00		100	100	87	4			-9.69	31.19		II		
				100	100	99	2.3		T2-101		32.23				
11-09-96				100	100	90	5				32.70		II/I		Very strong, greyish pink to pink, slightly decomposed to fresh coarse-grained GRANITE with widely to moderately spaced iron-stained rough planar joints dipping 10° & 30°. (S.D.G. to F.G.)
		10.93m at 16:00		100	100	96	1.7				33.58				
											34.94				
										-14.77	36.27				DRILLHOLE COMPLETED

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTRUBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
One falling head Permeability test is done at 6.5m to 7.5m.

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-7* | DATE *from 12-9-96 to 18-9-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *1 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary	E *837370.95*	*T2-101*
MACHINE No. *DR-17*	N *815268.37*	HOLE DIA. *Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+21.50mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
12-09-96	Hx	2.70m at 16:00	60	95				N=17	1 2	21.50	0.00		V		Loose, grey, fine to coarse SAND. (FILL)
		3.90m at 08:00								21.40	0.10				
											1.50				
				95							2.50				
											2.95				Extremely weak, yellowish brown to pinkish brown, completely decomposed coarse-grained GRANITE. (Medium dense to very dense, gravelly, clayey silty, fine to coarse SAND.) (C.D.G.)
									3 4		4.00				
				95							5.00				
											5.45				
											6.50				
				95					5 6		7.00				
13-09-96								N=200/0.30m			7.30				
										13.30	8.20				
				100	100	50	10		T2-101		8.50		I/II		As sheet 2 of 4
				100	100	100	0		T2-101		9.43				
				100	100	100	0		T2-101						

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTRUBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
Piezometer is installed at 21m. (+0.28MPD)
One falling head permeability test done at 16m to 17m.

D-15

B3.1

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-7* | DATE *from 12-9-96 to 18-9-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *2 of 4*

METHOD *Rotary* | CO-ORDINATES E *837370.95* N *815268.37* | ROCK COREBIT *T2-101* | HOLE DIA. *Hx*

MACHINE No. *DR-17*

FLUSHING MEDIUM *Water* | ORIENTATION *Vertical* | GROUND-LEVEL *+21.50mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
13-09-96				100	100	100	0		T2-101	11.50	10.00		I~II		
		3.07m at 16:00		100	100	90	4		T2-101	10.67	10.25				
11		5.71m at 08:00									10.83				
				95				7.11 15.19 21.26 N=66	M e 8		11.00				
12											12.00				
14-09-96											12.45				
13											13.50				
		6.94m at 16:00		90				9.14 19.28 27.31 N=100	M e 10		14.50		V		Extremely weak, pinkish brown, completely decomposed coarse-grained GRANITE. (Very dense, gravelly, clayey, silty fine to coarse SAND) (C.D.G.)
14											14.95				
15	Hx	10.00m at 08:00	60								16.00				
				95					M e 11		17.00				
16								9.14 19.31 29.48 N=86			17.45				
17-09-96									e 12						
17										3.00	18.50		V~VI		As sheet 2 of 4
				95					M e 13		19.50				
18											19.95				
19								14.19 29.31 38.48 N=140	e 14						
20															

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
Piezometer is installed at 21m. (+0.28MPD)
One falling head permeability test done at 16m to 17m.

B3.2

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.
HOLE No. *BH-7* | DATE *from 12-9-96 to 18-9-96*

PROJECT *Re-development of South China Athletic Association – PHASE 1* | SHEET *3 of 4*

METHOD *Rotary* | CO-ORDINATES E *837370.95* N *815268.37* | ROCK COREBIT *T2-101* | HOLE DIA. *Hx*

MACHINE No. *DR-17*

FLUSHING MEDIUM *Water* | ORIENTATION *Vertical* | GROUND-LEVEL *+21.50mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
										1.50	20.00		V~VI		As sheet 2 of 4
21										0.50	21.00				
				100					M e 15	-0.42	21.80 21.92		IV		Extremely weak to weak, pinkish brown, highly decomposed coarse-grained GRANITE. (Very dense, sandy GRAVELS) (H.D.G.)
22				100	100	95	3.5	143.67 N= 200/0.12m	T2-101	-1.28	22.78		II		
23															Very strong, yellowish pink to yellowish brown, slightly decomposed coarse-grained GRANITE with moderately spaced, iron-stained, manganese coated, rough planar joints dipping 10° and 30°. (S.D.G.)
											24.00				
24	Hx														
17-09-96				80					M e 17		25.00		V		
25			60								25.45				Extremely weak, yellowish brown, completely decomposed coarse-grained GRANITE. (Very dense, very gravelly, clayey, silty fine to coarse SAND) (C.D.G.)
26								9.15 16.19 25.32 N=89	e 18	-5.35	26.85				
27															Weak to moderately strong, yellowish brown, moderately to highly decomposed coarse-grained GRANITE with very closely spaced, iron-stained rough planar joints dipping 10°,30°and 45°. (M.D.G. to H.D.G.)
				50	35	16	NI		T2-101		26.20		III~IV		
28		6.70m at 16:00							M e 19		26.25				
		14.30m at 08:00						V N= 200/0.05m		-7.28	28.78				
29				85	83	62	8		T2-101				III~II		
18-09-96															As sheet 4 of 4
30															

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee
CHECKED : P.S.Nau

Form No. PRO/05/03

REMARKS :
Piezometer is installed at 21m. (+0.28MPD)
One falling head permeability test done at 16m to 17m.

D-16

GOLD RAM ENGINEERING & DEVELOPMENT LTD.

DRILLHOLE RECORD

JOB No. | CONTRACT No.

HOLE No. *BH-7* | DATE *from 12-9-96 to 18-9-96*

PROJECT *Re-development of South China Athletic Association - PHASE 1* | SHEET *4 of 4*

METHOD	CO-ORDINATES	ROCK COREBIT
Rotary	E *837370.95*	*T2-101*
MACHINE No. *DR-17*	N *815268.37*	HOLE DIA. *Hx*
FLUSHING MEDIUM *Water*	ORIENTATION *Vertical*	GROUND-LEVEL *+21.50mPD*

Drilling Progress	Casing depth/ size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index/m	Tests	Samples	Reduced level	Depth (m)	Legend	Grade	Zone	Description
				85	83	62	8		T2-101	-8.50	30.00				
31				52	48	26	>10		T2-101	-10.37	30.30 31.87		III/II		Moderately strong to very strong, yellowish brown to pinkish grey, moderately to slightly decomposed coarse-grained GRANITE with very closely spaced, iron-stained, rough planar joints dipping 10°, 30° and 45°. (M.D.G. to S.D.G.)
32				100	100	82	5		T2-101		32.24				
33	18-09-96			100	100	98	1		T2-101		33.29				
34			80	100	100	100	0		T2-101		33.97		I/II		Very strong, pinkish grey to yellowish brown, fresh (33.29-36.02m) to slightly (31.87-33.29m and 36.02-37.06m) decomposed coarse-grained GRANITE with widely to moderately spaced, occassionally iron-stained, rough planar joints dipping 10°,30°,45° and 60°. (F.G. to S.D.G.)
35				100	100	92	2.8		T2-101		35.52				
36				100	100	90	0		T2-101		36.02				
37		11.60m at 16:00		100	100	41	7		T2-101	-15.56	37.06				
															DRILLHOLE COMPLETED
38															
39															
40															

- SMALL DISTURBED SAMPLE
- BULK DISTURBED SAMPLE
- S.P.T. LINER SAMPLE
- U100 UNDISTURBED SAMPLE
- U76 UNDISTURBED SAMPLE
- U70 UNDISTURBED SAMPLE
- MAZIER SAMPLE
- WATER SAMPLE
- WATER LEVEL
- STANDARD PENETRATION TEST
- PISTON SAMPLE
- PERMEABILITY TEST

LOGGED : C.M.Yee

CHECKED : P.S.Nau

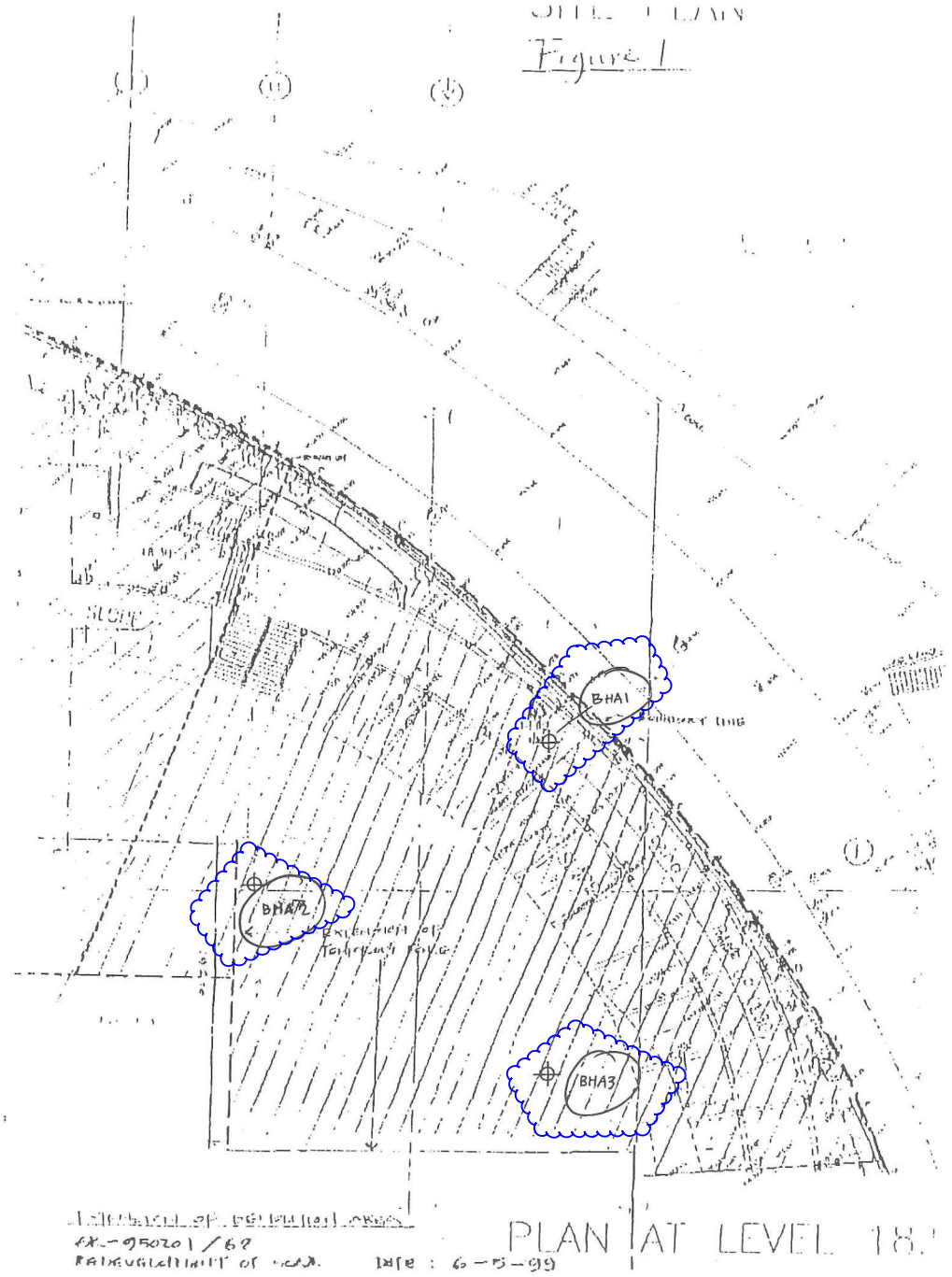
Form No. PRO/05/03

REMARKS :

Piezometer is installed at 21m. (+0.28MPD)
One falling head permeability test done at 16m to 17m.

21 MAY '99 11:13 FAX 25045237 P.003

Figure 1



PLAN AT LEVEL 18.

Ref : 6-5-99

D-17

PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD.

JOB NO.
HOLE NO. BH A1
SHEET 1 of 2
DATE from 28.05.99 to 03.06.99

DRILL / BORE HOLE LOG

PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)

METHOD ROTARY	CO-ORDINATES E 37,455.977 N 15,200.855	ROCK CORE BIT T2-101
Rig & No. D1		HOLE DIA. HX/T2-101
FLUSHING MEDIUM WATER	ORIENTATION VERTICAL	GROUND-LEVEL +16.00 mP.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
28.5.99	Hx	NA at 08:00	70												Brown, silty fine to coarse SAND with occasional fine to medium gravel. (FILL)
									1	+15.00	1.00				
			70	80					2	+14.00	2.00				
								(2, 3, 2, 3, 2, 3) N = 10	3						
		2.5m at 17:30	70						4	+13.55	2.45				
28.5.99										+13.00	3.00				
29.5.99		Dry at 08:00							5						
			70	80					6	+12.00	4.00				
								(3, 4, 3, 4, 5, 5) N = 17	7						
			70						8	+11.55	4.45				Extremely weak, brown mottled white, completely decomposed medium-grained GRANITE. (Fine to coarse sandy SILT)
										+11.00	5.00				
			70	100					9						
									10	+10.00	6.00				
			70					(3, 5, 4, 5, 6, 8) N = 23	11						
		6.8m at 17:30							12	+9.55	6.45				
29.5.99										+9.00	7.00				
1.6.99		Dry at 08:00							13				V		
			70	95					14	+8.00	8.00				
								(5, 6, 6, 5, 6, 8) N = 23	15						
			70						16	+7.55	8.45				
				0					17	+7.00	9.00				
										+6.85	9.15				
			70					(200)	18						

GENERAL SOUTHC.GPJ GENERAL.GDT 29/06/99

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (70mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Piezometer Tip
- In-situ Vane Shear Test

LOGGED C. Tai
DATE 9.6.99
CHECKED E. Ho
DATE 10.6.99

REMARKS

One Piezometer installed at depth of 7.15m.
One Standpipe installed at depth of 5.50m.

PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD.

JOB NO.
HOLE NO. BH A1
SHEET 2 of 2
DATE from 28.05.99 to 03.06.99

DRILL / BORE HOLE LOG

PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)

METHOD ROTARY	CO-ORDINATES E 37,455.977 N 15,200.855	ROCK CORE BIT T2-101
Rig & No. D1		HOLE DIA. HX/T2-101
FLUSHING MEDIUM WATER	ORIENTATION VERTICAL	GROUND-LEVEL +16.00 mP.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
	10.65 Hx							N = 200/0.05		+5.35	10.65				
		9.3m at 17:30	80	87	85	77			T2						Strong, pinkish brown, slightly decomposed medium-grained GRANITE. Joints are medium spaced, rough undulatary, very narrow, iron stained, dipping 10°-20°, 20°-30° and 30°-40°.
1.6.99										+4.27	11.73				
2.6.99		11.30m at 08:00	80	97	97	91			T2						
										+3.24	12.76		II		
		8.7m at 17:30	80	97	97	95	3.2		T2						
2.6.99										+2.64	13.36				
3.6.99		11.36m at 08:00	80	96	96	96			T2						
										+1.60	14.40				
										+1.30	14.70				
		9.58m at 17:30	80	91	82	80			T2				II		
3.6.99										+0.30	15.70				HOLE END AT DEPTH OF 15.70m.

GENERAL SOUTHC.GPJ GENERAL.GDT 29/06/99

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (70mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Piezometer Tip
- In-situ Vane Shear Test

LOGGED C. Tai
DATE 9.6.99
CHECKED E. Ho
DATE 10.6.99

REMARKS

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PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD.

JOB NO.
HOLE NO. BH A2
SHEET 1 of 3
DATE from 19.06.99 to 21.06.99

DRILL / BORE HOLE LOG

PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)

METHOD ROTARY	CO-ORDINATES E 37,441.626 N 15,185.795	ROCK CORE BIT T2-101 / TN
Rig & No. D1		HOLE DIA. HX/T2-101/TN
FLUSHING MEDIUM WATER	ORIENTATION VERTICAL	GROUND-LEVEL +21.50 mP.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
19.6.99	Hx	NA at 08:00	70												Extremely weak, orangish brown spotted white, completely decomposed medium grained GRANITE. (Firm, fine to coarse sandy SILT)
			70	90					1	+20.50	1.00				
									2	+19.50	2.00				
			70					(3, 2, 3, 3, 4, 3) N = 13	3						
									4	+19.05	2.45				
			70	75					5	+18.50	3.00				
									6	+17.50	4.00				
			70					(3, 4, 4, 4, 5, 5) N = 18	7						
									8	+17.05	4.45				
			70	100					9	+16.50	5.00		V		
									10	+15.50	6.00				
			70					(4, 5, 5, 6, 8, 9) N = 28	11						
		6.2m at 17:30							12	+15.05	6.45				
19.6.99															
20.6.99		Dry at 08:00	70	80					13	+14.50	7.00				
									14	+13.50	8.00				
			70					(5, 7, 7, 8, 8, 11) N = 34	15						
									16	+13.05	8.45				
			70	60					17	+12.50	9.00				
								(200)	18	+11.50	10.00				

GENERAL SOUTHC.GPJ GENERAL.GDT 27/06/99

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (70mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Piezometer Tip
- In-situ Vane Shear Test

LOGGED C. Tai
DATE 23.6.99
CHECKED E. Ho
DATE 24.6.99

REMARKS

PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD.

JOB NO.
HOLE NO. BH A2
SHEET 2 of 3
DATE from 19.06.99 to 21.06.99

DRILL / BORE HOLE LOG

PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)

METHOD ROTARY	CO-ORDINATES E 37,441.626 N 15,185.795	ROCK CORE BIT T2-101 / TN
Rig & No. D1		HOLE DIA. HX/T2-101/TN
FLUSHING MEDIUM WATER	ORIENTATION VERTICAL	GROUND-LEVEL +21.50 mP.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
			70					N = 200/0.05		+10.90	10.60		IV		Very weak, highly decomposed medium grained GRANITE.
	10.60 Hx														
	Nx		80	95	95	95			T2	+10.10	11.40				Strong, greyish pink spotted black and mottled brown adjacent joints, slightly decomposed medium grained GRANITE. Moderately weak to weak zone from 14.90m to 15.29m. Joints are medium to widely spaced, smooth planar, extremely to very narrow, iron stained, dipping 20°-30° and 40°-50°.
			80	96	96	96			T2						
	12.39 Nx									+9.11	12.39				
			80	97	97	97			TN				II		
										+8.11	13.39				
			80	98	98	98			TN						
										+7.11	14.39				
			80	95	85	56			TN	+6.60	14.90				
										+6.21	15.29		III/ IV		
		13.00m at 17:30	80	92	90	90			TN						
20.6.99							2.8			+5.50	16.00				
22.6.99		Dry at 08:00	80	96	96	88			TN						
										+4.14	17.36				
		11.23m at 17:30	80	96	96	90			TN						
22.6.99										+3.10	18.40		II		
23.6.99		15.10m at 08:00	80	92	92	92			TN						
										+1.75	19.75				
										+1.50	20.00				

GENERAL SOUTHC.GPJ GENERAL.GDT 27/06/99

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (70mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Piezometer Tip
- In-situ Vane Shear Test

LOGGED C. Tai
DATE 23.6.99
CHECKED E. Ho
DATE 24.6.99

REMARKS

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PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD.

JOB NO.
HOLE NO. BH A2
SHEET 3 of 3
DATE from 19.06.99 to 21.06.99

DRILL / BORE HOLE LOG

PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)

METHOD ROTARY	CO-ORDINATES	ROCK CORE BIT T2-101 / TN
Rig & No. D1	E 37,441.626 N 15,185.795	HOLE DIA. HX/T2-101/TN
FLUSHING MEDIUM WATER	ORIENTATION VERTICAL	GROUND-LEVEL +21.50 mP.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
23.6.99		14.23m at 17:30	80	98	98	98			TN	+0.20	21.30				As sheet 2 of 3. HOLE END AT DEPTH OF 21.30m.

GENERAL SOUTHC.GPJ GENERAL.GDT 27/06/99

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (70mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Piezometer Tip
- In-situ Vane Shear Test

LOGGED C. Tai
DATE 23.6.99
CHECKED E. Ho
DATE 24.6.99

REMARKS

B40

PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD.

JOB NO.
HOLE NO. BH A3
SHEET 1 of 2
DATE from 09.06.99 to 10.06.99

DRILL / BORE HOLE LOG

PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)

METHOD ROTARY	CO-ORDINATES	ROCK CORE BIT T2-101 / TN
Rig & No. D1	E 37,448.800 N 15,171.705	HOLE DIA. HX/T2-101/TN
FLUSHING MEDIUM WATER	ORIENTATION VERTICAL	GROUND-LEVEL +21.50 mP.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
9.6.99	Hx	NA at 08:00	70							+20.50	1.00				Extremely weak, orangish brown spotted white, completely decomposed medium grained GRANITE. (Firm, fine to coarse sandy SILT)
			70	100						+19.50	2.00				
			70					(3, 2, 3, 3, 3, 4) N = 13		+19.05	2.45				
										+18.50	3.00				
		2.5m at 17:30	70	100						+17.50	4.00				
9.6.99 10.6.99		Dry at 08:00	70					(4, 5, 5, 6, 8) N = 25		+17.05	4.45				
			70	100						+16.50	5.00			V	
			70					(7, 8, 8, 10, 11, 14) N = 43		+15.50	6.00				
										+15.05	6.45				
			70	100						+14.50	7.00				
			70					(8, 10, 11, 15, 18, 25) N = 69		+13.50	8.00				
										+13.05	8.45				
			70	100						+12.50	9.00				
										+11.50	10.00				

GENERAL SOUTHC.GPJ GENERAL.GDT 29/06/99

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (70mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Piezometer Tip
- In-situ Vane Shear Test

LOGGED C. Tai
DATE 23.6.99
CHECKED E. Ho
DATE 24.6.99

REMARKS
One Standpipe installed at depth of 18.00m.

D-20

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PAUL Y. - ITC CONSTRUCTION & ENGINEERING CO. LTD.

DRILL / BORE HOLE LOG

JOB NO. _____
HOLE NO. BH A3
SHEET 2 of 2
DATE from 09.06.99 to 10.06.99

PROJECT PROPOSED REDEVELOPMENT OF SOUTH CHINA ATHLETIC ASSOCIATION - PHASE I (ADDITIONAL WORK)

METHOD ROTARY	CO-ORDINATES	ROCK CORE BIT T2-101 / TN
Rig & No. D1	E 37,448.800 N 15,171.705	HOLE DIA. HX/T2-101/TN
FLUSHING MEDIUM WATER	ORIENTATION VERTICAL	GROUND-LEVEL +21.50 mP.D.

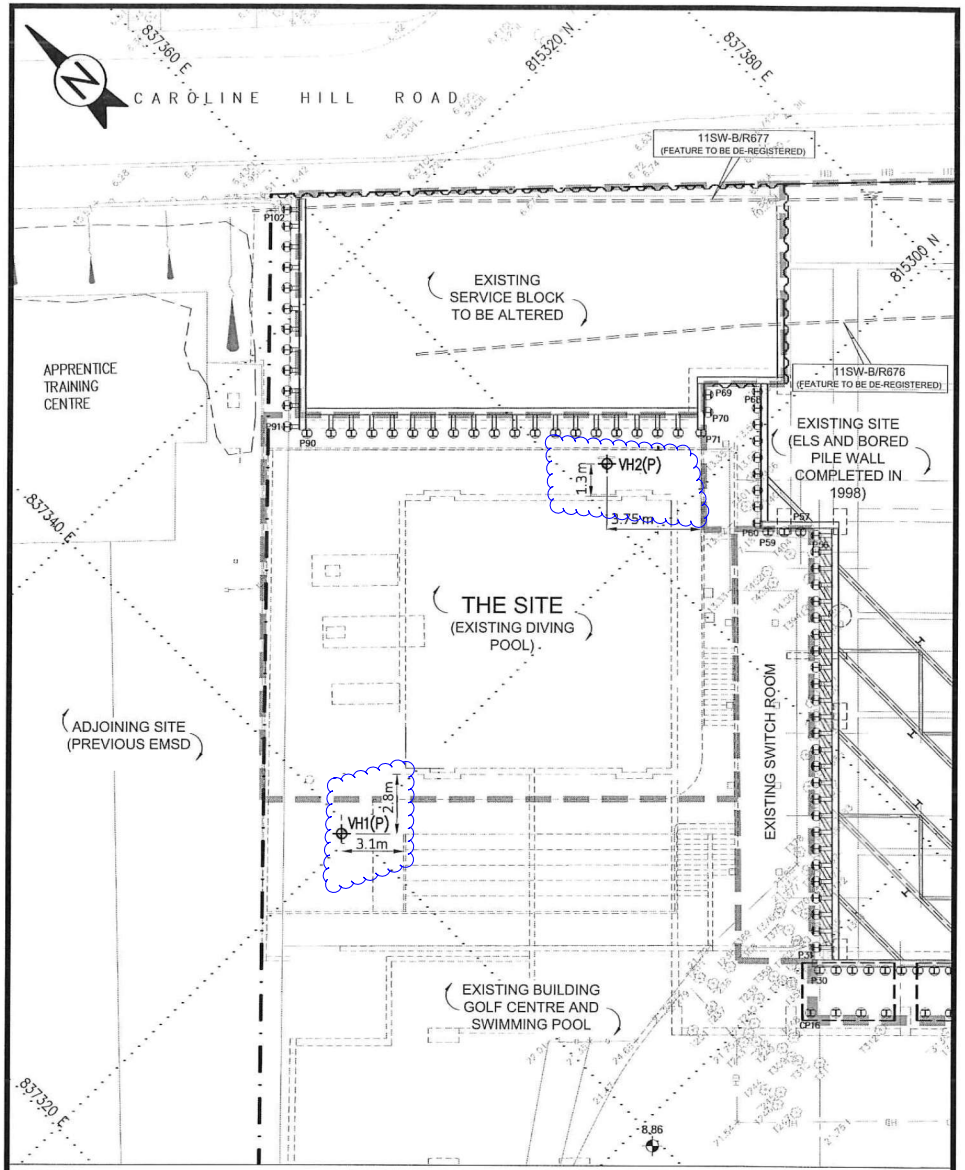
Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
			70					(7, 11, 14, 18, 25, 31) N = 88	19						
									D20	+11.05	10.45				As sheet 1 of 2.
										+10.50	11.00				
			70	0					D21	+10.39	11.89		IV		Very weak, highly decomposed medium grained GRANITE.
			80	95	95	90	2.2		T2				II		Strong, greyish pink spotted black, slightly decomposed medium grained GRANITE. (Boulder , Corestone)
										+9.00	12.50				
			80				NI			+8.50	13.00		IV		Very weak, highly decomposed medium grained GRANITE.
	13.30 Hx			0					D22	+8.30	13.20				
	Nx									+8.20	13.30				
			80	97	97	97			T2						Strong, greyish pink spotted black and mottled brown adjacent joints, slightly decomposed medium grained GRANITE. Joints are medium to widely spaced, smooth planar, extremely to very narrow, iron stained, dipping 20°-30° and 40°-50°.
			80	98	98	98				+7.20	14.30				
	15.72 Nx								T2						
			80	99	99	99	1.7			+5.78	15.72		II		
									TN						
			80	96	96	96				+5.05	16.45				
									TN						
										+3.75	17.75				
10.6.99		15.10m at 17:30	80	97	97	97			TN						
										+2.85	18.65				HOLE END AT DEPTH OF 18.65m.

GENERAL SOUTHC.GPJ GENERAL.GDT 2/9/0899

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (70mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Piezometer Tip
- In-situ Vane Shear Test

LOGGED C. Tai
DATE 23.6.99
CHECKED E. Ho
DATE 24.6.99

REMARKS



LAYOUT PLAN OF BOREHOLE

D-21

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH1
SHEET: 1 OF 7
DATE: 27/4/17 TO 11/5/17

PROJECT: South China Athletic Association – Ground Investigation at Diving Pool

METHOD : ROTARY	CO–ORDINATES E 837339.884 N 815301.306	ROCK COREBIT: T2-120/T2-101
MACHINE & NO.: XY-2B		HOLE DIA.: PX/HX
FLUSHING MEDIUM: WATER	ORIENTATION: VERTICAL	GROUND LEVEL : +16.29 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
27/4	Px								A	•	0.50	+16.29	0.00				Light greyish pink, sandy GRAVEL sized rock fragments. (FILL)
									B	•	1.00						
									C	•	1.50	+14.79	1.50				Firm, yellowish brown, slightly clayey sandy SILT with gravel sized rock fragments. (FILL)
				100					1								
								4,4,5, 7,9,7 N=28	2	•	2.60						
									3	□							
									4	•	3.05						
											3.95	+12.34	3.95				Light greyish brown and pink, subangular COBBLE sized concrete fragments. (FILL)
				83				T2-120			4.55	+11.74	4.55				Medium dense, reddish brown, slightly clayey silty fine to medium SAND. (FILL)
27/4		Dry/ 17:30									5.00						
28/4		Dry/ 08:30		95					5								
									6	•	6.10	+10.19	6.10		V		Extremely weak, reddish brown and pink, completely decomposed coarse grained GRANITE. (Dense, silty fine to coarse SAND.)
								4,4,6, 8,7,10 N=31	7	□							
									8	•	6.55						
											7.00						
				100					9								
									10	•	8.10						
								4,6,8, 11,13,14 N=46	11	□							
									12	•	8.55						
											9.00	+7.29	9.00		V		Extremely weak, light greyish brown and pink, completely decomposed coarse grained GRANITE. (Stiff, clayey sandy SILT with gravel sized rock fragments.)
				100					13								
28/4	Px											+6.29	10.00				

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 11/5/17
CHECKED M. Law
DATE 12/5/17

REMARKS

1. Inspection pit was excavated to 1.50m.
2. Piezometer was installed at 16.20m.

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH1
SHEET: 2 OF 7
DATE: 27/4/17 TO 11/5/17

PROJECT: South China Athletic Association – Ground Investigation at Diving Pool

METHOD : ROTARY	CO–ORDINATES E 837339.884 N 815301.306	ROCK COREBIT: T2-120/T2-101
MACHINE & NO.: XY-2B		HOLE DIA.: PX/HX
FLUSHING MEDIUM: WATER	ORIENTATION: VERTICAL	GROUND LEVEL : +16.29 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
28/4								6,8,12, 12,14,15 N=49	14	•	10.10	+6.29	10.00		V		Extremely weak, reddish brown and pink, completely decomposed coarse grained GRANITE. (Very dense, silty fine to coarse SAND.)
									15	□							
									16	•	10.55						
											11.00						
				100					17								
								6,8,12, 15,17,17 N=61	18	•	12.10						
									19	□							
									20	•	12.55						
28/4		9.50/ 17:00									12.75	+3.54	12.75		II		Strong, greyish pink, spotted with black, slightly decomposed coarse grained GRANITE with very widely to extremely very widely spaced, rough planar, extremely narrow, iron stained joints, dipping at 0°–10°.
4/5		11.05/ 08:30		100	100	100		T2-120			13.44						
				100	100	100	1.7	T2-120			14.80						
				100	100	100		T2-120			15.10	+1.19	15.10		IV		Weak to moderately weak, light greyish brown and pink, mottled with black, highly decomposed coarse grained GRANITE with extremely to very closely spaced, rough undulating and planar, narrow, iron stained joints.
				95	78	42	>20				16.28						
				97	81	67		T2-120			17.49				II		Strong, greyish pink, spotted with black, slightly decomposed coarse grained GRANITE with very widely spaced, rough planar, extremely narrow, iron stained joints, dipping at 0°–10°.
				100	100	100	0.6	T2-120			18.66						No recovery (inferred as completely to highly decomposed GRANITE.)
	19.03 Px			100	100	100		T2-120			19.03	-2.54	18.83		V/IV		Moderately weak to moderately strong, light greyish brown and pink, mottled with black, highly to moderately decomposed coarse grained GRANITE with closely spaced, rough undulating and planar, extremely narrow, iron stained joints, dipping at 0°–10° & 40°–50°.
	Hx			100	100	100	3.8					-2.74	19.03		IV/III		
								T2-120			19.56	-3.27	19.56		V/IV		
4/5	Hx												20				See sheet 3 of 7

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 11/5/17
CHECKED M. Law
DATE 12/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH1
SHEET: 3 OF 7
DATE: 27/4/17 TO 11/5/17

PROJECT: South China Athletic Association – Ground Investigation at Diving Pool

METHOD: ROTARY
MACHINE & NO.: XY-2B
FLUSHING MEDIUM: WATER

CO-ORDINATES
E 837339.884
N 815301.306

ROCK COREBIT: T2-120/T2-101
HOLE DIA.: PX/HX
ORIENTATION: VERTICAL
GROUND LEVEL: +16.29 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
4/5	Hx			0				50/0.03	21		20.05		20		V/IV		Extremely weak to very weak, greyish pink, mottled with black, completely to highly decomposed coarse grained GRANITE. (Very dense, sandy GRAVEL sized rock fragments.)
								200/0.03	22		20.48	-4.19	20.48		III/II		
		10.10/ 17:30		100	100	100				T2-101	21.15						Moderately strong to strong, greyish brown and pink, mottled with black, moderately to slightly decomposed coarse grained GRANITE with widely spaced, rough planar, very narrow to extremely narrow, iron stained joints, dipping at 0°–10°.
4/5																	
5/5		11.10/ 08:30		100	100	100	1.4			T2-101	22.67	-6.38	22.67		IV/III		Moderately weak, greyish brown and pink, spotted with black, highly to moderately decomposed coarse grained GRANITE with extremely to very closely spaced, rough and undulating, moderately narrow to narrow, iron stained joints.
				94	61	0	14.6			T2-101	23.57	-7.28	23.57				Wash boring
							NI										
							>20				25.50	-9.21	25.50		IV/III		Moderately weak to moderately strong, greyish brown and pink, mottled with black, highly to moderately decomposed coarse grained GRANITE with extremely to very closely spaced, rough undulating and planar, narrow, iron stained joints.
				93	60	16	>20			T2-101	26.25	-9.96	26.25				Wash boring
											26.75	-10.46	26.75		II		Strong, greyish pink, mottled with black, slightly decomposed coarse grained GRANITE with medium and widely spaced, rough planar, very narrow to extremely narrow, iron stained joints, dipping at 0°–10°.
				100	100	100				T2-101	27.40						
				100	100	100	2.1			T2-101		-12.18	28.47		III		Moderately strong, greyish brown and pink, mottled with black, moderately decomposed coarse grained GRANITE with closely to medium and medium to widely spaced, rough undulating and planar, very narrow to extremely narrow, iron stained joints, dipping at 0°–10°, 20°–30° & 40°–50°.
5/5		9.85/ 17:30															
6/5		11.00/ 08:30		100	95	92	>20			T2-101							
							4.6						30				
	Hx																

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 11/5/17
CHECKED M. Law
DATE 12/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH1
SHEET: 4 OF 7
DATE: 27/4/17 TO 11/5/17

PROJECT: South China Athletic Association – Ground Investigation at Diving Pool

METHOD: ROTARY
MACHINE & NO.: XY-2B
FLUSHING MEDIUM: WATER

CO-ORDINATES
E 837339.884
N 815301.306

ROCK COREBIT: T2-120/T2-101
HOLE DIA.: PX/HX
ORIENTATION: VERTICAL
GROUND LEVEL: +16.29 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
6/5	Hx			100	82	82	4.6			T2-101	30.03	-13.74	30.03		III		As sheet 3 of 7
							NI				30.20	-13.91	30.20		IV/III		Moderately weak to moderately strong, greyish brown and pink, spotted with black, highly to moderately decomposed coarse grained GRANITE with extremely to very closely spaced, rough undulating and planar, narrow, iron stained joints.
				100	100	100	0			T2-101	30.50	-14.21	30.50		II		Wash boring
											31.85						Strong, greyish pink, spotted with black, spotted with black, slightly decomposed coarse grained GRANITE with very widely spaced, rough planar, extremely narrow, iron stained joints, dipping at 0°–10°.
				100	100	100	0.7			T2-101	33.33	-17.04	33.33				Wash boring
											33.77	-17.48	33.77		II		Strong, greyish pink, spotted with black and white, slightly decomposed coarse grained GRANITE with widely spaced, rough planar, extremely narrow, iron stained joints, dipping at 0°–10°.
				100	100	100	0.6			T2-101	35.28	-19.11	35.40		IV		From 35.40m to 35.47m, highly decomposed GRANITE.
				98	87	80	NI					-19.18	35.47		II		
							7.3			T2-101	35.88	-19.59	35.88				Wash boring
				100	100	82	6.2			T2-101	36.07	-19.78	36.07		II		Strong, greyish pink, spotted with black and white, slightly decomposed coarse grained GRANITE with closely spaced, rough undulating and planar, very narrow to extremely narrow, iron stained joints, dipping at 0°–10° & 10°–20°.
6/5		9.05/ 17:00									36.73	-20.44	36.73				Wash boring
8/5		11.10/ 08:30		100	90	61	14.3			T2-101	37.28	-20.99	37.28		III		Moderately strong, greyish brown, mottled with black and white, moderately decomposed coarse grained GRANITE with closely spaced, rough undulating and planar, narrow to very narrow, iron stained joints, dipping at 0°–10°, 10°–20° & 40°–50°.
										T2-101	37.77	-21.57	37.77				Wash boring
				100	98	76	4.5			T2-101	38.18	-21.89	38.18		III		Moderately strong, greyish pink, spotted with black and white, moderately decomposed coarse grained GRANITE with closely and medium spaced, rough undulating and planar, narrow to very narrow, iron stained joints, dipping at 0°–10° & 20°–30°.
				100	99	99				T2-101		-22.92	39.21		III/II		
8/5	Hx												40				See sheet 5 of 7

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 11/5/17
CHECKED M. Law
DATE 12/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH1
SHEET: 5 OF 7
DATE: 27/4/17 TO 11/5/17

PROJECT: South China Athletic Association – Ground Investigation at Diving Pool

METHOD: ROTARY
MACHINE & NO.: XY-2B
FLUSHING MEDIUM: WATER

CO-ORDINATES
E 837339.884
N 815301.306

ROCK COREBIT: T2-120/T2-101
HOLE DIA.: PX/HX
ORIENTATION: VERTICAL
GROUND LEVEL: +16.29 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
8/5	Hx			100	99	99	4.5			T2-101	40.72		40		III/II		Moderately strong to strong, greyish brown and pink, spotted with black, moderately to slightly decomposed coarse grained GRANITE with closely to medium and medium to widely spaced, rough planar, very narrow to extremely narrow, iron stained joints, dipping at 0°–10° & 20°–30°.
				100	100	100				T2-101	42.21						
				100	100	100	0.9			T2-101	43.27	-26.98	43.27				
																	Wash boring
				93	73	0	NI			T2-101	44.23	-27.94	44.23		IV/III		Moderately weak to moderately strong, greyish brown and pink, mottled with black, highly to moderately decomposed coarse grained GRANITE with very closely to closely spaced, rough undulating and planar, narrow to very narrow, iron stained joints.
				100	96	83	5.7			T2-101	44.53						
							>20				45.83	-29.54	45.83				Wash boring
							>20				46.46	-30.17	46.46		IV		Moderately strong to strong, greyish brown and pink, spotted with black and white, moderately to slightly decomposed coarse grained GRANITE with closely and medium spaced, rough undulating and planar, very narrow, iron stained joints, dipping at 0°–10° & 10°–20°. From 46.46m to 46.54m, highly decomposed GRANITE.
				100	95	88	3.8			T2-101	47.62	-30.25	46.54		III/II		
				100	97	86				T2-101	49.07						From 49.45m to 49.85m, highly to moderately decomposed GRANITE.
		10.20/ 17:30					>20										
				97	78	47	7.5			T2-101	49.85	-33.16	49.45		IV/III		
							>20					-33.56	49.85				
8/5							15.0						50				
9/5	Hx	10.95/ 08:30															Wash boring

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 11/5/17
CHECKED M. Law
DATE 12/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH1
SHEET: 6 OF 7
DATE: 27/4/17 TO 11/5/17

PROJECT: South China Athletic Association – Ground Investigation at Diving Pool

METHOD: ROTARY
MACHINE & NO.: XY-2B
FLUSHING MEDIUM: WATER

CO-ORDINATES
E 837339.884
N 815301.306

ROCK COREBIT: T2-120/T2-101
HOLE DIA.: PX/HX
ORIENTATION: VERTICAL
GROUND LEVEL: +16.29 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
9/5	Hx												50				Wash boring
	53.28 Hx			80	0	0	NI			T2-101	53.18	-36.89	53.18		IV		Moderately weak, light greyish brown and pink, highly decomposed coarse grained GRANITE with extremely to very closely spaced, undulating and planar, narrow, iron stained joints.
		10.15/ 17:00		100	94	38	11.4				53.28	-36.99	53.28		III		
9/5		11.00/ 08:30								T2-101	54.07						Moderately strong, pinkish brown, spotted with black, moderately decomposed coarse grained GRANITE with closely spaced, rough undulating and planar, narrow to very narrow, iron and occasional chlorite stained joints, dipping at 0°–10°, 10°–20°, 30°–40° & 40°–50°.
10/5				98	98	94	3.3					-38.13	54.42		III/II		
				100	96	91				T2-101	55.36						Moderately strong to strong, greyish brown and pink, mottled with black and white, moderately to slightly decomposed coarse grained GRANITE with closely and medium spaced, rough undulating and planar, very narrow to extremely narrow, iron stained joints, dipping at 0°–10°, 10°–20° & 40°–50°.
							4.2				56.70						
				100	100	100				T2-101	58.09						
		9.85/ 17:30		100	100	100	2.1			T2-101	59.54						
10/5		11.15/ 08:30		100	100	96							60				
11/5																	

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 11/5/17
CHECKED M. Law
DATE 12/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH1
SHEET: 7 OF 7
DATE: 27/4/17 TO 11/5/17

PROJECT: South China Athletic Association – Ground Investigation at Diving Pool

METHOD: ROTARY
MACHINE & NO.: XY-2B
FLUSHING MEDIUM: WATER

CO-ORDINATES
E 837339.884
N 815301.306

ORIENTATION: VERTICAL

ROCK COREBIT: T2-120/T2-101
HOLE DIA.: PX/HX
GROUND LEVEL: +16.29 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
11/5		9.50/ 14:00		100	100	96	2.1			T2-101	60.58	-44.29	60.58		III/II		As sheet 6 of 7
																	End of hole at 60.58m.

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 11/5/17
CHECKED M. Law
DATE 12/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH2
SHEET: 1 OF 6
DATE: 18/5/17 TO 26/5/17

PROJECT: Proposed New South Stand at South China Athletic Association on I.L. No. 9041 at Caroline Hill Road, Hong Kong.

METHOD: ROTARY
MACHINE & NO.: XY-2B
FLUSHING MEDIUM: WATER

CO-ORDINATES
E 837361.738
N 815303.647

ORIENTATION: VERTICAL

ROCK COREBIT: T2-120/T2-101
HOLE DIA.: PX/HX
GROUND LEVEL: +16.32 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
18/5	Px											+16.32	0.00				Greyish brown, angular COBBLE and GRAVEL sized concrete fragments. (FILL)
				0				50/0.02	A		0.50						
								200/0.02	B		1.00						
									C		1.50						
									1		1.70						
									2		1.74						
											1.80	+14.52	1.80				Brownish grey, angular and subangular COBBLE and BOULDER sized rock and concrete fragments. (FILL)
				82						T2-120							
18/5		Dry/ 17:30									2.90						
19/5		Dry/ 08:30															
				86						T2-120		+12.72	3.60				Concrete with occasional rock fragments.
											4.30						
				95						T2-120							
											4.90	+11.42	4.90		V		Extremely weak, reddish brown and pink, completely decomposed coarse grained GRANITE. (Dense, slightly clayey silty fine to medium SAND.)
				100							5.00						
									3								
									4		6.10						
								3,4,7, 8,10,10 N=35	5								
									6		6.55						
											7.00	+9.32	7.00		V		Extremely weak, yellowish brown and pink, completely decomposed coarse grained GRANITE. (Dense to very dense, silty fine to coarse SAND.)
				100					7								
									8		8.10						
								4,4,7, 9,12,13 N=41	9								
									10		8.55						
											9.00						
				100					11								
19/5	10.00 Px	Dry/ 17:00											10				

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 27/5/17
CHECKED M. Law
DATE 29/5/17

REMARKS

1. Inspection pit was excavated to 1.50m.
2. Piezometer was installed at 17.50m.

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH2
SHEET: 2 OF 6
DATE: 18/5/17 TO 26/5/17

PROJECT: Proposed New South Stand at South China Athletic Association on I.L. No. 9041 at Caroline Hill Road, Hong Kong.

METHOD: ROTARY
MACHINE & NO.: XY-2B
FLUSHING MEDIUM: WATER

CO-ORDINATES
E 837361.738
N 815303.647

ROCK COREBIT: T2-120/T2-101
HOLE DIA.: PX/HX
ORIENTATION: VERTICAL
GROUND LEVEL: +16.32 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
20/5	Hx	Dry/ 08:30						5,6,8, 10,13,14 N=45	12	●	10.10		10		V		As sheet 1 of 6
									13	□							
									14	●	10.55						
				90							11.00						
									15	▨							
									16	●							
								5,7,10, 13,15,17 N=55	17	□	12.10						
									18	●	12.55						
											13.00						
				100					19	▨							
									20	●							
								7,10,15, 17,22,25 N=79	21	□	14.10						
									22	●	14.55						
											15.00						
				95					23	▨							
									24	●							
								50/0.04 200/0.04	25	●	16.10 16.18	+0.22	16.10				Extremely weak, yellowish brown and pink, completely decomposed coarse grained GRANITE. (Very dense, sandy GRAVEL sized rock fragments.)
											17.00						
				95					26	▨							
									27	●	18.10						
								50/0.03 200/0.04	28	●	18.17						
20/5		8.50/ 17:30									18.61	-2.29	18.61		IV		Strong, greyish pink, spotted with black and white, slightly decomposed coarse grained GRANITE with widely spaced, rough planar, extremely narrow joints. From 18.61m to 18.68m & 19.42m to 19.47m, highly to moderately decomposed GRANITE.
22/5		10.95/ 08:30		100	100	90	2.3		T2-101			-2.36	18.68		II		
											19.47	-3.10	19.42		IV		
												-3.15	19.47		V/IV		
22/5	Hx												20				See sheet 3 of 6

Small disturbed sample ● | Large disturbed sample ‡ | SPT liner sample □ | U76 undisturbed sample ▮ | U100 undisturbed sample ■ | Mazier sample ▨ | P/S Piston sample
Water sample ▲ | Water table ▽ | Standard penetration test ↓ | Permeability test ⬣ | Piezometer tip ▲ | Standpipe ⏚

LOGGED Poon Leung
DATE 27/5/17
CHECKED M. Law
DATE 29/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH2
SHEET: 3 OF 6
DATE: 18/5/17 TO 26/5/17

PROJECT: Proposed New South Stand at South China Athletic Association on I.L. No. 9041 at Caroline Hill Road, Hong Kong.

METHOD: ROTARY
MACHINE & NO.: XY-2B
FLUSHING MEDIUM: WATER

CO-ORDINATES
E 837361.738
N 815303.647

ROCK COREBIT: T2-120/T2-101
HOLE DIA.: PX/HX
ORIENTATION: VERTICAL
GROUND LEVEL: +16.32 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
22/5	Hx			0				50/0.03 200/0.03	29	▨	20.00		20		V/IV		Extremely weak, yellowish brown and pink, completely to highly decomposed coarse grained GRANITE. (Very dense, sandy GRAVEL sized rock fragments.)
									30	●	20.30 20.36						
									T2-101		22.87	-6.55	22.87		II		Strong, greyish pink, spotted with black and white, slightly decomposed coarse grained GRANITE with widely to very widely spaced, rough planar, extremely narrow joints. From 24.80m to 25.11m, highly to moderately decomposed GRANITE.
				100	100	100	0				24.41						
				93	79	40	12.9		T2-101		25.11	-8.48	24.80		IV/III		
22/5		10.10/ 17:30										-8.79	25.11				Wash boring
23/5		11.10/ 08:30		78	66	42	NI >20		T2-101		25.32 26.15	-9.00 -9.83	25.32 26.15		IV		Weak, light greyish brown and pink, highly decomposed coarse grained GRANITE with extremely to very closely spaced, rough undulating and planar, moderately narrow to narrow, iron stained joints.
																	Wash boring
23/5	Hx												30				

Small disturbed sample ● | Large disturbed sample ‡ | SPT liner sample □ | U76 undisturbed sample ▮ | U100 undisturbed sample ■ | Mazier sample ▨ | P/S Piston sample
Water sample ▲ | Water table ▽ | Standard penetration test ↓ | Permeability test ⬣ | Piezometer tip ▲ | Standpipe ⏚

LOGGED Poon Leung
DATE 27/5/17
CHECKED M. Law
DATE 29/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH2
SHEET: 4 OF 6
DATE: 18/5/17 TO 26/5/17

PROJECT: Proposed New South Stand at South China Athletic Association on I.L. No. 9041 at Caroline Hill Road, Hong Kong.

METHOD : ROTARY	CO-ORDINATES E 837361.738 N 815303.647	ROCK COREBIT: T2-120/T2-101
MACHINE & NO.: XY-2B		HOLE DIA.: PX/HX
FLUSHING MEDIUM: WATER	ORIENTATION: VERTICAL	GROUND LEVEL : +16.32 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
23/5	Hx										30				Wash boirng
23/5	Hx										40				

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 27/5/17
CHECKED M. Law
DATE 29/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH2
SHEET: 5 OF 6
DATE: 18/5/17 TO 26/5/17

PROJECT: Proposed New South Stand at South China Athletic Association on I.L. No. 9041 at Caroline Hill Road, Hong Kong.

METHOD : ROTARY	CO-ORDINATES E 837361.738 N 815303.647	ROCK COREBIT: T2-120/T2-101
MACHINE & NO.: XY-2B		HOLE DIA.: PX/HX
FLUSHING MEDIUM: WATER	ORIENTATION: VERTICAL	GROUND LEVEL : +16.32 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
23/5	Hx										40				Wash boirng
23/5		10.10/ 17:30													
24/5		11.00/ 08:30													
24/5	Hx										50				

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 27/5/17
CHECKED M. Law
DATE 29/5/17

REMARKS

WING SHING CAISSON & FOUNDATION LTD.

DRILLHOLE RECORD

JOB NO.:
HOLE NO.: VH2
SHEET: 6 OF 6
DATE: 18/5/17 TO 26/5/17

PROJECT: Proposed New South Stand at South China Athletic Association on I.L. No. 9041 at Caroline Hill Road, Hong Kong.

METHOD: ROTARY	CO-ORDINATES E 837361.738 N 815303.647	ROCK COREBIT: T2-120/T2-101
MACHINE & NO.: XY-2B		HOLE DIA.: PX/HX
FLUSHING MEDIUM: WATER	ORIENTATION: VERTICAL	GROUND LEVEL: +16.32 mPD.

Drilling Progress	Casing Depth/Size	Water Level/Time	Water Recovery %	Total Core Recovery %	Solid Core Recovery %	R. Q. D.	Fracture Index	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
24/5	50.32 Hx										50.32	-34.00	50.32				Wash boring
				80	28	0	NI		T2-101		50.57	-34.25	50.57		IV		Weak, light greyish brown and pink, highly decomposed coarse grained GRANITE with extremely to very closely spaced, rough undulating and planar, moderately narrow to narrow, iron stained joints.
				100	98	96			T2-101						III		
24/5		10.50/ 17:00									51.90						Moderately strong, light greyish brown and pink, spotted with black, moderately decomposed coarse grained GRANITE with closely and medium spaced, rough undulating and planar, very narrow to extremely narrow, iron stained joints, dipping at 0°-10°, 20°-30°, 50°-60°, 70°-80° & subvertical.
25/5		11.10/ 08:30		98	96	85	6.0		T2-101								
											53.45						
				100	95	54	>20		T2-101								
											54.94						
				100	100	60	5.8		T2-101								
25/5		9.80/ 17:30									56.44						
26/5		11.05/ 08:30		100	100	97			T2-101								
26/5		9.50/ 11:30									57.90	-41.58	57.90				End of hole at 57.90m.

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water table
- Standard penetration test
- Permeability test
- Piezometer tip
- Standpipe

LOGGED Poon Leung
DATE 27/5/17
CHECKED M. Law
DATE 29/5/17

REMARKS

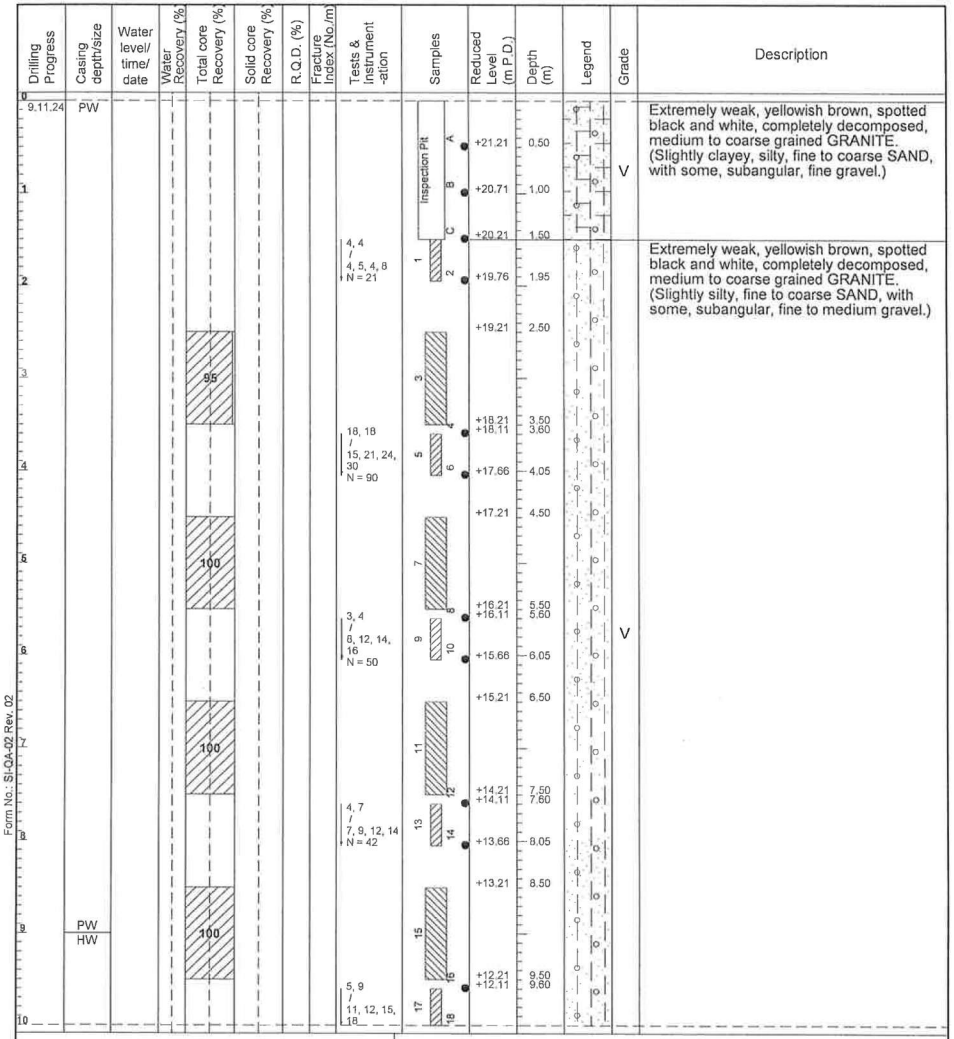
Tak Foo Engineering & Construction Co., Ltd.

JOB NO.
HOLE NO. DHF1
SHEET 1 of 4
DATE from 09.11.24 to 16.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary	CO-ORDINATES E 837,431.38 N 815,185.49	ROCK CORE BIT AT3
MACHINE & NO. XY-2B		HOLE DIA. PW, HW
FLUSHING MEDIUM Water	ORIENTATION VERTICAL	ELEVATION +21.71 m P.D.



Form No.: SI-QA-02 Rev. 02

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test
- N.A. = Not Applicable.
- N.I. = Non-intact
- N.R. = No recovery

REMARKS
Inspection pit was carried out at 0.00-1.50m.

LOGGED BY C.H. Lau CHECKED BY B.C. Tam
DATE 18.11.24 DATE 19.11.24

D-28

Tak Foo Engineering & Construction Co., Ltd.

JOB NO.
HOLE NO. DHF1
SHEET 2 of 4
DATE from 09.11.24 to 16.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary
MACHINE & NO. XY-2B
FLUSHING MEDIUM Water
CO-ORDINATES E 837,431.38 N 815,185.49
ORIENTATION VERTICAL
ROCK CORE BIT AT3
HOLE DIA. PW, HW
ELEVATION +21.71 m P.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrument -ation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
10								N = 56		+11.66	10.05			As sheet 1 of 4.
11										+11.21	10.50		V	
12				100				5, 5 / 7, 10, 17, 21 N = 55	19					
									20	+10.21	11.50			
									21	+10.11	11.60			
									22	+9.66	12.05			
										+9.21	12.50			
13		dry at 18:00		100					23					Weak, dark pinkish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Sandy, subangular, fine to coarse GRAVEL.)
	9.11.24							50/20mm / 200/30mm (200blows / 30mm)	24 25	+8.21 +8.11 +8.06	13.50 13.60 13.65		IV	
14	12.11.24	dry at 08:00								+7.21	14.50			
15				100					26	+6.71 +6.61	15.00 15.10			
							1.4							Very strong, pinkish grey, spotted black and white, slightly decomposed, medium to coarse grained GRANITE. Joints, where intact, are widely to very widely, occasionally very closely, closely to medium spaced, rough planar, tight to extremely narrow, iron oxide stained, dipping 0°-10° and 10°-20°.
16				100	100	99			AT3	+5.26	16.45		II	
17				100	100	100	0.3		AT3	+3.89	17.82			
18		6.36m at 18:00		100	100	100			AT3	+3.09	18.62			
	12.11.24	14.61m at 08:00								+2.73	18.98		III	18.98-19.16m: Moderately strong, moderately decomposed.
19	-14.11.24			81	81	81	2.3		AT3	+2.55	19.16		II	19.44-19.76m: Moderately strong, moderately decomposed.
							8.3			+2.27	19.44		III	19.52-19.76m: No recovery, inferred to be completely decomposed.
20							N.R.			+1.95	19.76		V	

Form No.: SI-QA-02 Rev. 02

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test
- N.A. = Not Applicable.
- N.I. = Non-Intact
- N.R. = No recovery

REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam
DATE 18.11.24 DATE 19.11.24

Tak Foo Engineering & Construction Co., Ltd.

JOB NO.
HOLE NO. DHF1
SHEET 3 of 4
DATE from 09.11.24 to 16.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary
MACHINE & NO. XY-2B
FLUSHING MEDIUM Water
CO-ORDINATES E 837,431.38 N 815,185.49
ORIENTATION VERTICAL
ROCK CORE BIT AT3
HOLE DIA. PW, HW
ELEVATION +21.71 m P.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrument -ation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
20							>20			+1.89	20.02		III	20.02-20.20m: Moderately strong, moderately decomposed. 20.02-20.07m: Highly fractured.
							7.7			+1.51	20.20			
21				91	84	84	0.9		AT3				II	
										+0.66	21.05		III	21.05-21.26m: Moderately strong, moderately decomposed.
		8.16m at 18:00					N.R.			+0.45	21.26		V	21.26-21.40m: No recovery, inferred to be completely decomposed.
	-14.11.24	HW					>20			+0.31	21.40		III	21.40-21.63m: Moderately strong, moderately decomposed. 21.40-21.45m: Highly fractured.
22	-15.11.24	14.72m at 08:00								+0.15	21.56			
										+0.08	21.63			
				93	91	89	0.8		AT3				II	
23							8.3			-1.00	22.71		III	22.71-23.08m: Moderately strong, moderately decomposed.
							>20			-1.37	23.08			
24				100	100	100	0.4		AT3				II	
										-2.93	24.64			
25										-3.34	25.05		III	25.05-25.35m: Moderately strong, moderately decomposed.
				77	77	77	N.R.		AT3	-3.64	25.35		V	25.35-25.70m: No recovery, inferred to be completely decomposed.
26										-3.99	25.70		II	
										-4.42	26.13		II	
										-4.49	26.20		III	Strong, pinkish grey, spotted black and white, slightly decomposed, medium to coarse grained GRANITE. Joints are widely to very widely , occasionally medium spaced, rough planar, tight to extremely narrow, iron oxide stained, dipping 0°-10° and 10°-20°. 26.20-26.47m: Moderately strong, moderately decomposed. 26.99-27.67m: Moderately strong, moderately decomposed.
27				94	94	94	1.3		AT3	-4.76	26.47		II	
										-5.28	26.99		III	
28				100	100	100	0.4		AT3	-5.96	27.67			28.33-28.73m: Hydrothermally altered.
		9.31m at 18:00											II	
29	-15.11.24	15.15m at 08:00								-7.41	29.12			29.89m: <20mm thick Hydrothermally altered. 29.98m: <30mm thick Hydrothermally altered.
	-16.11.24			94	94	94			AT3					
30														

Form No.: SI-QA-02 Rev. 02

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test
- N.A. = Not Applicable.
- N.I. = Non-Intact
- N.R. = No recovery

REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam
DATE 18.11.24 DATE 19.11.24

Tak Foo Engineering & Construction Co., Ltd.

JOB NO.
HOLE NO. DHF1
SHEET 4 of 4
DATE from 09.11.24 to 16.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary
MACHINE & NO. XY-2B
CO-ORDINATES E 837,431.38 N 815,185.49
ROCK CORE BIT AT3
HOLE DIA. PW, HW
FLUSHING MEDIUM Water
ORIENTATION VERTICAL
ELEVATION +21.71 m P.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrument -ation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
30														As sheet 3 of 4.
				94	94	94	0.4		AT3	-8.85	30.56		II	
31				96	96	96			AT3	-9.05	31.56		III	31.56-31.83m: Moderately strong, moderately decomposed.
										-10.12	31.83			
32										-10.29	32.00			
				93	93	93	1.5		AT3	-11.81	33.52		II	
33														
34				99	99	99			AT3	-12.27	33.98		III	33.98-34.40m: Moderately strong, moderately decomposed.
		8.85m at 18:00								-12.69	34.40			END of borehole at 34.40m
35														
36														
37														
38														
39														
40														

Form No.: SI-QA-02 Rev. 02

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test
- N.A. = Not Applicable.
- N.I. = Non-intact
- N.R. = No recovery

REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam
DATE 18.11.24 DATE 19.11.24

Tak Foo Engineering & Construction Co., Ltd.

JOB NO.
HOLE NO. DHF2(P)
SHEET 1 of 4
DATE from 28.10.24 to 06.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary
MACHINE & NO. XY-2B
CO-ORDINATES E 837,436.15 N 815,185.95
ROCK CORE BIT AT3
HOLE DIA. SW, PW, HW
FLUSHING MEDIUM Water
ORIENTATION VERTICAL
ELEVATION +21.68 m P.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrument -ation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
0														
28.10.24	SW								Inspection Pit A	+21.18	0.50		V	Extremely weak, yellowish brown, spotted black and white, completely decomposed, medium to coarse grained GRANITE. (Slightly clayey, silty, fine to coarse SAND, with some, subangular, fine gravel.)
1									B					
28.10.24		dry at 18:00							C	+20.68	1.00			
29.10.24		dry at 08:00						4, 4 / 4, 4, 4, 7 N = 19	1 2	+20.18	1.50			Weak, yellowish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Sandy, subangular, fine to coarse GRAVEL.)
2										+19.73	1.95			
										+19.18	2.50			
3	SW / PW			100					3					
29.10.24		1.35m at 18:00								+18.18	3.50			
30.10.24		dry at 08:00						4, 4 / 5, 5, 7, 10 N = 27	4 5 6	+18.08	3.60			
4										+17.63	4.05		IV	
										+17.18	4.50			
5				100					7					
										+16.18	5.50			
6								6, 9 / 10, 10, 14, 16 N = 50	8 9 10	+16.08	5.60			
										+15.63	6.05			
7				100					11	+15.18	6.50			Weak, dark pinkish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Sandy, subangular, fine to medium GRAVEL.)
										+14.18	7.50		IV	
8								8, 10 / 10, 13, 17, 22 N = 62	12 13 14	+14.08	7.60			
										+13.63	8.05			Weak, yellowish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Slightly sandy, subangular, fine to coarse GRAVEL and COBBLES.)
9				100					15	+13.18	8.50		IV	
30.10.24	PW	0.83m at 18:00								+12.18	9.50			
31.10.24	HW	dry at 08:00		100	100	100	0.9		16 AT3	+12.08	9.60			
10										+12.05	9.63		II	Very strong, pinkish grey, spotted black and white, slightly decomposed, medium

Form No.: SI-QA-02 Rev. 02

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test
- N.A. = Not Applicable.
- N.I. = Non-intact
- N.R. = No recovery

REMARKS
Inspection pit was carried out at 0.00-1.50m.
Standpipe installed at 9.00m.
Piezometer installed at 11.90m.

LOGGED BY C.H. Lau CHECKED BY B.C. Tam
DATE 9.11.24 DATE 11.11.24

D-30

Tak Foo Engineering & Construction Co., Ltd.

JOB NO.
HOLE NO. DHF2(P)
SHEET 2 of 4
DATE from 28.10.24 to 06.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary
MACHINE & NO. XY-2B
CO-ORDINATES E 837,436.15 N 815,185.95
ROCK CORE BIT AT3
HOLE DIA. SW, PW, HW
FLUSHING MEDIUM Water
ORIENTATION VERTICAL
ELEVATION +21.68 m P.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrument -ation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
10														to coarse grained GRANITE. Joints are widely spaced, rough planar, tight to extremely narrow, iron oxide stained, dipping 40°-50°.
				100	100	100	0.9		AT3	+10.93	10.75		II	
11		2.41m at 18:00 dry at 08:00						19, 24 / 22, 20, 12, 11 N = 65	17	+10.88	10.80			Weak, yellowish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Sandy, subangular, fine to coarse GRAVEL and COBBLES.)
	31.10.24								18	+10.43	11.25			
	1.11.24									+10.38	11.30		IV	
12				100					19					
									20	+9.36	12.30			
										+9.28	12.40			
				100	100	100			AT3	+9.04	12.64			Very strong, pinkish grey, spotted black and white, slightly decomposed, medium to coarse grained GRANITE. Joints, where intact, are widely, occasionally medium spaced, rough planar, tight to extremely narrow, iron oxide stained, dipping 0°-10° and 40°-50°.
13				100	100	100	1.0		AT3				II	
							3.4			+8.20	13.48			
							4.3			+7.80	13.88			
14				82	82	82	N.R.		AT3	+7.59	14.09		V	13.88-14.09m: No recovery, inferred to be completely decomposed.
							0.7			+7.02	14.66		II	
15				85	85	85			AT3					
							N.R.	25, 25/65mm / 100/10mm (100bls / 10mm)		+6.17	15.51		V	15.51-15.66m: No recovery, inferred to be completely decomposed.
	1.11.24	HW							21	+6.02	15.66		IV	Weak, yellowish brown, spotted black and white, highly decomposed, medium to coarse grained GRANITE. (Sandy, subangular, fine to coarse GRAVEL.)
16	2.11.24	10.51m at 18:00 13.48m at 08:00							22	+5.88	15.80			
										+5.73	15.95			
				100	100	100	1.0		AT3					Very strong, pinkish grey, spotted black and white, slightly decomposed, medium to coarse grained GRANITE. Joints, where intact, are widely to very widely , occasionally medium spaced, rough planar, tight to extremely narrow, iron oxide stained, dipping 0°-10°.
17										+4.37	17.31		II	
				100	100	100	0.4		AT3					
18										+3.23	18.45			
				92	92	92			AT3					
19		5.50m at 18:00					3.3			+2.31	19.37		III	19.37-19.49m: Moderately strong, moderately decomposed.
	2.11.24									+2.19	19.49		II	19.66-19.80m: Moderately strong, moderately decomposed.
	4.11.24									+2.02	19.66		III	
20				100	100	100	0.8		AT3	+1.94	19.74			
										+1.88	19.80			

Form No.: SI-QA-02 Rev. 02

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test

N.A. = Not Applicable.
N.I. = Non-Intact
N.R. = No recovery

REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam
DATE 9.11.24 DATE 11.11.24

Tak Foo Engineering & Construction Co., Ltd.

JOB NO.
HOLE NO. DHF2(P)
SHEET 3 of 4
DATE from 28.10.24 to 06.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary
MACHINE & NO. XY-2B
CO-ORDINATES E 837,436.15 N 815,185.95
ROCK CORE BIT AT3
HOLE DIA. SW, PW, HW
FLUSHING MEDIUM Water
ORIENTATION VERTICAL
ELEVATION +21.68 m P.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrument -ation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
20		13.92m at 08:00		100	100	100	0.8		AT3	+1.12	20.56		II	As sheet 2 of 4.
										+0.94	20.74		III	20.74-21.00m: Moderately strong, moderately decomposed.
21				72	68	68	2.6		AT3	+0.68	21.00		II	
							N.R.			+0.32	21.36		V	21.36-21.67m: No recovery, inferred to be completely decomposed.
		10.38m at 18:00								+0.01	21.67		III	21.67-21.85m: Moderately strong, moderately decomposed.
22	4.11.24	11.73m at 08:00		100	100	100			AT3	-0.17	21.85			
	5.11.24									-0.30	21.98			
				96	96	96			AT3					
										-0.97	22.65		II	
23				100	100	100	0.3		AT3					
										-2.04	23.72		III	23.72-24.00m: Moderately strong, moderately decomposed.
24				77	77	77			AT3	-2.19	23.87			
										-2.32	24.00		II	
										-3.00	24.68		III	24.68-24.82m: Moderately strong, moderately decomposed.
25									AT3	-3.14	24.82		II	24.92-25.23m: No recovery, inferred to be completely decomposed.
							N.R.			-3.24	24.92		V	Strong, pinkish grey, spotted black and white, slightly decomposed, medium to coarse grained GRANITE. Joints are widely , occasionally very closely and medium spaced, rough planar and rough undulating, tight to extremely narrow, iron oxide stained, dipping 0°-10°, 30°-40° and 60°-70°.
										-3.55	25.23		II	
26				96	90	90	0.8		AT3					
							>20			-4.73	26.41		III	26.41-27.48m: Moderately strong, moderately decomposed. 26.55-26.63m: Highly fractured.
	5.11.24	6.81m at 18:00								-5.12	26.90			
27	6.11.24	13.58m at 08:00					2.8							
							>20			-5.80	27.48			
				100	95	95	1.5		AT3					
28							>20			-6.66	28.34		II	
29				100	100	100	0.6		AT3					
										-8.17	29.85			
30									AT3					

Form No.: SI-QA-02 Rev. 02

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test

N.A. = Not Applicable.
N.I. = Non-Intact
N.R. = No recovery

REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam
DATE 9.11.24 DATE 11.11.24

D-31

Tak Foo Engineering & Construction Co., Ltd.

JOB NO.
HOLE NO. DHF2(P)
SHEET 4 of 4
DATE from 28.10.24 to 06.11.24

DRILLHOLE RECORD

PROJECT PROPOSED A & A WORKS TO STEEL GOLF FENCE AT SOUTH CHINA ATHLETIC ASSOCIATION

METHOD Rotary	CO-ORDINATES E 837,436.15 N 815,185.95	ROCK CORE BIT AT3
MACHINE & NO. XY-2B		HOLE DIA. SW, PW, HW
FLUSHING MEDIUM Water	ORIENTATION VERTICAL	ELEVATION +21.68 m P.D.

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery (%)	Total core Recovery (%)	Solid core Recovery (%)	R.Q.D. (%)	Fracture Index (No./m)	Tests & Instrument -ation	Samples	Reduced Level (m P.D.)	Depth (m)	Legend	Grade	Description
30							4.8			-8.43	30.11		III	As sheet 3 of 4.
										-8.60	30.28			30.11-30.28m: Moderately strong, moderately decomposed.
							1.5						II	
				97	94	94			AT3	-9.00	30.68		III	30.68-30.96m: Moderately strong, moderately decomposed.
31							>20			-9.28	30.96			30.83-30.94m: Highly fractured.
										-9.58	31.26		II	
										-9.72	31.40			31.26-33.00m: Moderately strong, moderately decomposed.
				100	100	92			AT3					
32										-10.45	32.13		III	
				94	91	91	0.6		AT3					
33										-11.32	33.00			
				99	99	99			AT3				II	
34		4.98m at 18:00												
	6.11.24									-12.62	34.30			END of borehole at 34.30m
35														
36														
37														
38														
39														
40														

Form No.: SI-QA-02 Rev. 02

LEGEND

- Small Disturbed Sample
- Large Disturbed Sample
- SPT Liner Sample
- U76 Undisturbed Sample
- U100 Undisturbed Sample
- Mazier Sample (74mm)
- Piston Sample
- Water Sample
- Water Level
- Standard Penetration Test
- Permeability Test
- Standpipe/Piezometer Tip
- In-situ Vane Shear Test

N.A. = Not Applicable.
N.I. = Non-Intact
N.R. = No recovery

REMARKS

LOGGED BY C.H. Lau CHECKED BY B.C. Tam
DATE 9.11.24 DATE 11.11.24

By Email

Our Ref: S3116/SCAA/23/002Lg

28 October 2025

PLANNING LIMITED
規劃顧問有限公司
[redacted]

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

Dear Sir/Madam,

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
- S16 Planning Application Submission -

Reference is made to the captioned S16 Planning Application submitted to the Town Planning Board ("TPB") on 17 October 2025 and onward telephone conversations with [redacted] on 27 October 2025.

Please see below an updated Table of Development Parameters for your consideration:

Proposed Development	
Application Site Area (notional)	About 6,132m^2
GFA*	About 31,327.12m^2
Plot Ratio (based on notional site area)	About 5.11
Building Height (at main roof level)	45.4mPD
No. of Storeys	4
Site Coverage (based on notional site area)	About 69%
Overall SCAA Complex (i.e. the whole site) – For reference only [Not for approval]	
Site Area	About 32,478.89m^2
Total (existing + proposed) Non-domestic GFA	About 96,055.23m^2
Plot Ratio (based on overall SCAA Complex)	About 2.96
Site Coverage (based on overall SCAA Complex)	About 41.7%

* This includes multiplications of area over the void of the high headroom ball courts (subject to approval by the Building Authority)

FS 579819

By Email and Hand

Our Ref: S3116/SCAA/23/003Lg

24 December 2025

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

Dear Sir/Madam,

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
- S16 Planning Application Submission –
TPB Ref.: A/H7/189
Further Information No. 1

Reference is made to the captioned S16 Planning Application submitted to the Town Planning Board ("TPB") on 17 October 2025 and departmental comments received on .

In response to the departmental comments received, please find attached the Further Information ("F.I.") submission for your consideration. The submission document consists of:

Response-to-Comment Table
Appendix I Revised Drainage Impact Assessment
Appendix II Revised Pages of the Visual Impact Assessment
Appendix III Revised Air Ventilation Assessment
Appendix IV Revised Sewerage Impact Assessment
Appendix V Revised Pages of the Supporting Planning Statement
Appendix VI Revised Air Quality Impact Assessment

Meanwhile, should you have any queries in relation to the above, please do not hesitate to contact [redacted]

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

Gladys Ng

Encl. (4 copies)

cc. the Applicant & Team

PL/GN/vy

FS 579819

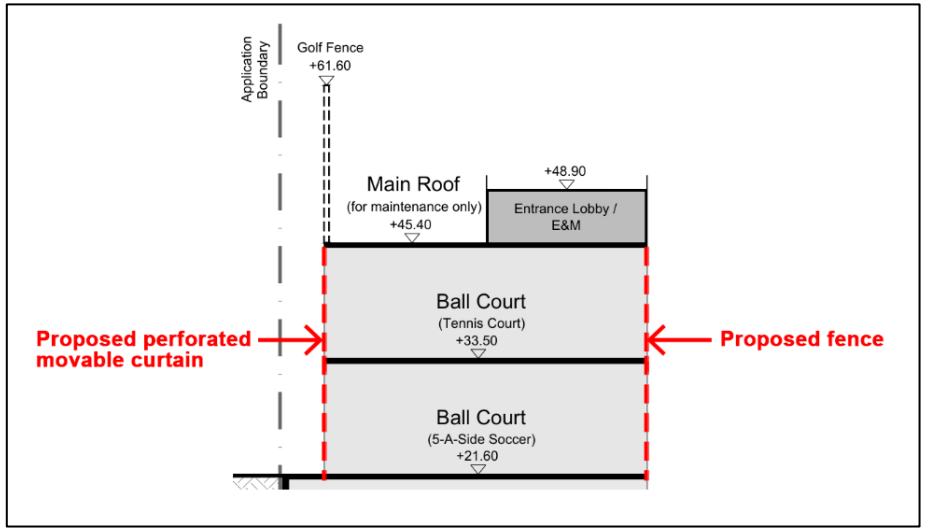
Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
S16 Planning Application

(Planning Application No: A/H7/189)

RESPONSE-TO-COMMENT TABLE

Comments	Response
Comments from Chief Engineer/Hong Kong & Islands, Drainage Services Department: **(Contact Person: Mr Keith WONG; Tel: 3101 2376)**	
1. Drainage Impact Assessment:	
a. Please advise the proposed pipe size from the stormwater terminal manhole to SMH7021021.	As advised by the Project Team, the proposed pipe connecting the stormwater terminal to SMH7021021 is 375 mm dia.
b. Please demonstrate the proposed pipe size is capable to discharge stormwater runoff from the subject site using the latest design rainfall parameter as stipulated in Corrigendum No. 1/2024 of Stormwater Drainage Manual. Effect of climate change with design allowance in-end-21 st Century scenario (i.e. 16%+12.1% = 28.1%) should be adopted according to Corrigendum No. 1/2022 of Stormwater Drainage Manual. The design calculation should also take into consideration of pipe siltation as per Section 9.3 of Stormwater Design Manual.	As shown in Appendix 6-1, the total peak runoff from the Application Site due to the Proposed Development has been calculated by adopting the rainfall increase factor due to climate change and design allowance. The total peak runoff after the proposed development has decreased as compared to the existing condition due to the increase of greenery area. No adverse stormwater drainage impact is therefore anticipated.
c. Appendix 6-1: Please be reminded that Bransby William's equation for estimating time of concentration is mainly for natural catchment. For urban areas with relatively small catchments, time of concentration is normally not more than 5 minutes. Please review the design calculation.	With reference to the Table 2a in Stormwater Drainage Manual Corrigendum No. 1/2024, the extreme intensity for 5 mins duration and 200-year Return Period has been adopted as conservative approach. Please refer to the revised Drainage Impact Assessment in *Appendix I*.
d. A runoff coefficient similar to paved area should be adopted if the greening area as mentioned in para. 5.3.1 and presented in the Master Layout Plan is in form of tree pots or planters.	Please be clarified that the horizontal greenery area at G/F is landscaped area, thus runoff coefficient for grassland has been adopted.

Comments	Response
e. With reference to extreme rainstorm event on 7 September 2023 in Hong Kong, as well as similar occurrences in other regions, it is noted that extreme events exceeding the current design standard (i.e. 1-in-200 year event) are not uncommon. You are therefore advised to consider the incorporation of additional resilience measures, in accordance with the recommendations set out in DSD Practice Note No. 2/2023, with a view to reducing potential loss and damage arising from future extreme events.	Noted, with reference to the Table 3a of Corrigendum No. 1/2024 of Stormwater Drainage Manual, storm constant for 200-year return period has been adopted in the hydraulic calculation. The peak runoff from Proposed Development has decreased as compared to the existing condition due to increase of greenery area. No adverse stormwater drainage impact is anticipated. Implementation of additional resilience measures, in accordance with the recommendations set out in DSD Practice Note No. 2/2023, will be considered, if necessary.
2. Sewerage Impact Assessment: a. Please advise the proposed pipe size and pipe material from the sewage terminal manhole to FMH7019720.	Please be advised that the pipe connecting to the existing manhole is an existing pipe. According to the drainage plan, it is a 225mm diameter vitrified clay pipe.
Comments from Chief Town Planner/Urban Design and Landscape Section, Planning Department: **(Contact Person: Ms Vanessa TSANG; Tel: 3565 3942)** Please find below our observations/comments from urban design, visual and air ventilation perspectives: Urban design and visual perspectives c. specific comments on VIA: (i) VP H – the rating of magnitude of change and resultant visual impact should be moderate and moderately adverse respectively;	Impact significance has been revised accordingly (revised pages *Appendix II* refer).

Comments	Response
(ii) the design of the proposed perforated movable curtain and fence is missing; and	The images below show the design of the proposed perforated movable curtain and fence. **Location of the proposed perforated movable curtain and fence** 

Comments	Response
	Design reference images of the proposed perforated movable curtain are shown below. It is subject to further development at detail design stage.  

Comments	Response
	Image below shows the design the proposed fence at 2/F & 3/F. It is subject to further development at detail design stage. 
(iii) it is noted from the Architectural Drawings that a golf fence up to +61.6mPD is proposed at the main roof of the proposed development. However, it is not annotated in the photomontages.	Annotations have been added to the photomontages (revised pages *Appendix II* refer).
<u>Air ventilation perspective</u> d. as noted from the AVA-EE, the report evaluates the potential air ventilation impact of the proposed development compared against the existing condition. Specific comments on AVA-EE are as follows: (i) the proposed development appears to be enclosed structure and	As a conservative approach, it is assumed that the proposed perforated

Comments		Response
	the effectiveness of the proposed perforated curtain and fence cannot be guaranteed;	curtain and fence are part of the enclosed structure of the proposed development for the purpose of discussing the air ventilation impact as a conservative approach. Please refer to the revised Air Ventilation Assessment in *Appendix III*.
(ii)	the discussion on the proposed golf fence up to +61.6mPD is missing;	The description of the proposed golf fence has been provided in Para 4.1.1 and relevant discussion of the golf fence has been provided in Section 9 of the revised Air Ventilation Assessment in *Appendix III*.
(iii)	reference could also be made to the Term Consultancy for AVA Services – Expert Evaluation on Air Ventilation Assessment of Causeway Bay Area, the Term Consultancy for Expert Evaluation on Air Ventilation Assessments for an Instructed Project for Causeway Bay Area - Expert Evaluation Report (2017) and the Term Consultancy for AVA Services - Expert Evaluation on Air Ventilation Assessment for Wong Nai Chung Area;	Reference have been made to the Expert Evaluation on Air Ventilation Assessment of Causeway Bay Area, the Term Consultancy for Expert Evaluation on Air Ventilation Assessments for an Instructed Project for Causeway Bay Area - Expert Evaluation Report (2017), the Term Consultancy for AVA Services - Expert Evaluation on Air Ventilation Assessment for Wong Nai Chung Area and Initial Study on Air Ventilation Assessment for Section 16 Planning Application (A/H7/188), and these have been indicated in Section 9 the revised Air Ventilation Assessment in *Appendix III*.
(iv)	in view of the hilly topography and the residential developments at Happy View Terrace, there may be only portion of prevailing wind from southwest between The Leighton Hill and Beverly Hill reaching the Site;	With the reference to the initial study of air ventilation assessment for Section 16 Planning Application No. A/H7/188, it is noted that the southwestern wind is mostly flowing from the gap between Olympic House and Hong Kong Stadium at the south of the Subject Site. Relevant discussion on this aspect has been provided in Section 9 the revised Air Ventilation Assessment in *Appendix III*.
(v)	para. 7.1.5 – the description of building setback from the site boundary of 'over 20m' is inconsistent with "at least 20m setback' throughout the report;	Relevant text has been revised to "at least 20m setback" throughout the report.

Comments	Response
(vi) Table 7.1 and relevant figures – Application No. A/H7/188 was approved on 24.10.2025 with a different layout as compared with A/H7/181; and	Please be kindly confirmed that information has been adopted from the Planning Application no. A/H7/188 instead of A/H7/181.
(vii) Figure 8.1 – there is a discrepancy between the annotation arrow and the description of setback from the site boundary.	Description in 8.1.4 has been updated accordingly (*Appendix III* refers).
e. specific comments on Supporting Planning Statement:	
(i) Figure 4.3 – there is a discrepancy between the annotation arrow and the description of setback from the site boundary.	Please refer to the response above.
Comments from Environmental Protection Department: **(Contact Person: Ms Virginia WONG; Tel: 2835 1109)**	
3. For clarification, the applicant is required to provide the following information:	
(a) clarify whether any public announcement system, portable loudspeaker or any form of amplification system would be allowed within the Site;	The public announcement system and its ancillary facilities would only be accommodated in the multi-function rooms on 1/F, which are designed with a fully enclosed façade envelope.
(b) whether there would be any administrative measures to minimise the potential noise nuisance to the surrounding sensitive receivers;	The proposed development will align its operating hours with the existing complex, ceasing operations at 10:00 pm. This strikes a balance between after work work-outs and noise generation during late-night hours.
(c) include the SIA for previous E-Sports Complex as Annex for others' easy reference;	Please note that the previous approved SIA report has been sent to EPD via a separate email.

Comments	Response
(d) illustrate an updated hydraulic calculation in the SIA	Please note that the hydraulics calculation is attached in Appendix 6-2 of *Appendix IV*.
4. Please find his technical comments on the Planning Statement from **Annex A**.	
Annex A His comments on Planning Statement and AQIA are as below:	
Planning Statement	
1. Section 4.7.1 – Please replace "dust suppression" and "dust" with "air quality control" and "air quality" in line 1 and 3 respectively.	Section 4.7.1 has been updated accordingly (*Appendix V* refers).
2. Section 4.7.1 and 5.8.4 – Please also supplement Air Pollution Control (Fuel Restriction) Regulations and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation.	Sections 4.7.1 and 5.8.4 have been updated accordingly (*Appendix V* refers).
3. Section 4.7.1-4.7.2, 5.8.5 – Please supplement conclusion related to industrial chimney and odour sources.	Relevant information related to industrial chimney and odour sources have been added to Section 4.7.2 and a new 5.8.6.
4. Section 5.8.4 – Please replace "dust suppression" and "significant dust" with "air quality control" and "adverse air quality impact" in line 2 and 3 respectively.	Section 5.8.4 has been updated accordingly (*Appendix V* refers).
AQIA	
1. Table 4-1 – a. Please update the concentration limit column with new AQOs, and supplement 24-hour NO2, peak season O3, and 24-hour CO.	Table 4-1 has been updated accordingly (*Appendix VI* refers).

Comments	Response
b. Please supplement "per Calendar Year" in the last column header.	The last column header of Table 4-1 has been updated accordingly (*Appendix VI* refers).
2. Section 4 – Please supplement brief discussion on relevant sub-legislations of APCO (e.g. Cap. 311Z, Cap. 311I).	Discussions on relevant sub-legislations of APCO has been added in Section 4.3 (*Appendix VI* refers).
3. Table 4-2 – Please make reference to Table 3.1 when discussing the buffer distance requirements for chimneys.	Table 4-2 has been updated with reference to Table 3.1 of HKPSG (*Appendix VI* refers).
4. Please discuss the background air quality of the project area by quoting the AQMS and PATH data (for grids covered by 500m assessment area) which are available in SAMP v2.1.	The discussions of background air quality of the project area have been added in Section 5 (*Appendix VI* refers).
5. Section 5.1.1 – Please indicate the representative ASRs in Figure 3.1.	Please note that Section 5.1.1 has been renumbered as Section 6.1.1. Representative ASRs have been added in Figure 3-1 (*Appendix VI* refers).
6. Table 5-1 – a. Please provide the uses and the building heights of the ASRs.	Please note that Table 5-1 has been renumbered as Table 6-1. Table 6-1 has been updated accordingly (*Appendix VI* refers).
b. For planned ASRs, please provide the operation year and source of information.	The discussions on the planned ASRs have been added under Section 6.1.7 (*Appendix VI* refers).
7. Section 5.1.2 – a. Please discuss gaseous emissions during construction.	Please note that Section 5.1.2 has been renumbered as Section 6.1.2. The discussions about gaseous emissions have been added in Section 6.1.5 to Section 6.1.6 (*Appendix VI* refers).

Comments	Response
b. Please provide more information including but not limited to: the size of the demolition, site formation or/and excavation area, amount of excavated materials to be handled, number of dump trucks and mechanical equipment to be used per time over the work site.	Please note that details such as the extent of demolition, site formation and excavation, volume of excavated materials to be handled, and the number of mechanical equipment operating concurrently are not available during at the planning stage of the Proposed Development. The construction activities will be carried out in compliance with all relevant standards and regulations. A new Section 6.1.2 has been added to include the above.
8. Section 5.1.3 – Please replace "dust" with "air quality"	Please note that Section 5.1.3 has been renumbered as Section 6.1.4. The term "dust" has been changed to "air quality".
9. Section 5 – Please review if there are any concurrent projects within 500m assessment area. If affirmative, please discuss cumulative constructional impact.	Please note that Section 5 has been renumbered as Section 6. Based on the best available information, there are three concurrent projects within our 500m assessment area, discussions on cumulative impact have been added in Section 6.1.7 (*Appendix VI* refers).
10. Section 6 – Please identify representative ASRs of the subject site e.g. openable windows and the fresh air intakes of the most affected air sensitive uses.	Please note that Section 6 has been renumbered as Section 7. Kindly note that detailed design of the exact locations of fresh air intakes is not available at planning stage, however the Proposed Development will comply with the relevant road buffer distance and chimney buffer distance requirements stipulated in the HKPSG. The detailed design of the exact locations of fresh air intakes, will also be arranged to comply with the identified buffer distance criteria.

Comments	Response
11. Section 6.2.1 – ATC 2024 is released. Please update.	Please note that Section 6.2.1 has been renumbered as Section 7.2.1. Section 7.2.1 has been updated with ATC 2024 (*Appendix VI* refers).
12. Section 6.3.2 – a. Please check if there will be any planned chimney e.g. the chimney at the proposed District Court Building at Caroline Hill Road.	Please note that Section 6.3.2 has been renumbered as Section 7.3.2. As at 5 September 2025, there are 4 nos. of chimneys at the Proposed District Court Building at Caroline Hill Road as noted from the Specified Processes (SP) Licence. Section 7.3.4 has been added to reflect the aforementioned.
b. Please provide evidence e.g. photo of the site visit, confirmation from the operator, for the removed chimney at Saint Paul's Convent.	Noted, the photographs taken during the site visit has been added in Table 7-2 (*Appendix VI* refers).
c. Please be reminded that it is the responsibility of the Project Proponent and their consultant to confirm the validity of the emission data used in the AQIA. Any errors found in their emission data used may render the AQIA results invalid.	Noted.
13. Section 6.3.3 – a. According to the planning statement, the main roof level would be +45.4 mPD. Please compare the height difference between the chimneys at Saint Paul's Hospital Main Block and the proposed development, and discuss the required buffer distance. Please note that >10m buffer distance is required for height difference >40m. Please revise the discussion in Section 6.3.3 and Figure 6-2.	Please note that Section 6.3.3 has been renumbered as Section 7.3.3. Noted, Section 7.3.4 has been revised (*Appendix VI* refers).

Comments	Response
b. Please provide the references for the locations and heights of the chimneys of Saint Paul's Hospital.	Please note that the location and heights of the chimneys were extracted from the Hong Kong open3Dhk website.
14. Section 6.3.4 –	Please note that Section 6.3.4 has been renumbered as Section 7.3.5.
a. In 1st line, please revise the text as follows:... A diesel generator owned by Tung Wah Eastern **Hospital** was found…	Noted, Section 7.3.5 has been revised accordingly (*Appendix VI* refers).
b. Please provide the details of the verbal communication e.g. date, time, the name of the person- in-charge or otherwise please provide written record about the use of the chimney.	Please be advised that the verbal communication with Tung Wah Eastern Hospital took place on 26 May 2021 with Ms. Pauline Chan. The date of the communication has been added in Section 7.3.5.
15. Section 6.3 – Please specify if the proposed development have no industrial chimney emission.	Please note that Section 7.4 has been added to discuss the industrial emission from the Proposed Development.
16. Please discuss the air quality impact from carpark of the proposed development, and provide the carpark exhaust and fresh air intake locations. Please also supplement if ProPECC PN 2/96 will be followed.	Please note that Section 7.4 has been added to discuss the air quality impact from carpark of the Proposed Development. Kindly note that the detailed design of the exact locations of carpark exhaust and fresh air intakes is not available at planning stage. However, the Proposed Development will be planned to comply with the relevant regulations and requirements.
17. Figure 3-1 – Please overlay PATH grids.	Noted, Figure 3-1 has been updated accordingly (*Appendix VI* refers).
18. Figure 6-1 – Please indicate the location of fresh air intake of the centralized AC system.	Kindly note that the detailed design of the exact location of fresh air intake of the centrelised AC system is not available at planning stage. However, the Proposed Development will be planned to comply with the relevant regulations and requirements.

Comments	Response
19. Figure 6-3 – Please rectify the colour of symbol for diesel emergency generator of Tung Wah Eastern Hospital.	Noted, Figure 6-2 has been revised accordingly (*Appendix VI* refers).
20. Please supplement north arrow in the figures.	Noted, all the Figure 3-1, Figure 6-1 and Figure 6-2 have been updated.
21. Please highlight all changes in the next submission.	Noted.
Comments from Critical Infrastructure Security Coordination Centre (CISCC), Hong Kong Police Force: **(Contact Person: Ms Crystal CHAU; Tel: 2860 5953)** According to the submitted information, the rooftop will be used for maintenance only. If the rooftop is to be used as a ball court in the future, appropriate measures should be implemented to prevent people from throwing projectiles or ball toward Planned District Court Building.	Noted.
Comments from Road Management Office Enforcement and Control, Hong Kong Police Force: **(Contact Person: Mr Raymond LAW; Tel: 3660 1887)** It is advised that each Temporary Traffic Arrangement (TTA) involving works on footpath and/or carriageway should be submitted to this office and Transport Department for comment before implementation.	Noted.

Consolidated by: **KTA Planning Limited**
Date: **23 December 2025**

Appendix I Revised Drainage Impact Assessment
Appendix II Revised Pages of the Visual Impact Assessment
Appendix III Revised Air Ventilation Assessment
Appendix IV Revised Sewerage Impact Assessment
Appendix V Revised Pages of the Supporting Planning Statement
Appendix VI Revised Air Quality Impact Assessment

APPENDIX I

Revised Drainage Impact Assessment

Issue No. : 2

Issue Date : December 2025

Project No. : 2215

DRAINAGE IMPACT ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

[redacted]

Document Verification

Project Title Error! Unknown document property name.	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.** 2215
Document Title	Drainage Impact Assessment	

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	October 2025	1st Submission	Various	Joanne Ng	Grace Kwok
2	December 2025	2nd Submission	Various	Joanne Ng	Grace Kwok



[redacted]

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5. Assessment Methodology 5
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5.3. Catchment Area 6
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7. Conclusion 7

List of Figures

Figure 3-1 Subject Site Location and Existing Stormwater Drainage

List of Appendices

Appendix 3-1 Site Layout Plan
Appendix 6-1 Peak Runoff Estimation

1. Introduction

1.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare a Drainage Impact Assessment ("DIA") in support of the Section 16 Planning Application for Development of Comprehensive Sports & Recreation Centre ("Proposed Development") at North Site, South China Athletic Association, Caroline Hill Road, Causeway Bay, Hong Kong ("Subject Site").

2. Objectives

2.1.1. The objectives of this DIA are to review the existing drainage facilities in the vicinity of the Subject Site and to evaluate the potential impacts on the current drainage system due to the additional discharge from the Proposed Development, and proposed mitigation measures where appropriate to mitigate potential impacts.

3. Description of the Proposed Development

3.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in ***Appendix 3-1***.

3.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

3.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 3-1*** shows the location of the Subject Site and Existing Stormwater Drainage.

4. Drainage Impact Assessment

4.1. Legislation, Standards and Guidelines

4.1.1. Water quality in Hong Kong is legislated by the provisions of the Water Pollution Control Ordinance (Cap 358), 1980 ("WPCO"). Territorial Water has been subdivided into ten Water Control Zones ("WCZ") and four supplementary water control zones. The study area lies within the North Western WCZ. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be met during the construction and operation stages.

4.1.2. Besides as stipulated in the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 41(1), 40(2), 41(1), 90 and recap in ProPECC PN 5/93, domestic sewage should be discharged to a foul water sewer and surface water should be discharged via rainwater pipes to stormwater drains during operational phase.

5. Assessment Methodology

5.1.1. Surface runoff within the Subject Site will be collected and discharged to the stormwater drainage network located at the northeast of the Application Site, as shown in ***Figure 3-1***. Perimeter drains will be established at the site boundary to collect surface runoff from the Proposed Development during operation phase.

5.1.2. With reference to the Storm Water Drainage Manual, Planning, Design and Management published by Drainage Services Department (DSD), Rational Method shall be applied to estimate the peak surface runoff values. The idea behind the Rational Method is that for a spatially and temporally uniform intensity *i*, which continues indefinitely, the runoff at the outlet of a catchment will increase until the time concentration t_c, when the whole catchment is contributing flow to the outlet. The peak runoff is calculated as follows:

$$Q_P = 0.278\ C\ i\ A \quad \ldots\ldots (1)$$

Where

Q_p = *peak runoff in* m^3/s

C = *runoff coefficient (dimensionless)*

i = *rainfall intensity in mm/hr*

A = *catchment area in* km^2

5.1.3. Runoff coefficient C depends on the permeability, slope and pond character of the surface; rainfall intensity i, is the average rainfall intensity selected on the basis of the design rainfall duration and return period.

5.2. Existing Drainage System

5.2.1. According to the DSD drainage record plans, public stormwater pipes of 375mm in diameters are available on the north of the Subject Site along Caroline Hill Road.

5.2.2. As shown in ***Figure 3-1***, stormwater runoff generated from the Subject Site will be collected by the existing public stormwater network along Caroline Hill Road, via stormwater manhole SMH7021021. As advised by Project Team, the proposed pipe connecting to the terminal manhole to SMH7021021 is 375mm dia. The location of the stormwater network is shown in ***Figure 3-1.***

5.3. Catchment Area

5.3.1. The coverage of the Subject Site before the Proposed Development is fully concrete paved. As advised by the Project Team, the Proposed Development will consist of approximately 14.6% of horizontal greenery area.

5.3.2. The details of the catchment area of the Subject Site before and after Proposed Development that contributes to the generation of stormwater generation is summarized in ***Table 5-1***.

Table 5-1 Catchment area of the Subject Site before and after Proposed Development

Catchment	Catchment Area (m^2)		
	Total	Concrete	Greenery
Subject Site Before Development	6,132	6,132	0
Subject Site After Development	6,132	5,235	897

6. Evaluation of Drainage Flow Rate

6.1.1. The surface runoff discharged from the Subject Site is calculated from equation (1) as mentioned in Section 5.1.2. The peak runoff from the Subject Site area before Proposed Development is 0.502 m^3/s whereas the peak runoff after Proposed Development is 0.456 m^3/s. Detailed calculation is tabulated in ***Appendix 6-1*** and summarized in ***Table 6-1*** below:

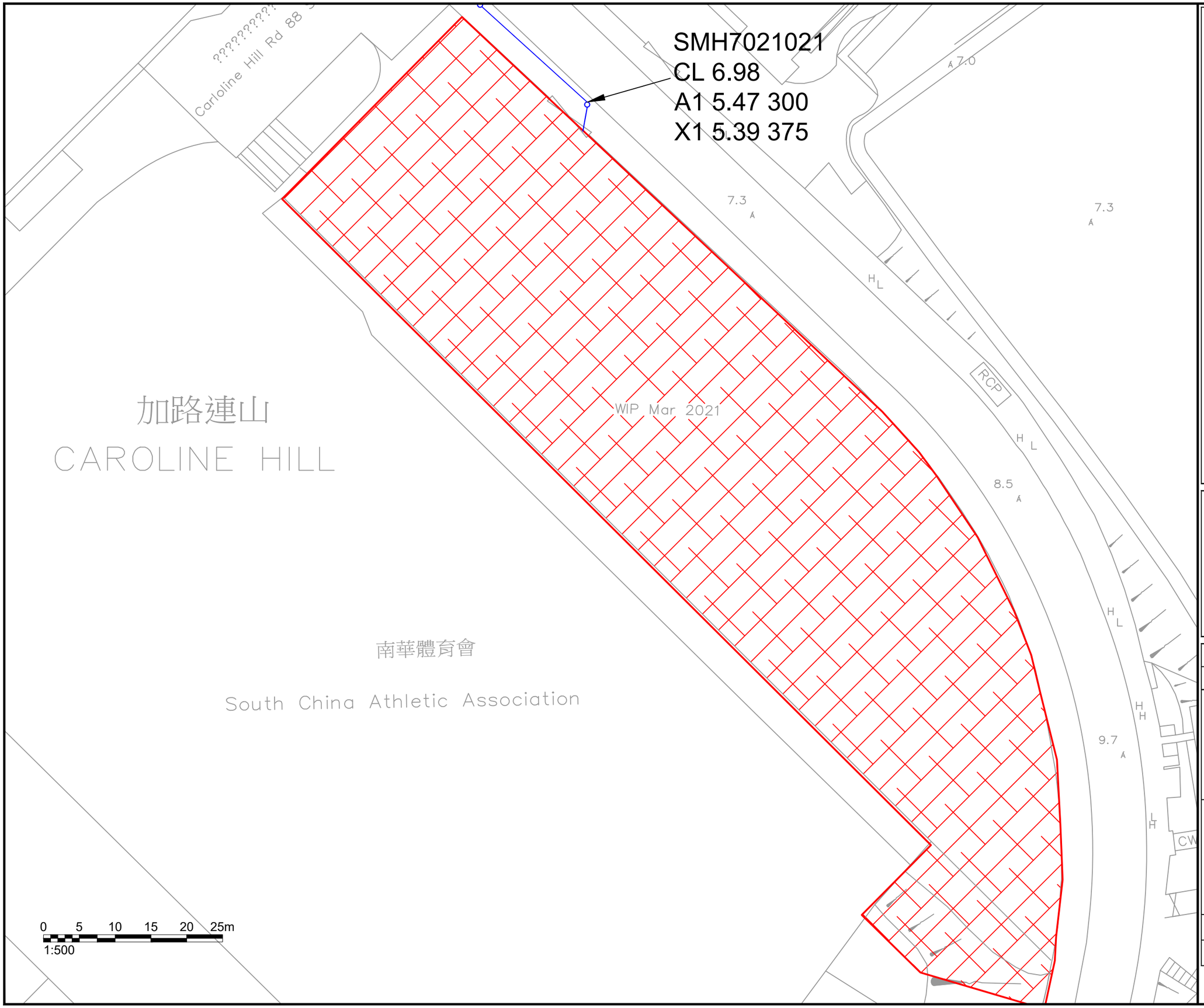
Table 6-1 Peak Flow of Subject Site

Catchment	Peak Flow (m^3/s)		Percentage (%)
	Before	After	
Subject Site	0.502	0.456	-9.16

6.1.2. Based on the calculation above, there is an anticipated 9.16% decrease in peak runoff from the Subject Site area after the Proposed Development. It is anticipated that no adverse stormwater drainage impact due to the Proposed Development would be imposed to the existing public drainage system at Caroline Hill Road.

7. Conclusion

7.1.1. A reduction in contribution of stormwater surface runoff associated with the proposed development is anticipated, it is therefore concluded that no potential drainage impact on existing stormwater system is anticipated.



NOTES :

Subject Site

Drainage Connection

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	ZX

Project :

Proposed SCAA Sports Link at
South China Athletic Association
88 Caroline Hill Road, Hong Kong

Drawing Title :

Subject Site Location and
Existing Stormwater Drainage

Drawing No :	Revision :
Figure 3-1	0
Scale : As Shown	Date : August 2025

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A3 420 x 297

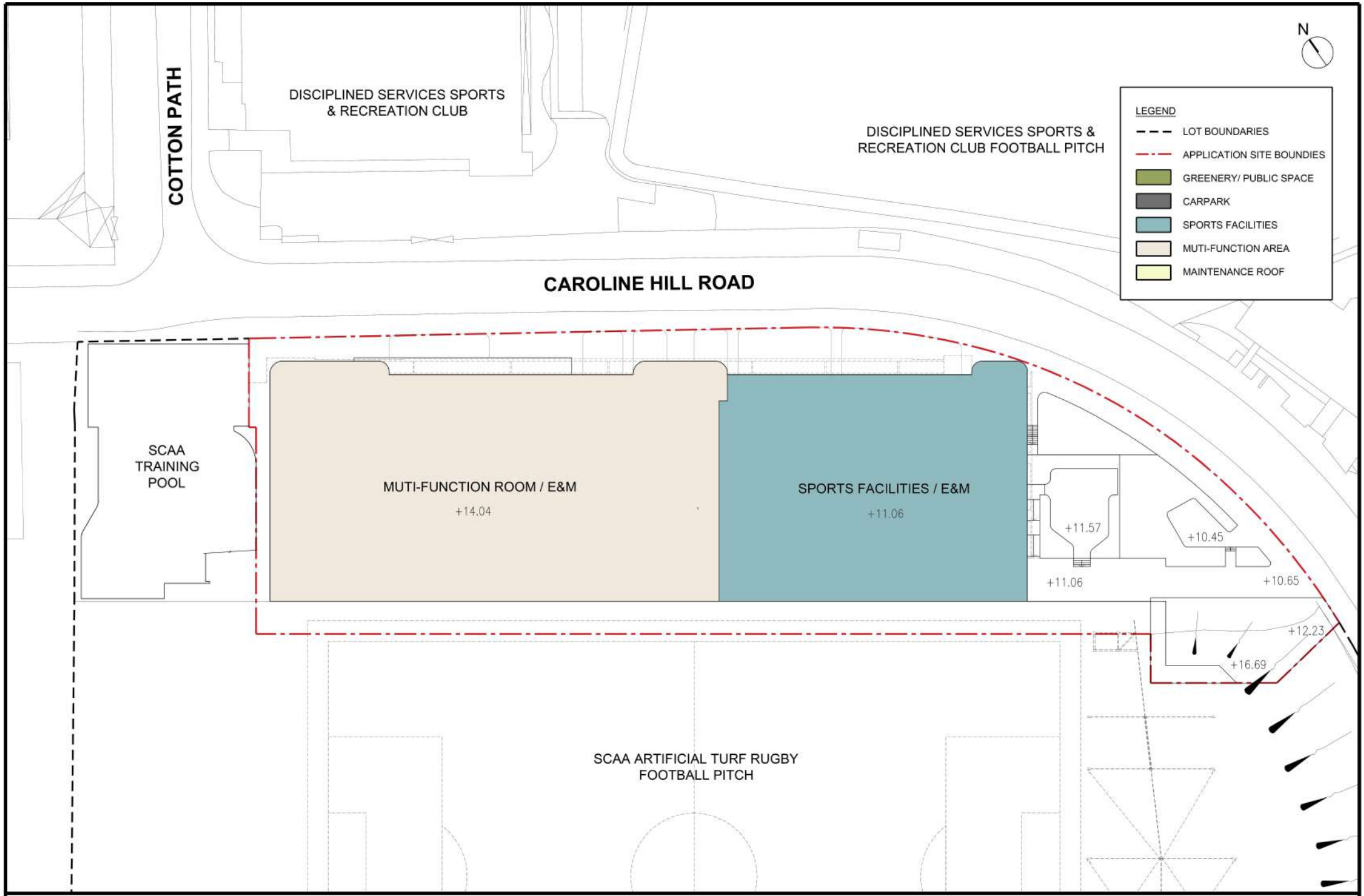
Appendix 3-1

Site Layout Plans



Comprehensive Sports & Recreation Centre
G/F Plan ◦ 1 : 500 (A3) ◦ 29 Aug 2025

Design 2 (HK) Limited



Comprehensive Sports & Recreation Centre
1/F Plan ◦ 1 : 500 (A3) ◦ 29 Aug 2025

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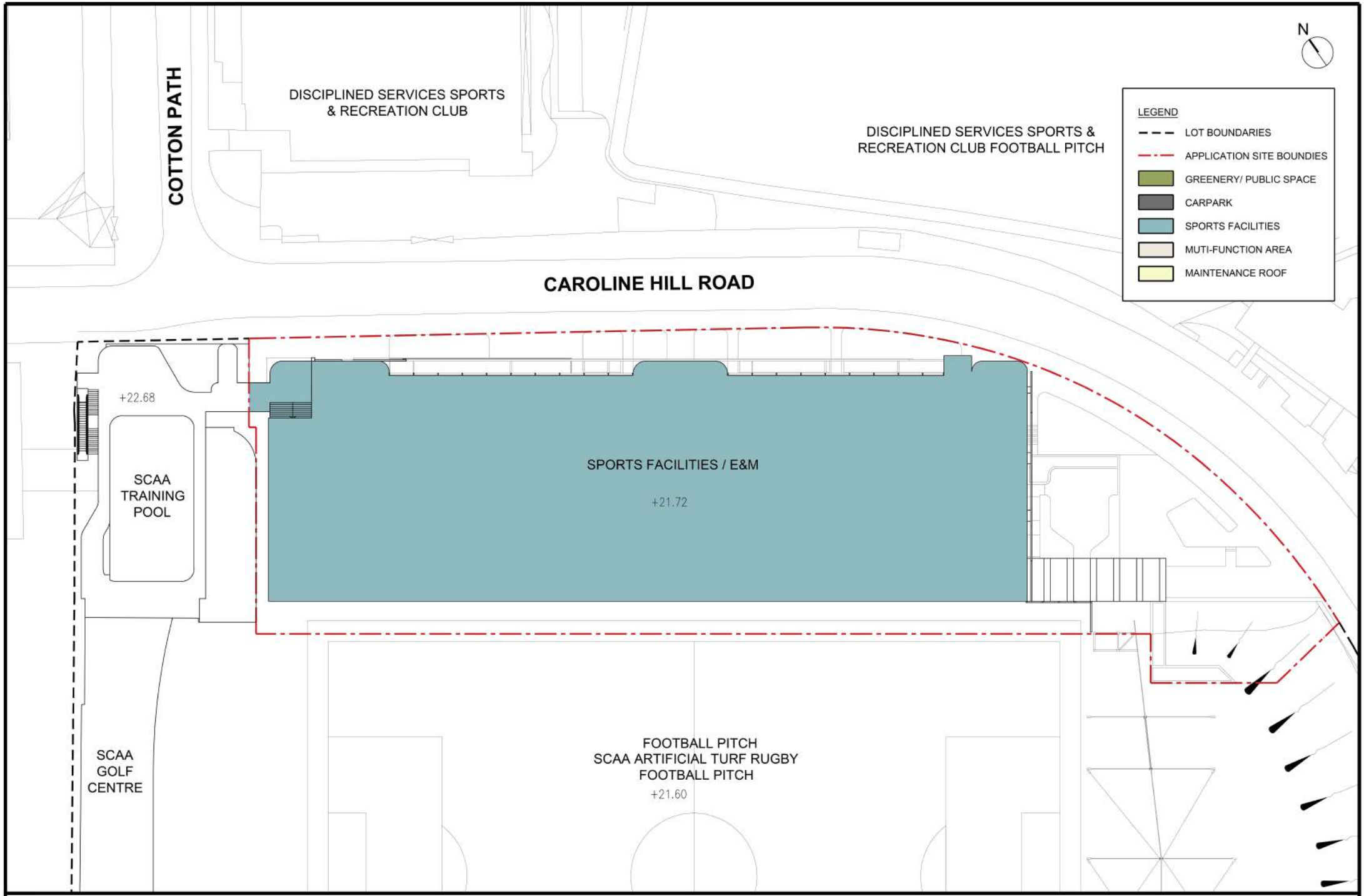
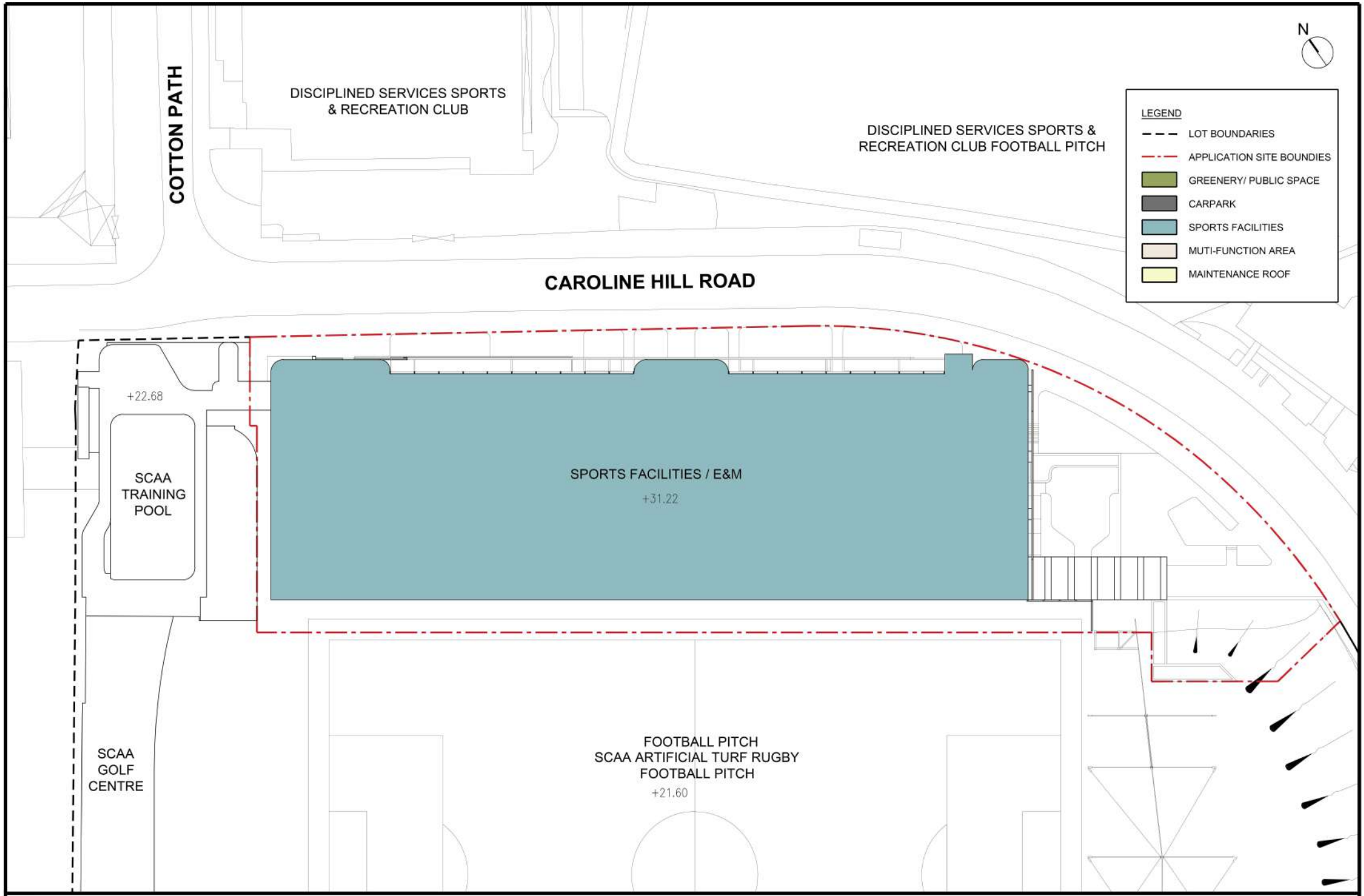


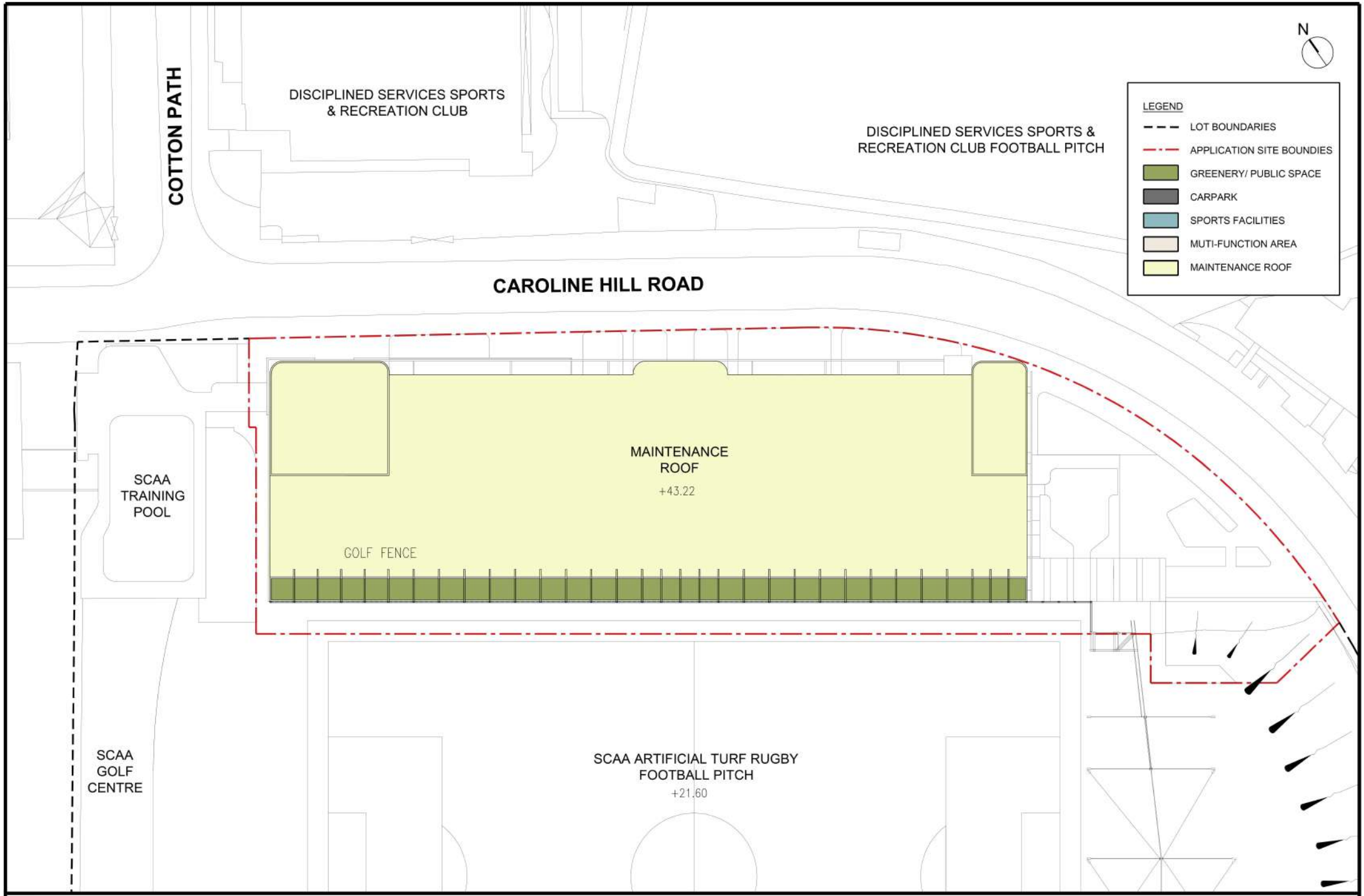
Comprehensive Sports & Recreation Centre
2/F Plan ◦ 1 : 500 (A3) ◦ 29 Aug 2025

Design 2 (HK) Limited



Comprehensive Sports & Recreation Centre
3/F Plan ◦ 1 : 500 (A3) ◦ 29 Aug 2025

Design 2 (HK) Limited



Comprehensive Sports & Recreation Centre
UR/F Plan ◦ 1 : 500 (A3) ◦ 29 Aug 2025

Design 2 (HK) Limited

Appendix 6-1

Peak Runoff Estimation

Appendix 6-1 Peak Runoff Estimation

Peak Runoff Estimation Before Proposed Development

Catchment	Topography		Average Slope, H (m per 100m)[1]	Total Catchment Area, A (m2)	Land Use	Catchment Area, A (m^2)	Flow Distance, L (m)	200-yr Return Period	Runoff Coefficient, C [3]	Rainfall Increase due to Climate Change, % [4]	Rainfall Increase for Design Allowance [5]	200-year Return Period Peak Runoff, Q_p (m^3/s) [6]	Total Peak Runoff, Qp (m3/s)
	Inlet invert level (mPD)	Outlet invert level (mPD)			Surface Characteristics			Extreme Mean Intensity, i (mm/hr) [2]					
Subject Site	11.3	6.7	2.91	6132	Concrete	6132	158	242	0.95	16.0	12.1	0.502	0.502
					Greenery	0			0.35	16.0	12.1	0.000	

Peak Runoff Estimation After Proposed Development

Catchment	Topography		Average Slope, H (m per 100m)[1]	Total Catchment Area, A (m2)	Land Use	Catchment Area, A (m^2)	Flow Distance, L (m)	200-yr Return Period	Runoff Coefficient, C [3]	Rainfall Increase due to Climate Change, % [4]	Rainfall Increase for Design Allowance [5]	200-year Return Period Peak Runoff, Q_p (m^3/s) [6]	Total Peak Runoff, Qp (m3/s)
	Inlet invert level (mPD)	Outlet invert level (mPD)			Surface Characteristics			Extreme Mean Intensity, i (mm/hr) [2]					
Subject Site	14.13	6.93	4.56	6132	Concrete	5235	158	242	0.95	16.0	12.1	0.429	0.456
					Greenery	897			0.35	16.0	12.1	0.027	

Note:

[1] Average slope, H is calculated using the highest and lowest elevations of the Subject Site and catchments as well as the flow distance. The elevation levels are referenced from the topographic survey map while the flow distance is measured between the highest and lowest elevation points.

[2] Adopted the extreme intensity for 5 mins duration and 200-year Return Period from Table 2a in Stormwater Drainage Manual Corrigendum No. 1/2024 as conservative approach.

[3] Runoff coefficient is referenced from Section 7.5.2 in DSD Stormwater Drainage Manual (Fifth Edition). For conservative estimation, coefficient of 0.35 is assumed for unpaved area while that of 0.95 for paved area.

[4] Rainfall increase precentage due to climate change is referenced from Table 28 in Stormwater Drainage Manual Corrigendum No. 1/2022. 16.0% for End of 21st Century is adopted as worst case scenario.

[5] Rainfall increase precentage for design allowance calculation (i.e. 12.1%) is referenced from Table 31 in DSD Stormwater Drainage Manual - Corrigendum No. 1/2022.

[6] Rational method for peak runoff estimation is referenced from Section 4.3.3 in DSD Stormwater Drainage Manual (Fifth Edition).

$$Q_p = 0.278\, C\, i\, A$$

where Q_p = peak runoff in m^3/s
C = runoff coefficient (dimensionless)
i = rainfall intensity in mm/hr
A = catchment area in km^2

Stormwater Drainage Manual CORRIGENDUM No. 1/2024 (26 March 2024)

Table 2a – Intensity-Duration-Frequency (IDF) Relationship of HKO Headquarters for durations not exceeding 240 minutes

Duration (min)	**Extreme Intensity (mm/h) for various Return Periods T (year)**								
	2	5	10	20	50	100	200	500	1000
240**	31.5	41.6	48.5	55.1	63.9	70.6	77.3	86.3	93.2
120++	50.4	66.0	75.7	84.7	95.9	104	112	121	128
60++	72.5	93.5	107	119	134	145	155	168	178
30++	93.3	115	128	139	153	162	170	180	187
15++	116	138	151	163	176	185	194	204	211
10*	131	155	169	181	195	204	212	222	229
5*	157	185	200	212	226	235	242	251	257
2*	191	223	239	252	265	273	280	287	291
1*	217	251	268	280	293	300	306	312	315
0.50*	242	279	296	309	320	327	332	337	339
0.25+++	268	307	324	336	347	353	357	361	363

APPENDIX II

Revised Pages of the Visual Impact Assessment

Proposed SCAA Sports Link
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Visual Impact Assessment

December 2025

Revised Pages

Prepared By:
ADI Limited

ADI

Project Title	Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung
Report Title	Visual Impact Assessment
Date of Issue	22nd October 2025

	Name	**Signature**	**Date**
Compiled by	Elsa Kwong		22nd October 2025
Checked by	Barry Lo		22nd October 2025
Approved by	Alison Lee		22nd October 2025

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Tables

Table 5.1 Summary of Visual Impact

1.0 Introduction

1.1 This report sets out to assess the potential visual impacts of the proposed new building of SCAA Sports Link, at South China Athletic Association, 88 Caroline Hill Road in Wong Nai Chung. The proposed development falls within zone of "OU(Sports and Recreation Club)" in Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21 ("Approved OZP"). The visual impact assessment is prepared in support of the S16 planning application to review visual changes to key public viewers and on the visual resources in the visual context of South China Athletic Association (SCAA) and to appraise the potential impact of the proposed new building in the SCAA on the overall visual composition. This report is prepared in accordance with TPB PG-No.41 'Guidelines on Submission of Visual Impact Assessment for Planning Applications to the Town Planning Board'.

1.2 This report should be read in conjunction with the architectural drawings and landscape proposal in separate appendices of this application.

2.0 The Proposed Development

2.1 The application site has area of approximately 6,132m^2 at the north part of the SCAA at Caroline Hill Road and So Kon Po. SCAA is an enclave of sports, recreational and other institutional facilities. The surrounding area of at Caroline Hill Road is also characterised by sports and recreation clubs or open spaces including Disciplined Services Sports and Recreation Club, So Kon Po Recreation Ground, Indian Recreation Club and Hong Kong Stadium in the northeast and to south adjacent to the site. G/IC buildings – Confucius Hall Secondary School (+39.7mPD), planned G/IC District Court and commercial buildings (max. +135mPD) under construction are also located at Caroline Hill Road immediately in the south and to the northwest of the site. Three existing buildings within SCAA including Sports Complex, Bowling Centre and Sports Centre are located at the west part of SCAA. The site is vacant pending for development. Only a few "self-seeded" trees are found in a narrow strip of soil on the top of sheet pile structures in the north and on retaining structure in the west. The site lies on flat land abutting to Cariline Hill Road and surrounds by the SCAA football field/golf practicing ground in the west and the training pool in the north at a higher elevation of about + 21.60 to +22mPD. Main entrance to the site is via Caroline Hill Road at about +7.50mPD.

2.2 Under the Approved OZP, the site falls with zone of "OU", The proposed building is regarded as "Place of Recreation, Sports or Culture" use, which is always permitted in the "Other Specified Uses (Sports and Recreation Club)" ("OU (Sports and Recreation Club)") zone on the approved Wong Nai Chung Outline Zoning Plan (OZP) No. S/H7/21. There is no building height restriction is stipulated in the OZP.

2.3 The development proposal will introduce a 4-storey new building of SCAA Sports Link with a proposed height of +45.40mPD. Entrance lobbies, car parking and E&M utilities are located at G/F. 1/F & 2/F & 3/F will accommodate multi-function rooms, ancillary office/ ancillary uses, ball courts such as tennis court and 5-a-side soccer, and plant rooms etc. The roof is reserved for maintenance and utilities and green roof. The existing golf net along the west edge will be reconstructed to integrate with the building design and with a proposed height of +61.60mPD.

2.4 A sitting-out garden is proposed at the southernmost of the site and at street level along Caroline Hill Road to soften the development edge and enhances the streetscape amenity.

2.5 Main vehicular entrance is from Caroline Hill Road at about +7.46mPD. Pedestrians and visitors would also able to enter the proposed building from Caroline Hill Road via the sitting-out garden and the lift lobbies. Pedestrian connections are also available at elevated levels from 2/F of the new building to access the existing SCAA football field/golf practising ground and the training pool.

2.6 Part rock cut slope located at the south within the site, where currently covered by weedy vegetation, will be reformed with new tree planting on slope top and hydroseeding on slope for enhancing the visual "green" of the SCAA. The new retaining structure associated with the reformed slope will be integrated with green roof and green wall to disguise its functional appearance.

2.7 The design and disposition of the proposed building are making reference to existing recreational neighbourhoods, green sloping areas of So Kon Po, environmental concerns, needs for the operation of recreational facilities and various site constraints. To ameliorate the potential visual impact and to better integrate the proposed building with the existing and planned development context, in addition to the design measures mentioned above, the following design measures are also incorporated in the architectural scheme:

- Proposed a low building height profile (BH of +45.40mPD) responding the existing elevation of SCAA sports ground in the west and in the north and existing buildings of SCAA (BH from +32 to 90mPD). Responsive building mass and scale of proposed building are much lower and smaller than the commercial and the District Court high-rises under construction (BH from +70 to 135mPD) immediately to the further north of the site;
- Greenings on the maintenance roof at +45.40mPD added to enhance visual amenity in views from elevated level of the surrounding neighbourhoods;
- The proposed scheme Improves permeability of proposed building through incorporation of large openings with perforated movable curtain and fence on the façade. These allow natural sunlight to penetrate and facilitate cross ventilation;
- Incorporation of vibrant colours and layered elements on proposed building echo with the design of the adjacent SCAA Grand Stand in the west that contribute to a coherent and lively aesthetic atmosphere to the overall SCAA identity and character;
- Regarding operational and safety concerns of the existing football field/golf practising ground, high protection fence (+61.60mPD) is unavoidable and integrated into the building design. Responsive non-reflective and permeable mesh materials would be used to alleviate the visual intrusion of this feature. Material used for the fence set around the existing football field/golf practising ground is a good example of the permeable fence;
- Building setback along Caroline Hill Road will accommodate planting areas and new tree plantings to create a comfortable walking environment to the pedestrians;
- Proposed sitting-out garden and planting areas at street level integrate the green slope character from the south of the SCAA to the east along Caroline Hill Road, enhance streetscape amenity and soften the development edge;
- Engineered appearance of the new retaining structure to the sloping area will be disguised with green roofs and green walls, and
- Replanting new trees and greenings on slope enhance the visual integration with the surrounding vegetated slopes of So Kon Po.

small part of sky view in-between the building gap in the background will be replaced by the proposed building. With responsive building height, mass and scale, and permeable façade treatment, the proposed building is hence considered compatible with the visual composition of the urbanised context.

4.2 Visual Obstruction – As demonstrated in **Figure V3.1**, only a portion of upper part of proposed building can be seen and replace some views to the urbanised background and a small part of sky view in-between the building gap in the background. Important visual access to the plantation, green slopes and building skyline will be largely maintained.

4.3 Effect on Visual Resources – The proposed building will not affect on the greenery in the view and the open sky view will be largely maintained. The grassed recreation ground and plantation in the foreground are maintained.

4.4 Effect on Public Viewers – By virtue of this low elevation view in close distance, the height and mass of proposed building would not affect visual resources in this viewpoint although some views to the urbanised background will be replaced by proposed building. Green resources in the foreground of this view will be maintained. Hence the change in overall urbanised context and visual amenity is minor; the proposed building forms a compatible component in the visual context of these viewers. Vegetation at front screened out most of lower part of the proposed building. With key visual resources largely maintained, the scale and mass of proposed building, the magnitude of change of visual amenity to this viewpoint is considered slight.

4.5 Having considered the slight magnitude of change, high sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in short distance view would be slightly adverse. It should be noted that the urbanised background will be changed upon the completion of planned commercial and District Court buildings right behind the SCAA.

Viewpoint B – View west from Tai Hang Road (Figure V3.2)

4.6 Visual Composition – The visual composition of this viewpoint comprises of vegetation on hill slope in front, grassed recreation grounds adjacent to the site, and urbanised building skyline on Leighton Hill and Broadwood Road in the background. Proposed low-profile building is set within a dense urbanised context; the lower part of the proposed building is screened by the existing plantation in recreation grounds along Caroline Hill Road. Regarding the elevated and medium distance of the view, proposed low-profile building will integrate with the existing SCAA buildings and surrounding recreational context in the midground of the view whilst the high-rise skyline and hilly landscape background will not be affected. Although the proposed building will replace the view to the existing football field/golf practising ground, proposed plantings at ground floor level of the proposed building will maintain the visual amenity in this view. With responsive building height, mass and scale, permeable façade treatment, and greening measures, proposed building does not form a major component in the view, hence proposed building will fit into and considered compatible with the visual composition of the urbanised context.

4.7 Upon the completion of two high-rise developments under construction including District Court buildings (BH of +70 & +135mPD) and commercial buildings (BH of +90 & +135mPD) immediately next to the SCAA and to the north of the proposed building, cumulative impact with the introduction of proposed low-profile building in this visual context would be negligible.

4.8 Visual Obstruction – As demonstrated in **Figure V3.2**, although the proposed building will replace the view to the existing football field/golf practising ground, proposed plantings at ground floor level and greening on the roof of the proposed building will maintain the visual amenity in this view. Views to major greenery in front and building skyline and hilly landscape in the background will not be affected.

4.9 Effect on Visual Resources – Key visual resources including the vegetation on the hill slope in front, plantation along the road and in recreation grounds and building skyline will be maintained. Planting proposal at street level and greenings on the roof of proposed building will replace the view of existing football field/golf practising ground of SCAA.

4.10 Effect on Public Viewers – By virtue of high elevation view in medium distance from proposed building with responsive building height, mass and scale of proposed building, permeable façade treatment, and planting proposal associated with the proposed building, therefore the proposed building would be integrated with the urbanised and recreational neighbourhoods. Planting proposal at street level and greenings on the roof of proposed building will enhance the visual amenity in the context. With important visual resources are largely maintained or enhanced, responsive building design, the magnitude of change of visual context and visual amenity in these viewers is considered slight.

4.11 Having considered the slight magnitude of change, medium sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in medium distance would be slightly adverse. It should be noted that the urbanised background will be changed upon the completion of commercial and District Court buildings immediately adjacent to the SCAA.

Viewpoint C – View west from So Kon Po Recreation Ground (Figure V3.3)

4.12 Visual Composition – The visual composition of the viewpoint comprises of tree planting at the edge of the grassed recreation grounds and low-rise of recreational buildings in the foreground, medium-rise building of Disciplined Services Sports and Recreation Club in the midground and residential and commercial high-rise building skyline on Leighton Hill and in Causeway Bay and open sky view in the background. Existing trees and buildings at the edge of the recreation ground screened out most of lower part of proposed building, only the uppermost of the proposed building could be seen. Proposed building with responsive height, mass and scale, and permeable façade treatment, is well integrated with urbanised background. Also, only a small portion of urbanised background will be replaced by proposed low-profile building. Proposed building will not reduce the visual openness of the visual context. With implementation of two high-rise developments under construction including District Court buildings (BH of +70 & +135mPD) and commercial buildings (BH of +90 & +135mPD) immediately next to the SCAA, the urbanised background will be changed following the on-going development process. With responsive building height, mass and scale, proposed building will fit into the existing and planned development context, and it is considered compatible to this urban context.

4.13 Visual Obstruction - As demonstrated in **Figure V3.3**, proposed building will replace only small portion of views to the existing buildings in SCAA and Causeway Bay in the background. Furthermore, small portion of view to the two high-rises developments under construction including District Court buildings (BH of +70 & +135mPD) and commercial buildings (BH of +90 & +135mPD) immediately next to the SCAA will be replaced by

4.30 Visual Obstruction – As demonstrated in **Figure V3.6**, proposed building will not obstruct any views.

4.31 Effect on Visual Resources – No key visual resources such as open sky view, sport ground and vegetation will be affected.

4.32 Effect on Public Viewers – By virtue of high elevation view in long distance from the proposed building, proposed building is being screened by intervening buildings and the proposed building well blends into the urbanised background. No perceivable change of visual amenity of these public viewers. The magnitude of change of visual context to these public viewers would be negligible.

4.33 Having considered the negligible magnitude of change and low sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers would be negligible**.**

Viewpoint G – View northeast from Stadium Path (Figure V3.7)

4.34 Visual Composition – The visual composition of this viewpoint comprises of streetscape of Stadium Path, roadside parking and Confucius Hall Secondary School in front, tree planning along Stadium Path and Eastern Hospital Road, SCAA existing golf net on vegetated slope can be seen in the midground, residential and institution high-rises and open sky view at the background. Majority of the lower part of the proposed building and proposed golf fence on the roof will be screened by the vegetated slope and the golf net of the SCAA. Comparing to the other buildings in the view, the proposed low-profile building well blends into the SCAA recreational facilities and the urbanised context. With responsive building height, mass and scale, proposed buildings is hence considered compatible with the visual composition of the urbanised and recreational context.

4.35 Visual Obstruction – As demonstrated in **Figure V3.7**, only a small portion of open sky view in between existing buildings where already obstructed by the golf fence in far distance will be screened by the proposed building.

4.36 Effect on Visual Resources – The proposed building will not affect the greenery in the view.

4.37 Effect on Public Viewers – By virtue of this low elevation view in close distance, the height and mass of proposed building would not affect visual resources in this viewpoint although some views to the urbanised background will be replaced by proposed building. Hence the change in overall urbanised context and visual amenity is minor, the proposed building forms a compatible visual component in visual context. Vegetation on slope of SCAA will screen out most of lower part of proposed building. With key visual resources largely maintained, the scale and mass of proposed building, the magnitude of change of visual amenity to this viewpoint is considered slight.

4.38 Having considered the slight magnitude of change, medium sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in short distance view would be slightly adverse.

Viewpoint H – View southeast from the junction of Caroline Hill Road & Cotton Path (Figure V3.8)

4.39 Visual Composition – Similar to viewpoint D, the visual composition of this viewpoint comprises of roadside parking, plantation along Caroline Hill Road, temporary hoarding of the site and open sky view interspersed with high-rises in the background. Visual context is confined along the road corridor and characterised by traffic and plantations. Proposed building setback and new tree planting along Caroline Hill Road can be easily seen in this road corridor visual context. Streetscape amenity will be enhanced with planting proposal associated with the proposed building. These planting proposals would also soften the development edge. Regarding the close viewing distance, proposed building will be dominant in the view. However, with application of the above design measures, including roadside plantation and permeable façade treatment, visual change of this road corridor and streetscape will not be substantial. Proposed building is therefore compatible to the existing visual context and on-going development process along the road.

4.40 Visual Obstruction - As demonstrated in **Figure V3.8**, although views to the buildings in the background and open sky view will be affected, it is unavoidable in this confined view and the on-going development process along the road.

4.41 Effect on Visual Resources – Existing trees and vegetation being seen along the road will not be affected. Although views to the buildings in the background and open sky view views will be affected, it is unavoidable in this confined view and the on-going development process along the road. Planting proposal associated with the proposed building introduces new visual resources in the context and enhances the streetscape amenity.

4.42 Effect on Public Viewers – By virtue of this low elevation view in close distance, although some views to buildings and open sky in the background will be replaced by proposed building, building setback and planting proposal associated with the proposed building, and permeable façade treatment, will enhance the streetscape amenity. Key visual resources, roadside plantation opposite to the site, will be maintained. Through the application of building setback and planting proposal, the magnitude of change of visual amenity to this viewpoint is considered slight.

4.43 Having considered the moderate magnitude of change, medium sensitivity of these public viewers, visual impact brought by the proposed building to these public viewers in short distance view would be moderately adverse with design measures mentioned above.

Viewpoint I – View northeast from Happy View Terrace (Figure V3.9)

4.44 Visual Composition – The visual composition of this viewpoint comprises of SCAA existing buildings and recreational facilities in front, high-rises in Tai Hang and on lower slopes of Hung Heung Lo Fung (+230mPD), and ridges from Siu Ma Shan (+424mPD) to Mount Butler (+436mPD) in the background. Vegetated slopes along Tai Hang Road are set in between the SCAA and Tai Hang high-rises. Proposed low-profile building is set behind the existing SCAA buildings, its view will be interrupted by the existing high fence. Proposed golf fence on the roof of proposed building is integrated with the existing fence. Regarding the elevated and short distance of the view, proposed low-profile building well blends into the existing SCAA buildings and surrounding recreational context in the midground of the view whilst the high-rise skyline and hilly landscape background will not be affected. Although the proposed building will replace the view to the existing buildings

golf net along the west edge will be reconstructed to integrate with the building design at +61.60mPD.

5.3 Regards of operational and safety concerns of the existing football field/golf practising ground to the new building, high protection fence on the roof of proposed building is unavoidable and has been integrated with the building design. Responsive non-reflective and permeable mesh materials would be used to alleviate the visual intrusion of these protection fences. Material used for fence set around the existing football field/golf practising ground is a good example of high permeable fence. Besides, at lower floors of proposed building, for safety reasons, permeable facade treatment with perforated movable curtain and fence will be used.

5.4 A sitting-out garden is proposed at the southernmost of the site and at street level along Caroline Hill Road to soften the development edge and enhances the streetscape amenity.

5.5 Part rock cut slope located at the south within the site, where currently covered by weedy vegetation, will be reformed with new tree planting on slope top and hydroseeding on slope for enhancing the visual “green” of the SCAA. The new retaining structure associated with the reformed slope will be integrated with green roof and green wall to disguise its functional appearance.

5.6 Due to the viewing distance and prominence of the proposed building to the public viewers, the proposed building would inevitably change of some visual context and amenity of the viewers in close proximity viewing distance to the site including viewers from Hong Kong Stadium, So Kon Po Recreation Ground, Stadium Path and Happy View Terrace. In these views, the lower portion of the proposed building will be screened by the existing buildings, existing vegetation in the recreation grounds or on slopes of SCAA. With responsive building height, mass and scale, proposed low-profile building and integrated golf fence well blends into the urbanised building background and it will only replace a small portion of views of existing buildings in the background. Although visual amenity of the viewers will be changed inevitably, the slightly adverse visual impact to these viewers would be alleviated with mitigation measures.

5.7 Even though visual amenity along Caroline Hill Road will be changed regarding the introduction of new building, some sky views at street level are inevitably being replaced, it is unavoidable in the on-going development process along the road, particularly after the implementation of the high-rises, including the District Court buildings (BH of +70 and +135mPD) and the commercial buildings (BH of +90 and +135mPD), immediately next to the SCAA and proposed building. The moderately to slightly adverse impact to the pedestrians along Caroline Hill Road would be further alleviated by proposed building setback, tree planting and planting proposal at street level and in proposed sitting-out garden, replanting on slope and greening on retaining structures and permeable façade treatment etc. With the implementation of these mitigation measures, the streetscape amenity would be enhanced, and the development edge would be soften.

5.8 For the viewers in medium distance from low level views to the proposed building, visual change on viewers at Moreton Terrance Temporary Playground is considered not perceivable and negligible regarding building height, mass and scale, proposed building is well blend into the urbanised context. Viewers from another medium distance view at elevated level at Tai Hang Road would experience a slightly adverse impact with introduction of proposed building in the recreational landscape context at So Kon Po. The lower portion of proposed building will be largely screened by existing vegetation in the recreation grounds. Replanting on slope, greening on retaining structures and greening

on the roof will make the proposed building better integrated with the surrounding green amenity. Although some views to the urbanised background, football field/ golf practising ground of SCAA will be replaced by the proposed building, building skyline behind will not be affected. With responsive building height, mass and scale of proposed building, and having considered the implementation of the commercial and institutional high-rises under construction adjacent to the site, the visual impact will be further alleviated.

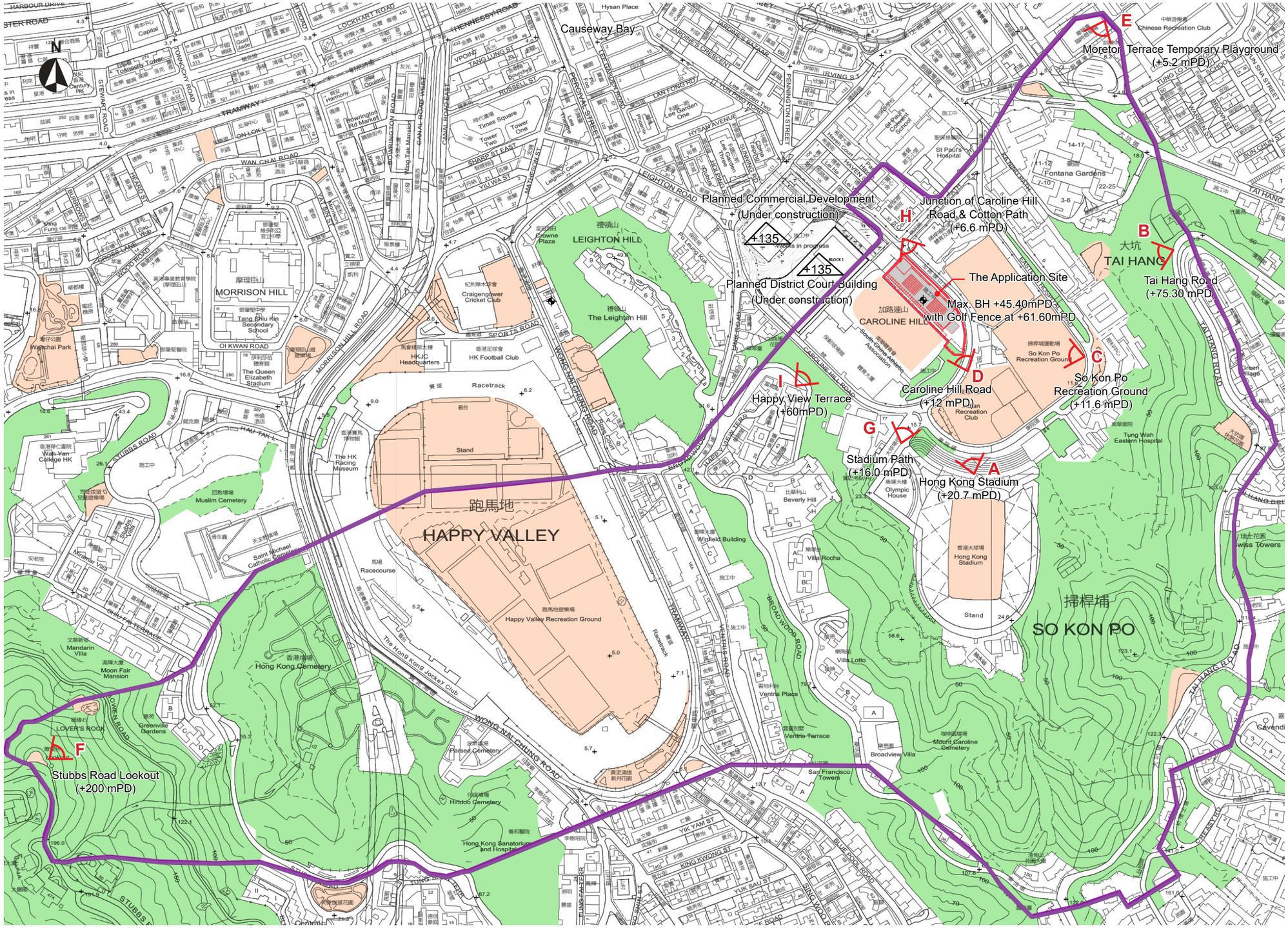
5.9 In distance elevated views from Stubbs Road Lookout, the wide-open view of the visitors is characterised by densely urbanised context with building skyline of Tai Hang, Causeway Bay and Happy Valley. Having considered the intervening effect of existing vegetation and existing buildings and viewing distance, proposed building is not perceivable and negligible regarding its building height, mass and scale, proposed building well blends into the urbanised context. Visual impact to these public viewers is considered as negligible.

5.10 In overall terms, though proposed building would have some visual impacts to the public viewers, with responsive building height, mass and scale, building setback and planting proposal at street level, green wall and greening on the roof , and permeable façade treatment etc. would alleviate the impact to an acceptable level, and proposed building is therefore compatible with the existing urbanised and recreational landscape and visual context. Proposed building is acceptable from visual perspectives.

Table 5.1 Summary of Visual Impact

Viewpoint	Visual Sensitivity	Resultant Visual Impact
Viewpoint A : View north from the Hong Kong Stadium	High	Slightly Adverse
Viewpoint B: View west from Tai Hang Road	Medium	Slightly Adverse
Viewpoint C: View west from So Kon Po Recreation Ground	Medium	Slightly Adverse
Viewpoint D: View north from Caroline Hill Road	Medium	Slightly Adverse
Viewpoint E: View southwest from Moreton Terrace Temporary Playground	Low	Negligible
Viewpoint F: View northeast from the Stubbs Road Lookout	Low	Negligible
Viewpoint G: View northeast from Stadium Path	Medium	Slightly Adverse
Viewpoint H: View southeast from the junction of Caroline Hill Road & Cotton Path	Medium	Moderately Adverse
Viewpoint I: View northeast from Happy View Terrace	Medium	Slightly Adverse

Figures



LEGEND

- Application Site Boundary
- Photomontage Viewpoint
- Assessment Area (Visual Envelope)
- Proposed Development
- +135 — Maximum Building Height (mPD) as stated in Approved Wong Nai Chung No. S/H7/21
- +80 — Building Heights (mPD)
- +54.22 — Proposed Building Heights (mPD)/ Formation Level

Visual Features

- Planting/ Vegetated Slope
- Open Space (Park, Garden and Sports Ground)

Viewpoint A - View north from Hong Kong Stadium

Viewpoint B - View west from Tai Hang Road

Viewpoint C - View west from So Kon Po Recreation Ground

Viewpoint D - View north from Caroline Hill Road

Viewpoint E - View southwest from Moreton Terrace Temporary Playground

Viewpoint F - View northeast from the Stubbs Road Lookout

Viewpoint G - View northeast from Stadium Path

Viewpoint H - View southeast from the junction of Caroline Hill Road & Cotton Path

Viewpoint I - View northeast from Happy View Terrace

0 50 100 200M

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Assessment Area and Viewpoint Location of Photomontage

SCALE	As Shown	DATE	December 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V2.1	REV	A

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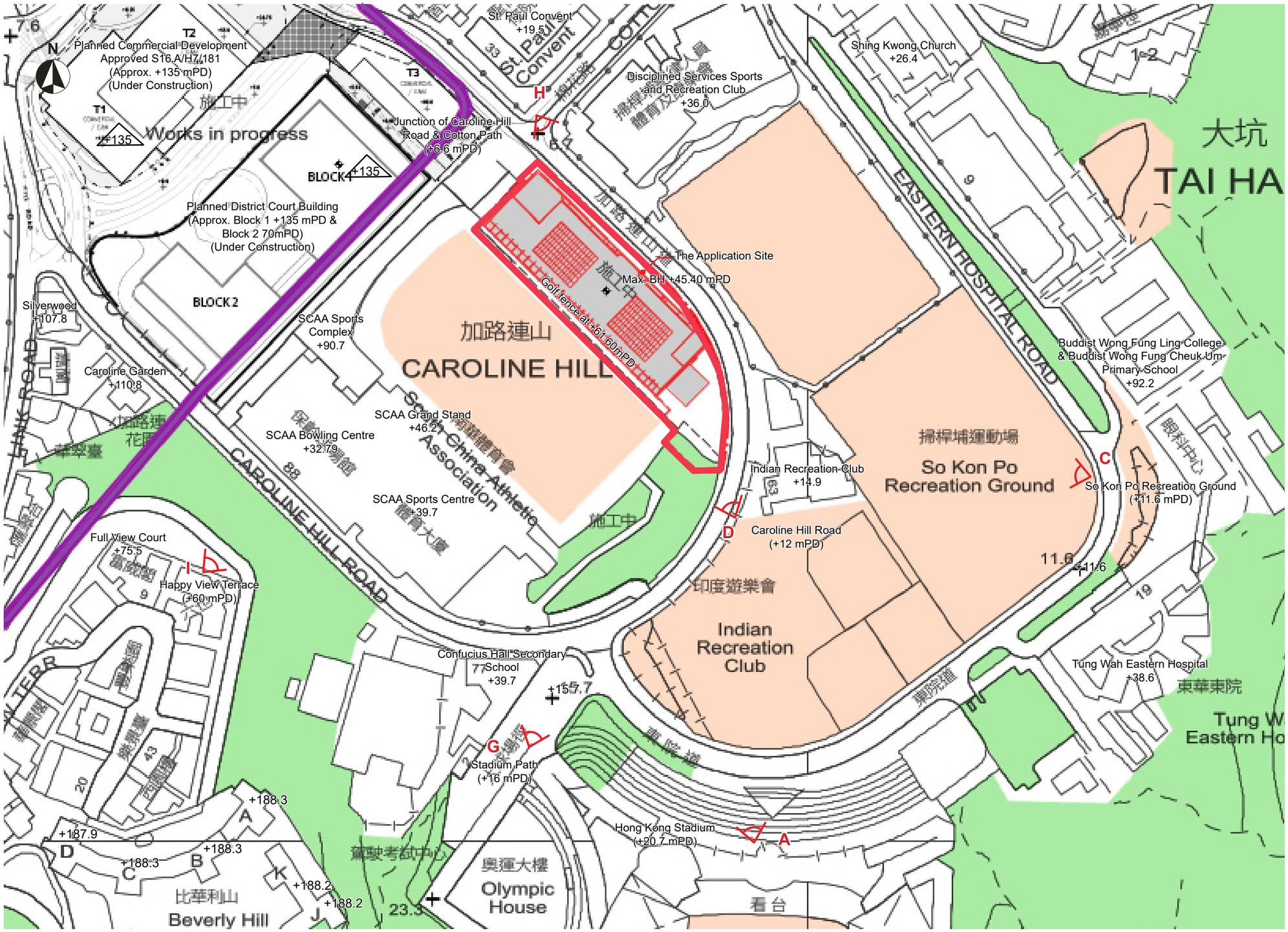

LEGEND

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- Photomontage Viewpoint
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- Proposed Development
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Visual Features

- Planting/ Vegetated Slope
- Open Space (Park, Garden and Sports Ground)

Viewpoint A - View north from Hong Kong Stadium

Viewpoint B - View west from Tai Hang Road

Viewpoint C - View west from So Kon Po Recreation Ground

Viewpoint D - View north from Caroline Hill Road

Viewpoint E - View southwest from Moreton Terrace Temporary Playground

Viewpoint F - View northeast from the Stubbs Road Lookout

Viewpoint G - View northeast from Stadium Path

Viewpoint H - View southeast from the junction of Caroline Hill Road & Caroline Hill Road & Cotton Path

Viewpoint I- View northeast from Happy View Terrace

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Assessment Area and Viewpoint Location of Photomontage

SCALE	As Shown	DATE	December 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V2.2	REV	A

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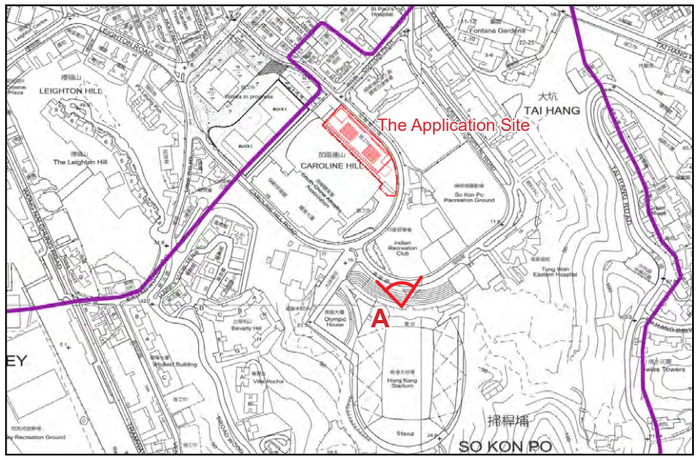
Existing View
View north from Hong Kong Stadium



Key Plan

Viewpoint A
Viewpoint Elevation: +20.70mPD at Hong Kong Stadium
Viewing Distance: 170m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD



Photomontage

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint A - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.1		REV	A

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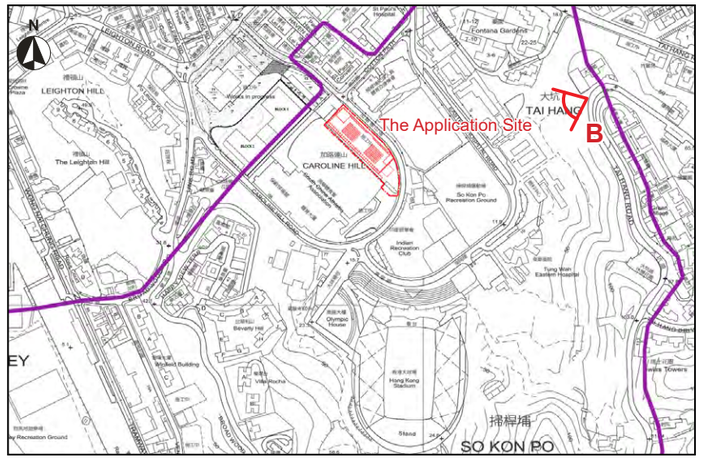
Existing View
View west from Tai Hang Road



Photomontage



Key Plan

0 50 100 200M

Viewpoint B
Viewpoint Elevation: +75.3mPD at Tai Hang Road
Viewing Distance: 310m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint B - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.2			REV A

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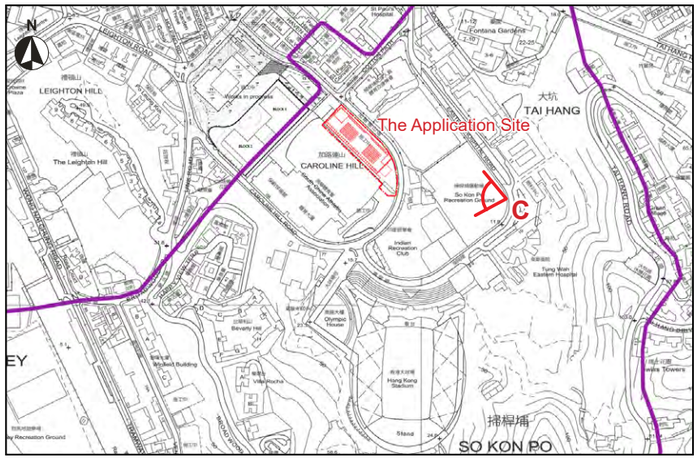
Existing View
View west from So Kon Po Recreation Ground



Key Plan

0 50 100 200M

Viewpoint C
Viewpoint Elevation: +11.6m PD at So Kon Po Recreation Ground
Viewing Distance: 165m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD



Photomontage

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint C - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.3	REV	A

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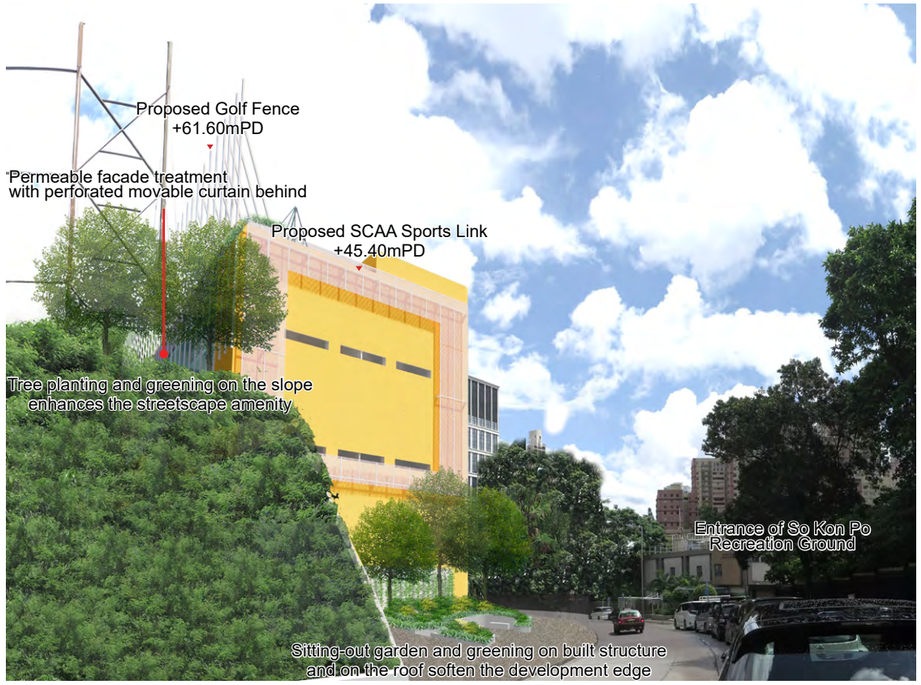
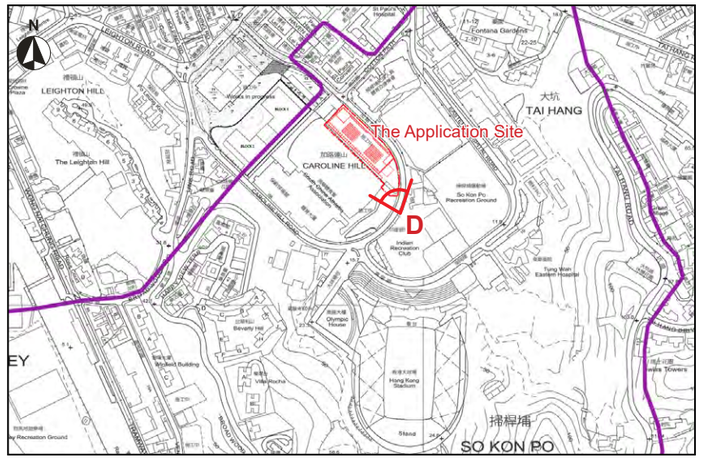
Existing View
View north from Caroline Hill Road



Photomontage



Key Plan

Viewpoint D
Viewpoint Elevation: +12mPD at Caroline Hill Road
Viewing Distance: 20m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint D - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.4			REV A

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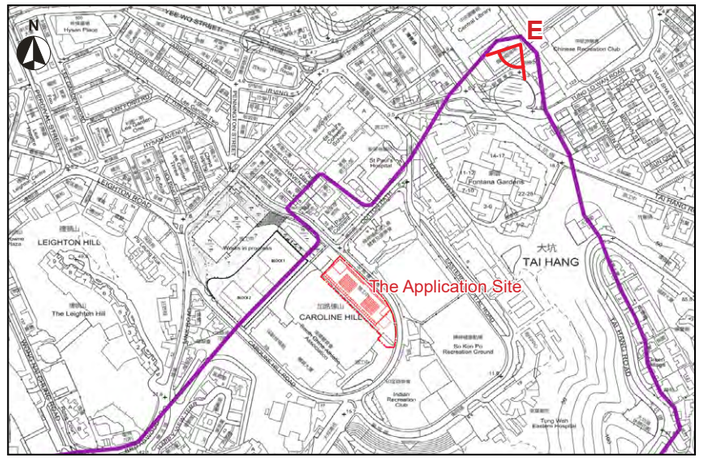
Existing View
View southwest from Moreton Terrace Temporary Playground



Photomontage



Key Plan

0 50 100 200M

Viewpoint E
Viewpoint Elevation:
+5.2mPD at Moreton Terrace Temporary Playground
Viewing Distance: 430m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint E - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025
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FIGURE NO.	FIGURE V3.5	REV	A

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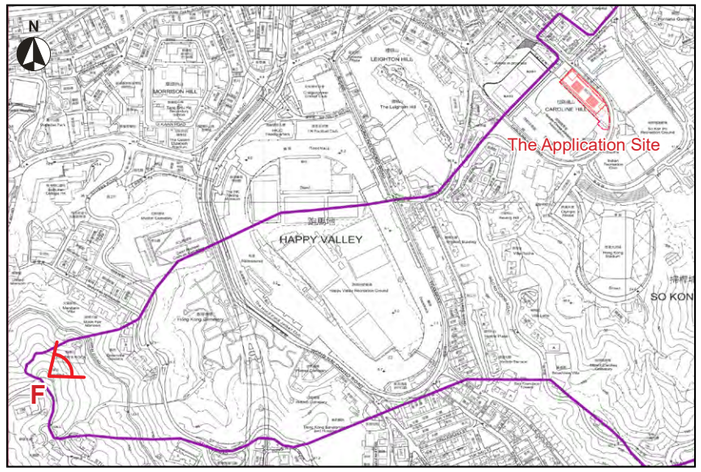
Existing View
View northeast from the Stubbs Road Lookout



Key Plan

Viewpoint F
Viewpoint Elevation: +200mPD at the Stubbs Road Lookout
Viewing Distance: 1,360m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD



Photomontage

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint F - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.6			REV A

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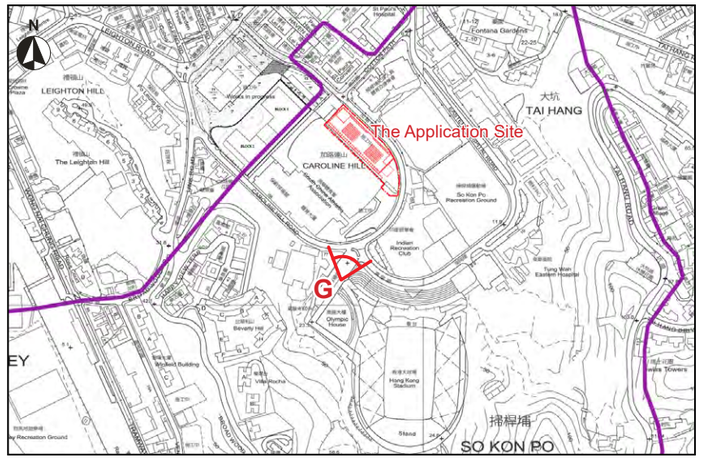
Existing View
View northeast from Stadium Path



Photomontage



Key Plan

Viewpoint G
Viewpoint Elevation: +16mPD at the Stadium Path
Viewing Distance: 146m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint G - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.7		REV	A

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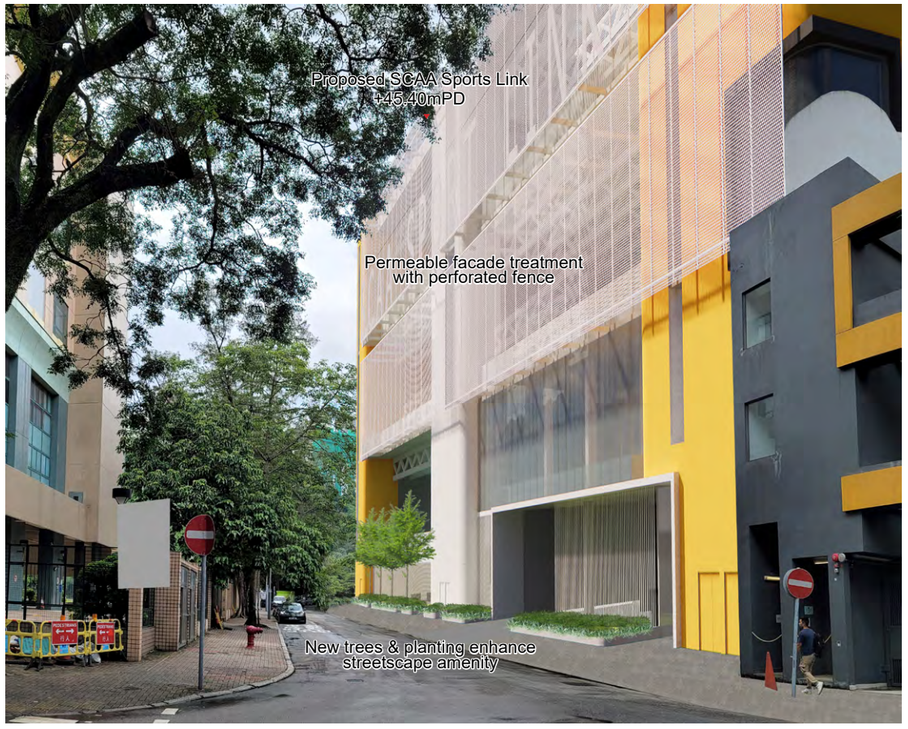
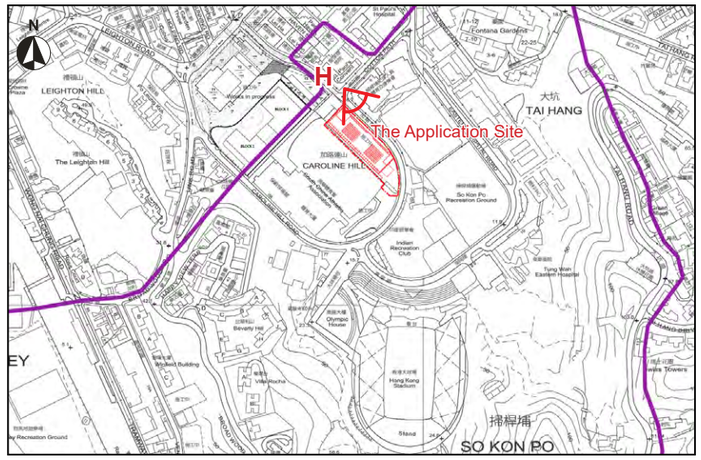
Existing View
View southeast from the junction of Caroline Hill Road & Cotton Path



Photomontage



Key Plan

Viewpoint H
Viewpoint Elevation:
+6.6mPD at the junction of Caroline Hill Road and Cotton Path
Viewing Distance: 20m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint H - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.8		REV	A

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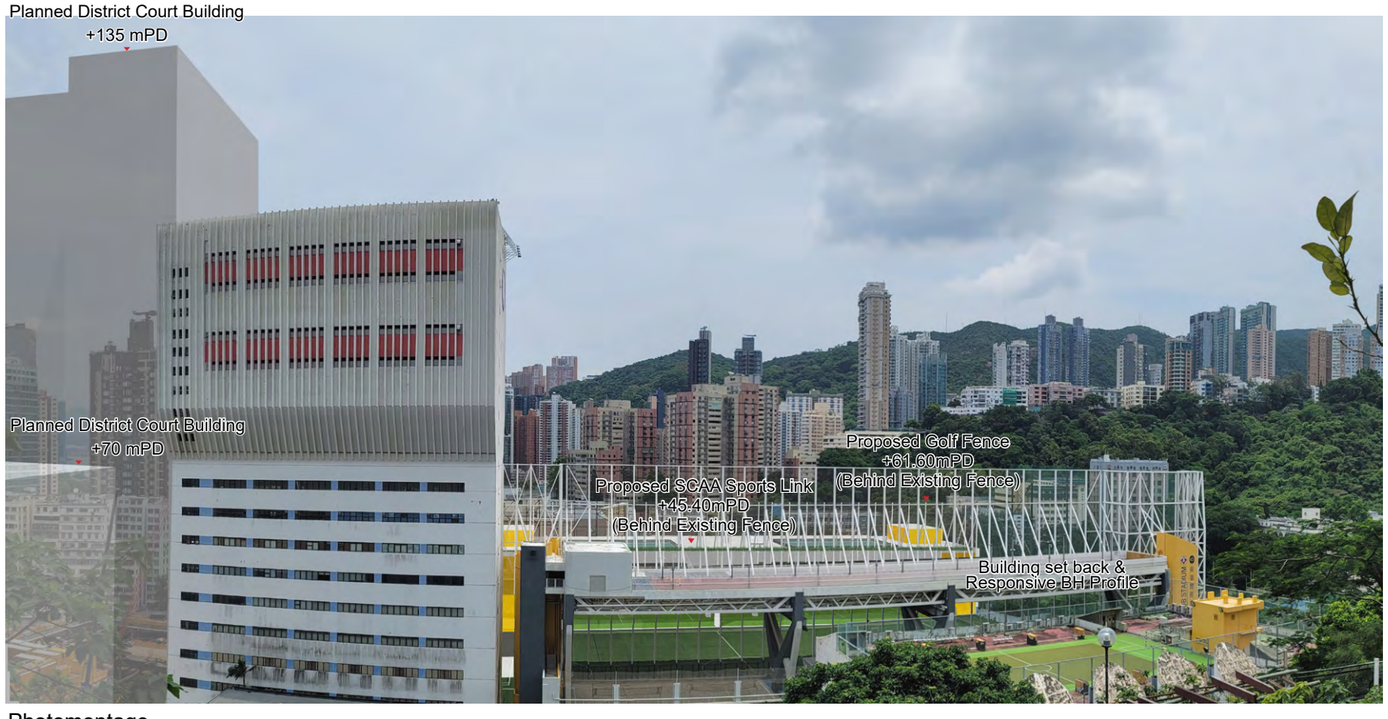
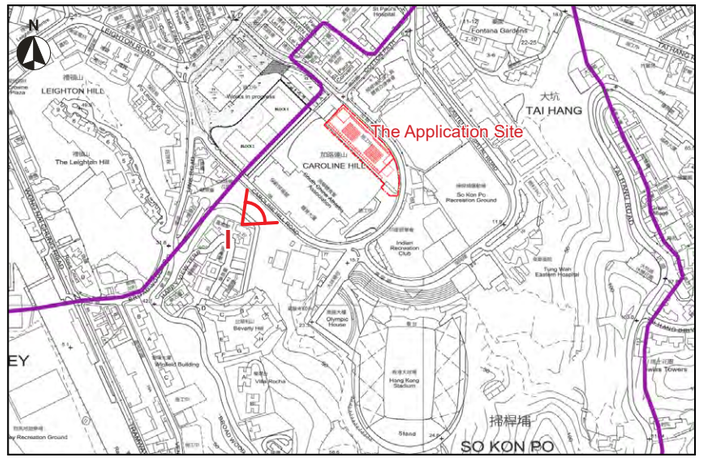
Existing View
View northeast from Happy View Terrace



Photomontage



Key Plan

Viewpoint I
Viewpoint Elevation: +60mPD at Happy View Terrace
Viewing Distance: 200m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint I - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.9		REV	A

ADI LIMITED
LANDSCAPE ARCHITECTURE, URBAN DESIGN AND MASTER PLANNING
10/F BANGKOK BANK BUILDING, 18 BONHAM STRAND WEST, HONG KONG
TELEPHONE 2131 8630 FACSIMILE 2131 8609
雅博奧頓國際設計有限公司
國際環境管理、城市規劃及設計、園景建築顧問服務
香港上環文咸西街十八號盤谷銀行大廈十樓
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APPENDIX III

Revised Air Ventilation Assessment

Issue No. : 2

Issue Date : December 2025

Project No. : 2215

AIR VENTILATION ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.**	2215
Document Title	Air Ventilation Assessment		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	October 2025	1st Submission	Toby Lam	Joanne Ng	Grace Kwok
2	December 2025	2nd Submission	Toby Lam	Joanne Ng	Grace Kwok

[redacted]

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Appendix 4.1 Site Layout Plan

1. Executive Summary

1.1.1. An Air Ventilation Assessment – Expert Evaluation (AVA-EE) study was conducted for the Section 16 Planning Application for Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong to provide qualitative evaluation of wind performance under Baseline and Proposed Scheme.

1.1.2. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage, with the top level positioned at 61.6mPD of the golf fence. Good design features including the provision of building setback and a stepped building height profile with the surrounding structures have been incorporated in the Proposed Scheme upon the consideration of site and design constraint criterion.

1.1.3. As evaluated in the AVA-EE, with the provision of abovementioned design features, no significant adverse impact to the wind environment in the surrounding area associated with the Proposed Development is anticipated.

2. Introduction

2.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare an Air Ventilation Assessment ("AVA") in support of the Section 16 Planning Application for Proposed SCAA Sports Link ("Proposed Development") at South China Athletic Association, 88 Caroline Hill Road, Hong Kong ("Subject Site").

3. Objectives

3.1.1. The main objective of the study is to evaluate potential air ventilation impacts associated with the Proposed Development on pedestrian wind environment within and in the vicinity of the Subject Site using the methodology framework as set out by relevant government standard, guidelines and technical circulars.

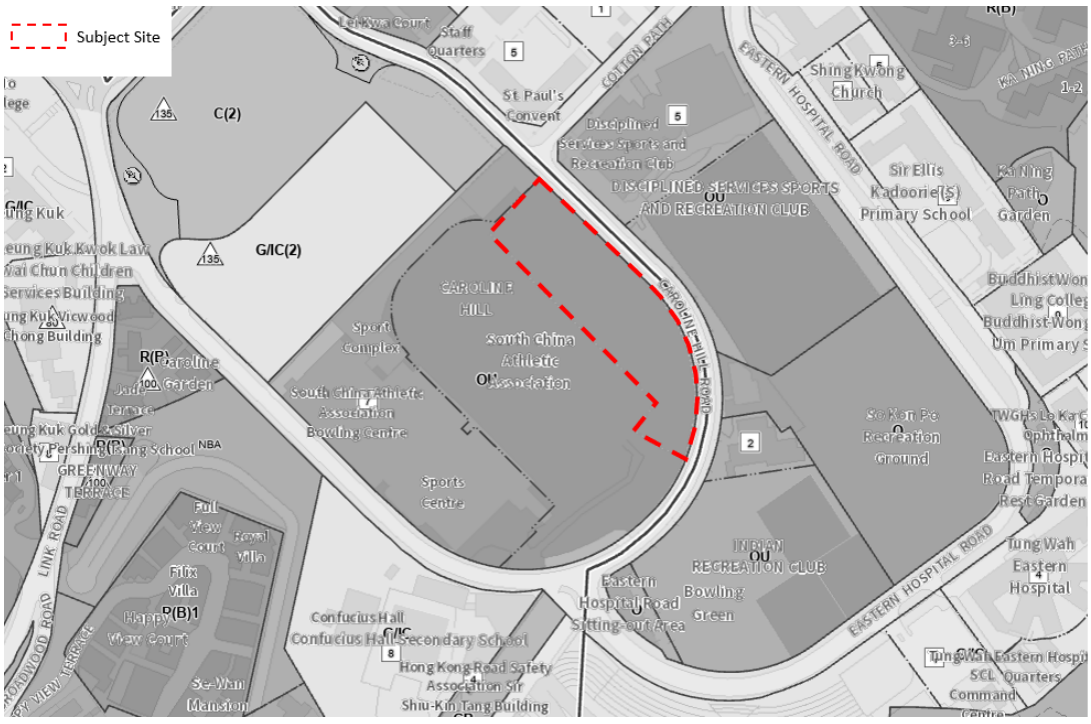
4. Description of the Proposed Development

4.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). On the building side facing the South China Stadium of South China Athletic Association, a movable curtain at 2/F and golf fence with top level of 61.6mPD are provided. The site layout plans for the Proposed Development are provided in ***Appendix 4.1***.

4.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

4.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 4.1*** shows the location of the Subject Site.

Figure 4.1 Subject Site Location



5. Methodology

5.1.1. The methodology framework of this study is set out in the Technical Circular No. 1/06 and its Annex A - Technical Guide for Air Ventilation Assessment for Development in Hong Kong. The Technical Circular is jointly issued by Housing, Planning and Lands Bureau (HPLB) and Environment, Transport and Work Bureau (ETWB) in July 2006 (Technical Guide).

5.1.2. The scope of this study shall cover the following:

- To identify any major wind corridors which should be preserved or reserved;
- To identify any potentially affected areas due to the Proposed design including the layout and deposition;
- To identify good design features; and
- To provide recommendations for alleviating the potential air ventilation impact identified.

6. Assessment Methodology

6.1. Wind Availability Data

Hong Kong Observatory

6.1.1. The Hong Kong Observatory records the metrological data in Hong Kong. Among all the weather stations in Hong Kong, wind data from Hong Kong Observatory station shall be used for the discussion on overall wind environment in the region.

6.1.2. According to the wind availability data from Hong Kong Observatory station from 1991 - 2020, the annual wind rose revealed winds flowing from the east throughout the year. The wind data from July to September is adopted as the summer prevailing wind, where predominant summer winds are flowing from the east and west. The wind rose during annual and summer conditions are shown in ***Figure 6.1*** and ***Figure 6.2*** respectively.

Figure 6.1 Annual Wind Rose for Hong Kong Observatory Station, 1991 - 2020

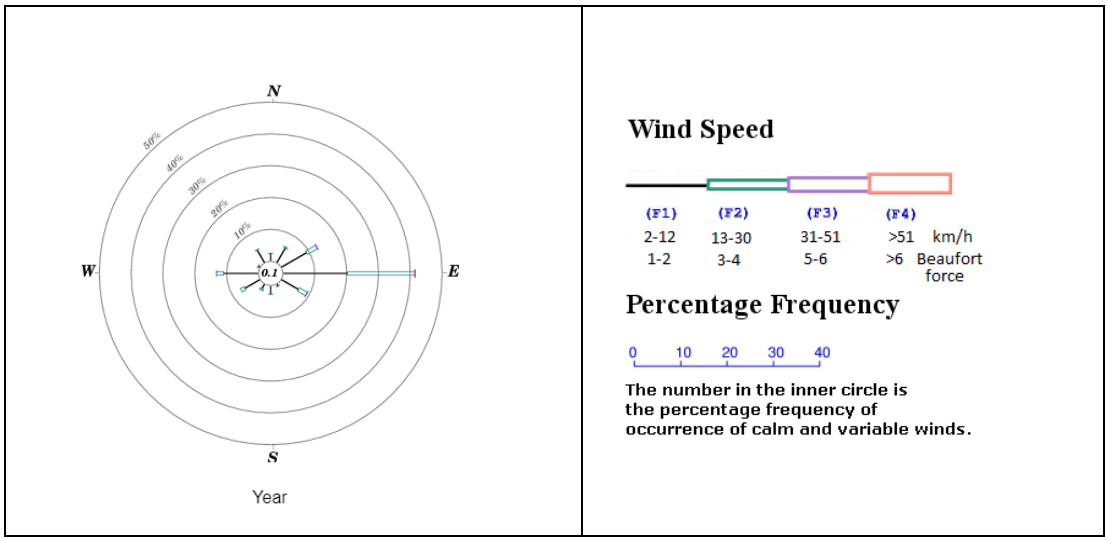
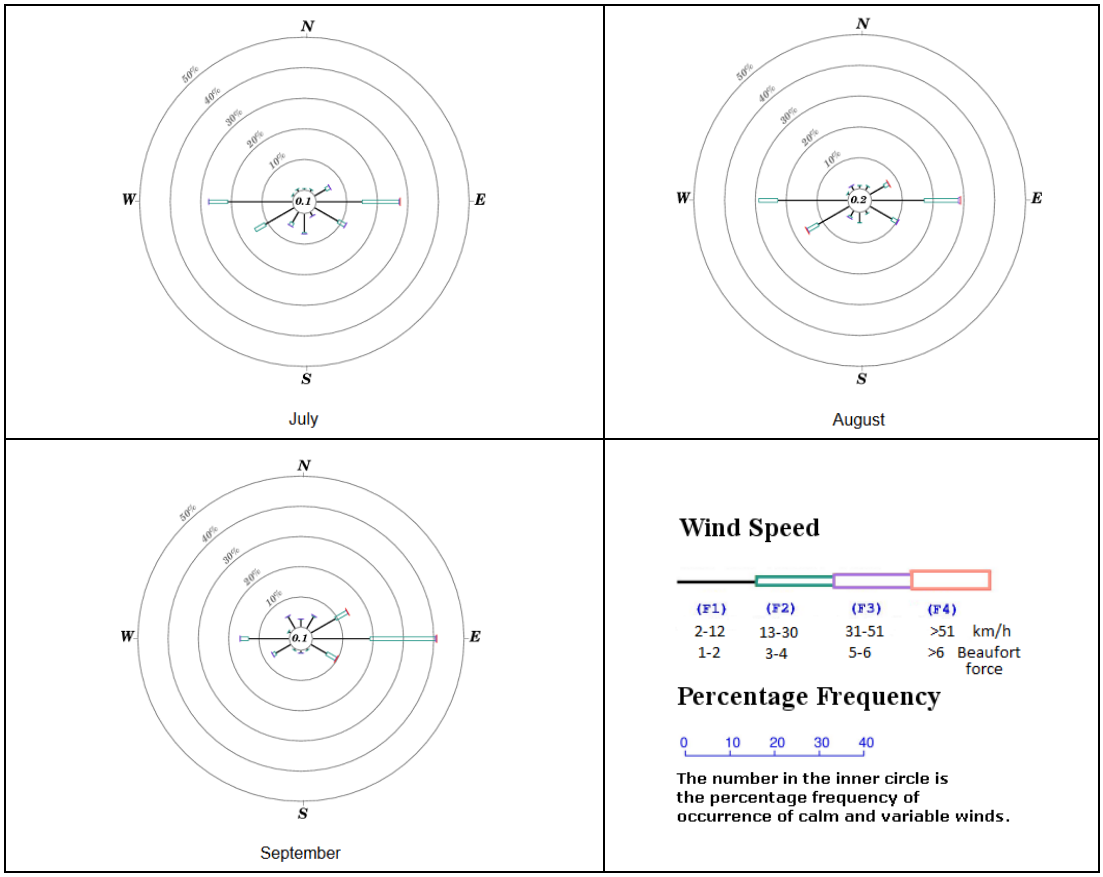


Figure 6.2 Summer Wind Rose for Hong Kong Observatory Station, 1991 - 2020



Regional Atmospheric Modelling System (RAMS)

6.1.3. Wind availability to the Subject Site is evaluated with reference to the "Consultancy Study on Establishment of Simulated Site Wind Availability Data for Air Ventilation Assessments in Hong Kong" simulated by the meso-scale model of Regional Atmospheric Modelling System (RAMS) Version 6.0 at the horizontal resolution of 0.5km * 0.5km.

6.1.4. The Subject Site is located within grid (083,033) in Causeway Bay. Wind availability data at 200m was adopted in this assessment. According to PlanD's simulated data, wind roses, wind direction and wind probability data are provided in ***Figure 6.3*** and ***Table 6.1***.

Figure 6.3 Wind Rose at Grid (083,033)

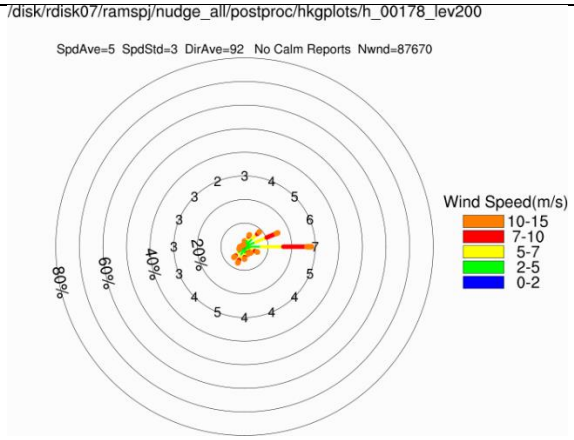
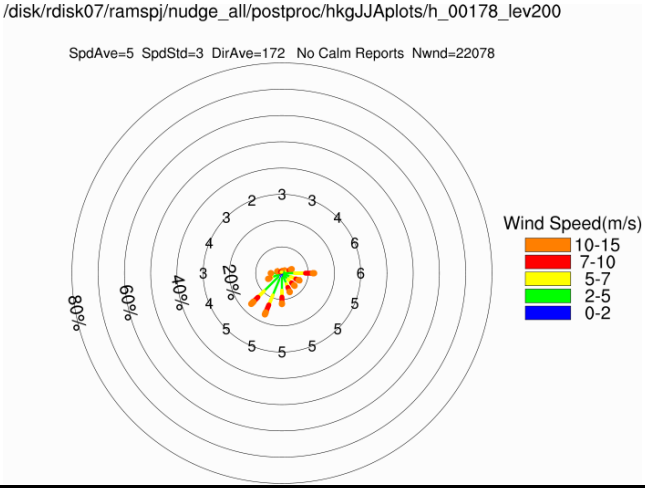
Wind Rose – Annual	
200m	
Wind Rose – Summer	
200m	

Table 6.1 Wind Probability at 200m (Grid 083,033)

Wind Direction	Annual Probability	Summer Probability
N	2%	1%
NNE	5%	1%
NE	**9%**	2%
ENE	**15%**	4%
E	**29%**	**12%**
ESE	6%	7%
SE	4%	7%
SSE	4%	8%
S	5%	**12%**
SSW	7%	**17%**
SW	6%	**17%**
WSW	3%	6%
W	2%	4%
WNW	1%	2%
NW	1%	1%
NNW	1%	1%

6.1.5. According to RAMS wind data, annual prevailing winds are the incoming winds flowing from the northeast quadrant (i.e. NE, ENE, E) while summer prevailing winds are flowing from southwest quadrant (i.e S, SSW, SW) and from E directions.

6.1.6. Among the two sets of wind data, ***Table 6.2*** summarises the identified prevailing wind conditions of in Causeway Bay area. For a comprehensive discussion on air ventilation performance of the Subject Site and the wind environment at pedestrian level, RAMS data is more appropriate as it is the most updated.

Table 6.2 Wind Data Summary

Sources	Annual Wind	Summer Wind
Hong Kong Observatory (Hong Kong Observatory station from 1991 -2020)	E	E, W
RAMS data (Grid 083,033)	NE, ENE, E	E, S, SSW, SW

7. Surrounding Environment

7.1. Urban Morphology

7.1.1. The Subject Site is surrounded by low to mid-rise GIC developments (approx. 20-50mPD) and sport centre (approx. 40-90mPD). The building heights near the surrounding and the land use in surroundings are summarized in ***Table 7.1*** and ***Figure 7.1*** respectively.

Table 7.1 Building Heights of Major Development in the Surroundings

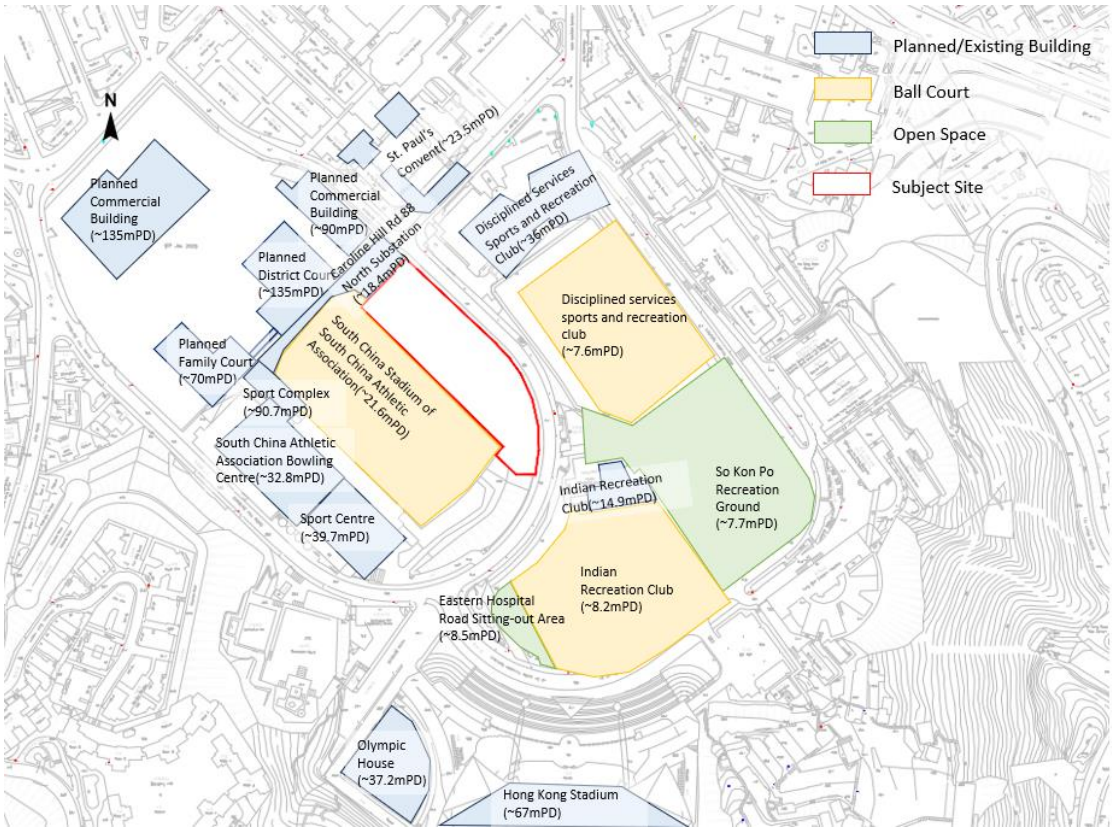
Surrounding Buildings	Building Heights (mPD)
Sport Complex	~90.7
Sports Centre	~39.7
South China Athletic Association Bowling Centre	~32.8
Indian Recreation Club	~8.2-14.9
Disciplined Services Sports and Recreation Club	~36
South China Athletic Association	~21.6
Disciplined services sports and recreation club	~7.6
So Kon Po Recreation Ground	~7.7
Eastern Hospital Road Sitting-out Area	~8.5
St. Paul's Convent	~23.5
Staff Quarters	~16.7
Caroline Hill Rd 88 North Substation	~18.4
Olympic House	~37.2
Hong Kong Stadium	~67
Planned Commercial Buildings	~90-135[1]
Planned District/Family Court	~70-135[2]

Note:

[1] Reference to Application for Permission under Section 16 of The Town Planning Ordinance (A/H7/188).

[2] Reference to Legco Paper "Item for Public Works Subcommittee of Finance Committee (PWSC(2022-23)3) on 33LJ – Construction of a District Court Building at Caroline Hill Road".

Figure 7.1 Surrounding Environment



8. Baseline Scheme and Proposed Scheme

8.1.1. The Subject Site falls within an area of OU (Sports and Recreation Club) on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The existing condition of the site is incorporated in Baseline Scheme and compared with the Proposed Scheme in the discussion of this report.

8.1.2. The major design parameters of Proposed Scheme are summarized in ***Table 8-1.*** Layout plans and section drawing under Proposed schemes are shown in ***Appendix 3.1.*** Comparison between Baseline Scheme (OZP-Compliant Scheme) and Proposed Scheme are made to evaluate any impacts on the overall air ventilation performance in its surrounding area.

Table 8-1 Major design parameters of Proposed Scheme

	Proposed Scheme
Site Area (m^2)	About 6,132
Gross Floor Area (m^2)	About 31,327.12
No. of Storey	4
Building Height (mPD)	45.4

8.1.3. Special design considerations have been adopted in Proposed Scheme. In particular, good design features including the provision of building setback and a stepped building height profile with the surrounding structures have been incorporated in the Proposed Scheme upon the consideration of site and design constraint criterion. These good design features are discussed in the following sections.

Building Setback

8.1.4. Building setback could reduce blockage in particular the perimeter of a development. The landscape garden at the southeastern portion is located at G/F which setbacks the building façade from the site boundary at least 20m. The building setback allows more wind at pedestrian level to flow across the site along Caroline Hill Road, thus improving wind environment along the road and local areas at the south of the Subject Site. The building setback is indicated in ***Figure 8.1.***

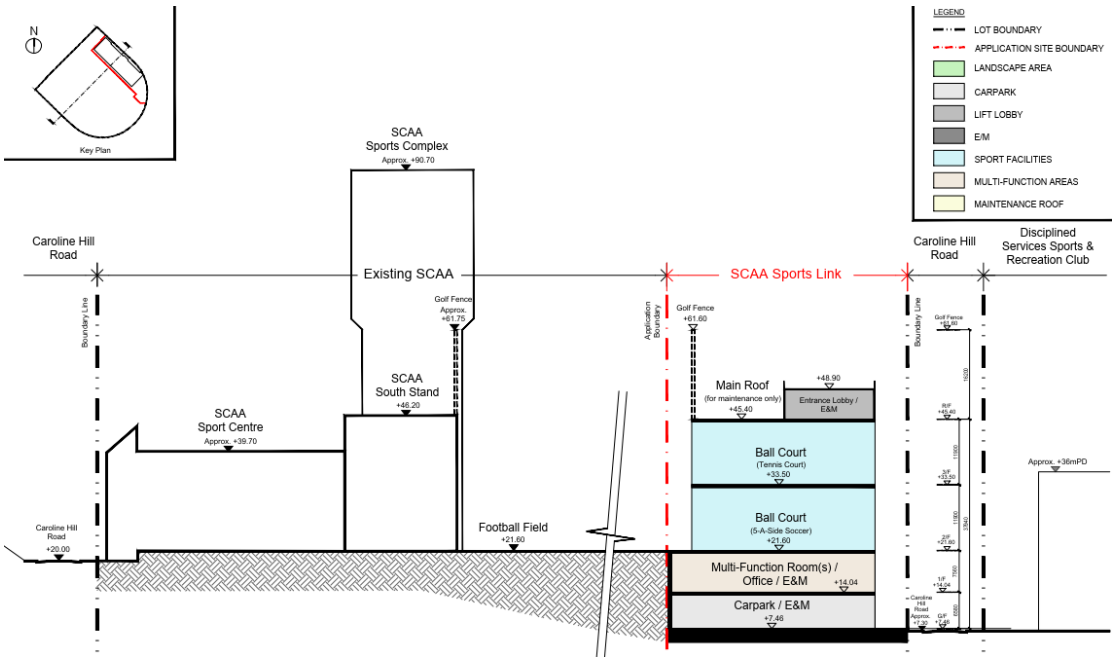
Figure 8.1 Building Setback at G/F



Stepped Height Profile with the surrounding structures

8.1.5. Under the Proposed Scheme, the top level of the Proposed Development with the golf fence is 61.6mPD. A stepped building height profile is formed with the surrounding, from SCAA Sports Complex at approx. 90.7mPD, the Proposed Development at 61.6mPD and Disciplined Services Sports & Recreation Club at approx. 36mPD, aligned in a NE-SW direction. It facilitate the wind flow of both incoming annual and summer prevailing winds to benefit the wind environment in the surrounding area. The section of the Proposed Development with the surrounding is shown in ***Figure 8.2.***

Figure 8.2 Section of the Proposed Development



9. Expert evaluation

9.1.1. Reference have been made to the Term Consultancy for AVA Services – Expert Evaluation on Air Ventilation Assessment of Causeway Bay Area (Project Ref: AVR/G/50), the Term Consultancy for Expert Evaluation on Air Ventilation Assessments for an Instructed Project for Causeway Bay Area - Expert Evaluation Report (2017) (Project Ref: AVR/G/113), and the Term Consultancy for AVA Services - Expert Evaluation on Air Ventilation Assessment for Wong Nai Chung Area (Project Ref: AVR/G/23) and Initial Study on Air Ventilation Assessment for Section 16 Planning Application (A/H7/188).

E, ENE, NE wind

9.1.2. Under annual prevailing wind condition, incoming E, ENE and NE wind would flow through the Sport Ground of Disciplined Services Sports and Recreation Club (~7.6mPD) and along the Cotton Path between St Paul's Convent (~23.5mPD) and Disciplined Services Sports and Recreation Club (~36mPD) at the east of the Subject Site, reaching the Subject Site as shown in ***Figure 9.1.***

9.1.3. Under the Baseline Scheme, the existing condition of the Subject Site with no obstruction is beneficial to the wind flow from easterly direction. Incoming E, ENE and NE wind could penetrate through the Subject Site at the north and south, and reach the downwind area of South China Athletic Association Bowling Centre (~32.8mPD) and Sport Centre at pedestrian level (~39.7mPD). The incoming wind collides at the South China Athletic Association Bowling Centre, Sport Centre and Sport Complex, creating a downwash effect and thus improving the wind environment at the South China Stadium of South China Athletic Association.

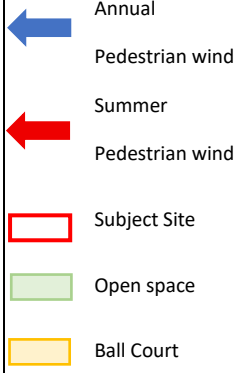
9.1.4. Under the Proposed Scheme, the southeastern portion of the Proposed Development is optimized to facilitate the flow of easterly wind by providing at least 20m setback from the southeastern site boundary. It allows more incoming wind to penetrate through the Subject Site at pedestrian level, thus improving wind environment along the road and local areas at the west of the Subject Site.

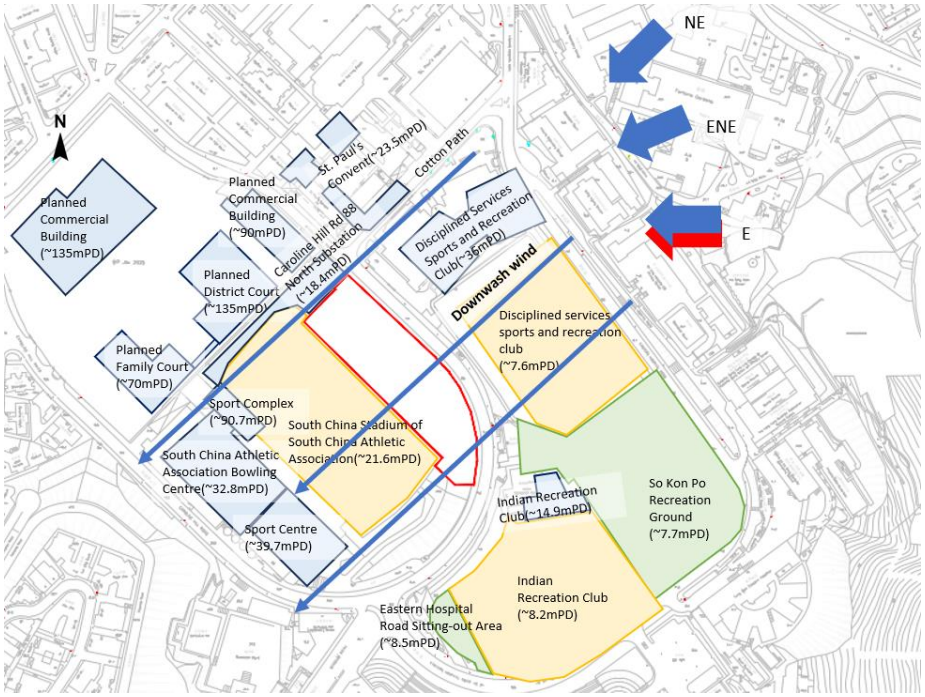
9.1.5. In addition, a stepped building height profile is provided for Proposed Development to the surrounding structures under the Proposed Scheme. The incoming wind flows from Disciplined Services Sports and Recreation Club and collide at the Proposed Development, creating a downwash effect at pedestrian level. In addition, by aligning the NE-SW direction, the building height of Disciplined Services Sports and Recreation Club, Proposed Development and Sport Complex are 36mPD, 61.6mPD and 90.7mPD respectively. High-to-mid-level prevailing wind can be captured and diverted downwards to the pedestrian area by the downwash effect.

9.1.6. With the provision of building setback from the southeastern site boundary and a stepped building height profile to the surrounding structures, it is expected that the impacts on wind environment at downwind areas including South China Stadium of South China Athletic Association, South China Athletic Association Bowling Centre and Sport Centre under the Proposed Scheme could be minimized.

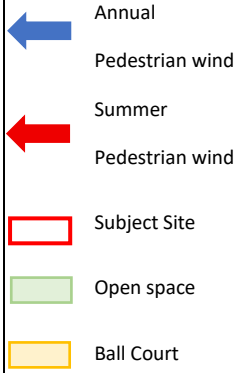
Figure 9.1 Wind Environment under E, ENE, NE wind

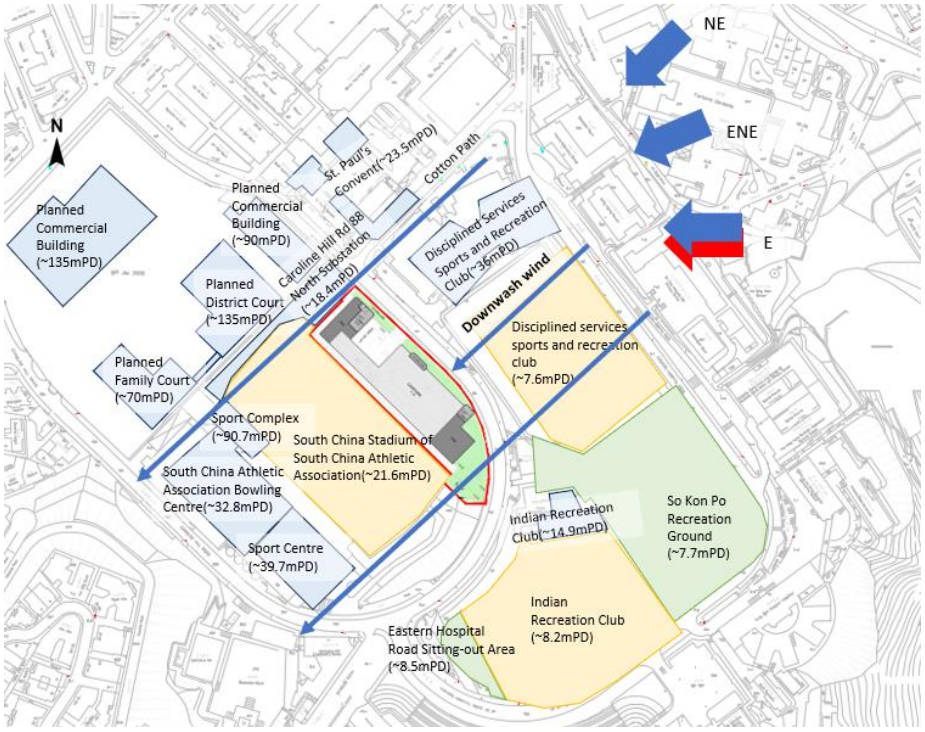
Baseline Scheme





Proposed Scheme at G/F





SSW, SW & S Wind

9.1.7. Under summer prevailing wind condition, the incoming SSW, SW and S wind would flow from the separation between Olympic House and Hong Kong Stadium at the south of the Subject Site and to reach the Subject Site as shown in ***Figure 9.2***.

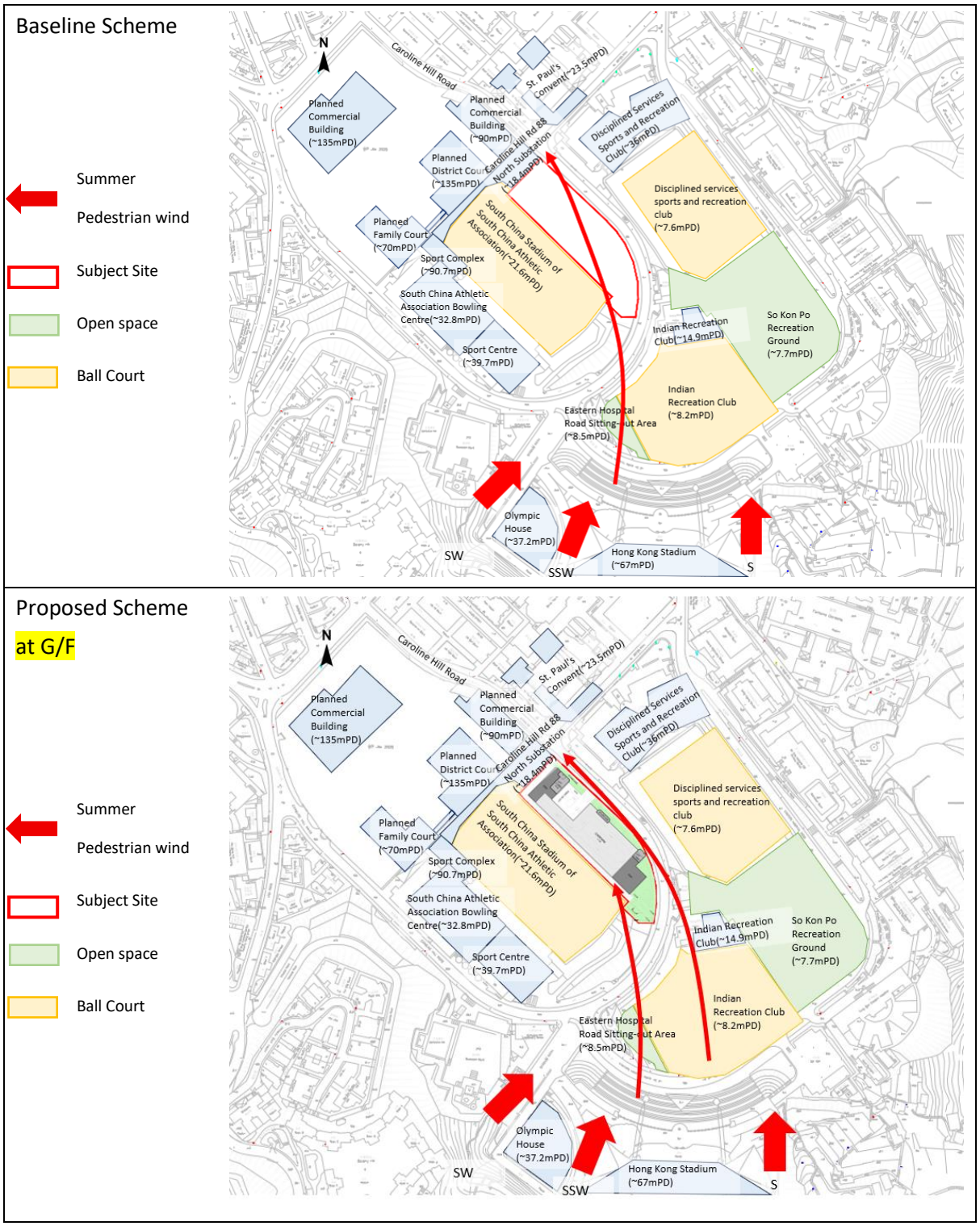
9.1.8. Under the Baseline Scheme, Incoming SSW, SW and S wind could penetrate through Eastern Hospital Road Sitting-out Area (~8.5mPD) and Indian Recreation Club (~8.2mPD), reaching the Subject Site. The existing condition of the Subject Site with no obstruction is beneficial to the wind flow from southwestern direction, further reach the downwind area of the Subject Site, Planned Commercial Building (~90mPD) and along Caroline Hill Road.

9.1.9. Under the Proposed Scheme, the southeastern portion of the Proposed Development is optimized to facilitate the flow of southwestern wind by providing at least 20m setback from the southeastern site boundary. It poses less obstruction by allowing more incoming wind to penetrate through the Subject Site at pedestrian level, thus improving wind environment along the road and local areas at the north of the Subject Site.

9.1.10. In addition, a stepped building height profile is provided for Proposed Development to the surrounding structures under the Proposed Scheme. The incoming wind flows from Eastern Hospital Road Sitting-out Area and Indian Recreation Club, and collide at the Proposed Development. It creates a downwash effect at pedestrian level. In addition, the building height of Proposed Development and Planned Commercial Building are 61.6mPD and 90mPD respectively. High-to-mid-level prevailing wind can be captured and diverted downwards to the pedestrian area by the downwash effect.

9.1.11. With the provision of building setback from the southeastern site boundary and a stepped building height profile to the surrounding structures, it is expected that the impacts on wind environment at downwind areas including Planned Commercial Building and St. Paul's Convent under the Proposed Scheme could be minimized.

Figure 9.2 Wind Environment under SW, SSW and S wind



10. Conclusion

10.1.1. An AVA-EE study was conducted for the for Development of Comprehensive Sports & Recreation Centre to provide qualitative evaluation of wind performance of the proposed development under the Baseline and the Proposed Scheme.

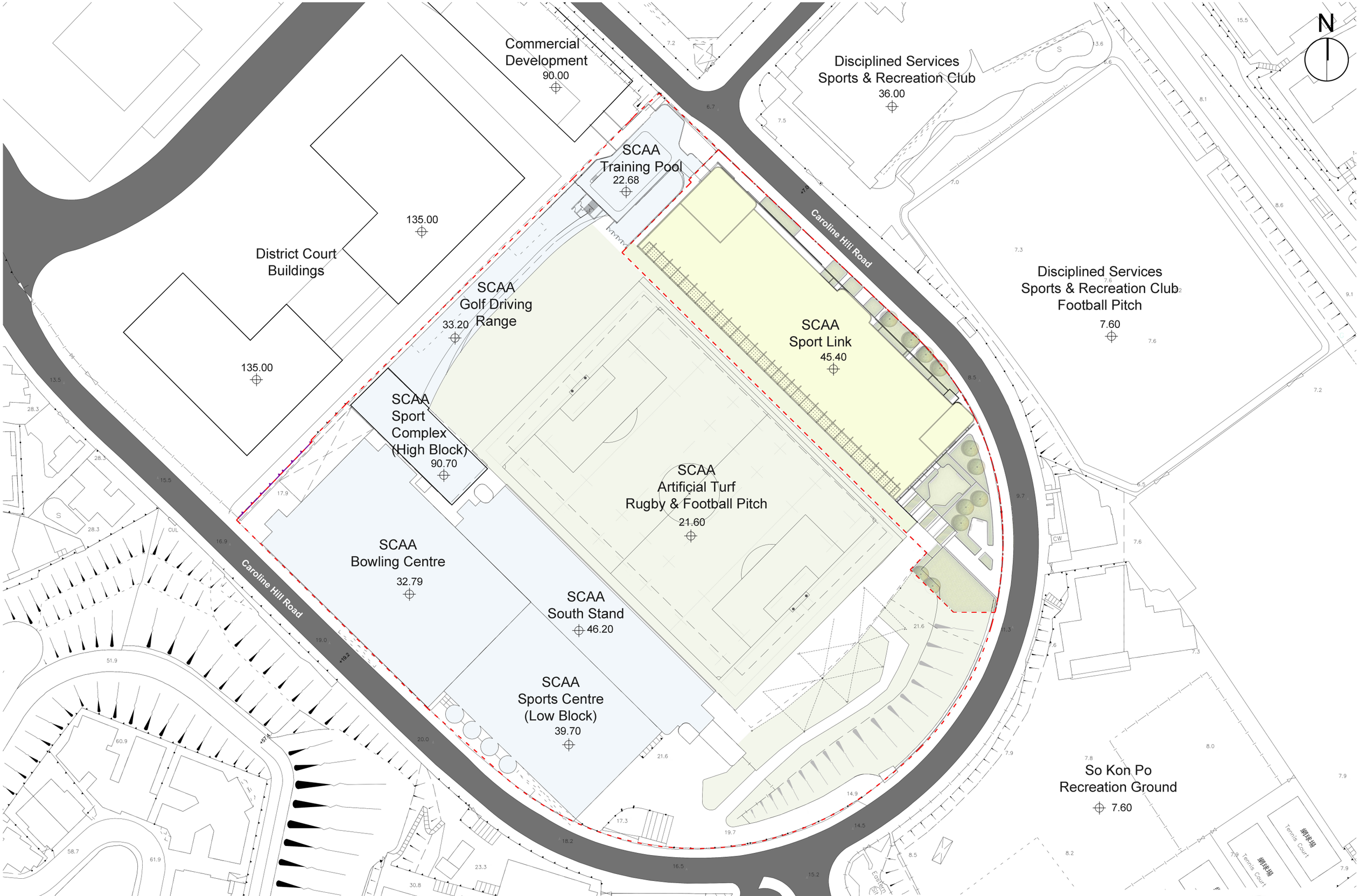
10.1.2. Under the Proposed Scheme, the southeastern portion of the Proposed Development is optimized to facilitate the flow of southwestern wind by providing at least 20m setback from the southeastern site boundary. It poses less obstruction by allowing more incoming annual and summer wind to penetrate through the Subject Site at pedestrian level, thus improving wind environment along the road and local areas at the north of the Subject Site.

10.1.3. In addition, a stepped building height profile is provided for Proposed Development to the surrounding structures under the Proposed Scheme. The incoming annual wind flows from Disciplined Services Sports and Recreation Club and collide at the Proposed Development, while summer wind flows from Eastern Hospital Road Sitting-out Area and Indian Recreation Club, and collide at the Proposed Development. It creates a downwash effect at pedestrian level, which is beneficial to the pedestrian level at surrounding area.

10.1.4. With the good design features to improve air ventilation performance, including building setback, and stepped building height to the surrounding structures, it is anticipated that there shall be insignificant impact to the wind environment in the surrounding area associated with the Subject Site.

Appendix 4.1

Site Layout Plan

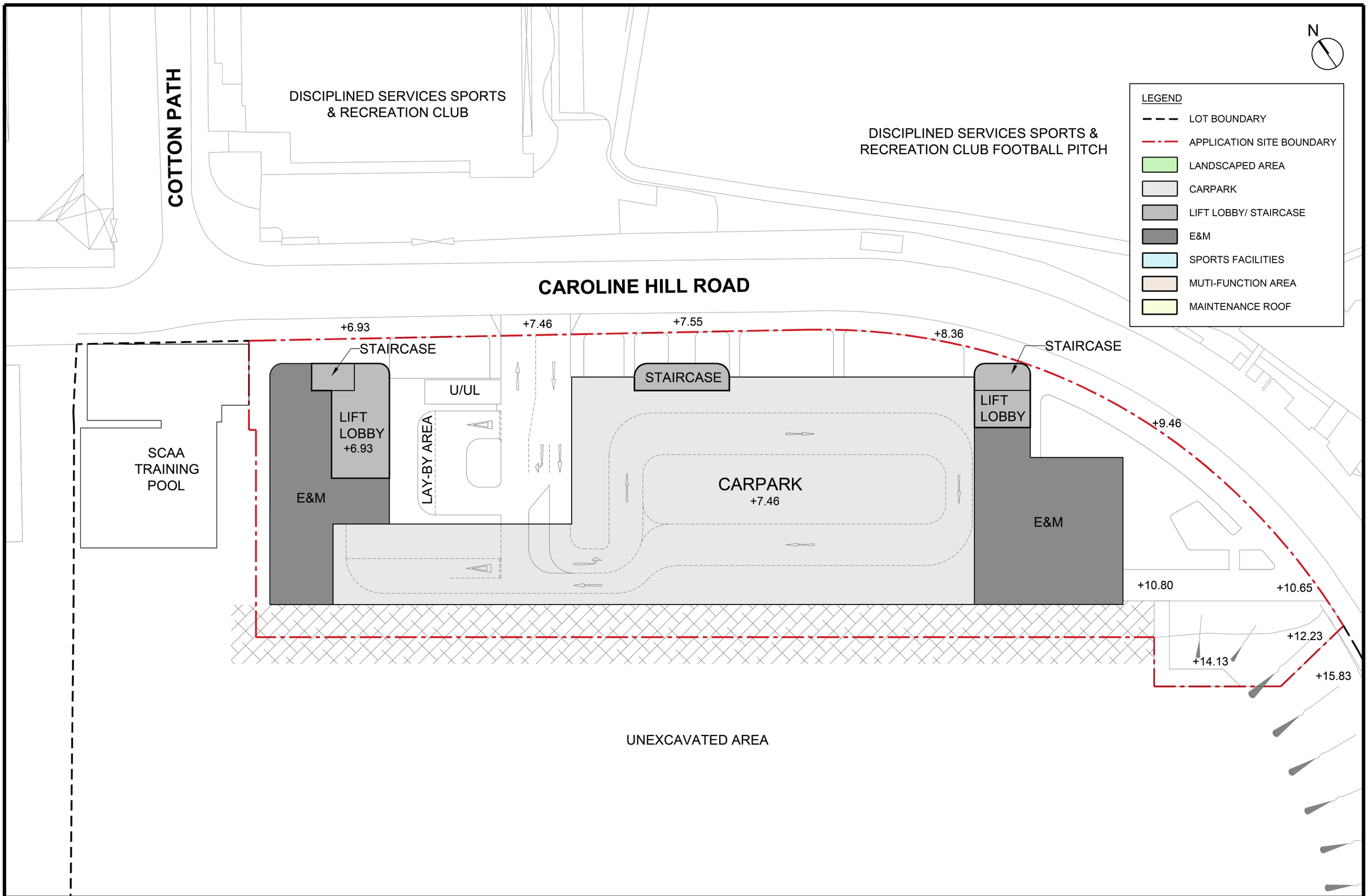


Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

m 10 20 30 50 100

Design 2 Architects



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

G/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

SCAA TRAINING POOL

STAIRCASE

LIFT LOBBY

STAIRCASE

MUTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.06

STAIRCASE

LIFT LOBBY

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

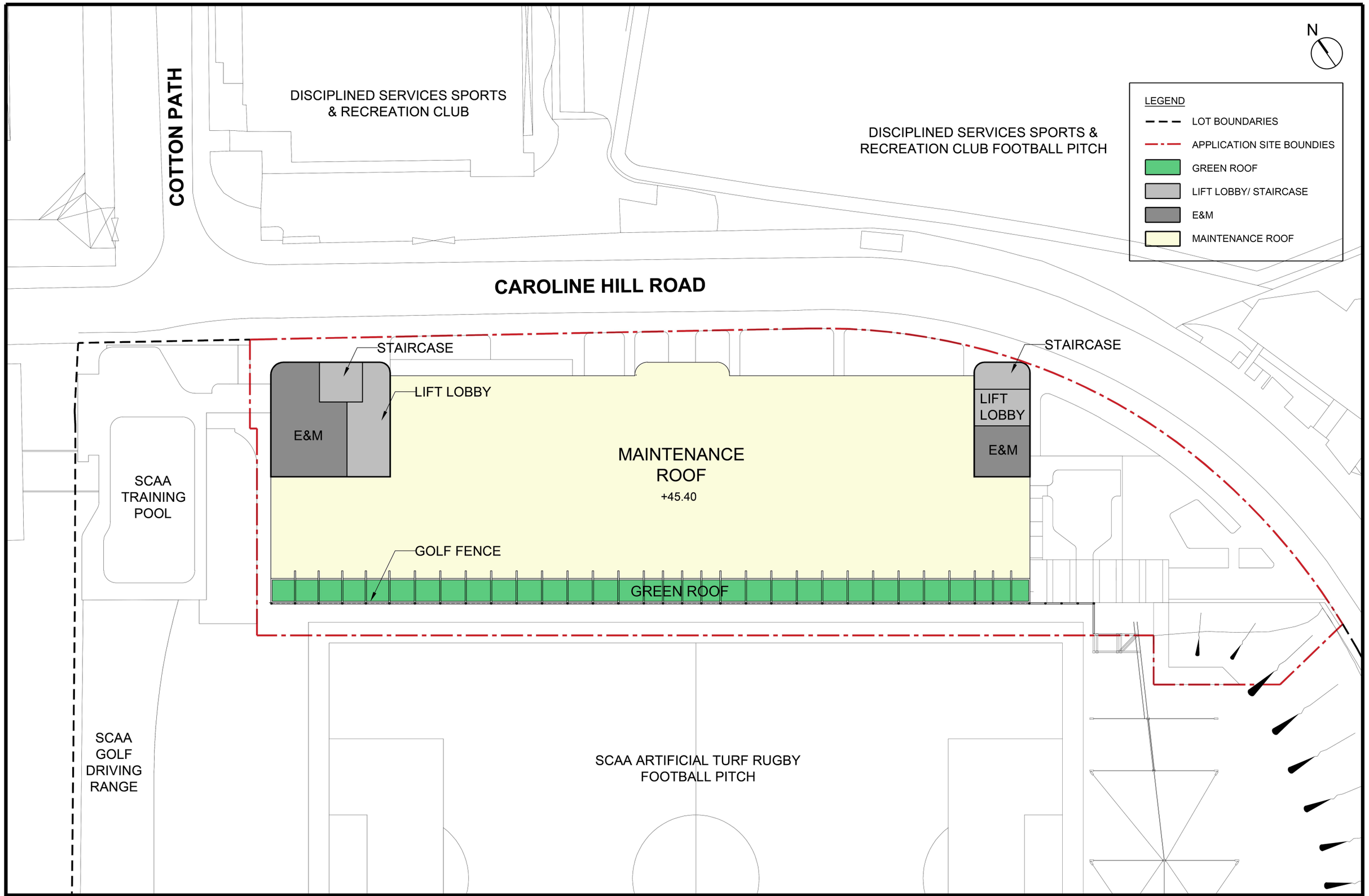
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

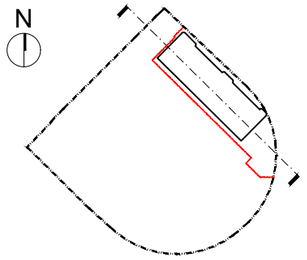
Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

UR/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- MAINTENANCE ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

11900

10540

3600

37940

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Main Roof (for maintenance only) +45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

7560

6580

Caroline Hill Road

Existing Slope

Approx. +10.65

Landscape Garden

+10.65

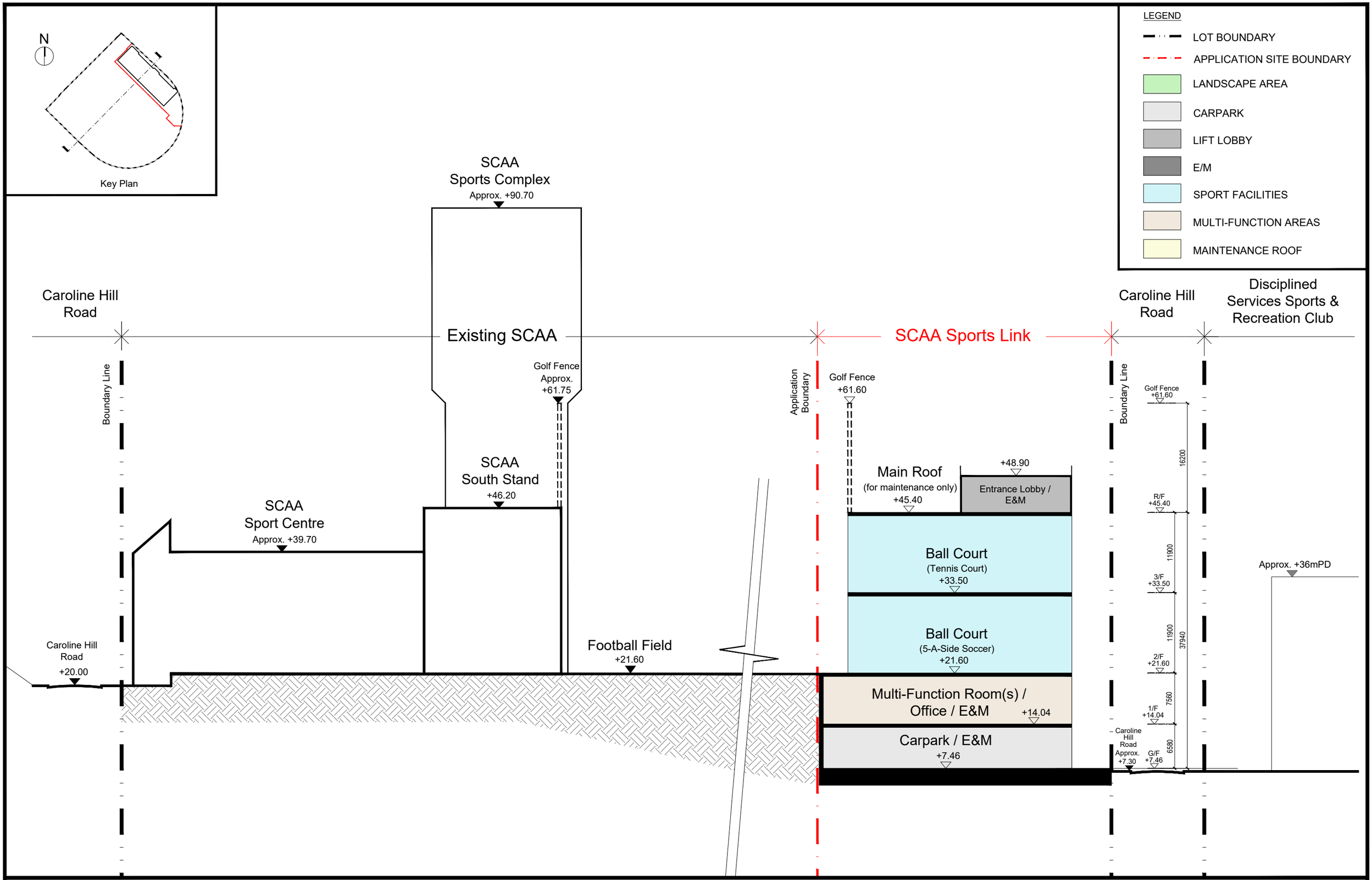
+8.811

Mean Street Level of North Site

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

APPENDIX IV

Revised Sewerage Impact Assessment

Issue No. : 2
Issue Date : December 2025
Project No. : 2215

SEWAGE IMPACT ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

[redacted]

Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.**	2215
Document Title	Sewage Impact Assessment		

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	October 2025	1st Submission	Coco Chin	Joanne Ng	Grace Kwok
2	December 2025	2nd Submission	Coco Chin	Joanne Ng	Grace Kwok



[redacted]

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Appendix 6-1 Estimation of Sewerage Flow from Proposed Redevelopment
Appendix 6-2 Hydraulics Calculation of Previously Approved SIA Report

1. Introduction

1.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare a Sewerage Impact Assessment ("SIA") in support of the Section 16 Planning Application for the Proposed SCAA Sports Link ("Proposed Development") at South China Athletic Association, 88 Caroline Hill Road, Hong Kong ("Subject Site").

2. Objectives

2.1.1. Main objectives of the study are to review the existing drainage facilities in the vicinity of the Proposed Development at the Subject Site, evaluate potential impacts based on the proposed sewerage drainage, recommend appropriate options for sewerage discharge, if necessary.

3. Site Description

3.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in ***Appendix 3-1***.

3.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

3.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 3-1*** shows the location of the Subject Site.

4. Relevant Government Standards

4.1.1. Water quality in Hong Kong is legislated by the provisions of the *Water Pollution Control Ordinance (Cap 358), 1980 (WPCO).* Territorial Water has been subdivided into ten Water Control Zones (WCZ) and four supplementary water control zones. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be met during the operation stage.

4.1.2. Besides as stipulated in the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 41(1), 40(2), 41(1), 90 and recap in ProPECC PN 1/23, domestic sewage should be discharged to a foul water sewer and surface water should be discharged via rainwater pipes to stormwater drains during operation phase.

5. Description of Sewerage System

5.1.1. Drainage record plans were obtained from the drawing office of the Drainage Services Department ("DSD") and the Proposed Development is indicated on the drainage record plans as shown in ***Figure 3-1***. Concerned sewerage network was identified for succeeding estimation of the potential sewerage impact to the downstream sewers associated with the Proposed Development.

5.1.2. The sewerage network of existing gravity sewers along Caroline Hill Road and Leighton Road collects sewage generated from the Proposed Development and the surrounding catchment areas. The sewage discharged from the corresponding catchment areas is conveyed to Wan Chai East Preliminary Treatment Works, and discharged to Stonecutter Island Sewage Treatment Works (SCISTW) for further treatment and ultimate disposal.

5.1.3. The sewage generated from Proposed Development will be conveyed to the existing manhole FMH7019720 with an existing 225mm vitrified clay pipe as shown in ***Figure 3-1***.

5.1. Design Standard Guideline

5.1.1. This assessment has been prepared in accordance with the following documents:

- For the roughness of sewers, the recommended value in "Sewerage Manual Part 1" published by DSD has been adopted;
- The recommended unit flow factors ("UFF") and peaking factors in "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (Report No.:

EPD/TP1/05" ("GESF") published by Environmental Protection Department ("EPD") have been adopted to estimate the sewage generated from the Proposed Development.

5.2. Design Parameters and Assumptions

5.2.1. Based on the above reference documents, the UFF for different types of population as shown in ***Table 5-1*** have been used in calculating the sewerage flow from the Proposed Development.

Table 5-1 Global Unit Flow Factor

Development Type	Unit	UFF (m^3/day)
Commercial Flow[1]		
J11, Community, Social & Personal Services	Employee	0.28
Visitors[2]	Person	0.032

Notes:
[1] Category of UFFs is selected according to Table T-1 and Table T-2 of the GESF.
[2] The unit flow factor for visitors of recreational facility is made reference to Kai Tak Multi-purpose Sports Complex Environmental Impact Assessment Report (AEIAR-204/2017), 0.032 m3/person/d.

6. Evaluation of Sewage Flow Rate

6.1. Predicted Sewage Flow from Proposed Development

6.1.1. The total estimated Average Dry Weather Flow ("ADWF") from the Proposed Development is estimated to be 27.02 m^3/day. The sewage flow estimation for Proposed Development is summarized in ***Table 6-1***. The population estimated ADWF of Proposed Development is summarized in ***Appendix 6-1***.

Table 6-1 Sewage Flow Estimation for The Proposed Development

Type of Occupancy[1]	Population		Category[2]	UFF (m^3/day)	ADWF (m^3/day)
Office	14	Person	Community, Social & Personal Services	0.28	3.92
Visitors	722	Person	Visitors[3]	0.032	23.10
				Total (m^3/day)	**27.02**

Notes:
[1] Information extracted from SoA table received on 13 June 2025.
[2] UFFs for various occupancy types are adopted according to Table T-1 and Table T-2 of the GESF.
[3] The unit flow factor for visitors of recreational facility is made reference to Kai Tak Multi-purpose Sports Complex Environmental Impact Assessment Report (AEIAR-204/2017), 0.032 m3/person/d.

6.1.2. According to the previous approved SIA report dated 23 September 2022, the Subject Site was previously proposed as an E-Sport Complex development with ADWF of 198.4 m^3/day. As demonstrated in ***Appendix 6-2***, the previous hydraulics calculation indicated that the existing sewerage system has sufficient capacity to cater the sewage flow from proposed E-Sport Complex, together with the sewage flows from the surrounding catchments.

6.1.3. In comparison, the current Proposed Development would generate a much smaller sewage generation, with an estimated ADWF of 27.02 m^3/day, representing an approximate 86% reduction compared with the previous proposed E-Sport Complex. Despite the reduction in flow, the sewage from the Proposed Development will continue to discharge to the same terminal manhole as previous approved SIA. The upstream and downstream sewerage

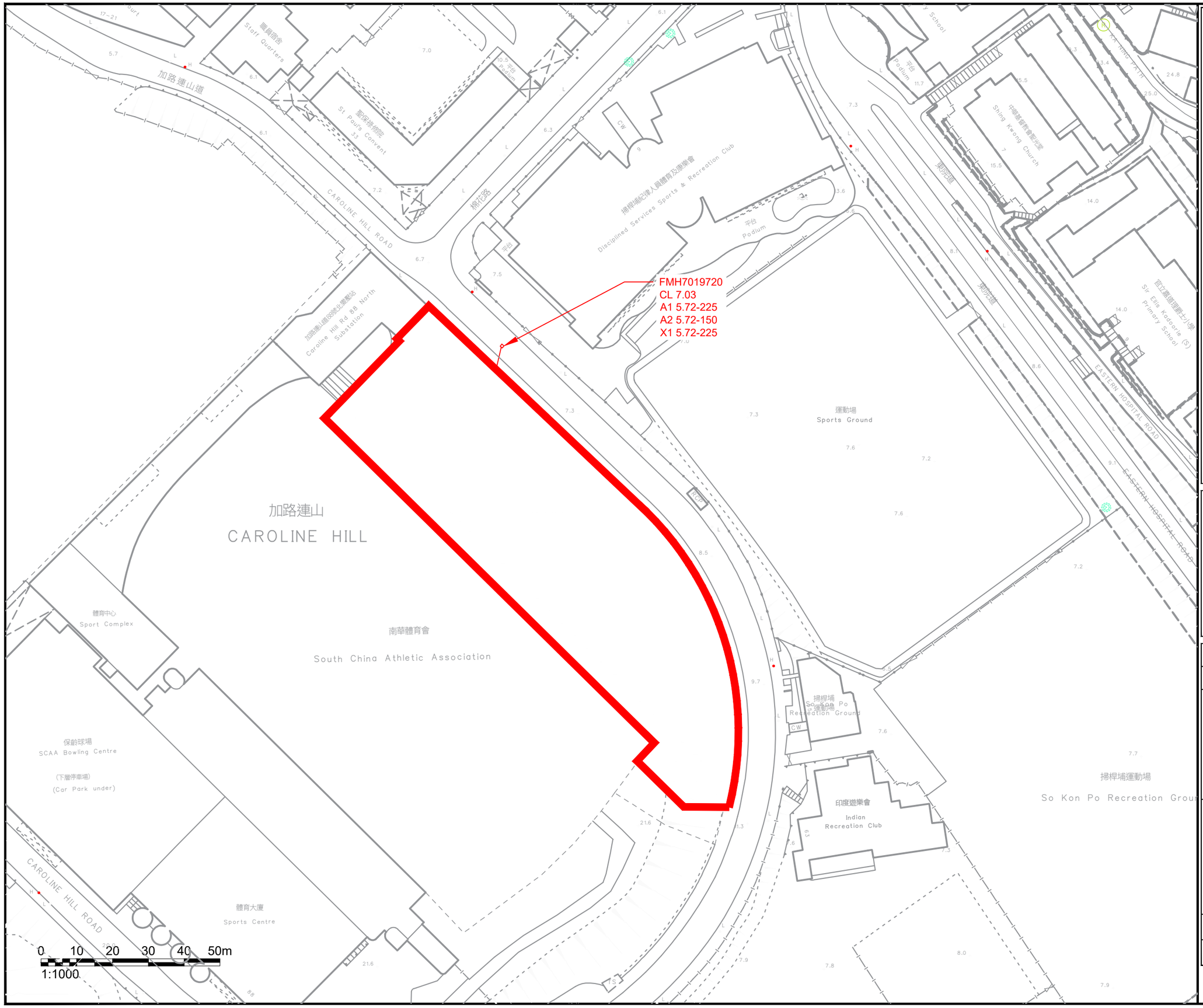
systems were also remained the same.

6.1.4. Given that the existing sewerage system have adequate capacity and considering the reduction in ADWF, no adverse sewerage impact to the existing sewerage system is anticipated.

7. Conclusions

7.1.1. According to the sewage flow estimation, the Proposed Development will discharge in a substantially lower ADWF compared to the previous approved SIA.

7.1.2. As the sewerage from the Proposed Development will continue to discharge to the same terminal manhole with unchanged upstream and downstream sewerage systems compared to previous approved SIA, no adverse impact to public sewerage system associated with the Proposed Redevelopment is expected. No immediate upgrading or improvement works to the existing local sewerage system is required.



NOTES :

SUBJECT SITE

EXISTING SEWERAGE SYSTEM

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC
Project :	PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG
Drawing Title :	SUBJECT SITE LOCATION
Drawing No : FIGURE 3-1	Revision : 0
Scale : AS SHOWN	Date : OCT 2025

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A3 420 x 297

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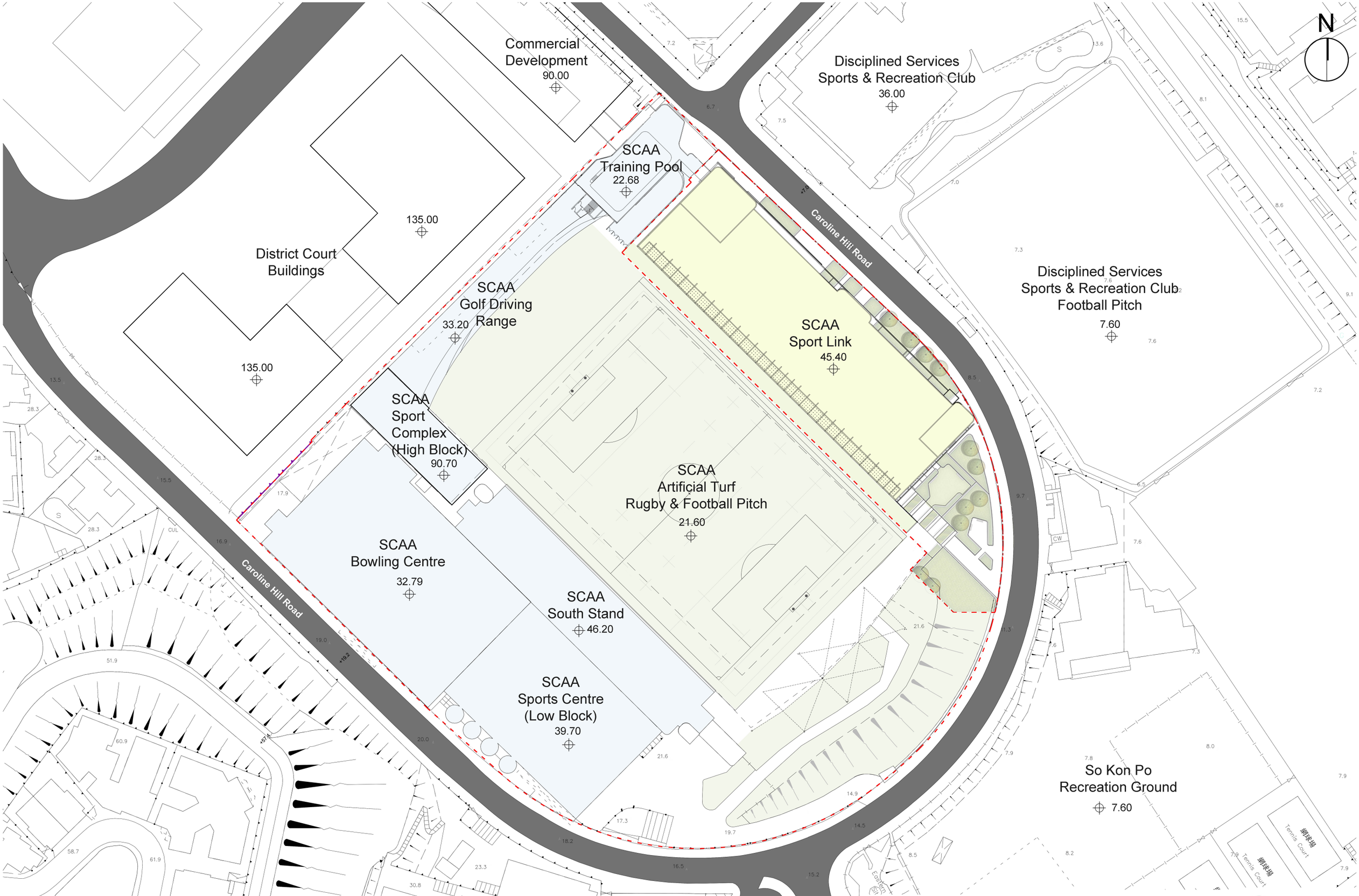
Appendix 3-1

Site Layout Plan

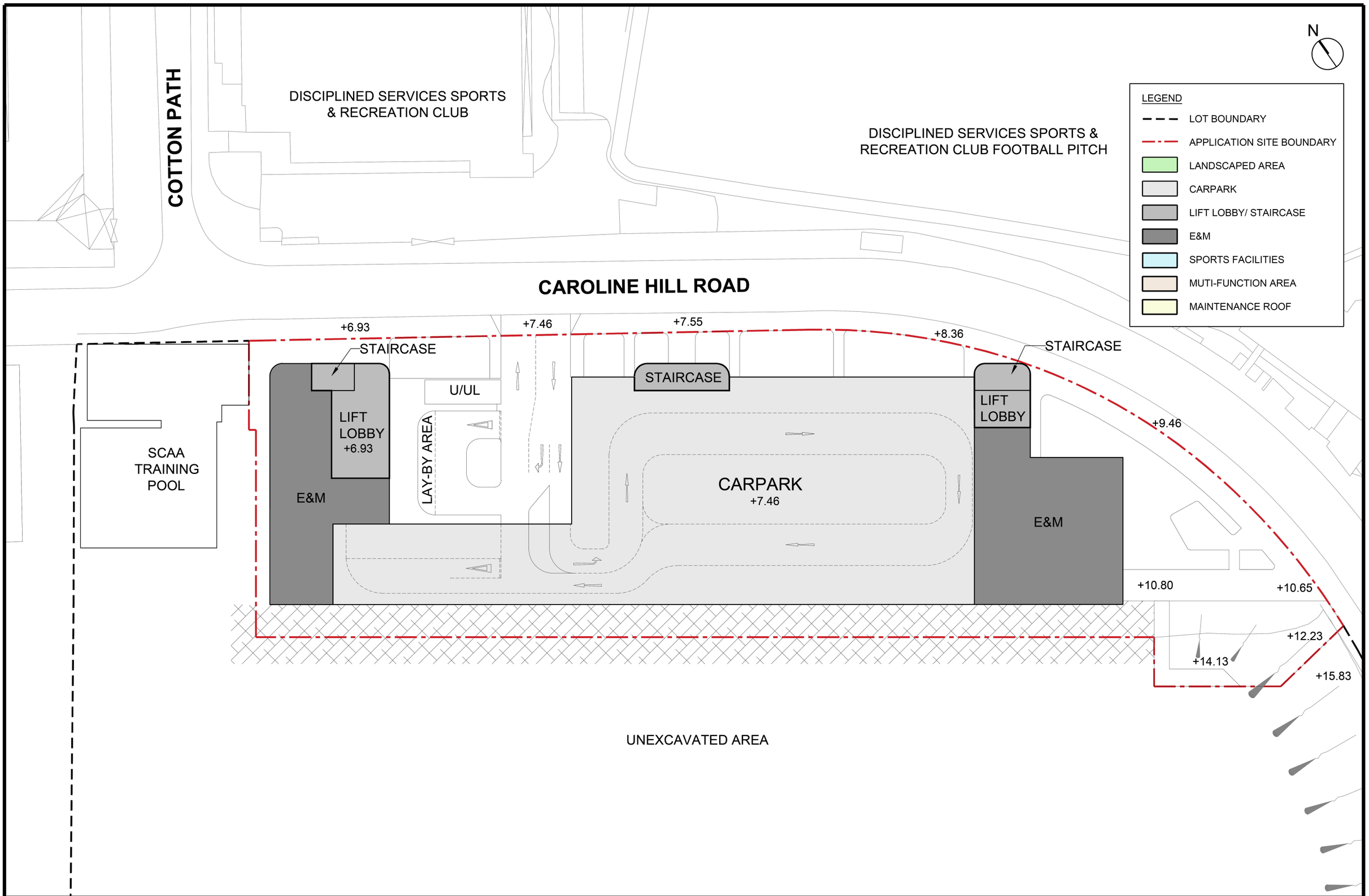


Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

m 10 20 30 50 100

Design 2 Architects



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

G/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

SCAA TRAINING POOL

STAIRCASE

LIFT LOBBY

STAIRCASE

MUTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.06

STAIRCASE

LIFT LOBBY

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

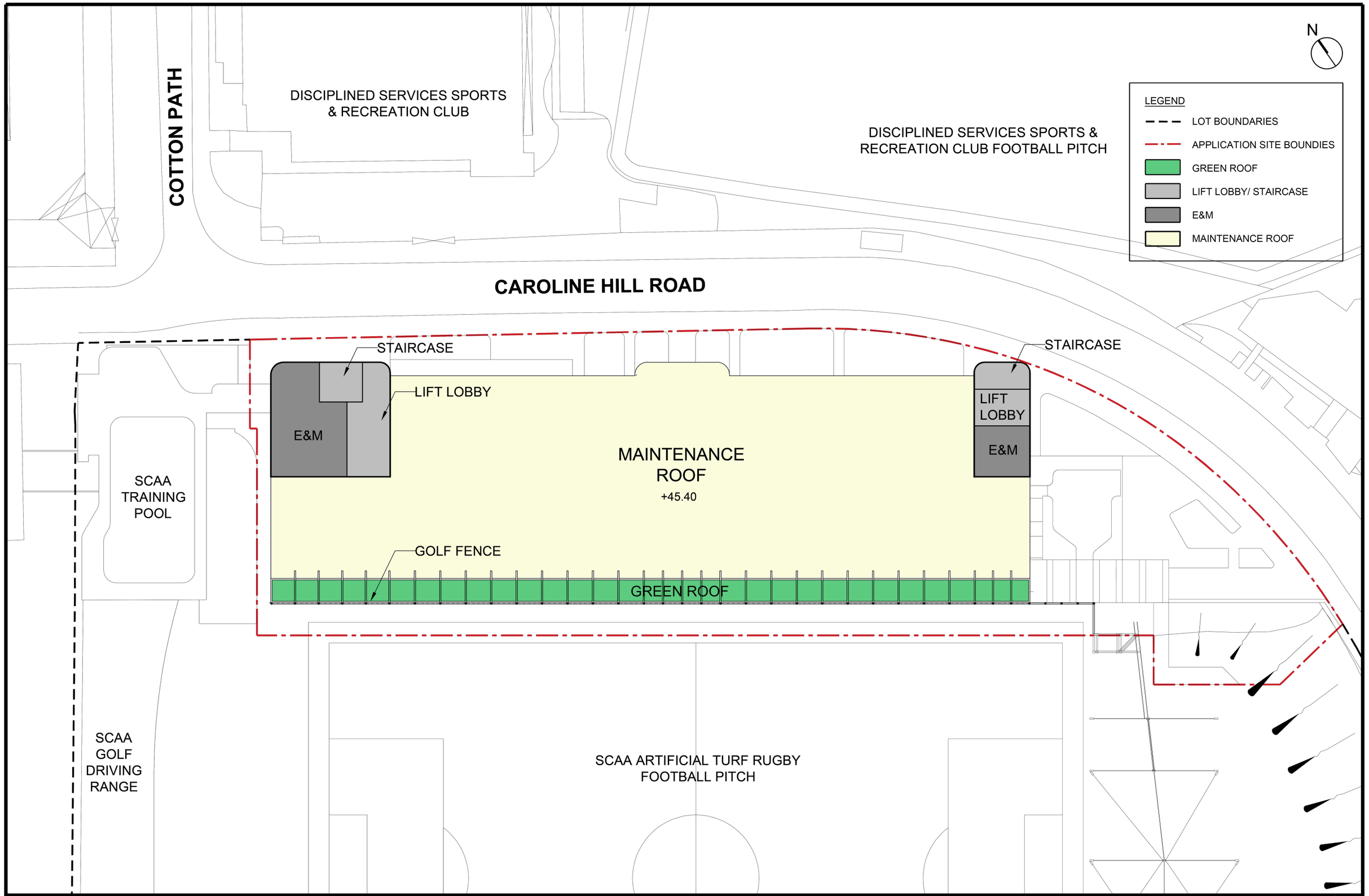
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

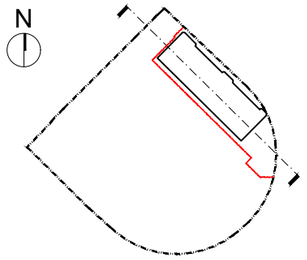
Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

UR/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- MAINTENANCE ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

11900

10540

3600

37940

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Main Roof (for maintenance only) +45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

7560

6580

Caroline Hill Road

Existing Slope

Approx. +10.65

Landscape Garden

+10.65

+8.811

Mean Street Level of North Site

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 13 Oct 2025

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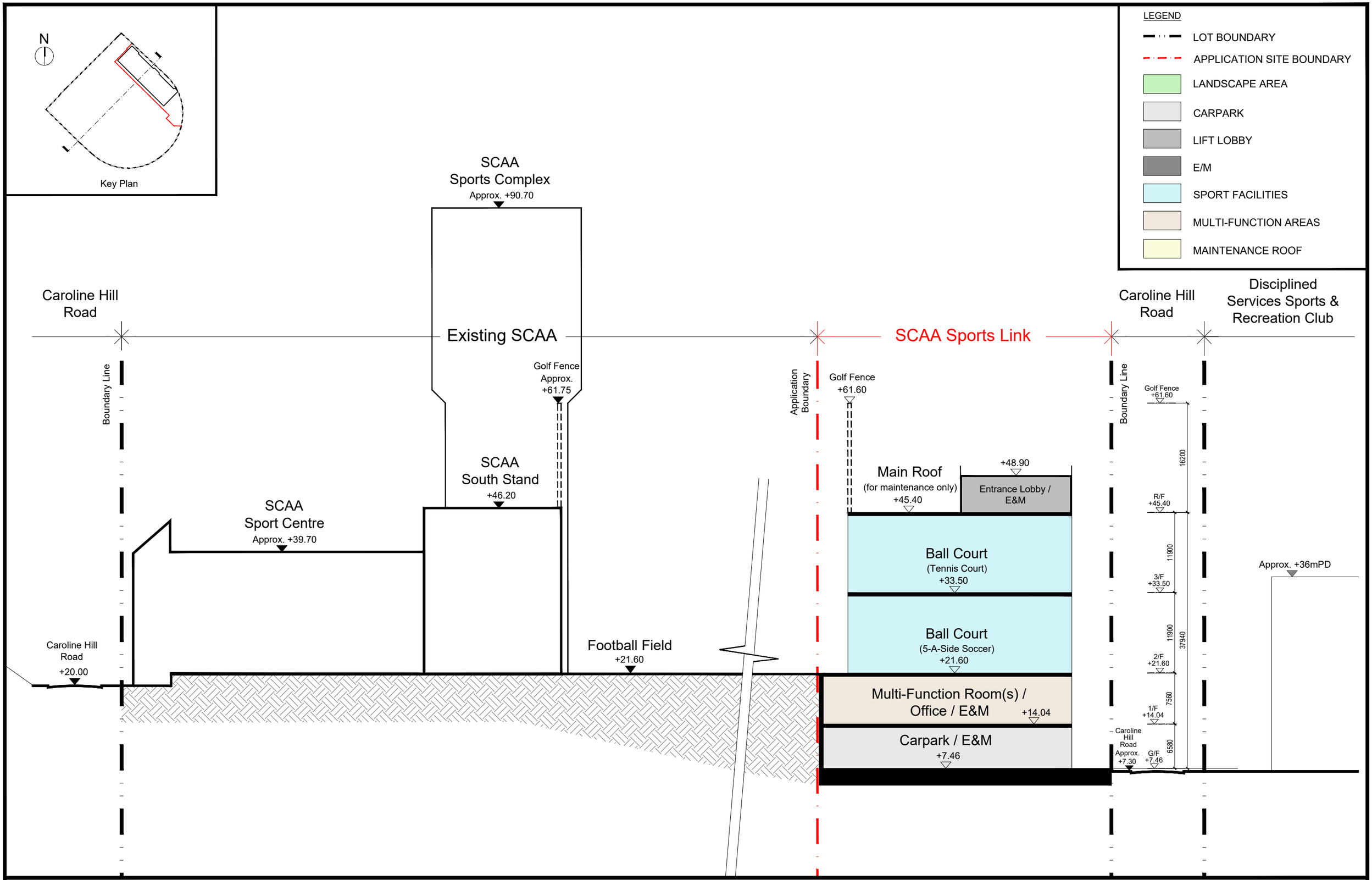

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

Appendix 6-1

Estimation of Sewerage Flow from Proposed Redevelopment

Appendix 6-1 : Estimation of Sewage Flow from the Proposed Development

Proposed Development

Type of Occupancy[1]	No. of Occupancy	Unit Flow Factor[2]		Total Average Sewage Discharge (m^3/day)
		Category	m^3/day	
Office	14	Community, Social & Personal Services	0.28	3.92
Visitors	722	Visitors	0.032	23.10
Total	**736**			**27.02**
				0.0003 (m3/s)

Note:

[1] The information is extracted from SoA table received on 13 June 2025

[2] The unit flow factor is made reference to "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0)", published by EPD.

Appendix 6-2

Hydraulics Calculation of Previously Approved SIA Report

Appendix 7-1. Calculation of Occupancy Rate of Sewerage System

Sewer No.				Internal Diameter (m) [a]	Cross-section Area (m^2)	Length (m) [a]	Inlet mPD (m) [a]	Outlet mPD (m) [a]	Hydraulic pipeline roughness (m) [b]	Hydraulic Gradient	Mean Velocity (m/s) [c]	Max Capacity of Sewer (m^3/s)	Total Average Dry Weather Flow	Contributing Population	Peaking Factor	Catchment Inflow Factor	Revised Total Average Dry Weather Flow	Peak Discharge through Manhole (m^3/s)	Peak Discharge from Swimming pool backwash (m^3/s)	Peak Discharge through Manhole (With Swimming Pool Backwash) (m^3/s)	Total Peak Flow Occupancy (%)	Project Site Peak Flow Occupancy (%)	Contributing Catchment No.	Development ID
ID	From	ID	To	D	A	l				s	V		m^3/day	[d]	[e]	[f]	m^3/day							
PD	Proposed development	5	FMH7019720	0.150	0.0177	8	6.43	5.720	0.0006	0.089	3.01	0.053	198.36	735	8.0	1.0	198	0.018	0.000	0.018	34%	34%	**Proposed development**	
5	FMH7019720	6	FMH7009996	0.225	0.0398	40.43	5.720	5.000	0.0006	0.018	1.74	0.069	343	1270	6.0	1.0	343	0.024	0.000	0.024	34%	20%	**K+I**+Proposed development	K1-4, I1-2, Proposed development
6	FMH7009996	7	FSH7003590	0.400	0.1257	9.4	5.000	4.840	0.0006	0.017	2.46	0.309	440	1628	6.0	1.0	440	0.031	0.023	0.054	17%	4%	K+I+Proposed development+**L**	K1-4, I1-2, Proposed development, L1
7	FSH7003590	8	FSH7003589	0.400	0.1257	8.78	4.840	4.720	0.0006	0.014	2.20	0.277	440	1628	6.0	1.0	440	0.031	0.023	0.054	19%	5%	K+I+Proposed development+L	
8	FSH7003589	9	FSH7003588	0.400	0.1257	27.57	4.720	4.350	0.0006	0.013	2.18	0.274	454	1681	6.0	1.0	454	0.032	0.023	0.055	20%	5%	K+I+Proposed development+L+**J**	K1-4, I1-2, Proposed development, L1, J1-2
9	FSH7003588	10	FMH7058641	0.400	0.1257	2.61	4.350	3.600	0.0006	0.287	10.17	1.278	454	1681	6.0	1.0	454	0.032	0.023	0.055	4%	1%	K+I+Proposed development+L+J	
10	FMH7058641	11	FMH7058642	0.400	0.1257	21.51	3.600	3.370	0.0006	0.011	1.95	0.245	454	1681	6.0	1.0	454	0.032	0.023	0.055	22%	6%	K+I+Proposed development+L+J	
11	FMH7058642	12	FMH7058643	0.400	0.1257	7.71	2.600	2.530	0.0006	0.009	1.79	0.225	454	1681	6.0	1.0	454	0.032	0.023	0.055	24%	6%	K+I+Proposed development+L+J	
12	FMH7058643	13	FMH7058644	0.400	0.1257	21.39	2.530	2.360	0.0006	0.008	1.68	0.211	454	1681	6.0	1.0	454	0.032	0.023	0.055	26%	7%	K+I+Proposed development+L+J	
13	FMH7058644	14	FSH7003587	0.400	0.1257	13.3	2.360	2.250	0.0006	0.008	1.71	0.215	751	2783	6.0	1.0	751	0.052	0.023	0.076	35%	6%	K+I+Proposed development+L+J+**N**	K1-4, I1-2, Proposed development, L1, J1-2, N1
14	FSH7003587	15	FSH3007586	0.400	0.1257	6.54	2.250	2.200	0.0006	0.008	1.64	0.207	751	2783	6.0	1.0	751	0.052	0.023	0.076	37%	7%	K+I+Proposed development+L+J+N	
15	FSH3007586	16	FMH7058647	0.400	0.1257	27.15	2.200	2.140	0.0006	0.002	0.88	0.110	751	2783	6.0	1.0	751	0.052	0.023	0.076	69%	12%	K+I+Proposed development+L+J+N	
16	FMH7058647	17	FSH7003585	0.400	0.1257	20.06	2.140	2.090	0.00232	0.006	1.18	0.149	751	2783	6.0	1.0	751	0.052	0.023	0.076	51%	9%	K+I+Proposed development+L+J+N	
17	FSH7003585	18	FMH7058340	0.500	0.1963	8.75	2.090	2.070	0.00069	0.001	0.51	0.100	900	3333	6.0	1.0	900	0.062	0.023	0.086	85%	14%	K+I+Proposed development+L+J+N+**D**	K1-4, I1-2, Proposed development, L1,J1-2, N1, D1-2
18	FMH7058340	19	FSH7004660	0.500	0.1963	33.38	2.07	2.000	0.003	0.003	0.95	0.187	900	3333	6.0	1.0	900	0.062	0.023	0.086	46%	7%	K+I+Proposed development+L+J+N+D	
19	FSH7004660	20	FSH7004661	0.500	0.1963	23.44	2.000	1.760	0.00193	0.010	1.88	0.370	900	3333	6.0	1.0	900	0.062	0.023	0.086	23%	4%	K+I+Proposed development+L+J+N+D	
20	FSH7004661	21	FSH7004662	0.5	0.1963	33.99	1.76	1.400	0.0006	0.011	2.23	0.438	1113	4124	6.0	1.0	1113	0.077	0.023	0.101	23%	3%	K+I+Proposed development+L+J+N+D+**C**	K1-4, I1-2, Proposed development, L1, J1-2, N1, D1-2, C1-3
21	FSH7004662	22	FMH7010025	0.500	0.1963	4.65	1.400	1.390	0.0006	0.002	1.00	0.196	1113	4124	6.0	1.0	1113	0.077	0.023	0.101	51%	7%	K+I+Proposed development+L+J+N+D+C	
22	FMH7010025	23	FSH7004682	0.500	0.1963	9.44	1.390	1.200	0.00168	0.020	2.70	0.529	2618	9696	5.0	1.0	2618	0.152	0.047	0.198	37%	2%	K+I+Proposed development+L+J+N+D+C+**A+B+F+G+H+M+O**	K1-4, I1-2, Proposed development, L1, J1-2, N1, D1-2, C1-3, A1-4, B1, F1-5, G1-3, H1-6, M1,O1
23	FSH7004682	24	FSH7001980	0.600	0.2827	41.59	1.2	1.080	0.0006	0.003	1.30	0.367	3153	11677	4.0	1.0	3153	0.146	0.047	0.192	52%	3%	K+I+Proposed development+L+J+N +D+C+A+B+F+G+H+M+O+**E**	All

Note:
[a] Information from Drainage Layout Plan
[b] Assume slimed of clayware in "Poor" condition for exisitng sewer
[c] The velocity is calculated using the Colebrook-White Formula:

$$V = -2(2gDS)^{0.5}\log\left(\frac{k}{3.7D} + \frac{2.5\nu}{D(2gDS)^{0.5}}\right)$$

where
k = Colebrook-White roughness coefficient, in meter
V = mean velocity (m/s)
D = circular cross-section pipe, inside diameter (m)
S = slope, in meters per meter
v = kinematic viscosity of water, in meter per second (0.000001306 m/s)
g = gravitational acceleration (m/s2) (9.807m/s2)
[d] The Contributing Population is defined as:

$$\text{Contributing Population} = \frac{\text{Calculated total average flow (m3/day)}}{\text{0.27 (m3/person/day)}}$$

[e] Reference from Table T-5 (a) of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning
[f] Reference from Table T-4 of Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning, Catchment inflow factor of Wan Chai is adopted.

APPENDIX V

Revised Pages of the Supporting Planning Statement

4.6.3. Junction capacity assessments were carried out at the key junctions in the vicinity for the year 2036. The results have indicated that all nearby junctions will operate satisfactorily for both reference and design scenarios.

Pedestrian Traffic

4.6.4. To ascertain the adequacy of footpath width for walking between the proposed development, bus/GMB stops and the MTR Causeway Bay Station, a pedestrian count survey was conducted.

4.6.5. The proposed development is estimated to generate 2-way pedestrian flows of 895 person/ hour during weekday AM, weekday PM and weekend peak hours. The condition of the key footpaths will be satisfactory after accommodating the pedestrians generated and attracted by the proposed development in all scenarios with LOS "C" or above, similar to the existing condition.

4.7. Environmental Considerations

Air Quality

4.7.1. During the construction stage, good site practices and sufficient air quality control measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Fuel Restriction) Regulations and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation will be implemented to prevent adverse air quality impact.

4.7.2. According to HKPSG, the recommended minimum buffer distance from the nearby roads (i.e Caroline Hill Road, a local distributor) is 5m. No air sensitive uses have been placed within this zone. Similarly, area with 100-200m horizontal buffer distance from any chimneys require a 20m difference in height between the chimney exit and fresh air intake location. The proposed fresh air intake location will be designed at or below 104.7mPD.

4.8. Drainage and Sewerage Considerations

Drainage

4.8.1. The Site is currently fully paved. The current peak runoff from the Site area is 0.447 m^3/s whereas the anticipated peak runoff upon completion of the proposed SCAA Sports Link would be reduced to 0.406 m^3/s.

4.8.2. According to the DSD drainage record plans, public stormwater pipes of 375mm in diameters are available along Caroline Hill Road. The reduction in surface runoff would post no negative impact to the public drainage system.

Sewerage

buildings.

5.7. No Unacceptable Visual Impact

5.7.1. The Visual Impact Assessment in *Appendix IX* has reviewed the potential visual impact of the proposed development onto 9 selected public viewpoints. The assessment report concluded that, though proposed building would have some slightly visual impacts to the public viewers, with responsive building height, mass and scale, building setback andplanting proposal at street level, green wall and greening on the roof etc., all these would help to alleviate the impact to an acceptable level, and proposed building is therefore compatible with the existing urbanised and recreational landscape and visual context. Proposed building is acceptable from visual perspective.

5.8. No Adverse Technical Impacts

Traffic Impact

5.8.1. Noted the concern from the previous planning application, the design of the proposed SCAA Sports Link has been refined with careful attention on traffic impact. The current plan positions the proposed SCAA Sports Link to provide sports facilities and operate according to its current operation mode. This proposed SCAA Sports Link is expected to generate significantly less vehicle and pedestrian traffic than the previous proposal.

5.8.2. A Traffic Impact Assessment has been carried out and the results revealed that all junctions and key footpths will have sufficient capacity to accommodate the expected traffic growth and the traffic generated by the Proposed Development. The TIA concluded that the proposed SCAA Sports Link would not induce adverse traffic impact on the adjacent road networks and should be acceptable from traffic viewpoint (*Appendix III* refers).

Noise Impact

5.8.3. According to the Noise Impact Assessment in *Appendix V*, the proposed SCAA Sports Link would not be subject to or generate any adverse noise impact.

Air Quality Impact

5.8.4. During the construction stage, with the implementation of good site practices and sufficient air quality control measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Fuel Restriction) Regulations and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, adverse air quality impact generated from the construction of the proposed SCAA Sports Link would not be anticipated.

5.8.5. During the operational phase, the Proposed Development Scheme has reserved

sufficient horizontal buffer distance from nearby road sections as promulgated in the HKPSG to minimise the air quality impacts of vehicular emissions and industrial emissions. Thus, no adverse air quality impact would be anticipated at the Site during the operational phase.

5.8.6. There are 4 nos. of chimneys nearby and these are located at Saint Paul's Hospital Main Block with a height of 124.7mPD. Whilst the main roof level of the proposed SCAA Sports Link would be approximately +45.4mPD, there would be a height difference of about 79.3m between the hospital chimneys and the proposed building. Having considered the horizontal difference between the two (more than 100m), there would be sufficient buffer distance from the chimney exit and the proposed fresh air intake location at the proposed SCAA Sports Link. Therefore, no adverse air quality impact to the Proposed Development would be anticipated.

Impact on Air Ventilation

5.8.7. An Air Ventilation Assessment – Expert Evaluation (*Appendix IV* refers) has been carried out to to provide qualitative evaluation of wind performance of the proposed SCAA Sports Link under the Proposed Development Scheme. With the good design features to improve air ventilation performance, including building setback, and perforated fence adopted in the proposed SCAA Sports Link, it is anticipated that there shall be insignificant impact to the wind environment in the surrounding area.

Drainage and Sewerage Impacts

5.8.8. Results of the Drainage Impact Assessment in *Appendix VII* confirm that there would be reduction in contribution of stormwater surface runoff upon completion of the proposed SCAA Sports Link. Therefore, the assessment concluded that there would be no adverse drainage impact on existing stormwater system.

5.8.9. According to the Sewerage Impact Assessment in *Appendix VIII*, the estimated Average Dry Weather Flow ("ADWF") to be generated by the proposed SCAA Sports Link would be 27.02m^3/day. The existing public sewerage system would have sufficient capacity to cater for the anticipated flow, therefore no adverse sewerage impact would be anticipated.

APPENDIX VI

Revised Air Quality Impact Assessment

Issue No. : Issue 2
Issue Date : December 2025
Project No. : 2215

AIR QUALITY IMPACT ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.** 2215
Document Title	Air Quality Impact Assessment	

Issue No.	Issue Date	Description	Prepared by	Checked by	Approved by
1	October 2025	1st Submission	Coco Chin	Joanne Ng	Grace Kwok
2	December 2025	2nd Submission	Coco Chin	Joanne Ng	Grace Kwok

[redacted]

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Appendix 3-1 Site Layout Plan

1. Introduction

1.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare an Air Quality Impact Assessment ("AQIA") in support of the Section 16 Planning Application for the Proposed SCAA Sports Link ("Proposed Development") at South China Athletic Association, 88 Caroline Hill Road, Hong Kong ("Subject Site").

2. Objectives

2.1.1. Main objective of the study is to evaluate potential air quality impacts associated with the Proposed Development during construction and operation phase. Where necessary, appropriate mitigation measures are recommended to reduce the impacts from the Proposed Development and the nearby sources at the Air Sensitive Receivers to satisfy the relevant environmental ordinance, standards and guidelines.

3. Description of the Proposed Development

3.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in ***Appendix 3-1***.

3.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

3.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 3-1*** shows the location of the Subject Site.

4. Environmental Legislation, Standards and Guidelines

4.1. Hong Kong Air Quality Objectives

4.1.1. Air quality in Hong Kong is governed under the Air Pollution Control Ordinance ("APCO") (Cap. 311) and its subsidiary Regulations. Under this legislation, the Government has designated Air Control Zones ("ACZ") for the whole territory, along with the new Air Quality Objectives ("AQOs") which was taken effect in 2025. The AQOs stipulate the statutory limits for 7 pollutants and dictate the maximum number of allowable exceedances over specified time periods. For details, please refer to ***Table 4-1*** below.

Table 4-1 Hong Kong Air Quality Objectives (AQOs)

Pollutant	Averaging Time	Concentration Limit (ug/m^3)[1]	Number of Exceedances to be allowed per Calendar Year
Sulphur Dioxide (SO_2)	10-minute	500	3
	24-hour	40	3
RSP or PM_{10}[2]	24-hour	75	9
	Annual	30	N/A
FSP or $PM_{2.5}$[3]	24-hour	37.5	18
	Annual	15	N/A
Nitrogen Dioxide (NO_2)	1-hour	200	18
	24-hour	120	9
	Annual	40	N/A
Ozone (O_3)	8-hour	160	9
	Peak season	100	N/A
Carbon monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
	24-hour	4,000	0
Lead (Pb)	Annual	0.5	N/A

Note:
[1] All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.
[2] Respirable suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 10 μm or less.
[3] Fine suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 2.5 μm or less.

4.2. Hong Kong Planning Standards and Guidelines

4.2.1. General design guidelines are stated in the Table 3.1 of Hong Kong Planning Standards and Guidelines ("HKPSG") as indicated in ***Table 4-2***.

Table 4-2 Guidelines on Usage of Open Space Site under HKPSG

Pollution Source	Parameter	Buffer Distance	Permitted Uses
Road and Highways	Type of Road		
	Trunk Road and Primary Distributor	>20m	Active and passive recreational uses
		3 - 20m	Passive recreational uses
		<3m	Amenity areas
	District Distributor	>10m	Active and passive recreational uses
		<10m	Passive recreational uses
	Local Distributor	>5m	Active and passive recreational uses
		<5m	Passive recreational uses
	Under Flyovers		Passive recreational uses
Industrial Areas	Difference in Height between Industrial Chimney Exit and the Site		
	<20m	>200m	Active and passive recreational uses
		5 - 200m	Passive recreational uses
	20 - 30m (*)	>100m	Active and passive recreational uses
		5 - 100m	Passive recreational uses
	30m - 40m	>50m	Active and passive recreational uses
		5 - 50m	Passive recreational uses
	>40m	>10m	Active and passive recreational uses
Construction and Earth Moving Activities	-	<50m	Passive recreational uses
		>50m	Active and passive recreational uses

Remarks:
(a) In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.
(b) The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.
(c) The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishments which are likely to be significant air pollution sources. Consult EPD when planning open space sites close to such establishments.
(d) Amenity areas are permitted in any situation.

4.3. Other environmental legislation, standard and guidelines

4.3.1. Other environmental legislation, standard and guidelines which are of relevance to the Proposed Development include:

i. Air Pollution Control Ordinance (APCO) (Cap. 311)
ii. Air Pollution Control (Construction Dust) Regulation
iii. Air Pollution Control (Non- Road Mobile Machinery) (Emission) Regulation
iv. Air Pollution Control (Fuel Restriction) Regulations
v. Recommended Pollution Control Clauses for Construction Contracts

5. Background Air Quality

5.1.1. The PATH v3.0 data at (41,29), (42,29), (41,28) and (42,28) in Year 2030 represent the future background air quality concentrations at the 500m assessment area, as shown in ***Figure 3-1***. A summary of the background concentrations for the year 2030 is provided in ***Table 5-1***.

Table 5-1 Background Air Pollutants in Year 2030 Extracted from the PATH Model (v3.0)

Pollutant	Averaging Time	Prevailing AQO[1] [4]	Data Summary	PATH v3.0 Grid in Year 2030[3]			
				41,29	42,29	41,28	42,28
FSP	24-hr	37.5 (18)	19th Max	31.41	29.67	30.06	28.58
			No. of Exceedance(s)	4	4	4	3
	Annual	15	-	12.75	11.72	11.9	10.99
RSP	24-hr	75 (9)	10th Max	52.27	50.72	51.18	49.77
			No. of Exceedance(s)	0	0	0	0
	Annual	30	-	20.42	19.23	19.37	18.37
SO_2	10-min[2]	500 (3)	4th Max	22.35	22.21	22.25	21.85
			No. of Exceedance(s)	0	0	0	0
	24-hr	40 (3)	4th Max	6.77	6.69	6.65	6.58
			No. of Exceedance(s)	0	0	0	0
NO_2	1-hr	200 (18)	19th Max	84.59	71.41	68.81	60.45
			No. of Exceedance(s)	0	0	0	0
	24-hr[4]	120 (9)	10th Max	35.02	28.76	27.73	23.62
			No. of Exceedance(s)	0	0	0	0
	Annual	40	-	17.21	13.45	13.38	10.37
O_3	8-hr	160 (9)	10th Max	**169.8**	**172.13**	**170.86**	**172.65**
			No. of Exceedance	**14**	**15**	**14**	**16**
CO	1-hr	30,000	1st Max	582.23	532.89	547.26	520.42
			No. of Exceedance	0	0	0	0
	8-hr	10,000	1st Max	512.37	495.93	500.11	480.31
			No. of Exceedance	0	0	0	0
	24-hr[4]	4,000	1st Max	492.05	474.21	483.45	457.02
			No. of Exceedance	0	0	0	0

Note:

[1] Values in ( ) indicate number of exceedances allowed under the AQO.

[2] Values are given as highest 10-minute SO_2 concentrations, which are estimated based on EPD's "Guidelines on the Estimation of 10-minute Average SO_2 Concentration for Air Quality Assessment in Hong Kong".
[3] Bolded and underlined values represent exceedances of the AQOs.
[4] The concentration limit and number of exceedances allowed are updated referenced to updated Hong Kong's AQOs on 11 April 2025.

5.1.2. As shown in ***Table 5-1***, the background concentrations of air pollutants at PATH v3.0 Grid (41,29), (42,29), (41,28) and (42,28) in Year 2030 are well below the AQO criteria, except for an exceedance of the daily maximum 8-hour average O_3 (ozone) criterion. Ozone is not directly emitted from pollution sources but formed by photochemical reactions in the presence of sunlight. Therefore, ozone is not a key pollutant to be assessed in this assessment.

6. Potential Air Quality Impact in Construction Phase

6.1.1. To assess the air quality impact associated with the construction works of the Proposed Development, the ASRs in the vicinity have been identified as summarised in ***Table 5-1*** and illustrated in ***Figure 3-1***.

Table 6-1 Summary of Air Sensitive Receivers

ID	Description	Uses	Building Heights (mPD)	Distance from the Site Boundary (m)
ASR 1	Proposed Commercial Development on IL No.8945 at Caroline Hill Road, Causeway Bay, Hong Kong	Commercial & Institution	135	~25
ASR 2	Proposed District Court at Caroline Hill Road	Institution	135	~28
ASR 3	St. Paul's Convent	Place of Public Worship	34	~32
ASR 4	Disciplined Services Sports and Recreation Club	Institution	49.6	~22
ASR 5	So Kon Po Recreation Ground	Institution	7.6	~14
ASR 6	Indian Recreation Club	Institution	22.4	~22
ASR 7	Eastern Hospital Road Sitting-Out Area	Recreational	8.5	~76
ASR 8	Confucius Hall Secondary School	Educational	49.9	~114
ASR 9	Existing South China Athletic Association	Institution	58.7	~8

6.1.2. Details such as the extent of demolition, site formation and excavation, volume of excavated materials to be handled, and the number of mechanical equipment operating concurrently are no available during at the planning stage of the Proposed Development. As the Subject Site is currently a vacant site, no extensive site formation work or excavation work are anticipated. Only foundation and superstructure works during construction phase are anticipated.

6.1.3. Dust mitigation measures to minimize air quality impacts at nearby ASRs during construction phase is recommended as below:

- Plan site layout so that machinery and dust causing activities (e.g. haul roads and stockpiling areas) are located away from ASRs as far as possible;

- Erect solid screens or barriers around dusty activities;

- Erect hoarding with sufficient height from ground level along the site boundary;

- Connecting construction plant and equipment to mains electricity supply and avoid use of diesel generators and diesel-powered equipment can be considered as far as practicable to minimize air quality impact arising from construction machinery.

6.1.4. With the implementation of good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, significant dust generated from the construction of the Proposed Development is not anticipated. Hence, adverse dust impact during the construction phase would not be anticipated.

6.1.5. Emission in terms of Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) are the key air pollutants during construction and demolition works. Heavy construction activities and emission from construction vehicles would contribute to construction air quality impact. Construction-related machines employed in the Subject Site will follow the requirements as stipulated in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery. Therefore, gaseous emission from construction equipment would be minor and would not cause any adverse air quality impact.

6.1.6. Potential sources of VOC emissions may arise from the use of paints and coatings during the construction phase. The construction activities will be carried out in compliance with all relevant standards and regulations, including the Air Pollution Control (Volatile Organic Compounds) Regulation. Hence, adverse air quality impact during the construction phase would not be anticipated.

6.1.7. Based on MPC Paper No. A/H7/188 published on 24 October 2025, the operation year of ASR 1 is anticipated to be 2029. Meanwhile, according to PWSC(2022-23)3 published on 24 April 2022, the operation year of ASR 2 is anticipated to be in 2027. Since, appropriate mitigation measures for air quality impact will be implemented during the construction phase of the Proposed Development, the adverse cumulative air quality impact during the construction phase of the Proposed Development to nearby ASRs is not anticipated.

Cumulative Air Quality Impact

6.1.8. Based on the best available information obtained, concurrent projects within 500 m from Subject Site which would interface with the Proposed Development have been identified and shown in ***Table 6-2***.

Table 6-2 Summary of Concurrent Projects

Projects		Tentative Construction Period		Cumulative Impact
		Start Date	End Date	
i.	Proposed Commercial Development on IL No.8945 Causeway Bay[1] (Planning Application No. A/H7/188)	N/A	2029	• Commencement date for the construction is currently unavailable. • Appropriate mitigation measures for air quality impact are expected to be implemented by the Contractors of the concurrent project. • The adverse cumulative air quality impact during the construction phase of the Proposed Development is not anticipated.
ii.	Proposed District Court Building at Caroline Hill Road[2] (Project Code No. 033LJ)	2022	2027	• Appropriate mitigation measures for air quality impact are expected to be implemented by the Contractors of the concurrent project. • The adverse cumulative air quality impact during the construction phase of the Proposed Development is not anticipated.
iii.	Proposed Office, Shop and Services and Eating Place at 8 Leighton Road, Causeway Bay, Hong Kong[3] (Planning Application No. A/H7/183)	N/A	N/A	• Commencement date for the construction is currently unavailable. • Appropriate mitigation measures for air quality impact are expected to be implemented by the Contractors of the concurrent project. • The adverse cumulative air quality impact during the construction phase of the Proposed Development is not anticipated.

Note:

[1] Information extracted from MPC Paper No. A/H7/188 dated 24 October 2025.

[2] Information extracted from PWSC(2022-23)3 dated 27 April 2022.

[3] Information extracted from MPC Paper No. A/H7/183A dated 14 October 2022.

7. Potential Air Quality Impact in Operation Phase

7.1.1. Study area for AQIA has been identified by a distance of 500m from the boundary of the Subject Site. ***Figure 3-1*** illustrates the extent of the study area. Vehicular emissions and industrial emissions are the key air pollution sources in the vicinity of the Subject Site that might impose air quality impacts during operation phase.

7.2. Vehicular Emissions from Open Road Traffic

7.2.1. The Subject Site is surrounded by an open road, namely Caroline Hill Road to the north. According to the information from the Annual Traffic Census (2024) published by Transport Department, the road section near to the Subject Site are classified as Local Distributor ("LD").

7.2.2. With reference to the HKPSG, recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions have been adopted as summarised in ***Table 7-1***. The buffer distance is illustrated in ***Figure 6-1.***

Table 7-1 Buffer distance from the Adjacent Roads

Road Name	Road Type	HKPSG Guideline Buffer Distance Requirement
Caroline Hill Road	Local Distributor	5m

7.2.3. The offices and multi-purpose rooms of the Proposed Development will rely on the centralized AC system whereas the sports facilities and carpark will rely on natural ventilation. As shown in ***Figure 6-1***, no air sensitive uses (including openable windows, open space for active recreation use, and fresh air intake of mechanical ventilation) will be located within the buffer zones from G/F to R/F during the operation phase. Hence, no significant air quality impact is anticipated during the operation phase.

7.3. Industrial Emissions from Chimneys

7.3.1. Site survey was carried out on 18 March 2025 to review the existing environmental conditions.

7.3.2. Chimneys were identified at Tung Wah Eastern Hospital and the Saint Paul's Hospital Main Block during the survey. According to the previous planning application (No. A/H7/182), a chimney was also present at Saint Paul's Convent, but it is noted that this chimney has been removed during the survey, as captured in ***Table 7-2*** below.

Table 7-2 Photographs of St. Paul's Convent Chimney

Captured by Google Maps on Jan 2024	Captured on Site Visit on March 2025
 The chimney was observed at St. Paul's Convent.	 The chimney at St. Paul's Convent was removed.

7.3.3. Based on the Hong Kong's open3Dhk website, it was noted there are 4 nos. of chimneys at Saint Paul's Hospital Main Block with a height of 124.7mPD. According to the proposed layout plan in ***Appendix 3-1***, the main roof level of the Proposed Development would be approximately +45.4mPD. The height difference between the hospital chimneys and the Proposed Development is therefore about 79.3m. The Subject Site is located more than 100m away from the Saint Paul's Hospital Main Block. Area with 100-200m horizontal buffer distance from chimney required 20m difference in height between industrial chimney exit and fresh air intake location (i.e. allowable fresh air intake location at or below 104.7mPD). Details of the allowable fresh air intake location are enclosed in ***Figure 6-2***. This showed that Proposed Development has sufficient buffer distance as stipulated in HKPSG, hence, no adverse air quality impact to the Proposed Development.

7.3.4. The Specified Processes (SP) Licence was reviewed on 05 September 2025 and it was noted that there are also 4 nos. of chimneys at Proposed District Court Building at Caroline Hill Road, with a height of 146.3mPD (2 nos. chimneys) and 146.4mPD (2 nos. chimneys). The height difference between the hospital chimneys and the Proposed Development are about 100.9m and 101.0m respectively. The Proposed Development is located more than 100m away from the Proposed District Court Building. As such, area with 100-200m horizontal buffer distance from chimney required 20m difference in height between industrial chimney exit and fresh air intake location (i.e. allowable fresh air intake location at or below 126.3mPD respectively). This showed that Proposed Development has sufficient buffer distance as stipulated in HKPSG, hence, no adverse air quality impact to the Proposed Development.

7.3.5. A diesel generator owned by Tung Wah Eastern Hospital was found during the site surveys within the 200m assessment area. The location of the diesel emergency generator is shown in ***Figure 6-2***. According to the verbal communication with Tung Wah Eastern Hospital on 26 May 2021, it was confirmed that the diesel generator is for emergency purpose only. In view of the diesel generator is for emergency use only, no adverse air quality impact to the Proposed Development and nearby air sensitive receivers is expected.

7.3.6. With compliance of the HKPSG recommendations, no air impact caused by the surrounding chimneys is anticipated.

7.3.7. Slaughterhouses, sewage treatment works facilities, village incinerators, odour sources and dusty uses are not found within 500m radius of the Proposed Development. Therefore, no adverse odour impact is expected.

7.4. Industrial Emission from the Proposed Development

7.4.1. The Proposed Development will not include any chimney for fuel combustion. Emergency generator will be provided in the Proposed Development. As Emergency generator is for emergency use only and will not be used during normal operation.

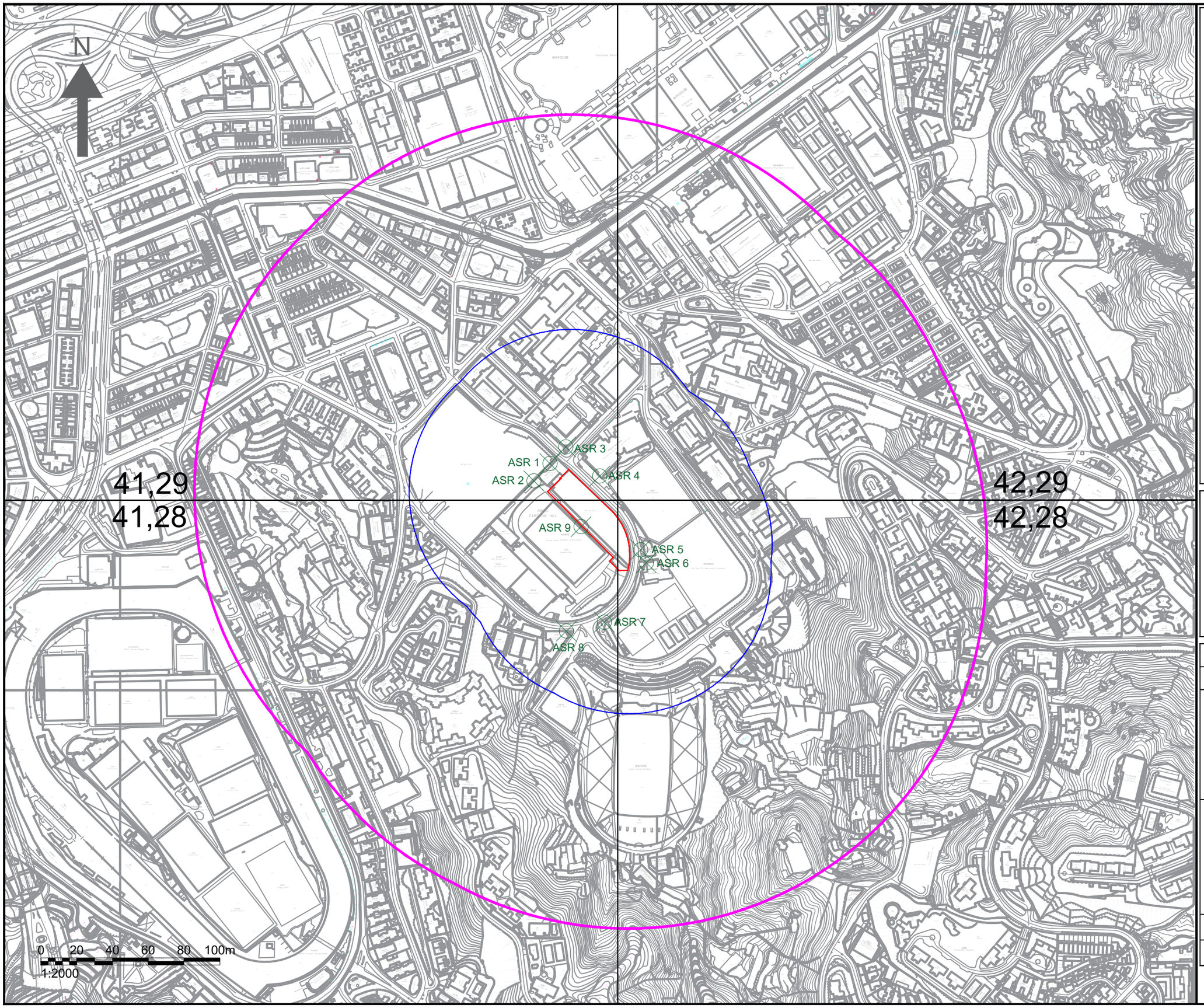
7.4.2. Carpark is included in the Proposed Development. The ventilation system for the carpark will follow the requirements in the ProPECC PN 2/96 - Control of Air Pollution.

7.4.3. Therefore, no adverse air quality impact related to industrial emission from the Proposed Development to the nearby air sensitive receivers is anticipated.

8. Conclusions

8.1.1. Fugitive dust due to construction works and gaseous emission from construction equipment would make insignificant air quality impacts to the nearby air sensitive receivers, with the implementation of dust suppression measures and good site practice as stipulated under Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation.

8.1.2. Air sensitive uses (including openable windows, fresh air intake for mechanical ventilation and open space for active recreational use) in the Subject Site shall maintain sufficient buffer distance from nearby road sections and industrial chimney as promulgated in the HKPSG. No adverse air quality impact is anticipated at the Subject Site during operation phase.



NOTES :

- SUBJECT SITE
- GRID NUMBER
- 200m ASSESSMENT AREA
- 500m ASSESSMENT AREA
- AIR SENSITIVE RECEIVERS

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

SUBJECT SITE LOCATION AND AIR SENSITIVE RECEIVERS

Drawing No : FIGURE 3-1	Revision : 0
Scale : AS SHOWN	Date : DEC 2025

THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY STATED.
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A3 420 x 297

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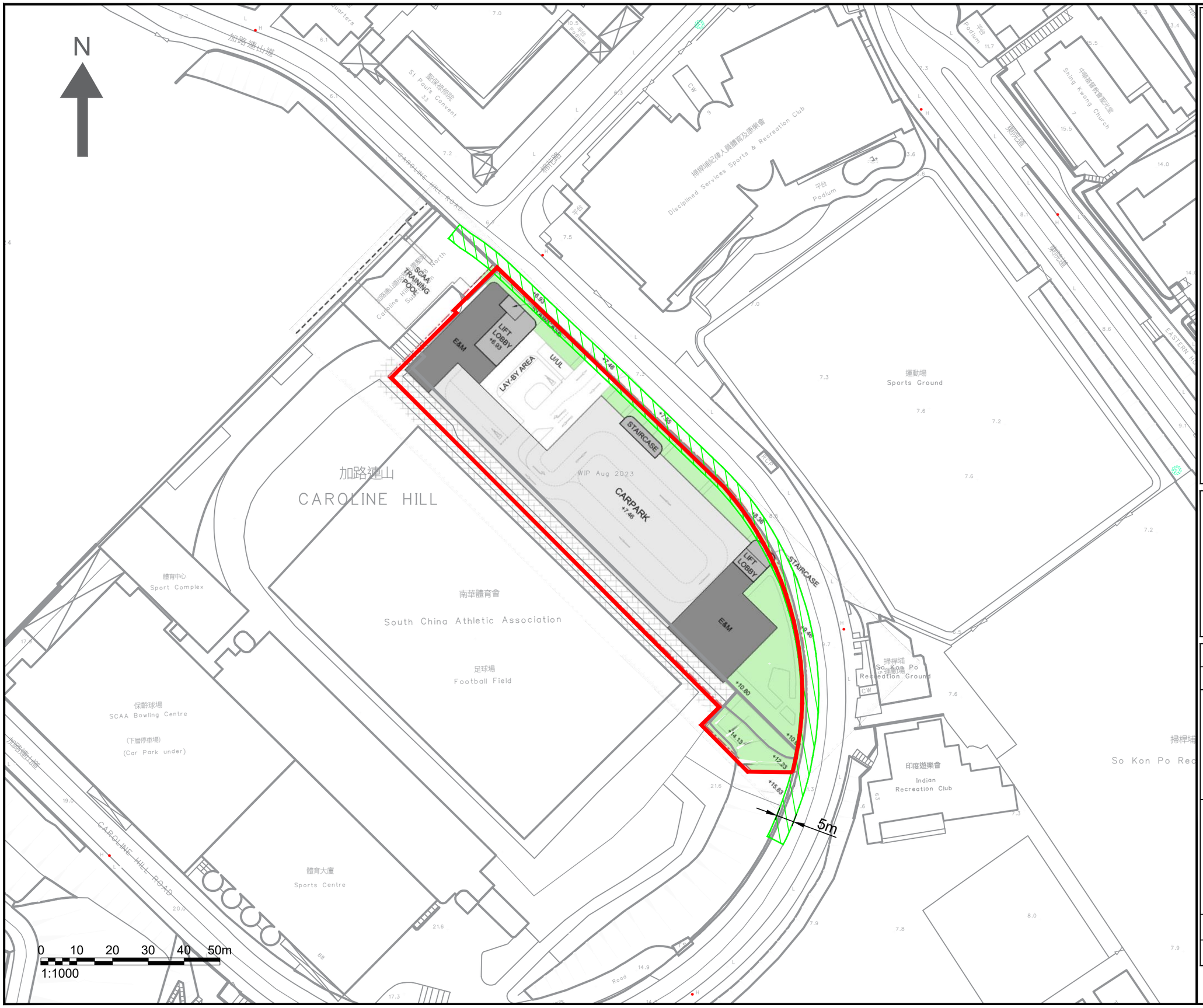

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG.

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT G/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-1	Revision : 1
Scale : AS SHOWN	Date : DEC 2025

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A3 420 x 297

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N

CAROLINE HILL ROAD

LIFT LOBBY

STAIRCASE

MULTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

WIP Aug 2023

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.08

LIFT LOBBY

STAIRCASE

LANDSCAPE AREA

+11.57

+10.45

+10.65

+16.80

+12.25

5m

SCAA TRAINING POOL

加路連山

CAROLINE HILL

體育中心
Sport Complex

南華體育會
South China Athletic Association

足球場
Football Field

保齡球場
SCAA Bowling Centre

(下層停車場)
(Car Park under)

體育大廈
Sports Centre

運動場
Sports Ground

掃桿埔
So Kon Po Recreation Ground

印度遊樂會
Indian Recreation Club

排桿操紀律人員體育及康樂會
Disciplined Services Sports & Recreation Club

聖保祿修院
St Pauls Convent

0 10 20 30 40 50m

1:1000

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 1/F AND THE ADJACENT ROADS

Drawing No :	Revision :
FIGURE 6-1	1
Scale : AS SHOWN	Date : DEC 2025

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A3 420 x 297

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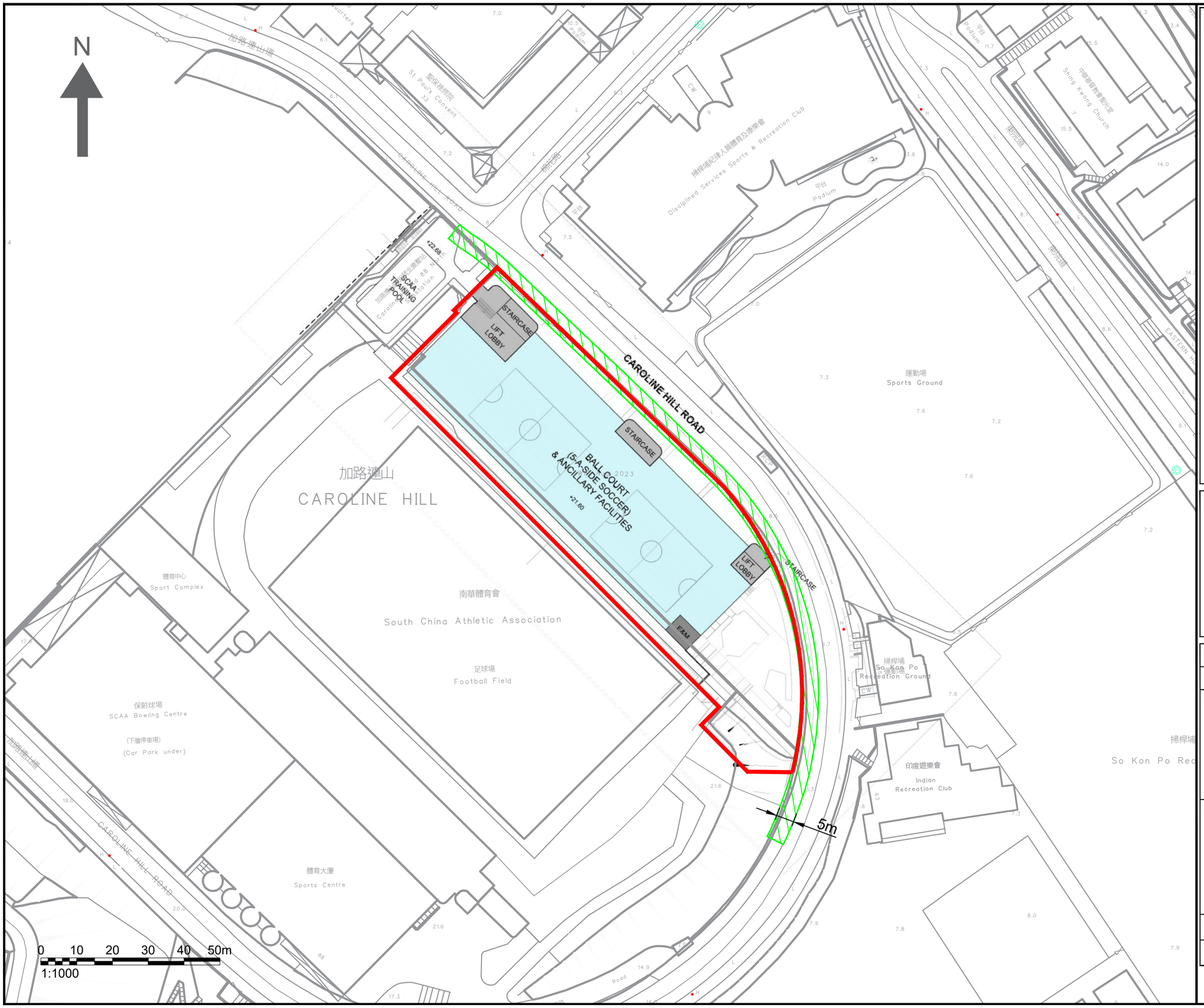

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 2/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-1	Revision : 1
Scale : AS SHOWN	Date : DEC 2025

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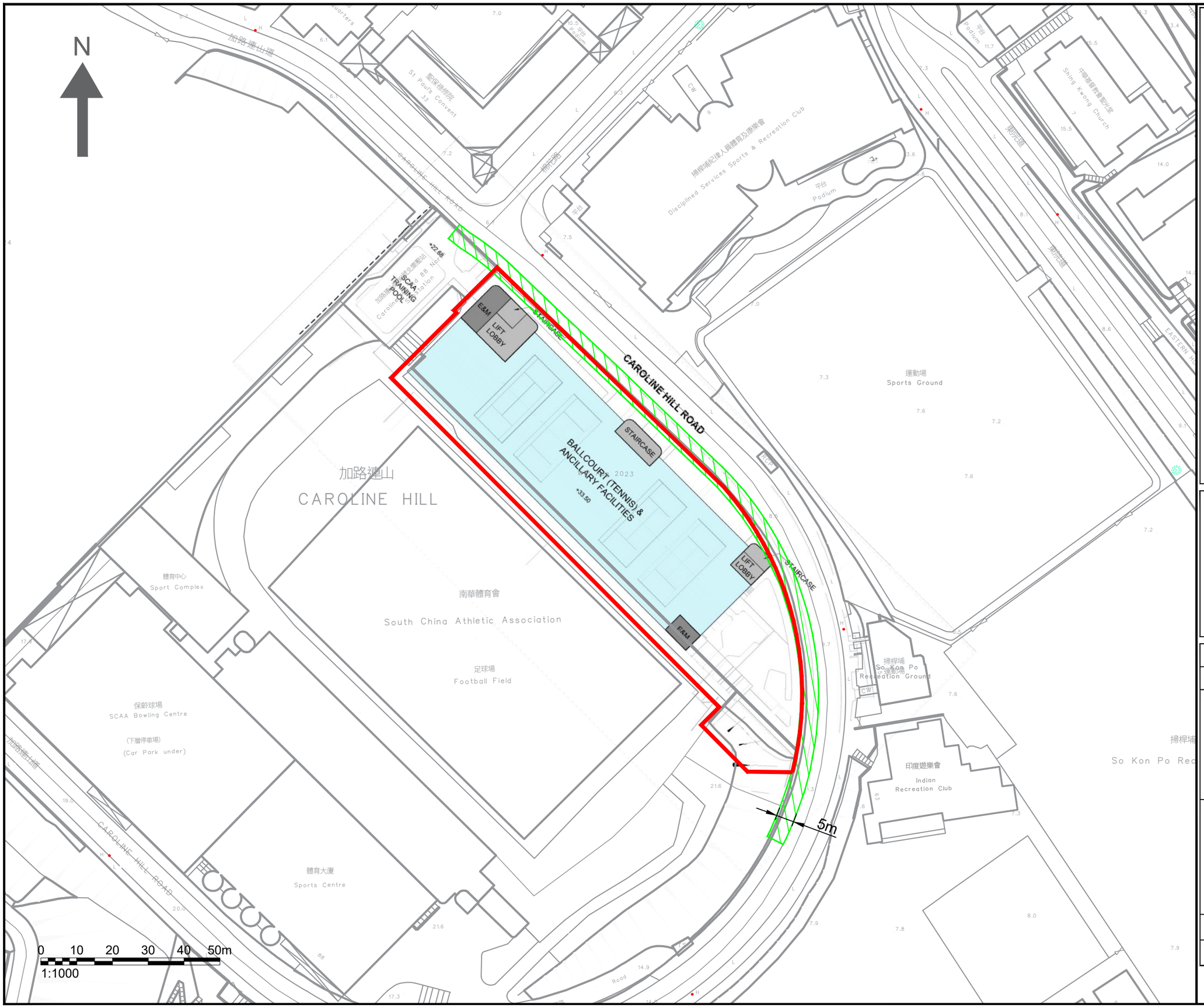

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 3/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-1	Revision : 1
Scale : AS SHOWN	Date : DEC 2025

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A3 420 x 297

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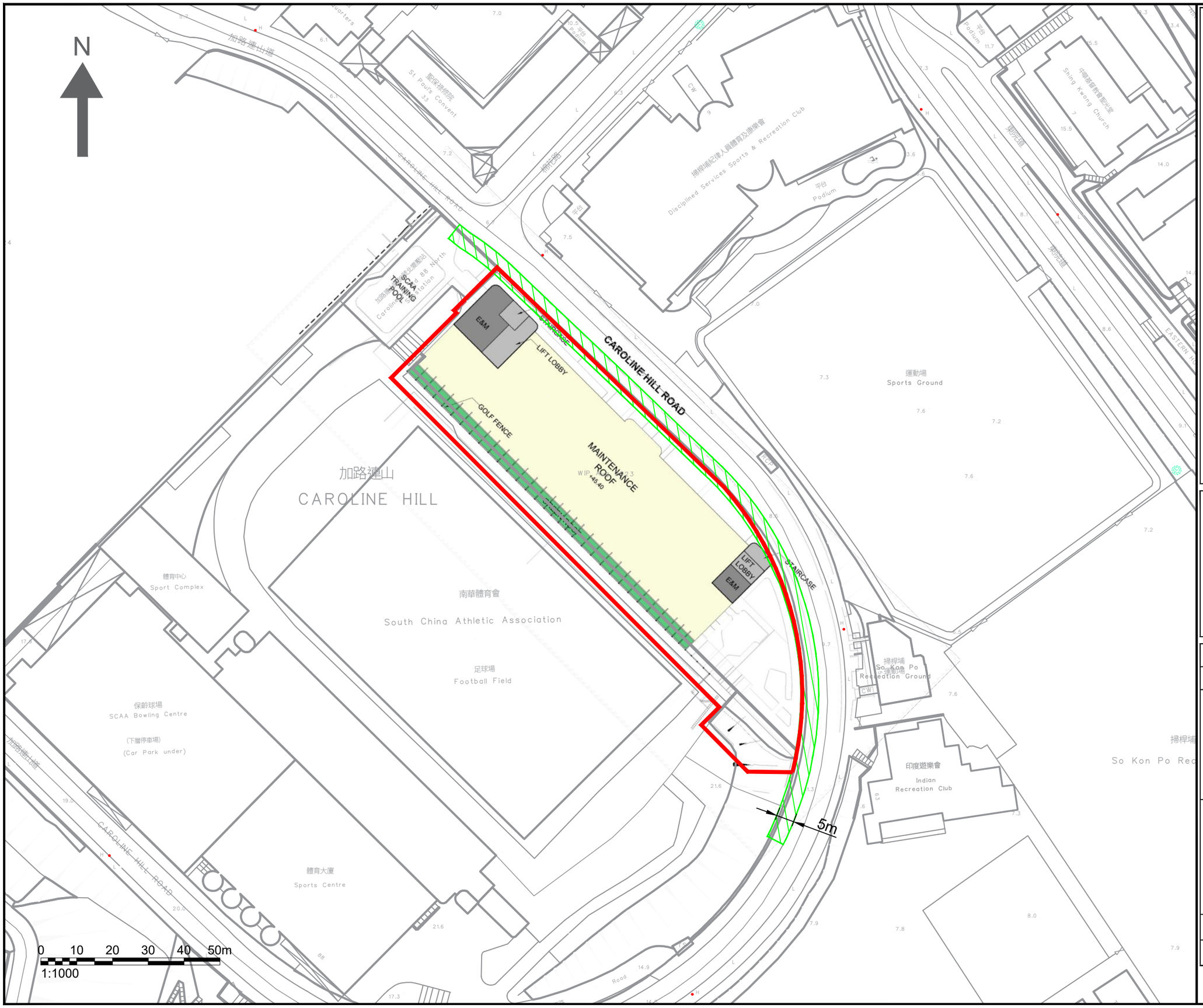

NOTES :

SUBJECT SITE

ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT R/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-1	Revision : 0
Scale : AS SHOWN	Date : OCT 2025

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A3 420 x 297

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N

200m Buffer Distance from Chimney

100m Buffer Distance from Chimney

4 Nos. of Chimney at Saint Paul's Hospital Main Block (124.7mPD)

100m Buffer Distance from Chimney

2 Nos. of Chimney at Proposed District Court Building (146.3mPD)

2 Nos. of Chimney at Proposed District Court Building (146.4mPD)

200m Buffer Distance from Chimney

Allowable Fresh Air Intake At or Below 104.7mPD

Allowable Fresh Air Intake At or Below 126.3mPD

Diesel Emergency Generator of Tung Wah Eastern Hospital

0 25 50 75 100 125m

1:2500

NOTES :

- SUBJECT SITE
- 200m ASSESSMENT AREA
- DIESEL EMERGENCY GENERATOR
- CHIMNEYS OF ST. PAUL'S HOSPITAL MAIN BLOCK
- CHIMNEYS OF PROPOSED DISTRICT COURT BUILDING
- ALLOWABLE FRESH AIR INTAKE LOCATION AT OR BELOW 104.7mPD
- ALLOWABLE FRESH AIR INTAKE LOCATION AT OR BELOW 126.3mPD
- ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	CC

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

MAP OF INDUSTRIAL CHIMNEY SURVEY WITHIN 200M ASSESSMENT AREA

Drawing No :	Revision :
FIGURE 6-2	1
Scale : AS SHOWN	Date : DEC 2025

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A3 420 x 297

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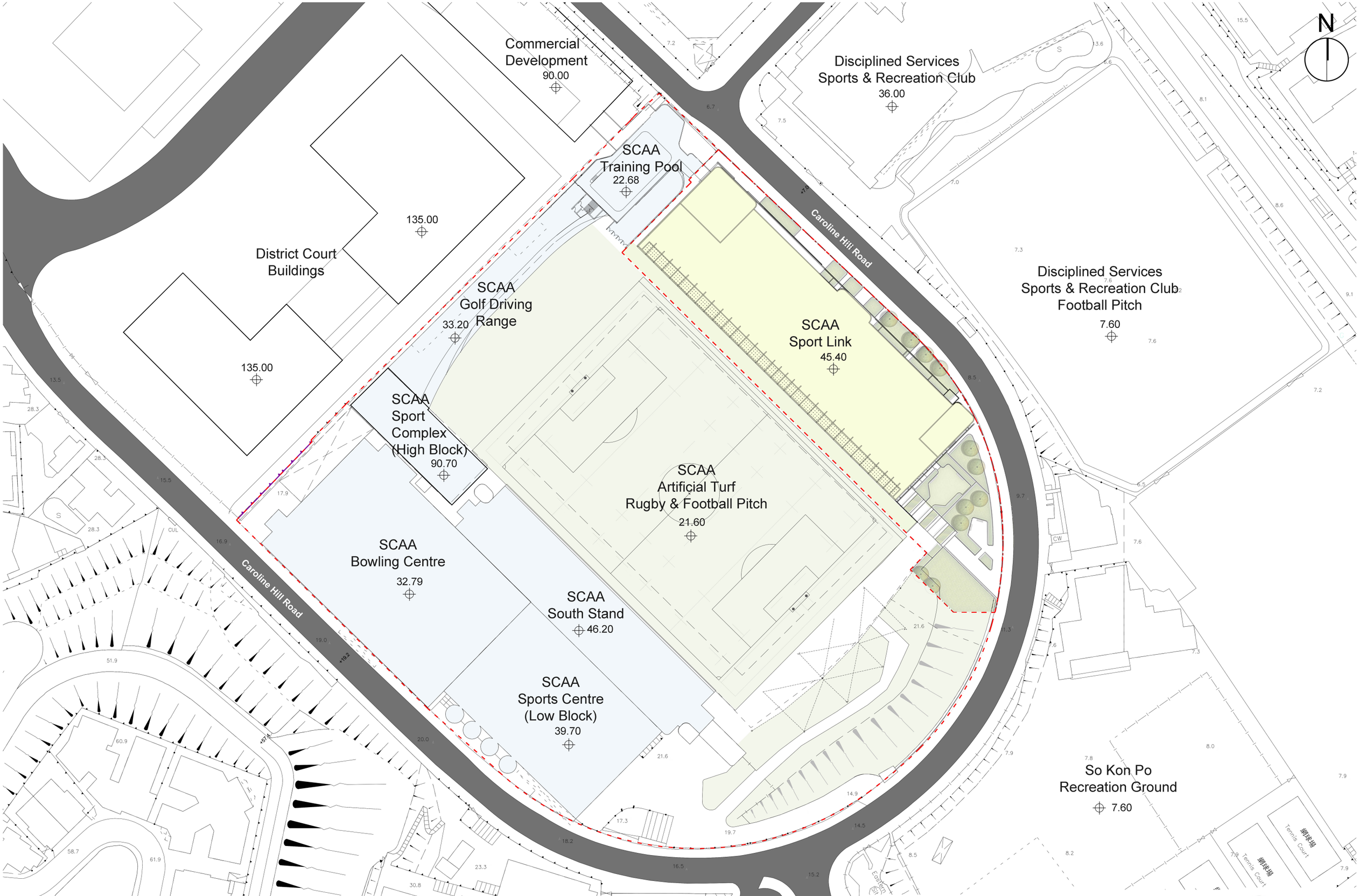
Appendix 3-1

Site Layout Plan

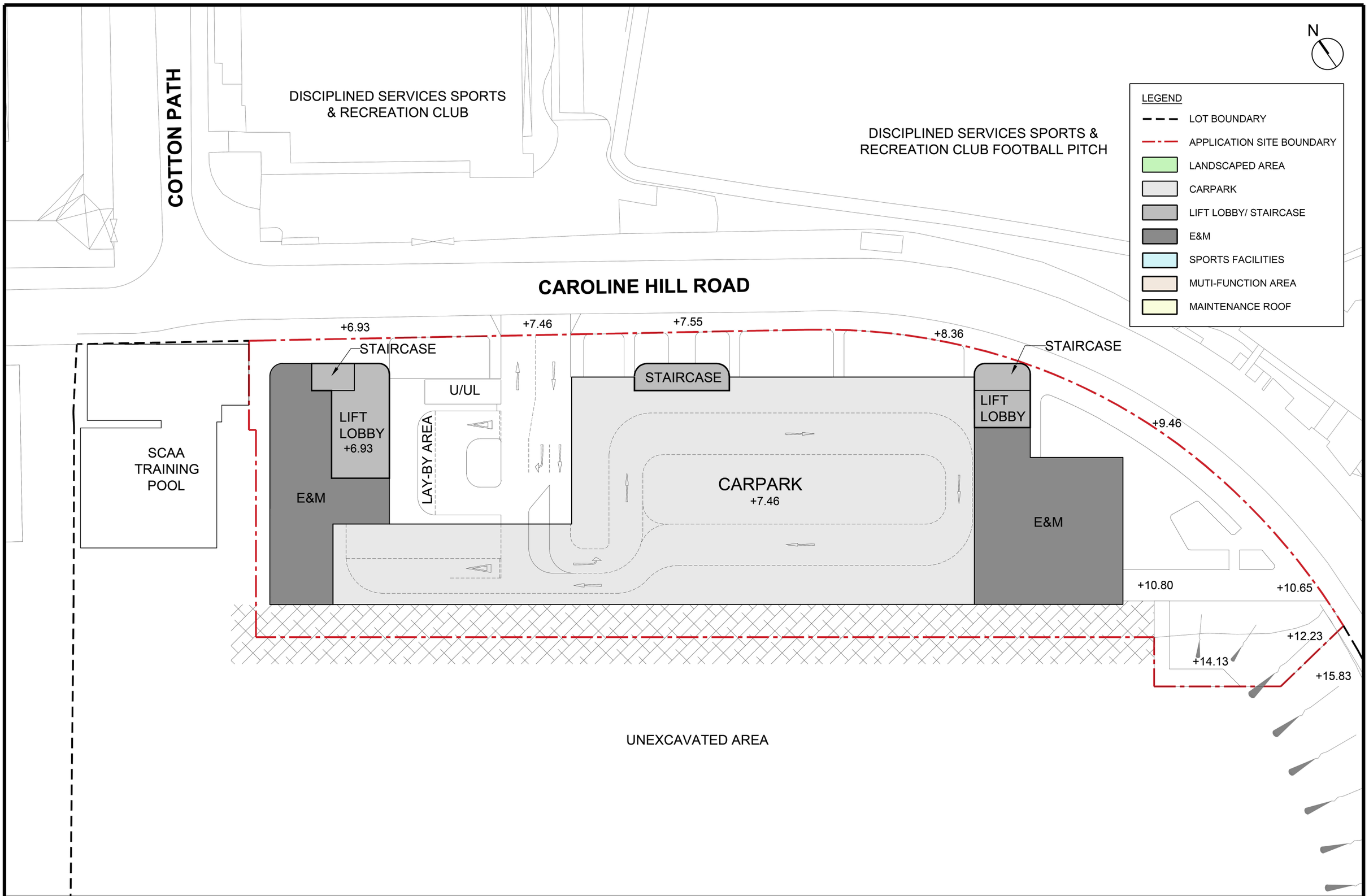


Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

m 10 20 30 50 100

Design 2 Architects



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

G/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

SCAA TRAINING POOL

STAIRCASE

LIFT LOBBY

STAIRCASE

MUTI-FUNCTION ROOMS & ANCHILLARY FACILITIES

+14.04

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+11.06

STAIRCASE

LIFT LOBBY

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALL COURT
(5-A-SIDE SOCCER)
& ANCILLARY FACILITIES

+21.60

E&M

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- MAINTENANCE ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

E&M

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

E&M

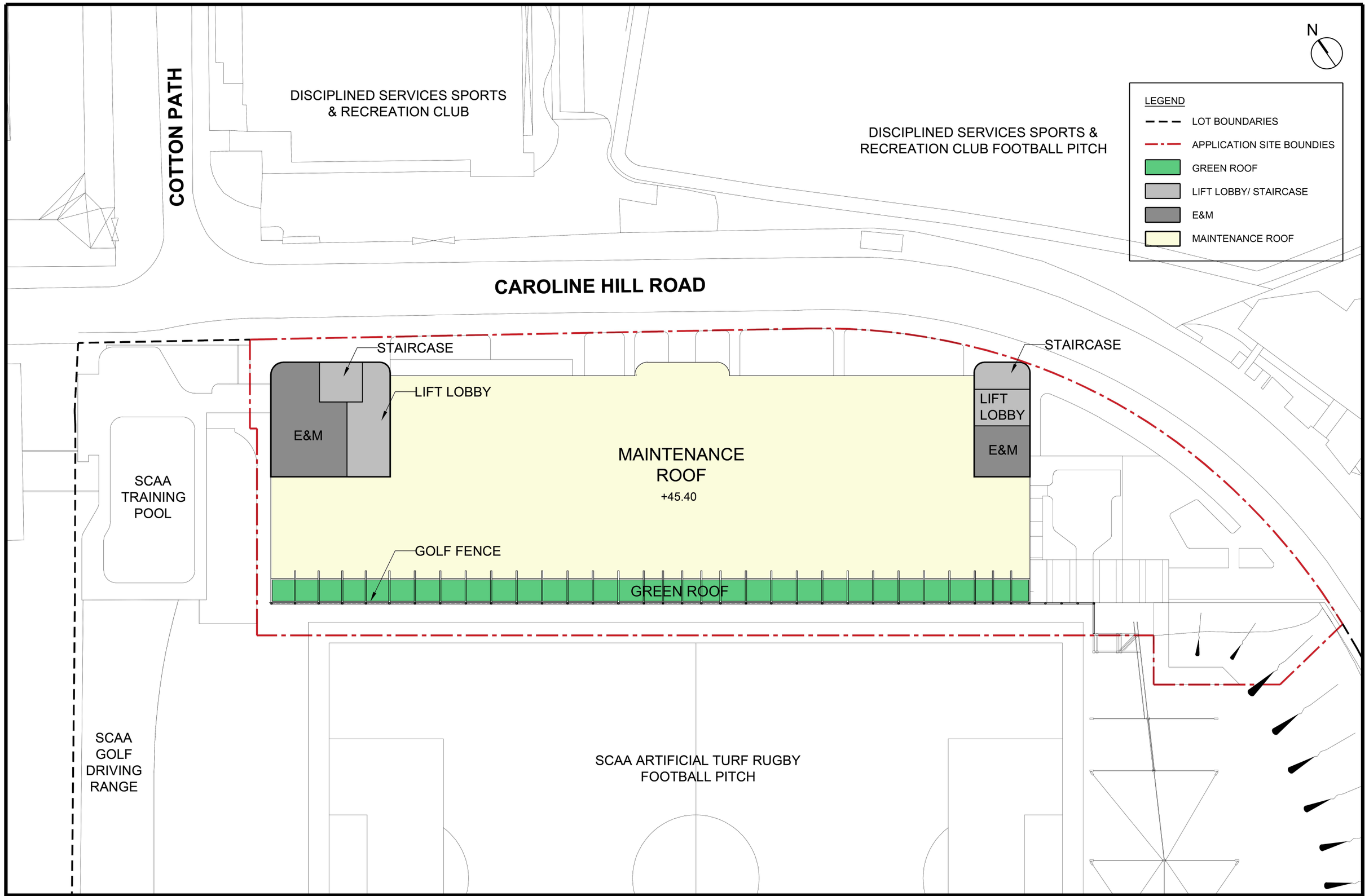
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025

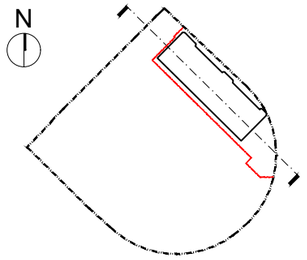
Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

UR/F Plan ◦ 1 : 500 (A3) ◦ 13 Oct 2025



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- MAINTENANCE ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

11900

10540

3600

37940

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Main Roof (for maintenance only) +45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

7560

6580

Caroline Hill Road

Existing Slope

Approx. +10.65

Landscape Garden

+10.65

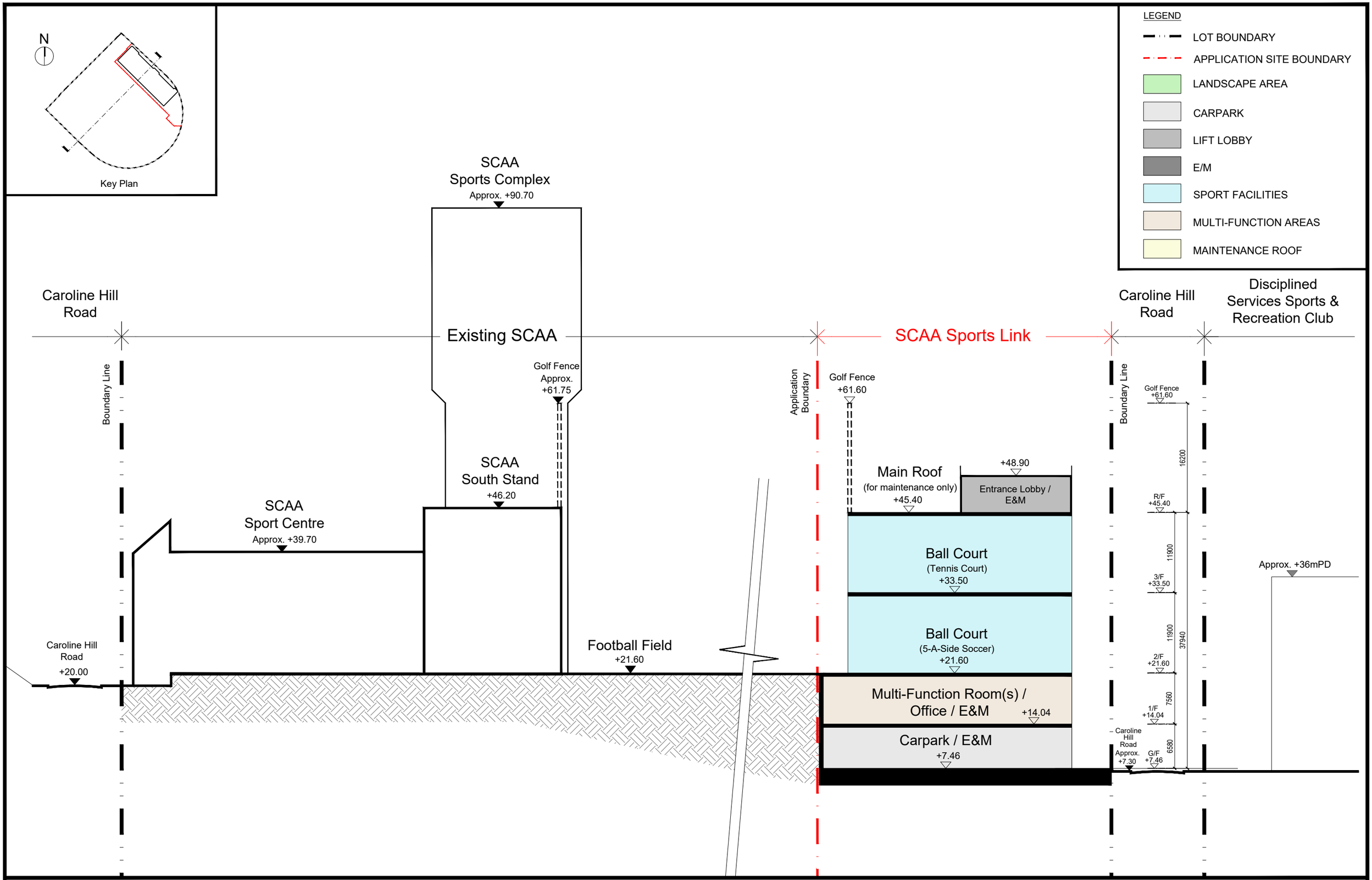
+8.811

Mean Street Level of North Site

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 13 Oct 2025

Design 2 (HK) Limited

PLANNING LIMITED
規劃顧問有限公司

[redacted]

By Email and Hand

Our Ref: S3116/SCAA/23/004Lg

7 January 2026

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

Dear Sir/Madam,

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
- S16 Planning Application Submission -
TPB Ref.: A/H7/189
Further Information No. 2

Reference is made to the captioned S16 Planning Application submitted to the Town Planning Board ("TPB") on 17 October 2025 and departmental comments received on 15 December 2025.

In response to the departmental comments received, please find attached the Further Information ("F.I.") submission for your consideration. The submission document consists of:

Response-to-Comment Table
Figures T1 – T5
Appendix I Updated Car Park Layout Plan
Appendix II Revised Traffic Impact Assessment
Appendix III Revised Pages of the GPRR

Meanwhile, should you have any queries in relation to the above, please do not hesitate to contact [redacted]

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

Gladys Ng

Encl. (4 copies)

cc. the Applicant & Team

PL/GN/vy

FS 579819

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
S16 Planning Application

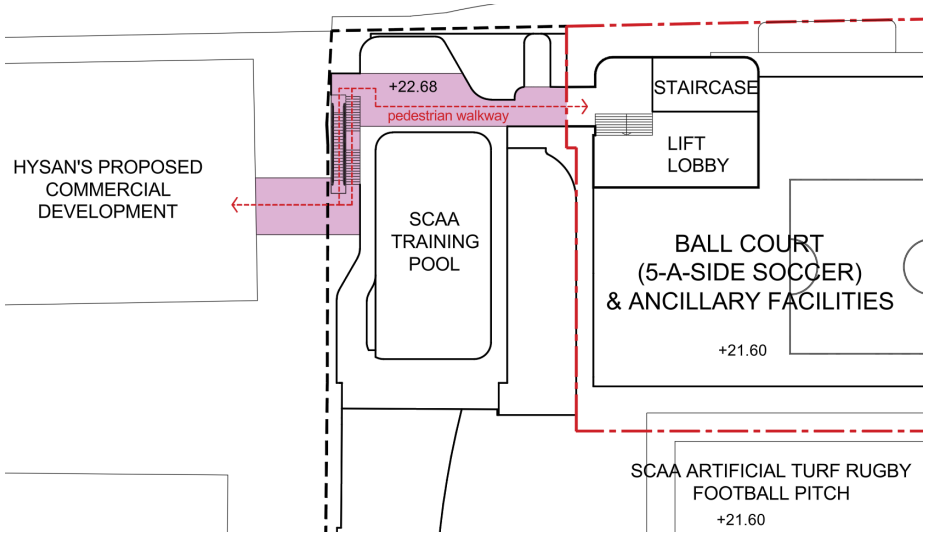
(Planning Application No: A/H7/189)

RESPONSE-TO-COMMENT TABLE

Comments	Response
Comments from Transport Department: **(Contact Person: Mr Sammy WONG; Tel: 2829 5262)**	
TD's Comments on the Traffic Impact Assessment (TIA) at Appendix III of the Planning Statement	
1) Section 2.4 refers - It is noted that the proposal includes 63 private car parking spaces (including 2 spaces for persons with disabilities), 9 motorcycle parking spaces, 1 pick-up/drop-off layby, and 1 goods vehicle loading/unloading bay. The Applicant is advised to make reference to the developments of similar nature to justify the adequacy of provisions of internal transport facilities for meeting the operational demand of the development.	Reference was also made to the parking provision of the existing SCAA Complex adjoining the Application Site. The parking ratio of the existing SCAA Complex is 1 space per 340 m^2 GFA (191 spaces for 64,728.113m^2 GFA). According to the Applicant, the average carpark occupancy during the operation period is 65%, i.e. 124 occupied spaces, equivalent to a parking ratio of 1 space per 522 m^2 GFA. The parking ratio of the proposed SCAA Sports Link is 1 space per 497 m^2 GFA (63 spaces for 31,327.12m^2 GFA), therefore is considered appropriate and sufficient to meet the parking demand as compared to existing situation at the SCAA Complex.
2) Section 2.3 refers – It is noted that there is a proposed vehicular access along the Caroline Hill Road. Please ensure that this access is located within the XYZ lease boundary as per the lease plan. Additionally, please provide swept path analysis showing vehicles entering and leaving the site using the proposed vehicular access.	Proposed vehicular access along Caroline Hill Road is located within the ingress/egress points as stated on the lease plan and condition. Please refer to the attached swept path analysis **Figures T1** and **T2**, for HGV and private cars respectively, to enter and leave the site.
3) The proposed car parking layout under Appendix A of the TIA refers. (i) Please indicate the dimensions of the parking spaces and width of the internal road at the proposed carpark layout	Please refer to the attached layout in *Appendix I* and the swept paths of the concerned spaces area shown in **Figures T4** and **T5** for detail.

Comments		Response
	plan. Please also refer to the marked-up comments on the drawing in the **Annex A** attached.	
(ii)	The Applicant should advise whether there is any vehicular access gate for the carpark to be provided within the development. The Applicant are reminded to provide sufficient queuing space between the vehicular access gate (if any) for the carpark and the proposed run-in to avoid tail-back of any queuing traffic onto Caroline Hill Road.	Noted. Please note that a drop bar will be provided to control cars enter the paid car parking area. The drop bar would be about 32 m away from Caroline Hill Road and a minimum of 15m queuing space would be provided to avoid blockage to the pick-up/drop-off layby. Please refer to **Figure T3** for detail.
4)	Section 3.3 refers - Please include the capacity performance assessments of the key junctions, i.e., "Leighton Road / Wong Nai Chung Road", "Broadwood Road / Link Road", "Pennington Street / Irving Street / Jardine's Bazaar", and "Hysan Avenue / Hoi Ping Road in the report.	Noted. The concerned junctions have been included in the report accordingly. Please refer to Chapter 3 and Chapter 4 of the updated TIA report in *Appendix II* for detail.
5)	Sections 4.2.6 to 4.2.10 refer - The Applicant assumed that most visitors to the proposed development will travel by PT and that the percentage of visitors using taxis would follow the average PT modal split of the territory (i.e. 5.8%), notwithstanding that the proposed development is about **650 m** from Causeway Bay MTR station as mentioned in Section 3.5.1. It is also noted that the Applicant assumes taxi trip is the sole vehicular traffic generation to the site. The above assumptions may underestimate the trip generation of the proposed development and the Applicant should critically review and re-assess the trip generation of the proposed development and provide justifications to the proposed trip generation and attraction.	The trip generation of the proposed SCAA Sports Link has been reviewed and updated accordingly. Please refer to Section 4.2 of the updated TIA report in *Appendix II* for detail.

Comments	Response
6) Section 4.3, Table 4.5 of "Traffic Generation by Planned Developments in the Vicinity" refers -	
(i) Please clarify whether both weekend and weekdays peak hour have been considered.	Please be clarified that both weekday and weekend peak hours have been considered. Please refer to updated Table 4.5 for details.
(ii) Regarding the column of "unit / content" for Office, please clarify whether the unit shall be pcu/hr/100m^2.	Please be clarified that the unit should be pcu/hr/100m^2. Table 4.5 has been updated accordingly (*Appendix II* refers).
(iii) Please also note that Note 3 appears to be missing from the table.	Table 4.5 has been reviewed and updated accordingly (*Appendix II* refers).
(iv) The title "Event Start" & "Event end" are not applicable for this development.	Table 4.5 has been reviewed and updated accordingly (*Appendix II* refers).
7) Section 4.7 refers - The assessment for the design year 2033 does not incorporate the assessment of the performance of junctions at the new access road formed under the Caroline Hill Road commercial development. Please review and revise the assessment accordingly, ensuring that the latest road improvement scheme and the projected traffic generation from all planned developments in the vicinity of the proposed sports and recreation centre are fully taken into account.	Please be clarified that the new access road formed under Caroline Hill Road commercial development has been assessed under Junction 1. Please refer to Appendix C and Appendix D of the revised TIA report (*Appendix II* refers).
8) Section 4.8, Table 4.9 of "Estimated Pedestrian Generation/Attraction of Planned Developments" refers - Please incorporate weekend peak hours into your assessment. Regarding Note (1), please clarify the source of reference for the "in-house trip rates" adopted.	Table 4.9 has been reviewed and updated accordingly. Please note that the pedestrian rates from the approved TIA report of Planning Application A/H7/181 have been adopted.

Comments	Response
9) Section 4.9, Table 4.10 refers - Please provide details and diagram showing how the pedestrian flow accessing from / to the proposed development are distributed.	The anticipated pedestrian routings have been shown in Figure 3.3 of the updated TIA report (*Appendix II* refers).
10) Section 4.9.5 refers - It is noted that the Applicant has liaised with the adjacent commercial development for the feasibility of establishing a footbridge between the proposed development and the adjacent commercial development. The Applicant should provide an indicative alignment of the proposed pedestrian linkage and clarify its future management and maintenance responsibility.	The initial discussion regarding the footbridge design with Hysan Development Co. Ltd (Hysan) was held on 4 November 2024. The indicative pedestrian linkage design is shown below:  Management and maintenance responsibility to be further discussed with Hysan in detail design stage.

Comments	Response
11) Figure 3.3 refers - Please include the pedestrian assessment of the crossing at junction of Cotton Path/Caroline Hill Road.	Pedestrian assessment of the concerned crossing has been included accordingly. Please refer to Section 3.4 of the updated TIA report for details.
12) Carpark Layout Plan refers – The barrier-free access route for disabled people should be indicated. The application is reminded that the location of the disabled parking should be close to the accessible facilities (i.e. lifts, ramps, etc).	A ramp will be provided to connect G/F lift lobby and disabled parking spaces. The proposed location is the closest possible to the lift lobby, while avoiding the need to cross or bypass internal vehicular traffic. Please refer to the attached layout in *Appendix II*.

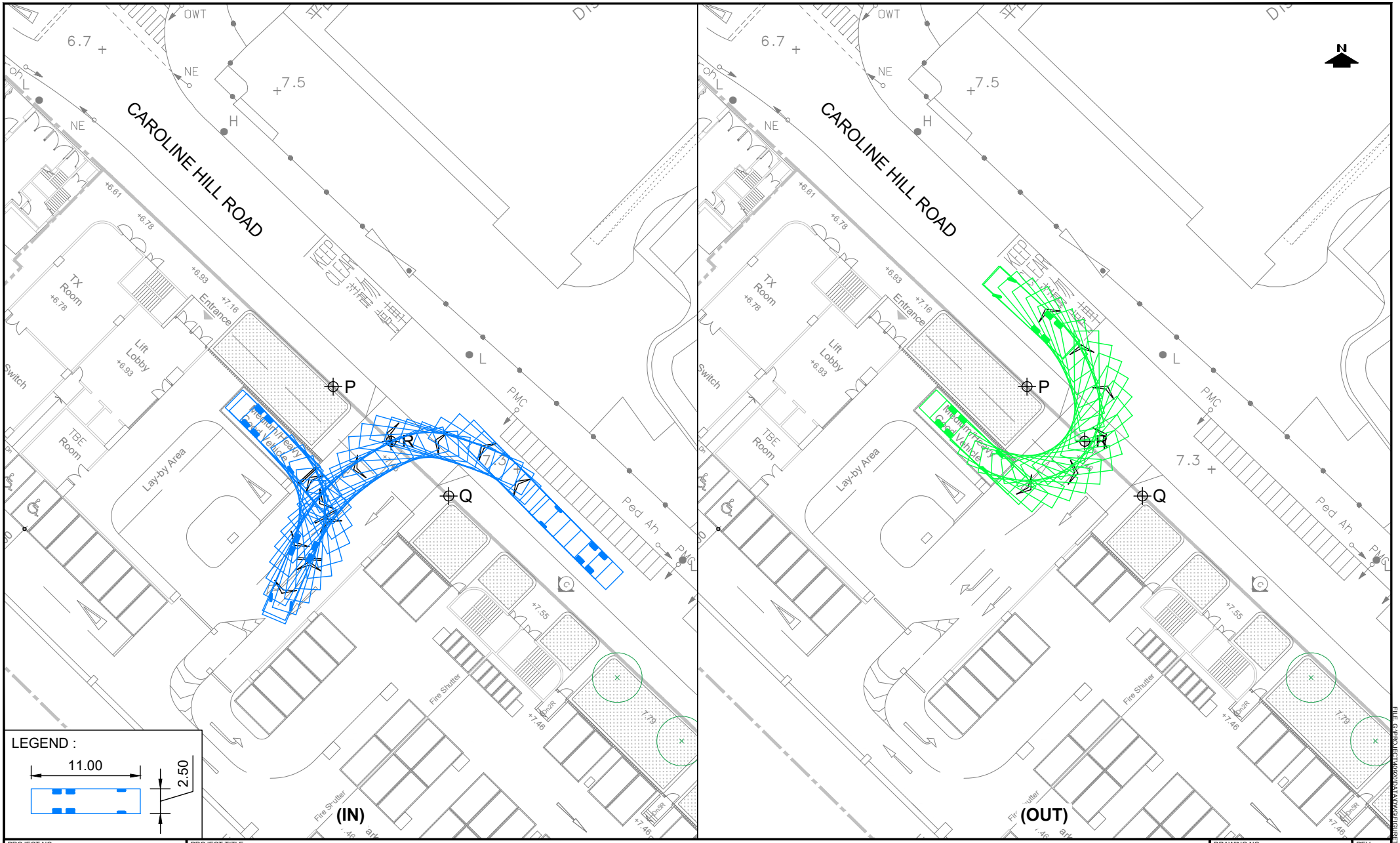
Consolidated by: **KTA Planning Limited**
Date: **7 January 2026**

Figures T1 – T5
Appendix I Updated Car Park Layout Plan
Appendix II Revised Traffic Impact Assessment
Appendix III Revised Pages of the GPRR

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
S16 Planning Application

(Planning Application No: A/H7/189)

FIGURES



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T1	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE DEC 2025 / SCALE 1:500 @ A4	DRAWING TITLE: SWEPT PATH ANALYSIS - 11m HGV AT RUN - IN / OUT	LLA 顧問有限公司 Consultancy Limited

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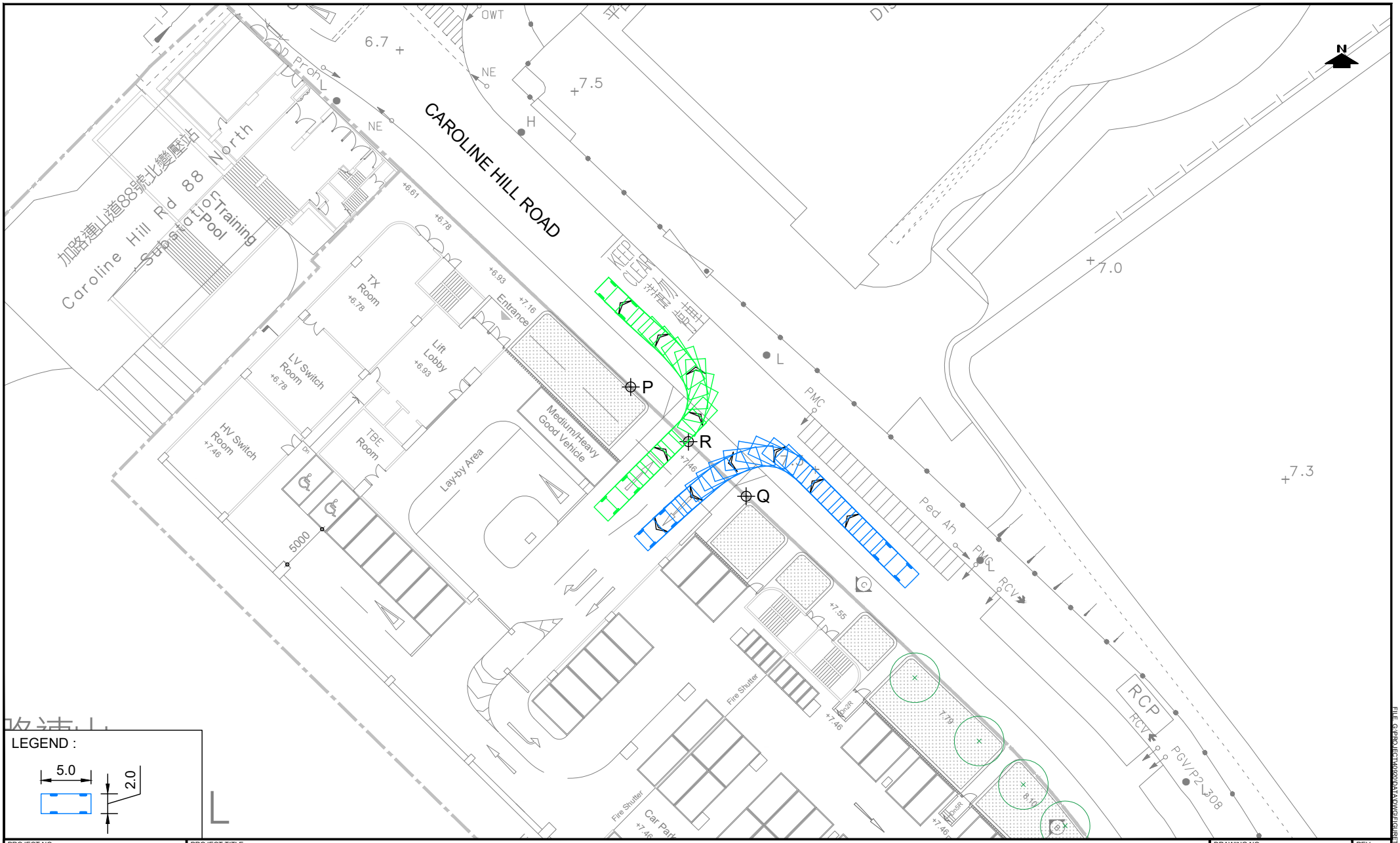
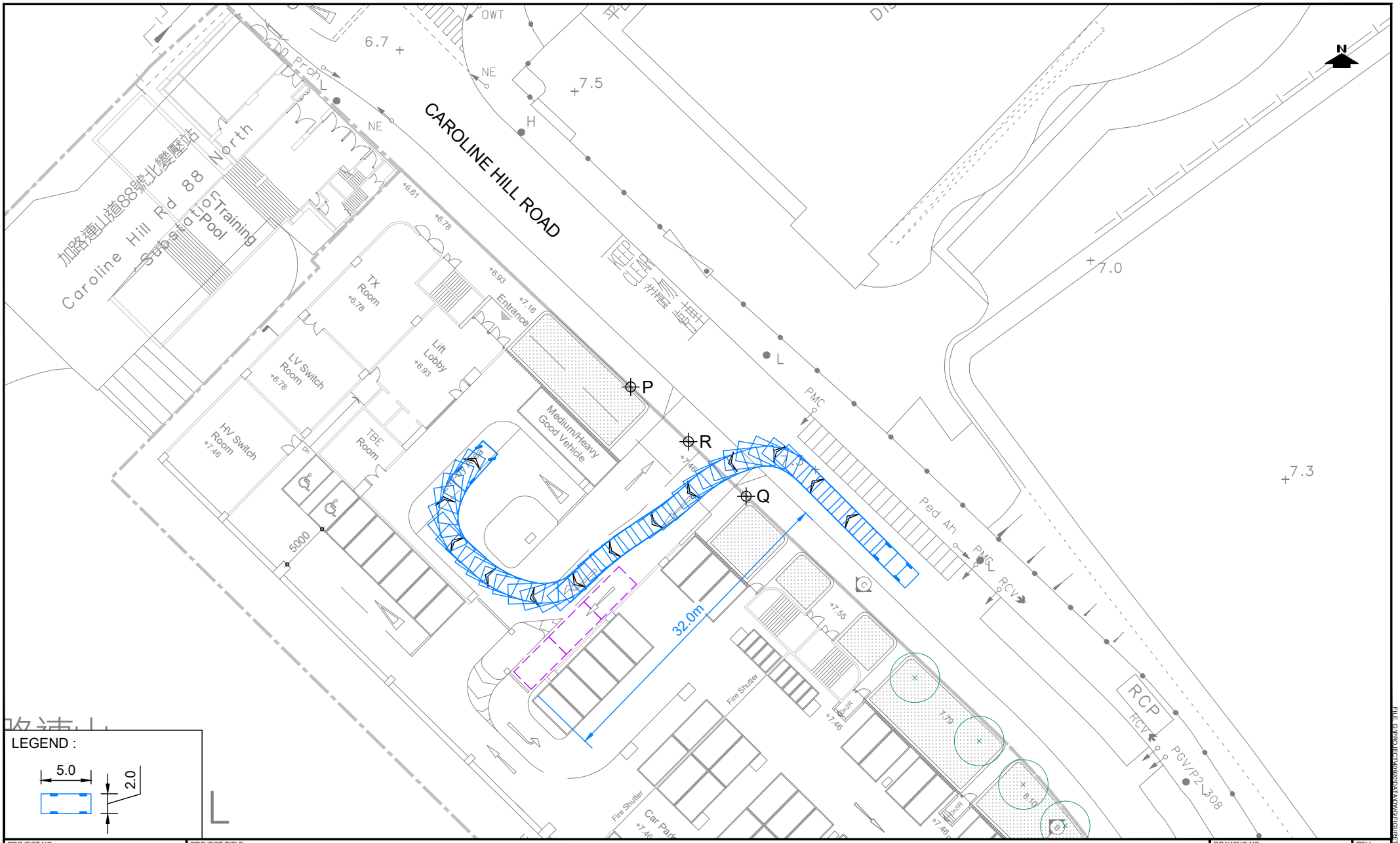


PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T2	REV. ·
DESIGNED SLN / DATE DEC 2025	DRAWING TITLE: **SWEPT PATH ANALYSIS - PRIVATE CARS AT RUN - IN / OUT**	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE 1:500 @ A4			
CHECKED SLN			

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET2.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T3	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE DEC 2025; SCALE 1:500 @ A4	DRAWING TITLE: QUEUING SPACES TO CAR PARK	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET3.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T4	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE JAN 2026 / SCALE 1:500 @ A4	DRAWING TITLE: SWEPT PATH ANALYSIS - PRIVATE CARS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET4.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T5	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE JAN 2026 / SCALE 1:500 @ A4	DRAWING TITLE: SWEPT PATH ANALYSIS - PRIVATE CARS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET5.DWG PLOT SCALE : 1 = 1

Appendix I

Updated Car Park Layout Plan

N

COTTON PATH

DISCIPLINED SERVICES SPORTS
& RECREATION CLUB

DISCIPLINED SERVICES SPORTS &
RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93
+7.46
+7.55
+8.36
+9.46
+10.80
+10.65
+12.23
+14.13
+15.83

STAIRCASE
STAIRCASE
STAIRCASE

L/UL

LIFT
LOBBY
+6.93

LIFT
LOBBY

LAY-BY AREA

SCAA
TRAINING
POOL

E&M

RAMP
DOWN

E&M

CARPARK
+7.46

5m
6m
6.43m

ACCESS GATE

UNEXCAVATED AREA

LEGEND:

11m
3.5m
5m
2.5m
2.5m
1m

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Car Park Layout ○ 1 : 500 (A3) ○ 07 Jan 2026

Design 2 (HK) Limited

Appendix II

Revised Traffic Impact Assessment

Document Status Control Record

Proposed SCAA Sports Link
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Traffic Impact Assessment Study

Originating Organisation : LLA Consultancy Limited [redacted]	Prepared by: SKL	SKL	Date: 29 December 2025
	Approved by: SLN		Date: 29 December 2025
	Revision No.: -		Date of Issue: 29 December 2025

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1 INTRODUCTION

1.1 Background

1.1.1 The South China Athletic Association ("SCAA") intends to develop a comprehensive sports and recreation centre ("the proposed development") at the northern part of SCAA site in Caroline Hill Road, Causeway Bay ("the Site"). A S16 planning application will be required for taking forward the implementation of the proposed development. In this regard, a traffic impact assessment ("TIA") study is required to support the S16 planning application.

1.1.2 LLA Consultancy Limited was commissioned to conduct the TIA study for the proposed development. This report presents the findings of this study.

1.2 Objectives

1.2.1 The objectives of this study are as follows:

- to review the existing traffic conditions in the vicinity of the Site;
- to estimate the traffic generation of the proposed development;
- to project the future traffic flows in the surrounding road network;
- to appraise the potential traffic impact of the proposed development, and to propose road improvement proposals, if required;
- to recommend the internal transport facilities for the proposed development; and
- to review the pedestrian traffic arrangement of the proposed development.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 As shown in **Figure 2.1**, the Site is situated on the northside of the SCAA site in Caroline Hill Road, Causeway Bay and the site area is about 6,132 m^2.

2.2 Development Schedule

2.2.1 The proposed development will provide tennis courts, 5-a-side artificial turf pitches, activities rooms, muti-purposes rooms and ancillary facilities. The key development parameters are summarised in **Table 2.1**.

Table 2.1 Proposed Development Schedule

Item	Parameter
Site Area	About 6,132 m^2
Total GFA	About 31,327.12 m^2
No. of Storeys	G/F, 1/F, 2/F and 3/F
Tennis Count	6 Nos.
5-a-side Artificial Turf Pitch	2 Nos.
Activities rooms, muti-purposes rooms and ancillary facilities	1/F: Activities Rooms + Multi-purposed Rooms + WC + Corridor = about 1840m^2
Internal transport facilities	63 private car parking spaces, 9 Motorcycle parking spaces, 1 pick-up/drop-off lay-by and 1 MGV loading/unloading bay

2.3 Vehicular Access Arrangement

2.3.1 The Site has a single frontage at Caroline Hill Road only and the proposed vehicular access for the proposed development must be located at Caroline Hill Road. Taking into consideration of the location of the Disciplined Services Sports & Recreation Club vehicular access at the opposite side, the proposed vehicular access is being positioned to stagger with the opposite vehicular access.

2.4 Proposed Transport Facilities

2.4.1 The internal transport facilities for the proposed development use should be provided in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG) or the land grant. As there is no specific guideline set in the HKPSG or land grant for the proposed sports and recreation uses, the design objective is to provide maximum parking space numbers on ground floor in formulating the carpark layout because there will be neither basement floor nor upper floor for carparks. The proposed ground floor plan is enclosed in **Appendix A** and a total of 63 car parking spaces, 9 motorcycle parking spaces, 1 pick-up/drop-off layby and 1 goods vehicle loading/unloading space can be provided. The car parking provision is equivalent to 1 car parking space per 124 m^2 and the provision level can meet the proposed operational needs.

2.4.2 **Table 2.2** lists out the details of the transport facilities provided within the proposed development.

Table 2.2 Summary of Overall Transport Facilities Provision

Facilities	Dimensions	Proposed Provision	
Car Parking Space	2.5m (W) x 5.0m (L) x 2.4 (H)	61	63
Disabled Car Parking Space	3.5m (W) x 5.0m (L) x 2.4 (H)	2	
Motorcycle Parking Space	1.0m (W) x 2.5m (L) x 2.4 (H)	9	
Pick-up/drop-off Lay-by	-	1	
Goods Vehicle Loading / Unloading Bay	HGV: 3.5m (W) x 11.0m (L) x 4.7m (H)	1	

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

3.1.1 Caroline Hill Road connects the local areas of Caroline Hill and So Kon Po with the district distributor Leighton Road in the area. The eastern end of Leighton Road intersects with Causeway Road and Tung Lo Wan Road that leads to the Tin Hau and Tai Hang areas respectively. The western end of Leighton Road links to Morrison Hill Road that leads to the local road network in Wan Chai and Canal Road Flyover.

3.1.2 Caroline Hill Road is a single 2-lane road with a short section adjoining the Disciplined Services Sports and Recreation Club near Cotton Path operating as one-way northbound. According to the 2023 Annual Traffic Census published by the Transport Department ("TD"), the section of Caroline Hill Road between Leighton Road and Yun Ping Road carried an annual average daily traffic ("AADT") of 5,330 vehicles per day.

3.2 Traffic Count Surveys

3.2.1 Having considered that the proposed development will have different traffic generation patterns during weekdays and weekends. For assessment purpose, both weekday and weekend are being considered.

3.2.2 Classified vehicles count surveys were carried out at the following locations in the vicinity of the Site on 17 June 2025 (Tuesday) for the time period of 08:00 – 10:00, 17:30 – 19:30 and 14 June 2025 (Saturday) for the time period of 11:30 to 13:30. The locations of the surveyed junctions are presented in **Figure 3.1**.

J1 – Caroline Hill Road (West) / Link Road

J2 – Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

J3 – Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

J4 – Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

J5 – Tung Lo Wan Road / Eastern Hospital Road

J6 – Eastern Hospital Road / Cotton Path

J7 – Caroline Hill Road/Cotton Path

J8 – Tung Lo Wan Road / Moreton Terrace

J9 – Moreton Terrace / Causeway Road

J10 – Leighton Road / Hysan Avenue / Leighton Lane

J11 – Leighton Road / Percival Street / Hysan Avenue

J12 – Leighton Road / Wong Nai Chung Road

J13 – Broadwood Road / Link Road

J14 – Pennington Street / Irving Street / Jardine's Bazaar

J15 – Hysan Avenue / Hoi Ping Road

3.2.3 The identified weekday AM, weekday PM and weekend peak hours were 08:15 – 09:15, 17:45 – 18:45 and 11:30 – 12:30, respectively and the surveyed traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

3.3.1 Based on the existing traffic flows, the performance of key junctions adjacent to the proposed development was assessed. The assessment results are in **Table 3.1**, and the detailed calculation sheets are attached in **Appendix B**.

Table 3.1 Existing Junction Performance

No.	Junction Location	Type/Capacity Index(1)	Identified Peak Hour		
			Weekday AM	Weekday PM	Weekend
J1	Caroline Hill Road (West) / Link Road	Priority/DFC	0.32	0.41	0.51
J2	Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	Signalised/RC	26%	32%	27%
J3	Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street	Signalised/RC	50%	33%	31%
J4	Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road	Signalised/RC	71%	52%	49%
J5	Tung Lo Wan Road / Eastern Hospital Road	Signalised/RC	63%	83%	74%
J6	Eastern Hospital Road / Cotton Path	Priority/DFC	0.27	0.22	0.30
J7	Caroline Hill Road/Cotton Path	Priority/DFC	0.10	0.06	0.11
J8	Tung Lo Wan Road / Moreton Terrace	Signalised/RC	44%	31%	72%
J9	Moreton Terrace / Causeway Road	Signalised/RC	45%	25%	28%
J10	Leighton Road / Hysan Avenue / Leighton Lane	Signalised/RC	313%	267%	164%
J11	Leighton Road / Percival Street / Hysan Avenue	Signalised/RC	68%	62%	40%
J12	Leighton Road / Wong Nai Chung Road	Signalised/RC	44%	96%	108%
J13	Broadwood Road / Link Road	Signalised/RC	28%	86%	99%
J14	Pennington Street / Irving Street / Jardine's Bazaar	Signalised/RC	247%	308%	339%
J15	Hysan Avenue / Hoi Ping Road	Priority/DFC	0.42	0.31	0.25

Note: (1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio.

3.3.2 It can be seen from **Table 3.1** that all of the key junctions performed satisfactorily during the peak hours.

3.4 Existing Footpath Capacity Assessment

3.4.1 To ascertain the adequacy of footpath width for walking between the proposed development, bus/GMB stops and the MTR Causeway Bay Station, a pedestrian count survey was conducted on 17 June 2025 (Tuesday) for the time period of 08:00 – 10:00, 17:30 – 19:30 and 14 June 2025 (Saturday) for the time period of 11:30 to 13:30. The locations of surveyed footpaths and anticipated pedestrian routings are shown in **Figure 3.3** and the assessment results are shown in **Table 3.2**.

Table 3.2 Capacity Analysis of Existing Footpaths

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Flow Rate(2) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE
P1	Southern footpath of Caroline Hill Road (between Eastern Hospital Road and Cotton Path)	3.0	2.0	90	38	41	0.8 [A]	0.3 [A]	0.3 [A]
P2	Eastern footpath of Cotton Path (between Caroline Hill Road and Eastern Hospital Road)	4.0	2.0	116	190	204	0.6 [A]	1.1 [A]	1.1 [A]
P3	Northern footpath of Caroline Hill Road (between Cotton Path and Leighton Road)	3.0	2.0	490	724	867	4.1 [A]	6.0 [A]	7.2 [A]
P4	Eastern footpath of Yun Ping Road(between Leighton Road and Hysan Avenue)	2.5	1.5	337	694	653	3.7 [A]	7.7 [A]	7.3 [A]
P5	Western footpath of Pennington Street (between Leighton Road and Keswick Street)	2.2	1.2	867	1,071	1,092	12.0 [A]	14.9 [A]	15.2 [A]
P6	Eastern footpath of Leighton Road (between Caroline Hill Road and Haven Street)	3.3	2.3	908	1,336	1,377	6.6 [A]	9.7 [A]	10.0 [A]
C1	Signalised Crossing	6.4	6.4	1,234	1,785	1,989	3.8 [A]	5.5 [A]	6.1 [A]
C2	Signalised Crossing	4.2	4.2	1,336	1,765	1,979	7.0 [A]	9.2 [A]	10.3 [A]
C3	Signalised Crossing	4.0	4.0	1,020	1,275	1,326	5.7 [A]	7.1 [A]	7.4 [A]
C4	Cautionary Crossing	3.3	3.3	94	40	43	0.5 [A]	0.2 [A]	0.2 [A]

Notes: (1) Clearances of 0.5m on either side were subtracted from the actual widths to produce effective widths, and clearance was increased to 1m for shopping frontage.
(2) For LOS "C" or above, flow rates should be less than 33 pedestrians/metre/minute.

3.4.2 The assessment results indicate that the existing footpath condition is satisfactory during the identified peak hours on weekday and weekend with LOS "C" or above.

3.5 Existing Public Transport Facilities

3.5.1 There are various franchised bus and scheduled minibus ("GMB") services running in the vicinity of the Site along Leighton Road and Caroline Hill Road and the walking distance to the MTR Causeway Bay Station is about 650m. **Table 3.3** and **Figure 3.4** show the public transport services operated in the vicinity of the Site.

Table 3.3 Existing Public Transport Services near the Proposed Development

Mode	Route No.	Origin-Destination	Frequency (min)
Bus	1	Central (Macau Ferry) – Happy Valley (Upper)	12 – 25
	1M	Exhibition Centre Station – Wong Nai Chung Gap (Circular)	15 – 30
	1P	Wong Nai Chung Road (Broadwood Road) – Central	4 trips per day
	2	Grand Promenade – Central (Macau Ferry)	20 – 30
	2A	Yiu Tung Estate – Exhibition Centre Station	5 – 20
	2X	Grand Promenade – Exhibition Centre Station	6 – 20
	5B	Felix Villas – Hong Kong Stadium	7 – 30
	5X	Causeway Bay (Whitfield Road) – Kennedy Town	20 – 30
	8	Heng Fa Chuen – Exhibition Centre Station	12 – 25
	8H	Siu Sai Wan (Island Resort) – Tung Wah Eastern Hospital	30
	8P	Siu Sai Wan (Island Resort) – Exhibition Centre Station	5 – 20
	8X	Siu Sai Wan (Island Resort) – Happy Valley (Upper)	6 – 20
	10	North Point Ferry Pier – Kennedy Town	8 – 25
	11	Central (Ferry Piers) – Jardine's Lookout (Circular)	15 – 30
	15B	The Peak – Wan Chai (Convention Centre)	2 trips per day
	19P	Shau Kei Wan – Tai Hang Road	1 trip per day
	23	North Point Ferry – Pokfield Road	7 – 20
	23B	Braemar Hill – Park Road / Robinson Road	7 trips per day
	25	Central (Piers 3) – Braemar Hill (Circular)	10 – 20
	25A	Exhibition Centre Station – Braemar Hill (Circular)	12 – 25
	26	Lai Tak Tsuen – Hollywood Road (Circular)	10 – 25
	38	Chi Fu Fa Yuen – North Point Ferry (Omit Wai Fu)	6 – 15
	42	Wah Fu (South) – North Point Ferry	10 – 20
	42C	Cyberport – North Point Ferry	4 trips per day
	63	North Point Ferry – Stanley Market	30
	65	North Point Ferry – Stanley Market	12 – 20
	72	Wah Kwai – Causeway Bay (Moreton Terrace)	6 – 20
	72A	Shum Wan Public Transport Terminus – Causeway Bay (Moreton Terrace)	20 – 30
	76	Shek Pai Wan – Causeway Bay (Pennington Street)(Circular)	30
	77	Tin Wan Estate – Shau Kei Wan	12 – 25
	81	Hing Wah Estate – Lai Tak Tsuen	15 – 20
	99	South Horizons – Shau Kei Wan	12 – 25
	102	Shau Kei Wan – Mei Foo	5 – 20

Mode	Route No.	Origin-Destination	Frequency (min)
	103	Chuk Yuen Estate – Pokfield Rd	15 – 30
	106	Wong Tai Sin – Siu Sai Wan (Island Resort)	6 – 24
	108	Kai Yip – Braemar Hill	10 – 30
	112	North Point – So Uk	5 – 30
	116	Tsz Wan Shan (Central) – Quarry Bay	4 – 20
	117	Sham Shui Po (Yen Chow St) – Happy Valley (Lower)	12 – 23
	170	Shatin Station – Wah Fu (Central)	15 – 30
	307	Tai Po Central – Central (Central Ferry Piers)	8 – 30
	511	Tai Hang Drive – Central (Central Ferry Piers)	4 trips per day
	592	South Horizons – Causeway Bay (Moreton Terrace)	8 – 30
	600	Anderson – Central (Rumsey Street)	20 – 30
	601	Po Tat – Admiralty Station (East)	7 – 23
	601P	Sheung Wan – Po Tat	4 – 10
	603	Ping Tin – Central Ferry Piers	10 – 30
	603A	Ping Tin – Central Market	4 trips per day
	619	Shun Lee – Central (Macau Ferry)	7 – 27
	619X	Shun Lee – Central (Macau Ferry)	7 trips per day
	621	Laguna City – Central (Hong Kong Station)	10 trips per day
	671	Diamond Hill Station – Ap Lei Chau Lee Lok St	15 – 30
	673	Sheung Shui – Central (Hong Kong Station)	20 – 30
	673A	Central (Hong Kong Station) – Sheung Shui	2 trips per day
	678	Sheung Shui – Causeway Bay	16 trips per day
	679	Queen'S Hill Fanling – Central (Hong Kong Station)	3 trips per day
	680	Lee On – Admiralty Station (East) (Via Chung On Estate)	12 – 30
	680B	Chevalier Garden Bus Terminus – Admiralty Station (East)	2 trips per day
	680P	Wu Kai Sha Station – Admiralty Station (East)	3 trips per day
	680X	Wu Kai Sha Station – Central (Macau Ferry)	8 trips per day
	681	Central (Hong Kong Station) – Ma On Shan Town Centre	9 – 30
	681P	Yiu On – Sheung Wan	5 trips per day
	690	Hong Sing Garden – Central (Exchange Square) (Via Leighton Road)	20 – 30
	690S	Hang Hau – Central (Exchange Square) (Via Lohas Park)	14 trips per day
	914	Hoi Lai Estate – Causeway Bay (Tin Hau)	13 – 30
	914P	Hoi Lai Estate – Causeway Bay (Tin Hau)	1 trip per day
	914X	Hoi Lai Estate – Causeway Bay (Tin Hau)	3 trips per day
	930B	Kwai Shing Circuit – Causeway Bay (Moreton Terrace)	1 trip per day
	930X	Causeway Bay (Moreton Terrace) – Tsuen Wan (Discovery Park) (Via Nina Tower On Journey To Causeway Bay)	8 – 25
	936	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	15 – 30
	936A	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	7 trips per day

Mode	Route No.	Origin-Destination	Frequency (min)
	948	Tsing Yi (Cheung On Estate) – Causeway Bay (Tin Hau)	8 – 30
	948A	Cheung On Estate – Causeway Bay (Tin Hau)	5 – 7
	948B	Greenfield Garden – Causeway Bay (Tin Hau)	2 trips per day
	948P	Cheung On Estate – Causeway Bay (Tin Hau)	5 trips per day
	948X	Cheung Wang – Causeway Bay (Tin Hau)	5 trips per day
	952	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	10 – 30
	952P	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	8 – 15
	960C	Causeway Bay – Fu Tai Estate	3 trips per day
	960P	Causeway Bay – Hung Shui Kiu	10 – 35
	960S	Tuen Mun (Fu Tai Estate) – Causeway Bay (Victoria Park)	10
	961	Tuen Mun (Shan King Estate) – Wan Chai (Hkcece)	7 – 25
	962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	8 – 25
	962G	Causeway Bay (Moreton Terrace) – Tuen Mun (Yuet Wu Villa)	3 trips per day
	962P	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	4 – 9
	962X	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	12 – 30
	967X	Tin Shui Wai (Tin Yan Estate) – Causeway Bay (Via Tin Shui Wai North)	12 – 20
	968	Yuen Long (West) – Causeway Bay (Tin Hau)	5 – 25
	968A	Yuen Long (West) – Causeway Bay (Tin Hau)	2 trips per day
	969	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	7 – 30
	969N	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	1 trip per day
	969P	Tin Shui Wai Town Centre – Causeway Bay (Moreton Terrace)	7 – 13
	A11	North Point Ferry Pier – Airport (Ground Transportation Centre)	15 – 60
	A17	Sham Wan – Airport	6 trips per day
	E11	Tin Hau Station – SKYCITY	20 – 40
	E11A	Tin Hau Station – SKYCITY	40
	E11B	Tin Hau Station – Tung Chung (Mun Tung Estate)	40
	E11S	Tung Chung (Mun Tung Estate) – Tin Hau Station	5 – 7
	N8P	Siu Sai Wan (Island Resort) – Wan Chai (Harbour Road) (Circular)	15 – 20
	N8X	Siu Sai Wan (Island Resort) – Kennedy Town	30
	N11	Central (Macau Ferry) – Airport (Ground Transportation Centre)	60
	N72	Wah Kwai – Quarry Bay (Hoi Chak Street)	25 – 30
	N122	Mei Foo – Shau Kei Wan	17 – 30
	N170	Shatin Central – Wah Fu (Central)	22 – 30
	N182	Kwong Yuen – Central (Macau Ferry)	20 – 30
	N307	Tai Wo – Sheung Wan	20 – 30
	N368	Yuen Long (West) – Central (Macau Ferry)	20 – 30
	N373	Fanling (Luen Wo Hui) – Central (Macau Ferry)	20 – 30
	N619	Shun Lee – Central (Macau Ferry)	20 – 30
	N680	Kam Ying Court – Central (Macau Ferry)	20 – 30

Mode	Route No.	Origin-Destination	Frequency (min)
	N691	Tiu Keng Leng – Central (Macau Ferry)	20 – 35
	N930	Tsuen Wan (Discovery Park) – Causeway Bay (Moreton Terrace)	3 trips per day
	N952	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	4 trips per day
	N962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	25 – 45
	N969	Tin Shui Wai Town Centre – Causeway Bay (Moreton Terrace)	20 – 45
	P968	Yuen Long (West) – Causeway Bay (Tin Hau)	16 trips per day
	NA11	North Point Ferry Pier – HZMB Hong Kong Port	3 trips per day
GMB	14M	Causeway Bay (Lan Fong Road) – Moorsom Road (Circular route)	4 – 12
	21A	Causeway Bay (Lan Fong Road) – Lai Tak Tsuen (Circular route)	4 – 12
	21M	Causeway Bay (Lan Fong Road) – Tai Hang Drive (Circular route)	4 – 12
	26	Causeway Bay (Lee Garden Road) – Stubbs Road (Hong Kong Adventist Hospital) (Circular route)	15 – 30
	28	Baguio Villa (Upper) – Causeway Bay (Sun Wui Road)	15 – 20
	28S	Baguio Villa (Upper) – Causeway Bay (Sun Wui Road)	15 – 20
	30	Happy Valley (Holly Road) – Causeway Bay (Lan Fong Road)	6 – 10
	36X	Ap Lei Chau (Ping Lan Street) – Causeway Bay (Jardine's Bazaar)	15 – 20
	39M	Yue On Court (Ap Lei Chau) – Tin Hau Station	60
	40	Stanley Village – Causeway Bay	10 – 20
	40X	Stanley (Stanley Prison) – Causeway Bay	3 – 9
	49S	Tuen Mun Siu Hong Court – Wan Chai	30
	56	Mid-Levels (Robinson Road) – North Point (Marble Road)	20
	56A	Mid-Levels (Robinson Road) – Tin Hau Station	8 – 15
	56B	Mid-levels (Robinson Road) – Wan Chai (Circular route)	20 – 25
	N40	Stanley – Causeway Bay	20

4 FUTURE TRAFFIC SITUATION

4.1 Design Year for Traffic Forecast

4.1.1 The completion year of the proposed development is expected to be 2030. As a result, the design year of the traffic impact assessment should be three years after the completion year, i.e., 2033.

4.2 Traffic Generation of the Proposed Development

Tennis Court

4.2.1 6 tennis courts are provided and the users will be 15 persons/court during a one-hour period. As a result, a total of 60 persons one-way trips will be generated.

5-a-side Artificial Turf Pitch

4.2.2 2 pitches are provided and the users will be 80 persons/court during a 1.5-hour period. As a result, a total of 160 persons one-way trips will be generated.

Activities rooms, Muti-purposes Rooms and Ancillary Facilities

4.2.3 According to the architectural layout, the holding capacity of all these facilities will be about 455 persons. As a result, a total of 455 persons one-way trips will be generated.

4.2.4 The total trips generated from the proposed development is summarized in **Table 4.1**.

Table 4.1 Number of Visitors of the Proposed Development

Use	Generation (in persons)			Attraction (in persons)		
	AM	PM	Weekend	AM	PM	Weekend
Tennis Court	60	60	60	60	60	60
5-a-side Artificial Turf Pitch	160	160	160	160	160	160
Activities rooms, Muti-purposes Rooms and Ancillary Facilities	0	455	228	455	0	227
Total	**220**	**675**	**448**	**675**	**220**	**447**

4.2.5 As there is no established trip rate published in Transport Planning and Design Manual (TPDM) for the proposed use, therefore, the traffic generation of the proposed development will be derived from basic principles and assumptions as described in the ensuing paragraphs.

4.2.6 The following assumptions were made in estimating the traffic and pedestrian movements generated by the proposed development:

- Having considered the good accessibility of the Site, most visitors are anticipated to use public transport services in the vicinity.
- The operation hour of the proposed development would be from 07:00 to 22:00.

Taxi Traffic Generation and Attraction

4.2.7 In order to establish the pedestrian flow pattern to the different public transport facilities, reference was made to the number of passenger journeys by public transport operators recorded in the Monthly Traffic and Transport Digest (MTTD) 2025. The modal split of the public transport for the proposed development was estimated as shown in **Table 4.2**.

Table 4.2 Estimated Modal Split for the Proposed Development

Mode	Distribution of Average Daily Public Transport Passenger Journeys by Mode (1)	Adjusted Modal Split for the Proposed Development
Rail-based PT	45.00%	45.50%
Road-based PT (excluding Taxi)	48.30%	48.80%
Taxi	5.70%	5.80%
Total	**99.0% (2)**	**100.0%**

Notes: (1) Source: Chart 2.7 in Monthly Traffic and Transport Digest (May 2025).
(2) Marine transport is omitted.

4.2.8 The passenger generation to / from the MTR Stations, the bus / mini-bus stops and the taxi stands / the roadside available for taxi passenger pick-up & drop-off in the vicinity of the proposed development in the AM and PM peak hours is estimated in **Table 4.3**.

Table 4.3 Estimated Pedestrian Generation to the Public Transport Facilities

Public Transport Facilities(1)	Adjusted Modal Split	Estimated Peak Hour Pedestrian Flows (person / hr)								
		Weekday AM			Weekday PM			Weekend		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
MTR Station	45.50%	100	307	407	307	100	407	203	203	406
Bus / Mini-bus Stops	48.80%	107	329	436	329	107	436	219	218	437
Taxi Stand / Roadside	5.80%	13	39	52	39	13	52	26	26	52
Total	**100.0%**	**220**	**675**	**895**	**675**	**220**	**895**	**448**	**447**	**895**

Note: Gen. – Generation; Att. - Attraction

4.2.9 Since most visitors are anticipated to use public transport services, only those who use taxis will be considered as the vehicular traffic generation of the proposed development. The vehicular traffic generated and attracted by the proposed development are estimated based on the above presented in **Table 4.4**.

Table 4.4 Estimated Taxi Traffic Generation and Attraction of the Proposed Development

Mode of Transport	Modal Split	Vehicle Capacity	Estimated No. of Vehicle (veh/hr[pcu/hr(2)])								
			Weekday AM			Weekday PM			Weekend		
			Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Taxi Stand / Roadside	5.8%	2.5(1)	6 [6]	16 [16]	22 [22]	16 [16]	6 [6]	22 [22]	11 [11]	11 [11]	22 [22]

Notes: Gen. – Generation; Att. – Attraction.

(1) According to the traffic survey, the average occupancy of taxis to the Existing SCAA is 2.5 passengers per vehicle and is adopted for estimating the future traffic generation and attraction.

(2) 1 pcu is adopted for each taxi.

Private Car Traffic Generation and Attraction

4.2.10 In order to establish private car traffic generation and attraction of the proposed development, reference was made to the existing SCAA car park. Trip generation survey at existing SCAA car park is arranged to collect trip rates. The trip generation survey was conducted on 27 December 2025 (Saturday) and 29 December 2025 (Monday) during the weekday AM, weekday PM peak and weekend hour period. The survey results and the trip rates derived are presented in **Table 4.5**.

Table 4.1 Surveyed Private Car Traffic Generation and Attraction of Existing SCAA

Name	Unit / Content	Weekday AM			Weekday PM			Weekend		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Private Car Traffic Generation of Existing SCAA (pcu/hr)										
Existing SCAA	64,728.113 m^2 GFA	13	23	36	36	39	75	22	29	51
Derived Trip Rates (pcu/hr/100 m^2)										
Sports Centre		0.02	0.036	-	0.056	0.06	-	0.034	0.045	-
Private Car Traffic Generation of Proposed Development (pcu/hr)										
Proposed Development	31,327.12 m^2 GFA	7	12	19	18	19	37	11	15	26

Note: Gen. – Generation; Att. – Attraction.

4.2.11 Based on **Table 4.4** and **Table 4.5** above, the estimated total vehicular traffic generation and attraction of the proposed development is summarised in **Table 4.6**.

Table 4.6 Estimated Traffic Generation and Attraction of Proposed Development

Use	Weekday AM			Weekday PM			Weekend		
	Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Total Traffic Generation (pcu/hr)									
Taxi [a]	6	16	22	16	6	22	11	11	22
Private Car [b]	7	12	19	18	19	37	11	15	26
TOTAL [a] + [b]	**13**	**28**	**41**	**34**	**25**	**59**	**22**	**26**	**48**

Note: Gen. – Generation; Att. – Attraction.

4.2.12 As shown in **Table 4.6**, the proposed development would generate two-way traffic flows of 41 pcu/hr, 59 pcu/hr and 48 pcu/hr during the weekday AM, weekday PM and weekend peak hours, respectively. The development traffic was distributed onto the road work with reference to surveyed traffic flows and presented in **Figure 4.1**.

4.3 Traffic Generation of the Planned Developments

4.3.1 To estimate the future traffic flows, updated information has been obtained from various sources regarding the planned developments in the vicinity of the study area. Although peak hours of the planned developments are not anticipated to coincide with the identified peak hours, for conservative assessment purposes, the traffic generations and attractions induced by these developments during highway peaks are assumed to occur in the identified peak hours.

4.3.2 The corresponding traffic generations and attractions by these adjacent developments are summarised in **Table 4.7**, and these generations and attractions will be considered in the junction capacity analysis for the design year.

Table 4.7 Traffic Generation by Planned Developments in the Vicinity

Proposed Use	Unit / Content	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour (1)		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Mean Trip rates from TPDM										
Retail	pcu/hr/ 100m^2	0.2296	0.2434	-	0.3100	0.3563	-	0.3100	0.3563	-
Office	pcu/hr/ 100m^2	0.1703	0.2452	-	0.1573	0.1175	-	0.1573	0.1175	-
Traffic Generation/Attraction										
Redevelopment at Po Leung Kuk Headquarter	37,725 m^2 GFA for G/IC use	14(2)	15(2)	29(2)	7(2)	6(2)	13(2)	7	6	13
Redevelopment at 5-19 Jardine's Bazaar	4,756 m^2 GFA for retail use	11	12	23	15	17	32	15	17	32
Redevelopment at 36 Jardine's Bazaar	979m^2 GFA for office use	2	3	5	2	2	4	2	2	4
Redevelopment of the Ex-EMSD headquarter at Caroline Hill Road, Causeway Bay	102,000 m^2 GFA for commercial and G/IC use	272(3)	398(3)	670(3)	308(3)	239(3)	547(3)	308	239	547
District Court Site	70,000 m^2 GFA	42(3)	64(3)	106(3)	33(3)	31(3)	64(3)	33	31	64
Commercial Development in 1- 5 Irving Street and 14 Pennington Street	7,548.8 m^2 GFA for office use	13	19	32	12	9	21	12	9	21
Total		**394**	**551**	**945**	**417**	**344**	**761**	**417**	**344**	**761**

Notes: (1) For conservative assessment purpose, traffic generation and attraction for weekday PM peak will be adopted for weekend peak.

(2) Figures extracted from the TIA report enclosed in the Metro Planning Committee paper no. 1/19.

(3) Figures extracted from the TIA report of Planning Application A/H7/181.

4.4 Future Road Network

4.4.1 According to the approved planning application no. A/H7/181, it is understood that two junction improvement schemes will be implemented at the junctions of Caroline Hill Road / Link Road and Leighton Road / Caroline Hill Road / Hoi Ping Road as part of the development of the adjoining Site. The junction improvements are expected to be completed by 2026 and therefore included in the traffic assessment of the proposed development. The proposed junction improvement schemes are enclosed in **Appendix C**.

4.5 Traffic Growth

ATC Data

4.5.1 Reference was made to the ATC reports published by the TD for the years from 2019 to 2023 (5 years) to determine the traffic growth rate of the local road network in the vicinity of the proposed development. The annual average daily traffic flow ("AADT") recorded at the counting stations in the vicinity of the Site are set out in **Table 4.8**.

Table 4.8 Annual Traffic Census Data

Stn. No.	Road Section			AADT(1)					Avg Growth %
	Road	From	To	2019	2020	2021	2022	2023	
1212	Irving St & Pennington St	Leighton Rd	Yee Wo St	12,290	11,730 (-4.6%)	12,250 (4.4%)	11,690 (-4.6%)	10,590 (-9.4%)	-3.7%
1213	Causeway Rd	Tung Lo Wan Rd	Shelter St	30,490	29,090 (-4.6%)	30,410 (4.5%)	29,010 (-4.6%)	29,000 (0%)	-1.2%
1414	Leighton Rd	Tung Lo Wan Rd	Irving St	22,970	21,040 (-8.4%)	21,990 (4.5%)	20,980 (-4.6%)	21,590 (2.9%)	-1.5%
1436	Percival St	Hennessy Rd	Leighton Rd	12,180	12,170 (-0.1%)	12,410 (2%)	11,760 (-5.2%)	12,340 (4.9%)	0.3%
1438	Tung Lo Wan Rd & Tai Hang Rd	Causeway Rd	Ka Ning Path	11,000	10,130 (-7.9%)	10,340 (2.1%)	9,740 (-5.8%)	9,950 (2.2%)	-2.5%
1612	Tai Hang Rd FO <H134>	St. John Ambulance Brigate Wan Rd Headquarters	Ramp to Tung Lo Wan Rd	19,140	19,280 (0.7%)	17,750 (-7.9%)	16,930 (-4.6%)	17,430 (3%)	-2.3%
2035	Leighton Rd	Wong Nai Chung Rd	Percival St	27,830	26,470 (-4.9%)	27,000 (2%)	21,860 (-19%)	23,770 (8.7%)	-3.9%
2036	Leighton Rd	Irving St	Percival St	14,950	14,220 (-4.9%)	14,510 (2%)	13,940 (-3.9%)	16,170 (16%)	2.0%
2214	Causeway Rd	Shelter St	Hing Fat St	33,760	31,440 (-6.9%)	34,000 (8.1%)	34,190 (0.6%)	33,940 (-0.7%)	0.1%
2608	Caroline Hill Rd	Leighton Rd	Yun Ping Rd	4,550	4,800 (5.5%)	4,610 (-4%)	4,890 (6.1%)	5,330 (9%)	4.0%
			Total	**189,160**	**180,370 (-4.6%)**	**185,270 (2.7%)**	**174,990 (-5.5%)**	**180,110 (2.9%)**	**-1.2%**

Note: (1) Figures in bracket indicated the % increase between two years.

4.5.2 **Table 4.8** shows that the AADT at the concerned ATC stations has an overall annual growth of negative 1.2% in between the years 2019 to 2023.

TPEDM Data

4.5.3 Reference was also made to the 2021–based Territorial Population and Employment Data Matrix ("TPEDM") released by the Planning Department. The population and employment data of year 2021 and 2031 in Wan Chai District are summarised in **Table 4.9**.

Table 4.9 Population and Employment Data in Wan Chai District

Year	2021	2026	2031
Population	166,700	156,000	145,700
Employment	299,700	301,700	287,250
Total	466,400	457,700	432,950
Average Growth per annum (%)		-0.4% (2021 to 2026)	-1.1% (2026 to 2031)

4.5.4 As shown in **Table 4.9**, the average annual growth rates for the population and the employment total between 2021–2026 and 2026–2031 are -0.4% and -1.1%, respectively. Having considered the ATC and TPEDM data, a nominal growth rate of +0.5% is adopted for subsequent assessments.

4.6 Reference and Design Flows

4.6.1 The 2033 Reference Flows, i.e., the traffic flows in the vicinity **without** the traffic flows generated by the proposed development, were estimated based on the following equation.

2033 Reference Flows = 2025 Existing Flows x $(1 + 0.5\%)^8$ + Traffic Flows Generated by the Planned/Committed Developments

4.6.2 The 2033 Design Flows, i.e., the traffic flows in the vicinity **with** the traffic flows generated by the proposed development, were estimated based on the following equation:

2033 Design Flows = 2033 Reference Flows + Traffic Flows Generated by the Proposed Development

4.6.3 The 2033 Reference and Design Flows are shown in **Figures 4.2** and **4.3**, respectively.

4.7 Junction Capacity Assessment

4.7.1 Capacity assessments were carried out for the major junctions in the local road network for both the Reference and Design scenarios. The results are summarised and presented in **Table 4.10** with detailed calculation sheets attached in **Appendix D**.

Table 4.10 Year 2033 Junction Capacity Assessment

No.	Junction Location	Type /Capacity Index(1)	2033 Reference			2033 Design		
			AM	PM	WE	AM	PM	WE
J1	Caroline Hill Road (West) / Link Road (2)	Signalised/ RC	36%	39%	38%	36%	39%	38%
J2	Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	Signalised/ RC	24%	33%	25%	22%	31%	24%
J3	Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street	Signalised/ RC	29%	17%	16%	29%	17%	16%
J4	Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road	Signalised/ RC	49%	37%	35%	48%	37%	34%
J5	Tung Lo Wan Road / Eastern Hospital Road	Signalised/ RC	39%	59%	52%	38%	56%	49%
J6	Eastern Hospital Road / Cotton Path	Priority/DFC	0.41	0.31	0.40	0.41	0.31	0.40
J7	Caroline Hill Road/Cotton Path	Priority/DFC	0.35	0.21	0.27	0.35	0.21	0.28
J8	Tung Lo Wan Road / Moreton Terrace	Signalised/ RC	32%	21%	58%	32%	21%	56%
J9	Moreton Terrace / Causeway Road	Signalised/ RC	34%	16%	19%	34%	16%	19%
J10	Leighton Road / Hysan Avenue / Leighton Lane	Signalised/ RC	289%	245%	149%	289%	245%	149%
J11	Leighton Road / Percival Street / Hysan Avenue	Signalised/ RC	43%	33%	20%	41%	30%	18%
J12	Leighton Road / Wong Nai Chung Road	Signalised/ RC	22%	54%	61%	21%	51%	58%
J13	Broadwood Road / Link Road	Signalised/ RC	16%	62%	72%	16%	62%	72%
J14	Pennington Street / Irving Street / Jardine's Bazaar	Signalised/ RC	222%	275%	303%	222%	275%	303%
J15	Hysan Avenue / Hoi Ping Road	Priority/DFC	0.66	0.43	0.37	0.68	0.45	0.39

Notes: AM – Weekday AM; PM – Weekday PM; WE - Weekend
(1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio.
(2) Junction improvement scheme to be implemented under planning application A/H7/181 is incorporated.

4.7.2 **Table 4.10** shows that all junctions will operate with positive RCs and DFCs<1.0 for both the reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce any adverse traffic impact to its surrounding road network.

4.8 Pedestrian Traffic Generation of the Other Planned Developments

4.8.1 It is understood that there are some planned and committed developments in vicinity of the Site. The pedestrian flows that would be induced by these developments have been considered. The pedestrian flows of these planned development are estimated by adopting the in-house pedestrian trip rates and presented in **Table 4.11**.

Table 4.11 Estimated Pedestrian Generation/Attraction of Planned Developments

Use	Unit	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Adopted Pedestrian Trip Rates (1)										
Headquarter	ped/hr/quota	0.31	0.52	-	0.59	0.08	-	0.17	0.05	-
Court	ped/hr /100 m^2	0.25	2.71	-	1.22	0.43	-	-	-	-
Office	ped/hr /100 m^2	0.27	2.74	-	2.66	0.33	-	0.27	0.37	-
Estimated Pedestrian Generation (2)										
Redevelopment at Po Leung Kuk Headquarter	322 quotas	99	166	265	191	25	216	56	16	72
Redevelopment of the Ex-EMSD headquarter at Caroline Hill Road, Causeway Bay(2)	102,000 m^2 GFA	549	2,727	3,276	2,844	1,064	3,908	1,011	1,183	2,194
District Court Site	70,000 m^2 GFA	175	1,898	2,073	855	303	1,158	20	20	40
Commercial Development in 1- 5 Irving Street and 14 Pennington Street	7,548.8 m^2 GFA	20	207	227	201	25	226	20	28	48
Total		**843**	**4,998**	**5,841**	**4,091**	**1,417**	**5,508**	**1,107**	**1,247**	**2,354**

Notes: Gen. – Generation; Att. – Attraction.
(1) Pedestrian trip rates from TIA report of Planning Application A/H7/181 are adopted.
(2) Figures were abstracted from the approved TIA report of planning application A/H7/181.

4.8.2 The planned developments are estimated to generate 2-way pedestrian flows of 5,841, 5,508 and 2,354 person/ hour during weekday AM, weekday PM and weekend peak hours respectively.

4.9 Reference and Design Pedestrian Flows

4.9.1 The 2033 Reference Pedestrian Flows, i.e., the pedestrian flows in the local pedestrian network, based on future walkway network **without** the proposed development pedestrian flows, were estimated based on the following equation.

2033 Reference Pedestrian Flows = 2025 Existing Flows x $(1 + 0.5\%)^8$ + Pedestrian Flows Generated by the Planned/Committed Developments

4.9.2 The 2033 Design Pedestrian Flows, i.e., the pedestrian flows in the local pedestrian network, based on future walkway network **with** the proposed development pedestrian flows, were estimated based on the following equation.

2033 Design Pedestrian Flows = 2033 Reference Flows + Pedestrian Flows Generated by the Proposed Development

4.9.3 The future walkway serviceability is assessed, and the results are shown in **Table 4.12**. The results showed that all of the concerned footpaths will operate satisfactorily with LOS level "C" or above.

Table 4.12 Future Capacity Analysis of Footpaths

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Flow Rate(2) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE
2033 Reference Scenario									
P1	Southern footpath of Caroline Hill Road	3.0	2.0	94	40	43	0.8 [A]	0.3 [A]	0.4 [A]
P2	Eastern footpath of Cotton Path	4.0	2.0	121	198	212	0.7 [A]	1.1 [A]	1.2 [A]
P3	Northern footpath of Caroline Hill Road	3.0	2.0	2,055	2,215	2,364	17.1 [B]	18.5 [B]	19.7 [B]
P4	Eastern footpath of Yun Ping Road	2.5	1.5	1,007	1,335	1,293	11.2 [A]	14.8 [A]	14.4 [A]
P5	Western footpath of Pennington Street	2.2	1.2	1,513	1,694	1,715	21.0 [B]	23.5 [C]	23.8 [C]
P6	Eastern footpath of Leighton Road	3.3	2.3	946	1,396	1,439	6.9 [A]	10.1 [A]	10.4 [A]
C1	Signalised Crossing	6.4	6.4	2,829	3,320	3,532	7.4 [A]	8.6 [A]	9.2 [A]
C2	Signalised Crossing	4.2	4.2	3,607	3,939	4,162	14.3 [A]	15.6 [A]	16.5 [B]
C3	Signalised Crossing	4.0	4.0	2,918	3,079	3,132	12.2 [A]	12.8 [A]	13.1 [A]
C4	Signalised Crossing	3.3	3.3	94	40	43	0.5 [A]	0.2 [A]	0.2 [A]
2033 Design Scenario									
P1	Southern footpath of Caroline Hill Road	3.0	2.0	937	883	886	7.8 [A]	7.4 [A]	7.4 [A]
P2	Eastern footpath of Cotton Path	4.0	3.0	339	416	431	1.9 [A]	2.3 [A]	2.4 [A]
P3	Northern footpath of Caroline Hill Road	3.0	2.0	2,680	2,840	2,989	22.3 [B]	23.7 [C]	24.9 [C]
P4	Eastern footpath of Yun Ping Road	2.5	1.5	1,211	1,539	1,496	13.5 [A]	17.1 [B]	16.6 [B]
P5	Western footpath of Pennington Street	2.2	1.2	1,717	1,898	1,918	23.8 [C]	26.4 [C]	26.6 [C]
P6	Eastern footpath of Leighton Road	3.3	2.3	1,164	1,614	1,658	8.4 [A]	11.7 [A]	12.0 [A]

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Flow Rate(2) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE
C1	Signalised Crossing	6.4	6.4	3,236	3,727	3,938	8.4 [A]	9.7 [A]	10.3 [A]
C2	Signalised Crossing	4.2	4.2	4,014	4,346	4,568	15.9 [A]	17.2 [B]	18.1 [B]
C3	Signalised Crossing	4.0	4.0	3,325	3,486	3,538	13.9 [A]	14.5 [A]	14.7 [A]
C4	Signalised Crossing	3.3	3.3	937	883	886	4.7 [A]	4.5 [A]	4.5 [A]

Notes: AM – Weekday AM; PM – Weekday PM; WE – Weekend
(1) Clearances of 0.5m on either side were subtracted from the actual widths to produce effective widths, and clearance was increased to 1m for shopping frontage.
(2) For LOS "C" or above, flow rates should be less than 33 pedestrians/metre/minute.

4.9.4 **Table 4.10** shows that all of the concerned footpaths and walkway will operate satisfactorily with LOS level "C" or above.

4.9.5 Having considered that the MTR is one of the main modes of transport of the proposed development, to facilitate the visitors travelling between the site and the Causeway Bay MTR Station, the applicant has liaised with the adjacent commercial development for the feasibility of establishing a footbridge between the proposed development and the adjacent commercial development. With this footbridge proposal, visitors can reach the proposed development more conveniently and comfortably and relieve the burden of the at-grade walkway network.

5 SUMMARY AND CONCLUSION

5.1 Summary

5.1.1 The South China Athletic Association intends to develop a comprehensive sports and recreation centre at the northern part of SCAA site in Caroline Hill Road, Causeway Bay.

5.1.2 As there is no specific guideline set in the HKPSG or land grant for the proposed uses, the proposed car parking provisions is based on the proposed operational needs. The proposed development will provide a total of 66 private car parking spaces (including 2 nos. of parking space for disabled users), 9 motorcycle parking spaces, 1 pick-up/drop-off layby and 1 goods vehicle loading/unloading bay.

5.1.3 Existing junction capacity assessments were carried out for the identified peak hours and the results show that all of the key junctions performed satisfactorily during the surveyed peak hours.

5.1.4 The proposed development would generate two-way traffic flows of 41 pcu/hr, 59 pcu/hr and 48 pcu/hr in the weekday AM, weekday PM and weekend peak hours, respectively. By assigning the additional development traffic to the 2033 Reference Flows, the 2033 Design Flows were obtained.

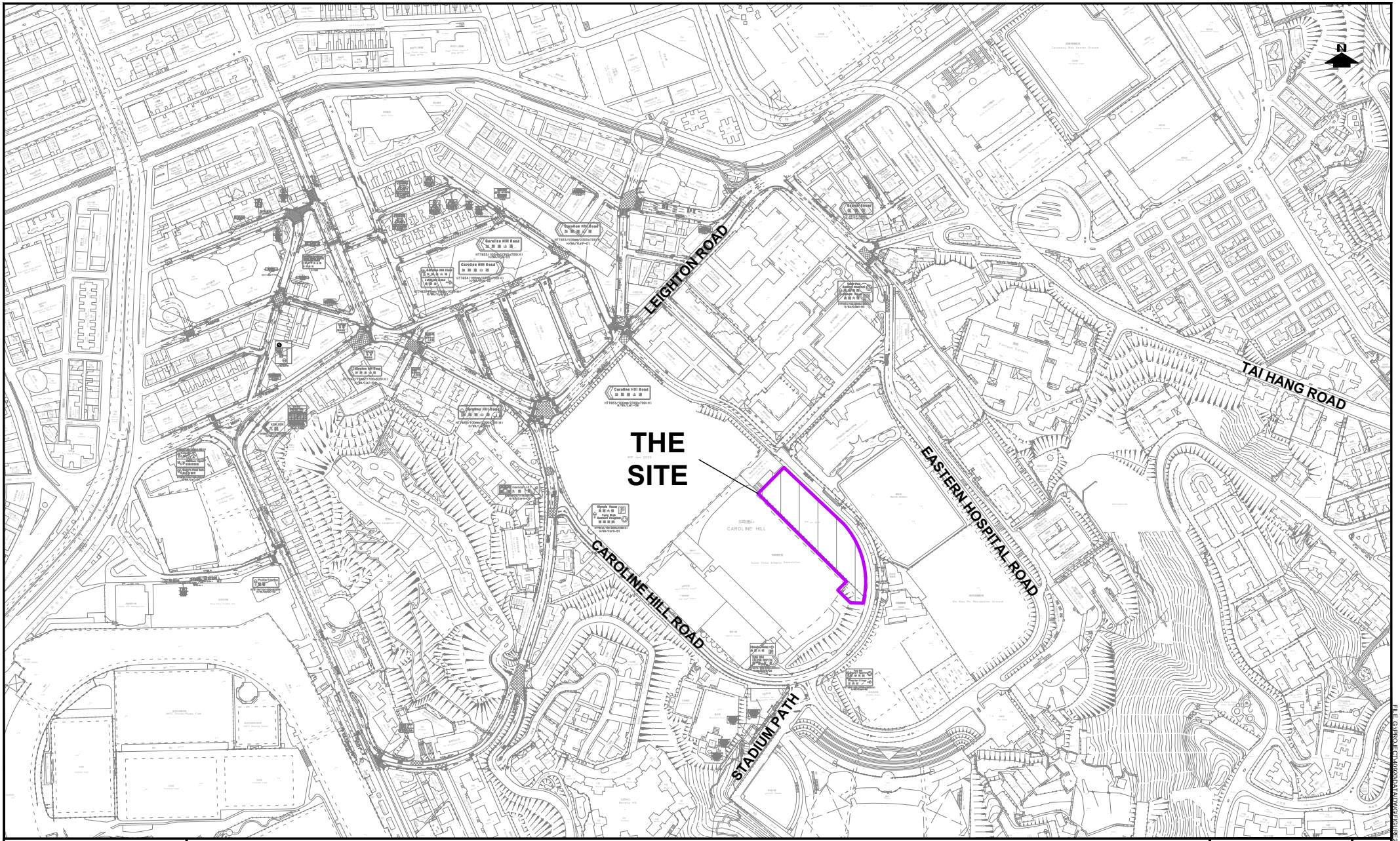
5.1.5 Junction capacity assessments were carried out at the key junctions in the vicinity for the year 2033. The results have indicated that all junctions will operate satisfactorily for both reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce significant traffic impact to the surrounding road network.

5.1.6 The proposed development is estimated to generate 2-way pedestrian flows of 895 person/ hour during weekday AM, weekday PM and weekend peak hours. The condition of the key footpaths will be satisfactory after accommodating the pedestrians generated and attracted by the proposed development in all scenarios with LOS “C” or above.

5.1.7 Having considered that MTR is one of the main modes of transport of the proposed development to facilitate the visitors travelling between the Site and the Causeway Bay MTR Station, the applicant has liaised with the adjacent commercial development for the feasibility of establishing a footbridge between the proposed development and the adjacent commercial development. With this footbridge proposal, visitors can reach the proposed development more conveniently and comfortably and relieve the burden of the at-grade walkway network.

5.2 Conclusion

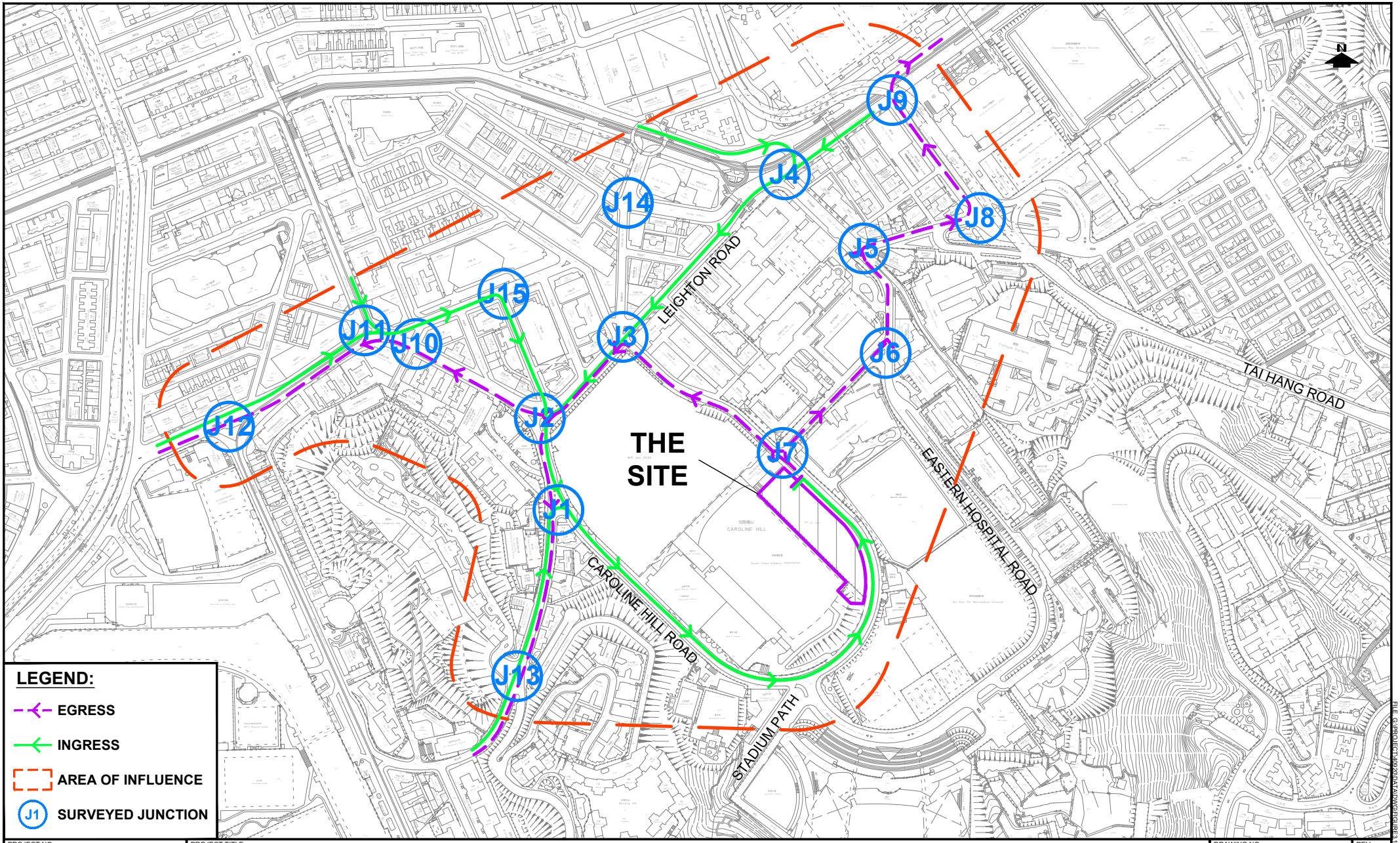
5.2.1 From the assessment results, it can be concluded that the proposed development will not induce significant traffic impact on the surrounding road network and the development proposal is considered acceptable from traffic engineering point of view.



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 2.1	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE SEP 2025 / SCALE 1:5000	DRAWING TITLE: LOCATION PLAN	LLA 顧問有限公司 Consultancy Limited

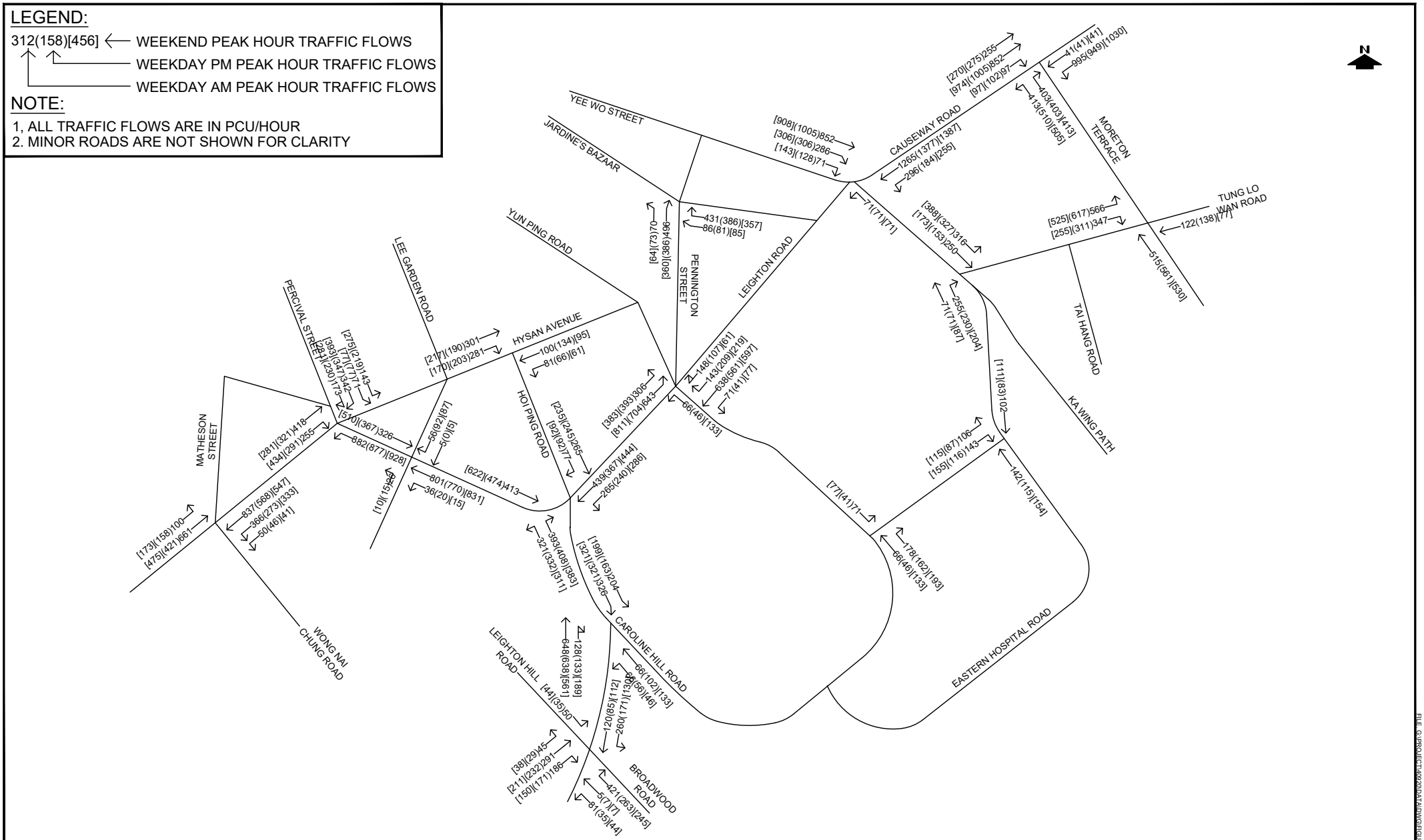
FILE: G:\PROJECT\40920\DATA\DWG\FIGURE2.1.DWG PLOT SCALE : 1 = 1

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE2.1.DWG PLOT SCALE : 1 = 1



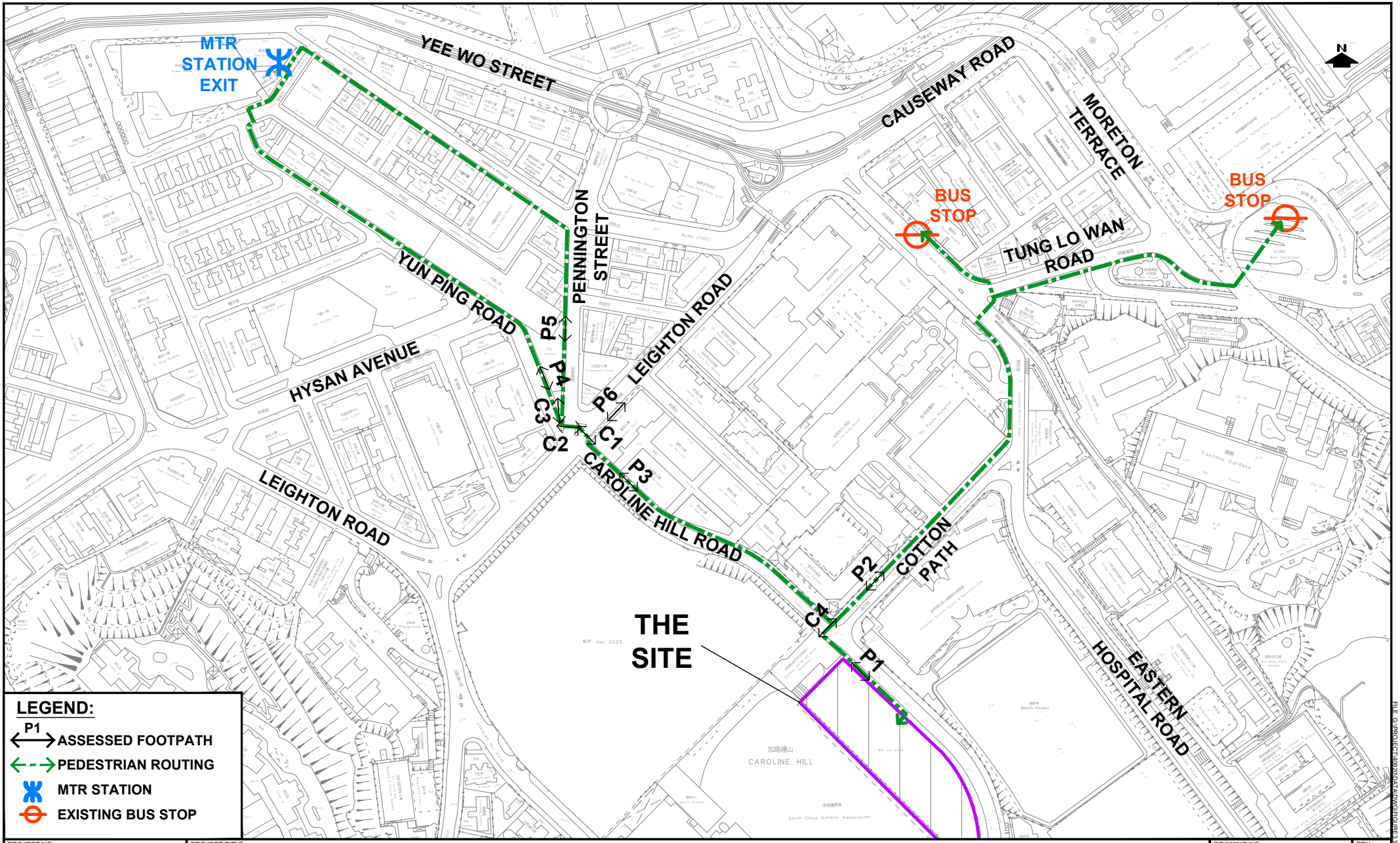
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.1	REV. A
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE DEC 2025 / SCALE 1:5000	DRAWING TITLE: LOCATION OF SURVEYED JUNCTIONS AND AREA OF INFLUENCE	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.1A.DWG PLOT SCALE : 1 = 1



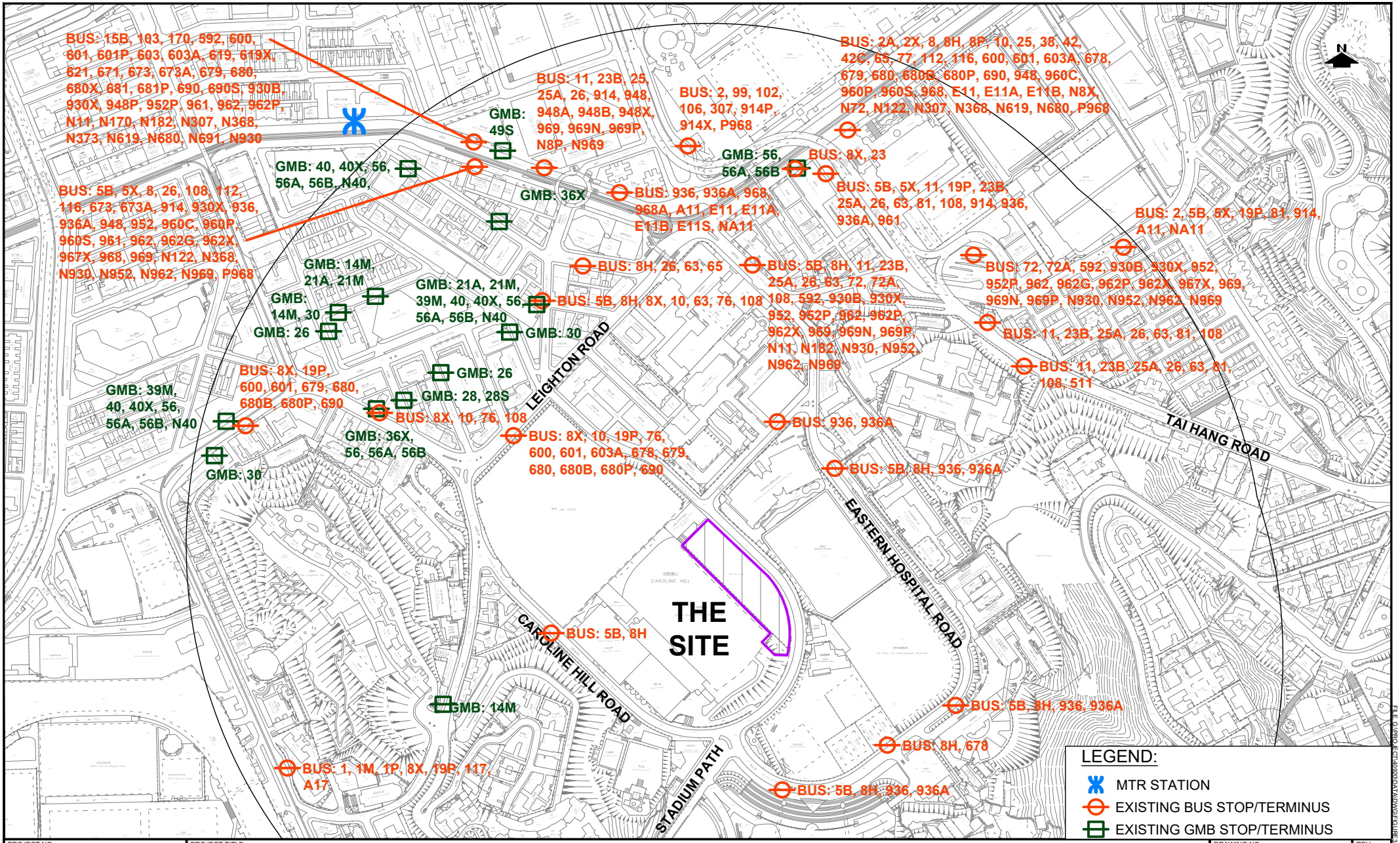
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. **FIGURE 3.2**	REV. **A**
DESIGNED **SLN** / DRAWN **CLL** / CHECKED **SLN**	DATE **DEC 2025** / SCALE **N.T.S.**	DRAWING TITLE: **2025 EXISTING TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.2A.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.3	REV. A
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE DEC 2025 / SCALE 1:3000	DRAWING TITLE: ANTICIPATED PEDESTRIAN ROUTINGS AND LOCATION OF SURVEYED FOOTPATHS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.3A.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.4	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE SEP 2025 / SCALE 1:5000	DRAWING TITLE: EXISTING PUBLIC TRANSPORT FACILITIES	LLA 顧問有限公司 Consultancy Limited

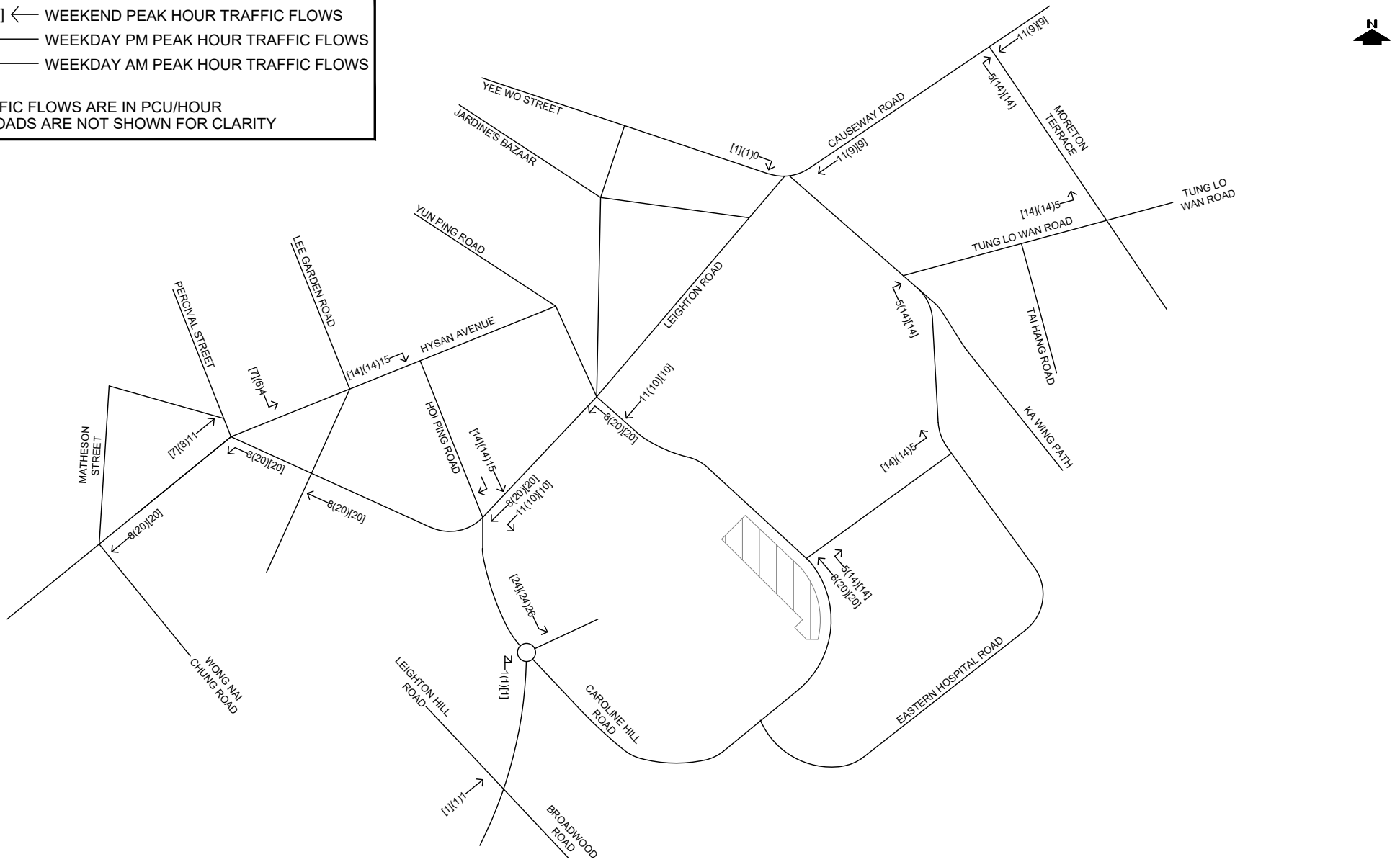
FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.4.DWG PLOT SCALE : 1 = 1

LEGEND:

312(158)[456] ← WEEKEND PEAK HOUR TRAFFIC FLOWS
WEEKDAY PM PEAK HOUR TRAFFIC FLOWS
WEEKDAY AM PEAK HOUR TRAFFIC FLOWS

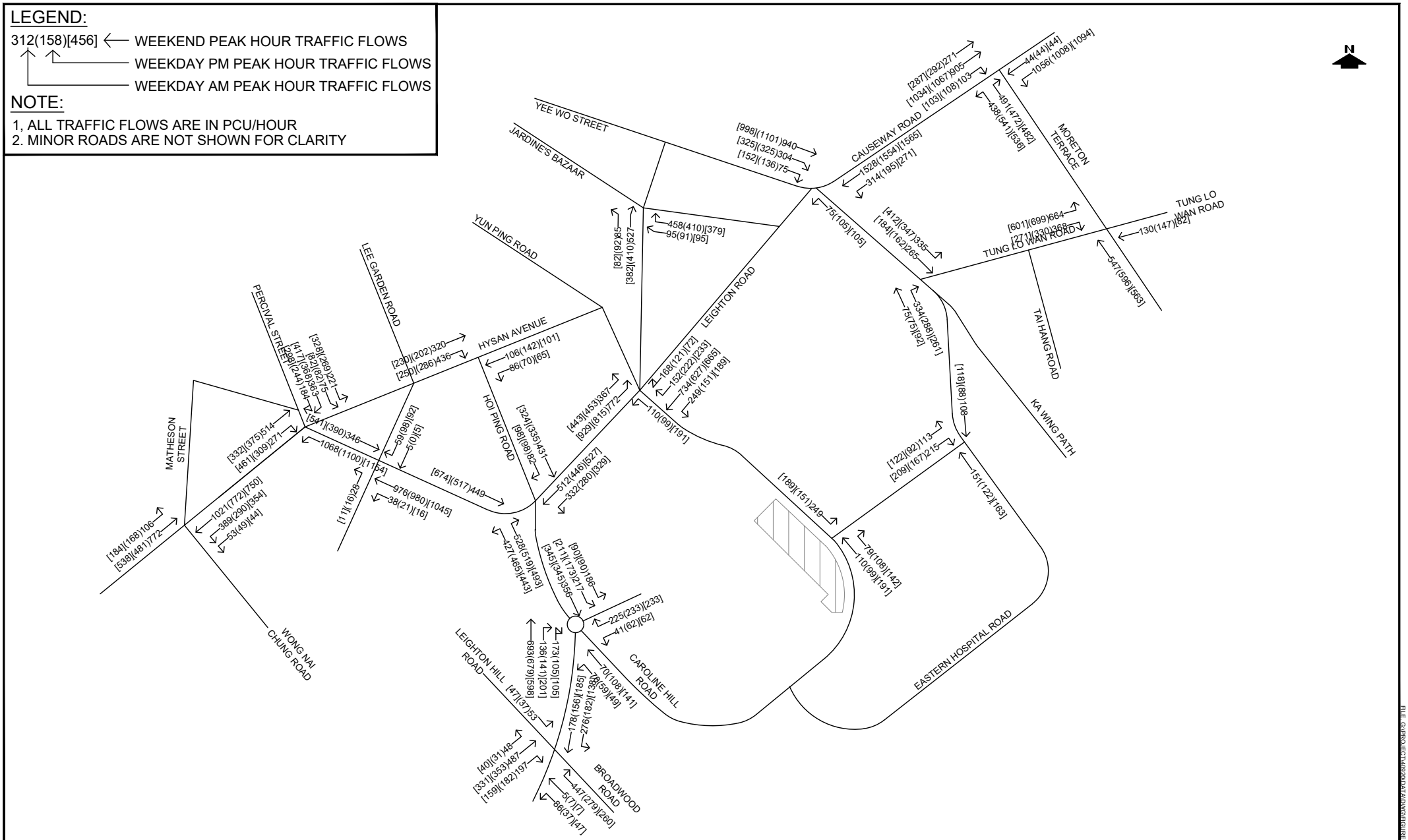
NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY



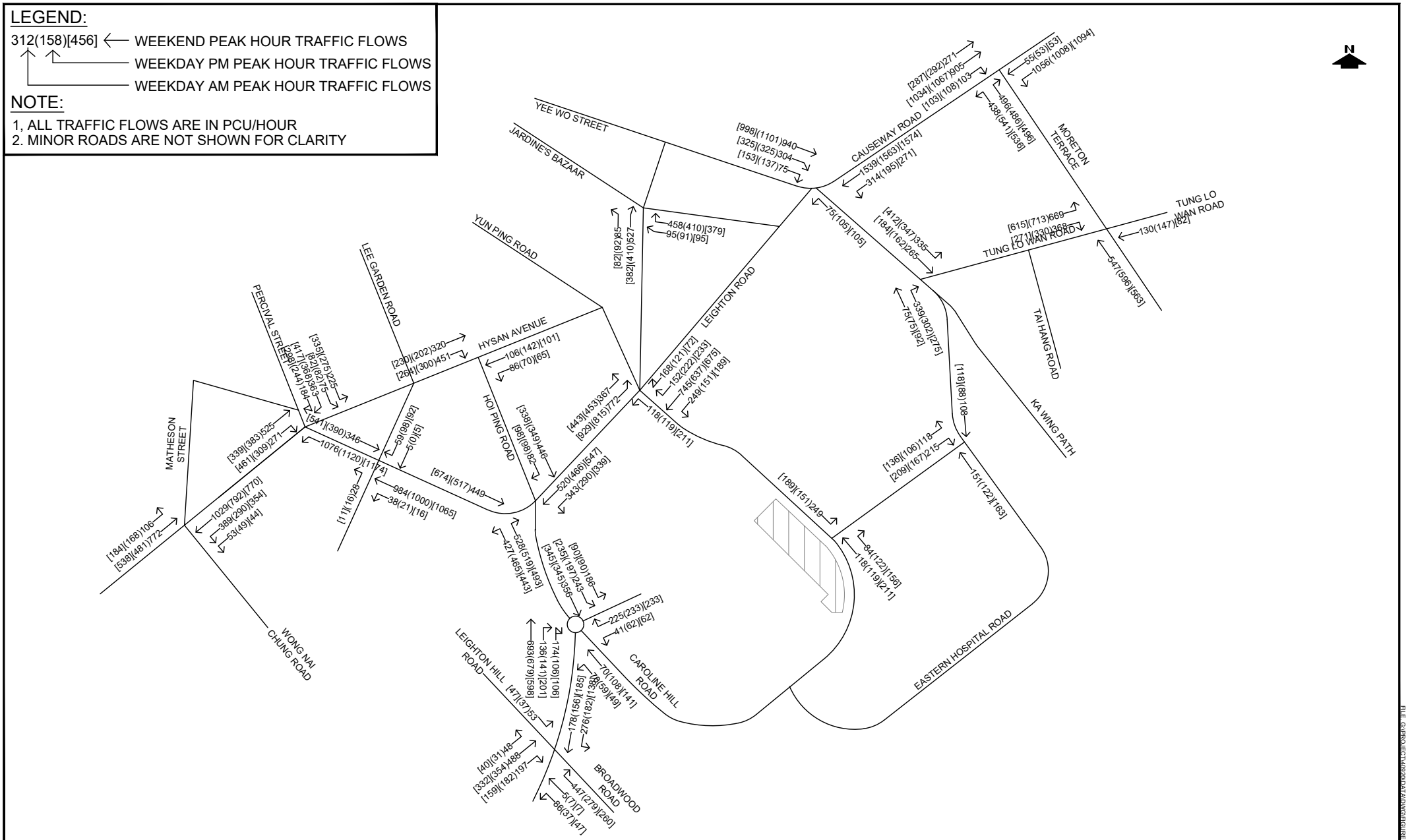
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 4.1	REV. A
DESIGNED SLN / DATE DEC 2025	DRAWING TITLE: DEVELOPMENT TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN			

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.1A.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 4.2	REV. A
DESIGNED SLN / DATE DEC 2025	DRAWING TITLE: 2033 REFERENCE TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN			

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.2A.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 4.3	REV. A
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE DEC 2025 / SCALE N.T.S.	DRAWING TITLE: 2033 DESIGN TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.3A.DWG PLOT SCALE : 1 = 1

APPENDIX A

Proposed Car Park Layout

N

COTTON PATH

DISCIPLINED SERVICES SPORTS
& RECREATION CLUB

DISCIPLINED SERVICES SPORTS &
RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93
+7.46
+7.55
+8.36
+9.46
+10.80
+10.65
+12.23
+14.13
+15.83

STAIRCASE
STAIRCASE
STAIRCASE

L/UL

LIFT
LOBBY
+6.93

LIFT
LOBBY

LAY-BY AREA

SCAA
TRAINING
POOL

E&M

RAMP
DOWN

E&M

CARPARK
+7.46

5m
6m
6.43m

ACCESS GATE

UNEXCAVATED AREA

LEGEND:

11m
3.5m
5m
2.5m
2.5m
1m

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Car Park Layout ○ 1 : 500 (A3) ○ 07 Jan 2026

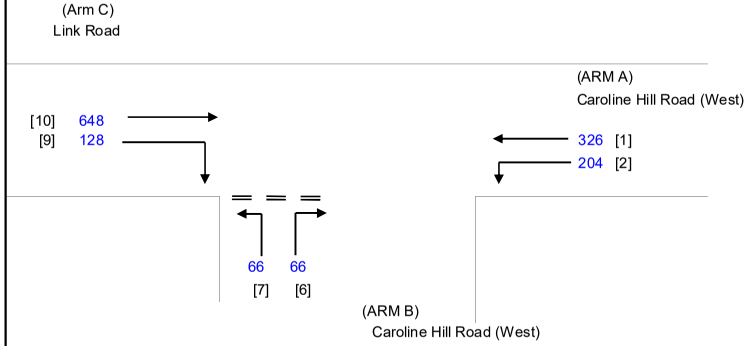
Design 2 (HK) Limited

APPENDIX B

Detail Calculation Sheets

- Existing Scenario

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_CHRW_LR	CHECKED BY:	SLN	Oct-25
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	204	(pcu/hr)
q a-c	=	326	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	648	(pcu/hr)
q c-b	=	128	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	66	(pcu/hr)
q b-c	=	66	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.5

THE CAPACITY OF MOVEMENT :

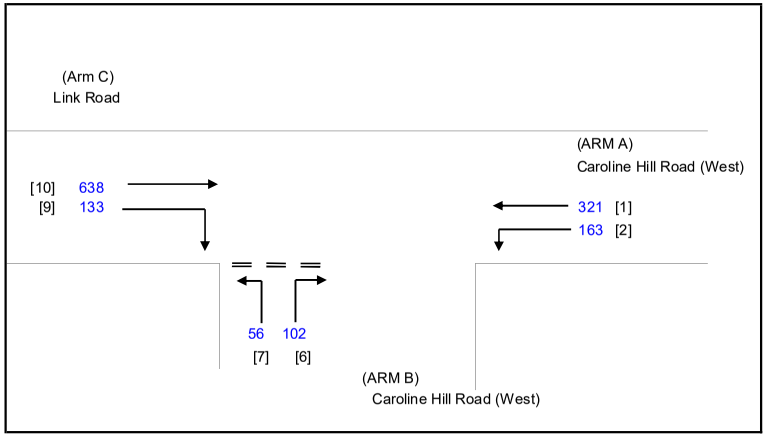
Q b-a	=	316			
Q b-c	=	574	Q b-c (O) =	544	
Q c-b	=	502			
Q b-ac	=	408			
TOTAL FLOW	=	1438	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2089
DFC b-c	=	0.1150
DFC c-b	=	0.2550
DFC b-c (share lane)	=	0.3238

CRITICAL DFC = 0.32

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_CHRW_LF	CHECKED BY:	SLN	Oct-25
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	163	(pcu/hr)
q a-c	=	321	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	638	(pcu/hr)
q c-b	=	133	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	102	(pcu/hr)
q b-c	=	56	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.35443038

THE CAPACITY OF MOVEMENT :

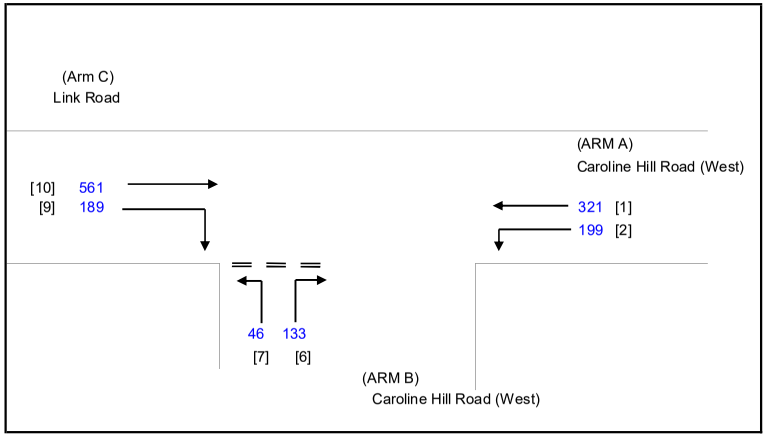
Q b-a	=	321			
Q b-c	=	579	Q b-c (O) =	533	
Q c-b	=	513			
Q b-ac	=	381			
TOTAL FLOW	=	1413	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3178
DFC b-c	=	0.0967
DFC c-b	=	0.2593
DFC b-c (share lane)	=	0.4145

CRITICAL DFC = 0.41

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_CHRW_LF	CHECKED BY:	SLN	Oct-25
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	199	(pcu/hr)
q a-c	=	321	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	561	(pcu/hr)
q c-b	=	189	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	133	(pcu/hr)
q b-c	=	46	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.25698324

THE CAPACITY OF MOVEMENT :

Q b-a	=	310		
Q b-c	=	576	Q b-c (O) =	514.2
Q c-b	=	505		
Q b-ac	=	352		
TOTAL FLOW	=	1449	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4290
DFC b-c	=	0.0799
DFC c-b	=	0.3743
DFC b-c (share lane)	=	0.5089

CRITICAL DFC = 0.51

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

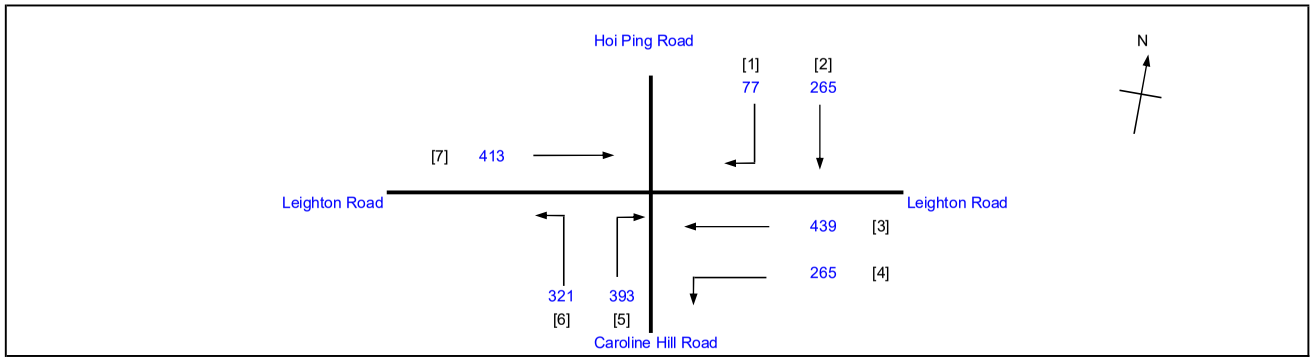
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

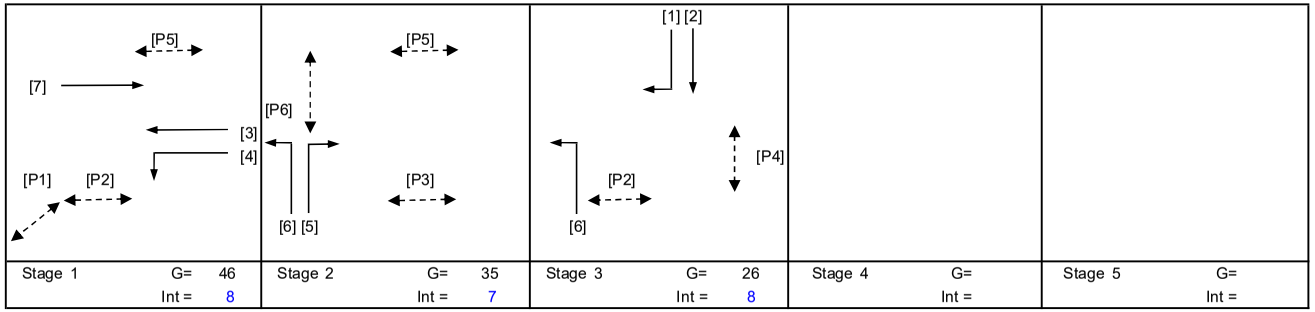
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.602
Loss time		L =	20 sec
Total Flow		=	2173 pcu
Co	= (1.5*L+5)/(1-Y)	=	88.0 sec
Cm	= L/(1-Y)	=	50.3 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	24.5 %
Cp	= 0.9*L/(0.9-Y)	=	60.5 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**26 %**



Stage 1	G= 46	Int = 8
Stage 2	G= 35	Int = 7
Stage 3	G= 26	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

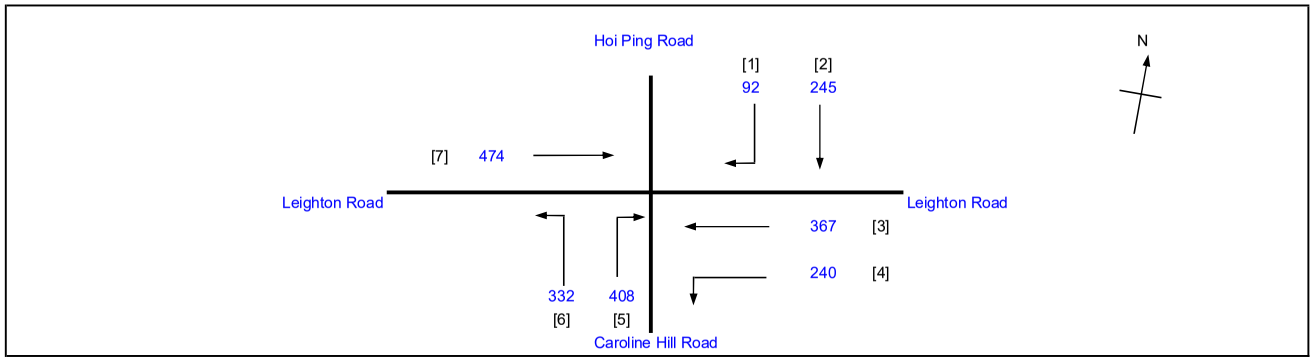
Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	47	5
P2	1,3	4	14	5	0	83	5
P3	2	4.5	14	5	3	34	5
P4	3	15	10	7	4	23	7
P5	1,2	7	11	6	1	89	6
P6	2	15	10	7	4	31	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		413		413	0.00	4020							4020	0.103			19	47	0.712	36	55
3*	1	3.00	1				2055		370		370	0.00	2055			0.7	-617			1438	0.257	0.257		47	47	0.712	48	40
3,4*	1	3.50	1	20		N	1965	265	69		334	0.79	1855			0.7	-556			1299	0.257			47	47	0.712	42	41
6	2,3	3.00	1	30		N	1915	321			321	1.00	1824							1824	0.176			32	42	0.712	48	49
5	2	4.00	1	20			2155			393	393	1.00	2005							2005	0.196	0.196		36	36	0.712	60	45
1,2	3	3.00	1	10		N	1915		265	77	342	0.23	1852	20	444					2297	0.149	0.149		27	27	0.712	54	51

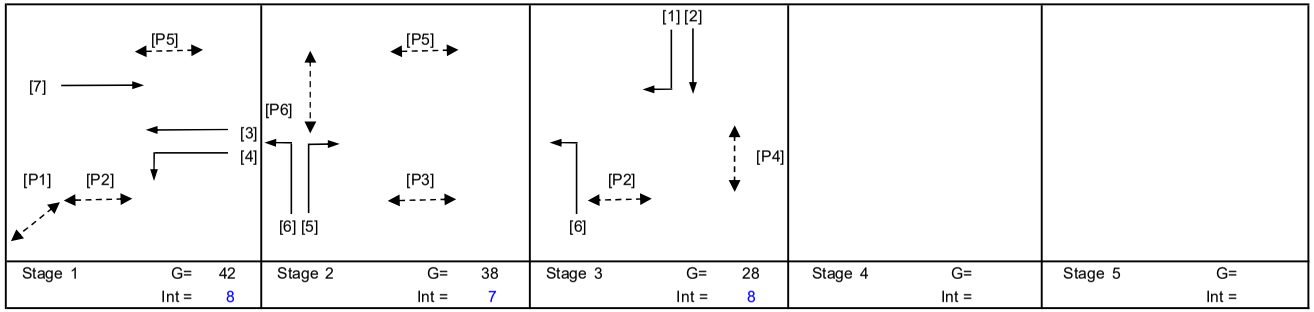
* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road		FILENAME : J2_LR_CHR_HPR.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.576
Loss time	L =	20 sec
Total Flow	=	2158 pcu
Co = (1.5*L+5)/(1-Y)	=	82.5 sec
Cm = L/(1-Y)	=	47.1 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	30.3 %
Cp = 0.9*L/(0.9-Y)	=	55.5 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**32 %**



Stage 1	G= 42	Int = 8
Stage 2	G= 38	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	Green Time Required FG	Green Time Required Delay	Green Time Provided SG	Green Time Provided FG
P1	1	4.5	10	5	2	43	5
P2	1,3	4	14	5	0	80	5
P3	2	4.5	14	5	3	37	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Movement Straight pcu/h	Movement Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		474		474	0.00	4020							4020	0.118			23	43	0.680	42	50
3*	1	3.00	1				2055		319		319	0.00	2055			0.7	-617			1438	0.222			42	43	0.680	42	41
3,4*	1	3.50	1	20		N	1965	240	48		288	0.83	1849			0.7	-555			1294	0.222	0.222		43	43	0.680	36	42
6	2,3	3.00	1	30		N	1915	332			332	1.00	1824							1824	0.182			35	45	0.680	48	45
5	2	4.00	1	20			2155			408	408	1.00	2005							2005	0.204	0.204		39	39	0.680	60	42
1,2	3	3.00	1	10		N	1915		245	92	337	0.27	1840	20	414					2253	0.150	0.150		29	29	0.680	54	49

* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

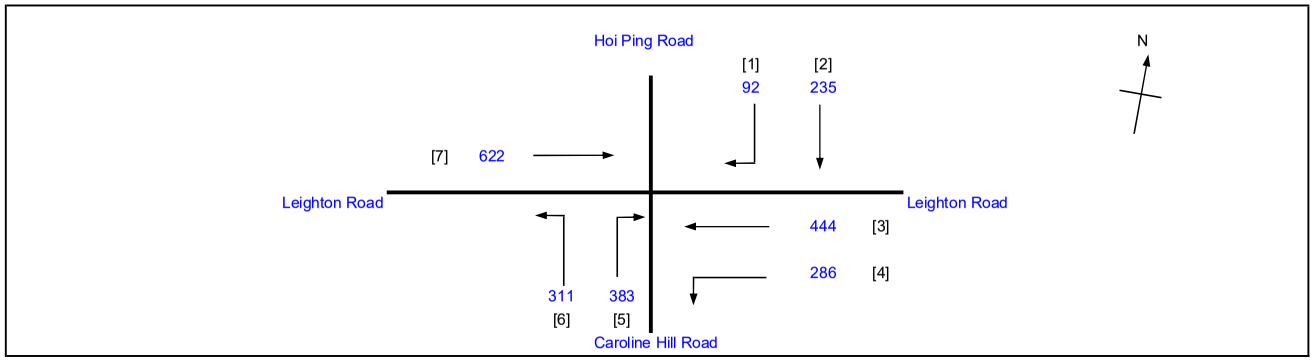
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

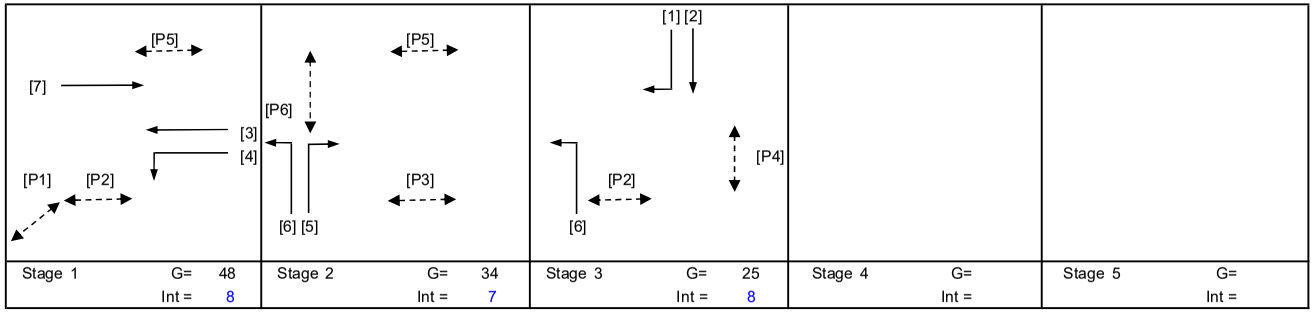
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.600
Loss time		L =	20 sec
Total Flow		=	2373 pcu
Co	= (1.5*L+5)/(1-Y)	=	87.6 sec
Cm	= L/(1-Y)	=	50.1 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	24.9 %
Cp	= 0.9*L/(0.9-Y)	=	60.1 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**27 %**



Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	49	5
P2	1,3	4	14	5	0	84	5
P3	2	4.5	14	5	3	33	5
P4	3	15	10	7	4	22	7
P5	1,2	7	11	6	1	90	6
P6	2	15	10	7	4	30	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		622		622	0.00	4020							4020	0.155			28	49	0.710	51	47
3*	1	3.00	1				2055		384		384	0.00	2055			0.7	-617			1438	0.267			49	49	0.710	48	38
3,4*	1	3.50	1	20		N	1965	286	60		346	0.83	1850			0.7	-555			1295	0.267	0.267		49	49	0.710	42	39
6	2,3	3.00	1	30		N	1915	311			311	1.00	1824							1824	0.171			31	41	0.710	48	50
5	2	4.00	1	20			2155			383	383	1.00	2005							2005	0.191	0.191		35	35	0.710	60	46
1,2	3	3.00	1	10		N	1915		235	92	327	0.28	1837	20	462					2299	0.142	0.142		26	26	0.710	54	52

* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

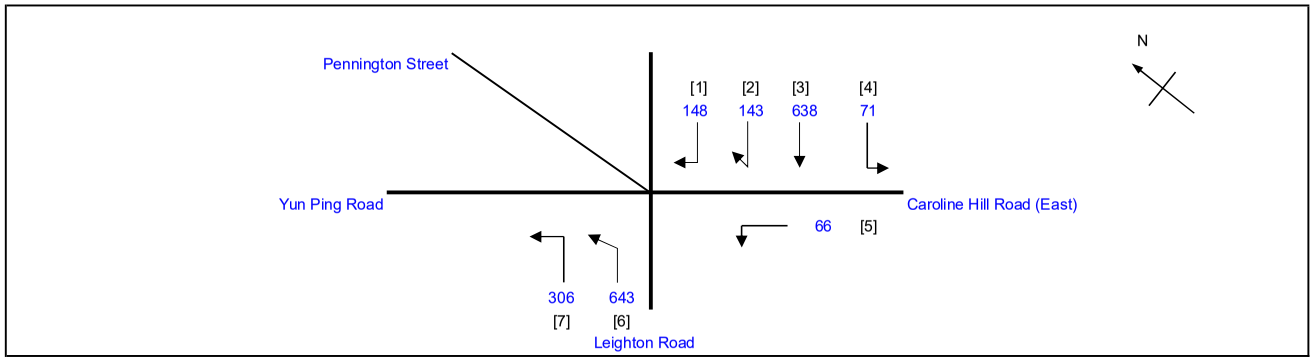
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

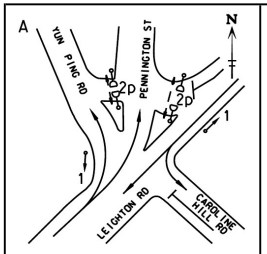
2025 Existing AM

PROJECT NO.: 40920

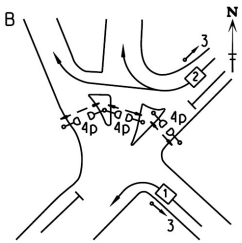
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.550
Loss time		L =	11 sec
Total Flow		=	2015 pcu
Co	= (1.5*L+5)/(1-Y)	=	47.8 sec
Cm	= L/(1-Y)	=	24.4 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	48.6 %
Cp	= 0.9*L/(0.9-Y)	=	28.3 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**50 %**



Stage 1 G= 71 Int = 6



Stage 2 G= 46 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	67	8
4P	2		10	8	2	43	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							11		
3	1	2.50	1				2005		461		461	0.00	2005							2005	0.230			50	72
3,4	1	3.00	1	7		N	1915	71	177		248	0.29	1804			0.6	-722			1082	0.229			50	72
6	1	3.00	1				2055		508		508	0.00	2055			0.7	-534			1521	0.334	0.334		72	72
6,7	1	3.00	1	15		N	1915	306	135		441	0.69	1791			0.7	-466			1325	0.333			72	72
1,2	2	3.50	1	9		N	1965			291	291	1.00	1684			0.8	-337			1347	0.216	0.216		47	47
5	2	4.00	1	5		N	2015	66			66	1.00	1550			0.6	-620			930	0.071			15	47

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

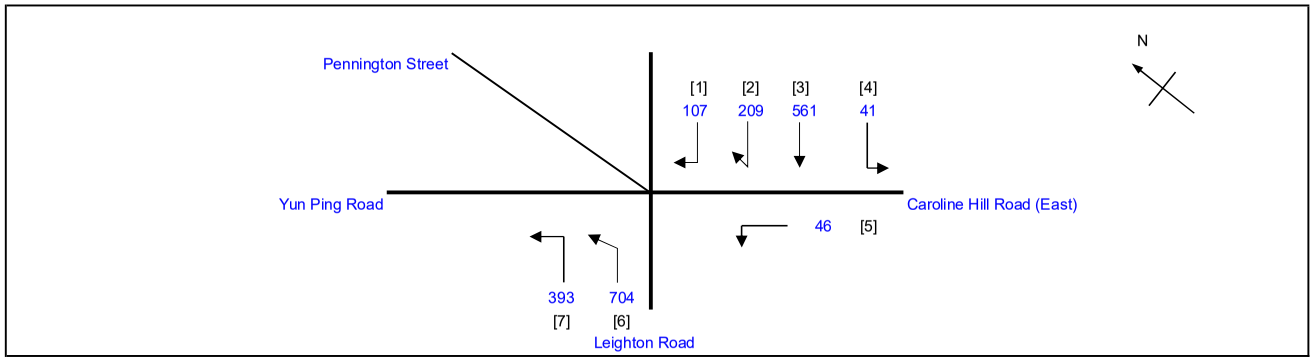
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

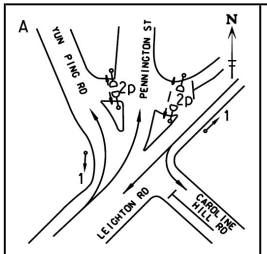
2025 Existing PM

PROJECT NO.: 40920

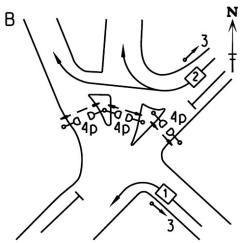
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.621
Loss time		L =	11 sec
Total Flow		=	2061 pcu
Co	= (1.5*L+5)/(1-Y)	=	56.8 sec
Cm	= L/(1-Y)	=	29.1 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	31.6 %
Cp	= 0.9*L/(0.9-Y)	=	35.5 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**33 %**



Stage 1 G= 73 Int = 6



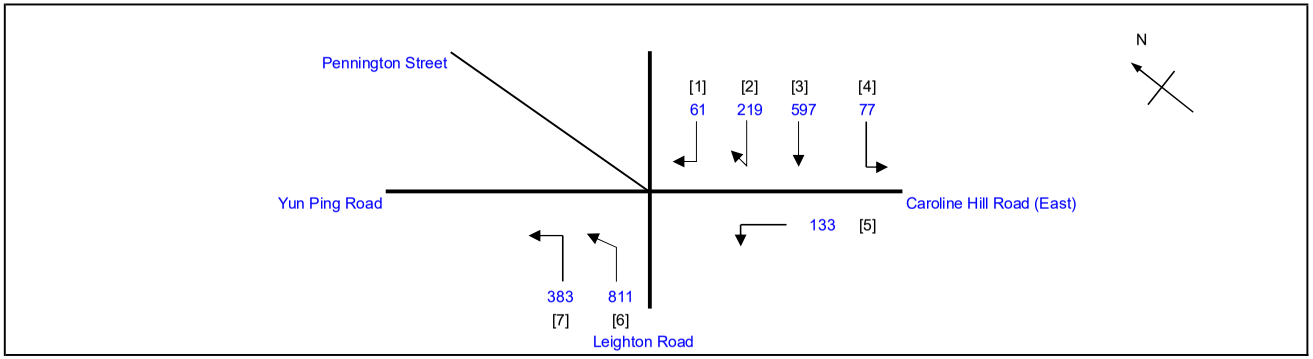
Stage 2 G= 44 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	69	8
4P	2		10	8	2	41	8

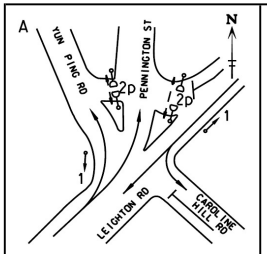
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		388		388	0.00	2005							2005	0.194			37	74
3,4	1	3.00	1	7		N	1915	41	173		214	0.19	1839			0.6	-736			1103	0.194			37	74
6	1	3.00	1				2055		588		588	0.00	2055			0.7	-534			1521	0.387			74	74
6,7	1	3.00	1	15		N	1915	393	116		509	0.77	1778			0.7	-462			1316	0.387	0.387		74	74
1,2	2	3.50	1	9		N	1965			316	316	1.00	1684			0.8	-337			1347	0.235	0.235		45	45
5	2	4.00	1	5		N	2015	46			46	1.00	1550			0.6	-620			930	0.049			9	45

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

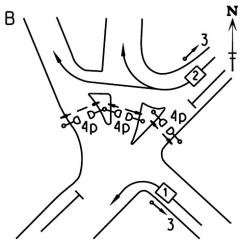
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.627
Loss time	L =	11 sec
Total Flow	=	2281 pcu
Co = (1.5*L+5)/(1-Y)	=	57.7 sec
Cm = L/(1-Y)	=	29.5 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	30.3 %
Cp = 0.9*L/(0.9-Y)	=	36.3 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**31 %**



Stage 1 G= 79 Int = 6



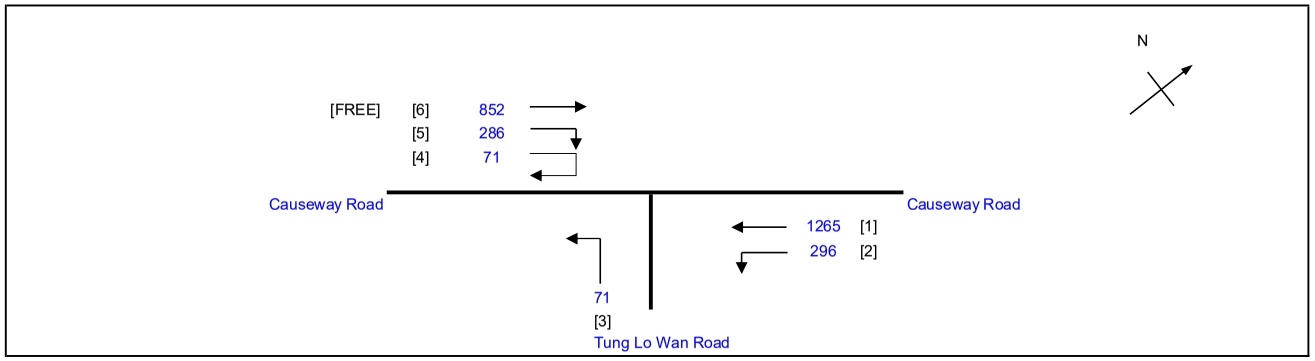
Stage 2 G= 38 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	75	8
4P	2		10	8	2	35	8

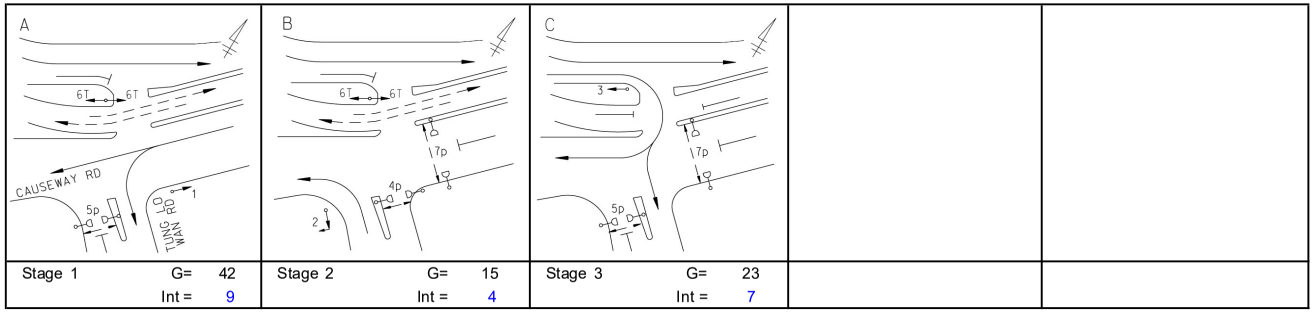
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		439		439	0.00	2005							2005	0.219			42	80
3,4	1	3.00	1	7		N	1915	77	158		235	0.33	1789			0.6	-716			1073	0.219			42	80
6	1	3.00	1				2055		638		638	0.00	2055			0.7	-534			1521	0.419	0.419		80	80
6,7	1	3.00	1	15		N	1915	383	173		556	0.69	1792			0.7	-466			1326	0.419			80	80
1,2	2	3.50	1	9		N	1965			280	280	1.00	1684			0.8	-337			1347	0.208	0.208		39	39
5	2	4.00	1	5		N	2015	133			133	1.00	1550			0.6	-620			930	0.143			27	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.352
Loss time	L =	33 sec
Total Flow	=	1989 pcu
Co = (1.5*L+5)/(1-Y)	=	84.2 sec
Cm = L/(1-Y)	=	51.0 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	85.2 %
Cp = 0.9*L/(0.9-Y)	=	54.2 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**71 %**



Stage 1	G= 42	Stage 2	G= 15	Stage 3	G= 23
	Int = 9		Int = 4		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		38	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		343		343	0.00	1915			0.8	-383			1532	0.224			43	43
1	1	3.00	2				4110		922		922	0.00	4110							4110	0.224			43	43
2	1	3.00	1	9		N	1915	296			296	1.00	1641			0.8	-328			1313	0.225	0.225		43	43
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			9	15
4,5	3	4.00	1	12		N	2015			182	182	1.00	1791			0.8	-358			1433	0.127	0.127		24	24
4,5	3	4.50	1	8		N	2065			175	175	1.00	1739			0.8	-348			1391	0.126			24	24
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

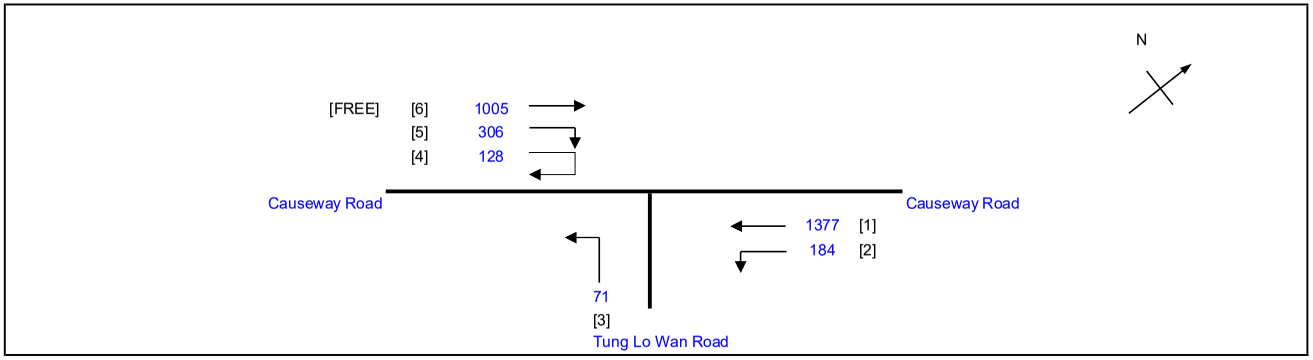
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

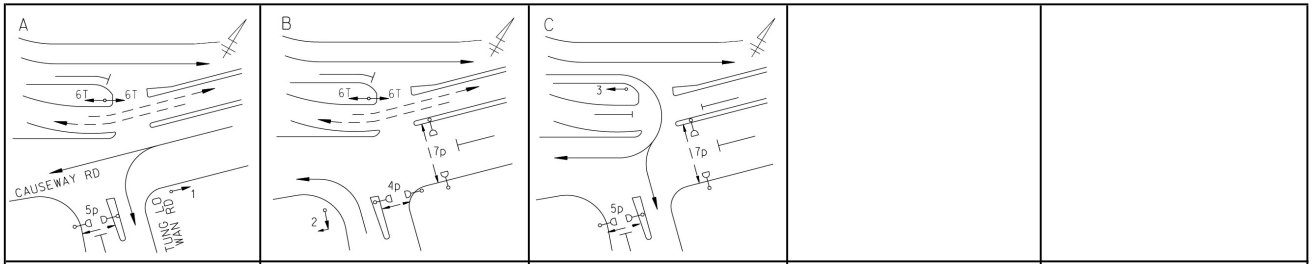
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.398
Loss time		L =	33 sec
Total Flow		=	2066 pcu
Co	= (1.5*L+5)/(1-Y)	=	90.5 sec
Cm	= L/(1-Y)	=	54.8 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	64.0 %
Cp	= 0.9*L/(0.9-Y)	=	59.2 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**52 %**



Stage 1	G= 40	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 25	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		40	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		374		374	0.00	1915			0.8	-383			1532	0.244	0.244		41	41
1	1	3.00	2				4110		1003		1003	0.00	4110							4110	0.244			41	41
2	1	3.00	1	9		N	1915	184			184	1.00	1641			0.8	-328			1313	0.140			24	41
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			8	15
4,5	3	4.00	1	12		N	2015			220	220	1.00	1791			0.8	-358			1433	0.154			26	26
4,5	3	4.50	1	8		N	2065			214	214	1.00	1739			0.8	-348			1391	0.154	0.154		26	26
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

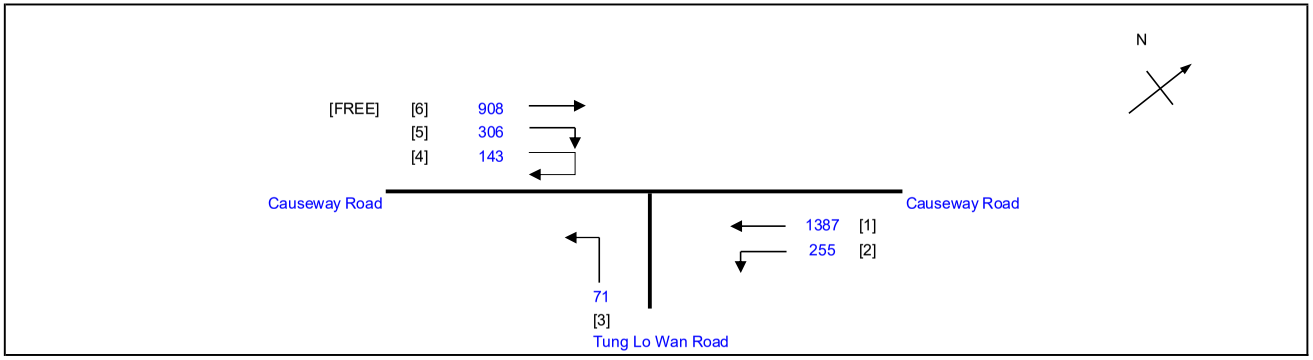
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

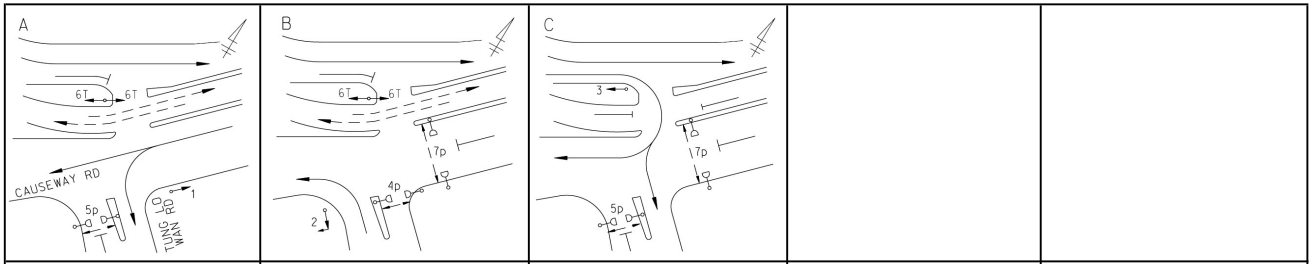
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.405
Loss time		L =	33 sec
Total Flow		=	2162 pcu
Co	= (1.5*L+5)/(1-Y)	=	91.6 sec
Cm	= L/(1-Y)	=	55.5 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	61.0 %
Cp	= 0.9*L/(0.9-Y)	=	60.0 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**49 %**



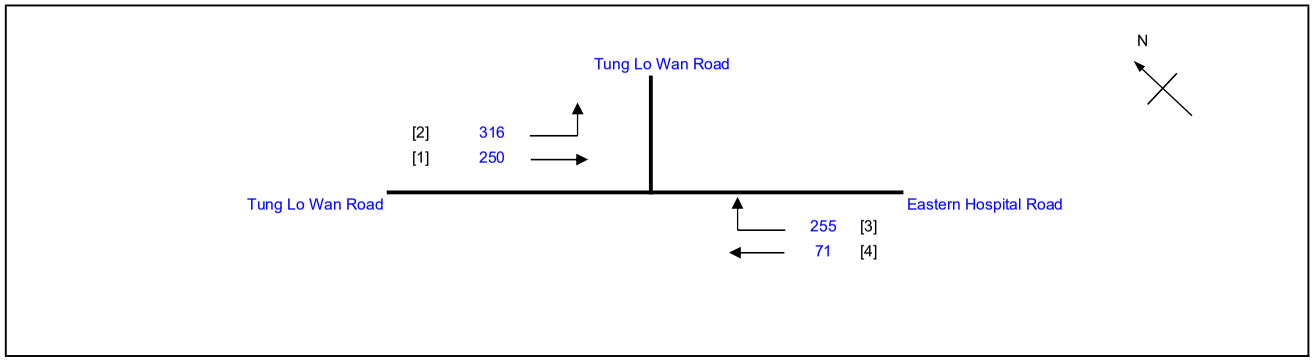
Stage 1	G=	40	
	Int =	9	
Stage 2	G=	15	
	Int =	4	
Stage 3	G=	25	
	Int =	7	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		40	11

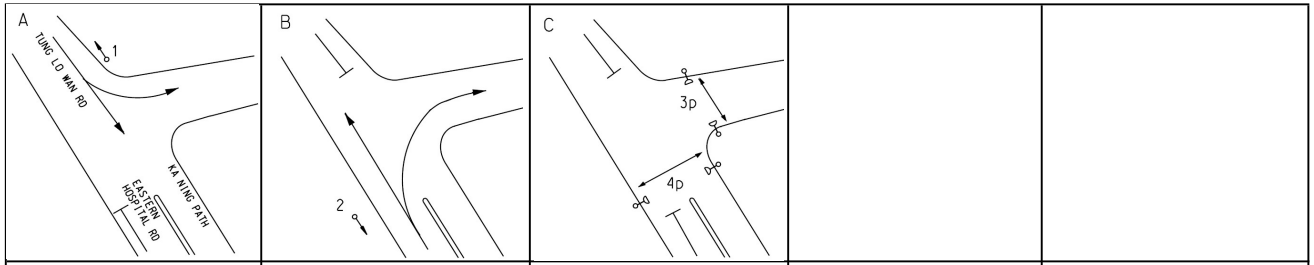
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		377		377	0.00	1915			0.8	-383			1532	0.246	0.246		41	41
1	1	3.00	2				4110		1010		1010	0.00	4110							4110	0.246			41	41
2	1	3.00	1	9		N	1915	255			255	1.00	1641			0.8	-328			1313	0.194			32	41
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			8	15
4,5	3	4.00	1	12		N	2015			228	228	1.00	1791			0.8	-358			1433	0.159	0.159		26	26
4,5	3	4.50	1	8		N	2065			221	221	1.00	1739			0.8	-348			1391	0.159			26	26
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.326
Loss time	L =	41 sec
Total Flow	=	892 pcu
Co = (1.5*L+5)/(1-Y)	=	98.7 sec
Cm = L/(1-Y)	=	60.8 sec
Yult	=	0.593
R.C.ult = (Yult-Y)/Y*100%	=	81.7 %
Cp = 0.9*L/(0.9-Y)	=	64.3 sec
Ymax = 1-L/C	=	0.590
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**63 %**



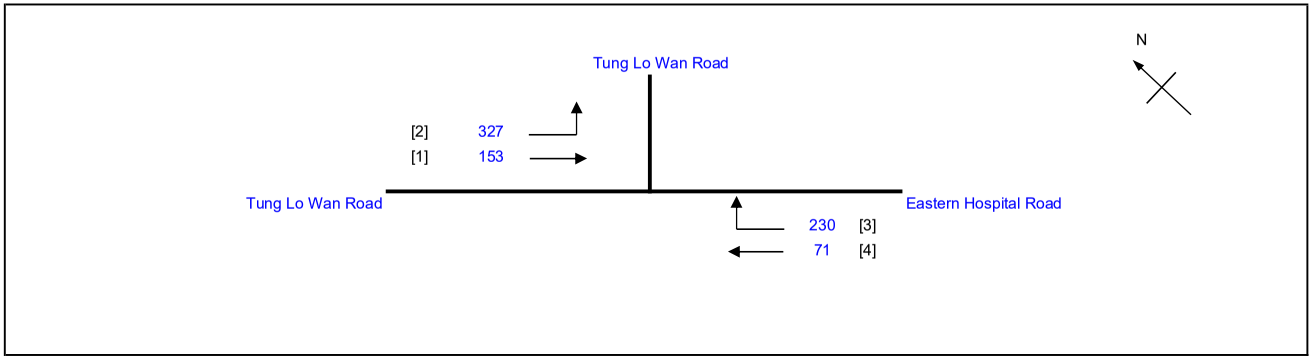
Stage 1	G= 25	Int = 5
Stage 2	G= 32	Int = 3
Stage 3	G= 33	Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

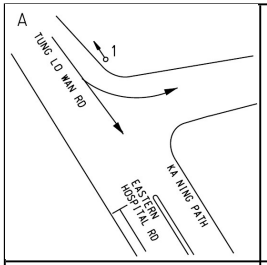
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	50	250		300	0.17	2064							2064	0.145	0.145		26	26
4	1	3.30	1	25		N	1945	266			266	1.00	1835							1835	0.145			26	26
1,2	2	3.65	1	12		N	1980		71	255	326	0.78	1804							1804	0.181	0.181		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

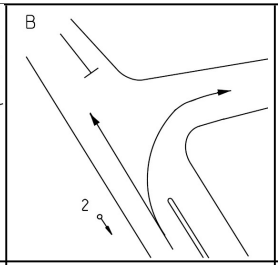
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Oct-25
J5 Tung Lo Wan Road / Eastern Hospital Road			Reviewed By:	SLN	Oct-25



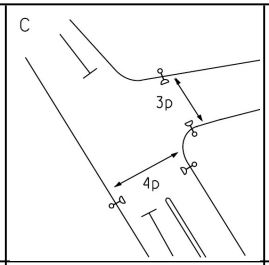
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.291
Loss time	L =	41 sec
Total Flow	=	781 pcu
Co = (1.5*L+5)/(1-Y)	=	93.8 sec
Cm = L/(1-Y)	=	57.8 sec
Yult	=	0.593
R.C.ult = (Yult-Y)/Y*100%	=	103.8 %
Cp = 0.9*L/(0.9-Y)	=	60.6 sec
Ymax = 1-L/C	=	0.590
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**83 %**



Stage 1 G= 24 Int = 5



Stage 2 G= 33 Int = 3



Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
3,4	1	3.30	1	25			2085	99	153		252	0.39	2037							2037	0.124			25	25			
4	1	3.30	1	25		N	1945	228			228	1.00	1835							1835	0.124	0.124		25	25			
1,2	2	3.65	1	12		N	1980		71	230	301	0.76	1807							1807	0.167	0.167		34	34			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

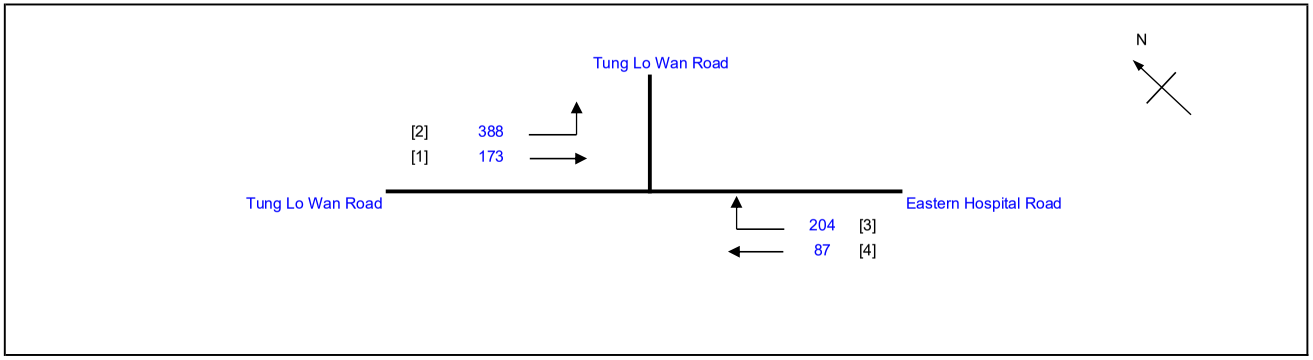
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

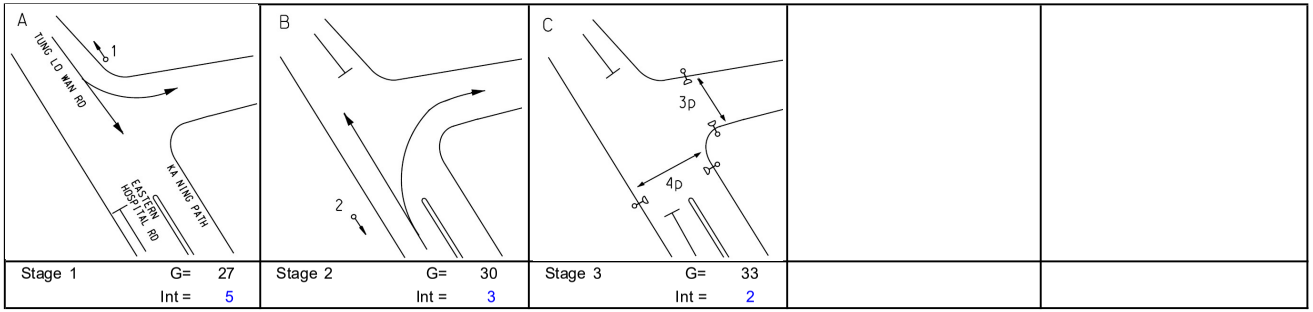
J5 Tung Lo Wan Road / Eastern Hospital Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.305
Loss time		L =	41 sec
Total Flow		=	852 pcu
Co	= (1.5*L+5)/(1-Y)	=	95.7 sec
Cm	= L/(1-Y)	=	59.0 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	94.4 %
Cp	= 0.9*L/(0.9-Y)	=	62.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**74 %**



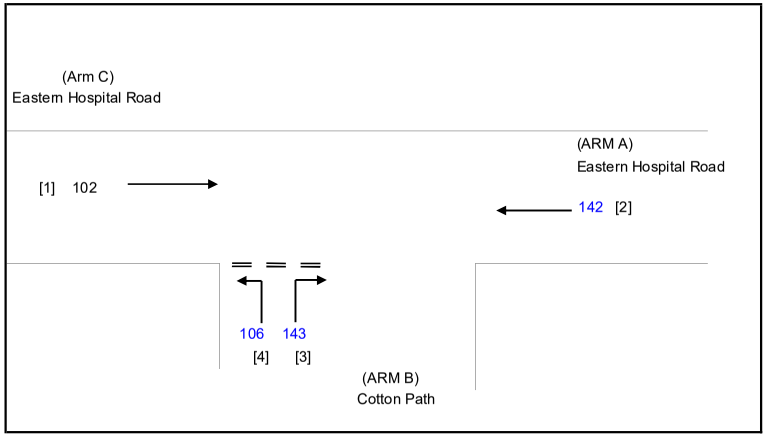
Stage 1	G=	27	
	Int =	5	
Stage 2	G=	30	
	Int =	3	
Stage 3	G=	33	
	Int =	2	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
3,4	1	3.30	1	25			2085	122	173		295	0.41	2035							2035	0.145	0.145		28	28			
4	1	3.30	1	25		N	1945	266			266	1.00	1835							1835	0.145			28	28			
1,2	2	3.65	1	12		N	1980		87	204	291	0.70	1820							1820	0.160	0.160		31	31			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	102	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	143	(pcu/hr)
q b-c	=	106	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.42570281

THE CAPACITY OF MOVEMENT :

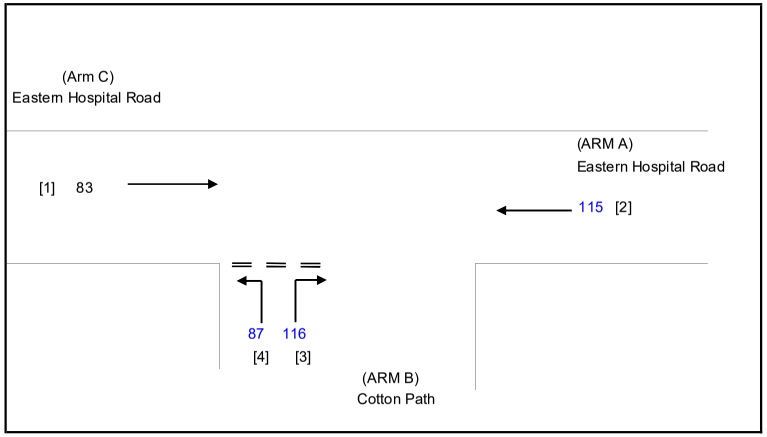
Q b-a	=	528		
Q b-c	=	728	Q b-c (O) =	678.7
Q c-b	=	414		
Q b-ac	=	598		
TOTAL FLOW	=	493	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2708
DFC b-c	=	0.1456
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1773

CRITICAL DFC = 0.27

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	115	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	83	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	116	(pcu/hr)
q b-c	=	87	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.42857143

THE CAPACITY OF MOVEMENT :

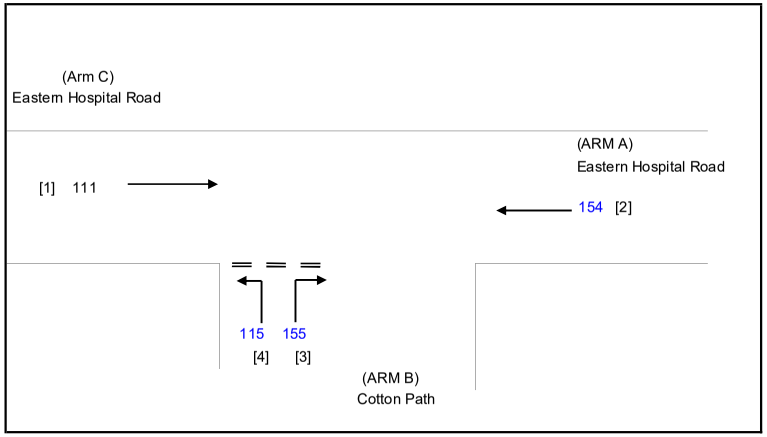
Q b-a	=	538		
Q b-c	=	735	Q b-c (O) =	695.4
Q c-b	=	418		
Q b-ac	=	608		
TOTAL FLOW	=	401	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2156
DFC b-c	=	0.1184
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1431

CRITICAL DFC = 0.22

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Oct-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	154	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	111	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	155	(pcu/hr)
q b-c	=	115	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.42592593

THE CAPACITY OF MOVEMENT :

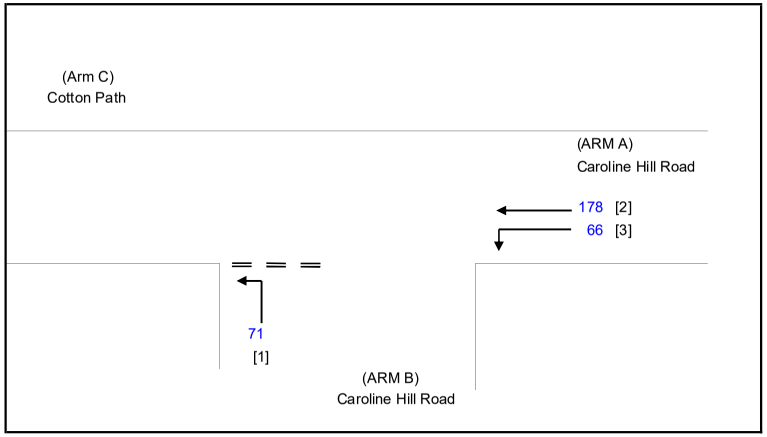
Q b-a	=	524		
Q b-c	=	725	Q b-c (O) =	671.4
Q c-b	=	412		
Q b-ac	=	594		
TOTAL FLOW	=	535	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2958
DFC b-c	=	0.1586
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1936

CRITICAL DFC = 0.30

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	66	(pcu/hr)
q a-c	=	178	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	71	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

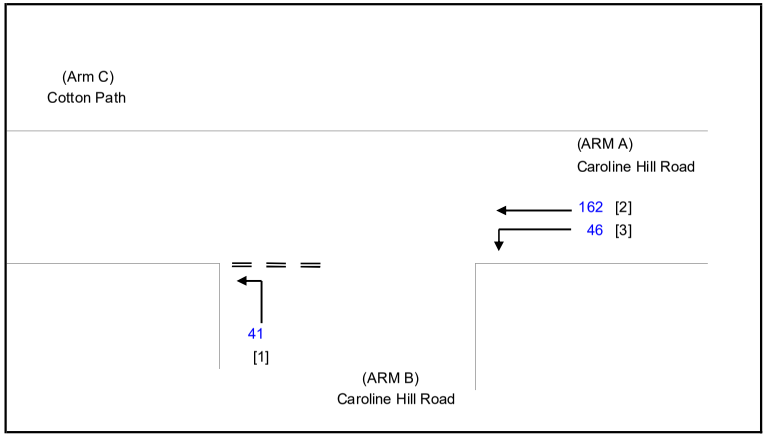
Q b-a	=	303			
Q b-c	=	696	Q b-c (O) =	696	
Q c-b	=	395			
Q b-ac	=	696			
TOTAL FLOW	=	315	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1020
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1020

CRITICAL DFC = 0.10

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	46	(pcu/hr)
q a-c	=	162	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	41	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

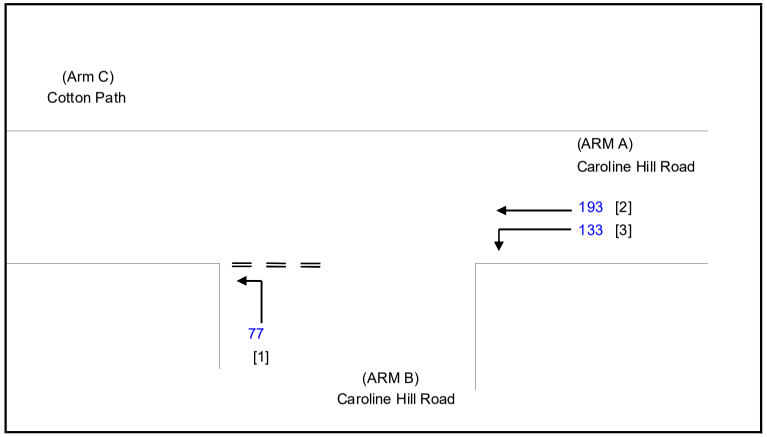
Q b-a	=	307			
Q b-c	=	703	Q b-c (O) =	703	
Q c-b	=	401			
Q b-ac	=	703			
TOTAL FLOW	=	249	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0583
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.0583

CRITICAL DFC = 0.06

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Oct-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Oct-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	133	(pcu/hr)
q a-c	=	193	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	77	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

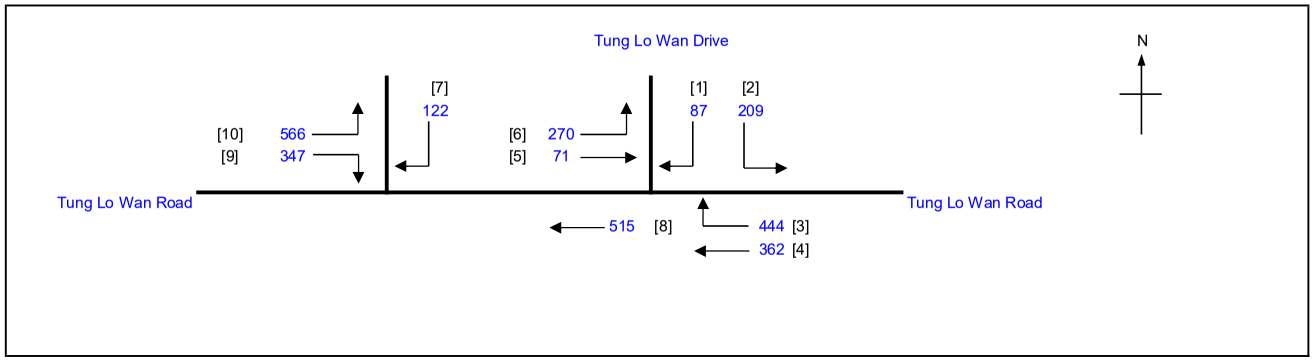
Q b-a	=	297			
Q b-c	=	684	Q b-c (O) =	684	
Q c-b	=	381			
Q b-ac	=	684			
TOTAL FLOW	=	403	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

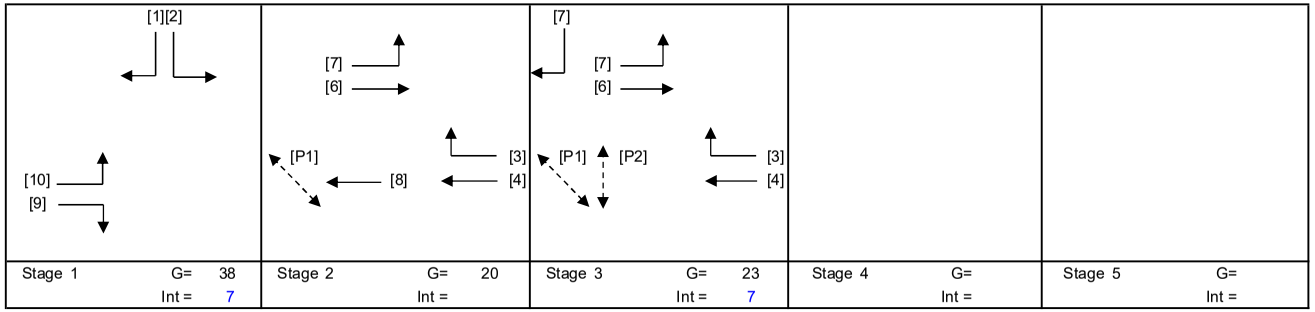
DFC b-a	=	0.0000
DFC b-c	=	0.1126
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1126

CRITICAL DFC = 0.11

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
J8 Tung Lo Wan Road / Moreton Terrace		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.546
Loss time	L =	12 sec
Total Flow	=	2993 pcu
Co = (1.5*L+5)/(1-Y)	=	50.6 sec
Cm = L/(1-Y)	=	26.4 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	48.5 %
Cp = 0.9*L/(0.9-Y)	=	30.5 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**44 %**



Stage 1	G= 38	Stage 2	G= 20	Stage 3	G= 23	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		42	8
P2	3		9	8		22	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		515		515	0.00	3970							3970	0.130			20	20	0.624	30	34
10	1	3.70	1	8		N	1985	429			429	1.00	1672							1672	0.257	0.257		39	39	0.624	36	24
9,10	1	3.50	1	13			2105	137		347	484	1.00	1887							1887	0.256			39	39	0.624	42	23
7	3	5.00	1	27		N	2115			122	122	1.00	2004							2004	0.061			9	24	0.624	18	51
4	2,3	3.70	1			N	1985		362		362	0.00	1985							1985	0.182			28	44	0.624	36	31
3,4	2,3	3.00	1	8	O		2055			444	444	1.00	1537							1537	0.289	0.289		44	44	0.624	36	21
5,6	2,3	5.00	1	13		N	2115	270	71		341	0.79	1938							1938	0.176			27	44	0.624	36	32
1,2	1	3.50	1	8		N	1965	209		87	296	1.00	1655							1655	0.179			27	39	0.624	30	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

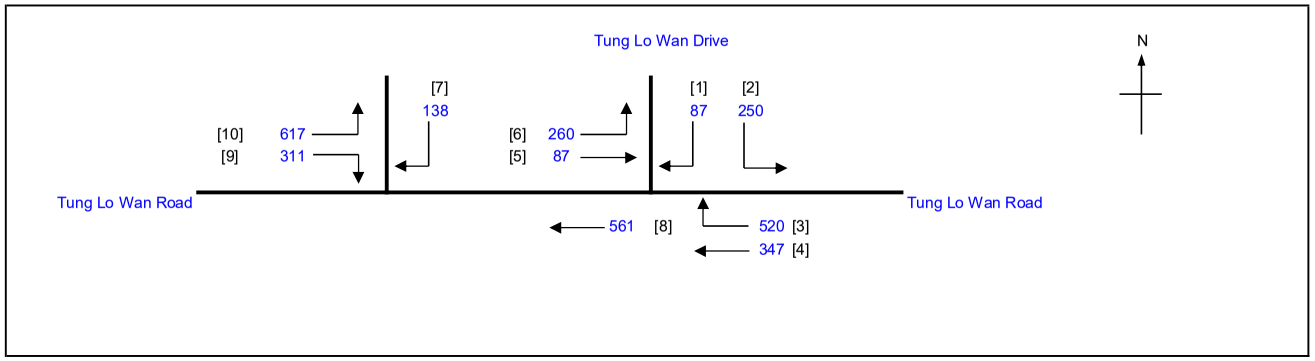
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
PROJECT NO.:	40920	Prepared By:	SKL	Oct-25
FILENAME :	J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
		Reviewed By:	SLN	Oct-25

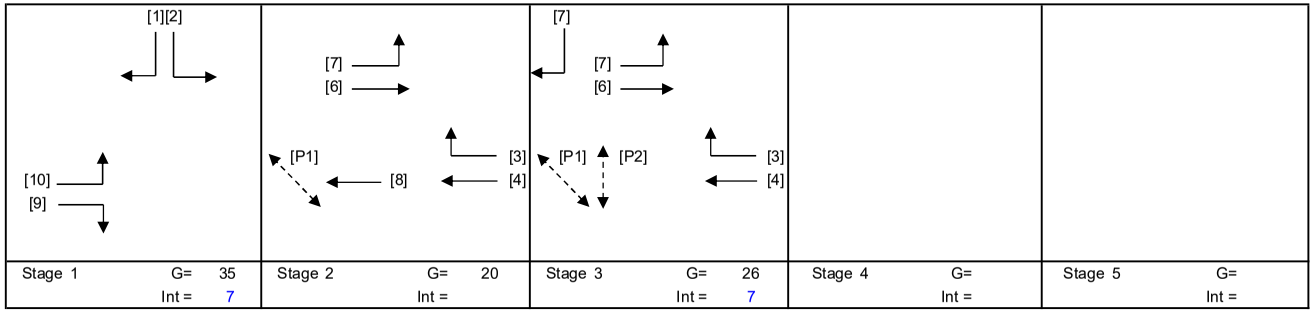
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J8 Tung Lo Wan Road / Moreton Terrace

2025 Existing PM



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.599
Loss time	L =	12 sec
Total Flow	=	3178 pcu
Co = (1.5*L+5)/(1-Y)	=	57.4 sec
Cm = L/(1-Y)	=	29.9 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	35.2 %
Cp = 0.9*L/(0.9-Y)	=	35.9 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**31 %**



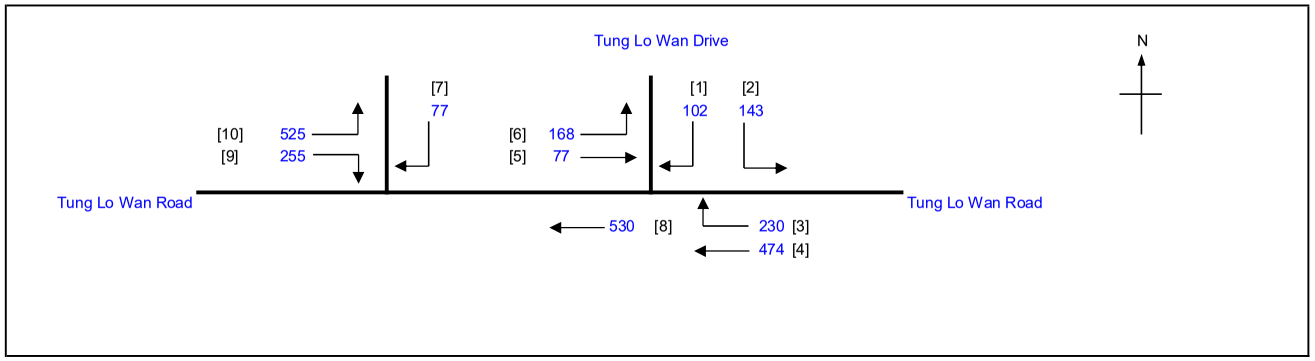
Stage 1	G= 35	Stage 2	G= 20	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		45	8
P2	3		9	8		25	8

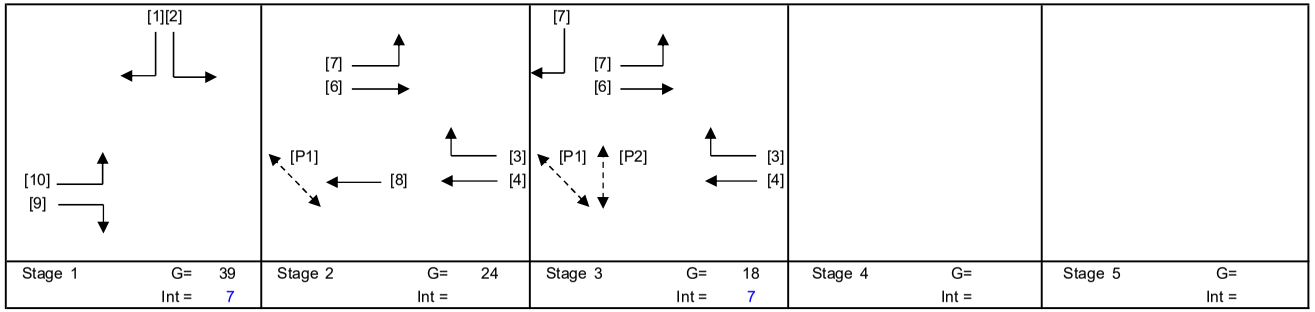
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		561		561	0.00	3970							3970	0.141			20	20	0.686	33	36
10	1	3.70	1	8		N	1985	436			436	1.00	1672							1672	0.261	0.261		36	36	0.686	42	28
9,10	1	3.50	1	13			2105	181		311	492	1.00	1887							1887	0.261			36	36	0.686	48	27
7	3	5.00	1	27		N	2115			138	138	1.00	2004							2004	0.069			10	27	0.686	18	55
4	2,3	3.70	1			N	1985		347		347	0.00	1985							1985	0.175			24	47	0.686	36	36
3,4	2,3	3.00	1	8	O		2055			520	520	1.00	1537							1537	0.338	0.338		47	47	0.686	36	21
5,6	2,3	5.00	1	13		N	2115	260	87		347	0.75	1947							1947	0.178			25	47	0.686	36	35
1,2	1	3.50	1	8		N	1965	250		87	337	1.00	1655							1655	0.204			28	36	0.686	36	34

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Oct-25
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Oct-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.458
Loss time	L =	12 sec
Total Flow	=	2581 pcu
Co = (1.5*L+5)/(1-Y)	=	42.4 sec
Cm = L/(1-Y)	=	22.1 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	76.8 %
Cp = 0.9*L/(0.9-Y)	=	24.4 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**72 %**



Stage 1	G= 39	Stage 2	G= 24	Stage 3	G= 18	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		17	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		530		530	0.00	3970							3970	0.134			24	24	0.524	30	29
10	1	3.70	1	8		N	1985	366			366	1.00	1672							1672	0.219			40	40	0.524	30	21
9,10	1	3.50	1	13			2105	159		255	414	1.00	1887							1887	0.219	0.219		40	40	0.524	36	21
7	3	5.00	1	27		N	2115			77	77	1.00	2004							2004	0.038			7	19	0.524	12	50
4	2,3	3.70	1			N	1985		474		474	0.00	1985							1985	0.239	0.239		43	43	0.524	36	19
3,4	2,3	3.00	1	8	O		2055			230	230	1.00	1537							1537	0.150			27	43	0.524	24	30
5,6	2,3	5.00	1	13		N	2115	168	77		245	0.69	1960							1960	0.125			23	43	0.524	24	32
1,2	1	3.50	1	8		N	1965	143		102	245	1.00	1655							1655	0.148			27	40	0.524	24	30

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

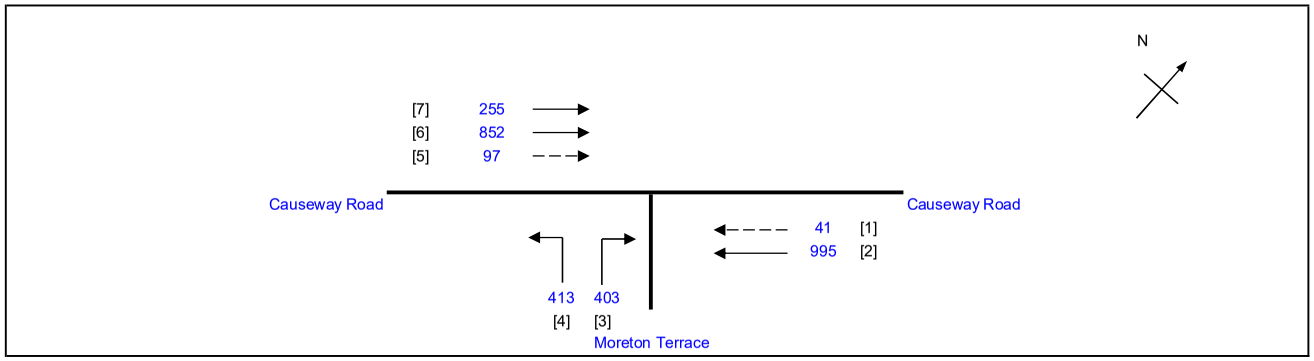
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

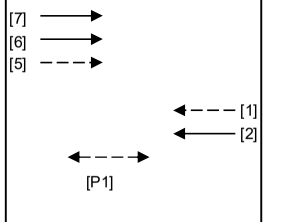
J9 Moreton Terrace / Causeway Road

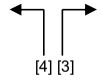
2025 Existing AM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.554
Loss time	L =	10 sec
Total Flow	=	3056 pcu
Co = (1.5*L+5)/(1-Y)	=	44.8 sec
Cm = L/(1-Y)	=	22.4 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	49.0 %
Cp = 0.9*L/(0.9-Y)	=	26.0 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**45 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		268		268	0.00	1985			0.4	-1191			794	0.338			52	62	0.619	18	19
2	1	4.00	1				2155		727		727	0.00	2155							2155	0.337			52	62	0.619	48	16
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	62	0.619	6	80
4	2	3.50	1	9		N	1965	251			251	1.00	1684							1684	0.149	0.149		23	23	0.619	30	35
3,4	2	3.30	1	15			2085	162		119	281	1.00	1895							1895	0.148			23	23	0.619	30	35
3	2	3.50	1	15			2105			284	284	1.00	1914							1914	0.148			23	23	0.619	30	35
7	1	3.50	1			N	1965		255		255	0.00	1965							1965	0.130			20	62	0.619	30	37
6	1	3.50	1				2105		852		852	0.00	2105							2105	0.405	0.405		62	62	0.619	42	11
5	1	3.00	1				2055		97		97	0.00	2055							2055	0.047			7	62	0.619	12	55

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

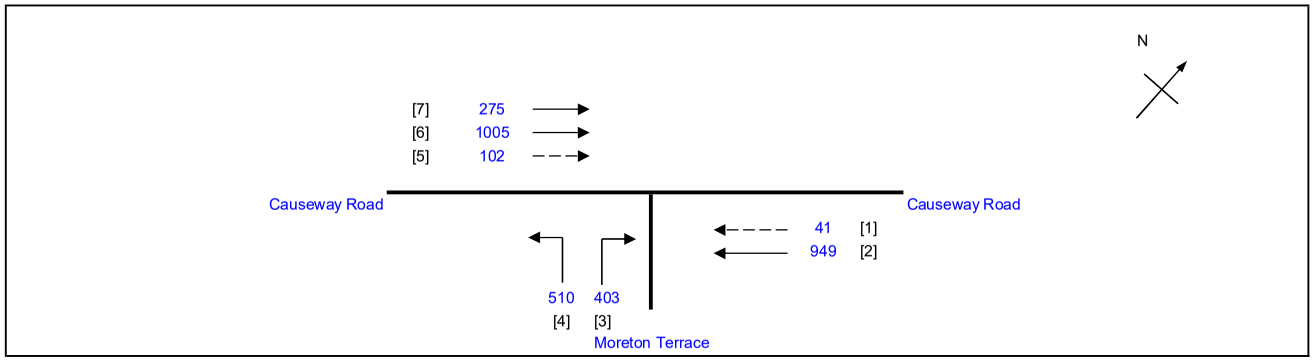
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

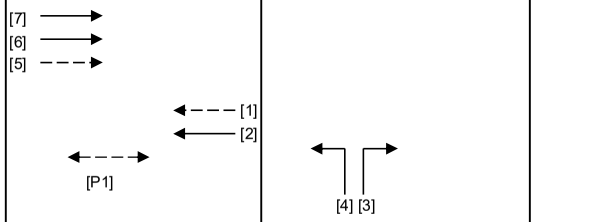
J9 Moreton Terrace / Causeway Road

2025 Existing PM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.644
Loss time	L =	10 sec
Total Flow	=	3285 pcu
Co = (1.5*L+5)/(1-Y)	=	56.1 sec
Cm = L/(1-Y)	=	28.1 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	28.2 %
Cp = 0.9*L/(0.9-Y)	=	35.1 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**25 %**



Stage 1 G= 62 Int = 5
Stage 2 G= 21 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		57	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		256		256	0.00	1985			0.4	-1191			794	0.322			43	63	0.719	24	31
2	1	4.00	1				2155		693		693	0.00	2155							2155	0.322			42	63	0.719	60	24
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	63	0.719	6	114
4	2	3.50	1	9		N	1965	280			280	1.00	1684							1684	0.166	0.166		22	22	0.719	36	41
3,4	2	3.30	1	15			2085	230		85	315	1.00	1895							1895	0.166			22	22	0.719	36	40
3	2	3.50	1	15			2105			318	318	1.00	1914							1914	0.166			22	22	0.719	36	40
7	1	3.50	1			N	1965		275		275	0.00	1965							1965	0.140			18	63	0.719	36	43
6	1	3.50	1				2105		1005		1005	0.00	2105							2105	0.477	0.477		63	63	0.719	48	12
5	1	3.00	1				2055		102		102	0.00	2055							2055	0.050			7	63	0.719	18	68

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

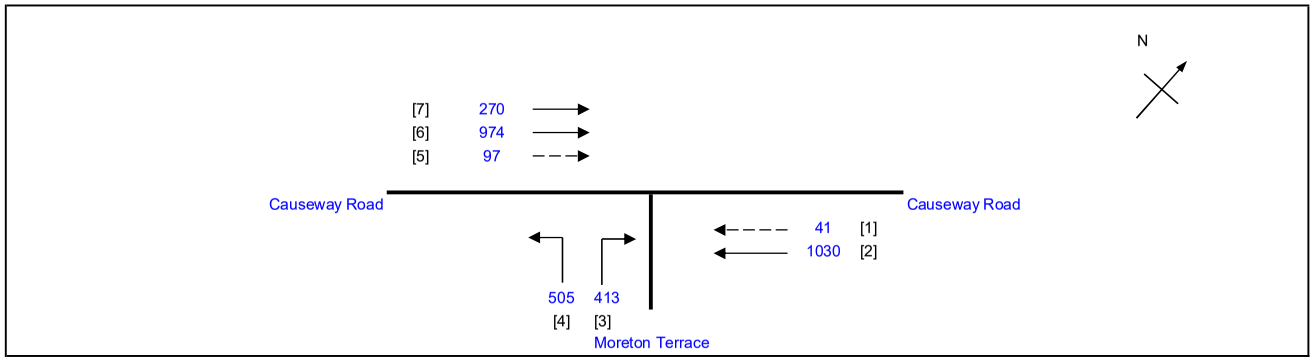
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
PROJECT NO.: 40920	Prepared By:	SKL	Oct-25
FILENAME : J9_MT_CR.xlsx	Checked By:	SLN	Oct-25
	Reviewed By:	SLN	Oct-25

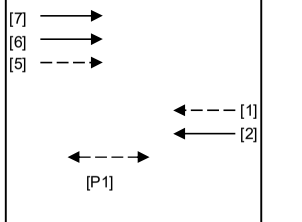
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

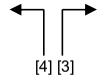
J9 Moreton Terrace / Causeway Road

2025 Existing Weekend



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.630
Loss time	L =	10 sec
Total Flow	=	3330 pcu
Co = (1.5*L+5)/(1-Y)	=	54.0 sec
Cm = L/(1-Y)	=	27.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	31.0 %
Cp = 0.9*L/(0.9-Y)	=	33.3 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**28 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		277		277	0.00	1985			0.4	-1191			794	0.349			47	62	0.704	18	27
2	1	4.00	1				2155		753		753	0.00	2155							2155	0.349			47	62	0.704	60	20
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	62	0.704	6	107
4	2	3.50	1	9		N	1965	281			281	1.00	1684							1684	0.167			23	23	0.704	30	40
3,4	2	3.30	1	15			2085	224		93	317	1.00	1895							1895	0.167	0.167		23	23	0.704	36	38
3	2	3.50	1	15			2105			320	320	1.00	1914							1914	0.167			23	23	0.704	36	38
7	1	3.50	1			N	1965		270		270	0.00	1965							1965	0.137			19	62	0.704	36	42
6	1	3.50	1				2105		974		974	0.00	2105							2105	0.463	0.463		62	62	0.704	48	12
5	1	3.00	1				2055		97		97	0.00	2055							2055	0.047			6	62	0.704	18	67

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

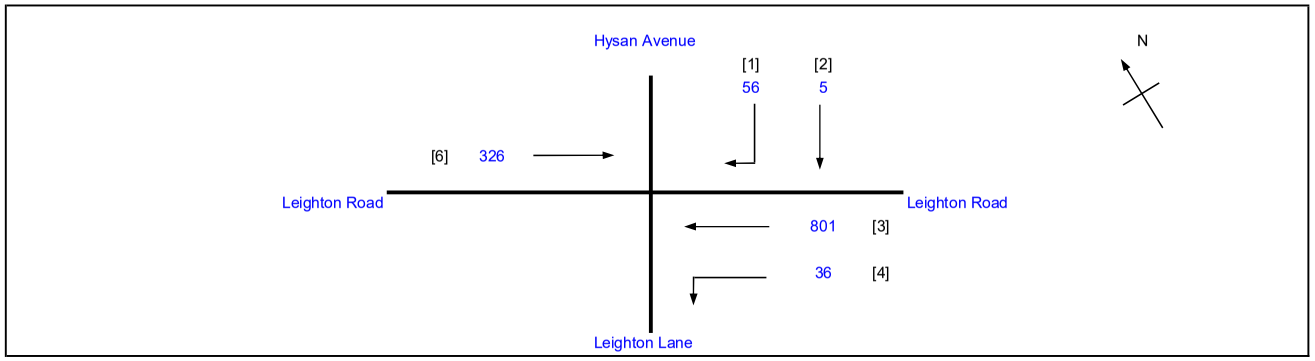
		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

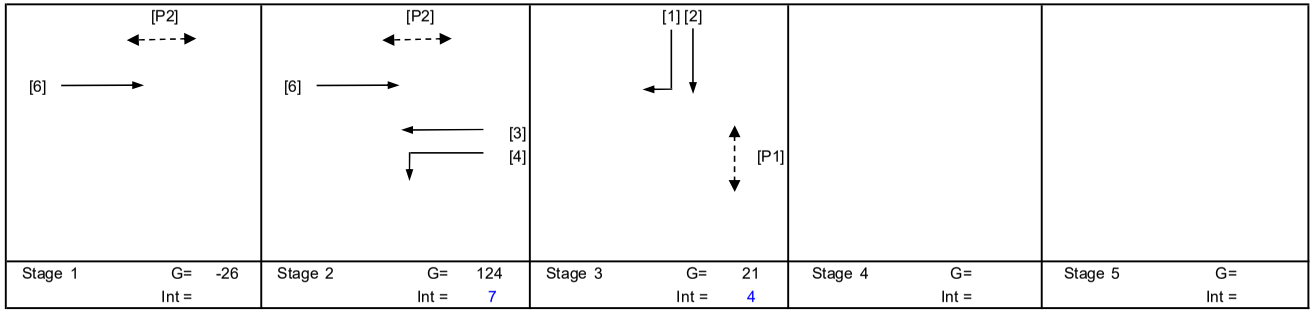
J10 Leighton Road / Hysan Avenue / Leighton Lane

2025 Existing AM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.166
Loss time		L =	31 sec
Total Flow		=	1224 pcu
Co	= (1.5*L+5)/(1-Y)	=	61.7 sec
Cm	= L/(1-Y)	=	37.2 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	302.3 %
Cp	= 0.9*L/(0.9-Y)	=	38.0 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**313 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	36	365		401	0.09	1913							1913	0.210			125	125	0.218	0	0
3	2	3.20	1				2075		436		436	0.00	2075							2075	0.210			125	125	0.218	0	0
6	1,2	3.50	1			N	1965		326		326	0.00	1965							1965	0.166	0.166		99	99	0.218	12	4
1,2	3	3.30	1	17		N	1945		5	27	32	0.84	1810							1810	0.018			11	21	0.218	6	53
1	3	3.00	1	10	O		2055			29	29	1.00	1587							1587	0.018			11	21	0.218	0	53
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Oct-25
Checked By:		SLN	Oct-25
Reviewed By:		SLN	Oct-25

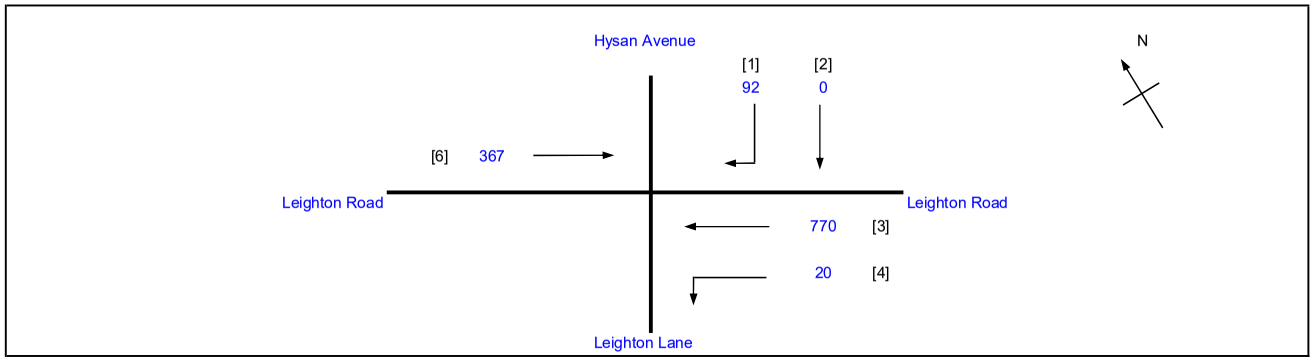
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

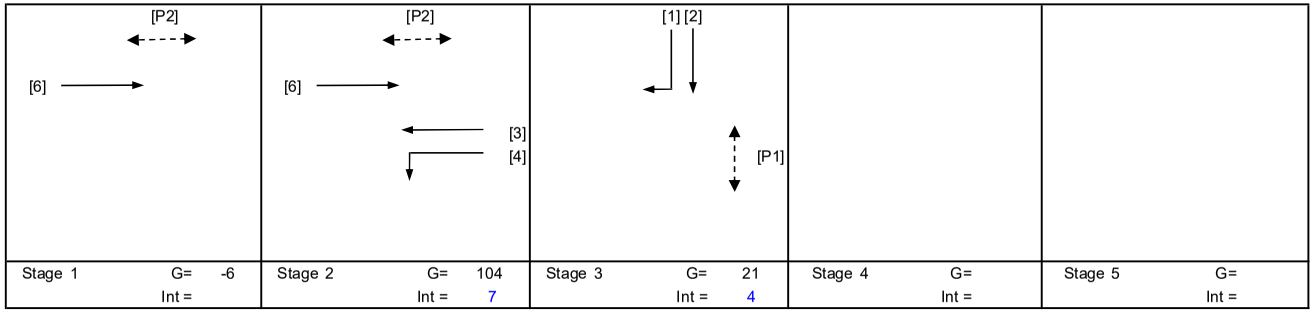
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.187
Loss time		L =	31 sec
Total Flow		=	1249 pcu
Co	= (1.5*L+5)/(1-Y)	=	63.3 sec
Cm	= L/(1-Y)	=	38.1 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	257.4 %
Cp	= 0.9*L/(0.9-Y)	=	39.1 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**267 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	20	362		382	0.05	1935							1935	0.197			105	105	0.245	12	3
3	2	3.20	1				2075		408		408	0.00	2075							2075	0.197			104	105	0.245	12	3
6	1,2	3.50	1			N	1965		367		367	0.00	1965							1965	0.187	0.187		99	99	0.245	18	4
1,2	3	3.30	1	17		N	1945		0	48	48	1.00	1787							1787	0.027			14	21	0.245	6	50
1	3	3.00	1	10	O		2055			44	44	1.00	1587							1587	0.028			15	21	0.245	6	50
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

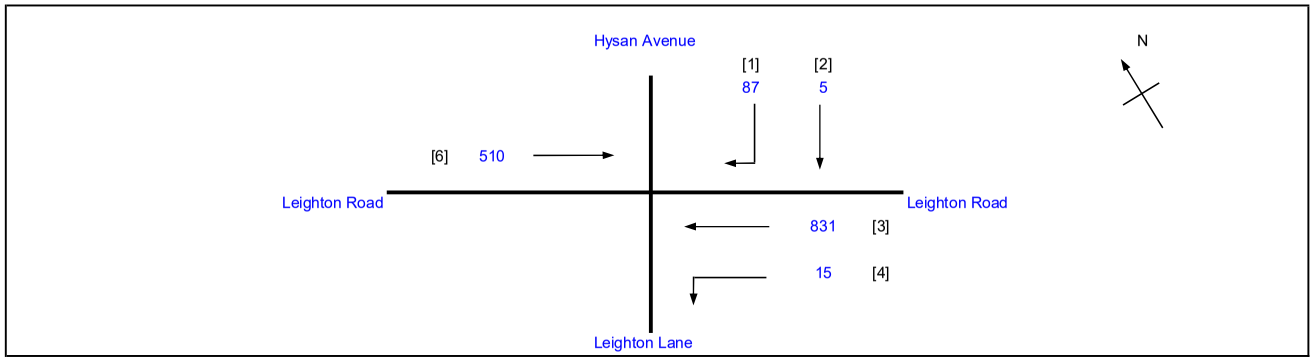
	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

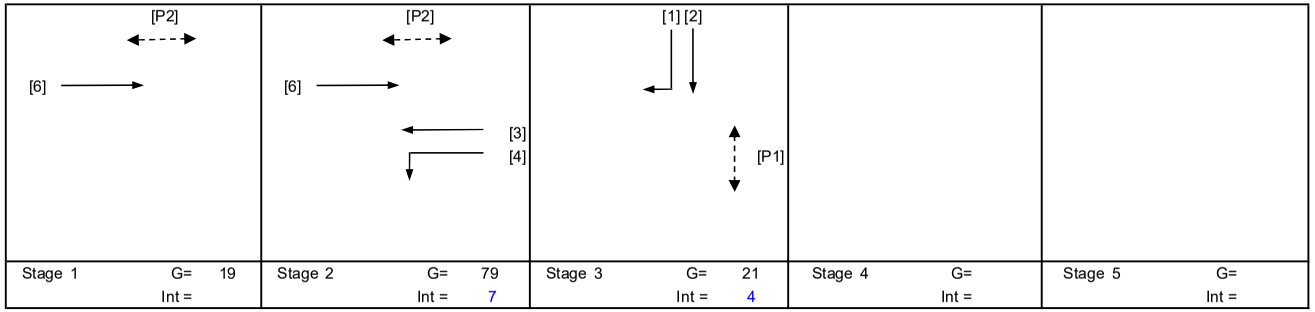
J10 Leighton Road / Hysan Avenue / Leighton Lane

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.260
Loss time		L =	31 sec
Total Flow		=	1448 pcu
Co	= (1.5*L+5)/(1-Y)	=	69.6 sec
Cm	= L/(1-Y)	=	41.9 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	157.2 %
Cp	= 0.9*L/(0.9-Y)	=	43.6 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**164 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	15	395		410	0.04	1944							1944	0.211			80	80	0.341	30	11
3	2	3.20	1				2075		436		436	0.00	2075							2075	0.210			80	80	0.341	36	12
6	1,2	3.50	1			N	1965		510		510	0.00	1965							1965	0.260	0.260		99	99	0.341	24	5
1,2	3	3.30	1	17		N	1945		5	44	49	0.90	1802							1802	0.027			10	21	0.341	6	57
1	3	3.00	1	10	O		2055			43	43	1.00	1587							1587	0.027			10	21	0.341	6	58
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

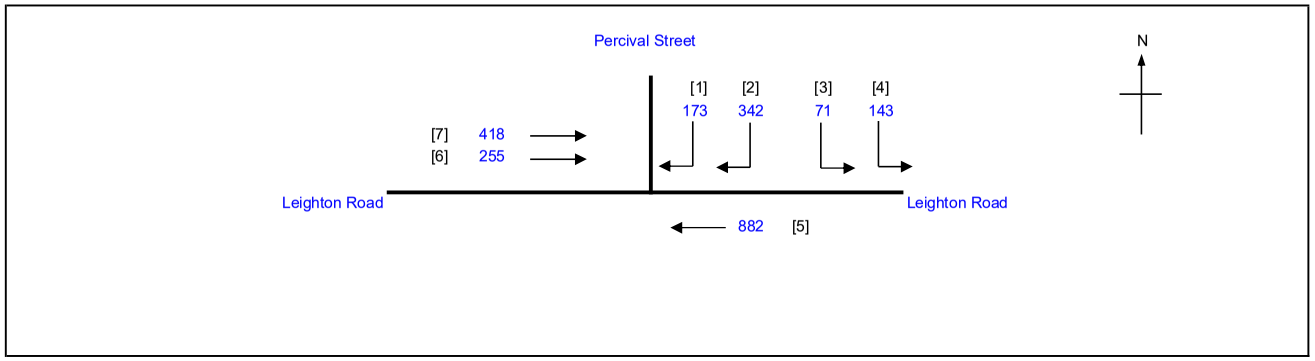
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

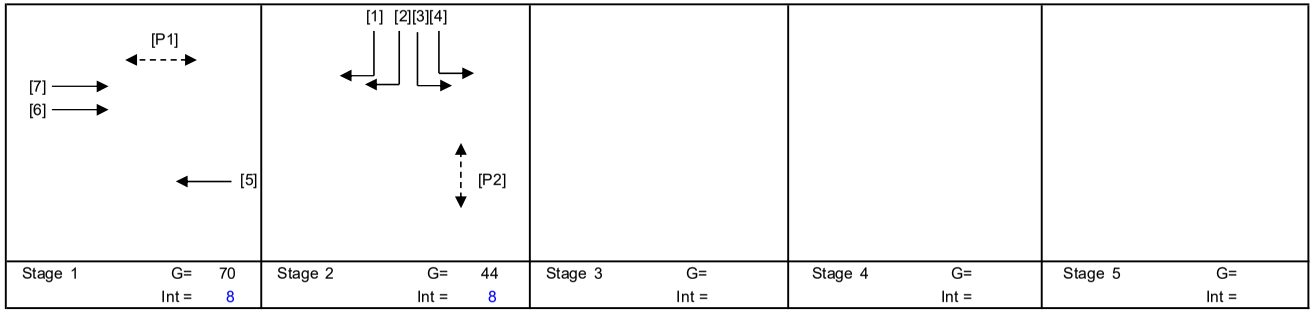
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.477
Loss time	L =	14 sec
Total Flow	=	2284 pcu
Co = (1.5*L+5)/(1-Y)	=	49.7 sec
Cm = L/(1-Y)	=	26.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	66.7 %
Cp = 0.9*L/(0.9-Y)	=	29.8 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**68 %**



Stage 1	G= 70	Int = 8
Stage 2	G= 44	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		71	7
P2	2		5	12		40	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		431		431	0.00	1965			0.8	-393			1572	0.274			67	71	0.534	42	21
5	1	3.00	1				2055		451		451	0.00	2055			0.8	-411			1644	0.274			67	71	0.534	42	21
6,7	1	2.50	1			N	1865		324		324	0.00	1865			0.6	-746			1119	0.290			70	71	0.534	30	20
6,7	1	2.50	1				2005		349		349	0.00	2005			0.6	-802			1203	0.290	0.290		71	71	0.534	30	20
3,4	2	4.00	1	25		N	2015	214			214	1.00	1901			0.7	-570			1331	0.161			39	45	0.534	30	39
1,2	2	5.00	1	25		N	2115			298	298	1.00	1995			0.8	-399			1596	0.187	0.187		45	45	0.534	42	34
1,2	2	3.30	1	20			2085			217	217	1.00	1940			0.6	-776			1164	0.187			45	45	0.534	30	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

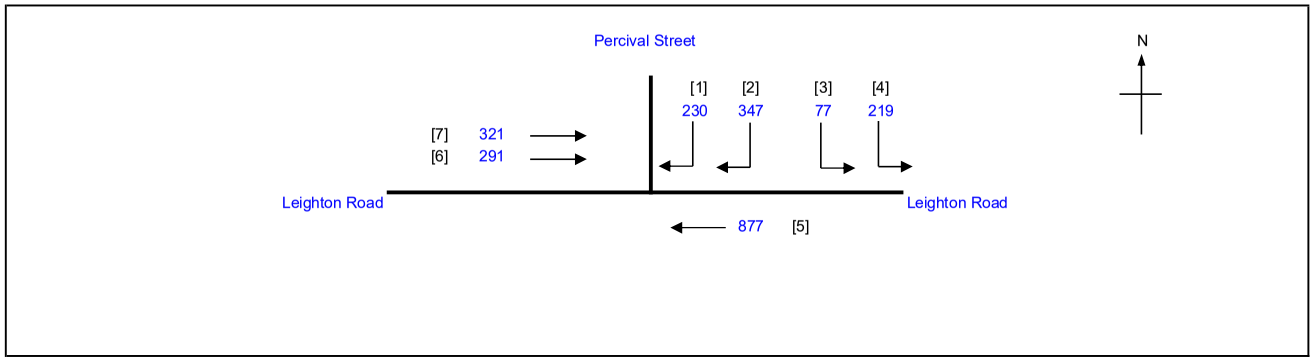
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

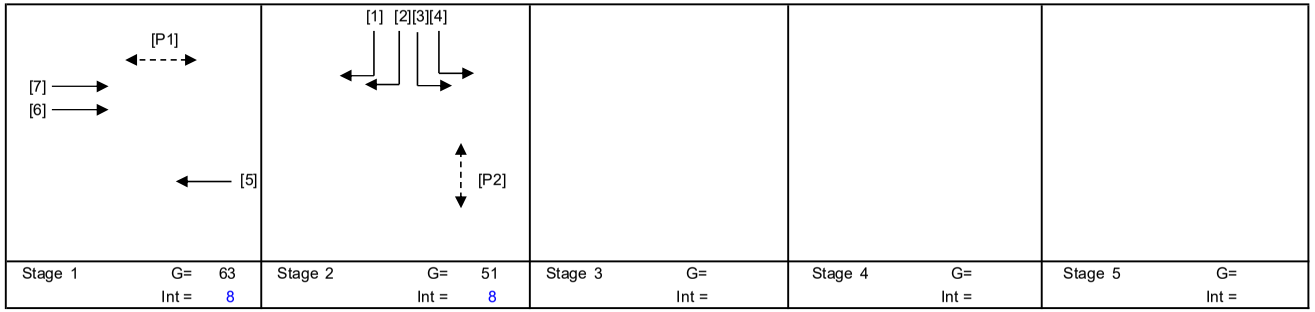
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.495
Loss time	L =	14 sec
Total Flow	=	2362 pcu
Co = (1.5*L+5)/(1-Y)	=	51.5 sec
Cm = L/(1-Y)	=	27.7 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	60.5 %
Cp = 0.9*L/(0.9-Y)	=	31.1 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**62 %**



Stage 1	G= 63	Int = 8
Stage 2	G= 51	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		64	7
P2	2		5	12		47	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		429		429	0.00	1965			0.8	-393			1572	0.273	0.273		64	64	0.555	42	23
5	1	3.00	1				2055		448		448	0.00	2055			0.8	-411			1644	0.273			64	64	0.555	48	23
6,7	1	2.50	1			N	1865		295		295	0.00	1865			0.6	-746			1119	0.264			62	64	0.555	30	26
6,7	1	2.50	1				2005		317		317	0.00	2005			0.6	-802			1203	0.264			62	64	0.555	36	25
3,4	2	4.00	1	25		N	2015	296			296	1.00	1901			0.7	-570			1331	0.222	0.222		52	52	0.555	36	31
1,2	2	5.00	1	25		N	2115			334	334	1.00	1995			0.8	-399			1596	0.209			49	52	0.555	42	32
1,2	2	3.30	1	20			2085			243	243	1.00	1940			0.6	-776			1164	0.209			49	52	0.555	30	33

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Oct-25
Checked By:	SLN	Oct-25
Reviewed By:	SLN	Oct-25

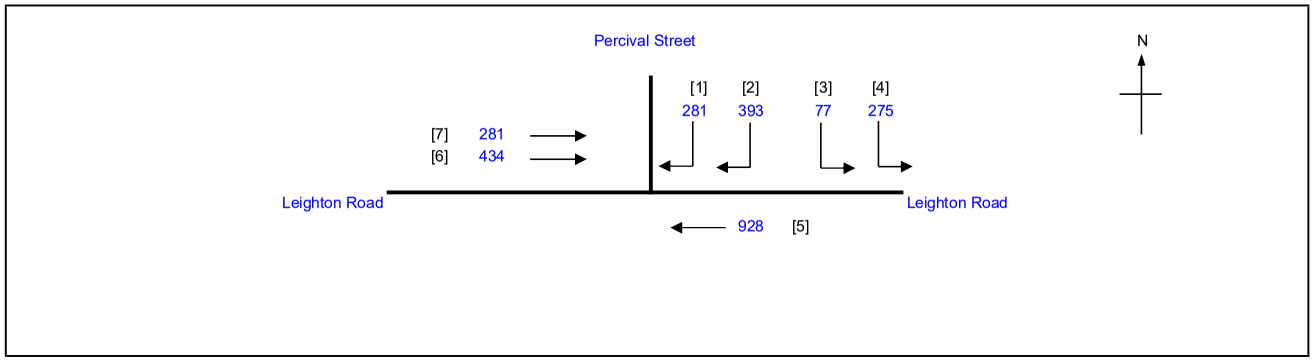
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

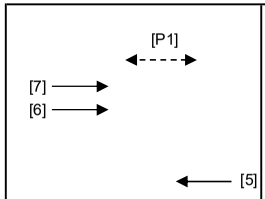
2025 Existing Weekend

PROJECT NO.: 40920

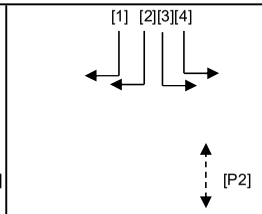
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.573
Loss time	L =	14 sec
Total Flow	=	2669 pcu
Co = (1.5*L+5)/(1-Y)	=	60.9 sec
Cm = L/(1-Y)	=	32.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	38.8 %
Cp = 0.9*L/(0.9-Y)	=	38.5 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**40 %**



Stage 1 G= 61 Int = 8



Stage 2 G= 53 Int = 8

Stage 3 G= Int =

Stage 4 G= Int =

Stage 5 G= Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		62	7
P2	2		5	12		49	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		454		454	0.00	1965			0.8	-393			1572	0.289			58	62	0.642	54	29
5	1	3.00	1				2055		474		474	0.00	2055			0.8	-411			1644	0.288			58	62	0.642	54	29
6,7	1	2.50	1			N	1865		345		345	0.00	1865			0.6	-746			1119	0.308	0.308		62	62	0.642	36	28
6,7	1	2.50	1				2005		370		370	0.00	2005			0.6	-802			1203	0.308			62	62	0.642	36	28
3,4	2	4.00	1	25		N	2015	352			352	1.00	1901			0.7	-570			1331	0.264	0.264		54	54	0.642	42	33
1,2	2	5.00	1	25		N	2115			390	390	1.00	1995			0.8	-399			1596	0.244			49	54	0.642	48	34
1,2	2	3.30	1	20			2085			284	284	1.00	1940			0.6	-776			1164	0.244			49	54	0.642	36	36

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

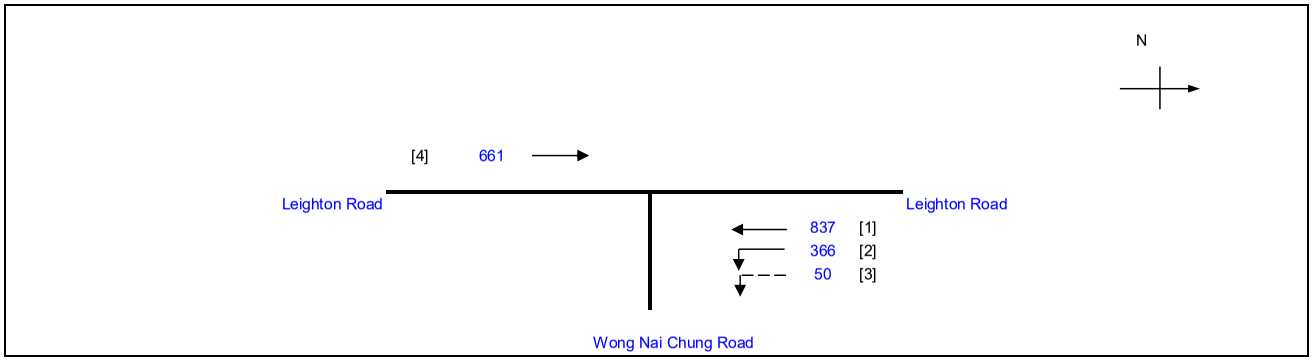
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

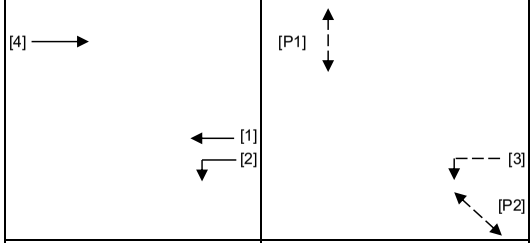
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.566
Loss time		L =	12 sec
Total Flow		=	1914 pcu
Co	= (1.5*L+5)/(1-Y)	=	53.0 sec
Cm	= L/(1-Y)	=	27.7 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	43.0 %
Cp	= 0.9*L/(0.9-Y)	=	32.4 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**44 %**



Stage 1 G= 89 Int = 7

Stage 2 G= 27 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	25	9
P2	2		7	7	0	27	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	301			301	1.00	1828							1828	0.165			34	90	0.624	48	44
2	1	3.50	1	25			2105	65			65	1.00	1986			0.2	-1589			397	0.164			34	90	0.624	12	64
3	2	3.00	1	40		N	1915	50			50	1.00	1846			0.2	-1477			369	0.136	0.136		28	28	0.624	6	75
1	1	3.00	1			N	1915		660		660	0.00	1915			0.8	-383			1532	0.431	0.431		90	90	0.624	42	12
1	1	3.00	1				2055		177		177	0.00	2055			0.2	-1644			411	0.431			90	90	0.624	6	19
4	1	3.50	1			N	1965		106		106	0.00	1965			0.2	-1572			393	0.270			56	90	0.624	12	42
4	1	3.00	1				2055		278		278	0.00	2055			0.5	-1028			1027	0.271			56	90	0.624	30	32
4	1	3.00	1				2055		277		277	0.00	2055			0.5	-1028			1027	0.270			56	90	0.624	30	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

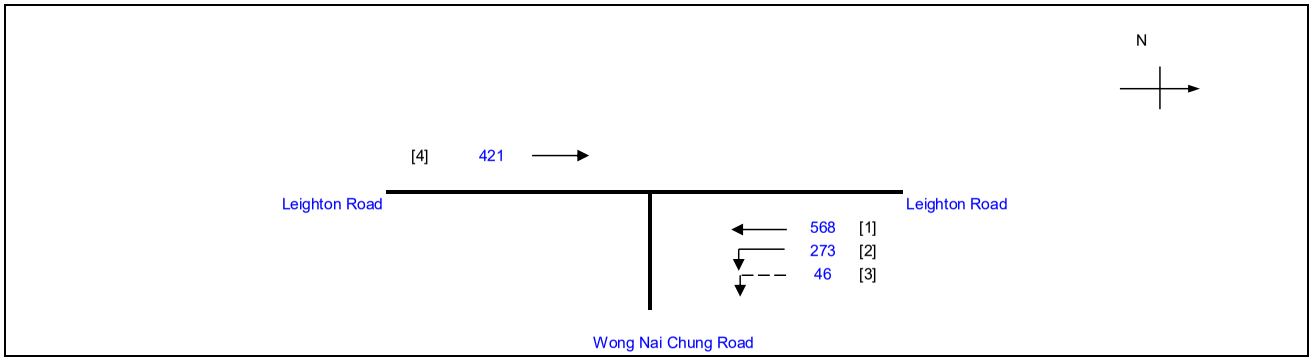
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

2025 Existing PM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.417
Loss time	L =	12 sec
Total Flow	=	1308 pcu
Co = (1.5*L+5)/(1-Y)	=	39.5 sec
Cm = L/(1-Y)	=	20.6 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	94.2 %
Cp = 0.9*L/(0.9-Y)	=	22.4 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**96 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	32	9
P2	2		7	7	0	34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	224			224	1.00	1828							1828	0.123			35	83	0.460	30	39
2	1	3.50	1	25			2105	49			49	1.00	1986			0.2	-1589			397	0.123			35	83	0.460	6	49
3	2	3.00	1	40		N	1915	46			46	1.00	1846			0.2	-1477			369	0.125	0.125		35	35	0.460	6	49
1	1	3.00	1			N	1915		448		448	0.00	1915			0.8	-383			1532	0.292	0.292		83	83	0.460	30	12
1	1	3.00	1				2055		120		120	0.00	2055			0.2	-1644			411	0.292			83	83	0.460	6	16
4	1	3.50	1			N	1965		68		68	0.00	1965			0.2	-1572			393	0.172			49	83	0.460	6	37
4	1	3.00	1				2055		177		177	0.00	2055			0.5	-1028			1027	0.172			49	83	0.460	18	31
4	1	3.00	1				2055		177		177	0.00	2055			0.5	-1028			1027	0.172			49	83	0.460	18	31

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

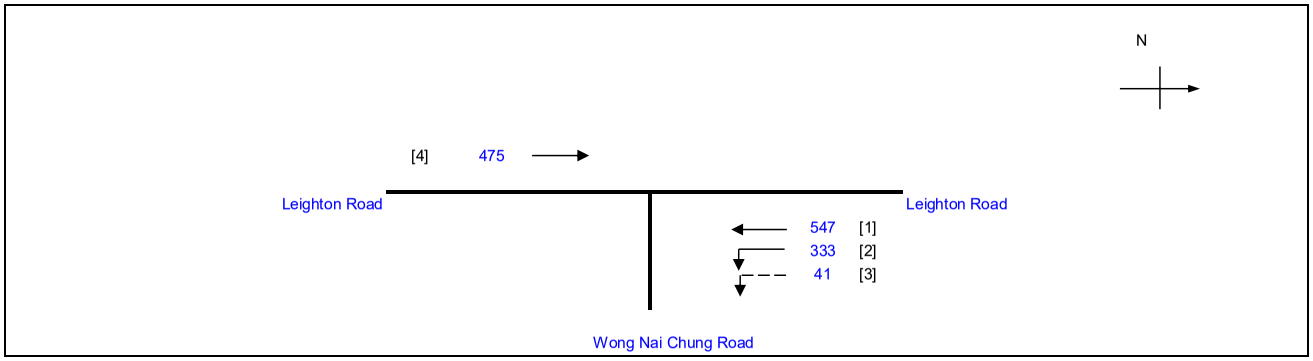
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

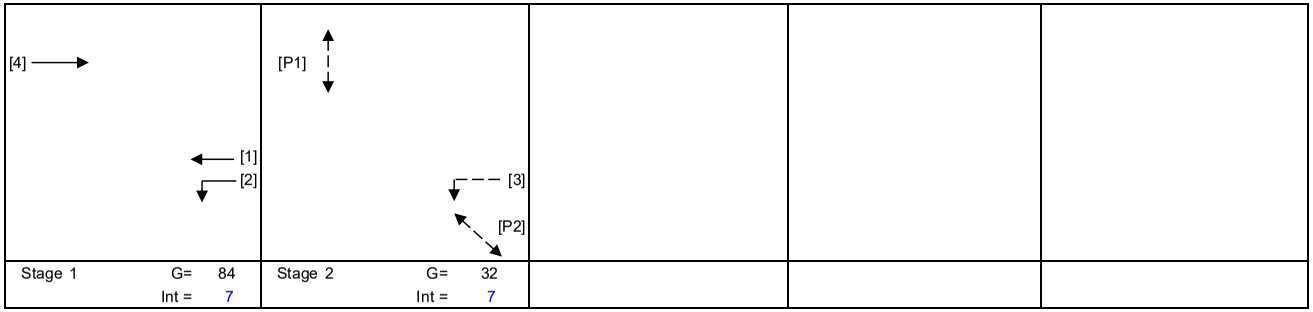
J12 Leighton Road / Wong Nai Chung Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.393
Loss time	L =	12 sec
Total Flow	=	1396 pcu
Co = (1.5*L+5)/(1-Y)	=	37.9 sec
Cm = L/(1-Y)	=	19.8 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	105.9 %
Cp = 0.9*L/(0.9-Y)	=	21.3 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**108 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	30	9
P2	2		7	7	0	32	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	274			274	1.00	1828							1828	0.150			45	85	0.433	36	31
2	1	3.50	1	25			2105	59			59	1.00	1986			0.2	-1589			397	0.149			45	85	0.433	6	39
3	2	3.00	1	40		N	1915	41			41	1.00	1846			0.2	-1477			369	0.111	0.111		33	33	0.433	6	49
1	1	3.00	1			N	1915		431		431	0.00	1915			0.8	-383			1532	0.281			84	85	0.433	30	11
1	1	3.00	1				2055		116		116	0.00	2055			0.2	-1644			411	0.282	0.282		85	85	0.433	6	15
4	1	3.50	1			N	1965		76		76	0.00	1965			0.2	-1572			393	0.193			58	85	0.433	6	29
4	1	3.00	1				2055		200		200	0.00	2055			0.5	-1028			1027	0.194			58	85	0.433	18	25
4	1	3.00	1				2055		200		200	0.00	2055			0.5	-1028			1027	0.194			58	85	0.433	18	25

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

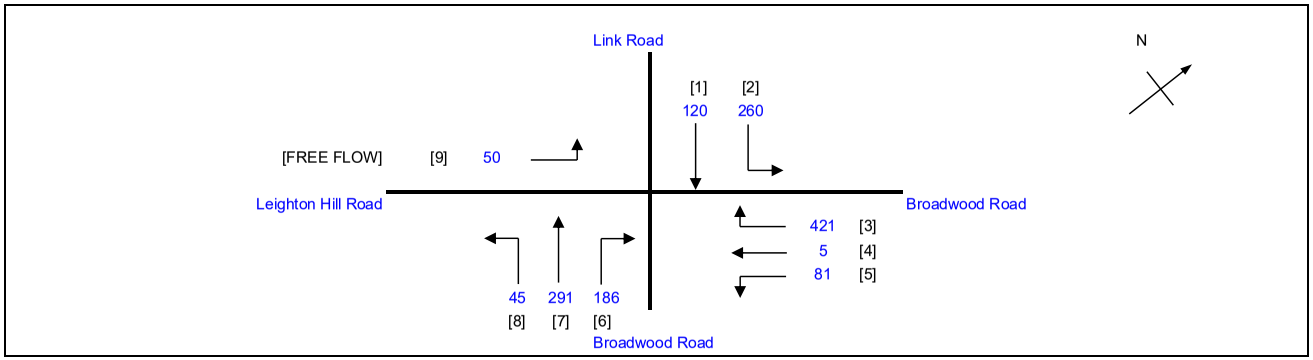
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

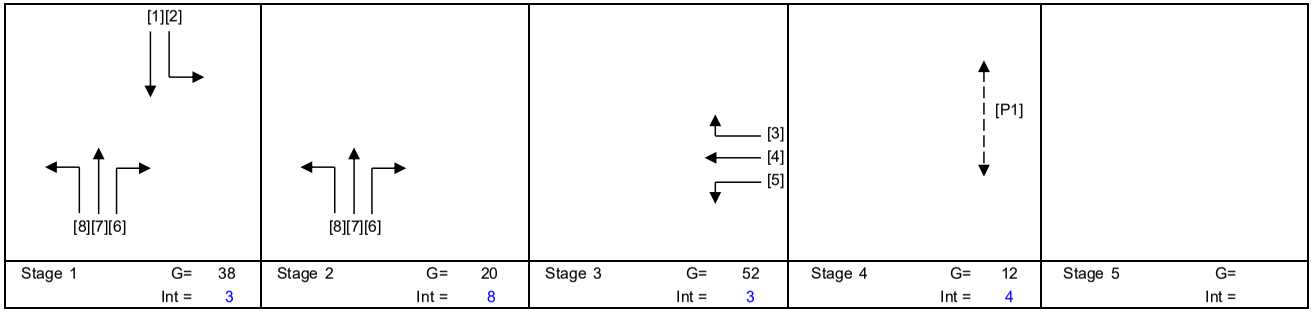
J13 Broadwood Road / Link Road

2025 Existing AM

PROJECT NO.: 40920
FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.568
Loss time	L =	27 sec
Total Flow	=	1409 pcu
Co = (1.5*L+5)/(1-Y)	=	105.3 sec
Cm = L/(1-Y)	=	62.5 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	22.9 %
Cp = 0.9*L/(0.9-Y)	=	73.1 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**28 %**



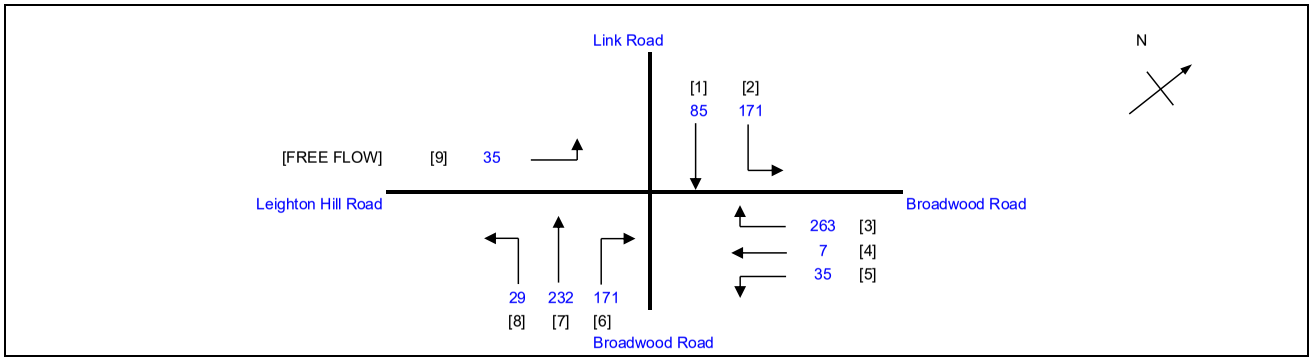
Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 38	G= 20	G= 52	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

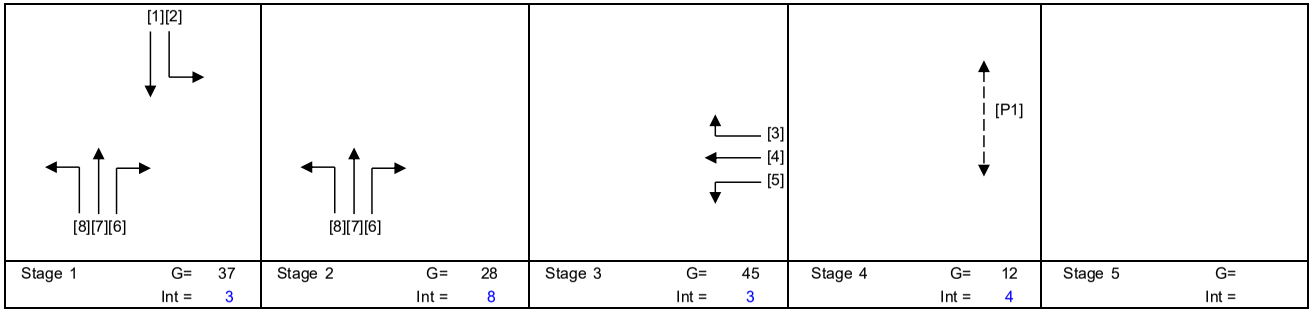
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	260	120		380	0.68	1940							1940	0.196	0.196	15	39	39	0.703	60	48
7,8	1,2	3.00	1	15		N	1915	45	291		336	0.13	1890							1890	0.178			35	60	0.703	54	51
6	2	3.00	1	8			2055			186	186	1.00	1731							1731	0.107	0.107		21	21	0.703	36	65
3,4,5	3	3.50	1	60		N	1965	81	5	421	507	0.99	1918							1918	0.264	0.264		53	53	0.703	72	39
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J13 Broadwood Road / Link Road		FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.390
Loss time	L =	27 sec
Total Flow	=	993 pcu
Co = (1.5*L+5)/(1-Y)	=	74.6 sec
Cm = L/(1-Y)	=	44.2 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	79.0 %
Cp = 0.9*L/(0.9-Y)	=	47.6 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**86 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 37	G= 28	G= 45	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	171	85		256	0.67	1941							1941	0.132	0.132		38	38	0.483	42	41
7,8	1,2	3.00	1	15		N	1915	29	232		261	0.11	1894							1894	0.138			40	67	0.483	42	40
6	2	3.00	1	8			2055			171	171	1.00	1731							1731	0.099	0.099		29	29	0.483	30	48
3,4,5	3	3.50	1	60		N	1965	35	7	263	305	0.98	1918							1918	0.159	0.159		46	46	0.483	42	36
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

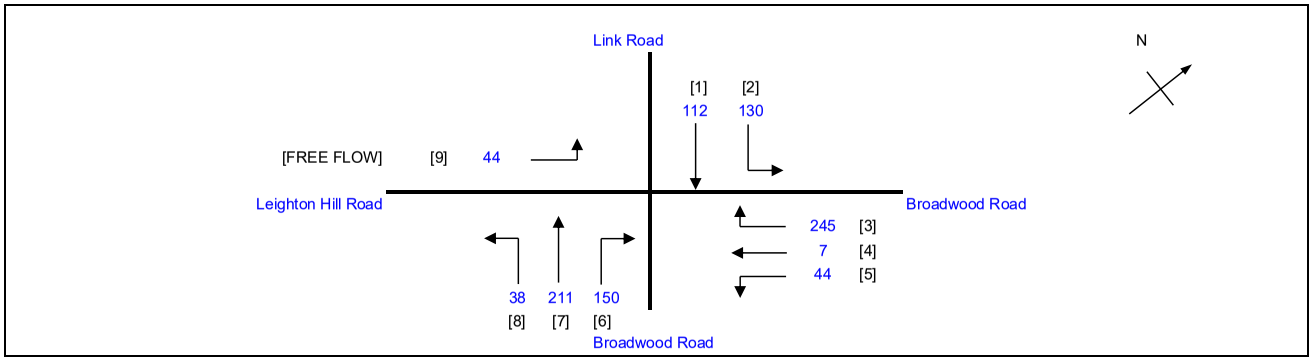
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

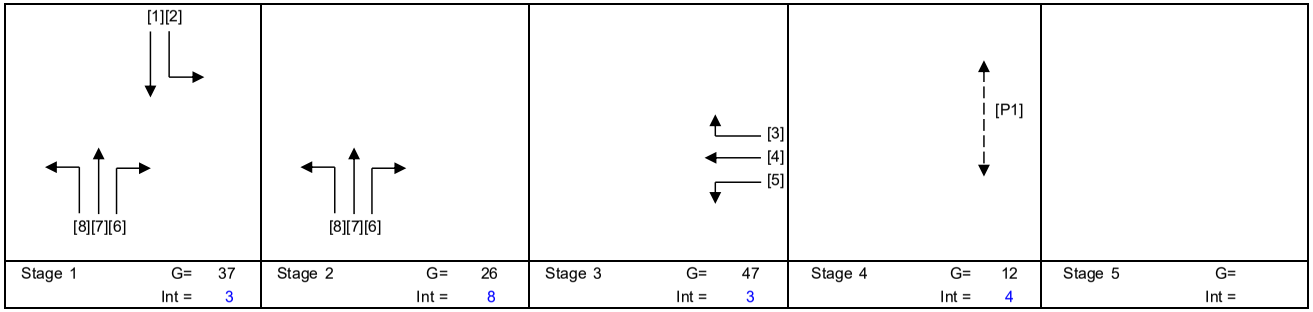
J13 Broadwood Road / Link Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.365
Loss time	L =	27 sec
Total Flow	=	937 pcu
Co = (1.5*L+5)/(1-Y)	=	71.7 sec
Cm = L/(1-Y)	=	42.5 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	90.9 %
Cp = 0.9*L/(0.9-Y)	=	45.5 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**99 %**



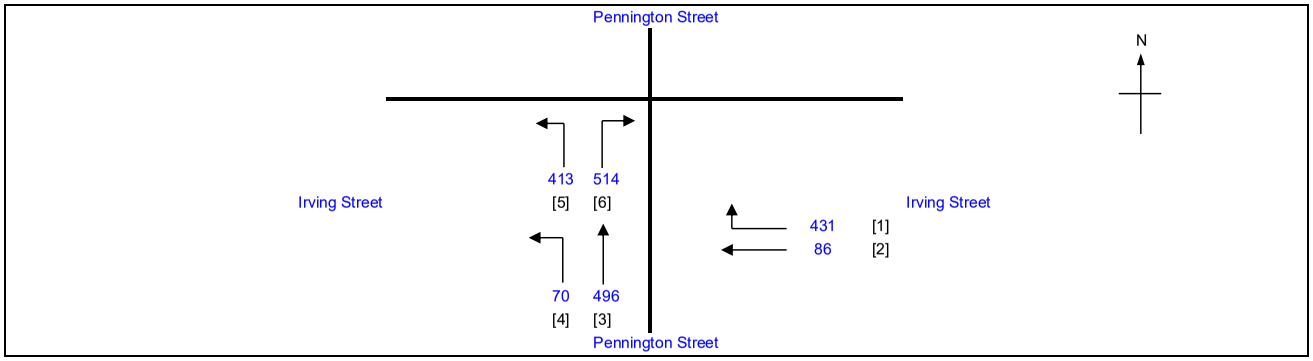
Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 37	G= 26	G= 47	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

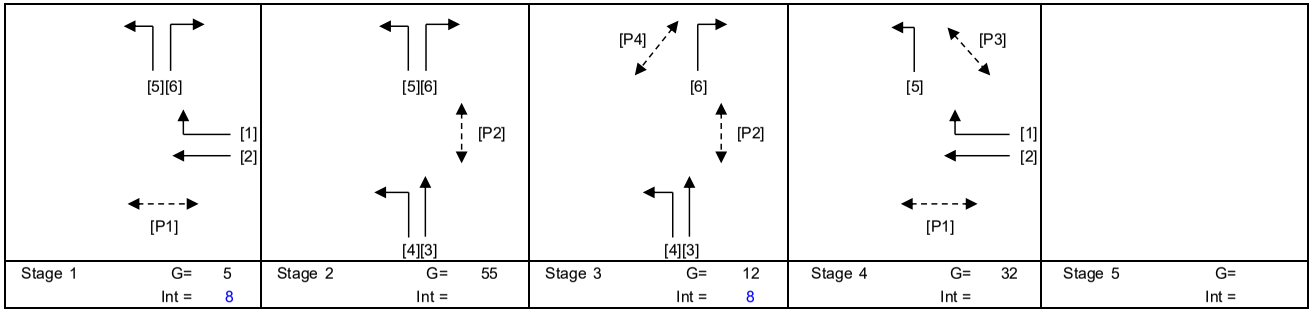
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	130	112		242	0.54	1945							1945	0.124	0.124	15	38	38	0.453	36	40
7,8	1,2	3.00	1	15		N	1915	38	211		249	0.15	1886							1886	0.132			41	65	0.453	36	39
6	2	3.00	1	8			2055			150	150	1.00	1731							1731	0.087	0.087		27	27	0.453	24	49
3,4,5	3	3.50	1	60		N	1965	44	7	245	296	0.98	1918							1918	0.154	0.154		48	48	0.453	42	34
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J14 Pennington Street / Irving Street / Jardine's Bazaar		FILENAME : J14_PS_IS_JB.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.229
Loss time	L =	14 sec
Total Flow	=	2010 pcu
Co = (1.5*L+5)/(1-Y)	=	33.7 sec
Cm = L/(1-Y)	=	18.2 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	247.1 %
Cp = 0.9*L/(0.9-Y)	=	18.8 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**247 %**



Stage 1	G= 5	Stage 2	G= 55	Stage 3	G= 12	Stage 4	G= 32	Stage 5	G=
	Int = 8		Int =		Int = 8		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		37	8
P2	2,3		8	14		61	14
P3	4		7	7		25	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14				
2	1,4	3.00	1			N	1915		78		78	0.00	1915			0.5	-958			957	0.082			38	38	0.259	6	30
1,2	1,4	3.00	1	16			2055		8	145	153	0.95	1887							1887	0.081			38	38	0.259	18	29
1	1,4	3.00	1	13			2055			150	150	1.00	1842							1842	0.081			38	38	0.259	18	29
1	1,4	3.00	1	10		N	1915			136	136	1.00	1665							1665	0.082	0.082		38	38	0.259	18	29
3,4	2,3	3.80	1	5		N	1995	70	203		273	0.26	1853							1853	0.147	0.147		68	68	0.259	18	12
3	2,3	3.80	1			N	1995		293		293	0.00	1995							1995	0.147			68	68	0.259	24	12
5	1,2,4	3.50	1	10			2105	413			413	1.00	1830							1830	0.226			104	94	0.259	6	2
6	1,2,4	3.50	1	10			2105			274	274	1.00	1830							1830	0.150			69	94	0.259	18	12
6	1,2,4	3.50	1	6.5		N	1965			240	240	1.00	1597							1597	0.150			70	94	0.259	18	12

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

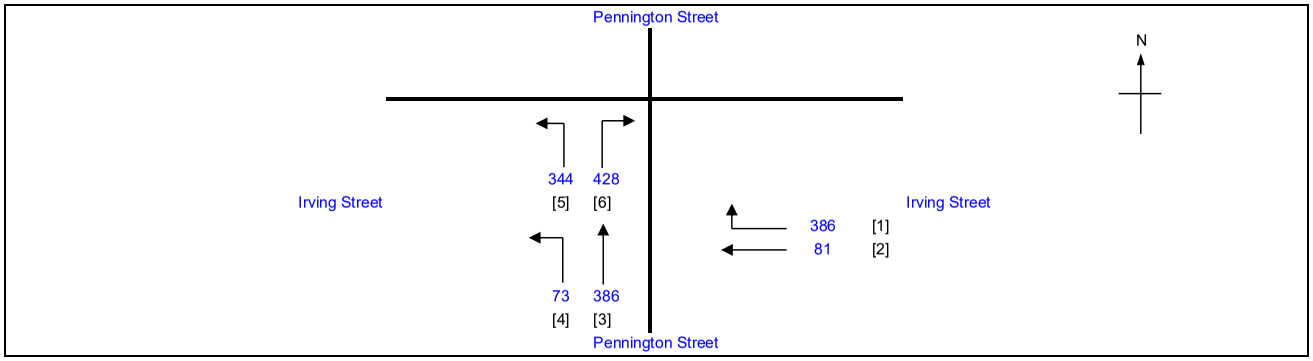
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

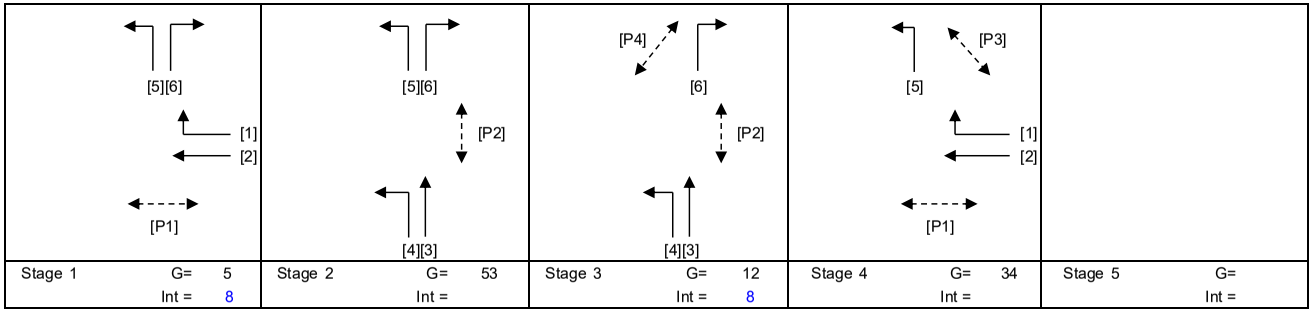
J14 Pennington Street / Irving Street / Jardine's Bazaar

2025 Existing PM

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.195
Loss time		L =	14 sec
Total Flow		=	1698 pcu
Co	= (1.5*L+5)/(1-Y)	=	32.3 sec
Cm	= L/(1-Y)	=	17.4 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	307.8 %
Cp	= 0.9*L/(0.9-Y)	=	17.9 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**308 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14				
2	1,4	3.00	1			N	1915		71		71	0.00	1915			0.5	-958			957	0.074	0.074		40	40	0.221	6	27
1,2	1,4	3.00	1	16			2055		10	129	139	0.93	1891							1891	0.074			40	40	0.221	18	27
1	1,4	3.00	1	13			2055			136	136	1.00	1842							1842	0.074			40	40	0.221	18	27
1	1,4	3.00	1	10		N	1915			121	121	1.00	1665							1665	0.073			40	40	0.221	12	27
3,4	2,3	3.80	1	5		N	1995	73	146		219	0.33	1814							1814	0.121	0.121		66	66	0.221	18	13
3	2,3	3.80	1			N	1995		240		240	0.00	1995							1995	0.120			65	66	0.221	18	13
5	1,2,4	3.50	1	10			2105	344			344	1.00	1830							1830	0.188			102	94	0.221	6	2
6	1,2,4	3.50	1	10			2105			228	228	1.00	1830							1830	0.125			68	94	0.221	18	12
6	1,2,4	3.50	1	6.5		N	1965			200	200	1.00	1597							1597	0.125			68	94	0.221	12	12

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

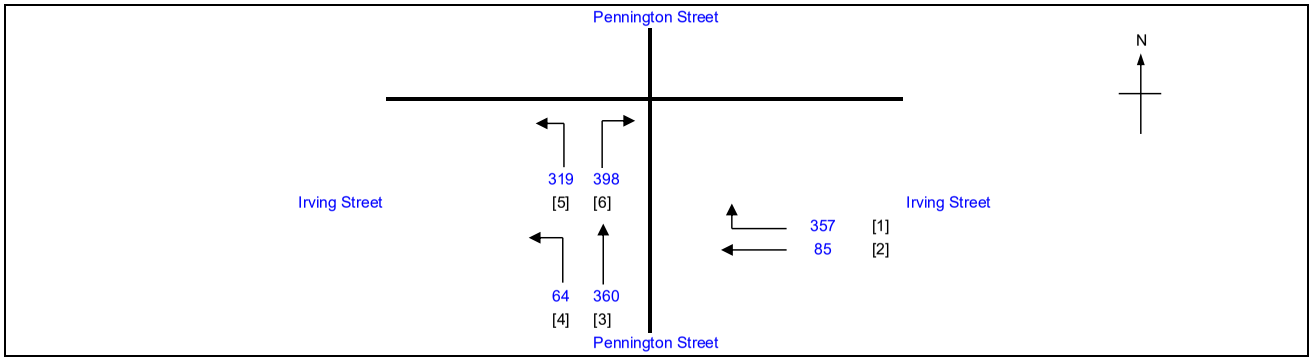
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

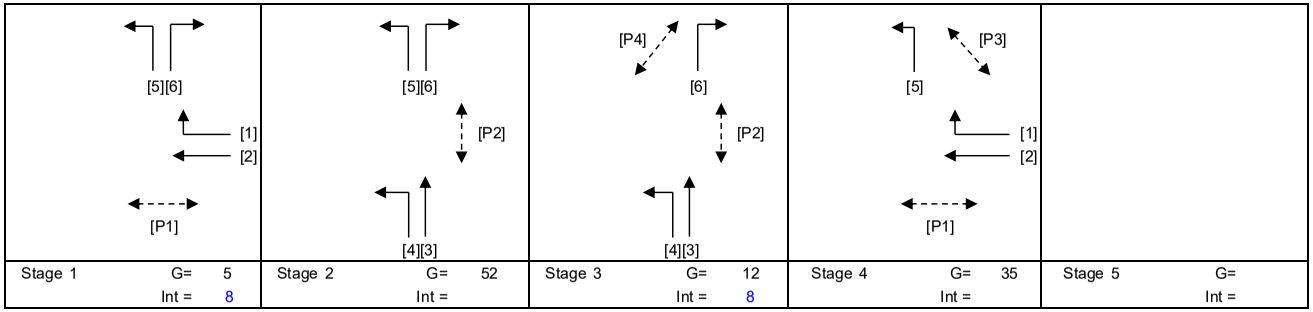
J14 Pennington Street / Irving Street / Jardine's Bazaar

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.181
Loss time		L =	14 sec
Total Flow		=	1583 pcu
Co	= (1.5*L+5)/(1-Y)	=	31.8 sec
Cm	= L/(1-Y)	=	17.1 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	338.5 %
Cp	= 0.9*L/(0.9-Y)	=	17.5 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**339 %**



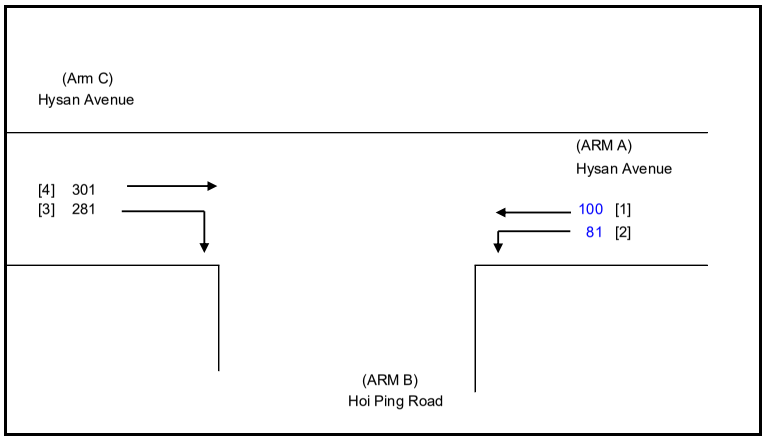
Stage 1	G= 5	Int = 8
Stage 2	G= 52	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 35	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		40	8
P2	2,3		8	14		58	14
P3	4		7	7		28	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		67		67	0.00	1915			0.5	-958			957	0.070	0.070		41	41	0.205	6	26
1,2	1,4	3.00	1	16			2055		18	113	131	0.86	1901							1901	0.069			40	41	0.205	12	26
1	1,4	3.00	1	13			2055			128	128	1.00	1842							1842	0.069			41	41	0.205	12	26
1	1,4	3.00	1	10		N	1915			116	116	1.00	1665							1665	0.070			41	41	0.205	12	26
3,4	2,3	3.80	1	5		N	1995	64	138		202	0.32	1822							1822	0.111			65	65	0.205	18	13
3	2,3	3.80	1			N	1995		222		222	0.00	1995							1995	0.111	0.111		65	65	0.205	18	13
5	1,2,4	3.50	1	10			2105	319			319	1.00	1830							1830	0.174			102	94	0.205	6	2
6	1,2,4	3.50	1	10			2105			213	213	1.00	1830							1830	0.116			68	94	0.205	18	12
6	1,2,4	3.50	1	6.5		N	1965			185	185	1.00	1597							1597	0.116			68	94	0.205	12	12

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Dec-25
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	81	(pcu/hr)
q a-c	=	100	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	301	(pcu/hr)
q c-b	=	281	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

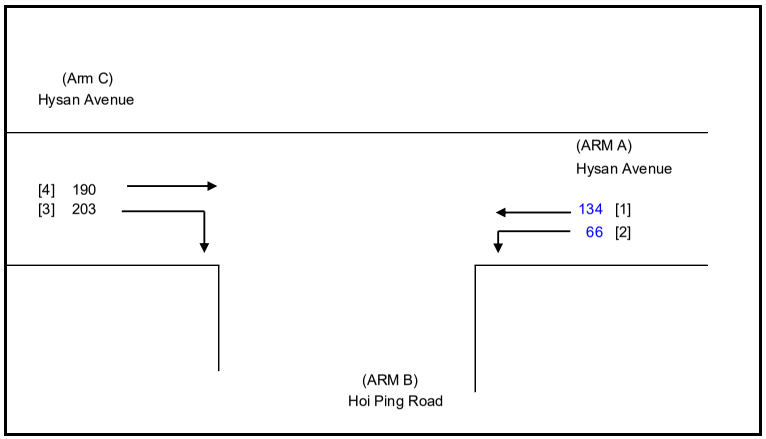
Q b-a	=	242		
Q b-c	=	418	Q b-c (O) =	418
Q c-b	=	667		
Q b-ac	=	242		
TOTAL FLOW	=	763	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4213
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.42

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Dec-25
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	66	(pcu/hr)
q a-c	=	134	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	190	(pcu/hr)
q c-b	=	203	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

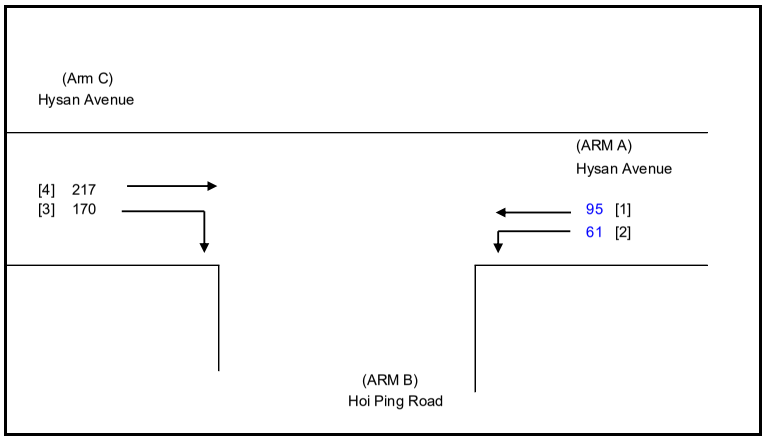
Q b-a	=	262		
Q b-c	=	414	Q b-c (O) =	414
Q c-b	=	662		
Q b-ac	=	262		
TOTAL FLOW	=	593	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.3066
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.31

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Dec-25
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	61	(pcu/hr)
q a-c	=	95	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	217	(pcu/hr)
q c-b	=	170	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

Q b-a	=	271		
Q b-c	=	420	Q b-c (O) =	420
Q c-b	=	672		
Q b-ac	=	271		
TOTAL FLOW	=	543	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.2530
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.25

APPENDIX C

Proposed Road Schemes

at Adjacent Junctions

HOI PING ROAD

SUNNING ROAD

LEIGHTON ROAD

CAROLINE HILL ROAD

Caroline Hill Road
加路連山道

649/100mm/3200×700(H)
H/WA/Lei/705

24-HR COVERED PEDESTRIAN WALKWAY

TO 1/F

PEDESTRIAN LINK TO B1/F

COMMERCIAL / E&M +8.25

TO LOADING / & LIGHT LAYE

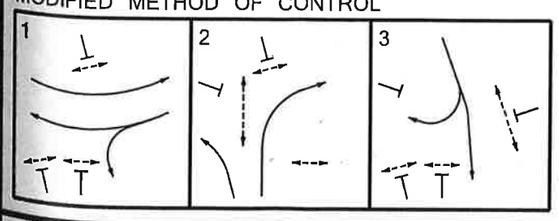
DROP-OFF

PRIVATE L/UL

TO CARPARK

Except goods vehicles loading/unloading
貨車上落貨除外

MODIFIED METHOD OF CONTROL



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	CHC	14APR22
A	TD'S COMMENTS INCORPORATED	CHC	25FEB22

CHK50603110/TIA/F61-B.DWG/KCM/14APR22

Project Title

PROPOSED COMMERCIAL DEVELOPMENT ON
INLAND LOT NO. 8945, CAUSEWAY BAY, HONG KONG
TRAFFIC REVIEW REPORT

Drawing Title

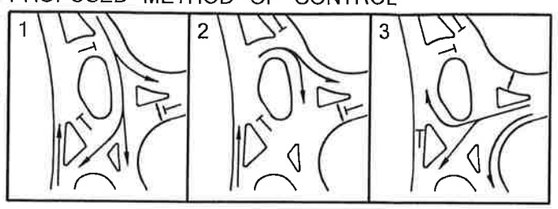
FUTURE JUNCTION LAYOUT OF LEIGHTON ROAD / CAROLINE HILL ROAD (WEST) (J5)

Designed	Checked	Scale	Date	Drawing No.	Rev.
TCW	CHC	1:500(A3)	DEC 2021	6.1	B

SYSTRA MVA

Original Size : A3

PROPOSED METHOD OF CONTROL



NOTE:

THE LAYOUT, MOC, ROAD MARKING AND SIGNAGE ARRANGEMENTS ARE SUBJECT TO FURTHER REFINEMENT/ADJUSTMENT IN THE DETAIL DESIGN STAGE

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	CHC	12APR22
A	TD'S COMMENTS INCORPORATED	CHC	25FEB22

Project Title

PROPOSED COMMERCIAL DEVELOPMENT ON INLAND LOT NO. 8945, CAUSEWAY BAY, HONG KONG TRAFFIC REVIEW REPORT

Drawing Title

PROPOSED LAYOUT AND ARRANGEMENT FOR JUNCTION OF CAROLINE HILL ROAD (WEST) / LINK ROAD / NEW ACCESS ROAD (J6)

Designed	Checked	Scale	Date	Drawing No.	Rev.
TCW	CHC	1:500(A3)	DEC 2021	6.2	B

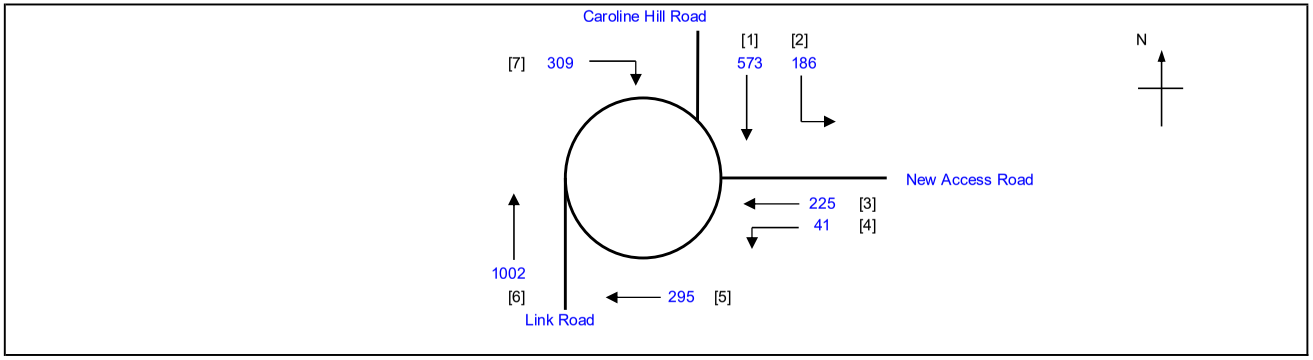
CHK50603110/TIA/F62-B.DWG/KCM/12APR22

APPENDIX D

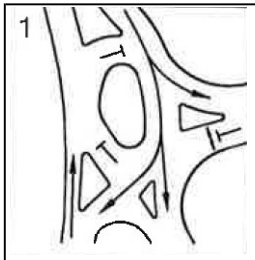
Detail Calculation Sheets

- Reference & Design Scenarios

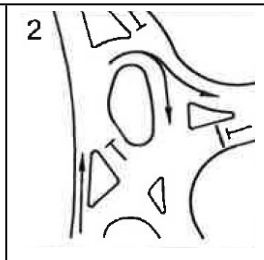
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



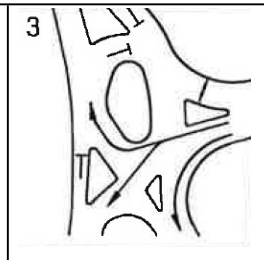
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.612
Loss time	L =	8 sec
Total Flow	=	2631 pcu
Co = (1.5*L+5)/(1-Y)	=	43.8 sec
Cm = L/(1-Y)	=	20.6 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	37.2 %
Cp = 0.9*L/(0.9-Y)	=	25.0 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**36 %**



Stage 1 G= 45 Int =



Stage 2 G= 29 Int = 5



Stage 3 G= 21 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		21	5
P2	1,2		9	5		74	5

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		1002		1002	0.00	2120							2120	0.473	0.473		75	75	0.663	48	9
7	2	5.00	1	5		N	2115			309	309	1.00	1627							1627	0.190			30	30	0.663	36	37
3	3	3.65	1				2120		225		225	0.00	2120							2120	0.106			17	22	0.663	30	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	22	0.663	6	97
1,2	1	3.65	1	20		N	1980	186	174		360	0.52	1906							1906	0.189			30	45	0.663	42	36
1	1	3.65	1				2120		399		399	0.00	2120							2120	0.188			30	45	0.663	48	35
5	3	5.00	1			N	2115		295		295	0.00	2115							2115	0.139	0.139		22	22	0.663	36	41

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

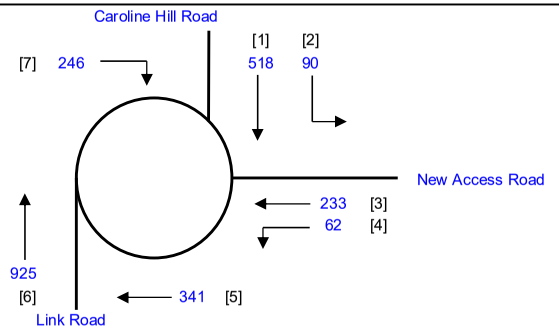
		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

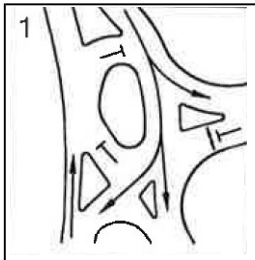
J1 Caroline Hill Road (West) / Link Road

2033 Reference PM

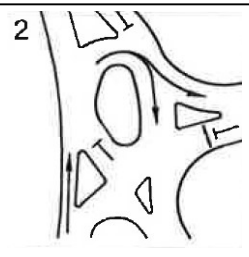
PROJECT NO.: 40920
FILENAME : J1_CHRW_LR_IMP.xlsx



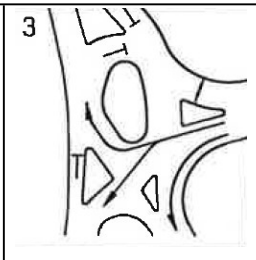
No. of stages per cycle		N =	3
Cycle time		C =	105 sec
Sum(y)		Y =	0.598
Loss time		L =	8 sec
Total Flow		=	2415 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.2 sec
Cm	= L/(1-Y)	=	19.9 sec
Yult		=	0.840
R.C.ult	= (Yult-Y)/Y*100%	=	40.6 %
Cp	= 0.9*L/(0.9-Y)	=	23.8 sec
Ymax	= 1-L/C	=	0.924
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**39 %**



Stage 1 G= 46 Int =



Stage 2 G= 24 Int = 5



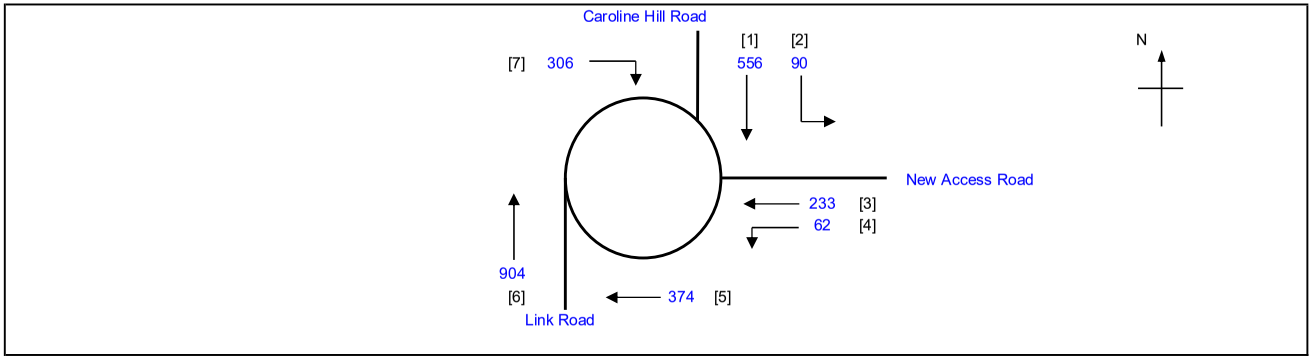
Stage 3 G= 25 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

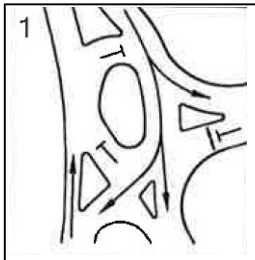
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		925		925	0.00	2120							2120	0.436	0.436		71	71	0.647	48	11
7	2	5.00	1	5		N	2115			246	246	1.00	1627							1627	0.151			25	25	0.647	30	40
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	26	0.647	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	26	0.647	12	75
1,2	1	3.65	1	20		N	1980	90	200		290	0.31	1935							1935	0.150			24	46	0.647	36	39
1	1	3.65	1				2120		318		318	0.00	2120							2120	0.150			24	46	0.647	42	39
5	3	5.00	1			N	2115		341		341	0.00	2115							2115	0.161	0.161		26	26	0.647	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

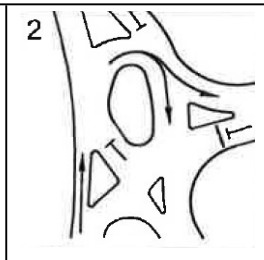
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



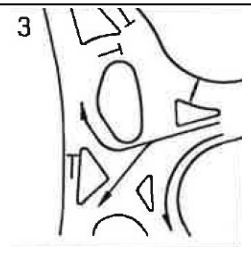
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.603
Loss time	L =	8 sec
Total Flow	=	2525 pcu
Co = (1.5*L+5)/(1-Y)	=	42.8 sec
Cm = L/(1-Y)	=	20.2 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	39.2 %
Cp = 0.9*L/(0.9-Y)	=	24.3 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**38 %**



Stage 1 G= 38
Int =



Stage 2 G= 29
Int = 5



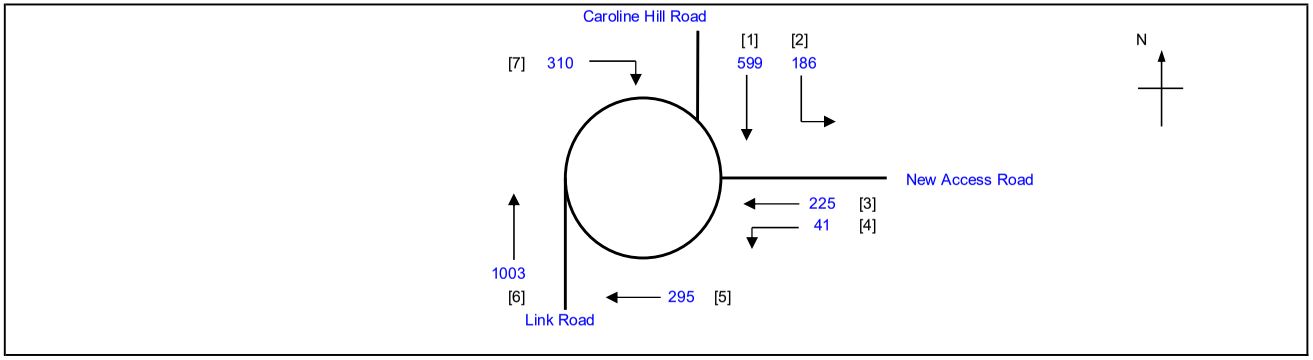
Stage 3 G= 27
Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		27	5
P2	1,2		9	5		68	5

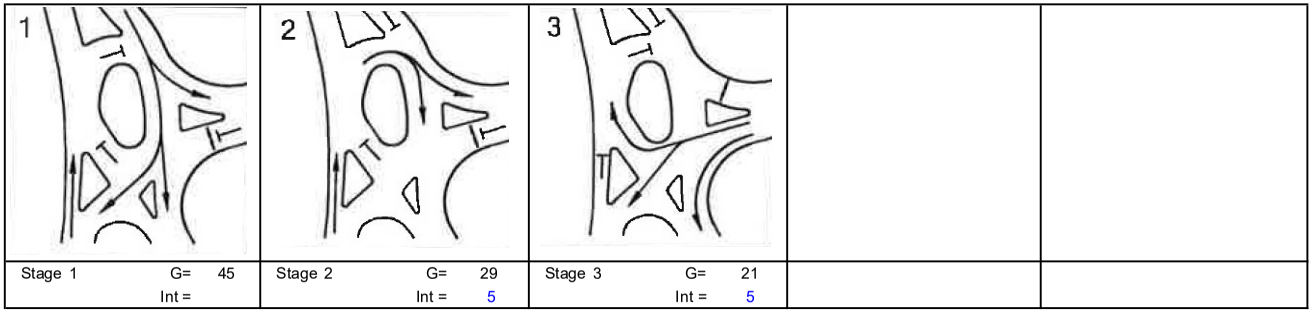
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		904		904	0.00	2120							2120	0.426	0.426		69	69	0.653	54	12
7	2	5.00	1	5		N	2115			306	306	1.00	1627							1627	0.188			30	30	0.653	36	36
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	28	0.653	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	28	0.653	12	76
1,2	1	3.65	1	20		N	1980	90	219		309	0.29	1938							1938	0.159			26	38	0.653	36	39
1	1	3.65	1				2120		337		337	0.00	2120							2120	0.159			26	38	0.653	42	38
5	3	5.00	1			N	2115		374		374	0.00	2115							2115	0.177	0.177		28	28	0.653	42	36

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.613
Loss time	L =	8 sec
Total Flow	=	2659 pcu
Co = (1.5*L+5)/(1-Y)	=	43.9 sec
Cm = L/(1-Y)	=	20.7 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	37.1 %
Cp = 0.9*L/(0.9-Y)	=	25.1 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**36 %**

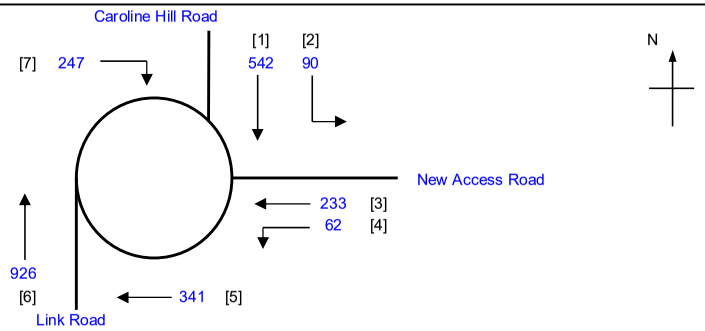


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		21	5
P2	1,2		9	5		74	5

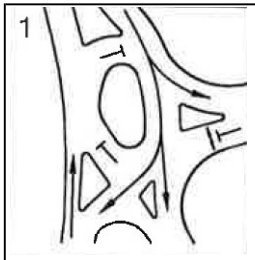
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		1003		1003	0.00	2120							2120	0.473	0.473		75	75	0.663	48	9
7	2	5.00	1	5		N	2115			310	310	1.00	1627							1627	0.191			30	30	0.663	36	36
3	3	3.65	1				2120		225		225	0.00	2120							2120	0.106			17	22	0.663	30	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	22	0.663	6	97
1,2	1	3.65	1	20		N	1980	186	186		372	0.50	1908							1908	0.195			31	45	0.663	42	35
1	1	3.65	1				2120		413		413	0.00	2120							2120	0.195			31	45	0.663	48	34
5	3	5.00	1			N	2115		295		295	0.00	2115							2115	0.139	0.139		22	22	0.663	36	41

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

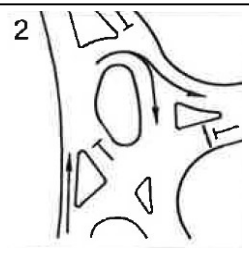
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



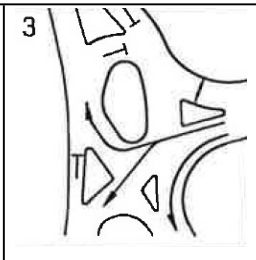
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.598
Loss time	L =	8 sec
Total Flow	=	2441 pcu
Co = (1.5*L+5)/(1-Y)	=	42.3 sec
Cm = L/(1-Y)	=	19.9 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	40.5 %
Cp = 0.9*L/(0.9-Y)	=	23.8 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**39 %**



Stage 1 G= 46
Int =



Stage 2 G= 24
Int = 5



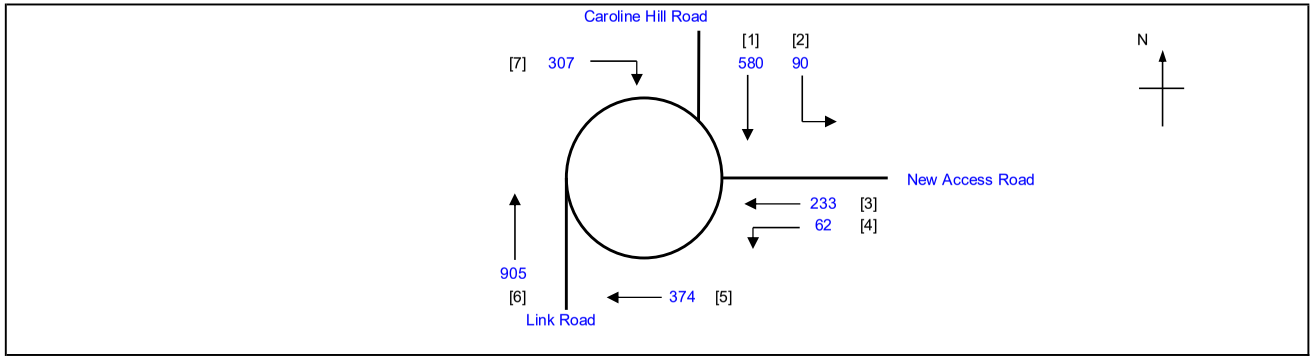
Stage 3 G= 25
Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

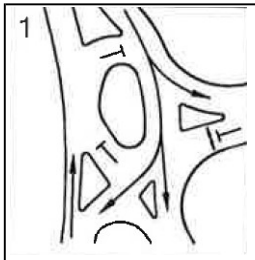
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		926		926	0.00	2120							2120	0.437	0.437		71	71	0.647	48	11
7	2	5.00	1	5		N	2115			247	247	1.00	1627							1627	0.152			25	25	0.647	30	40
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	26	0.647	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	26	0.647	12	75
1,2	1	3.65	1	20		N	1980	90	212		302	0.30	1937							1937	0.156			25	46	0.647	36	39
1	1	3.65	1				2120		330		330	0.00	2120							2120	0.156			25	46	0.647	42	38
5	3	5.00	1			N	2115		341		341	0.00	2115							2115	0.161	0.161		26	26	0.647	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

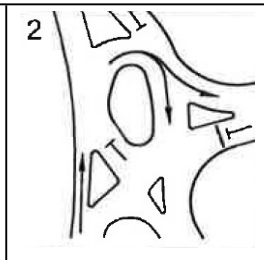
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.:	40920	Prepared By:	SKL	Dec-25
		FILENAME :	J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Dec-25
J1 Caroline Hill Road (West) / Link Road				Reviewed By:	SLN	Dec-25



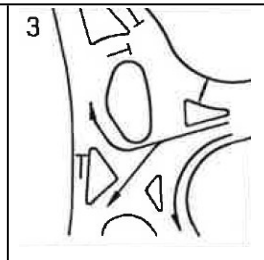
No. of stages per cycle		N =	3
Cycle time		C =	105 sec
Sum(y)		Y =	0.604
Loss time		L =	8 sec
Total Flow		=	2551 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.9 sec
Cm	= L/(1-Y)	=	20.2 sec
Yult		=	0.840
R.C.ult	= (Yult-Y)/Y*100%	=	39.1 %
Cp	= 0.9*L/(0.9-Y)	=	24.3 sec
Ymax	= 1-L/C	=	0.924
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**38 %**



Stage 1 G= 38 Int =



Stage 2 G= 29 Int = 5



Stage 3 G= 27 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		27	5
P2	1,2		9	5		68	5

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		905		905	0.00	2120							2120	0.427	0.427		69	69	0.654	54	12
7	2	5.00	1	5		N	2115			307	307	1.00	1627							1627	0.189			30	30	0.654	36	36
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	28	0.654	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	28	0.654	12	76
1,2	1	3.65	1	20		N	1980	90	230		320	0.28	1939							1939	0.165			27	38	0.654	36	38
1	1	3.65	1				2120		350		350	0.00	2120							2120	0.165			27	38	0.654	42	37
5	3	5.00	1			N	2115		374		374	0.00	2115							2115	0.177	0.177		28	28	0.654	42	36

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

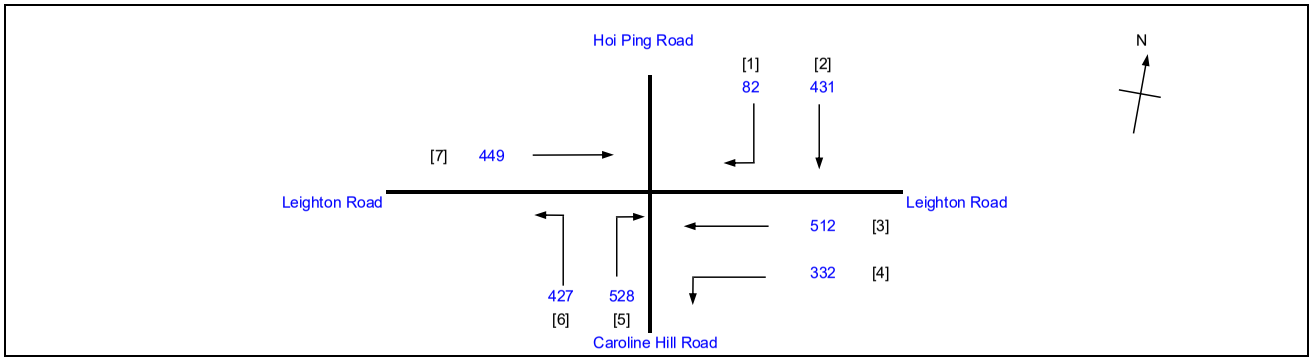
		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

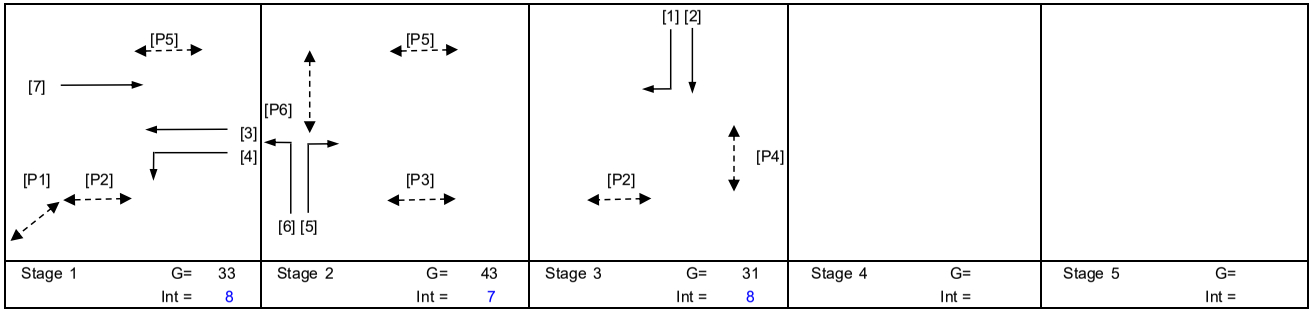
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Reference AM

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.616
Loss time		L =	20 sec
Total Flow		=	2761 pcu
Co	= (1.5*L+5)/(1-Y)	=	91.2 sec
Cm	= L/(1-Y)	=	52.1 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	21.7 %
Cp	= 0.9*L/(0.9-Y)	=	63.4 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**24 %**



Stage 1	G= 33	Int = 8
Stage 2	G= 43	Int = 7
Stage 3	G= 31	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	34	5
P2	1,3	4	14	5	0	75	5
P3	2	4.5	14	5	3	42	5
P4	3	15	10	7	4	28	7
P5	1,2	7	11	6	1	84	6
P6	2	15	10	7	4	39	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	175			175	1.00	1828			0.5	-914			914	0.191			34	34	0.728	30	57
3,4	1	3.50	1	25			2105	157	117		274	0.57	2035			0.7	-611			1424	0.192	0.192		34	34	0.728	42	51
3	1	3.00	1				2055		395		395	0.00	2055							2055	0.192			34	34	0.728	60	47
5,6	2	3.50	1	65		N	1965	427		46	473	1.00	1921							1921	0.246	0.246		44	44	0.728	66	41
5	2	3.50	1	20			2105			482	482	1.00	1958							1958	0.246			44	44	0.728	66	41
7	1	3.50	1			N	1965		144		144	0.00	1965			0.5	-983			982	0.147			26	34	0.728	24	66
7	1	3.30	1				2085		305		305	0.00	2085							2085	0.146			26	34	0.728	48	54
2	3	3.50	1			N	1965		349		349	0.00	1965							1965	0.178	0.178		32	32	0.728	54	50
1,2	3	3.50	1	12		N	1965		82	82	164	0.50	1849			0.5	-925			924	0.177			32	32	0.728	24	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

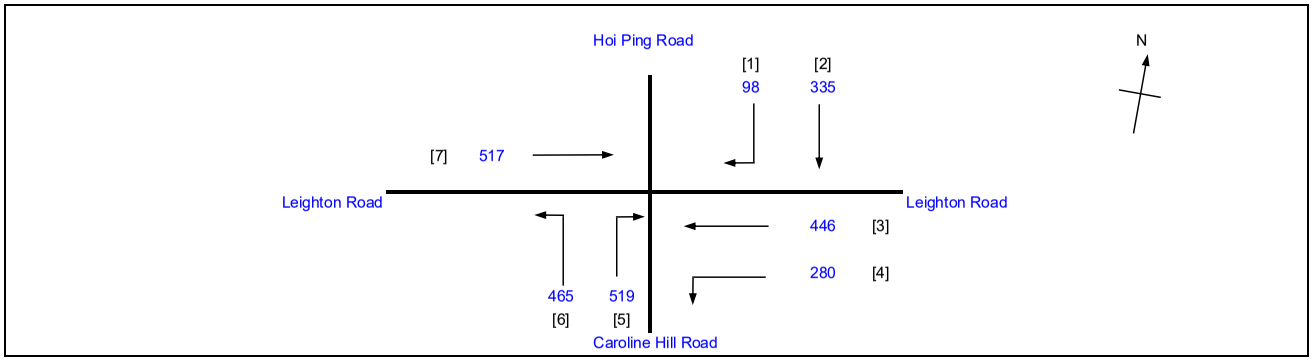
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

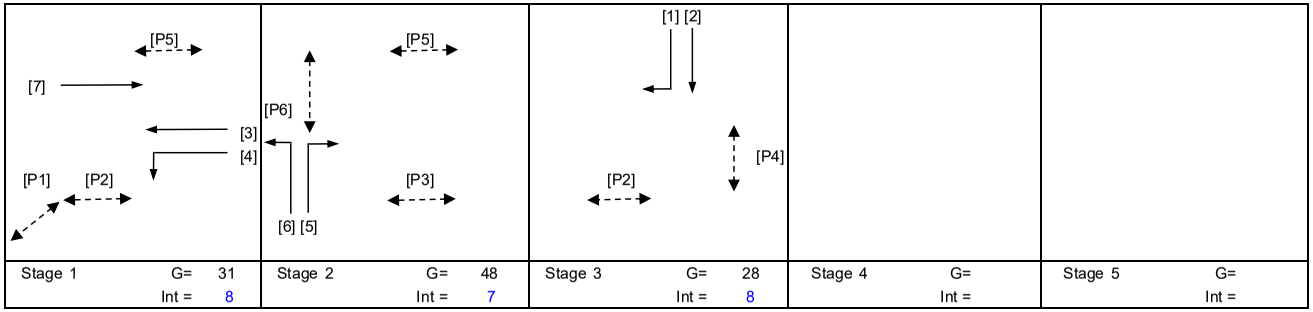
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Reference PM

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.574
Loss time	L =	20 sec
Total Flow	=	2660 pcu
Co = (1.5*L+5)/(1-Y)	=	82.2 sec
Cm = L/(1-Y)	=	46.9 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	30.7 %
Cp = 0.9*L/(0.9-Y)	=	55.2 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**33 %**



Stage 1	G= 31	Int = 8
Stage 2	G= 48	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	32	5
P2	1,3	4	14	5	0	70	5
P3	2	4.5	14	5	3	47	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	44	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	151			151	1.00	1828			0.5	-914			914	0.165			32	32	0.678	24	55
3,4	1	3.50	1	25			2105	129	107		236	0.55	2038			0.7	-611			1427	0.165			32	32	0.678	36	50
3	1	3.00	1				2055		339		339	0.00	2055							2055	0.165			32	32	0.678	54	47
5,6	2	3.50	1	65		N	1965	465		22	487	1.00	1921							1921	0.254			49	49	0.678	66	35
5	2	3.50	1	20			2105			497	497	1.00	1958							1958	0.254	0.254		49	49	0.678	66	35
7	1	3.50	1			N	1965		166		166	0.00	1965			0.5	-983			982	0.169	0.169		32	32	0.678	24	54
7	1	3.30	1				2085		351		351	0.00	2085							2085	0.168			32	32	0.678	54	46
2	3	3.50	1			N	1965		297		297	0.00	1965							1965	0.151	0.151		29	29	0.678	48	49
1,2	3	3.50	1	12		N	1965		38	98	136	0.72	1803			0.5	-901			902	0.151			29	29	0.678	24	59

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

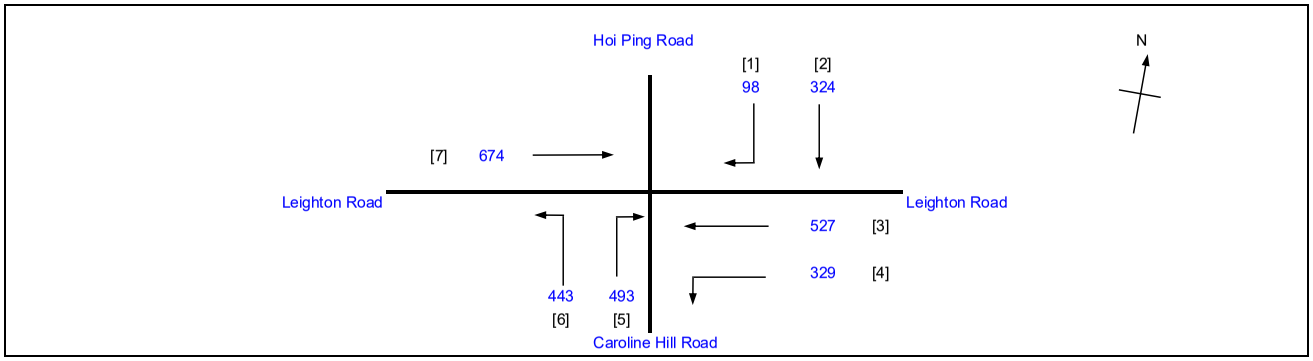
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

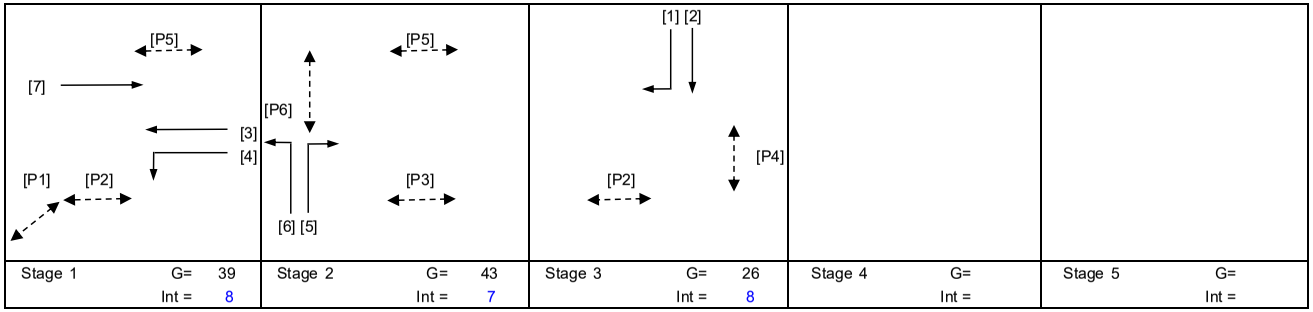
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.609
Loss time		L =	20 sec
Total Flow		=	2888 pcu
Co	= (1.5*L+5)/(1-Y)	=	89.5 sec
Cm	= L/(1-Y)	=	51.2 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	23.1 %
Cp	= 0.9*L/(0.9-Y)	=	61.9 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**25 %**



Stage 1	G= 39	Int = 8
Stage 2	G= 43	Int = 7
Stage 3	G= 26	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	40	5
P2	1,3	4	14	5	0	75	5
P3	2	4.5	14	5	3	42	5
P4	3	15	10	7	4	23	7
P5	1,2	7	11	6	1	89	6
P6	2	15	10	7	4	39	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	178			178	1.00	1828			0.5	-914			914	0.195			35	40	0.720	30	55
3,4	1	3.50	1	25			2105	151	127		278	0.54	2039			0.7	-612			1427	0.195			35	40	0.720	42	49
3	1	3.00	1				2055		400		400	0.00	2055							2055	0.195			35	40	0.720	60	46
5,6	2	3.50	1	65		N	1965	443		21	464	1.00	1921							1921	0.242	0.242		44	44	0.720	66	41
5	2	3.50	1	20			2105			472	472	1.00	1958							1958	0.241			44	44	0.720	66	40
7	1	3.50	1			N	1965		216		216	0.00	1965			0.5	-983			982	0.220	0.220		40	40	0.720	30	50
7	1	3.30	1				2085		458		458	0.00	2085							2085	0.220			40	40	0.720	66	43
2	3	3.50	1			N	1965		290		290	0.00	1965							1965	0.148	0.148		27	27	0.720	48	54
1,2	3	3.50	1	12		N	1965		34	98	132	0.74	1798			0.5	-899			899	0.147			27	27	0.720	24	66

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

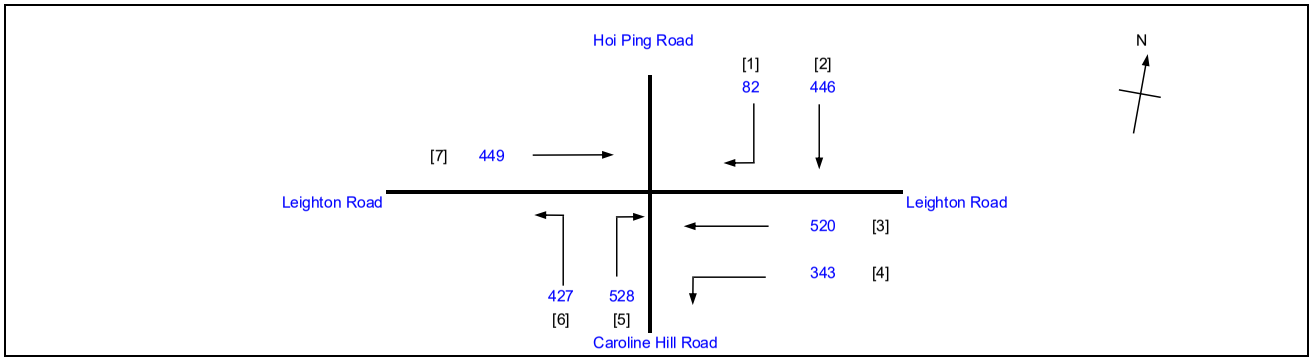
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

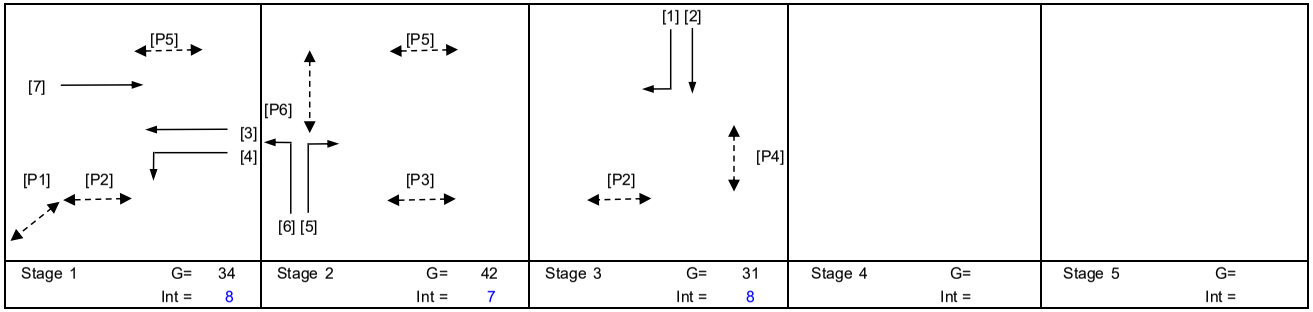
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Design AM

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.626
Loss time		L =	20 sec
Total Flow		=	2795 pcu
Co	= (1.5*L+5)/(1-Y)	=	93.6 sec
Cm	= L/(1-Y)	=	53.5 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	19.8 %
Cp	= 0.9*L/(0.9-Y)	=	65.7 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**22 %**



Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	35	5
P2	1,3	4	14	5	0	76	5
P3	2	4.5	14	5	3	41	5
P4	3	15	10	7	4	28	7
P5	1,2	7	11	6	1	84	6
P6	2	15	10	7	4	38	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	180			180	1.00	1828			0.5	-914			914	0.197	0.197		35	35	0.740	30	58
3,4	1	3.50	1	25			2105	163	116		279	0.58	2034			0.7	-610			1424	0.196			34	35	0.740	42	52
3	1	3.00	1				2055		404		404	0.00	2055							2055	0.197			35	35	0.740	60	48
5,6	2	3.50	1	65		N	1965	427		46	473	1.00	1921							1921	0.246	0.246		43	43	0.740	66	42
5	2	3.50	1	20			2105			482	482	1.00	1958							1958	0.246			43	43	0.740	66	42
7	1	3.50	1			N	1965		144		144	0.00	1965			0.5	-983			982	0.147			26	35	0.740	24	68
7	1	3.30	1				2085		305		305	0.00	2085							2085	0.146			26	35	0.740	54	55
2	3	3.50	1			N	1965		359		359	0.00	1965							1965	0.183	0.183		32	32	0.740	54	50
1,2	3	3.50	1	12		N	1965		87	82	169	0.49	1853			0.5	-926			927	0.182			32	32	0.740	30	61

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

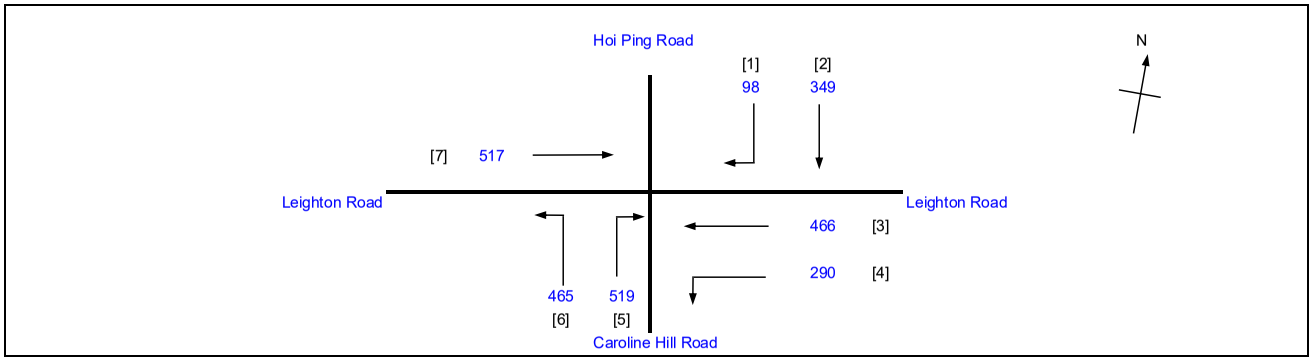
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

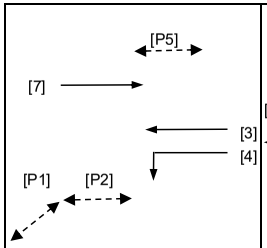
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Design PM

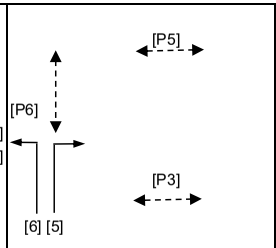
PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



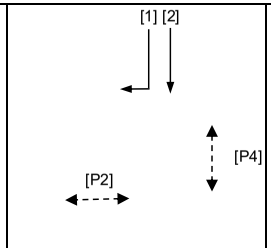
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.582
Loss time		L =	20 sec
Total Flow		=	2704 pcu
Co	= (1.5*L+5)/(1-Y)	=	83.7 sec
Cm	= L/(1-Y)	=	47.9 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	28.9 %
Cp	= 0.9*L/(0.9-Y)	=	56.6 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**31 %**



Stage 1 G= 32 Int = 8



Stage 2 G= 47 Int = 7



Stage 3 G= 28 Int = 8

Stage 4 G= Int =

Stage 5 G= Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	33	5
P2	1,3	4	14	5	0	71	5
P3	2	4.5	14	5	3	46	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	43	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	157			157	1.00	1828			0.5	-914			914	0.172			32	33	0.688	24	55
3,4	1	3.50	1	25			2105	133	112		245	0.54	2039			0.7	-612			1427	0.172			32	33	0.688	36	50
3	1	3.00	1				2055		354		354	0.00	2055							2055	0.172	0.172		33	33	0.688	54	47
5,6	2	3.50	1	65		N	1965	465		22	487	1.00	1921							1921	0.254			48	48	0.688	66	36
5	2	3.50	1	20			2105			497	497	1.00	1958							1958	0.254	0.254		48	48	0.688	66	36
7	1	3.50	1			N	1965		166		166	0.00	1965			0.5	-983			982	0.169			32	33	0.688	24	55
7	1	3.30	1				2085		351		351	0.00	2085							2085	0.168			32	33	0.688	54	47
2	3	3.50	1			N	1965		306		306	0.00	1965							1965	0.156			29	29	0.688	48	49
1,2	3	3.50	1	12		N	1965		43	98	141	0.70	1808			0.5	-904			904	0.156	0.156		29	29	0.688	24	59

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

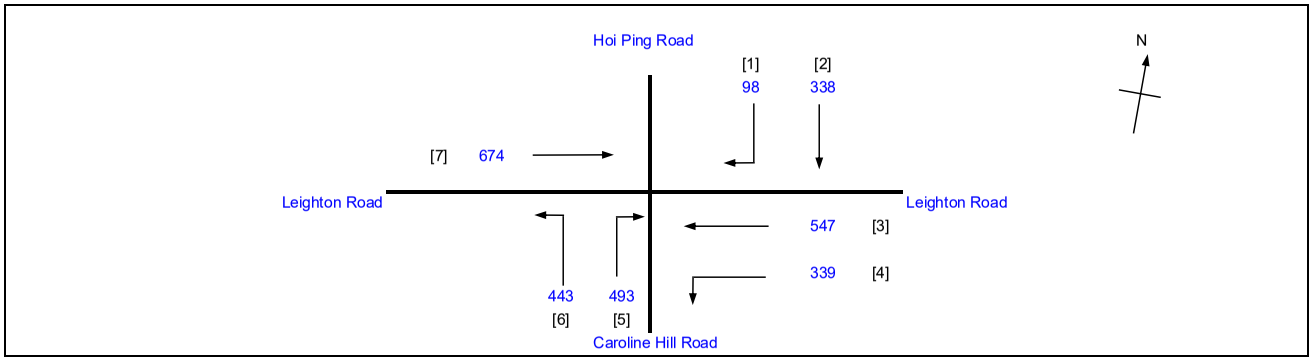
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

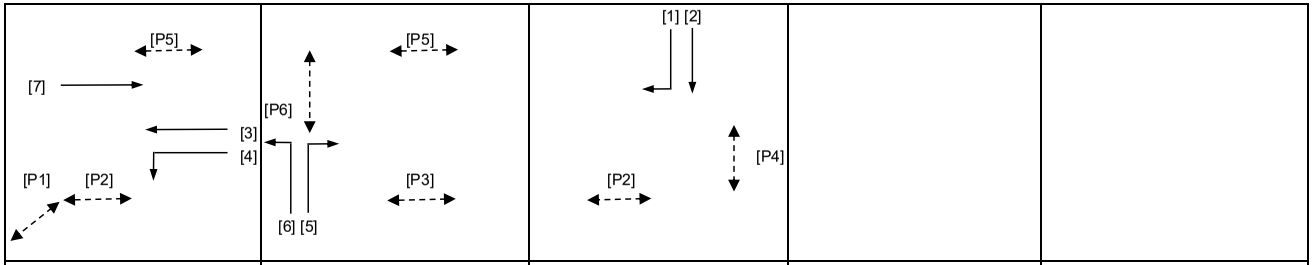
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.614
Loss time	L =	20 sec
Total Flow	=	2932 pcu
Co = (1.5*L+5)/(1-Y)	=	90.6 sec
Cm = L/(1-Y)	=	51.8 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	22.2 %
Cp = 0.9*L/(0.9-Y)	=	62.9 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**24 %**



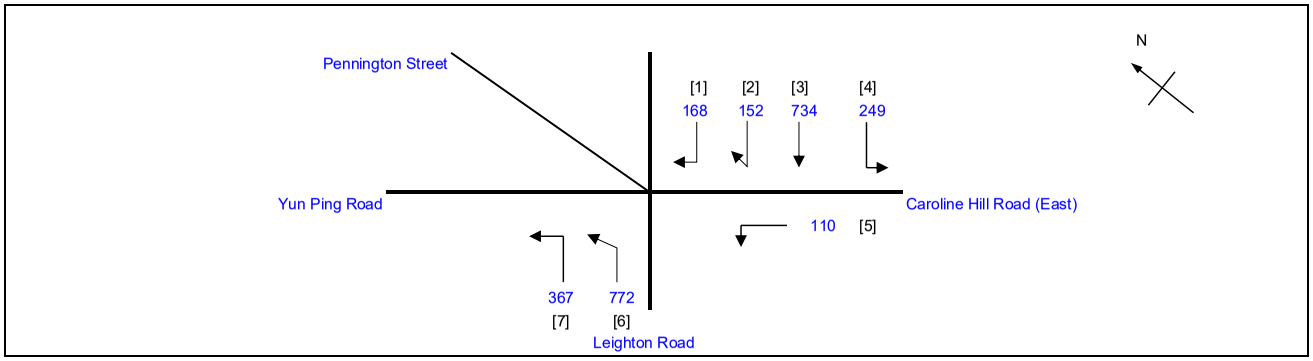
Stage 1	G= 38	Int = 8
Stage 2	G= 42	Int = 7
Stage 3	G= 26	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	39	5
P2	1,3	4	14	5	0	76	5
P3	2	4.5	14	5	3	41	5
P4	3	15	10	7	4	23	7
P5	1,2	7	11	6	1	89	6
P6	2	15	10	7	4	38	7

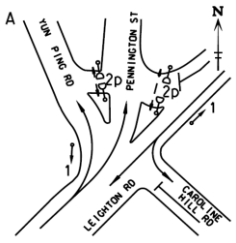
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	184			184	1.00	1828			0.5	-914			914	0.201			36	39	0.725	30	55
3,4	1	3.50	1	25			2105	155	132		287	0.54	2039			0.7	-612			1427	0.201			36	39	0.725	42	49
3	1	3.00	1				2055		415		415	0.00	2055							2055	0.202			36	39	0.725	60	46
5,6	2	3.50	1	65		N	1965	443		21	464	1.00	1921							1921	0.242	0.242		43	43	0.725	66	41
5	2	3.50	1	20			2105			472	472	1.00	1958							1958	0.241			43	43	0.725	66	41
7	1	3.50	1			N	1965		216		216	0.00	1965			0.5	-983			982	0.220	0.220		39	39	0.725	30	51
7	1	3.30	1				2085		458		458	0.00	2085							2085	0.220			39	39	0.725	66	43
2	3	3.50	1			N	1965		299		299	0.00	1965							1965	0.152	0.152		27	27	0.725	48	53
1,2	3	3.50	1	12		N	1965		39	98	137	0.72	1804			0.5	-902			902	0.152			27	27	0.725	24	66

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

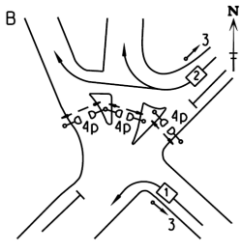
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.638
Loss time	L =	11 sec
Total Flow	=	2552 pcu
Co = (1.5*L+5)/(1-Y)	=	59.4 sec
Cm = L/(1-Y)	=	30.4 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	28.2 %
Cp = 0.9*L/(0.9-Y)	=	37.8 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**29 %**



Stage 1 G= 74 Int = 6



Stage 2 G= 43 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	70	8
4P	2		10	8	2	40	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							11					
3	1	2.50	1				2005		659		659	0.00	2005							2005	0.329			61	75			
3,4	1	3.00	1	7		N	1915	249	75		324	0.77	1644			0.6	-658			986	0.329			61	75			
6	1	3.00	1				2055		609		609	0.00	2055			0.7	-534			1521	0.400	0.400		75	75			
6,7	1	3.00	1	15		N	1915	367	163		530	0.69	1791			0.7	-466			1325	0.400			75	75			
1,2	2	3.50	1	9		N	1965			320	320	1.00	1684			0.8	-337			1347	0.238	0.238		44	44			
5	2	4.00	1	5		N	2015	110			110	1.00	1550			0.6	-620			930	0.118			22	44			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

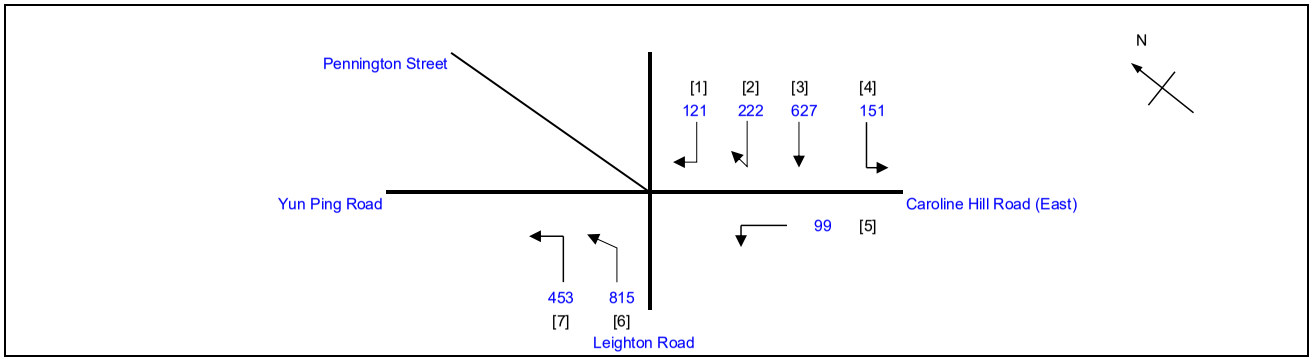
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

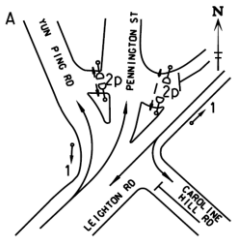
2033 Reference PM

PROJECT NO.: 40920

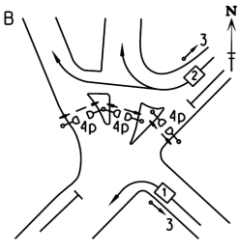
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.702
Loss time		L =	11 sec
Total Flow		=	2488 pcu
Co	= (1.5*L+5)/(1-Y)	=	72.1 sec
Cm	= L/(1-Y)	=	36.9 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	16.5 %
Cp	= 0.9*L/(0.9-Y)	=	49.9 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**17 %**



Stage 1 G= 75 Int = 6



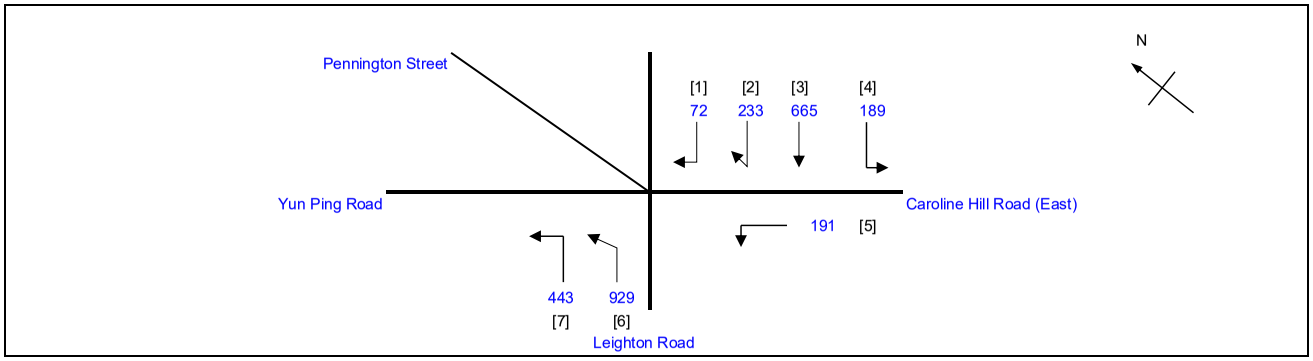
Stage 2 G= 42 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	71	8
4P	2		10	8	2	39	8

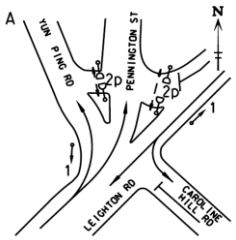
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		515		515	0.00	2005							2005	0.257			44	76
3,4	1	3.00	1	7		N	1915	151	112		263	0.57	1705			0.6	-682			1023	0.257			44	76
6	1	3.00	1				2055		680		680	0.00	2055			0.7	-534			1521	0.447	0.447		76	76
6,7	1	3.00	1	15		N	1915	453	135		588	0.77	1778			0.7	-462			1316	0.447			76	76
1,2	2	3.50	1	9		N	1965			343	343	1.00	1684			0.8	-337			1347	0.255	0.255		43	43
5	2	4.00	1	5		N	2015	99			99	1.00	1550			0.6	-620			930	0.106			18	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

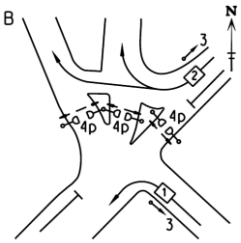
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.709
Loss time	L =	11 sec
Total Flow	=	2722 pcu
Co = (1.5*L+5)/(1-Y)	=	73.8 sec
Cm = L/(1-Y)	=	37.8 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	15.4 %
Cp = 0.9*L/(0.9-Y)	=	51.8 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**



Stage 1 G= 80 Int = 6



Stage 2 G= 37 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	76	8
4P	2		10	8	2	34	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		569		569	0.00	2005							2005	0.284			48	81
3,4	1	3.00	1	7		N	1915	189	96		285	0.66	1677			0.6	-671			1006	0.283			48	81
6	1	3.00	1				2055		733		733	0.00	2055			0.7	-534			1521	0.482			81	81
6,7	1	3.00	1	15		N	1915	443	196		639	0.69	1791			0.7	-466			1325	0.482	0.482		81	81
1,2	2	3.50	1	9		N	1965			305	305	1.00	1684			0.8	-337			1347	0.226	0.226		38	38
5	2	4.00	1	5		N	2015	191			191	1.00	1550			0.6	-620			930	0.205			34	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

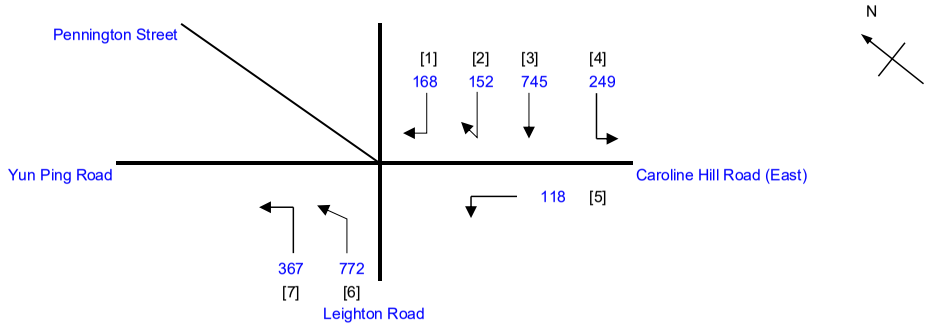
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

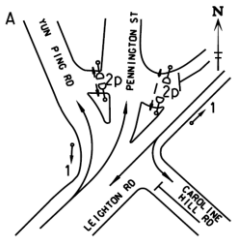
2033 Design AM

PROJECT NO.: 40920

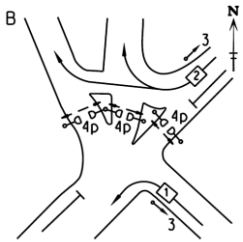
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.638
Loss time		L =	11 sec
Total Flow		=	2571 pcu
Co	= (1.5*L+5)/(1-Y)	=	59.4 sec
Cm	= L/(1-Y)	=	30.4 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	28.2 %
Cp	= 0.9*L/(0.9-Y)	=	37.8 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**29 %**



Stage 1 G= 74 Int = 6



Stage 2 G= 43 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	70	8
4P	2		10	8	2	40	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							11					
3	1	2.50	1				2005		666		666	0.00	2005							2005	0.332			62	75			
3,4	1	3.00	1	7		N	1915	249	79		328	0.76	1647			0.6	-659			988	0.332			62	75			
6	1	3.00	1				2055		609		609	0.00	2055			0.7	-534			1521	0.400	0.400		75	75			
6,7	1	3.00	1	15		N	1915	367	163		530	0.69	1791			0.7	-466			1325	0.400			75	75			
1,2	2	3.50	1	9		N	1965			320	320	1.00	1684			0.8	-337			1347	0.238	0.238		44	44			
5	2	4.00	1	5		N	2015	118			118	1.00	1550			0.6	-620			930	0.127			24	44			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

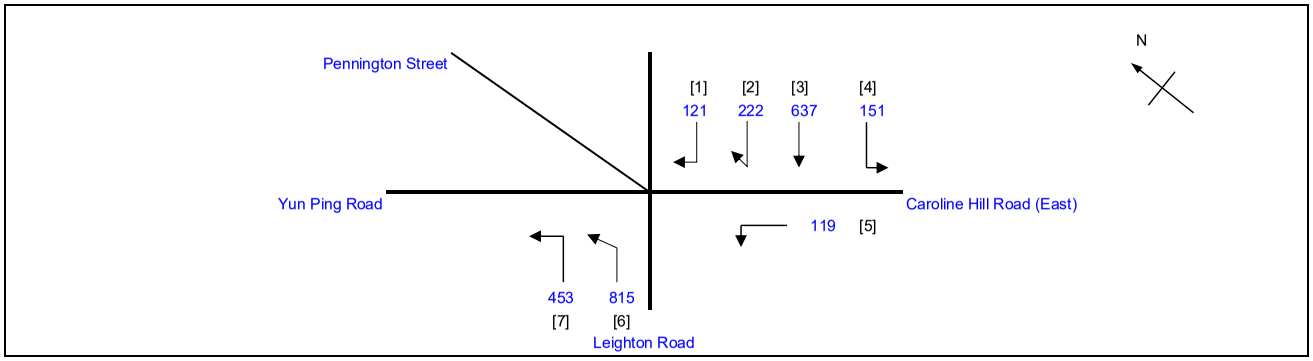
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

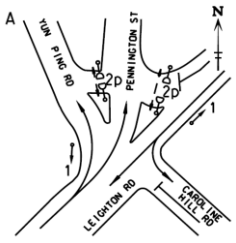
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

2033 Design PM

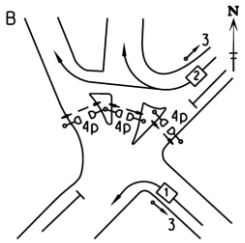
PROJECT NO.:	40920
FILENAME :	J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.702
Loss time		L =	11 sec
Total Flow		=	2518 pcu
Co	= (1.5*L+5)/(1-Y)	=	72.1 sec
Cm	= L/(1-Y)	=	36.9 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	16.5 %
Cp	= 0.9*L/(0.9-Y)	=	49.9 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**17 %**



Stage 1 G= 75 Int = 6



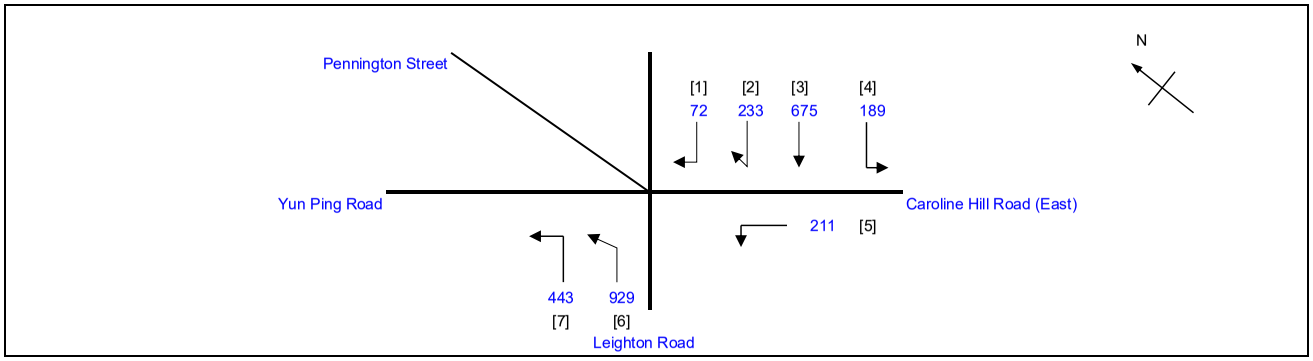
Stage 2 G= 42 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	71	8
4P	2		10	8	2	39	8

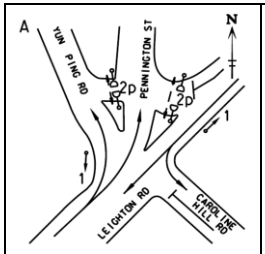
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		521		521	0.00	2005							2005	0.260			44	76
3,4	1	3.00	1	7		N	1915	151	116		267	0.57	1708			0.6	-683			1025	0.260			44	76
6	1	3.00	1				2055		680		680	0.00	2055			0.7	-534			1521	0.447	0.447		76	76
6,7	1	3.00	1	15		N	1915	453	135		588	0.77	1778			0.7	-462			1316	0.447			76	76
1,2	2	3.50	1	9		N	1965			343	343	1.00	1684			0.8	-337			1347	0.255	0.255		43	43
5	2	4.00	1	5		N	2015	119			119	1.00	1550			0.6	-620			930	0.128			22	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

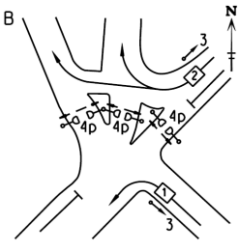
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.709
Loss time	L =	11 sec
Total Flow	=	2752 pcu
Co = (1.5*L+5)/(1-Y)	=	73.9 sec
Cm = L/(1-Y)	=	37.8 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	15.3 %
Cp = 0.9*L/(0.9-Y)	=	51.9 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**



Stage 1 G= 80 Int = 6



Stage 2 G= 37 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	76	8
4P	2		10	8	2	34	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		575		575	0.00	2005							2005	0.287			48	81
3,4	1	3.00	1	7		N	1915	189	100		289	0.65	1680			0.6	-672			1008	0.287			48	81
6	1	3.00	1				2055		733		733	0.00	2055			0.7	-534			1521	0.482			81	81
6,7	1	3.00	1	15		N	1915	443	196		639	0.69	1791			0.7	-466			1325	0.482	0.482		81	81
1,2	2	3.50	1	9		N	1965			305	305	1.00	1684			0.8	-337			1347	0.226			38	38
5	2	4.00	1	5		N	2015	211			211	1.00	1550			0.6	-620			930	0.227	0.227		38	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

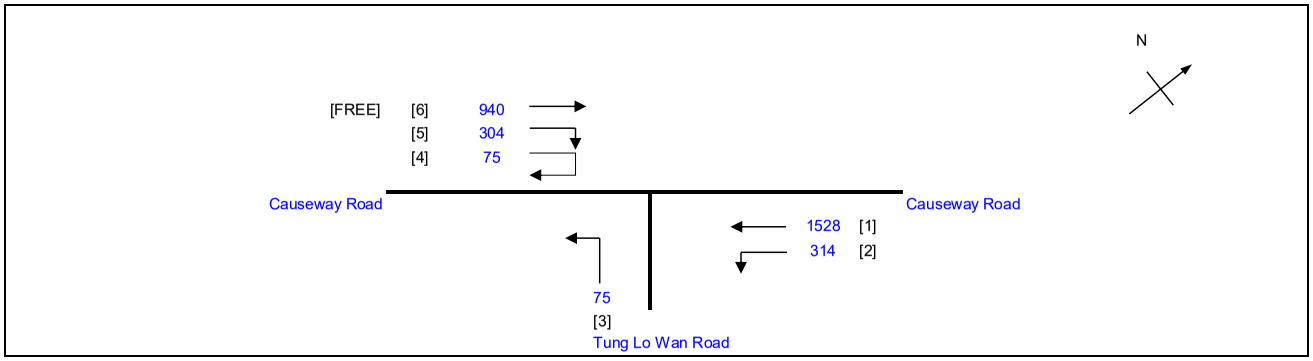
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

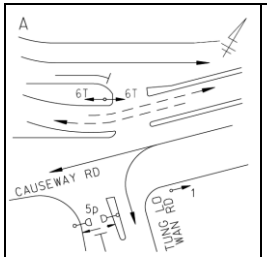
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

2033 Reference AM

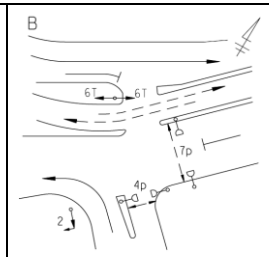
PROJECT NO.:	40920
FILENAME :	J4_CR_LR_IS.xlsx



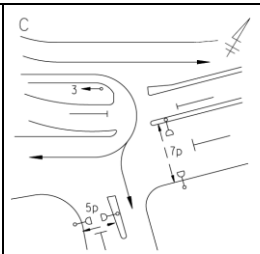
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.405
Loss time		L =	33 sec
Total Flow		=	2296 pcu
Co	= (1.5*L+5)/(1-Y)	=	91.6 sec
Cm	= L/(1-Y)	=	55.5 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	61.0 %
Cp	= 0.9*L/(0.9-Y)	=	60.0 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**49 %**



Stage 1 G= 44 Int = 9



Stage 2 G= 15 Int = 4



Stage 3 G= 21 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		36	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		415		415	0.00	1915			0.8	-383			1532	0.271	0.271		45	45
1	1	3.00	2				4110		1113		1113	0.00	4110							4110	0.271			45	45
2	1	3.00	1	9		N	1915	314			314	1.00	1641			0.8	-328			1313	0.239			40	45
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			8	15
4,5	3	4.00	1	12		N	2015			192	192	1.00	1791			0.8	-358			1433	0.134			22	22
4,5	3	4.50	1	8		N	2065			187	187	1.00	1739			0.8	-348			1391	0.134	0.134		22	22
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

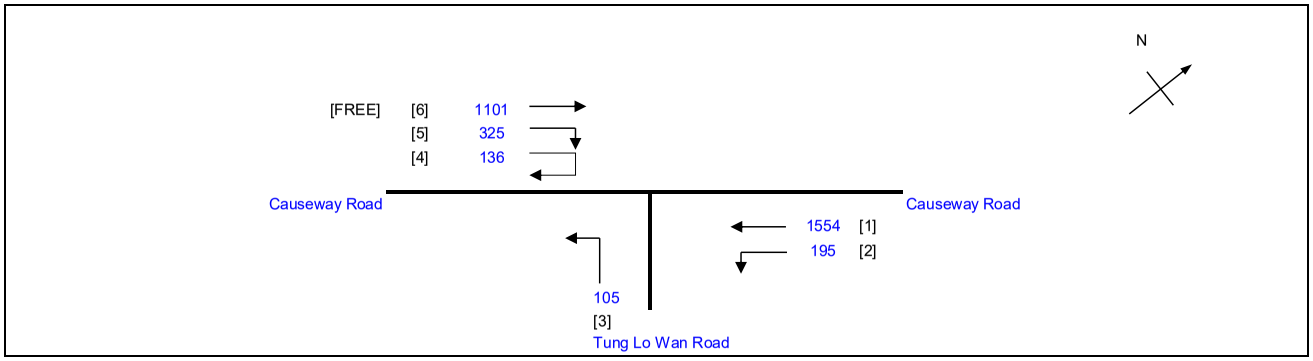
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

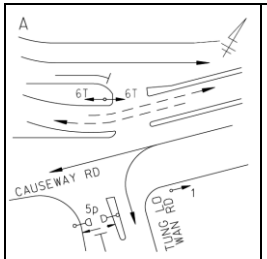
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

2033 Reference PM

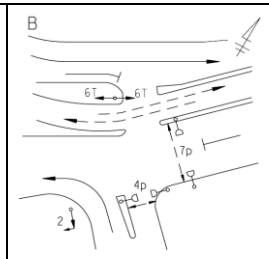
PROJECT NO.: 40920
FILENAME : J4_CR_LR_IS.xlsx



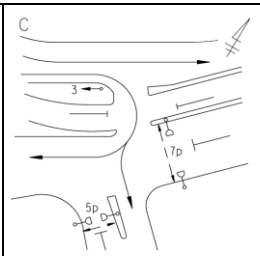
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.439
Loss time		L =	33 sec
Total Flow		=	2315 pcu
Co	= (1.5*L+5)/(1-Y)	=	97.1 sec
Cm	= L/(1-Y)	=	58.8 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	48.7 %
Cp	= 0.9*L/(0.9-Y)	=	64.4 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**37 %**



Stage 1 G= 41
Int = 9



Stage 2 G= 15
Int = 4



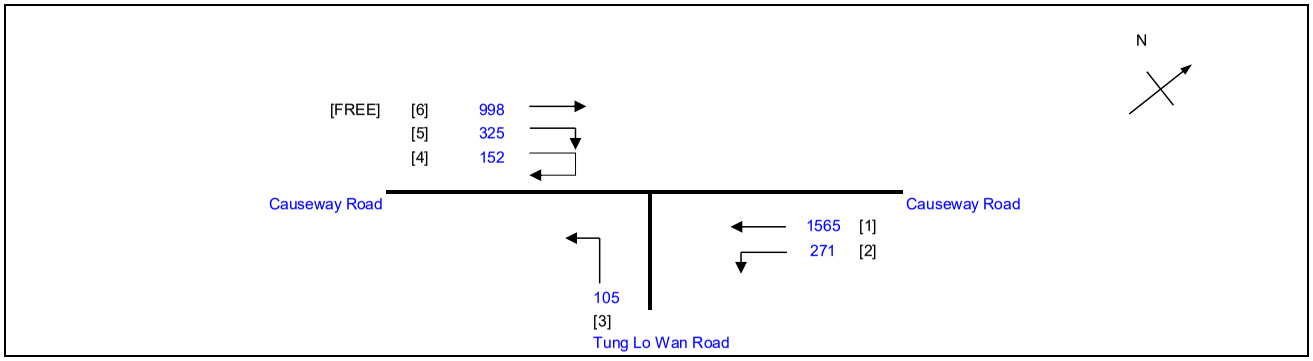
Stage 3 G= 24
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

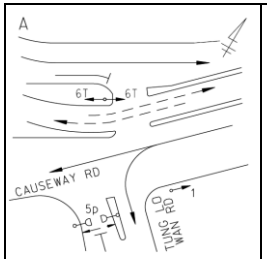
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		422		422	0.00	1915			0.8	-383			1532	0.275	0.275		42	42
1	1	3.00	2				4110		1132		1132	0.00	4110							4110	0.275			42	42
2	1	3.00	1	9		N	1915	195			195	1.00	1641			0.8	-328			1313	0.148			23	42
3	2	4.00	1	25		N	2015	105			105	1.00	1901			0.8	-380			1521	0.069			11	15
4,5	3	4.00	1	12		N	2015			234	234	1.00	1791			0.8	-358			1433	0.163	0.163		25	25
4,5	3	4.50	1	8		N	2065			227	227	1.00	1739			0.8	-348			1391	0.163			25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

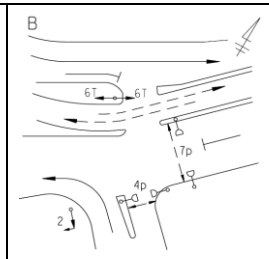
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



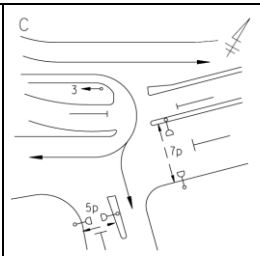
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.446
Loss time	L =	33 sec
Total Flow	=	2418 pcu
Co = (1.5*L+5)/(1-Y)	=	98.4 sec
Cm = L/(1-Y)	=	59.6 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	46.2 %
Cp = 0.9*L/(0.9-Y)	=	65.5 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**35 %**



Stage 1 G= 41 Int = 9



Stage 2 G= 15 Int = 4



Stage 3 G= 24 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		425		425	0.00	1915			0.8	-383			1532	0.277	0.277		42	42
1	1	3.00	2				4110		1140		1140	0.00	4110							4110	0.277			42	42
2	1	3.00	1	9		N	1915	271			271	1.00	1641			0.8	-328			1313	0.206			31	42
3	2	4.00	1	25		N	2015	105			105	1.00	1901			0.8	-380			1521	0.069			10	15
4,5	3	4.00	1	12		N	2015			242	242	1.00	1791			0.8	-358			1433	0.169			25	25
4,5	3	4.50	1	8		N	2065			235	235	1.00	1739			0.8	-348			1391	0.169	0.169		25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

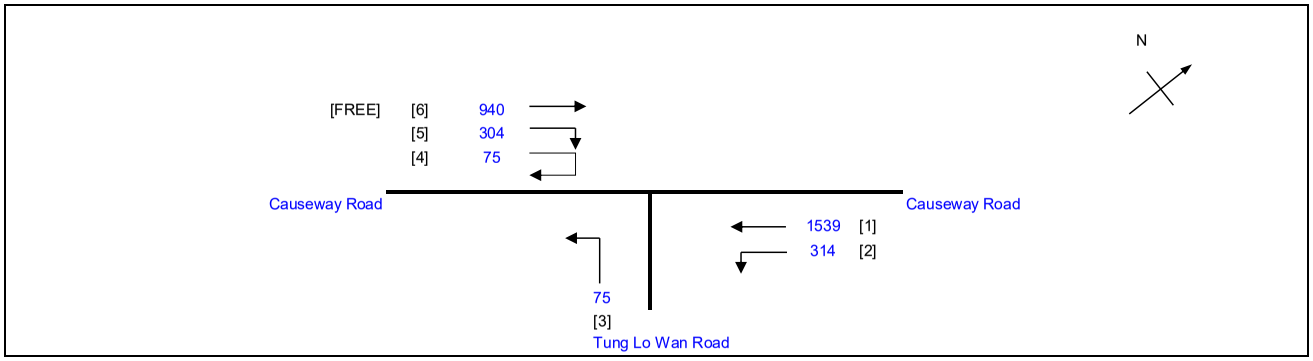
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

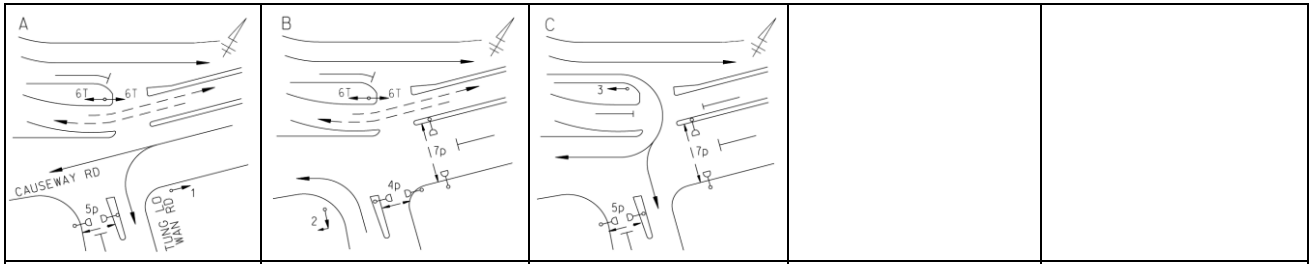
2033 Design AM

PROJECT NO.: 40920

FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.408
Loss time		L =	33 sec
Total Flow		=	2307 pcu
Co	= (1.5*L+5)/(1-Y)	=	92.1 sec
Cm	= L/(1-Y)	=	55.7 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	60.0 %
Cp	= 0.9*L/(0.9-Y)	=	60.4 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**48 %**



Stage 1	G= 44	Int = 9	
Stage 2	G= 15	Int = 4	
Stage 3	G= 21	Int = 7	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		36	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		419		419	0.00	1915			0.8	-383			1532	0.273	0.273		45	45
1	1	3.00	2				4110		1120		1120	0.00	4110							4110	0.273			45	45
2	1	3.00	1	9		N	1915	314			314	1.00	1641			0.8	-328			1313	0.239			39	45
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			8	15
4,5	3	4.00	1	12		N	2015			192	192	1.00	1791			0.8	-358			1433	0.134			22	22
4,5	3	4.50	1	8		N	2065			187	187	1.00	1739			0.8	-348			1391	0.134	0.134		22	22
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

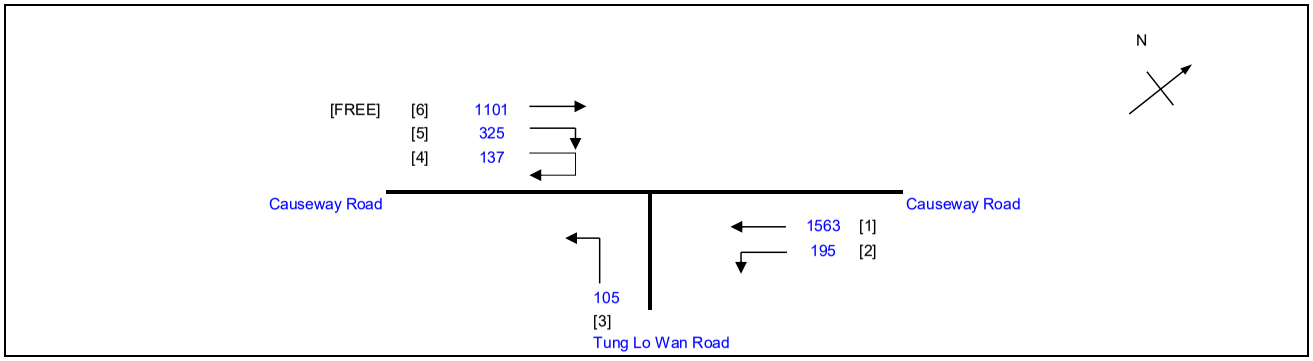
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

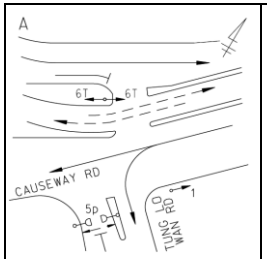
2033 Design PM

PROJECT NO.: 40920

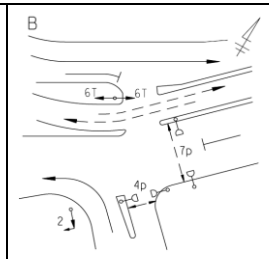
FILENAME : J4_CR_LR_IS.xlsx



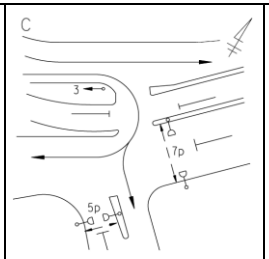
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.441
Loss time	L =	33 sec
Total Flow	=	2325 pcu
Co = (1.5*L+5)/(1-Y)	=	97.5 sec
Cm = L/(1-Y)	=	59.0 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	47.9 %
Cp = 0.9*L/(0.9-Y)	=	64.7 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**37 %**



Stage 1 G= 41 Int = 9



Stage 2 G= 15 Int = 4



Stage 3 G= 24 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		424		424	0.00	1915			0.8	-383			1532	0.277			42	42
1	1	3.00	2				4110		1139		1139	0.00	4110							4110	0.277	0.277		42	42
2	1	3.00	1	9		N	1915	195			195	1.00	1641			0.8	-328			1313	0.148			23	42
3	2	4.00	1	25		N	2015	105			105	1.00	1901			0.8	-380			1521	0.069			10	15
4,5	3	4.00	1	12		N	2015			235	235	1.00	1791			0.8	-358			1433	0.164	0.164		25	25
4,5	3	4.50	1	8		N	2065			227	227	1.00	1739			0.8	-348			1391	0.163			25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

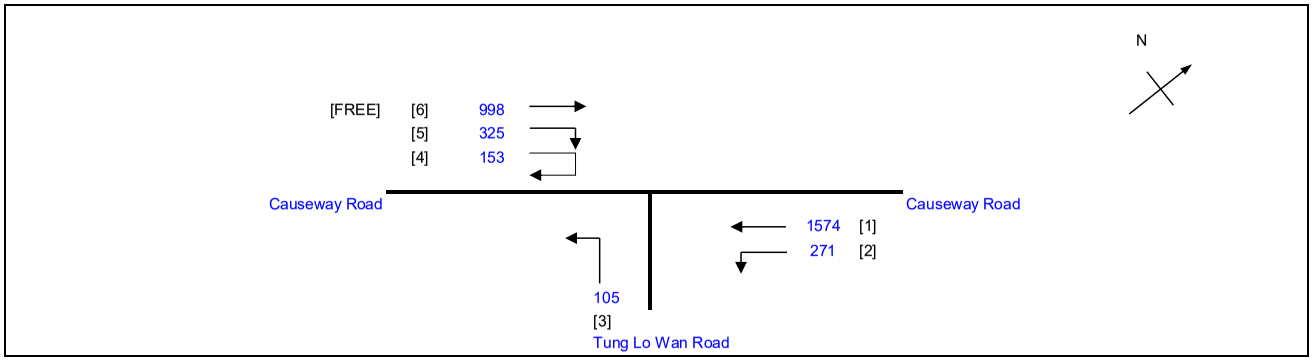
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

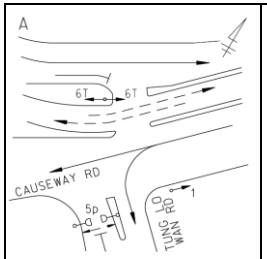
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

2033 Design Weekend

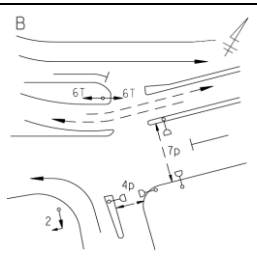
PROJECT NO.: 40920
FILENAME : J4_CR_LR_IS.xlsx



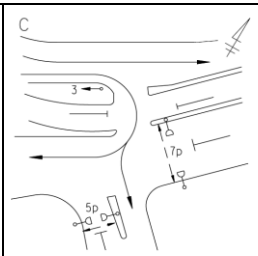
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.449
Loss time		L =	33 sec
Total Flow		=	2428 pcu
Co	= (1.5*L+5)/(1-Y)	=	98.9 sec
Cm	= L/(1-Y)	=	59.9 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	45.3 %
Cp	= 0.9*L/(0.9-Y)	=	65.8 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**34 %**



Stage 1 G= 41 Int = 9



Stage 2 G= 15 Int = 4



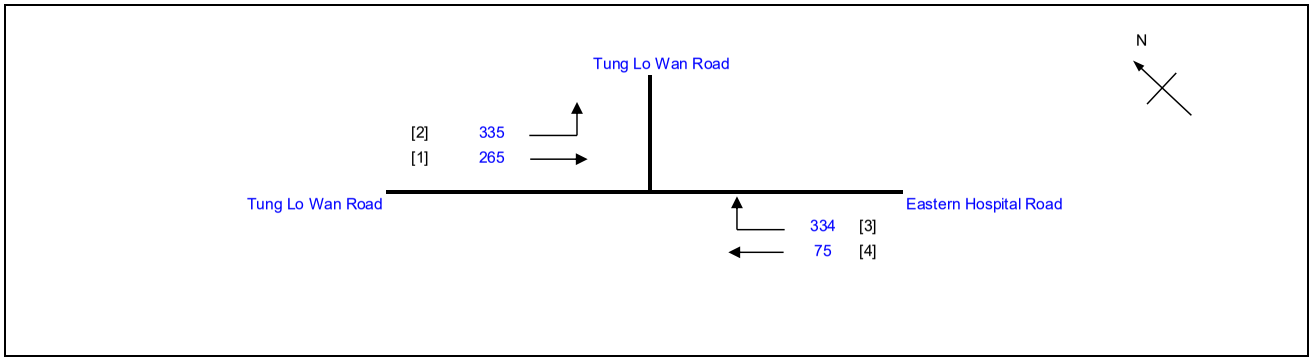
Stage 3 G= 24 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

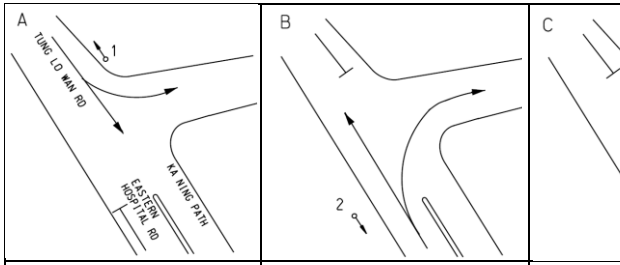
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		428		428	0.00	1915			0.8	-383			1532	0.279	0.279		42	42
1	1	3.00	2				4110		1146		1146	0.00	4110							4110	0.279			42	42
2	1	3.00	1	9		N	1915	271			271	1.00	1641			0.8	-328			1313	0.206			31	42
3	2	4.00	1	25		N	2015	105			105	1.00	1901			0.8	-380			1521	0.069			10	15
4,5	3	4.00	1	12		N	2015			243	243	1.00	1791			0.8	-358			1433	0.170	0.170		25	25
4,5	3	4.50	1	8		N	2065			235	235	1.00	1739			0.8	-348			1391	0.169			25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25

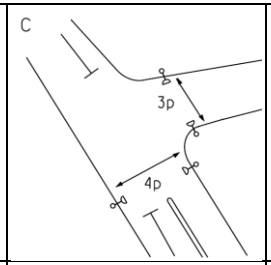


No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.382
Loss time	L =	41 sec
Total Flow	=	1009 pcu
Co = (1.5*L+5)/(1-Y)	=	107.6 sec
Cm = L/(1-Y)	=	66.3 sec
Yult	=	0.593
R.C.ult = (Yult-Y)/Y*100%	=	55.2 %
Cp = 0.9*L/(0.9-Y)	=	71.2 sec
Ymax = 1-L/C	=	0.590
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**39 %**



Stage 1 G= 23 Int = 5

Stage 2 G= 34 Int = 3



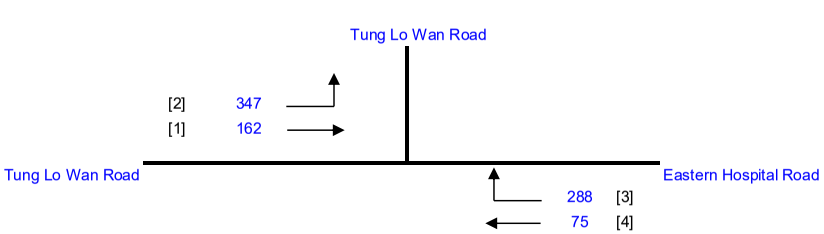
Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

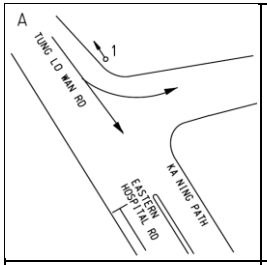
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
3,4	1	3.30	1	25			2085	53	265		318	0.17	2064							2064	0.154	0.154		24	24			
4	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			24	24			
1,2	2	3.65	1	12		N	1980		75	334	409	0.82	1797							1797	0.228	0.228		35	35			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

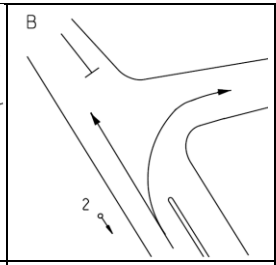
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



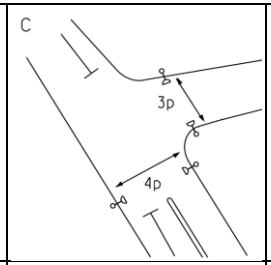
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.333
Loss time	L =	41 sec
Total Flow	=	872 pcu
Co = (1.5*L+5)/(1-Y)	=	99.7 sec
Cm = L/(1-Y)	=	61.5 sec
Yult	=	0.593
R.C.ult = (Yult-Y)/Y*100%	=	77.9 %
Cp = 0.9*L/(0.9-Y)	=	65.1 sec
Ymax = 1-L/C	=	0.590
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**59 %**



Stage 1 G= 22 Int = 5



Stage 2 G= 35 Int = 3



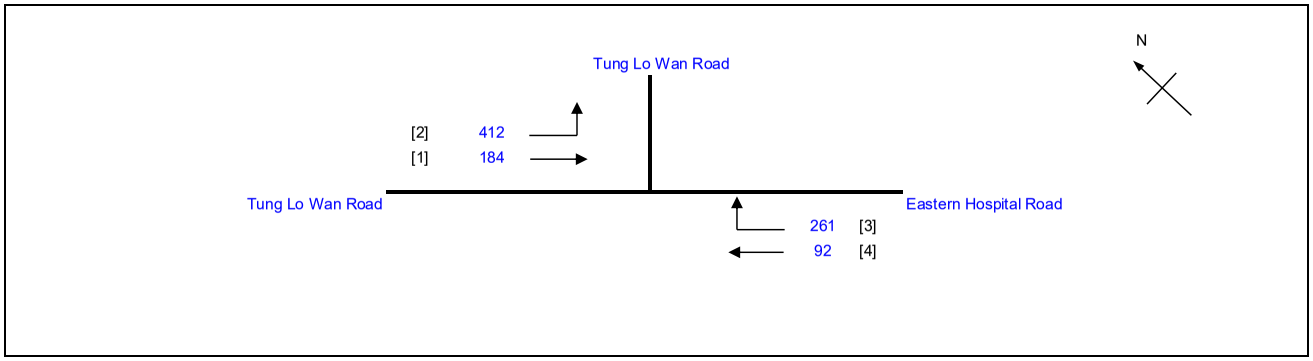
Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

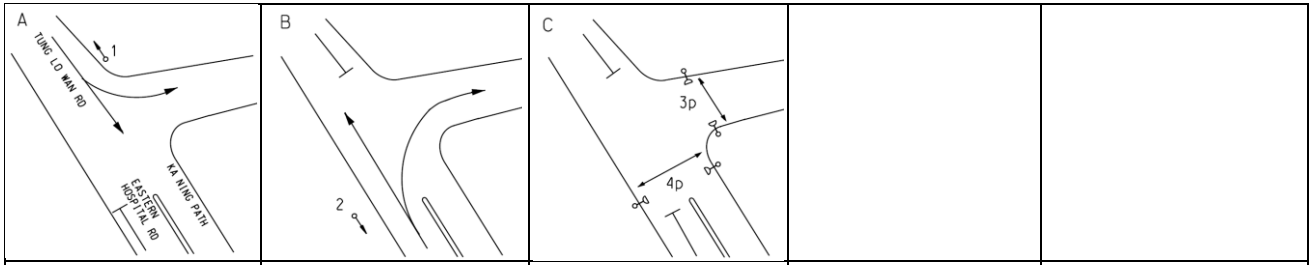
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						8		
3,4	1	3.30	1	25			2085	106	162		268	0.40	2037							2037	0.132	0.132		23	23
4	1	3.30	1	25		N	1945	241			241	1.00	1835							1835	0.131			23	23
1,2	2	3.65	1	12		N	1980		75	288	363	0.79	1801							1801	0.202	0.202		36	36
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.349
Loss time		L =	41 sec
Total Flow		=	949 pcu
Co	= (1.5*L+5)/(1-Y)	=	102.2 sec
Cm	= L/(1-Y)	=	63.0 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	69.7 %
Cp	= 0.9*L/(0.9-Y)	=	67.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**52 %**



Stage 1	G= 25	Stage 2	G= 32	Stage 3	G= 33
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
3,4	1	3.30	1	25			2085	130	184		314	0.41	2034							2034	0.154	0.154		26	26			
4	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			26	26			
1,2	2	3.65	1	12		N	1980		92	261	353	0.74	1812							1812	0.195	0.195		33	33			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

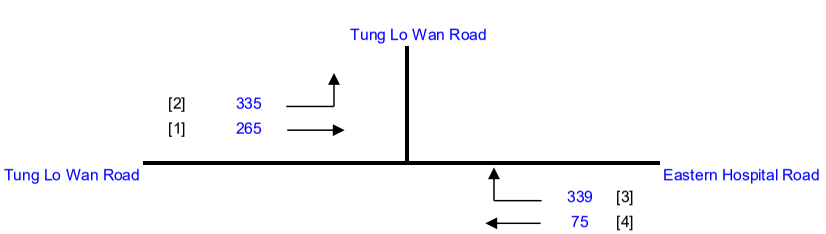
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

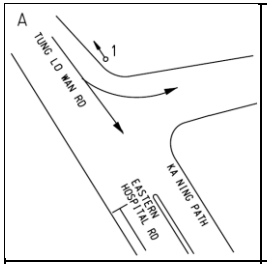
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Design AM

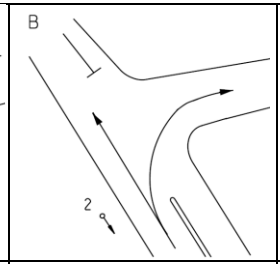
PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



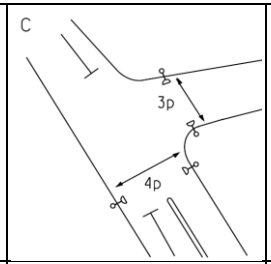
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.385
Loss time		L =	41 sec
Total Flow		=	1014 pcu
Co	= (1.5*L+5)/(1-Y)	=	108.1 sec
Cm	= L/(1-Y)	=	66.6 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	54.0 %
Cp	= 0.9*L/(0.9-Y)	=	71.6 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**38 %**



Stage 1 G= 23 Int = 5



Stage 2 G= 34 Int = 3



Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						8		
3,4	1	3.30	1	25			2085	52	265		317	0.16	2065							2065	0.154			24	24
4	1	3.30	1	25		N	1945	283			283	1.00	1835							1835	0.154	0.154		24	24
1,2	2	3.65	1	12		N	1980		75	339	414	0.82	1796							1796	0.230	0.230		35	35
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

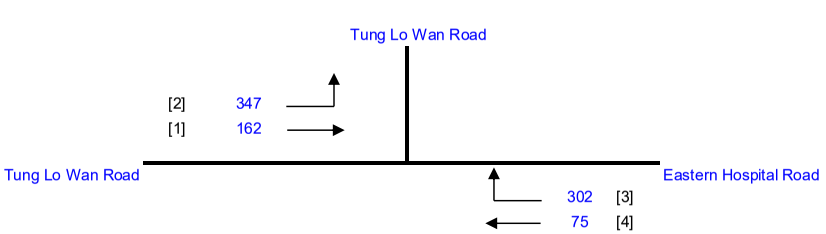
		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

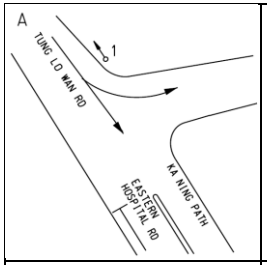
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Design PM

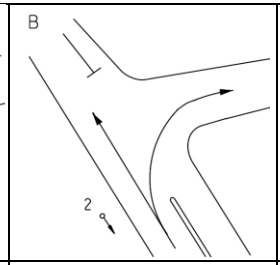
PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



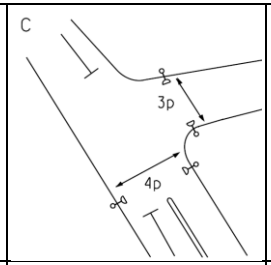
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.341
Loss time		L =	41 sec
Total Flow		=	886 pcu
Co	= (1.5*L+5)/(1-Y)	=	100.9 sec
Cm	= L/(1-Y)	=	62.2 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	73.7 %
Cp	= 0.9*L/(0.9-Y)	=	66.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**56 %**



Stage 1 G= 22 Int = 5



Stage 2 G= 35 Int = 3



Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						8		
3,4	1	3.30	1	25			2085	106	162		268	0.40	2037							2037	0.132	0.132		23	23
4	1	3.30	1	25		N	1945	241			241	1.00	1835							1835	0.131			23	23
1,2	2	3.65	1	12		N	1980		75	302	377	0.80	1800							1800	0.209	0.209		36	36
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

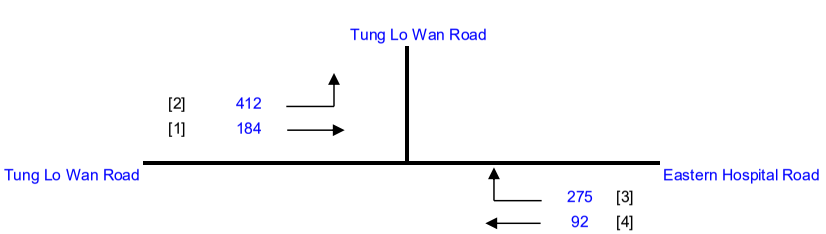
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

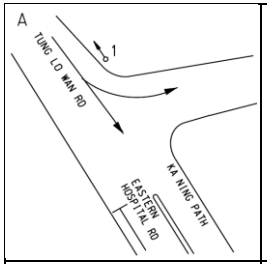
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Design Weekend

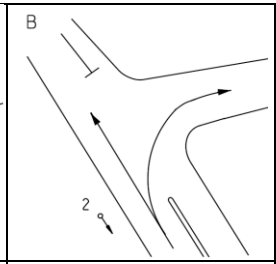
PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



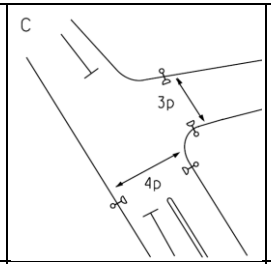
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.357
Loss time		L =	41 sec
Total Flow		=	963 pcu
Co	= (1.5*L+5)/(1-Y)	=	103.4 sec
Cm	= L/(1-Y)	=	63.8 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	65.9 %
Cp	= 0.9*L/(0.9-Y)	=	68.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**49 %**



Stage 1 G= 25 Int = 5



Stage 2 G= 32 Int = 3



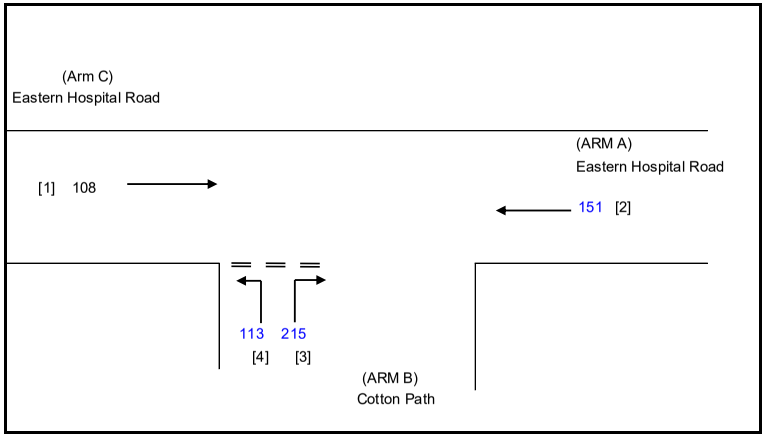
Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						8		
3,4	1	3.30	1	25			2085	130	184		314	0.41	2034							2034	0.154	0.154		26	26
4	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			25	26
1,2	2	3.65	1	12		N	1980		92	275	367	0.75	1810							1810	0.203	0.203		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Dec-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	151	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	108	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	215	(pcu/hr)
q b-c	=	113	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.3445122

THE CAPACITY OF MOVEMENT :

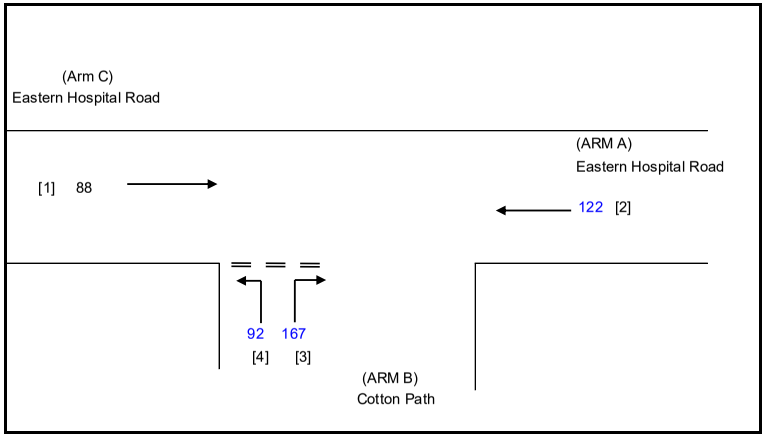
Q b-a	=	525		
Q b-c	=	725	Q b-c (O) =	650.8
Q c-b	=	412		
Q b-ac	=	580		
TOTAL FLOW	=	587	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4095
DFC b-c	=	0.1559
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1948

CRITICAL DFC = 0.41

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Dec-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	122	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	88	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	167	(pcu/hr)
q b-c	=	92	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.35521236

THE CAPACITY OF MOVEMENT :

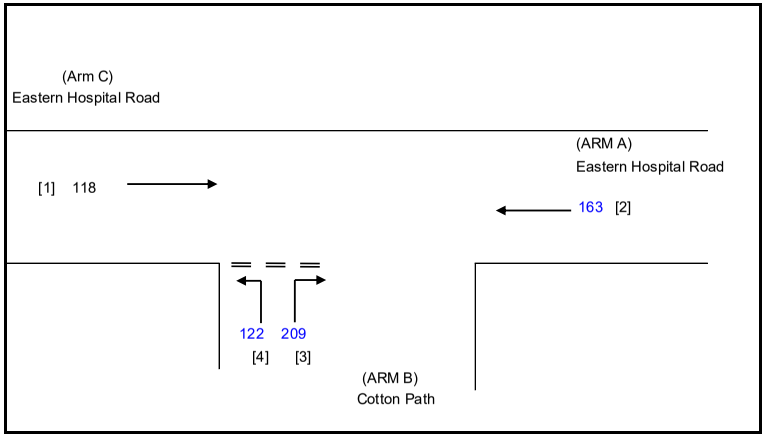
Q b-a	=	535		
Q b-c	=	734	Q b-c (O) =	676.7
Q c-b	=	417		
Q b-ac	=	592		
TOTAL FLOW	=	469	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3121
DFC b-c	=	0.1253
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1554

CRITICAL DFC = 0.31

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Dec-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	163	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	118	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	209	(pcu/hr)
q b-c	=	122	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.36858006

THE CAPACITY OF MOVEMENT :

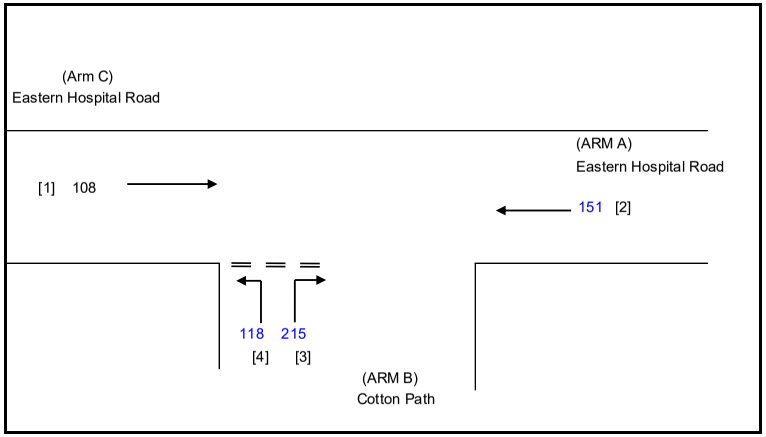
Q b-a	=	520		
Q b-c	=	722	Q b-c (O) =	649.5
Q c-b	=	411		
Q b-ac	=	580		
TOTAL FLOW	=	612	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4019
DFC b-c	=	0.1690
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2104

CRITICAL DFC = 0.40

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Dec-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	151	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	108	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	215	(pcu/hr)
q b-c	=	118	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.35435435

THE CAPACITY OF MOVEMENT :

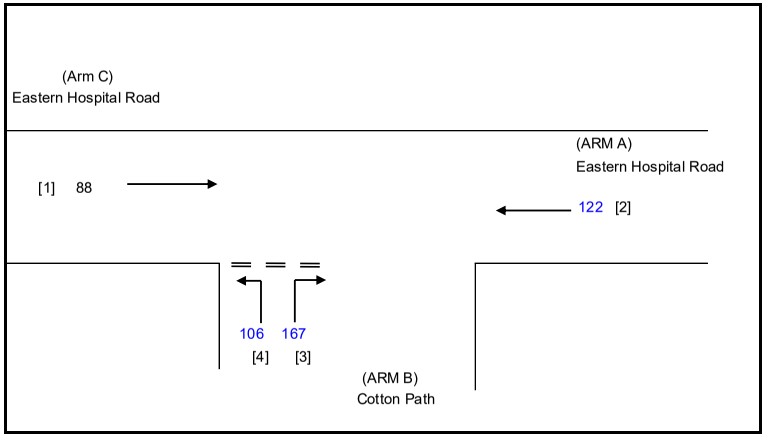
Q b-a	=	525		
Q b-c	=	725	Q b-c (O) =	650.8
Q c-b	=	412		
Q b-ac	=	582		
TOTAL FLOW	=	592	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4095
DFC b-c	=	0.1628
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2028

CRITICAL DFC = 0.41

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Dec-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	122	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	88	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	167	(pcu/hr)
q b-c	=	106	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.38827839

THE CAPACITY OF MOVEMENT :

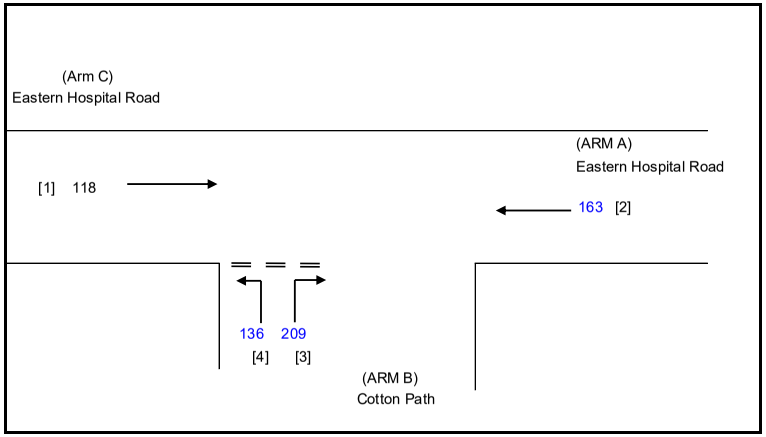
Q b-a	=	535		
Q b-c	=	734	Q b-c (O) =	676.7
Q c-b	=	417		
Q b-ac	=	598		
TOTAL FLOW	=	483	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3121
DFC b-c	=	0.1444
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1773

CRITICAL DFC = 0.31

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Dec-25
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	163	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	118	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	209	(pcu/hr)
q b-c	=	136	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.3942029

THE CAPACITY OF MOVEMENT :

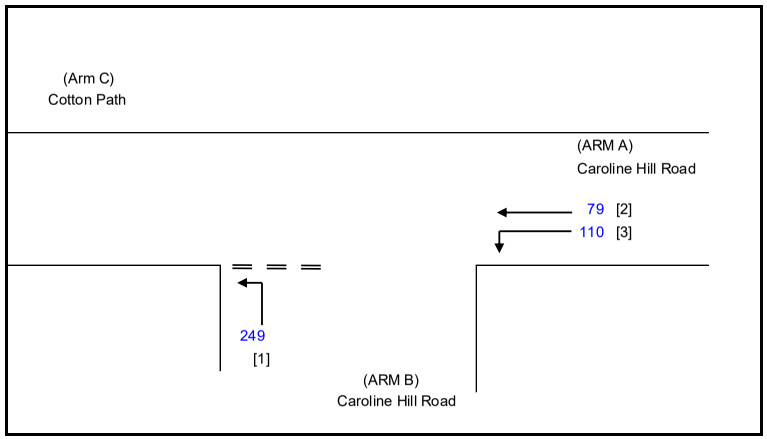
Q b-a	=	520		
Q b-c	=	722	Q b-c (O) =	649.5
Q c-b	=	411		
Q b-ac	=	584		
TOTAL FLOW	=	626	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.4019
DFC b-c	=	0.1884
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2327

CRITICAL DFC = 0.40

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Dec-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	110	(pcu/hr)
q a-c	=	79	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	249	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

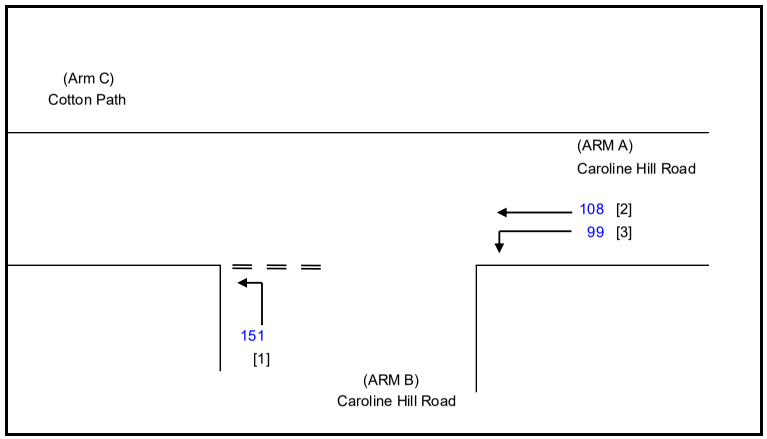
Q b-a	=	315		
Q b-c	=	720	Q b-c (O) =	720
Q c-b	=	405		
Q b-ac	=	720		
TOTAL FLOW	=	438	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.3458
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3458

CRITICAL DFC = 0.35

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Dec-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	99	(pcu/hr)
q a-c	=	108	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	151	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

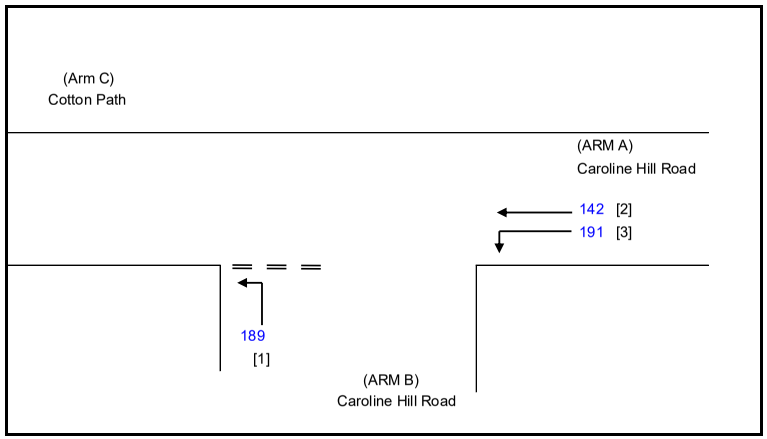
Q b-a	=	312		
Q b-c	=	713	Q b-c (O) =	713
Q c-b	=	402		
Q b-ac	=	713		
TOTAL FLOW	=	358	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2118
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2118

CRITICAL DFC = 0.21

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Dec-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	191	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	189	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

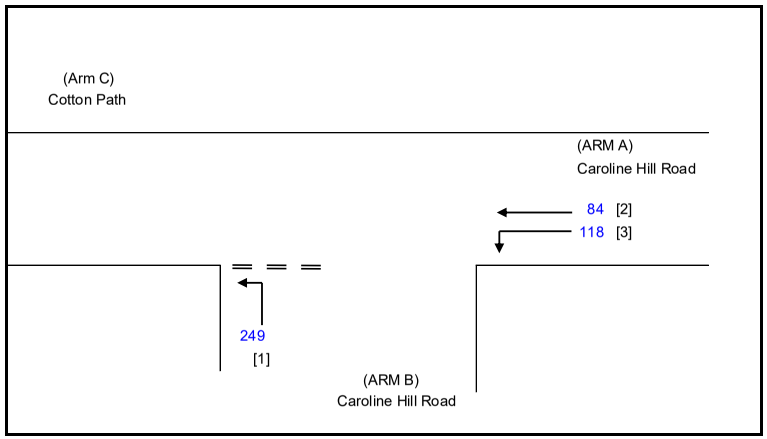
Q b-a	=	301		
Q b-c	=	692	Q b-c (O) =	692
Q c-b	=	380		
Q b-ac	=	692		
TOTAL FLOW	=	522	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2731
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2731

CRITICAL DFC = 0.27

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Dec-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	118	(pcu/hr)
q a-c	=	84	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	249	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

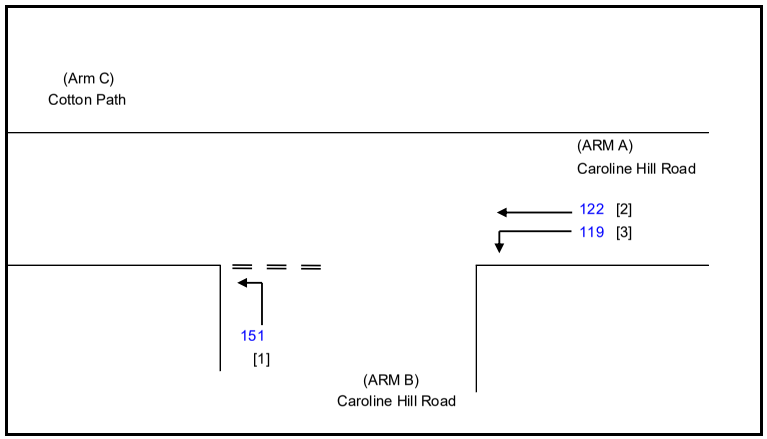
Q b-a	=	314		
Q b-c	=	717	Q b-c (O) =	717
Q c-b	=	402		
Q b-ac	=	717		
TOTAL FLOW	=	451	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.3473
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3473

CRITICAL DFC = 0.35

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Dec-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	119	(pcu/hr)
q a-c	=	122	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	151	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

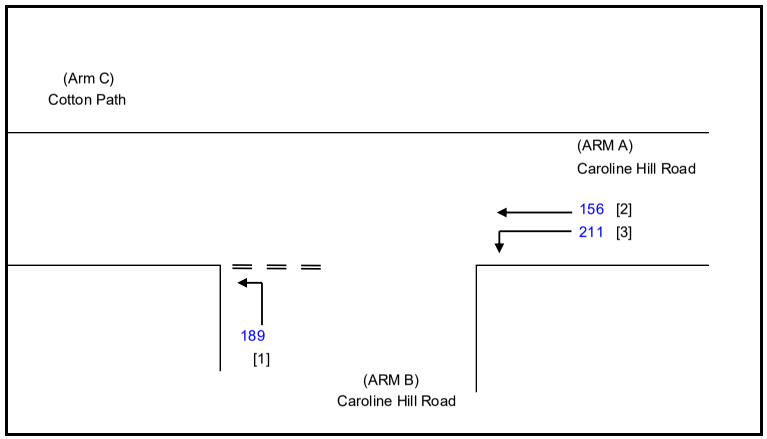
Q b-a	=	308		
Q b-c	=	706	Q b-c (O) =	706
Q c-b	=	396		
Q b-ac	=	706		
TOTAL FLOW	=	392	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2139
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2139

CRITICAL DFC = 0.21

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Dec-25
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	211	(pcu/hr)
q a-c	=	156	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	189	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

Q b-a	=	297			
Q b-c	=	686	Q b-c (O) =	686	
Q c-b	=	374			
Q b-ac	=	686			
TOTAL FLOW	=	556	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

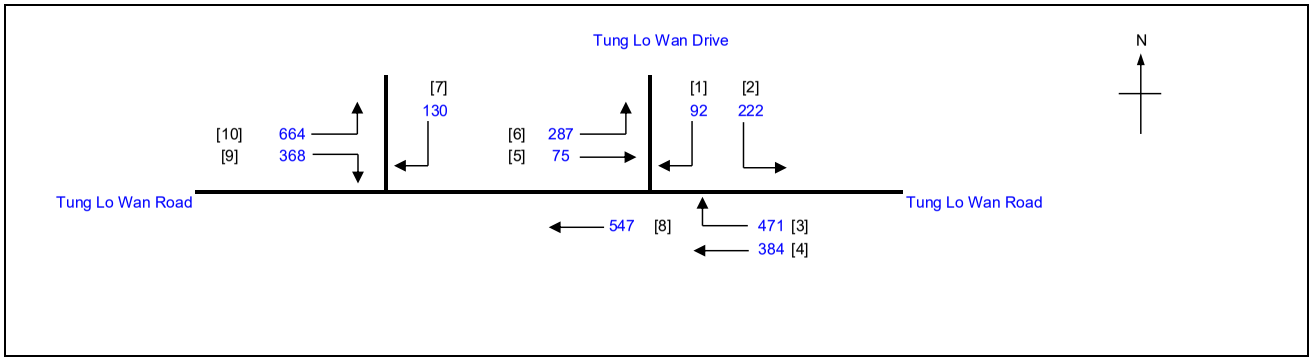
DFC b-a	=	0.0000
DFC b-c	=	0.2755
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2755

CRITICAL DFC = 0.28

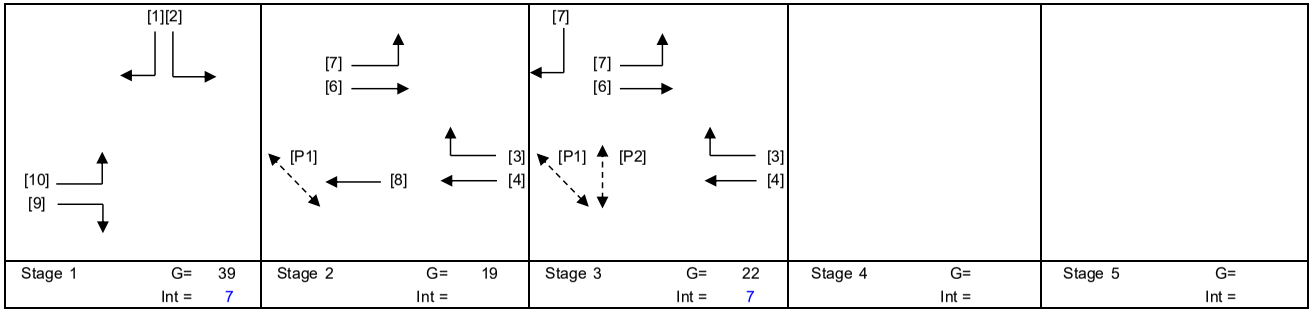
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2033 Reference AM**		
PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Dec-25
	Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.597
Loss time	L =	12 sec
Total Flow	=	3240 pcu
Co = (1.5*L+5)/(1-Y)	=	57.0 sec
Cm = L/(1-Y)	=	29.7 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	35.8 %
Cp = 0.9*L/(0.9-Y)	=	35.6 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**32 %**



Stage 1	G= 39	Int = 7
Stage 2	G= 19	Int =
Stage 3	G= 22	Int = 7
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		21	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		547		547	0.00	3970							3970	0.138			19	19	0.683	33	36
10	1	3.70	1	8		N	1985	485			485	1.00	1672							1672	0.290	0.290		40	40	0.683	42	25
9,10	1	3.50	1	13			2105	179		368	547	1.00	1887							1887	0.290			40	40	0.683	48	24
7	3	5.00	1	27		N	2115			130	130	1.00	2004							2004	0.065			9	23	0.683	18	56
4	2,3	3.70	1			N	1985		384		384	0.00	1985							1985	0.193			27	43	0.683	42	33
3,4	2,3	3.00	1	8	O		2055			471	471	1.00	1537							1537	0.306	0.306		43	43	0.683	36	24
5,6	2,3	5.00	1	13		N	2115	287	75		362	0.79	1938							1938	0.187			26	43	0.683	36	34
1,2	1	3.50	1	8		N	1965	222		92	314	1.00	1655							1655	0.190			26	40	0.683	36	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

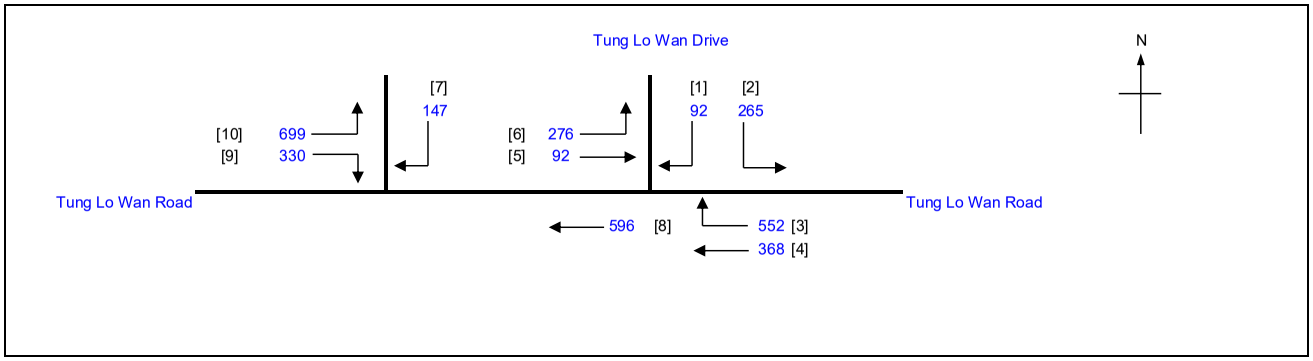
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Dec-25
	Reviewed By:	SLN	Dec-25

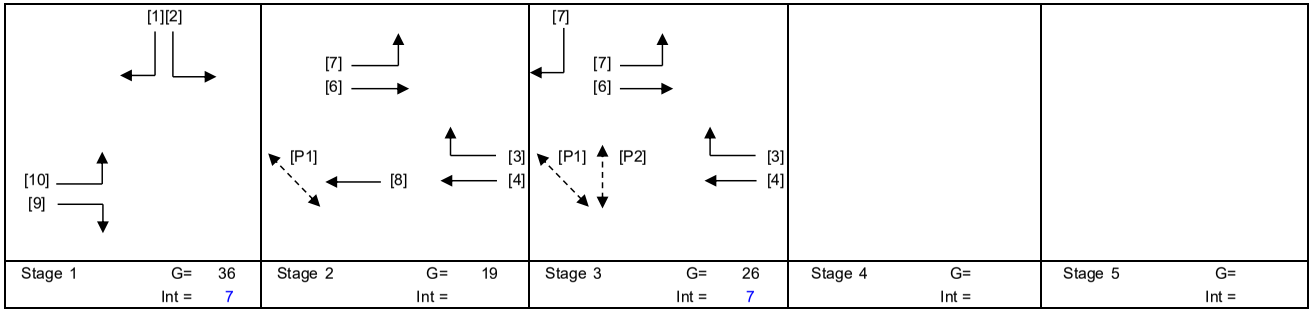
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J8 Tung Lo Wan Road / Moreton Terrace

2033 Reference PM



No. of stages per cycle		N =	3
Cycle time		C =	95 sec
Sum(y)		Y =	0.648
Loss time		L =	12 sec
Total Flow		=	3417 pcu
Co	= (1.5*L+5)/(1-Y)	=	65.4 sec
Cm	= L/(1-Y)	=	34.1 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	24.9 %
Cp	= 0.9*L/(0.9-Y)	=	42.9 sec
Ymax	= 1-L/C	=	0.874
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**21 %**



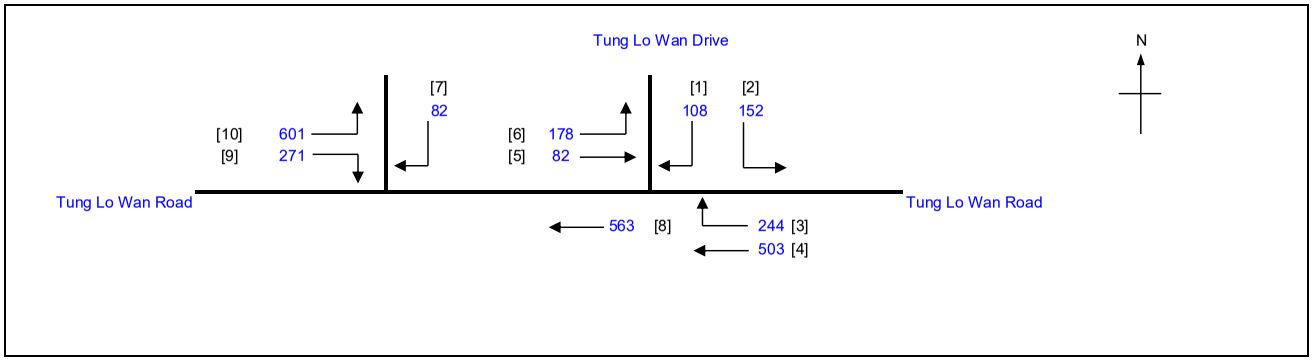
Stage 1	G= 36	Stage 2	G= 19	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		44	8
P2	3		9	8		25	8

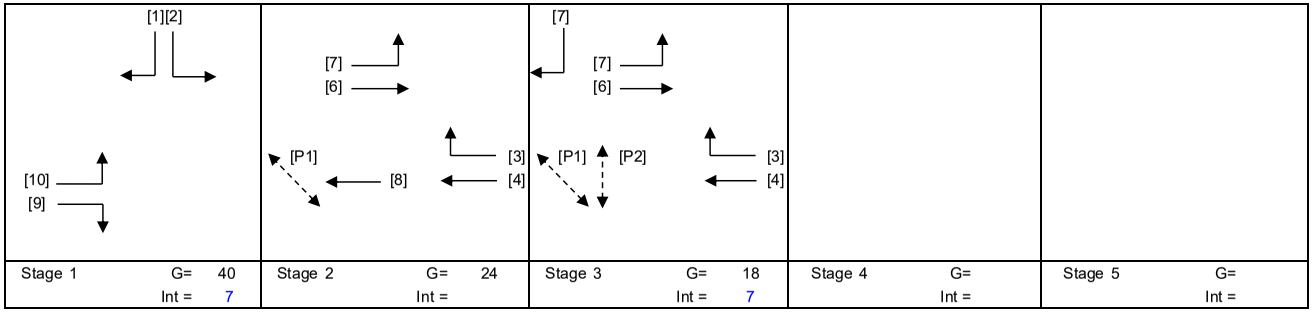
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		596		596	0.00	3970							3970	0.150			19	19	0.742	36	38
10	1	3.70	1	8		N	1985	483			483	1.00	1672							1672	0.289			37	37	0.742	42	30
9,10	1	3.50	1	13			2105	216		330	546	1.00	1887							1887	0.289	0.289		37	37	0.742	48	29
7	3	5.00	1	27		N	2115			147	147	1.00	2004							2004	0.073			9	27	0.742	24	61
4	2,3	3.70	1			N	1985		368		368	0.00	1985							1985	0.185			24	46	0.742	42	39
3,4	2,3	3.00	1	8	O		2055			552	552	1.00	1537							1537	0.359	0.359		46	46	0.742	42	24
5,6	2,3	5.00	1	13		N	2115	276	92		368	0.75	1947							1947	0.189			24	46	0.742	42	39
1,2	1	3.50	1	8		N	1965	265		92	357	1.00	1655							1655	0.216			28	37	0.742	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J8 Tung Lo Wan Road / Moreton Terrace		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.499
Loss time	L =	12 sec
Total Flow	=	2784 pcu
Co = (1.5*L+5)/(1-Y)	=	45.9 sec
Cm = L/(1-Y)	=	23.9 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	62.4 %
Cp = 0.9*L/(0.9-Y)	=	26.9 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**58 %**



Stage 1	G= 40	Int = 7
Stage 2	G= 24	Int =
Stage 3	G= 18	Int = 7
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		40	8
P2	3		9	8		17	8

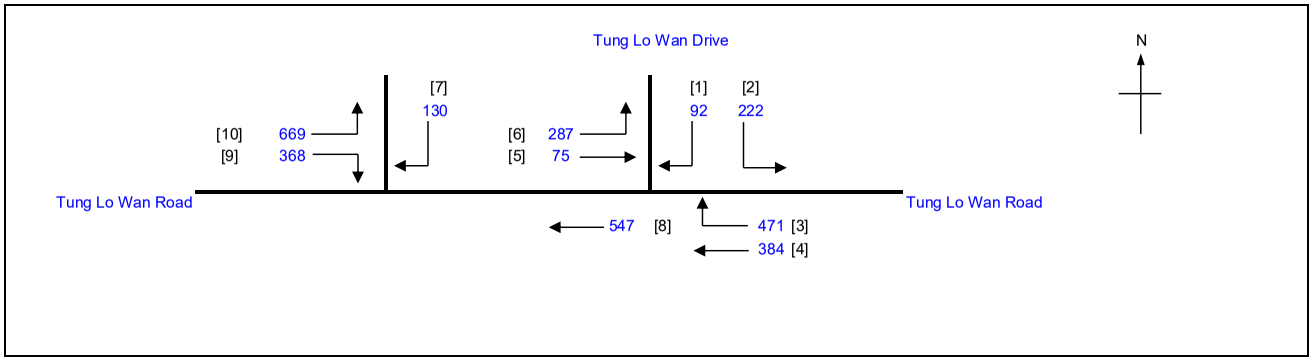
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		563		563	0.00	3970							3970	0.142			24	24	0.571	33	30
10	1	3.70	1	8		N	1985	410			410	1.00	1672							1672	0.245	0.245		41	41	0.571	36	21
9,10	1	3.50	1	13			2105	191		271	462	1.00	1887							1887	0.245			41	41	0.571	36	21
7	3	5.00	1	27		N	2115			82	82	1.00	2004							2004	0.041			7	19	0.571	12	53
4	2,3	3.70	1			N	1985		503		503	0.00	1985							1985	0.253	0.253		42	42	0.571	42	20
3,4	2,3	3.00	1	8	O		2055			244	244	1.00	1537							1537	0.159			26	42	0.571	24	32
5,6	2,3	5.00	1	13		N	2115	178	82		260	0.68	1960							1960	0.133			22	42	0.571	30	34
1,2	1	3.50	1	8		N	1965	152		108	260	1.00	1655							1655	0.157			26	41	0.571	24	31

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

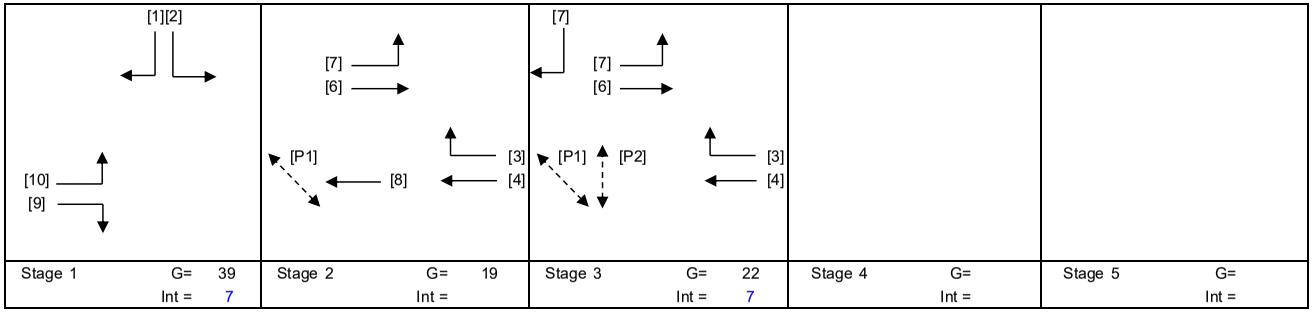
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Dec-25
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.598
Loss time	L =	12 sec
Total Flow	=	3245 pcu
Co = (1.5*L+5)/(1-Y)	=	57.2 sec
Cm = L/(1-Y)	=	29.8 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	35.5 %
Cp = 0.9*L/(0.9-Y)	=	35.8 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**32 %**



Stage 1	G= 39	Stage 2	G= 19	Stage 3	G= 22	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		21	8

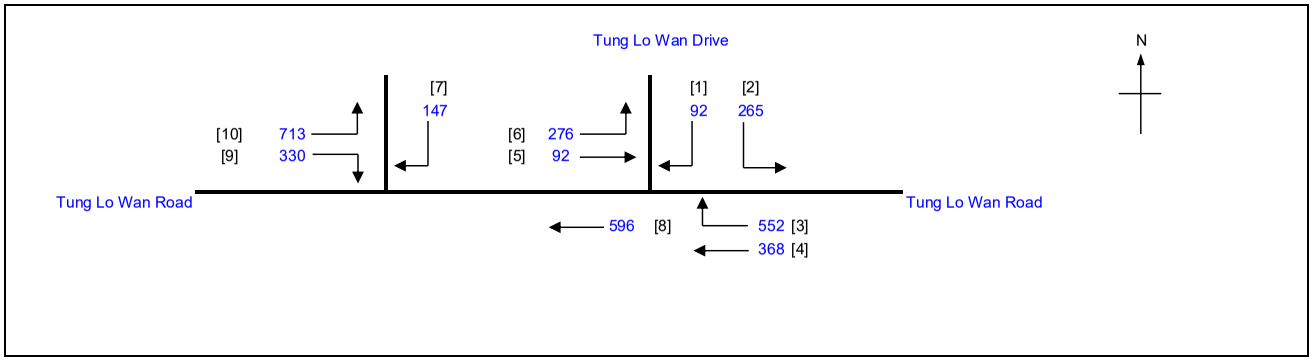
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		547		547	0.00	3970							3970	0.138			19	19	0.684	33	36
10	1	3.70	1	8		N	1985	487			487	1.00	1672							1672	0.291			40	40	0.684	42	25
9,10	1	3.50	1	13			2105	182		368	550	1.00	1887							1887	0.291	0.291		40	40	0.684	48	24
7	3	5.00	1	27		N	2115			130	130	1.00	2004							2004	0.065			9	23	0.684	18	56
4	2,3	3.70	1			N	1985		384		384	0.00	1985							1985	0.193			27	43	0.684	42	34
3,4	2,3	3.00	1	8	O		2055			471	471	1.00	1537							1537	0.306	0.306		43	43	0.684	36	24
5,6	2,3	5.00	1	13		N	2115	287	75		362	0.79	1938							1938	0.187			26	43	0.684	36	34
1,2	1	3.50	1	8		N	1965	222		92	314	1.00	1655							1655	0.190			26	40	0.684	36	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

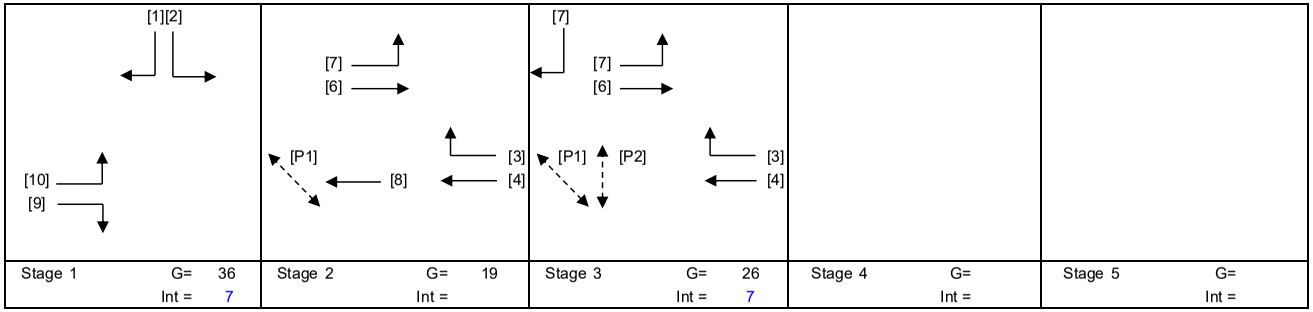
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Dec-25
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.652
Loss time	L =	12 sec
Total Flow	=	3431 pcu
Co = (1.5*L+5)/(1-Y)	=	66.2 sec
Cm = L/(1-Y)	=	34.5 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	24.2 %
Cp = 0.9*L/(0.9-Y)	=	43.6 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**21 %**



Stage 1	G= 36	Stage 2	G= 19	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		44	8
P2	3		9	8		25	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		596		596	0.00	3970							3970	0.150			19	19	0.747	36	38
10	1	3.70	1	8		N	1985	490			490	1.00	1672							1672	0.293	0.293		37	37	0.747	42	30
9,10	1	3.50	1	13			2105	223		330	553	1.00	1887							1887	0.293			37	37	0.747	48	29
7	3	5.00	1	27		N	2115			147	147	1.00	2004							2004	0.073			9	27	0.747	24	62
4	2,3	3.70	1			N	1985		368		368	0.00	1985							1985	0.185			24	46	0.747	42	39
3,4	2,3	3.00	1	8	O		2055			552	552	1.00	1537							1537	0.359	0.359		46	46	0.747	42	24
5,6	2,3	5.00	1	13		N	2115	276	92		368	0.75	1947							1947	0.189			24	46	0.747	42	39
1,2	1	3.50	1	8		N	1965	265		92	357	1.00	1655							1655	0.216			27	37	0.747	42	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

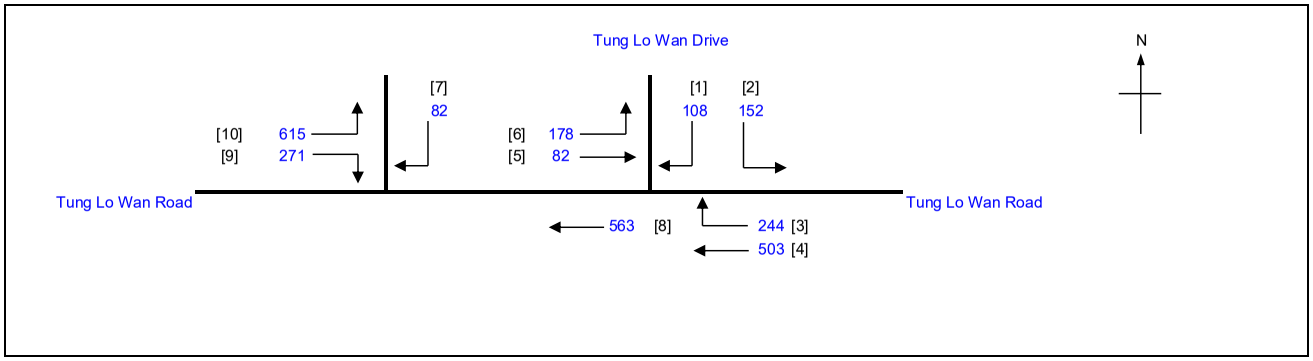
		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

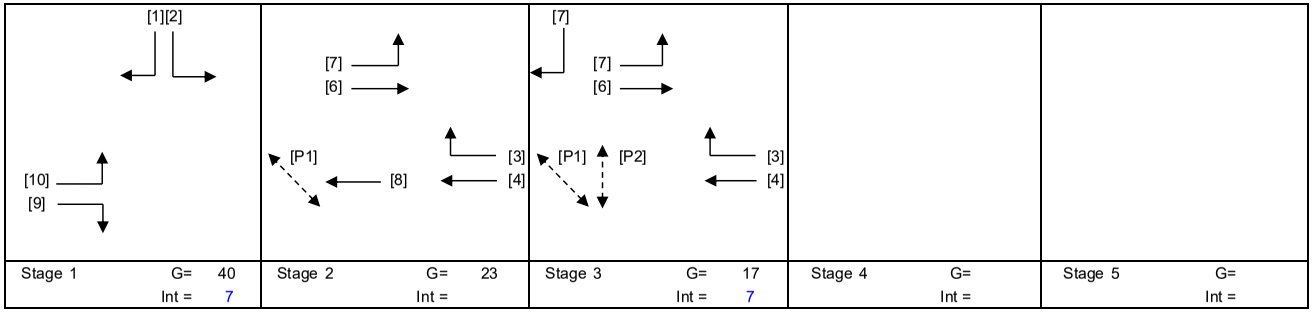
J8 Tung Lo Wan Road / Moreton Terrace

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J8_TLWR_MT.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.503
Loss time	L =	12 sec
Total Flow	=	2798 pcu
Co = (1.5*L+5)/(1-Y)	=	46.3 sec
Cm = L/(1-Y)	=	24.1 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	61.1 %
Cp = 0.9*L/(0.9-Y)	=	27.2 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**56 %**



Stage 1	G= 40	Stage 2	G= 23	Stage 3	G= 17	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		40	8
P2	3		9	8		16	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		563		563	0.00	3970							3970	0.142			23	23	0.576	33	31
10	1	3.70	1	8		N	1985	417			417	1.00	1672							1672	0.249	0.249		41	41	0.576	36	21
9,10	1	3.50	1	13			2105	198		271	469	1.00	1887							1887	0.249			41	41	0.576	42	21
7	3	5.00	1	27		N	2115			82	82	1.00	2004							2004	0.041			7	18	0.576	12	54
4	2,3	3.70	1			N	1985		503		503	0.00	1985							1985	0.253	0.253		42	42	0.576	42	20
3,4	2,3	3.00	1	8	O		2055			244	244	1.00	1537							1537	0.159			26	42	0.576	24	32
5,6	2,3	5.00	1	13		N	2115	178	82		260	0.68	1960							1960	0.133			22	42	0.576	30	34
1,2	1	3.50	1	8		N	1965	152		108	260	1.00	1655							1655	0.157			26	41	0.576	24	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

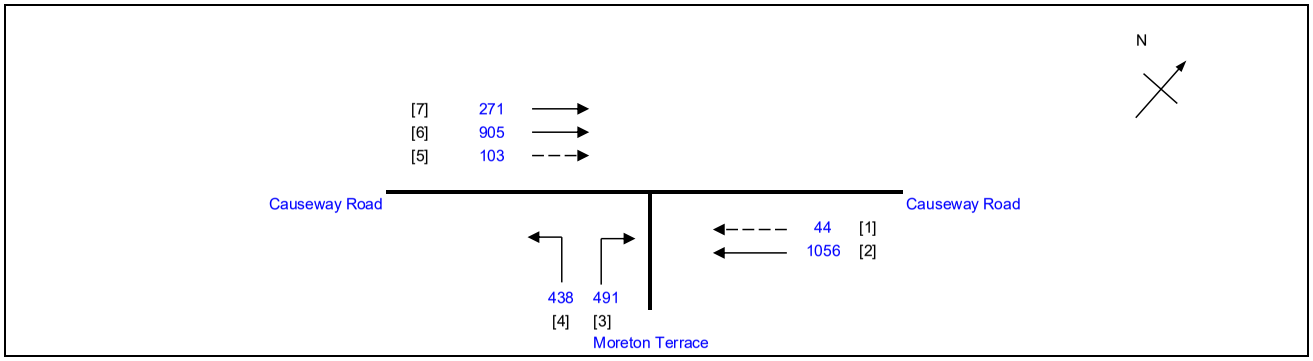
		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

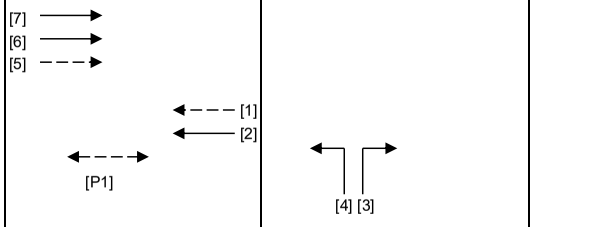
J9 Moreton Terrace / Causeway Road

2033 Reference AM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.599
Loss time	L =	10 sec
Total Flow	=	3308 pcu
Co = (1.5*L+5)/(1-Y)	=	49.9 sec
Cm = L/(1-Y)	=	25.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	37.7 %
Cp = 0.9*L/(0.9-Y)	=	29.9 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**34 %**



Stage 1	G= 60	Stage 2	G= 23
	Int = 5		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		284		284	0.00	1985			0.4	-1191			794	0.358			51	61	0.670	18	22
2	1	4.00	1				2155		772		772	0.00	2155							2155	0.358			51	61	0.670	54	17
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	61	0.670	6	91
4	2	3.50	1	9		N	1965	284			284	1.00	1684							1684	0.169			24	24	0.670	30	37
3,4	2	3.30	1	15			2085	154		167	321	1.00	1895							1895	0.169	0.169		24	24	0.670	36	36
3	2	3.50	1	15			2105			324	324	1.00	1914							1914	0.169			24	24	0.670	36	36
7	1	3.50	1			N	1965		271		271	0.00	1965							1965	0.138			20	61	0.670	30	39
6	1	3.50	1				2105		905		905	0.00	2105							2105	0.430	0.430		61	61	0.670	48	12
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			7	61	0.670	12	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

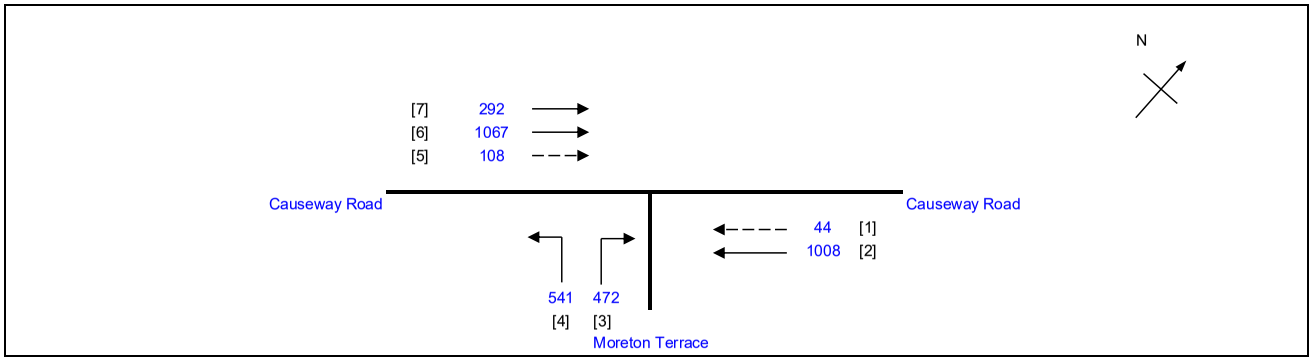
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

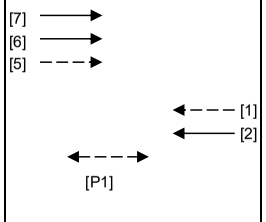
J9 Moreton Terrace / Causeway Road

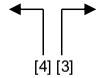
2033 Reference PM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.692
Loss time	L =	10 sec
Total Flow	=	3532 pcu
Co = (1.5*L+5)/(1-Y)	=	64.8 sec
Cm = L/(1-Y)	=	32.4 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	19.3 %
Cp = 0.9*L/(0.9-Y)	=	43.2 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**16 %**





Stage 1 G= 61 Int = 5

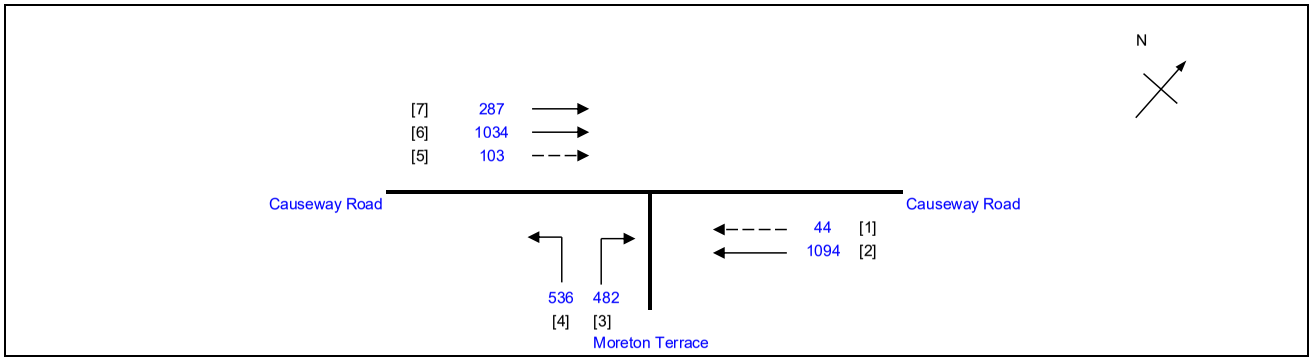
Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

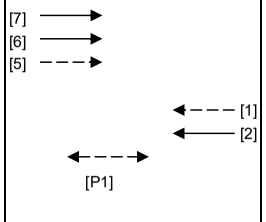
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		271		271	0.00	1985			0.4	-1191			794	0.341			42	62	0.773	24	36
2	1	4.00	1				2155		737		737	0.00	2155							2155	0.342			42	62	0.773	60	26
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.773	12	138
4	2	3.50	1	9		N	1965	311			311	1.00	1684							1684	0.185	0.185		23	23	0.773	36	44
3,4	2	3.30	1	15			2085	230		119	349	1.00	1895							1895	0.184			23	23	0.773	42	43
3	2	3.50	1	15			2105			353	353	1.00	1914							1914	0.184			23	23	0.773	42	42
7	1	3.50	1			N	1965		292		292	0.00	1965							1965	0.149			18	62	0.773	36	47
6	1	3.50	1				2105		1067		1067	0.00	2105							2105	0.507	0.507		62	62	0.773	54	14
5	1	3.00	1				2055		108		108	0.00	2055							2055	0.053			6	62	0.773	18	79

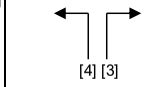
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J9 Moreton Terrace / Causeway Road		FILENAME : J9_MT_CR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.677
Loss time	L =	10 sec
Total Flow	=	3580 pcu
Co = (1.5*L+5)/(1-Y)	=	61.9 sec
Cm = L/(1-Y)	=	31.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	21.9 %
Cp = 0.9*L/(0.9-Y)	=	40.3 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**19 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		294		294	0.00	1985			0.4	-1191			794	0.370			46	62	0.757	24	31
2	1	4.00	1				2155		800		800	0.00	2155							2155	0.371			47	62	0.757	60	22
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.757	12	128
4	2	3.50	1	9		N	1965	312			312	1.00	1684							1684	0.185			23	23	0.757	36	42
3,4	2	3.30	1	15			2085	224		128	352	1.00	1895							1895	0.186	0.186		23	23	0.757	42	41
3	2	3.50	1	15			2105			354	354	1.00	1914							1914	0.185			23	23	0.757	42	41
7	1	3.50	1			N	1965		287		287	0.00	1965							1965	0.146			18	62	0.757	36	46
6	1	3.50	1				2105		1034		1034	0.00	2105							2105	0.491	0.491		62	62	0.757	54	14
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			6	62	0.757	18	76

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

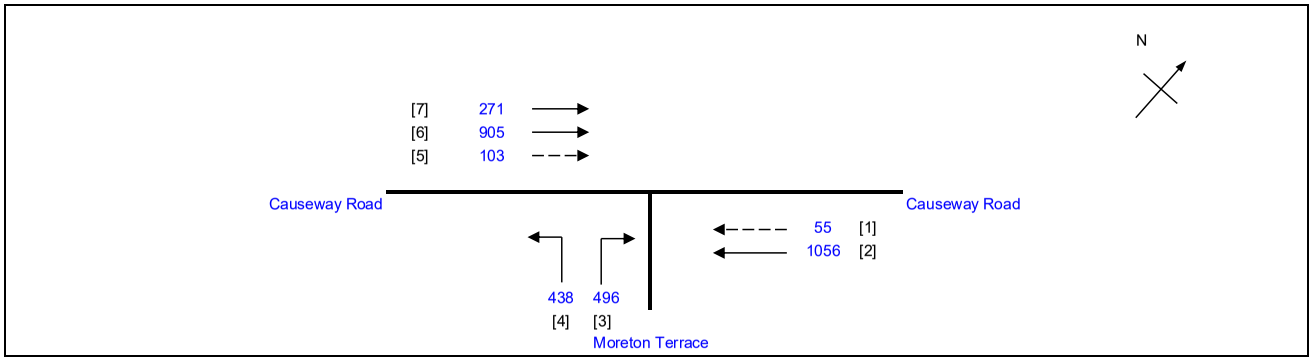
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J9 Moreton Terrace / Causeway Road

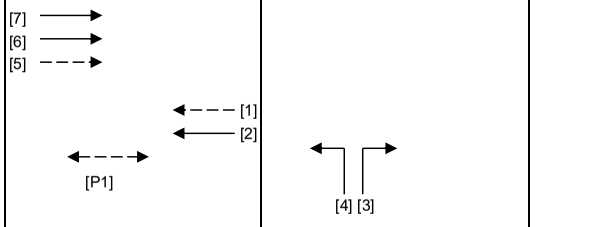
2033 Design AM

PROJECT NO.: 40920

FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.600
Loss time	L =	10 sec
Total Flow	=	3324 pcu
Co = (1.5*L+5)/(1-Y)	=	50.0 sec
Cm = L/(1-Y)	=	25.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	37.4 %
Cp = 0.9*L/(0.9-Y)	=	30.0 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**34 %**



Stage 1 G= 60 Int = 5

Stage 2 G= 23 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		284		284	0.00	1985			0.4	-1191			794	0.358			51	61	0.671	18	22
2	1	4.00	1				2155		772		772	0.00	2155							2155	0.358			51	61	0.671	54	17
1	1	3.00	1			N	1915		55		55	0.00	1915							1915	0.029			4	61	0.671	6	81
4	2	3.50	1	9		N	1965	286		170	286	1.00	1684							1684	0.170			24	24	0.671	30	36
3,4	2	3.30	1	15			2085	152		170	322	1.00	1895							1895	0.170			24	24	0.671	36	36
3	2	3.50	1	15			2105			326	326	1.00	1914							1914	0.170	0.170		24	24	0.671	36	35
7	1	3.50	1			N	1965		271		271	0.00	1965							1965	0.138			20	61	0.671	30	39
6	1	3.50	1				2105		905		905	0.00	2105							2105	0.430	0.430		61	61	0.671	48	12
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			7	61	0.671	12	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

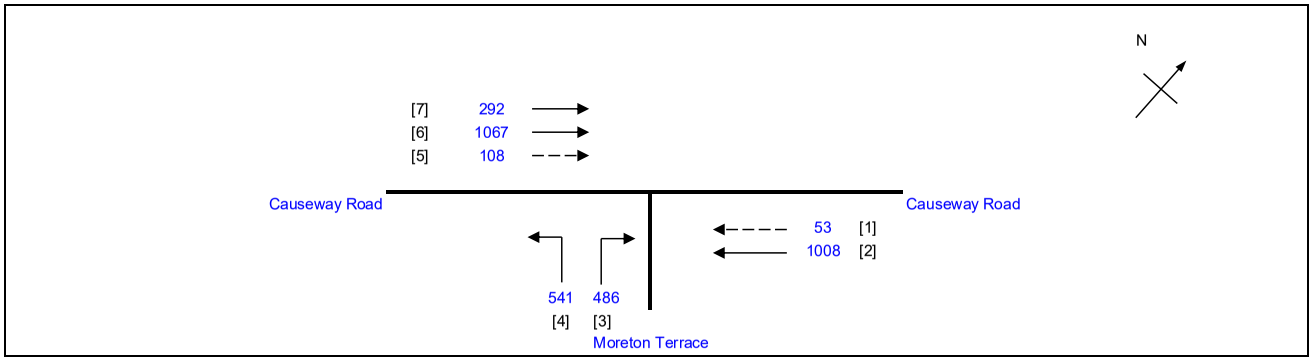
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

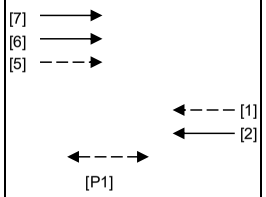
J9 Moreton Terrace / Causeway Road

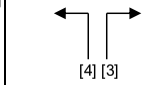
2033 Design PM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.694
Loss time	L =	10 sec
Total Flow	=	3555 pcu
Co = (1.5*L+5)/(1-Y)	=	65.4 sec
Cm = L/(1-Y)	=	32.7 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	18.8 %
Cp = 0.9*L/(0.9-Y)	=	43.7 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**16 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		271		271	0.00	1985			0.4	-1191			794	0.341			42	62	0.776	24	36
2	1	4.00	1				2155		737		737	0.00	2155							2155	0.342			42	62	0.776	60	26
1	1	3.00	1			N	1915		53		53	0.00	1915							1915	0.028			3	62	0.776	12	123
4	2	3.50	1	9		N	1965	314		128	314	1.00	1684							1684	0.186			23	23	0.776	42	44
3,4	2	3.30	1	15			2085	227			355	1.00	1895							1895	0.187	0.187		23	23	0.776	42	43
3	2	3.50	1	15			2105			358	358	1.00	1914							1914	0.187			23	23	0.776	42	42
7	1	3.50	1			N	1965		292		292	0.00	1965							1965	0.149			18	62	0.776	36	48
6	1	3.50	1				2105		1067		1067	0.00	2105							2105	0.507	0.507		62	62	0.776	54	14
5	1	3.00	1				2055		108		108	0.00	2055							2055	0.053			6	62	0.776	18	79

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

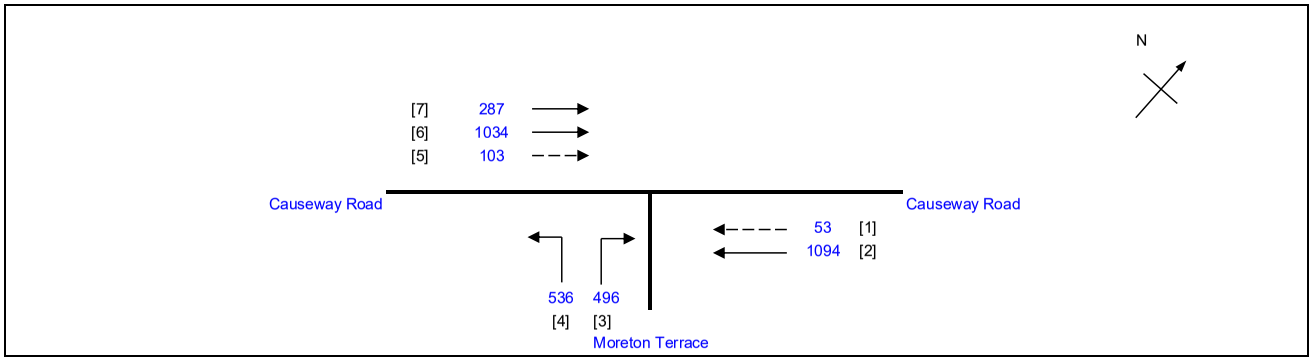
		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

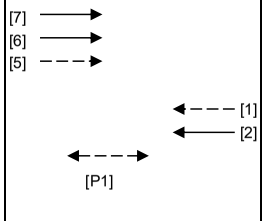
J9 Moreton Terrace / Causeway Road

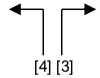
2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	95 sec
Sum(y)		Y =	0.679
Loss time		L =	10 sec
Total Flow		=	3603 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.4 sec
Cm	= L/(1-Y)	=	31.2 sec
Yult		=	0.825
R.C.ult	= (Yult-Y)/Y*100%	=	21.4 %
Cp	= 0.9*L/(0.9-Y)	=	40.8 sec
Ymax	= 1-L/C	=	0.895
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**19 %**





Stage 1 G= 60 Int = 5

Stage 2 G= 23 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		294		294	0.00	1985			0.4	-1191			794	0.370			46	61	0.759	24	31
2	1	4.00	1				2155		800		800	0.00	2155							2155	0.371			46	61	0.759	60	23
1	1	3.00	1			N	1915		53		53	0.00	1915							1915	0.028			3	61	0.759	12	114
4	2	3.50	1	9		N	1965	316			316	1.00	1684							1684	0.188			23	24	0.759	36	42
3,4	2	3.30	1	15			2085	220		136	356	1.00	1895							1895	0.188			24	24	0.759	42	41
3	2	3.50	1	15			2105			360	360	1.00	1914							1914	0.188	0.188		24	24	0.759	42	41
7	1	3.50	1			N	1965		287		287	0.00	1965							1965	0.146			18	61	0.759	36	46
6	1	3.50	1				2105		1034		1034	0.00	2105							2105	0.491	0.491		61	61	0.759	54	14
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			6	61	0.759	18	77

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

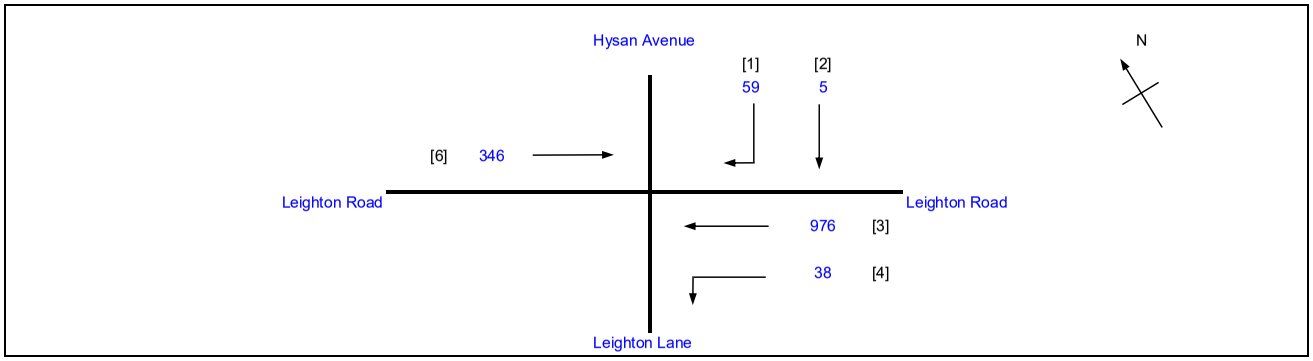
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

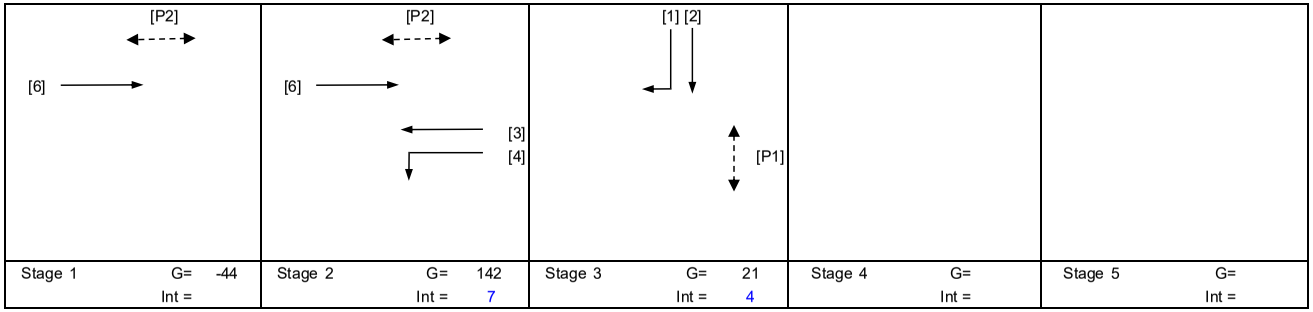
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Reference AM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.176
Loss time		L =	31 sec
Total Flow		=	1424 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.5 sec
Cm	= L/(1-Y)	=	37.6 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	279.1 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**289 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	38	449		487	0.08	1920							1920	0.254			143	143	0.231	-6	1
3	2	3.20	1				2075		527		527	0.00	2075							2075	0.254			143	143	0.231	-6	1
6	1,2	3.50	1			N	1965		346		346	0.00	1965							1965	0.176	0.176		99	99	0.231	12	4
1,2	3	3.30	1	17		N	1945		5	29	34	0.85	1809							1809	0.019			11	21	0.231	6	54
1	3	3.00	1	10	O		2055			30	30	1.00	1587							1587	0.019			11	21	0.231	0	54
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

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Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Reference PM

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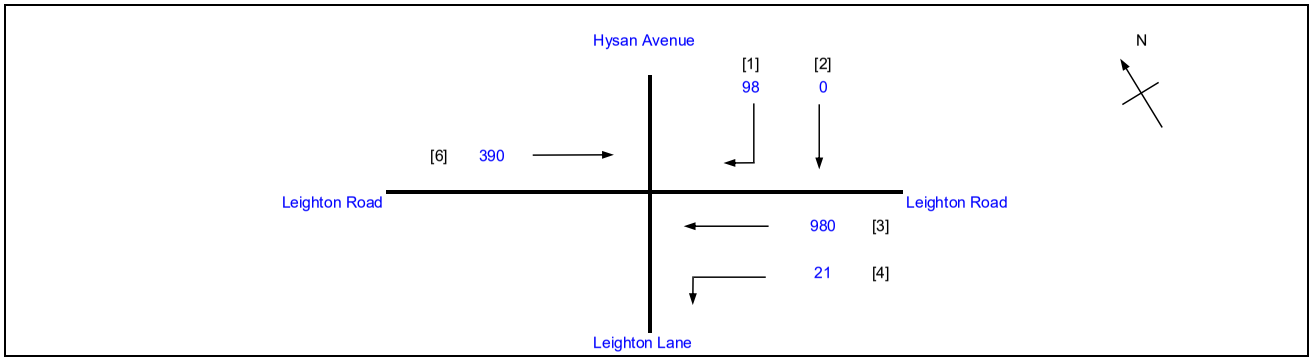
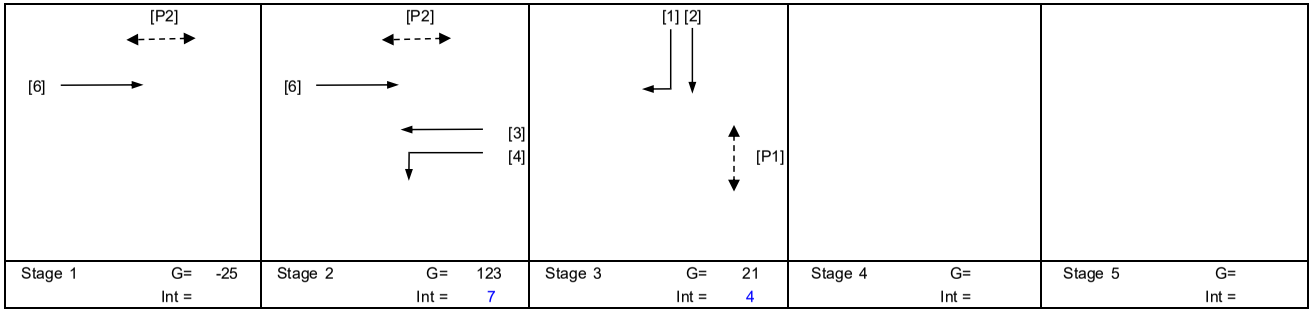
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.198
Loss time		L =	31 sec
Total Flow		=	1489 pcu
Co	= (1.5*L+5)/(1-Y)	=	64.3 sec
Cm	= L/(1-Y)	=	38.7 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	236.3 %
Cp	= 0.9*L/(0.9-Y)	=	39.8 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**245 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	21	463		484	0.04	1940							1940	0.250			124	124	0.261	0	0
3	2	3.20	1				2075		517		517	0.00	2075							2075	0.249			124	124	0.261	0	0
6	1,2	3.50	1			N	1965		390		390	0.00	1965							1965	0.198	0.198		99	99	0.261	18	5
1,2	3	3.30	1	17		N	1945		0	51	51	1.00	1787							1787	0.029			14	21	0.261	6	51
1	3	3.00	1	10	O		2055			47	47	1.00	1587							1587	0.030			15	21	0.261	6	51
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

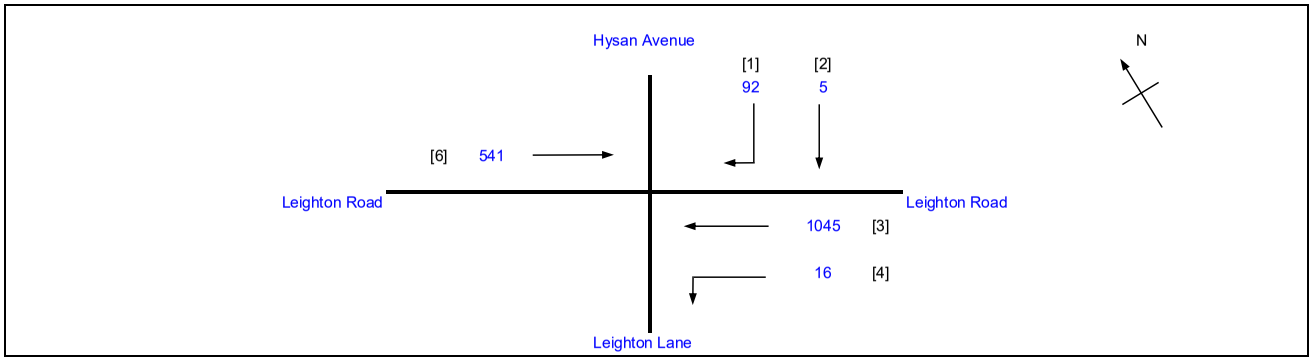
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

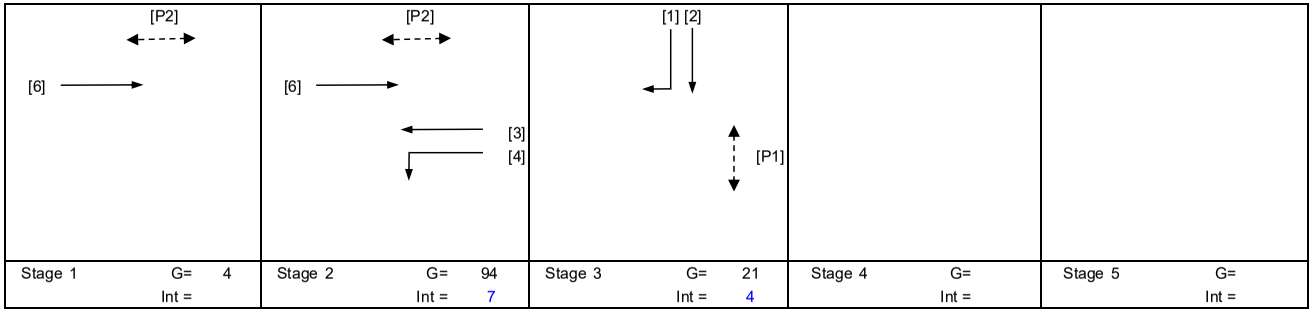
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.275
Loss time		L =	31 sec
Total Flow		=	1699 pcu
Co	= (1.5*L+5)/(1-Y)	=	71.1 sec
Cm	= L/(1-Y)	=	42.8 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	142.4 %
Cp	= 0.9*L/(0.9-Y)	=	44.7 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**149 %**



Stage 1	G= 4	Int =	Stage 2	G= 94	Int = 7	Stage 3	G= 21	Int = 4	Stage 4	G=	Int =	Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10				
3,4	2	3.50	1	5		N	1965	16	498		514	0.03	1947							1947	0.264			95	95	0.362	30	6
3	2	3.20	1				2075		547		547	0.00	2075							2075	0.264			95	95	0.362	30	6
6	1,2	3.50	1			N	1965		541		541	0.00	1965							1965	0.275	0.275		99	99	0.362	24	5
1,2	3	3.30	1	17		N	1945		5	47	52	0.90	1801							1801	0.029			10	21	0.362	6	57
1	3	3.00	1	10	O		2055			45	45	1.00	1587							1587	0.028			10	21	0.362	6	59
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
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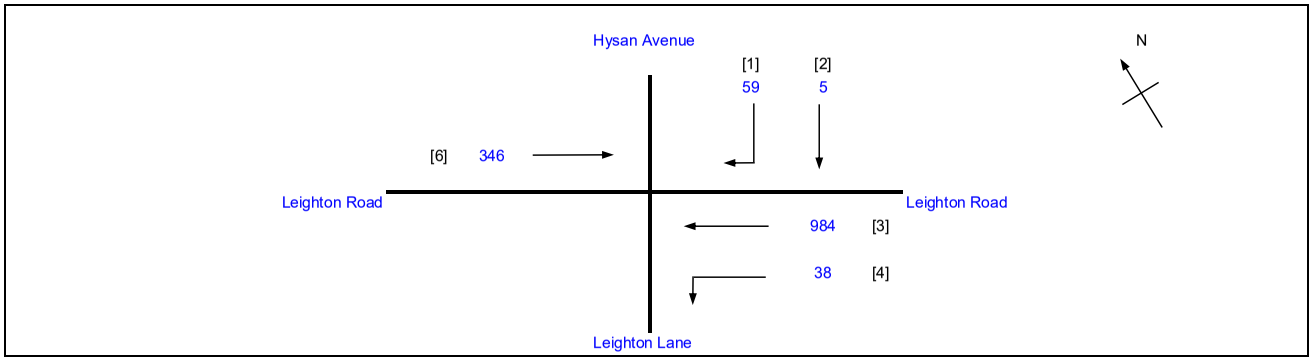
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

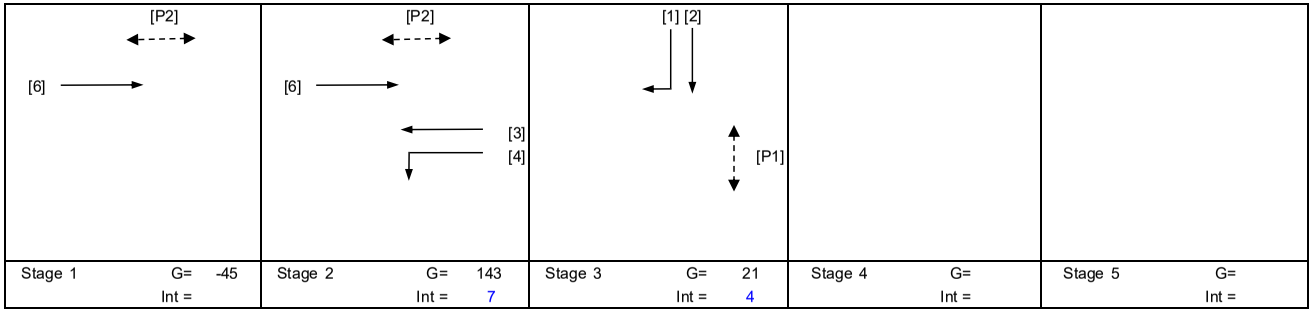
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Design AM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.176
Loss time		L =	31 sec
Total Flow		=	1432 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.5 sec
Cm	= L/(1-Y)	=	37.6 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	279.1 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**289 %**



Stage 1	G=	-45	Stage 2	G=	143	Stage 3	G=	21	Stage 4 G= Stage 5 G=
	Int =			Int =	7		Int =	4	Int = Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	38	453		491	0.08	1920							1920	0.256			144	144	0.231	-6	1
3	2	3.20	1				2075		531		531	0.00	2075							2075	0.256			144	144	0.231	-6	1
6	1,2	3.50	1			N	1965		346		346	0.00	1965							1965	0.176	0.176		99	99	0.231	12	4
1,2	3	3.30	1	17		N	1945		5	29	34	0.85	1809							1809	0.019			11	21	0.231	6	54
1	3	3.00	1	10	O		2055			30	30	1.00	1587							1587	0.019			11	21	0.231	0	54
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

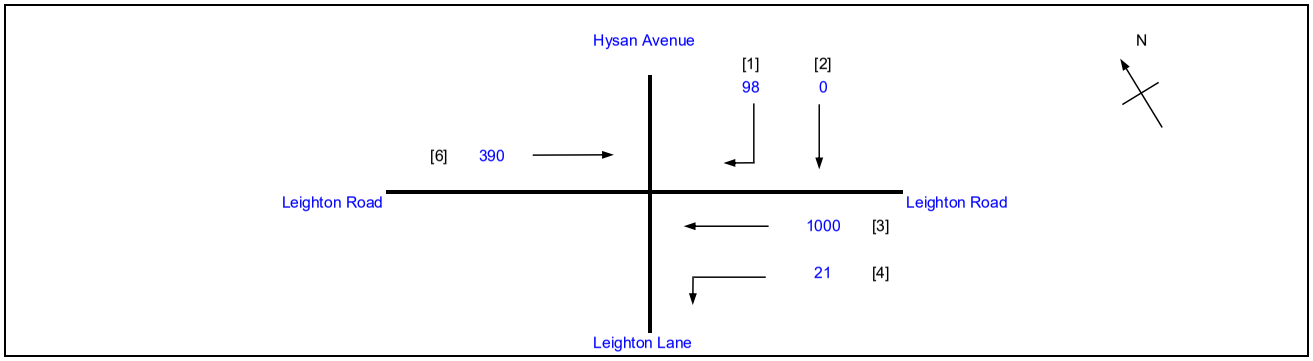
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

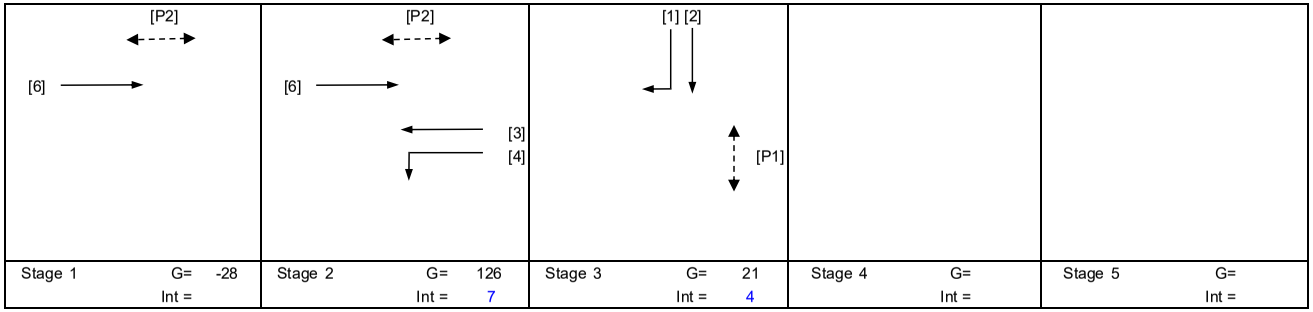
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Design PM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.198
Loss time		L =	31 sec
Total Flow		=	1509 pcu
Co	= (1.5*L+5)/(1-Y)	=	64.3 sec
Cm	= L/(1-Y)	=	38.7 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	236.3 %
Cp	= 0.9*L/(0.9-Y)	=	39.8 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**245 %**



Stage 1	G= -28	Int =	Stage 2	G= 126	Int = 7	Stage 3	G= 21	Int = 4	Stage 4	G=	Int =	Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	21	472		493	0.04	1940							1940	0.254			127	127	0.261	0	0
3	2	3.20	1				2075		528		528	0.00	2075							2075	0.254			127	127	0.261	0	0
6	1,2	3.50	1			N	1965		390		390	0.00	1965							1965	0.198	0.198		99	99	0.261	18	5
1,2	3	3.30	1	17		N	1945		0	52	52	1.00	1787							1787	0.029			15	21	0.261	6	50
1	3	3.00	1	10	O		2055			46	46	1.00	1587							1587	0.029			14	21	0.261	6	51
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

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J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Design Weekend

PROJECT NO.: 40920
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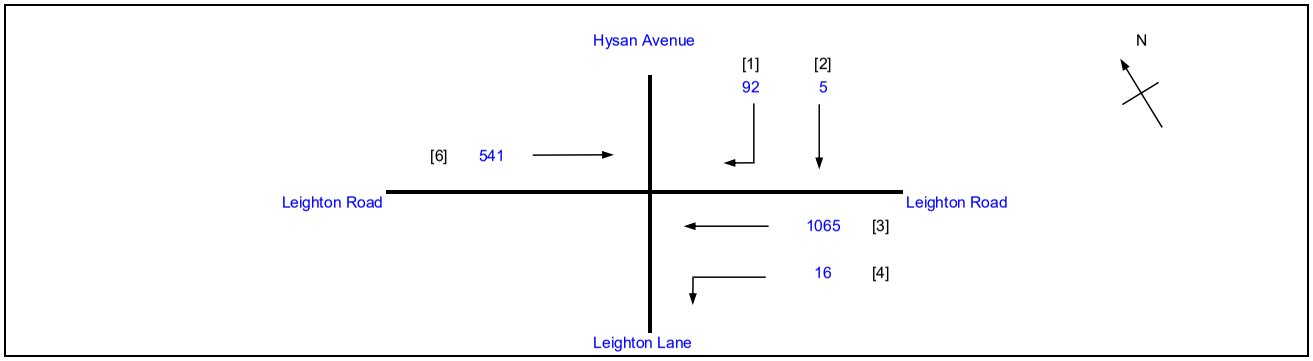
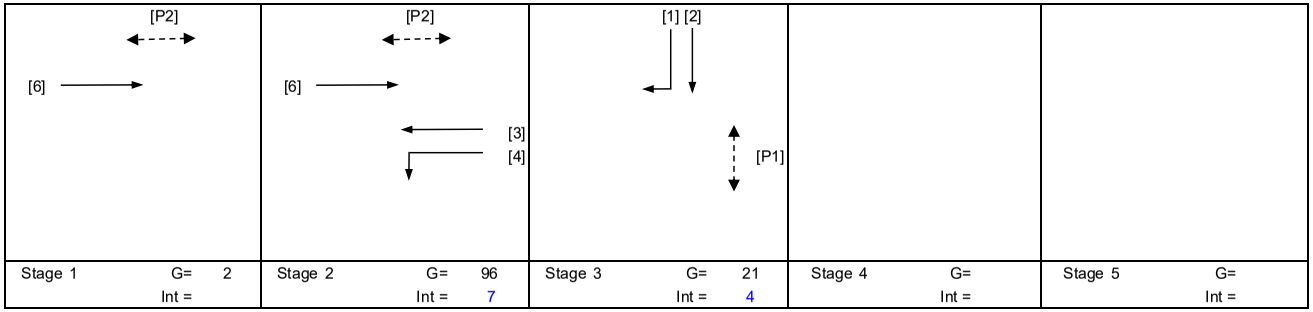


No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.275
Loss time		L =	31 sec
Total Flow		=	1719 pcu
Co	= (1.5*L+5)/(1-Y)	=	71.1 sec
Cm	= L/(1-Y)	=	42.8 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	142.4 %
Cp	= 0.9*L/(0.9-Y)	=	44.7 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**149 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	16	507		523	0.03	1947							1947	0.269			97	97	0.362	24	6
3	2	3.20	1				2075		558		558	0.00	2075							2075	0.269			97	97	0.362	30	6
6	1,2	3.50	1			N	1965		541		541	0.00	1965							1965	0.275	0.275		99	99	0.362	24	5
1,2	3	3.30	1	17		N	1945		5	47	52	0.90	1801							1801	0.029			10	21	0.362	6	57
1	3	3.00	1	10	O		2055			45	45	1.00	1587							1587	0.028			10	21	0.362	6	59
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

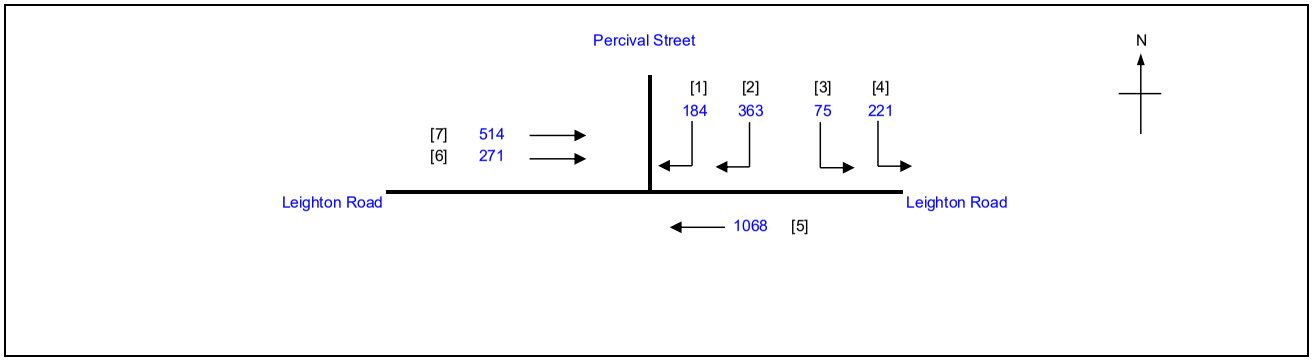
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

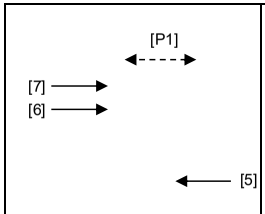
2033 Reference AM

PROJECT NO.: 40920

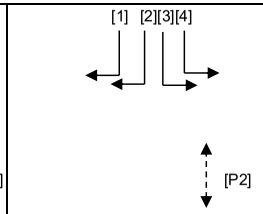
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.561
Loss time		L =	14 sec
Total Flow		=	2696 pcu
Co	= (1.5*L+5)/(1-Y)	=	59.2 sec
Cm	= L/(1-Y)	=	31.9 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	41.8 %
Cp	= 0.9*L/(0.9-Y)	=	37.1 sec
Ymax	= 1-L/C	=	0.892
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**43 %**



Stage 1 G= 69 Int = 8



Stage 2 G= 45 Int = 8

Stage 3 G= Int =

Stage 4 G= Int =

Stage 5 G= Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		70	7
P2	2		5	12		41	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		522		522	0.00	1965			0.8	-393			1572	0.332			69	70	0.628	48	23
5	1	3.00	1				2055		546		546	0.00	2055			0.8	-411			1644	0.332			69	70	0.628	54	23
6,7	1	2.50	1			N	1865		378		378	0.00	1865			0.6	-746			1119	0.338			70	70	0.628	36	23
6,7	1	2.50	1				2005		407		407	0.00	2005			0.6	-802			1203	0.338	0.338		70	70	0.628	36	23
3,4	2	4.00	1	25		N	2015	296			296	1.00	1901			0.7	-570			1331	0.222	0.222		46	46	0.628	36	37
1,2	2	5.00	1	25		N	2115			317	317	1.00	1995			0.8	-399			1596	0.199			41	46	0.628	42	40
1,2	2	3.30	1	20			2085			230	230	1.00	1940			0.6	-776			1164	0.198			41	46	0.628	30	42

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

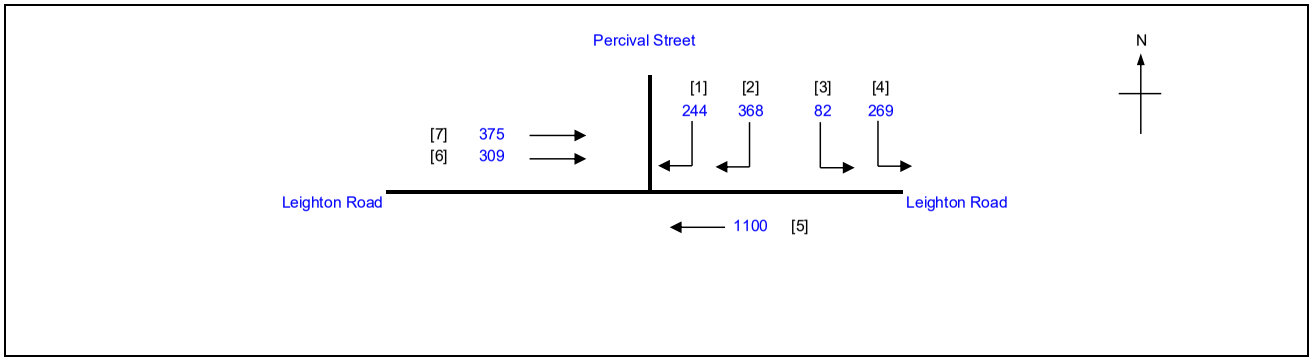
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

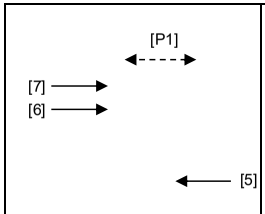
J11 Leighton Road / Percival Street / Hysan Avenue

2033 Reference PM

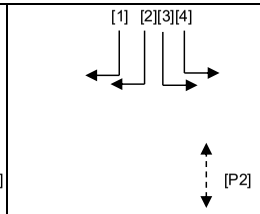
PROJECT NO.: 40920
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.606
Loss time	L =	14 sec
Total Flow	=	2747 pcu
Co = (1.5*L+5)/(1-Y)	=	66.0 sec
Cm = L/(1-Y)	=	35.5 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	31.2 %
Cp = 0.9*L/(0.9-Y)	=	42.9 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**33 %**



Stage 1 G= 65 Int = 8



Stage 2 G= 49 Int = 8

Stage 3 G= Int =

Stage 4 G= Int =

Stage 5 G= Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		66	7
P2	2		5	12		45	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
5	1	3.50	1			N	1965		538		538	0.00	1965			0.8	-393			1572	0.342	0.342		66	66	0.679	54	26
5	1	3.00	1				2055		562		562	0.00	2055			0.8	-411			1644	0.342			65	66	0.679	60	26
6,7	1	2.50	1			N	1865		330		330	0.00	1865			0.6	-746			1119	0.295			56	66	0.679	36	34
6,7	1	2.50	1				2005		354		354	0.00	2005			0.6	-802			1203	0.294			56	66	0.679	42	33
3,4	2	4.00	1	25		N	2015	351			351	1.00	1901			0.7	-570			1331	0.264	0.264		50	50	0.679	42	36
1,2	2	5.00	1	25		N	2115			354	354	1.00	1995			0.8	-399			1596	0.222			42	50	0.679	48	41
1,2	2	3.30	1	20			2085			258	258	1.00	1940			0.6	-776			1164	0.222			42	50	0.679	36	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

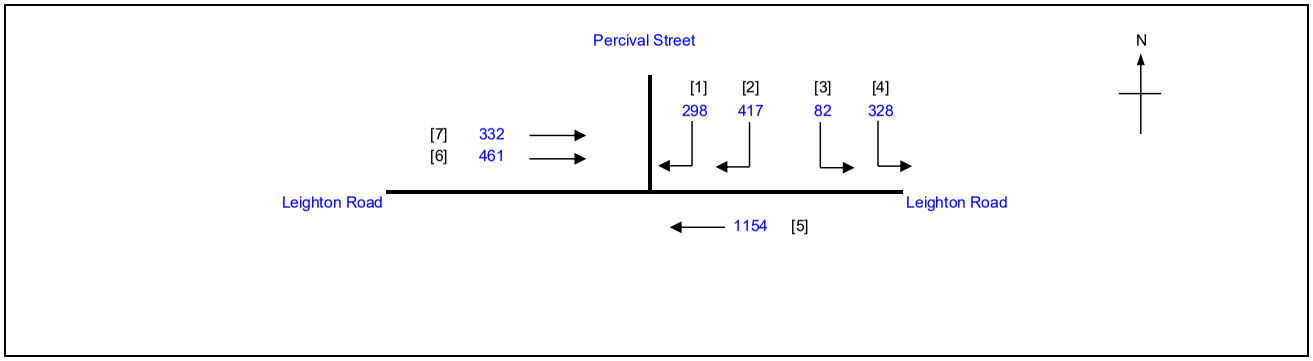
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

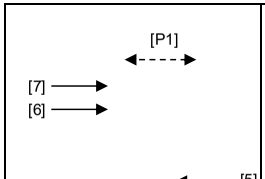
J11 Leighton Road / Percival Street / Hysan Avenue

2033 Reference Weekend

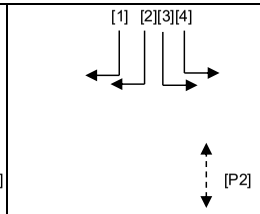
PROJECT NO.: 40920
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.667
Loss time	L =	14 sec
Total Flow	=	3072 pcu
Co = (1.5*L+5)/(1-Y)	=	78.1 sec
Cm = L/(1-Y)	=	42.0 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	19.2 %
Cp = 0.9*L/(0.9-Y)	=	54.1 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**20 %**



Stage 1 G= 61 Int = 8



Stage 2 G= 53 Int = 8

Stage 3 G= Int =

Stage 4 G= Int =

Stage 5 G= Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		62	7
P2	2		5	12		49	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		564		564	0.00	1965			0.8	-393			1572	0.359			62	62	0.747	60	31
5	1	3.00	1				2055		590		590	0.00	2055			0.8	-411			1644	0.359	0.359		62	62	0.747	66	31
6,7	1	2.50	1			N	1865		383		383	0.00	1865			0.6	-746			1119	0.342			60	62	0.747	42	35
6,7	1	2.50	1				2005		410		410	0.00	2005			0.6	-802			1203	0.341			59	62	0.747	48	35
3,4	2	4.00	1	25		N	2015	410			410	1.00	1901			0.7	-570			1331	0.308	0.308		54	54	0.747	48	38
1,2	2	5.00	1	25		N	2115			414	414	1.00	1995			0.8	-399			1596	0.259			45	54	0.747	54	42
1,2	2	3.30	1	20			2085			301	301	1.00	1940			0.6	-776			1164	0.259			45	54	0.747	42	46

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

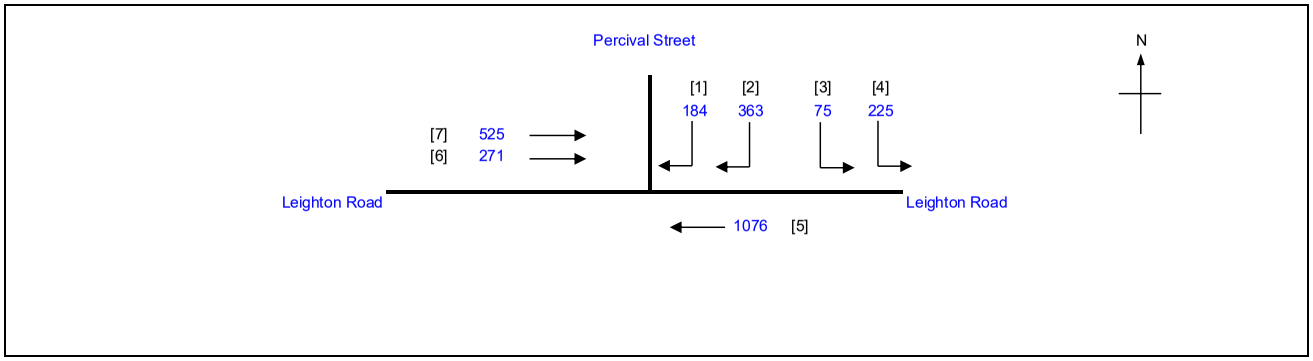
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

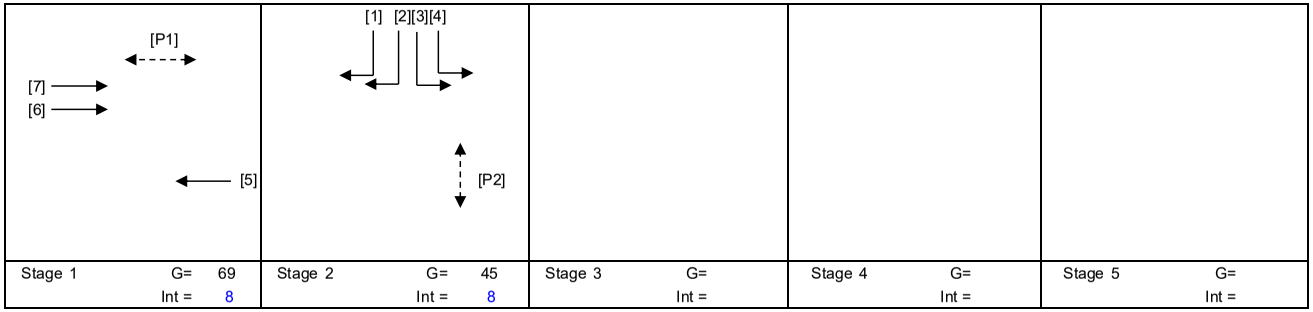
2033 Design AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.569
Loss time	L =	14 sec
Total Flow	=	2719 pcu
Co = (1.5*L+5)/(1-Y)	=	60.3 sec
Cm = L/(1-Y)	=	32.5 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	39.8 %
Cp = 0.9*L/(0.9-Y)	=	38.0 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**41 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 69	G= 45	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		70	7
P2	2		5	12		41	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		526		526	0.00	1965			0.8	-393			1572	0.335			68	70	0.637	54	23
5	1	3.00	1				2055		550		550	0.00	2055			0.8	-411			1644	0.335			68	70	0.637	54	23
6,7	1	2.50	1			N	1865		384		384	0.00	1865			0.6	-746			1119	0.343	0.343		70	70	0.637	36	24
6,7	1	2.50	1				2005		412		412	0.00	2005			0.6	-802			1203	0.342			70	70	0.637	36	23
3,4	2	4.00	1	25		N	2015	300			300	1.00	1901			0.7	-570			1331	0.225	0.225		46	46	0.637	42	38
1,2	2	5.00	1	25		N	2115			317	317	1.00	1995			0.8	-399			1596	0.199			41	46	0.637	42	40
1,2	2	3.30	1	20			2085			230	230	1.00	1940			0.6	-776			1164	0.198			40	46	0.637	30	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

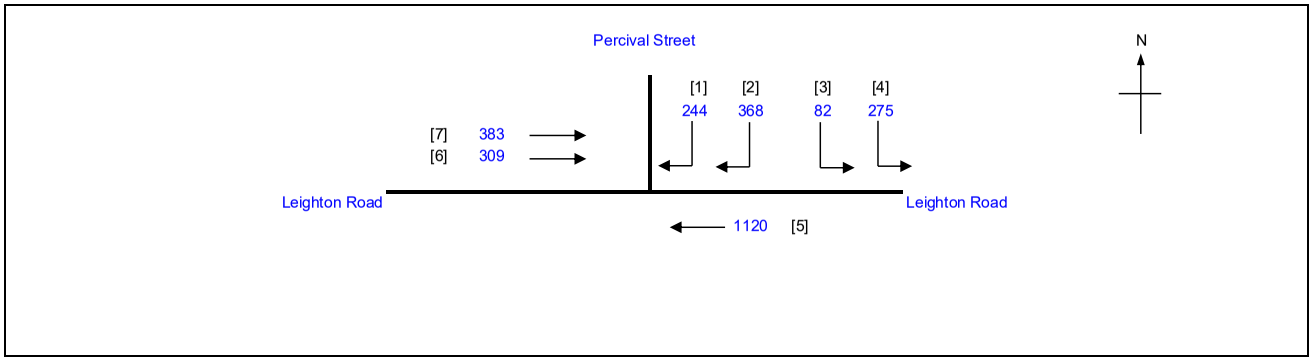
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

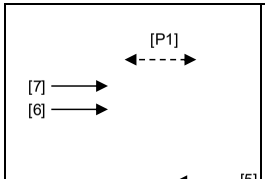
J11 Leighton Road / Percival Street / Hysan Avenue

2033 Design PM

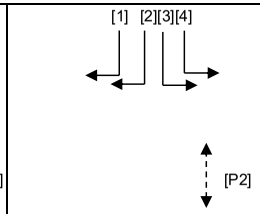
PROJECT NO.: 40920
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.617
Loss time	L =	14 sec
Total Flow	=	2781 pcu
Co = (1.5*L+5)/(1-Y)	=	67.8 sec
Cm = L/(1-Y)	=	36.5 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	28.9 %
Cp = 0.9*L/(0.9-Y)	=	44.5 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**30 %**



Stage 1 G= 65 Int = 8



Stage 2 G= 49 Int = 8

Stage 3 G= Int =

Stage 4 G= Int =

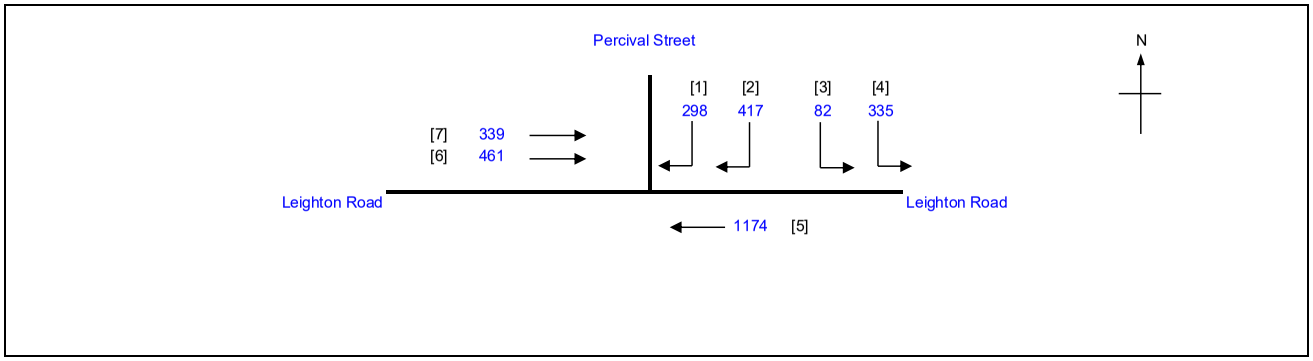
Stage 5 G= Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		66	7
P2	2		5	12		45	12

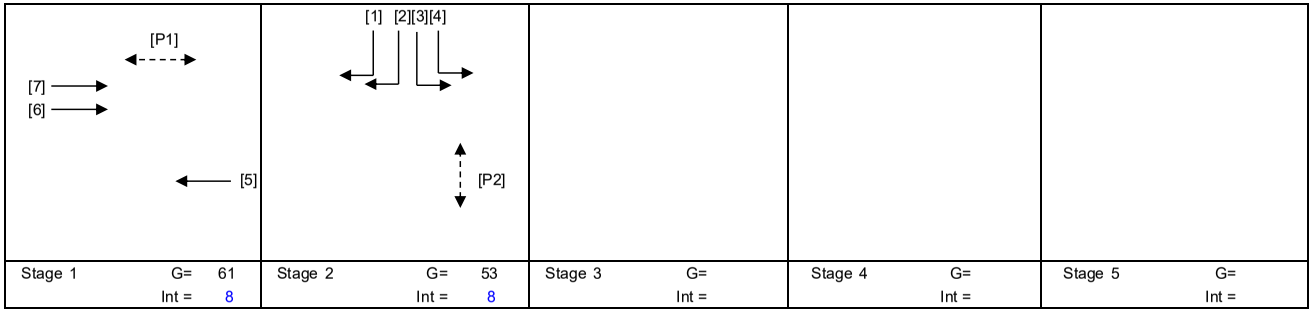
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
5	1	3.50	1			N	1965		547		547	0.00	1965			0.8	-393			1572	0.348			65	66	0.691	54	27
5	1	3.00	1				2055		573		573	0.00	2055			0.8	-411			1644	0.349	0.349		66	66	0.691	60	26
6,7	1	2.50	1			N	1865		334		334	0.00	1865			0.6	-746			1119	0.298			56	66	0.691	36	34
6,7	1	2.50	1				2005		358		358	0.00	2005			0.6	-802			1203	0.298			56	66	0.691	42	34
3,4	2	4.00	1	25		N	2015	357			357	1.00	1901			0.7	-570			1331	0.268	0.268		50	50	0.691	42	37
1,2	2	5.00	1	25		N	2115			354	354	1.00	1995			0.8	-399			1596	0.222			42	50	0.691	48	42
1,2	2	3.30	1	20			2085			258	258	1.00	1940			0.6	-776			1164	0.222			42	50	0.691	36	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J11 Leighton Road / Percival Street / Hysan Avenue		FILENAME : J11_LR_PS_HA.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.678
Loss time	L =	14 sec
Total Flow	=	3106 pcu
Co = (1.5*L+5)/(1-Y)	=	80.9 sec
Cm = L/(1-Y)	=	43.5 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	17.2 %
Cp = 0.9*L/(0.9-Y)	=	56.9 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**18 %**



Stage 1	G= 61	Stage 2	G= 53	Stage 3	G=	Stage 4	G=	Stage 5	G=
	Int = 8		Int = 8		Int =		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		62	7
P2	2		5	12		49	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		574		574	0.00	1965			0.8	-393			1572	0.365	0.365		62	62	0.760	60	32
5	1	3.00	1				2055		600		600	0.00	2055			0.8	-411			1644	0.365			62	62	0.760	66	31
6,7	1	2.50	1			N	1865		386		386	0.00	1865			0.6	-746			1119	0.345			59	62	0.760	42	37
6,7	1	2.50	1				2005		414		414	0.00	2005			0.6	-802			1203	0.344			59	62	0.760	48	36
3,4	2	4.00	1	25		N	2015	417			417	1.00	1901			0.7	-570			1331	0.313	0.313		54	54	0.760	48	39
1,2	2	5.00	1	25		N	2115			414	414	1.00	1995			0.8	-399			1596	0.259			44	54	0.760	54	44
1,2	2	3.30	1	20			2085			301	301	1.00	1940			0.6	-776			1164	0.259			44	54	0.760	42	47

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

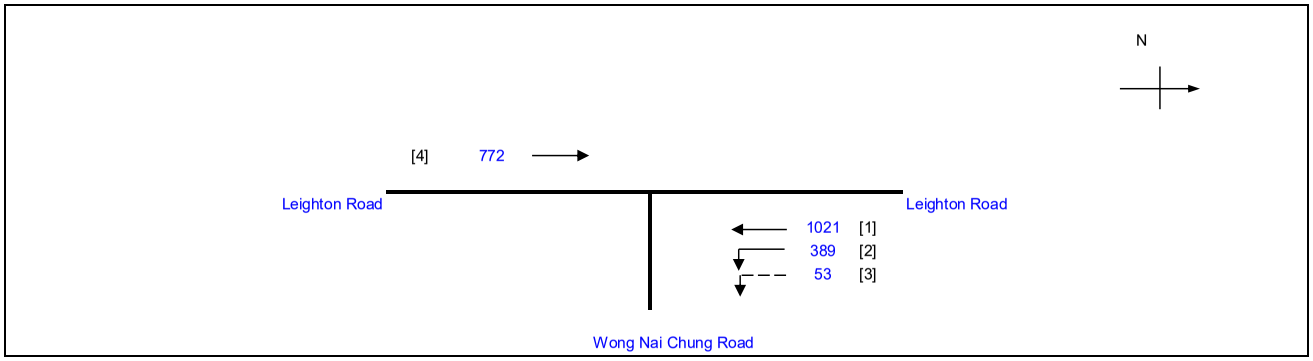
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

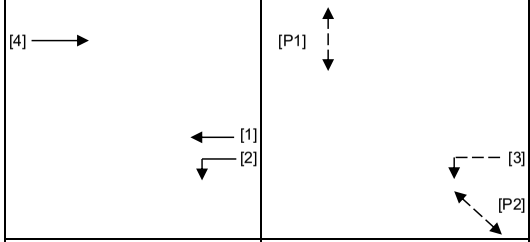
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.669
Loss time		L =	12 sec
Total Flow		=	2235 pcu
Co	= (1.5*L+5)/(1-Y)	=	69.5 sec
Cm	= L/(1-Y)	=	36.3 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	21.0 %
Cp	= 0.9*L/(0.9-Y)	=	46.8 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**22 %**



Stage 1 G= 92 Int = 7

Stage 2 G= 24 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	22	9
P2	2		7	7	0	24	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	319			319	1.00	1828							1828	0.175			31	93	0.737	48	52
2	1	3.50	1	25			2105	70			70	1.00	1986			0.2	-1589			397	0.176			31	93	0.737	12	89
3	2	3.00	1	40		N	1915	53			53	1.00	1846			0.2	-1477			369	0.144	0.144		25	25	0.737	12	108
1	1	3.00	1			N	1915		805		805	0.00	1915			0.8	-383			1532	0.525			93	93	0.737	48	14
1	1	3.00	1				2055		216		216	0.00	2055			0.2	-1644			411	0.526	0.526		93	93	0.737	12	26
4	1	3.50	1			N	1965		124		124	0.00	1965			0.2	-1572			393	0.316			56	93	0.737	18	55
4	1	3.00	1				2055		325		325	0.00	2055			0.5	-1028			1027	0.316			56	93	0.737	36	38
4	1	3.00	1				2055		323		323	0.00	2055			0.5	-1028			1027	0.315			55	93	0.737	36	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

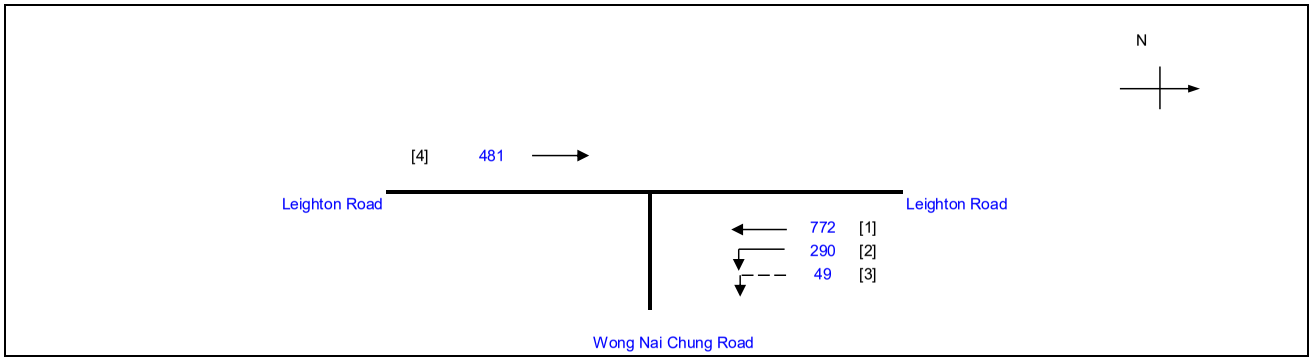
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

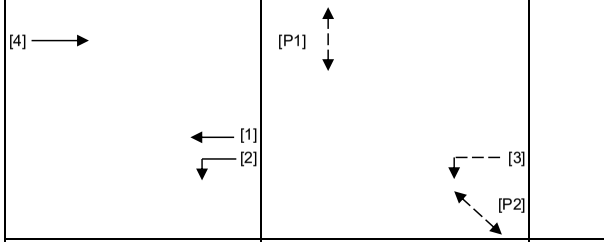
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.530
Loss time	L =	12 sec
Total Flow	=	1592 pcu
Co = (1.5*L+5)/(1-Y)	=	49.0 sec
Cm = L/(1-Y)	=	25.6 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	52.7 %
Cp = 0.9*L/(0.9-Y)	=	29.2 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**54 %**



Stage 1 G= 87 Int = 7

Stage 2 G= 29 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	27	9
P2	2		7	7	0	29	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	238			238	1.00	1828							1828	0.130			29	88	0.584	36	46
2	1	3.50	1	25			2105	52			52	1.00	1986			0.2	-1589			397	0.131			29	88	0.584	6	66
3	2	3.00	1	40		N	1915	49			49	1.00	1846			0.2	-1477			369	0.133	0.133		30	30	0.584	6	67
1	1	3.00	1			N	1915		609		609	0.00	1915			0.8	-383			1532	0.398	0.398		88	88	0.584	42	12
1	1	3.00	1				2055		163		163	0.00	2055			0.2	-1644			411	0.397			88	88	0.584	6	18
4	1	3.50	1			N	1965		77		77	0.00	1965			0.2	-1572			393	0.196			44	88	0.584	6	49
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			44	88	0.584	24	39
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			44	88	0.584	24	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

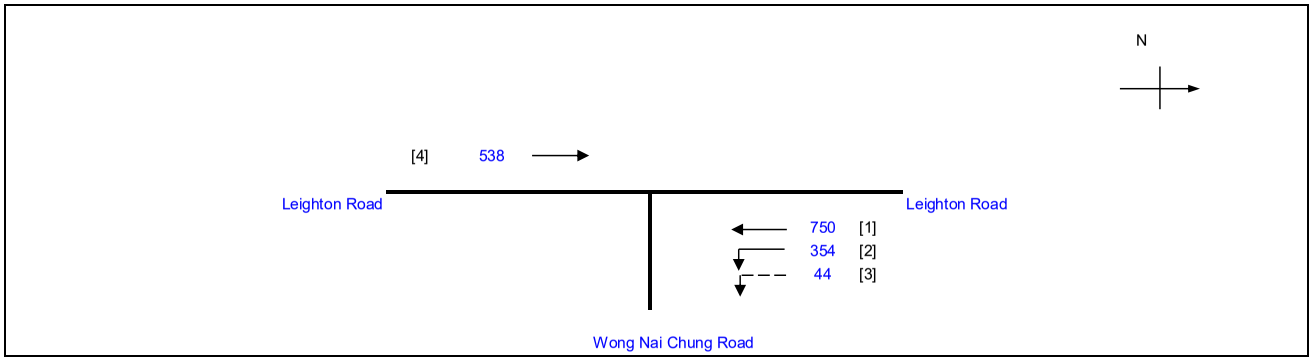
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

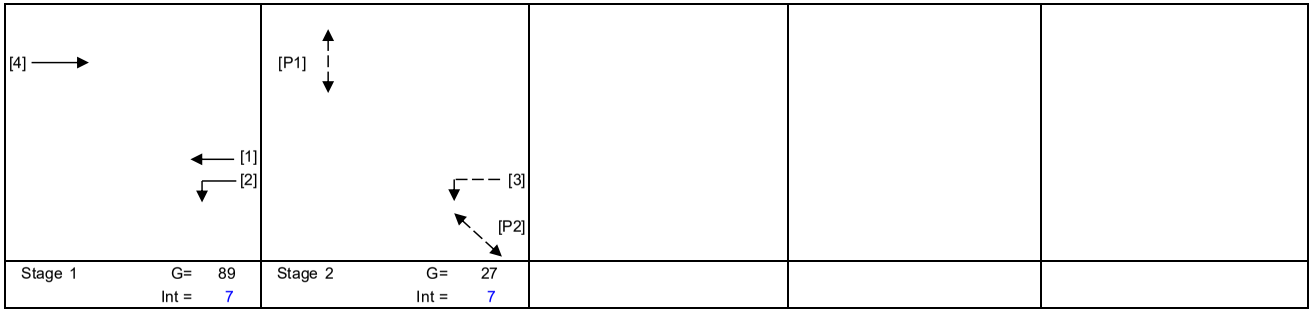
2033 Reference Weekend

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.506
Loss time	L =	12 sec
Total Flow	=	1686 pcu
Co = (1.5*L+5)/(1-Y)	=	46.6 sec
Cm = L/(1-Y)	=	24.3 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	60.0 %
Cp = 0.9*L/(0.9-Y)	=	27.4 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**61 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	25	9
P2	2		7	7	0	27	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	291			291	1.00	1828							1828	0.159			37	90	0.558	42	39
2	1	3.50	1	25			2105	63			63	1.00	1986			0.2	-1589			397	0.159			37	90	0.558	6	54
3	2	3.00	1	40		N	1915	44			44	1.00	1846			0.2	-1477			369	0.119	0.119		28	28	0.558	6	67
1	1	3.00	1			N	1915		591		591	0.00	1915			0.8	-383			1532	0.386			90	90	0.558	36	11
1	1	3.00	1				2055		159		159	0.00	2055			0.2	-1644			411	0.387	0.387		90	90	0.558	6	16
4	1	3.50	1			N	1965		86		86	0.00	1965			0.2	-1572			393	0.219			51	90	0.558	6	41
4	1	3.00	1				2055		226		226	0.00	2055			0.5	-1028			1027	0.220			51	90	0.558	24	33
4	1	3.00	1				2055		226		226	0.00	2055			0.5	-1028			1027	0.220			51	90	0.558	24	33

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

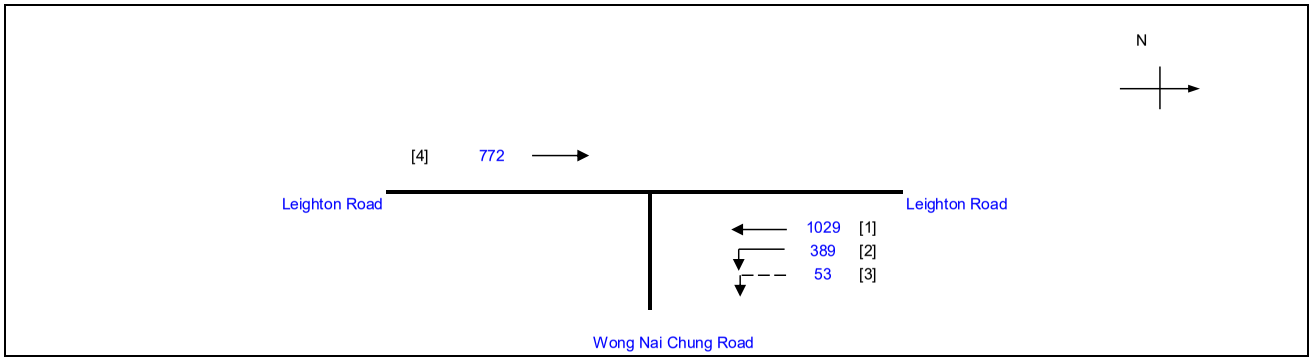
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

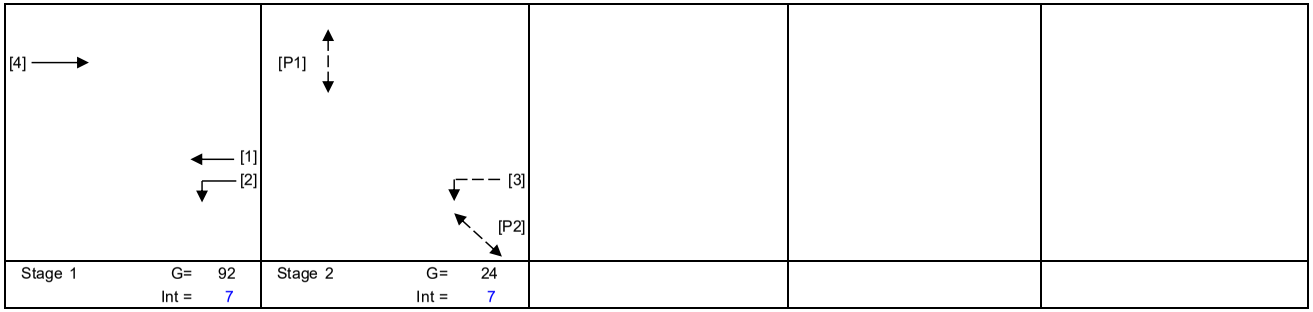
2033 Design AM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.674
Loss time		L =	12 sec
Total Flow		=	2243 pcu
Co	= (1.5*L+5)/(1-Y)	=	70.6 sec
Cm	= L/(1-Y)	=	36.8 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	20.2 %
Cp	= 0.9*L/(0.9-Y)	=	47.8 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**21 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	22	9
P2	2		7	7	0	24	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	320			320	1.00	1828							1828	0.175			31	93	0.743	54	52
2	1	3.50	1	25			2105	69			69	1.00	1986			0.2	-1589			397	0.174			30	93	0.743	12	92
3	2	3.00	1	40		N	1915	53			53	1.00	1846			0.2	-1477			369	0.144	0.144		25	25	0.743	12	110
1	1	3.00	1			N	1915		811		811	0.00	1915			0.8	-383			1532	0.529			93	93	0.743	48	15
1	1	3.00	1				2055		218		218	0.00	2055			0.2	-1644			411	0.530	0.530		93	93	0.743	12	26
4	1	3.50	1			N	1965		124		124	0.00	1965			0.2	-1572			393	0.316			55	93	0.743	18	56
4	1	3.00	1				2055		325		325	0.00	2055			0.5	-1028			1027	0.316			55	93	0.743	36	39
4	1	3.00	1				2055		323		323	0.00	2055			0.5	-1028			1027	0.315			55	93	0.743	36	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

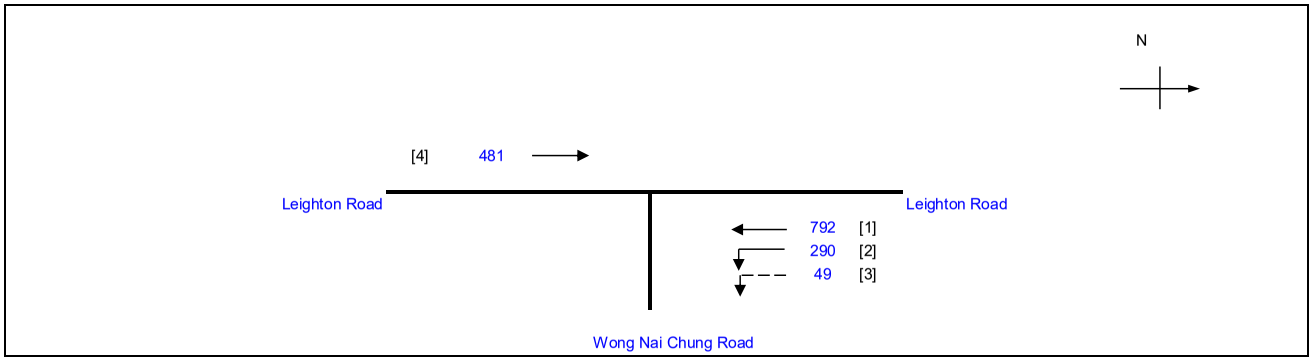
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

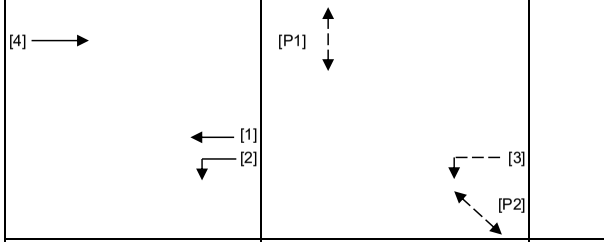
2033 Design PM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.541
Loss time		L =	12 sec
Total Flow		=	1612 pcu
Co	= (1.5*L+5)/(1-Y)	=	50.1 sec
Cm	= L/(1-Y)	=	26.1 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	49.9 %
Cp	= 0.9*L/(0.9-Y)	=	30.0 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**51 %**



Stage 1 G= 88 Int = 7

Stage 2 G= 28 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	26	9
P2	2		7	7	0	28	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	238			238	1.00	1828							1828	0.130			28	89	0.595	36	47
2	1	3.50	1	25			2105	52			52	1.00	1986			0.2	-1589			397	0.131			29	89	0.595	6	68
3	2	3.00	1	40		N	1915	49			49	1.00	1846			0.2	-1477			369	0.133	0.133		29	29	0.595	6	70
1	1	3.00	1			N	1915		625		625	0.00	1915			0.8	-383			1532	0.408	0.408		89	89	0.595	42	12
1	1	3.00	1				2055		168		168	0.00	2055			0.2	-1644			411	0.408			89	89	0.595	6	18
4	1	3.50	1			N	1965		77		77	0.00	1965			0.2	-1572			393	0.196			43	89	0.595	12	51
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			43	89	0.595	24	40
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			43	89	0.595	24	40

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

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	INITIALS	DATE
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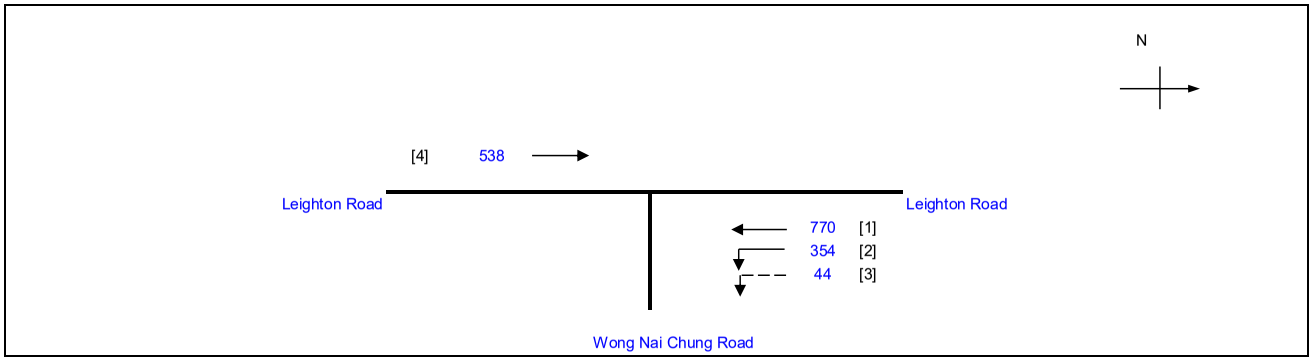
J12 Leighton Road / Wong Nai Chung Road

2033 Design Weekend

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.516
Loss time	L =	12 sec
Total Flow	=	1706 pcu
Co = (1.5*L+5)/(1-Y)	=	47.5 sec
Cm = L/(1-Y)	=	24.8 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	57.0 %
Cp = 0.9*L/(0.9-Y)	=	28.1 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**58 %**

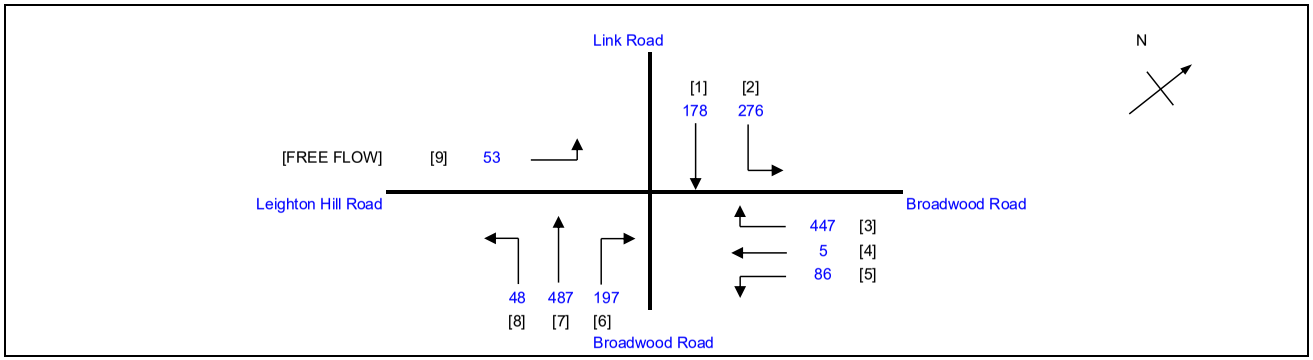


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	24	9
P2	2		7	7	0	26	7

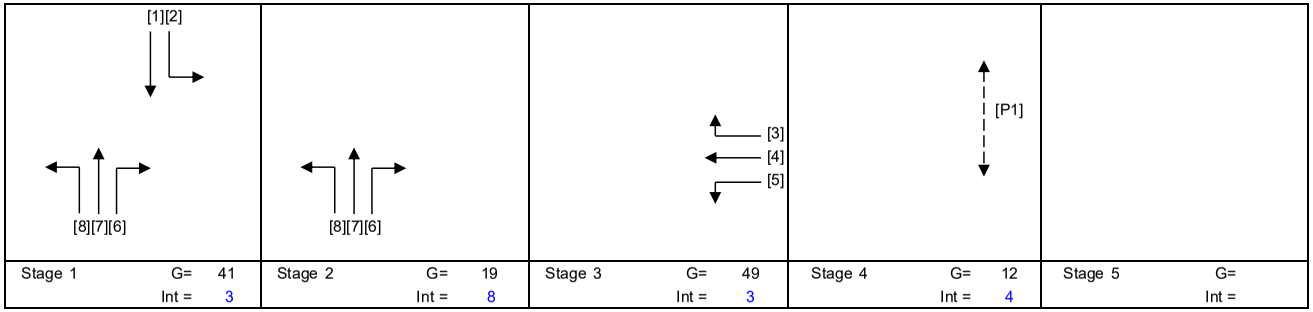
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	291			291	1.00	1828							1828	0.159			36	91	0.568	42	40
2	1	3.50	1	25			2105	63			63	1.00	1986			0.2	-1589			397	0.159			36	91	0.568	6	55
3	2	3.00	1	40		N	1915	44			44	1.00	1846			0.2	-1477			369	0.119	0.119		27	27	0.568	6	69
1	1	3.00	1			N	1915		607		607	0.00	1915			0.8	-383			1532	0.396			91	91	0.568	36	11
1	1	3.00	1				2055		163		163	0.00	2055			0.2	-1644			411	0.397	0.397		91	91	0.568	6	16
4	1	3.50	1			N	1965		86		86	0.00	1965			0.2	-1572			393	0.219			50	91	0.568	6	42
4	1	3.00	1				2055		226		226	0.00	2055			0.5	-1028			1027	0.220			50	91	0.568	30	34
4	1	3.00	1				2055		226		226	0.00	2055			0.5	-1028			1027	0.220			50	91	0.568	30	34

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J13 Broadwood Road / Link Road		FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.628
Loss time	L =	27 sec
Total Flow	=	1724 pcu
Co = (1.5*L+5)/(1-Y)	=	122.3 sec
Cm = L/(1-Y)	=	72.6 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	11.1 %
Cp = 0.9*L/(0.9-Y)	=	89.4 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**



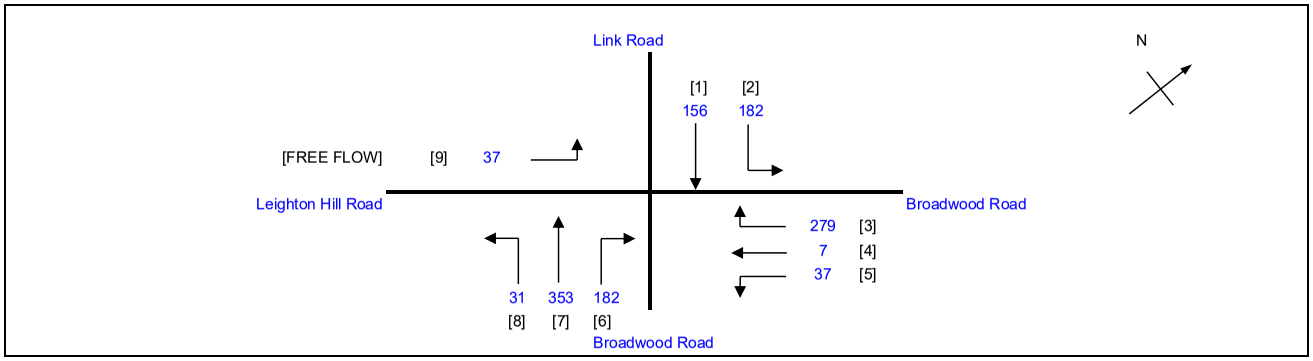
Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 41	G= 19	G= 49	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

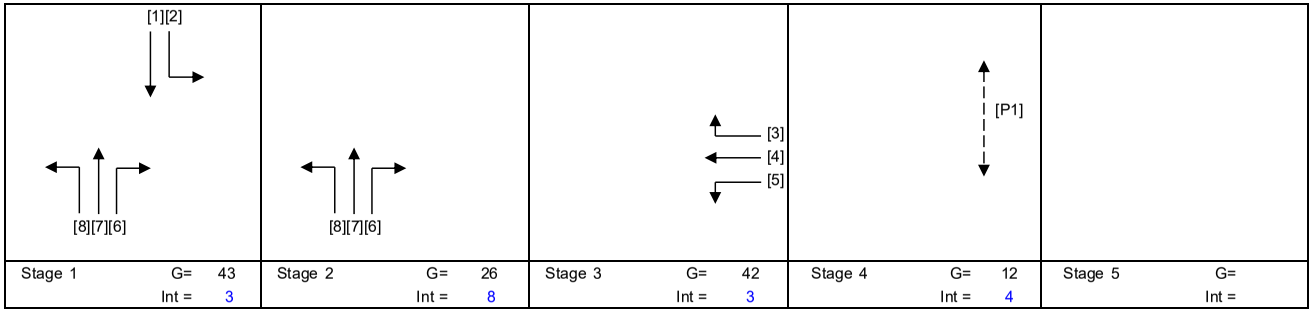
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	276	178		454	0.61	1943							1943	0.234	0.234	15	42	42	0.778	72	50
7,8	1,2	3.00	1	15		N	1915	48	487		535	0.09	1898							1898	0.282			51	63	0.778	78	44
6	2	3.00	1	8			2055			197	197	1.00	1731							1731	0.114	0.114		20	20	0.778	42	74
3,4,5	3	3.50	1	60		N	1965	86	5	447	538	0.99	1918							1918	0.281	0.281		50	50	0.778	78	44
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J13 Broadwood Road / Link Road		FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.447
Loss time	L =	27 sec
Total Flow	=	1227 pcu
Co = (1.5*L+5)/(1-Y)	=	82.3 sec
Cm = L/(1-Y)	=	48.9 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	55.9 %
Cp = 0.9*L/(0.9-Y)	=	53.7 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**62 %**



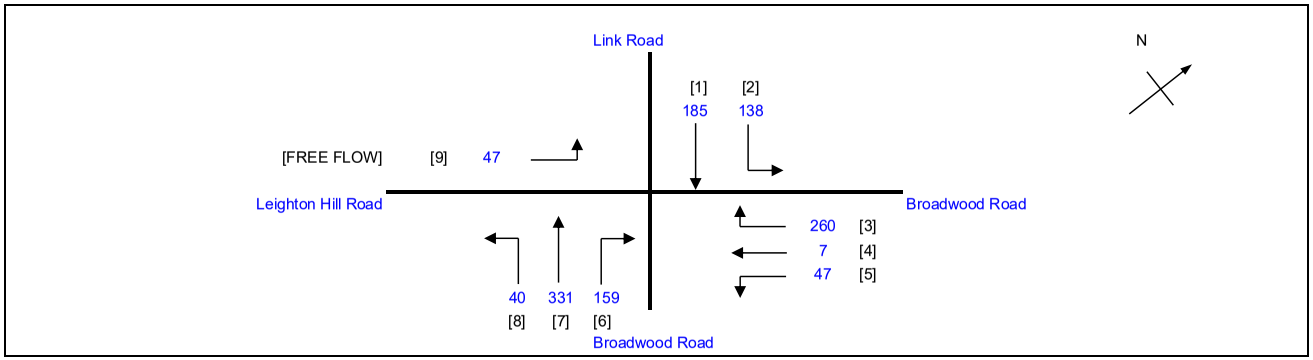
Stage 1	G= 43	Int = 3
Stage 2	G= 26	Int = 8
Stage 3	G= 42	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

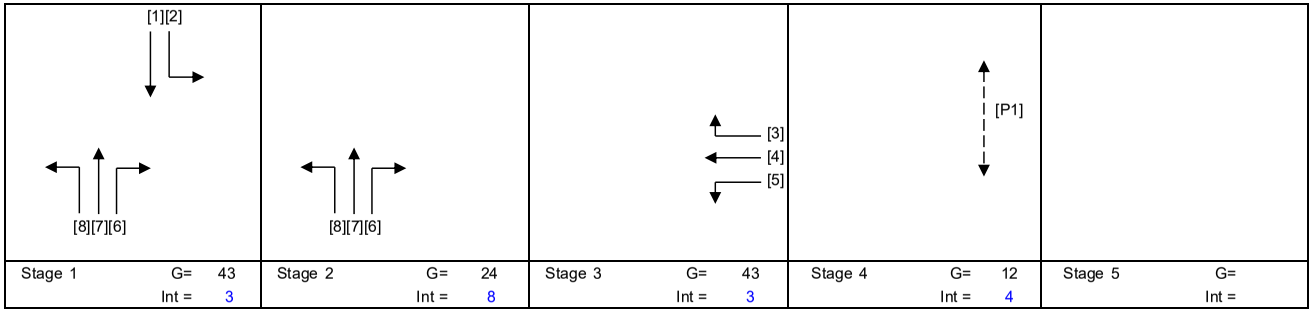
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	182	156		338	0.54	1945							1945	0.174	0.174	15	44	44	0.554	54	39
7,8	1,2	3.00	1	15		N	1915	31	353		384	0.08	1900							1900	0.202			51	70	0.554	54	35
6	2	3.00	1	8			2055			182	182	1.00	1731							1731	0.105	0.105		27	27	0.554	30	52
3,4,5	3	3.50	1	60		N	1965	37	7	279	323	0.98	1918							1918	0.168	0.168		43	43	0.554	48	40
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J13 Broadwood Road / Link Road		FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.421
Loss time		L =	27 sec
Total Flow		=	1167 pcu
Co	= (1.5*L+5)/(1-Y)	=	78.6 sec
Cm	= L/(1-Y)	=	46.7 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	65.6 %
Cp	= 0.9*L/(0.9-Y)	=	50.8 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**72 %**



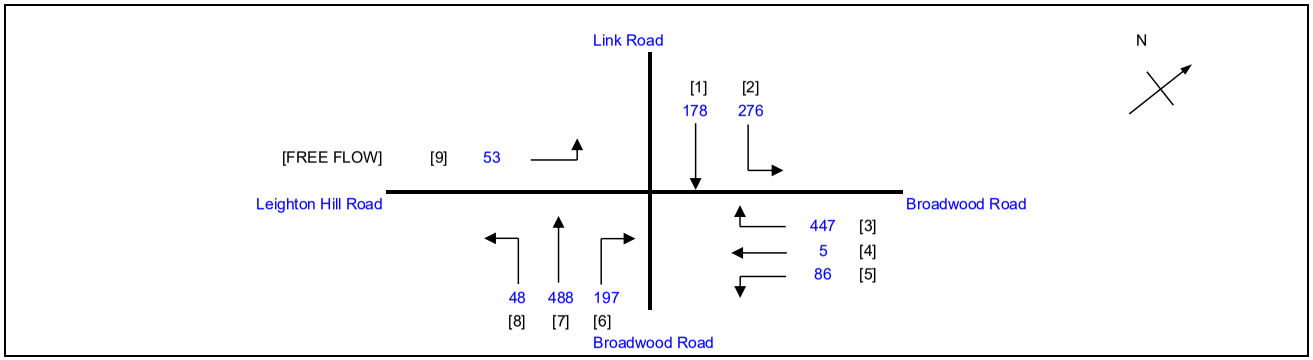
Stage 1	G= 43	Int = 3
Stage 2	G= 24	Int = 8
Stage 3	G= 43	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

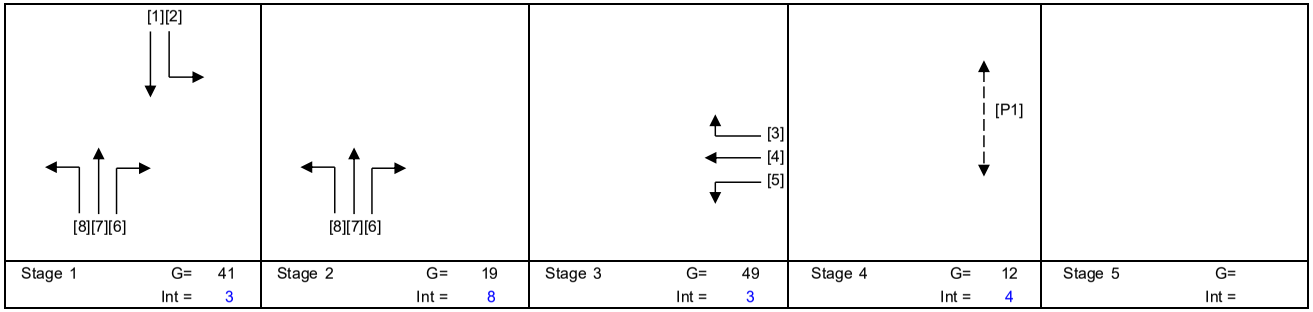
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	138	185		323	0.43	1949							1949	0.166	0.166	15	44	44	0.522	48	38
7,8	1,2	3.00	1	15		N	1915	40	331		371	0.11	1895							1895	0.196			53	69	0.522	54	33
6	2	3.00	1	8			2055			159	159	1.00	1731							1731	0.092	0.092		25	25	0.522	30	53
3,4,5	3	3.50	1	60		N	1965	47	7	260	314	0.98	1918							1918	0.164	0.164		44	44	0.522	48	38
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J13 Broadwood Road / Link Road		FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.628
Loss time	L =	27 sec
Total Flow	=	1725 pcu
Co = (1.5*L+5)/(1-Y)	=	122.3 sec
Cm = L/(1-Y)	=	72.6 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	11.1 %
Cp = 0.9*L/(0.9-Y)	=	89.4 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**



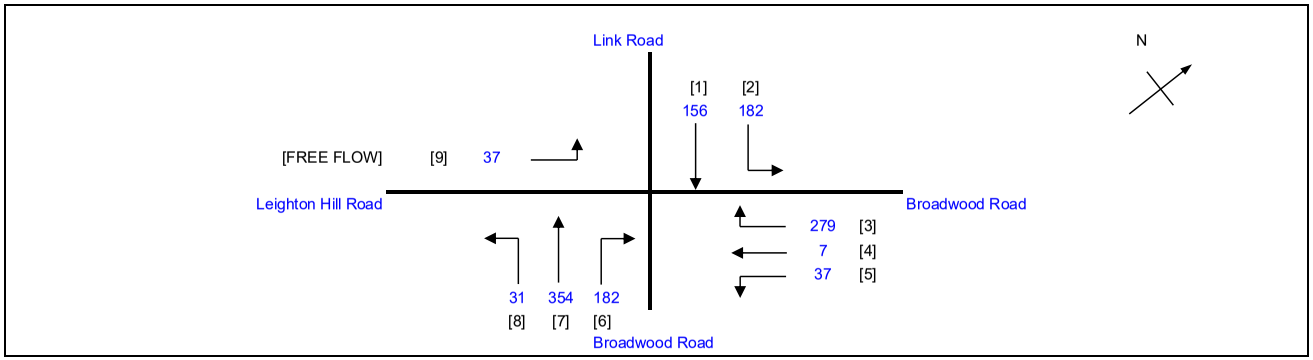
Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 41	G= 19	G= 49	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

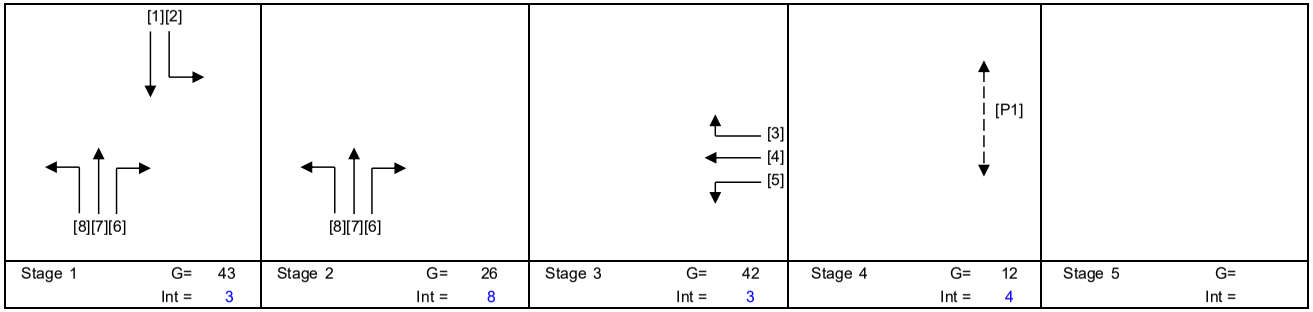
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	276	178		454	0.61	1943							1943	0.234	0.234	15	42	42	0.778	72	50
7,8	1,2	3.00	1	15		N	1915	48	488		536	0.09	1898							1898	0.282			51	63	0.778	78	44
6	2	3.00	1	8			2055			197	197	1.00	1731							1731	0.114	0.114		20	20	0.778	42	74
3,4,5	3	3.50	1	60		N	1965	86	5	447	538	0.99	1918							1918	0.281	0.281		50	50	0.778	78	44
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Dec-25
J13 Broadwood Road / Link Road		FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Dec-25
			Reviewed By:	SLN	Dec-25



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.447
Loss time		L =	27 sec
Total Flow		=	1228 pcu
Co	= (1.5*L+5)/(1-Y)	=	82.3 sec
Cm	= L/(1-Y)	=	48.9 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	55.9 %
Cp	= 0.9*L/(0.9-Y)	=	53.7 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**62 %**



Stage 1	G= 43	Int = 3	Stage 2	G= 26	Int = 8	Stage 3	G= 42	Int = 3	Stage 4	G= 12	Int = 4	Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	182	156		338	0.54	1945							1945	0.174	0.174		44	44	0.554	54	39
7,8	1,2	3.00	1	15		N	1915	31	354		385	0.08	1900							1900	0.203			51	70	0.554	54	35
6	2	3.00	1	8			2055			182	182	1.00	1731							1731	0.105	0.105		27	27	0.554	30	52
3,4,5	3	3.50	1	60		N	1965	37	7	279	323	0.98	1918							1918	0.168	0.168		43	43	0.554	48	40
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

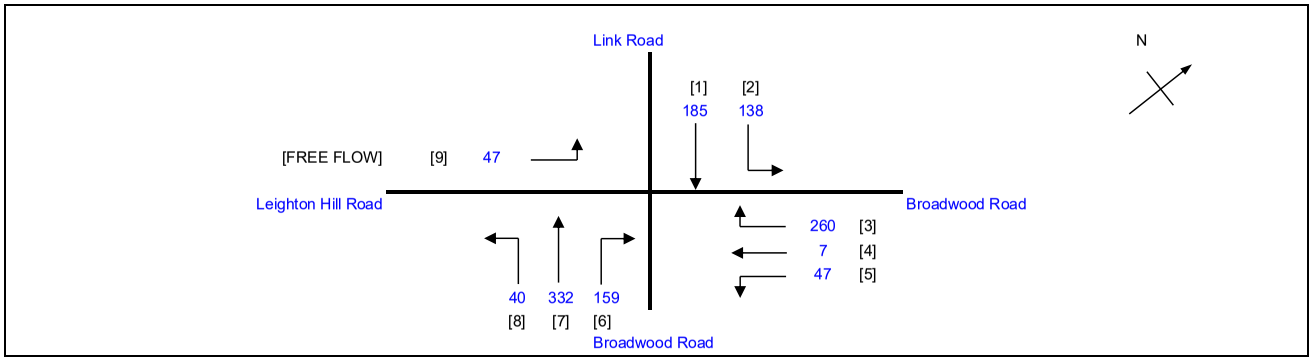
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

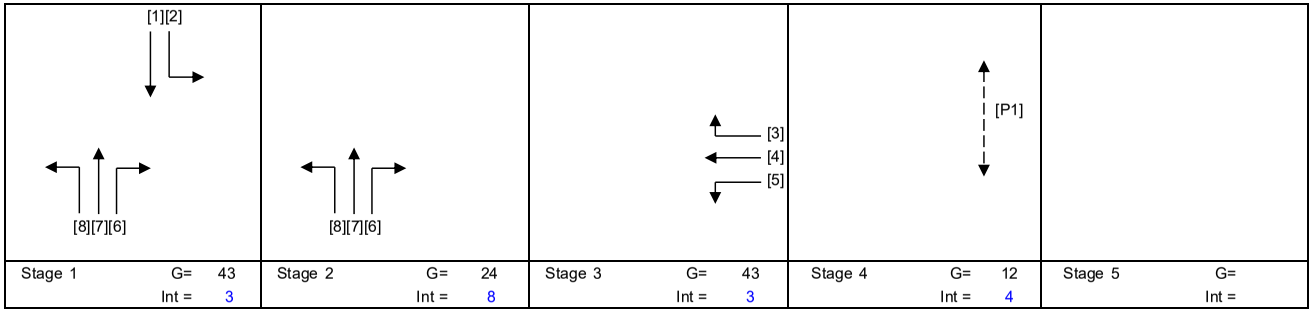
J13 Broadwood Road / Link Road

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.421
Loss time	L =	27 sec
Total Flow	=	1168 pcu
Co = (1.5*L+5)/(1-Y)	=	78.6 sec
Cm = L/(1-Y)	=	46.7 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	65.6 %
Cp = 0.9*L/(0.9-Y)	=	50.8 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**72 %**



Stage 1	G= 43	Int = 3
Stage 2	G= 24	Int = 8
Stage 3	G= 43	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	138	185		323	0.43	1949							1949	0.166	0.166	15	44	44	0.522	48	38
7,8	1,2	3.00	1	15		N	1915	40	332		372	0.11	1895							1895	0.196			53	69	0.522	54	33
6	2	3.00	1	8			2055			159	159	1.00	1731							1731	0.092	0.092		25	25	0.522	30	53
3,4,5	3	3.50	1	60		N	1965	47	7	260	314	0.98	1918							1918	0.164	0.164		44	44	0.522	48	38
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

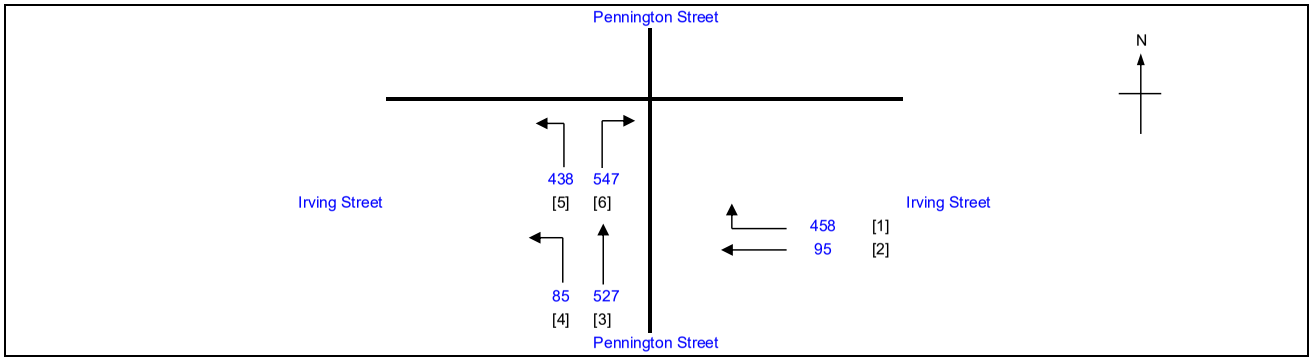
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

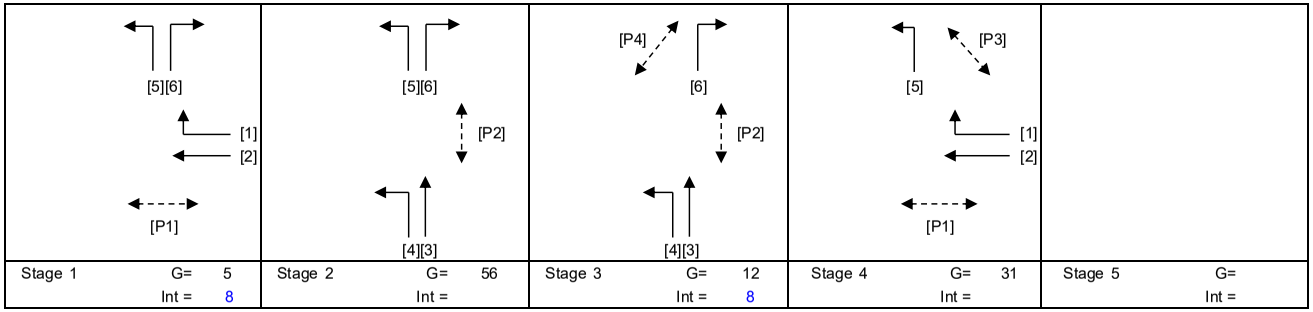
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.247
Loss time	L =	14 sec
Total Flow	=	2150 pcu
Co = (1.5*L+5)/(1-Y)	=	34.5 sec
Cm = L/(1-Y)	=	18.6 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	221.6 %
Cp = 0.9*L/(0.9-Y)	=	19.3 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**222 %**



Stage 1	G= 5	Int = 8
Stage 2	G= 56	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 31	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		36	8
P2	2,3		8	14		62	14
P3	4		7	7		24	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		83		83	0.00	1915			0.5	-958			957	0.087			37	37	0.280	6	30
1,2	1,4	3.00	1	16			2055		12	153	165	0.93	1891							1891	0.087	0.087		37	37	0.280	18	29
1	1,4	3.00	1	13			2055			160	160	1.00	1842							1842	0.087			37	37	0.280	18	29
1	1,4	3.00	1	10		N	1915			145	145	1.00	1665							1665	0.087			37	37	0.280	18	29
3,4	2,3	3.80	1	5		N	1995	85	208		293	0.29	1835							1835	0.160			68	69	0.280	24	12
3	2,3	3.80	1			N	1995		319		319	0.00	1995							1995	0.160	0.160		69	69	0.280	24	12
5	1,2,4	3.50	1	10			2105	438			438	1.00	1830							1830	0.239			103	94	0.280	12	2
6	1,2,4	3.50	1	10			2105			292	292	1.00	1830							1830	0.160			68	94	0.280	24	12
6	1,2,4	3.50	1	6.5		N	1965			255	255	1.00	1597							1597	0.160			68	94	0.280	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

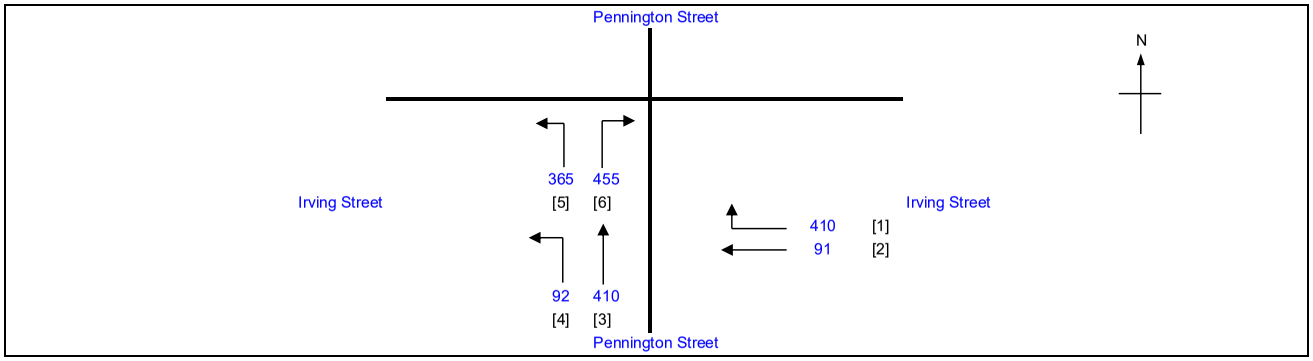
		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

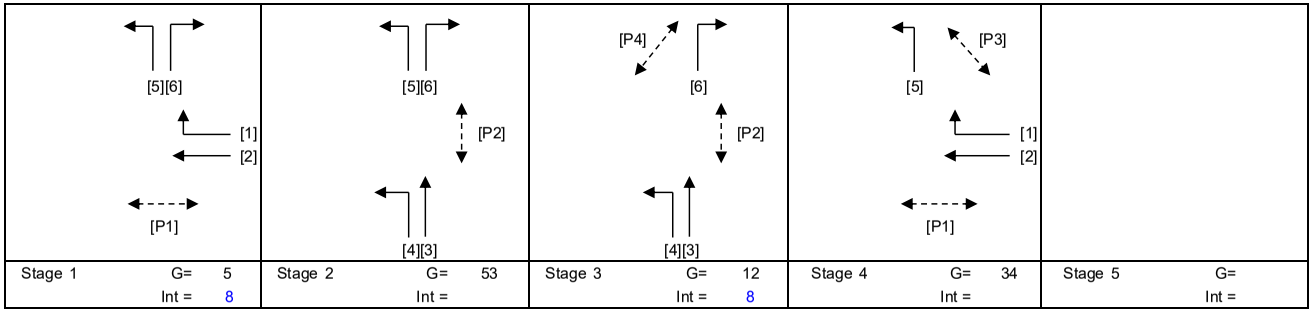
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Reference PM

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.212
Loss time		L =	14 sec
Total Flow		=	1823 pcu
Co	= (1.5*L+5)/(1-Y)	=	33.0 sec
Cm	= L/(1-Y)	=	17.8 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	274.6 %
Cp	= 0.9*L/(0.9-Y)	=	18.3 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**275 %**



Stage 1	G= 5	Int = 8
Stage 2	G= 53	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 34	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		76		76	0.00	1915			0.5	-958			957	0.079	0.079		40	40	0.240	6	28
1,2	1,4	3.00	1	16			2055		15	133	148	0.90	1895							1895	0.078			39	40	0.240	18	28
1	1,4	3.00	1	13			2055			146	146	1.00	1842							1842	0.079			40	40	0.240	18	27
1	1,4	3.00	1	10		N	1915			131	131	1.00	1665							1665	0.079			39	40	0.240	12	27
3,4	2,3	3.80	1	5		N	1995	92	145		237	0.39	1787							1787	0.133			66	66	0.240	18	13
3	2,3	3.80	1			N	1995		265		265	0.00	1995							1995	0.133	0.133		66	66	0.240	18	13
5	1,2,4	3.50	1	10			2105	365			365	1.00	1830							1830	0.199			100	94	0.240	12	2
6	1,2,4	3.50	1	10			2105			243	243	1.00	1830							1830	0.133			66	94	0.240	18	13
6	1,2,4	3.50	1	6.5		N	1965			212	212	1.00	1597							1597	0.133			66	94	0.240	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

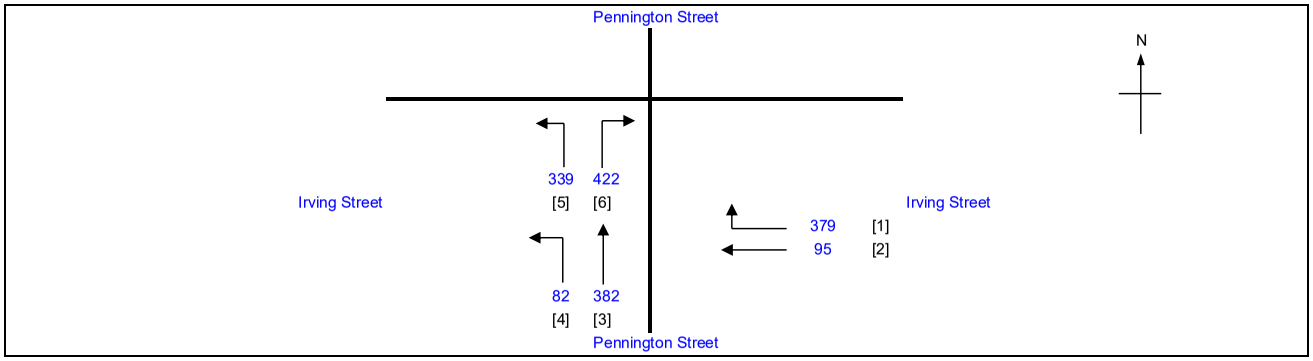
		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

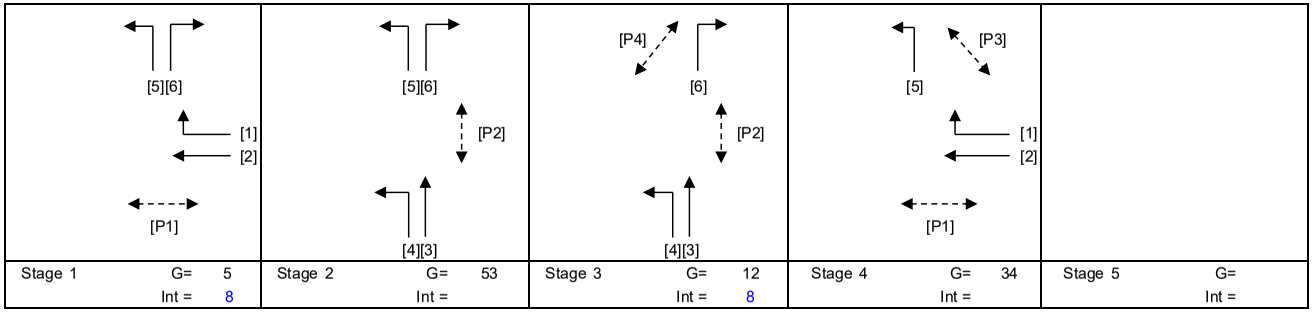
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.197
Loss time		L =	14 sec
Total Flow		=	1699 pcu
Co	= (1.5*L+5)/(1-Y)	=	32.4 sec
Cm	= L/(1-Y)	=	17.4 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	303.4 %
Cp	= 0.9*L/(0.9-Y)	=	17.9 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**303 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14				
2	1,4	3.00	1			N	1915		71		71	0.00	1915			0.5	-958			957	0.074			40	40	0.223	6	27
1,2	1,4	3.00	1	16			2055		24	118	142	0.83	1906							1906	0.074	0.074		40	40	0.223	18	27
1	1,4	3.00	1	13			2055			137	137	1.00	1842							1842	0.074			40	40	0.223	18	27
1	1,4	3.00	1	10		N	1915			124	124	1.00	1665							1665	0.074			40	40	0.223	12	27
3,4	2,3	3.80	1	5		N	1995	82	138		220	0.37	1794							1794	0.123	0.123		66	66	0.223	18	13
3	2,3	3.80	1			N	1995		244		244	0.00	1995							1995	0.122			66	66	0.223	18	13
5	1,2,4	3.50	1	10			2105	339			339	1.00	1830							1830	0.185			100	94	0.223	6	2
6	1,2,4	3.50	1	10			2105			225	225	1.00	1830							1830	0.123			66	94	0.223	18	13
6	1,2,4	3.50	1	6.5		N	1965			197	197	1.00	1597							1597	0.123			66	94	0.223	12	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

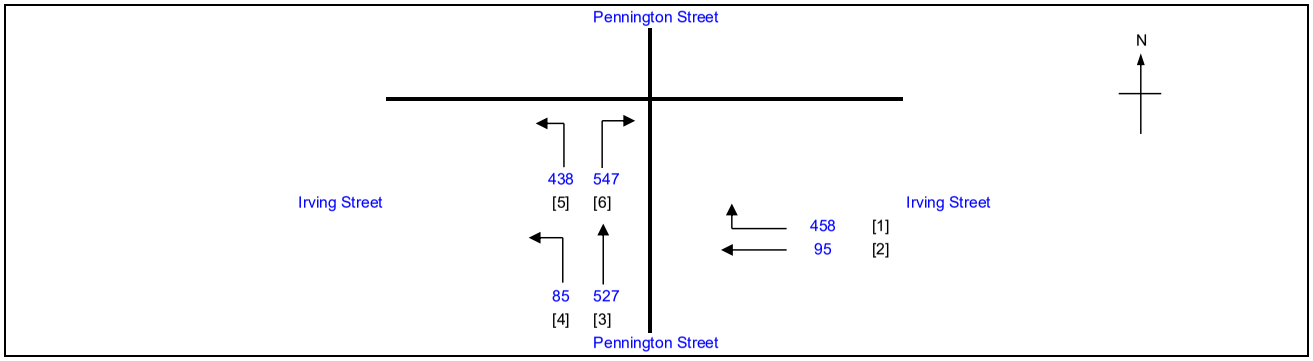
	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

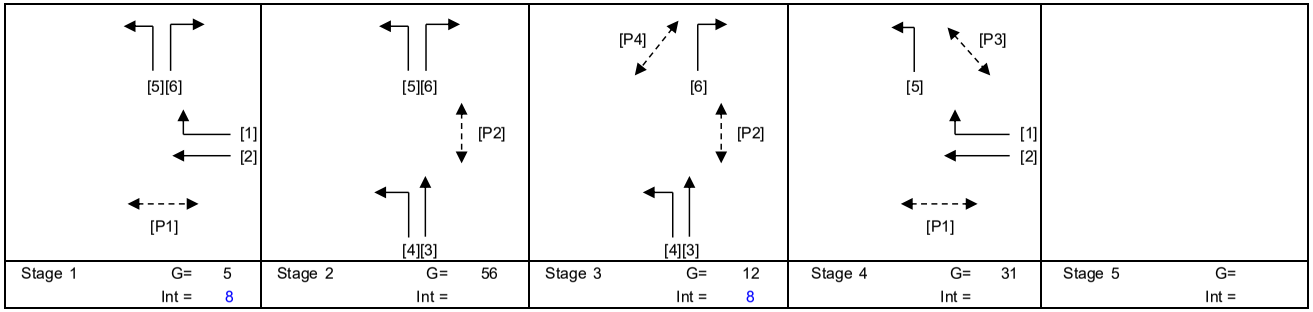
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Design AM

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.247
Loss time		L =	14 sec
Total Flow		=	2150 pcu
Co	= (1.5*L+5)/(1-Y)	=	34.5 sec
Cm	= L/(1-Y)	=	18.6 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	221.6 %
Cp	= 0.9*L/(0.9-Y)	=	19.3 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**222 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		36	8
P2	2,3		8	14		62	14
P3	4		7	7		24	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		83		83	0.00	1915			0.5	-958			957	0.087			37	37	0.280	6	30
1,2	1,4	3.00	1	16			2055		12	153	165	0.93	1891							1891	0.087	0.087		37	37	0.280	18	29
1	1,4	3.00	1	13			2055			160	160	1.00	1842							1842	0.087			37	37	0.280	18	29
1	1,4	3.00	1	10		N	1915			145	145	1.00	1665							1665	0.087			37	37	0.280	18	29
3,4	2,3	3.80	1	5		N	1995	85	208		293	0.29	1835							1835	0.160			68	69	0.280	24	12
3	2,3	3.80	1			N	1995		319		319	0.00	1995							1995	0.160	0.160		69	69	0.280	24	12
5	1,2,4	3.50	1	10			2105	438			438	1.00	1830							1830	0.239			103	94	0.280	12	2
6	1,2,4	3.50	1	10			2105			292	292	1.00	1830							1830	0.160			68	94	0.280	24	12
6	1,2,4	3.50	1	6.5		N	1965			255	255	1.00	1597							1597	0.160			68	94	0.280	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Dec-25
Checked By:	SLN	Dec-25
Reviewed By:	SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Design PM

PROJECT NO.: 40920
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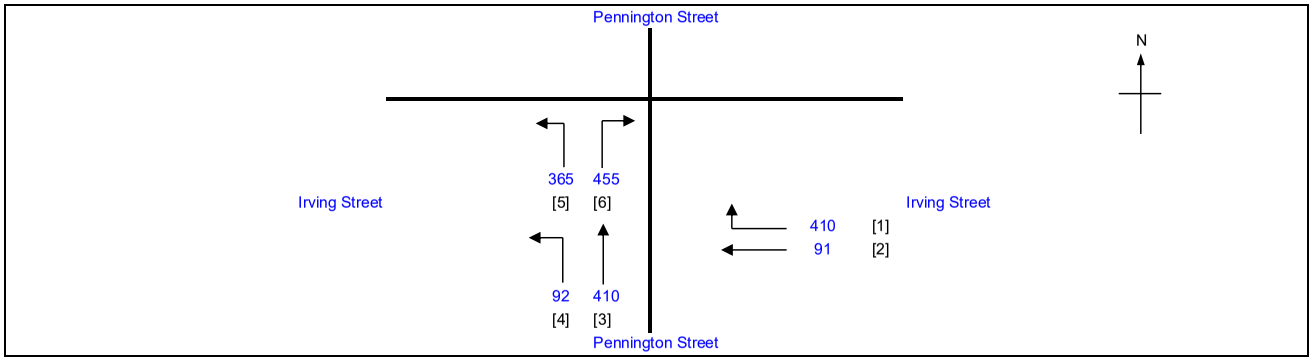
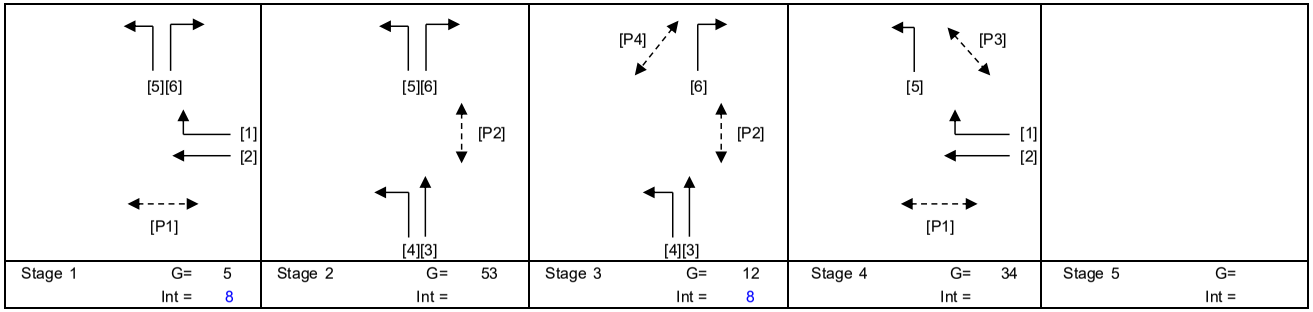


No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.212
Loss time	L =	14 sec
Total Flow	=	1823 pcu
Co = (1.5*L+5)/(1-Y)	=	33.0 sec
Cm = L/(1-Y)	=	17.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	274.6 %
Cp = 0.9*L/(0.9-Y)	=	18.3 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**275 %**



Stage 1	G= 5	Int = 8
Stage 2	G= 53	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 34	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		76		76	0.00	1915			0.5	-958			957	0.079	0.079		40	40	0.240	6	28
1,2	1,4	3.00	1	16			2055		15	133	148	0.90	1895							1895	0.078			39	40	0.240	18	28
1	1,4	3.00	1	13			2055			146	146	1.00	1842							1842	0.079			40	40	0.240	18	27
1	1,4	3.00	1	10		N	1915			131	131	1.00	1665							1665	0.079			39	40	0.240	12	27
3,4	2,3	3.80	1	5		N	1995	92	145		237	0.39	1787							1787	0.133			66	66	0.240	18	13
3	2,3	3.80	1			N	1995		265		265	0.00	1995							1995	0.133	0.133		66	66	0.240	18	13
5	1,2,4	3.50	1	10			2105	365			365	1.00	1830							1830	0.199			100	94	0.240	12	2
6	1,2,4	3.50	1	10			2105			243	243	1.00	1830							1830	0.133			66	94	0.240	18	13
6	1,2,4	3.50	1	6.5		N	1965			212	212	1.00	1597							1597	0.133			66	94	0.240	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Dec-25
Checked By:		SLN	Dec-25
Reviewed By:		SLN	Dec-25

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Design Weekend

PROJECT NO.: 40920
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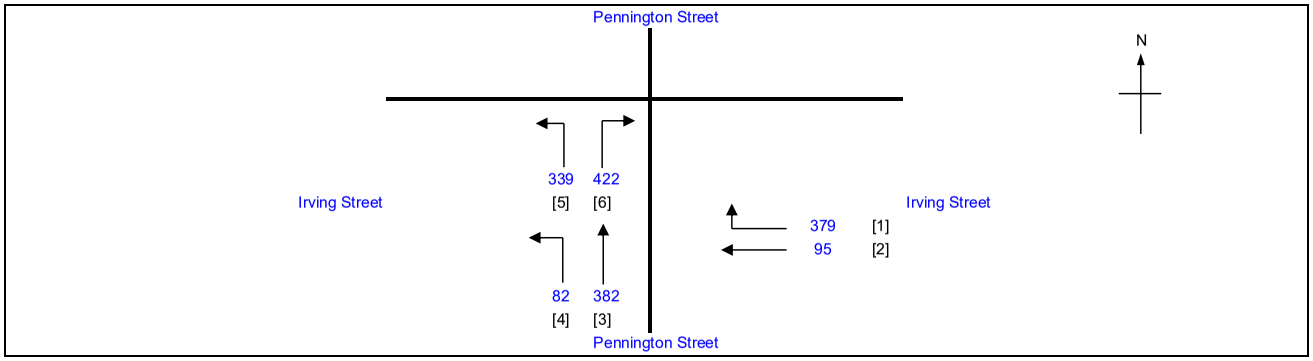
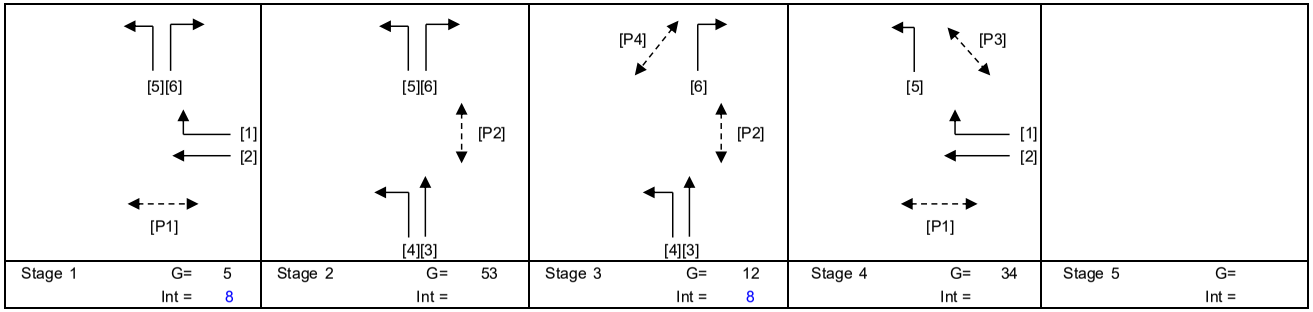


No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.197
Loss time		L =	14 sec
Total Flow		=	1699 pcu
Co	= (1.5*L+5)/(1-Y)	=	32.4 sec
Cm	= L/(1-Y)	=	17.4 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	303.4 %
Cp	= 0.9*L/(0.9-Y)	=	17.9 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**303 %**

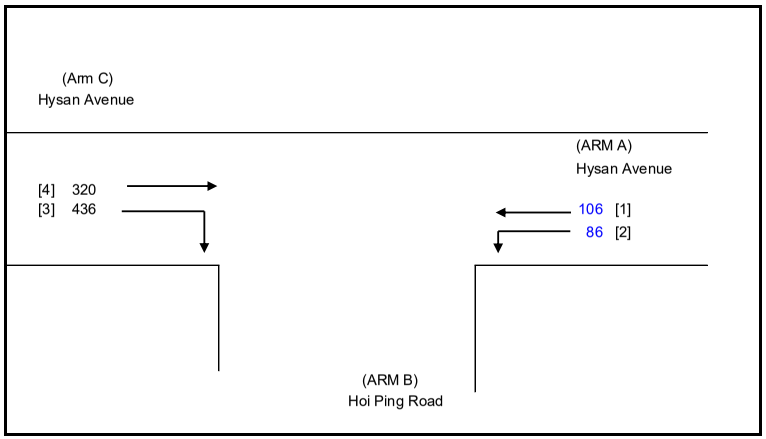


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14				
2	1,4	3.00	1			N	1915		71		71	0.00	1915			0.5	-958			957	0.074			40	40	0.223	6	27
1,2	1,4	3.00	1	16			2055		24	118	142	0.83	1906							1906	0.074	0.074		40	40	0.223	18	27
1	1,4	3.00	1	13			2055			137	137	1.00	1842							1842	0.074			40	40	0.223	18	27
1	1,4	3.00	1	10		N	1915			124	124	1.00	1665							1665	0.074			40	40	0.223	12	27
3,4	2,3	3.80	1	5		N	1995	82	138		220	0.37	1794							1794	0.123	0.123		66	66	0.223	18	13
3	2,3	3.80	1			N	1995		244		244	0.00	1995							1995	0.122			66	66	0.223	18	13
5	1,2,4	3.50	1	10			2105	339			339	1.00	1830							1830	0.185			100	94	0.223	6	2
6	1,2,4	3.50	1	10			2105			225	225	1.00	1830							1830	0.123			66	94	0.223	18	13
6	1,2,4	3.50	1	6.5		N	1965			197	197	1.00	1597							1597	0.123			66	94	0.223	12	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Dec-25
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	86	(pcu/hr)
q a-c	=	106	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	320	(pcu/hr)
q c-b	=	436	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

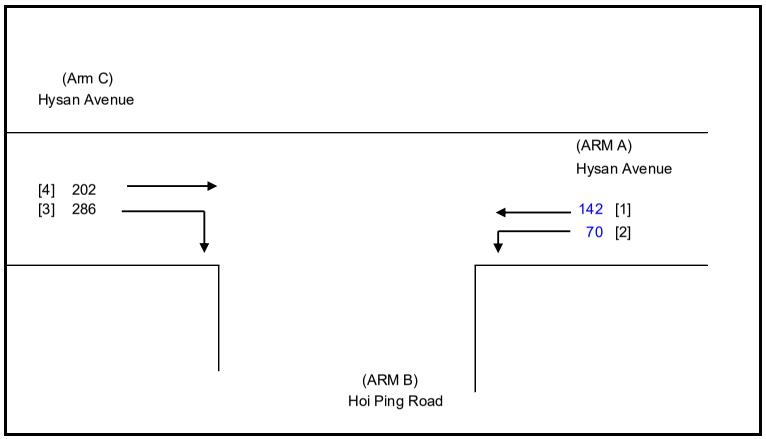
Q b-a	=	212		
Q b-c	=	417	Q b-c (O) =	417
Q c-b	=	664		
Q b-ac	=	212		
TOTAL FLOW	=	948	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.6566
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.66

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Dec-25
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	70	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	202	(pcu/hr)
q c-b	=	286	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

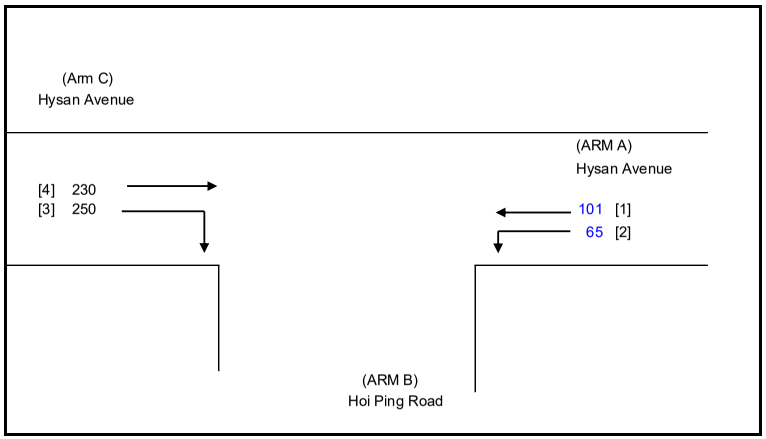
Q b-a	=	245		
Q b-c	=	413	Q b-c (O) =	413
Q c-b	=	660		
Q b-ac	=	245		
TOTAL FLOW	=	700	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4333
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.43

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Dec-25
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	65	(pcu/hr)
q a-c	=	101	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	230	(pcu/hr)
q c-b	=	250	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

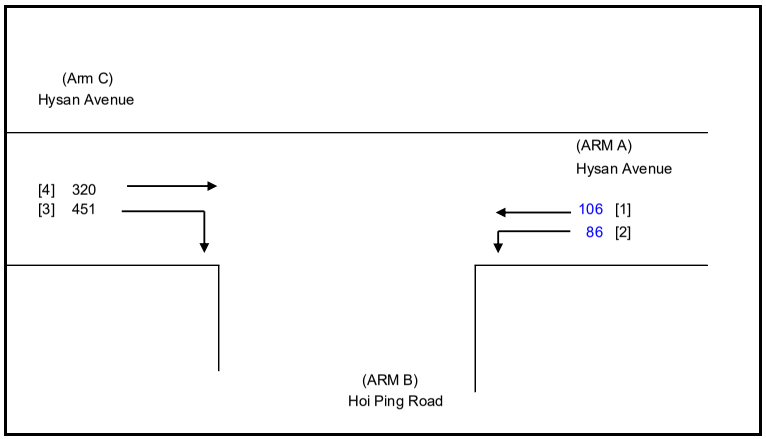
Q b-a	=	254		
Q b-c	=	419	Q b-c (O) =	419
Q c-b	=	670		
Q b-ac	=	254		
TOTAL FLOW	=	646	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.3731
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.37

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Dec-25
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	86	(pcu/hr)
q a-c	=	106	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	320	(pcu/hr)
q c-b	=	451	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

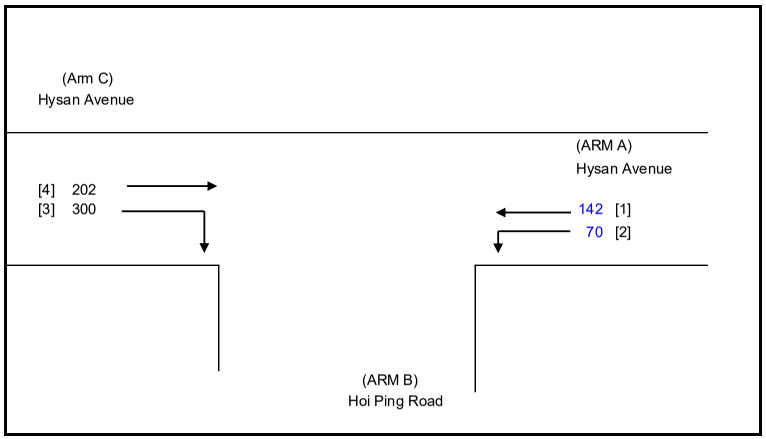
Q b-a	=	209		
Q b-c	=	417	Q b-c (O) =	417
Q c-b	=	664		
Q b-ac	=	209		
TOTAL FLOW	=	963	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.6792
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.68

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Dec-25
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	70	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	202	(pcu/hr)
q c-b	=	300	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

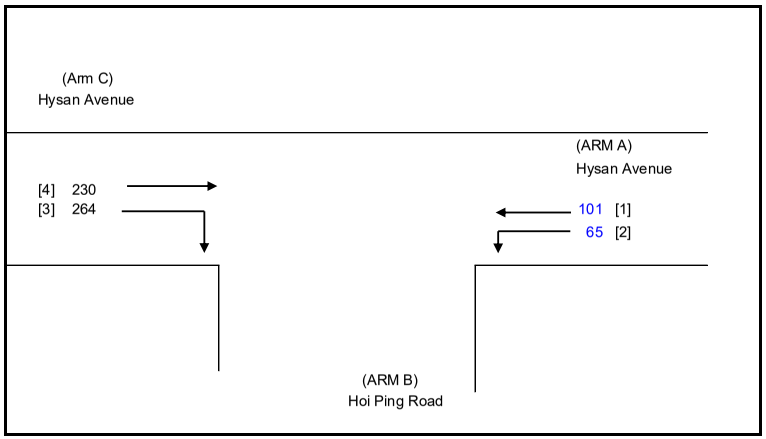
Q b-a	=	242		
Q b-c	=	413	Q b-c (O) =	413
Q c-b	=	660		
Q b-ac	=	242		
TOTAL FLOW	=	714	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4545
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.45

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Dec-25
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Dec-25
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Dec-25



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	65	(pcu/hr)
q a-c	=	101	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	230	(pcu/hr)
q c-b	=	264	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

Q b-a	=	252		
Q b-c	=	419	Q b-c (O) =	419
Q c-b	=	670		
Q b-ac	=	252		
TOTAL FLOW	=	660	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.3940
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.39

Appendix III

Revised Pages of the GPRR

Provision of top soil with erosion control mat on the concrete backfill slope could be utilized for landscaping purpose.

The existing registered slope 11SW-B/C659 with average gradient of 32° located to the south of proposed development is unlikely to be affected by the proposed development. Extracts of the slope stability with a min. of FOS of 1.4 under previous site formation design report approved by BD Ref no. 3/3053/96 in May 2000 is attached for reference. Nevertheless, the effect of the proposed development to adjacent man-made features including 11SW-B/C659 shall be reviewed in the detailed design stage. The effect of the Schematic site formation works associated with the development is presented in **Figure 3**.

Based on a review of the desk study information, assessment of the stability condition of existing man-made features and/or upgrading works are considered required:-

Table 4: Summary of Recommendation of Proposed Works for Features within Development

Feature	Location	Existing CTL	Proposed Works
Temporary soil nailed slope	South of proposed complex	-	Feature to be modified and registered

Table 5: Summary of Existing Feature outside the Development

Feature	Location	Existing CTL	Proposed Works
11SW-B/C659	South of proposed complex	2	Slope with average gradient of 32° with FoS= 1.4 min. will be retained and no site formation works required.

4.2 ELS Works

As discussed in Section 3.3 above, there are temporary ELS works at the west bound of the proposed development. The ELS work is supporting the existing football field at +21.5mPD. It is expected that the existing temporary ELS works including the soldier pile wall shall be replaced by permanent building screen wall or retaining structures under the proposed development. The temporary anchors and steel waling/strut shall be destressed and dismantled in a safety manner respectively. The existing bored pile wall will be strengthened, and it will either become abandoned after erection of the building or will be designed as a permanent bored pile wall for the development subject to detailed design review.

Table 6 : Summary of Recommendation of Proposed ELS Works within Development

Feature	Location	Proposed Works
Bored pile wall	Along western boundary of the site	Two feasible options subject to detailed design review. Option 1 - Feature is considered as temporary ELS works, and will become abandoned after erection of building screen wall. The existing anchors will be distressed and removed with the raking strut supports from the existing bored pile wall.

Feature	Location	Proposed Works
		Option 2 – Feature will be strengthened and will be designed as a permanent bored pile wall after erection of the building. The existing anchors will be distressed and removed with the raking strut supports from the existing bored pile wall.
Soldier pile wall (Temp. ELS)	At southern portion and north-western corner of the site	Feature to be removed with erection of building screen wall and retaining structures, and dismantling of strut/waling.

The temporary ELS works shall be reviewed or modified to fulfill the stability requirements with due consideration of the staged construction of the foundation and building works.

4.3 Potential Natural Terrain Hazards

The development is situated at the build-up area and does not meet the alert criteria for carrying out a natural terrain hazard study (NTHS).

5. CONCLUSIONS AND RECOMMENDATONS

- A temporary soil nailed slope is located at the southern boundary of the development. The feature will be modified/upgraded to current safety standard under this development and registered after completion of the works.
- Existing feature 11SW-B/C659 is located to the south and adjoining the temporary slope. It is unlikely that the feature will be affected by the proposed development. Nevertheless, the effect of the proposed development to adjacent man-made features including 11SW-B/C659 shall be reviewed in the detailed design stage.
- The existing temporary ELS works including the soldier pile wall shall be replaced by permanent building screen wall or retaining structures under the proposed development. The temporary anchors and steel waling/strut shall be destressed and dismantled in a safety manner respectively. The existing bored pile wall will be strengthened, and it will either become abandoned after erection of the building or will be designed as a permanent bored pile wall for the developed subject to detailed design review.
- The development is situated at the build-up area and does not meet the alert criteria for natural terrain screening based on GEO Report No. 138 (2nd Edition). Therefore, NTH Study is not required.
- Based on the above discussions, it can be concluded that the construction of the proposed development is geotechnically feasible.

PLANNING LIMITED
規劃顧問有限公司

[redacted]

By Email and Hand

Our Ref: S3116/SCAA/23/005Lg

9 January 2026

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

Dear Sir/Madam,

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
- S16 Planning Application Submission -
TPB Ref.: A/H7/189
Further Information No. 3

Reference is made to the captioned S16 Planning Application submitted to the Town Planning Board ("TPB") on 17 October 2025 and departmental comments received on 8 January 2026.

In response to the departmental comments received, please find attached the Further Information ("F.I.") submission for your consideration. The submission document consists of:

Response-to-Comment Table
Appendix I Updated Architectural Drawings
Appendix II Replacement Pages of the Supporting Planning Statement

Meanwhile, should you have any queries in relation to the above, please do not hesitate to contact [redacted]

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

Gladys Ng

Encl. (4 copies)

cc. DPO/HK – Mr Harvey Law (By Email)
the Applicant & Team

PL/GN/vy

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
S16 Planning Application

(Planning Application No: A/H7/189)

RESPONSE-TO-COMMENT TABLE

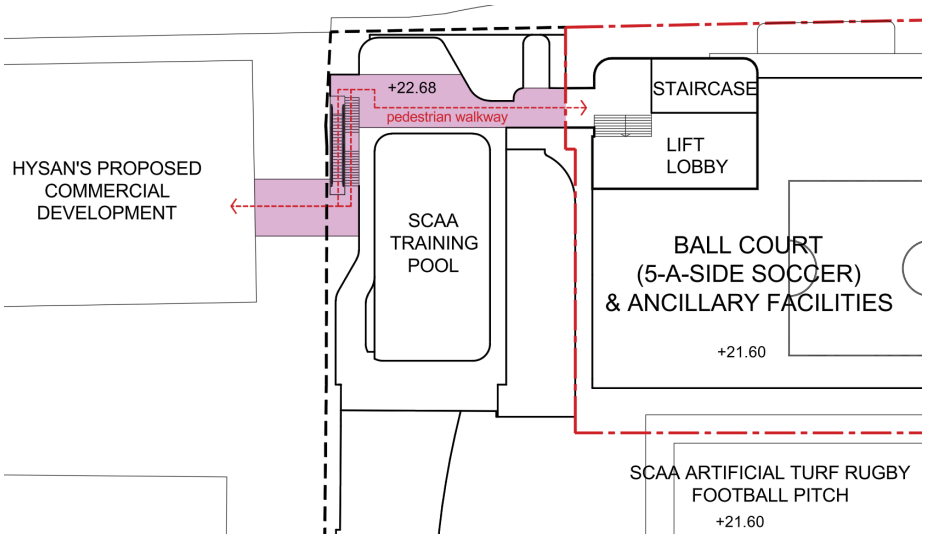
Comments	Response
Comments from District Land Officer/Hong Kong East: **(Contact Person: Ms Phoebe TAI; Tel: 2835 1635)** Her inputs and comments are provided below. Lease Term of the Conditions	
3. It is noted from para 4.1.3 of the PS that the proposed development is anticipated to be completed in 2030. As mentioned in para. 2 above, the lease term of the Lot will be expired on 25.12.2026. In this respect, she would like to emphasize that the approval of the Application from TPB would not give rise to the renewal of the lease term of the Lot. Such renewal will be processed and considered separately by LandsD in the capacity of a landlord provided that policy support is given from CSTB. Besides, the Grantee shall not be entitled to any compensation on the expiration or sooner determination of the lease term in respect of the Lot or any building or structure erected thereon pursuant to Special Conditions ("SC") No. (21) of the Conditions.	Noted.
Proposed Uses and Building	
4. SC No. (5) of the Conditions restricts that the Lot shall not be used for any purposes other than for sporting and recreational purposes and in accordance with the Memorandum and Articles of Association of the Grantee including such reasonable social functions and other ancillary/ associated recreational activities and in particular the Grantee should not use or permit the use of the Lot or any part thereof or any building or part of any building thereon: (a) by any persons other than members of the Grantee or their guests, guests of the Grantee, and members of sports	Noted.

Comments	Response
teams competing with the Grantee; or (b) for any meetings, rallies or assemblies whatsoever of a political nature; or (c) for commercial purposes; or (d) for commercial advertising; or (e) for residential purposes other than for persons employed on the Lot by the Grantee, subject to those uses as may be permitted with the prior written consent of the Director of Lands ("the Director') under SC No. (6) of the Conditions.	
5. According to para. 4.1, Table 4.2 and Appendix I of the PS, the proposed uses mainly consist of multi-function rooms, ball courts (tennis or 5-aside soccer courts), carparks and other ancillary facilities. The Applicant is advised to seek comments from CSTB as to whether the use and operation of the Proposed Development would contravene the user restriction under the Conditions. Besides, the Applicant should also observe SC Nos. (16) and (17) of the Conditions which provide, amongst others, the use of the Lot by outside bodies and national sports association, etc.	Noted.
6. The proposed development parameters are set out in Table 4.1 of the PS and the clarification letter dated 28 October 2025 from the Applicant's agent (KTA Planning Limited). If the application is approved by the TPB and to proceed with the Proposed Development, the Applicant is required to obtain the prior written approval of the Director in accordance with SC No. (12) of the Conditions under which the Grantee shall not erect any building or structure other than the Existing Structures and the Projections (as referred to in the Conditions) or to make any extension or alteration to the Existing Structures and the Projections, except with the prior written approval of the Director.	Noted.
<u>Landscaping Proposal</u>	

Comments	Response
7. The Applicant is reminded to observe SC No. (8) of the Conditions concerning preservation of trees. The Landscape Proposal and Tree Survey Report at Appendix II of the PS would be subject to the comments from PlanD. According to para. 4.4 of the PS, the Applicant proposed to remove and replant 11 nos. of trees. In this regard, Tree Preservation and Removal Proposal should be included for consideration or comments by PlanD / TPB.	Please refer to Appendix II of the Supporting Planning Statement for the Landscape Proposal and Tree Preservation and Removal Proposal ("TPRP"; in Annex A). No comment has been received from PlanD at this stage. A separate TPRP will be submitted to Lands Department for approval after the approval of current s16 Planning Application.
<u>Parking spaces</u> 8. According to para. 4.3 and the Traffic Impact Assessment at Appendix III of the PS, 63 car parking spaces (including disabled car parking spaces), 9 motor cycle parking spaces, 1 pick-up / drop-off layby and 1 goods vehicle loading / unloading bay are provided. In accordance with SC No. (23) of the Conditions, the proposed number and type of parking spaces shall be provided to the satisfaction of the Director. TD should be consulted in the regard.	Noted.
<u>Vehicular access</u> 9. The Applicant is required to clearly indicate and ensure the proposed vehicular access falls within the vehicular access points as permitted under SC No. (24) of the Conditions on the Architectural Drawings at Appendix I of the PS.	The proposed vehicular access falls within Point P and Q through R as per the lease plan dated 24 September 2013. The proposed access is permitted under SC No. (24).
<u>Proposed Footbridge Connection to the adjoining Commercial Development (i.e. IL 8945)</u> 10. According to para 4.2.6 and Figure 4.2 of the PS, there would be a potential pedestrian connection on 2/F of the Proposed Development connecting to the adjoining commercial development erected on IL 8945	Noted.

Comments	Response
through the existing SCAA's swimming pool to facilitate visitors travelling between the Proposed Development and the Causeway Bay MTR Station. There is no requirement under the Conditions and Conditions of Sale governing IL 8945 to provide any links between the Lot and IL 8945.	
11. As shown on the "Section A-A" plan at Appendix I of the PS, the proposed pedestrian linkage at the existing SCAA's swimming pool might involve erection of new structures and alteration and addition works to the Existing Structures. Therefore, the Applicant is reminded to observe SC No. (12) of the Conditions under which prior written approval from the Director should be obtained.	Noted.
Other Comments 12. It is noted that the Applicant has submitted schematic layout plans, floor plans and section drawings of the proposed development. This office reserves our comment on the said plans and drawings upon compliance checking under the Conditions at the general building plan submission stage.	Noted.
Comments from District Planning Officer/Hong Kong: **(Contact Person: Mr Harvey LAW; Tel: 2231 4929)** We have the following observation from district planning perspective: *Clarification on ancillary uses* (a) Please clarify whether shop and services or eating places uses, are included in the current submission.	There is no shop nor eating place in the proposed development scheme.

Comments	Response
(b) Please also supplement the submission with details of those ancillary uses proposed within the development.	Ancillary uses include toilets, changing rooms, vending machines, and E/M services ducts and plantrooms.
Table 4.2	
(c) It is noted from the architectural drawings at Appendix I that a landscape area is located at 2/F. Please specify the main use of 4/F in Table 4.2.	Please kindly note that the landscape area is located on 1/F and R/F is an open-air space for enjoyment by the members. Table 4.2 of the Supporting Planning Statement has been updated accordingly (*Appendix II* refers).
(d) Please provide further details regarding the ball courts in Table 4.2.	Table 4.2 of the Supporting Planning Statement has been updated accordingly (*Appendix II* refers).
(e) Kindly include the main use of UR/F in Table 4.2.	'UR/F Plan' should be read 'R/F Plan'. The main use of R/F has been incorporated into Table 4.2 accordingly (*Appendix II* refers).
Architectural Drawings at Appendix I	
(f) To ensure consistency with Table 4.2, please specify the ancillary office and other ancillary uses in the drawings.	The schematic drawings have been updated accordingly (*Appendix I* refers).
(g) Drawing of 1/F: Minor typo is spotted. It should be read as 'Multi-function rooms & ancillary facilities'.	The schematic drawings have been updated accordingly (*Appendix I* refers).
(h) Drawing of UR/F: Please clarify whether the "Lift Lobby" at UR/F refers to "Lift Landing." If so, kindly update the drawings accordingly. Please advise whether the maintenance roof and green roof are intended to be accessible to staff only, members or the public.	Please be clarified that the lift last landing floor is R/F at +45.40mPD. R/F would be an open-air area for enjoyment by the members.

Comments	Response
Gross Floor Area (GFA) (i) For the GFA of approximately 31,327.12 sqm as stated in Table 4.1, please clarify whether plant rooms, lift shafts, car parks, loading areas, and large void spaces for special functions of sports halls, etc., have been assumed to be exempted from the GFA calculation.	The proposed GFA includes plant rooms, lift shafts, car parks, loading areas, and large void spaces for special functions (such as sports halls and etc.).
(j) Kindly provide details of the GFA concessions under the current submission.	Ditto.
Proposed Footbridge connection to the adjoining commercial development (k) Please provide sectional drawings or other relevant plans indicating the proposed footbridge connection to the adjoining lot.	The indicative pedestrian linkage design is shown below: 

Comments	Response
	Please kindly note that the above is indicative only and is subject to further design and liaison with different parties.
(l) Kindly clarify whether the applicant has initiated discussions or reached a mutual understanding with the developer of the adjoining lot regarding the pedestrian linkage.	The initial discussion regarding the footbridge design with Hysan Development Co. Ltd (Hysan) was held on 4 November 2024.
(m) Please also specify how the pedestrian linkage will be implemented, maintained, monitored, and managed for public use.	Management and maintenance responsibility to be further discussed with Hysan in detail design stage.
Setback	
(n) For paragraph 4.4.3, please supplement the submission with the dimensions and intended purpose of the setback along Caroline Hill Road.	The proposed SCAA Sports Link will include an about 3m setback along Caroline Hill Road to incorporate street plantings, enhancing the streetscape with trees and shrubs that provide shade for pedestrians and visitors to the SCAA. Para. 4.4.3 has been updated accordingly.
Existing Fence at SCAA Site	
(o) It is noted that an existing fence has been erected around the football field at the SCAA site. Please clarify whether this fence will be removed and whether a new gold fence will be erected at the R/F of the proposed SCAA Sport Link.	The new golf fence is proposed to set on the Roof of Sports Link to replace the existing golf fence. The existing golf fence will be removed after the completion of new fence.

Consolidated by: **KTA Planning Limited**
Date: **9 January 2026**

Appendix I Updated Architectural Drawings
Appendix II Replacement Pages of the Supporting Planning Statement

Appendix I

Updated Architectural Drawings

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93

STAIRCASE

LIFT LOBBY +6.93

E&M

L/UL

LAY-BY AREA

+7.46

+7.55

STAIRCASE

CARPARK +7.46

+8.36

STAIRCASE

LIFT LOBBY

E&M

+9.46

+10.80

+10.65

+12.23

+14.13

+15.83

SCAA TRAINING POOL

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

G/F Plan ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

OFFICE

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

SCAA TRAINING POOL

MULTI-FUNCTION ROOMS

+14.04

BALLCOURT (TENNIS)

+11.06

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

TOILETS/ CHANGING ROOMS/ E/M

TOILETS/ CHANGING ROOMS/ E/M

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 09 Jan 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

TOILETS/ CHANGING ROOMS/ E/M

BALL COURT (5-A-SIDE SOCCER) & ANCILLARY FACILITIES

+21.60

TOILETS/ CHANGING ROOMS

E&M

SCAA GOLF DRIVING RANGE

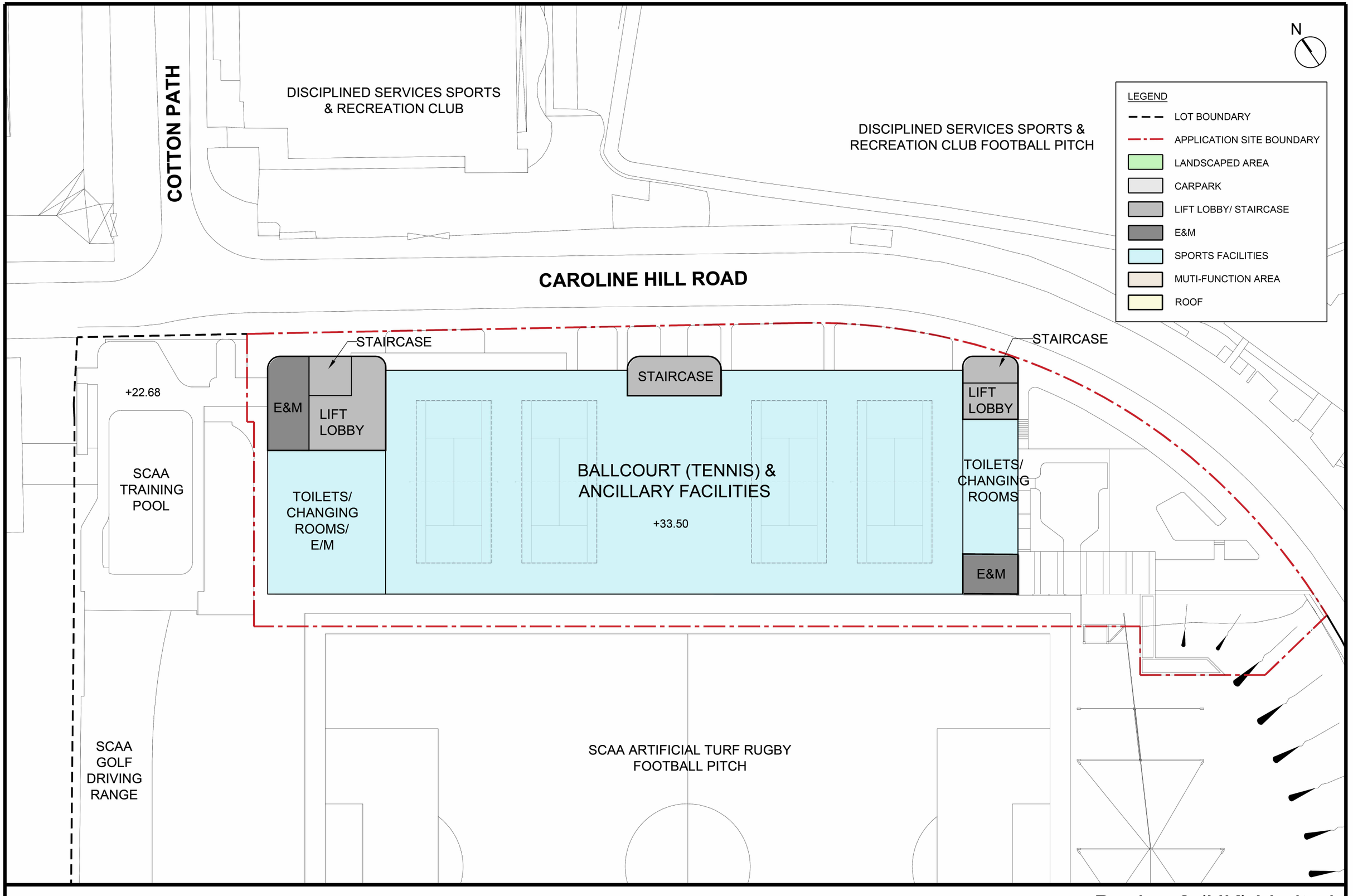
SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 09 Jan 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARIES
- APPLICATION SITE BOUNDIES
- GREEN ROOF
- LIFT LOBBY/ STAIRCASE
- E&M
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

LIFT LOBBY

E&M

STAIRCASE

LIFT LOBBY

E&M

ROOF

+45.40

GOLF FENCE

GREEN ROOF

SCAA TRAINING POOL

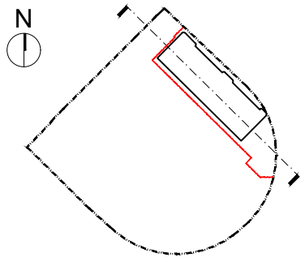
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

R/F Plan ○ 1 : 500 (A3) ○ 09 Jan 2026



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

37940

11900

10540

3600

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Roof

+45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

16200

11900

37940

11900

7560

6580

R/F +45.40

3/F +33.50

2/F +21.60

1/F +14.04

G/F +7.46

Caroline Hill Road

Approx. +10.65

+8.811

Mean Street Level of North Site

Existing Slope

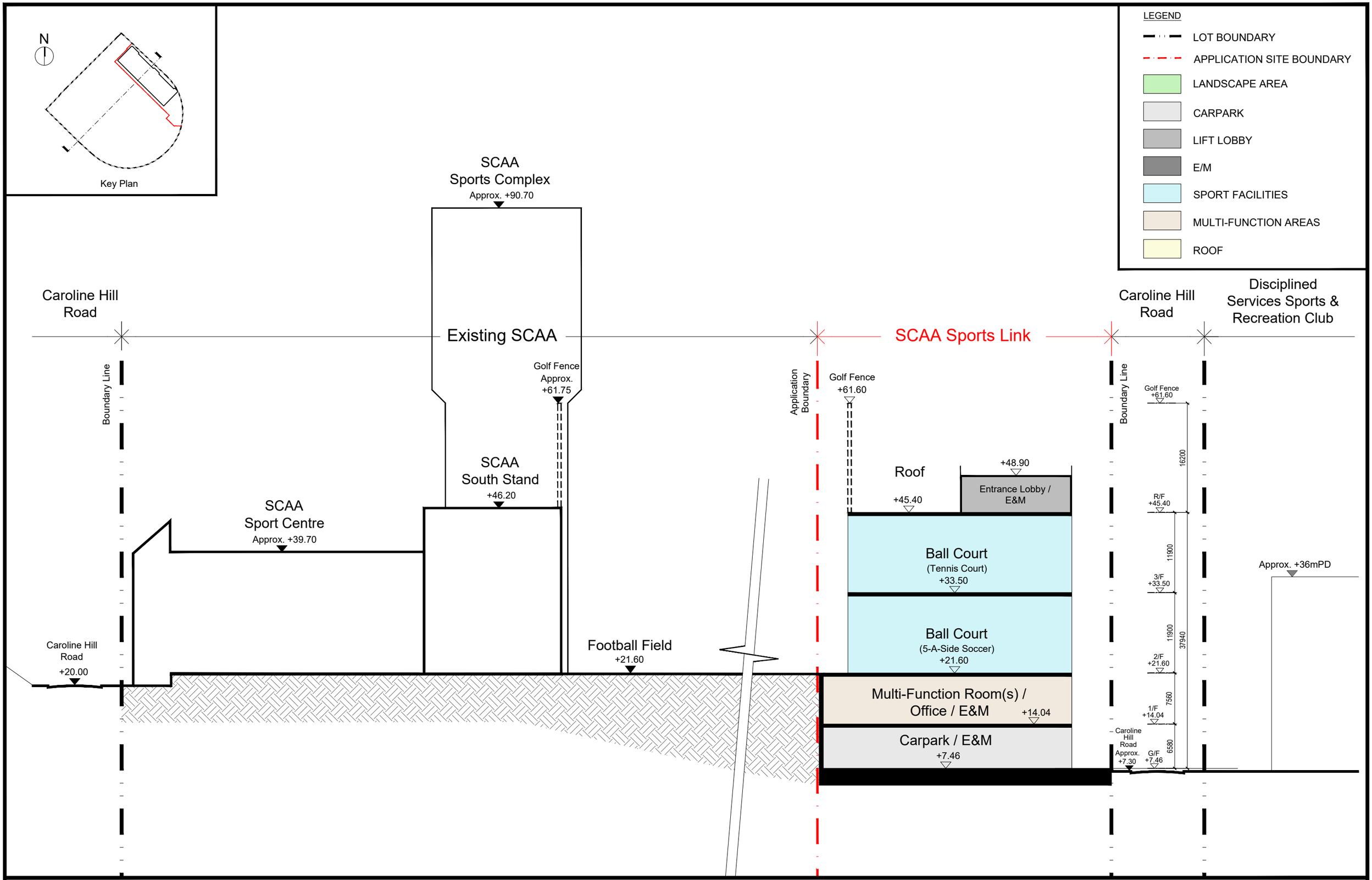
Landscape Garden

+10.65

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited

Appendix II

Replacement Pages of the Supporting Planning Statement

Table 4.2 Proposed Usage

Floor	Usage
G/F	Car Park / E&M
1/F	Multi-Function Rooms / Ancillary Office / Ancillary Uses (e.g. WC & Changing Rooms) / Ball Courts (Tennis) / Landscape Area
2/F	Ball Courts (5-a-side Soccer) / Ancillary Uses (e.g. WC & Changing Rooms) / Plant Room
3/F	Ball Courts (Tennis) / Ancillary Uses (e.g. WC & Changing Rooms) / Plant Room
Roof	Open-air area for enjoyment by the members

4.1.4. The Proposed Development will be opened from Monday to Sunday including Public Holidays, from 7:00am to 10:00pm. The number of visitors will be controlled as advance booking will be required.

4.2. Major Design Elements

4.2.1. In developing the Proposed Development Scheme for the Proposed Development, the schematic design has considered site constraints and characteristics of the surrounding environment. The key design elements that have been incorporated into the Proposed Development Scheme are as follows:

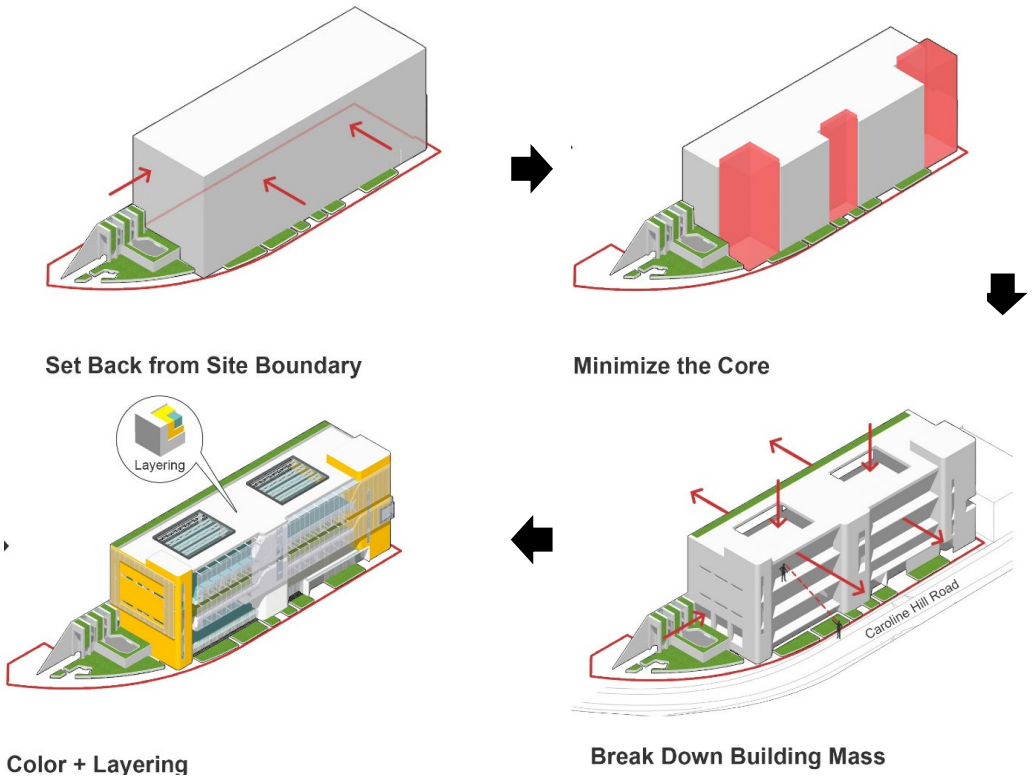


Figure 4.1 Design Process

and/or conventional planting is not technically feasible, e.g. green wall and climbing plants will be applied on retaining structures. Green roofs will be incorporated on top of building, and

- Through selection of suitable plants in suitable place and use of combination of localized/native and ornamental plants to enrich the diversity of species combination in the context. Utilise a combination of evergreen and/or ornamental and/or flowering tree and shrub species with an interesting form, colour and foliage texture to enrich the landscape experiences and provide architectural highlights.

4.4.3. The proposed SCAA Sports Link will include an about 3m setback along Caroline Hill Road to incorporate street plantings, enhancing the streetscape with trees and shrubs that provide shade for pedestrians and visitors to the SCAA. The southernmost part of the Site will feature a sitting-out garden, while the sloping area at the interface to the existing south will be reformed following the sloping topography; the engineered appearance of the new retaining structure to the sloping area will be disguised with green roofs and green walls. Besides, green roof will be added on the maintenance roof to enhance visual amenity looking from the elevated neighbourhoods.

4.4.4. The proposed design emphasises greenery coverage with an area targeting 20% of the Site (i.e. a minimum of 1,226.4m² of greenery), where over 50% out of the 20% greenery areas is allocated at primary zone and will be accessible by future users and pedestrians.

4.5. Air Ventilation Consideration (*Appendix VI* refers)

4.5.1. According to RAMS wind data, annual prevailing winds are the incoming winds flowing from the northeast quadrant (i.e. NE, ENE, E) while summer prevailing winds are flowing from southwest quadrant (i.e S, SSW, SW) and from E directions.

4.5.2. The Proposed Development Scheme has incorporated good design features, such as provision of building setback and increased building permeability. Building setback could reduce blockage in particular the perimeter of a development. The landscape garden at the southeastern portion on G/F sets back the building façade from the site boundary for over 20m (**Figure 4.**3 refers). The building setback allows more wind penetration at pedestrian level to flow across the site along Caroline Hill Road, thus improving wind environment along the road and local areas to the south of the Site.

PLANNING LIMITED
規劃顧問有限公司

[redacted]

By Email and Hand

Our Ref: S3116/SCAA/23/005Lg

9 January 2026

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

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Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

Gladys Ng

Encl. (4 copies)

cc. DPO/HK – Mr Harvey Law (By Email)
the Applicant & Team

PL/GN/vy

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
S16 Planning Application

(Planning Application No: A/H7/189)

RESPONSE-TO-COMMENT TABLE

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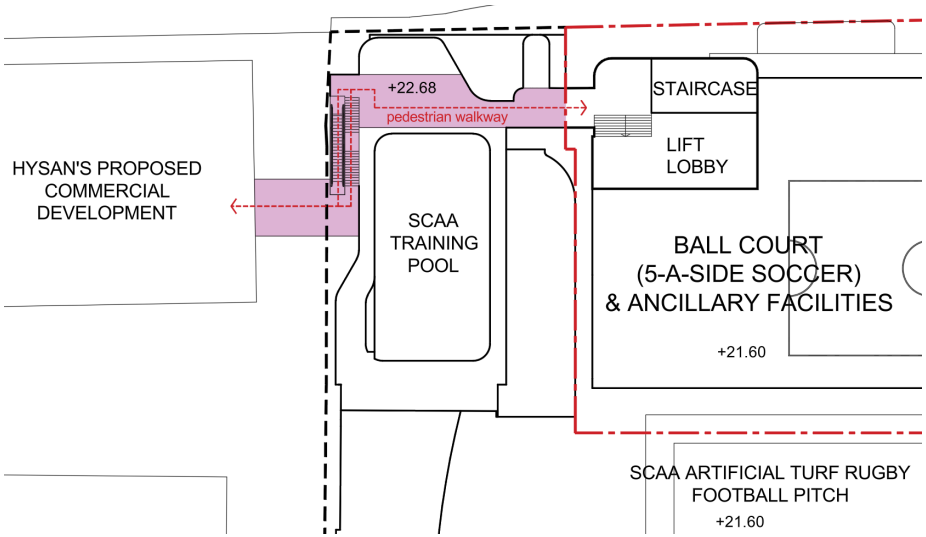
Proposed Uses and Building	
4. SC No. (5) of the Conditions restricts that the Lot shall not be used for any purposes other than for sporting and recreational purposes and in accordance with the Memorandum and Articles of Association of the Grantee including such reasonable social functions and other ancillary/ associated recreational activities and in particular the Grantee should not use or permit the use of the Lot or any part thereof or any building or part of any building thereon: (a) by any persons other than members of the Grantee or their guests, guests of the Grantee, and members of sports	Noted.

Comments	Response
teams competing with the Grantee; or (b) for any meetings, rallies or assemblies whatsoever of a political nature; or (c) for commercial purposes; or (d) for commercial advertising; or (e) for residential purposes other than for persons employed on the Lot by the Grantee, subject to those uses as may be permitted with the prior written consent of the Director of Lands ("the Director') under SC No. (6) of the Conditions.	
5. According to para. 4.1, Table 4.2 and Appendix I of the PS, the proposed uses mainly consist of multi-function rooms, ball courts (tennis or 5-aside soccer courts), carparks and other ancillary facilities. The Applicant is advised to seek comments from CSTB as to whether the use and operation of the Proposed Development would contravene the user restriction under the Conditions. Besides, the Applicant should also observe SC Nos. (16) and (17) of the Conditions which provide, amongst others, the use of the Lot by outside bodies and national sports association, etc.	Noted.
6. The proposed development parameters are set out in Table 4.1 of the PS and the clarification letter dated 28 October 2025 from the Applicant's agent (KTA Planning Limited). If the application is approved by the TPB and to proceed with the Proposed Development, the Applicant is required to obtain the prior written approval of the Director in accordance with SC No. (12) of the Conditions under which the Grantee shall not erect any building or structure other than the Existing Structures and the Projections (as referred to in the Conditions) or to make any extension or alteration to the Existing Structures and the Projections, except with the prior written approval of the Director.	Noted.
<u>Landscaping Proposal</u>	

Comments	Response
7. The Applicant is reminded to observe SC No. (8) of the Conditions concerning preservation of trees. The Landscape Proposal and Tree Survey Report at Appendix II of the PS would be subject to the comments from PlanD. According to para. 4.4 of the PS, the Applicant proposed to remove and replant 11 nos. of trees. In this regard, Tree Preservation and Removal Proposal should be included for consideration or comments by PlanD / TPB.	Please refer to Appendix II of the Supporting Planning Statement for the Landscape Proposal and Tree Preservation and Removal Proposal ("TPRP"; in Annex A). No comment has been received from PlanD at this stage. A separate TPRP will be submitted to Lands Department for approval after the approval of current s16 Planning Application.
<u>Parking spaces</u> 8. According to para. 4.3 and the Traffic Impact Assessment at Appendix III of the PS, 63 car parking spaces (including disabled car parking spaces), 9 motor cycle parking spaces, 1 pick-up / drop-off layby and 1 goods vehicle loading / unloading bay are provided. In accordance with SC No. (23) of the Conditions, the proposed number and type of parking spaces shall be provided to the satisfaction of the Director. TD should be consulted in the regard.	Noted.
<u>Vehicular access</u> 9. The Applicant is required to clearly indicate and ensure the proposed vehicular access falls within the vehicular access points as permitted under SC No. (24) of the Conditions on the Architectural Drawings at Appendix I of the PS.	The proposed vehicular access falls within Point P and Q through R as per the lease plan dated 24 September 2013. The proposed access is permitted under SC No. (24).
<u>Proposed Footbridge Connection to the adjoining Commercial Development (i.e. IL 8945)</u> 10. According to para 4.2.6 and Figure 4.2 of the PS, there would be a potential pedestrian connection on 2/F of the Proposed Development connecting to the adjoining commercial development erected on IL 8945	Noted.

Comments	Response
through the existing SCAA's swimming pool to facilitate visitors travelling between the Proposed Development and the Causeway Bay MTR Station. There is no requirement under the Conditions and Conditions of Sale governing IL 8945 to provide any links between the Lot and IL 8945.	
11. As shown on the "Section A-A" plan at Appendix I of the PS, the proposed pedestrian linkage at the existing SCAA's swimming pool might involve erection of new structures and alteration and addition works to the Existing Structures. Therefore, the Applicant is reminded to observe SC No. (12) of the Conditions under which prior written approval from the Director should be obtained.	Noted.
Other Comments 12. It is noted that the Applicant has submitted schematic layout plans, floor plans and section drawings of the proposed development. This office reserves our comment on the said plans and drawings upon compliance checking under the Conditions at the general building plan submission stage.	Noted.
Comments from District Planning Officer/Hong Kong: **(Contact Person: Mr Harvey LAW; Tel: 2231 4929)** We have the following observation from district planning perspective: *Clarification on ancillary uses* (a) Please clarify whether shop and services or eating places uses, are included in the current submission.	There is no shop nor eating place in the proposed development scheme.

Comments	Response
(b) Please also supplement the submission with details of those ancillary uses proposed within the development.	Ancillary uses include toilets, changing rooms, vending machines, and E/M services ducts and plantrooms.
Table 4.2	
(c) It is noted from the architectural drawings at Appendix I that a landscape area is located at 2/F. Please specify the main use of 4/F in Table 4.2.	Please kindly note that the landscape area is located on 1/F and R/F is an open-air space for enjoyment by the members. Table 4.2 of the Supporting Planning Statement has been updated accordingly (*Appendix II* refers).
(d) Please provide further details regarding the ball courts in Table 4.2.	Table 4.2 of the Supporting Planning Statement has been updated accordingly (*Appendix II* refers).
(e) Kindly include the main use of UR/F in Table 4.2.	'UR/F Plan' should be read 'R/F Plan'. The main use of R/F has been incorporated into Table 4.2 accordingly (*Appendix II* refers).
Architectural Drawings at Appendix I	
(f) To ensure consistency with Table 4.2, please specify the ancillary office and other ancillary uses in the drawings.	The schematic drawings have been updated accordingly (*Appendix I* refers).
(g) Drawing of 1/F: Minor typo is spotted. It should be read as 'Multi-function rooms & ancillary facilities'.	The schematic drawings have been updated accordingly (*Appendix I* refers).
(h) Drawing of UR/F: Please clarify whether the "Lift Lobby" at UR/F refers to "Lift Landing." If so, kindly update the drawings accordingly. Please advise whether the maintenance roof and green roof are intended to be accessible to staff only, members or the public.	Please be clarified that the lift last landing floor is R/F at +45.40mPD. R/F would be an open-air area for enjoyment by the members.

Comments	Response
Gross Floor Area (GFA) (i) For the GFA of approximately 31,327.12 sqm as stated in Table 4.1, please clarify whether plant rooms, lift shafts, car parks, loading areas, and large void spaces for special functions of sports halls, etc., have been assumed to be exempted from the GFA calculation.	The proposed GFA includes plant rooms, lift shafts, car parks, loading areas, and large void spaces for special functions (such as sports halls and etc.).
(j) Kindly provide details of the GFA concessions under the current submission.	Ditto.
Proposed Footbridge connection to the adjoining commercial development (k) Please provide sectional drawings or other relevant plans indicating the proposed footbridge connection to the adjoining lot.	The indicative pedestrian linkage design is shown below: 

Comments	Response
	Please kindly note that the above is indicative only and is subject to further design and liaison with different parties.
(l) Kindly clarify whether the applicant has initiated discussions or reached a mutual understanding with the developer of the adjoining lot regarding the pedestrian linkage.	The initial discussion regarding the footbridge design with Hysan Development Co. Ltd (Hysan) was held on 4 November 2024.
(m) Please also specify how the pedestrian linkage will be implemented, maintained, monitored, and managed for public use.	Management and maintenance responsibility to be further discussed with Hysan in detail design stage.
Setback	
(n) For paragraph 4.4.3, please supplement the submission with the dimensions and intended purpose of the setback along Caroline Hill Road.	The proposed SCAA Sports Link will include an about 3m setback along Caroline Hill Road to incorporate street plantings, enhancing the streetscape with trees and shrubs that provide shade for pedestrians and visitors to the SCAA. Para. 4.4.3 has been updated accordingly.
Existing Fence at SCAA Site	
(o) It is noted that an existing fence has been erected around the football field at the SCAA site. Please clarify whether this fence will be removed and whether a new gold fence will be erected at the R/F of the proposed SCAA Sport Link.	The new golf fence is proposed to set on the Roof of Sports Link to replace the existing golf fence. The existing golf fence will be removed after the completion of new fence.

Consolidated by: **KTA Planning Limited**
Date: **9 January 2026**

Appendix I Updated Architectural Drawings
Appendix II Replacement Pages of the Supporting Planning Statement

PLANNING LIMITED
規劃顧問有限公司
[redacted]

By Email and Hand

Our Ref: S3116/SCAA/23/007Lg

5 March 2026

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

Dear Sir/Madam,

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
- S16 Planning Application Submission -
TPB Ref.: A/H7/189
Further Information No. 4

Reference is made to the captioned S16 Planning Application submitted to the Town Planning Board ("TPB") on 17 October 2025 and departmental comments received on 27 January and 5 February 2026.

In response to the departmental comments received, please find attached the Further Information ("F.I.") submission for your consideration. The submission document consists of:

Response-to-Comment Table
Appendix I Revised Air Ventilation Assessment – Expert Evaluation
Appendix II Replacement Pages of the Supporting Planning Statement
Appendix III Revised Air Quality Impact Assessment
Appendix IV Updated Traffic Impact Assessment

Meanwhile, should you have any queries in relation to the above, please do not hesitate to contact Ms [redacted] or the undersigned at [redacted].

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

Gladys Ng

Encl. (4 copies)

cc. DPO/HK – Mr Harvey Law (By Email)
the Applicant & Team

PL/GN/vy

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
S16 Planning Application

(Planning Application No: A/H7/189)

RESPONSE-TO-COMMENT TABLE

Comments	Response
Comments from the Chief Town Planner/Urban Design and Landscape Section: **(Contact Person: Ms Vanessa TSANG; Tel: 3565 3942)**	
(c) Comments to the Consultant on AVA-EE and Supporting Planning Statement (SPS):	
(i) the Consultant may wish to review and incorporate our comments previously provided in (d)(iv) regarding the wind from the southwest of the Site into the evaluation of the AVA-EE report;	For summer condition, it is anticipated that the prevailing wind will penetrate through the separation between The Leighton Hill and Beverly Hill. The relevant discussion has been provided in Section 9.1.7 to 9.1.11 of the revised AVA-EE in *Appendix I*.
(ii) as the site is vacant currently, it is inevitable that the proposed development would result in some adverse impact when compared with the baseline scheme. It is considered that the proposed building setback of at least 20m from the southeastern site boundary would alleviate potential air ventilation impact instead of "improving wind environment" along the road and local areas at the north/south/west of the Site as concluded in the AVA-EE and para. 5.8.7 of the SPS; and	The relevant text has been revised from "improving wind environment" to "alleviate potential air ventilation impact" throughout the report (*Appendix I* refers).
(iii) Figure 8.1 of the AVA-EE and para. 4.5.2 & Figure 4.3 of the SPS – as previously commented, the blue arrow of "at least 20m setback" should be confined to the site boundary to avoid misinterpretation.	The relevant text and figures have been revised accordingly. Please refer to *Appendix 1* for the revised Figure 8.1 and *Appendix II* for the revised para. 4.5.2 & Figure 4.3.

Comments	Response
Comments from the Director of Environmental Protection: **(Contact Person: Ms Virginia WONG; Tel: 2835 1109)**	
His comments on the 1st Further information are as below:	
1. Table 4-2 – Please supplement buffer distance for under flyovers.	Table 4-2 has been revised accordingly (*Appendix III* refers).
2. Section 4.3.1 – Please supplement brief descriptions for the legislations and guidelines.	Section 4.3 has been revised accordingly (*Appendix III* refers).
3. Section 5.1.1 – Please explain why year 2030 is chosen for background concentrations.	Pleas be clarified that as the Proposed Development is expected to be in operation in 2030, the PATH v3.0 data in Year 2030 have been adopted to represent the future background air quality concentrations at the 500m assessment area. Please note that Section 5.1.1 has been renumbered as 5.1.2 in *Appendix III*.
4. Table 5-1 –	
a. Please provide the level of PATH data.	Table 5-1 has been renumbered as Table 5-2 and updated accordingly.
b. Please supplement ozone peak season.	Table 5-1 has been renumbered as Table 5-2 and updated accordingly.
c. Suggest to remove Notes [2] and [4]. Please supplement that the data are obtained from Smart Air Modelling Platform (SAMP v2.1).	Table 5-1 has been renumbered as Table 5-2 and updated accordingly.

Comments	Response
5. Section 5 – Please supplement background concentrations of the nearest AQMS for recent 5 years.	Please refer to the new Section 5.1.1 and Table 5-1 for the background concentrations of the nearest AQMS for recent 5 years (*Appendix III* refers).
6. Section 6.1.8 – Please indicate the locations of the concurrent projects in a figure.	Figure 6-1 has been added to show the locations of the concurrent projects (*Appendix III* refers).
7. Section 7.2.3 – Please replace "significant" with "adverse" in the 2nd last line.	Section 7.2.3 has been revised accordingly (*Appendix III* refers).
8. Section 7.3.3 and 7.3.4– Please remove "Area with 100-200m buffer…to the Proposed Development." In line 6-11 of Section 7.3.3, and "As such,…to the Proposed Development" in line 6-10 of Section 7.3.4. Please supplement that 10m buffer distance is required, and that the buffer distance requirement can be met and no adverse air quality impact from the concerned chimneys is anticipated.	Section 7.3.3 and 7.3.4 have been updated accordingly (*Appendix III* refers).
9. Section 7.3.4 – Please revise to "between the hospital chimneys at Proposed District Court Building" in line 4.	Section 7.3.4 has been revised accordingly (*Appendix III* refers).
10. Section 7.4 and 7.4.3 – Please delete "Industrial" in section heading and line 1 of Section 7.4.3.	Noted, Section 7.4 and 7.4.3 have been revised accordingly (*Appendix III* refers).
11. Section 7.4.1 – Please delete "As" in line 2.	Section 7.4.1 has been revised accordingly (*Appendix III* refers).
12. Section 7.4.2 – Please supplement that detailed design of the exact locations of carpark exhaust and fresh air intakes is not available at planning stage, and that the exhaust air outlets should be located	Section 7.4.2 has been revised accordingly (*Appendix III* refers).

Comments	Response
away from nearby ASRs. 13. Section 8.1.2 – Please revise to "industrial chimneys" in line 3.	Section 8.1.2 has been revised accordingly (*Appendix III* refers).
14. Figure 6-1 (G/F) – Please indicate the meaning of green area (landscape area?).	Figure 6-1 has been renumbered as Figure 6-2 and revised accordingly (*Appendix III* refers).
15. Figure 6-1 – Suggest to assign different figure no. for different floors for easy reference.	Noted, different figures have been prepared for each floor as shown in Figures 6-2 to 6-6 (*Appendix III* refers).
16. Figure 6-2 – Please explain the meaning of the logos shown in cyan colour.	Figure 6-2 has been renumbered as Figure 6-7 and the irrelevant logo has been removed (*Appendix III* refers).
17. Please use consistent names for "St. Paul's Convent", "Saint Paul's Convent", "St. Paul's Hospital", "Saint Paul's Hospital".	The names have been updated as "St. Paul's Convent" in the report (*Appendix III* refers).
18. Please highlight all changes in the next submission.	Noted.
Comments from the District Land Officer/Hong Kong East: **(Contact Person: Ms Phoebe TAI; Tel: 2835 1635)** According to her record, the Annex A of Appendix II of the PS is a Tree Survey Report instead of a Tree Preservation and Removal Proposal ("TPRP"). Please clarify and include a TPRP for consideration or comments by PlanD/TPB if otherwise.	Separate TPRP will be submitted to Lands Department for approval in due course after the approval of this application.

Comments	Response
Comments from the Transport Department: **(Contact Person: N/A; Tel: N/A)**	
Responses-to-Comments (R-to-C)	
1) R-to-C item I - section 2.4 refers. Your R-to-C mentioned that the parking ratio of the proposed SCAA Sport Link is 1 space per 497 m2 GFA which is considered sufficient as compared with the existing SCAA Complex. Please incorporate the supporting information in the revised TIA report and justify also the demand of L/UL bays. On the other hand, the ratio is inconsistent with the one mentioned in section 2.4 of the revised TIA which proposed the parking ratio to be 1 car parking space per 124 m2 GFA.	Please be clarified that the car parking ratio is 1 space per 497m^2 GFA. The supporting information has been incorporated into the TIA report accordingly. Please refer to Section 2.4 of the updated TIA report in *Appendix IV* for detail.
2) R-to-C item 9 - I note that the anticipated pedestrian routings have been shown in Figure 3.3. Please provide details regarding the distribution of pedestrian flow to/from the proposed development in order to assess the associated impact to the respective section of footpath in table 4.12.	Please refer to Figure 3.3 of the updated TIA report for detail.
3) R-to-C item 2 - Regarding the swept path analysis of the Jim HGV in Figure TI, I note that vehicles are encroaching onto the road kerb. Please review.	The swept path analysis has been reviewed and updated accordingly. Please refer to updated Figure T1 for detail.
Revised Traffic Impact Assessment	
4) Section. 4.2 - Please advise whether there will be any large scale event conducted in the proposed SCAA Sport Link which will attract large number of audience.	SCAA confirms that they do not expect to conduct large-scale event at the proposed SCAA Sports Link.

Comments	Response
5) Table 4.7 refers. Regarding the trip generation of the weekend peak hour, please clarify why adopting the weekday PM peak hour for weekend peak hour is more conservative approach. In addition, please advise if there is any trip generation survey on weekend.	Please be clarified that no trip generation survey on weekend is conducted for the planned developments. The largest trip rates among weekday AM and PM Peak have been adopted for conservative assessment purpose. Please refer to Table 4.7 of the updated TIA report in *Appendix IV* for detail.
6) Figures 3.2, 4.1 and 4.2 refer. Some traffic flow directions are not correct and some peak hour traffic flows seem to be deviated from the traffic survey in the TIA. Please refer to the markup comment under Annex I and review.	Traffic flows and directions have been reviewed and updated accordingly. Please refer to Figures 3.1, 4.1 and 4.2 of the updated TIA report in *Appendix IV* for detail.
7) Table 4.12 refers. The existing crossings along Leighton Road, Pennington Street, and Yun Ping Road are missing from the future capacity analysis. Please refer to the markup comments on Figure 3.3 of Annex I. In addition, the crossing at the new access road formed under the Caroline Hill Road commercial development shall also be evaluated. Regarding the pedestrian impact at the crossings, please consider assessing (a) the LOS based on pedestrian delay and (b) the LOS for central refuge islands in accordance with the Chapter 18 - Pedestrian Methodology of the Highway Capacity Manual 2000 for our further review. Since pedestrian will need to wait at the footpath before pedestrian green at the signalized junction, assuming LOS for normal footpath for the concerned crossings in the calculation may underestimate the actual pedestrian impact.	As shown in Figure 3.3, the destination of the anticipated pedestrian routes would be MTR Causeway Bay Station in the northwest and the bus stop/bus terminus on Tung Lo Wan Road and Moreton Terrace in the northeast. Therefore, pedestrians to be induced by the proposed SCAA Sports Link is not expected to use the concerned pedestrian crossing at the new access road formed under the Caroline Hill Road commercial development. For central refuge islands at J/O Leighton Road, Pennington Street, and Yun Ping Road, additional assessment for central refuge islands has been conducted accordingly. Please refer to Section 4.11 of the updated TIA report for detail.

Comments	Response
8) Section 4.9.5 refers. It is noted that an indicative scheme of pedestrian linkage system to connect the subject site to the commercial site (IL 8945) was proposed and initial discussion regarding the footbridge design with the concerned developer, Hysan Development Co. Ltd (Hysan) was held on 4 November 2024. Please provide some more information of the discussion as well as the way formed for the proposed pedestrian linkage system.	SCAA and Hysan exchanged information and drawings during and after the meeting to assess the technical feasibility of the proposed connection, yet we are unable to disclose the information as the proposal has not been confirmed. Upon the approval of the current planning application, further discussion will be carried out with the owner of adjoining development and relevant government departments regarding land lease issue, maintenance liability, and funding arrangement.

Consolidated by: **KTA Planning Limited**

Date: **3 March 2026**

Appendix I	Revised Air Ventilation Assessment – Expert Evaluation
Appendix II	Replacement Pages of the Supporting Planning Statement
Appendix III	Revised Air Quality Impact Assessment
Appendix IV	Updated Traffic Impact Assessment

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
S16 Planning Application

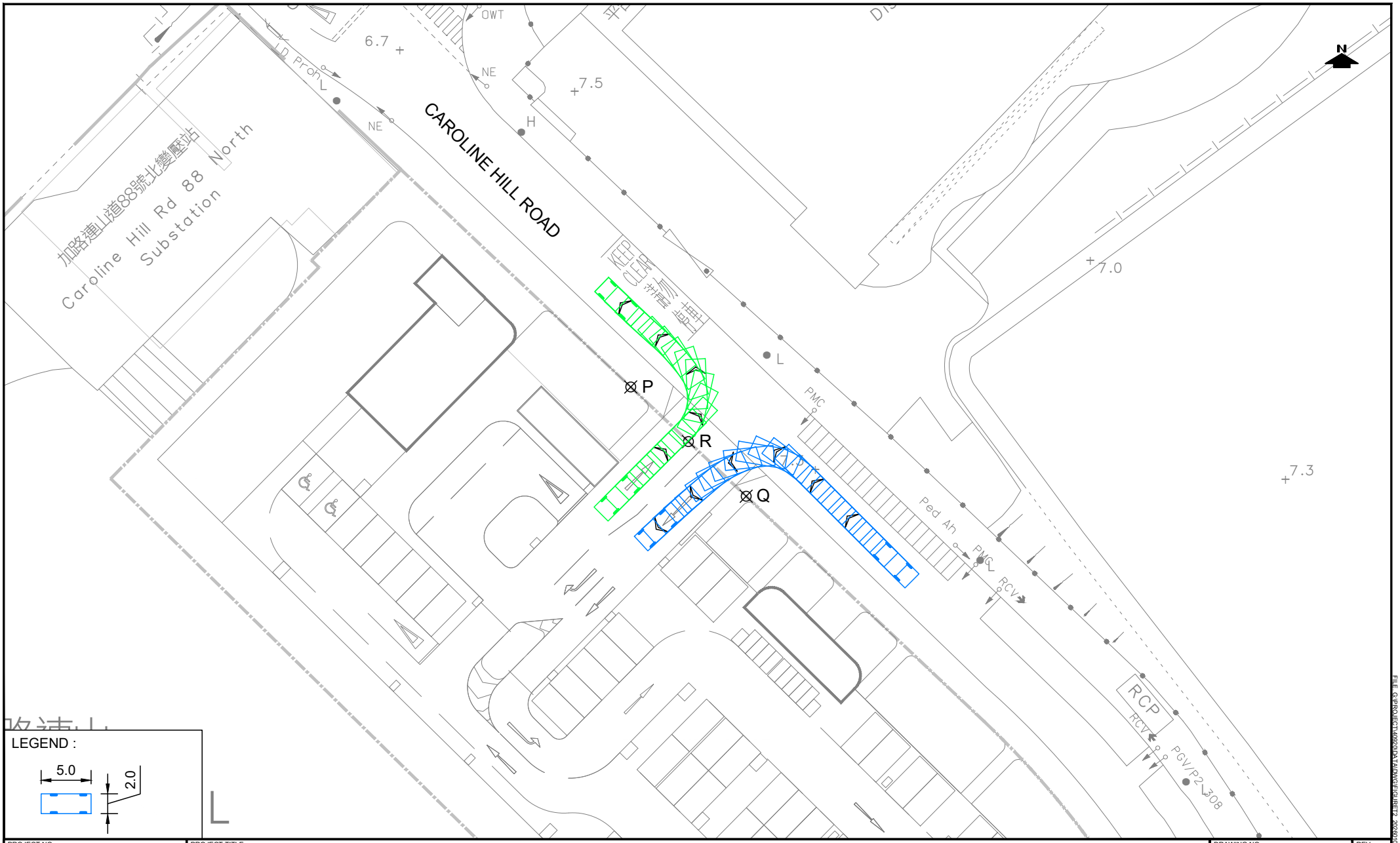
(Planning Application No: A/H7/189)

FIGURE T1



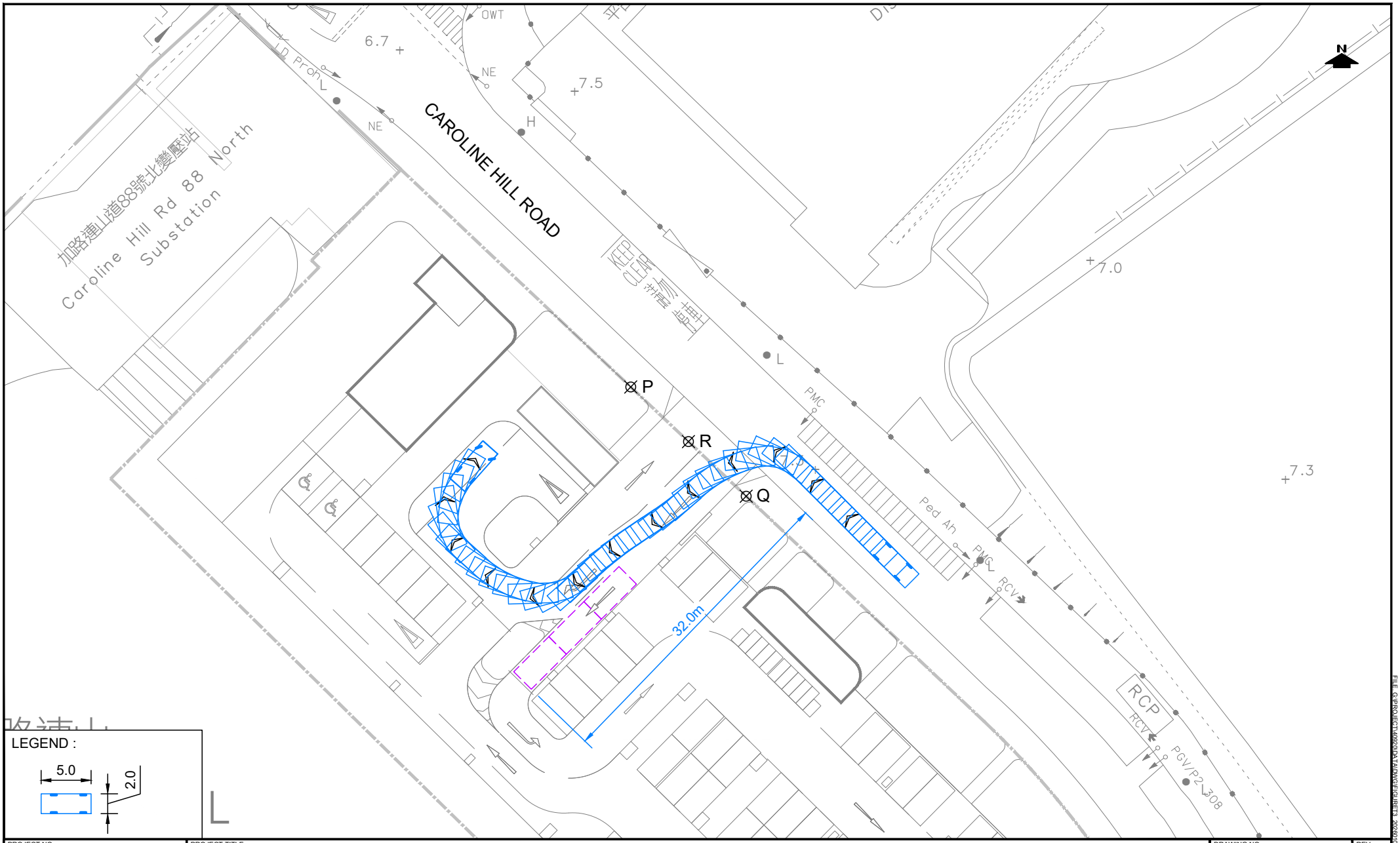
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T1	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE JAN 2026; SCALE 1:500 @ A4	DRAWING TITLE: SWEPT PATH ANALYSIS - 11m HGV AT RUN - IN / OUT	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET1_20260107.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T2	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE JAN 2026; SCALE 1:500 @ A4	DRAWING TITLE: **SWEPT PATH ANALYSIS - PRIVATE CARS AT RUN - IN / OUT**	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET2_20260107.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T3	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE JAN 2026; SCALE 1:500 @ A4	DRAWING TITLE: QUEUING SPACES TO CAR PARK	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET3_20260107.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T4	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE JAN 2026 / SCALE 1:500 @ A4	DRAWING TITLE: SWEPT PATH ANALYSIS - PRIVATE CARS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET4_20260107.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T5	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE JAN 2026 / SCALE 1:500 @ A4	DRAWING TITLE: SWEPT PATH ANALYSIS - PRIVATE CARS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET5_20260107.DWG PLOT SCALE : 1 = 1

Appendix I

Revised Air Ventilation Assessment – Expert Evaluation

Issue No. : 3

Issue Date : February 2026

Project No. : 2215

AIR VENTILATION ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong	**Project No.**	2215
Document Title	Air Ventilation Assessment		

Issue No.	Issue Date	Description
1	October 2025	1st Submission
2	December 2025	2nd Submission
3	February 2026	3rd Submission

[redacted]

[redacted]

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5. Methodology 6
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Appendix 4.1 Site Layout Plan

1. Executive Summary

1.1.1. An Air Ventilation Assessment – Expert Evaluation (AVA-EE) study was conducted for the Section 16 Planning Application for Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong to provide qualitative evaluation of wind performance under Baseline and Proposed Scheme.

1.1.2. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage, with the top level positioned at 61.6mPD of the golf fence. Good design features including the provision of building setback and a stepped building height profile with the surrounding structures have been incorporated in the Proposed Scheme upon the consideration of site and design constraint criterion.

1.1.3. As evaluated in the AVA-EE, with the provision of abovementioned design features, no significant adverse impact to the wind environment in the surrounding area associated with the Proposed Development is anticipated.

2. Introduction

2.1.1. Allied Environmental Consultants Limited (“AEC”) has been commissioned to prepare an Air Ventilation Assessment (“AVA”) in support of the Section 16 Planning Application for Proposed SCAA Sports Link (“Proposed Development”) at South China Athletic Association, 88 Caroline Hill Road, Hong Kong (“Subject Site”).

3. Objectives

3.1.1. The main objective of the study is to evaluate potential air ventilation impacts associated with the Proposed Development on pedestrian wind environment within and in the vicinity of the Subject Site using the methodology framework as set out by relevant government standard, guidelines and technical circulars.

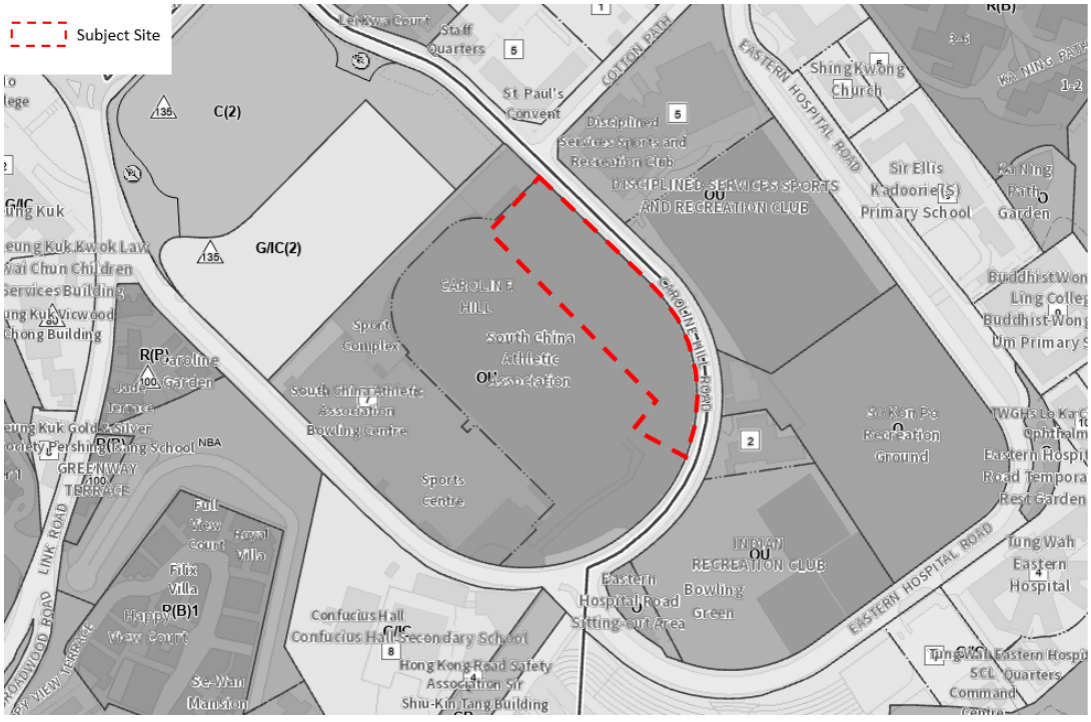
4. Description of the Proposed Development

4.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). On the building side facing the South China Stadium of South China Athletic Association, a movable curtain at 2/F and golf fence with top level of 61.6mPD are provided. The site layout plans for the Proposed Development are provided in ***Appendix 4.1***.

4.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

4.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 4.1*** shows the location of the Subject Site.

Figure 4.1 Subject Site Location



5. Methodology

5.1.1. The methodology framework of this study is set out in the Technical Circular No. 1/06 and its Annex A - Technical Guide for Air Ventilation Assessment for Development in Hong Kong. The Technical Circular is jointly issued by Housing, Planning and Lands Bureau (HPLB) and Environment, Transport and Work Bureau (ETWB) in July 2006 (Technical Guide).

5.1.2. The scope of this study shall cover the following:

- To identify any major wind corridors which should be preserved or reserved;
- To identify any potentially affected areas due to the Proposed design including the layout and deposition;
- To identify good design features; and
- To provide recommendations for alleviating the potential air ventilation impact identified.

6. Assessment Methodology

6.1. Wind Availability Data

Hong Kong Observatory

6.1.1. The Hong Kong Observatory records the metrological data in Hong Kong. Among all the weather stations in Hong Kong, wind data from Hong Kong Observatory station shall be used for the discussion on overall wind environment in the region.

6.1.2. According to the wind availability data from Hong Kong Observatory station from 1991 - 2020, the annual wind rose revealed winds flowing from the east throughout the year. The wind data from July to September is adopted as the summer prevailing wind, where predominant summer winds are flowing from the east and west. The wind rose during annual and summer conditions are shown in ***Figure 6.1*** and ***Figure 6.2*** respectively.

Figure 6.1 Annual Wind Rose for Hong Kong Observatory Station, 1991 - 2020

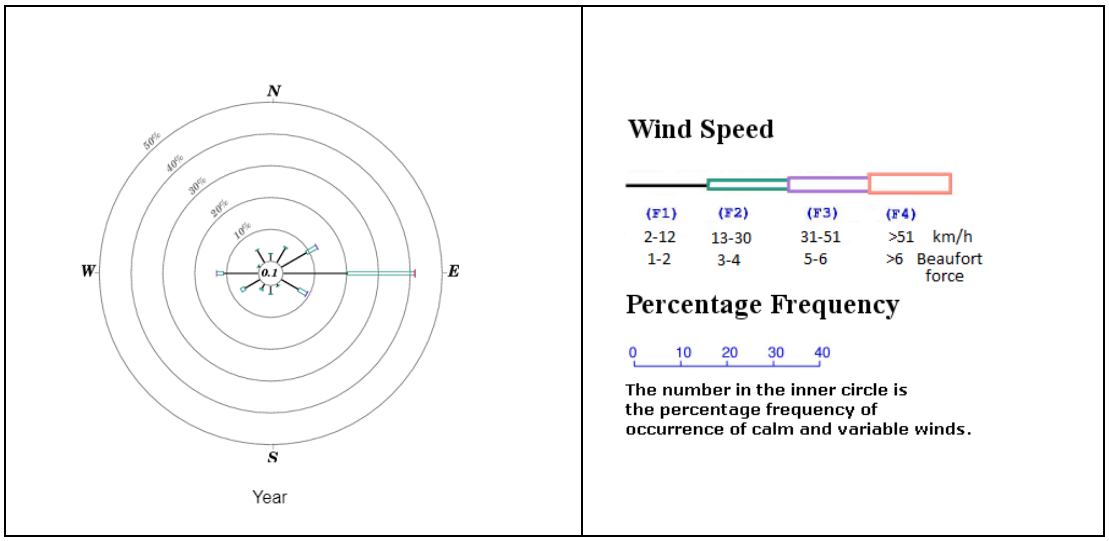
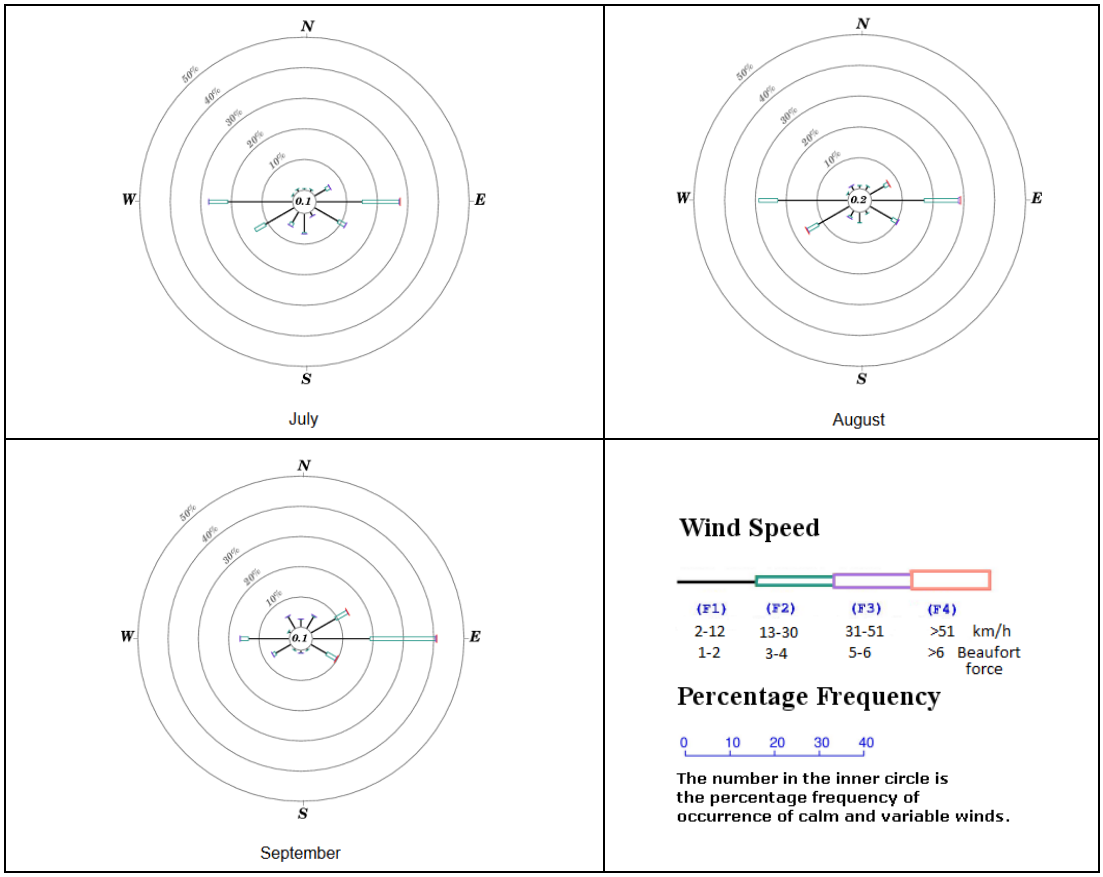


Figure 6.2 Summer Wind Rose for Hong Kong Observatory Station, 1991 - 2020



Regional Atmospheric Modelling System (RAMS)

6.1.3. Wind availability to the Subject Site is evaluated with reference to the "Consultancy Study on Establishment of Simulated Site Wind Availability Data for Air Ventilation Assessments in Hong Kong" simulated by the meso-scale model of Regional Atmospheric Modelling System (RAMS) Version 6.0 at the horizontal resolution of 0.5km * 0.5km.

6.1.4. The Subject Site is located within grid (083,033) in Causeway Bay. Wind availability data at 200m was adopted in this assessment. According to PlanD's simulated data, wind roses, wind direction and wind probability data are provided in ***Figure 6.3*** and ***Table 6.1***.

Figure 6.3 Wind Rose at Grid (083,033)

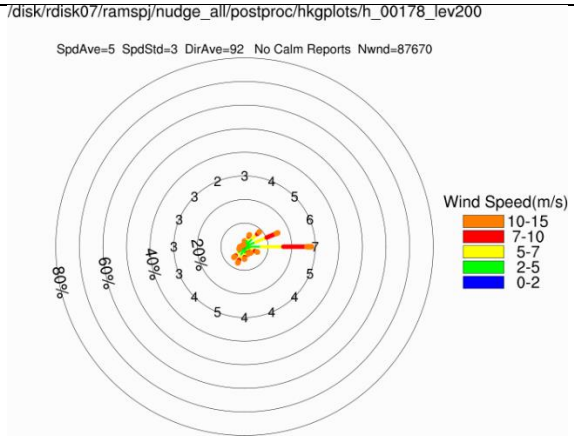
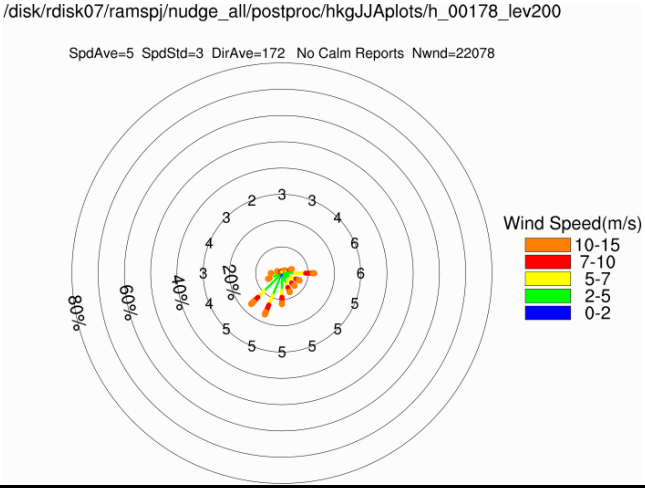
Wind Rose – Annual	
200m	
Wind Rose – Summer	
200m	

Table 6.1 Wind Probability at 200m (Grid 083,033)

Wind Direction	Annual Probability	Summer Probability
N	2%	1%
NNE	5%	1%
NE	**9%**	2%
ENE	**15%**	4%
E	**29%**	**12%**
ESE	6%	7%
SE	4%	7%
SSE	4%	8%
S	5%	**12%**
SSW	7%	**17%**
SW	6%	**17%**
WSW	3%	6%
W	2%	4%
WNW	1%	2%
NW	1%	1%
NNW	1%	1%

6.1.5. According to RAMS wind data, annual prevailing winds are the incoming winds flowing from the northeast quadrant (i.e. NE, ENE, E) while summer prevailing winds are flowing from southwest quadrant (i.e S, SSW, SW) and from E directions.

6.1.6. Among the two sets of wind data, ***Table 6.2*** summarises the identified prevailing wind conditions of in Causeway Bay area. For a comprehensive discussion on air ventilation performance of the Subject Site and the wind environment at pedestrian level, RAMS data is more appropriate as it is the most updated.

Table 6.2 Wind Data Summary

Sources	Annual Wind	Summer Wind
Hong Kong Observatory (Hong Kong Observatory station from 1991 -2020)	E	E, W
RAMS data (Grid 083,033)	NE, ENE, E	E, S, SSW, SW

7. Surrounding Environment

7.1. Urban Morphology

7.1.1. The Subject Site is surrounded by low to mid-rise GIC developments (approx. 20-50mPD) and sport centre (approx. 40-90mPD). The building heights near the surrounding and the land use in surroundings are summarized in ***Table 7.1*** and ***Figure 7.1*** respectively.

Table 7.1 Building Heights of Major Development in the Surroundings

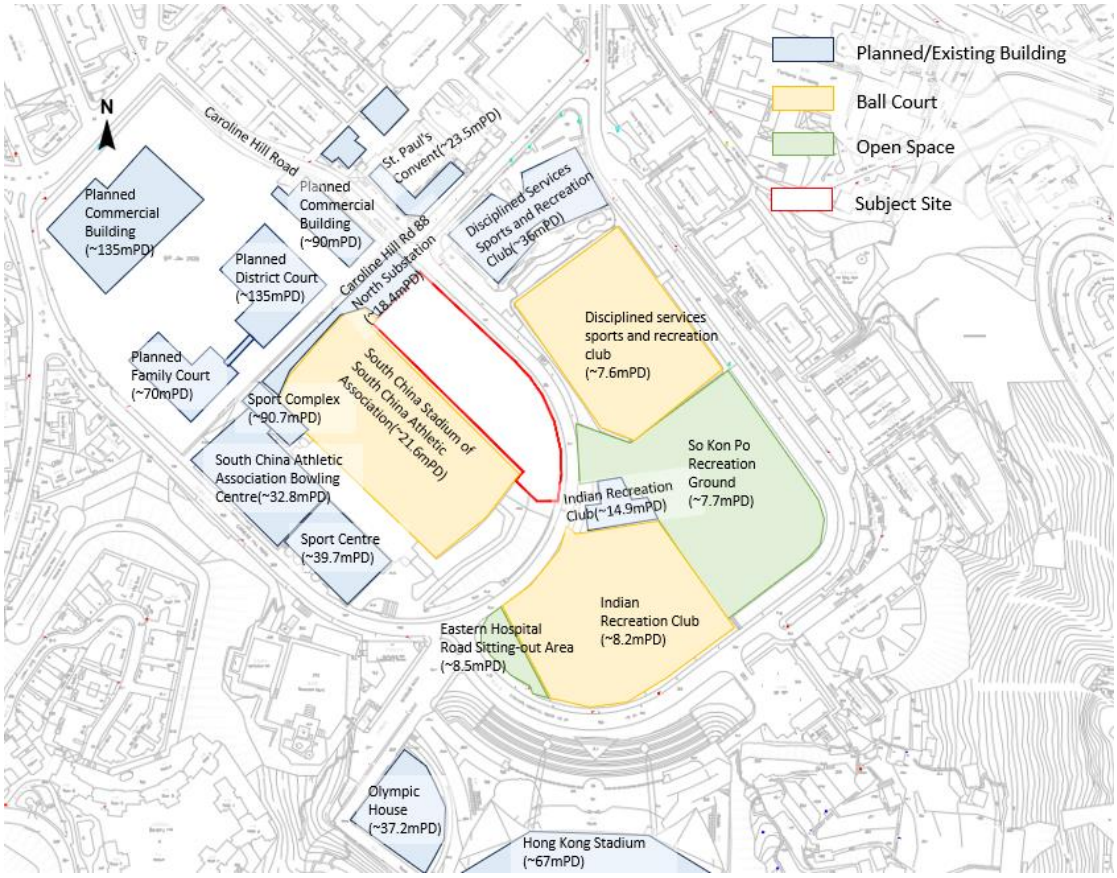
Surrounding Buildings	Building Heights (mPD)
Sport Complex	~90.7
Sports Centre	~39.7
South China Athletic Association Bowling Centre	~32.8
Indian Recreation Club	~8.2-14.9
Disciplined Services Sports and Recreation Club	~36
South China Athletic Association	~21.6
Disciplined services sports and recreation club	~7.6
So Kon Po Recreation Ground	~7.7
Eastern Hospital Road Sitting-out Area	~8.5
St. Paul's Convent	~23.5
Staff Quarters	~16.7
Caroline Hill Rd 88 North Substation	~18.4
Olympic House	~37.2
Hong Kong Stadium	~67
Planned Commercial Buildings	~90-135[1]
Planned District/Family Court	~70-135[2]

Note:

[1] Reference to Application for Permission under Section 16 of The Town Planning Ordinance (A/H7/188).

[2] Reference to Legco Paper "Item for Public Works Subcommittee of Finance Committee (PWSC(2022-23)3) on 33LJ – Construction of a District Court Building at Caroline Hill Road".

Figure 7.1 Surrounding Environment



8. Baseline Scheme and Proposed Scheme

8.1.1. The Subject Site falls within an area of OU (Sports and Recreation Club) on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The existing condition of the site is incorporated in Baseline Scheme and compared with the Proposed Scheme in the discussion of this report.

8.1.2. The major design parameters of Proposed Scheme are summarized in ***Table 8-1.*** Layout plans and section drawing under Proposed schemes are shown in ***Appendix 3.1.*** Comparison between Baseline Scheme (OZP-Compliant Scheme) and Proposed Scheme are made to evaluate any impacts on the overall air ventilation performance in its surrounding area.

Table 8-1 Major design parameters of Proposed Scheme

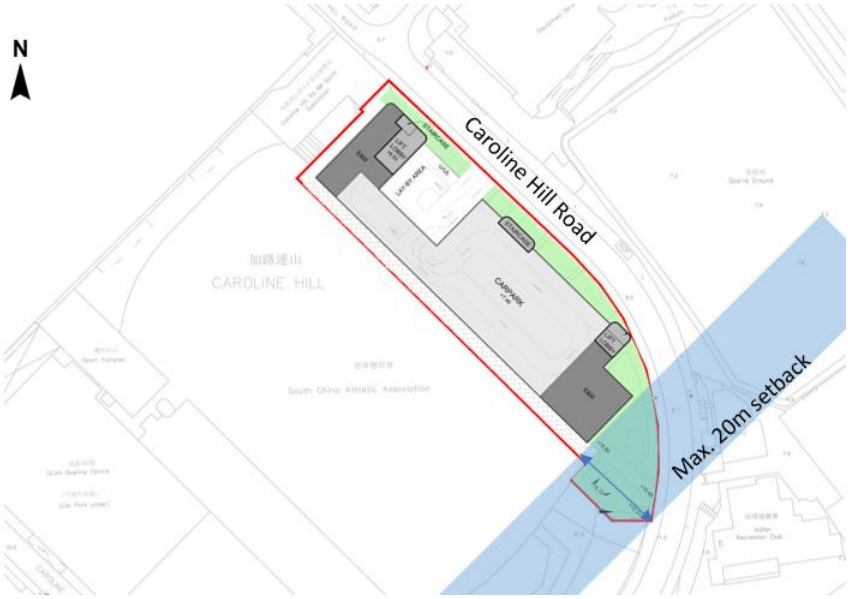
	Proposed Scheme
Site Area (m^2)	About 6,132
Gross Floor Area (m^2)	About 31,327.12
No. of Storey	4
Building Height (mPD)	45.4

8.1.3. Special design considerations have been adopted in Proposed Scheme. In particular, good design features including the provision of building setback and a stepped building height profile with the surrounding structures have been incorporated in the Proposed Scheme upon the consideration of site and design constraint criterion. These good design features are discussed in the following sections.

Building Setback

8.1.4. Building setback could reduce blockage in particular the perimeter of a development. The landscape garden at the southeastern portion is located at G/F which setbacks the building façade from the site boundary for a maximum of 20m. The building setback allows more wind at pedestrian level to flow across the site along Caroline Hill Road, thus alleviate potential air ventilation impact along the road and local areas at the northeast and southwest of the Subject Site. The building setback is indicated in ***Figure 8.1.***

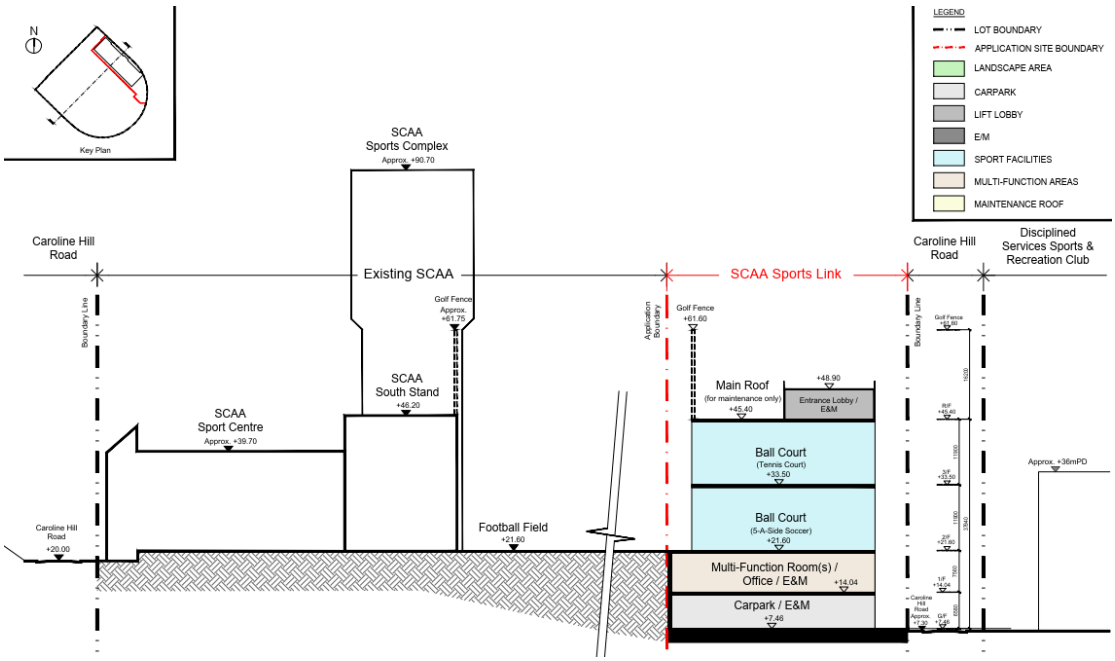
Figure 8.1 Building Setback at G/F



Stepped Height Profile with the surrounding structures

8.1.5. Under the Proposed Scheme, the top level of the Proposed Development with the golf fence is 61.6mPD. A stepped building height profile is formed with the surrounding, from SCAA Sports Complex at approx. 90.7mPD, the Proposed Development at 61.6mPD and Disciplined Services Sports & Recreation Club at approx. 36mPD, aligned in a NE-SW direction. It facilitate the wind flow of both incoming annual and summer prevailing winds to benefit the wind environment in the surrounding area. The section of the Proposed Development with the surrounding is shown in ***Figure 8.2.***

Figure 8.2 Section of the Proposed Development



9. Expert evaluation

9.1.1. Reference have been made to the Term Consultancy for AVA Services – Expert Evaluation on Air Ventilation Assessment of Causeway Bay Area (Project Ref: AVR/G/50), the Term Consultancy for Expert Evaluation on Air Ventilation Assessments for an Instructed Project for Causeway Bay Area - Expert Evaluation Report (2017) (Project Ref: AVR/G/113), and the Term Consultancy for AVA Services - Expert Evaluation on Air Ventilation Assessment for Wong Nai Chung Area (Project Ref: AVR/G/23) and Initial Study on Air Ventilation Assessment for Section 16 Planning Application (A/H7/188).

E, ENE, NE wind

9.1.2. Under annual prevailing wind condition, incoming E, ENE and NE wind would flow through the Sport Ground of Disciplined Services Sports and Recreation Club (~7.6mPD) and along the Cotton Path between St Paul's Convent (~23.5mPD) and Disciplined Services Sports and Recreation Club (~36mPD) at the east of the Subject Site, reaching the Subject Site as shown in ***Figure 9.1.***

9.1.3. Under the Baseline Scheme, the existing condition of the Subject Site with no obstruction is beneficial to the wind flow from easterly direction. Incoming E, ENE and NE wind could penetrate through the Subject Site at the north and south, and reach the downwind area of South China Athletic Association Bowling Centre (~32.8mPD) and Sport Centre at pedestrian level (~39.7mPD). The incoming wind collides at the South China Athletic Association Bowling Centre, Sport Centre and Sport Complex, creating a downwash effect at the South China Stadium of South China Athletic Association.

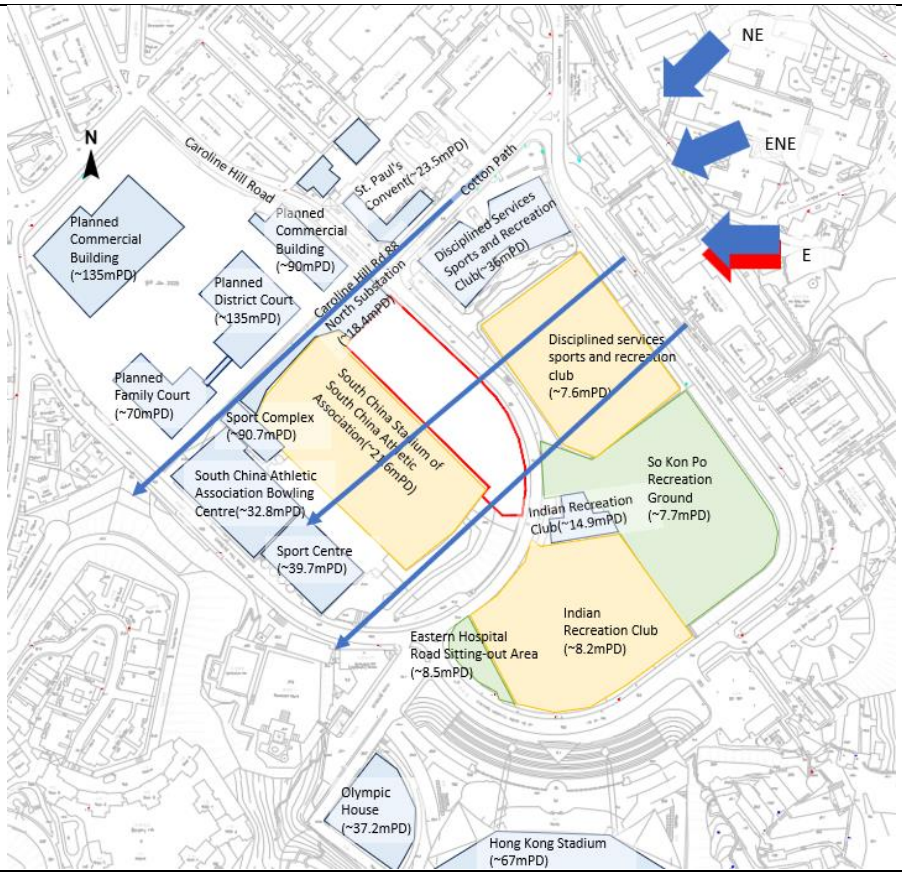
9.1.4. Under the Proposed Scheme, the southeastern portion of the Proposed Development is optimized to facilitate the flow of easterly wind by providing a maximum 20m setback from the southeastern site boundary. It allows more incoming wind to penetrate through the Subject Site at pedestrian level, thus alleviate potential air ventilation impact along the road and local areas at the southwest of the Subject Site.

9.1.5. In addition, a stepped building height profile is provided for Proposed Development to the surrounding structures under the Proposed Scheme. The incoming wind flows from Disciplined Services Sports and Recreation Club and collide at the Proposed Development, creating a downwash effect at pedestrian level. In addition, by aligning the NE-SW direction, the building height of Disciplined Services Sports and Recreation Club, Proposed Development and Sport Complex are 36mPD, 61.6mPD and 90.7mPD respectively. High-to-mid-level prevailing wind can be captured and diverted downwards to the pedestrian area by the downwash effect.

9.1.6. With the provision of building setback from the southeastern site boundary and a stepped building height profile to the surrounding structures, it is expected that the impacts on wind environment at downwind areas including South China Stadium of South China Athletic Association, South China Athletic Association Bowling Centre and Sport Centre under the Proposed Scheme could be minimized.

Figure 9.1 Wind Environment under E, ENE, NE wind

Baseline Scheme



Annual Pedestrian wind

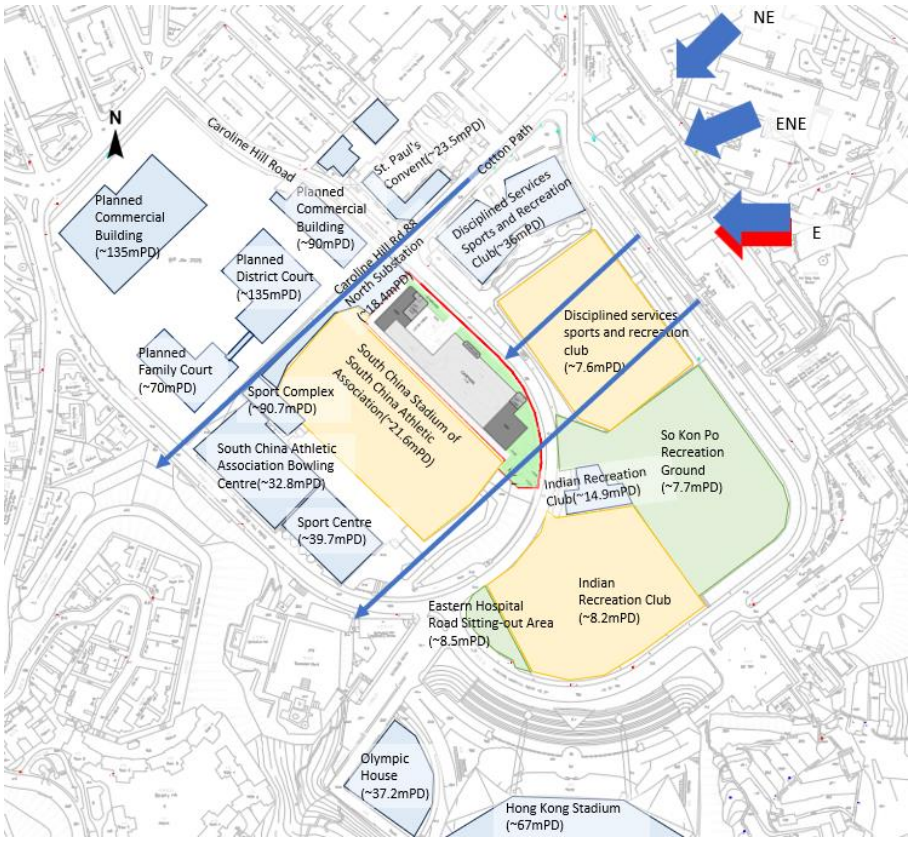
Summer Pedestrian wind

Subject Site

Open space

Ball Court

Proposed Scheme at G/F



Annual Pedestrian wind

Summer Pedestrian wind

Subject Site

Open space

Ball Court

SSW, SW & S Wind

9.1.7. Under summer prevailing wind condition, the incoming SSW, SW and S wind would flow from the separation between the high-rise residential development of The Leighton Hill and Beverly Hill at the southwest of the Subject Site as shown in ***Figure 9.2***.

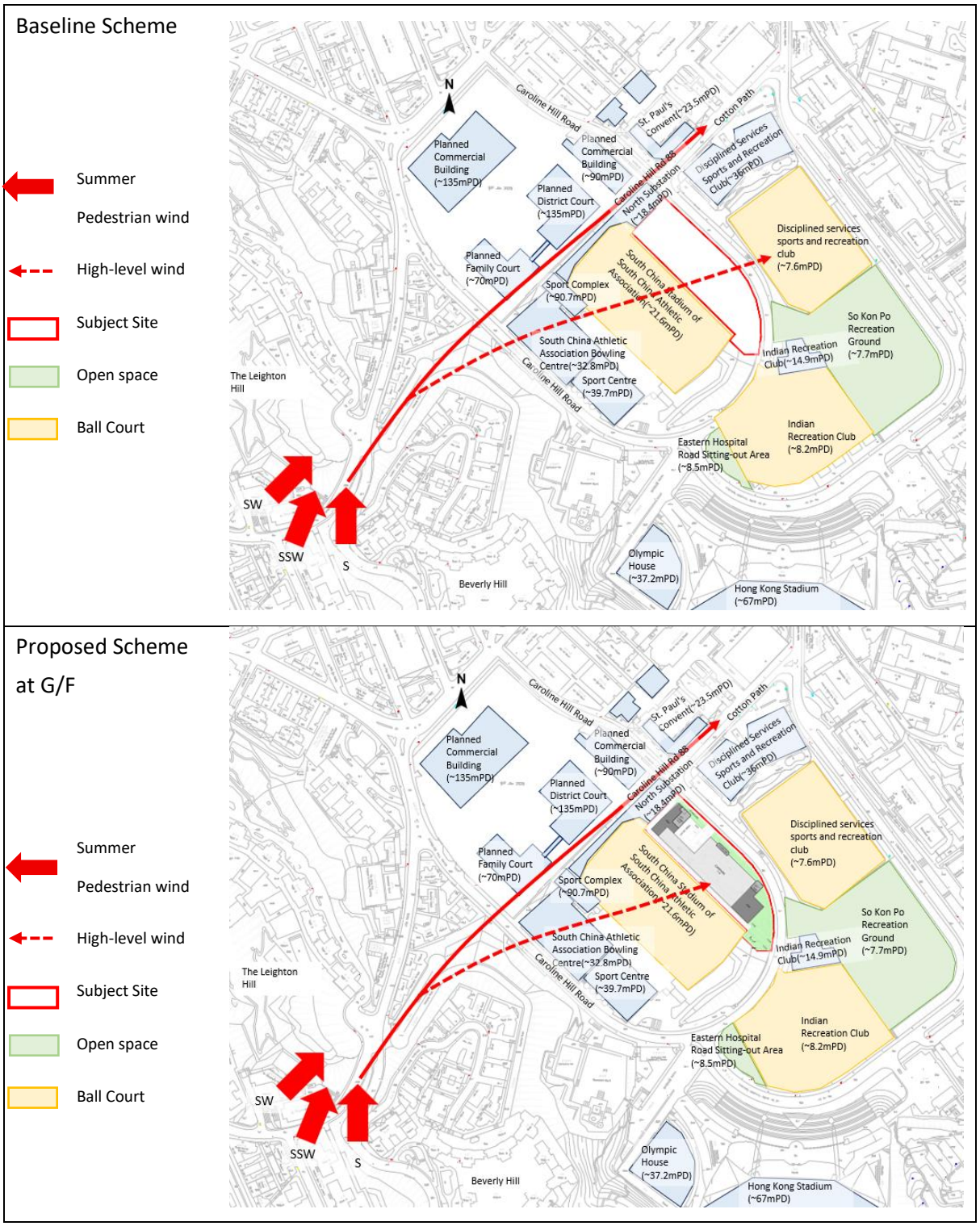
9.1.8. Under the Baseline Scheme, Incoming SSW, SW and S wind penetrate through the separation between The Leighton Hill and Beverly Hill. The high-rise buildings of Sport Complex (~90.7mPD) located at the southwest of the Subject Site pose obstruction to the prevailing wind. It is anticipated that only portion of high-level wind could skim over the high to low-rise buildings of Sport Complex, South China Athletic Association Bowling Centre (~32.8mPD) and Sport Centre (~39.7mPD), reaching the Subject Site and further to the downwind areas of So Kon Po Recreation Ground (~7.7mPD) and Disciplined services sports and recreation club (~7.6mPD) at pedestrian level.

9.1.9. Under the Proposed Scheme, high-rise building at the southwest of the Subject Site pose obstruction to the prevailing wind and only portion of high-level wind could skim over the high to low-rise buildings and reach the Subject Site. A stepped building height profile is provided for Proposed Development to the surrounding structures under the Proposed Scheme. By aligning the NE-SW direction, the building height of Disciplined Services Sports and Recreation Club, Proposed Development and Sport Complex are 36mPD, 61.6mPD and 90.7mPD respectively. High-to-mid-level prevailing wind can be captured and diverted downwards to the pedestrian area by the downwash effect.

9.1.10. To further facilitate the wind penetration of the downwind area of the Subject Site, the southeastern portion of the Proposed Development is optimized by providing a maximum 20m setback from the southeastern site boundary. It poses less obstruction by allowing more incoming wind to penetrate through the Subject Site at pedestrian level, thus alleviate potential air ventilation impact along the road and local areas at the northeast of the Subject Site. The provision of setback allows more wind penetrate the downwind areas of So Kon Po Recreation Ground and Disciplined services sports and recreation club.

9.1.11. With the provision of building setback from the southeastern site boundary and a stepped building height profile to the surrounding structures, it is expected that the impacts on wind environment at downwind areas including So Kon Po Recreation Ground and Disciplined services sports and recreation club under the Proposed Scheme could be minimized.

Figure 9.2 Wind Environment under SW, SSW and S wind



10. Conclusion

10.1.1. An AVA-EE study was conducted for Development of Comprehensive Sports & Recreation Centre to provide qualitative evaluation of wind performance of the proposed development under the Baseline and the Proposed Scheme.

10.1.2. Under the Proposed Scheme, the southeastern portion of the Proposed Development is optimized to facilitate the flow of southwestern wind by providing a maximum of 20m setback from the southeastern site boundary. It poses less obstruction by allowing more incoming annual and summer wind to penetrate through the Subject Site at pedestrian level, thus alleviate potential air ventilation impact along the road and local areas at the northeast and southwest of the Subject Site.

10.1.3. In addition, a stepped building height profile is provided for Proposed Development to the surrounding structures under the Proposed Scheme. The incoming annual wind flows from Disciplined Services Sports and Recreation Club and collide at the Proposed Development, while summer wind flows from Sport Complex, South China Athletic Association Bowling Centre and Sport Centre, and collide at the Proposed Development. It creates a downwash effect at pedestrian level, which alleviate the potential air ventilation impact to the pedestrian level at surrounding area.

10.1.4. With the good design features to alleviate potential air ventilation impact, including building setback, and stepped building height to the surrounding structures, it is anticipated that there shall be insignificant impact to the wind environment in the surrounding area associated with the Subject Site.

Appendix 4.1

Site Layout Plan

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93

STAIRCASE

LIFT LOBBY +6.93

E&M

L/UL

LAY-BY AREA

+7.46

+7.55

STAIRCASE

CARPARK +7.46

+8.36

STAIRCASE

LIFT LOBBY

E&M

+9.46

+10.80

+10.65

+12.23

+14.13

+15.83

SCAA TRAINING POOL

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

G/F Plan ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

OFFICE

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

SCAA TRAINING POOL

MULTI-FUNCTION ROOMS

+14.04

BALLCOURT (TENNIS)

+11.06

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

TOILETS/ CHANGING ROOMS/ E/M

TOILETS/ CHANGING ROOMS/ E/M

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 09 Jan 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

TOILETS/ CHANGING ROOMS/ E/M

BALL COURT (5-A-SIDE SOCCER) & ANCILLARY FACILITIES

+21.60

TOILETS/ CHANGING ROOMS

E&M

SCAA GOLF DRIVING RANGE

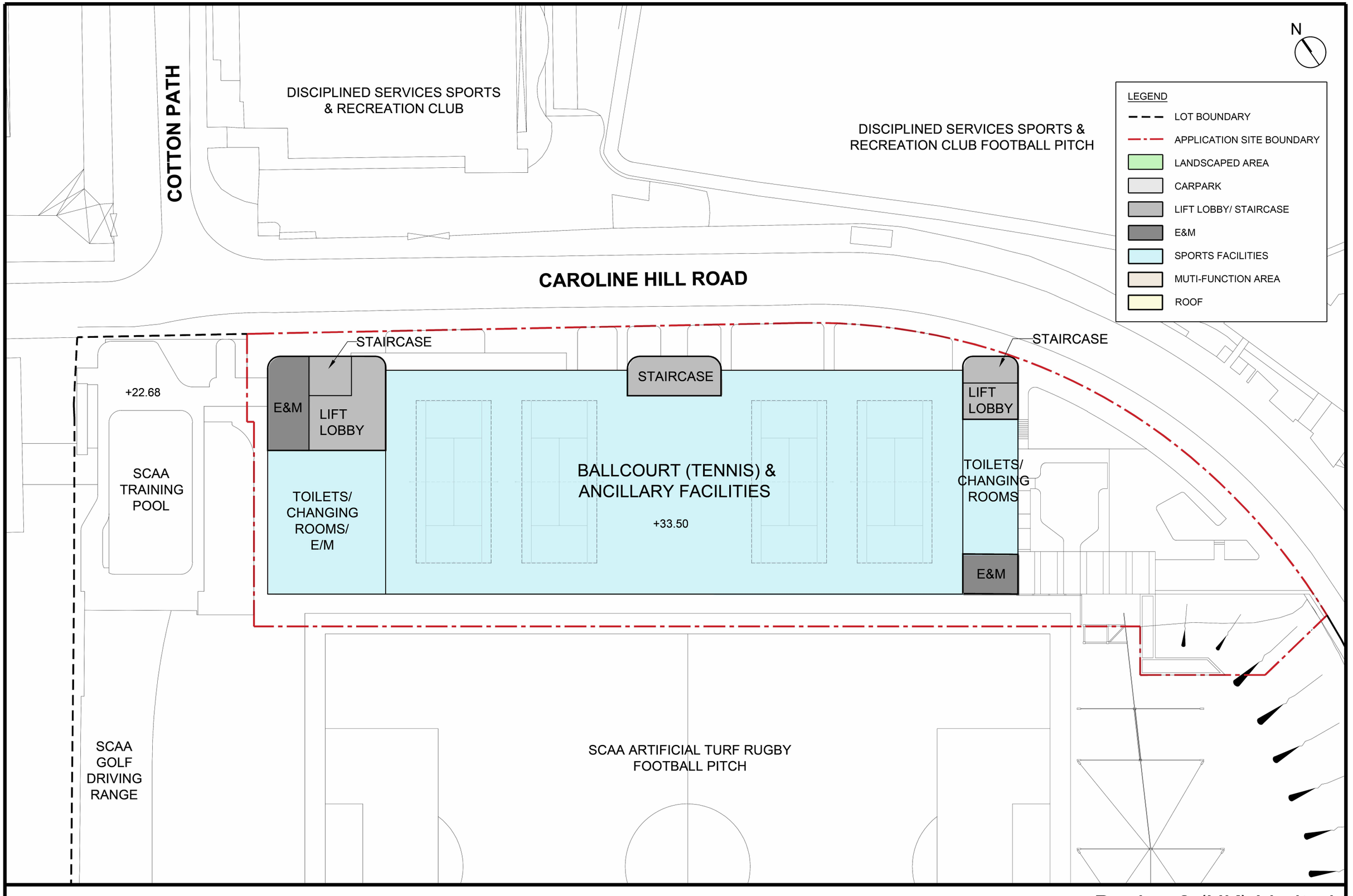
SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 09 Jan 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARIES
- APPLICATION SITE BOUNDIES
- GREEN ROOF
- LIFT LOBBY/ STAIRCASE
- E&M
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

LIFT LOBBY

E&M

STAIRCASE

LIFT LOBBY

E&M

ROOF

+45.40

GOLF FENCE

GREEN ROOF

SCAA TRAINING POOL

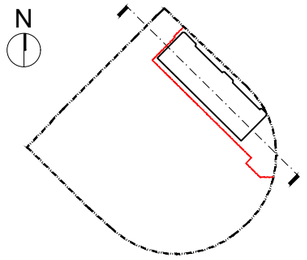
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

R/F Plan ○ 1 : 500 (A3) ○ 09 Jan 2026



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

37940

11900

10540

3600

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Roof

+45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

16200

11900

37940

11900

7560

6580

R/F +45.40

3/F +33.50

2/F +21.60

1/F +14.04

G/F +7.46

Caroline Hill Road

Approx. +10.65

+8.811

Mean Street Level of North Site

Existing Slope

Landscape Garden

+10.65

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 09 Jan 2026

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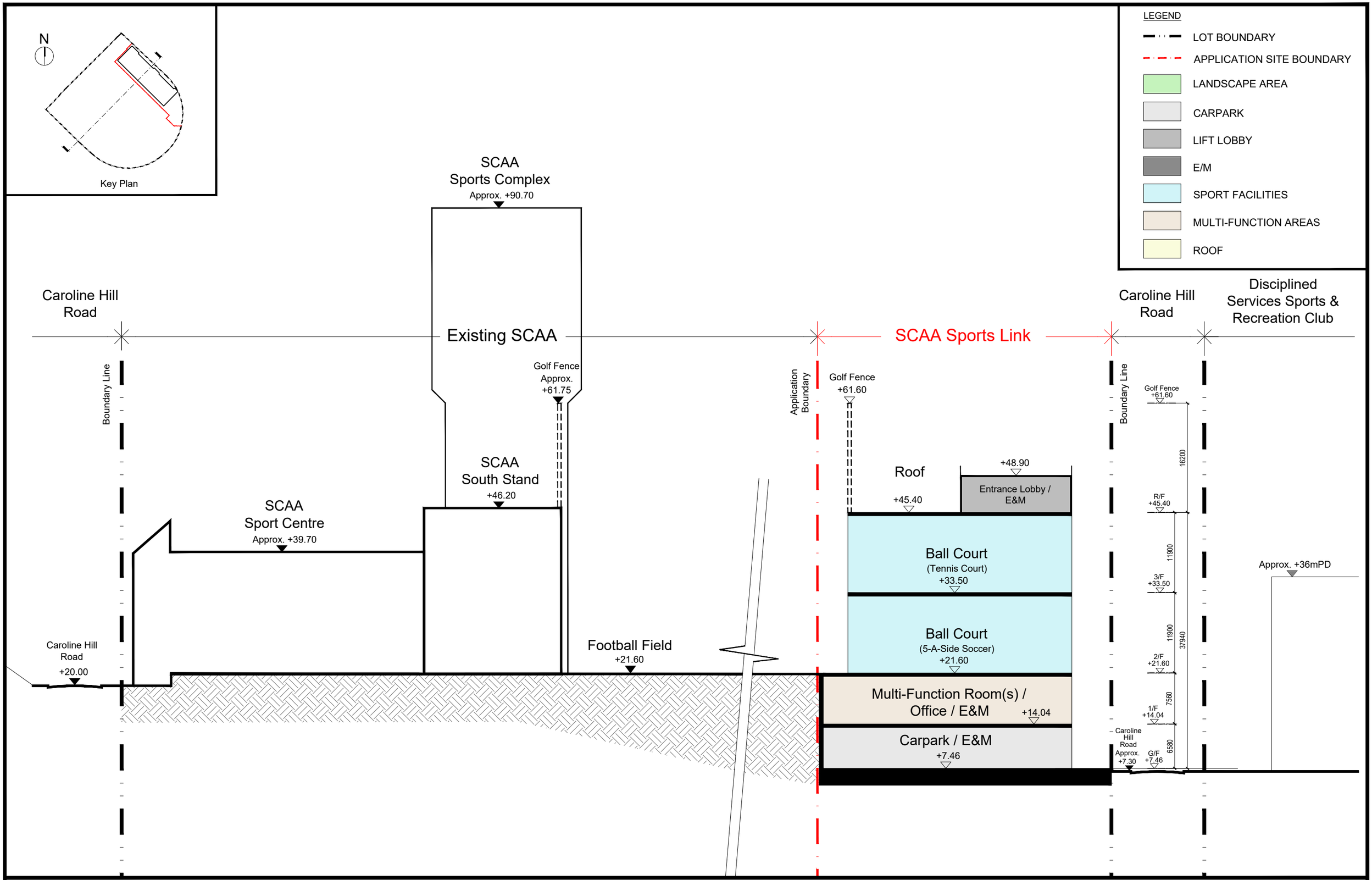

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 09 Jan 2026

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Appendix II

Replacement Pages of the Supporting Planning Statement

and/or conventional planting is not technically feasible, e.g. green wall and climbing plants will be applied on retaining structures. Green roofs will be incorporated on top of building, and

- Through selection of suitable plants in suitable place and use of combination of localized/native and ornamental plants to enrich the diversity of species combination in the context. Utilise a combination of evergreen and/or ornamental and/or flowering tree and shrub species with an interesting form, colour and foliage texture to enrich the landscape experiences and provide architectural highlights.

4.4.3. The proposed SCAA Sports Link will include an about 3m setback along Caroline Hill Road to incorporate street plantings, enhancing the streetscape with trees and shrubs that provide shade for pedestrians and visitors to the SCAA. The southernmost part of the Site will feature a sitting-out garden, while the sloping area at the interface to the existing south will be reformed following the sloping topography; the engineered appearance of the new retaining structure to the sloping area will be disguised with green roofs and green walls. Besides, green roof will be added on the maintenance roof to enhance visual amenity looking from the elevated neighbourhoods.

4.4.4. The proposed design emphasises greenery coverage with an area targeting 20% of the Site (i.e. a minimum of 1,226.4m² of greenery), where over 50% out of the 20% greenery areas is allocated at primary zone and will be accessible by future users and pedestrians.

4.5. Air Ventilation Consideration (*Appendix VI* refers)

4.5.1. According to RAMS wind data, annual prevailing winds are the incoming winds flowing from the northeast quadrant (i.e. NE, ENE, E) while summer prevailing winds are flowing from southwest quadrant (i.e S, SSW, SW) and from E directions.

4.5.2. The Proposed Development Scheme has incorporated good design features, such as provision of building setback and increased building permeability. Building setback could reduce blockage in particular the perimeter of a development. The landscape garden at the southeastern portion on G/F sets back the building façade from the site boundary for at least 20m (**Figure 4.**3 refers). The building setback allows more wind penetration at pedestrian level to flow across the site along Caroline Hill Road, thus improving wind environment along the road and local areas to the south of the Site.

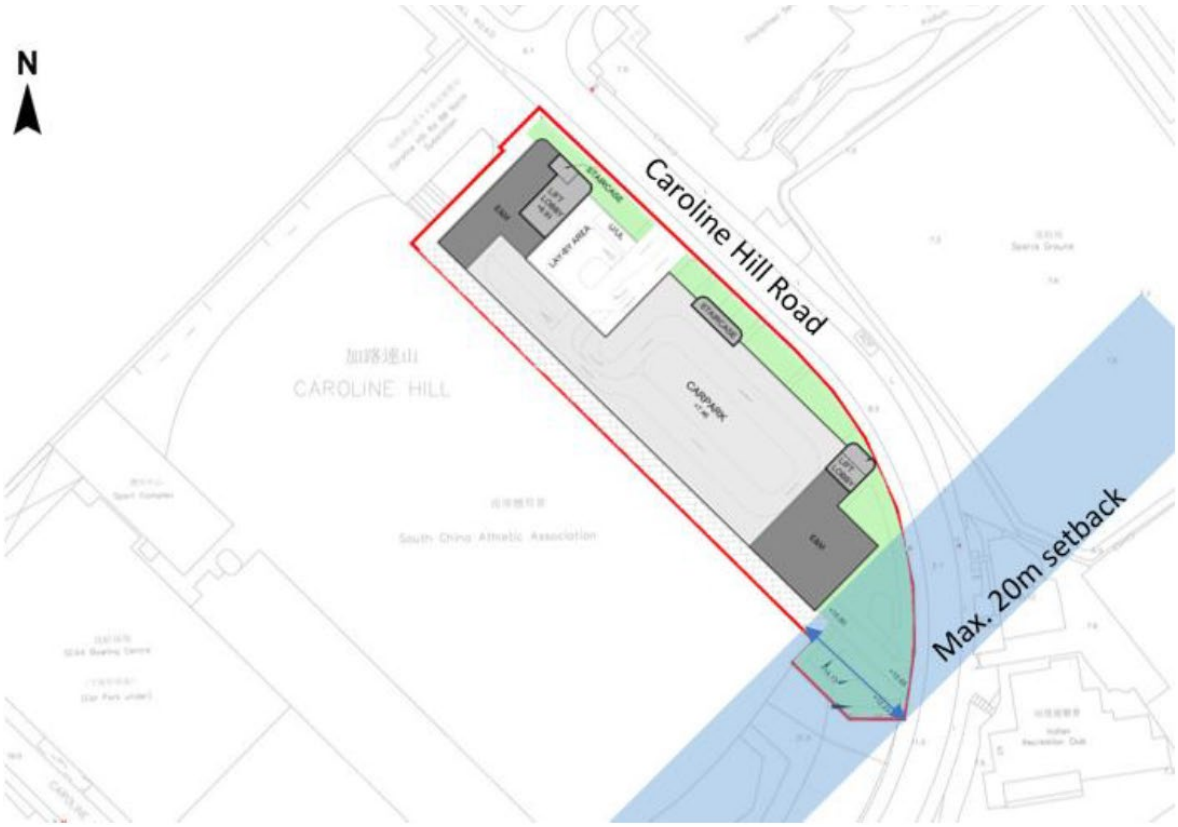

Figure 4.3 Building Setback on G/F

4.5.3. There will be perforated movable curtain and fence for the ball courts on 2/F and 3/F respectively to further increase the wind penetration and decrease the bulkiness of the building. These will help to facilitate the penetration of both incoming annual and summer prevailing winds to benefit the wind environment in the surrounding area.

4.6. Vehicular and Pedestrian Traffic Considerations

Vehicular Traffic

4.6.1. Caroline Hill Road connects the local areas of Caroline Hill and So Kon Po with the district distributor Leighton Road in the area. The eastern end of Leighton Road intersects with Causeway Road and Tung Lo Wan Road that leads to the Tin Hau and Tai Hang areas respectively. The western end of Leighton Road links to Morrison Hill Road that leads to the local road network in Wan Chai and Canal Road Flyover.

4.6.2. According to the Traffic Impact Assessment in *Appendix III*, most visitors are anticipated to use public transport services, only those who use taxis will be considered as the vehicular traffic generation of the proposed development. It is anticipated that the proposed SCAA Sports Link would generate two-way traffic flows of 22 pcu/hr in the weekday AM, weekday PM and weekend peak hours.

Appendix III

Revised Air Quality Impact Assessment

Issue No. : Issue 3
Issue Date : February 2026
Project No. : 2215

AIR QUALITY IMPACT ASSESSMENT

FOR

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

[redacted]

Document Verification

Project Title	Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong
Project No.	2215
Document Title	Air Quality Impact Assessment

Issue No.	Issue Date	Description
1	October 2025	1st Submission
2	December 2025	2nd Submission
3	February 2026	3rd Submission

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[redacted]

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Appendix 3-1 Site Layout Plan

1. Introduction

1.1.1. Allied Environmental Consultants Limited ("AEC") has been commissioned to prepare an Air Quality Impact Assessment ("AQIA") in support of the Section 16 Planning Application for the Proposed SCAA Sports Link ("Proposed Development") at South China Athletic Association, 88 Caroline Hill Road, Hong Kong ("Subject Site").

2. Objectives

2.1.1. Main objective of the study is to evaluate potential air quality impacts associated with the Proposed Development during construction and operation phase. Where necessary, appropriate mitigation measures are recommended to reduce the impacts from the Proposed Development and the nearby sources at the Air Sensitive Receivers to satisfy the relevant environmental ordinance, standards and guidelines.

3. Description of the Proposed Development

3.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in ***Appendix 3-1***.

3.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) ("OU (Sports and Recreation Club)") on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.

3.1.3. The Subject Site area is approximately 6,132m^2. It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses ("OU"), Government, Institution or Community ("G/IC"), Commercial ("C"), Open Space ("O"), Residential (Group B) ("R(B)"), Residential (Group C) ("R(C)") and Green Belt ("GB"). ***Figure 3-1*** shows the location of the Subject Site.

4. Environmental Legislation, Standards and Guidelines

4.1. Hong Kong Air Quality Objectives

4.1.1. Air quality in Hong Kong is governed under the Air Pollution Control Ordinance ("APCO") (Cap. 311) and its subsidiary Regulations. Under this legislation, the Government has designated Air Control Zones ("ACZ") for the whole territory, along with the new Air Quality Objectives ("AQOs") which was taken effect in 2025. The AQOs stipulate the statutory limits for 7 pollutants and dictate the maximum number of allowable exceedances over specified time periods. For details, please refer to ***Table 4-1*** below.

Table 4-1 Hong Kong Air Quality Objectives (AQOs)

Pollutant	Averaging Time	Concentration Limit (ug/m^3)[1]	Number of Exceedances to be allowed per Calendar Year
Sulphur Dioxide (SO_2)	10-minute	500	3
	24-hour	40	3
RSP or PM_{10}[2]	24-hour	75	9
	Annual	30	N/A
FSP or $PM_{2.5}$[3]	24-hour	37.5	18
	Annual	15	N/A
Nitrogen Dioxide (NO_2)	1-hour	200	18
	24-hour	120	9
	Annual	40	N/A
Ozone (O_3)	8-hour	160	9
	Peak season	100	N/A
Carbon monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
	24-hour	4,000	0
Lead (Pb)	Annual	0.5	N/A

Note:
[1] All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.
[2] Respirable suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.
[3] Fine suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

4.2. Hong Kong Planning Standards and Guidelines

4.2.1. General design guidelines are stated in the Table 3.1 of Hong Kong Planning Standards and Guidelines ("HKPSG") as indicated in ***Table 4-2***.

Table 4-2 Guidelines on Usage of Open Space Site under HKPSG

Pollution Source	Parameter	Buffer Distance	Permitted Uses
Road and Highways	Type of Road		
	Trunk Road and Primary Distributor	>20m	Active and passive recreational uses
		3 - 20m	Passive recreational uses
		<3m	Amenity areas
	District Distributor	>10m	Active and passive recreational uses
		<10m	Passive recreational uses
	Local Distributor	>5m	Active and passive recreational uses
	Under Flyovers	<5m	Passive recreational uses
Industrial Areas	Difference in Height between Industrial Chimney Exit and the Site		
	<20m	>200m	Active and passive recreational uses
		5 - 200m	Passive recreational uses
	20 - 30m (*)	>100m	Active and passive recreational uses
		5 - 100m	Passive recreational uses
	30m - 40m	>50m	Active and passive recreational uses
		5 - 50m	Passive recreational uses
	>40m	>10m	Active and passive recreational uses
Construction and Earth Moving Activities	-	<50m	Passive recreational uses
		>50m	Active and passive recreational uses

Remarks:
(a) In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.
(b) The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.
(c) The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishments which are likely to be significant air pollution sources. Consult EPD when planning open space sites close to such establishments.
(d) Amenity areas are permitted in any situation.

4.3. Other environmental legislation, standard and guidelines

4.3.1. Other environmental legislation, standard and guidelines which are of relevance to the Proposed Development include:

i. Air Pollution Control (Construction Dust) Regulation (Cap. 311R)

4.3.2. This Regulation requires the Contractor to notify EPD before carrying out any notifiable works, such as site formation, reclamation, demolition, foundations, superstructure or road construction, and to implement dust suppression and control measures in accordance with the Schedule of the Regulation to minimise fugitive dust emissions and associated air quality impacts on the surrounding environment.

ii. Air Pollution Control (Non- Road Mobile Machinery) (Emission) Regulation (Cap. 311Z)

4.3.3. This Regulation came into operation on 1 June 2015. Under the Regulation, non-road mobile machinery (NRMMs), except those exempted, are required to comply with the prescribed emission standards. From 1 September 2015, all regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Starting from 1 December 2015, only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites. The contractor is required to ensure the adopted machines or non-road vehicles under the Project could meet the prescribed emission standards and requirement.

iii. Air Pollution Control (Fuel Restriction) Regulations

4.3.4. The Air Pollution Control (Fuel Restriction) Regulation was enacted in 1990 to impose legal control on the type of fuels allowed for use and their sulphur contents in commercial and industrial processes to reduce sulphur dioxide (SO_2) emissions. As stipulated under the Air Pollution Control (Fuel Restriction) (Amendment) Regulation 2024 (the Amendment Regulation) which took effect on 1 April 2025, only liquid fuel with a sulphur content not exceeding 0.001% by weight and a viscosity not more than 6 centistokes at 40°C, such as Ultra Low Sulphur Diesel (ULSD) is permitted to be used.

iv. Control of Air Pollution in Car Parks (ProPECC PN 2/96)

4.3.5. This practice notes outlines the air quality guidelines required for the protection of public health and factors that should be considered in the design and operation of car parks in order to achieve the required air quality. The concentration limits for air pollutants as recommended by the practice notes are summarised in ***Table 4-3***.

Table 4-3 Air Quality Concentration Limits Inside Car Parks

Air Pollutants	**Maximum Concentration**		
	Averaging Time	**Micrograms Per Cubic Meter ($\mu g/m^3$)**	**Parts per Million (ppm)**
(a) Carbon monoxide (CO)	5 minutes	115,000	100
(b) Nitrogen Dioxide (NO2)	5 minutes	1,800	1

Notes:

All limits are expressed as at reference conditions of 298K and 101.325 kPa.

5. Background Air Quality

5.1.1. The nearest EPD air quality monitoring station (AQMS) is Causeway Bay monitoring station. The recent five years (2020-2024) averaged concentration of air pollutants are presented in ***Table 5-1*** below. Exceedances of RSP, FSP and NO_2 were recorded at the Causeway Bay AQMS during the period from 2020 to 2024, while the remaining pollutants were in compliance with the AQO.

Table 5-1 Average Concentrations of Pollutants in the Recent Five Years (Year 2020-2024) at Causeway Bay Air Quality Monitoring Station

Pollutant	Averaging Time	AQO[1]	Pollutant Concentration (µg/m³)[2]					
			2020	2021	2022	2023	2024	Average
RSP	10th Highest 24-hour	75 (9)	70	**79**	66	72	**76**	73
	Annual	30	**36**	**39**	**34**	**39**	**37**	**37**
FSP	19th Highest 24-hour	37.5 (18)	**39**	**42**	**42**	**40**	**43**	**41**
	Annual	15	**22**	**23**	**21**	**23**	**24**	**23**
NO_2	19th Highest 1-hour	200 (18)	**216**	**211**	**249**	**221**	**209**	**221**
	10th Highest 24-hour	120 (9)	**121**	119	**124**	118	110	118
	Annual	40	**68**	**71**	**65**	**67**	**66**	**67**
SO_2	4th Highest 10-Min	500 (3)	35	32	43	29	23	32
	4th Highest 24-hour	40 (3)	11	11	10	10	9	10
O_3	10th Highest 8-hour	160 (9)	91	94	100	101	105	98
	Peak season	100	56	57	54	58	56	56
CO	1st Highest 1-hour	30000 (0)	2850	1920	2020	1760	1950	2100
	1st Highest 8-hour	10000 (0)	1685	1551	1509	1404	1776	1585
	1st Highest 24-hour	4000 (0)	1441	1400	1248	1022	1262	1275

Note:

[1] Values in ( ) indicate number of exceedances allowed under the AQO.
[2] Bolded and underlined values represent exceedances of the AQOs.

5.1.2. As the Proposed Development is expected to be in operating in 2030, the PATH v3.0 data at (41,29), (42,29), (41,28) and (42,28) in Year 2030 have been adopted to represent the future background air quality concentrations at the 500m assessment area, as shown in ***Figure 3-1***. A summary of the background concentrations for the year 2030 is provided in ***Table 5-1***.

Table 5-2 Background Air Pollutants in Year 2030 Extracted from the PATH Model (v3.0)

Pollutant	Averaging Time	Prevailing AQO	Data Summary	PATH v3.0 Grid in Year 2030[1][2][3]			
				41,29	42,29	41,28	42,28
FSP	24-hr	37.5 (18)	19th Max	31.41	29.67	30.06	28.58
			No. of Exceedance(s)	4	4	4	3
	Annual	15	-	12.75	11.72	11.9	10.99
RSP	24-hr	75 (9)	10th Max	52.27	50.72	51.18	49.77
			No. of Exceedance(s)	0	0	0	0
	Annual	30	-	20.42	19.23	19.37	18.37
SO_2	10-min	500 (3)	4th Max	22.35	22.21	22.25	21.85
			No. of Exceedance(s)	0	0	0	0
	24-hr	40 (3)	4th Max	6.77	6.69	6.65	6.58
			No. of Exceedance(s)	0	0	0	0
NO_2	1-hr	200 (18)	19th Max	84.59	71.41	68.81	60.45
			No. of Exceedance(s)	0	0	0	0
	24-hr	120 (9)	10th Max	35.02	28.76	27.73	23.62
			No. of Exceedance(s)	0	0	0	0
	Annual	40	-	17.21	13.45	13.38	10.37
O_3	8-hr	160 (9)	10th Max	**169.8**	**172.13**	**170.86**	**172.65**
			No. of Exceedance	**14**	**15**	**14**	**16**
	Peak season	100	-	**116.33**	**119.11**	**118.2**	**120.49**
CO	1-hr	30,000	1st Max	582.23	532.89	547.26	520.42
			No. of Exceedance	0	0	0	0
	8-hr	10,000	1st Max	512.37	495.93	500.11	480.31
			No. of Exceedance	0	0	0	0
	24-hr	4,000	1st Max	492.05	474.21	483.45	457.02
			No. of Exceedance	0	0	0	0

Note:

[1] Data recorded at Level L1 (0m – 17m)

[2] Bolded and underlined values represent exceedances of the AQOs.

[3] Data extracted from Smart Air Modelling Platform (SAMP v2.1).

5.1.3. As shown in ***Table 5-1***, the background concentrations of air pollutants at PATH v3.0 Grid (41,29), (42,29), (41,28) and (42,28) in Year 2030 are well below the AQO criteria, except for an exceedance of the daily maximum 8-hour average O_3 (ozone) criterion. Ozone is not directly emitted from pollution sources but formed by photochemical reactions in the presence of sunlight. Therefore, ozone is not a key pollutant to be assessed in this assessment.

6. Potential Air Quality Impact in Construction Phase

6.1.1. To assess the air quality impact associated with the construction works of the Proposed Development, the ASRs in the vicinity have been identified as summarised in ***Table 5-1*** and illustrated in ***Figure 3-1***.

Table 6-1 Summary of Air Sensitive Receivers

ID	Description	Uses	Building Heights (mPD)	Distance from the Site Boundary (m)
ASR 1	Proposed Commercial Development on IL No.8945 at Caroline Hill Road, Causeway Bay, Hong Kong	Commercial & Institution	135	~25
ASR 2	Proposed District Court at Caroline Hill Road	Institution	135	~28
ASR 3	St. Paul's Convent	Place of Public Worship	34	~32
ASR 4	Disciplined Services Sports and Recreation Club	Institution	49.6	~22
ASR 5	So Kon Po Recreation Ground	Institution	7.6	~14
ASR 6	Indian Recreation Club	Institution	22.4	~22
ASR 7	Eastern Hospital Road Sitting-Out Area	Recreational	8.5	~76
ASR 8	Confucius Hall Secondary School	Educational	49.9	~114
ASR 9	Existing South China Athletic Association	Institution	58.7	~8

6.1.2. Details such as the extent of demolition, site formation and excavation, volume of excavated materials to be handled, and the number of mechanical equipment operating concurrently are no available during at the planning stage of the Proposed Development. As the Subject Site is currently a vacant site, no extensive site formation work or excavation work are anticipated. Only foundation and superstructure works during construction phase are anticipated.

6.1.3. Dust mitigation measures to minimize air quality impacts at nearby ASRs during construction phase is recommended as below:

- Plan site layout so that machinery and dust causing activities (e.g. haul roads and stockpiling areas) are located away from ASRs as far as possible;

- Erect solid screens or barriers around dusty activities;

- Erect hoarding with sufficient height from ground level along the site boundary;

- Connecting construction plant and equipment to mains electricity supply and avoid use of diesel generators and diesel-powered equipment can be considered as far as practicable to minimize air quality impact arising from construction machinery.

6.1.4. With the implementation of good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, significant dust generated from the construction of the Proposed Development is not anticipated. Hence, adverse dust impact during the construction phase would not be anticipated.

6.1.5. Emission in terms of Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) are the key air pollutants during construction and demolition works. Heavy construction activities and emission from construction vehicles would contribute to construction air quality impact. Construction-related machines employed in the Subject Site will follow the requirements as stipulated in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery. Therefore, gaseous emission from construction equipment would be minor and would not cause any adverse air quality impact.

6.1.6. Potential sources of VOC emissions may arise from the use of paints and coatings during the construction phase. The construction activities will be carried out in compliance with all relevant standards and regulations, including the Air Pollution Control (Volatile Organic Compounds) Regulation. Hence, adverse air quality impact during the construction phase would not be anticipated.

6.1.7. Based on MPC Paper No. A/H7/188 published on 24 October 2025, the operation year of ASR 1 is anticipated to be 2029. Meanwhile, according to PWSC(2022-23)3 published on 24 April 2022, the operation year of ASR 2 is anticipated to be in 2027. Since, appropriate mitigation measures for air quality impact will be implemented during the construction phase of the Proposed Development, the adverse cumulative air quality impact during the construction phase of the Proposed Development to nearby ASRs is not anticipated.

Cumulative Air Quality Impact

6.1.8. Based on the best available information obtained, concurrent projects within 500 m from Subject Site which would interface with the Proposed Development have been identified and shown in ***Table 6-2*** and indicated in ***Figure 6-1***.

Table 6-2 Summary of Concurrent Projects

Projects		Tentative Construction Period		Cumulative Impact
		Start Date	End Date	
i.	Proposed Commercial Development on IL No.8945 Causeway Bay[1] (Planning Application No. A/H7/188)	N/A	2029	• Commencement date for the construction is currently unavailable. • Appropriate mitigation measures for air quality impact are expected to be implemented by the Contractors of the concurrent project. • The adverse cumulative air quality impact during the construction phase of the Proposed Development is not anticipated.
ii.	Proposed District Court Building at Caroline Hill Road[2] (Project Code No. 033LJ)	2022	2027	• Appropriate mitigation measures for air quality impact are expected to be implemented by the Contractors of the concurrent project. • The adverse cumulative air quality impact during the construction phase of the Proposed Development is not anticipated.
iii.	Proposed Office, Shop and Services and Eating Place at 8 Leighton Road, Causeway Bay, Hong Kong[3] (Planning Application No. A/H7/183)	N/A	N/A	• Commencement date for the construction is currently unavailable. • Appropriate mitigation measures for air quality impact are expected to be implemented by the Contractors of the concurrent project. • The adverse cumulative air quality impact during the construction phase of the Proposed Development is not anticipated.

Note:

[1] Information extracted from MPC Paper No. A/H7/188 dated 24 October 2025.

[2] Information extracted from PWSC(2022-23)3 dated 27 April 2022.

[3] Information extracted from MPC Paper No. A/H7/183A dated 14 October 2022.

7. Potential Air Quality Impact in Operation Phase

7.1.1. Study area for AQIA has been identified by a distance of 500m from the boundary of the Subject Site. ***Figure 3-1*** illustrates the extent of the study area. Vehicular emissions and industrial emissions are the key air pollution sources in the vicinity of the Subject Site that might impose air quality impacts during operation phase.

7.2. Vehicular Emissions from Open Road Traffic

7.2.1. The Subject Site is surrounded by an open road, namely Caroline Hill Road to the north. According to the information from the Annual Traffic Census (2024) published by Transport Department, the road section near to the Subject Site are classified as Local Distributor ("LD").

7.2.2. With reference to the HKPSG, recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions have been adopted as summarised in ***Table 7-1***. The buffer distance is illustrated in ***Figure 6-2.***

Table 7-1 Buffer distance from the Adjacent Roads

Road Name	Road Type	HKPSG Guideline Buffer Distance Requirement
Caroline Hill Road	Local Distributor	5m

7.2.3. The offices and multi-purpose rooms of the Proposed Development will rely on the centralized AC system whereas the sports facilities and carpark will rely on natural ventilation. As shown in ***Figure 6-2***, no air sensitive uses (including openable windows, open space for active recreation use, and fresh air intake of mechanical ventilation) will be located within the buffer zones from G/F to R/F during the operation phase. Hence, no adverse air quality impact is anticipated during the operation phase.

7.3. Industrial Emissions from Chimneys

7.3.1. Site survey was carried out on 18 March 2025 to review the existing environmental conditions.

7.3.2. Chimneys were identified at Tung Wah Eastern Hospital and the St. Paul's Convent Main Block during the survey. According to the previous planning application (No. A/H7/182), a chimney was also present at St. Paul's Convent, but it is noted that this chimney has been removed during the survey, as captured in ***Table 7-2*** below.

Table 7-2 Photographs of St. Paul's Convent Chimney

Captured by Google Maps on Jan 2024	Captured on Site Visit on March 2025
 The chimney was observed at St. Paul's Convent.	 The chimney at St. Paul's Convent was removed.

7.3.3. Based on the Hong Kong's open3Dhk website, it was noted there are 4 nos. of chimneys at St. Paul's Convent Main Block with a height of 124.7mPD. According to the proposed layout plan in ***Appendix 3-1***, the main roof level of the Proposed Development would be approximately +45.4mPD. The height difference between the hospital chimneys and the Proposed Development is therefore about 79.3m which requires 10m buffer distance as stipulated in HKPSG Guidelines. The Subject Site is located more than 100m away from the St. Paul's Convent Main Block which has met the required buffer distance and therefore, no adverse air quality impact from the concerned chimneys is anticipated.

7.3.4. The Specified Processes (SP) Licence was reviewed on 05 September 2025 and it was noted that there are also 4 nos. of chimneys at Proposed District Court Building at Caroline Hill Road, with a height of 146.3mPD (2 nos. chimneys) and 146.4mPD (2 nos. chimneys). The height difference between the hospital chimneys at Proposed District Court Building and the Proposed Development are about 100.9m and 101.0m respectively which have complied with the required 10m buffer distance as stipulated in HKPSG guideline. Therefore, no adverse air quality impact from the concerned chimneys is anticipated.

7.3.5. A diesel generator owned by Tung Wah Eastern Hospital was found during the site surveys within the 200m assessment area. The location of the diesel emergency generator is shown in ***Figure 6-3***. According to the verbal communication with Tung Wah Eastern Hospital on 26 May 2021, it was confirmed that the diesel generator is for emergency purpose only. In view of the diesel generator is for emergency use only, no adverse air quality impact to the Proposed Development and nearby air sensitive receivers is expected.

7.3.6. With compliance of the HKPSG recommendations, no air impact caused by the surrounding chimneys is anticipated.

7.3.7. Slaughterhouses, sewage treatment works facilities, village incinerators, odour sources and dusty uses are not found within 500m radius of the Proposed Development. Therefore, no adverse odour impact is expected.

7.4. Emission from the Proposed Development

7.4.1. The Proposed Development will not include any chimney for fuel combustion. Emergency generator will be provided in the Proposed Development. The emergency generator is for emergency use only and will not be used during normal operation.

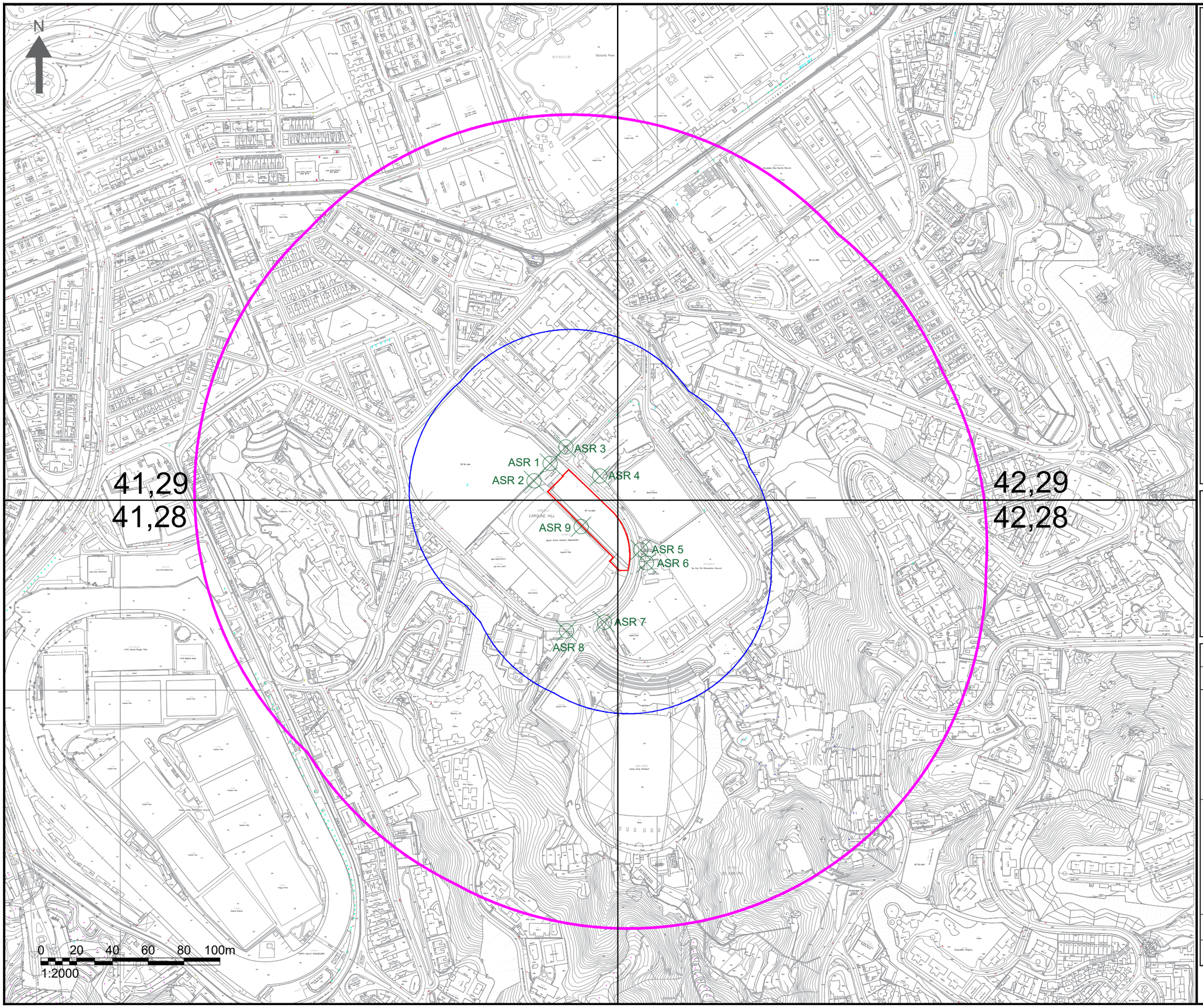
7.4.2. Carpark is included in the Proposed Development. The ventilation system for the carpark will follow the requirements in the ProPECC PN 2/96 - Control of Air Pollution. The detailed design of the exact locations of carpark exhaust and fresh air intakes are not available at the current planning stage. The exhaust air outlets will be located away from nearby ASRs.

7.4.3. Therefore, no adverse air quality impact related to emission from the Proposed Development to the nearby air sensitive receivers is anticipated.

8. Conclusions

8.1.1. Fugitive dust due to construction works and gaseous emission from construction equipment would make air quality impacts to the nearby air sensitive receivers, with the implementation of dust suppression measures and good site practice as stipulated under Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation.

8.1.2. Air sensitive uses (including openable windows, fresh air intake for mechanical ventilation and open space for active recreational use) in the Subject Site shall maintain sufficient buffer distance from nearby road sections and industrial chimneys as promulgated in the HKPSG. No adverse air quality impact is anticipated at the Subject Site during operation phase.



NOTES :

- SUBJECT SITE
- GRID NUMBER
- 200M ASSESSMENT AREA
- 500M ASSESSMENT AREA
- AIR SENSITIVE RECEIVERS

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

SUBJECT SITE LOCATION AND AIR SENSITIVE RECEIVERS

Drawing No :	Revision :
FIGURE 3-1	1
Scale : AS SHOWN	Date : FEB 2026

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A3 420 x 297

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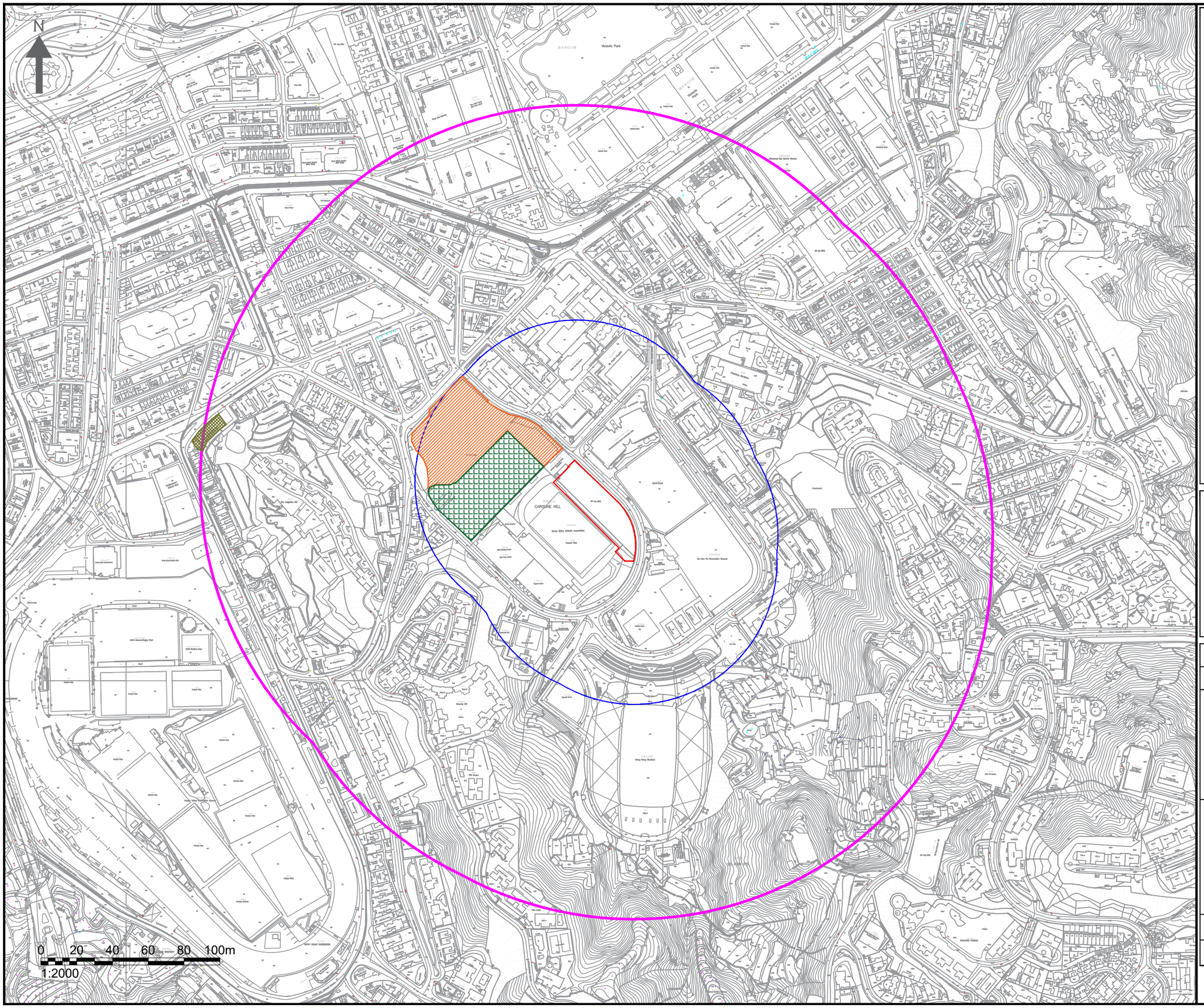

NOTES :

- SUBJECT SITE
- 200M ASSESSMENT AREA
- 500M ASSESSMENT AREA
- PROPOSED COMMERCIAL DEVELOPMENT ON IL NO.8945 CAUSEWAY BAY (PLANNING APPLICATION NO. A/H7/188)
- PROPOSED DISTRICT COURT BUILDING AT CAROLINE HILL ROAD (PROJECT CODE NO. 033LJ)
- PROPOSED OFFICE, SHOP AND SERVICES AND EATING PLACE AT 8 LEIGHTON ROAD, CAUSEWAY BAY, HONG KONG (PLANNING APPLICATION NO. A/H7/183)

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

LOCATIONS OF CONCURRENT PROJECTS

Drawing No : FIGURE 6-1	Revision : 0
Scale : AS SHOWN	Date : FEB 2026

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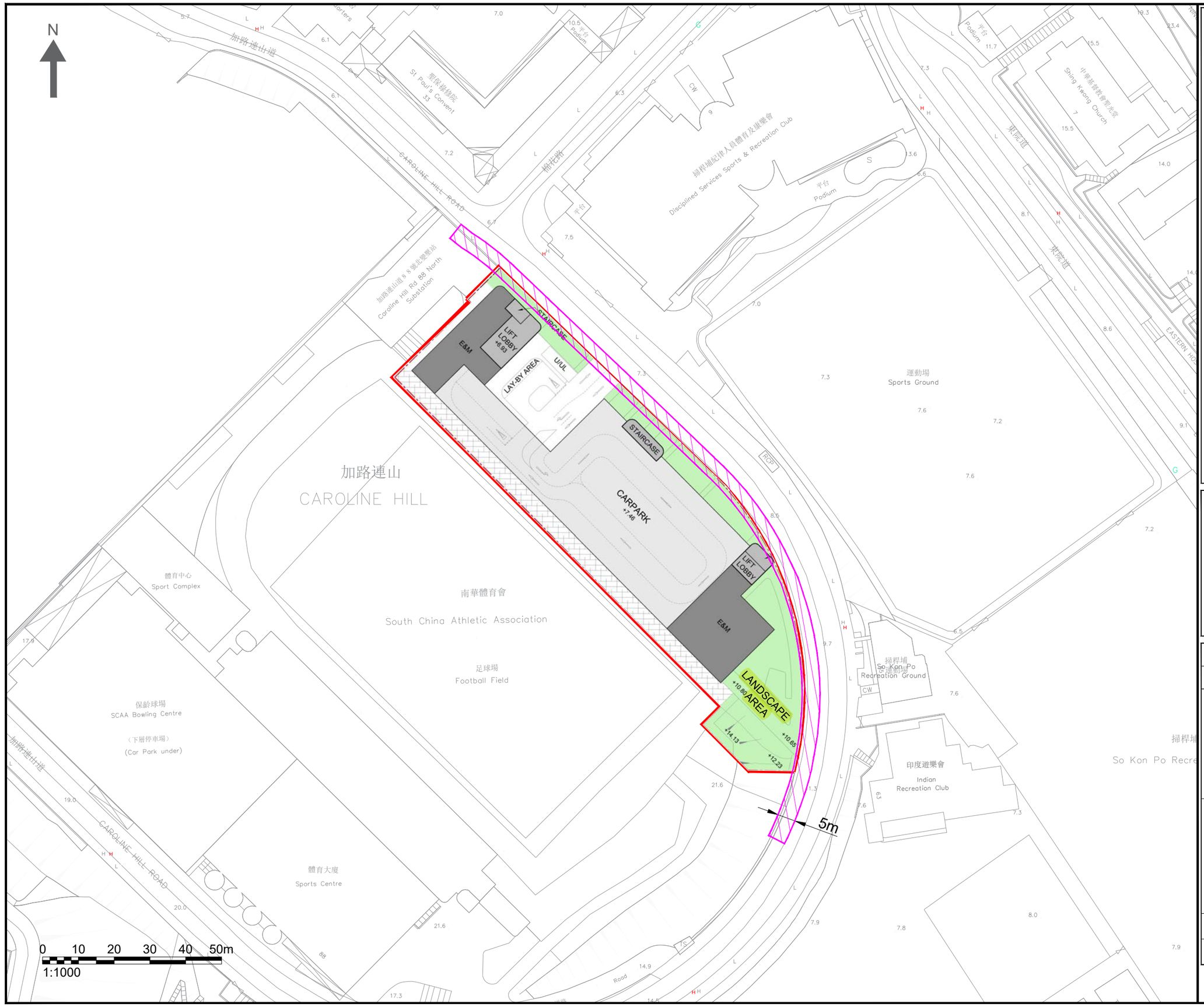

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG.

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT G/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-2	Revision : 2
Scale : AS SHOWN	Date : FEB 2026

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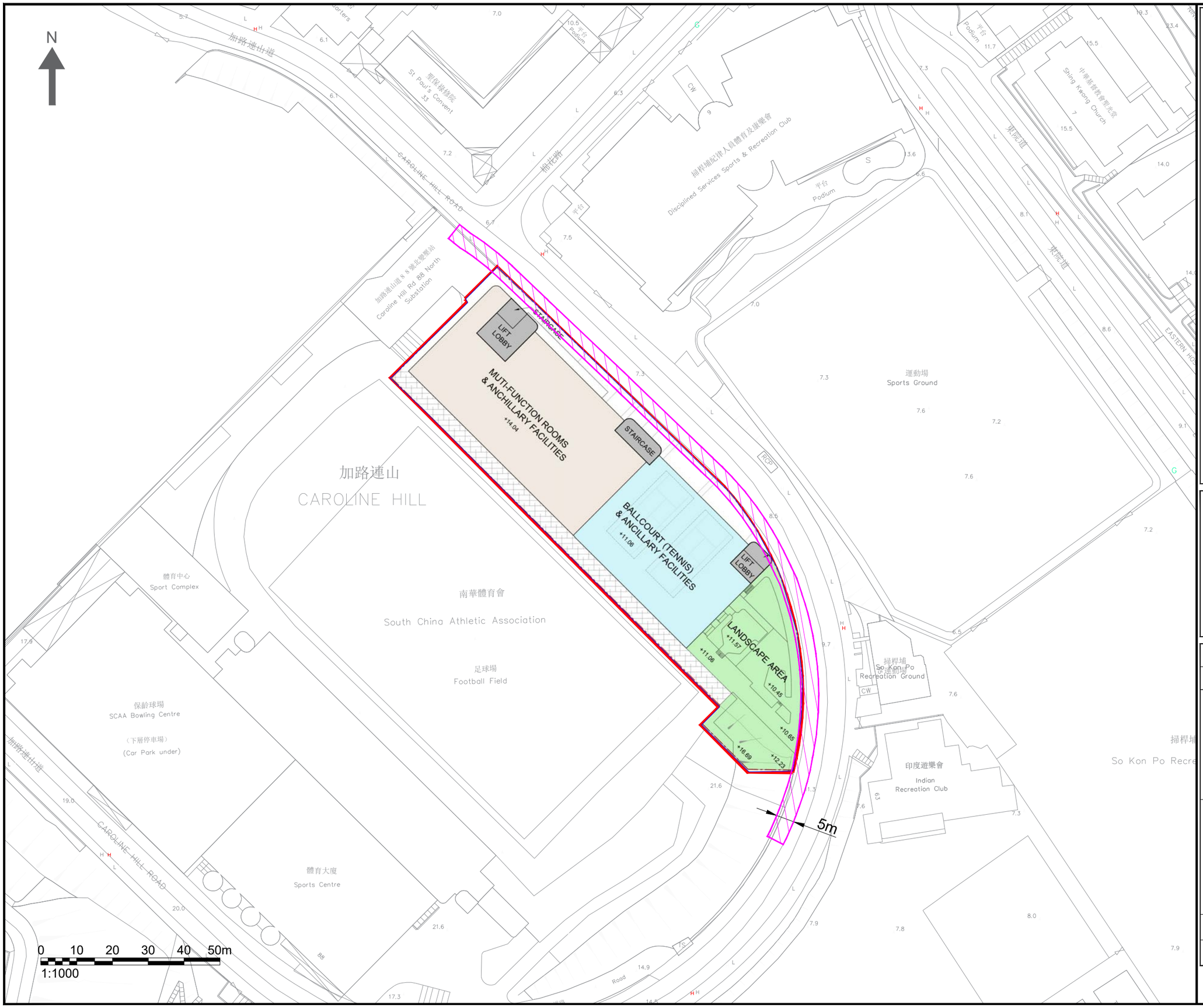

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

AEC

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 1/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-3	Revision : 2
Scale : AS SHOWN	Date : FEB 2026

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A3 420 x 297

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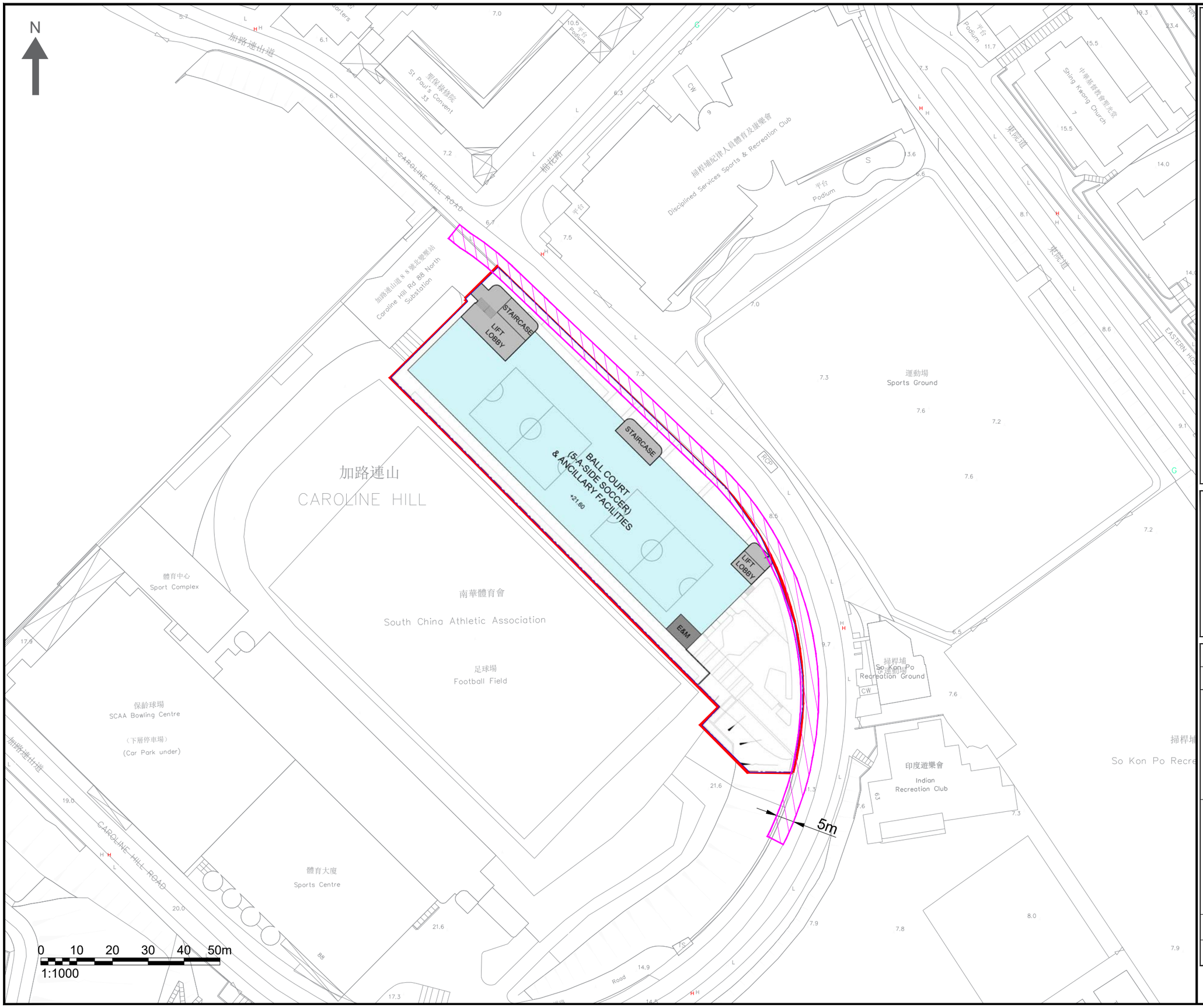

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 2/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-4	Revision : 2
Scale : AS SHOWN	Date : FEB 2026

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A3 420 x 297

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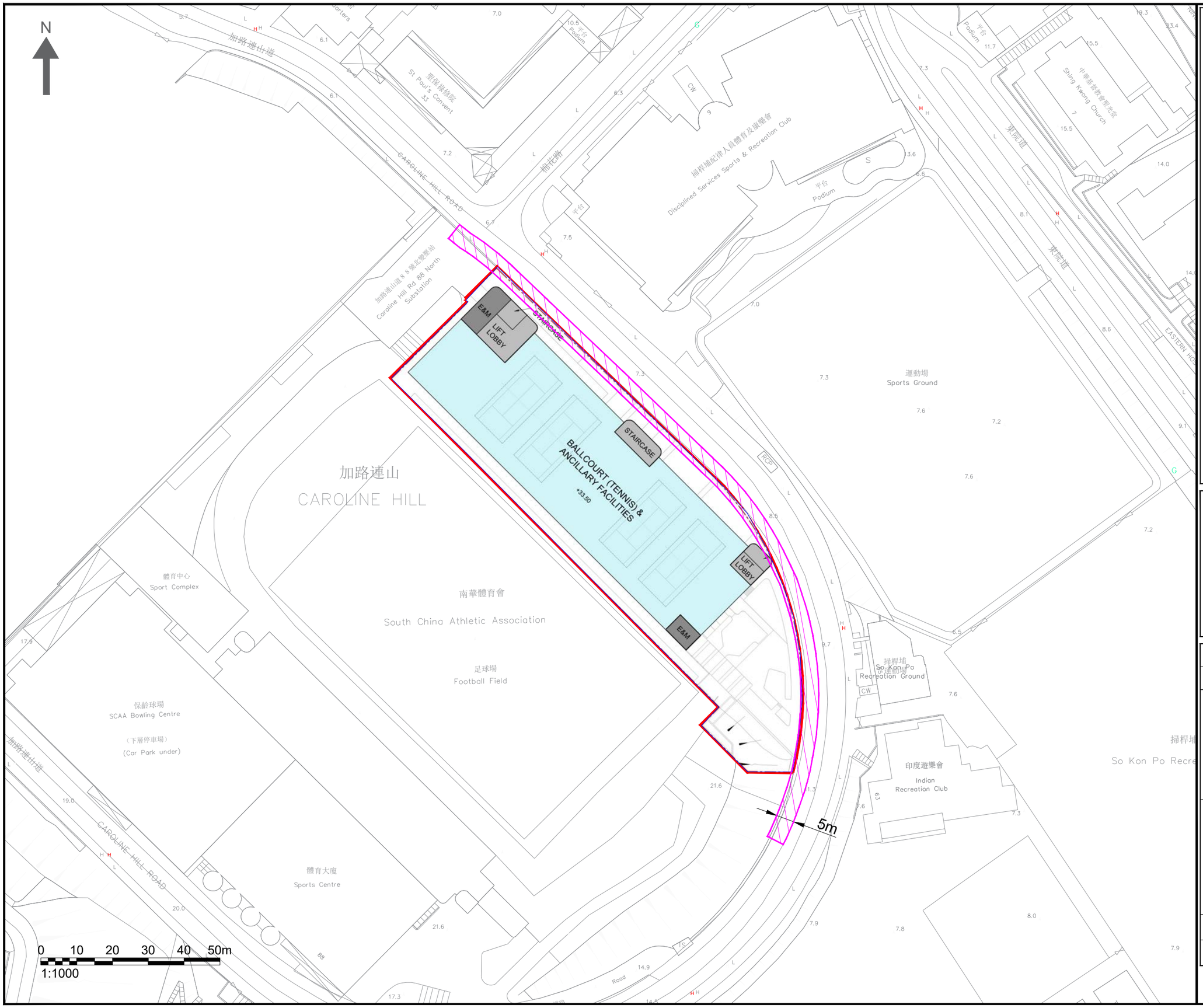

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 3/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-5	Revision : 2
Scale : AS SHOWN	Date : FEB 2026

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A3 420 x 297

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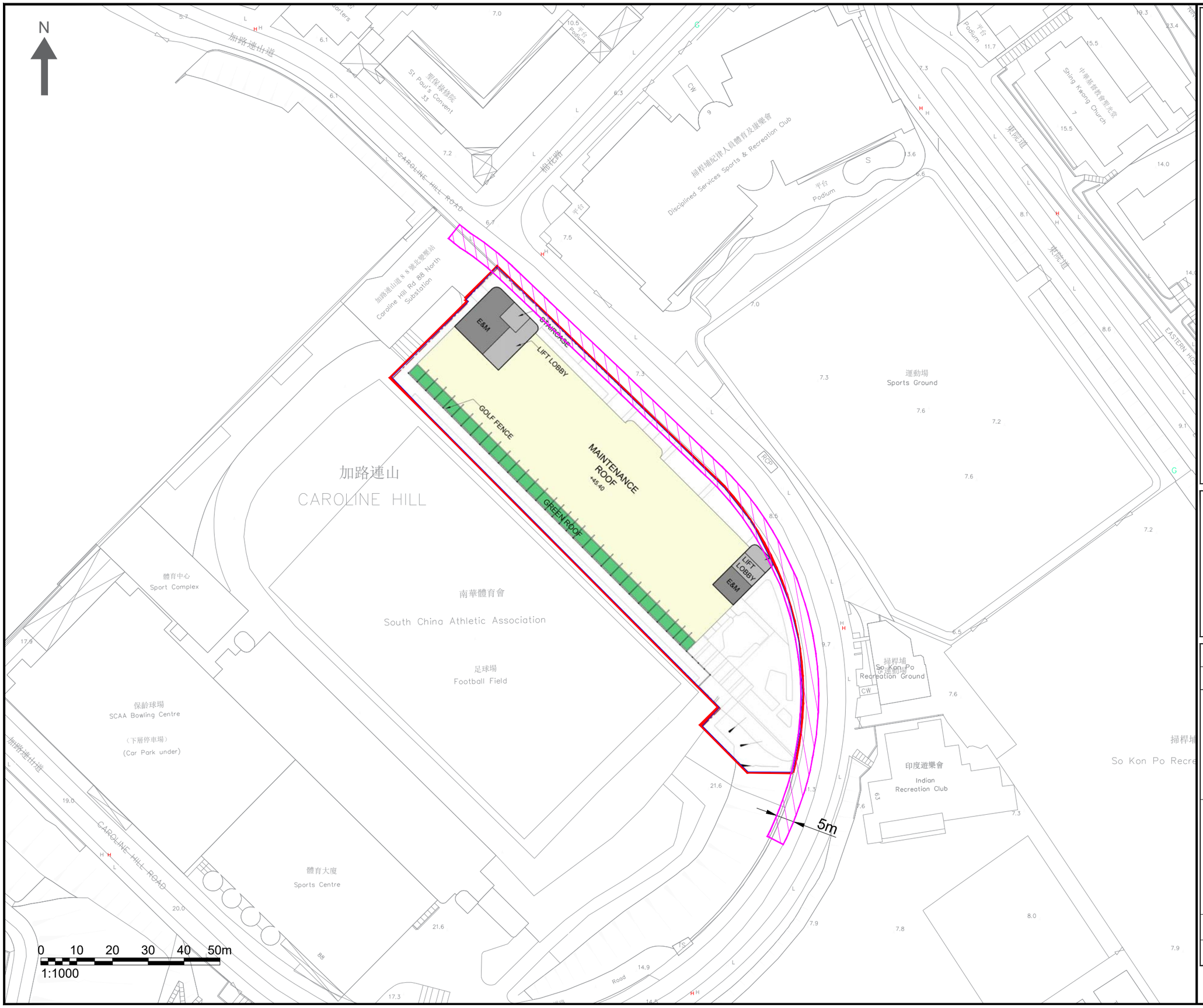

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT R/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-6	Revision : 2
Scale : AS SHOWN	Date : FEB 2026

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A3 420 x 297

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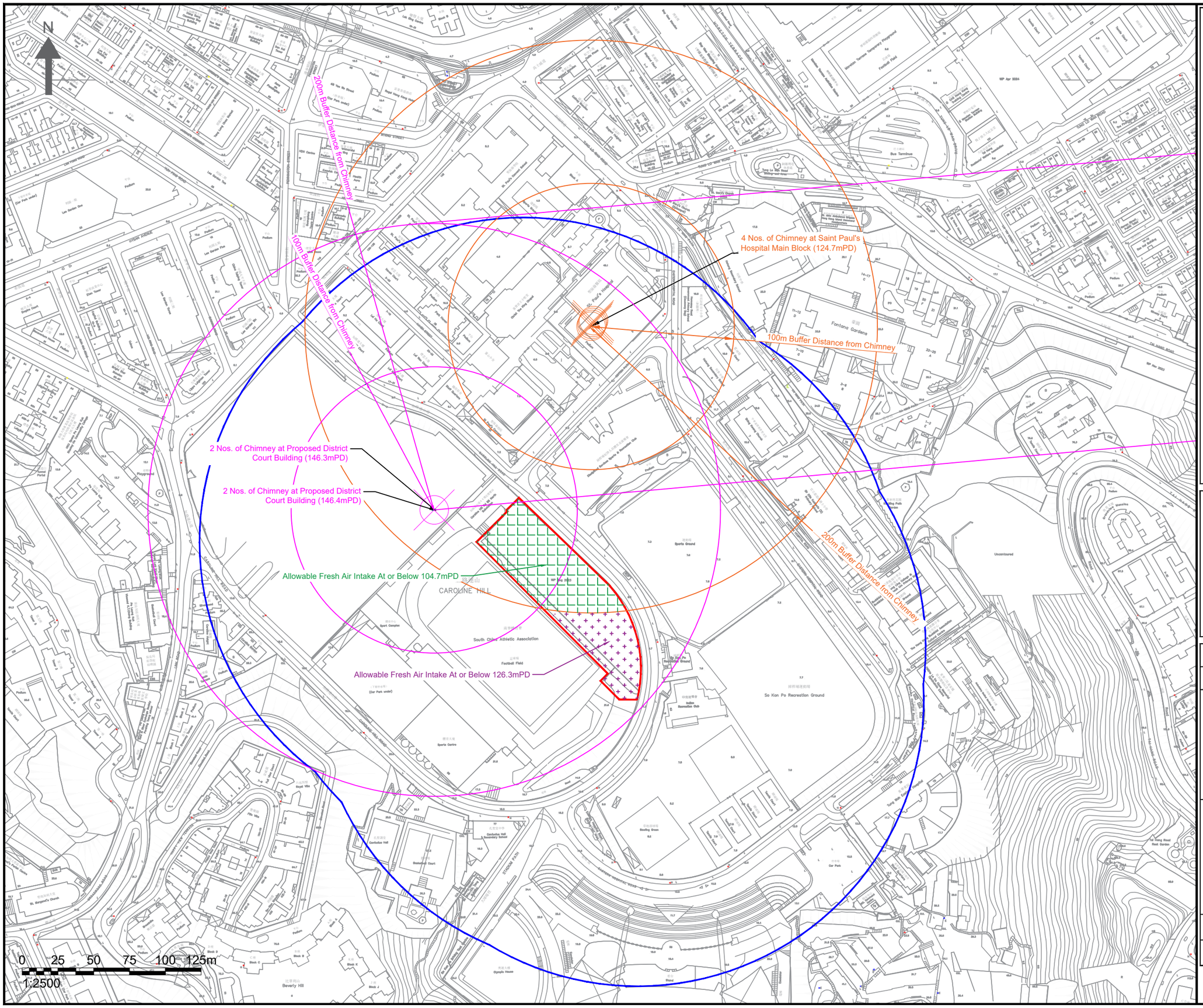

NOTES :

- SUBJECT SITE
- 200m ASSESSMENT AREA
- DIESEL EMERGENCY GENERATOR
- CHIMNEYS OF ST. PAUL'S HOSPITAL MAIN BLOCK
- CHIMNEYS OF PROPOSED DISTRICT COURT BUILDING
- ALLOWABLE FRESH AIR INTAKE LOCATION AT OR BELOW 104.7mPD
- ALLOWABLE FRESH AIR INTAKE LOCATION AT OR BELOW 126.3mPD
- 5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

MAP OF INDUSTRIAL CHIMNEY SURVEY WITHIN 200M ASSESSMENT AREA

Drawing No : FIGURE 6-7	Revision : 2
Scale : AS SHOWN	Date : FEB 2026

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A3 420 x 297

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Appendix 3-1

Site Layout Plan

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93

STAIRCASE

LIFT LOBBY +6.93

E&M

L/UL

LAY-BY AREA

+7.46

+7.55

STAIRCASE

CARPARK +7.46

+8.36

STAIRCASE

LIFT LOBBY

E&M

+9.46

+10.80

+10.65

+12.23

+14.13

+15.83

SCAA TRAINING POOL

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

G/F Plan ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

OFFICE

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

SCAA TRAINING POOL

MULTI-FUNCTION ROOMS

+14.04

BALLCOURT (TENNIS)

+11.06

LANDSCAPE AREA

+11.57

+10.45

+11.06

+10.65

+12.23

+16.69

TOILETS/ CHANGING ROOMS/ E/M

TOILETS/ CHANGING ROOMS/ E/M

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 09 Jan 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

TOILETS/ CHANGING ROOMS/ E/M

BALL COURT (5-A-SIDE SOCCER) & ANCILLARY FACILITIES

+21.60

TOILETS/ CHANGING ROOMS

E&M

SCAA GOLF DRIVING RANGE

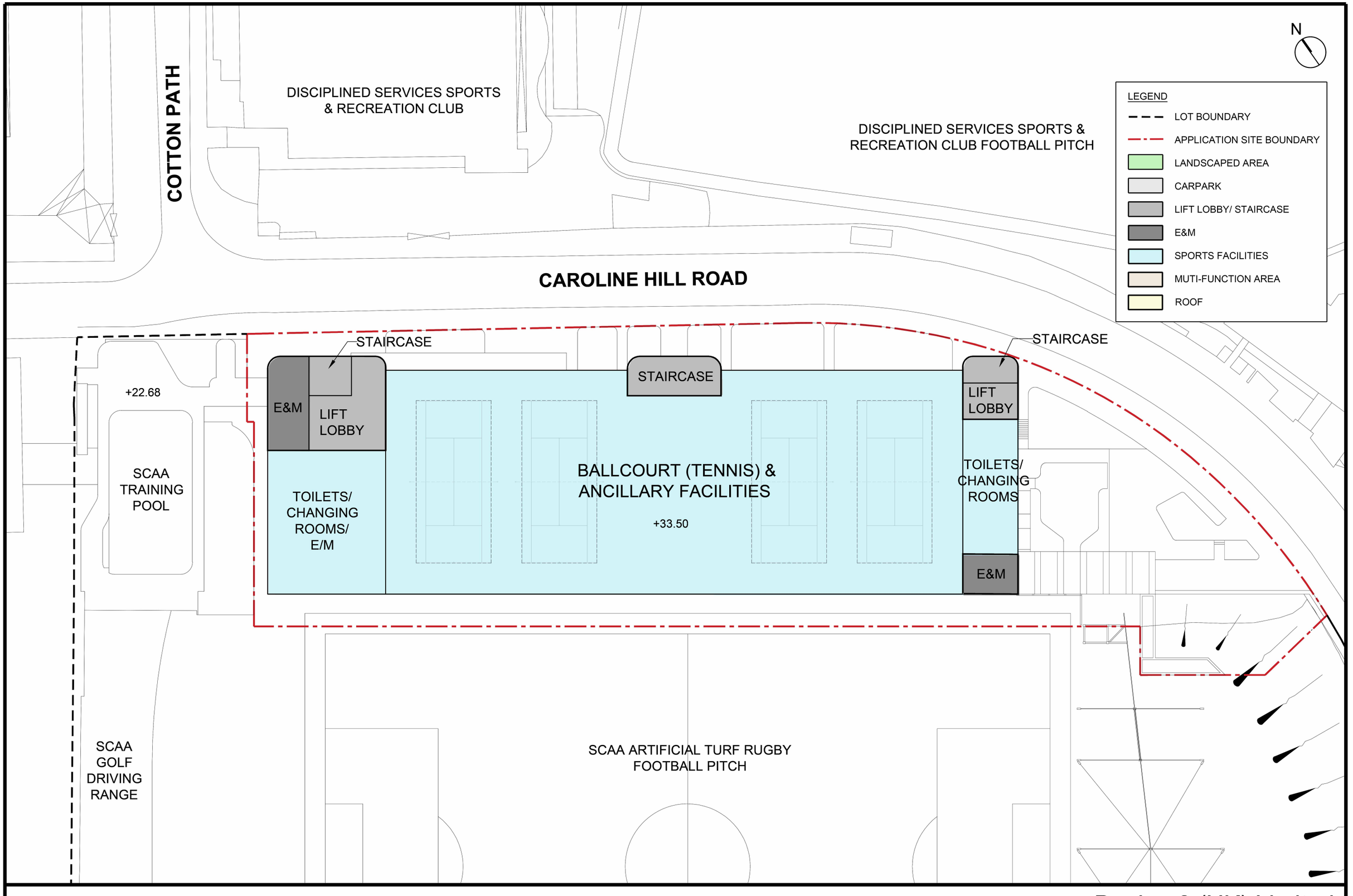
SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 09 Jan 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARIES
- APPLICATION SITE BOUNDIES
- GREEN ROOF
- LIFT LOBBY/ STAIRCASE
- E&M
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

STAIRCASE

LIFT LOBBY

E&M

STAIRCASE

LIFT LOBBY

E&M

ROOF

+45.40

GOLF FENCE

GREEN ROOF

SCAA TRAINING POOL

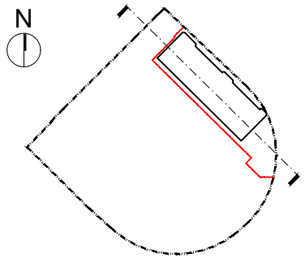
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

R/F Plan ○ 1 : 500 (A3) ○ 09 Jan 2026



Key Plan

LEGEND

- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPE AREA
- CARPARK
- LIFT LOBBY
- E/M
- SPORT FACILITIES
- MULTI-FUNCTION AREAS
- ROOF

SCAA Sports Link

SCAA Training Pool

Adjoining Commercial Development

Boundary Line

Application Boundary

Boundary Line

Golf Fence +61.60

Golf Fence +61.60

Golf Fence +61.60

16200

11900

37940

11900

10540

3600

R/F +45.40

3/F +33.50

2/F +21.60

1/F +11.06

G/F +7.46

+48.90

Entrance Lobby / E&M

Roof

+45.40

+48.90

Entrance Lobby / E&M

Ball Court (Tennis Court) +33.50

Ball Court (Tennis Court) +33.50

Ball Court (5-A-Side Soccer) +21.60

Ball Court (5-A-Side Soccer) +21.60

Ball Court (Tennis Court) +11.06

Multi-Function Room(s) / Office / E&M +14.04

Carpark +7.46

Entrance Lobby +6.93

E&M

E&M

Carpark

Linkage with Training Pool

Linkage with Adjoining Development

Training Pool +22.68

+18.60

16200

11900

37940

11900

7560

6580

R/F +45.40

3/F +33.50

2/F +21.60

1/F +14.04

G/F +7.46

Caroline Hill Road

Approx. +10.65

+8.811

Mean Street Level of North Site

Existing Slope

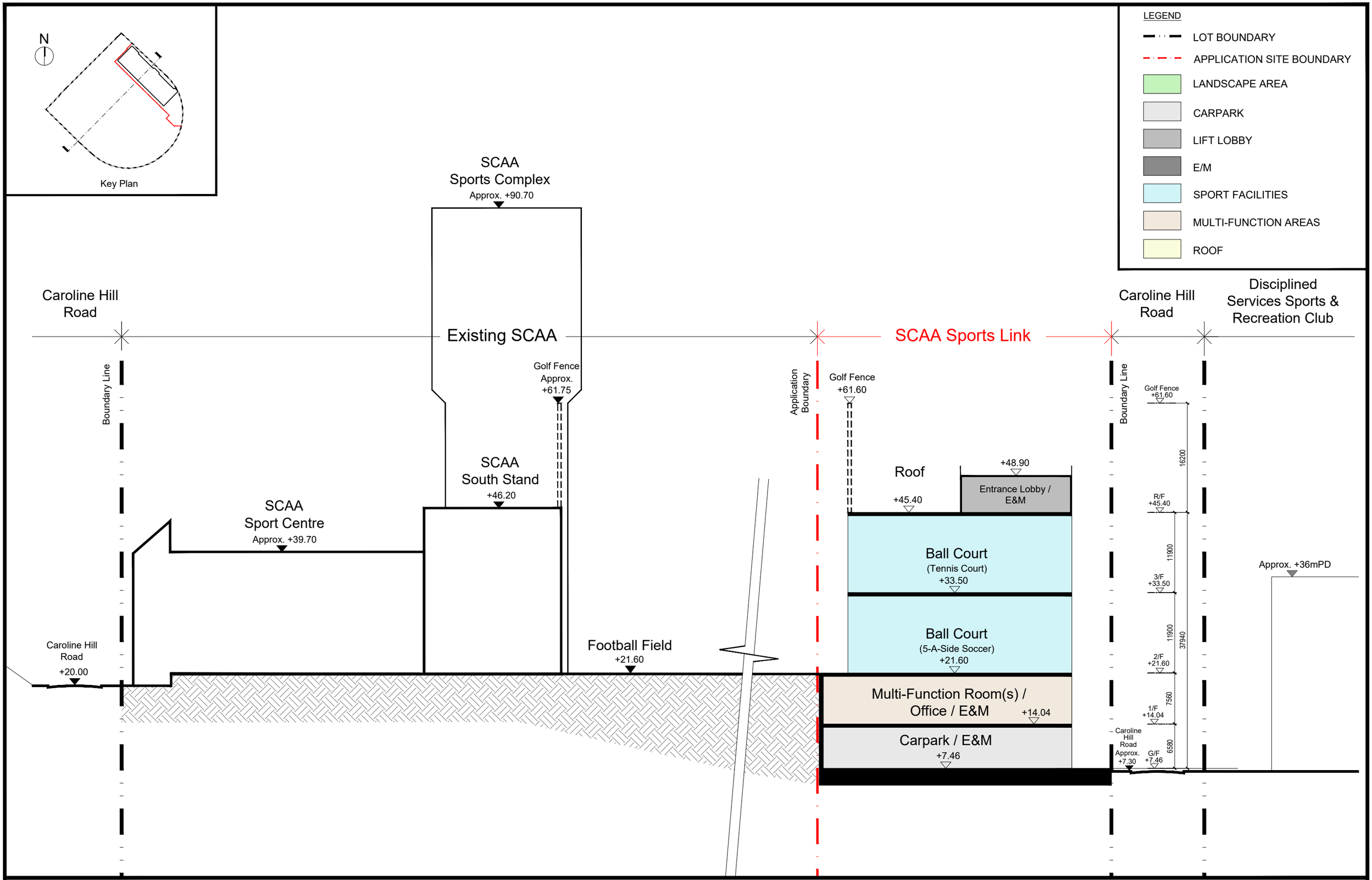
Landscape Garden

+10.65

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section A-A ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Section B-B ○ 1 : 500 (A3) ○ 09 Jan 2026

Design 2 (HK) Limited

PLANNING LIMITED
規劃顧問有限公司

By Email and Hand

Our Ref: S3116/SCAA/23/008Lg

1 April 2026

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

Dear Sir/Madam,

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
- S16 Planning Application Submission -
TPB Ref.: A/H7/189
Further Information No. 5

Reference is made to the captioned S16 Planning Application submitted to the Town Planning Board ("TPB") on 17 October 2025 and departmental comments received on 17 and 27 March 2026.

In response to the departmental comments received, please find attached the Further Information ("F.I.") submission for your consideration. The submission document consists of:

Response-to-Comment Table
Appendix I Updated Traffic Impact Assessment
Appendix II Replacement Pages of the Air Quality Impact Assessment
Appendix III Replacement Pages of the Sewerage Impact Assessment
Appendix IV Drawings indicating the new/existing pedestrian route and vehicular access

Meanwhile, should you have any queries in relation to the above, please do not hesitate to contact

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

Gladys Ng

Encl. (4 copies)

cc. DPO/HK – Mr Harvey Law (By Email)
the Applicant & Team

PL/GN/vy

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
S16 Planning Application

(Planning Application No: A/H7/189)

RESPONSE-TO-COMMENT TABLE

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
S16 Planning Application

(Planning Application No: A/H7/189)

Comments	Response
Comments from Transport Department: **(Contact Person: Mr Sammy WONG; Tel: 2829 5262)** TD's Comments on the R-to-C table and the revised TIA enclosed in the 4th Further information (FI) are as below:	
1) R-to-C item 1 – The supporting information of car parking ratio of 1 space per 497 m^2 GFA for the proposed development as incorporated in Section 2.4 of the updated TIA report is noted. Please also justify the L/UL demand.	At present, there is no designated GV loading/unloading space provided at the existing SCAA main block. The loading/unloading activities are conducted by LGV within the carpark near the entrance area and the operation was found to be satisfactory. In the proposed development, 1 no. of HGV loading/unloading bay has been proposed to better serve the loading/unloading demand.
2) R-to-C item 2 and revised Figure 3.3 – It is assumed that 45.5% of generated pedestrian flow will be distributed to/from CWB MTR station and 48.8% to/from bus stops at Moreton Terrace. Please advise the basis of this assumption as it appears more pedestrian will access to CWB MTR station side in the past large scale events. Please review your distribution and assess the associated pedestrian impact.	Please be clarified that no large-scale event will be conducted in the proposed development. The proposed development will serve as a sports centre providing tennis courts and football pitches as well as supporting activities/multi-purposed rooms only and therefore, the pedestrian pattern will be different to the pattern under large-scale events.
3) R-to-C item 3 & revised Figure T1 – The swept path for the 11m HGV is in conflict with adjacent walkway when leaving the L/UL bay. Please review the internal layout design.	Noted. Please find the updated Figure T1 (Rev.A) in the attached.

Comments	Response
4) R-to-C item 5 and Table 4.7 refer – please justify why adopting the largest trip rates among weekday AM and PM peak for the weekend peak is considered a conservative approach, in particular for "Retail" use.	The trip rates have been reviewed and updated. Please refer to Table 4.7 in *Appendix I* for details.
5) R-to-C item 6 refers – The traffic flow direction of Tung Lo Wan Road at the j/o Tung Lo Wan Road and Moreton Terrace in Figure 3.2 is incorrect. Please rectify.	Noted. Figure 3.2 has been updated accordingly.
6) R-to-C item 7 refers -	
(i) Please clarify why peak hour flow instead of peak 15-min flow is used in the LOS assessment.	Peak 15-min flow has been adopted accordingly. Please refer to *Appendix I* for details.
(ii) Regarding the section 4.11, please elaborate how the estimate average number of pedestrians waiting at the refuge island was derived and provide the results of space per person at Table 4.13.	Noted. An example has been provided to demonstrate how the estimated average number of pedestrians waiting at the refuge island was derived. Please refer to Section 4.11 in *Appendix I* for details.
(iii) Regarding Note (2) of Table 4.13, please note that the criteria for LOS should be referenced from Table 18-8 instead of Table 18-7 if HCM 2000.	Please note that the reference was checked and confirmed to be correct. An abstract of the HCM2000 has been appended in Appendix E for easy reference (*Appendix I* refers).
7) It is noted that an indicative scheme of pedestrian linkage system to connect the subject site to the commercial site (IL 8945) was proposed and further discussion will be made with the owner of adjoining development and relevant government departments regarding land lease issue, maintenance liability and funding arrangement. Please allow provision for the proposed pedestrian	Noted. The provision for the proposed pedestrian linkage system will be allowed at the building plan stage.

Comments	Response
linkage system in the building plan and future construction of the development.	
Comments from the Director of Environmental Protection: **(Contact Person: Ms Virginia WONG; Tel: 2835 1109)**	
1. Section 4.3.5 – a. Please underline the section header. b. Since the AQIA is to evaluate the air quality impacts at ASRs instead of inside the carpark, please remove Table 4-3.	Section 4.3.5 has been revised accordingly (*Appendix II* refers).
2. Section 5.1.1 – Please provide data of the nearest general AQMS instead of roadside AQMS.	Data of the Central/Western monitoring station has been adopted in Section 5.1.1 (*Appendix II* refers).
3. Section 5.1.2 – Please review if line 1 should read "operati**on**~~**ing**~~"	Section 5.1.2 has been revised accordingly (*Appendix II* refers).
4. Table 5-2 – a. 10th max 24-hour RSP for (41,29) should be 52.**57**. b. Please remove the underline and bold for the no. of exceedance for 8-hr O3.	Table 5-2 has been revised accordingly (*Appendix II* refers).
5. Section 7.3.2 and 7.3.3 – Please check whether "St. Paul' s Hospital Main Block" should be "St. Paul's **Hospital** Main Block".	Section 7.3.2 and 7.3.3 have been revised accordingly (*Appendix II* refers).
6. Figure 6-2 to 6-6 – Please add a remark in the figure that there are no fresh air intake and openable windows of air sensitive use and open space for active recreation use within the buffer zone.	Figures 6-2 to 6-6 have been revised accordingly (*Appendix II* refers).

Comments	Response
7. Figure 6-7 – Please remove 5m road buffer distance in the legend. 8. Please highlight all changes in the next submission.	Figure 6-7 has been updated accordingly (*Appendix II* refers). Noted.
Chief Engineer/Hong Kong & Islands, Drainage Services Department **(contact officer: Mr Keith WONG, tel.: 3101 2376)** Regarding the revised SIA enclosed in 1st FI, the applicant is advised that as per DSD's Corrigendum No. 1/2024 for Sewerage Manual Part 1, polyethylene (PE) pipes should be used for sewers with diameter not exceeding 375mm.	Please be clarified that the sewage generated from Proposed Development will be conveyed to the existing manhole FMH7019720 via existing 150mm diameter concrete pipe. No additional pipe work will be required for the Proposed Development. Please refer to *Appendix III*.
District Planning Officer/Hong Kong, Planning Department **(contact officer: Mr Harvey LAW, Tel.: 2231 4929/ Mr. Michael SO, Tel: 2231 4992)** (i) Please further clarify whether ancillary office is included in the proposed ancillary facilities (ii) Please provided relevant plans/drawings indicating the new/existing pedestrian route and vehicular access (including the existing main exit located in the SCAA Complex); and (iii) Please clarify whether the proposed landscape garden at primary zone	Yes, the proposed ancillary facilities include ancillary office. Please refer to drawings in *Appendix IV*. These show the new/existing pedestrian route and vehicular access (including the existing main exit located in the SCAA Complex). Yes, pedestrians can access and enjoy the proposed landscape garden at

Comments	Response
(on the G/F) can be accessed and used by the pedestrians.	primary zone (on the G/F) during operation hours of the proposed SCAA Sports Link.

Consolidated by: **KTA Planning Limited**
Date: **31 March 2026**

List of Appendices

Appendix I Updated Traffic Impact Assessment
Appendix II Replacement Pages of the Air Quality Impact Assessment
Appendix III Replacement Pages of the Sewerage Impact Assessment
Appendix IV Drawings indicating the new/existing pedestrian route and vehicular access



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE T1	REV. A
DESIGNED SLN / DRAWN CLL / CHECKED SLN; DATE JAN 2026; SCALE 1:500 @ A4	DRAWING TITLE: SWEPT PATH ANALYSIS - 11m HGV AT RUN - IN / OUT	LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40920\DATA\DWG\FIGURET1A.DWG PLOT SCALE : 1 = 1

APPENDIX I

Updated Traffic Impact Assessment

Document Status Control Record

Proposed SCAA Sports Link
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Traffic Impact Assessment Study

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1 INTRODUCTION

1.1 Background

1.1.1 The South China Athletic Association ("SCAA") intends to develop a comprehensive sports and recreation centre ("the proposed development") at the northern part of SCAA site in Caroline Hill Road, Causeway Bay ("the Site"). A S16 planning application will be required for taking forward the implementation of the proposed development. In this regard, a traffic impact assessment ("TIA") study is required to support the S16 planning application.

1.1.2 LLA Consultancy Limited was commissioned to conduct the TIA study for the proposed development. This report presents the findings of this study.

1.2 Objectives

1.2.1 The objectives of this study are as follows:

- to review the existing traffic conditions in the vicinity of the Site;
- to estimate the traffic generation of the proposed development;
- to project the future traffic flows in the surrounding road network;
- to appraise the potential traffic impact of the proposed development, and to propose road improvement proposals, if required;
- to recommend the internal transport facilities for the proposed development; and
- to review the pedestrian traffic arrangement of the proposed development.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 As shown in **Figure 2.1**, the Site is situated on the northside of the SCAA site in Caroline Hill Road, Causeway Bay and the site area is about 6,132 m^2.

2.2 Development Schedule

2.2.1 The proposed development will provide tennis courts, 5-a-side artificial turf pitches, activities rooms, muti-purposes rooms and ancillary facilities. The key development parameters are summarised in **Table 2.1**.

Table 2.1 Proposed Development Schedule

Item	Parameter
Site Area	About 6,132 m^2
Total GFA	About 31,327.12 m^2
No. of Storeys	G/F, 1/F, 2/F and 3/F
Tennis Count	6 Nos.
5-a-side Artificial Turf Pitch	2 Nos.
Activities rooms, muti-purposes rooms and ancillary facilities	1/F: Activities Rooms + Multi-purposed Rooms + WC + Corridor = about 1840m^2
Internal transport facilities	63 private car parking spaces, 9 Motorcycle parking spaces, 1 pick-up/drop-off lay-by and 1 HGV loading/unloading bay

2.3 Vehicular Access Arrangement

2.3.1 The Site has a single frontage at Caroline Hill Road only and the proposed vehicular access for the proposed development must be located at Caroline Hill Road. Taking into consideration of the location of the Disciplined Services Sports & Recreation Club vehicular access at the opposite side, the proposed vehicular access is being positioned to stagger with the opposite vehicular access.

2.4 Proposed Transport Facilities

2.4.1 The internal transport facilities for the proposed development use should be provided in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG) or the land grant. As there is no specific guideline set in the HKPSG or land grant for the proposed sports and recreation uses, the design objective is to provide maximum parking space numbers on ground floor in formulating the carpark layout because there will be neither basement floor nor upper floor for carparks.

2.4.2 Reference was also made to the parking provision of the adjoining SCAA. The parking ratio of the adjoining SCAA is 1 space per 340 m^2 GFA (total 64,728.113m^2 GFA with 191 spaces). According to the Applicant, the average carpark occupancy during the operation period is 65%, i.e. 124 occupied spaces, equivalent to a parking ratio of 1 space per 522 m^2 GFA. As compared with the adjoining SCAA, the parking ratio of the proposed sports and recreation centre is 1 space per 497 m^2 GFA (total 31,327.12m^2 GFA with 63 spaces) and therefore is considered appropriate and sufficient to meet the parking demand

2.4.3 At present, there is no designated HGV loading/unloading space provided at the adjoining SCAA. The loading/unloading activities are conducted by LGV within the carpark near the entrance area and the operation was found to be satisfactory. In the proposed development, it is proposed to provide 1 no. of HGV loading/unloading bay to better serve the loading/unloading demand.

2.4.4 The proposed ground floor plan is enclosed in **Appendix A** and a total of 63 car parking spaces, 9 motorcycle parking spaces, 1 pick-up/drop-off layby and 1 goods vehicle loading/unloading space can be provided.

2.4.5 **Table 2.2** lists out the details of the transport facilities provided within the proposed development.

Table 2.2 Summary of Overall Transport Facilities Provision

Facilities	Dimensions	Proposed Provision	
Car Parking Space	2.5m (W) x 5.0m (L) x 2.4 (H)	61	63
Disabled Car Parking Space	3.5m (W) x 5.0m (L) x 2.4 (H)	2	
Motorcycle Parking Space	1.0m (W) x 2.5m (L) x 2.4 (H)	9	
Pick-up/drop-off Lay-by	-	1	
Goods Vehicle Loading / Unloading Bay	HGV: 3.5m (W) x 11.0m (L) x 4.7m (H)	1	

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

3.1.1 Caroline Hill Road connects the local areas of Caroline Hill and So Kon Po with the district distributor Leighton Road in the area. The eastern end of Leighton Road intersects with Causeway Road and Tung Lo Wan Road that leads to the Tin Hau and Tai Hang areas respectively. The western end of Leighton Road links to Morrison Hill Road that leads to the local road network in Wan Chai and Canal Road Flyover.

3.1.2 Caroline Hill Road is a single 2-lane road with a short section adjoining the Disciplined Services Sports and Recreation Club near Cotton Path operating as one-way northbound. According to the 2023 Annual Traffic Census published by the Transport Department ("TD"), the section of Caroline Hill Road between Leighton Road and Yun Ping Road carried an annual average daily traffic ("AADT") of 5,330 vehicles per day.

3.2 Traffic Count Surveys

3.2.1 Having considered that the proposed development will have different traffic generation patterns during weekdays and weekends. For assessment purpose, both weekday and weekend are being considered.

3.2.2 Classified vehicles count surveys were carried out at the following locations in the vicinity of the Site on 17 June 2025 (Tuesday) for the time period of 08:00 – 10:00, 17:30 – 19:30 and 14 June 2025 (Saturday) for the time period of 11:30 to 13:30. The locations of the surveyed junctions are presented in **Figure 3.1**.

J1 – Caroline Hill Road (West) / Link Road

J2 – Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

J3 – Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

J4 – Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

J5 – Tung Lo Wan Road / Eastern Hospital Road

J6 – Eastern Hospital Road / Cotton Path

J7 – Caroline Hill Road/Cotton Path

J8 – Tung Lo Wan Road / Moreton Terrace

J9 – Moreton Terrace / Causeway Road

J10 – Leighton Road / Hysan Avenue / Leighton Lane

J11 – Leighton Road / Percival Street / Hysan Avenue

J12 – Leighton Road / Wong Nai Chung Road

J13 – Broadwood Road / Link Road

J14 – Pennington Street / Irving Street / Jardine's Bazaar

J15 – Hysan Avenue / Hoi Ping Road

3.2.3 The identified weekday AM, weekday PM and weekend peak hours were 08:15 – 09:15, 17:45 – 18:45 and 11:30 – 12:30, respectively and the surveyed traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

3.3.1 Based on the existing traffic flows, the performance of key junctions adjacent to the proposed development was assessed. The assessment results are in **Table 3.1**, and the detailed calculation sheets are attached in **Appendix B**.

Table 3.1 Existing Junction Performance

No.	Junction Location	Type/Capacity Index(1)	Identified Peak Hour		
			Weekday AM	Weekday PM	Weekend
J1	Caroline Hill Road (West) / Link Road	Priority/DFC	0.30	0.38	0.44
J2	Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	Signalised/RC	26%	32%	27%
J3	Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street	Signalised/RC	50%	33%	31%
J4	Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road	Signalised/RC	71%	52%	49%
J5	Tung Lo Wan Road / Eastern Hospital Road	Signalised/RC	63%	83%	74%
J6	Eastern Hospital Road / Cotton Path	Priority/DFC	0.16	0.16	0.32
J7	Caroline Hill Road/Cotton Path	Priority/DFC	0.10	0.06	0.11
J8	Tung Lo Wan Road / Moreton Terrace	Signalised/RC	44%	31%	72%
J9	Moreton Terrace / Causeway Road	Signalised/RC	45%	25%	28%
J10	Leighton Road / Hysan Avenue / Leighton Lane	Signalised/RC	313%	267%	164%
J11	Leighton Road / Percival Street / Hysan Avenue	Signalised/RC	68%	62%	40%
J12	Leighton Road / Wong Nai Chung Road	Signalised/RC	44%	96%	108%
J13	Broadwood Road / Link Road	Signalised/RC	28%	86%	99%
J14	Pennington Street / Irving Street / Jardine's Bazaar	Signalised/RC	247%	308%	339%
J15	Hysan Avenue / Hoi Ping Road	Priority/DFC	0.42	0.31	0.25

Note: (1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio.

3.3.2 It can be seen from **Table 3.1** that all of the key junctions performed satisfactorily during the peak hours.

3.4 Existing Footpath Capacity Assessment

3.4.1 To ascertain the adequacy of footpath width for walking between the proposed development, bus/GMB stops and the MTR Causeway Bay Station, a pedestrian count survey was conducted on 17 June 2025 (Tuesday) for the time period of 08:00 – 10:00, 17:30 – 19:30 and 14 June 2025 (Saturday) for the time period of 11:30 to 13:30. The locations of surveyed footpaths and anticipated pedestrian routings are shown in **Figure 3.3** and the assessment results are shown in **Table 3.2**.

Table 3.2 Capacity Analysis of Existing Footpaths

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Peak 15-minute flow (2) (ped/15-min)			Flow Rate(3) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE	AM	PM	WE
P1	Southern footpath of Caroline Hill Road (between Eastern Hospital Road and Cotton Path)	3.0	2.0	90	38	41	27	12	13	0.9 [A]	0.4 [A]	0.4 [A]
P2	Eastern footpath of Cotton Path (between Caroline Hill Road and Eastern Hospital Road)	4.0	2.0	116	190	204	35	57	62	0.8 [A]	1.3 [A]	1.4 [A]
P3	Northern footpath of Caroline Hill Road (between Cotton Path and Leighton Road)	3.0	2.0	490	724	867	147	218	261	4.9 [A]	7.3 [A]	8.7 [A]
P4	Eastern footpath of Yun Ping Road(between Leighton Road and Hysan Avenue)	2.5	1.5	337	694	653	102	209	196	4.5 [A]	9.3 [A]	8.7 [A]
P5	Western footpath of Pennington Street (between Leighton Road and Keswick Street)	2.2	1.2	867	1,071	1,092	261	322	328	14.5 [A]	17.9 [B]	18.2 [B]
P6	Eastern footpath of Leighton Road (between Caroline Hill Road and Haven Street)	3.3	2.3	908	1,336	1,377	273	401	414	7.9 [A]	11.6 [A]	12.0 [A]
C1	Signalised Crossing	6.4	6.4	1,285	1,795	1,595	27	12	13	2.6 [A]	1.1 [A]	1.2 [A]
C2	Signalised Crossing	4.2	4.2	1,245	1,655	1,540	386	539	479	4.0 [A]	5.6 [A]	5.0 [A]
C3	Signalised Crossing	4.0	4.0	1,050	1,230	1,260	374	497	462	5.9 [A]	7.9 [A]	7.3 [A]
C4	Cautionary Crossing	3.3	3.3	90	38	41	315	369	378	5.3 [A]	6.2 [A]	6.3 [A]

Notes: (1) Clearances of 0.5m on either side were subtracted from the actual widths to produce effective widths, and clearance was increased to 1m for shopping frontage.
(2) According to on-site observation, the peak 15-minute flows are about 30% of the peak hour flows.
(3) For LOS "C" or above, flow rates should be less than 33 pedestrians/metre/minute. The peak 15-minute flows are adopted for assessment.

3.4.2 The assessment results indicate that the existing footpath condition is satisfactory during the identified peak hours on weekday and weekend with LOS "C" or above.

3.5 Existing Public Transport Facilities

3.5.1 There are various franchised bus and scheduled minibus ("GMB") services running in the vicinity of the Site along Leighton Road and Caroline Hill Road and the walking distance to the MTR Causeway Bay Station is about 650m. **Table 3.3** and **Figure 3.4** show the public transport services operated in the vicinity of the Site.

Table 3.3 Existing Public Transport Services near the Proposed Development

Mode	Route No.	Origin-Destination	Frequency (min)
Bus	1	Central (Macau Ferry) – Happy Valley (Upper)	12 – 25
	1M	Exhibition Centre Station – Wong Nai Chung Gap (Circular)	15 – 30
	1P	Wong Nai Chung Road (Broadwood Road) – Central	4 trips per day
	2	Grand Promenade – Central (Macau Ferry)	20 – 30
	2A	Yiu Tung Estate – Exhibition Centre Station	5 – 20
	2X	Grand Promenade – Exhibition Centre Station	6 – 20
	5B	Felix Villas – Hong Kong Stadium	7 – 30
	5X	Causeway Bay (Whitfield Road) – Kennedy Town	20 – 30
	8	Heng Fa Chuen – Exhibition Centre Station	12 – 25
	8H	Siu Sai Wan (Island Resort) – Tung Wah Eastern Hospital	30
	8P	Siu Sai Wan (Island Resort) – Exhibition Centre Station	5 – 20
	8X	Siu Sai Wan (Island Resort) – Happy Valley (Upper)	6 – 20
	10	North Point Ferry Pier – Kennedy Town	8 – 25
	11	Central (Ferry Piers) – Jardine's Lookout (Circular)	15 – 30
	15B	The Peak – Wan Chai (Convention Centre)	2 trips per day
	19P	Shau Kei Wan – Tai Hang Road	1 trip per day
	23	North Point Ferry – Pokfield Road	7 – 20
	23B	Braemar Hill – Park Road / Robinson Road	7 trips per day
	25	Central (Piers 3) – Braemar Hill (Circular)	10 – 20
	25A	Exhibition Centre Station – Braemar Hill (Circular)	12 – 25
	26	Lai Tak Tsuen – Hollywood Road (Circular)	10 – 25
	38	Chi Fu Fa Yuen – North Point Ferry (Omit Wai Fu)	6 – 15
	42	Wah Fu (South) – North Point Ferry	10 – 20
	42C	Cyberport – North Point Ferry	4 trips per day
	63	North Point Ferry – Stanley Market	30
	65	North Point Ferry – Stanley Market	12 – 20
	72	Wah Kwai – Causeway Bay (Moreton Terrace)	6 – 20
	72A	Shum Wan Public Transport Terminus – Causeway Bay (Moreton Terrace)	20 – 30
	76	Shek Pai Wan – Causeway Bay (Pennington Street)(Circular)	30
	77	Tin Wan Estate – Shau Kei Wan	12 – 25
	81	Hing Wah Estate – Lai Tak Tsuen	15 – 20
	99	South Horizons – Shau Kei Wan	12 – 25
	102	Shau Kei Wan – Mei Foo	5 – 20

Mode	Route No.	Origin-Destination	Frequency (min)
	103	Chuk Yuen Estate – Pokfield Rd	15 – 30
	106	Wong Tai Sin – Siu Sai Wan (Island Resort)	6 – 24
	108	Kai Yip – Braemar Hill	10 – 30
	112	North Point – So Uk	5 – 30
	116	Tsz Wan Shan (Central) – Quarry Bay	4 – 20
	117	Sham Shui Po (Yen Chow St) – Happy Valley (Lower)	12 – 23
	170	Shatin Station – Wah Fu (Central)	15 – 30
	307	Tai Po Central – Central (Central Ferry Piers)	8 – 30
	511	Tai Hang Drive – Central (Central Ferry Piers)	4 trips per day
	592	South Horizons – Causeway Bay (Moreton Terrace)	8 – 30
	600	Anderson – Central (Rumsey Street)	20 – 30
	601	Po Tat – Admiralty Station (East)	7 – 23
	601P	Sheung Wan – Po Tat	4 – 10
	603	Ping Tin – Central Ferry Piers	10 – 30
	603A	Ping Tin – Central Market	4 trips per day
	619	Shun Lee – Central (Macau Ferry)	7 – 27
	619X	Shun Lee – Central (Macau Ferry)	7 trips per day
	621	Laguna City – Central (Hong Kong Station)	10 trips per day
	671	Diamond Hill Station – Ap Lei Chau Lee Lok St	15 – 30
	673	Sheung Shui – Central (Hong Kong Station)	20 – 30
	673A	Central (Hong Kong Station) – Sheung Shui	2 trips per day
	678	Sheung Shui – Causeway Bay	16 trips per day
	679	Queen'S Hill Fanling – Central (Hong Kong Station)	3 trips per day
	680	Lee On – Admiralty Station (East) (Via Chung On Estate)	12 – 30
	680B	Chevalier Garden Bus Terminus – Admiralty Station (East)	2 trips per day
	680P	Wu Kai Sha Station – Admiralty Station (East)	3 trips per day
	680X	Wu Kai Sha Station – Central (Macau Ferry)	8 trips per day
	681	Central (Hong Kong Station) – Ma On Shan Town Centre	9 – 30
	681P	Yiu On – Sheung Wan	5 trips per day
	690	Hong Sing Garden – Central (Exchange Square) (Via Leighton Road)	20 – 30
	690S	Hang Hau – Central (Exchange Square) (Via Lohas Park)	14 trips per day
	914	Hoi Lai Estate – Causeway Bay (Tin Hau)	13 – 30
	914P	Hoi Lai Estate – Causeway Bay (Tin Hau)	1 trip per day
	914X	Hoi Lai Estate – Causeway Bay (Tin Hau)	3 trips per day
	930B	Kwai Shing Circuit – Causeway Bay (Moreton Terrace)	1 trip per day
	930X	Causeway Bay (Moreton Terrace) – Tsuen Wan (Discovery Park) (Via Nina Tower On Journey To Causeway Bay)	8 – 25
	936	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	15 – 30
	936A	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	7 trips per day

Mode	Route No.	Origin-Destination	Frequency (min)
	948	Tsing Yi (Cheung On Estate) – Causeway Bay (Tin Hau)	8 – 30
	948A	Cheung On Estate – Causeway Bay (Tin Hau)	5 – 7
	948B	Greenfield Garden – Causeway Bay (Tin Hau)	2 trips per day
	948P	Cheung On Estate – Causeway Bay (Tin Hau)	5 trips per day
	948X	Cheung Wang – Causeway Bay (Tin Hau)	5 trips per day
	952	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	10 – 30
	952P	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	8 – 15
	960C	Causeway Bay – Fu Tai Estate	3 trips per day
	960P	Causeway Bay – Hung Shui Kiu	10 – 35
	960S	Tuen Mun (Fu Tai Estate) – Causeway Bay (Victoria Park)	10
	961	Tuen Mun (Shan King Estate) – Wan Chai (Hkcece)	7 – 25
	962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	8 – 25
	962G	Causeway Bay (Moreton Terrace) – Tuen Mun (Yuet Wu Villa)	3 trips per day
	962P	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	4 – 9
	962X	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	12 – 30
	967X	Tin Shui Wai (Tin Yan Estate) – Causeway Bay (Via Tin Shui Wai North)	12 – 20
	968	Yuen Long (West) – Causeway Bay (Tin Hau)	5 – 25
	968A	Yuen Long (West) – Causeway Bay (Tin Hau)	2 trips per day
	969	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	7 – 30
	969N	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	1 trip per day
	969P	Tin Shui Wai Town Centre – Causeway Bay (Moreton Terrace)	7 – 13
	A11	North Point Ferry Pier – Airport (Ground Transportation Centre)	15 – 60
	A17	Sham Wan – Airport	6 trips per day
	E11	Tin Hau Station – SKYCITY	20 – 40
	E11A	Tin Hau Station – SKYCITY	40
	E11B	Tin Hau Station – Tung Chung (Mun Tung Estate)	40
	E11S	Tung Chung (Mun Tung Estate) – Tin Hau Station	5 – 7
	N8P	Siu Sai Wan (Island Resort) – Wan Chai (Harbour Road) (Circular)	15 – 20
	N8X	Siu Sai Wan (Island Resort) – Kennedy Town	30
	N11	Central (Macau Ferry) – Airport (Ground Transportation Centre)	60
	N72	Wah Kwai – Quarry Bay (Hoi Chak Street)	25 – 30
	N122	Mei Foo – Shau Kei Wan	17 – 30
	N170	Shatin Central – Wah Fu (Central)	22 – 30
	N182	Kwong Yuen – Central (Macau Ferry)	20 – 30
	N307	Tai Wo – Sheung Wan	20 – 30
	N368	Yuen Long (West) – Central (Macau Ferry)	20 – 30
	N373	Fanling (Luen Wo Hui) – Central (Macau Ferry)	20 – 30
	N619	Shun Lee – Central (Macau Ferry)	20 – 30
	N680	Kam Ying Court – Central (Macau Ferry)	20 – 30

Mode	Route No.	Origin-Destination	Frequency (min)
	N691	Tiu Keng Leng – Central (Macau Ferry)	20 – 35
	N930	Tsuen Wan (Discovery Park) – Causeway Bay (Moreton Terrace)	3 trips per day
	N952	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	4 trips per day
	N962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	25 – 45
	N969	Tin Shui Wai Town Centre – Causeway Bay (Moreton Terrace)	20 – 45
	P968	Yuen Long (West) – Causeway Bay (Tin Hau)	16 trips per day
	NA11	North Point Ferry Pier – HZMB Hong Kong Port	3 trips per day
GMB	14M	Causeway Bay (Lan Fong Road) – Moorsom Road (Circular route)	4 – 12
	21A	Causeway Bay (Lan Fong Road) – Lai Tak Tsuen (Circular route)	4 – 12
	21M	Causeway Bay (Lan Fong Road) – Tai Hang Drive (Circular route)	4 – 12
	26	Causeway Bay (Lee Garden Road) – Stubbs Road (Hong Kong Adventist Hospital) (Circular route)	15 – 30
	28	Baguio Villa (Upper) – Causeway Bay (Sun Wui Road)	15 – 20
	28S	Baguio Villa (Upper) – Causeway Bay (Sun Wui Road)	15 – 20
	30	Happy Valley (Holly Road) – Causeway Bay (Lan Fong Road)	6 – 10
	36X	Ap Lei Chau (Ping Lan Street) – Causeway Bay (Jardine's Bazaar)	15 – 20
	39M	Yue On Court (Ap Lei Chau) – Tin Hau Station	60
	40	Stanley Village – Causeway Bay	10 – 20
	40X	Stanley (Stanley Prison) – Causeway Bay	3 – 9
	49S	Tuen Mun Siu Hong Court – Wan Chai	30
	56	Mid-Levels (Robinson Road) – North Point (Marble Road)	20
	56A	Mid-Levels (Robinson Road) – Tin Hau Station	8 – 15
	56B	Mid-levels (Robinson Road) – Wan Chai (Circular route)	20 – 25
	N40	Stanley – Causeway Bay	20

4 FUTURE TRAFFIC SITUATION

4.1 Design Year for Traffic Forecast

4.1.1 The completion year of the proposed development is expected to be 2030. As a result, the design year of the traffic impact assessment should be three years after the completion year, i.e., 2033.

4.2 Traffic Generation of the Proposed Development

Tennis Court

4.2.1 6 tennis courts are provided and the users will be 15 persons/court during a one-hour period. As a result, a total of 60 persons one-way trips will be generated.

5-a-side Artificial Turf Pitch

4.2.2 2 pitches are provided and the users will be 80 persons/court during a 1.5-hour period. As a result, a total of 160 persons one-way trips will be generated.

Activities rooms, Muti-purposes Rooms and Ancillary Facilities

4.2.3 According to the architectural layout, the holding capacity of all these facilities will be about 455 persons. As a result, a total of 455 persons one-way trips will be generated.

4.2.4 The total trips generated from the proposed development is summarized in **Table 4.1**.

Table 4.1 Number of Visitors of the Proposed Development

Use	Generation (in persons)			Attraction (in persons)		
	AM	PM	Weekend	AM	PM	Weekend
Tennis Court	60	60	60	60	60	60
5-a-side Artificial Turf Pitch	160	160	160	160	160	160
Activities rooms, Muti-purposes Rooms and Ancillary Facilities	0	455	228	455	0	227
Total	**220**	**675**	**448**	**675**	**220**	**447**

4.2.5 As there is no established trip rate published in Transport Planning and Design Manual (TPDM) for the proposed use, therefore, the traffic generation of the proposed development will be derived from basic principles and assumptions as described in the ensuing paragraphs.

4.2.6 The following assumptions were made in estimating the traffic and pedestrian movements generated by the proposed development:

- Having considered the good accessibility of the Site, most visitors are anticipated to use public transport services in the vicinity.
- The operation hour of the proposed development would be from 07:00 to 22:00.

Taxi Traffic Generation and Attraction

4.2.7 In order to establish the pedestrian flow pattern to the different public transport facilities, reference was made to the number of passenger journeys by public transport operators recorded in the Monthly Traffic and Transport Digest (MTTD) 2025. The modal split of the public transport for the proposed development was estimated as shown in **Table 4.2**.

Table 4.2 Estimated Modal Split for the Proposed Development

Mode	Distribution of Average Daily Public Transport Passenger Journeys by Mode (1)	Adjusted Modal Split for the Proposed Development
Rail-based PT	45.00%	45.50%
Road-based PT (excluding Taxi)	48.30%	48.80%
Taxi	5.70%	5.80%
Total	**99.0% (2)**	**100.0%**

Notes: (1) Source: Chart 2.7 in Monthly Traffic and Transport Digest (May 2025).
(2) Marine transport is omitted.

4.2.8 The passenger generation to / from the MTR Stations, the bus / mini-bus stops and the taxi stands / the roadside available for taxi passenger pick-up & drop-off in the vicinity of the proposed development in the AM and PM peak hours is estimated in **Table 4.3**.

Table 4.3 Estimated Pedestrian Generation to the Public Transport Facilities

Public Transport Facilities(1)	Adjusted Modal Split	Estimated Peak Hour Pedestrian Flows (person / hr)								
		Weekday AM			Weekday PM			Weekend		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
MTR Station	45.50%	100	307	407	307	100	407	203	203	406
Bus / Mini-bus Stops	48.80%	107	329	436	329	107	436	219	218	437
Taxi Stand / Roadside	5.80%	13	39	52	39	13	52	26	26	52
Total	**100.0%**	**220**	**675**	**895**	**675**	**220**	**895**	**448**	**447**	**895**

Note: Gen. – Generation; Att. - Attraction

4.2.9 Since most visitors are anticipated to use public transport services, only those who use taxis will be considered as the vehicular traffic generation of the proposed development. The vehicular traffic generated and attracted by the proposed development are estimated based on the above presented in **Table 4.4**.

Table 4.4 Estimated Taxi Traffic Generation and Attraction of the Proposed Development

Mode of Transport	Modal Split	Vehicle Capacity	Estimated No. of Vehicle (veh/hr[pcu/hr(2)])								
			Weekday AM			Weekday PM			Weekend		
			Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Taxi Stand / Roadside	5.8%	2.5(1)	6 [6]	16 [16]	22 [22]	16 [16]	6 [6]	22 [22]	11 [11]	11 [11]	22 [22]

Notes: Gen. – Generation; Att. – Attraction.

(1) According to the traffic survey, the average occupancy of taxis to the Existing SCAA is 2.5 passengers per vehicle and is adopted for estimating the future traffic generation and attraction.

(2) 1 pcu is adopted for each taxi.

Private Car Traffic Generation and Attraction

4.2.10 In order to establish private car traffic generation and attraction of the proposed development, reference was made to the existing SCAA car park. Trip generation survey at existing SCAA car park is arranged to collect trip rates. The trip generation survey was conducted on 27 December 2025 (Saturday) and 29 December 2025 (Monday) during the weekday AM, weekday PM peak and weekend hour period. The survey results and the trip rates derived are presented in **Table 4.5**.

Table 4.1 Surveyed Private Car Traffic Generation and Attraction of Existing SCAA

Name	Unit / Content	Weekday AM			Weekday PM			Weekend		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Private Car Traffic Generation of Existing SCAA (pcu/hr)										
Existing SCAA	64,728.113 m^2 GFA	13	23	36	36	39	75	22	29	51
Derived Trip Rates (pcu/hr/100 m^2)										
Sports Centre		0.02	0.036	-	0.056	0.06	-	0.034	0.045	-
Private Car Traffic Generation of Proposed Development (pcu/hr)										
Proposed Development	31,327.12 m^2 GFA	7	12	19	18	19	37	11	15	26

Note: Gen. – Generation; Att. – Attraction.

4.2.11 Based on **Table 4.4** and **Table 4.5** above, the estimated total vehicular traffic generation and attraction of the proposed development is summarised in **Table 4.6**.

Table 4.6 Estimated Traffic Generation and Attraction of Proposed Development

Use	Weekday AM			Weekday PM			Weekend		
	Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Total Traffic Generation (pcu/hr)									
Taxi [a]	6	16	22	16	6	22	11	11	22
Private Car [b]	7	12	19	18	19	37	11	15	26
TOTAL [a] + [b]	**13**	**28**	**41**	**34**	**25**	**59**	**22**	**26**	**48**

Note: Gen. – Generation; Att. – Attraction.

4.2.12 As shown in **Table 4.6**, the proposed development would generate two-way traffic flows of 41 pcu/hr, 59 pcu/hr and 48 pcu/hr during the weekday AM, weekday PM and weekend peak hours, respectively. The development traffic was distributed onto the road work with reference to surveyed traffic flows and presented in **Figure 4.1**.

4.3 Traffic Generation of the Planned Developments

4.3.1 To estimate the future traffic flows, updated information has been obtained from various sources regarding the planned developments in the vicinity of the study area. Although peak hours of the planned developments are not anticipated to coincide with the identified peak hours, for conservative assessment purposes, the traffic generations and attractions induced by these developments during highway peaks are assumed to occur in the identified peak hours.

4.3.2 The corresponding traffic generations and attractions by these adjacent developments are summarised in **Table 4.7,** and these generations and attractions will be considered in the junction capacity analysis for the design year.

Table 4.7 Traffic Generation by Planned Developments in the Vicinity

Proposed Use	Unit / Content	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Mean Trip rates from TPDM										
Retail	pcu/hr/ 100m^2	0.2296	0.2434	-	0.3100	0.3563	-	0.2821[2]	0.4817[2]	
Office	pcu/hr/ 100m^2	0.1703	0.2452	-	0.1573	0.1175	-	0.1431[2]	0.1589[2]	-
Traffic Generation/Attraction										
Redevelopment at Po Leung Kuk Headquarter	37,725 m^2 GFA for G/IC use	14[1]	15[1]	29[1]	7[1]	6[1]	13[1]	5[2]	6[2]	11
Redevelopment at 5-19 Jardine's Bazaar	4,756 m^2 GFA for retail use	11	12	23	15	17	32	14	23	37
Redevelopment at 36 Jardine's Bazaar	979m^2 GFA for office use	2	3	5	2	2	4	2	2	4
Redevelopment of the Ex-EMSD headquarter at Caroline Hill Road, Causeway Bay	102,000 m^2 GFA for commercial and G/IC use	272[2]	398[2]	670[2]	308[2]	239[2]	547[2]	304[2]	303[2]	607[2]

Proposed Use	Unit / Content	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
District Court Site	70,000 m^2 GFA	42[2]	64[2]	106[2]	33[2]	31[2]	64[2]	5[2]	5[2]	10
Commercial Development in 1-5 Irving Street and 14 Pennington Street	7,548.8 m^2 GFA for office use	13	19	32	12	9	21	11	12	23
Total		**354**	**511**	**865**	**377**	**304**	**681**	**341**	**351**	**692**

Notes: (1) Figures extracted from the TIA report enclosed in the Metro Planning Committee paper no. 1/19.
(2) Figures extracted from the TIA report of Planning Application A/H7/181.

4.4 Future Road Network

4.4.1 According to the approved planning application no. A/H7/181, it is understood that two junction improvement schemes will be implemented at the junctions of Caroline Hill Road / Link Road and Leighton Road / Caroline Hill Road / Hoi Ping Road as part of the development of the adjoining Site. The junction improvements are expected to be completed by 2026 and therefore included in the traffic assessment of the proposed development. The proposed junction improvement schemes are enclosed in **Appendix C**.

4.5 Traffic Growth

ATC Data

4.5.1 Reference was made to the ATC reports published by the TD for the years from 2019 to 2023 (5 years) to determine the traffic growth rate of the local road network in the vicinity of the proposed development. The annual average daily traffic flow ("AADT") recorded at the counting stations in the vicinity of the Site are set out in **Table 4.8**.

Table 4.8 Annual Traffic Census Data

Stn. No.	Road Section			AADT[1]					Avg Growth %
	Road	From	To	2019	2020	2021	2022	2023	
1212	Irving St & Pennington St	Leighton Rd	Yee Wo St	12,290	11,730 (-4.6%)	12,250 (4.4%)	11,690 (-4.6%)	10,590 (-9.4%)	-3.7%
1213	Causeway Rd	Tung Lo Wan Rd	Shelter St	30,490	29,090 (-4.6%)	30,410 (4.5%)	29,010 (-4.6%)	29,000 (0%)	-1.2%
1414	Leighton Rd	Tung Lo Wan Rd	Irving St	22,970	21,040 (-8.4%)	21,990 (4.5%)	20,980 (-4.6%)	21,590 (2.9%)	-1.5%
1436	Percival St	Hennessy Rd	Leighton Rd	12,180	12,170 (-0.1%)	12,410 (2%)	11,760 (-5.2%)	12,340 (4.9%)	0.3%
1438	Tung Lo Wan Rd & Tai Hang Rd	Causeway Rd	Ka Ning Path	11,000	10,130 (-7.9%)	10,340 (2.1%)	9,740 (-5.8%)	9,950 (2.2%)	-2.5%
1612	Tai Hang Rd FO <H134>	St. John Ambulance Brigate Wan Rd Headquarters	Ramp to Tung Lo Wan Rd	19,140	19,280 (0.7%)	17,750 (-7.9%)	16,930 (-4.6%)	17,430 (3%)	-2.3%
2035	Leighton Rd	Wong Nai Chung Rd	Percival St	27,830	26,470 (-4.9%)	27,000 (2%)	21,860 (-19%)	23,770 (8.7%)	-3.9%
2036	Leighton Rd	Irving St	Percival St	14,950	14,220 (-4.9%)	14,510 (2%)	13,940 (-3.9%)	16,170 (16%)	2.0%

Stn. No.	Road Section			AADT(1)					Avg Growth %
	Road	From	To	2019	2020	2021	2022	2023	
2214	Causeway Rd	Shelter St	Hing Fat St	33,760	31,440 (-6.9%)	34,000 (8.1%)	34,190 (0.6%)	33,940 (-0.7%)	0.1%
2608	Caroline Hill Rd	Leighton Rd	Yun Ping Rd	4,550	4,800 (5.5%)	4,610 (-4%)	4,890 (6.1%)	5,330 (9%)	4.0%
			Total	**189,160**	**180,370 (-4.6%)**	**185,270 (2.7%)**	**174,990 (-5.5%)**	**180,110 (2.9%)**	**-1.2%**

Note: (1) Figures in bracket indicated the % increase between two years.

4.5.2 **Table 4.8** shows that the AADT at the concerned ATC stations has an overall annual growth of negative 1.2% in between the years 2019 to 2023.

TPEDM Data

4.5.3 Reference was also made to the 2021–based Territorial Population and Employment Data Matrix ("TPEDM") released by the Planning Department. The population and employment data of year 2021 and 2031 in Wan Chai District are summarised in **Table 4.9**.

Table 4.9 Population and Employment Data in Wan Chai District

Year	2021	2026	2031
Population	166,700	156,000	145,700
Employment	299,700	301,700	287,250
Total	466,400	457,700	432,950
Average Growth per annum (%)		-0.4% (2021 to 2026)	-1.1% (2026 to 2031)

4.5.4 As shown in **Table 4.9**, the average annual growth rates for the population and the employment total between 2021–2026 and 2026–2031 are -0.4% and -1.1%, respectively. Having considered the ATC and TPEDM data, a nominal growth rate of +0.5% is adopted for subsequent assessments.

4.6 Reference and Design Flows

4.6.1 The 2033 Reference Flows, i.e., the traffic flows in the vicinity **without** the traffic flows generated by the proposed development, were estimated based on the following equation.

2033 Reference Flows = 2025 Existing Flows x $(1 + 0.5\%)^8$ + Traffic Flows Generated by the Planned/Committed Developments

4.6.2 The 2033 Design Flows, i.e., the traffic flows in the vicinity **with** the traffic flows generated by the proposed development, were estimated based on the following equation:

2033 Design Flows = 2033 Reference Flows + Traffic Flows Generated by the Proposed Development

4.6.3 The 2033 Reference and Design Flows are shown in **Figures 4.2** and **4.3**, respectively.

4.7 Junction Capacity Assessment

4.7.1 Capacity assessments were carried out for the major junctions in the local road network for both the Reference and Design scenarios. The results are summarised and presented in **Table 4.10** with detailed calculation sheets attached in **Appendix D**.

Table 4.10 Year 2033 Junction Capacity Assessment

No.	Junction Location	Type /Capacity Index(1)	2033 Reference			2033 Design		
			AM	PM	WE	AM	PM	WE
J1	Caroline Hill Road (West) / Link Road (2)	Signalised /RC	36%	39%	42%	36%	39%	42%
J2	Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	Signalised /RC	24%	33%	25%	22%	31%	24%
J3	Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street	Signalised /RC	29%	17%	17%	29%	17%	17%
J4	Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road	Signalised/ RC	46%	35%	34%	45%	35%	33%
J5	Tung Lo Wan Road / Eastern Hospital Road	Signalised /RC	39%	59%	53%	38%	56%	49%
J6	Eastern Hospital Road / Cotton Path	Priority/DFC	0.25	0.24	0.34	0.26	0.26	0.34
J7	Caroline Hill Road/Cotton Path	Priority/DFC	0.22	0.14	0.19	0.23	0.14	0.19
J8	Tung Lo Wan Road / Moreton Terrace	Signalised /RC	32%	21%	56%	32%	21%	55%
J9	Moreton Terrace / Causeway Road	Signalised /RC	35%	17%	19%	34%	16%	19%
J10	Leighton Road / Hysan Avenue / Leighton Lane	Signalised /RC	289%	245%	149%	289%	245%	149%
J11	Leighton Road / Percival Street / Hysan Avenue	Signalised /RC	43%	33%	21%	41%	30%	19%
J12	Leighton Road / Wong Nai Chung Road	Signalised /RC	22%	54%	67%	21%	51%	64%
J13	Broadwood Road / Link Road	Signalised /RC	16%	62%	76%	16%	62%	76%
J14	Pennington Street / Irving Street / Jardine's Bazaar	Signalised /RC	222%	275%	303%	222%	275%	303%
J15	Hysan Avenue / Hoi Ping Road	Priority/DFC	0.66	0.43	0.38	0.68	0.45	0.40
J16	Caroline Hill Road / New Road(2)	Priority/DFC	0.13	0.09	0.08	0.13	0.09	0.09

Notes: AM – Weekday AM; PM – Weekday PM; WE - Weekend
(1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio.
(2) Junction improvement scheme to be implemented under planning application A/H7/181 is incorporated.

4.7.2 **Table 4.10** shows that all junctions will operate with positive RCs and DFCs<1.0 for both the reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce any adverse traffic impact to its surrounding road network.

4.8 Pedestrian Traffic Generation of the Other Planned Developments

4.8.1 It is understood that there are some planned and committed developments in vicinity of the Site. The pedestrian flows that would be induced by these developments have been considered. The pedestrian flows of these planned development are estimated by adopting the in-house pedestrian trip rates and presented in **Table 4.11**.

Table 4.11 Estimated Pedestrian Generation/Attraction of Planned Developments

Use	Unit	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Adopted Pedestrian Trip Rates (1)										
Headquarter	ped/hr/quota	0.31	0.52	-	0.59	0.08	-	0.17	0.05	-
Court	ped/hr /100 m^2	0.25	2.71	-	1.22	0.43	-	-	-	-
Office	ped/hr /100 m^2	0.27	2.74	-	2.66	0.33	-	0.27	0.37	-
Estimated Pedestrian Generation (2)										
Redevelopment at Po Leung Kuk Headquarter	322 quotas	99	166	265	191	25	216	56	16	72
Redevelopment of the Ex-EMSD headquarter at Caroline Hill Road, Causeway Bay(2)	102,000 m^2 GFA	549	2,727	3,276	2,844	1,064	3,908	1,011	1,183	2,194
District Court Site	70,000 m^2 GFA	175	1,898	2,073	855	303	1,158	20	20	40
Commercial Development in 1- 5 Irving Street and 14 Pennington Street	7,548.8 m^2 GFA	20	207	227	201	25	226	20	28	48
Total		**843**	**4,998**	**5,841**	**4,091**	**1,417**	**5,508**	**1,107**	**1,247**	**2,354**

Notes: Gen. – Generation; Att. – Attraction.
(1) Pedestrian trip rates from TIA report of Planning Application A/H7/181 are adopted.
(2) Figures were abstracted from the approved TIA report of planning application A/H7/181.

4.8.2 The planned developments are estimated to generate 2-way pedestrian flows of 5,841, 5,508 and 2,354 person/ hour during weekday AM, weekday PM and weekend peak hours respectively. The pedestrians flows are distributed onto the network based on the existing pattern and the future pedestrian connections planned under application A/H7/181.

4.9 Reference and Design Pedestrian Flows

4.9.1 The 2033 Reference Pedestrian Flows, i.e., the pedestrian flows in the local pedestrian network, based on future walkway network **without** the proposed development pedestrian flows, were estimated based on the following equation.

2033 Reference Pedestrian Flows = 2025 Existing Flows x $(1 + 0.5\%)^8$ + Pedestrian Flows Generated by the Planned/Committed Developments

4.9.2 The 2033 Design Pedestrian Flows, i.e., the pedestrian flows in the local pedestrian network, based on future walkway network **with** the proposed development pedestrian flows, were estimated based on the following equation.

2033 Design Pedestrian Flows = 2033 Reference Flows + Pedestrian Flows Generated by the Proposed Development

4.10 Future Capacity of Pedestrian Facilities

4.10.1 The future walkway serviceability is assessed, and the results are shown in **Table 4.12**. The results showed that all of the concerned footpaths will operate satisfactorily with LOS level "C" or above.

Table 4.12 Future Capacity Analysis of Footpaths

Ref.	Location	Actual Width (m)	Effective Width (m)[1]	Peak Hour flow (ped/hr)			Peak 15-minute flow [2] (ped/15-min)			Flow Rate[3] ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE	AM	PM	WE
2033 Reference Scenario												
P1	Southern footpath of Caroline Hill Road	3.0	2.0	94	40	43	29	12	13	1.0 [A]	0.4 [A]	0.4 [A]
P2	Eastern footpath of Cotton Path	4.0	2.0	121	198	212	37	60	64	0.8 [A]	1.3 [A]	1.4 [A]
P3	Northern footpath of Caroline Hill Road	3.0	2.0	1,210	1,433	1,202	363	430	361	12.1 [A]	14.3 [A]	12.0 [A]
P4	Eastern footpath of Yun Ping Road	2.5	1.5	561	953	787	169	286	237	7.5 [A]	12.7 [A]	10.5 [A]
P5	Western footpath of Pennington Street	2.2	1.2	1,392	1,564	1,329	418	470	399	23.2 [C]	26.1 [C]	22.2 [B]
P6	Eastern footpath of Leighton Road	3.3	2.3	945	1,390	1,433	284	417	430	8.2 [A]	12.1 [A]	12.5 [A]
C1	Signalised Crossing	6.4	6.4	380	380	210	114	114	63	10.9 [A]	10.9 [A]	6.0 [A]
C2	Signalised Crossing	4.2	4.2	2,037	2,548	1,960	612	765	588	6.4 [A]	8.0 [A]	6.1 [A]
C3	Signalised Crossing	4.0	4.0	1,996	2,402	1,903	599	721	571	9.5 [A]	11.4 [A]	9.1 [A]
C4	Signalised Crossing	3.3	3.3	1,793	1,960	1,611	538	588	484	9.0 [A]	9.8 [A]	8.1 [A]
2033 Design Scenario												
P1	Southern footpath of Caroline Hill Road	3.0	2.0	937	883	886	282	265	266	9.4 [A]	8.8 [A]	8.9 [A]
P2	Eastern footpath of Cotton Path	4.0	3.0	339	416	431	102	125	130	2.3 [A]	2.8 [A]	2.9 [A]

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Peak 15-minute flow (2) (ped/15-min)			Flow Rate(3) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE	AM	PM	WE
P3	Northern footpath of Caroline Hill Road	3.0	2.0	1,835	2,058	1,827	551	618	549	18.4 [B]	20.6 [B]	18.3 [B]
P4	Eastern footpath of Yun Ping Road	2.5	1.5	765	1,157	990	230	348	297	10.2 [A]	15.5 [A]	13.2 [A]
P5	Western footpath of Pennington Street	2.2	1.2	1,596	1,768	1,532	479	531	460	26.6 [C]	29.5 [C]	25.6 [C]
P6	Eastern footpath of Leighton Road	3.3	2.3	1,163	1,608	1,652	349	483	496	10.1 [A]	14.0 [A]	14.4 [A]
C1	Signalised Crossing	6.4	6.4	380	380	210	114	114	63	10.9 [A]	10.9 [A]	6.0 [A]
C2	Signalised Crossing	4.2	4.2	2,444	2,955	2,366	734	887	710	7.6 [A]	9.2 [A]	7.4 [A]
C3	Signalised Crossing	4.0	4.0	2,403	2,809	2,309	721	843	693	11.4 [A]	13.4 [A]	11.0 [A]
C4	Signalised Crossing	3.3	3.3	2,200	2,367	2,017	660	711	606	11.0 [A]	11.9 [A]	10.1 [A]

Notes: AM – Weekday AM; PM – Weekday PM; WE - Weekend
(1) Clearances of 0.5m on either side were subtracted from the actual widths to produce effective widths, and clearance was increased to 1m for shopping frontage.
(2) According to on-site observation, the peak 15-minute flows are about 30% of the peak hour flows.
(3) For LOS "C" or above, flow rates should be less than 33 pedestrians/metre/minute. The peak 15-minute flows are adopted for assessment.

4.10.2 **Table 4.12** shows that all of the concerned footpaths and walkway will operate satisfactorily with LOS level "C" or above.

4.10.3 Having considered that the MTR is one of the main modes of transport of the proposed development, to facilitate the visitors travelling between the site and the Causeway Bay MTR Station, the applicant has liaised with the adjacent commercial development for the feasibility of establishing a footbridge between the proposed development and the adjacent commercial development. With this footbridge proposal, visitors can reach the proposed development more conveniently and comfortably and relieve the burden of the at-grade walkway network.

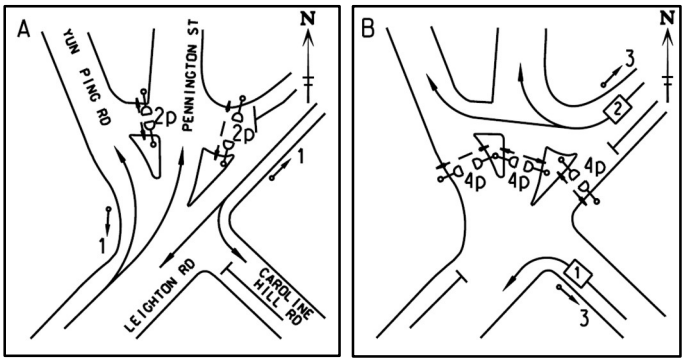
4.11 Future Operational Performance of Central Refuge Islands at J3

4.11.1 Apart from footpaths and pedestrian crossing facilities, LOS assessment on pedestrian waiting spaces provided at the two refuge islands at the junction of Leighton Road / Yun Ping Road / Pennington Street / Caroline Hill Road (East) (J3) are also conducted. The average number of pedestrians waiting at refuge island is estimated based on the pedestrian flows and green time for each stage, an example is shown below to demonstrate how the number is derived:

Taking northern refuge island in 2033 reference scenario AM peak hour as an example,

The northbound peak hour flow is 1,162 ped/hr which is equivalent to 0.323 pedestrian/second.

There are 2 stages in this signalized junction and the calculated optimum green time for stage A and B are 80 seconds and 50 seconds, respectively.



According to the method of control of this junction, northbound pedestrians can only cross the junction in stage A, which means they have to wait for 50 seconds.

At the end of stage B before the start of stage A, there will be 14 pedestrians waiting (0.323 ped/sec x 50 sec = 16.15, say 17 ped) at the island.

4.11.2 The assessment results are summarized in **Table 4.13**.

Table 4.13 Operational Performance of Central Refuge Islands at J3

Location	Effective Area (m^2)	Estimated Average Number of Pedestrian Waiting at Refuge Island(1)			Space (m^2/p) [Level-of-service (LOS)](2)		
		AM	PM	WE	AM	PM	WE
2033 Reference							
Northern Refuge Island	18	17	24	16	1.1 [B]	0.8 [C]	1.1 [B]
Southern Refuge Island	21	4	3	16	5.3 [A]	7.0 [A]	1.3 [A]
2033 Design							
Northern Refuge Island	18	21	26	16	0.9 [C]	0.7 [C]	1.1 [B]
Southern Refuge Island	21	4	3	16	5.3 [A]	7.0 [A]	1.3 [A]

Notes: AM – Weekday AM; PM – Weekday PM; WE – Weekend
(1) Estimated by the forecasted pedestrian crossing demand and MOC of the signal junction.
(2) Based on the criteria of LOS from Table 18-7 in Chapter 18 of HCM 2000 (see **Appendix E**), the LOS reflects the space per person which is computed by effective waiting area divided by waiting pedestrian. LOS is A for space > $1.2m^2$; B for space >0.9 – $1.2m^2$; C for space >0.6 – $0.9m^2$; D for space >0.3 – $0.6m^2$; E for space >0.2 – $0.3m^2$ and F for space $\leq$ $0.2m^2$.

4.11.3 As shown in **Table 4.13**, the assessment results suggested that the available waiting spaces provided on the refuge islands at junction J3 will still able to cater for the anticipated waiting pedestrian demand at acceptable LOS in both reference and design scenarios.

5 SUMMARY AND CONCLUSION

5.1 Summary

5.1.1 The South China Athletic Association intends to develop a comprehensive sports and recreation centre at the northern part of SCAA site in Caroline Hill Road, Causeway Bay.

5.1.2 As there is no specific guideline set in the HKPSG or land grant for the proposed uses, the proposed car parking provisions is based on the proposed operational needs. The proposed development will provide a total of 66 private car parking spaces (including 2 nos. of parking space for disabled users), 9 motorcycle parking spaces, 1 pick-up/drop-off layby and 1 goods vehicle loading/unloading bay.

5.1.3 Existing junction capacity assessments were carried out for the identified peak hours and the results show that all of the key junctions performed satisfactorily during the surveyed peak hours.

5.1.4 The proposed development would generate two-way traffic flows of 41 pcu/hr, 59 pcu/hr and 48 pcu/hr in the weekday AM, weekday PM and weekend peak hours, respectively. By assigning the additional development traffic to the 2033 Reference Flows, the 2033 Design Flows were obtained.

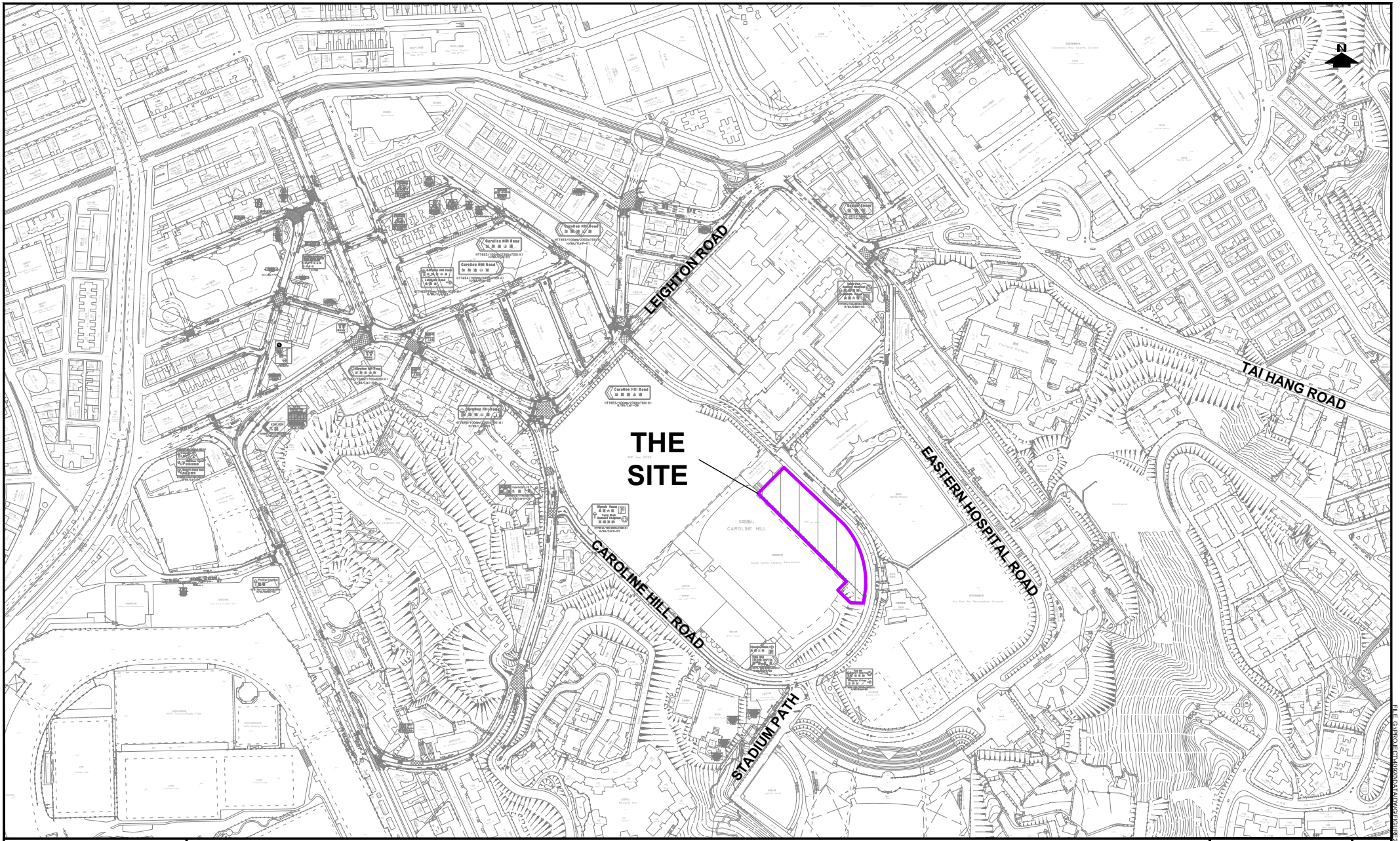
5.1.5 Junction capacity assessments were carried out at the key junctions in the vicinity for the year 2033. The results have indicated that all junctions will operate satisfactorily for both reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce significant traffic impact to the surrounding road network.

5.1.6 The proposed development is estimated to generate 2-way pedestrian flows of 895 person/ hour during weekday AM, weekday PM and weekend peak hours. The condition of the key footpaths , crossings and refuge islands will be satisfactory after accommodating the pedestrians generated and attracted by the proposed development in all scenarios with LOS “C” or above.

5.1.7 Having considered that MTR is one of the main modes of transport of the proposed development to facilitate the visitors travelling between the Site and the Causeway Bay MTR Station, the applicant has liaised with the adjacent commercial development for the feasibility of establishing a footbridge between the proposed development and the adjacent commercial development. With this footbridge proposal, visitors can reach the proposed development more conveniently and comfortably and relieve the burden of the at-grade walkway network.

5.2 Conclusion

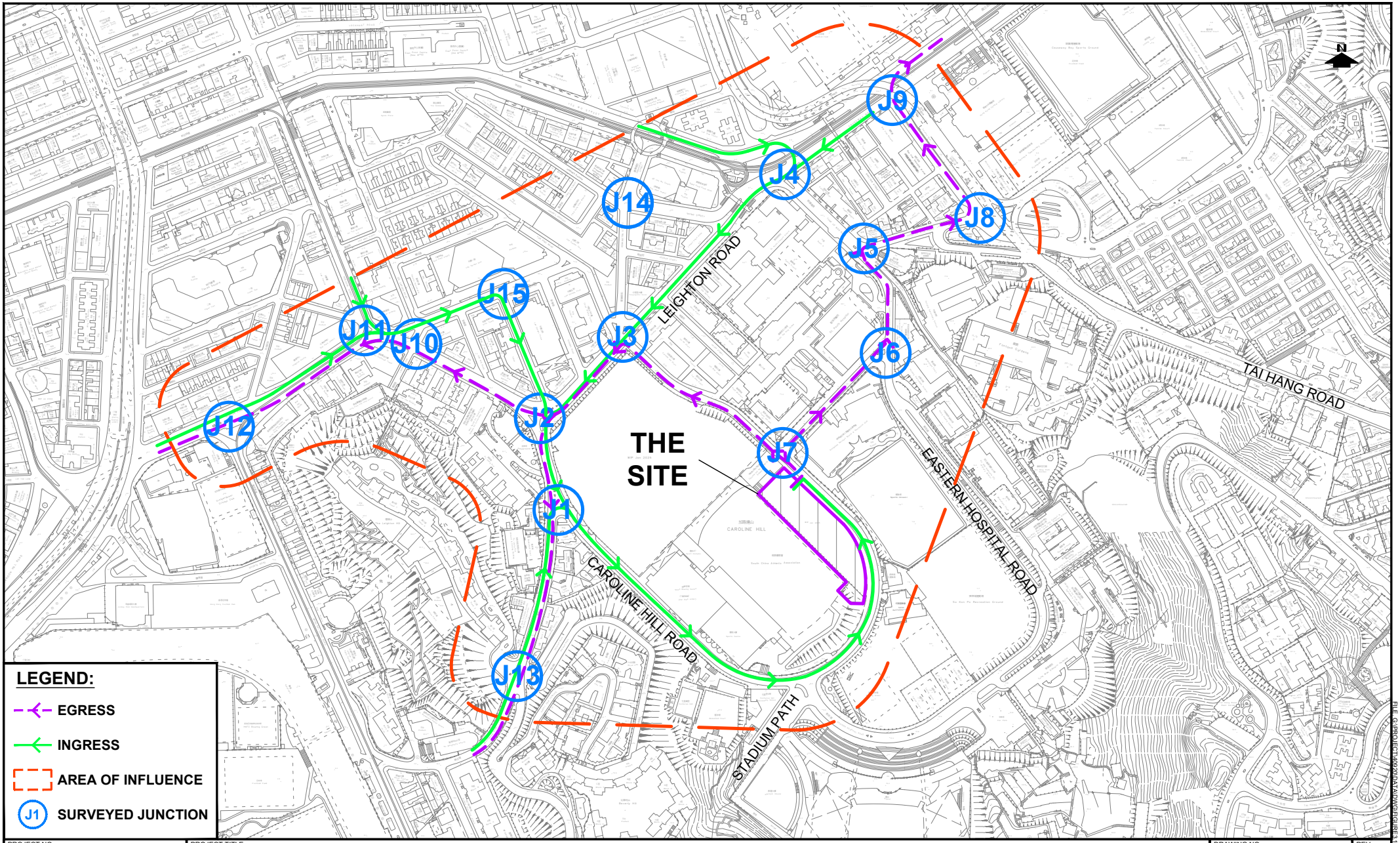
5.2.1 From the assessment results, it can be concluded that the proposed development will not induce significant traffic impact on the surrounding road network and the development proposal is considered acceptable from traffic engineering point of view.



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 2.1	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE SEP 2025 / SCALE 1:5000	DRAWING TITLE: LOCATION PLAN	LLA 顧問有限公司 Consultancy Limited

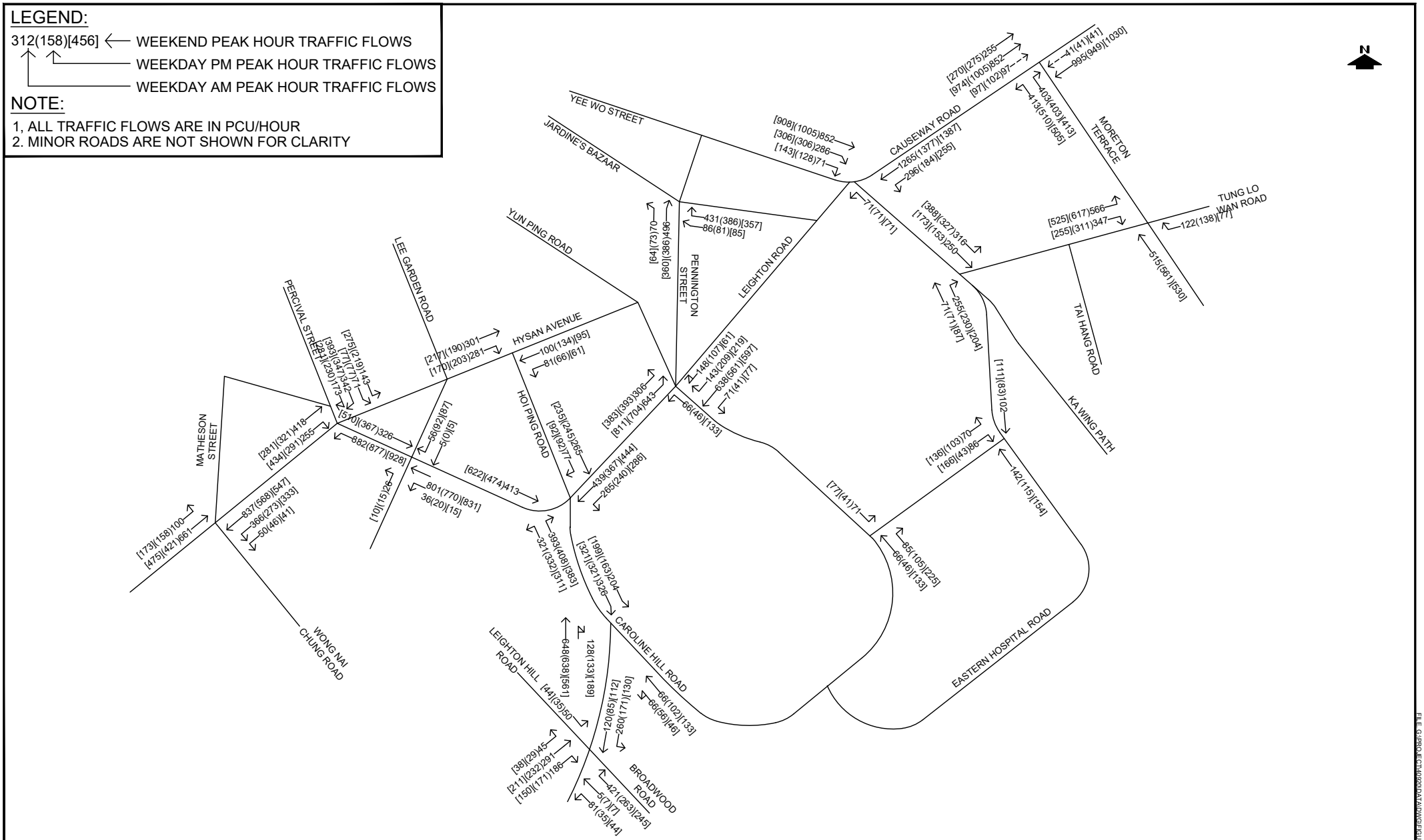
FILE: G:\PROJECT\40920\DATA\DWG\FIGURE2.1.DWG PLOT SCALE : 1 = 1

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE2.1.DWG PLOT SCALE : 1 = 1



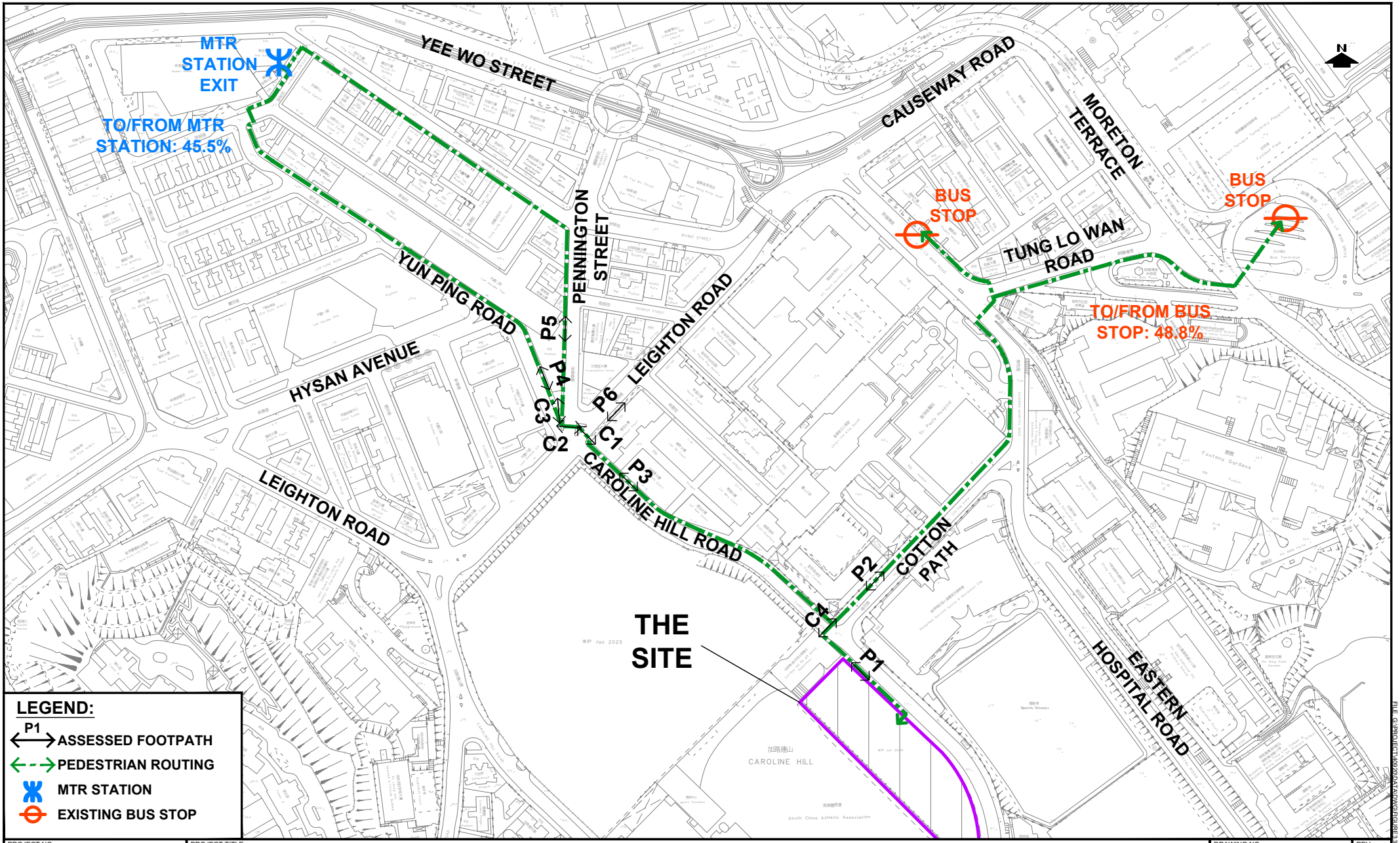
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.1	REV. A
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE DEC 2025 / SCALE 1:5000	DRAWING TITLE: LOCATION OF SURVEYED JUNCTIONS AND AREA OF INFLUENCE	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.1A.DWG PLOT SCALE : 1 = 1



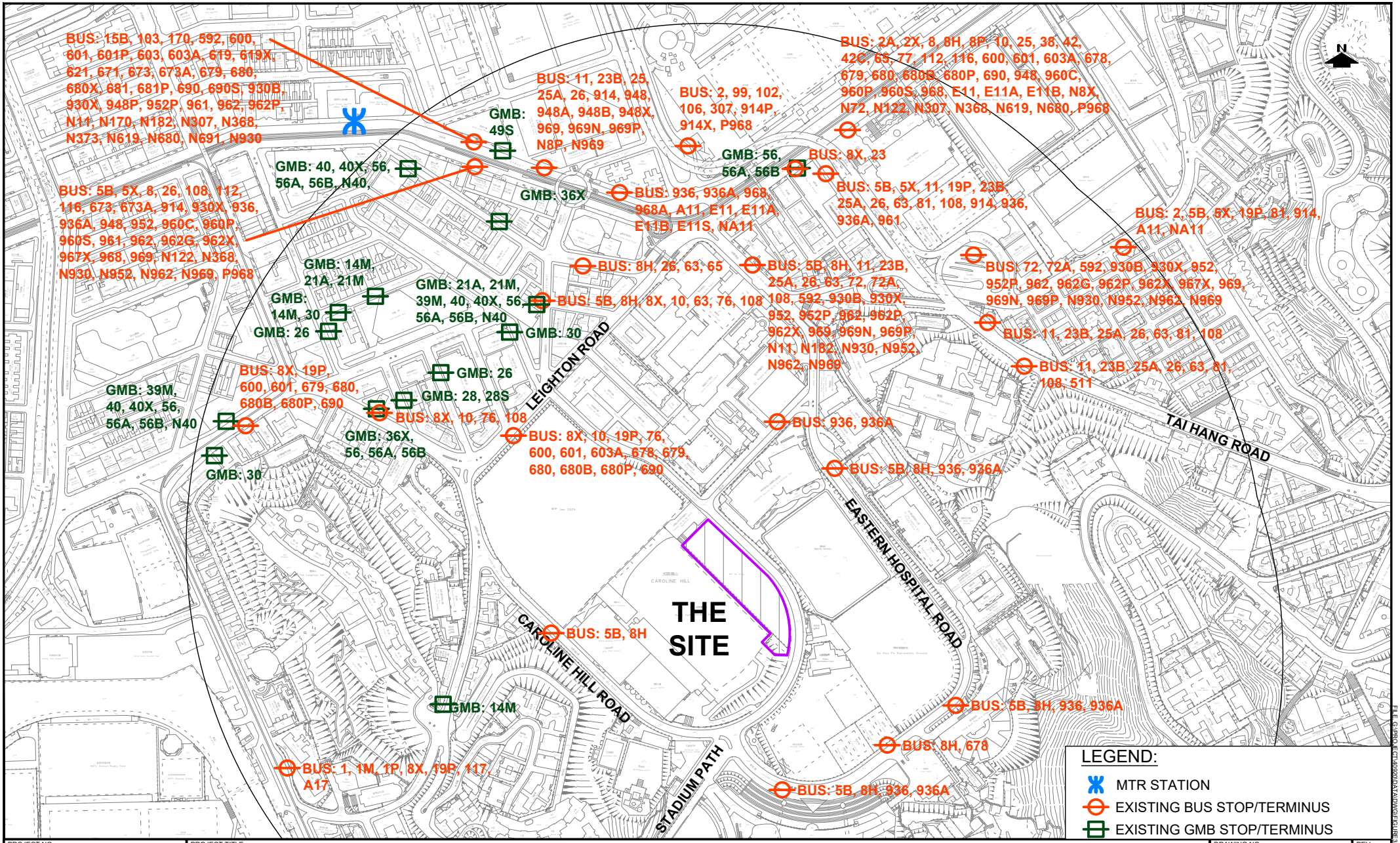
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. **FIGURE 3.2**	REV. **C**
DESIGNED **SLN** / DRAWN **CLL** / CHECKED **SLN**	DATE **MAR 2026** / SCALE **N.T.S.**	DRAWING TITLE: **2025 EXISTING TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.2C.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.3	REV. B
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE FEB 2026 / SCALE 1:3000	DRAWING TITLE: ANTICIPATED PEDESTRIAN ROUTINGS AND LOCATION OF SURVEYED FOOTPATHS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.3B.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.4	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE SEP 2025 / SCALE 1:5000	DRAWING TITLE: EXISTING PUBLIC TRANSPORT FACILITIES	LLA 顧問有限公司 Consultancy Limited

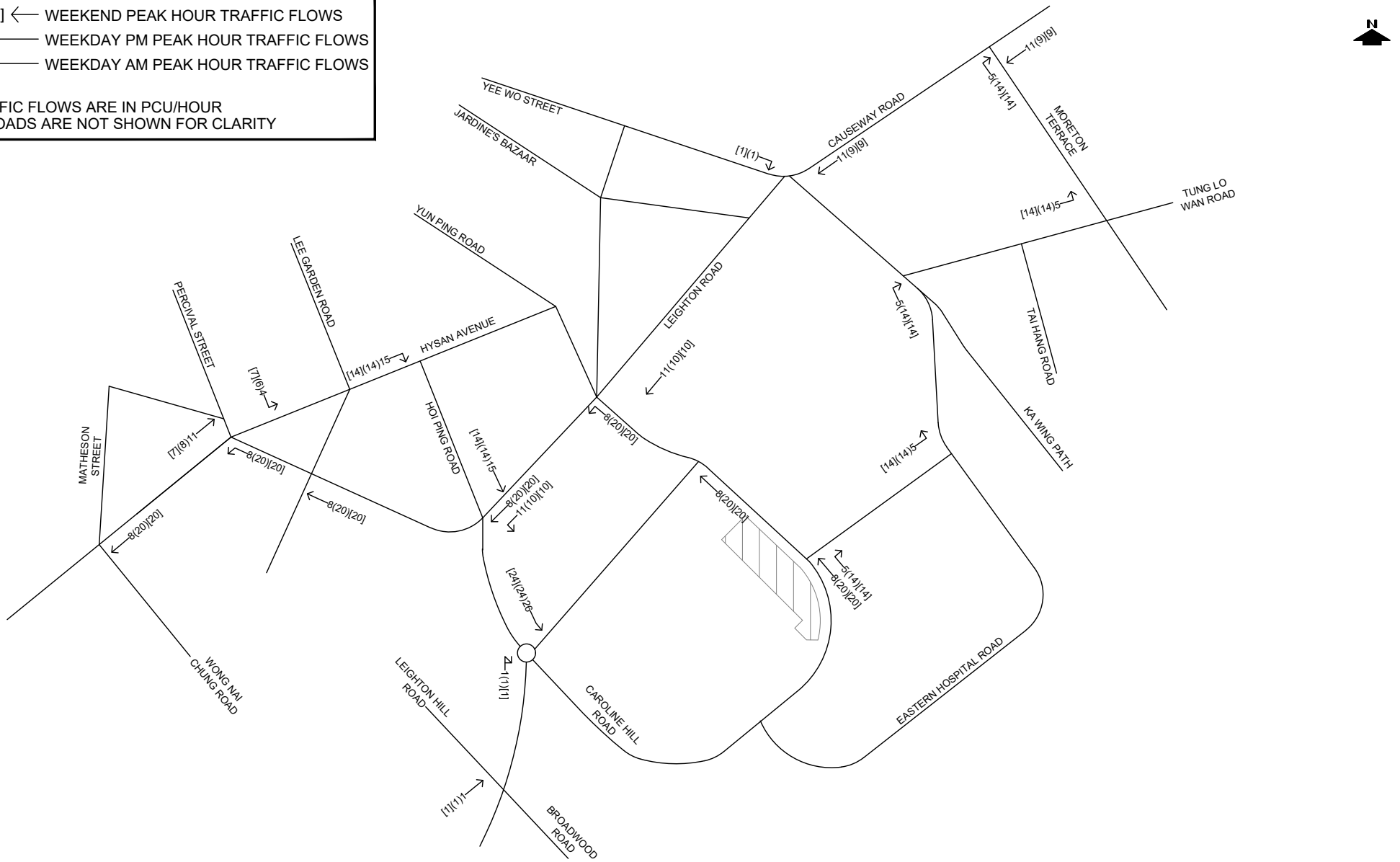
FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.4.DWG PLOT SCALE : 1 = 1

LEGEND:

312(158)[456] ← WEEKEND PEAK HOUR TRAFFIC FLOWS
WEEKDAY PM PEAK HOUR TRAFFIC FLOWS
WEEKDAY AM PEAK HOUR TRAFFIC FLOWS

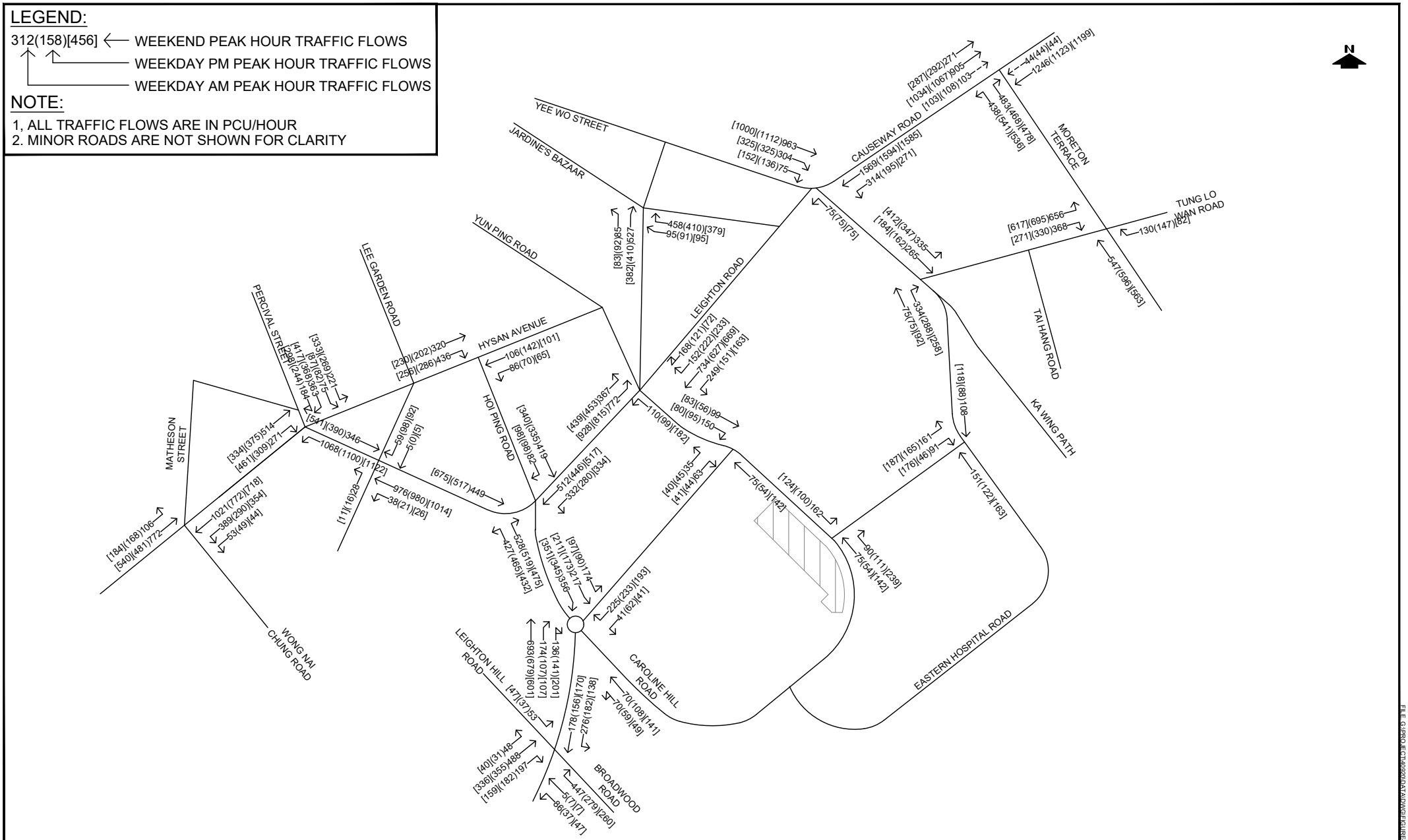
NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY



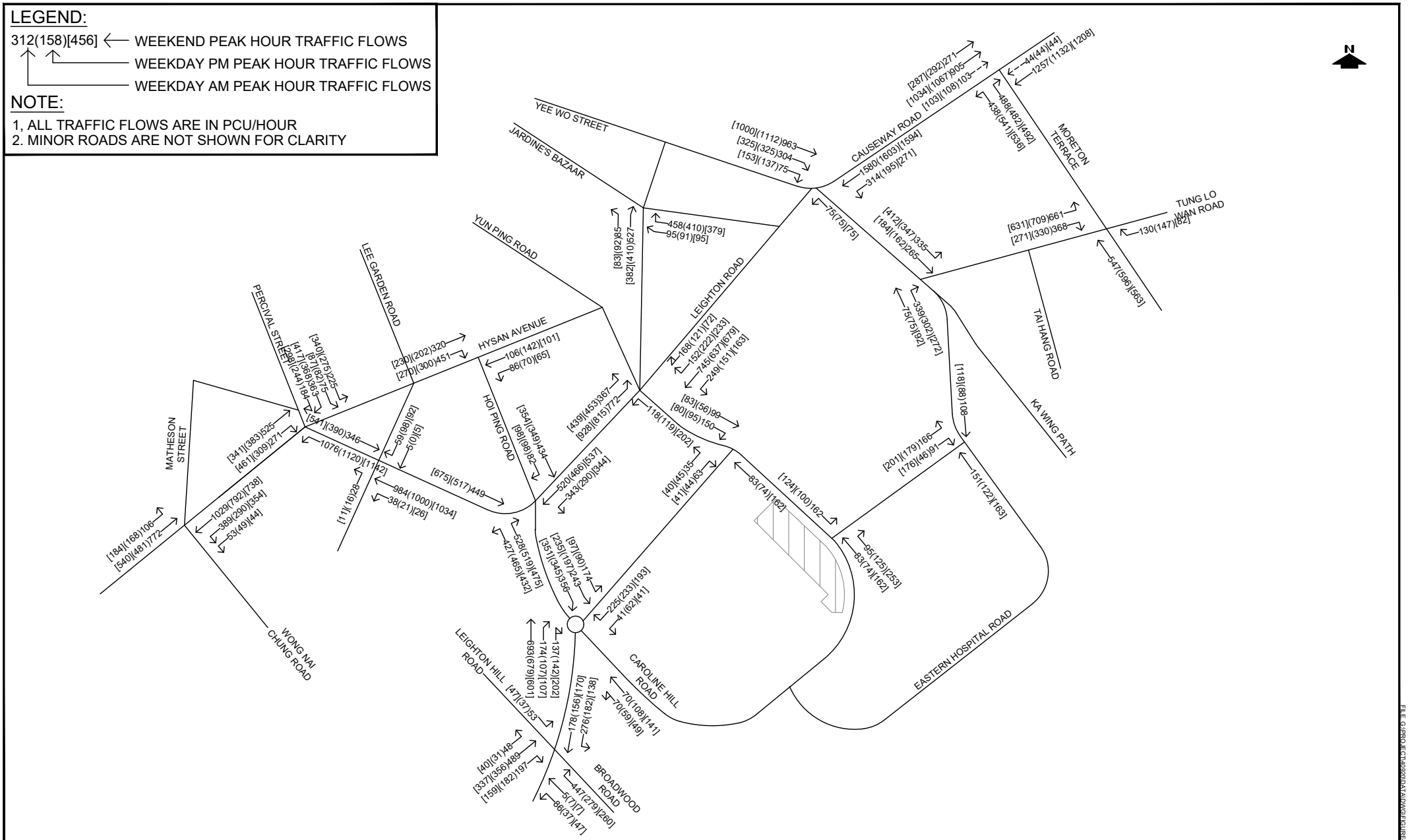
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. **FIGURE 4.1**	REV. **B**
DESIGNED **SLN** / DATE **FEB 2026**	DRAWING TITLE: **DEVELOPMENT TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited	
DRAWN **CLL** / SCALE **N.T.S.**			
CHECKED **SLN**			

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.1B.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 4.2	REV. C
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE MAR 2026 / SCALE N.T.S.	DRAWING TITLE: 2033 REFERENCE TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.2C.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG			DRAWING NO. FIGURE 4.3	REV. C
DESIGNED SLN	DATE MAR 2026	DRAWING TITLE: **2033 DESIGN TRAFFIC FLOWS**		LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE N.T.S.				
CHECKED SLN					

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.3C.DWG PLOT SCALE : 1 = 1

APPENDIX A

Proposed Car Park Layout

N

COTTON PATH

DISCIPLINED SERVICES SPORTS
& RECREATION CLUB

DISCIPLINED SERVICES SPORTS &
RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93
+7.46
+7.55
+8.36
+9.46
+10.80
+10.65
+12.23
+14.13
+15.83

STAIRCASE
STAIRCASE
STAIRCASE

L/UL

LIFT
LOBBY
+6.93

LIFT
LOBBY

LAY-BY AREA

SCAA
TRAINING
POOL

E&M

RAMP
DOWN

E&M

CARPARK
+7.46

5m
6m
6.43m

ACCESS GATE

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Car Park Layout ○ 1 : 500 (A3) ○ 07 Jan 2026

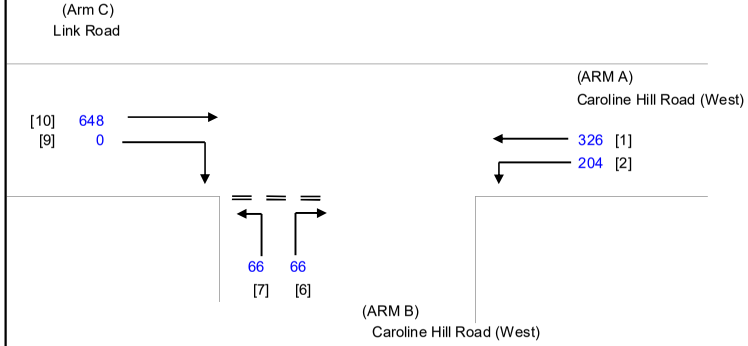
Design 2 (HK) Limited

APPENDIX B

Detail Calculation Sheets

- Existing Scenario

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J1_CHRW_LR	CHECKED BY:	SLN	Feb-26
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	204	(pcu/hr)
q a-c	=	326	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	648	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	66	(pcu/hr)
q b-c	=	66	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.5

THE CAPACITY OF MOVEMENT :

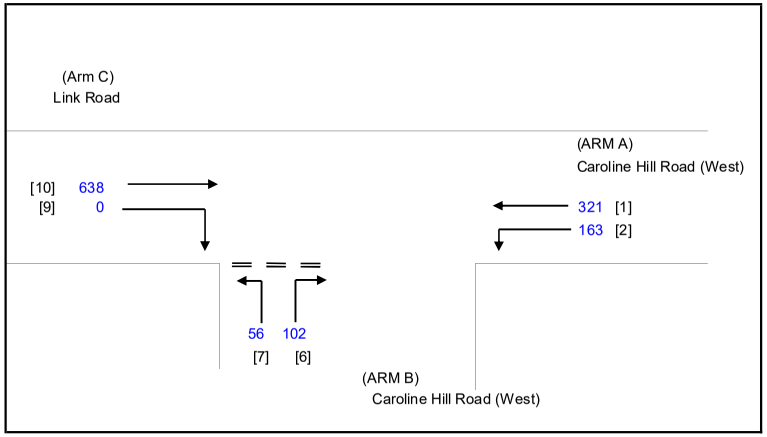
Q b-a	=	358		
Q b-c	=	574	Q b-c (O) =	547.5
Q c-b	=	502		
Q b-ac	=	441		
TOTAL FLOW	=	1310	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1844
DFC b-c	=	0.1150
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2993

CRITICAL DFC = 0.30

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J1_CHRW_LR	CHECKED BY:	SLN	Feb-26
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	163	(pcu/hr)
q a-c	=	321	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	638	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	102	(pcu/hr)
q b-c	=	56	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.35443038

THE CAPACITY OF MOVEMENT :

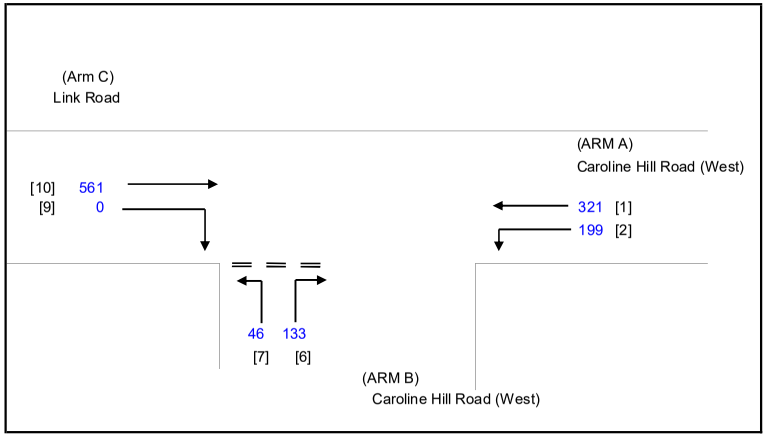
Q b-a	=	364		
Q b-c	=	579	Q b-c (O) =	538.4
Q c-b	=	513		
Q b-ac	=	419		
TOTAL FLOW	=	1280	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2802
DFC b-c	=	0.0967
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3769

CRITICAL DFC = 0.38

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J1_CHRW_LF	CHECKED BY:	SLN	Feb-26
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	199	(pcu/hr)
q a-c	=	321	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	561	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	133	(pcu/hr)
q b-c	=	46	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.25698324

THE CAPACITY OF MOVEMENT :

Q b-a	=	372		
Q b-c	=	576	Q b-c (O) =	524.5
Q c-b	=	505		
Q b-ac	=	409		
TOTAL FLOW	=	1260	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3575
DFC b-c	=	0.0799
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.4374

CRITICAL DFC = 0.44

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

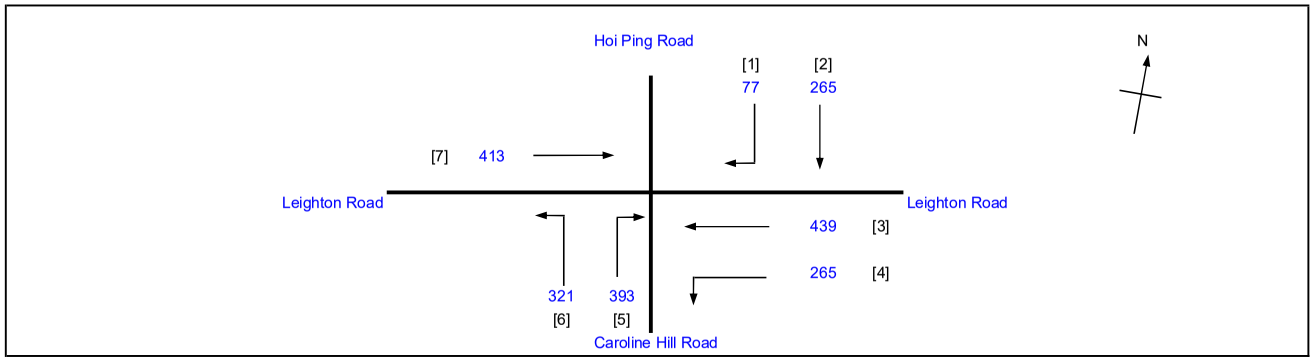
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

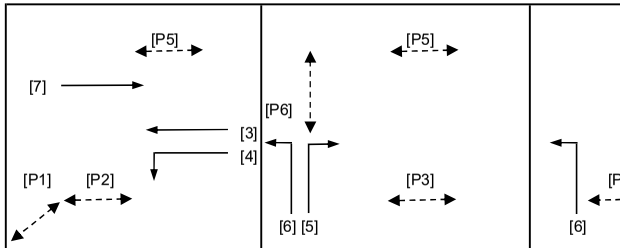
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2025 Existing AM

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx

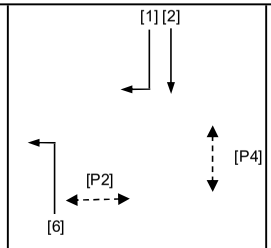


No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.602
Loss time		L =	20 sec
Total Flow		=	2173 pcu
Co	= (1.5*L+5)/(1-Y)	=	88.0 sec
Cm	= L/(1-Y)	=	50.3 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	24.5 %
Cp	= 0.9*L/(0.9-Y)	=	60.5 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**26 %**



Stage 1 G= 46 Int = 8

Stage 2 G= 35 Int = 7



Stage 3 G= 26 Int = 8

Stage 4 G= Int =

Stage 5 G= Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	47	5
P2	1,3	4	14	5	0	83	5
P3	2	4.5	14	5	3	34	5
P4	3	15	10	7	4	23	7
P5	1,2	7	11	6	1	89	6
P6	2	15	10	7	4	31	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		413		413	0.00	4020							4020	0.103			19	47	0.712	36	55
3*	1	3.00	1				2055		370		370	0.00	2055			0.7	-617			1438	0.257	0.257		47	47	0.712	48	40
3,4*	1	3.50	1	20		N	1965	265	69		334	0.79	1855			0.7	-556			1299	0.257			47	47	0.712	42	41
6	2,3	3.00	1	30		N	1915	321			321	1.00	1824							1824	0.176			32	42	0.712	48	49
5	2	4.00	1	20			2155			393	393	1.00	2005							2005	0.196	0.196		36	36	0.712	60	45
1,2	3	3.00	1	10		N	1915		265	77	342	0.23	1852	20	444					2297	0.149	0.149		27	27	0.712	54	51

* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

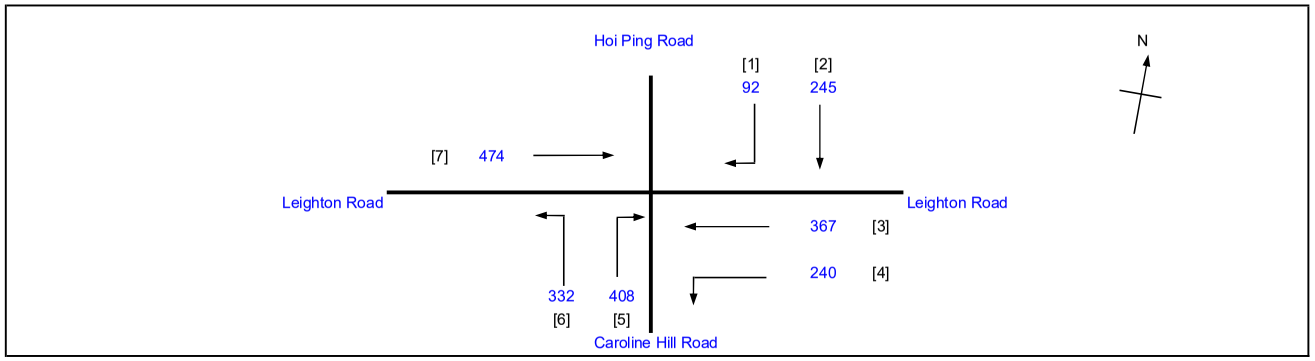
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

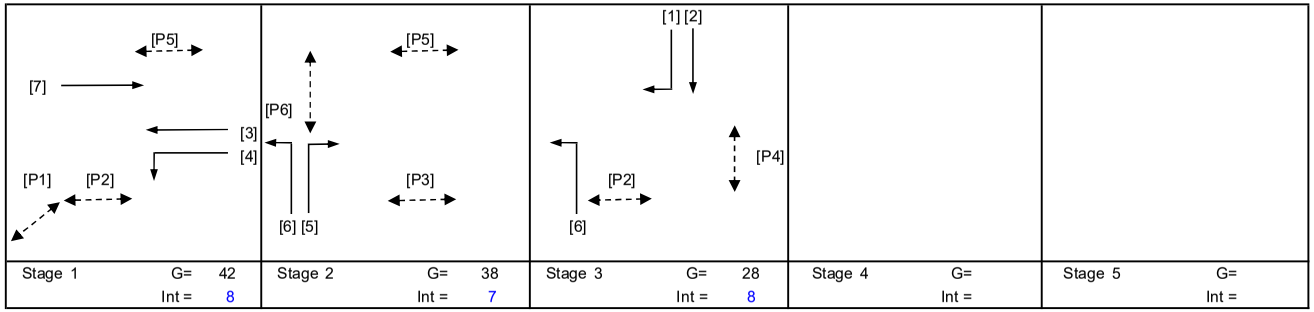
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.576
Loss time	L =	20 sec
Total Flow	=	2158 pcu
Co = (1.5*L+5)/(1-Y)	=	82.5 sec
Cm = L/(1-Y)	=	47.1 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	30.3 %
Cp = 0.9*L/(0.9-Y)	=	55.5 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**32 %**



Stage 1	G= 42	Int = 8
Stage 2	G= 38	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	Green Time Required FG	Green Time Required Delay	Green Time Provided SG	Green Time Provided FG
P1	1	4.5	10	5	2	43	5
P2	1,3	4	14	5	0	80	5
P3	2	4.5	14	5	3	37	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Movement Straight pcu/h	Movement Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		474		474	0.00	4020							4020	0.118			23	43	0.680	42	50
3*	1	3.00	1				2055		319		319	0.00	2055			0.7	-617			1438	0.222			42	43	0.680	42	41
3,4*	1	3.50	1	20		N	1965	240	48		288	0.83	1849			0.7	-555			1294	0.222	0.222		43	43	0.680	36	42
6	2,3	3.00	1	30		N	1915	332			332	1.00	1824							1824	0.182			35	45	0.680	48	45
5	2	4.00	1	20			2155			408	408	1.00	2005							2005	0.204	0.204		39	39	0.680	60	42
1,2	3	3.00	1	10		N	1915		245	92	337	0.27	1840	20	414					2253	0.150	0.150		29	29	0.680	54	49

* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

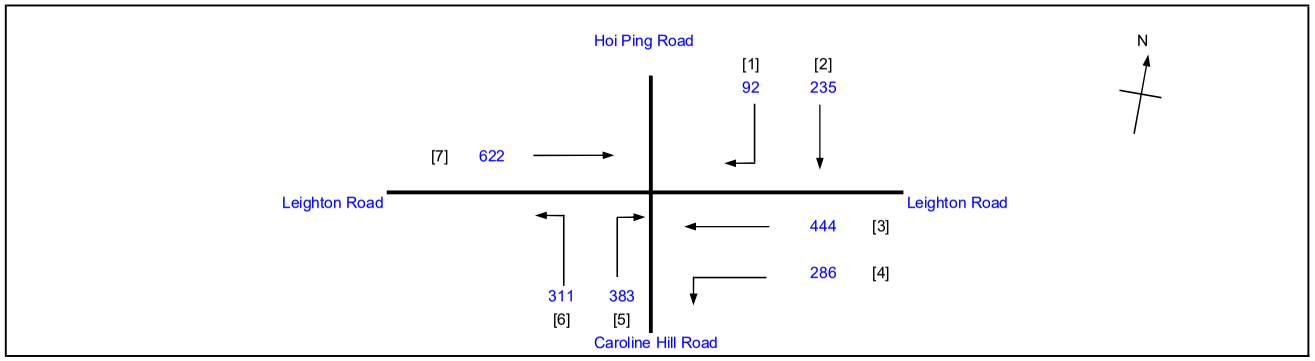
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

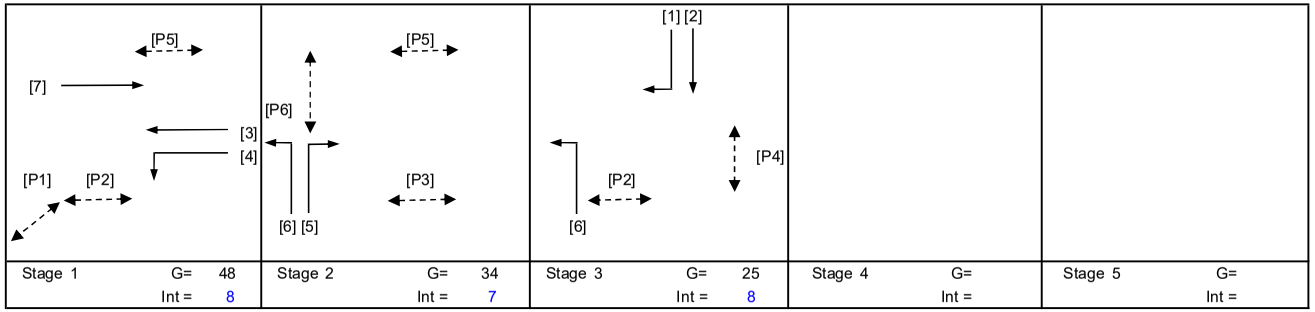
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.600
Loss time		L =	20 sec
Total Flow		=	2373 pcu
Co	= (1.5*L+5)/(1-Y)	=	87.6 sec
Cm	= L/(1-Y)	=	50.1 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	24.9 %
Cp	= 0.9*L/(0.9-Y)	=	60.1 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**27 %**



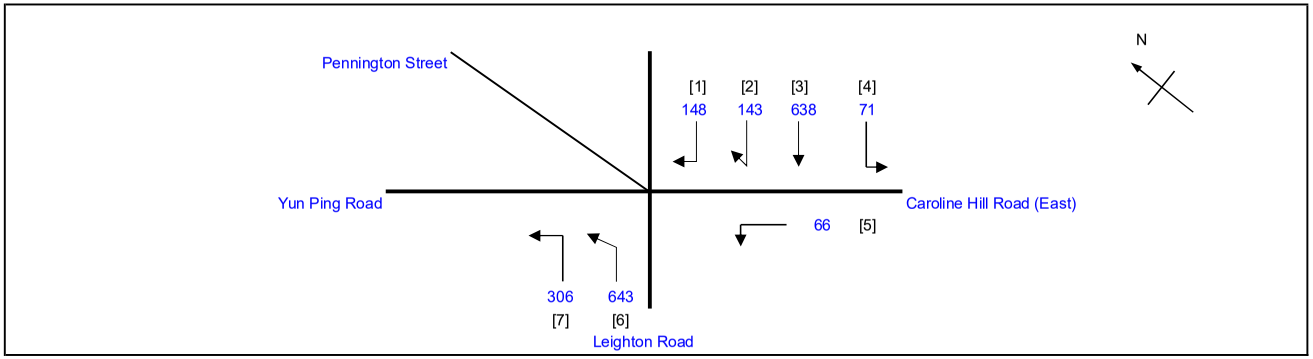
Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	49	5
P2	1,3	4	14	5	0	84	5
P3	2	4.5	14	5	3	33	5
P4	3	15	10	7	4	22	7
P5	1,2	7	11	6	1	90	6
P6	2	15	10	7	4	30	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		622		622	0.00	4020							4020	0.155			28	49	0.710	51	47
3*	1	3.00	1				2055		384		384	0.00	2055			0.7	-617			1438	0.267			49	49	0.710	48	38
3,4*	1	3.50	1	20		N	1965	286	60		346	0.83	1850			0.7	-555			1295	0.267	0.267		49	49	0.710	42	39
6	2,3	3.00	1	30		N	1915	311			311	1.00	1824							1824	0.171			31	41	0.710	48	50
5	2	4.00	1	20			2155			383	383	1.00	2005							2005	0.191	0.191		35	35	0.710	60	46
1,2	3	3.00	1	10		N	1915		235	92	327	0.28	1837	20	462					2299	0.142	0.142		26	26	0.710	54	52

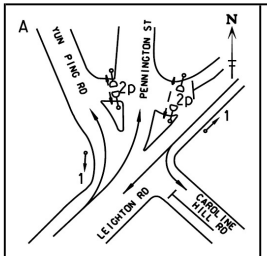
* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

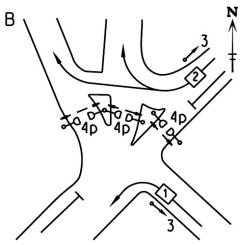
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Feb-26
			Reviewed By:	SLN	Feb-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.550
Loss time	L =	11 sec
Total Flow	=	2015 pcu
Co = (1.5*L+5)/(1-Y)	=	47.8 sec
Cm = L/(1-Y)	=	24.4 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	48.6 %
Cp = 0.9*L/(0.9-Y)	=	28.3 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**50 %**



Stage 1 G= 71
Int = 6



Stage 2 G= 46
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	67	8
4P	2		10	8	2	43	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							11		
3	1	2.50	1				2005		461		461	0.00	2005							2005	0.230			50	72
3,4	1	3.00	1	7		N	1915	71	177		248	0.29	1804			0.6	-722			1082	0.229			50	72
6	1	3.00	1				2055		508		508	0.00	2055			0.7	-534			1521	0.334	0.334		72	72
6,7	1	3.00	1	15		N	1915	306	135		441	0.69	1791			0.7	-466			1325	0.333			72	72
1,2	2	3.50	1	9		N	1965			291	291	1.00	1684			0.8	-337			1347	0.216	0.216		47	47
5	2	4.00	1	5		N	2015	66			66	1.00	1550			0.6	-620			930	0.071			15	47

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

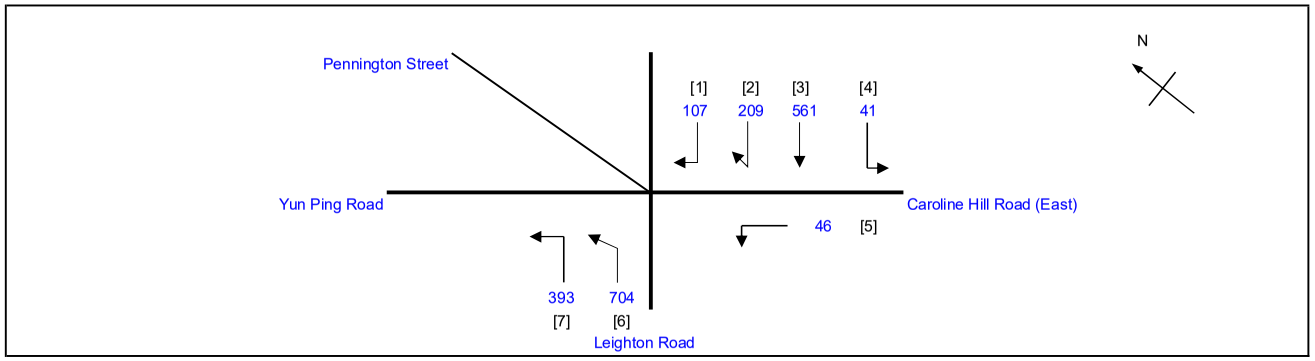
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

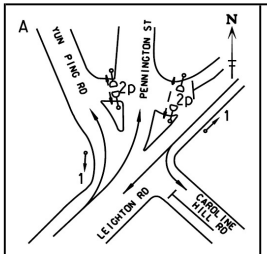
2025 Existing PM

PROJECT NO.: 40920

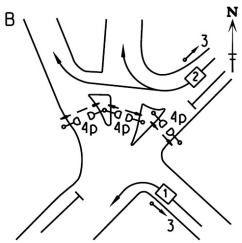
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.621
Loss time		L =	11 sec
Total Flow		=	2061 pcu
Co	= (1.5*L+5)/(1-Y)	=	56.8 sec
Cm	= L/(1-Y)	=	29.1 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	31.6 %
Cp	= 0.9*L/(0.9-Y)	=	35.5 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**33 %**



Stage 1 G= 73 Int = 6



Stage 2 G= 44 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	69	8
4P	2		10	8	2	41	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		388		388	0.00	2005							2005	0.194			37	74
3,4	1	3.00	1	7		N	1915	41	173		214	0.19	1839			0.6	-736			1103	0.194			37	74
6	1	3.00	1				2055		588		588	0.00	2055			0.7	-534			1521	0.387			74	74
6,7	1	3.00	1	15		N	1915	393	116		509	0.77	1778			0.7	-462			1316	0.387	0.387		74	74
1,2	2	3.50	1	9		N	1965			316	316	1.00	1684			0.8	-337			1347	0.235	0.235		45	45
5	2	4.00	1	5		N	2015	46			46	1.00	1550			0.6	-620			930	0.049			9	45

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

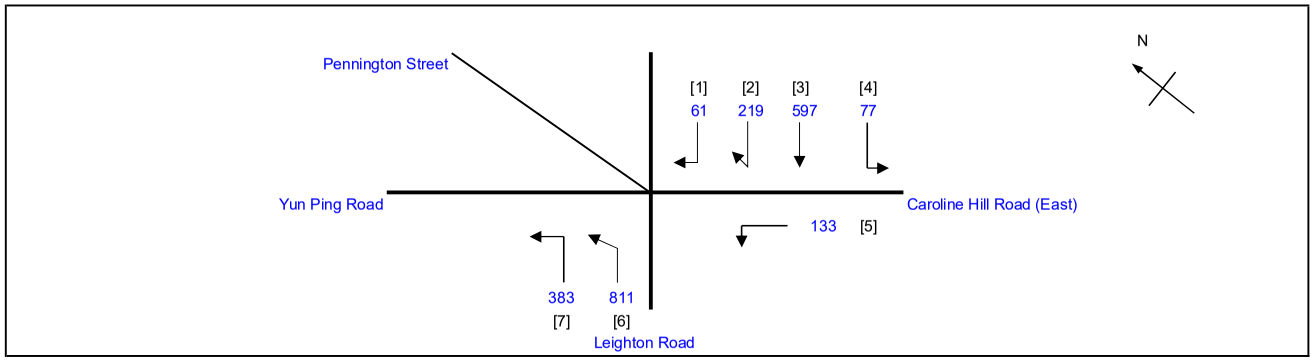
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

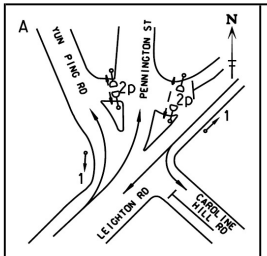
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

2025 Existing Weekend

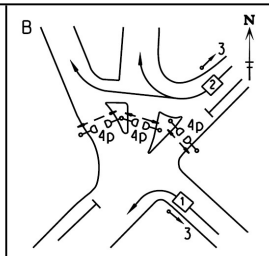
PROJECT NO.:	40920
FILENAME :	J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.627
Loss time		L =	11 sec
Total Flow		=	2281 pcu
Co	= (1.5*L+5)/(1-Y)	=	57.7 sec
Cm	= L/(1-Y)	=	29.5 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	30.3 %
Cp	= 0.9*L/(0.9-Y)	=	36.3 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**31 %**



Stage 1 G= 79 Int = 6



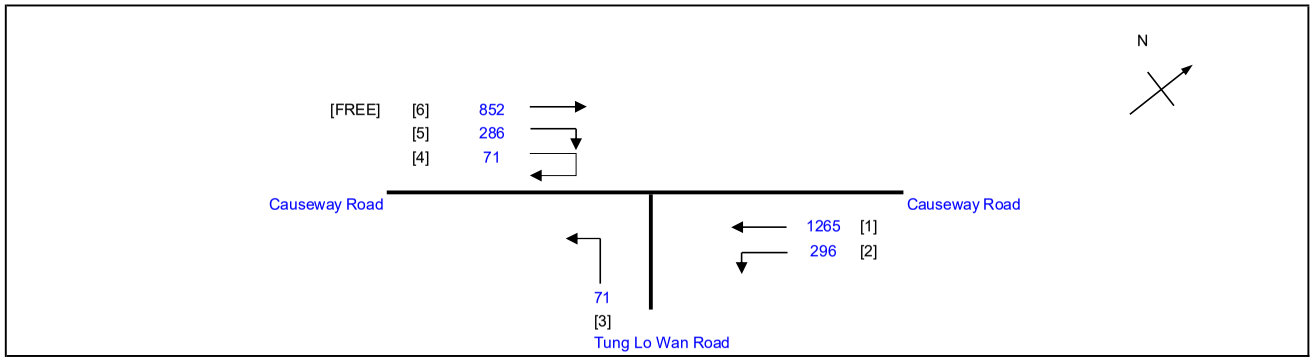
Stage 2 G= 38 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	75	8
4P	2		10	8	2	35	8

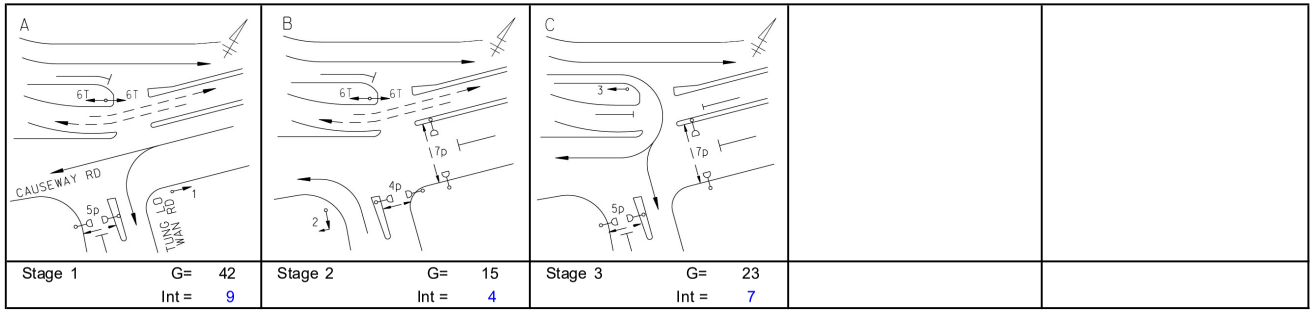
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							11		
3	1	2.50	1				2005		439		439	0.00	2005							2005	0.219			42	80
3,4	1	3.00	1	7		N	1915	77	158		235	0.33	1789			0.6	-716			1073	0.219			42	80
6	1	3.00	1				2055		638		638	0.00	2055			0.7	-534			1521	0.419	0.419		80	80
6,7	1	3.00	1	15		N	1915	383	173		556	0.69	1792			0.7	-466			1326	0.419			80	80
1,2	2	3.50	1	9		N	1965			280	280	1.00	1684			0.8	-337			1347	0.208	0.208		39	39
5	2	4.00	1	5		N	2015	133			133	1.00	1550			0.6	-620			930	0.143			27	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Feb-26
			Reviewed By:	SLN	Feb-26



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.352
Loss time	L =	33 sec
Total Flow	=	1989 pcu
Co = (1.5*L+5)/(1-Y)	=	84.2 sec
Cm = L/(1-Y)	=	51.0 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	85.2 %
Cp = 0.9*L/(0.9-Y)	=	54.2 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**71 %**



Stage 1	G= 42	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 23	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		38	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		343		343	0.00	1915			0.8	-383			1532	0.224			43	43
1	1	3.00	2				4110		922		922	0.00	4110							4110	0.224			43	43
2	1	3.00	1	9		N	1915	296			296	1.00	1641			0.8	-328			1313	0.225	0.225		43	43
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			9	15
4,5	3	4.00	1	12		N	2015			182	182	1.00	1791			0.8	-358			1433	0.127	0.127		24	24
4,5	3	4.50	1	8		N	2065			175	175	1.00	1739			0.8	-348			1391	0.126			24	24
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

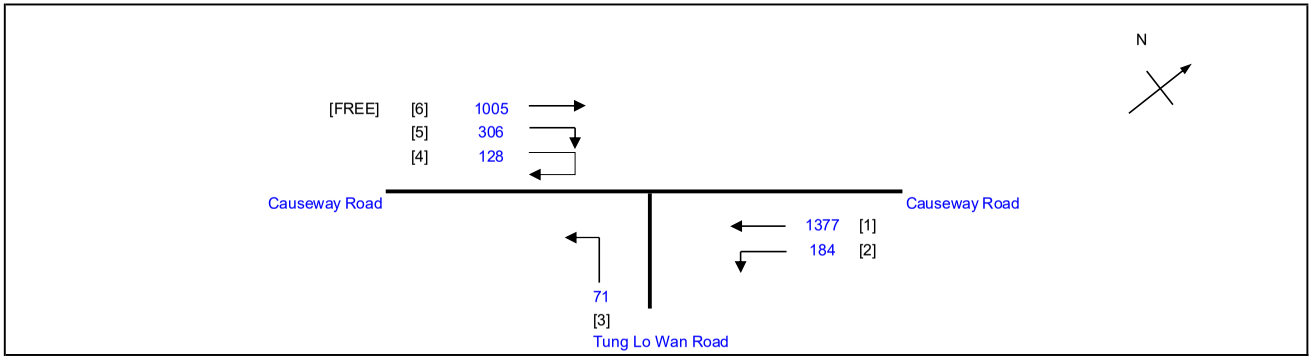
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

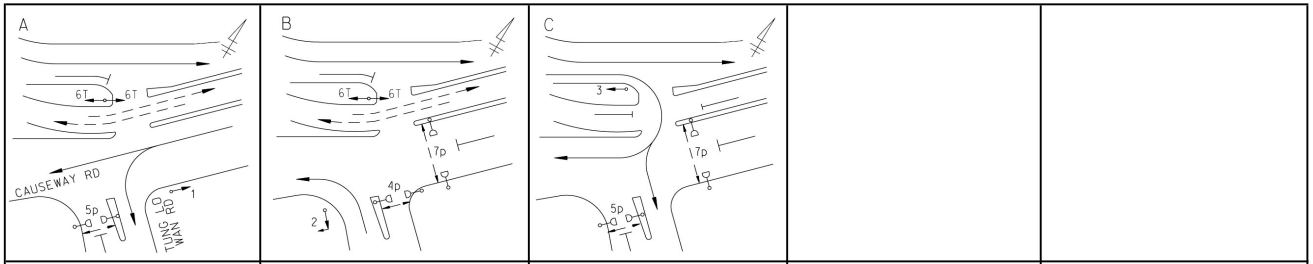
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.398
Loss time		L =	33 sec
Total Flow		=	2066 pcu
Co	= (1.5*L+5)/(1-Y)	=	90.5 sec
Cm	= L/(1-Y)	=	54.8 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	64.0 %
Cp	= 0.9*L/(0.9-Y)	=	59.2 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**52 %**



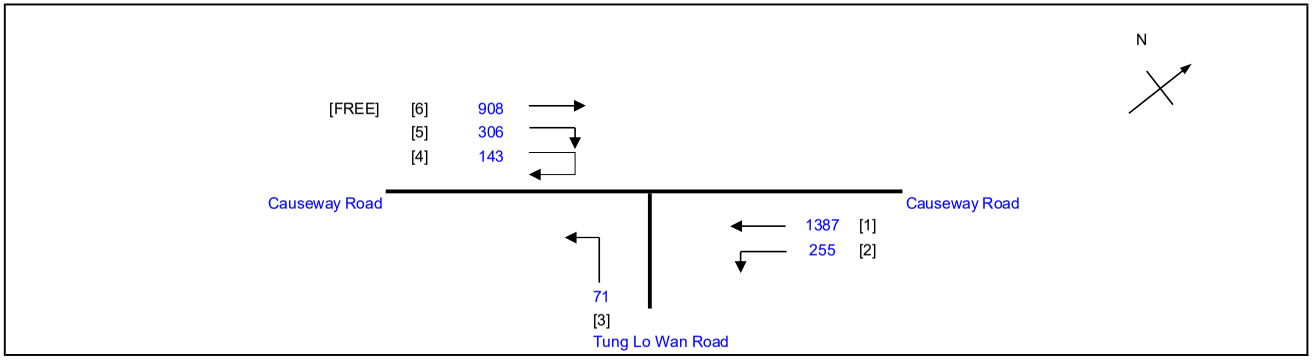
Stage 1	G= 40	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 25	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		40	11

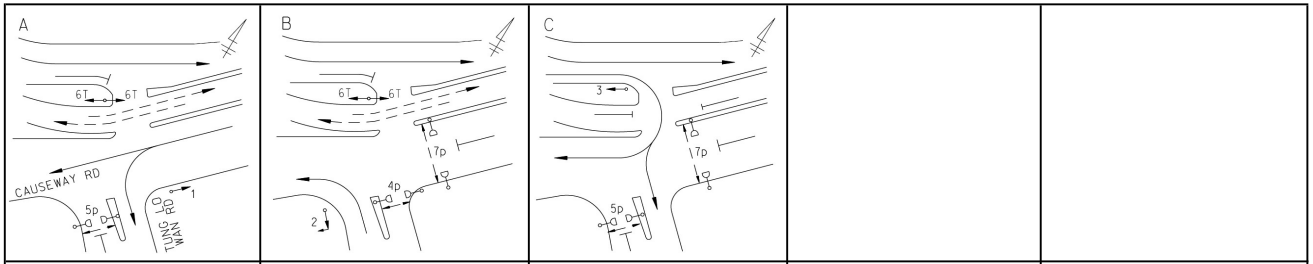
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		374		374	0.00	1915			0.8	-383			1532	0.244	0.244		41	41
1	1	3.00	2				4110		1003		1003	0.00	4110							4110	0.244			41	41
2	1	3.00	1	9		N	1915	184			184	1.00	1641			0.8	-328			1313	0.140			24	41
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			8	15
4,5	3	4.00	1	12		N	2015			220	220	1.00	1791			0.8	-358			1433	0.154			26	26
4,5	3	4.50	1	8		N	2065			214	214	1.00	1739			0.8	-348			1391	0.154	0.154		26	26
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Feb-26
			Reviewed By:	SLN	Feb-26



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.405
Loss time	L =	33 sec
Total Flow	=	2162 pcu
Co = (1.5*L+5)/(1-Y)	=	91.6 sec
Cm = L/(1-Y)	=	55.5 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	61.0 %
Cp = 0.9*L/(0.9-Y)	=	60.0 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**49 %**



Stage 1	G= 40	Stage 2	G= 15	Stage 3	G= 25
	Int = 9		Int = 4		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		40	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		377		377	0.00	1915			0.8	-383			1532	0.246	0.246		41	41
1	1	3.00	2				4110		1010		1010	0.00	4110							4110	0.246			41	41
2	1	3.00	1	9		N	1915	255			255	1.00	1641			0.8	-328			1313	0.194			32	41
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			8	15
4,5	3	4.00	1	12		N	2015			228	228	1.00	1791			0.8	-358			1433	0.159	0.159		26	26
4,5	3	4.50	1	8		N	2065			221	221	1.00	1739			0.8	-348			1391	0.159			26	26
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

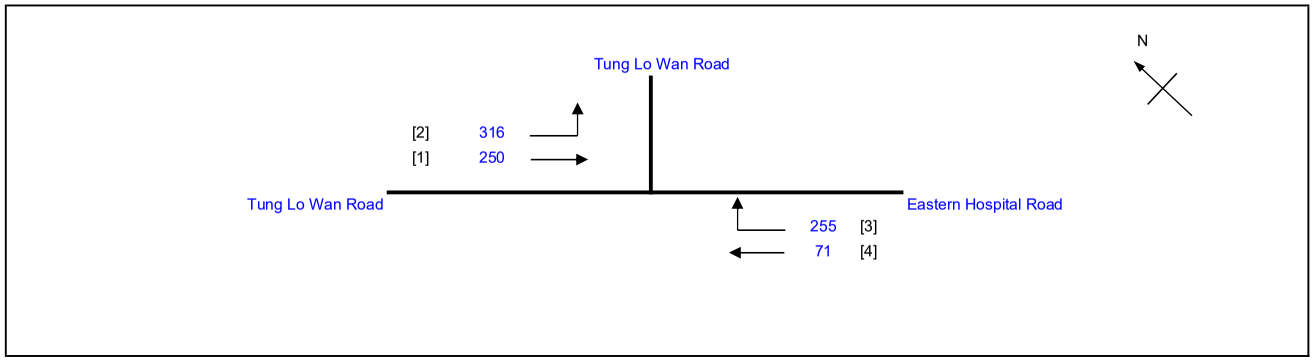
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

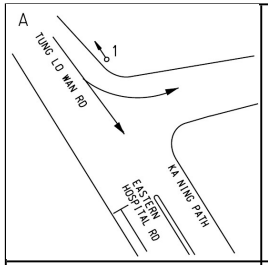
J5 Tung Lo Wan Road / Eastern Hospital Road

2025 Existing AM

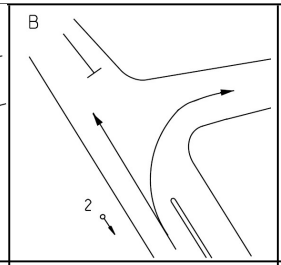
PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



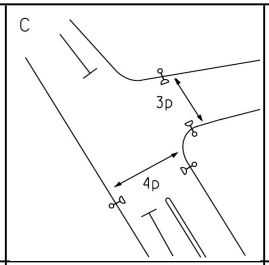
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.326
Loss time		L =	41 sec
Total Flow		=	892 pcu
Co	= (1.5*L+5)/(1-Y)	=	98.7 sec
Cm	= L/(1-Y)	=	60.8 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	81.7 %
Cp	= 0.9*L/(0.9-Y)	=	64.3 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**63 %**



Stage 1 G= 25
Int = 5



Stage 2 G= 32
Int = 3



Stage 3 G= 33
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	50	250		300	0.17	2064							2064	0.145	0.145		26	26
4	1	3.30	1	25		N	1945	266			266	1.00	1835							1835	0.145			26	26
1,2	2	3.65	1	12		N	1980		71	255	326	0.78	1804							1804	0.181	0.181		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

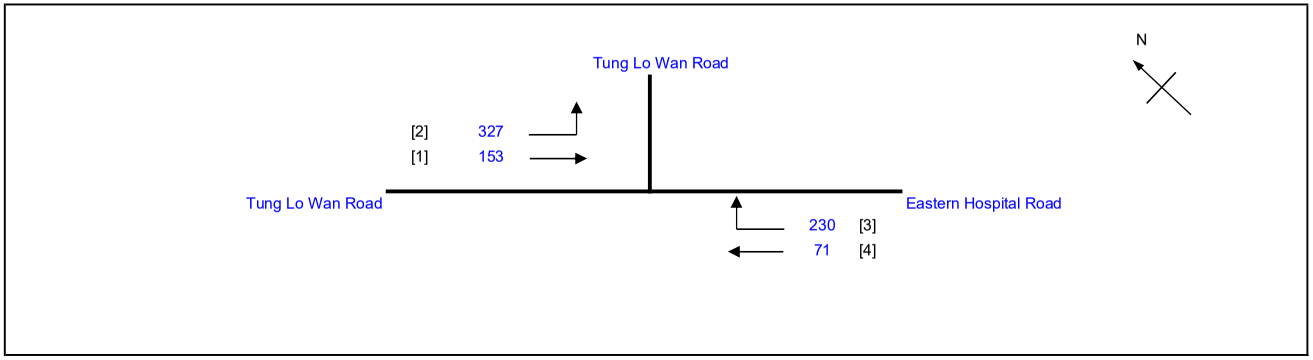
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

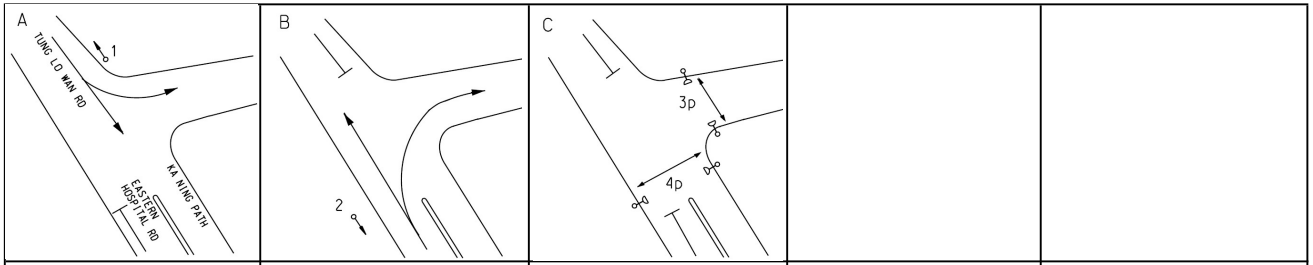
J5 Tung Lo Wan Road / Eastern Hospital Road

2025 Existing PM

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.291
Loss time		L =	41 sec
Total Flow		=	781 pcu
Co	= (1.5*L+5)/(1-Y)	=	93.8 sec
Cm	= L/(1-Y)	=	57.8 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	103.8 %
Cp	= 0.9*L/(0.9-Y)	=	60.6 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**83 %**



Stage 1	G=	24	
	Int =	5	
Stage 2	G=	33	
	Int =	3	
Stage 3	G=	33	
	Int =	2	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						8		
3,4	1	3.30	1	25			2085	99	153		252	0.39	2037							2037	0.124			25	25
4	1	3.30	1	25		N	1945	228			228	1.00	1835							1835	0.124	0.124		25	25
1,2	2	3.65	1	12		N	1980		71	230	301	0.76	1807							1807	0.167	0.167		34	34
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

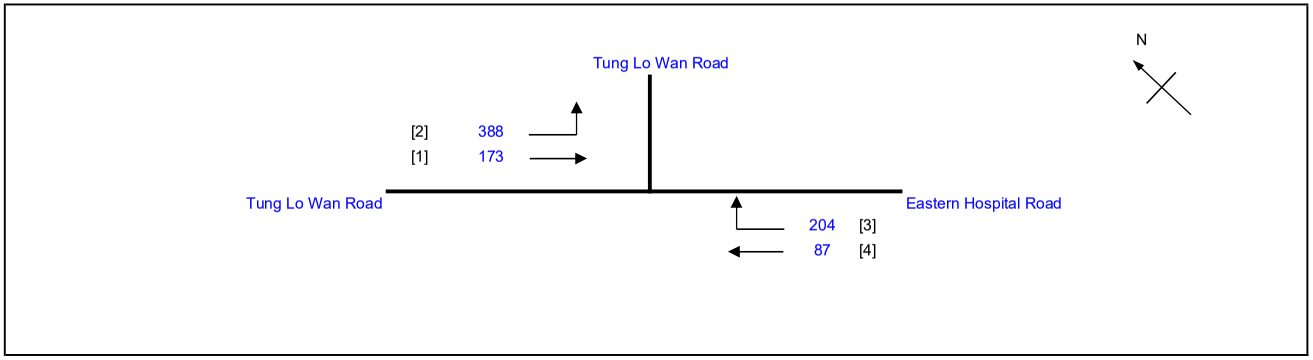
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

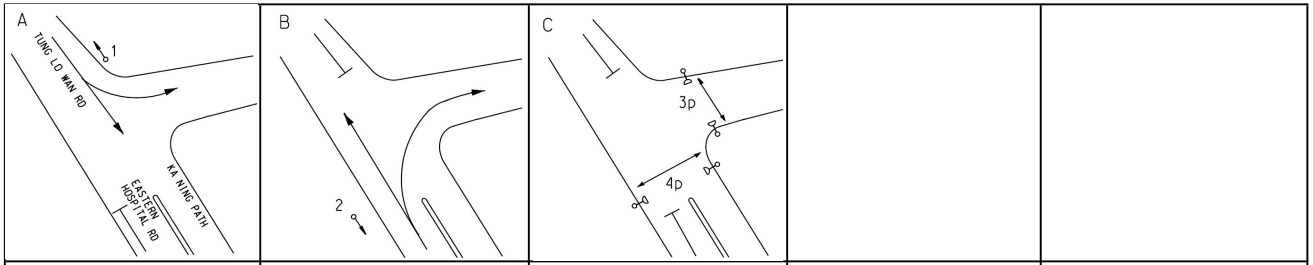
J5 Tung Lo Wan Road / Eastern Hospital Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.305
Loss time		L =	41 sec
Total Flow		=	852 pcu
Co	= (1.5*L+5)/(1-Y)	=	95.7 sec
Cm	= L/(1-Y)	=	59.0 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	94.4 %
Cp	= 0.9*L/(0.9-Y)	=	62.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**74 %**



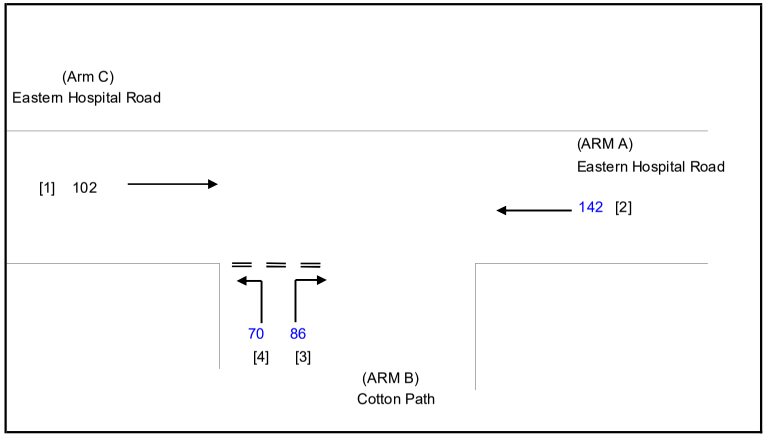
Stage 1	G=	27	
	Int =	5	
Stage 2	G=	30	
	Int =	3	
Stage 3	G=	33	
	Int =	2	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	122	173		295	0.41	2035							2035	0.145	0.145		28	28
4	1	3.30	1	25		N	1945	266			266	1.00	1835							1835	0.145			28	28
1,2	2	3.65	1	12		N	1980		87	204	291	0.70	1820							1820	0.160	0.160		31	31
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Feb-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	102	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	86	(pcu/hr)
q b-c	=	70	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.44871795

THE CAPACITY OF MOVEMENT :

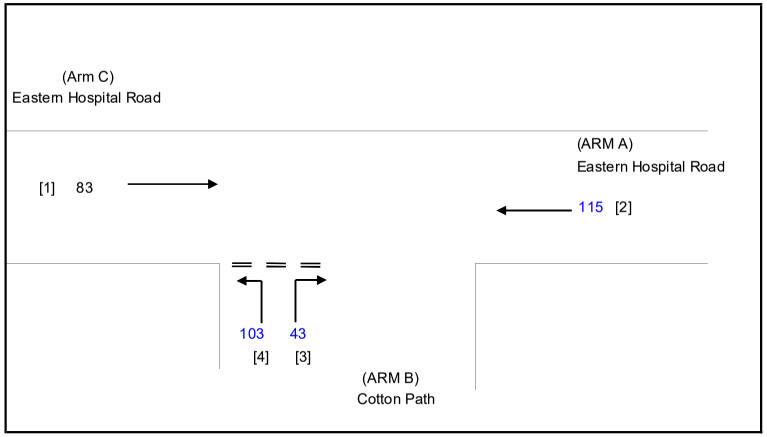
Q b-a	=	528			
Q b-c	=	728	Q b-c (O) =	698.4	
Q c-b	=	414			
Q b-ac	=	602			
TOTAL FLOW	=	400	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1629
DFC b-c	=	0.0962
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1162

CRITICAL DFC = 0.16

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Feb-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	115	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	83	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	43	(pcu/hr)
q b-c	=	103	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.70547945

THE CAPACITY OF MOVEMENT :

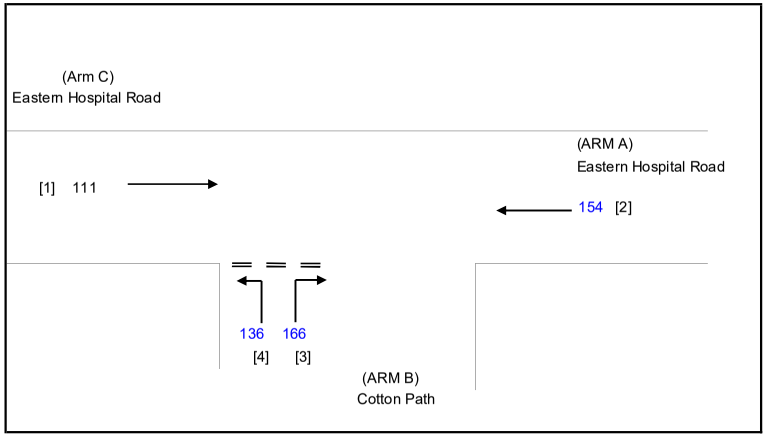
Q b-a	=	538		
Q b-c	=	735	Q b-c (O) =	720.3
Q c-b	=	418		
Q b-ac	=	663		
TOTAL FLOW	=	344	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0799
DFC b-c	=	0.1401
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1552

CRITICAL DFC = 0.16

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Feb-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	154	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	111	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	166	(pcu/hr)
q b-c	=	136	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.45033113

THE CAPACITY OF MOVEMENT :

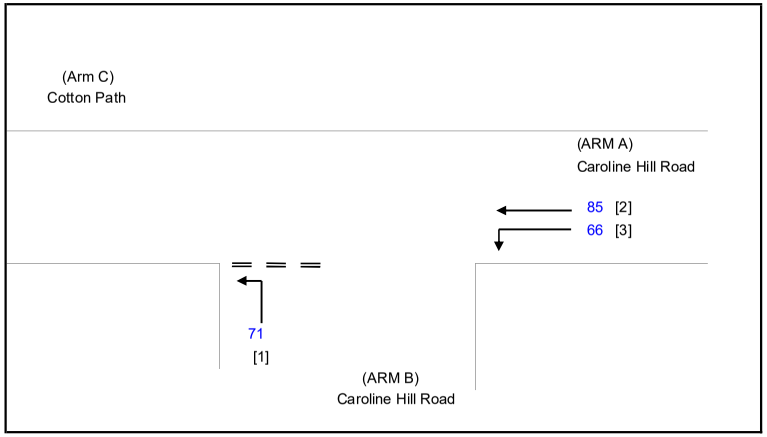
Q b-a	=	524		
Q b-c	=	725	Q b-c (O) =	667.6
Q c-b	=	412		
Q b-ac	=	599		
TOTAL FLOW	=	567	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3168
DFC b-c	=	0.1876
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2271

CRITICAL DFC = 0.32

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Feb-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	66	(pcu/hr)
q a-c	=	85	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	71	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

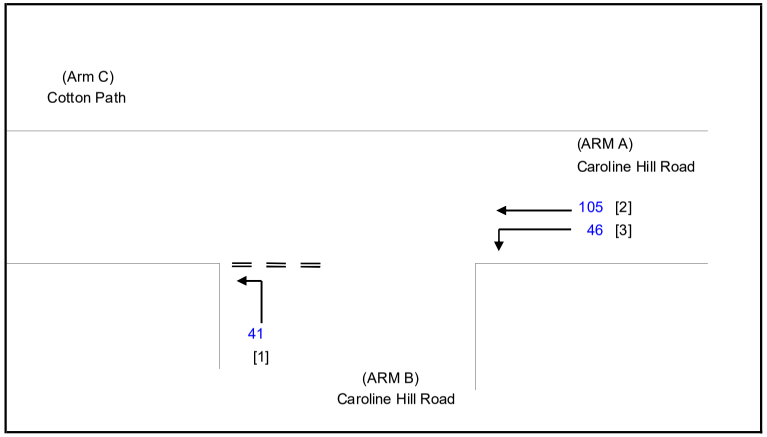
Q b-a	=	317			
Q b-c	=	723	Q b-c (O) =	723	
Q c-b	=	411			
Q b-ac	=	723			
TOTAL FLOW	=	222	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0982
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.0982

CRITICAL DFC = 0.10

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Feb-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	46	(pcu/hr)
q a-c	=	105	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	41	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

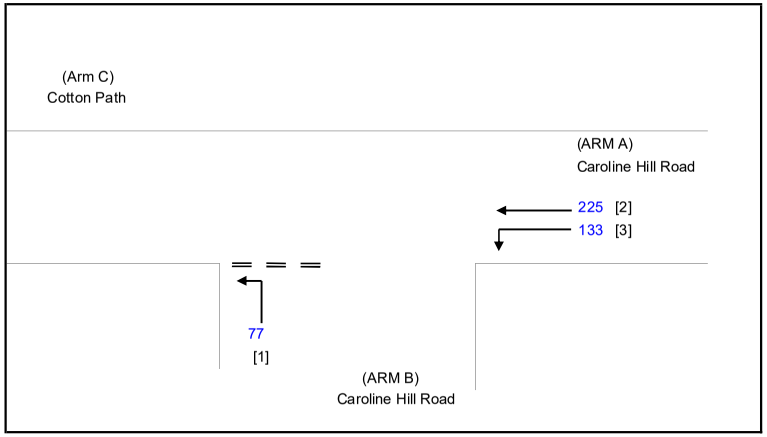
Q b-a	=	315			
Q b-c	=	720	Q b-c (O) =	720	
Q c-b	=	411			
Q b-ac	=	720			
TOTAL FLOW	=	192	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0569
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.0569

CRITICAL DFC = 0.06

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Feb-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	133	(pcu/hr)
q a-c	=	225	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	77	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

Q b-a	=	292			
Q b-c	=	674	Q b-c (O) =	674	
Q c-b	=	376			
Q b-ac	=	674			
TOTAL FLOW	=	435	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1142
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1142

CRITICAL DFC = 0.11

LLA CONSULTANCY LIMITED

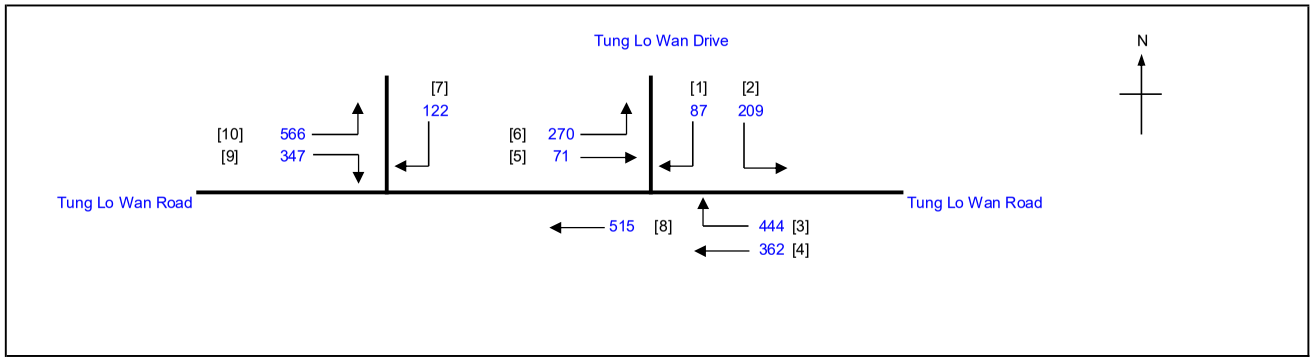
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Feb-26
	Reviewed By:	SLN	Feb-26

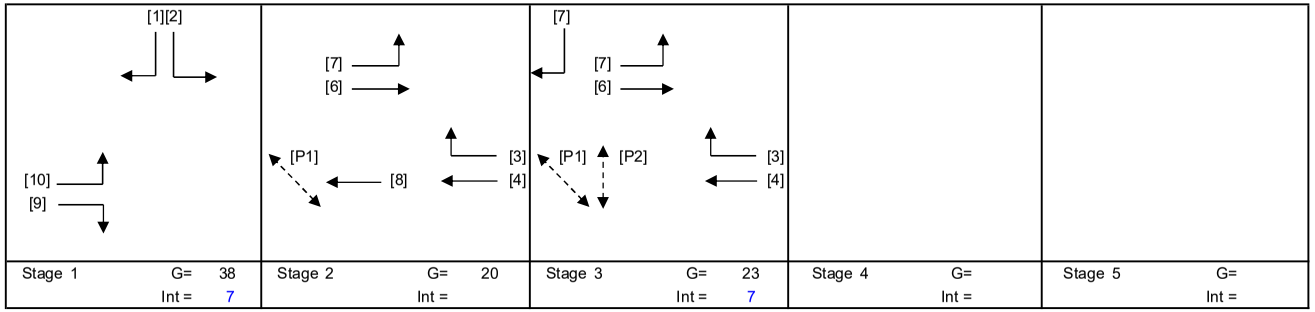
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J8 Tung Lo Wan Road / Moreton Terrace

2025 Existing AM



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.546
Loss time	L =	12 sec
Total Flow	=	2993 pcu
Co = (1.5*L+5)/(1-Y)	=	50.6 sec
Cm = L/(1-Y)	=	26.4 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	48.5 %
Cp = 0.9*L/(0.9-Y)	=	30.5 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**44 %**



Stage 1	G= 38	Stage 2	G= 20	Stage 3	G= 23	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		42	8
P2	3		9	8		22	8

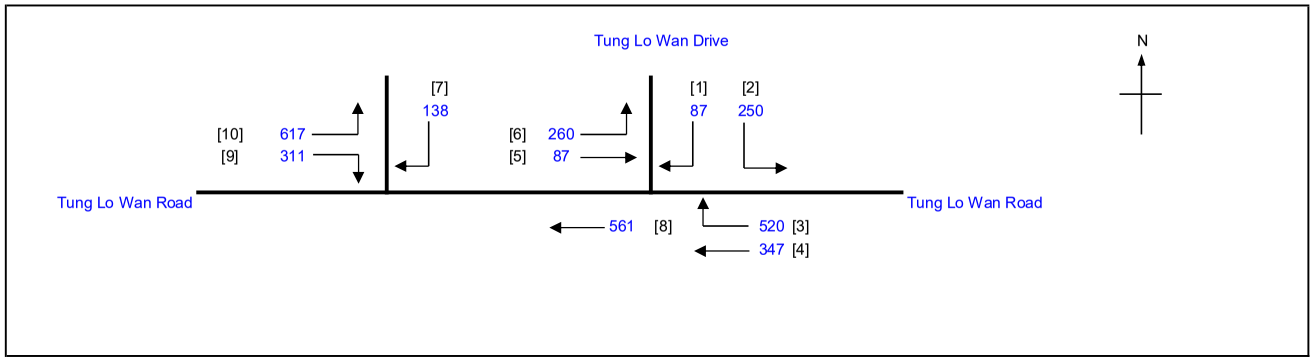
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		515		515	0.00	3970							3970	0.130			20	20	0.624	30	34
10	1	3.70	1	8		N	1985	429			429	1.00	1672							1672	0.257	0.257		39	39	0.624	36	24
9,10	1	3.50	1	13			2105	137		347	484	1.00	1887							1887	0.256			39	39	0.624	42	23
7	3	5.00	1	27		N	2115			122	122	1.00	2004							2004	0.061			9	24	0.624	18	51
4	2,3	3.70	1			N	1985		362		362	0.00	1985							1985	0.182			28	44	0.624	36	31
3,4	2,3	3.00	1	8	O		2055			444	444	1.00	1537							1537	0.289	0.289		44	44	0.624	36	21
5,6	2,3	5.00	1	13		N	2115	270	71		341	0.79	1938							1938	0.176			27	44	0.624	36	32
1,2	1	3.50	1	8		N	1965	209		87	296	1.00	1655							1655	0.179			27	39	0.624	30	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

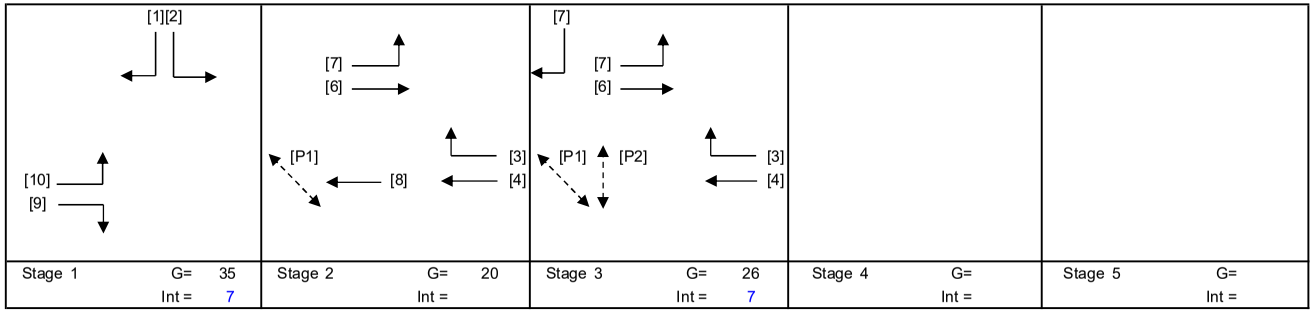
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2025 Existing PM**		
PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Feb-26
	Reviewed By:	SLN	Feb-26



No. of stages per cycle		N =	3
Cycle time		C =	95 sec
Sum(y)		Y =	0.599
Loss time		L =	12 sec
Total Flow		=	3178 pcu
Co	= (1.5*L+5)/(1-Y)	=	57.4 sec
Cm	= L/(1-Y)	=	29.9 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	35.2 %
Cp	= 0.9*L/(0.9-Y)	=	35.9 sec
Ymax	= 1-L/C	=	0.874
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**31 %**



Stage 1	G= 35	Int = 7
Stage 2	G= 20	Int =
Stage 3	G= 26	Int = 7
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		45	8
P2	3		9	8		25	8

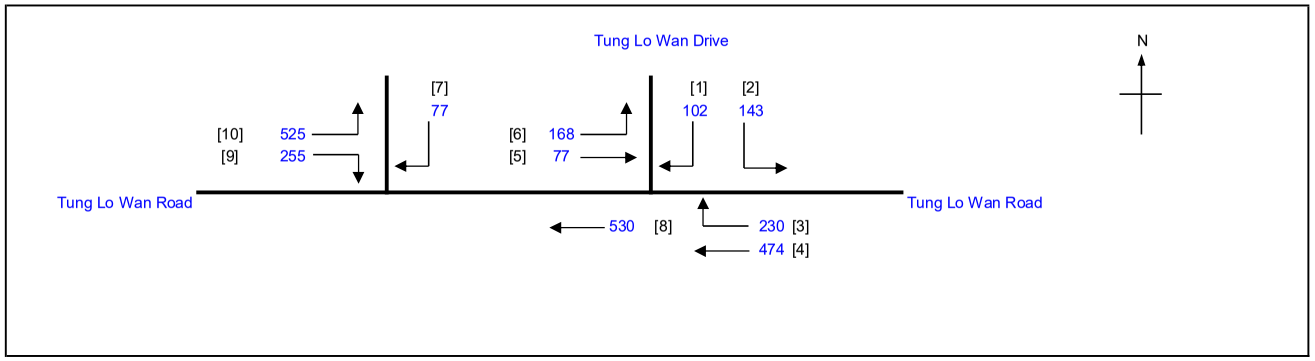
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		561		561	0.00	3970							3970	0.141			20	20	0.686	33	36
10	1	3.70	1	8		N	1985	436			436	1.00	1672							1672	0.261	0.261		36	36	0.686	42	28
9,10	1	3.50	1	13			2105	181		311	492	1.00	1887							1887	0.261			36	36	0.686	48	27
7	3	5.00	1	27		N	2115			138	138	1.00	2004							2004	0.069			10	27	0.686	18	55
4	2,3	3.70	1			N	1985		347		347	0.00	1985							1985	0.175			24	47	0.686	36	36
3,4	2,3	3.00	1	8	O		2055			520	520	1.00	1537							1537	0.338	0.338		47	47	0.686	36	21
5,6	2,3	5.00	1	13		N	2115	260	87		347	0.75	1947							1947	0.178			25	47	0.686	36	35
1,2	1	3.50	1	8		N	1965	250		87	337	1.00	1655							1655	0.204			28	36	0.686	36	34

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

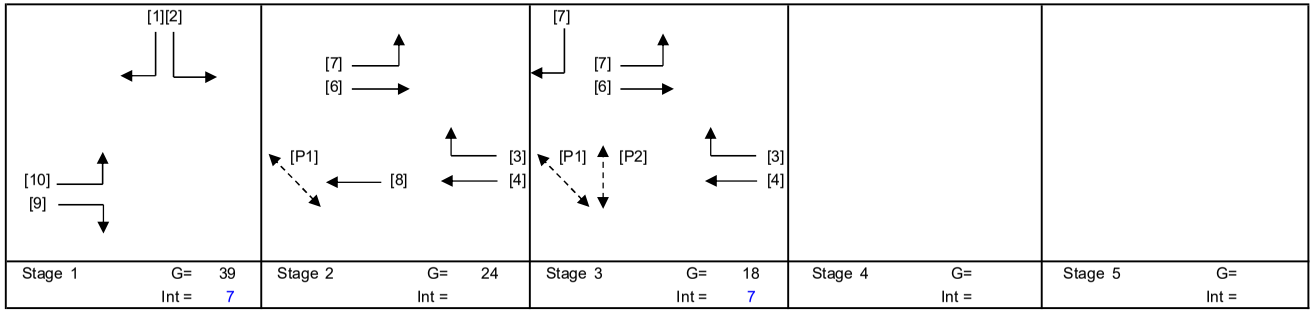
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2025 Existing Weekend**		
PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Feb-26
	Reviewed By:	SLN	Feb-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.458
Loss time	L =	12 sec
Total Flow	=	2581 pcu
Co = (1.5*L+5)/(1-Y)	=	42.4 sec
Cm = L/(1-Y)	=	22.1 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	76.8 %
Cp = 0.9*L/(0.9-Y)	=	24.4 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**72 %**



Stage 1	G= 39	Int = 7
Stage 2	G= 24	Int =
Stage 3	G= 18	Int = 7
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		17	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		530		530	0.00	3970							3970	0.134			24	24	0.524	30	29
10	1	3.70	1	8		N	1985	366			366	1.00	1672							1672	0.219			40	40	0.524	30	21
9,10	1	3.50	1	13			2105	159		255	414	1.00	1887							1887	0.219	0.219		40	40	0.524	36	21
7	3	5.00	1	27		N	2115			77	77	1.00	2004							2004	0.038			7	19	0.524	12	50
4	2,3	3.70	1			N	1985		474		474	0.00	1985							1985	0.239	0.239		43	43	0.524	36	19
3,4	2,3	3.00	1	8	O		2055			230	230	1.00	1537							1537	0.150			27	43	0.524	24	30
5,6	2,3	5.00	1	13		N	2115	168	77		245	0.69	1960							1960	0.125			23	43	0.524	24	32
1,2	1	3.50	1	8		N	1965	143		102	245	1.00	1655							1655	0.148			27	40	0.524	24	30

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

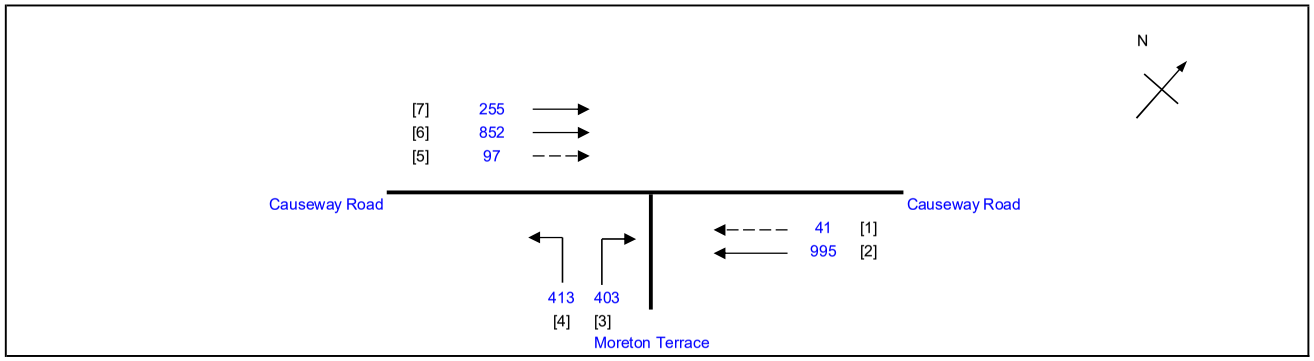
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

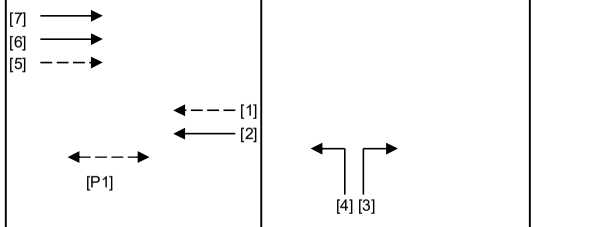
J9 Moreton Terrace / Causeway Road

2025 Existing AM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.554
Loss time	L =	10 sec
Total Flow	=	3056 pcu
Co = (1.5*L+5)/(1-Y)	=	44.8 sec
Cm = L/(1-Y)	=	22.4 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	49.0 %
Cp = 0.9*L/(0.9-Y)	=	26.0 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**45 %**



Stage 1 G= 61 Int = 5
Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		268		268	0.00	1985			0.4	-1191			794	0.338			52	62	0.619	18	19
2	1	4.00	1				2155		727		727	0.00	2155							2155	0.337			52	62	0.619	48	16
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	62	0.619	6	80
4	2	3.50	1	9		N	1965	251			251	1.00	1684							1684	0.149	0.149		23	23	0.619	30	35
3,4	2	3.30	1	15			2085	162		119	281	1.00	1895							1895	0.148			23	23	0.619	30	35
3	2	3.50	1	15			2105			284	284	1.00	1914							1914	0.148			23	23	0.619	30	35
7	1	3.50	1			N	1965		255		255	0.00	1965							1965	0.130			20	62	0.619	30	37
6	1	3.50	1				2105		852		852	0.00	2105							2105	0.405	0.405		62	62	0.619	42	11
5	1	3.00	1				2055		97		97	0.00	2055							2055	0.047			7	62	0.619	12	55

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

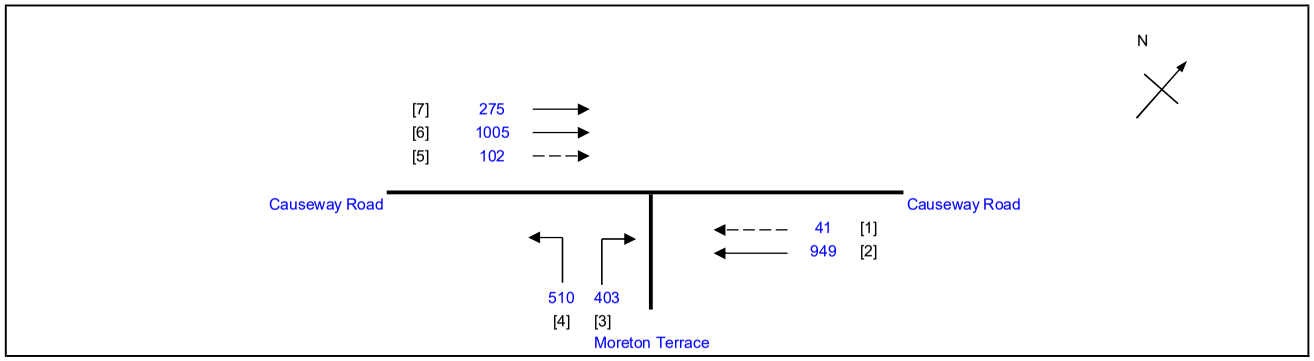
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

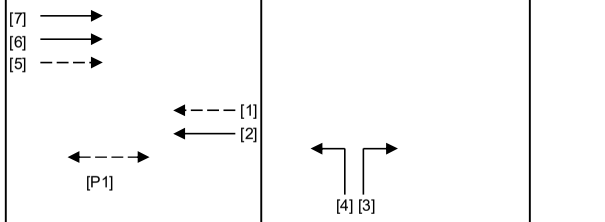
J9 Moreton Terrace / Causeway Road

2025 Existing PM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.644
Loss time	L =	10 sec
Total Flow	=	3285 pcu
Co = (1.5*L+5)/(1-Y)	=	56.1 sec
Cm = L/(1-Y)	=	28.1 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	28.2 %
Cp = 0.9*L/(0.9-Y)	=	35.1 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**25 %**



Stage 1 G= 62 Int = 5
Stage 2 G= 21 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		57	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		256		256	0.00	1985			0.4	-1191			794	0.322			43	63	0.719	24	31
2	1	4.00	1				2155		693		693	0.00	2155							2155	0.322			42	63	0.719	60	24
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	63	0.719	6	114
4	2	3.50	1	9		N	1965	280			280	1.00	1684							1684	0.166	0.166		22	22	0.719	36	41
3,4	2	3.30	1	15			2085	230		85	315	1.00	1895							1895	0.166			22	22	0.719	36	40
3	2	3.50	1	15			2105			318	318	1.00	1914							1914	0.166			22	22	0.719	36	40
7	1	3.50	1			N	1965		275		275	0.00	1965							1965	0.140			18	63	0.719	36	43
6	1	3.50	1				2105		1005		1005	0.00	2105							2105	0.477	0.477		63	63	0.719	48	12
5	1	3.00	1				2055		102		102	0.00	2055							2055	0.050			7	63	0.719	18	68

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

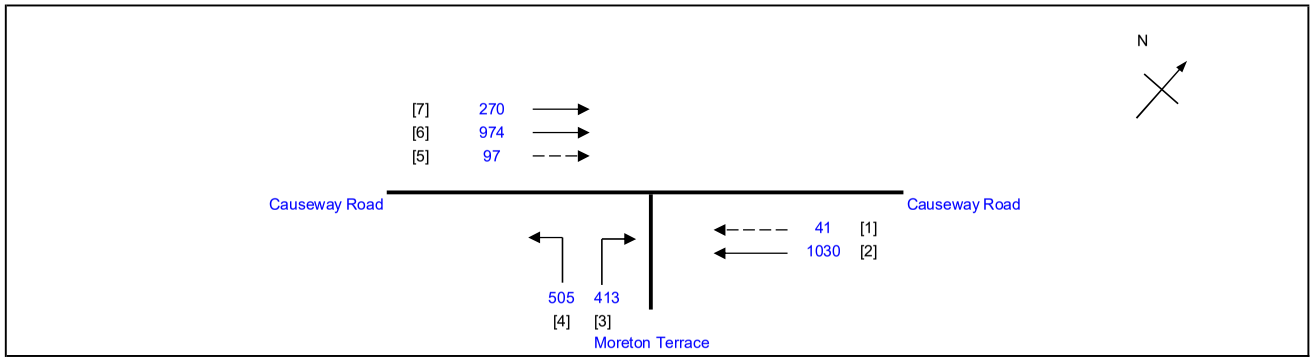
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

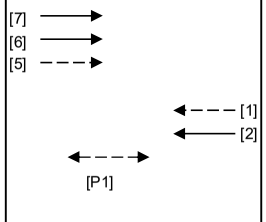
J9 Moreton Terrace / Causeway Road

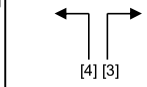
2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.630
Loss time	L =	10 sec
Total Flow	=	3330 pcu
Co = (1.5*L+5)/(1-Y)	=	54.0 sec
Cm = L/(1-Y)	=	27.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	31.0 %
Cp = 0.9*L/(0.9-Y)	=	33.3 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**28 %**





Stage 1 G= 61 Int = 5

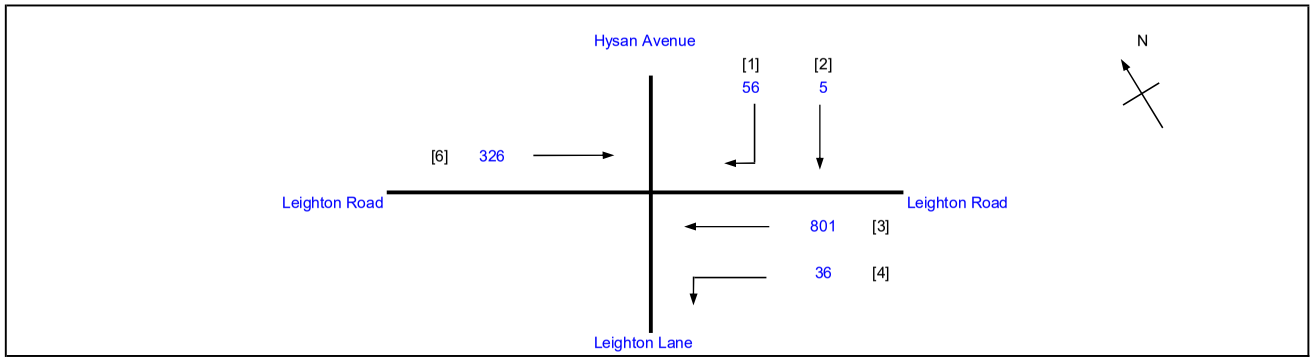
Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

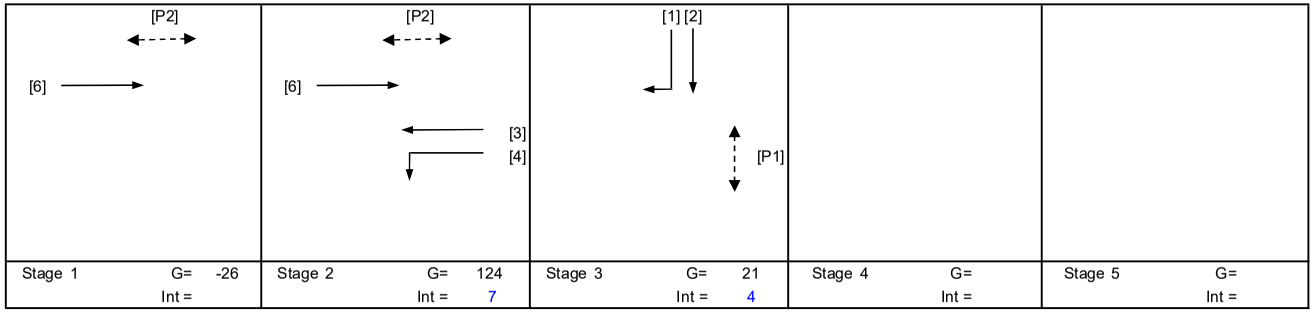
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		277		277	0.00	1985			0.4	-1191			794	0.349			47	62	0.704	18	27
2	1	4.00	1				2155		753		753	0.00	2155							2155	0.349			47	62	0.704	60	20
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	62	0.704	6	107
4	2	3.50	1	9		N	1965	281			281	1.00	1684							1684	0.167			23	23	0.704	30	40
3,4	2	3.30	1	15			2085	224		93	317	1.00	1895							1895	0.167	0.167		23	23	0.704	36	38
3	2	3.50	1	15			2105			320	320	1.00	1914							1914	0.167			23	23	0.704	36	38
7	1	3.50	1			N	1965		270		270	0.00	1965							1965	0.137			19	62	0.704	36	42
6	1	3.50	1				2105		974		974	0.00	2105							2105	0.463	0.463		62	62	0.704	48	12
5	1	3.00	1				2055		97		97	0.00	2055							2055	0.047			6	62	0.704	18	67

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
		FILENAME : J10_LR_HA_LL.xlsx	Checked By:	SLN	Feb-26
J10 Leighton Road / Hysan Avenue / Leighton Lane			Reviewed By:	SLN	Feb-26



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.166
Loss time	L =	31 sec
Total Flow	=	1224 pcu
Co = (1.5*L+5)/(1-Y)	=	61.7 sec
Cm = L/(1-Y)	=	37.2 sec
Yult	=	0.668
R.C.ult = (Yult-Y)/Y*100%	=	302.3 %
Cp = 0.9*L/(0.9-Y)	=	38.0 sec
Ymax = 1-L/C	=	0.762
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**313 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	36	365		401	0.09	1913							1913	0.210			125	125	0.218	0	0
3	2	3.20	1				2075		436		436	0.00	2075							2075	0.210			125	125	0.218	0	0
6	1,2	3.50	1			N	1965		326		326	0.00	1965							1965	0.166	0.166		99	99	0.218	12	4
1,2	3	3.30	1	17		N	1945		5	27	32	0.84	1810							1810	0.018			11	21	0.218	6	53
1	3	3.00	1	10	O		2055			29	29	1.00	1587							1587	0.018			11	21	0.218	0	53
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

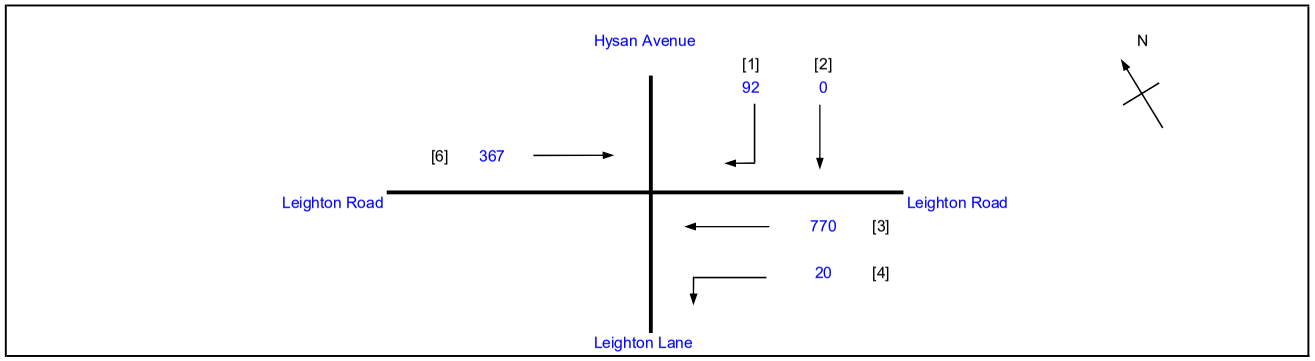
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

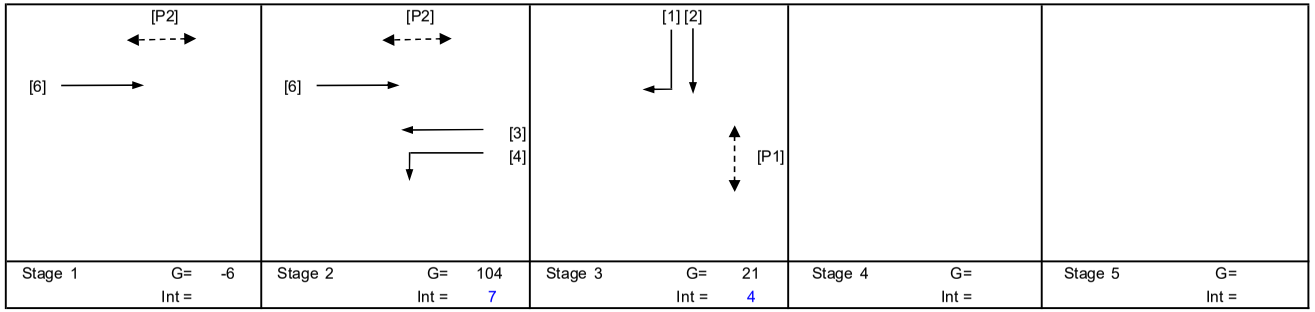
J10 Leighton Road / Hysan Avenue / Leighton Lane

2025 Existing PM

PROJECT NO.:	40920
FILENAME :	J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.187
Loss time		L =	31 sec
Total Flow		=	1249 pcu
Co	= (1.5*L+5)/(1-Y)	=	63.3 sec
Cm	= L/(1-Y)	=	38.1 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	257.4 %
Cp	= 0.9*L/(0.9-Y)	=	39.1 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**267 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	20	362		382	0.05	1935							1935	0.197			105	105	0.245	12	3
3	2	3.20	1				2075		408		408	0.00	2075							2075	0.197			104	105	0.245	12	3
6	1,2	3.50	1			N	1965		367		367	0.00	1965							1965	0.187	0.187		99	99	0.245	18	4
1,2	3	3.30	1	17		N	1945		0	48	48	1.00	1787							1787	0.027			14	21	0.245	6	50
1	3	3.00	1	10	O		2055			44	44	1.00	1587							1587	0.028			15	21	0.245	6	50
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

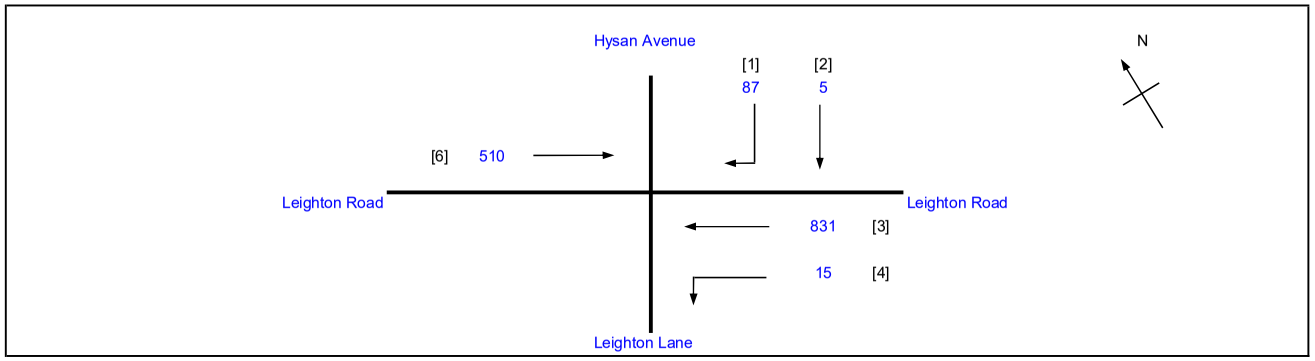
		INITIALS	DATE
Prepared By:		SKL	Feb-26
Checked By:		SLN	Feb-26
Reviewed By:		SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

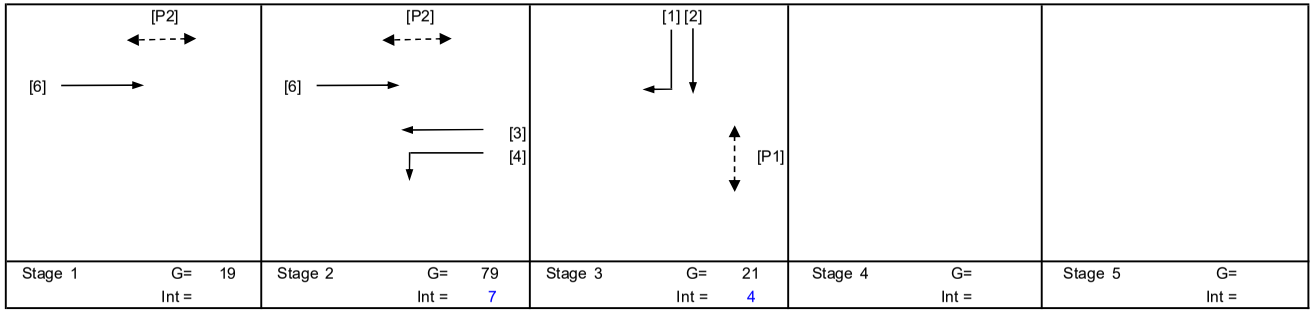
J10 Leighton Road / Hysan Avenue / Leighton Lane

2025 Existing Weekend

PROJECT NO.:	40920
FILENAME :	J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.260
Loss time		L =	31 sec
Total Flow		=	1448 pcu
Co	= (1.5*L+5)/(1-Y)	=	69.6 sec
Cm	= L/(1-Y)	=	41.9 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	157.2 %
Cp	= 0.9*L/(0.9-Y)	=	43.6 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**164 %**



Stage 1	G= 19	Int =	Stage 2	G= 79	Int = 7	Stage 3	G= 21	Int = 4	Stage 4	G=	Int =	Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	15	395		410	0.04	1944							1944	0.211			80	80	0.341	30	11
3	2	3.20	1				2075		436		436	0.00	2075							2075	0.210			80	80	0.341	36	12
6	1,2	3.50	1			N	1965		510		510	0.00	1965							1965	0.260	0.260		99	99	0.341	24	5
1,2	3	3.30	1	17		N	1945		5	44	49	0.90	1802							1802	0.027			10	21	0.341	6	57
1	3	3.00	1	10	O		2055			43	43	1.00	1587							1587	0.027			10	21	0.341	6	58
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

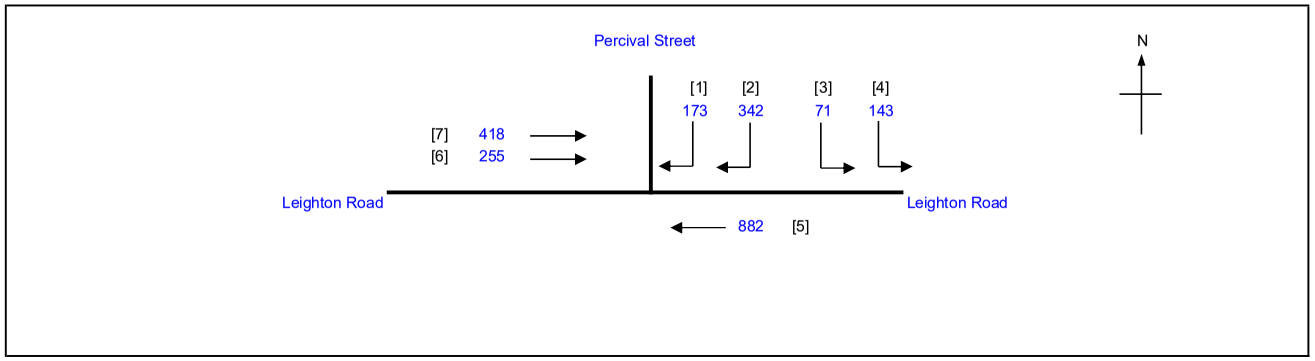
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

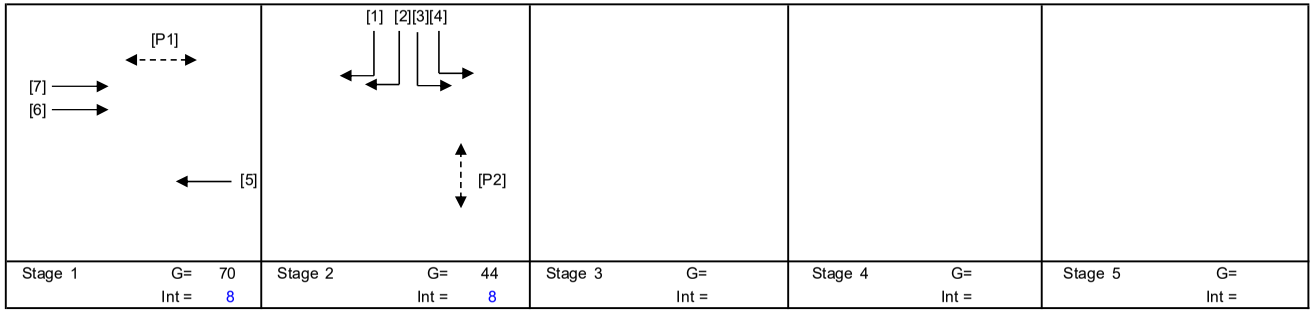
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.477
Loss time	L =	14 sec
Total Flow	=	2284 pcu
Co = (1.5*L+5)/(1-Y)	=	49.7 sec
Cm = L/(1-Y)	=	26.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	66.7 %
Cp = 0.9*L/(0.9-Y)	=	29.8 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**68 %**



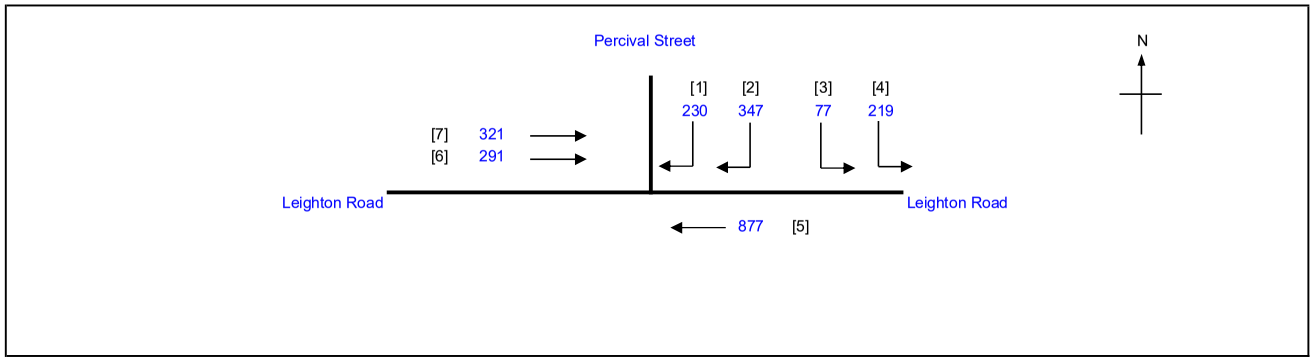
Stage 1	G= 70	Int = 8
Stage 2	G= 44	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		71	7
P2	2		5	12		40	12

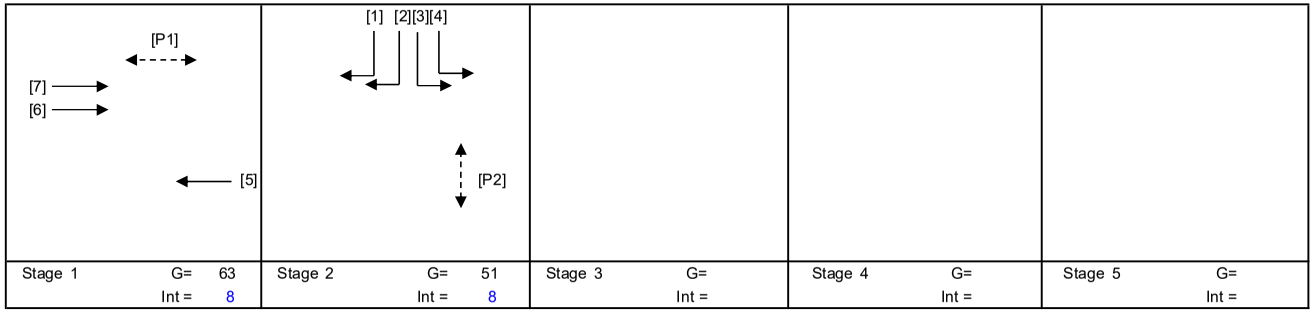
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
5	1	3.50	1			N	1965		431		431	0.00	1965			0.8	-393			1572	0.274			67	71	0.534	42	21
5	1	3.00	1				2055		451		451	0.00	2055			0.8	-411			1644	0.274			67	71	0.534	42	21
6,7	1	2.50	1			N	1865		324		324	0.00	1865			0.6	-746			1119	0.290			70	71	0.534	30	20
6,7	1	2.50	1				2005		349		349	0.00	2005			0.6	-802			1203	0.290	0.290		71	71	0.534	30	20
3,4	2	4.00	1	25		N	2015	214			214	1.00	1901			0.7	-570			1331	0.161			39	45	0.534	30	39
1,2	2	5.00	1	25		N	2115			298	298	1.00	1995			0.8	-399			1596	0.187	0.187		45	45	0.534	42	34
1,2	2	3.30	1	20			2085			217	217	1.00	1940			0.6	-776			1164	0.187			45	45	0.534	30	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
J11 Leighton Road / Percival Street / Hysan Avenue		FILENAME : J11_LR_PS_HA.xlsx	Checked By:	SLN	Feb-26
			Reviewed By:	SLN	Feb-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.495
Loss time	L =	14 sec
Total Flow	=	2362 pcu
Co = (1.5*L+5)/(1-Y)	=	51.5 sec
Cm = L/(1-Y)	=	27.7 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	60.5 %
Cp = 0.9*L/(0.9-Y)	=	31.1 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**62 %**



Stage 1	G= 63	Stage 2	G= 51	Stage 3	G=	Stage 4	G=	Stage 5	G=
	Int = 8		Int = 8		Int =		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		64	7
P2	2		5	12		47	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		429		429	0.00	1965			0.8	-393			1572	0.273	0.273		64	64	0.555	42	23
5	1	3.00	1				2055		448		448	0.00	2055			0.8	-411			1644	0.273			64	64	0.555	48	23
6,7	1	2.50	1			N	1865		295		295	0.00	1865			0.6	-746			1119	0.264			62	64	0.555	30	26
6,7	1	2.50	1				2005		317		317	0.00	2005			0.6	-802			1203	0.264			62	64	0.555	36	25
3,4	2	4.00	1	25		N	2015	296			296	1.00	1901			0.7	-570			1331	0.222	0.222		52	52	0.555	36	31
1,2	2	5.00	1	25		N	2115			334	334	1.00	1995			0.8	-399			1596	0.209			49	52	0.555	42	32
1,2	2	3.30	1	20			2085			243	243	1.00	1940			0.6	-776			1164	0.209			49	52	0.555	30	33

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

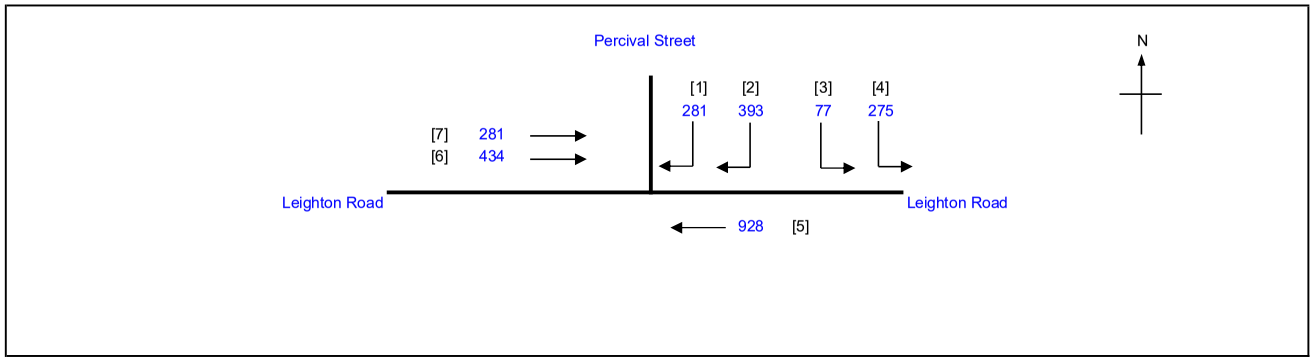
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

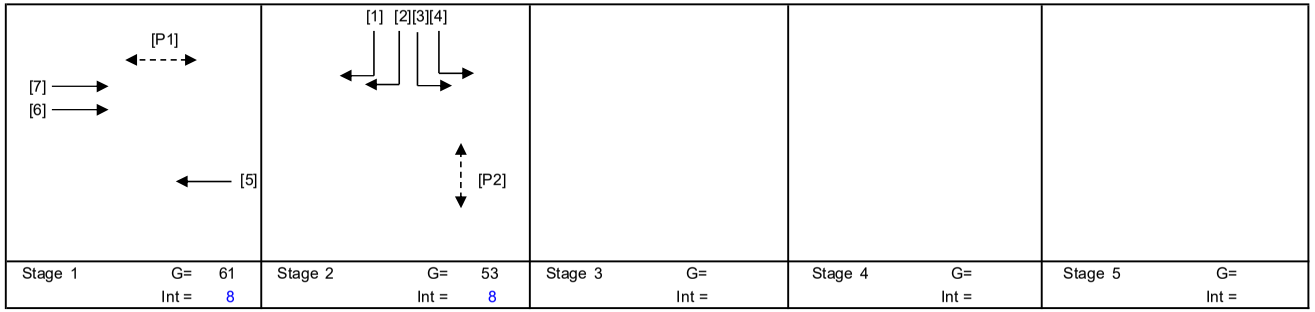
J11 Leighton Road / Percival Street / Hysan Avenue

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.573
Loss time		L =	14 sec
Total Flow		=	2669 pcu
Co	= (1.5*L+5)/(1-Y)	=	60.9 sec
Cm	= L/(1-Y)	=	32.8 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	38.8 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.892
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**40 %**



Stage 1	G= 61	Stage 2	G= 53	Stage 3	G=	Stage 4	G=	Stage 5	G=
	Int = 8		Int = 8		Int =		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		62	7
P2	2		5	12		49	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		454		454	0.00	1965			0.8	-393			1572	0.289			58	62	0.642	54	29
5	1	3.00	1				2055		474		474	0.00	2055			0.8	-411			1644	0.288			58	62	0.642	54	29
6,7	1	2.50	1			N	1865		345		345	0.00	1865			0.6	-746			1119	0.308	0.308		62	62	0.642	36	28
6,7	1	2.50	1				2005		370		370	0.00	2005			0.6	-802			1203	0.308			62	62	0.642	36	28
3,4	2	4.00	1	25		N	2015	352			352	1.00	1901			0.7	-570			1331	0.264	0.264		54	54	0.642	42	33
1,2	2	5.00	1	25		N	2115			390	390	1.00	1995			0.8	-399			1596	0.244			49	54	0.642	48	34
1,2	2	3.30	1	20			2085			284	284	1.00	1940			0.6	-776			1164	0.244			49	54	0.642	36	36

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

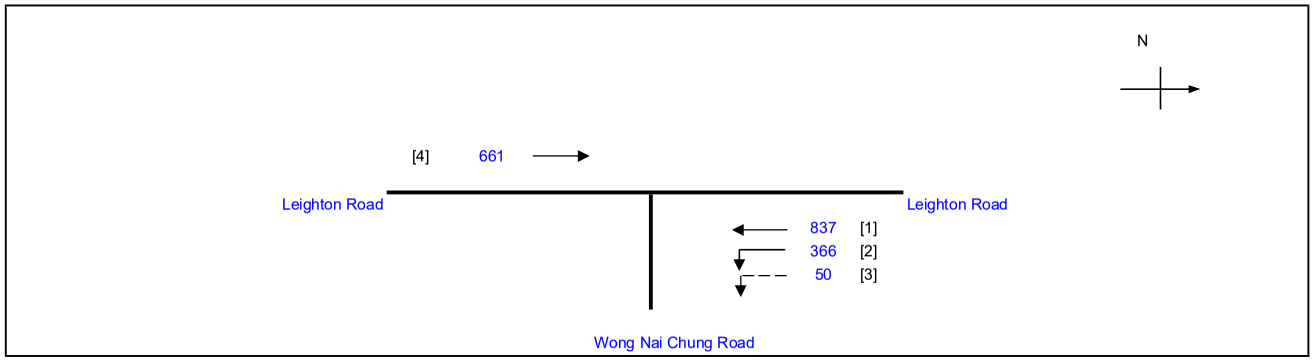
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

2025 Existing AM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.566
Loss time		L =	12 sec
Total Flow		=	1914 pcu
Co	= (1.5*L+5)/(1-Y)	=	53.0 sec
Cm	= L/(1-Y)	=	27.7 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	43.0 %
Cp	= 0.9*L/(0.9-Y)	=	32.4 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**44 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	25	9
P2	2		7	7	0	27	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	301			301	1.00	1828							1828	0.165			34	90	0.624	48	44
2	1	3.50	1	25			2105	65			65	1.00	1986			0.2	-1589			397	0.164			34	90	0.624	12	64
3	2	3.00	1	40		N	1915	50			50	1.00	1846			0.2	-1477			369	0.136	0.136		28	28	0.624	6	75
1	1	3.00	1			N	1915		660		660	0.00	1915			0.8	-383			1532	0.431	0.431		90	90	0.624	42	12
1	1	3.00	1				2055		177		177	0.00	2055			0.2	-1644			411	0.431			90	90	0.624	6	19
4	1	3.50	1			N	1965		106		106	0.00	1965			0.2	-1572			393	0.270			56	90	0.624	12	42
4	1	3.00	1				2055		278		278	0.00	2055			0.5	-1028			1027	0.271			56	90	0.624	30	32
4	1	3.00	1				2055		277		277	0.00	2055			0.5	-1028			1027	0.270			56	90	0.624	30	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

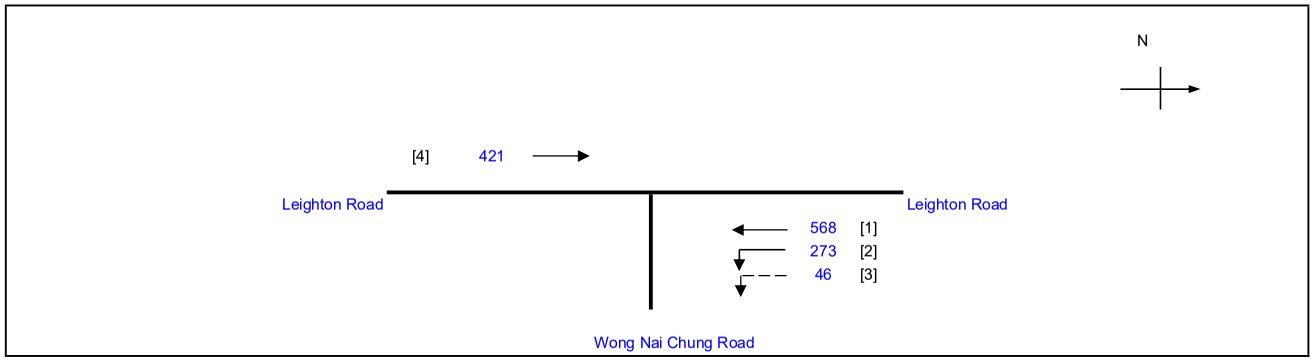
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

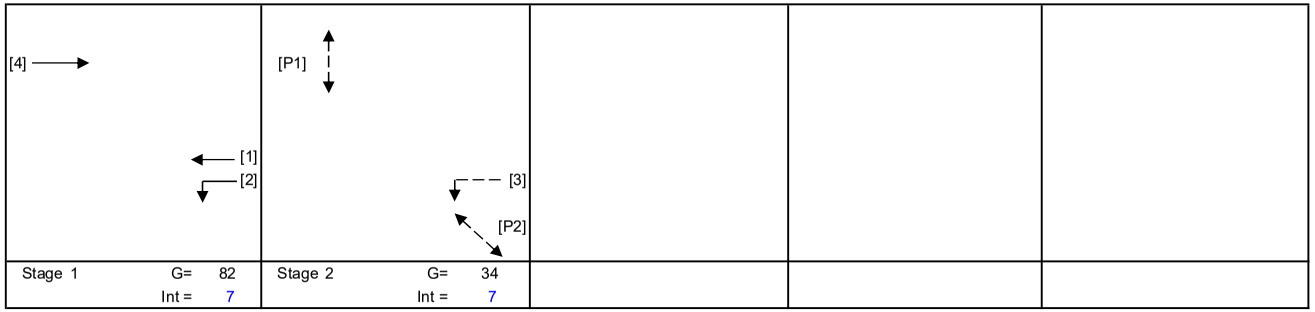
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.417
Loss time	L =	12 sec
Total Flow	=	1308 pcu
Co = (1.5*L+5)/(1-Y)	=	39.5 sec
Cm = L/(1-Y)	=	20.6 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	94.2 %
Cp = 0.9*L/(0.9-Y)	=	22.4 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**96 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	32	9
P2	2		7	7	0	34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	224			224	1.00	1828							1828	0.123			35	83	0.460	30	39
2	1	3.50	1	25			2105	49			49	1.00	1986			0.2	-1589			397	0.123			35	83	0.460	6	49
3	2	3.00	1	40		N	1915	46			46	1.00	1846			0.2	-1477			369	0.125	0.125		35	35	0.460	6	49
1	1	3.00	1			N	1915		448		448	0.00	1915			0.8	-383			1532	0.292	0.292		83	83	0.460	30	12
1	1	3.00	1				2055		120		120	0.00	2055			0.2	-1644			411	0.292			83	83	0.460	6	16
4	1	3.50	1			N	1965		68		68	0.00	1965			0.2	-1572			393	0.172			49	83	0.460	6	37
4	1	3.00	1				2055		177		177	0.00	2055			0.5	-1028			1027	0.172			49	83	0.460	18	31
4	1	3.00	1				2055		177		177	0.00	2055			0.5	-1028			1027	0.172			49	83	0.460	18	31

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

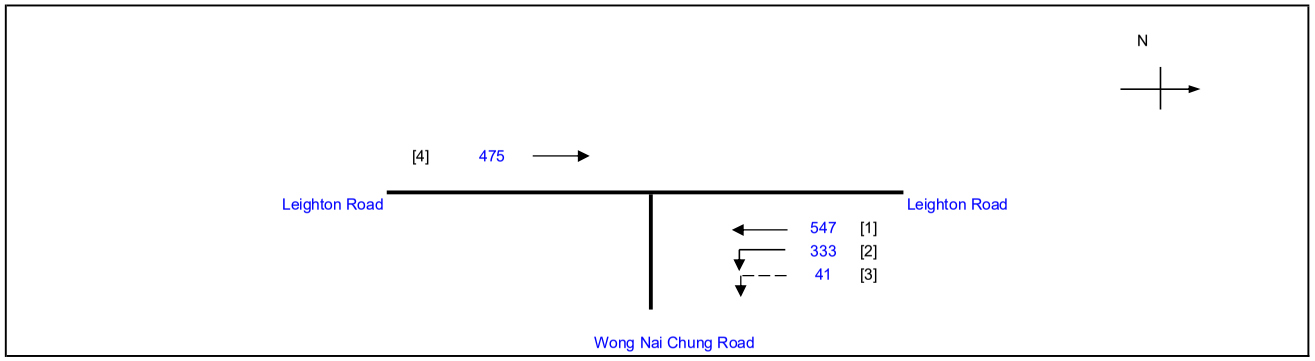
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

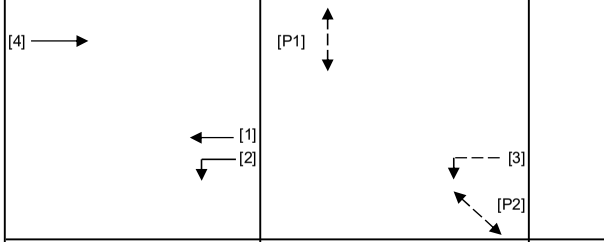
J12 Leighton Road / Wong Nai Chung Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.393
Loss time		L =	12 sec
Total Flow		=	1396 pcu
Co	= (1.5*L+5)/(1-Y)	=	37.9 sec
Cm	= L/(1-Y)	=	19.8 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	105.9 %
Cp	= 0.9*L/(0.9-Y)	=	21.3 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**108 %**



Stage 1 G= 84 Int = 7
Stage 2 G= 32 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	30	9
P2	2		7	7	0	32	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	274			274	1.00	1828							1828	0.150			45	85	0.433	36	31
2	1	3.50	1	25			2105	59			59	1.00	1986			0.2	-1589			397	0.149			45	85	0.433	6	39
3	2	3.00	1	40		N	1915	41			41	1.00	1846			0.2	-1477			369	0.111	0.111		33	33	0.433	6	49
1	1	3.00	1			N	1915		431		431	0.00	1915			0.8	-383			1532	0.281			84	85	0.433	30	11
1	1	3.00	1				2055		116		116	0.00	2055			0.2	-1644			411	0.282	0.282		85	85	0.433	6	15
4	1	3.50	1			N	1965		76		76	0.00	1965			0.2	-1572			393	0.193			58	85	0.433	6	29
4	1	3.00	1				2055		200		200	0.00	2055			0.5	-1028			1027	0.194			58	85	0.433	18	25
4	1	3.00	1				2055		200		200	0.00	2055			0.5	-1028			1027	0.194			58	85	0.433	18	25

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Feb-26
Checked By:		SLN	Feb-26
Reviewed By:		SLN	Feb-26

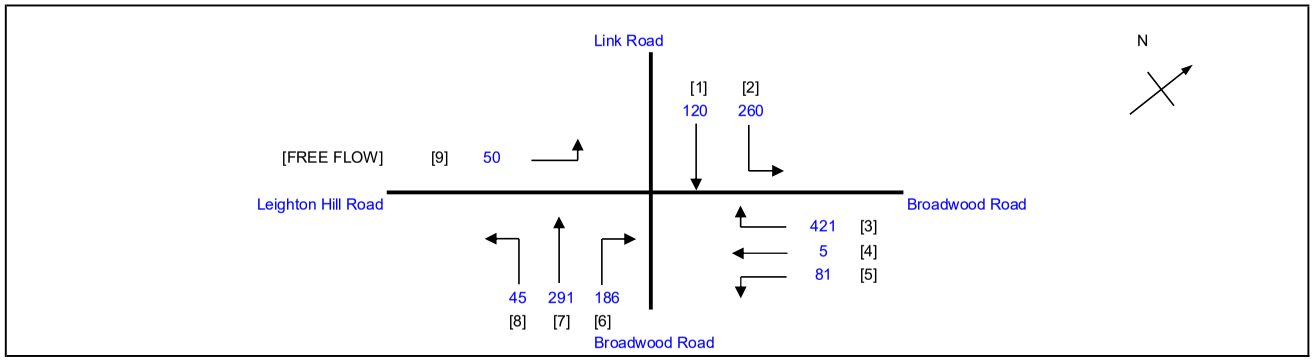
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J13 Broadwood Road / Link Road

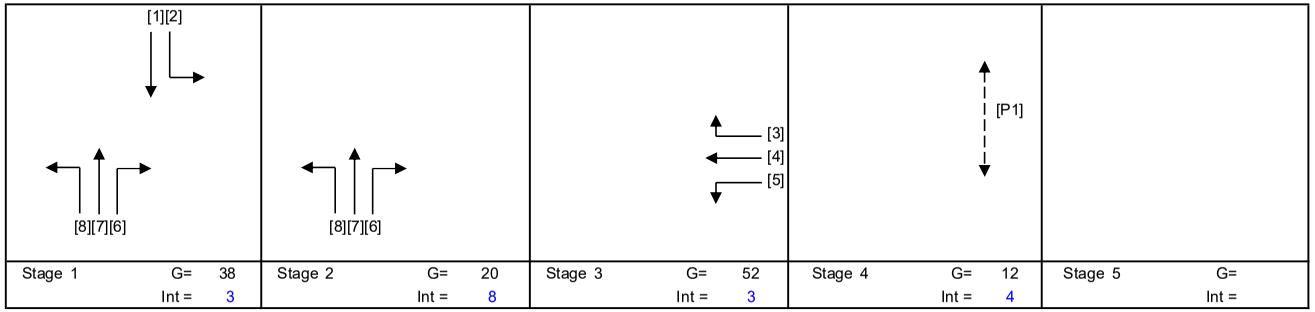
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.568
Loss time	L =	27 sec
Total Flow	=	1409 pcu
Co = (1.5*L+5)/(1-Y)	=	105.3 sec
Cm = L/(1-Y)	=	62.5 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	22.9 %
Cp = 0.9*L/(0.9-Y)	=	73.1 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**28 %**



Stage 1	G= 38	Int = 3
Stage 2	G= 20	Int = 8
Stage 3	G= 52	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	260	120		380	0.68	1940							1940	0.196	0.196	15	39	39	0.703	60	48
7,8	1,2	3.00	1	15		N	1915	45	291		336	0.13	1890							1890	0.178			35	60	0.703	54	51
6	2	3.00	1	8			2055			186	186	1.00	1731							1731	0.107	0.107		21	21	0.703	36	65
3,4,5	3	3.50	1	60		N	1965	81	5	421	507	0.99	1918							1918	0.264	0.264		53	53	0.703	72	39
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

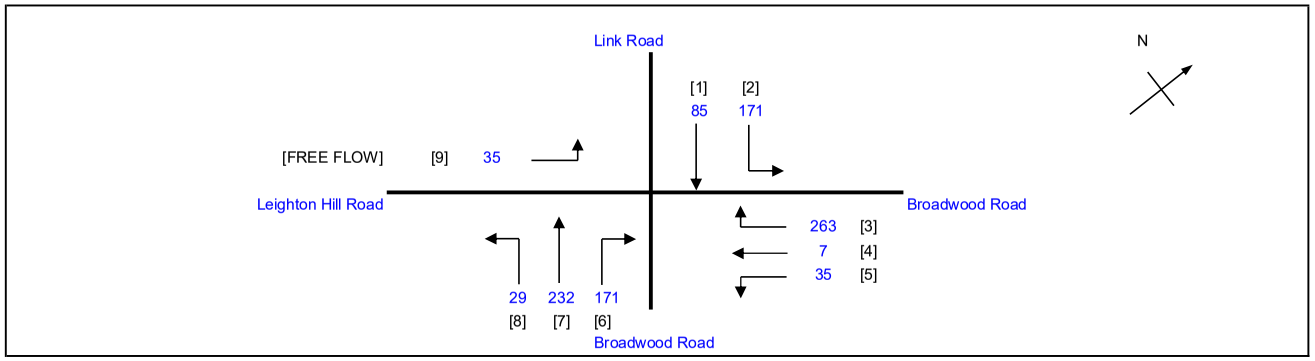
		INITIALS	DATE
Prepared By:		SKL	Feb-26
Checked By:		SLN	Feb-26
Reviewed By:		SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

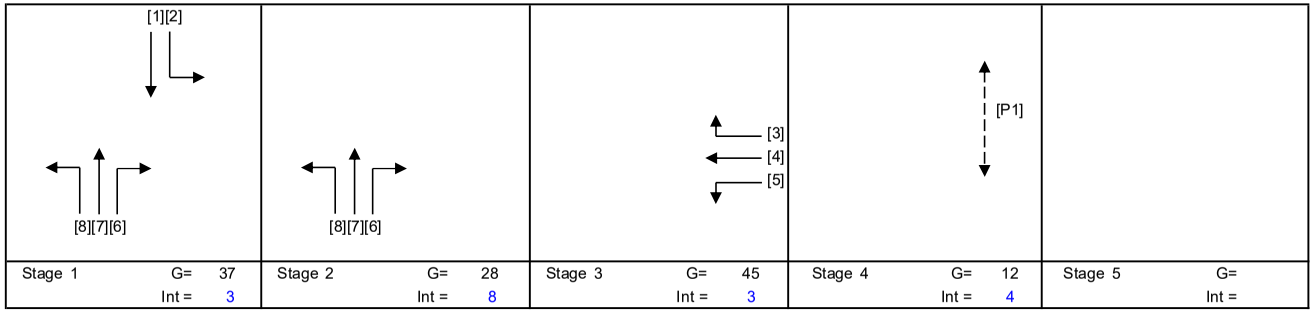
J13 Broadwood Road / Link Road

2025 Existing PM

PROJECT NO.: 40920
FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.390
Loss time	L =	27 sec
Total Flow	=	993 pcu
Co = (1.5*L+5)/(1-Y)	=	74.6 sec
Cm = L/(1-Y)	=	44.2 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	79.0 %
Cp = 0.9*L/(0.9-Y)	=	47.6 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**86 %**



Stage 1	G= 37	Int = 3
Stage 2	G= 28	Int = 8
Stage 3	G= 45	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	171	85		256	0.67	1941							1941	0.132	0.132		38	38	0.483	42	41
7,8	1,2	3.00	1	15		N	1915	29	232		261	0.11	1894							1894	0.138			40	67	0.483	42	40
6	2	3.00	1	8			2055			171	171	1.00	1731							1731	0.099	0.099		29	29	0.483	30	48
3,4,5	3	3.50	1	60		N	1965	35	7	263	305	0.98	1918							1918	0.159	0.159		46	46	0.483	42	36
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

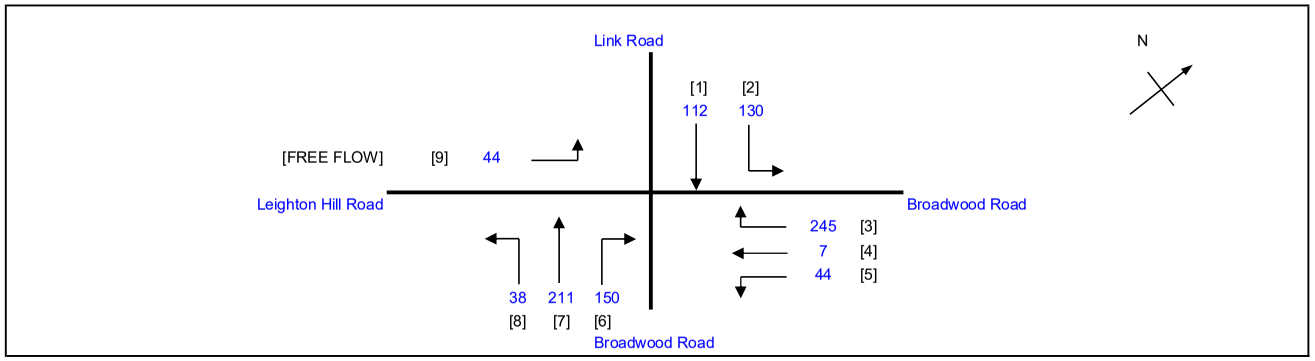
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

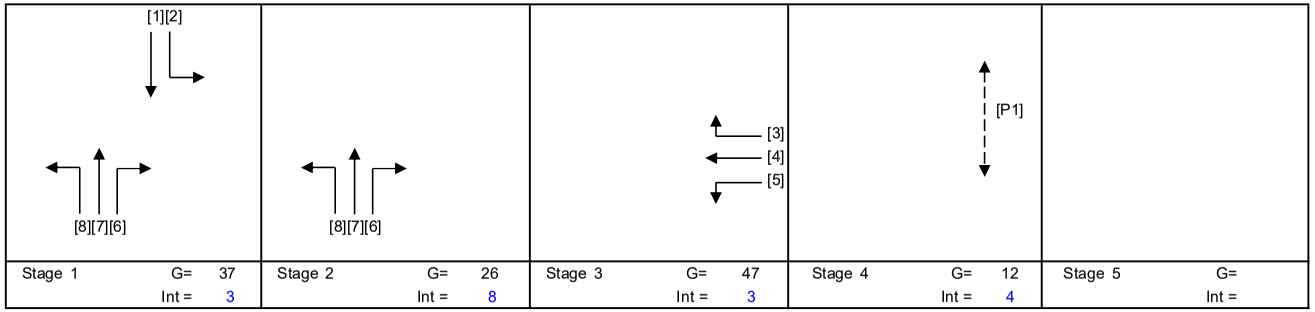
J13 Broadwood Road / Link Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.365
Loss time	L =	27 sec
Total Flow	=	937 pcu
Co = (1.5*L+5)/(1-Y)	=	71.7 sec
Cm = L/(1-Y)	=	42.5 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	90.9 %
Cp = 0.9*L/(0.9-Y)	=	45.5 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**99 %**



Stage 1	G= 37	Int = 3
Stage 2	G= 26	Int = 8
Stage 3	G= 47	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	130	112		242	0.54	1945							1945	0.124	0.124	15	38	38	0.453	36	40
7,8	1,2	3.00	1	15		N	1915	38	211		249	0.15	1886							1886	0.132			41	65	0.453	36	39
6	2	3.00	1	8			2055			150	150	1.00	1731							1731	0.087	0.087		27	27	0.453	24	49
3,4,5	3	3.50	1	60		N	1965	44	7	245	296	0.98	1918							1918	0.154	0.154		48	48	0.453	42	34
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

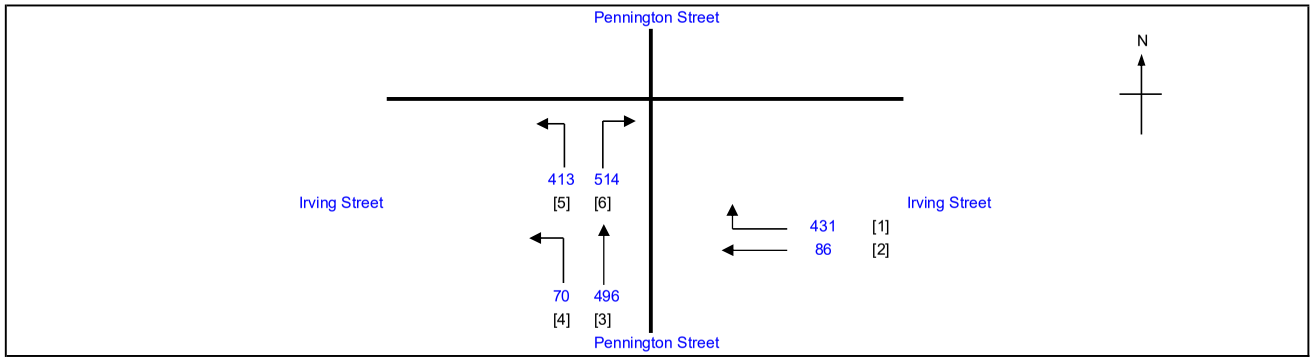
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

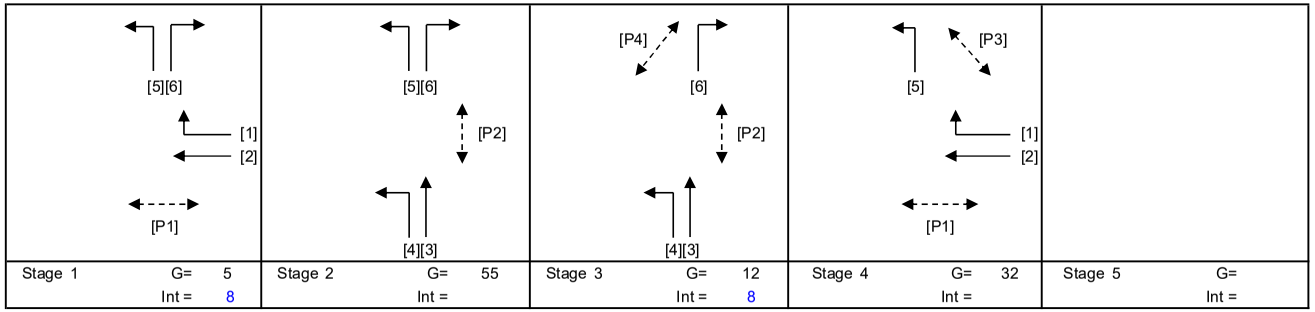
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.229
Loss time		L =	14 sec
Total Flow		=	2010 pcu
Co	= (1.5*L+5)/(1-Y)	=	33.7 sec
Cm	= L/(1-Y)	=	18.2 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	247.1 %
Cp	= 0.9*L/(0.9-Y)	=	18.8 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**247 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		37	8
P2	2,3		8	14		61	14
P3	4		7	7		25	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		78		78	0.00	1915			0.5	-958			957	0.082			38	38	0.259	6	30
1,2	1,4	3.00	1	16			2055		8	145	153	0.95	1887							1887	0.081			38	38	0.259	18	29
1	1,4	3.00	1	13			2055			150	150	1.00	1842							1842	0.081			38	38	0.259	18	29
1	1,4	3.00	1	10		N	1915			136	136	1.00	1665							1665	0.082	0.082		38	38	0.259	18	29
3,4	2,3	3.80	1	5		N	1995	70	203		273	0.26	1853							1853	0.147	0.147		68	68	0.259	18	12
3	2,3	3.80	1			N	1995		293		293	0.00	1995							1995	0.147			68	68	0.259	24	12
5	1,2,4	3.50	1	10			2105	413			413	1.00	1830							1830	0.226			104	94	0.259	6	2
6	1,2,4	3.50	1	10			2105			274	274	1.00	1830							1830	0.150			69	94	0.259	18	12
6	1,2,4	3.50	1	6.5		N	1965			240	240	1.00	1597							1597	0.150			70	94	0.259	18	12

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

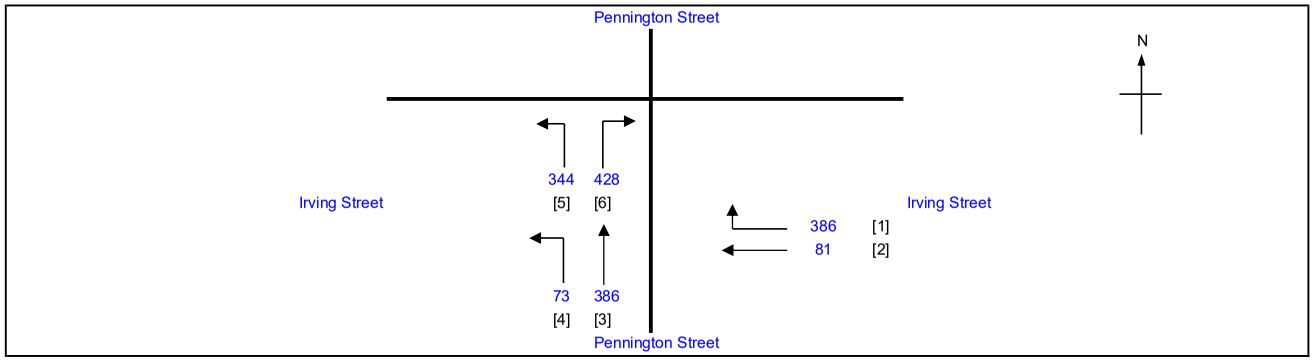
		INITIALS	DATE
Prepared By:		SKL	Feb-26
Checked By:		SLN	Feb-26
Reviewed By:		SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

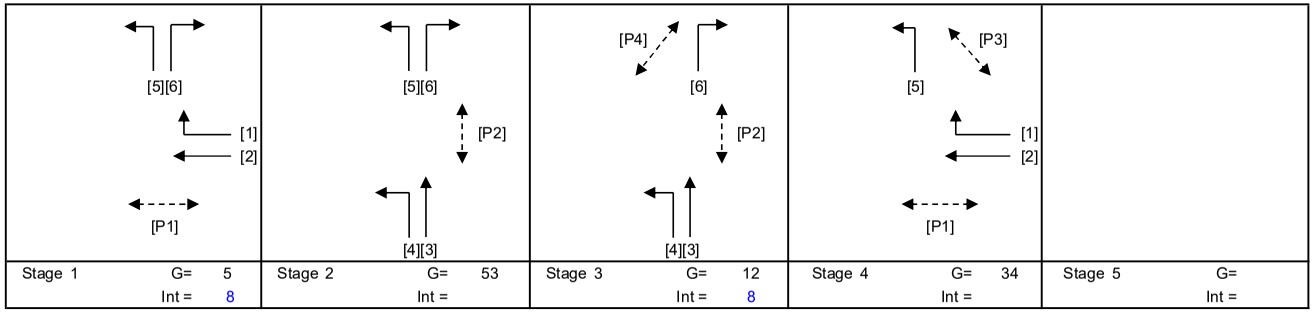
J14 Pennington Street / Irving Street / Jardine's Bazaar

2025 Existing PM

PROJECT NO.:	40920	
FILENAME :	J14_PS_IS_JB.xlsx	



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.195
Loss time		L =	14 sec
Total Flow		=	1698 pcu
Co	= (1.5*L+5)/(1-Y)	=	32.3 sec
Cm	= L/(1-Y)	=	17.4 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	307.8 %
Cp	= 0.9*L/(0.9-Y)	=	17.9 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**308 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		71		71	0.00	1915			0.5	-958			957	0.074	0.074		40	40	0.221	6	27
1,2	1,4	3.00	1	16			2055		10	129	139	0.93	1891							1891	0.074			40	40	0.221	18	27
1	1,4	3.00	1	13			2055			136	136	1.00	1842							1842	0.074			40	40	0.221	18	27
1	1,4	3.00	1	10		N	1915			121	121	1.00	1665							1665	0.073			40	40	0.221	12	27
3,4	2,3	3.80	1	5		N	1995	73	146		219	0.33	1814							1814	0.121	0.121		66	66	0.221	18	13
3	2,3	3.80	1			N	1995		240		240	0.00	1995							1995	0.120			65	66	0.221	18	13
5	1,2,4	3.50	1	10			2105	344			344	1.00	1830							1830	0.188			102	94	0.221	6	2
6	1,2,4	3.50	1	10			2105			228	228	1.00	1830							1830	0.125			68	94	0.221	18	12
6	1,2,4	3.50	1	6.5		N	1965			200	200	1.00	1597							1597	0.125			68	94	0.221	12	12

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

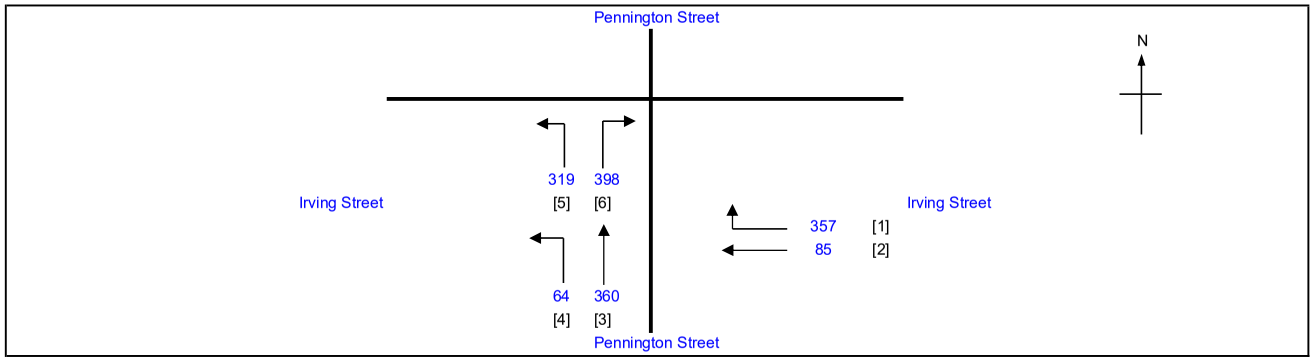
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

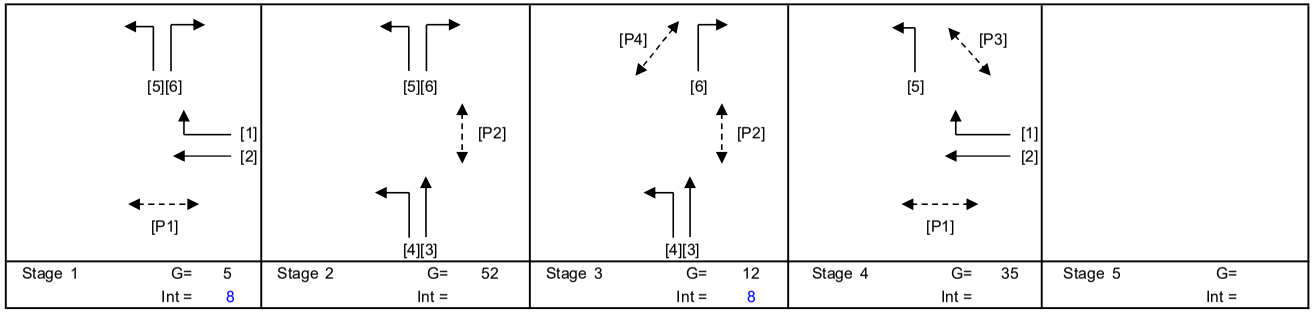
J14 Pennington Street / Irving Street / Jardine's Bazaar

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.181
Loss time		L =	14 sec
Total Flow		=	1583 pcu
Co	= (1.5*L+5)/(1-Y)	=	31.8 sec
Cm	= L/(1-Y)	=	17.1 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	338.5 %
Cp	= 0.9*L/(0.9-Y)	=	17.5 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**339 %**



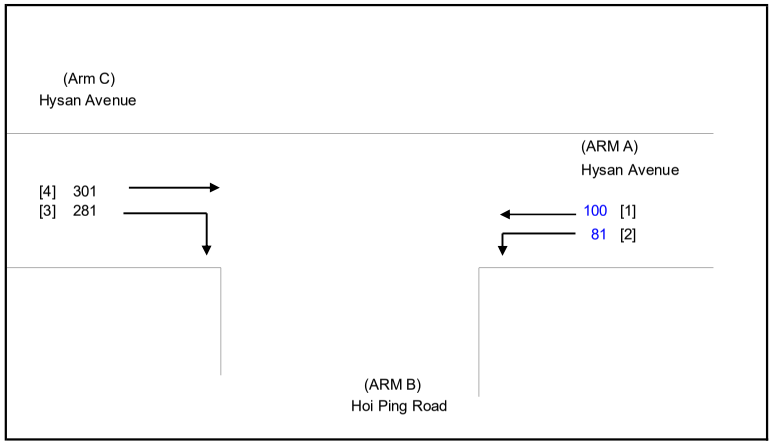
Stage 1	G= 5	Int = 8
Stage 2	G= 52	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 35	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		40	8
P2	2,3		8	14		58	14
P3	4		7	7		28	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		67		67	0.00	1915			0.5	-958			957	0.070	0.070		41	41	0.205	6	26
1,2	1,4	3.00	1	16			2055		18	113	131	0.86	1901							1901	0.069			40	41	0.205	12	26
1	1,4	3.00	1	13			2055			128	128	1.00	1842							1842	0.069			41	41	0.205	12	26
1	1,4	3.00	1	10		N	1915			116	116	1.00	1665							1665	0.070			41	41	0.205	12	26
3,4	2,3	3.80	1	5		N	1995	64	138		202	0.32	1822							1822	0.111			65	65	0.205	18	13
3	2,3	3.80	1			N	1995		222		222	0.00	1995							1995	0.111	0.111		65	65	0.205	18	13
5	1,2,4	3.50	1	10			2105	319			319	1.00	1830							1830	0.174			102	94	0.205	6	2
6	1,2,4	3.50	1	10			2105			213	213	1.00	1830							1830	0.116			68	94	0.205	18	12
6	1,2,4	3.50	1	6.5		N	1965			185	185	1.00	1597							1597	0.116			68	94	0.205	12	12

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Feb-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	81	(pcu/hr)
q a-c	=	100	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	301	(pcu/hr)
q c-b	=	281	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

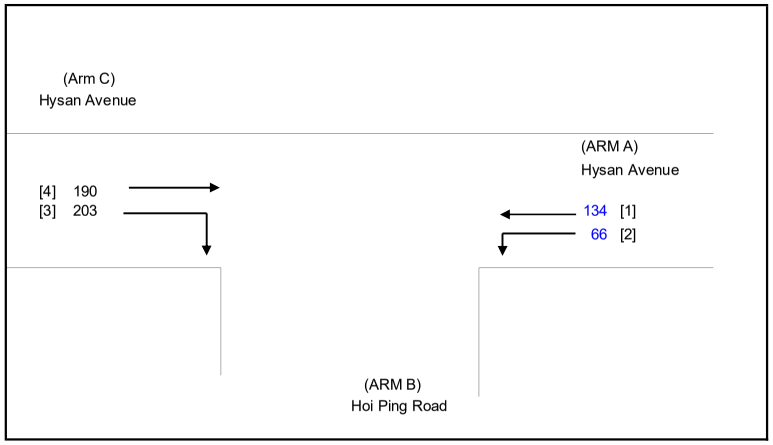
Q b-a	=	242		
Q b-c	=	418	Q b-c (O) =	418
Q c-b	=	667		
Q b-ac	=	242		
TOTAL FLOW	=	763	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4213
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.42

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Feb-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	66	(pcu/hr)
q a-c	=	134	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	190	(pcu/hr)
q c-b	=	203	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

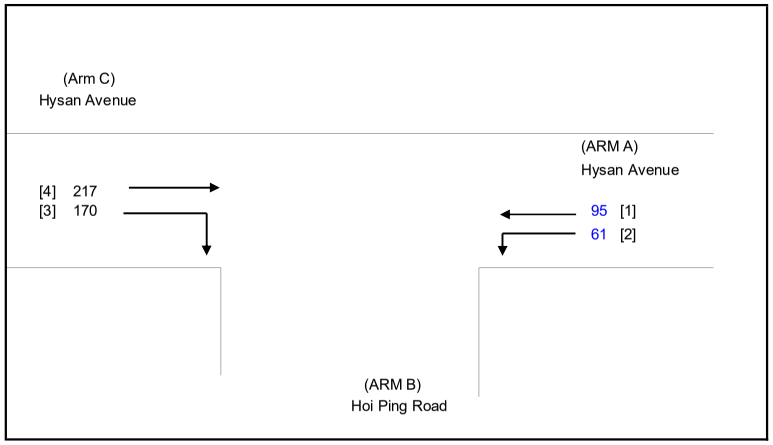
Q b-a	=	262		
Q b-c	=	414	Q b-c (O) =	414
Q c-b	=	662		
Q b-ac	=	262		
TOTAL FLOW	=	593	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.3066
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.31

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Feb-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	61	(pcu/hr)
q a-c	=	95	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	217	(pcu/hr)
q c-b	=	170	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

Q b-a	=	271		
Q b-c	=	420	Q b-c (O) =	420
Q c-b	=	672		
Q b-ac	=	271		
TOTAL FLOW	=	543	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.2530
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.25

APPENDIX C

Proposed Road Schemes

at Adjacent Junctions

HOI PING ROAD

SUNNING ROAD

LEIGHTON ROAD

CAROLINE HILL ROAD

Caroline Hill Road
加路連山道

649/100mm/3200×700(H)
H/WA/Lei/705

24-HR COVERED PEDESTRIAN WALKWAY

TO 1/F

PEDESTRIAN LINK TO B1/F

COMMERCIAL / E&M +8.25

TO LOADING / & LIGHT LAYE

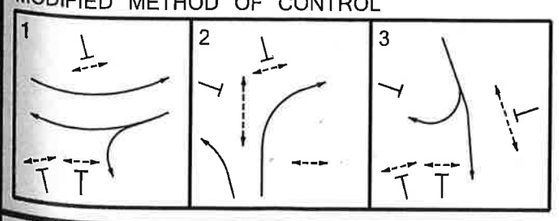
DROP-OFF

PRIVATE L/UL

TO CARPARK

Except goods vehicles loading/unloading
貨車上落貨除外

MODIFIED METHOD OF CONTROL



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	CHC	14APR22
A	TD'S COMMENTS INCORPORATED	CHC	25FEB22

CHK50603110/TIA/F61-B.DWG/KCM/14APR22

Project Title

PROPOSED COMMERCIAL DEVELOPMENT ON
INLAND LOT NO. 8945, CAUSEWAY BAY, HONG KONG
TRAFFIC REVIEW REPORT

Drawing Title

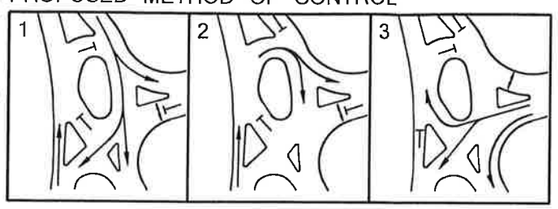
FUTURE JUNCTION LAYOUT OF LEIGHTON ROAD / CAROLINE HILL ROAD (WEST) (J5)

Designed	Checked	Scale	Date	Drawing No.	Rev.
TCW	CHC	1:500(A3)	DEC 2021	6.1	B

SYSTRA MVA

Original Size : A3

PROPOSED METHOD OF CONTROL



NOTE:

THE LAYOUT, MOC, ROAD MARKING AND SIGNAGE ARRANGEMENTS ARE SUBJECT TO FURTHER REFINEMENT/ADJUSTMENT IN THE DETAIL DESIGN STAGE

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	CHC	12APR22
A	TD'S COMMENTS INCORPORATED	CHC	25FEB22

Project Title

PROPOSED COMMERCIAL DEVELOPMENT ON INLAND LOT NO. 8945, CAUSEWAY BAY, HONG KONG TRAFFIC REVIEW REPORT

Drawing Title

PROPOSED LAYOUT AND ARRANGEMENT FOR JUNCTION OF CAROLINE HILL ROAD (WEST) / LINK ROAD / NEW ACCESS ROAD (J6)

Designed	Checked	Scale	Date	Drawing No.	Rev.
TCW	CHC	1:500(A3)	DEC 2021	6.2	B

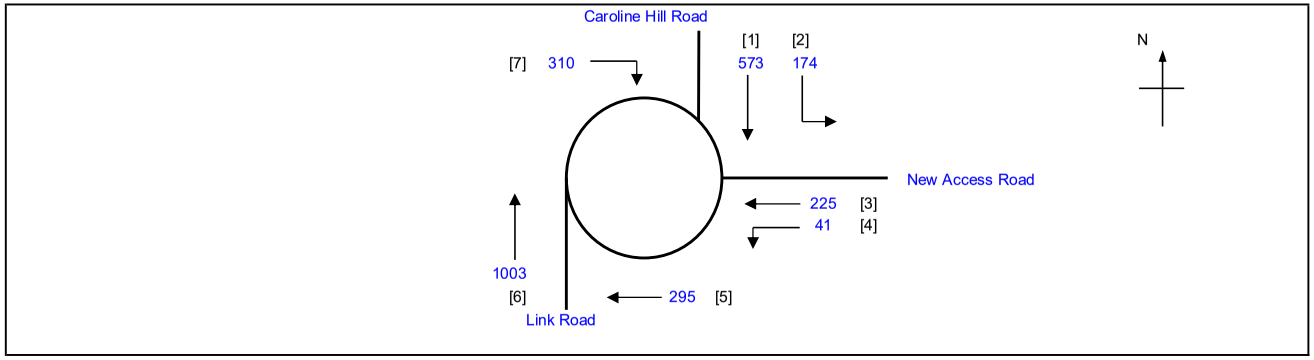
CHK50603110/TIA/F62-B.DWG/KCM/12APR22

APPENDIX D

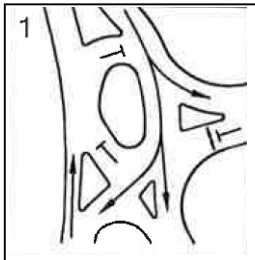
Detail Calculation Sheets

- Reference & Design Scenarios

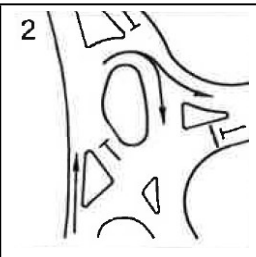
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



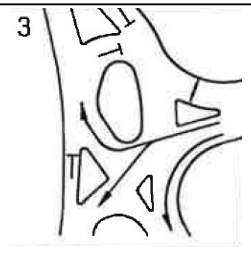
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.613
Loss time	L =	8 sec
Total Flow	=	2621 pcu
Co = (1.5*L+5)/(1-Y)	=	43.9 sec
Cm = L/(1-Y)	=	20.7 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	37.1 %
Cp = 0.9*L/(0.9-Y)	=	25.1 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**36 %**



Stage 1 G= 45
Int =



Stage 2 G= 29
Int = 5



Stage 3 G= 21
Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		21	5
P2	1,2		9	5		74	5

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		1003		1003	0.00	2120							2120	0.473	0.473		75	75	0.663	48	9
7	2	5.00	1	5		N	2115			310	310	1.00	1627							1627	0.191			30	30	0.663	36	36
3	3	3.65	1				2120		225		225	0.00	2120							2120	0.106			17	22	0.663	30	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	22	0.663	6	97
1,2	1	3.65	1	20		N	1980	174	180		354	0.49	1910							1910	0.185			29	45	0.663	42	36
1	1	3.65	1				2120		393		393	0.00	2120							2120	0.185			29	45	0.663	48	35
5	3	5.00	1			N	2115		295		295	0.00	2115							2115	0.139	0.139		22	22	0.663	36	41

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J1 Caroline Hill Road (West) / Link Road

2033 Reference PM

PROJECT NO.: 40920

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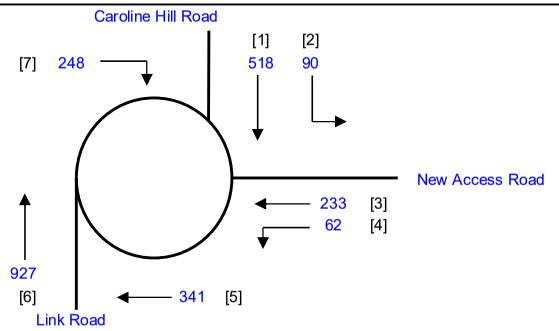
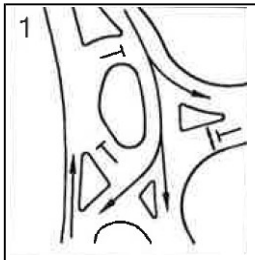
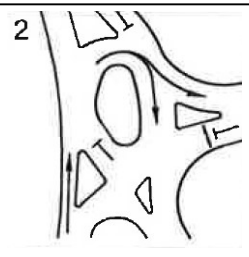


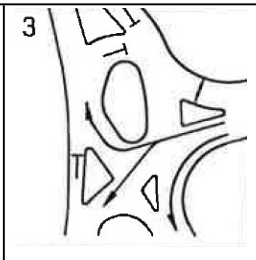
No. of stages per cycle		N =	3
Cycle time		C =	105 sec
Sum(y)		Y =	0.598
Loss time		L =	8 sec
Total Flow		=	2419 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.3 sec
Cm	= L/(1-Y)	=	19.9 sec
Yult		=	0.840
R.C.ult	= (Yult-Y)/Y*100%	=	40.4 %
Cp	= 0.9*L/(0.9-Y)	=	23.9 sec
Ymax	= 1-L/C	=	0.924
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**



Stage 1 G= 46 Int =



Stage 2 G= 24 Int = 5



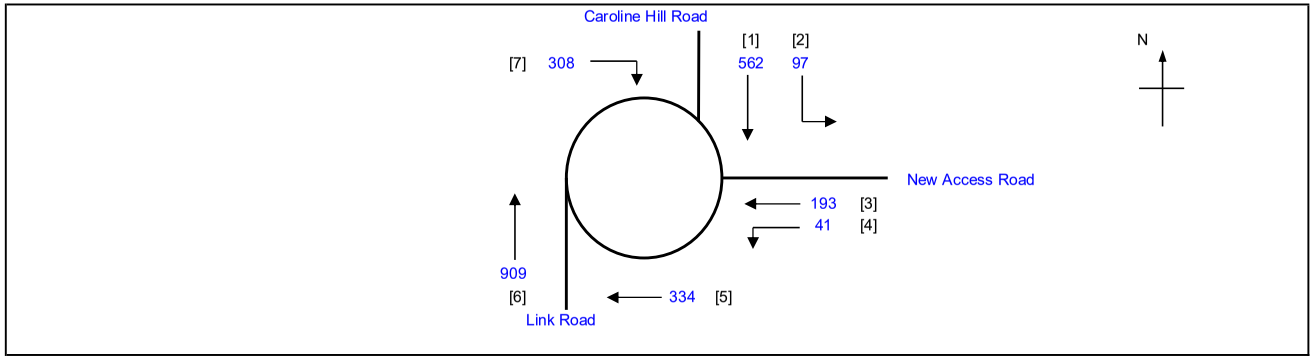
Stage 3 G= 25 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

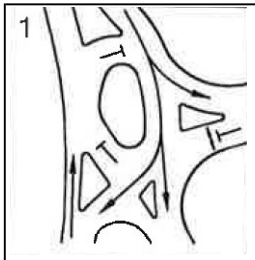
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		927		927	0.00	2120							2120	0.437	0.437		71	71	0.648	48	11
7	2	5.00	1	5		N	2115			248	248	1.00	1627							1627	0.152			25	25	0.648	30	40
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	26	0.648	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	26	0.648	12	75
1,2	1	3.65	1	20		N	1980	90	200		290	0.31	1935							1935	0.150			24	46	0.648	36	39
1	1	3.65	1				2120		318		318	0.00	2120							2120	0.150			24	46	0.648	42	39
5	3	5.00	1			N	2115		341		341	0.00	2115							2115	0.161	0.161		26	26	0.648	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

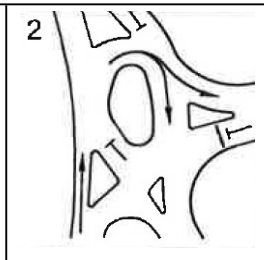
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
J1 Caroline Hill Road (West) / Link Road			Reviewed By:	SLN	Mar-26



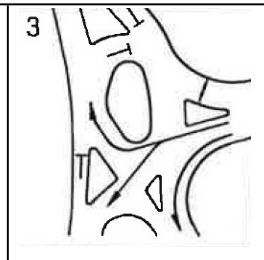
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.587
Loss time	L =	8 sec
Total Flow	=	2444 pcu
Co = (1.5*L+5)/(1-Y)	=	41.1 sec
Cm = L/(1-Y)	=	19.4 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	43.2 %
Cp = 0.9*L/(0.9-Y)	=	23.0 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**42 %**



Stage 1 G= 40 Int =



Stage 2 G= 30 Int = 5



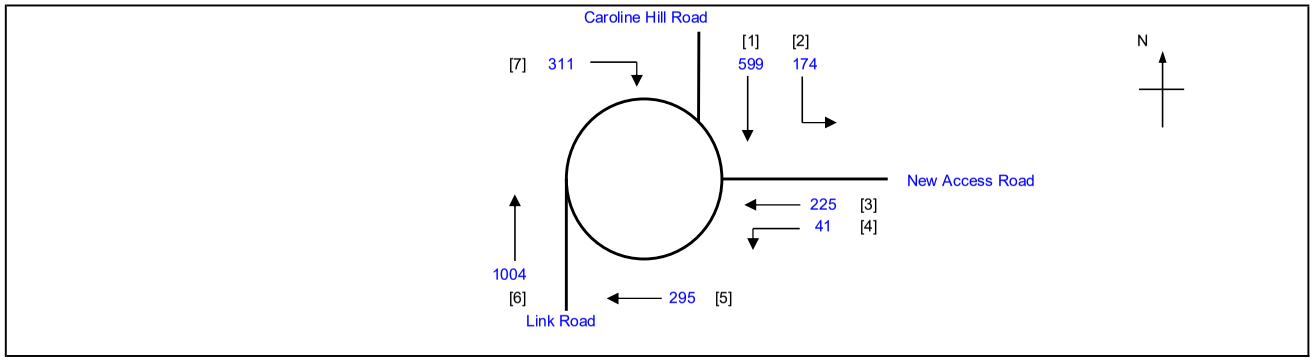
Stage 3 G= 25 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

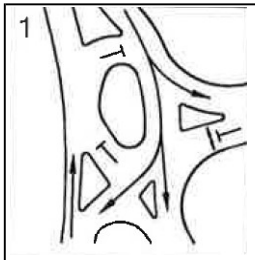
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		909		909	0.00	2120							2120	0.429	0.429		71	71	0.635	48	11
7	2	5.00	1	5		N	2115			308	308	1.00	1627							1627	0.189			31	31	0.635	36	35
3	3	3.65	1				2120		193		193	0.00	2120							2120	0.091			15	26	0.635	24	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	26	0.635	6	89
1,2	1	3.65	1	20		N	1980	97	218		315	0.31	1935							1935	0.163			27	40	0.635	36	37
1	1	3.65	1				2120		344		344	0.00	2120							2120	0.162			27	40	0.635	42	36
5	3	5.00	1			N	2115		334		334	0.00	2115							2115	0.158	0.158		26	26	0.635	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

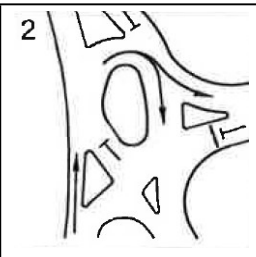
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



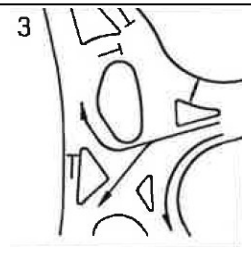
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.613
Loss time	L =	8 sec
Total Flow	=	2649 pcu
Co = (1.5*L+5)/(1-Y)	=	43.9 sec
Cm = L/(1-Y)	=	20.7 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	37.0 %
Cp = 0.9*L/(0.9-Y)	=	25.1 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**36 %**



Stage 1 G= 45
Int =



Stage 2 G= 29
Int = 5



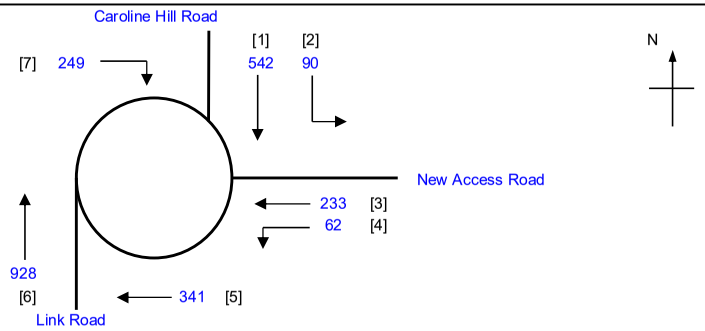
Stage 3 G= 21
Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		21	5
P2	1,2		9	5		74	5

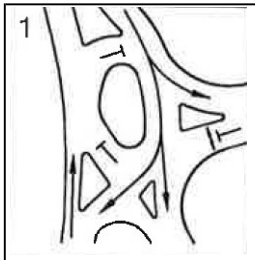
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		1004		1004	0.00	2120							2120	0.474	0.474		75	75	0.664	48	9
7	2	5.00	1	5		N	2115			311	311	1.00	1627							1627	0.191			30	30	0.664	36	36
3	3	3.65	1				2120		225		225	0.00	2120							2120	0.106			17	22	0.664	30	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	22	0.664	6	97
1,2	1	3.65	1	20		N	1980	174	193		367	0.47	1912							1912	0.192			30	45	0.664	42	35
1	1	3.65	1				2120		406		406	0.00	2120							2120	0.192			30	45	0.664	48	35
5	3	5.00	1			N	2115		295		295	0.00	2115							2115	0.139	0.139		22	22	0.664	36	41

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

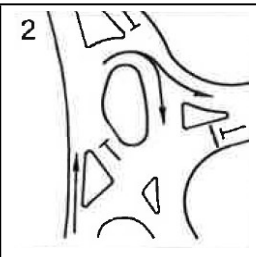
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



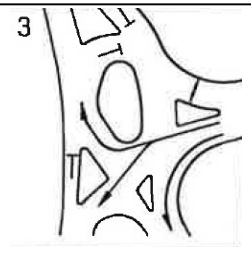
No. of stages per cycle		N =	3
Cycle time		C =	105 sec
Sum(y)		Y =	0.599
Loss time		L =	8 sec
Total Flow		=	2445 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.4 sec
Cm	= L/(1-Y)	=	19.9 sec
Yult		=	0.840
R.C.ult	= (Yult-Y)/Y*100%	=	40.2 %
Cp	= 0.9*L/(0.9-Y)	=	23.9 sec
Ymax	= 1-L/C	=	0.924
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**



Stage 1 G= 46 Int =



Stage 2 G= 24 Int = 5



Stage 3 G= 25 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

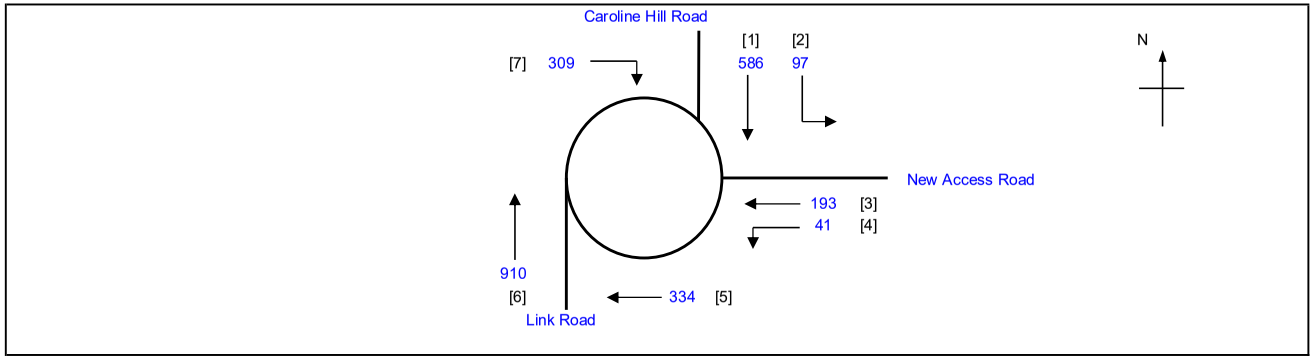
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		928		928	0.00	2120							2120	0.438	0.438		71	71	0.648	48	11
7	2	5.00	1	5		N	2115			249	249	1.00	1627							1627	0.153			25	25	0.648	30	40
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	26	0.648	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	26	0.648	12	75
1,2	1	3.65	1	20		N	1980	90	212		302	0.30	1937							1937	0.156			25	46	0.648	36	39
1	1	3.65	1				2120		330		330	0.00	2120							2120	0.156			25	46	0.648	42	38
5	3	5.00	1			N	2115		341		341	0.00	2115							2115	0.161	0.161		26	26	0.648	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

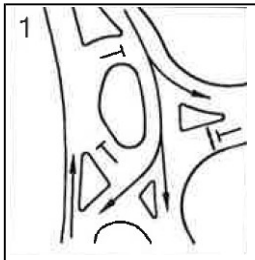
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

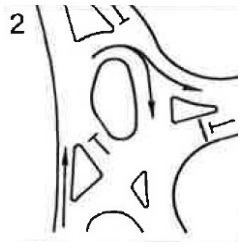
		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J1 Caroline Hill Road (West) / Link Road	**2033 Design Weekend**		
PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
	Reviewed By:	SLN	Mar-26



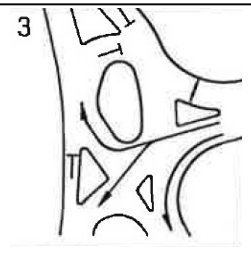
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.587
Loss time	L =	8 sec
Total Flow	=	2470 pcu
Co = (1.5*L+5)/(1-Y)	=	41.2 sec
Cm = L/(1-Y)	=	19.4 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	43.1 %
Cp = 0.9*L/(0.9-Y)	=	23.0 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**42 %**



Stage 1 G= 40
Int =



Stage 2 G= 30
Int = 5



Stage 3 G= 25
Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		910		910	0.00	2120							2120	0.429	0.429		71	71	0.636	48	11
7	2	5.00	1	5		N	2115			309	309	1.00	1627							1627	0.190			31	31	0.636	36	34
3	3	3.65	1				2120		193		193	0.00	2120							2120	0.091			15	26	0.636	24	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	26	0.636	6	89
1,2	1	3.65	1	20		N	1980	97	229		326	0.30	1937							1937	0.168			28	40	0.636	36	36
1	1	3.65	1				2120		357		357	0.00	2120							2120	0.168			28	40	0.636	42	36
5	3	5.00	1			N	2115		334		334	0.00	2115							2115	0.158	0.158		26	26	0.636	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

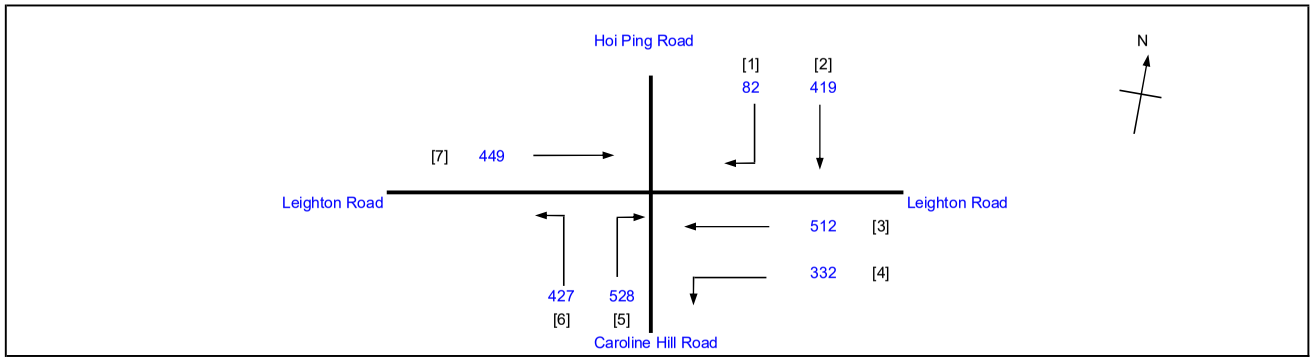
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

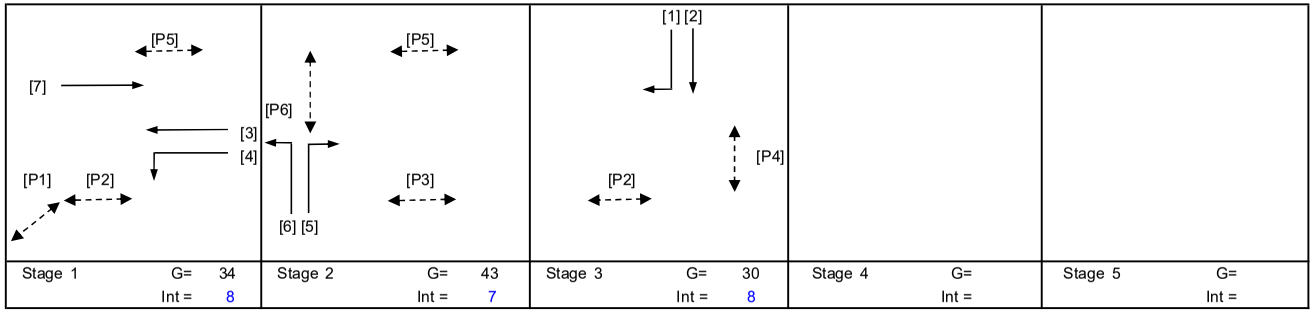
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.613
Loss time		L =	20 sec
Total Flow		=	2749 pcu
Co	= (1.5*L+5)/(1-Y)	=	90.4 sec
Cm	= L/(1-Y)	=	51.7 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	22.3 %
Cp	= 0.9*L/(0.9-Y)	=	62.7 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**24 %**



Stage 1	G= 34	Int = 8
Stage 2	G= 43	Int = 7
Stage 3	G= 30	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	35	5
P2	1,3	4	14	5	0	75	5
P3	2	4.5	14	5	3	42	5
P4	3	15	10	7	4	27	7
P5	1,2	7	11	6	1	85	6
P6	2	15	10	7	4	39	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	175			175	1.00	1828			0.5	-914			914	0.191			34	35	0.724	30	57
3,4	1	3.50	1	25			2105	157	117		274	0.57	2035			0.7	-611			1424	0.192	0.192		35	35	0.724	42	50
3	1	3.00	1				2055		395		395	0.00	2055							2055	0.192			34	35	0.724	60	47
5,6	2	3.50	1	65		N	1965	427		46	473	1.00	1921							1921	0.246	0.246		44	44	0.724	66	40
5	2	3.50	1	20			2105			482	482	1.00	1958							1958	0.246			44	44	0.724	66	40
7	1	3.50	1			N	1965		144		144	0.00	1965			0.5	-983			982	0.147			26	35	0.724	24	65
7	1	3.30	1				2085		305		305	0.00	2085							2085	0.146			26	35	0.724	48	54
2	3	3.50	1			N	1965		340		340	0.00	1965							1965	0.173			31	31	0.724	54	50
1,2	3	3.50	1	12		N	1965		79	82	161	0.51	1847			0.5	-924			923	0.174	0.174		31	31	0.724	24	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

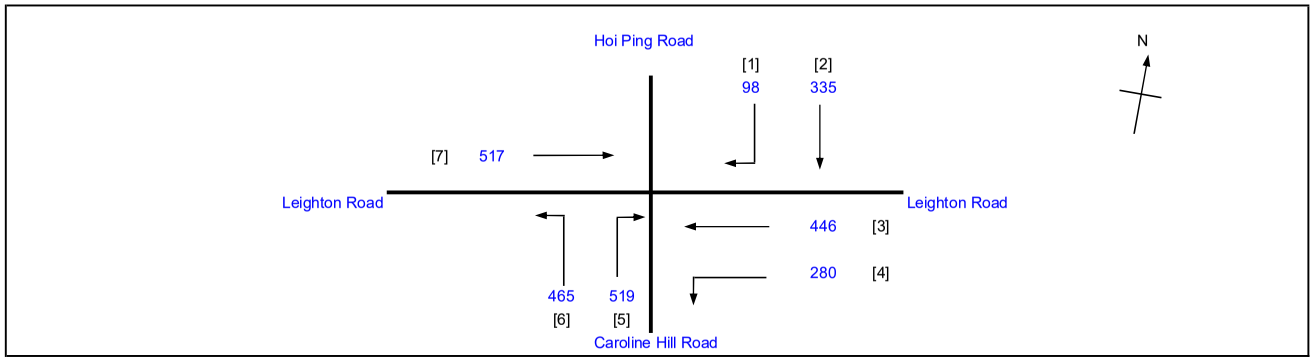
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

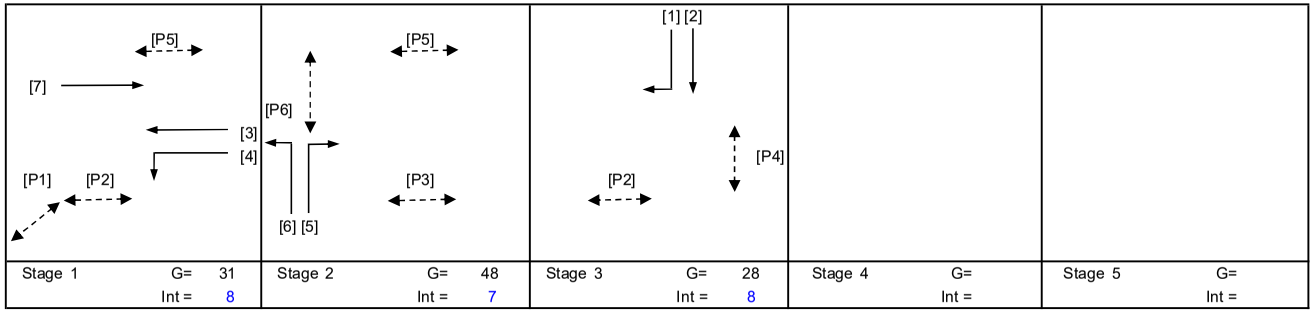
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.574
Loss time		L =	20 sec
Total Flow		=	2660 pcu
Co	= (1.5*L+5)/(1-Y)	=	82.2 sec
Cm	= L/(1-Y)	=	46.9 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	30.7 %
Cp	= 0.9*L/(0.9-Y)	=	55.2 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**33 %**



Stage 1	G= 31	Int = 8
Stage 2	G= 48	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	32	5
P2	1,3	4	14	5	0	70	5
P3	2	4.5	14	5	3	47	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	44	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	151			151	1.00	1828			0.5	-914			914	0.165			32	32	0.678	24	55
3,4	1	3.50	1	25			2105	129	107		236	0.55	2038			0.7	-611			1427	0.165			32	32	0.678	36	50
3	1	3.00	1				2055		339		339	0.00	2055							2055	0.165			32	32	0.678	54	47
5,6	2	3.50	1	65		N	1965	465		22	487	1.00	1921							1921	0.254			49	49	0.678	66	35
5	2	3.50	1	20			2105			497	497	1.00	1958							1958	0.254	0.254		49	49	0.678	66	35
7	1	3.50	1			N	1965		166		166	0.00	1965			0.5	-983			982	0.169	0.169		32	32	0.678	24	54
7	1	3.30	1				2085		351		351	0.00	2085							2085	0.168			32	32	0.678	54	46
2	3	3.50	1			N	1965		297		297	0.00	1965							1965	0.151	0.151		29	29	0.678	48	49
1,2	3	3.50	1	12		N	1965		38	98	136	0.72	1803			0.5	-901			902	0.151			29	29	0.678	24	59

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

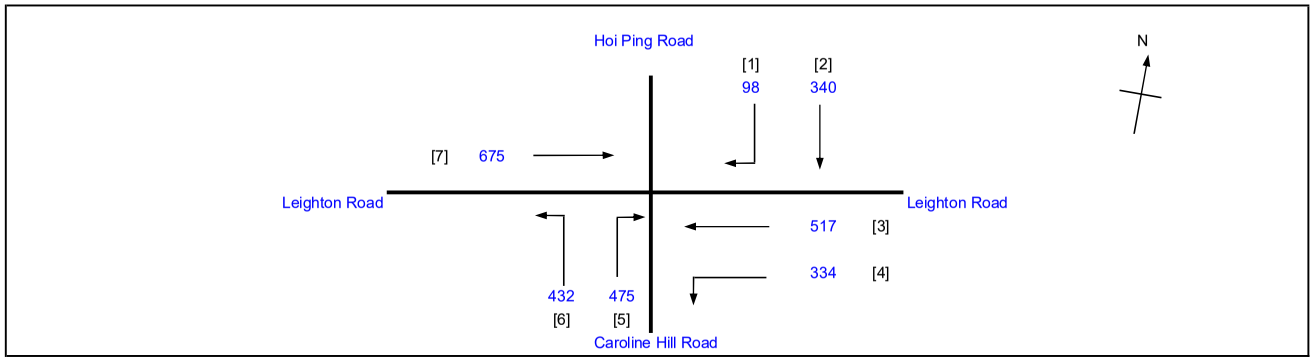
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

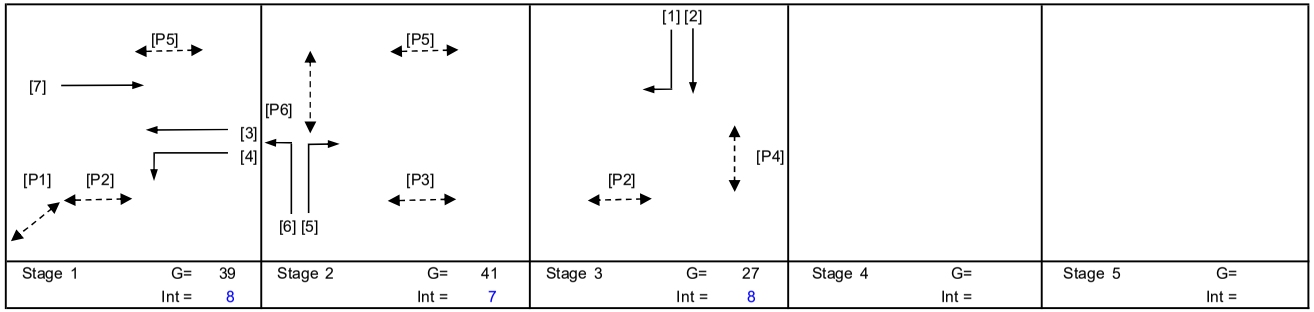
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.607
Loss time		L =	20 sec
Total Flow		=	2871 pcu
Co	= (1.5*L+5)/(1-Y)	=	89.0 sec
Cm	= L/(1-Y)	=	50.9 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	23.6 %
Cp	= 0.9*L/(0.9-Y)	=	61.4 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**25 %**



Stage 1	G= 39	Int = 8
Stage 2	G= 41	Int = 7
Stage 3	G= 27	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	40	5
P2	1,3	4	14	5	0	77	5
P3	2	4.5	14	5	3	40	5
P4	3	15	10	7	4	24	7
P5	1,2	7	11	6	1	88	6
P6	2	15	10	7	4	37	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	177			177	1.00	1828			0.5	-914			914	0.194			35	40	0.717	30	55
3,4	1	3.50	1	25			2105	157	118		275	0.57	2035			0.7	-611			1424	0.193			35	40	0.717	42	49
3	1	3.00	1				2055		399		399	0.00	2055							2055	0.194			35	40	0.717	60	46
5,6	2	3.50	1	65		N	1965	432		17	449	1.00	1921							1921	0.234			42	42	0.717	60	41
5	2	3.50	1	20			2105			458	458	1.00	1958							1958	0.234	0.234		42	42	0.717	66	41
7	1	3.50	1			N	1965		216		216	0.00	1965			0.5	-983			982	0.220			40	40	0.717	30	50
7	1	3.30	1				2085		459		459	0.00	2085							2085	0.220	0.220		40	40	0.717	66	42
2	3	3.50	1			N	1965		300		300	0.00	1965							1965	0.153			28	28	0.717	48	53
1,2	3	3.50	1	12		N	1965		40	98	138	0.71	1805			0.5	-902			903	0.153	0.153		28	28	0.717	24	64

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

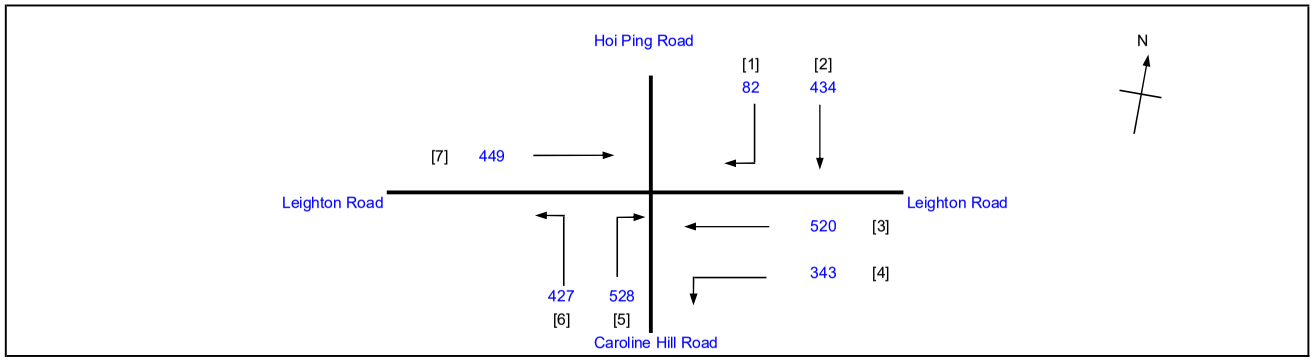
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

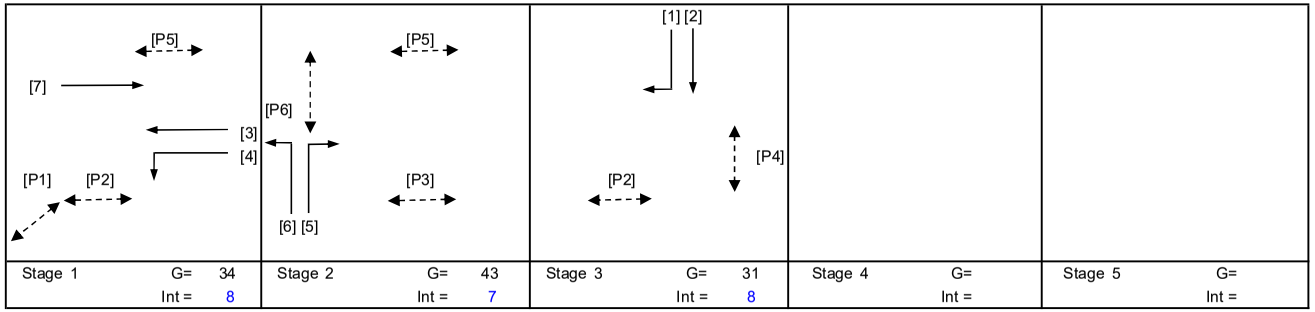
2033 Design AM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.622
Loss time	L =	20 sec
Total Flow	=	2783 pcu
Co = (1.5*L+5)/(1-Y)	=	92.6 sec
Cm = L/(1-Y)	=	52.9 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	20.6 %
Cp = 0.9*L/(0.9-Y)	=	64.7 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**22 %**



Stage 1	G= 34	Int = 8
Stage 2	G= 43	Int = 7
Stage 3	G= 31	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	35	5
P2	1,3	4	14	5	0	75	5
P3	2	4.5	14	5	3	42	5
P4	3	15	10	7	4	28	7
P5	1,2	7	11	6	1	84	6
P6	2	15	10	7	4	39	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	180			180	1.00	1828			0.5	-914			914	0.197	0.197		35	35	0.735	30	57
3,4	1	3.50	1	25			2105	163	116		279	0.58	2034			0.7	-610			1424	0.196			35	35	0.735	42	51
3	1	3.00	1				2055		404		404	0.00	2055							2055	0.197			35	35	0.735	60	47
5,6	2	3.50	1	65		N	1965	427		46	473	1.00	1921							1921	0.246	0.246		44	44	0.735	66	41
5	2	3.50	1	20			2105			482	482	1.00	1958							1958	0.246			44	44	0.735	66	41
7	1	3.50	1			N	1965		144		144	0.00	1965			0.5	-983			982	0.147			26	35	0.735	24	67
7	1	3.30	1				2085		305		305	0.00	2085							2085	0.146			26	35	0.735	54	55
2	3	3.50	1			N	1965		351		351	0.00	1965							1965	0.179	0.179		32	32	0.735	54	50
1,2	3	3.50	1	12		N	1965		83	82	165	0.50	1850			0.5	-925			925	0.178			32	32	0.735	30	61

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

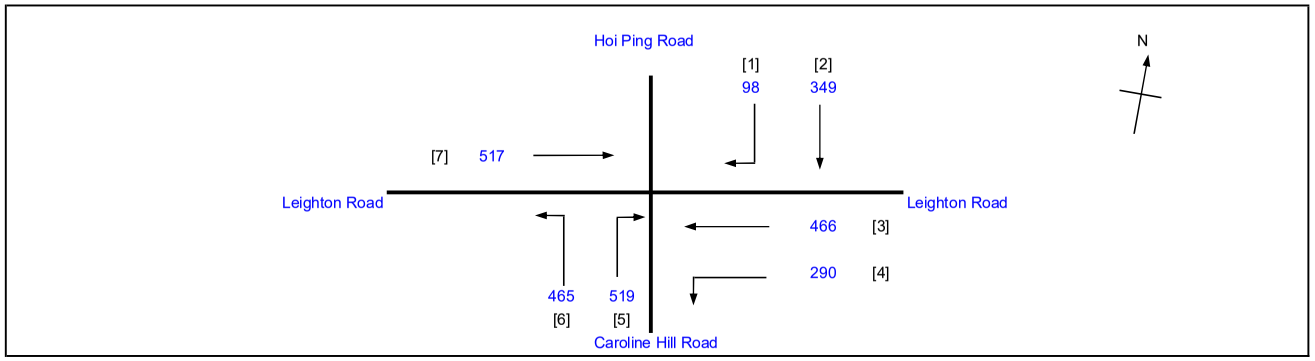
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

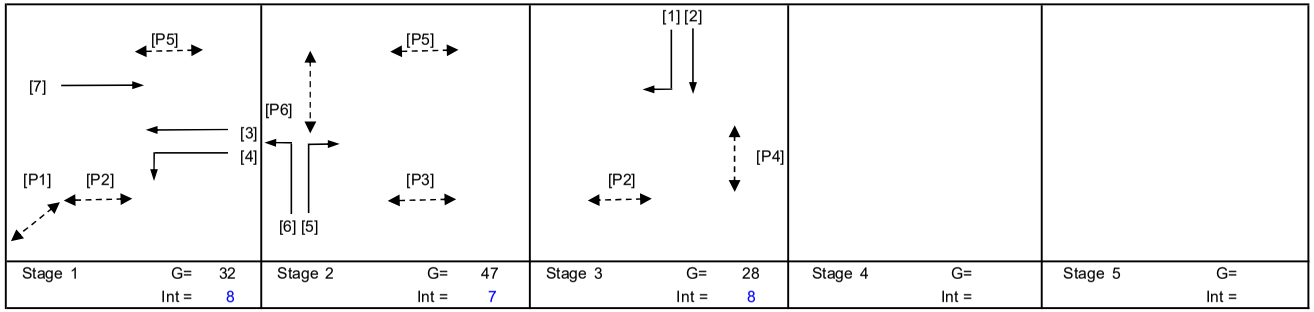
2033 Design PM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.582
Loss time	L =	20 sec
Total Flow	=	2704 pcu
Co = (1.5*L+5)/(1-Y)	=	83.7 sec
Cm = L/(1-Y)	=	47.9 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	28.9 %
Cp = 0.9*L/(0.9-Y)	=	56.6 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**31 %**



Stage 1	G= 32	Int = 8
Stage 2	G= 47	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	33	5
P2	1,3	4	14	5	0	71	5
P3	2	4.5	14	5	3	46	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	43	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	157			157	1.00	1828			0.5	-914			914	0.172			32	33	0.688	24	55
3,4	1	3.50	1	25			2105	133	112		245	0.54	2039			0.7	-612			1427	0.172			32	33	0.688	36	50
3	1	3.00	1				2055		354		354	0.00	2055							2055	0.172	0.172		33	33	0.688	54	47
5,6	2	3.50	1	65		N	1965	465		22	487	1.00	1921							1921	0.254			48	48	0.688	66	36
5	2	3.50	1	20			2105			497	497	1.00	1958							1958	0.254	0.254		48	48	0.688	66	36
7	1	3.50	1			N	1965		166		166	0.00	1965			0.5	-983			982	0.169			32	33	0.688	24	55
7	1	3.30	1				2085		351		351	0.00	2085							2085	0.168			32	33	0.688	54	47
2	3	3.50	1			N	1965		306		306	0.00	1965							1965	0.156			29	29	0.688	48	49
1,2	3	3.50	1	12		N	1965		43	98	141	0.70	1808			0.5	-904			904	0.156	0.156		29	29	0.688	24	59

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

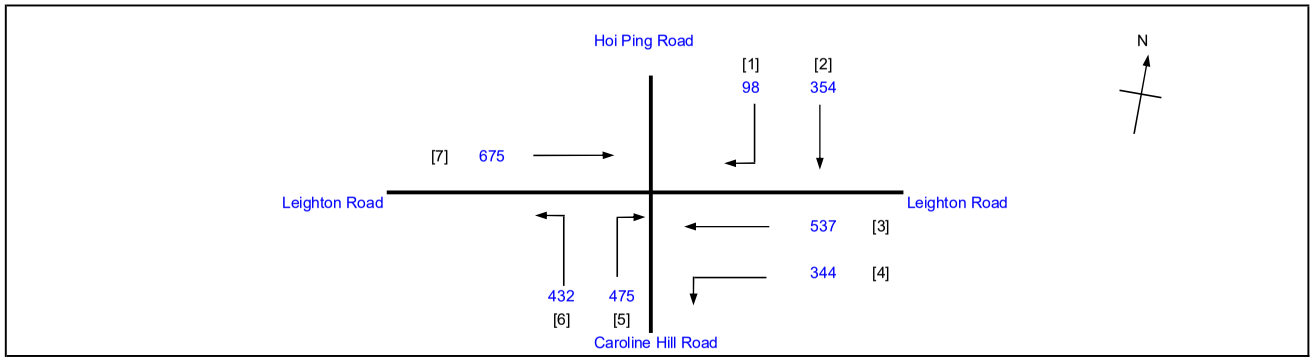
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

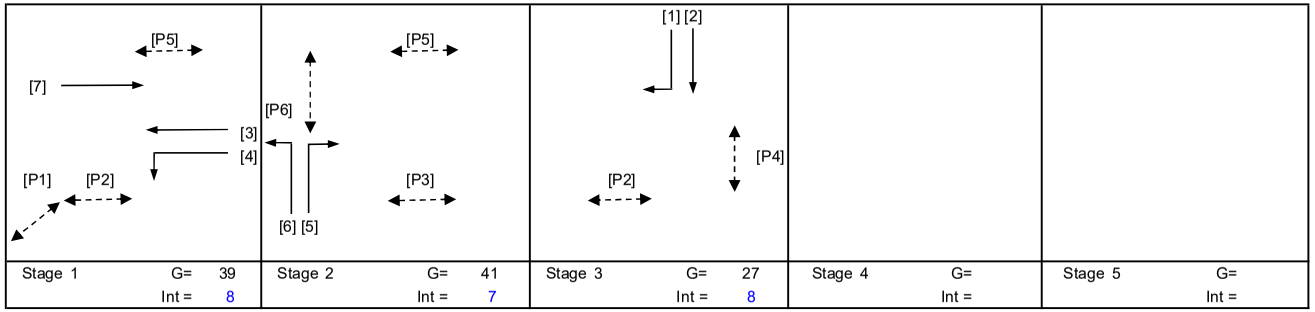
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.612
Loss time	L =	20 sec
Total Flow	=	2915 pcu
Co = (1.5*L+5)/(1-Y)	=	90.2 sec
Cm = L/(1-Y)	=	51.6 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	22.5 %
Cp = 0.9*L/(0.9-Y)	=	62.5 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**24 %**



Stage 1	G= 39	Int = 8
Stage 2	G= 41	Int = 7
Stage 3	G= 27	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	40	5
P2	1,3	4	14	5	0	77	5
P3	2	4.5	14	5	3	40	5
P4	3	15	10	7	4	24	7
P5	1,2	7	11	6	1	88	6
P6	2	15	10	7	4	37	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	184			184	1.00	1828			0.5	-914			914	0.201			36	40	0.723	30	55
3,4	1	3.50	1	25			2105	160	126		286	0.56	2037			0.7	-611			1426	0.201			36	40	0.723	42	49
3	1	3.00	1				2055		411		411	0.00	2055							2055	0.200			36	40	0.723	60	46
5,6	2	3.50	1	65		N	1965	432		17	449	1.00	1921							1921	0.234			42	42	0.723	60	42
5	2	3.50	1	20			2105			458	458	1.00	1958							1958	0.234	0.234		42	42	0.723	66	42
7	1	3.50	1			N	1965		216		216	0.00	1965			0.5	-983			982	0.220			40	40	0.723	30	51
7	1	3.30	1				2085		459		459	0.00	2085							2085	0.220	0.220		40	40	0.723	66	43
2	3	3.50	1			N	1965		309		309	0.00	1965							1965	0.157			28	28	0.723	48	52
1,2	3	3.50	1	12		N	1965		45	98	143	0.69	1810			0.5	-905			905	0.158	0.158		28	28	0.723	24	64

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

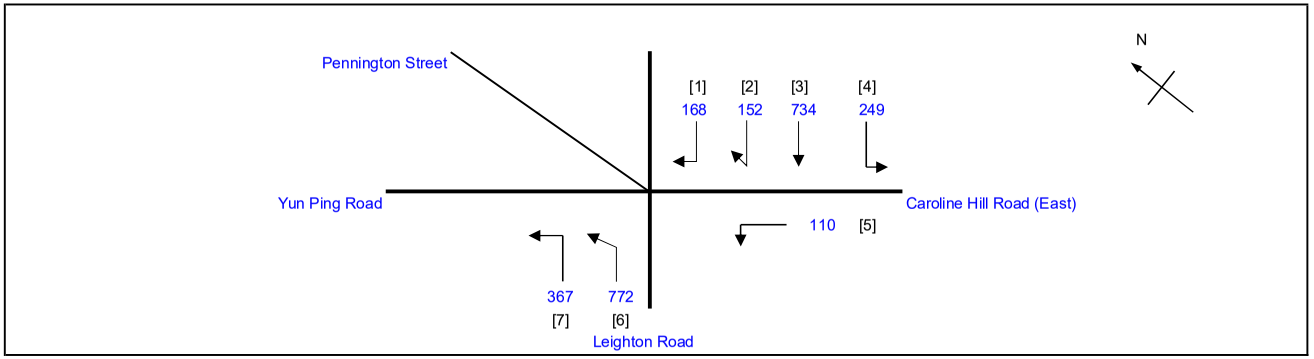
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

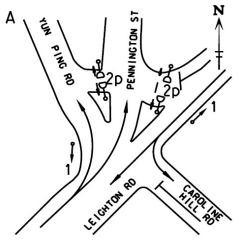
2033 Reference AM

PROJECT NO.: 40920

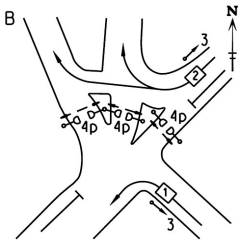
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.638
Loss time		L =	11 sec
Total Flow		=	2552 pcu
Co	= (1.5*L+5)/(1-Y)	=	59.4 sec
Cm	= L/(1-Y)	=	30.4 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	28.2 %
Cp	= 0.9*L/(0.9-Y)	=	37.8 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**29 %**



Stage 1 G= 74 Int = 6



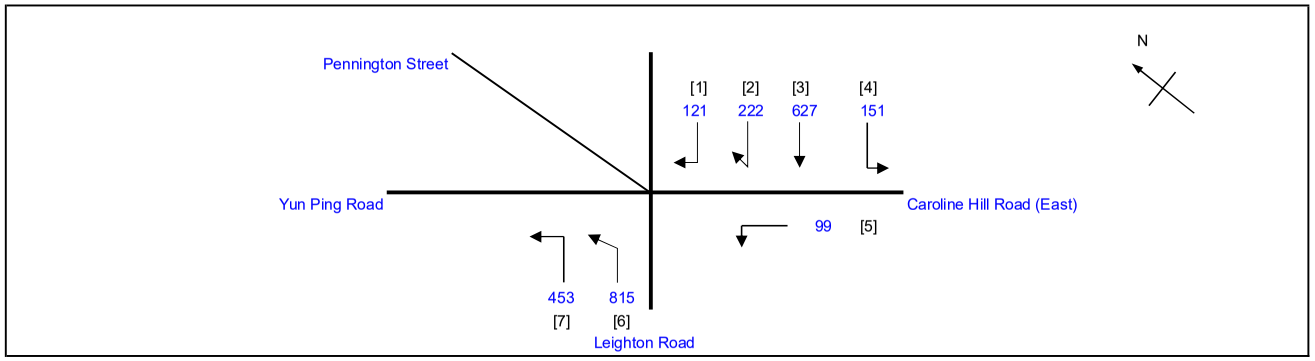
Stage 2 G= 43 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	70	8
4P	2		10	8	2	40	8

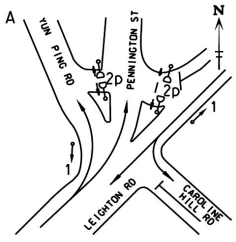
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		659		659	0.00	2005							2005	0.329			61	75
3,4	1	3.00	1	7		N	1915	249	75		324	0.77	1644			0.6	-658			986	0.329			61	75
6	1	3.00	1				2055		609		609	0.00	2055			0.7	-534			1521	0.400	0.400		75	75
6,7	1	3.00	1	15		N	1915	367	163		530	0.69	1791			0.7	-466			1325	0.400			75	75
1,2	2	3.50	1	9		N	1965			320	320	1.00	1684			0.8	-337			1347	0.238	0.238		44	44
5	2	4.00	1	5		N	2015	110			110	1.00	1550			0.6	-620			930	0.118			22	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

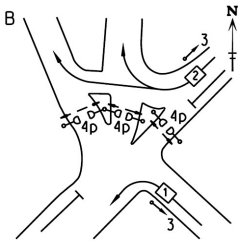
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.702
Loss time	L =	11 sec
Total Flow	=	2488 pcu
Co = (1.5*L+5)/(1-Y)	=	72.1 sec
Cm = L/(1-Y)	=	36.9 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	16.5 %
Cp = 0.9*L/(0.9-Y)	=	49.9 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**17 %**



Stage 1 G= 75
Int = 6



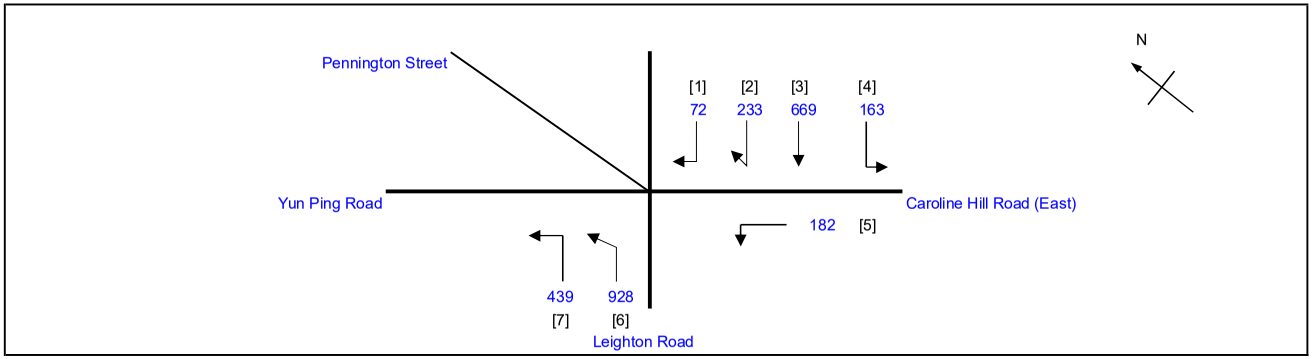
Stage 2 G= 42
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	71	8
4P	2		10	8	2	39	8

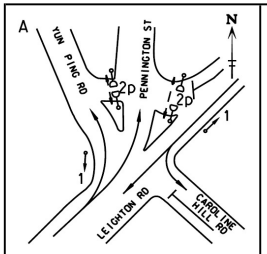
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							11		
3	1	2.50	1				2005		515		515	0.00	2005							2005	0.257			44	76
3,4	1	3.00	1	7		N	1915	151	112		263	0.57	1705			0.6	-682			1023	0.257			44	76
6	1	3.00	1				2055		680		680	0.00	2055			0.7	-534			1521	0.447	0.447		76	76
6,7	1	3.00	1	15		N	1915	453	135		588	0.77	1778			0.7	-462			1316	0.447			76	76
1,2	2	3.50	1	9		N	1965			343	343	1.00	1684			0.8	-337			1347	0.255	0.255		43	43
5	2	4.00	1	5		N	2015	99			99	1.00	1550			0.6	-620			930	0.106			18	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

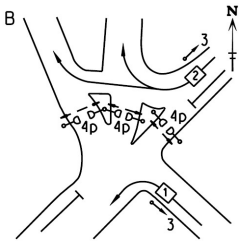
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.707
Loss time	L =	11 sec
Total Flow	=	2686 pcu
Co = (1.5*L+5)/(1-Y)	=	73.4 sec
Cm = L/(1-Y)	=	37.5 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	15.6 %
Cp = 0.9*L/(0.9-Y)	=	51.3 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**17 %**



Stage 1 G= 80 Int = 6



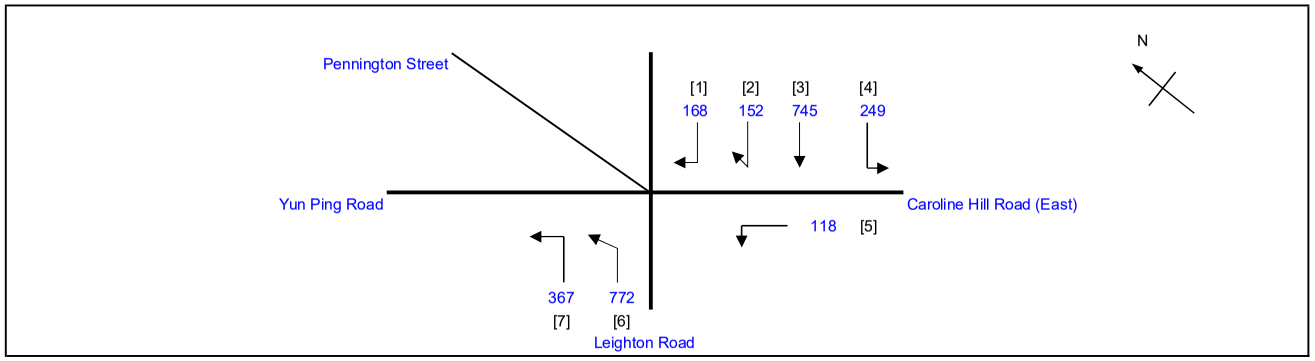
Stage 2 G= 37 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	76	8
4P	2		10	8	2	34	8

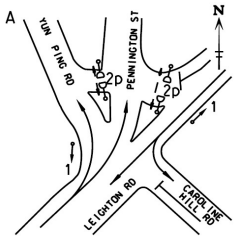
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							11				
3	1	2.50	1				2005		551		551	0.00	2005							2005	0.275			46	81			
3,4	1	3.00	1	7		N	1915	163	118		281	0.58	1703			0.6	-681			1022	0.275			46	81			
6	1	3.00	1				2055		731		731	0.00	2055			0.7	-534			1521	0.481	0.481		81	81			
6,7	1	3.00	1	15		N	1915	439	197		636	0.69	1791			0.7	-466			1325	0.480			81	81			
1,2	2	3.50	1	9		N	1965			305	305	1.00	1684			0.8	-337			1347	0.226	0.226		38	38			
5	2	4.00	1	5		N	2015	182			182	1.00	1550			0.6	-620			930	0.196			33	38			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

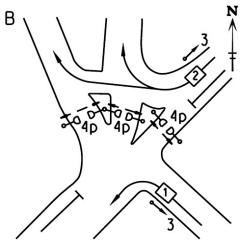
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.638
Loss time	L =	11 sec
Total Flow	=	2571 pcu
Co = (1.5*L+5)/(1-Y)	=	59.4 sec
Cm = L/(1-Y)	=	30.4 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	28.2 %
Cp = 0.9*L/(0.9-Y)	=	37.8 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**29 %**



Stage 1 G= 74
Int = 6



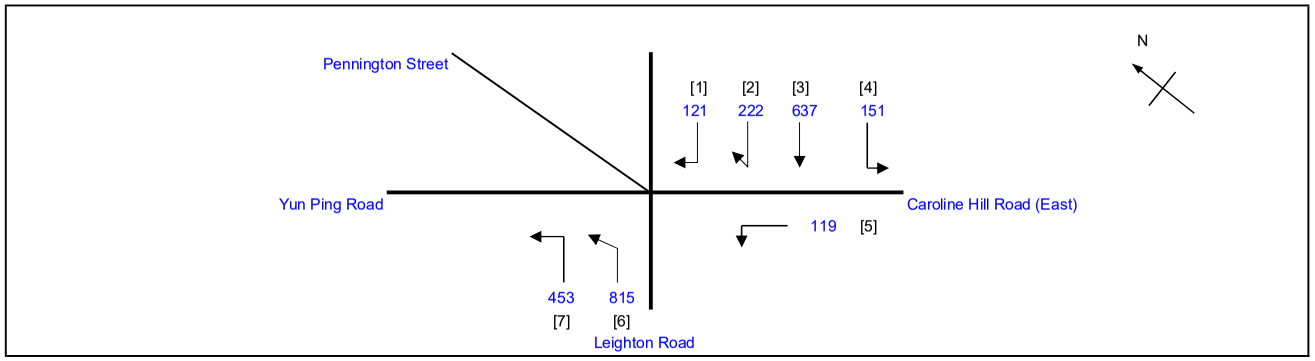
Stage 2 G= 43
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	70	8
4P	2		10	8	2	40	8

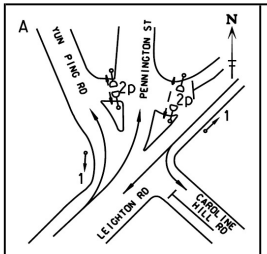
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		666		666	0.00	2005							2005	0.332			62	75
3,4	1	3.00	1	7		N	1915	249	79		328	0.76	1647			0.6	-659			988	0.332			62	75
6	1	3.00	1				2055		609		609	0.00	2055			0.7	-534			1521	0.400	0.400		75	75
6,7	1	3.00	1	15		N	1915	367	163		530	0.69	1791			0.7	-466			1325	0.400			75	75
1,2	2	3.50	1	9		N	1965			320	320	1.00	1684			0.8	-337			1347	0.238	0.238		44	44
5	2	4.00	1	5		N	2015	118			118	1.00	1550			0.6	-620			930	0.127			24	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

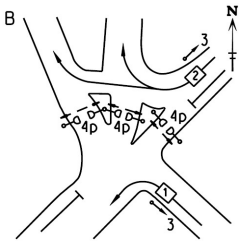
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.702
Loss time	L =	11 sec
Total Flow	=	2518 pcu
Co = (1.5*L+5)/(1-Y)	=	72.1 sec
Cm = L/(1-Y)	=	36.9 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	16.5 %
Cp = 0.9*L/(0.9-Y)	=	49.9 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**17 %**



Stage 1 G= 75 Int = 6



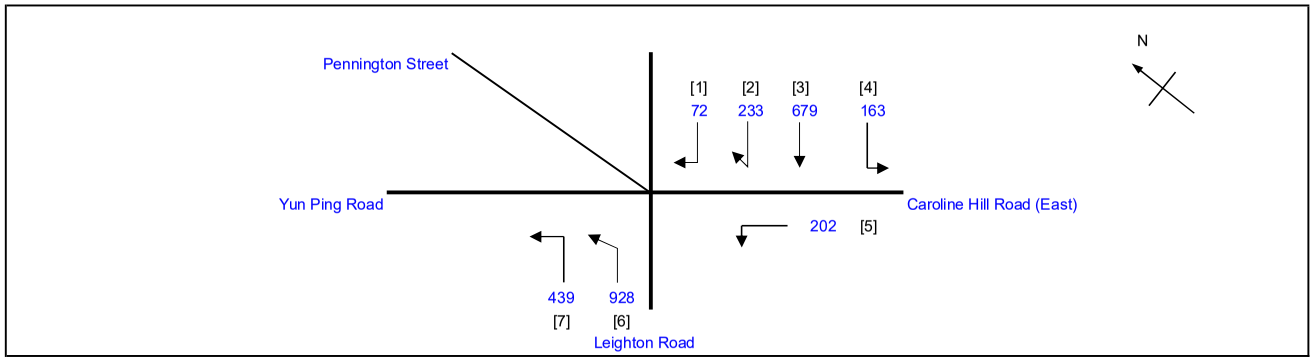
Stage 2 G= 42 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	71	8
4P	2		10	8	2	39	8

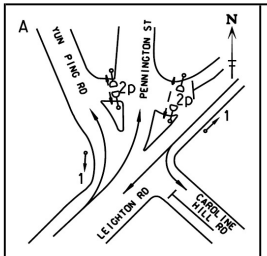
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		521		521	0.00	2005							2005	0.260			44	76
3,4	1	3.00	1	7		N	1915	151	116		267	0.57	1708			0.6	-683			1025	0.260			44	76
6	1	3.00	1				2055		680		680	0.00	2055			0.7	-534			1521	0.447	0.447		76	76
6,7	1	3.00	1	15		N	1915	453	135		588	0.77	1778			0.7	-462			1316	0.447			76	76
1,2	2	3.50	1	9		N	1965			343	343	1.00	1684			0.8	-337			1347	0.255	0.255		43	43
5	2	4.00	1	5		N	2015	119			119	1.00	1550			0.6	-620			930	0.128			22	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

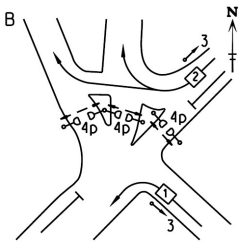
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.707
Loss time	L =	11 sec
Total Flow	=	2716 pcu
Co = (1.5*L+5)/(1-Y)	=	73.4 sec
Cm = L/(1-Y)	=	37.5 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	15.6 %
Cp = 0.9*L/(0.9-Y)	=	51.3 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**17 %**



Stage 1 G= 80
Int = 6



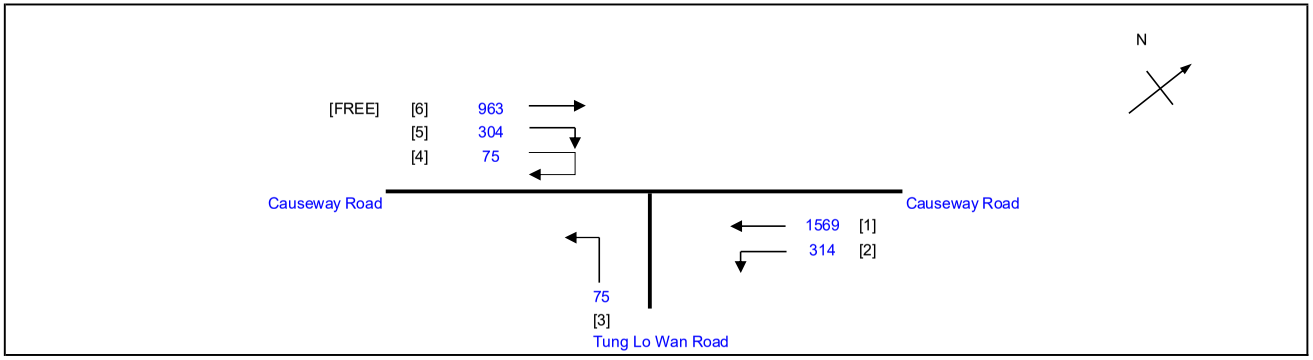
Stage 2 G= 37
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	76	8
4P	2		10	8	2	34	8

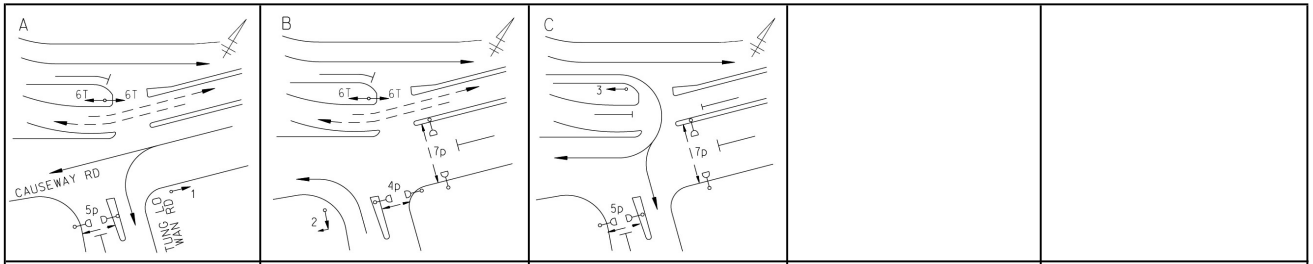
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		557		557	0.00	2005							2005	0.278			47	81
3,4	1	3.00	1	7		N	1915	163	122		285	0.57	1706			0.6	-682			1024	0.278			47	81
6	1	3.00	1				2055		731		731	0.00	2055			0.7	-534			1521	0.481	0.481		81	81
6,7	1	3.00	1	15		N	1915	439	197		636	0.69	1791			0.7	-466			1325	0.480			81	81
1,2	2	3.50	1	9		N	1965			305	305	1.00	1684			0.8	-337			1347	0.226	0.226		38	38
5	2	4.00	1	5		N	2015	202			202	1.00	1550			0.6	-620			930	0.217			37	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.413
Loss time	L =	33 sec
Total Flow	=	2337 pcu
Co = (1.5*L+5)/(1-Y)	=	92.8 sec
Cm = L/(1-Y)	=	56.2 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	58.2 %
Cp = 0.9*L/(0.9-Y)	=	60.9 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**46 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		36	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		426		426	0.00	1915			0.8	-383			1532	0.278			45	45
1	1	3.00	2				4110		1143		1143	0.00	4110							4110	0.278	0.278		45	45
2	1	3.00	1	9		N	1915	314			314	1.00	1641			0.8	-328			1313	0.239			39	45
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			8	15
4,5	3	4.00	1	12		N	2015			192	192	1.00	1791			0.8	-358			1433	0.134			22	22
4,5	3	4.50	1	8		N	2065			187	187	1.00	1739			0.8	-348			1391	0.134	0.134		22	22
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

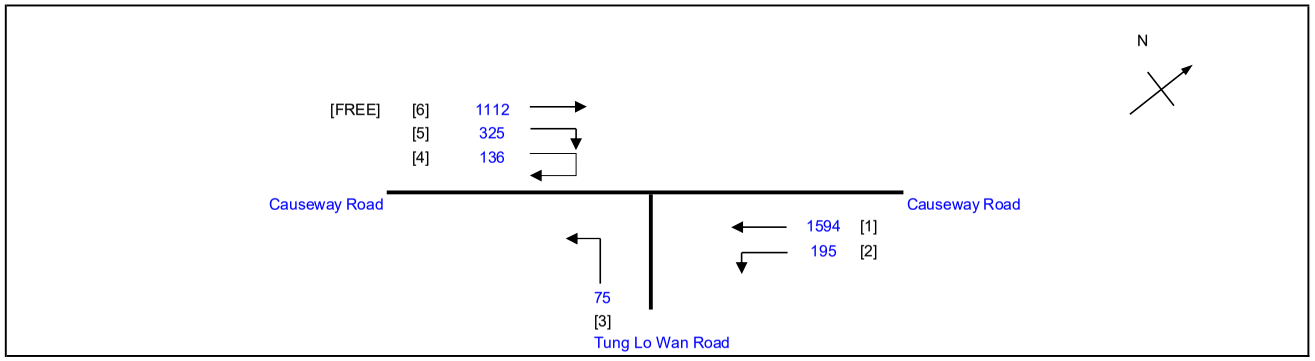
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

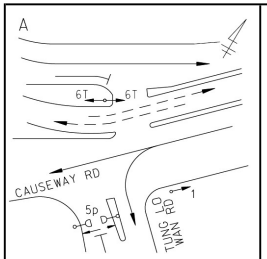
2033 Reference PM

PROJECT NO.: 40920

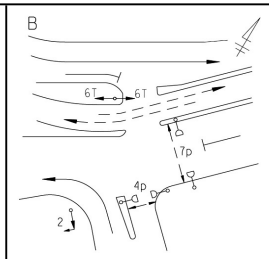
FILENAME : J4_CR_LR_IS.xlsx



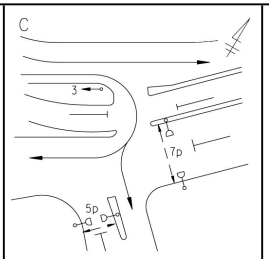
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.446
Loss time	L =	33 sec
Total Flow	=	2325 pcu
Co = (1.5*L+5)/(1-Y)	=	98.4 sec
Cm = L/(1-Y)	=	59.6 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	46.3 %
Cp = 0.9*L/(0.9-Y)	=	65.4 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**35 %**



Stage 1 G= 41 Int = 9



Stage 2 G= 15 Int = 4



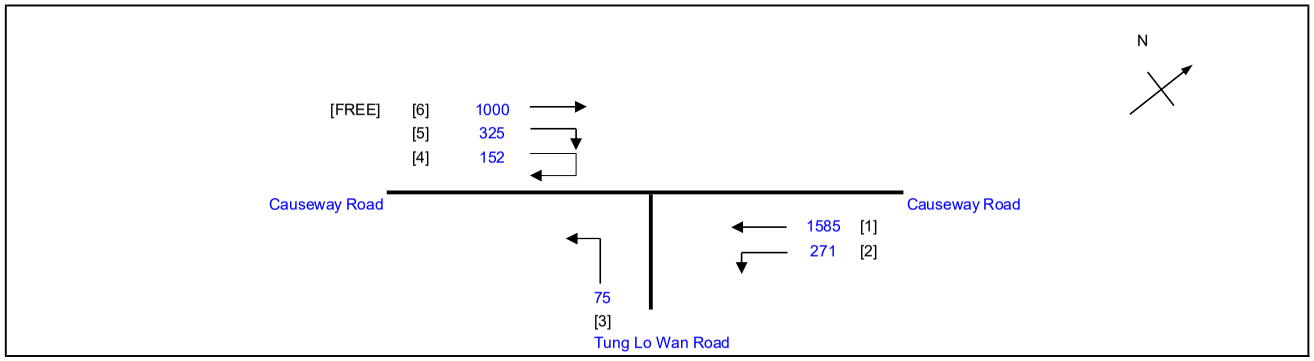
Stage 3 G= 24 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

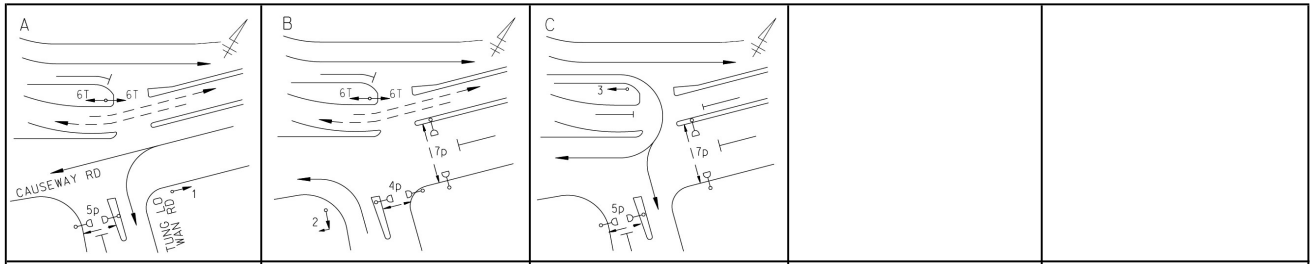
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		433		433	0.00	1915			0.8	-383			1532	0.283	0.283		42	42
1	1	3.00	2				4110		1161		1161	0.00	4110							4110	0.282			42	42
2	1	3.00	1	9		N	1915	195			195	1.00	1641			0.8	-328			1313	0.148			22	42
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
4,5	3	4.00	1	12		N	2015			234	234	1.00	1791			0.8	-358			1433	0.163	0.163		25	25
4,5	3	4.50	1	8		N	2065			227	227	1.00	1739			0.8	-348			1391	0.163			25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.450
Loss time	L =	33 sec
Total Flow	=	2408 pcu
Co = (1.5*L+5)/(1-Y)	=	99.1 sec
Cm = L/(1-Y)	=	60.0 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	44.9 %
Cp = 0.9*L/(0.9-Y)	=	66.0 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**34 %**



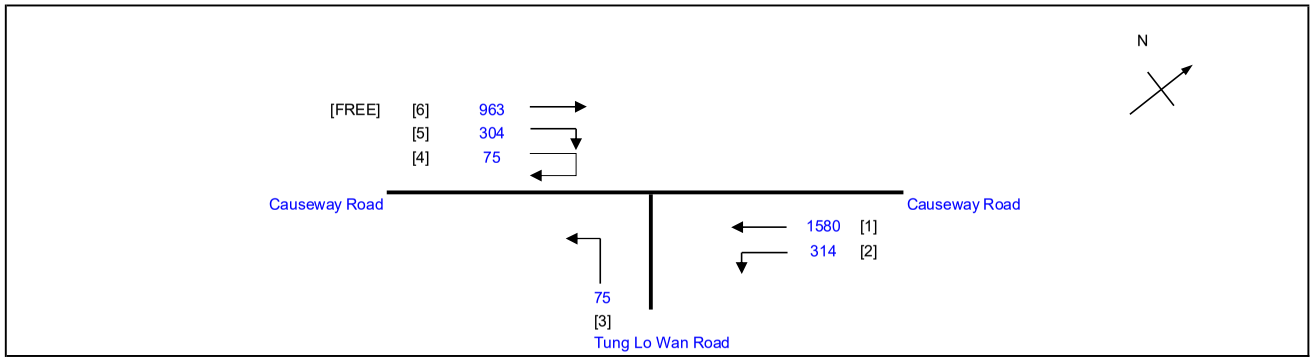
Stage 1	G= 41	Stage 2	G= 15	Stage 3	G= 24
	Int = 9		Int = 4		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

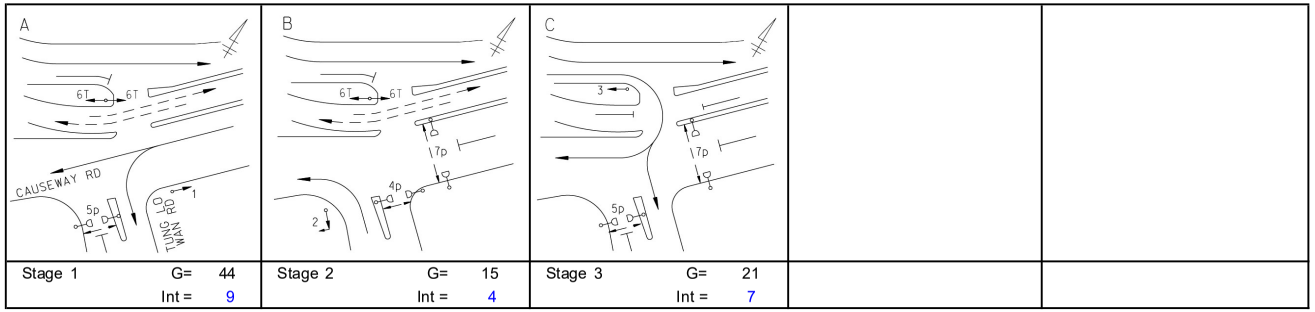
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		431		431	0.00	1915			0.8	-383			1532	0.281	0.281		42	42
1	1	3.00	2				4110		1154		1154	0.00	4110							4110	0.281			42	42
2	1	3.00	1	9		N	1915	271			271	1.00	1641			0.8	-328			1313	0.206			31	42
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
4,5	3	4.00	1	12		N	2015			242	242	1.00	1791			0.8	-358			1433	0.169			25	25
4,5	3	4.50	1	8		N	2065			235	235	1.00	1739			0.8	-348			1391	0.169	0.169		25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.414
Loss time	L =	33 sec
Total Flow	=	2348 pcu
Co = (1.5*L+5)/(1-Y)	=	93.1 sec
Cm = L/(1-Y)	=	56.4 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	57.4 %
Cp = 0.9*L/(0.9-Y)	=	61.2 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**45 %**

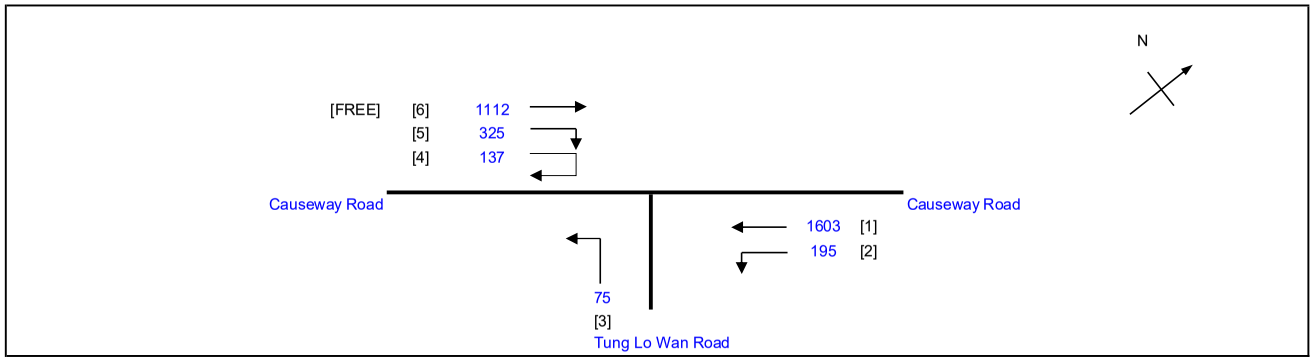


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		36	11

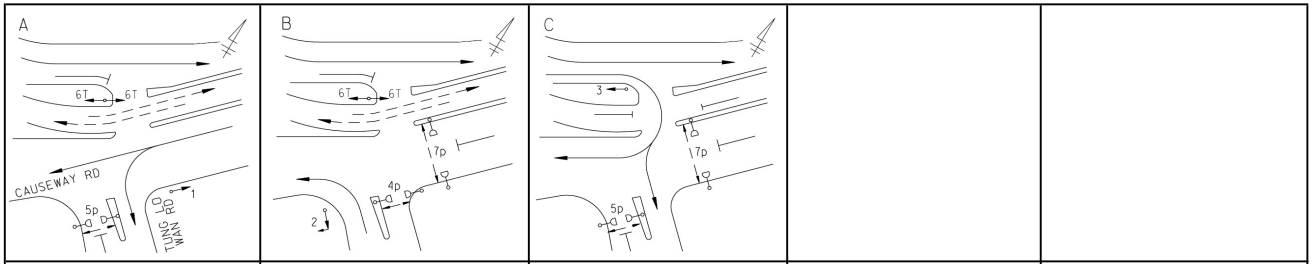
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		429		429	0.00	1915			0.8	-383			1532	0.280			45	45
1	1	3.00	2				4110		1151		1151	0.00	4110							4110	0.280	0.280		45	45
2	1	3.00	1	9		N	1915	314			314	1.00	1641			0.8	-328			1313	0.239			39	45
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			8	15
4,5	3	4.00	1	12		N	2015			192	192	1.00	1791			0.8	-358			1433	0.134			22	22
4,5	3	4.50	1	8		N	2065			187	187	1.00	1739			0.8	-348			1391	0.134	0.134		22	22
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.448
Loss time	L =	33 sec
Total Flow	=	2335 pcu
Co = (1.5*L+5)/(1-Y)	=	98.8 sec
Cm = L/(1-Y)	=	59.8 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	45.6 %
Cp = 0.9*L/(0.9-Y)	=	65.7 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**35 %**



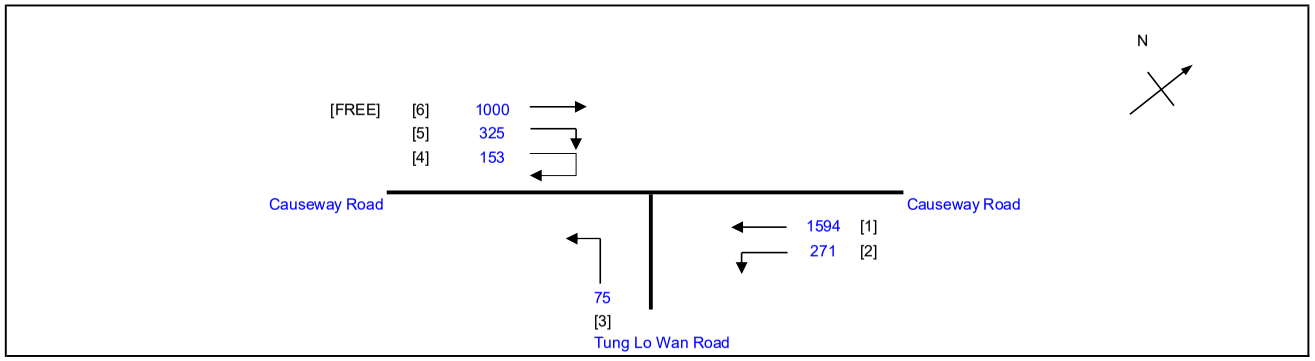
Stage 1	G= 41	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 24	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

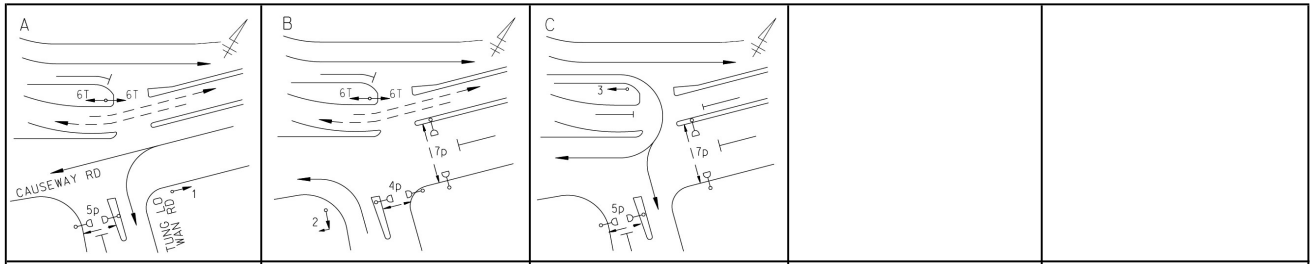
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		435		435	0.00	1915			0.8	-383			1532	0.284			42	42
1	1	3.00	2				4110		1168		1168	0.00	4110							4110	0.284	0.284		42	42
2	1	3.00	1	9		N	1915	195			195	1.00	1641			0.8	-328			1313	0.148			22	42
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
4,5	3	4.00	1	12		N	2015			235	235	1.00	1791			0.8	-358			1433	0.164	0.164		25	25
4,5	3	4.50	1	8		N	2065			227	227	1.00	1739			0.8	-348			1391	0.163			24	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.:	40920	Prepared By:	SKL	Mar-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME :	J4_CR_LR_IS.xlsx	Checked By:	SLN	Mar-26
				Reviewed By:	SLN	Mar-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.452
Loss time		L =	33 sec
Total Flow		=	2418 pcu
Co	= (1.5*L+5)/(1-Y)	=	99.5 sec
Cm	= L/(1-Y)	=	60.2 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	44.3 %
Cp	= 0.9*L/(0.9-Y)	=	66.3 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**33 %**



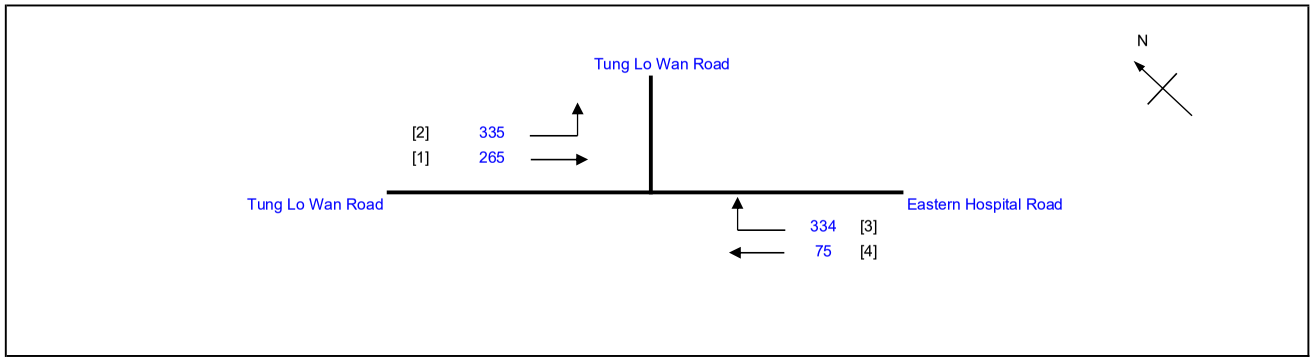
Stage 1	G= 41	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 24	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		39	11

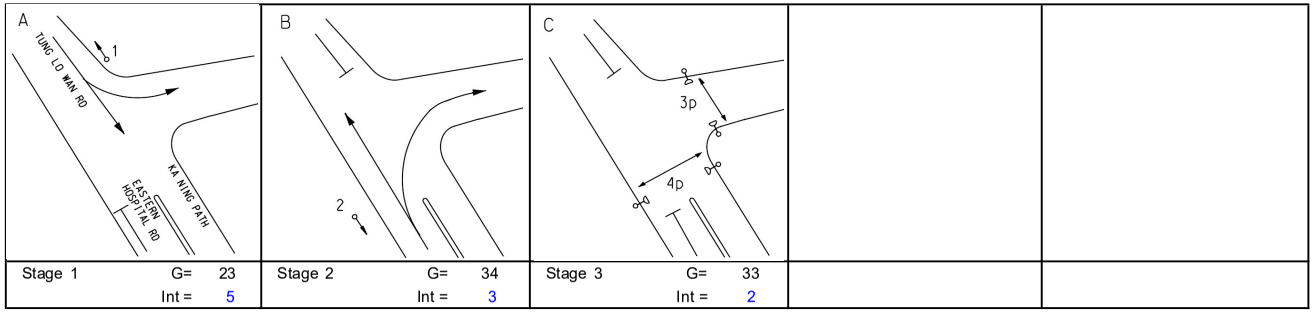
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		433		433	0.00	1915			0.8	-383			1532	0.283	0.283		42	42
1	1	3.00	2				4110		1161		1161	0.00	4110							4110	0.282			42	42
2	1	3.00	1	9		N	1915	271			271	1.00	1641			0.8	-328			1313	0.206			31	42
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
4,5	3	4.00	1	12		N	2015			243	243	1.00	1791			0.8	-358			1433	0.170	0.170		25	25
4,5	3	4.50	1	8		N	2065			235	235	1.00	1739			0.8	-348			1391	0.169			25	25
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.382
Loss time		L =	41 sec
Total Flow		=	1009 pcu
Co	= (1.5*L+5)/(1-Y)	=	107.6 sec
Cm	= L/(1-Y)	=	66.3 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	55.2 %
Cp	= 0.9*L/(0.9-Y)	=	71.2 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**



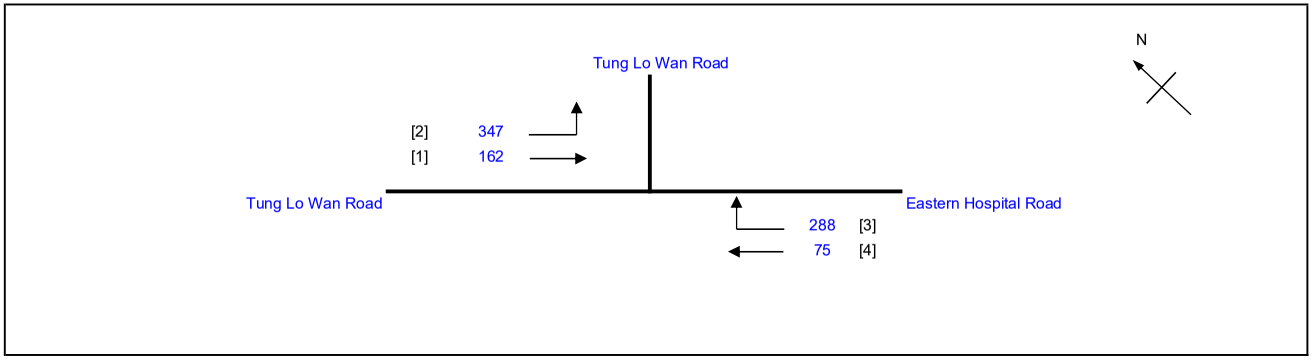
Stage 1	G= 23	Int = 5
Stage 2	G= 34	Int = 3
Stage 3	G= 33	Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

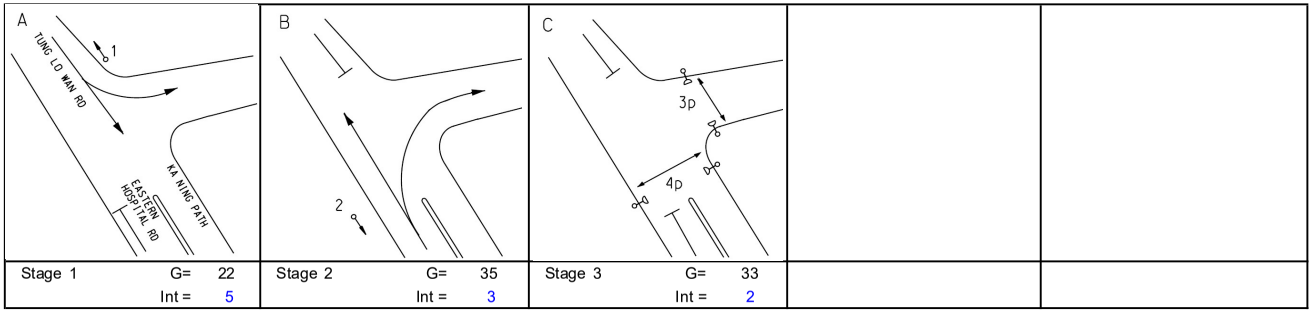
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	53	265		318	0.17	2064							2064	0.154	0.154		24	24
4	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			24	24
1,2	2	3.65	1	12		N	1980		75	334	409	0.82	1797							1797	0.228	0.228		35	35
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.333
Loss time		L =	41 sec
Total Flow		=	872 pcu
Co	= (1.5*L+5)/(1-Y)	=	99.7 sec
Cm	= L/(1-Y)	=	61.5 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	77.9 %
Cp	= 0.9*L/(0.9-Y)	=	65.1 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**59 %**



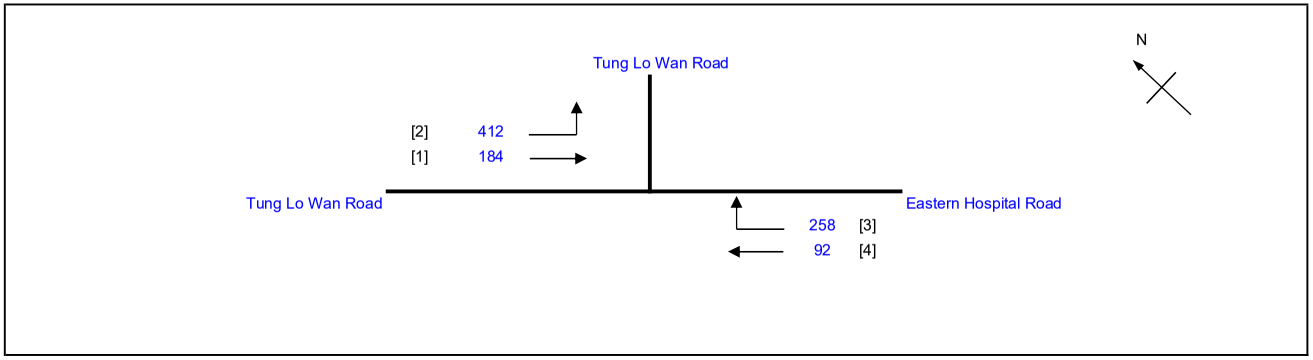
Stage 1	G= 22	Stage 2	G= 35	Stage 3	G= 33		
	Int = 5		Int = 3		Int = 2		

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

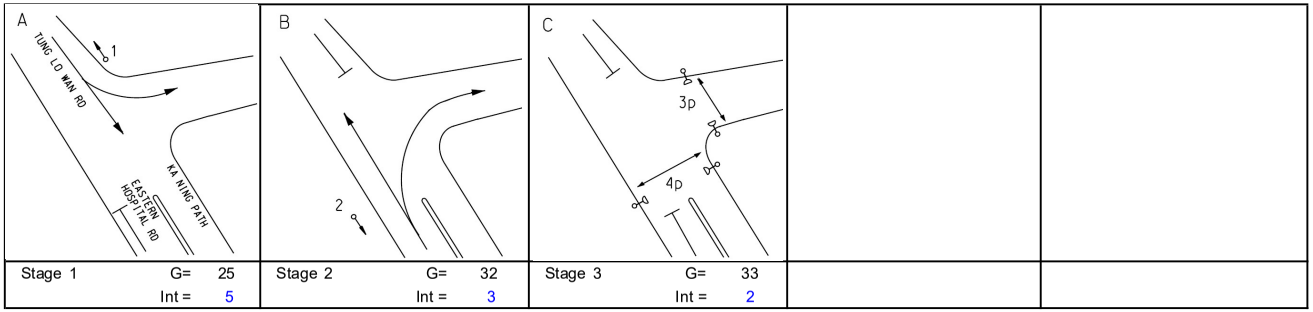
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
3,4	1	3.30	1	25			2085	106	162		268	0.40	2037							2037	0.132	0.132		23	23			
4	1	3.30	1	25		N	1945	241			241	1.00	1835							1835	0.131			23	23			
1,2	2	3.65	1	12		N	1980		75	288	363	0.79	1801							1801	0.202	0.202		36	36			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.347
Loss time		L =	41 sec
Total Flow		=	946 pcu
Co	= (1.5*L+5)/(1-Y)	=	101.9 sec
Cm	= L/(1-Y)	=	62.8 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	70.6 %
Cp	= 0.9*L/(0.9-Y)	=	66.8 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**53 %**



Stage 1	G= 25	Stage 2	G= 32	Stage 3	G= 33
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	130	184		314	0.41	2034							2034	0.154	0.154		26	26
4	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			26	26
1,2	2	3.65	1	12		N	1980		92	258	350	0.74	1813							1813	0.193	0.193		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

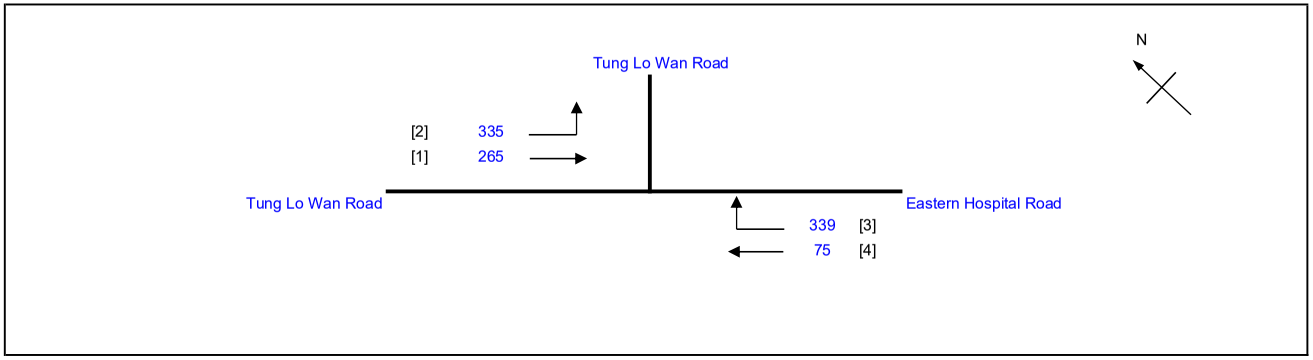
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

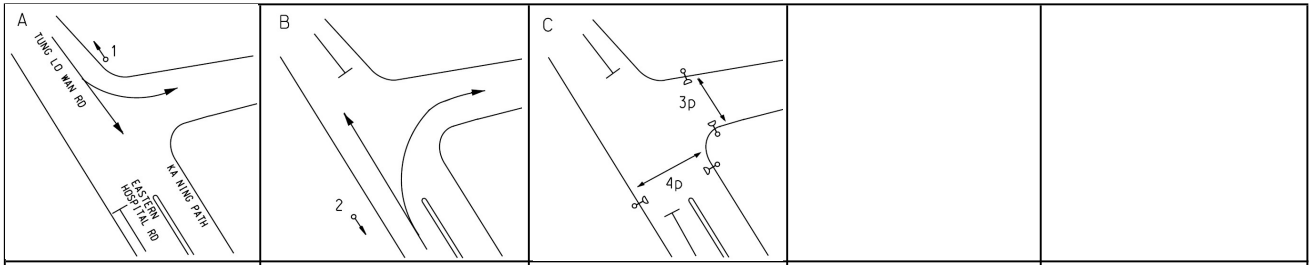
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Design AM

PROJECT NO.:	40920
FILENAME :	J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.385
Loss time		L =	41 sec
Total Flow		=	1014 pcu
Co	= (1.5*L+5)/(1-Y)	=	108.1 sec
Cm	= L/(1-Y)	=	66.6 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	54.0 %
Cp	= 0.9*L/(0.9-Y)	=	71.6 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**38 %**



Stage 1	G=	23	Stage 2	G=	34	Stage 3 G= 33
	Int =	5		Int =	3	Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						8		
3,4	1	3.30	1	25			2085	52	265		317	0.16	2065							2065	0.154			24	24
4	1	3.30	1	25		N	1945	283			283	1.00	1835							1835	0.154	0.154		24	24
1,2	2	3.65	1	12		N	1980		75	339	414	0.82	1796							1796	0.230	0.230		35	35
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

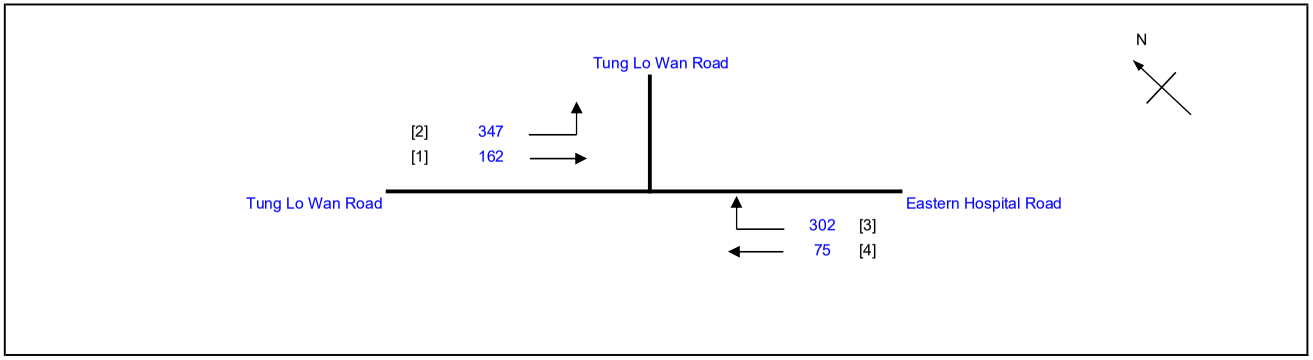
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

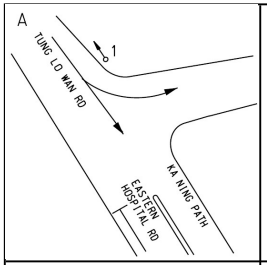
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Design PM

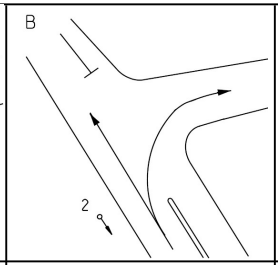
PROJECT NO.:	40920
FILENAME :	J5_TLWR_EHR.xlsx



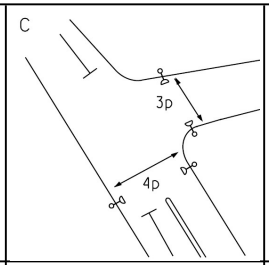
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.341
Loss time		L =	41 sec
Total Flow		=	886 pcu
Co	= (1.5*L+5)/(1-Y)	=	100.9 sec
Cm	= L/(1-Y)	=	62.2 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	73.7 %
Cp	= 0.9*L/(0.9-Y)	=	66.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**56 %**



Stage 1 G= 22 Int = 5



Stage 2 G= 35 Int = 3



Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

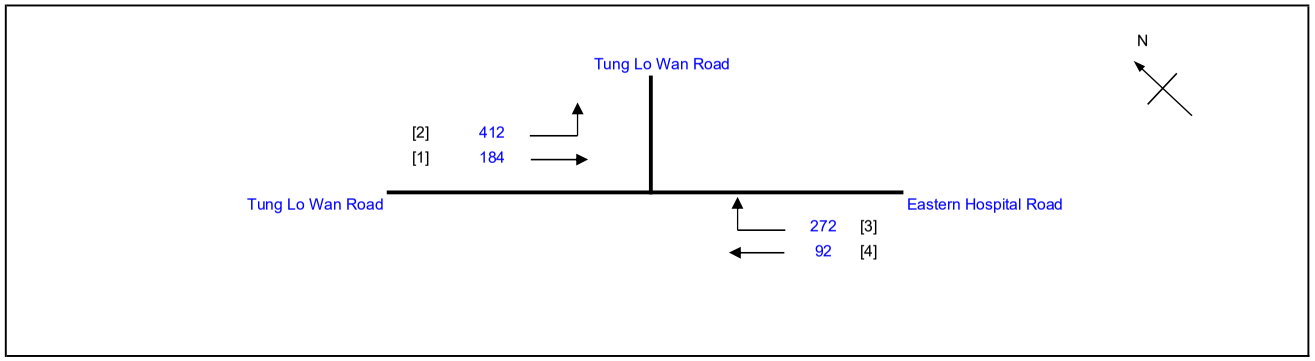
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
3,4	1	3.30	1	25			2085	106	162		268	0.40	2037							2037	0.132	0.132		23	23			
4	1	3.30	1	25		N	1945	241			241	1.00	1835							1835	0.131			23	23			
1,2	2	3.65	1	12		N	1980		75	302	377	0.80	1800							1800	0.209	0.209		36	36			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

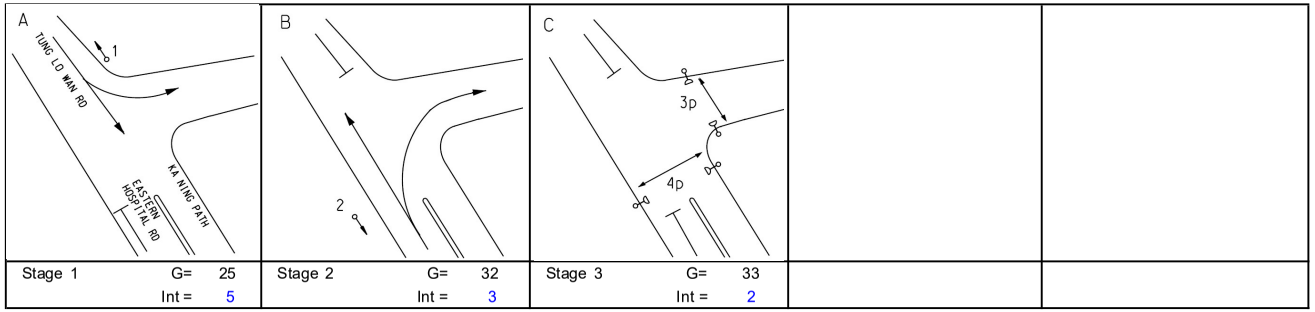
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.355
Loss time		L =	41 sec
Total Flow		=	960 pcu
Co	= (1.5*L+5)/(1-Y)	=	103.2 sec
Cm	= L/(1-Y)	=	63.6 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	66.7 %
Cp	= 0.9*L/(0.9-Y)	=	67.8 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**49 %**



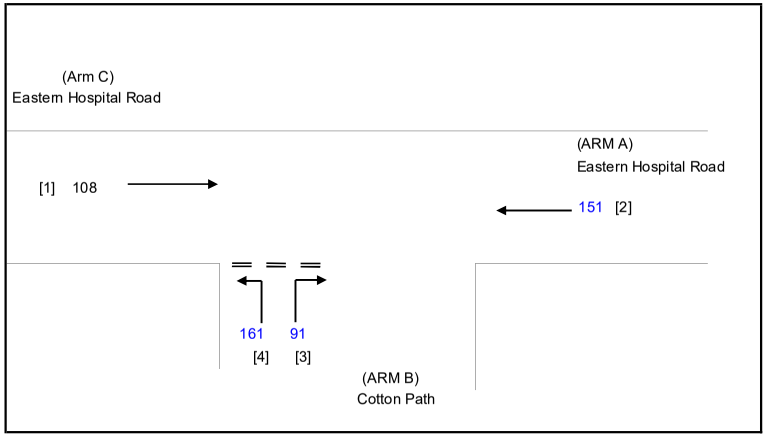
Stage 1	G= 25	Stage 2	G= 32	Stage 3	G= 33
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
3,4	1	3.30	1	25			2085	130	184		314	0.41	2034							2034	0.154	0.154		26	26
4	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			26	26
1,2	2	3.65	1	12		N	1980		92	272	364	0.75	1811							1811	0.201	0.201		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	151	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	108	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	91	(pcu/hr)
q b-c	=	161	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.63888889

THE CAPACITY OF MOVEMENT :

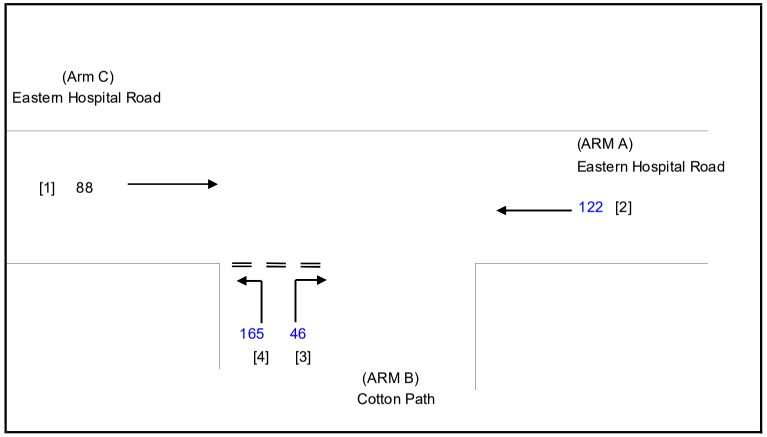
Q b-a	=	525		
Q b-c	=	725	Q b-c (O) =	693.6
Q c-b	=	412		
Q b-ac	=	637		
TOTAL FLOW	=	511	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1733
DFC b-c	=	0.2221
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2526

CRITICAL DFC = 0.25

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	122	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	88	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	46	(pcu/hr)
q b-c	=	165	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.78199052

THE CAPACITY OF MOVEMENT :

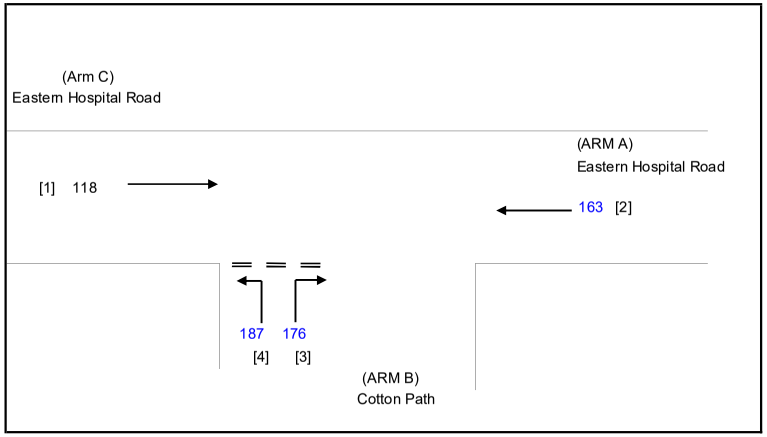
Q b-a	=	535		
Q b-c	=	734	Q b-c (O) =	718.2
Q c-b	=	417		
Q b-ac	=	679		
TOTAL FLOW	=	421	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0860
DFC b-c	=	0.2248
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2430

CRITICAL DFC = 0.24

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	163	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	118	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	176	(pcu/hr)
q b-c	=	187	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.51515152

THE CAPACITY OF MOVEMENT :

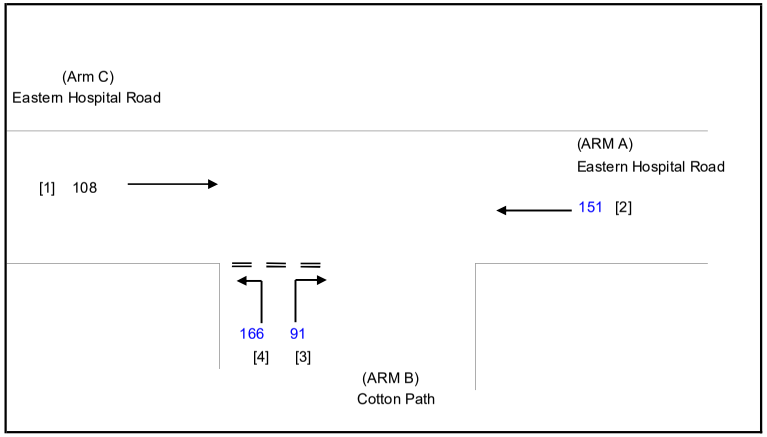
Q b-a	=	520			
Q b-c	=	722	Q b-c (O) =	660.9	
Q c-b	=	411			
Q b-ac	=	608			
TOTAL FLOW	=	644	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3385
DFC b-c	=	0.2590
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3078

CRITICAL DFC = 0.34

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	151	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	108	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	91	(pcu/hr)
q b-c	=	166	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.6459144

THE CAPACITY OF MOVEMENT :

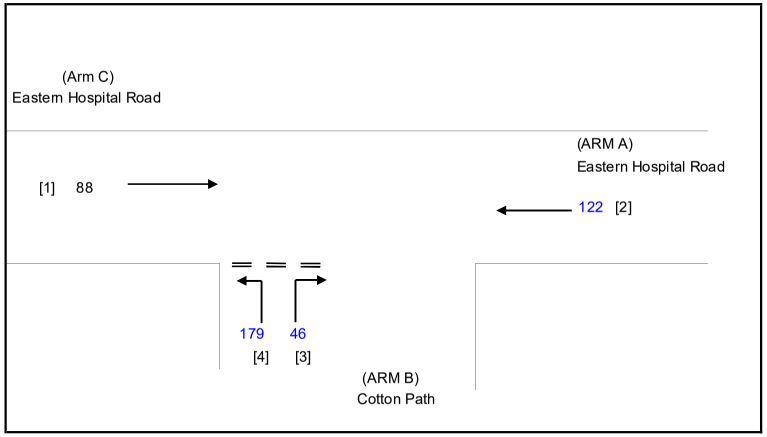
Q b-a	=	525		
Q b-c	=	725	Q b-c (O) =	693.6
Q c-b	=	412		
Q b-ac	=	639		
TOTAL FLOW	=	516	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1733
DFC b-c	=	0.2290
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2599

CRITICAL DFC = 0.26

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	122	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	88	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	46	(pcu/hr)
q b-c	=	179	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.79555556

THE CAPACITY OF MOVEMENT :

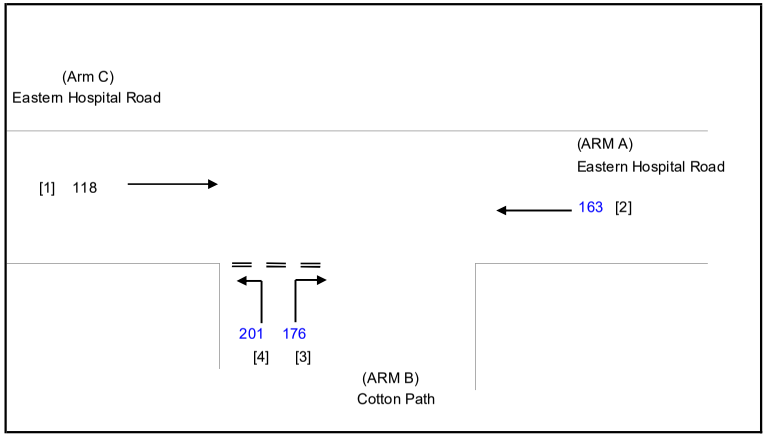
Q b-a	=	535		
Q b-c	=	734	Q b-c (O) =	718.2
Q c-b	=	417		
Q b-ac	=	682		
TOTAL FLOW	=	435	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0860
DFC b-c	=	0.2439
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2624

CRITICAL DFC = 0.26

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	163	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	118	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	176	(pcu/hr)
q b-c	=	201	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.5331565

THE CAPACITY OF MOVEMENT :

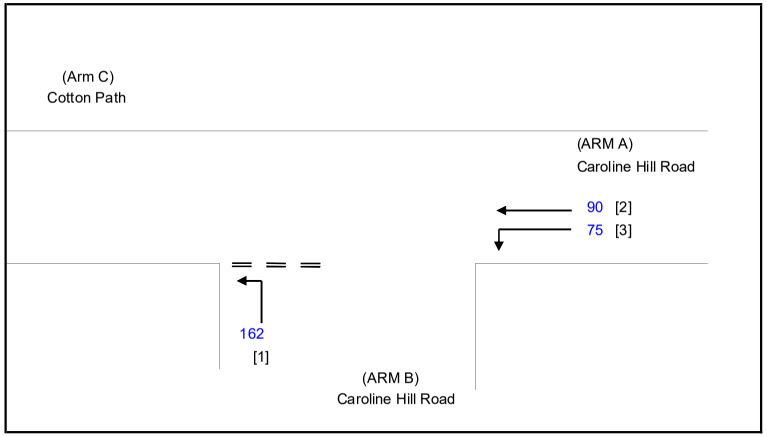
Q b-a	=	520		
Q b-c	=	722	Q b-c (O) =	660.9
Q c-b	=	411		
Q b-ac	=	611		
TOTAL FLOW	=	658	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3385
DFC b-c	=	0.2784
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3289

CRITICAL DFC = 0.34

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	75	(pcu/hr)
q a-c	=	90	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	162	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

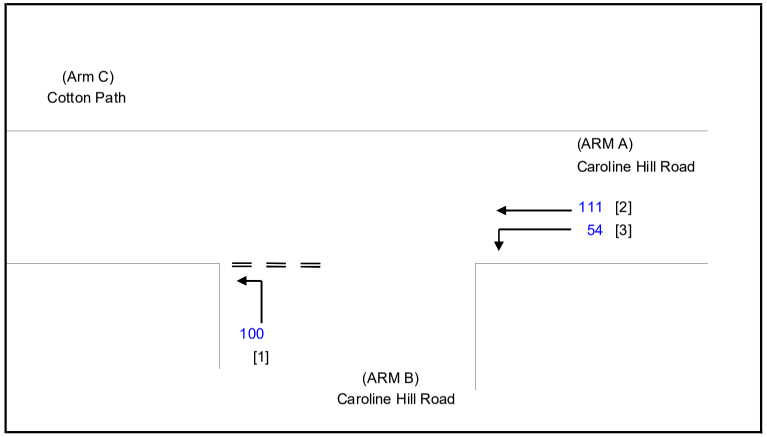
Q b-a	=	316			
Q b-c	=	721	Q b-c (O) =	721	
Q c-b	=	409			
Q b-ac	=	721			
TOTAL FLOW	=	327	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2247
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2247

CRITICAL DFC = 0.22

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	54	(pcu/hr)
q a-c	=	111	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	100	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

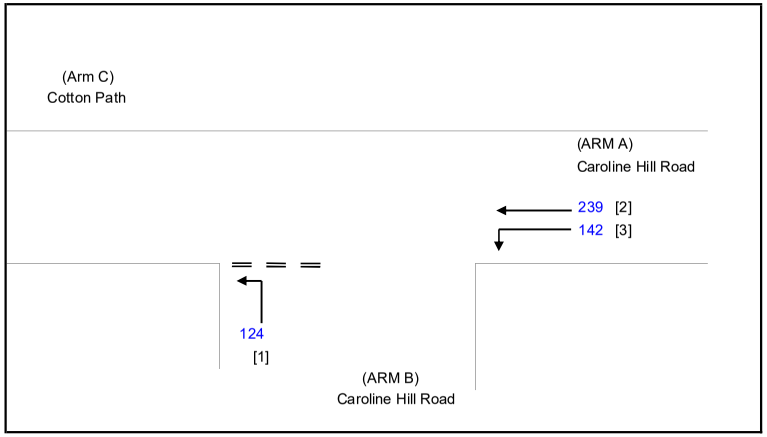
Q b-a	=	314		
Q b-c	=	717	Q b-c (O) =	717
Q c-b	=	409		
Q b-ac	=	717		
TOTAL FLOW	=	265	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1395
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1395

CRITICAL DFC = 0.14

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	142	(pcu/hr)
q a-c	=	239	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	124	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

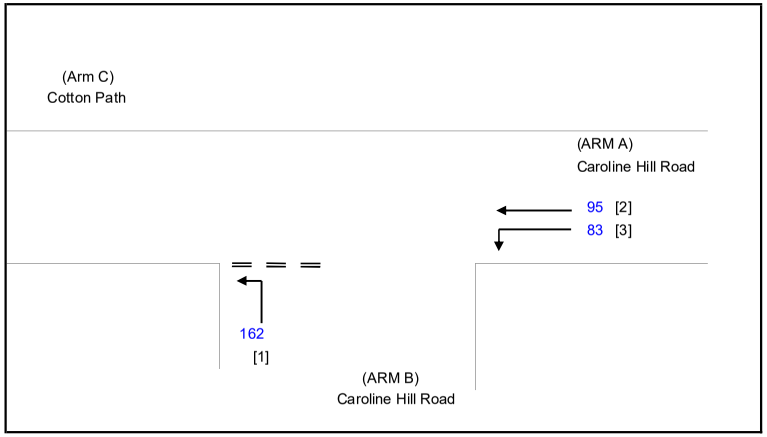
Q b-a	=	289		
Q b-c	=	669	Q b-c (O) =	669
Q c-b	=	372		
Q b-ac	=	669		
TOTAL FLOW	=	505	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1854
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1854

CRITICAL DFC = 0.19

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	83	(pcu/hr)
q a-c	=	95	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	162	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

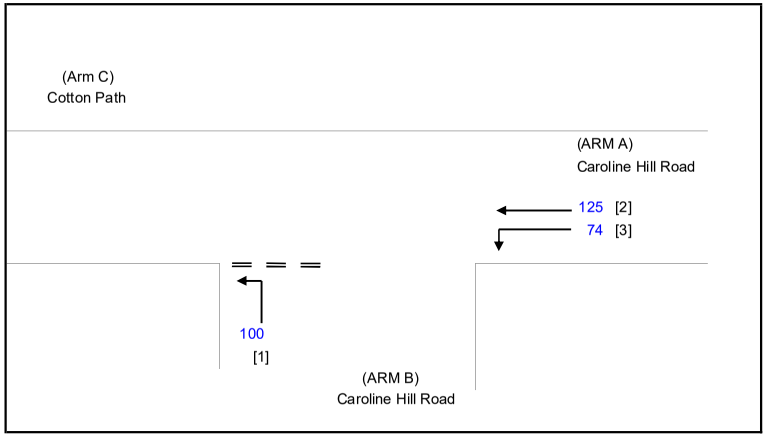
Q b-a	=	315			
Q b-c	=	718	Q b-c (O) =	718	
Q c-b	=	406			
Q b-ac	=	718			
TOTAL FLOW	=	340	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2256
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2256

CRITICAL DFC = 0.23

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	74	(pcu/hr)
q a-c	=	125	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	100	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

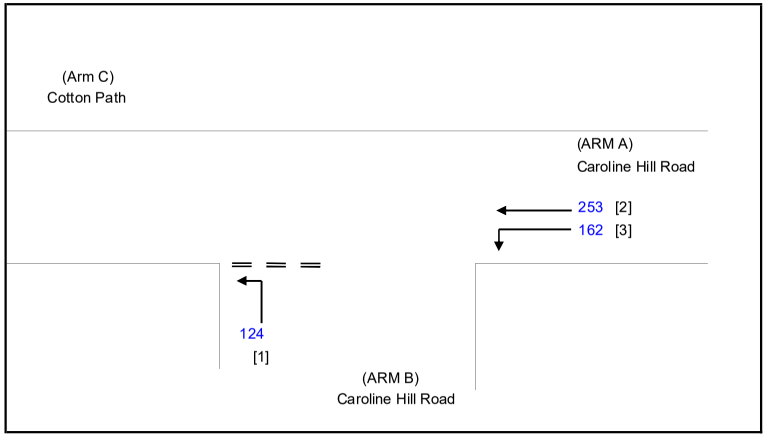
Q b-a	=	311		
Q b-c	=	710	Q b-c (O) =	710
Q c-b	=	403		
Q b-ac	=	710		
TOTAL FLOW	=	299	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1408
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1408

CRITICAL DFC = 0.14

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	162	(pcu/hr)
q a-c	=	253	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	124	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

Q b-a	=	286			
Q b-c	=	663	Q b-c (O) =	663	
Q c-b	=	366			
Q b-ac	=	663			
TOTAL FLOW	=	539	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

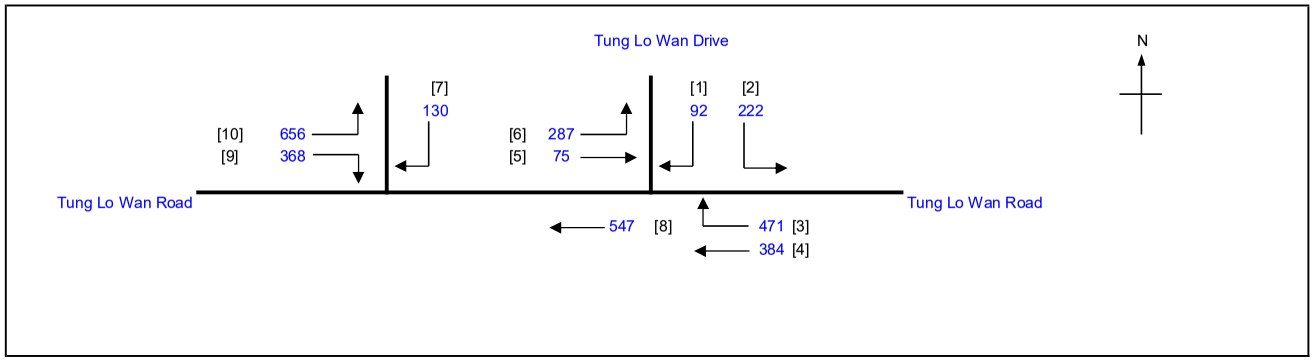
DFC b-a	=	0.0000
DFC b-c	=	0.1870
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1870

CRITICAL DFC = 0.19

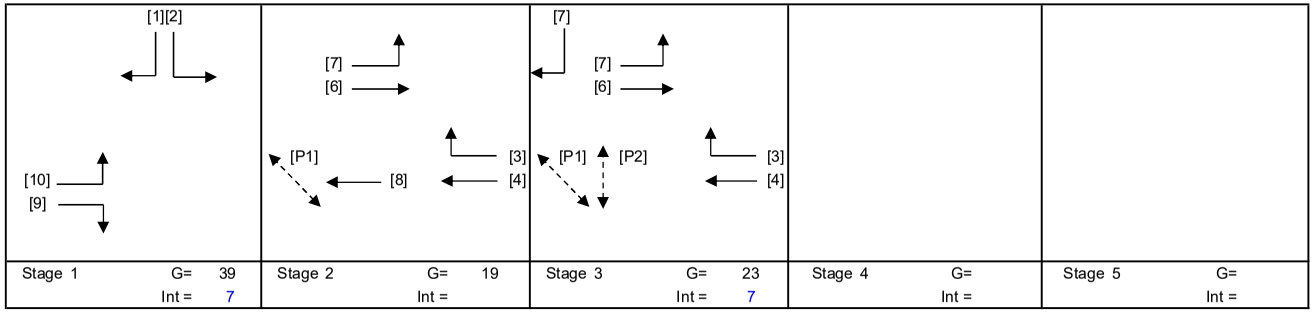
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2033 Reference AM**		
PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Mar-26
	Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.594
Loss time	L =	12 sec
Total Flow	=	3232 pcu
Co = (1.5*L+5)/(1-Y)	=	56.7 sec
Cm = L/(1-Y)	=	29.6 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	36.3 %
Cp = 0.9*L/(0.9-Y)	=	35.3 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**32 %**



Stage 1	G= 39	Stage 2	G= 19	Stage 3	G= 23	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		22	8

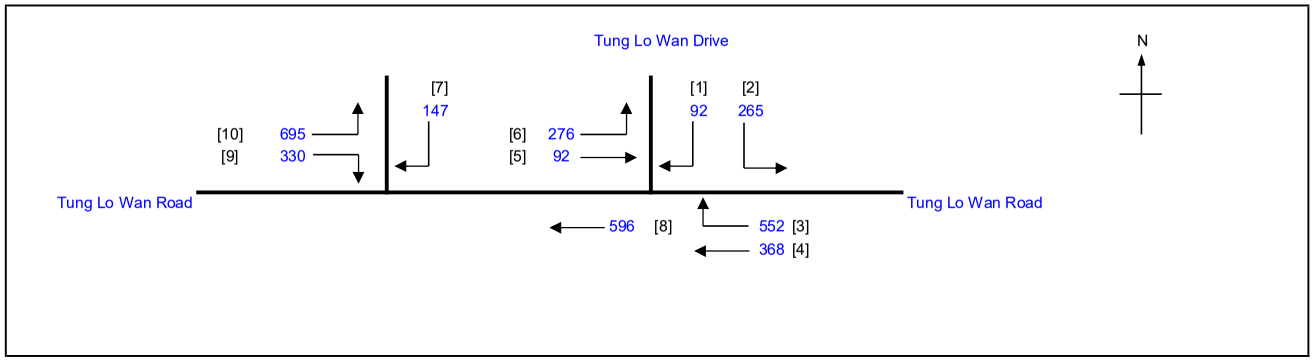
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		547		547	0.00	3970							3970	0.138			19	19	0.680	33	36
10	1	3.70	1	8		N	1985	481			481	1.00	1672							1672	0.288	0.288		40	40	0.680	42	25
9,10	1	3.50	1	13			2105	175		368	543	1.00	1887							1887	0.288			40	40	0.680	48	24
7	3	5.00	1	27		N	2115			130	130	1.00	2004							2004	0.065			9	24	0.680	18	55
4	2,3	3.70	1			N	1985		384		384	0.00	1985							1985	0.193			27	43	0.680	42	33
3,4	2,3	3.00	1	8	O		2055			471	471	1.00	1537							1537	0.306	0.306		43	43	0.680	36	24
5,6	2,3	5.00	1	13		N	2115	287	75		362	0.79	1938							1938	0.187			26	43	0.680	36	34
1,2	1	3.50	1	8		N	1965	222		92	314	1.00	1655							1655	0.190			27	40	0.680	36	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

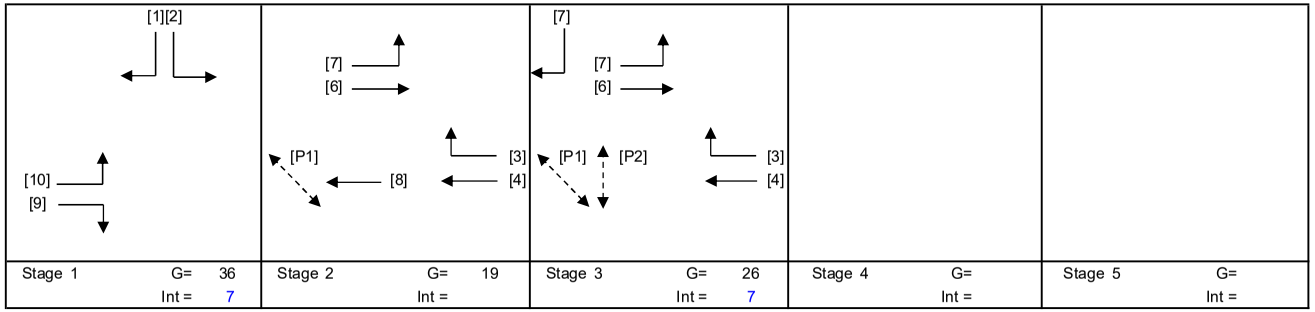
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2033 Reference PM**		
	PROJECT NO.: 40920	Prepared By:	SKL Mar-26
	FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN Mar-26
		Reviewed By:	SLN Mar-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.647
Loss time	L =	12 sec
Total Flow	=	3413 pcu
Co = (1.5*L+5)/(1-Y)	=	65.2 sec
Cm = L/(1-Y)	=	34.0 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	25.1 %
Cp = 0.9*L/(0.9-Y)	=	42.8 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**21 %**



Stage 1	G= 36	Stage 2	G= 19	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		44	8
P2	3		9	8		25	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		596		596	0.00	3970							3970	0.150			19	19	0.741	36	38
10	1	3.70	1	8		N	1985	481			481	1.00	1672							1672	0.288			37	37	0.741	42	30
9,10	1	3.50	1	13			2105	214		330	544	1.00	1887							1887	0.288	0.288		37	37	0.741	48	29
7	3	5.00	1	27		N	2115			147	147	1.00	2004							2004	0.073			9	27	0.741	24	61
4	2,3	3.70	1			N	1985		368		368	0.00	1985							1985	0.185			24	46	0.741	42	39
3,4	2,3	3.00	1	8	O		2055			552	552	1.00	1537							1537	0.359	0.359		46	46	0.741	42	24
5,6	2,3	5.00	1	13		N	2115	276	92		368	0.75	1947							1947	0.189			24	46	0.741	42	39
1,2	1	3.50	1	8		N	1965	265		92	357	1.00	1655							1655	0.216			28	37	0.741	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

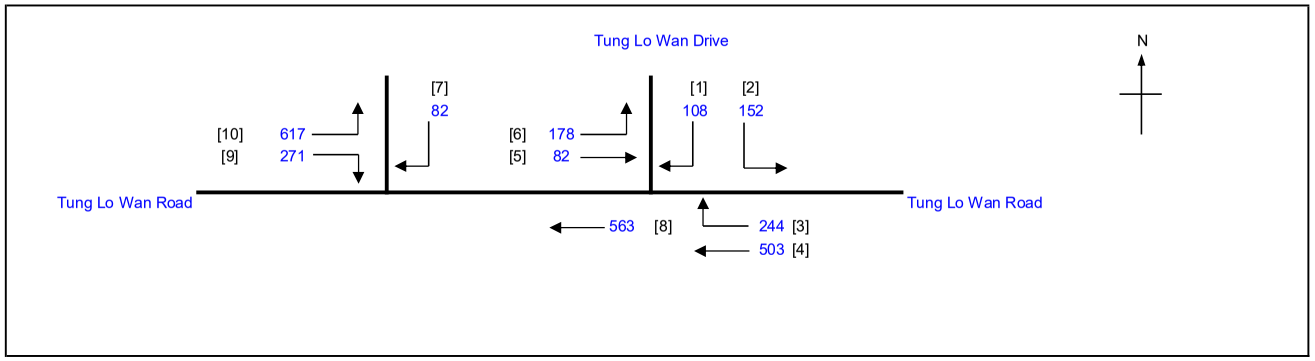
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

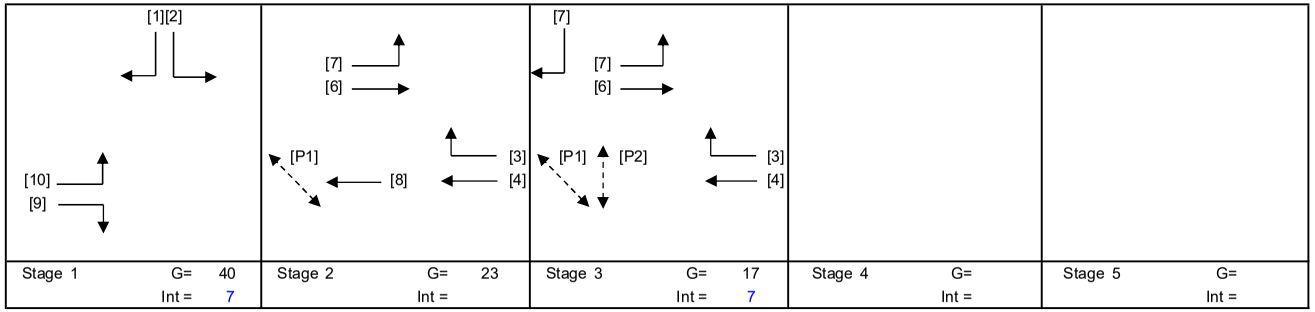
J8 Tung Lo Wan Road / Moreton Terrace

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J8_TLWR_MT.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.503
Loss time	L =	12 sec
Total Flow	=	2800 pcu
Co = (1.5*L+5)/(1-Y)	=	46.3 sec
Cm = L/(1-Y)	=	24.1 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	61.0 %
Cp = 0.9*L/(0.9-Y)	=	27.2 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**56 %**



Stage 1	G= 40	Int = 7
Stage 2	G= 23	Int =
Stage 3	G= 17	Int = 7
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		40	8
P2	3		9	8		16	8

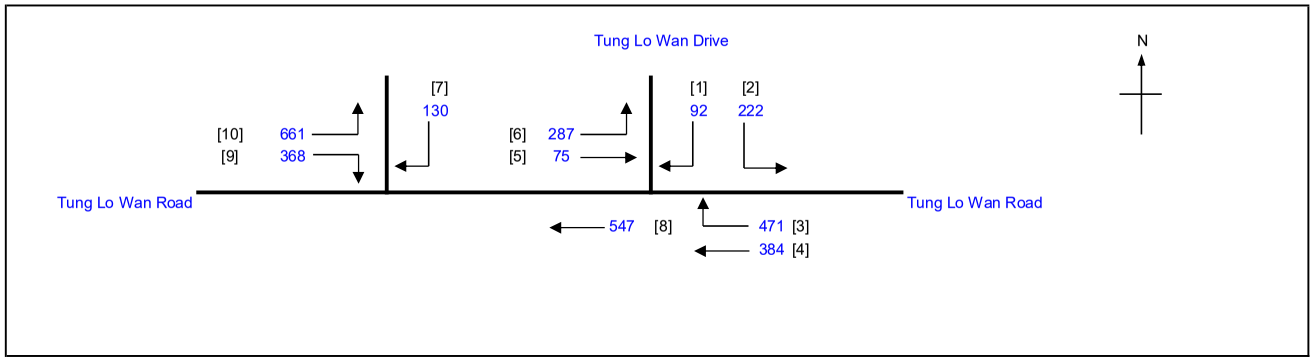
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		563		563	0.00	3970							3970	0.142			23	23	0.576	33	31
10	1	3.70	1	8		N	1985	417			417	1.00	1672							1672	0.249			41	41	0.576	36	21
9,10	1	3.50	1	13			2105	200		271	471	1.00	1887							1887	0.250	0.250		41	41	0.576	42	21
7	3	5.00	1	27		N	2115			82	82	1.00	2004							2004	0.041			7	18	0.576	12	54
4	2,3	3.70	1			N	1985		503		503	0.00	1985							1985	0.253	0.253		42	42	0.576	42	20
3,4	2,3	3.00	1	8	O		2055			244	244	1.00	1537							1537	0.159			26	42	0.576	24	32
5,6	2,3	5.00	1	13		N	2115	178	82		260	0.68	1960							1960	0.133			22	42	0.576	30	34
1,2	1	3.50	1	8		N	1965	152		108	260	1.00	1655							1655	0.157			26	41	0.576	24	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

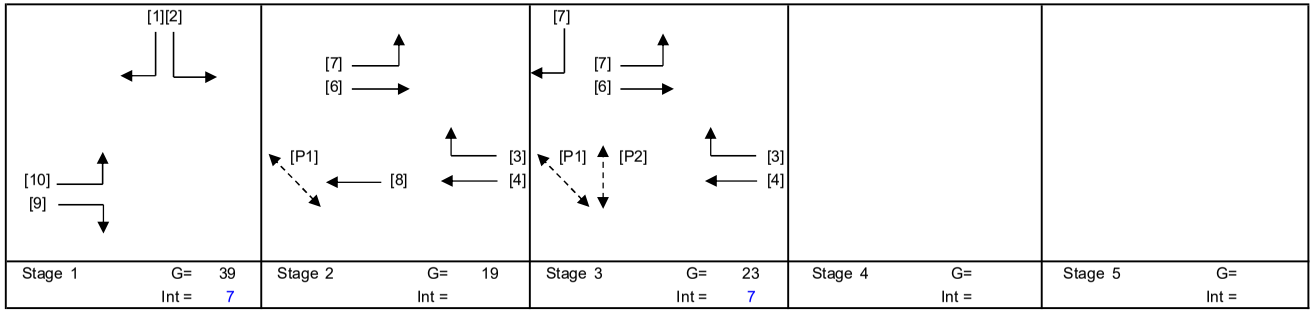
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Mar-26
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.596
Loss time	L =	12 sec
Total Flow	=	3237 pcu
Co = (1.5*L+5)/(1-Y)	=	56.9 sec
Cm = L/(1-Y)	=	29.7 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	36.0 %
Cp = 0.9*L/(0.9-Y)	=	35.5 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**32 %**



Stage 1	G= 39	Stage 2	G= 19	Stage 3	G= 23	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		22	8

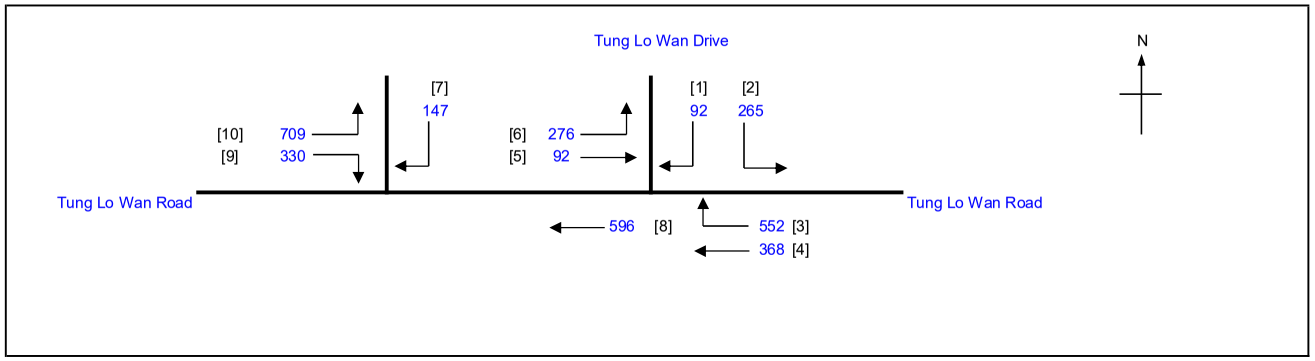
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		547		547	0.00	3970							3970	0.138			19	19	0.682	33	36
10	1	3.70	1	8		N	1985	483			483	1.00	1672							1672	0.289			40	40	0.682	42	25
9,10	1	3.50	1	13			2105	178		368	546	1.00	1887							1887	0.289	0.289		40	40	0.682	48	24
7	3	5.00	1	27		N	2115			130	130	1.00	2004							2004	0.065			9	24	0.682	18	56
4	2,3	3.70	1			N	1985		384		384	0.00	1985							1985	0.193			27	43	0.682	42	33
3,4	2,3	3.00	1	8	O		2055			471	471	1.00	1537							1537	0.306	0.306		43	43	0.682	36	24
5,6	2,3	5.00	1	13		N	2115	287	75		362	0.79	1938							1938	0.187			26	43	0.682	36	34
1,2	1	3.50	1	8		N	1965	222		92	314	1.00	1655							1655	0.190			26	40	0.682	36	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

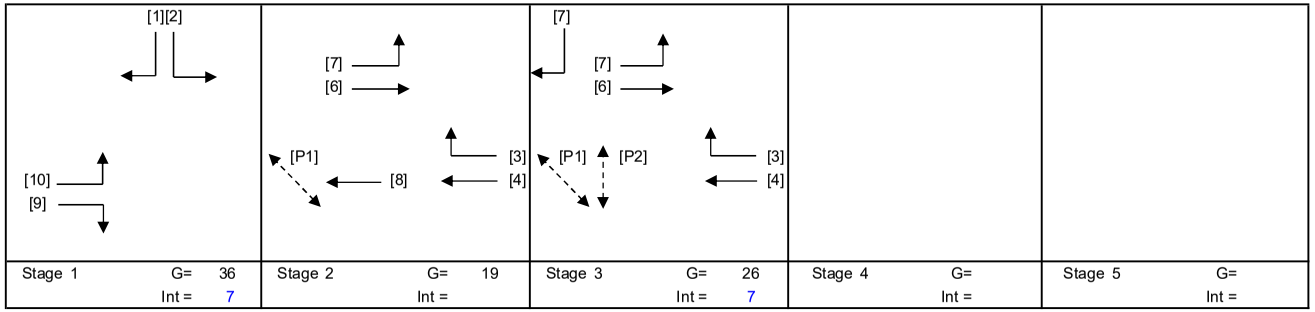
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Mar-26
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Mar-26



No. of stages per cycle		N =	3
Cycle time		C =	95 sec
Sum(y)		Y =	0.651
Loss time		L =	12 sec
Total Flow		=	3427 pcu
Co	= (1.5*L+5)/(1-Y)	=	65.9 sec
Cm	= L/(1-Y)	=	34.4 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	24.4 %
Cp	= 0.9*L/(0.9-Y)	=	43.4 sec
Ymax	= 1-L/C	=	0.874
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**21 %**



Stage 1	G= 36	Stage 2	G= 19	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		44	8
P2	3		9	8		25	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		596		596	0.00	3970							3970	0.150			19	19	0.745	36	38
10	1	3.70	1	8		N	1985	488			488	1.00	1672							1672	0.292			37	37	0.745	42	30
9,10	1	3.50	1	13			2105	221		330	551	1.00	1887							1887	0.292	0.292		37	37	0.745	48	29
7	3	5.00	1	27		N	2115			147	147	1.00	2004							2004	0.073			9	27	0.745	24	62
4	2,3	3.70	1			N	1985		368		368	0.00	1985							1985	0.185			24	46	0.745	42	39
3,4	2,3	3.00	1	8	O		2055			552	552	1.00	1537							1537	0.359	0.359		46	46	0.745	42	24
5,6	2,3	5.00	1	13		N	2115	276	92		368	0.75	1947							1947	0.189			24	46	0.745	42	39
1,2	1	3.50	1	8		N	1965	265		92	357	1.00	1655							1655	0.216			28	37	0.745	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

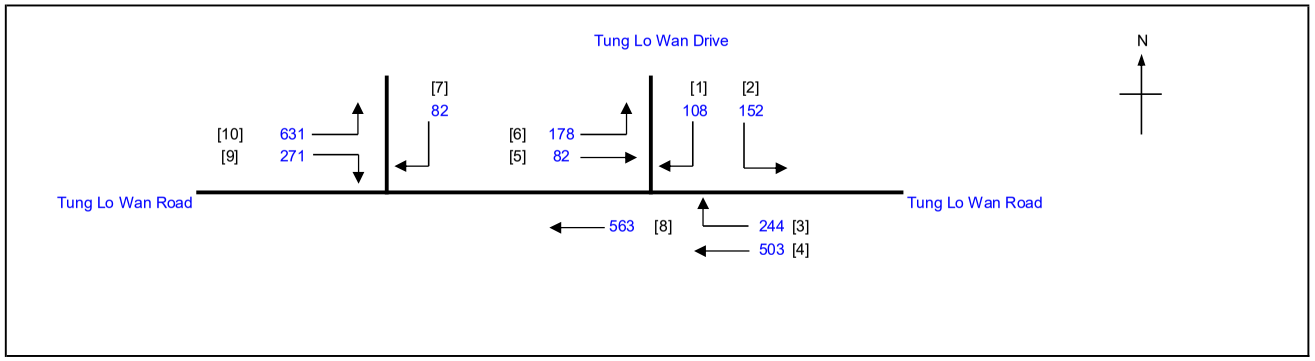
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J8 Tung Lo Wan Road / Moreton Terrace

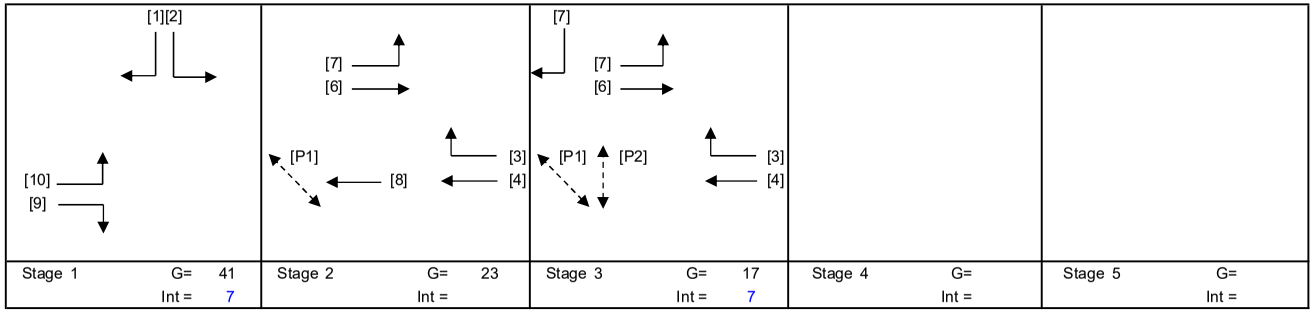
2033 Design Weekend

PROJECT NO.: 40920

FILENAME : J8_TLWR_MT.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.507
Loss time	L =	12 sec
Total Flow	=	2814 pcu
Co = (1.5*L+5)/(1-Y)	=	46.7 sec
Cm = L/(1-Y)	=	24.3 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	59.7 %
Cp = 0.9*L/(0.9-Y)	=	27.5 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**55 %**



Stage 1	G= 41	Int = 7
Stage 2	G= 23	Int =
Stage 3	G= 17	Int = 7
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		39	8
P2	3		9	8		16	8

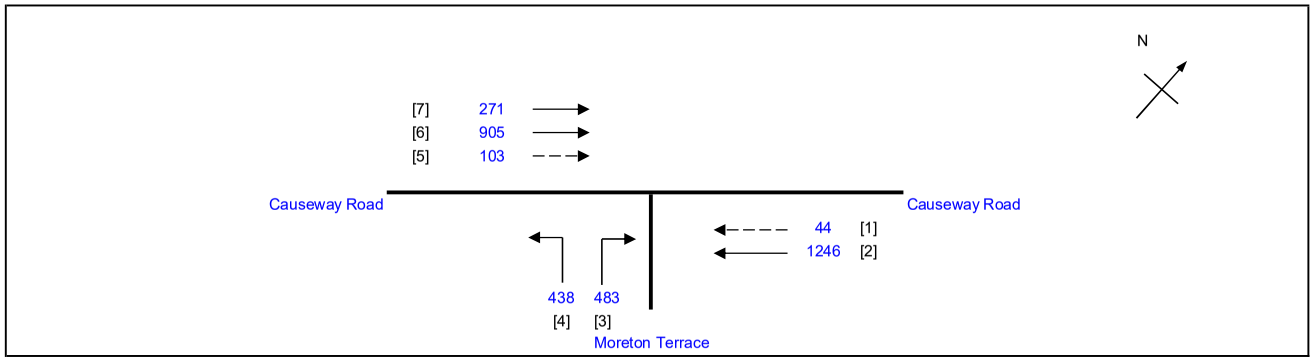
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		563		563	0.00	3970							3970	0.142			23	23	0.580	33	31
10	1	3.70	1	8		N	1985	424			424	1.00	1672							1672	0.254	0.254		42	42	0.580	36	21
9,10	1	3.50	1	13			2105	207		271	478	1.00	1887							1887	0.253			41	42	0.580	42	21
7	3	5.00	1	27		N	2115			82	82	1.00	2004							2004	0.041			7	18	0.580	12	54
4	2,3	3.70	1			N	1985		503		503	0.00	1985							1985	0.253	0.253		41	41	0.580	42	21
3,4	2,3	3.00	1	8	O		2055			244	244	1.00	1537							1537	0.159			26	41	0.580	24	32
5,6	2,3	5.00	1	13		N	2115	178	82		260	0.68	1960							1960	0.133			22	41	0.580	30	34
1,2	1	3.50	1	8		N	1965	152		108	260	1.00	1655							1655	0.157			26	42	0.580	30	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

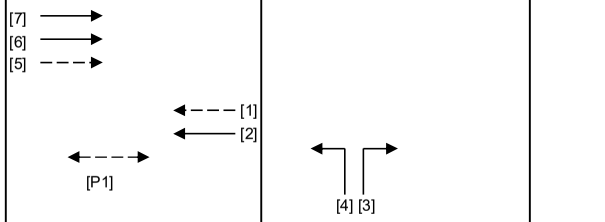
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J9 Moreton Terrace / Causeway Road	**2033 Reference AM**		
PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
FILENAME : J9_MT_CR.xlsx	Checked By:	SLN	Mar-26
	Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.598
Loss time	L =	10 sec
Total Flow	=	3490 pcu
Co = (1.5*L+5)/(1-Y)	=	49.7 sec
Cm = L/(1-Y)	=	24.9 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	38.0 %
Cp = 0.9*L/(0.9-Y)	=	29.8 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**35 %**



Stage 1	G= 60	Stage 2	G= 23
	Int = 5		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

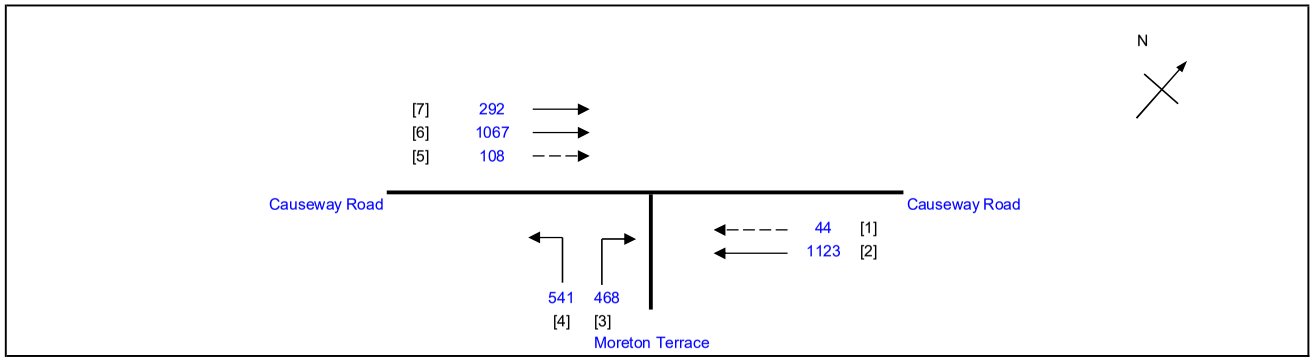
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		336		336	0.00	1985			0.4	-1191			794	0.423			60	61	0.668	18	16
2	1	4.00	1				2155		910		910	0.00	2155							2155	0.422			60	61	0.668	48	12
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	61	0.668	6	90
4	2	3.50	1	9		N	1965	282			282	1.00	1684							1684	0.167			24	24	0.668	30	37
3,4	2	3.30	1	15			2085	156		162	318	1.00	1895							1895	0.168	0.168		24	24	0.668	36	36
3	2	3.50	1	15			2105			321	321	1.00	1914							1914	0.168			24	24	0.668	36	36
7	1	3.50	1			N	1965		271		271	0.00	1965							1965	0.138			20	61	0.668	30	39
6	1	3.50	1				2105		905		905	0.00	2105							2105	0.430	0.430		61	61	0.668	48	12
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			7	61	0.668	12	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

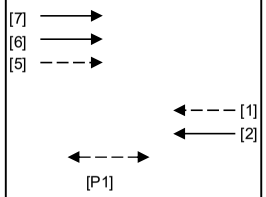
LLA CONSULTANCY LIMITED

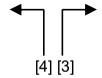
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J9 Moreton Terrace / Causeway Road	**2033 Reference PM**		
PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
FILENAME : J9_MT_CR.xlsx	Checked By:	SLN	Mar-26
	Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.691
Loss time	L =	10 sec
Total Flow	=	3643 pcu
Co = (1.5*L+5)/(1-Y)	=	64.7 sec
Cm = L/(1-Y)	=	32.4 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	19.4 %
Cp = 0.9*L/(0.9-Y)	=	43.1 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**17 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		302		302	0.00	1985			0.4	-1191			794	0.380			47	62	0.772	24	32
2	1	4.00	1				2155		821		821	0.00	2155							2155	0.381			47	62	0.772	60	23
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.772	12	138
4	2	3.50	1	9		N	1965	309			309	1.00	1684							1684	0.183			23	23	0.772	36	44
3,4	2	3.30	1	15			2085	232		117	349	1.00	1895							1895	0.184	0.184		23	23	0.772	42	43
3	2	3.50	1	15			2105			351	351	1.00	1914							1914	0.183			23	23	0.772	42	43
7	1	3.50	1			N	1965		292		292	0.00	1965							1965	0.149			18	62	0.772	36	47
6	1	3.50	1				2105		1067		1067	0.00	2105							2105	0.507	0.507		62	62	0.772	54	14
5	1	3.00	1				2055		108		108	0.00	2055							2055	0.053			6	62	0.772	18	78

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

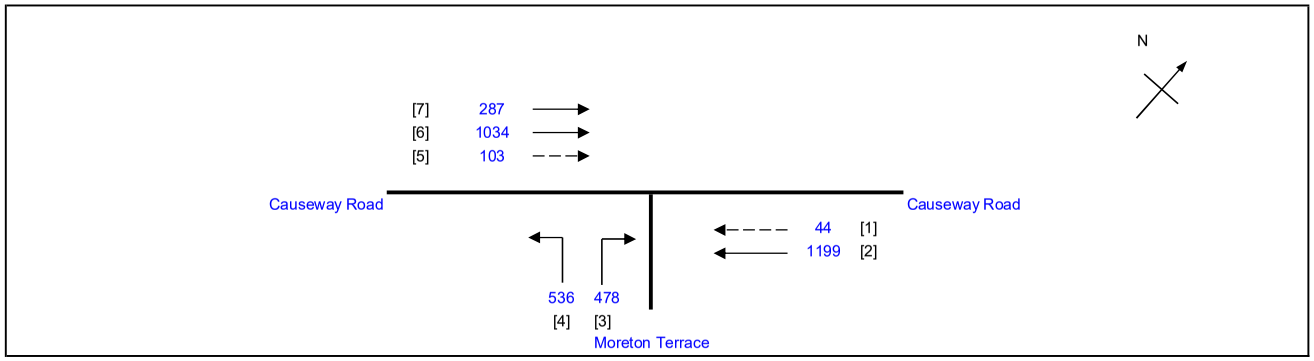
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

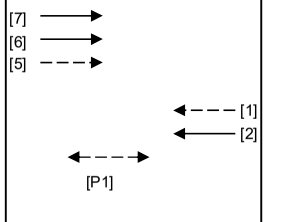
J9 Moreton Terrace / Causeway Road

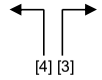
2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.676
Loss time	L =	10 sec
Total Flow	=	3681 pcu
Co = (1.5*L+5)/(1-Y)	=	61.8 sec
Cm = L/(1-Y)	=	30.9 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	22.0 %
Cp = 0.9*L/(0.9-Y)	=	40.2 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**19 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		322		322	0.00	1985			0.4	-1191			794	0.406			51	62	0.756	24	27
2	1	4.00	1				2155		877		877	0.00	2155							2155	0.407			51	62	0.756	60	20
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.756	12	127
4	2	3.50	1	9		N	1965	311			311	1.00	1684							1684	0.185			23	23	0.756	36	42
3,4	2	3.30	1	15			2085	225		124	349	1.00	1895							1895	0.184			23	23	0.756	42	41
3	2	3.50	1	15			2105			354	354	1.00	1914							1914	0.185	0.185		23	23	0.756	42	41
7	1	3.50	1			N	1965		287		287	0.00	1965							1965	0.146			18	62	0.756	36	46
6	1	3.50	1				2105		1034		1034	0.00	2105							2105	0.491	0.491		62	62	0.756	54	14
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			6	62	0.756	18	76

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

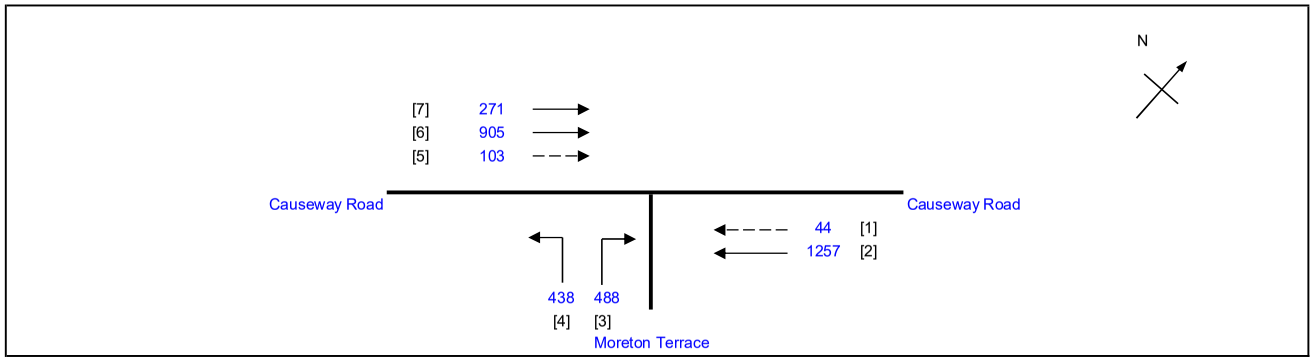
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J9 Moreton Terrace / Causeway Road

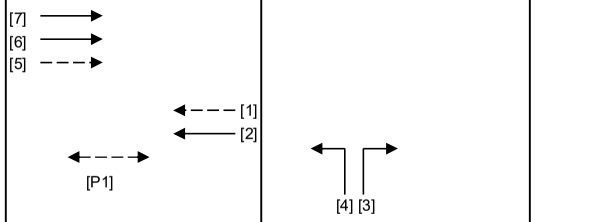
2033 Design AM

PROJECT NO.: 40920

FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.599
Loss time	L =	10 sec
Total Flow	=	3506 pcu
Co = (1.5*L+5)/(1-Y)	=	49.8 sec
Cm = L/(1-Y)	=	24.9 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	37.8 %
Cp = 0.9*L/(0.9-Y)	=	29.9 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**34 %**



Stage 1 G= 60 Int = 5

Stage 2 G= 23 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		338		338	0.00	1985			0.4	-1191			794	0.426			60	61	0.669	18	16
2	1	4.00	1				2155		919		919	0.00	2155							2155	0.426			61	61	0.669	48	12
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	61	0.669	6	91
4	2	3.50	1	9		N	1965	284			284	1.00	1684							1684	0.169			24	24	0.669	30	36
3,4	2	3.30	1	15			2085	154		165	319	1.00	1895							1895	0.168			24	24	0.669	36	36
3	2	3.50	1	15			2105			323	323	1.00	1914							1914	0.169	0.169		24	24	0.669	36	36
7	1	3.50	1			N	1965		271		271	0.00	1965							1965	0.138			20	61	0.669	30	39
6	1	3.50	1				2105		905		905	0.00	2105							2105	0.430	0.430		61	61	0.669	48	12
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			7	61	0.669	12	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

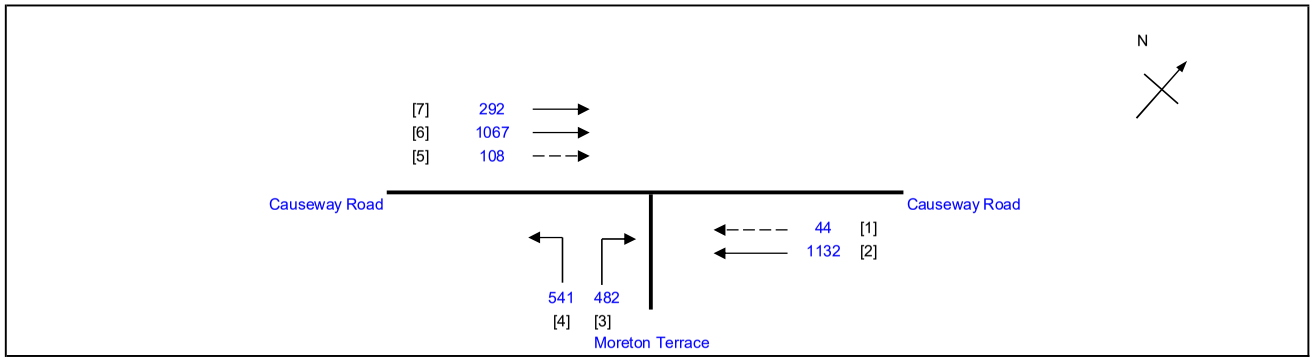
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J9 Moreton Terrace / Causeway Road

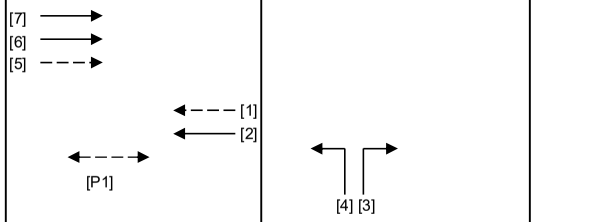
2033 Design PM

PROJECT NO.: 40920

FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.694
Loss time	L =	10 sec
Total Flow	=	3666 pcu
Co = (1.5*L+5)/(1-Y)	=	65.3 sec
Cm = L/(1-Y)	=	32.6 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	18.9 %
Cp = 0.9*L/(0.9-Y)	=	43.6 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**



Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		305		305	0.00	1985			0.4	-1191			794	0.384			47	62	0.775	24	32
2	1	4.00	1				2155		827		827	0.00	2155							2155	0.384			47	62	0.775	66	23
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.775	12	140
4	2	3.50	1	9		N	1965	314			314	1.00	1684							1684	0.186			23	23	0.775	36	44
3,4	2	3.30	1	15			2085	227		127	354	1.00	1895							1895	0.187	0.187		23	23	0.775	42	43
3	2	3.50	1	15			2105			355	355	1.00	1914							1914	0.186			23	23	0.775	42	43
7	1	3.50	1			N	1965		292		292	0.00	1965							1965	0.149			18	62	0.775	36	48
6	1	3.50	1				2105		1067		1067	0.00	2105							2105	0.507	0.507		62	62	0.775	54	14
5	1	3.00	1				2055		108		108	0.00	2055							2055	0.053			6	62	0.775	18	79

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

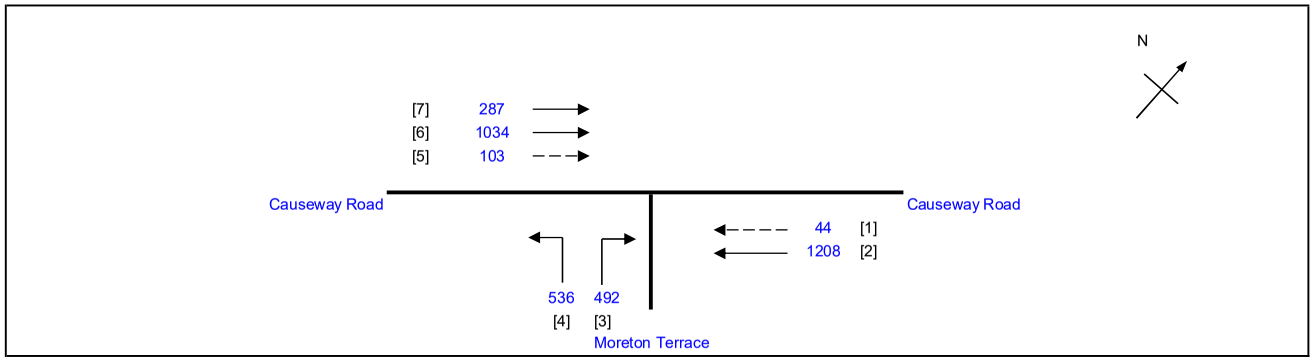
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

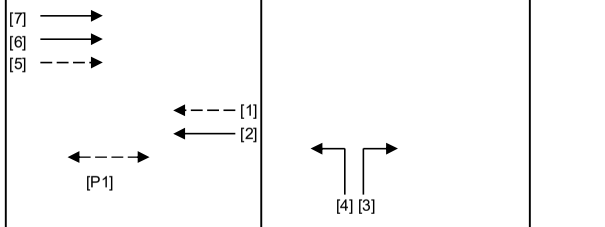
J9 Moreton Terrace / Causeway Road

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.679
Loss time	L =	10 sec
Total Flow	=	3704 pcu
Co = (1.5*L+5)/(1-Y)	=	62.3 sec
Cm = L/(1-Y)	=	31.2 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	21.5 %
Cp = 0.9*L/(0.9-Y)	=	40.7 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**19 %**



Stage 1 G= 60 Int = 5
Stage 2 G= 23 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		325		325	0.00	1985			0.4	-1191			794	0.409			51	61	0.759	24	27
2	1	4.00	1				2155		883		883	0.00	2155							2155	0.410			51	61	0.759	60	20
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	61	0.759	12	129
4	2	3.50	1	9		N	1965	315			315	1.00	1684							1684	0.187			23	24	0.759	36	42
3,4	2	3.30	1	15			2085	221		135	356	1.00	1895							1895	0.188	0.188		24	24	0.759	42	41
3	2	3.50	1	15			2105			357	357	1.00	1914							1914	0.187			23	24	0.759	42	41
7	1	3.50	1			N	1965		287		287	0.00	1965							1965	0.146			18	61	0.759	36	46
6	1	3.50	1				2105		1034		1034	0.00	2105							2105	0.491	0.491		61	61	0.759	54	14
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			6	61	0.759	18	77

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

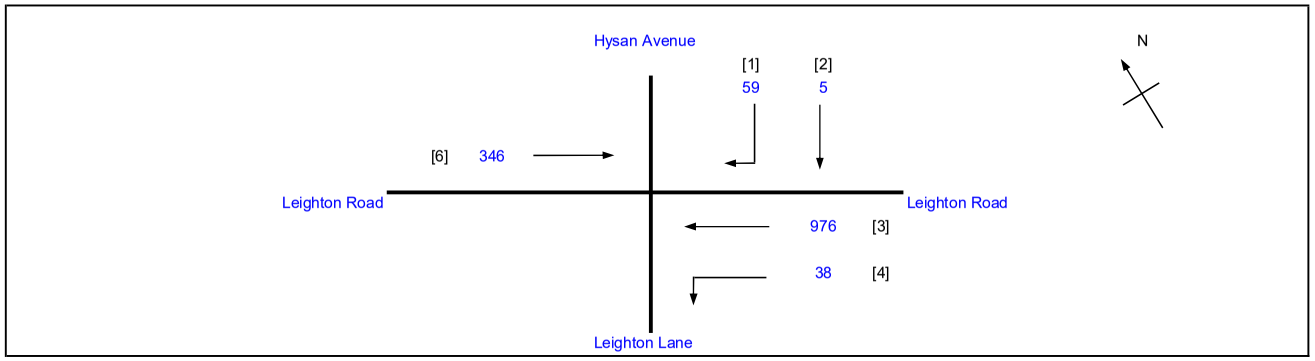
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

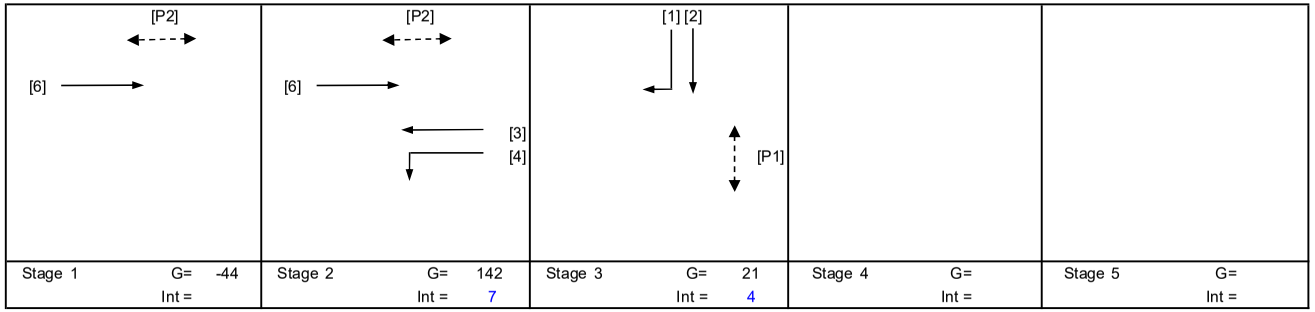
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.176
Loss time		L =	31 sec
Total Flow		=	1424 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.5 sec
Cm	= L/(1-Y)	=	37.6 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	279.1 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**289 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	38	449		487	0.08	1920							1920	0.254			143	143	0.231	-6	1
3	2	3.20	1				2075		527		527	0.00	2075							2075	0.254			143	143	0.231	-6	1
6	1,2	3.50	1			N	1965		346		346	0.00	1965							1965	0.176	0.176		99	99	0.231	12	4
1,2	3	3.30	1	17		N	1945		5	29	34	0.85	1809							1809	0.019			11	21	0.231	6	54
1	3	3.00	1	10	O		2055			30	30	1.00	1587							1587	0.019			11	21	0.231	0	54
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

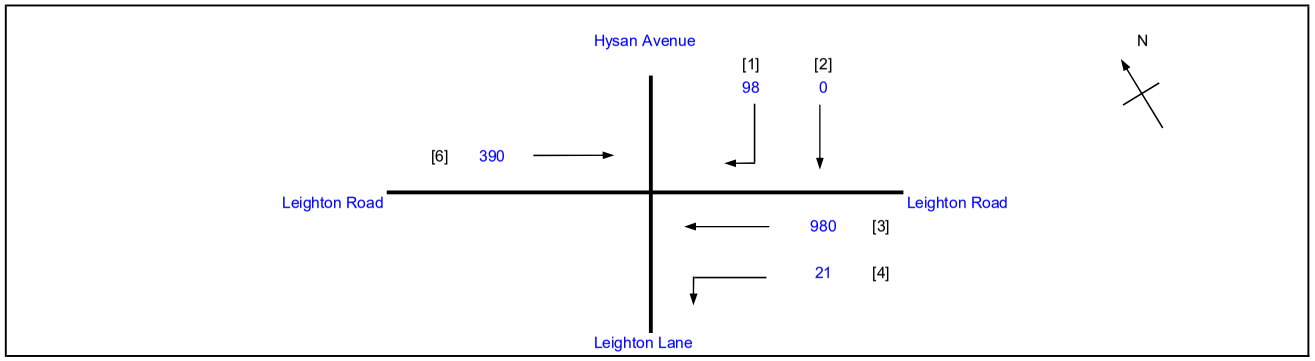
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

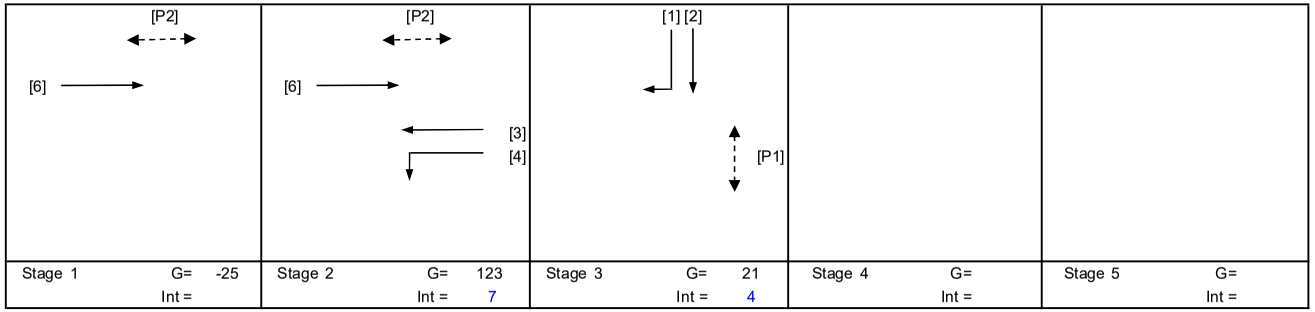
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Reference PM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.198
Loss time		L =	31 sec
Total Flow		=	1489 pcu
Co	= (1.5*L+5)/(1-Y)	=	64.3 sec
Cm	= L/(1-Y)	=	38.7 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	236.3 %
Cp	= 0.9*L/(0.9-Y)	=	39.8 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**245 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	21	463		484	0.04	1940							1940	0.250			124	124	0.261	0	0
3	2	3.20	1				2075		517		517	0.00	2075							2075	0.249			124	124	0.261	0	0
6	1,2	3.50	1			N	1965		390		390	0.00	1965							1965	0.198	0.198		99	99	0.261	18	5
1,2	3	3.30	1	17		N	1945		0	52	52	1.00	1787							1787	0.029			15	21	0.261	6	50
1	3	3.00	1	10	O		2055			46	46	1.00	1587							1587	0.029			14	21	0.261	6	51
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

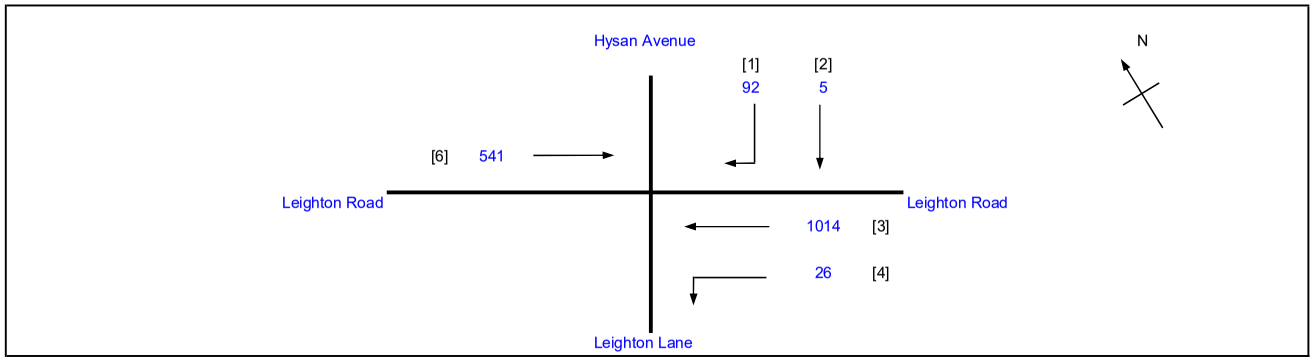
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

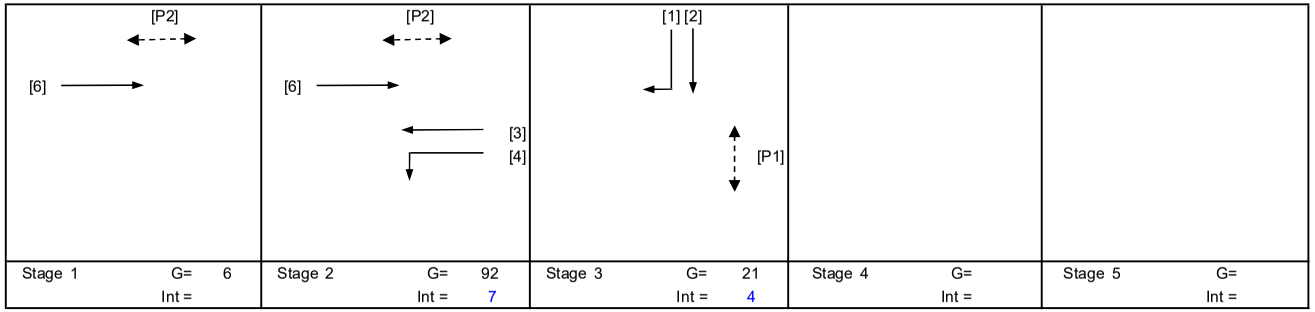
2033 Reference Weekend

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.275
Loss time		L =	31 sec
Total Flow		=	1678 pcu
Co	= (1.5*L+5)/(1-Y)	=	71.1 sec
Cm	= L/(1-Y)	=	42.8 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	142.4 %
Cp	= 0.9*L/(0.9-Y)	=	44.7 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**149 %**



Stage 1	G= 6	Int =	Stage 2	G= 92	Int = 7	Stage 3	G= 21	Int = 4	Stage 4	G=	Int =	Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	26	476		502	0.05	1935							1935	0.259			93	93	0.362	30	7
3	2	3.20	1				2075		538		538	0.00	2075							2075	0.259			93	93	0.362	30	7
6	1,2	3.50	1			N	1965		541		541	0.00	1965							1965	0.275	0.275		99	99	0.362	24	5
1,2	3	3.30	1	17		N	1945		5	47	52	0.90	1801							1801	0.029			10	21	0.362	6	57
1	3	3.00	1	10	O		2055			45	45	1.00	1587							1587	0.028			10	21	0.362	6	59
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

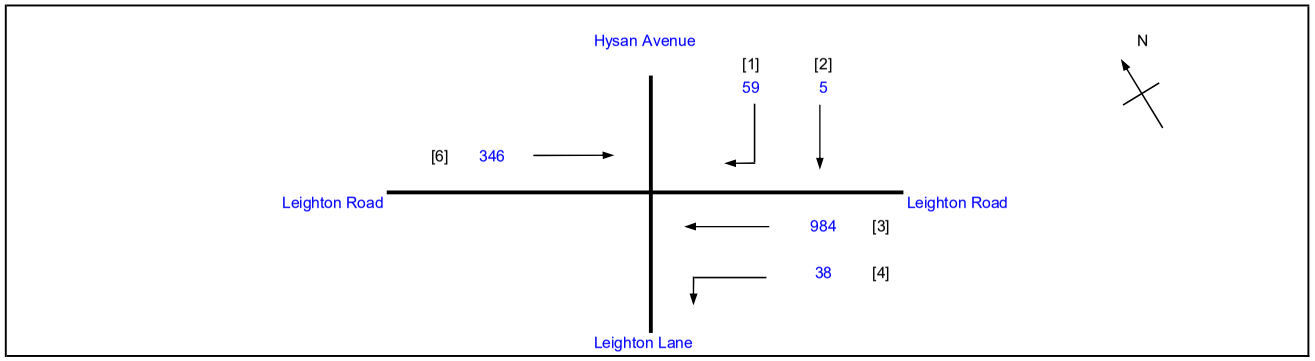
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

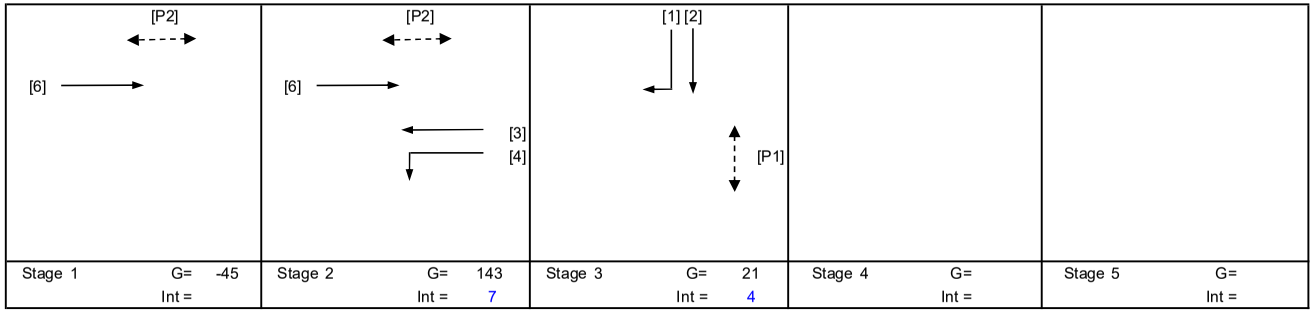
2033 Design AM

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.176
Loss time		L =	31 sec
Total Flow		=	1432 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.5 sec
Cm	= L/(1-Y)	=	37.6 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	279.1 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**289 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	38	453		491	0.08	1920							1920	0.256			144	144	0.231	-6	1
3	2	3.20	1				2075		531		531	0.00	2075							2075	0.256			144	144	0.231	-6	1
6	1,2	3.50	1			N	1965		346		346	0.00	1965							1965	0.176	0.176		99	99	0.231	12	4
1,2	3	3.30	1	17		N	1945		5	29	34	0.85	1809							1809	0.019			11	21	0.231	6	54
1	3	3.00	1	10	O		2055			30	30	1.00	1587							1587	0.019			11	21	0.231	0	54
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

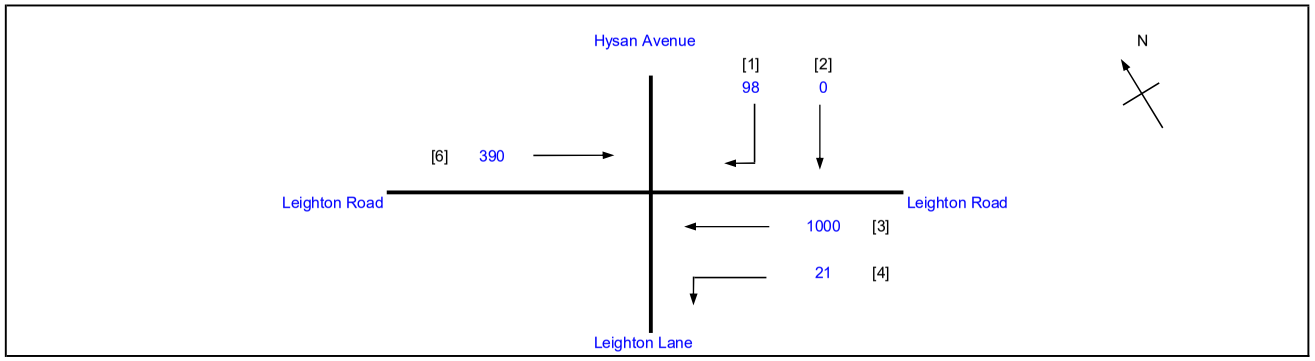
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

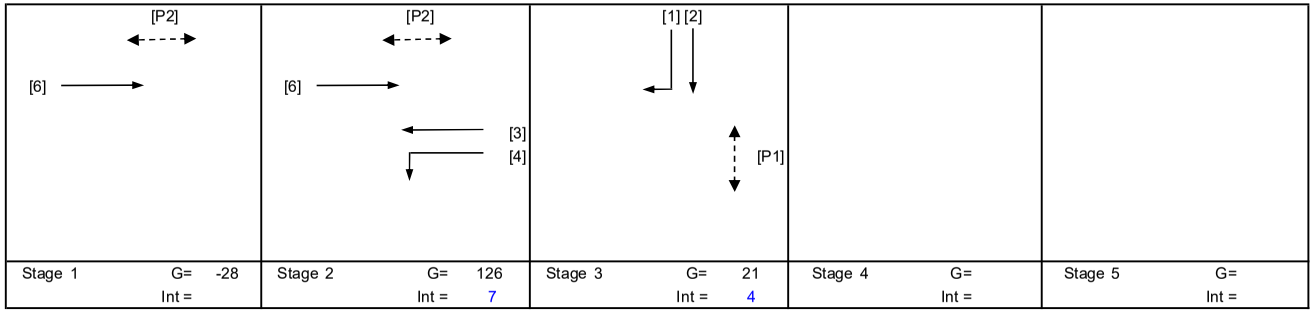
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Design PM

PROJECT NO.:	40920	
FILENAME :	J10_LR_HA_LL.xlsx	



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.198
Loss time		L =	31 sec
Total Flow		=	1509 pcu
Co	= (1.5*L+5)/(1-Y)	=	64.3 sec
Cm	= L/(1-Y)	=	38.7 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	236.3 %
Cp	= 0.9*L/(0.9-Y)	=	39.8 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**245 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	21	472		493	0.04	1940							1940	0.254			127	127	0.261	0	0
3	2	3.20	1				2075		528		528	0.00	2075							2075	0.254			127	127	0.261	0	0
6	1,2	3.50	1			N	1965		390		390	0.00	1965							1965	0.198	0.198		99	99	0.261	18	5
1,2	3	3.30	1	17		N	1945		0	52	52	1.00	1787							1787	0.029			15	21	0.261	6	50
1	3	3.00	1	10	O		2055			46	46	1.00	1587							1587	0.029			14	21	0.261	6	51
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

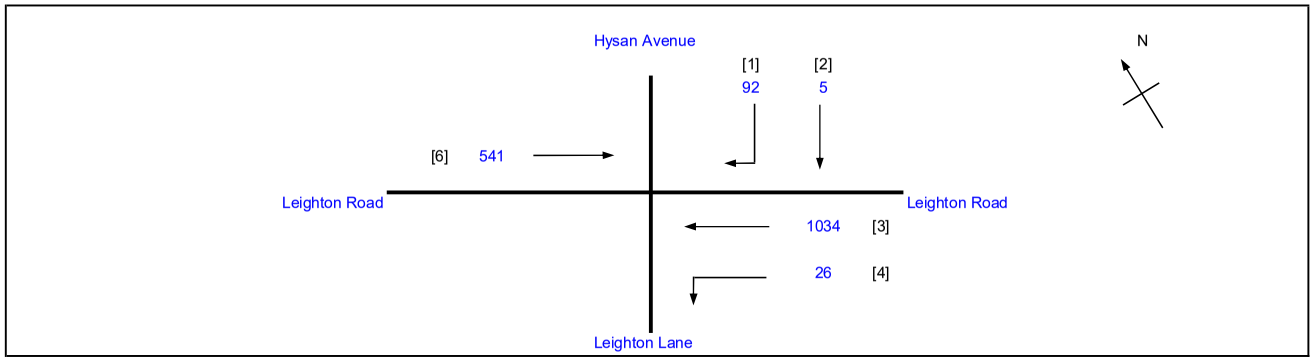
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

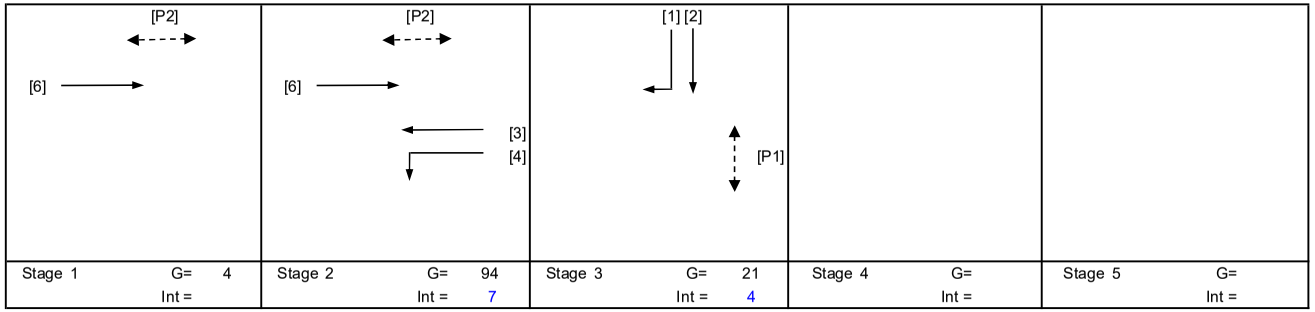
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.275
Loss time		L =	31 sec
Total Flow		=	1698 pcu
Co	= (1.5*L+5)/(1-Y)	=	71.1 sec
Cm	= L/(1-Y)	=	42.8 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	142.4 %
Cp	= 0.9*L/(0.9-Y)	=	44.7 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**149 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	26	486		512	0.05	1936							1936	0.265			95	95	0.362	24	6
3	2	3.20	1				2075		548		548	0.00	2075							2075	0.264			95	95	0.362	30	6
6	1,2	3.50	1			N	1965		541		541	0.00	1965							1965	0.275	0.275		99	99	0.362	24	5
1,2	3	3.30	1	17		N	1945		5	47	52	0.90	1801							1801	0.029			10	21	0.362	6	57
1	3	3.00	1	10	O		2055			45	45	1.00	1587							1587	0.028			10	21	0.362	6	59
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

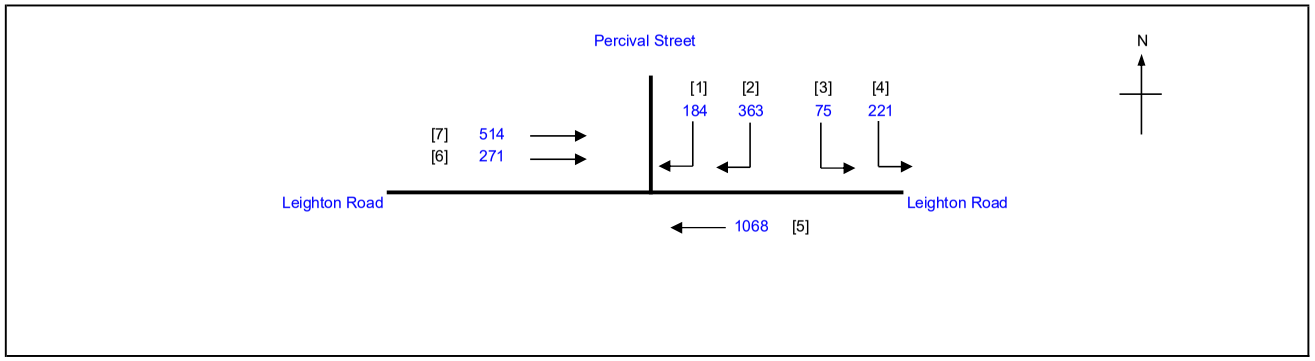
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

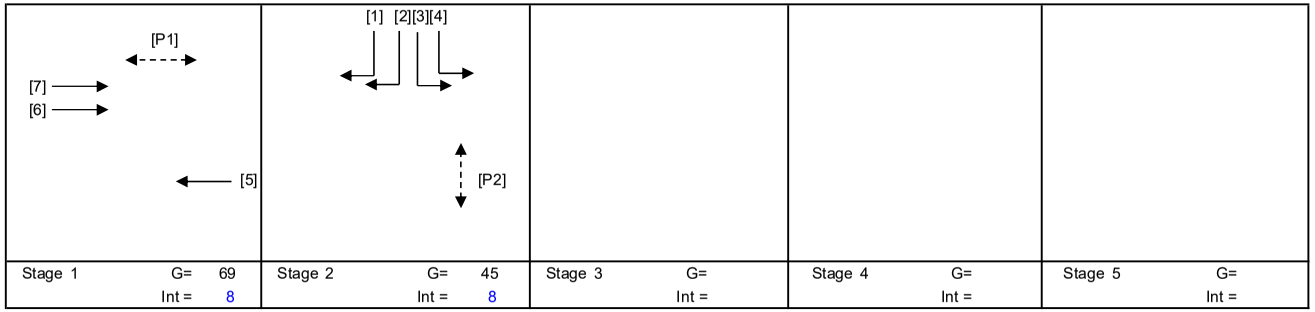
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.561
Loss time	L =	14 sec
Total Flow	=	2696 pcu
Co = (1.5*L+5)/(1-Y)	=	59.2 sec
Cm = L/(1-Y)	=	31.9 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	41.8 %
Cp = 0.9*L/(0.9-Y)	=	37.1 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**43 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 69	G= 45	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		70	7
P2	2		5	12		41	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		522		522	0.00	1965			0.8	-393			1572	0.332			69	70	0.628	48	23
5	1	3.00	1				2055		546		546	0.00	2055			0.8	-411			1644	0.332			69	70	0.628	54	23
6,7	1	2.50	1			N	1865		378		378	0.00	1865			0.6	-746			1119	0.338			70	70	0.628	36	23
6,7	1	2.50	1				2005		407		407	0.00	2005			0.6	-802			1203	0.338	0.338		70	70	0.628	36	23
3,4	2	4.00	1	25		N	2015	296			296	1.00	1901			0.7	-570			1331	0.222	0.222		46	46	0.628	36	37
1,2	2	5.00	1	25		N	2115			317	317	1.00	1995			0.8	-399			1596	0.199			41	46	0.628	42	40
1,2	2	3.30	1	20			2085			230	230	1.00	1940			0.6	-776			1164	0.198			41	46	0.628	30	42

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

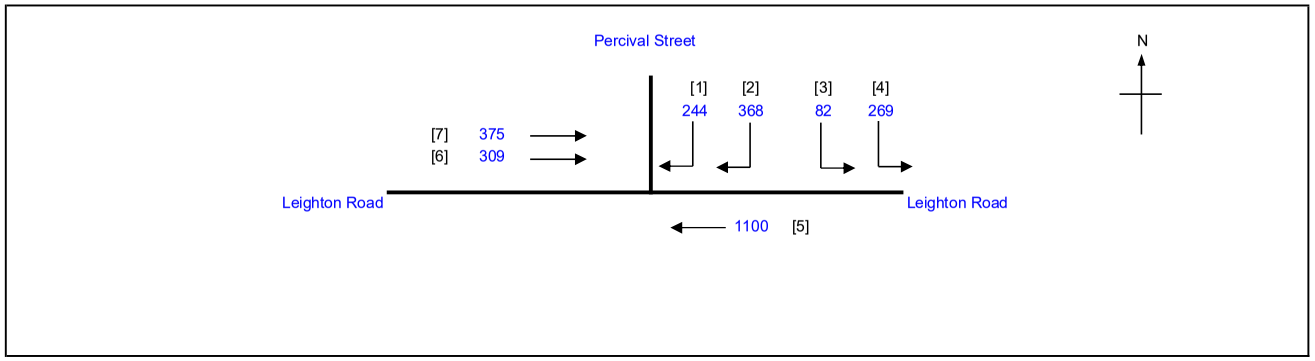
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

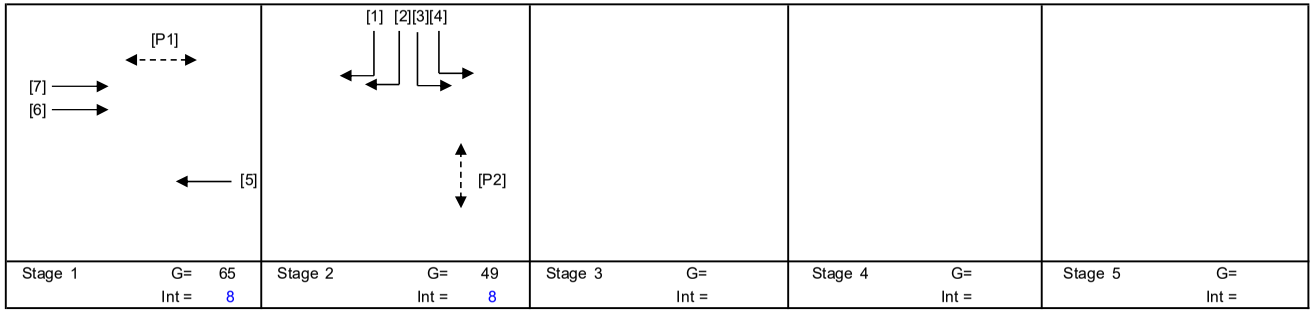
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.606
Loss time	L =	14 sec
Total Flow	=	2747 pcu
Co = (1.5*L+5)/(1-Y)	=	66.0 sec
Cm = L/(1-Y)	=	35.5 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	31.2 %
Cp = 0.9*L/(0.9-Y)	=	42.9 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**33 %**



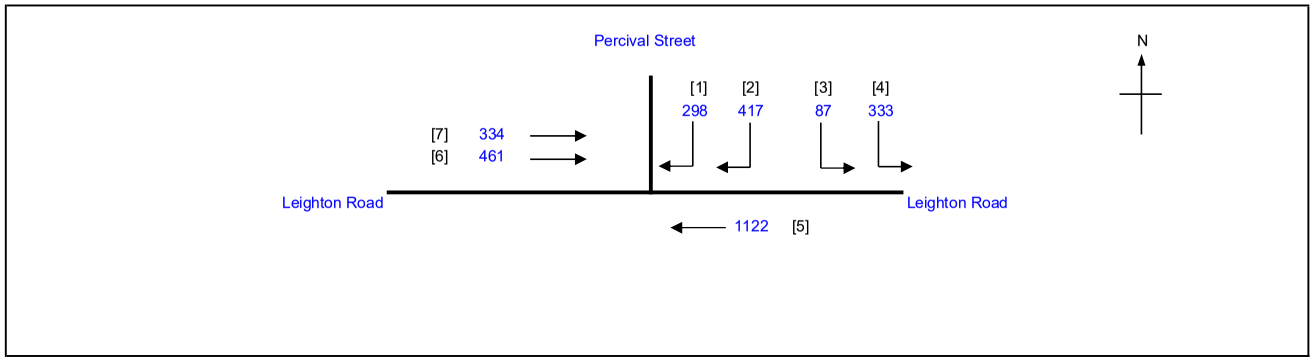
Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 65	G= 49	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		66	7
P2	2		5	12		45	12

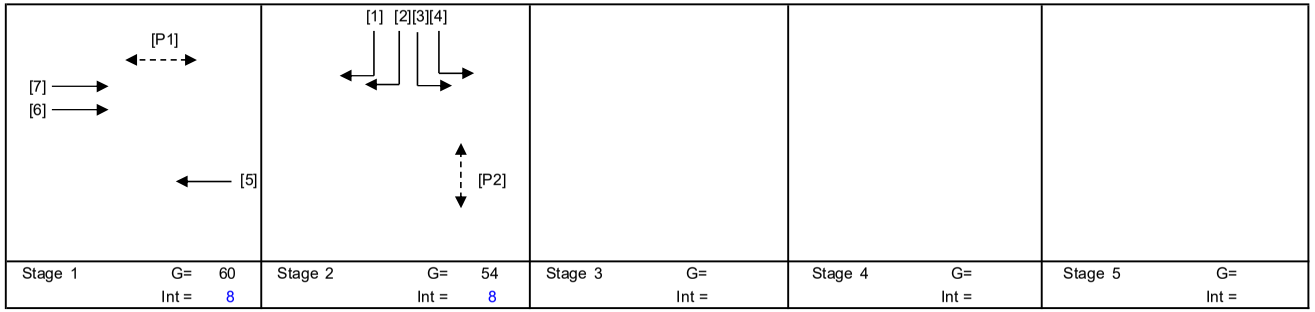
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		538		538	0.00	1965			0.8	-393			1572	0.342	0.342		66	66	0.679	54	26
5	1	3.00	1				2055		562		562	0.00	2055			0.8	-411			1644	0.342			65	66	0.679	60	26
6,7	1	2.50	1			N	1865		330		330	0.00	1865			0.6	-746			1119	0.295			56	66	0.679	36	34
6,7	1	2.50	1				2005		354		354	0.00	2005			0.6	-802			1203	0.294			56	66	0.679	42	33
3,4	2	4.00	1	25		N	2015	351			351	1.00	1901			0.7	-570			1331	0.264	0.264		50	50	0.679	42	36
1,2	2	5.00	1	25		N	2115			354	354	1.00	1995			0.8	-399			1596	0.222			42	50	0.679	48	41
1,2	2	3.30	1	20			2085			258	258	1.00	1940			0.6	-776			1164	0.222			42	50	0.679	36	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J11 Leighton Road / Percival Street / Hysan Avenue		FILENAME : J11_LR_PS_HA.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.665
Loss time	L =	14 sec
Total Flow	=	3052 pcu
Co = (1.5*L+5)/(1-Y)	=	77.6 sec
Cm = L/(1-Y)	=	41.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	19.6 %
Cp = 0.9*L/(0.9-Y)	=	53.6 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**21 %**



Stage 1	G= 60	Stage 2	G= 54	Stage 3	G=	Stage 4	G=	Stage 5	G=
	Int = 8		Int = 8		Int =		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		61	7
P2	2		5	12		50	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		549		549	0.00	1965			0.8	-393			1572	0.349	0.349		61	61	0.745	60	32
5	1	3.00	1				2055		573		573	0.00	2055			0.8	-411			1644	0.349			61	61	0.745	66	32
6,7	1	2.50	1			N	1865		383		383	0.00	1865			0.6	-746			1119	0.342			60	61	0.745	42	35
6,7	1	2.50	1				2005		412		412	0.00	2005			0.6	-802			1203	0.342			60	61	0.745	48	35
3,4	2	4.00	1	25		N	2015	420			420	1.00	1901			0.7	-570			1331	0.316	0.316		55	55	0.745	48	37
1,2	2	5.00	1	25		N	2115			414	414	1.00	1995			0.8	-399			1596	0.259			45	55	0.745	54	42
1,2	2	3.30	1	20			2085			301	301	1.00	1940			0.6	-776			1164	0.259			45	55	0.745	42	45

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

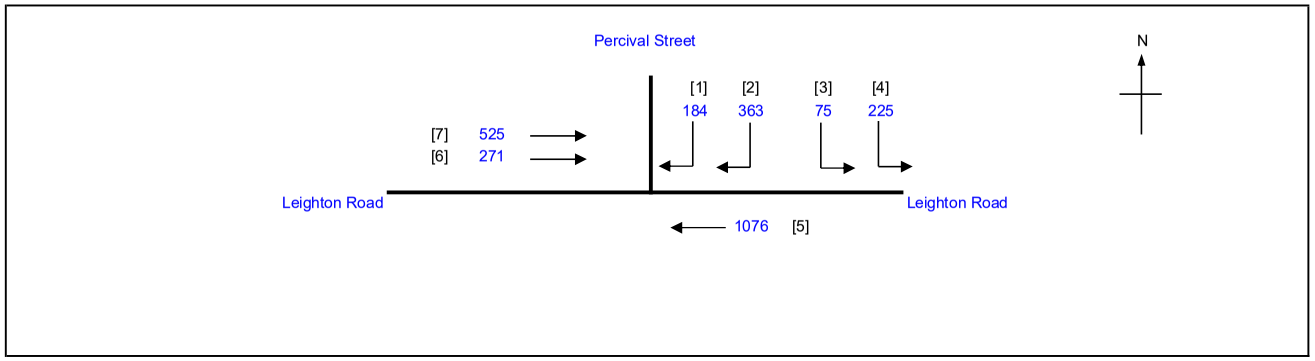
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

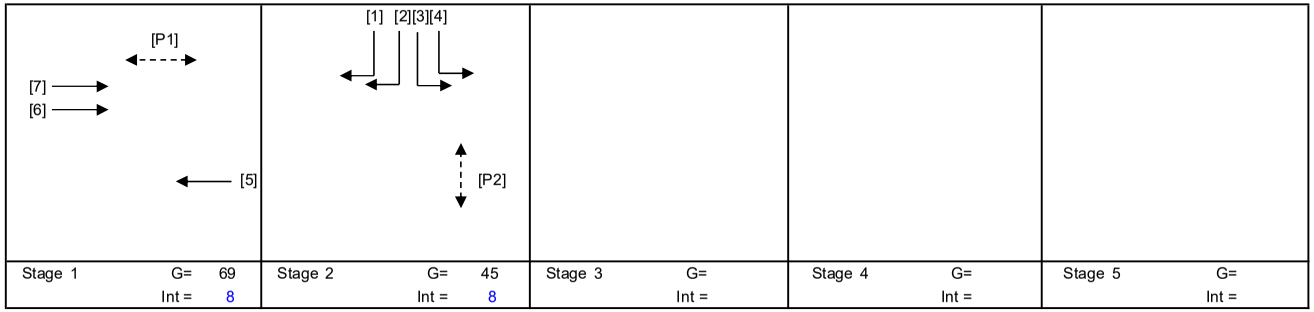
2033 Design AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.569
Loss time	L =	14 sec
Total Flow	=	2719 pcu
Co = (1.5*L+5)/(1-Y)	=	60.3 sec
Cm = L/(1-Y)	=	32.5 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	39.8 %
Cp = 0.9*L/(0.9-Y)	=	38.0 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**41 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 69	G= 45	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		70	7
P2	2		5	12		41	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		526		526	0.00	1965			0.8	-393			1572	0.335			68	70	0.637	54	23
5	1	3.00	1				2055		550		550	0.00	2055			0.8	-411			1644	0.335			68	70	0.637	54	23
6,7	1	2.50	1			N	1865		384		384	0.00	1865			0.6	-746			1119	0.343	0.343		70	70	0.637	36	24
6,7	1	2.50	1				2005		412		412	0.00	2005			0.6	-802			1203	0.342			70	70	0.637	36	23
3,4	2	4.00	1	25		N	2015	300			300	1.00	1901			0.7	-570			1331	0.225	0.225		46	46	0.637	42	38
1,2	2	5.00	1	25		N	2115			317	317	1.00	1995			0.8	-399			1596	0.199			41	46	0.637	42	40
1,2	2	3.30	1	20			2085			230	230	1.00	1940			0.6	-776			1164	0.198			40	46	0.637	30	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

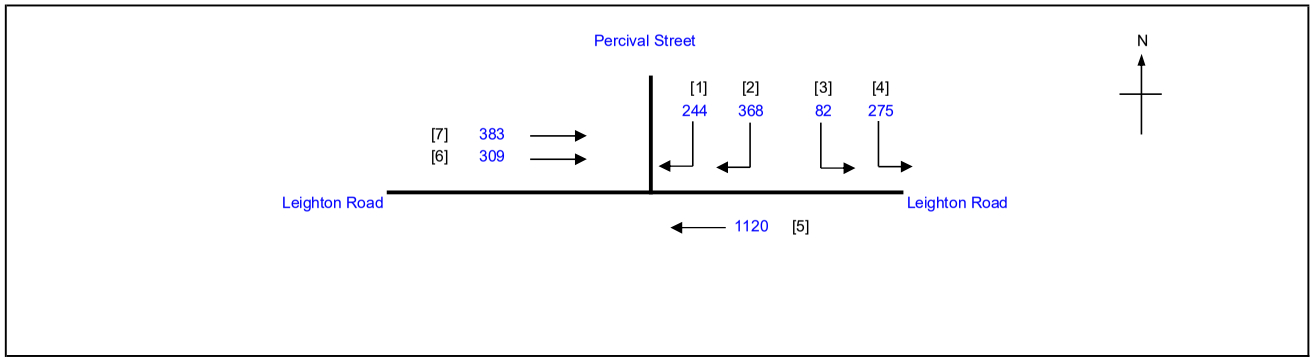
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

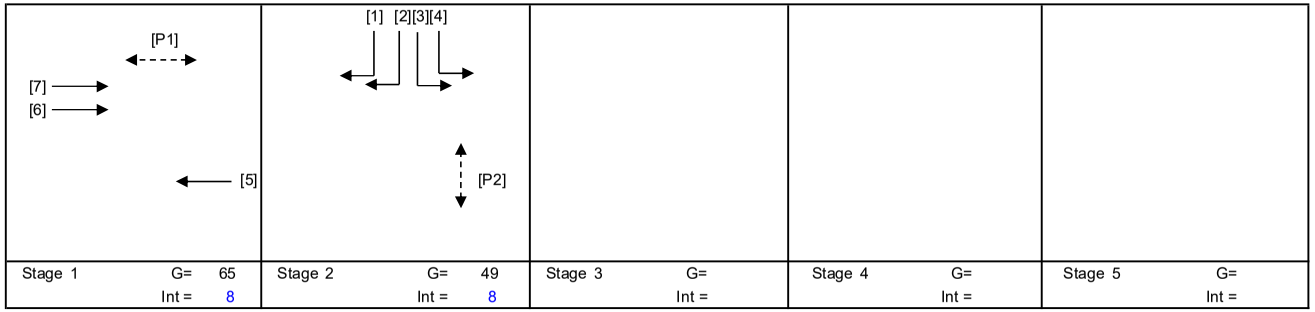
2033 Design PM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.617
Loss time		L =	14 sec
Total Flow		=	2781 pcu
Co	= (1.5*L+5)/(1-Y)	=	67.8 sec
Cm	= L/(1-Y)	=	36.5 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	28.9 %
Cp	= 0.9*L/(0.9-Y)	=	44.5 sec
Ymax	= 1-L/C	=	0.892
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**30 %**



Stage 1	G= 65	Int = 8
Stage 2	G= 49	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		66	7
P2	2		5	12		45	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		547		547	0.00	1965			0.8	-393			1572	0.348			65	66	0.691	54	27
5	1	3.00	1				2055		573		573	0.00	2055			0.8	-411			1644	0.349	0.349		66	66	0.691	60	26
6,7	1	2.50	1			N	1865		334		334	0.00	1865			0.6	-746			1119	0.298			56	66	0.691	36	34
6,7	1	2.50	1				2005		358		358	0.00	2005			0.6	-802			1203	0.298			56	66	0.691	42	34
3,4	2	4.00	1	25		N	2015	357			357	1.00	1901			0.7	-570			1331	0.268	0.268		50	50	0.691	42	37
1,2	2	5.00	1	25		N	2115			354	354	1.00	1995			0.8	-399			1596	0.222			42	50	0.691	48	42
1,2	2	3.30	1	20			2085			258	258	1.00	1940			0.6	-776			1164	0.222			42	50	0.691	36	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

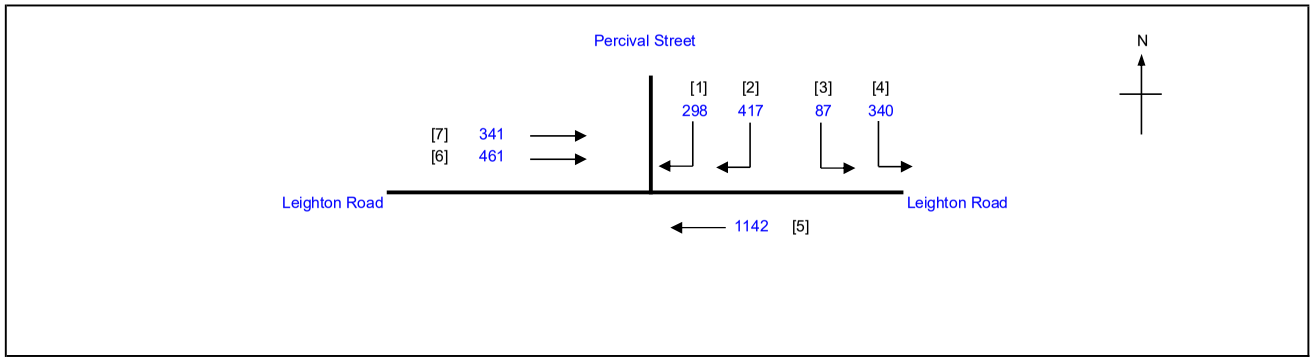
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

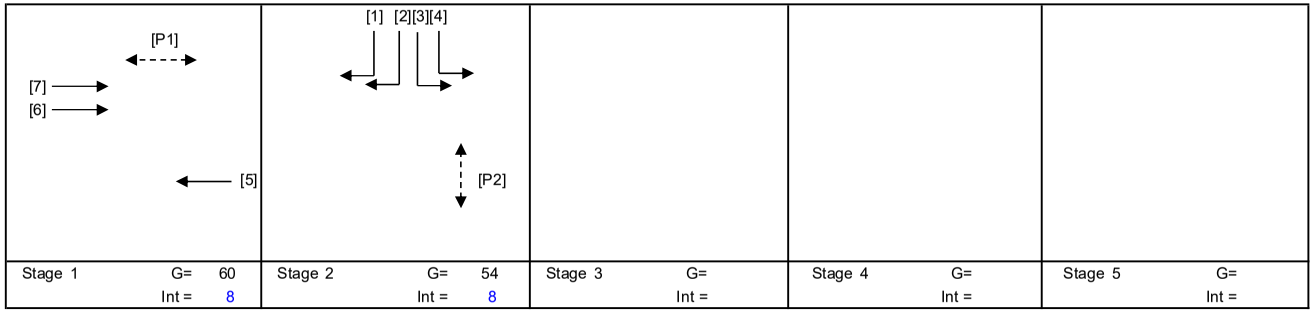
J11 Leighton Road / Percival Street / Hysan Avenue

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.676
Loss time		L =	14 sec
Total Flow		=	3086 pcu
Co	= (1.5*L+5)/(1-Y)	=	80.3 sec
Cm	= L/(1-Y)	=	43.2 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	17.6 %
Cp	= 0.9*L/(0.9-Y)	=	56.3 sec
Ymax	= 1-L/C	=	0.892
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**19 %**



Stage 1	G= 60	Int = 8
Stage 2	G= 54	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		61	7
P2	2		5	12		50	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		558		558	0.00	1965			0.8	-393			1572	0.355			61	61	0.758	60	32
5	1	3.00	1				2055		584		584	0.00	2055			0.8	-411			1644	0.355	0.355		61	61	0.758	66	32
6,7	1	2.50	1			N	1865		386		386	0.00	1865			0.6	-746			1119	0.345			59	61	0.758	42	36
6,7	1	2.50	1				2005		416		416	0.00	2005			0.6	-802			1203	0.346			59	61	0.758	48	36
3,4	2	4.00	1	25		N	2015	427			427	1.00	1901			0.7	-570			1331	0.321	0.321		55	55	0.758	48	38
1,2	2	5.00	1	25		N	2115			414	414	1.00	1995			0.8	-399			1596	0.259			45	55	0.758	54	43
1,2	2	3.30	1	20			2085			301	301	1.00	1940			0.6	-776			1164	0.259			44	55	0.758	42	47

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

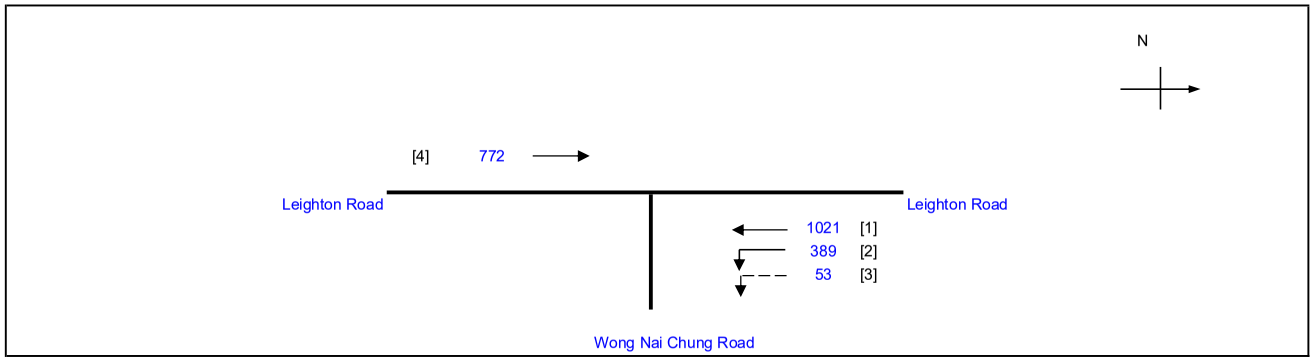
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

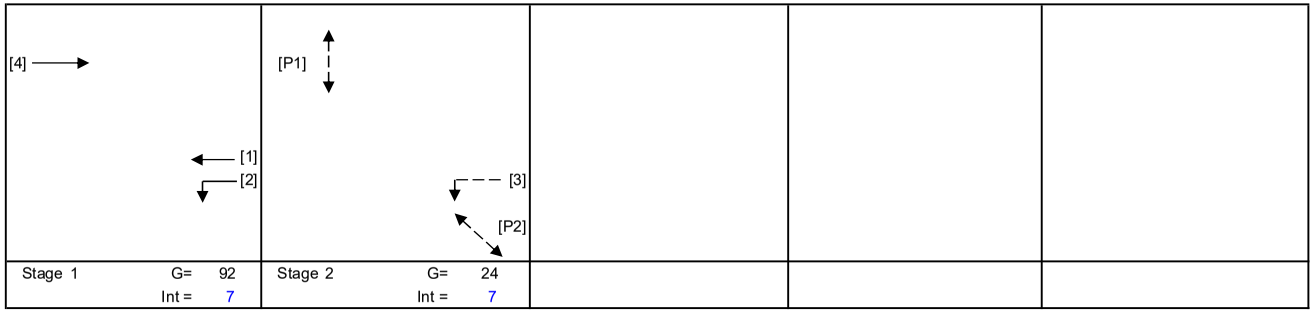
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.669
Loss time		L =	12 sec
Total Flow		=	2235 pcu
Co	= (1.5*L+5)/(1-Y)	=	69.5 sec
Cm	= L/(1-Y)	=	36.3 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	21.0 %
Cp	= 0.9*L/(0.9-Y)	=	46.8 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**22 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	22	9
P2	2		7	7	0	24	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	320			320	1.00	1828							1828	0.175			31	93	0.737	54	52
2	1	3.50	1	25			2105	69			69	1.00	1986			0.2	-1589			397	0.174			31	93	0.737	12	90
3	2	3.00	1	40		N	1915	53			53	1.00	1846			0.2	-1477			369	0.144	0.144		25	25	0.737	12	108
1	1	3.00	1			N	1915		805		805	0.00	1915			0.8	-383			1532	0.525			93	93	0.737	48	14
1	1	3.00	1				2055		216		216	0.00	2055			0.2	-1644			411	0.526	0.526		93	93	0.737	12	26
4	1	3.50	1			N	1965		124		124	0.00	1965			0.2	-1572			393	0.316			56	93	0.737	18	55
4	1	3.00	1				2055		324		324	0.00	2055			0.5	-1028			1027	0.315			56	93	0.737	36	38
4	1	3.00	1				2055		324		324	0.00	2055			0.5	-1028			1027	0.315			56	93	0.737	36	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

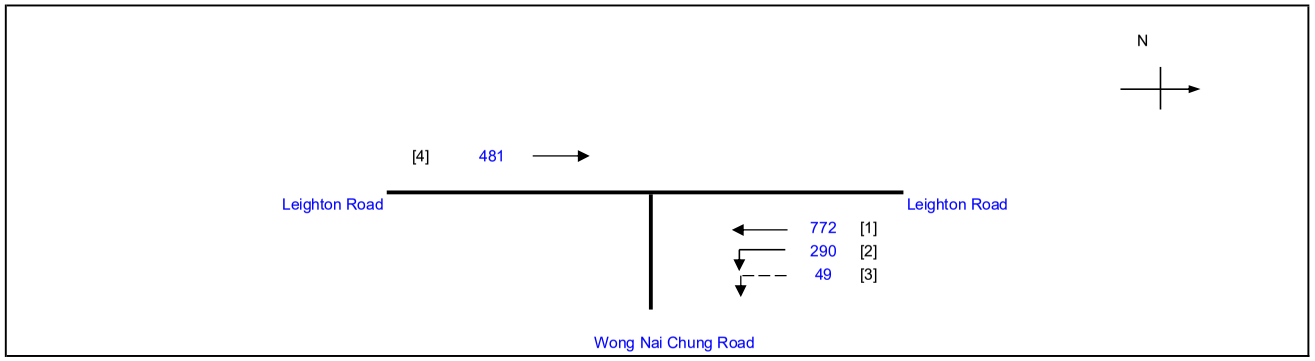
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

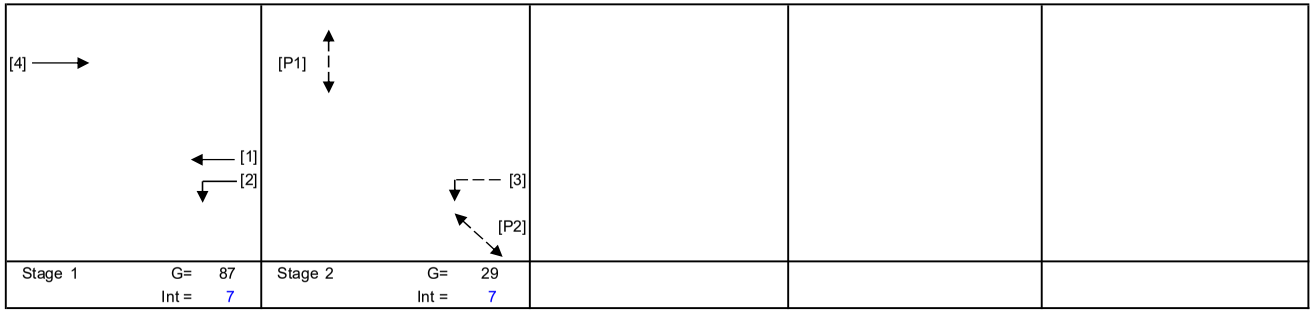
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.530
Loss time	L =	12 sec
Total Flow	=	1592 pcu
Co = (1.5*L+5)/(1-Y)	=	49.0 sec
Cm = L/(1-Y)	=	25.6 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	52.7 %
Cp = 0.9*L/(0.9-Y)	=	29.2 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**54 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	27	9
P2	2		7	7	0	29	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	238			238	1.00	1828							1828	0.130			29	88	0.584	36	46
2	1	3.50	1	25			2105	52			52	1.00	1986			0.2	-1589			397	0.131			29	88	0.584	6	66
3	2	3.00	1	40		N	1915	49			49	1.00	1846			0.2	-1477			369	0.133	0.133		30	30	0.584	6	67
1	1	3.00	1			N	1915		609		609	0.00	1915			0.8	-383			1532	0.398	0.398		88	88	0.584	42	12
1	1	3.00	1				2055		163		163	0.00	2055			0.2	-1644			411	0.397			88	88	0.584	6	18
4	1	3.50	1			N	1965		77		77	0.00	1965			0.2	-1572			393	0.196			44	88	0.584	6	49
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			44	88	0.584	24	39
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			44	88	0.584	24	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

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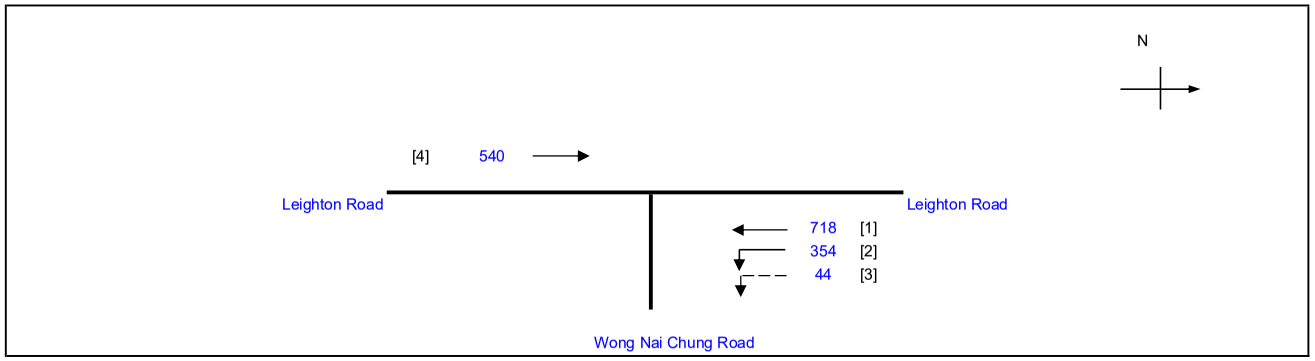
J12 Leighton Road / Wong Nai Chung Road

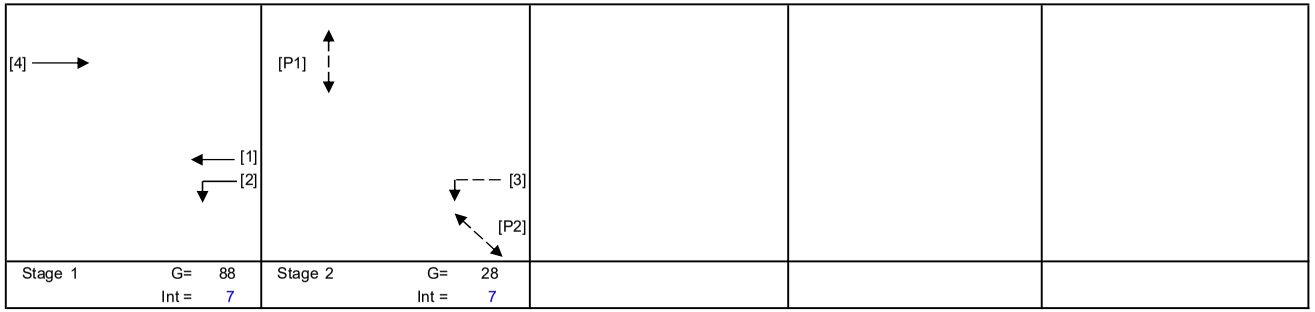
2033 Reference Weekend

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.489
Loss time		L =	12 sec
Total Flow		=	1656 pcu
Co	= (1.5*L+5)/(1-Y)	=	45.0 sec
Cm	= L/(1-Y)	=	23.5 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	65.6 %
Cp	= 0.9*L/(0.9-Y)	=	26.3 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**67 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	26	9
P2	2		7	7	0	28	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	291			291	1.00	1828							1828	0.159			38	89	0.539	42	38
2	1	3.50	1	25			2105	63			63	1.00	1986			0.2	-1589			397	0.159			38	89	0.539	6	51
3	2	3.00	1	40		N	1915	44			44	1.00	1846			0.2	-1477			369	0.119	0.119		29	29	0.539	6	63
1	1	3.00	1			N	1915		566		566	0.00	1915			0.8	-383			1532	0.369			89	89	0.539	36	11
1	1	3.00	1				2055		152		152	0.00	2055			0.2	-1644			411	0.370	0.370		89	89	0.539	6	16
4	1	3.50	1			N	1965		87		87	0.00	1965			0.2	-1572			393	0.221			53	89	0.539	6	38
4	1	3.00	1				2055		226		226	0.00	2055			0.5	-1028			1027	0.220			53	89	0.539	24	31
4	1	3.00	1				2055		227		227	0.00	2055			0.5	-1028			1027	0.221			53	89	0.539	24	31

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

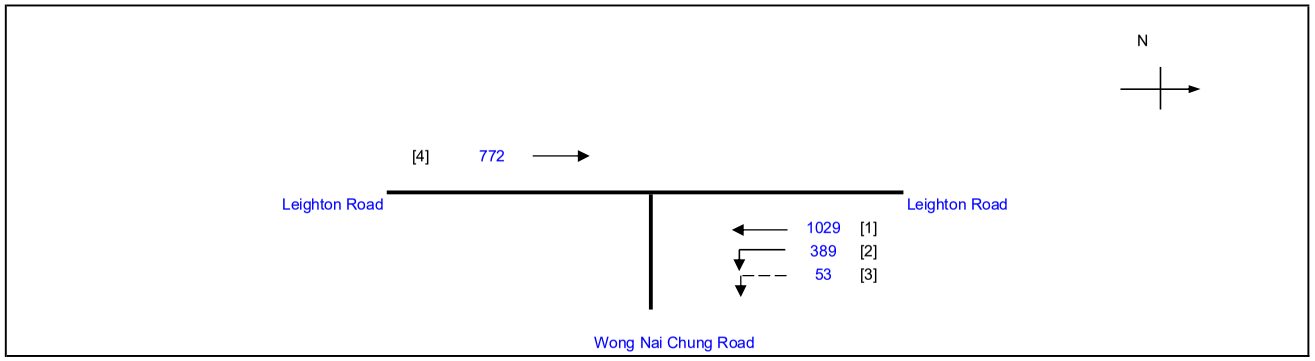
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

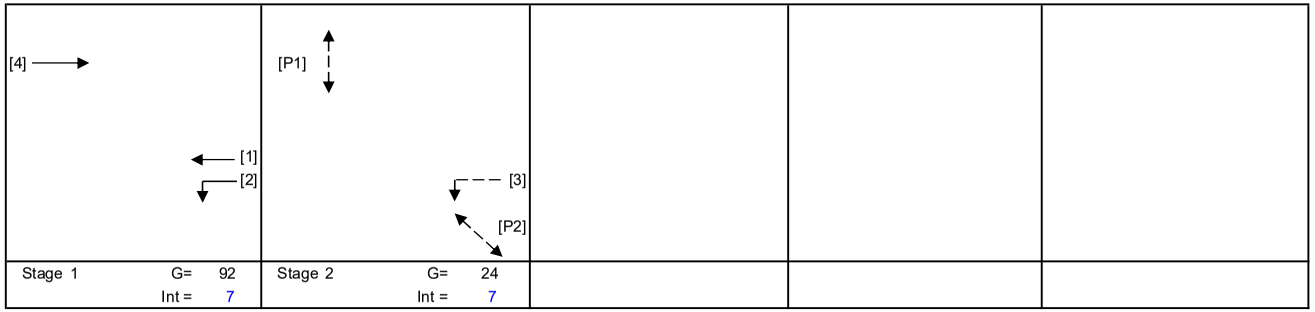
2033 Design AM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.674
Loss time	L =	12 sec
Total Flow	=	2243 pcu
Co = (1.5*L+5)/(1-Y)	=	70.6 sec
Cm = L/(1-Y)	=	36.8 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	20.2 %
Cp = 0.9*L/(0.9-Y)	=	47.8 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**21 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	22	9
P2	2		7	7	0	24	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	320			320	1.00	1828							1828	0.175			31	93	0.743	54	52
2	1	3.50	1	25			2105	69			69	1.00	1986			0.2	-1589			397	0.174			30	93	0.743	12	92
3	2	3.00	1	40		N	1915	53			53	1.00	1846			0.2	-1477			369	0.144	0.144		25	25	0.743	12	110
1	1	3.00	1			N	1915		811		811	0.00	1915			0.8	-383			1532	0.529			93	93	0.743	48	15
1	1	3.00	1				2055		218		218	0.00	2055			0.2	-1644			411	0.530	0.530		93	93	0.743	12	26
4	1	3.50	1			N	1965		124		124	0.00	1965			0.2	-1572			393	0.316			55	93	0.743	18	56
4	1	3.00	1				2055		325		325	0.00	2055			0.5	-1028			1027	0.316			55	93	0.743	36	39
4	1	3.00	1				2055		323		323	0.00	2055			0.5	-1028			1027	0.315			55	93	0.743	36	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

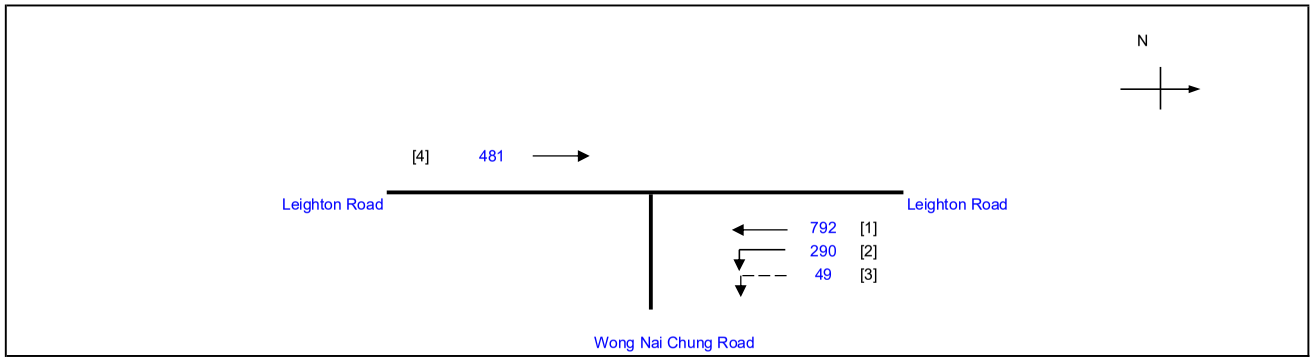
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

2033 Design PM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.541
Loss time		L =	12 sec
Total Flow		=	1612 pcu
Co	= (1.5*L+5)/(1-Y)	=	50.1 sec
Cm	= L/(1-Y)	=	26.1 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	49.9 %
Cp	= 0.9*L/(0.9-Y)	=	30.0 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**51 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	26	9
P2	2		7	7	0	28	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	238			238	1.00	1828							1828	0.130			28	89	0.595	36	47
2	1	3.50	1	25			2105	52			52	1.00	1986			0.2	-1589			397	0.131			29	89	0.595	6	68
3	2	3.00	1	40		N	1915	49			49	1.00	1846			0.2	-1477			369	0.133	0.133		29	29	0.595	6	70
1	1	3.00	1			N	1915		625		625	0.00	1915			0.8	-383			1532	0.408	0.408		89	89	0.595	42	12
1	1	3.00	1				2055		168		168	0.00	2055			0.2	-1644			411	0.408			89	89	0.595	6	18
4	1	3.50	1			N	1965		77		77	0.00	1965			0.2	-1572			393	0.196			43	89	0.595	12	51
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			43	89	0.595	24	40
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			43	89	0.595	24	40

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

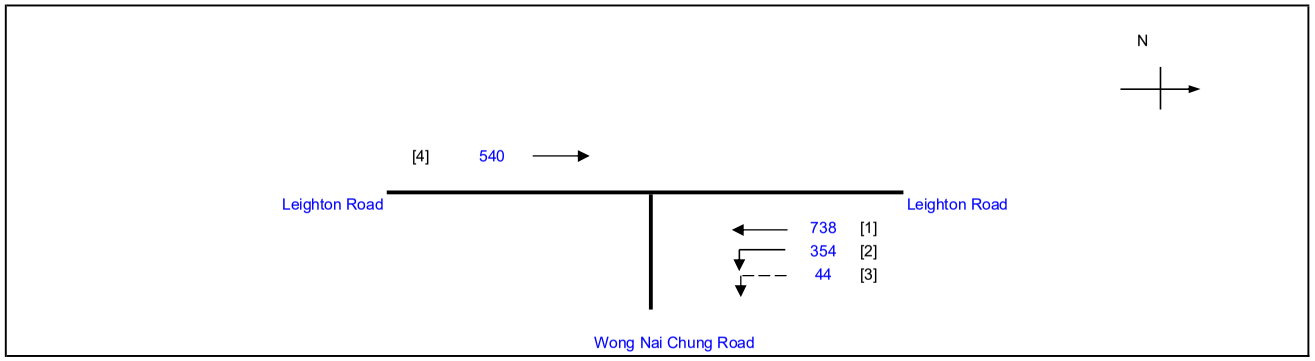
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

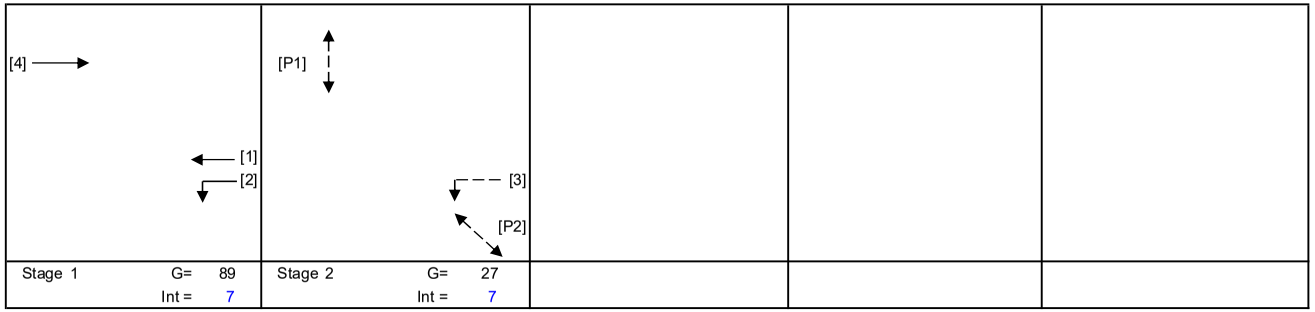
2033 Design Weekend

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.499
Loss time		L =	12 sec
Total Flow		=	1676 pcu
Co	= (1.5*L+5)/(1-Y)	=	45.9 sec
Cm	= L/(1-Y)	=	24.0 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	62.3 %
Cp	= 0.9*L/(0.9-Y)	=	26.9 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**64 %**

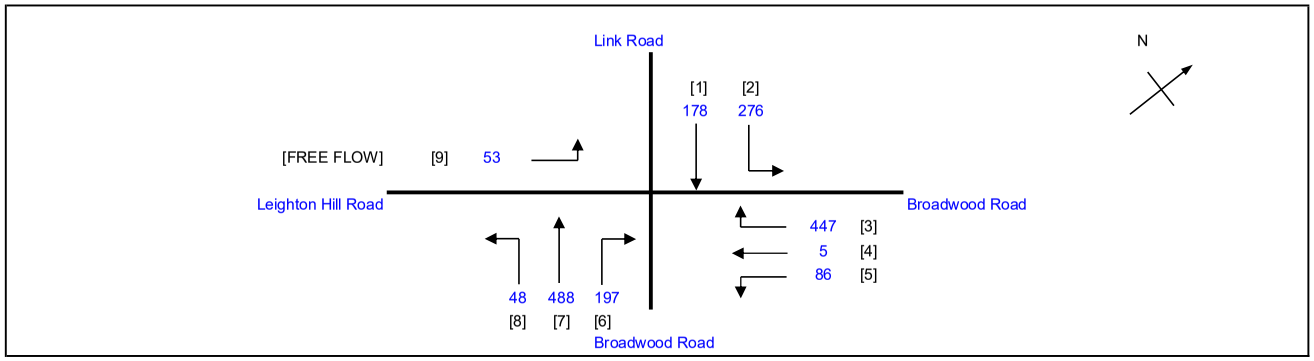


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	25	9
P2	2		7	7	0	27	7

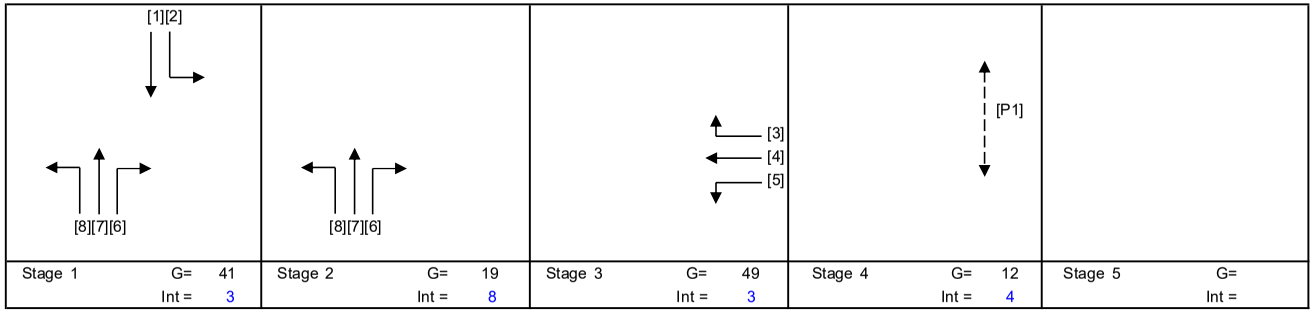
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	291			291	1.00	1828							1828	0.159			38	90	0.550	42	39
2	1	3.50	1	25			2105	63			63	1.00	1986			0.2	-1589			397	0.159			38	90	0.550	6	52
3	2	3.00	1	40		N	1915	44			44	1.00	1846			0.2	-1477			369	0.119	0.119		28	28	0.550	6	65
1	1	3.00	1			N	1915		582		582	0.00	1915			0.8	-383			1532	0.380	0.380		90	90	0.550	36	11
1	1	3.00	1				2055		156		156	0.00	2055			0.2	-1644			411	0.380			90	90	0.550	6	16
4	1	3.50	1			N	1965		87		87	0.00	1965			0.2	-1572			393	0.221			52	90	0.550	6	39
4	1	3.00	1				2055		226		226	0.00	2055			0.5	-1028			1027	0.220			52	90	0.550	24	32
4	1	3.00	1				2055		227		227	0.00	2055			0.5	-1028			1027	0.221			52	90	0.550	24	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J13 Broadwood Road / Link Road		FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.628
Loss time		L =	27 sec
Total Flow		=	1725 pcu
Co	= (1.5*L+5)/(1-Y)	=	122.3 sec
Cm	= L/(1-Y)	=	72.6 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	11.1 %
Cp	= 0.9*L/(0.9-Y)	=	89.4 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**16 %**



Stage 1	G= 41	Int = 3
Stage 2	G= 19	Int = 8
Stage 3	G= 49	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	276	178		454	0.61	1943							1943	0.234	0.234		42	42	0.778	72	50
7,8	1,2	3.00	1	15		N	1915	48	488		536	0.09	1898							1898	0.282			51	63	0.778	78	44
6	2	3.00	1	8			2055			197	197	1.00	1731							1731	0.114	0.114		20	20	0.778	42	74
3,4,5	3	3.50	1	60		N	1965	86	5	447	538	0.99	1918							1918	0.281	0.281		50	50	0.778	78	44
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

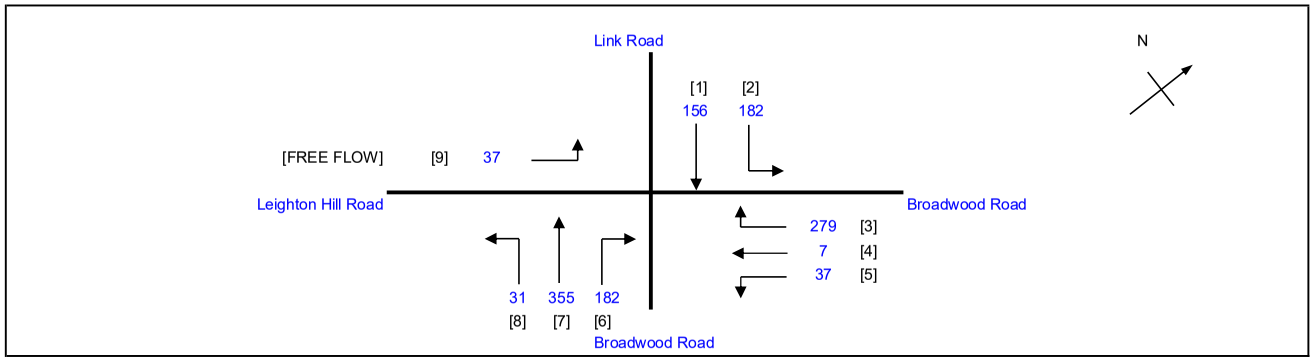
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J13 Broadwood Road / Link Road

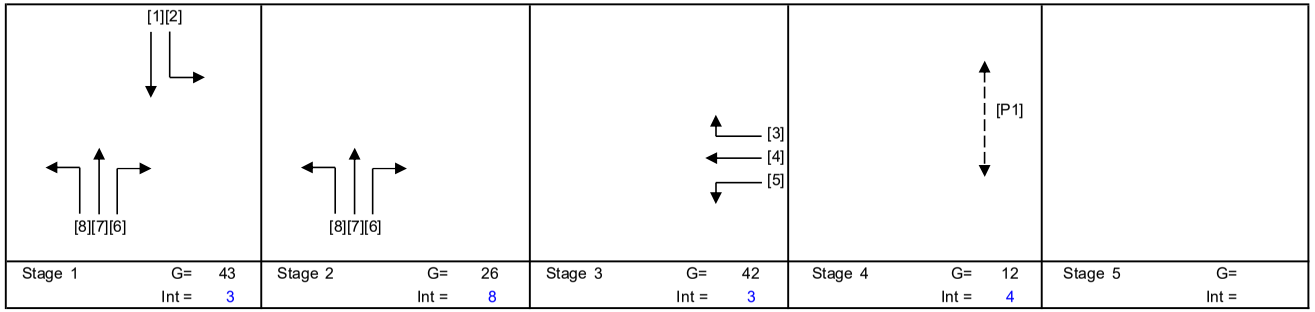
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.447
Loss time	L =	27 sec
Total Flow	=	1229 pcu
Co = (1.5*L+5)/(1-Y)	=	82.3 sec
Cm = L/(1-Y)	=	48.9 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	55.9 %
Cp = 0.9*L/(0.9-Y)	=	53.7 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**62 %**



Stage 1	G= 43	Int = 3
Stage 2	G= 26	Int = 8
Stage 3	G= 42	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	182	156		338	0.54	1945							1945	0.174	0.174		44	44	0.554	54	39
7,8	1,2	3.00	1	15		N	1915	31	355		386	0.08	1900							1900	0.203			51	70	0.554	54	35
6	2	3.00	1	8			2055			182	182	1.00	1731							1731	0.105	0.105		27	27	0.554	30	52
3,4,5	3	3.50	1	60		N	1965	37	7	279	323	0.98	1918							1918	0.168	0.168		43	43	0.554	48	40
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

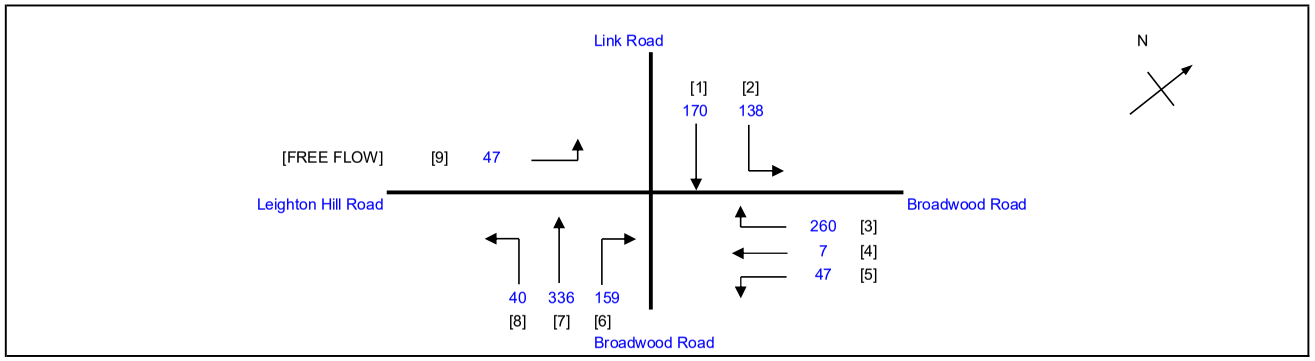
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

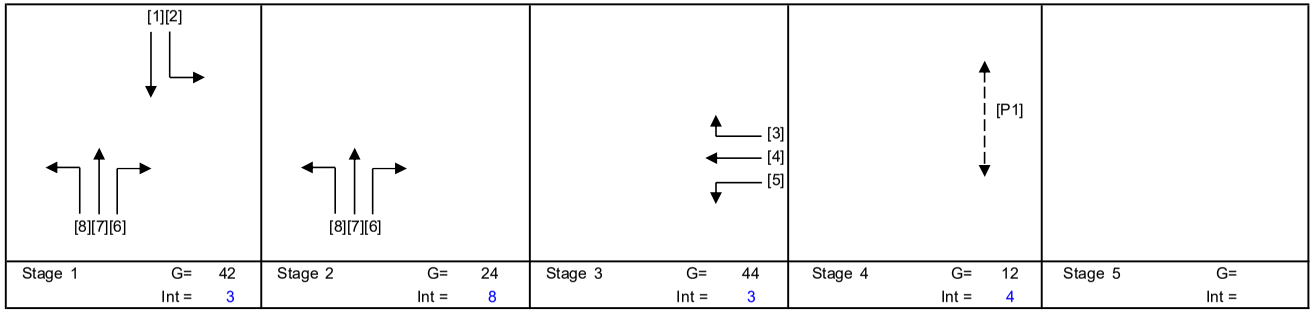
J13 Broadwood Road / Link Road

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J13_BR_LR.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.414
Loss time		L =	27 sec
Total Flow		=	1157 pcu
Co	= (1.5*L+5)/(1-Y)	=	77.6 sec
Cm	= L/(1-Y)	=	46.0 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	68.6 %
Cp	= 0.9*L/(0.9-Y)	=	50.0 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**76 %**



Stage 1	G= 42	Int = 3
Stage 2	G= 24	Int = 8
Stage 3	G= 44	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

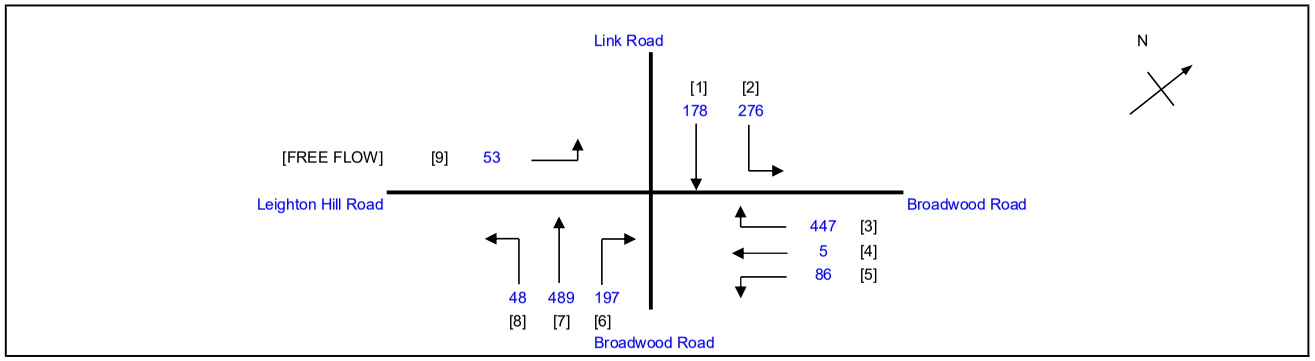
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	138	170		308	0.45	1949							1949	0.158	0.158		43	43	0.512	48	39
7,8	1,2	3.00	1	15		N	1915	40	336		376	0.11	1895							1895	0.198			54	68	0.512	48	32
6	2	3.00	1	8			2055			159	159	1.00	1731							1731	0.092	0.092		25	25	0.512	30	52
3,4,5	3	3.50	1	60		N	1965	47	7	260	314	0.98	1918							1918	0.164	0.164		45	45	0.512	48	38
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

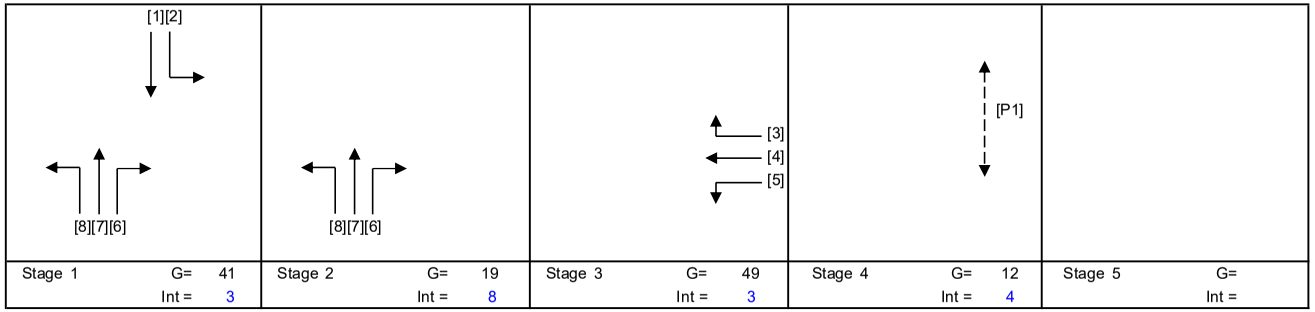
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
2033 Design AM	FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Mar-26
J13 Broadwood Road / Link Road		Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.628
Loss time	L =	27 sec
Total Flow	=	1726 pcu
Co = (1.5*L+5)/(1-Y)	=	122.3 sec
Cm = L/(1-Y)	=	72.6 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	11.1 %
Cp = 0.9*L/(0.9-Y)	=	89.4 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 41	G= 19	G= 49	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	276	178		454	0.61	1943							1943	0.234	0.234	15	42	42	0.778	72	50
7,8	1,2	3.00	1	15		N	1915	48	489		537	0.09	1898							1898	0.283			51	63	0.778	78	44
6	2	3.00	1	8			2055			197	197	1.00	1731							1731	0.114	0.114		20	20	0.778	42	74
3,4,5	3	3.50	1	60		N	1965	86	5	447	538	0.99	1918							1918	0.281	0.281		50	50	0.778	78	44
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

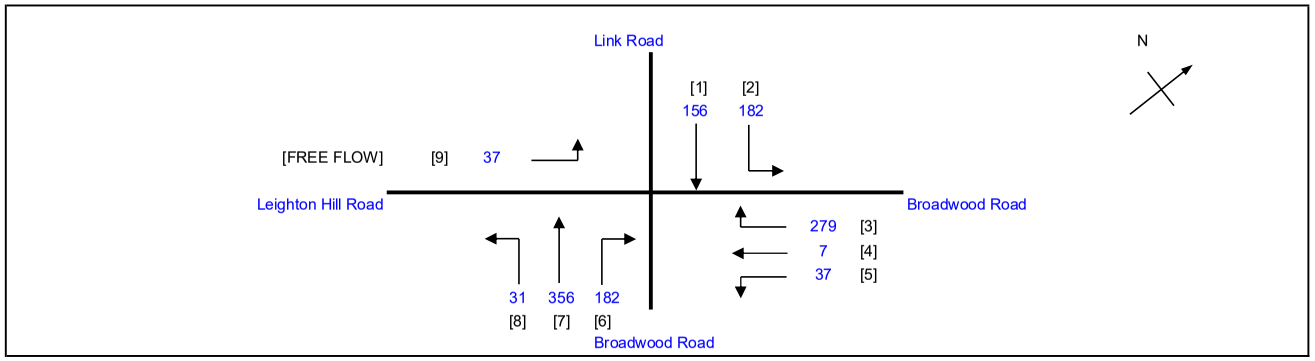
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J13 Broadwood Road / Link Road

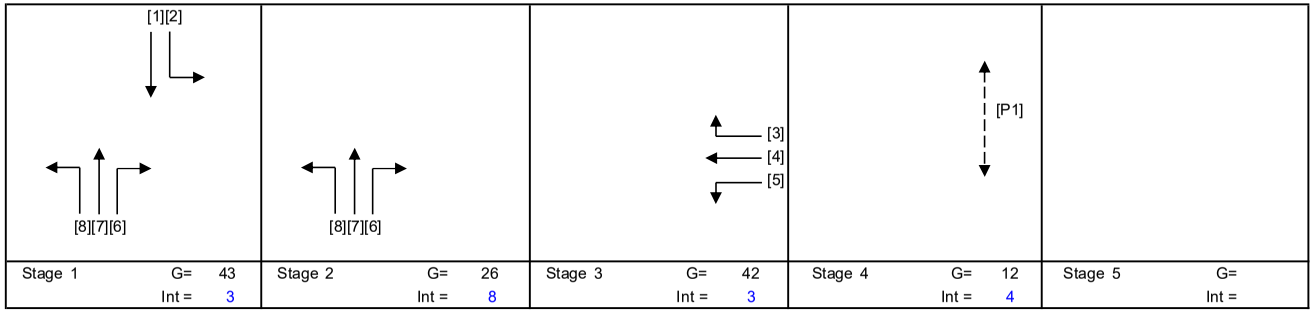
2033 Design PM

PROJECT NO.: 40920

FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.447
Loss time	L =	27 sec
Total Flow	=	1230 pcu
Co = (1.5*L+5)/(1-Y)	=	82.3 sec
Cm = L/(1-Y)	=	48.9 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	55.9 %
Cp = 0.9*L/(0.9-Y)	=	53.7 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**62 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 43	G= 26	G= 42	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	182	156		338	0.54	1945							1945	0.174	0.174		44	44	0.554	54	39
7,8	1,2	3.00	1	15		N	1915	31	356		387	0.08	1900							1900	0.204			51	70	0.554	54	35
6	2	3.00	1	8			2055			182	182	1.00	1731							1731	0.105	0.105		27	27	0.554	30	52
3,4,5	3	3.50	1	60		N	1965	37	7	279	323	0.98	1918							1918	0.168	0.168		43	43	0.554	48	40
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

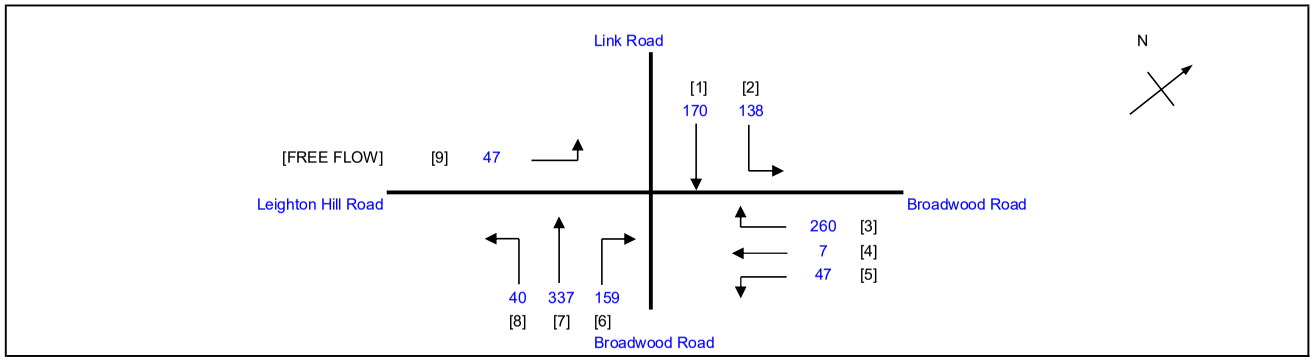
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

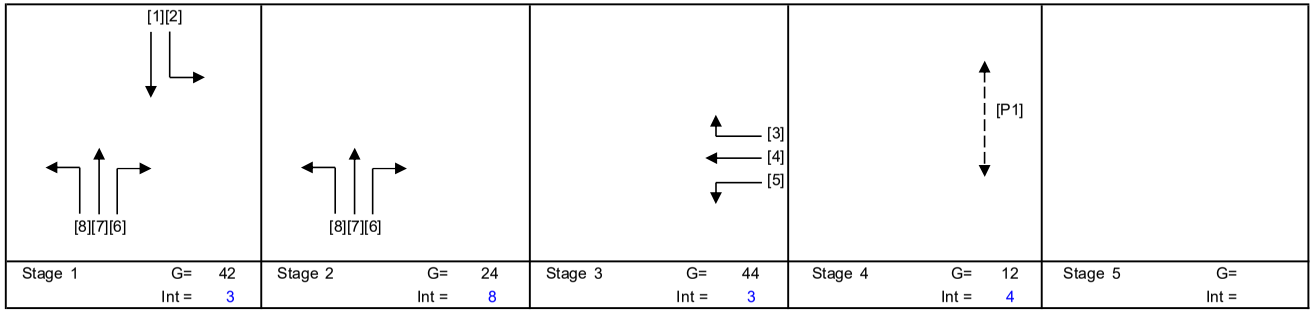
J13 Broadwood Road / Link Road

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.414
Loss time	L =	27 sec
Total Flow	=	1158 pcu
Co = (1.5*L+5)/(1-Y)	=	77.6 sec
Cm = L/(1-Y)	=	46.0 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	68.6 %
Cp = 0.9*L/(0.9-Y)	=	50.0 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**76 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 42	G= 24	G= 44	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	138	170		308	0.45	1949							1949	0.158	0.158	15	43	43	0.512	48	39
7,8	1,2	3.00	1	15		N	1915	40	337		377	0.11	1895							1895	0.199			54	68	0.512	48	32
6	2	3.00	1	8			2055			159	159	1.00	1731							1731	0.092	0.092		25	25	0.512	30	52
3,4,5	3	3.50	1	60		N	1965	47	7	260	314	0.98	1918							1918	0.164	0.164		45	45	0.512	48	38
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

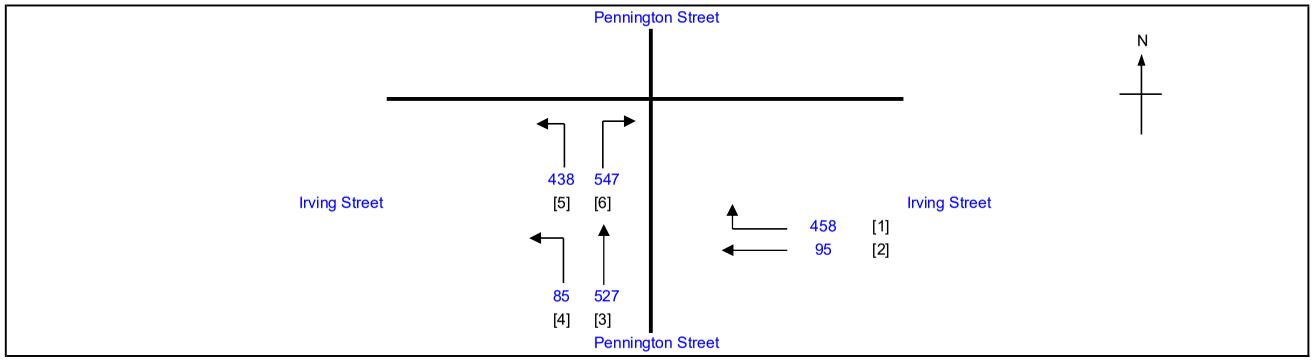
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
FILENAME : J14_PS_IS_JB.xlsx	Checked By:	SLN	Mar-26
	Reviewed By:	SLN	Mar-26

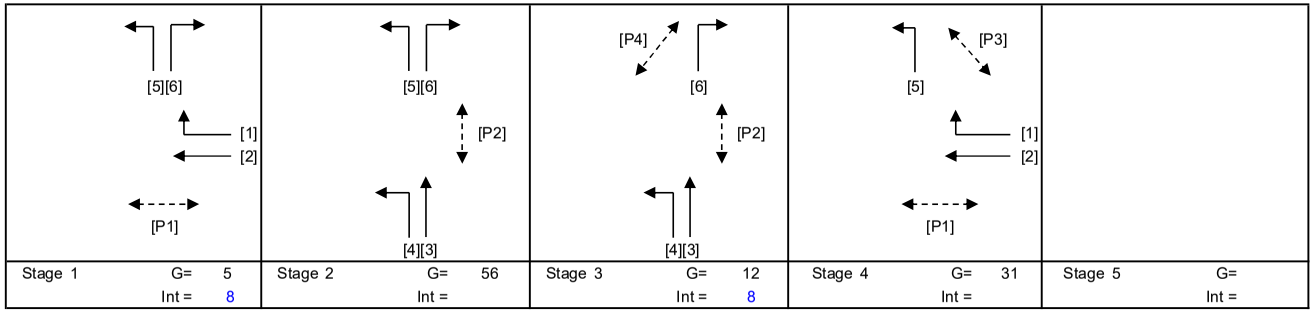
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Reference AM



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.247
Loss time	L =	14 sec
Total Flow	=	2150 pcu
Co = (1.5*L+5)/(1-Y)	=	34.5 sec
Cm = L/(1-Y)	=	18.6 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	221.6 %
Cp = 0.9*L/(0.9-Y)	=	19.3 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**222 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		36	8
P2	2,3		8	14		62	14
P3	4		7	7		24	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		83		83	0.00	1915			0.5	-958			957	0.087			37	37	0.280	6	30
1,2	1,4	3.00	1	16			2055		12	153	165	0.93	1891							1891	0.087	0.087		37	37	0.280	18	29
1	1,4	3.00	1	13			2055			160	160	1.00	1842							1842	0.087			37	37	0.280	18	29
1	1,4	3.00	1	10		N	1915			145	145	1.00	1665							1665	0.087			37	37	0.280	18	29
3,4	2,3	3.80	1	5		N	1995	85	208		293	0.29	1835							1835	0.160			68	69	0.280	24	12
3	2,3	3.80	1			N	1995		319		319	0.00	1995							1995	0.160	0.160		69	69	0.280	24	12
5	1,2,4	3.50	1	10			2105	438			438	1.00	1830							1830	0.239			103	94	0.280	12	2
6	1,2,4	3.50	1	10			2105			292	292	1.00	1830							1830	0.160			68	94	0.280	24	12
6	1,2,4	3.50	1	6.5		N	1965			255	255	1.00	1597							1597	0.160			68	94	0.280	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

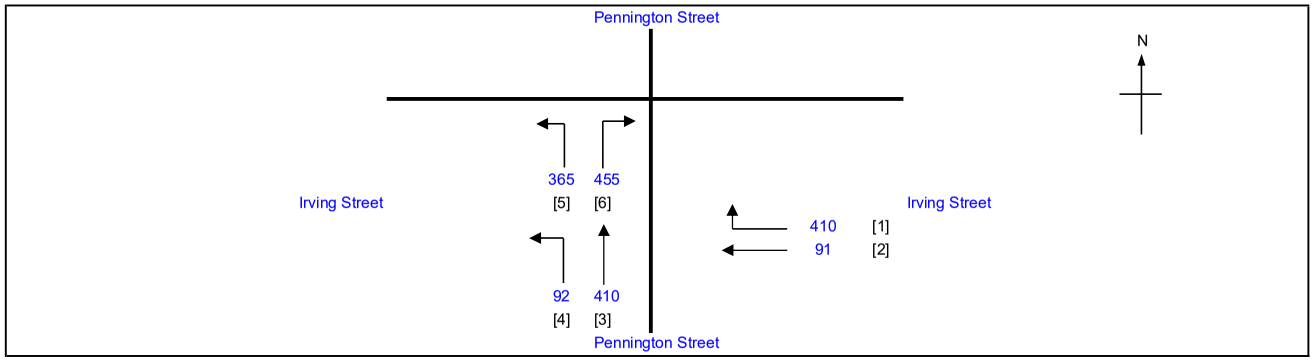
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

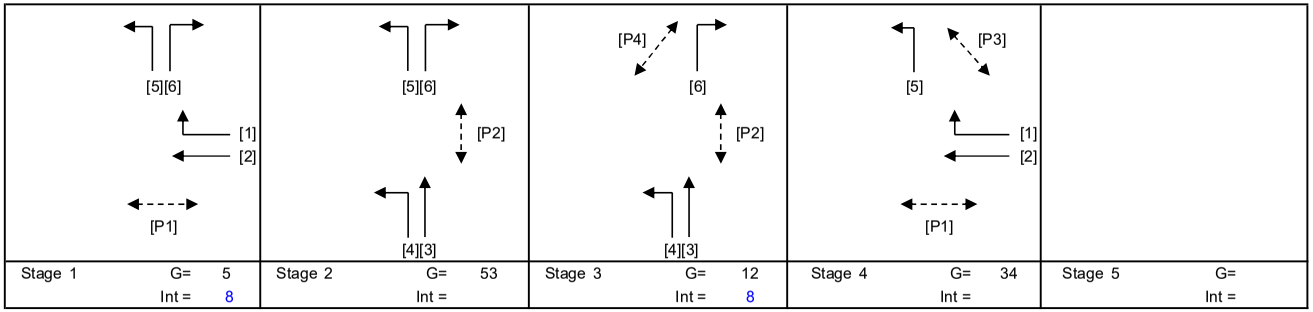
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Reference PM

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.212
Loss time		L =	14 sec
Total Flow		=	1823 pcu
Co	= (1.5*L+5)/(1-Y)	=	33.0 sec
Cm	= L/(1-Y)	=	17.8 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	274.6 %
Cp	= 0.9*L/(0.9-Y)	=	18.3 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**275 %**



Stage 1	G= 5	Int = 8
Stage 2	G= 53	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 34	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		76		76	0.00	1915			0.5	-958			957	0.079	0.079		40	40	0.240	6	28
1,2	1,4	3.00	1	16			2055		15	133	148	0.90	1895							1895	0.078			39	40	0.240	18	28
1	1,4	3.00	1	13			2055			146	146	1.00	1842							1842	0.079			40	40	0.240	18	27
1	1,4	3.00	1	10		N	1915			131	131	1.00	1665							1665	0.079			39	40	0.240	12	27
3,4	2,3	3.80	1	5		N	1995	92	145		237	0.39	1787							1787	0.133			66	66	0.240	18	13
3	2,3	3.80	1			N	1995		265		265	0.00	1995							1995	0.133	0.133		66	66	0.240	18	13
5	1,2,4	3.50	1	10			2105	365			365	1.00	1830							1830	0.199			100	94	0.240	12	2
6	1,2,4	3.50	1	10			2105			243	243	1.00	1830							1830	0.133			66	94	0.240	18	13
6	1,2,4	3.50	1	6.5		N	1965			212	212	1.00	1597							1597	0.133			66	94	0.240	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

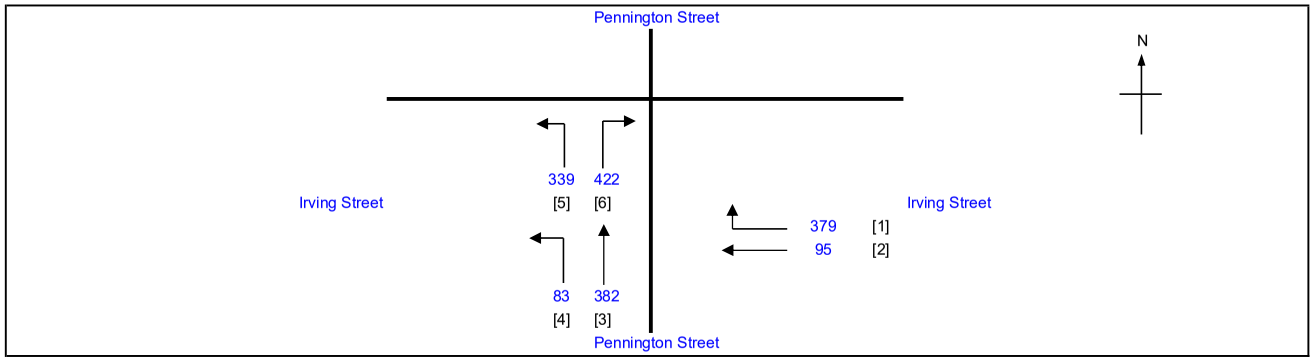
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

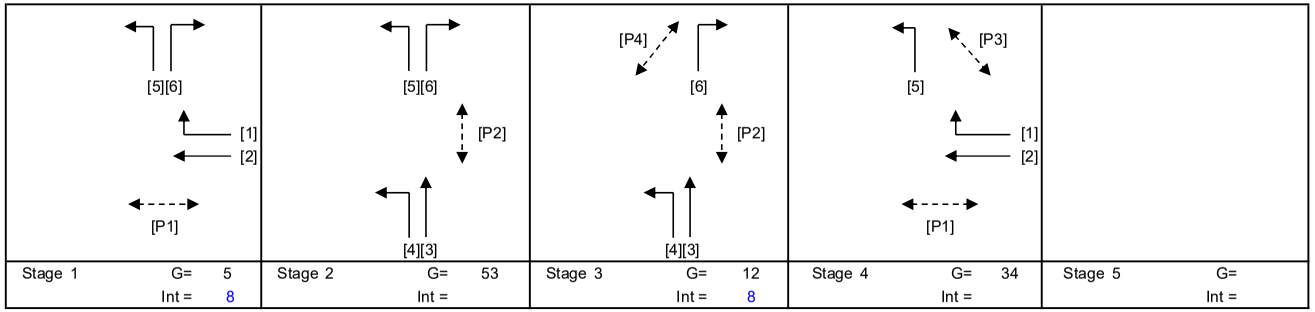
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.197
Loss time	L =	14 sec
Total Flow	=	1700 pcu
Co = (1.5*L+5)/(1-Y)	=	32.4 sec
Cm = L/(1-Y)	=	17.4 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	303.0 %
Cp = 0.9*L/(0.9-Y)	=	17.9 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**303 %**



Stage 1	G= 5	Int = 8
Stage 2	G= 53	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 34	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		71		71	0.00	1915			0.5	-958			957	0.074			40	40	0.223	6	27
1,2	1,4	3.00	1	16			2055		24	118	142	0.83	1906							1906	0.074	0.074		40	40	0.223	18	27
1	1,4	3.00	1	13			2055			137	137	1.00	1842							1842	0.074			40	40	0.223	18	27
1	1,4	3.00	1	10		N	1915			124	124	1.00	1665							1665	0.074			40	40	0.223	12	27
3,4	2,3	3.80	1	5		N	1995	83	137		220	0.38	1792							1792	0.123			66	66	0.223	18	13
3	2,3	3.80	1			N	1995		245		245	0.00	1995							1995	0.123	0.123		66	66	0.223	18	13
5	1,2,4	3.50	1	10			2105	339			339	1.00	1830							1830	0.185			100	94	0.223	6	2
6	1,2,4	3.50	1	10			2105			225	225	1.00	1830							1830	0.123			66	94	0.223	18	13
6	1,2,4	3.50	1	6.5		N	1965			197	197	1.00	1597							1597	0.123			66	94	0.223	12	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

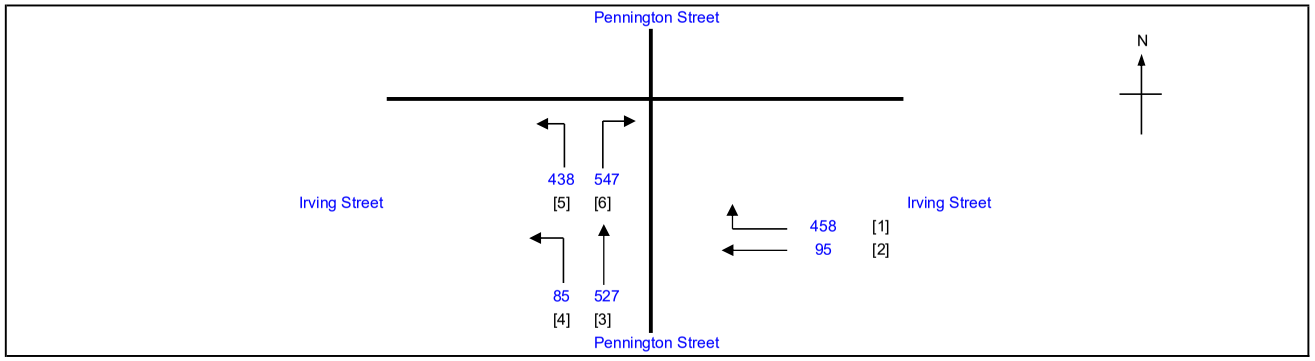
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

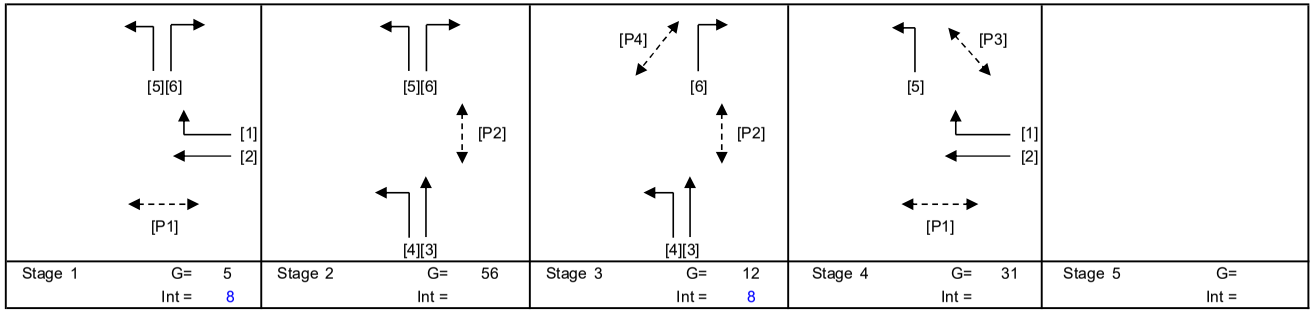
2033 Design AM

PROJECT NO.: 40920

FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.247
Loss time	L =	14 sec
Total Flow	=	2150 pcu
Co = (1.5*L+5)/(1-Y)	=	34.5 sec
Cm = L/(1-Y)	=	18.6 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	221.6 %
Cp = 0.9*L/(0.9-Y)	=	19.3 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**222 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		36	8
P2	2,3		8	14		62	14
P3	4		7	7		24	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		83		83	0.00	1915			0.5	-958			957	0.087			37	37	0.280	6	30
1,2	1,4	3.00	1	16			2055		12	153	165	0.93	1891							1891	0.087	0.087		37	37	0.280	18	29
1	1,4	3.00	1	13			2055			160	160	1.00	1842							1842	0.087			37	37	0.280	18	29
1	1,4	3.00	1	10		N	1915			145	145	1.00	1665							1665	0.087			37	37	0.280	18	29
3,4	2,3	3.80	1	5		N	1995	85	208		293	0.29	1835							1835	0.160			68	69	0.280	24	12
3	2,3	3.80	1			N	1995		319		319	0.00	1995							1995	0.160	0.160		69	69	0.280	24	12
5	1,2,4	3.50	1	10			2105	438			438	1.00	1830							1830	0.239			103	94	0.280	12	2
6	1,2,4	3.50	1	10			2105			292	292	1.00	1830							1830	0.160			68	94	0.280	24	12
6	1,2,4	3.50	1	6.5		N	1965			255	255	1.00	1597							1597	0.160			68	94	0.280	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

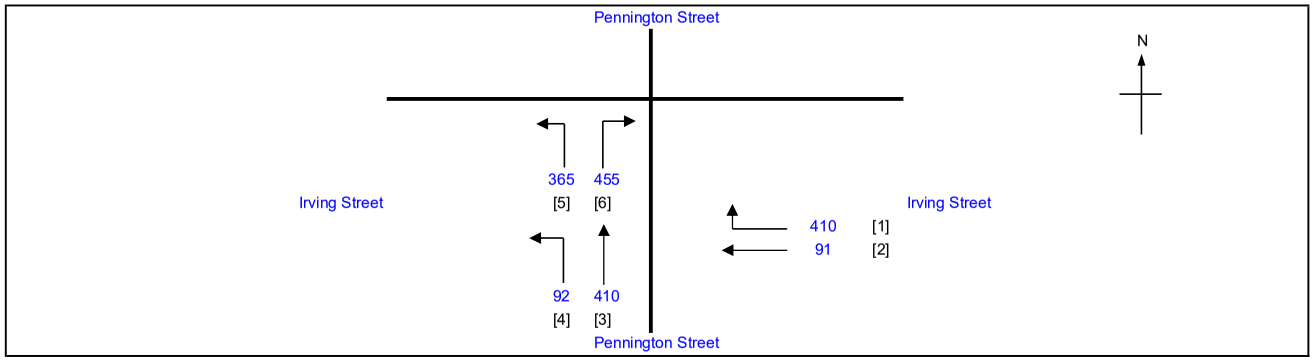
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

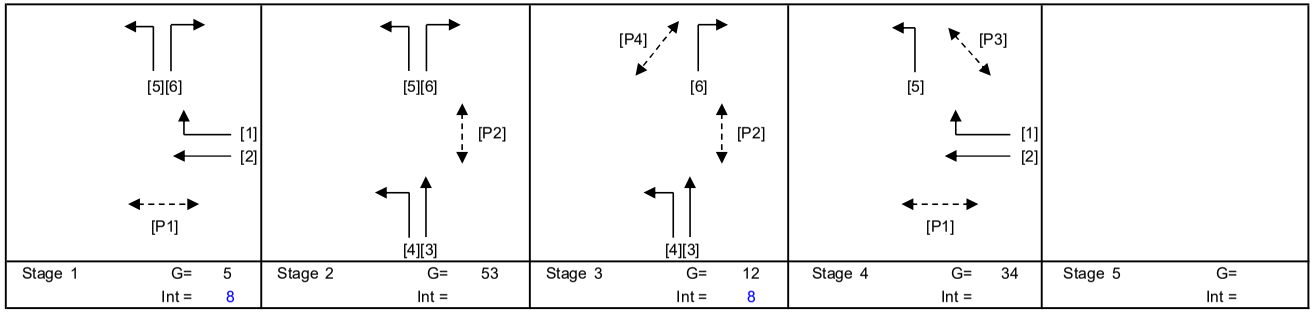
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Design PM

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.212
Loss time	L =	14 sec
Total Flow	=	1823 pcu
Co = (1.5*L+5)/(1-Y)	=	33.0 sec
Cm = L/(1-Y)	=	17.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	274.6 %
Cp = 0.9*L/(0.9-Y)	=	18.3 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**275 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 5	G= 53	G= 12	G= 34	G=
Int = 8	Int =	Int = 8	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		76		76	0.00	1915			0.5	-958			957	0.079	0.079		40	40	0.240	6	28
1,2	1,4	3.00	1	16			2055		15	133	148	0.90	1895							1895	0.078			39	40	0.240	18	28
1	1,4	3.00	1	13			2055			146	146	1.00	1842							1842	0.079			40	40	0.240	18	27
1	1,4	3.00	1	10		N	1915			131	131	1.00	1665							1665	0.079			39	40	0.240	12	27
3,4	2,3	3.80	1	5		N	1995	92	145		237	0.39	1787							1787	0.133			66	66	0.240	18	13
3	2,3	3.80	1			N	1995		265		265	0.00	1995							1995	0.133	0.133		66	66	0.240	18	13
5	1,2,4	3.50	1	10			2105	365			365	1.00	1830							1830	0.199			100	94	0.240	12	2
6	1,2,4	3.50	1	10			2105			243	243	1.00	1830							1830	0.133			66	94	0.240	18	13
6	1,2,4	3.50	1	6.5		N	1965			212	212	1.00	1597							1597	0.133			66	94	0.240	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

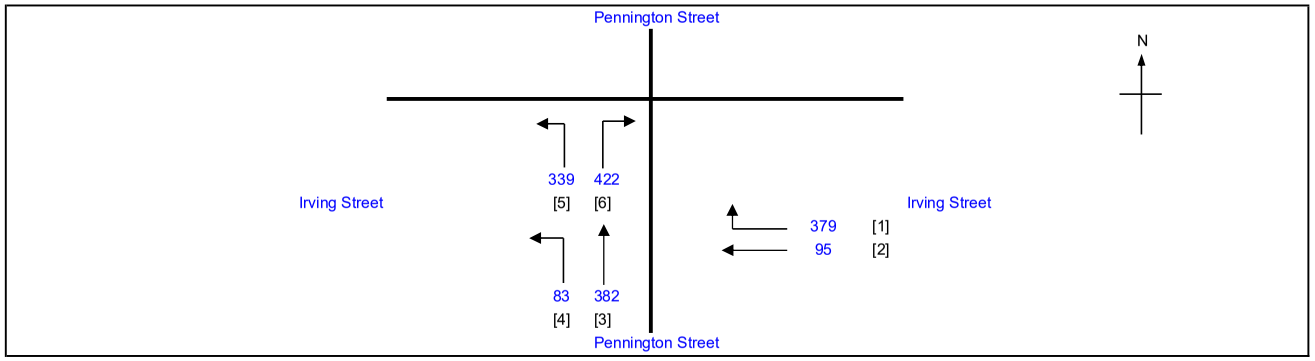
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

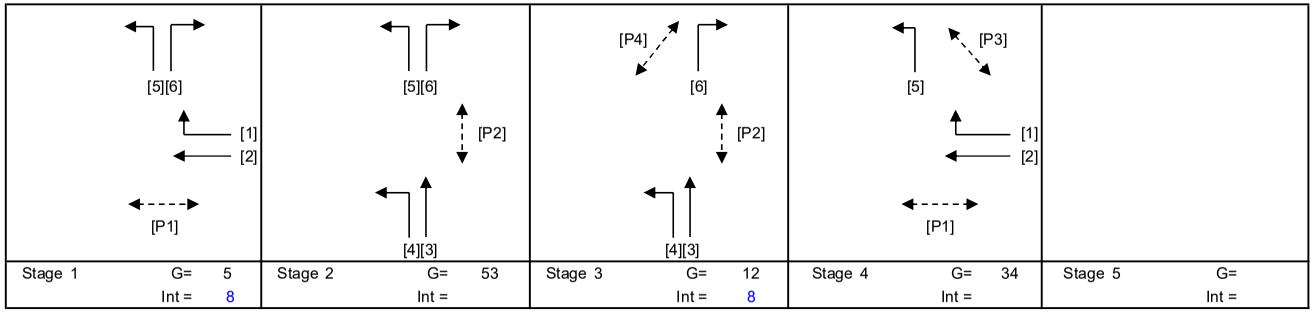
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.197
Loss time		L =	14 sec
Total Flow		=	1700 pcu
Co	= (1.5*L+5)/(1-Y)	=	32.4 sec
Cm	= L/(1-Y)	=	17.4 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	303.0 %
Cp	= 0.9*L/(0.9-Y)	=	17.9 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**303 %**

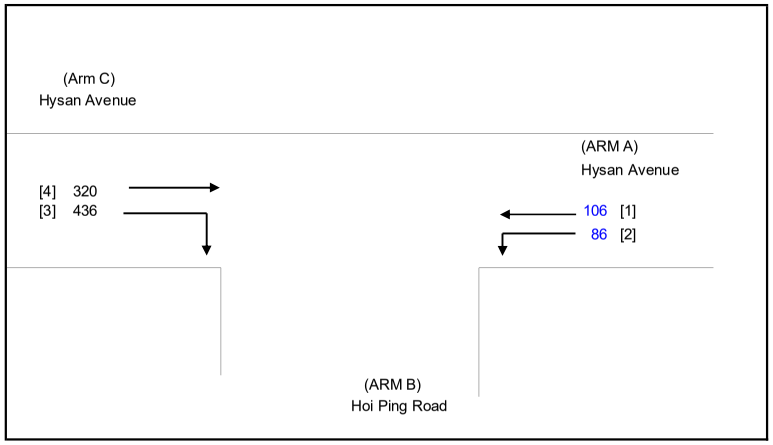


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		71		71	0.00	1915			0.5	-958			957	0.074			40	40	0.223	6	27
1,2	1,4	3.00	1	16			2055		24	118	142	0.83	1906							1906	0.074	0.074		40	40	0.223	18	27
1	1,4	3.00	1	13			2055			137	137	1.00	1842							1842	0.074			40	40	0.223	18	27
1	1,4	3.00	1	10		N	1915			124	124	1.00	1665							1665	0.074			40	40	0.223	12	27
3,4	2,3	3.80	1	5		N	1995	83	137		220	0.38	1792							1792	0.123			66	66	0.223	18	13
3	2,3	3.80	1			N	1995		245		245	0.00	1995							1995	0.123	0.123		66	66	0.223	18	13
5	1,2,4	3.50	1	10			2105	339			339	1.00	1830							1830	0.185			100	94	0.223	6	2
6	1,2,4	3.50	1	10			2105			225	225	1.00	1830							1830	0.123			66	94	0.223	18	13
6	1,2,4	3.50	1	6.5		N	1965			197	197	1.00	1597							1597	0.123			66	94	0.223	12	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	86	(pcu/hr)
q a-c	=	106	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	320	(pcu/hr)
q c-b	=	436	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

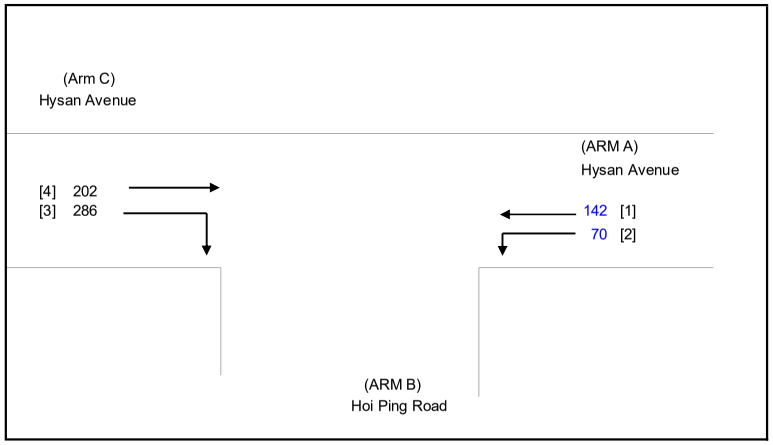
Q b-a	=	212		
Q b-c	=	417	Q b-c (O) =	417
Q c-b	=	664		
Q b-ac	=	212		
TOTAL FLOW	=	948	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.6566
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.66

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	70	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	202	(pcu/hr)
q c-b	=	286	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

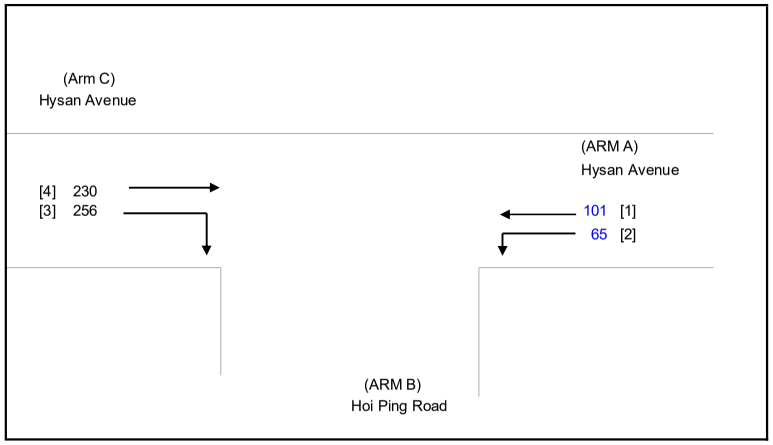
Q b-a	=	245		
Q b-c	=	413	Q b-c (O) =	413
Q c-b	=	660		
Q b-ac	=	245		
TOTAL FLOW	=	700	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4333
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.43

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	65	(pcu/hr)
q a-c	=	101	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	230	(pcu/hr)
q c-b	=	256	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

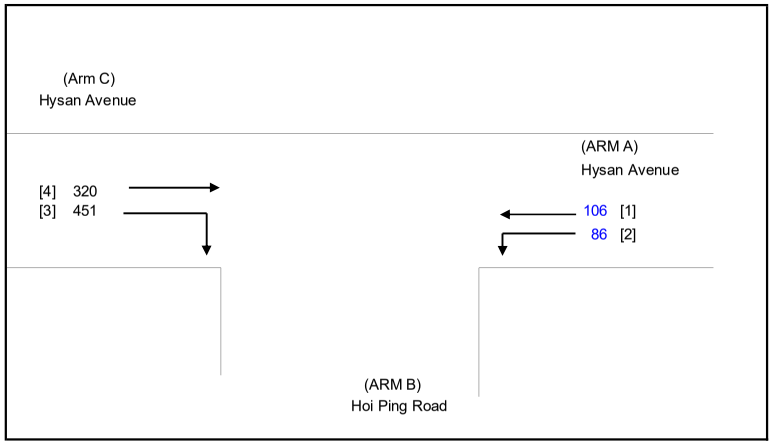
Q b-a	=	253		
Q b-c	=	419	Q b-c (O) =	419
Q c-b	=	670		
Q b-ac	=	253		
TOTAL FLOW	=	652	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.3821
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.38

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	86	(pcu/hr)
q a-c	=	106	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	320	(pcu/hr)
q c-b	=	451	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

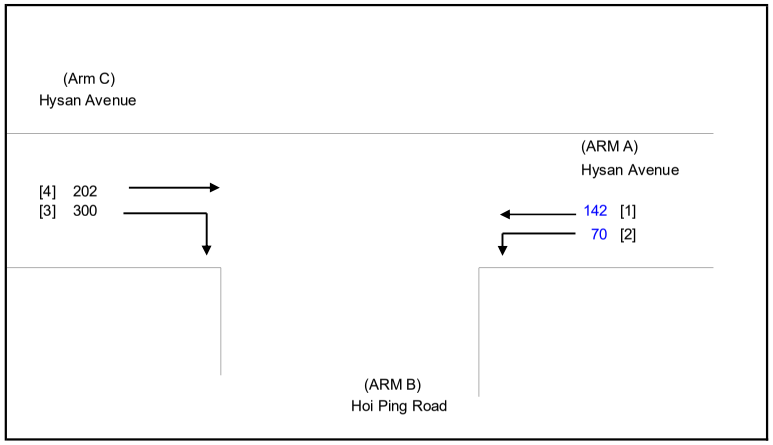
Q b-a	=	209		
Q b-c	=	417	Q b-c (O) =	417
Q c-b	=	664		
Q b-ac	=	209		
TOTAL FLOW	=	963	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.6792
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.68

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	70	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	202	(pcu/hr)
q c-b	=	300	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

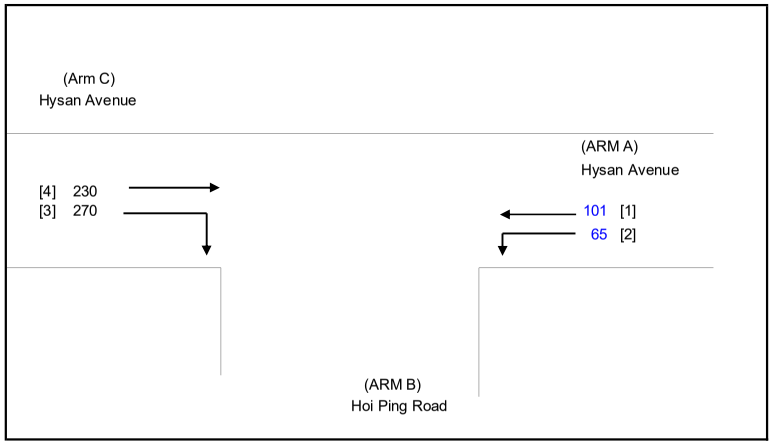
Q b-a	=	242		
Q b-c	=	413	Q b-c (O) =	413
Q c-b	=	660		
Q b-ac	=	242		
TOTAL FLOW	=	714	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4545
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.45

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	65	(pcu/hr)
q a-c	=	101	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	230	(pcu/hr)
q c-b	=	270	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

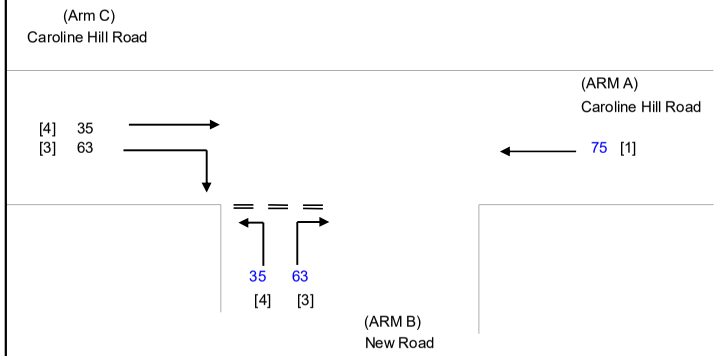
Q b-a	=	251		
Q b-c	=	419	Q b-c (O) =	419
Q c-b	=	670		
Q b-ac	=	251		
TOTAL FLOW	=	666	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4030
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.40

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	75	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	35	(pcu/hr)
q c-b	=	63	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	63	(pcu/hr)
q b-c	=	35	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.35714286

THE CAPACITY OF MOVEMENT :

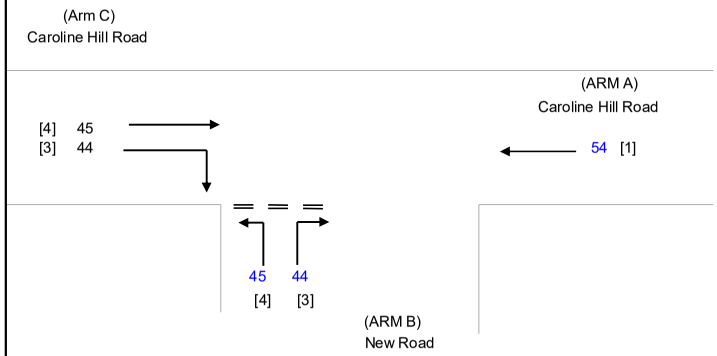
Q b-a	=	493		
Q b-c	=	669	Q b-c (O) =	647.6
Q c-b	=	668		
Q b-ac	=	544		
TOTAL FLOW	=	271	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1278
DFC b-c	=	0.0523
DFC c-b	=	0.0943
DFC b-c (share lane)	=	0.0643

CRITICAL DFC = 0.13

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	54	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	45	(pcu/hr)
q c-b	=	44	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	44	(pcu/hr)
q b-c	=	45	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.50561798

THE CAPACITY OF MOVEMENT :

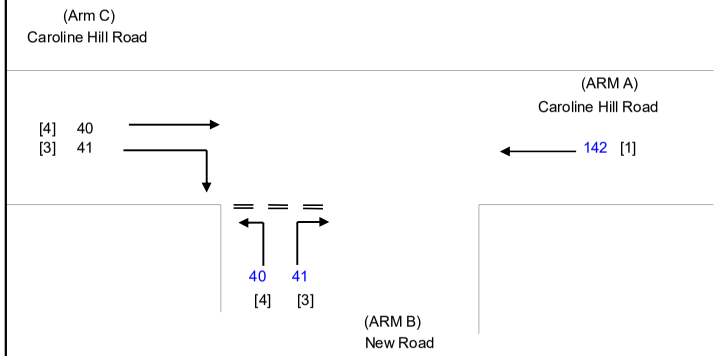
Q b-a	=	503		
Q b-c	=	675	Q b-c (O) =	660.2
Q c-b	=	673		
Q b-ac	=	577		
TOTAL FLOW	=	232	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0875
DFC b-c	=	0.0667
DFC c-b	=	0.0654
DFC b-c (share lane)	=	0.0779

CRITICAL DFC = 0.09

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	40	(pcu/hr)
q c-b	=	41	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	41	(pcu/hr)
q b-c	=	40	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.49382716

THE CAPACITY OF MOVEMENT :

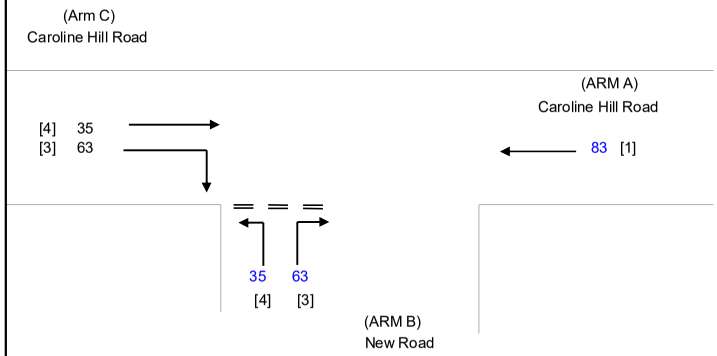
Q b-a	=	484		
Q b-c	=	652	Q b-c (O) =	638.2
Q c-b	=	651		
Q b-ac	=	555		
TOTAL FLOW	=	304	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0847
DFC b-c	=	0.0613
DFC c-b	=	0.0630
DFC b-c (share lane)	=	0.0721

CRITICAL DFC = 0.08

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	83	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	35	(pcu/hr)
q c-b	=	63	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	63	(pcu/hr)
q b-c	=	35	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.35714286

THE CAPACITY OF MOVEMENT :

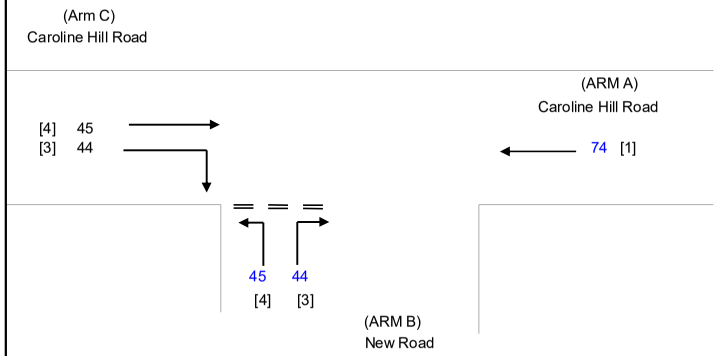
Q b-a	=	491		
Q b-c	=	667	Q b-c (O) =	645.6
Q c-b	=	666		
Q b-ac	=	542		
TOTAL FLOW	=	279	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1283
DFC b-c	=	0.0525
DFC c-b	=	0.0946
DFC b-c (share lane)	=	0.0646

CRITICAL DFC = 0.13

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	74	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	45	(pcu/hr)
q c-b	=	44	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	44	(pcu/hr)
q b-c	=	45	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.50561798

THE CAPACITY OF MOVEMENT :

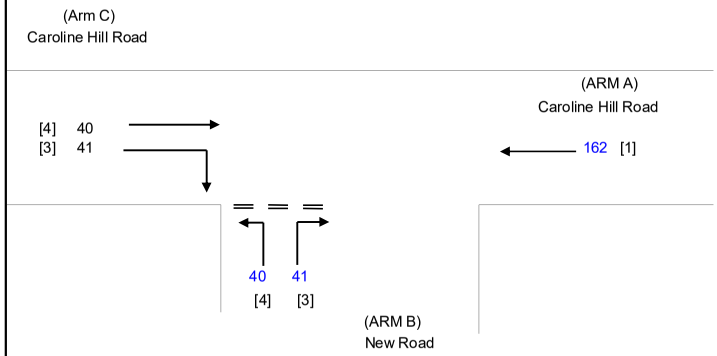
Q b-a	=	498		
Q b-c	=	670	Q b-c (O) =	655.2
Q c-b	=	668		
Q b-ac	=	572		
TOTAL FLOW	=	252	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0884
DFC b-c	=	0.0672
DFC c-b	=	0.0659
DFC b-c (share lane)	=	0.0786

CRITICAL DFC = 0.09

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	162	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	40	(pcu/hr)
q c-b	=	41	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	41	(pcu/hr)
q b-c	=	40	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.49382716

THE CAPACITY OF MOVEMENT :

Q b-a	=	479		
Q b-c	=	647	Q b-c (O) =	633.2
Q c-b	=	646		
Q b-ac	=	549		
TOTAL FLOW	=	324	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0856
DFC b-c	=	0.0618
DFC c-b	=	0.0635
DFC b-c (share lane)	=	0.0728

CRITICAL DFC = 0.09

APPENDIX E

Abstract of Highway Capacity Manual (HCM) 2000

transportation terminals is provided in Chapter 27, "Transit;" for more discussion, refer to the *Transit Quality of Service Manual* (*3*).

EXHIBIT 18-4. PLATOON-ADJUSTED LOS CRITERIA FOR WALKWAYS AND SIDEWALKS

LOS	Space (m^2/p)	Flow Rate[a] (p/min/m)
A	> 49	≤ 1.6
B	> 8–49	> 1.6–10
C	> 4–8	> 10–20
D	> 2–4	> 20–36
E	> 1–2	> 36–59
F	≤ 1	> 59

Note:
a. Rates in the table represent average flow rates over a 5- to 6-min period.

Stairs

Institute of Transportation Engineers stairway standards

Research (*4*) has developed LOS thresholds based on the Institute of Transportation Engineers stairways standards, which provide space and flow values listed in Exhibit 18-5. These modified LOS criteria are to ensure that the basic equation of traffic flow is satisfied. The volume to capacity (v/c) ratios are based on a stairway capacity of 49 p/min/m.

EXHIBIT 18-5. LOS CRITERIA FOR STAIRWAYS

LOS	Space (m^2/p)	Flow Rate (p/min/m)	Average Horizontal Speed (m/s)	v/c Ratio
A	> 1.9	≤ 16	> 0.53	≤ 0.33
B	> 1.6–1.9	> 16–20	> 0.53	> 0.33–0.41
C	> 1.1–1.6	> 20–26	> 0.48–0.53	> 0.41–0.53
D	> 0.7–1.1	> 26–36	> 0.42–0.48	> 0.53–0.73
E	> 0.5–0.7	> 36–49	> 0.40–0.42	> 0.73–1.00
F	≤ 0.5	variable	≤ 0.40	variable

Cross Flows

A cross flow is a pedestrian flow that is approximately perpendicular to and crosses another pedestrian stream. In general, the smaller of the two flows is referred to as the cross-flow condition. Research (*5*) notes that pedestrian cross flows occur in hallways and corridors. The same procedure for estimating walkway and sidewalk space is used to analyze pedestrian facilities with cross flows. LOS criteria A through D are to be used from Exhibit 18-3 or, if platoons are observed, from Exhibit 18-4. In addition, Exhibit 18-6 lists LOS E criteria for pedestrian facilities with cross flows.

EXHIBIT 18-6. LOS CRITERIA FOR PEDESTRIAN CROSS FLOWS

LOS	Space (m^2/p)	Flow[a] (p/min/m)	Speed (m/s)	Density (p/m^2)
E	≥ 1.25	≤ 75	≥ 1.0	≤ 0.8

Note:
a. Total of the major and minor flows.

Queuing Areas

The average space available to pedestrians also can apply as the walkway service measure for queuing or waiting areas. The pedestrian stands temporarily in these areas, waiting to be served. The LOS thresholds listed in Exhibit 18-7 are related to the average space available to each pedestrian and to the degree of mobility allowed. In dense

standing crowds, there is little room to move, but limited circulation is possible as the average space per pedestrian increases.

EXHIBIT 18-7. LOS CRITERIA FOR PEDESTRIAN QUEUING AREAS

LOS	Space (m^2/p)
A	> 1.2
B	> 0.9–1.2
C	> 0.6–0.9
D	> 0.3–0.6
E	> 0.2–0.3
F	≤ 0.2

Shared Pedestrian-Bicycle Facilities

Shared pedestrian facilities typically are open to use by nonmotorized modes such as bicycles, skate boards, and wheelchairs. Shared-use paths often are constructed to serve areas without city streets and to provide recreational opportunities for the public. These paths are common on university campuses, where motor vehicle traffic and parking are often restricted. In the United States, there are few paths exclusively for pedestrians; most off-street paths, therefore, are for shared use.

On shared facilities, bicycles—because of their markedly higher speeds—can have a negative effect on pedestrian capacity and LOS. However, it is difficult to establish a bicycle-pedestrian equivalent because the relationship between the two differs depending on their respective flows, directional splits, and other factors.

This chapter deals with the LOS provided to pedestrians on shared facilities. Bicyclists have a different perspective as discussed in Chapter 19 of this manual.

LOS is based on the overtaking of pedestrians by bicycles. Pedestrian-to-pedestrian interaction is negligible.

LOS for shared paths is based on hindrance. Research (*6*) has established LOS guidelines both for pedestrians and for bicyclists based on the frequency of passing (same direction) and of meeting (opposite direction) other users on paths 2.4 m wide. Because pedestrians seldom overtake other pedestrians, the LOS for a pedestrian on a shared path depends on the frequency that the average pedestrian is overtaken by bicyclists (*6*). However, the analyst should observe pedestrian behavior in the field before assuming there is no pedestrian-to-pedestrian interaction.

Equation 18-3 is used to calculate the total number of bicycle passing events and the total number of opposing bicycle meeting events, per hour, for the average pedestrian on the shared path.

$$F_p = Q_{sb}\left(1 - \frac{S_p}{S_b}\right) \qquad (18\text{-}3)$$

$$F_m = Q_{ob}\left(1 + \frac{S_p}{S_b}\right)$$

where

F_p = number of passing events (events/h),
F_m = number of opposing events (events/h),
Q_{sb} = bicycle flow rate in the same direction (bicycles/h),
Q_{ob} = bicycle flow rate in the opposing direction (bicycles/h),
S_p = mean pedestrian speed on the path (m/s), and
S_b = mean bicycle speed on the path (m/s).

The total number of events is calculated according to Equation 18-4.

$$F = F_p + 0.5\,F_m \qquad (18\text{-}4)$$

APPENDIX II

Replacement Pages of the Air Quality Impact Assessment

iv. Control of Air Pollution in Car Parks (ProPECC PN 2/96)

4.3.5. This practice notes outlines the air quality guidelines required for the protection of public health and factors that should be considered in the design and operation of car parks in order to achieve the required air quality.

5. Background Air Quality

5.1.1. The nearest EPD air quality monitoring station (AQMS) is Central/Western monitoring station. The recent five years (2020-2024) averaged concentration of air pollutants are presented in ***Table 5-1*** below. Exceedances of FSP and O_3 were recorded at the Central/Western AQMS during the period from 2020 to 2024, while the remaining pollutants were in compliance with the AQO.

Table 5-1 Average Concentrations of Pollutants in the Recent Five Years (Year 2020-2024) at Central/Western Air Quality Monitoring Station

Pollutant	Averaging Time	AQO[1]	Pollutant Concentration (µg/m³)[2]					
			2020	2021	2022	2023	2024	Average
RSP	10th Highest 24-hour	75 (9)	60	65	52	53	62	58
	Annual	30	25	26	22	22	24	24
FSP	19th Highest 24-hour	37.5 (18)	33	34	33	29	35	33
	Annual	15	**16**	**16**	14	14	14	15
NO_2	19th Highest 1-hour	200 (18)	128	149	142	142	130	138
	10th Highest 24-hour	120 (9)	67	75	62	62	63	66
	Annual	40	32	33	30	32	32	32
SO_2	4th Highest 10-Min	500 (3)	31	51	62	36	22	40
	4th Highest 24-hour	40 (3)	9	10	7	7	7	8
O_3	10th Highest 8-hour	160 (9)	140	155	**197**	153	157	160
	Peak season	100	88	92	**101**	90	100	94

Note:

[1] Values in ( ) indicate number of exceedances allowed under the AQO.
[2] Bolded and underlined values represent exceedances of the AQOs.

5.1.2. As the Proposed Development is expected to be in operation in 2030, the PATH v3.0 data at (41,29), (42,29), (41,28) and (42,28) in Year 2030 have been adopted to represent the future background air quality concentrations at the 500m assessment area, as shown in ***Figure 3-1***. A summary of the background concentrations for the year 2030 is provided in ***Table 5-2***.

Table 5-2 Background Air Pollutants in Year 2030 Extracted from the PATH Model (v3.0)

Pollutant	Averaging Time	Prevailing AQO	Data Summary	PATH v3.0 Grid in Year 2030[1][2][3]			
				41,29	42,29	41,28	42,28
FSP	24-hr	37.5 (18)	19th Max	31.41	29.67	30.06	28.58
			No. of Exceedance(s)	4	4	4	3
	Annual	15	-	12.75	11.72	11.9	10.99
RSP	24-hr	75 (9)	10th Max	52.57	50.72	51.18	49.77
			No. of Exceedance(s)	0	0	0	0
	Annual	30	-	20.42	19.23	19.37	18.37
SO_2	10-min	500 (3)	4th Max	22.35	22.21	22.25	21.85
			No. of Exceedance(s)	0	0	0	0
	24-hr	40 (3)	4th Max	6.77	6.69	6.65	6.58
			No. of Exceedance(s)	0	0	0	0
NO_2	1-hr	200 (18)	19th Max	84.59	71.41	68.81	60.45
			No. of Exceedance(s)	0	0	0	0
	24-hr	120 (9)	10th Max	35.02	28.76	27.73	23.62
			No. of Exceedance(s)	0	0	0	0
	Annual	40	-	17.21	13.45	13.38	10.37
O_3	8-hr	160 (9)	10th Max	**169.8**	**172.13**	**170.86**	**172.65**
			No. of Exceedance	14	15	14	16
	Peak season	100	-	**116.33**	**119.11**	**118.2**	**120.49**
CO	1-hr	30,000	1st Max	582.23	532.89	547.26	520.42
			No. of Exceedance	0	0	0	0
	8-hr	10,000	1st Max	512.37	495.93	500.11	480.31
			No. of Exceedance	0	0	0	0
	24-hr	4,000	1st Max	492.05	474.21	483.45	457.02
			No. of Exceedance	0	0	0	0

Note:

[1] Data recorded at Level L1 (0m – 17m)

[2] Bolded and underlined values represent exceedances of the AQOs.

[3] Data extracted from Smart Air Modelling Platform (SAMP v2.1).

7.3. Industrial Emissions from Chimneys

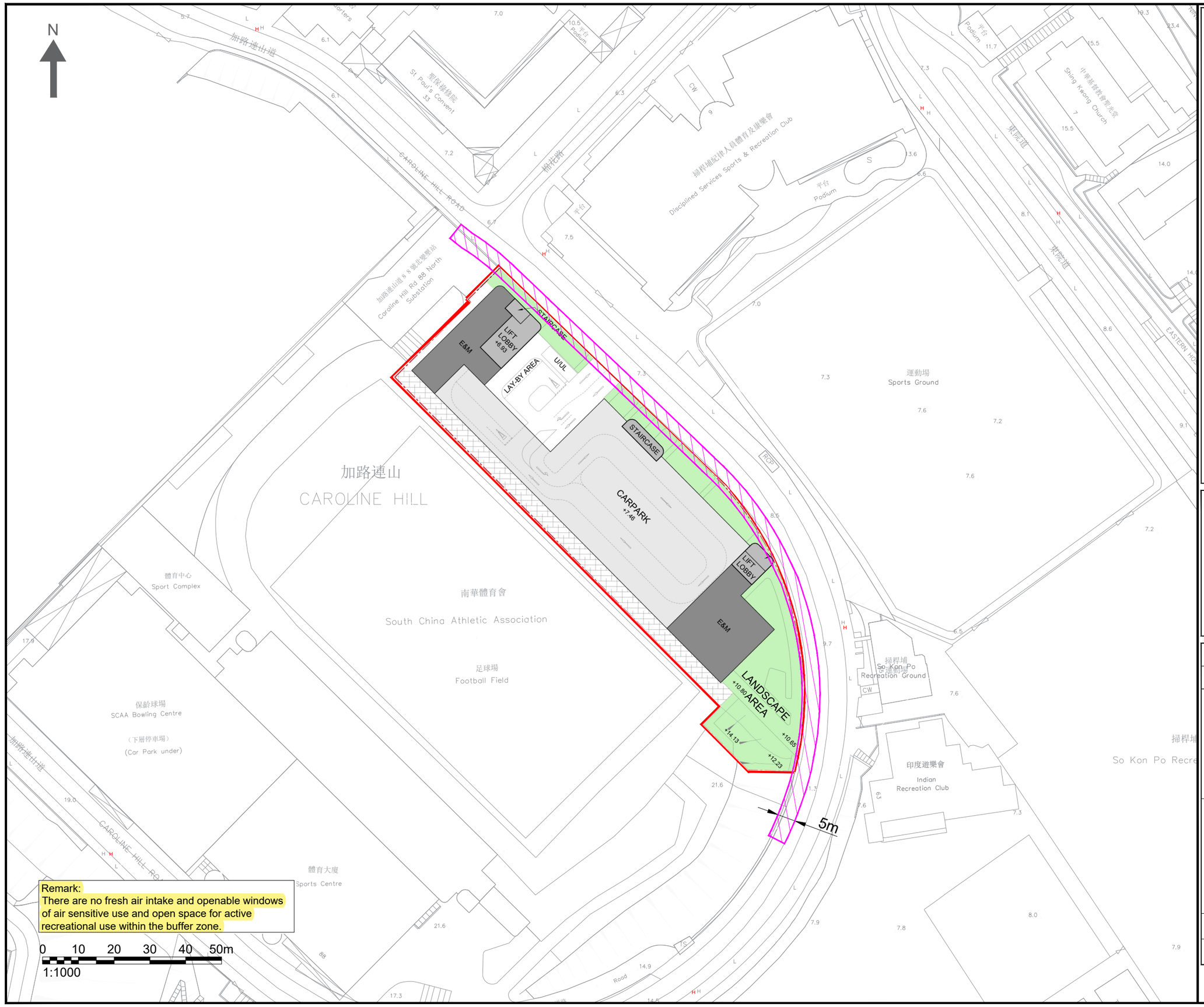
7.3.1. Site survey was carried out on 18 March 2025 to review the existing environmental conditions.

7.3.2. Chimneys were identified at Tung Wah Eastern Hospital and the St. Paul's Hospital Main Block during the survey. According to the previous planning application (No. A/H7/182), a chimney was also present at St. Paul's Convent, but it is noted that this chimney has been removed during the survey, as captured in ***Table 7-2*** below.

Table 7-2 Photographs of St. Paul's Convent Chimney

Captured by Google Maps on Jan 2024	Captured on Site Visit on March 2025
 The chimney was observed at St. Paul's Convent.	 The chimney at St. Paul's Convent was removed.

7.3.3. Based on the Hong Kong's open3Dhk website, it was noted there are 4 nos. of chimneys at St. Paul's Hospital Main Block with a height of 124.7mPD. According to the proposed layout plan in ***Appendix 3-1***, the main roof level of the Proposed Development would be approximately +45.4mPD. The height difference between the hospital chimneys and the Proposed Development is therefore about 79.3m which requires 10m buffer distance as stipulated in HKPSG Guidelines. The Subject Site is located more than 100m away from the St. Paul's Hospital Main Block which has met the required buffer distance and therefore, no adverse air quality impact from the concerned chimneys is anticipated.



Remark:
There are no fresh air intake and openable windows of air sensitive use and open space for active recreational use within the buffer zone.

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG.

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT G/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-2	Revision : 3
Scale : AS SHOWN	Date : MAR 2026

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A3 420 x 297

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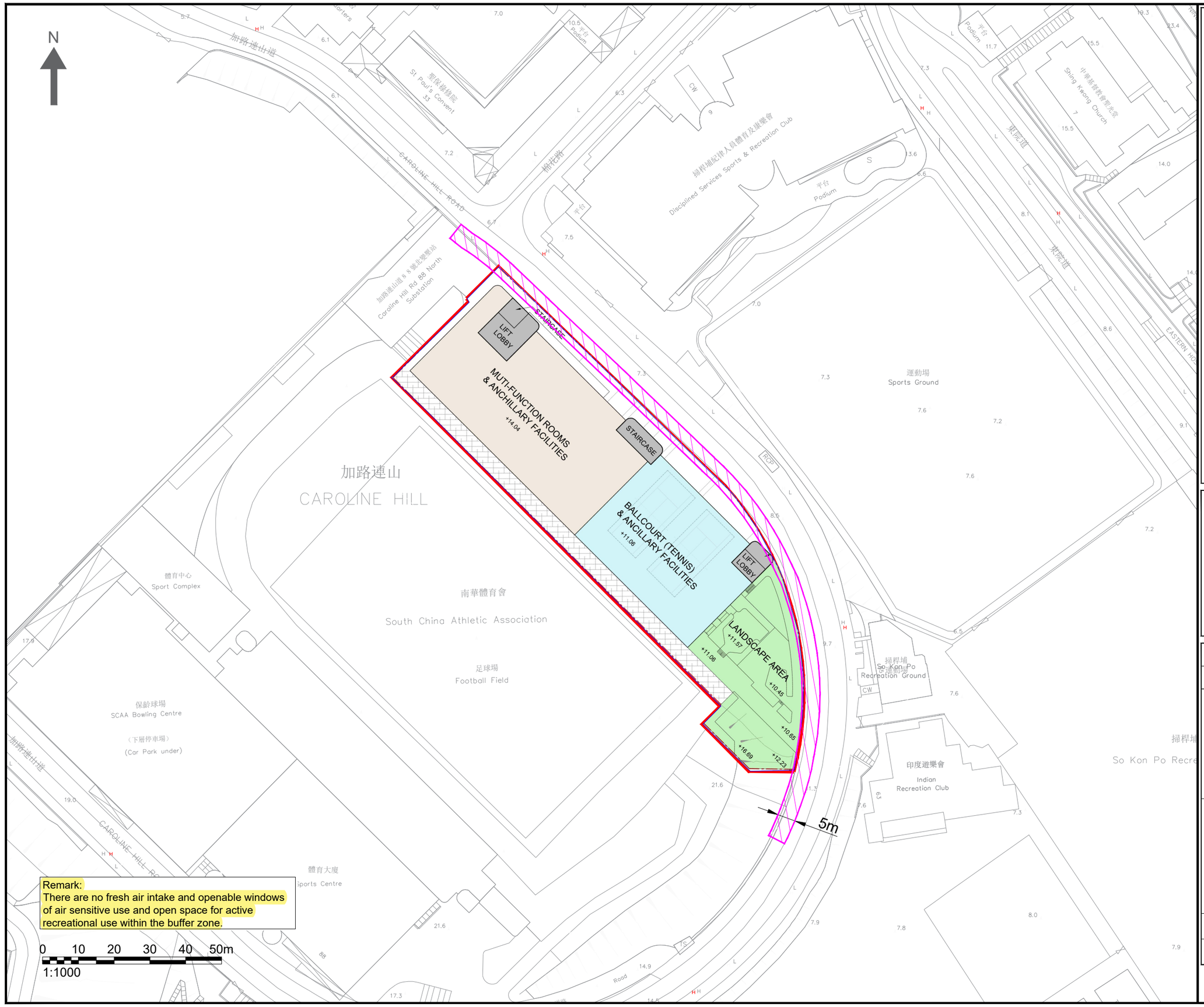

Remark:
There are no fresh air intake and openable windows of air sensitive use and open space for active recreational use within the buffer zone.

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 1/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-3	Revision : 3
Scale : AS SHOWN	Date : MAR 2026

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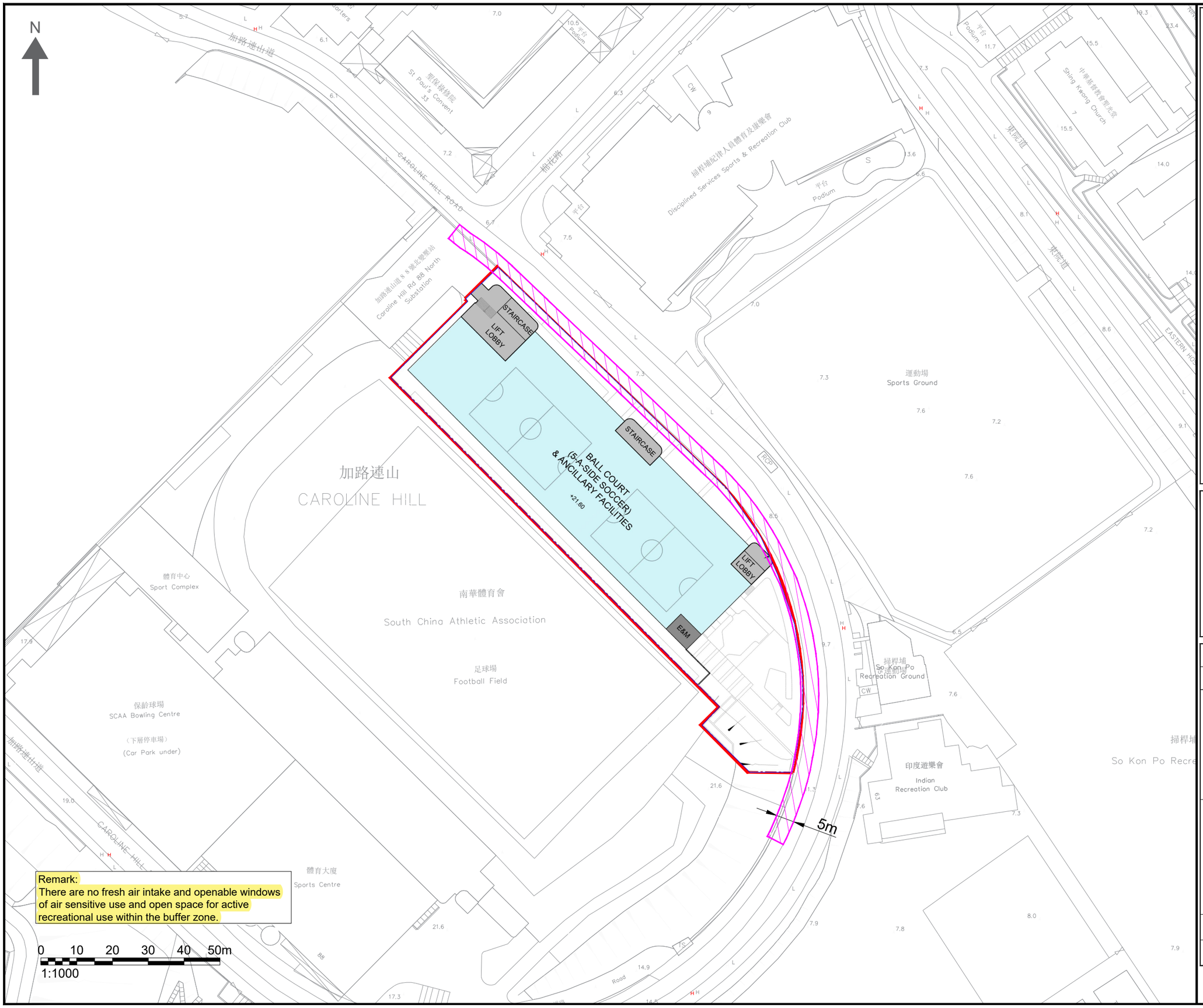

Remark:
There are no fresh air intake and openable windows of air sensitive use and open space for active recreational use within the buffer zone.

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 2/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-4	Revision : 3
Scale : AS SHOWN	Date : MAR 2026

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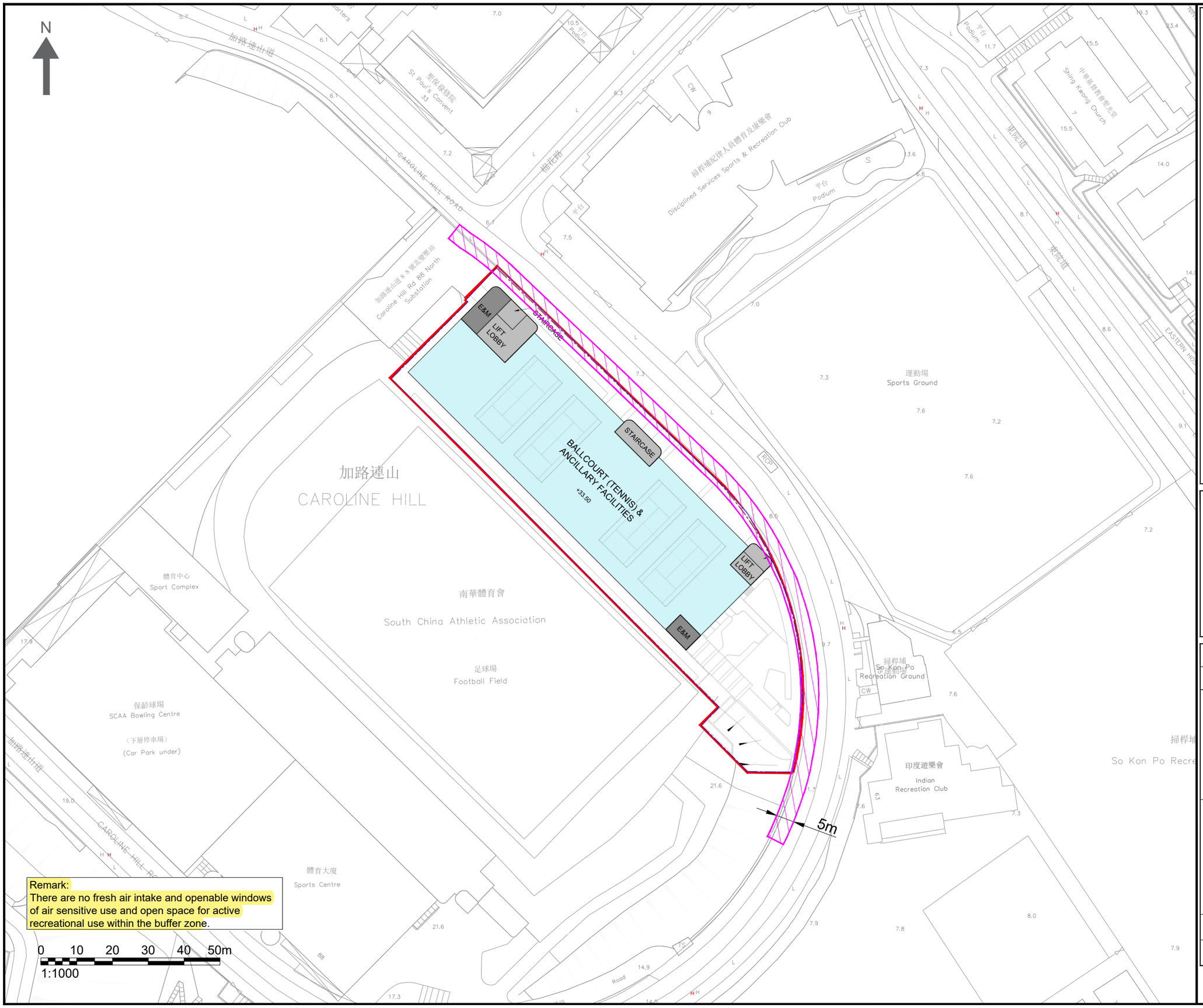

Remark:
There are no fresh air intake and openable windows of air sensitive use and open space for active recreational use within the buffer zone.

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT 3/F AND THE ADJACENT ROADS

Drawing No :	Revision :
FIGURE 6-5	3
Scale : AS SHOWN	Date : MAR 2026

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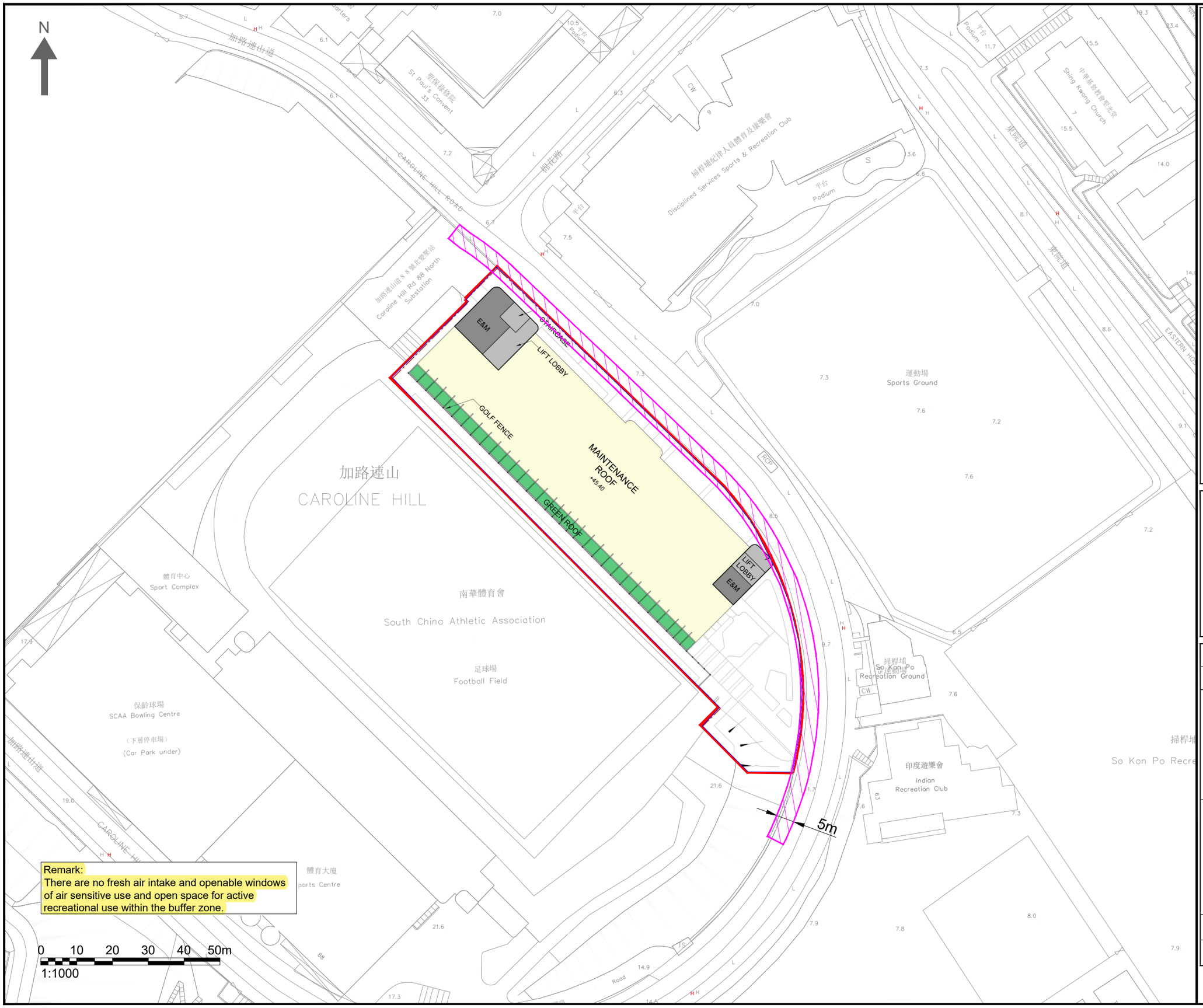

Remark:
There are no fresh air intake and openable windows of air sensitive use and open space for active recreational use within the buffer zone.

0 10 20 30 40 50m
1:1000

NOTES :

SUBJECT SITE

5M ROAD BUFFER DISTANCE

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

BUFFER DISTANCE BETWEEN THE SUBJECT SITE AT R/F AND THE ADJACENT ROADS

Drawing No : FIGURE 6-6	Revision : 3
Scale : AS SHOWN	Date : MAR 2026

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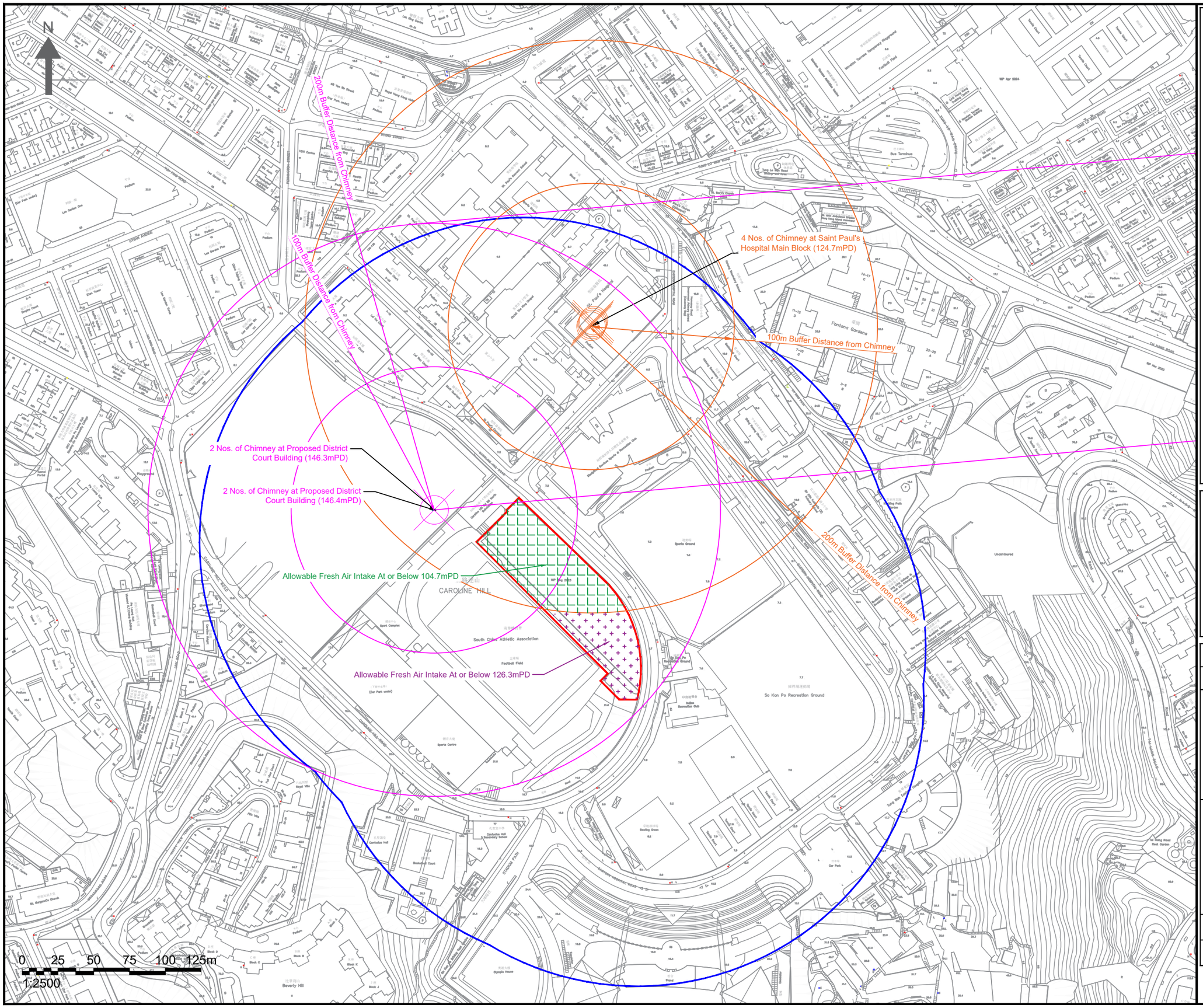

NOTES :

- SUBJECT SITE
- 200m ASSESSMENT AREA
- DIESEL EMERGENCY GENERATOR
- CHIMNEYS OF ST. PAUL'S HOSPITAL MAIN BLOCK
- CHIMNEYS OF PROPOSED DISTRICT COURT BUILDING
- ALLOWABLE FRESH AIR INTAKE LOCATION AT OR BELOW 104.7mPD
- ALLOWABLE FRESH AIR INTAKE LOCATION AT OR BELOW 126.3mPD

Consultant

Allied Environmental Consultants Limited

Project No. :	2215
Drawn By :	RL

Project :

PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION, 88 CAROLINE HILL ROAD, HONG KONG

Drawing Title :

MAP OF INDUSTRIAL CHIMNEY SURVEY WITHIN 200M ASSESSMENT AREA

Drawing No : FIGURE 6-7	Revision : 3
Scale : AS SHOWN	Date : MAR 2026

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APPENDIX III

Replacement Pages of the Sewerage Impact Assessment

4. Relevant Government Standards

4.1.1. Water quality in Hong Kong is legislated by the provisions of the *Water Pollution Control Ordinance (Cap 358), 1980 (WPCO).* Territorial Water has been subdivided into ten Water Control Zones (WCZ) and four supplementary water control zones. A Technical Memorandum on Standards for Effluents discharged into Drainage and Sewerage Systems, Inland and Coastal Water (TMES) has been issued, which requires licensing of all discharges into all public sewers and drains. The water quality standards will have to be met during the operation stage.

4.1.2. Besides as stipulated in the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations 41(1), 40(2), 41(1), 90 and recap in ProPECC PN 1/23, domestic sewage should be discharged to a foul water sewer and surface water should be discharged via rainwater pipes to stormwater drains during operation phase.

5. Description of Sewerage System

5.1.1. Drainage record plans were obtained from the drawing office of the Drainage Services Department ("DSD") and the Proposed Development is indicated on the drainage record plans as shown in ***Figure 3-1***. Concerned sewerage network was identified for succeeding estimation of the potential sewerage impact to the downstream sewers associated with the Proposed Development.

5.1.2. The sewerage network of existing gravity sewers along Caroline Hill Road and Leighton Road collects sewage generated from the Proposed Development and the surrounding catchment areas. The sewage discharged from the corresponding catchment areas is conveyed to Wan Chai East Preliminary Treatment Works, and discharged to Stonecutter Island Sewage Treatment Works (SCISTW) for further treatment and ultimate disposal.

5.1.3. The sewage generated from Proposed Development will be conveyed to the existing manhole FMH7019720 with the existing 150mm concrete pipe as shown in ***Figure 3-1***. No additional pipe work is required for the Proposed Development.

5.1. Design Standard Guideline

5.1.1. This assessment has been prepared in accordance with the following documents:

- For the roughness of sewers, the recommended value in "Sewerage Manual Part 1" published by DSD has been adopted;
- The recommended unit flow factors ("UFF") and peaking factors in "Guidelines for

APPENDIX IV

Drawings indicating the new/existing pedestrian route and vehicular access

N

Legends

Pedestrain Access

Vehicular Access

Commercial Development
90.00

Disciplined Services Sports & Recreation Club
36.00

SCAA Training Pool
22.68

Caroline Hill Road

District Court Building
135.00

SCAA Golf Centre
33.20

SCAA Sport Link
45.40

Disciplined Services Sports & Recreation Club Football Pitch
7.60

EXISTING PEDESTRIAN ROUTE AT SCAA COMPLEX

CIRCULATION BETWEEN SCAA EXISTING MAIN ENTRANCE AND TRAINING POOL / SPORT LINK

SCAA Sport Complex
90.70

SCAA Artificial Turf Rugby & Football Pitch
21.60

EXISTING VEHICULAR ACCESS AT SCAA COMPLEX

SCAA Bowling Centre
32.79

SCAA South Stand
46.20

SCAA Sports Centre
39.70

Caroline Hill Road

EXISTING PEDESTRIAN ROUTE AT SCAA COMPLEX

So Kon Po Recreation Ground
7.60

Tennis Court

Tennis Court

Eastern Hospital Road Sitting-out Area

10 20 30 50 100

m

Diagram for Pedestrian Access Route on G/F

N

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

Legends

- Pedestrain Access Route
- Run-in/out
- Application Site Boundary
- Lot Boundary

MAIN ACCESS TO THE GROUND FLOOR LOBBY FROM CAROLINE HILL ROAD

CAROLINE HILL ROAD

+6.93

+7.46

+7.55

+8.36

+9.46

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY +6.93

U/UL

LAY-BY AREA

RUN-IN/ OUT FOR VEHICLE

LIFT LOBBY

SCAA TRAINING POOL

E&M

CARPARK +7.46

E&M

ACCESS FROM LAY-BY AREA WITHIN THE SITE

+10.80

+10.65

+12.23

+14.13

+15.83

ACCESS TO THE SCAA SPORT LINK ON FIRST FLOOR FROM CAROLINE HILL ROAD

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Diagram of Pedestrian Access Route on G/F ○ 1:500(A3) ○ 26 Sep 2025

Design 2 (HK) Limited

Diagram for Pedestrian Access Route on 2/F

N

Legends

- Pedestrain Access Route
- Application Site Boundary
- Lot Boundary

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

POSSIBLE PEDESTRIAN CONNECTION ON SEOND FLOOR FROM ADJOINING COMMERCIAL DEVELOPMENT THROUGH THE EXISTING SCAA TRAINING POOL

+22.68

STAIRCASE

LIFT LOBBY

STAIRCASE

STAIRCASE

LIFT LOBBY

SCAA TRAINING POOL

BALL COURT (5-A-SIDE SOCCER) & ANCILLARY FACILITIES

+21.60

E&M

ACCESS BEWTEEN THE SCAA FOOTBALL PITCH AND SCAA TRAINING POOL

FREE-FLOWING PEDESTRAIN ACCESS BETWEEN THE SPORTS FACILITIES ON SECOND FLOOR AND THE EXISTING FOOTBALL PITCH

SCAA GOLF DRIVING RANGE

CIRCULATION BETWEEN SCAA EXISTING MAIN ENTRANCE AND TRAINING POOL / SPORT LINK

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Diagram of Pedestrian Access Route on 2/F ○ 1:500(A3) ○ 26 Sep 2025

Design 2 (HK) Limited

PLANNING LIMITED
規劃顧問有限公司

[redacted]

By Email

Our Ref: S3116/SCAA/23/010Lg

10 April 2026

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

Dear Sir/Madam,

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
- S16 Planning Application Submission -
TPB Ref.: A/H7/189
Further Information No. 6

This supersedes Supplementary to Further Information No. 5 submitted on 2 April 2026

Reference is made to the captioned S16 Planning Application submitted to the Town Planning Board ("TPB") on 17 October 2025.

For clarification and better presentation purposes, please find attached updated plans in response to the request from the Planning Department:

- replacement page of the Supporting Planning Statement
- replacement pages of the Visual Impact Assessment
- updated diagrams on pedestrian and vehicular accesses
- updated G/F, 1/F, 2/F & 3/F plans

Please also be kindly confirmed that the golf fence to be erected at the Proposed SCAA Sports Link shall replace the corresponding portion of the existing golf fence that attaches to the football field.

Lastly, please also note that the Applicant is keen to implement the footbridge connection to the adjoining commercial development (through the existing SCAA Training Pool). The Applicant will continue the liaison with the adjoining landowner upon approval of the current planning application. As a conservative approach, the pedestrian assessment carried out under the current application has not taken into account the possible pedestrian connection.

FS 579819

PLANNING LIMITED
規劃顧問有限公司

Meanwhile, should you have any queries in relation to the above, please do not hesitate to contact [redacted].

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

Gladys Ng

Encl.

cc. DPO/HK – Mr Harvey Law (By Email)
the Applicant & Team

PL/GN/vy

and/or conventional planting is not technically feasible, e.g. green wall and climbing plants will be applied on retaining structures. Green roofs will be incorporated on top of building, and

- Through selection of suitable plants in suitable place and use of combination of localized/native and ornamental plants to enrich the diversity of species combination in the context. Utilise a combination of evergreen and/or ornamental and/or flowering tree and shrub species with an interesting form, colour and foliage texture to enrich the landscape experiences and provide architectural highlights.

4.4.3. The proposed SCAA Sports Link will include an about 3m setback along Caroline Hill Road to incorporate street plantings, enhancing the streetscape with trees and shrubs that provide shade for pedestrians and visitors to the SCAA. The southernmost part of the Site will feature a sitting-out garden, while the sloping area at the interface to the existing south will be reformed following the sloping topography; the engineered appearance of the new retaining structure to the sloping area will be disguised with green roofs and green walls. Besides, green roof will be added on the maintenance roof to enhance visual amenity looking from the elevated neighbourhoods.

4.4.4. The proposed design emphasises greenery coverage with an area targeting 20% of the Site (i.e. a minimum of 1,226.4m² of greenery), where over 50% out of the 20% greenery areas is allocated at primary zone and will be accessible by future users and pedestrians.

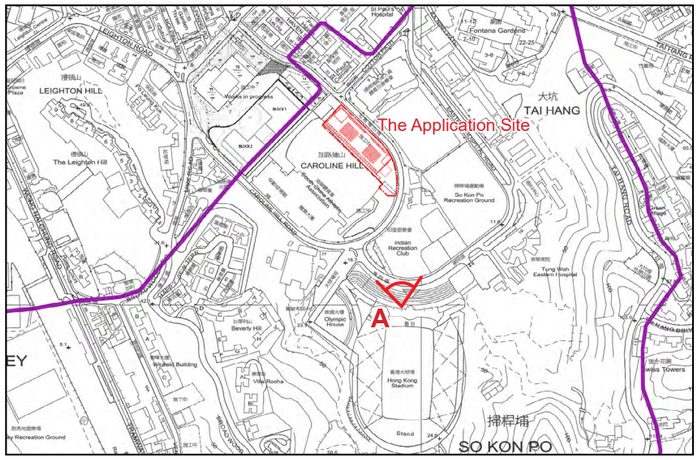
4.5. Air Ventilation Consideration (*Appendix VI* refers)

4.5.1. According to RAMS wind data, annual prevailing winds are the incoming winds flowing from the northeast quadrant (i.e. NE, ENE, E) while summer prevailing winds are flowing from southwest quadrant (i.e S, SSW, SW) and from E directions.

4.5.2. The Proposed Development Scheme has incorporated good design features, such as provision of building setback and increased building permeability. Building setback could reduce blockage in particular the perimeter of a development. The landscape garden at the southeastern portion on G/F sets back the building façade from the site boundary for a maximum of 20m (**Figure 4.**3 refers). The building setback allows more wind penetration at pedestrian level to flow across the site along Caroline Hill Road, thus improving wind environment along the road and local areas to the south of the Site.



Existing View
View north from Hong Kong Stadium



Key Plan

0 50 100 200M

Viewpoint A
Viewpoint Elevation: +20.70mPD at Hong Kong Stadium
Viewing Distance: 170m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD



Photomontage

* Indicative only, subject to detailed design

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint A - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.1			REV A

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LANDSCAPE ARCHITECTURE, URBAN DESIGN AND MASTER PLANNING
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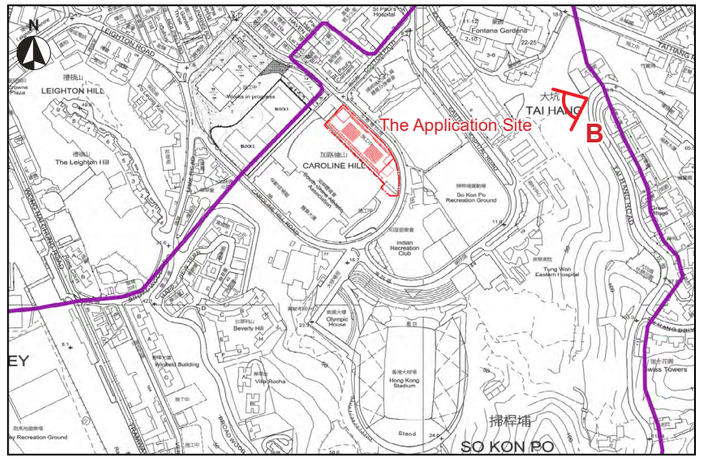
Existing View
View west from Tai Hang Road



Photomontage



Key Plan

Viewpoint B
Viewpoint Elevation: +75.3mPD at Tai Hang Road
Viewing Distance: 310m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

* Indicative only, subject to detailed design

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint B - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.2			REV A

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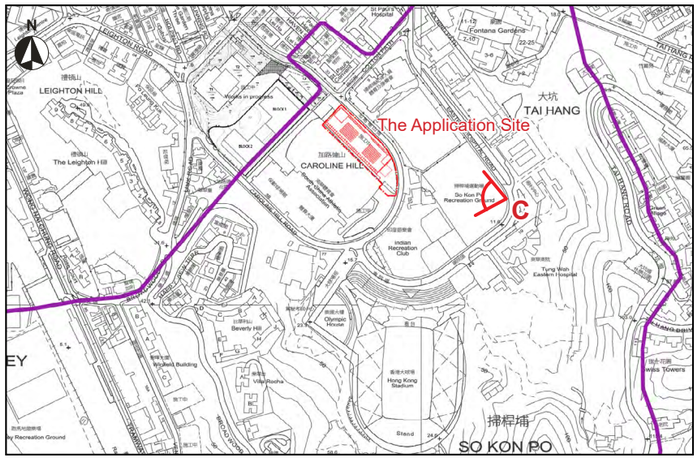
Existing View
View west from So Kon Po Recreation Ground



Key Plan

0 50 100 200M

Viewpoint C
Viewpoint Elevation: +11.6m PD at So Kon Po Recreation Ground
Viewing Distance: 165m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD



Photomontage

* Indicative only, subject to detailed design

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint C - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.3	REV	A

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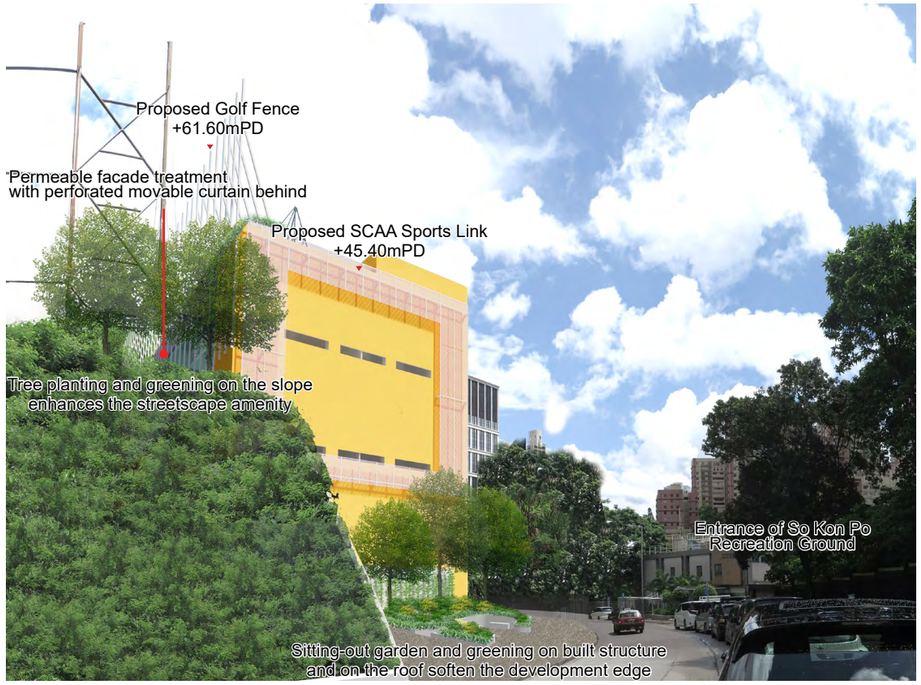
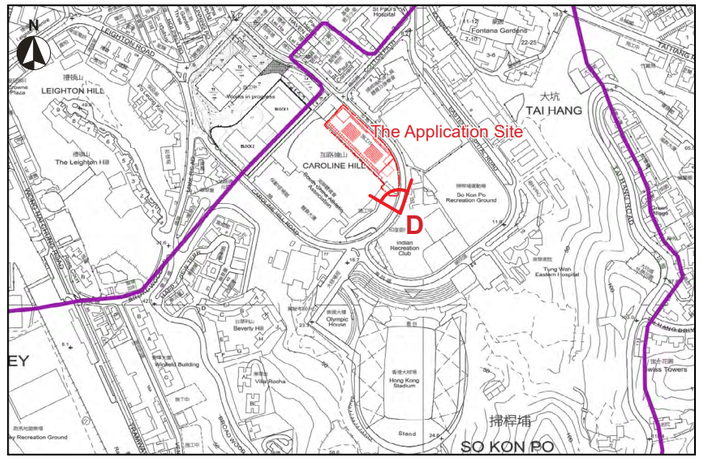
Existing View
View north from Caroline Hill Road



Photomontage



Key Plan

Viewpoint D
Viewpoint Elevation: +12mPD at Caroline Hill Road
Viewing Distance: 20m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

* Indicative only, subject to detailed design

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint D - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.4			REV A

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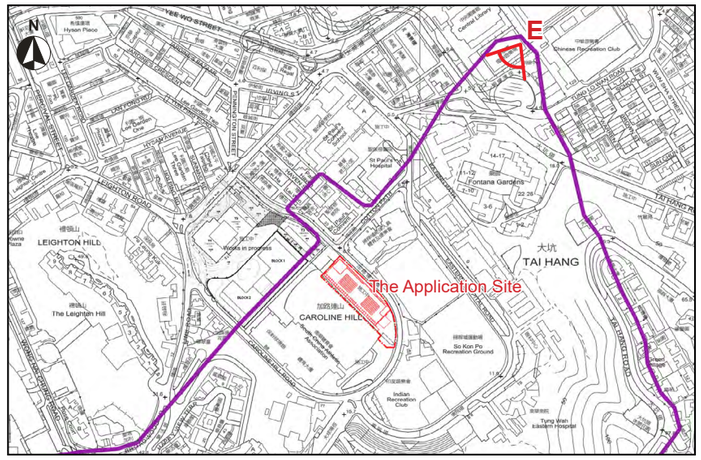
Existing View
View southwest from Moreton Terrace Temporary Playground



Photomontage



Key Plan

Viewpoint E
Viewpoint Elevation:
+5.2mPD at Moreton Terrace Temporary Playground
Viewing Distance: 430m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

* Indicative only, subject to detailed design

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint E - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.5	REV	A

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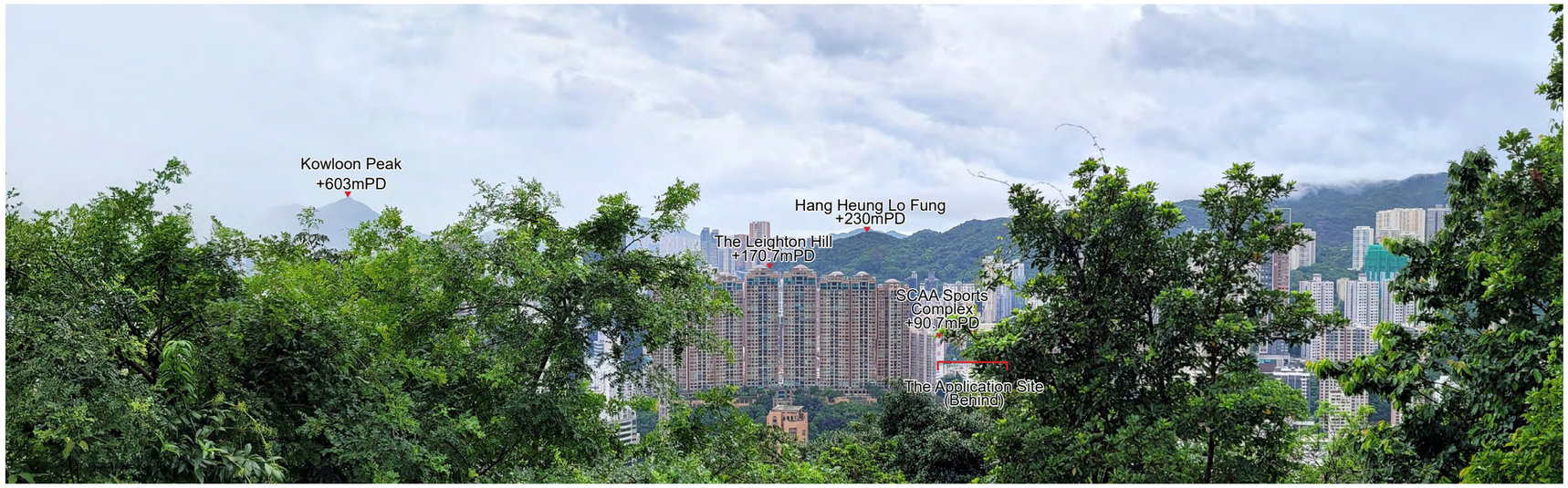
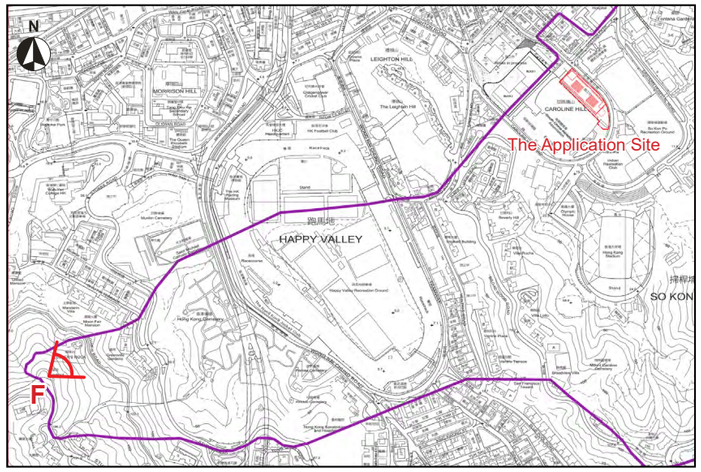


Existing View
View northeast from the Stubbs Road Lookout



Key Plan

Viewpoint F
Viewpoint Elevation: +200mPD at the Stubbs Road Lookout
Viewing Distance: 1,360m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD



Photomontage

* Indicative only, subject to detailed design

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint F - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025	
CHECKED	ELK	DRAWN	TEAM	
FIGURE NO.	FIGURE V3.6			REV A

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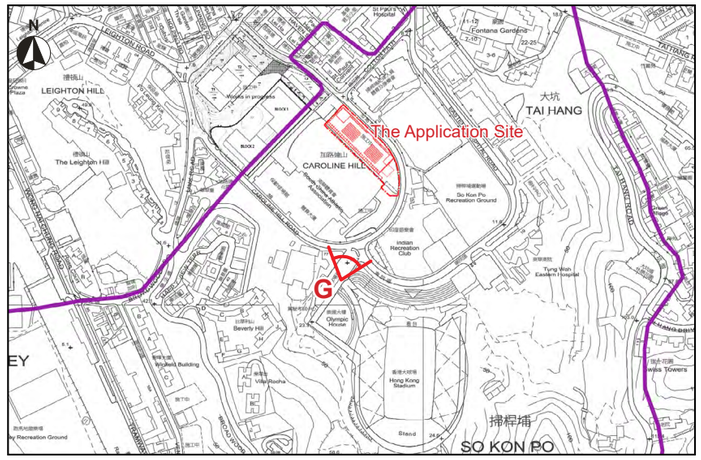
Existing View
View northeast from Stadium Path



Photomontage



Key Plan

0 50 100 200M

Viewpoint G
Viewpoint Elevation: +16mPD at the Stadium Path
Viewing Distance: 146m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

* Indicative only, subject to detailed design

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint G - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.7	REV	A

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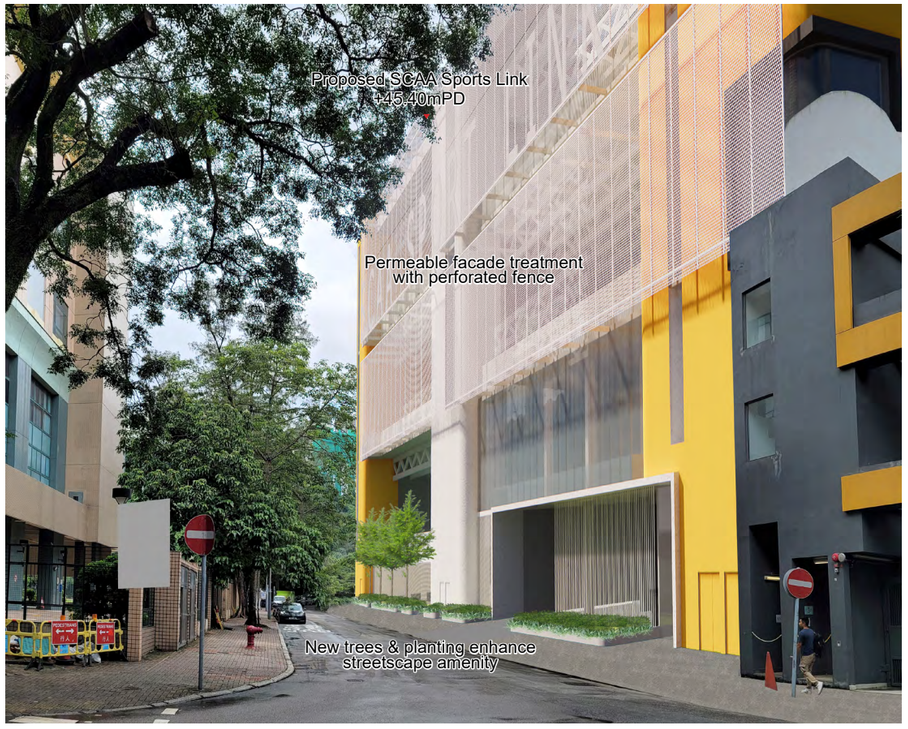
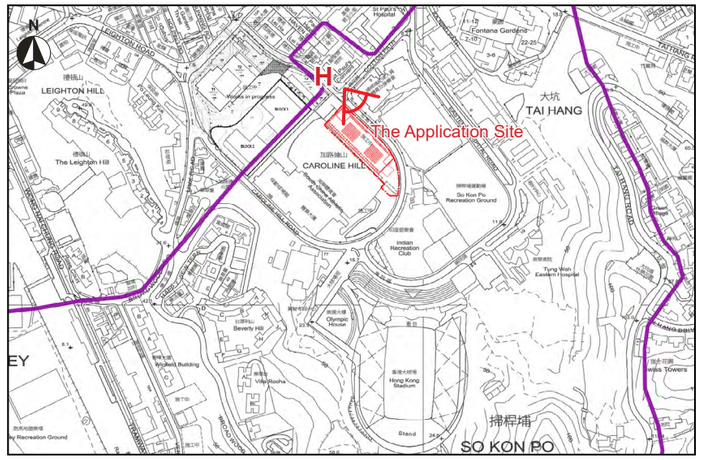
Existing View
View southeast from the junction of Caroline Hill Road & Cotton Path



Photomontage



Key Plan

Viewpoint H
Viewpoint Elevation:
+6.6mPD at the junction of Caroline Hill Road and Cotton Path
Viewing Distance: 20m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

* Indicative only, subject to detailed design

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint H - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.8	REV	A

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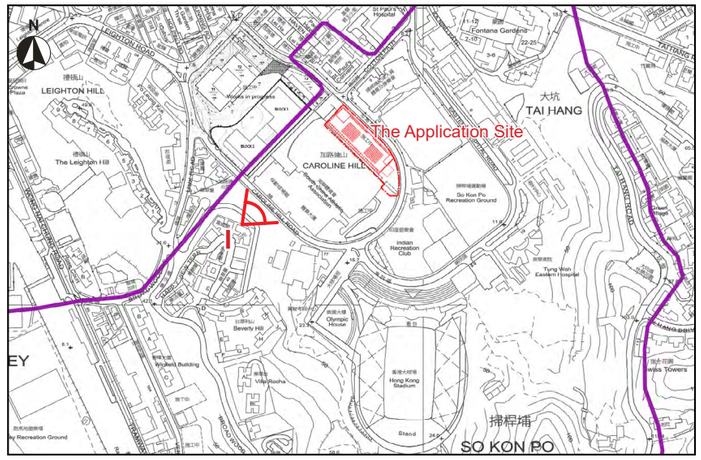
Existing View
View northeast from Happy View Terrace



Photomontage



Key Plan

Viewpoint I
Viewpoint Elevation: +60mPD at Happy View Terrace
Viewing Distance: 200m
Proposed Building Height: Approx. +45.40mPD
Proposed Golf fence: Approx. +61.60mPD

* Indicative only, subject to detailed design

Proposed SCAA Sports Link at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
Viewpoint I - Existing View and Photomontage

SCALE	As Shown	DATE	December 2025
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	FIGURE V3.9	REV	A

ADI LIMITED
LANDSCAPE ARCHITECTURE, URBAN DESIGN AND MASTER PLANNING
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N

Legends

- Existing Pedestrian Access
- Proposed Pedestrian Access of Sports Link

Commercial Development
90.00

POSSIBLE PEDESTRIAN CONNECTION ON SECOND FLOOR FROM ADJOINING COMMERCIAL DEVELOPMENT THROUGH THE EXISTING SCAA TRAINING POOL

SPORTS LINK's MAIN ENTRANCE

Disciplined Services Sports & Recreation Club
36.00

SCAA Training Pool
22.68

135.00

District Court Buildings

135.00

Caroline Hill Road

SCAA Golf Driving Range
33.20

SCAA Sports Link
45.40

Disciplined Services Sports & Recreation Club Football Pitch
7.60

CIRCULATION BETWEEN SCAA EXISTING MAIN ENTRANCE AND TRAINING POOL / SPORTS LINK

SCAA Sport Complex (High Block)
90.70

EXISTING PEDESTRIAN ACCESS AT SCAA COMPLEX

SCAA Artificial Turf Rugby & Football Pitch
21.60

FREE-FLOWING BETWEEN 2/F OF SPORTS LINK AND THE EXISTING FOOTBALL PITCH

SCAA Bowling Centre
32.79

SCAA South Stand
46.20

SPORTS LINK's 2ND ENTRANCE TO 1/F

Caroline Hill Road

SCAA Sports Centre (Low Block)
39.70

So Kon Po Recreation Ground
7.60

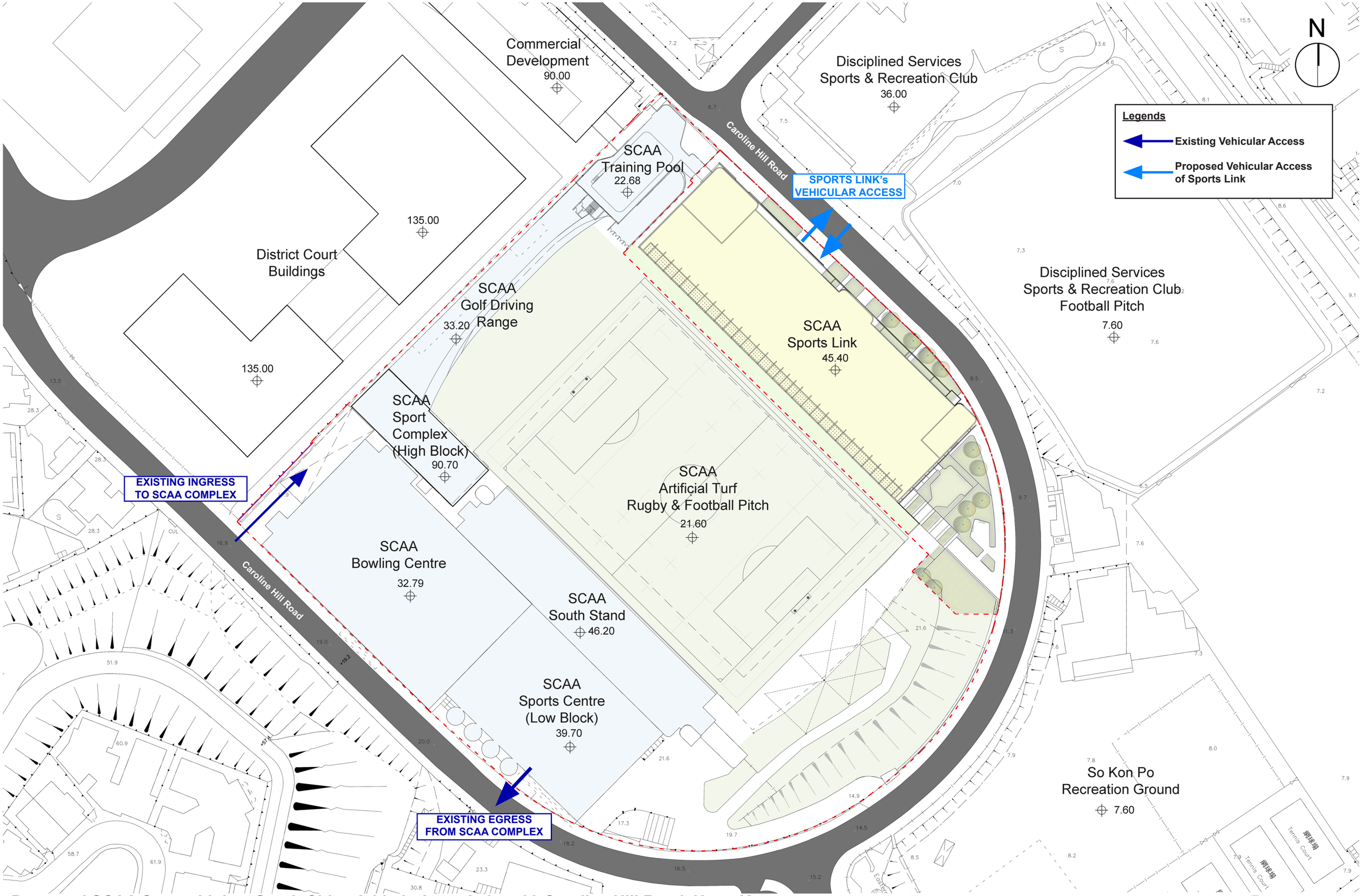
EXISTING PEDESTRIAN ACCESS AT SCAA COMPLEX

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Pedestrian Access | 1:1000 (A3) | 10 Apr 2026

m 10 20 30 50 100

Design 2 Architects



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Vehicular Access | 1:1000 (A3) | 10 Apr 2026

Design 2 Architects

Diagram for Pedestrian Access Route on 2/F

N

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

Legends

- Pedestrain Access Route
- Application Site Boundary
- Lot Boundary

POSSIBLE PEDESTRIAN CONNECTION ON SECOND FLOOR FROM ADJOINING COMMERCIAL DEVELOPMENT THROUGH THE EXISTING SCAA TRAINING POOL

CAROLINE HILL ROAD

+22.68

STAIRCASE

LIFT LOBBY

SCAA TRAINING POOL

STAIRCASE

BALL COURT (5-A-SIDE SOCCER) & ANCILLARY FACILITIES

+21.60

STAIRCASE

LIFT LOBBY

E&M

ACCESS BEWTEEN THE SCAA FOOTBALL PITCH AND SCAA TRAINING POOL

FREE-FLOWING PEDESTRIAN ACCESS BETWEEN THE SPORTS FACILITIES ON SECOND FLOOR AND THE EXISTING FOOTBALL PITCH

SCAA GOLF DRIVING RANGE

CIRCULATION BETWEEN SCAA EXISTING MAIN ENTRANCE AND TRAINING POOL / SPORT LINK

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Design 2 (HK) Limited

Diagram of Pedestrian Access Route on 2/F ○ 1:500(A3) ○ 10 Apr 2026

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

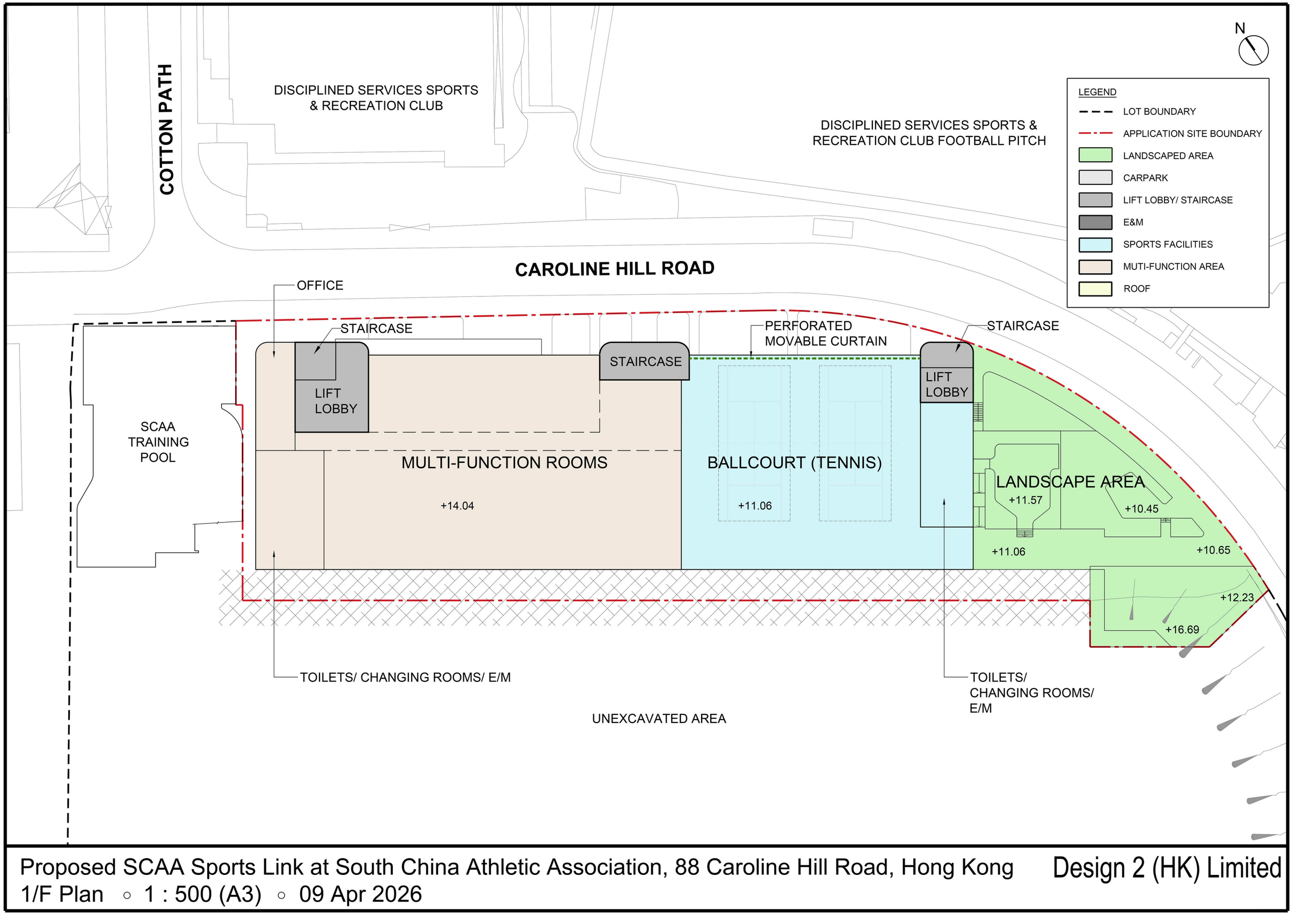
+6.93
STAIRCASE
LIFT LOBBY +6.93
E&M
L/UL
LAY-BY AREA
+7.46
+7.55
3m
STAIRCASE
CARPARK +7.46
+8.36
STAIRCASE
LIFT LOBBY
E&M
+9.46
20m
+10.80
+10.65
+12.23
+14.13
+15.83

SCAA TRAINING POOL

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong
G/F Plan ○ 1 : 500 (A3) ○ 09 Apr 2026

Design 2 (HK) Limited



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

1/F Plan ◦ 1 : 500 (A3) ◦ 09 Apr 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

PERFORATED MOVABLE CURTAIN

STAIRCASE

STAIRCASE

STAIRCASE

LIFT LOBBY

LIFT LOBBY

+22.68

SCAA TRAINING POOL

TOILETS/ CHANGING ROOMS/ E/M

BALL COURT (5-A-SIDE SOCCER) & ANCILLARY FACILITIES

+21.60

TOILETS/ CHANGING ROOMS

E&M

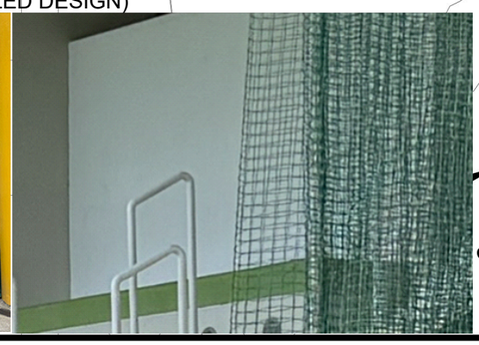
SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

+21.60

PERFORATED MOVABLE CURTAIN
SEE DESIGN REFERENCE IMAGES BELOW
(INDICATIVE ONLY; SUBJECT TO DETAILED DESIGN)





Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

2/F Plan ◦ 1 : 500 (A3) ◦ 09 Apr 2026

Design 2 (HK) Limited

N

LEGEND
- LOT BOUNDARY
- APPLICATION SITE BOUNDARY
- LANDSCAPED AREA
- CARPARK
- LIFT LOBBY/ STAIRCASE
- E&M
- SPORTS FACILITIES
- MUTI-FUNCTION AREA
- ROOF

COTTON PATH

DISCIPLINED SERVICES SPORTS & RECREATION CLUB

DISCIPLINED SERVICES SPORTS & RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

PERFORATED MOVABLE CURTAIN

STAIRCASE

STAIRCASE

STAIRCASE

+22.68

E&M

LIFT LOBBY

LIFT LOBBY

SCAA TRAINING POOL

TOILETS/ CHANGING ROOMS/ E/M

BALLCOURT (TENNIS) & ANCILLARY FACILITIES

+33.50

TOILETS/ CHANGING ROOMS

E&M

PERFORATED MOVABLE CURTAIN

SCAA GOLF DRIVING RANGE

SCAA ARTIFICIAL TURF RUGBY FOOTBALL PITCH

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

3/F Plan ◦ 1 : 500 (A3) ◦ 09 Apr 2026

Design 2 (HK) Limited

PLANNING LIMITED
規劃顧問有限公司
[redacted]

By Email and Hand

Our Ref: S3116/SCAA/23/012Lg

14 April 2026

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

Dear Sir/Madam,

Proposed SCAA Sports Link ("Place of Recreation, Sports or Culture")
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung
- S16 Planning Application Submission -
TPB Ref.: A/H7/189
Further Information No. 7

This supersedes Further Information No. 7 submitted vide our letter ref.: S3116/SCAA/23/011Lg

Reference is made to the captioned S16 Planning Application submitted to the Town Planning Board ("TPB") on 17 October 2025.

In response to the comments from the Transport Department, please find attached submission of the updated Traffic Impact Assessment for your consideration.

Meanwhile, should you have any queries in relation to the above, please do not hesitate to contact [redacted]

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

Gladys Ng

Encl. (4 hard copies)

cc. DPO/HK – Mr Harvey Law (By Email)
the Applicant & Team

PL/GN/vy

bsi ISO 9001 Quality Management Systems
FS 579819

Document Status Control Record

Proposed SCAA Sports Link
at South China Athletic Association
88 Caroline Hill Road in Wong Nai Chung

Traffic Impact Assessment Study

Originating Organisation : LLA Consultancy Limited Unit 610, 6/F Island Place Tower 510 King's Road North Point, Hong Kong	Prepared by: SKL	SKL	Date: 10 April 2026
	Approved by: SLN		Date: 10 April 2026
	Revision No.: -		Date of Issue: 10 April 2026

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1 INTRODUCTION

1.1 Background

1.1.1 The South China Athletic Association ("SCAA") intends to develop a comprehensive sports and recreation centre ("the proposed development") at the northern part of SCAA site in Caroline Hill Road, Causeway Bay ("the Site"). A S16 planning application will be required for taking forward the implementation of the proposed development. In this regard, a traffic impact assessment ("TIA") study is required to support the S16 planning application.

1.1.2 LLA Consultancy Limited was commissioned to conduct the TIA study for the proposed development. This report presents the findings of this study.

1.2 Objectives

1.2.1 The objectives of this study are as follows:

- to review the existing traffic conditions in the vicinity of the Site;
- to estimate the traffic generation of the proposed development;
- to project the future traffic flows in the surrounding road network;
- to appraise the potential traffic impact of the proposed development, and to propose road improvement proposals, if required;
- to recommend the internal transport facilities for the proposed development; and
- to review the pedestrian traffic arrangement of the proposed development.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 As shown in **Figure 2.1**, the Site is situated on the northside of the SCAA site in Caroline Hill Road, Causeway Bay and the site area is about 6,132 m^2.

2.2 Development Schedule

2.2.1 The proposed development will provide tennis courts, 5-a-side artificial turf pitches, activities rooms, muti-purposes rooms and ancillary facilities. The key development parameters are summarised in **Table 2.1**.

Table 2.1 Proposed Development Schedule

Item	Parameter
Site Area	About 6,132 m^2
Total GFA	About 31,327.12 m^2
No. of Storeys	G/F, 1/F, 2/F and 3/F
Tennis Count	6 Nos.
5-a-side Artificial Turf Pitch	2 Nos.
Activities rooms, muti-purposes rooms and ancillary facilities	1/F: Activities Rooms + Multi-purposed Rooms + WC + Corridor = about 1840m^2
Internal transport facilities	63 private car parking spaces, 9 Motorcycle parking spaces, 1 pick-up/drop-off lay-by and 1 HGV loading/unloading bay

2.3 Vehicular Access Arrangement

2.3.1 The Site has a single frontage at Caroline Hill Road only and the proposed vehicular access for the proposed development must be located at Caroline Hill Road. Taking into consideration of the location of the Disciplined Services Sports & Recreation Club vehicular access at the opposite side, the proposed vehicular access is being positioned to stagger with the opposite vehicular access.

2.4 Proposed Transport Facilities

2.4.1 The internal transport facilities for the proposed development use should be provided in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG) or the land grant. As there is no specific guideline set in the HKPSG or land grant for the proposed sports and recreation uses, the design objective is to provide maximum parking space numbers on ground floor in formulating the carpark layout because there will be neither basement floor nor upper floor for carparks.

2.4.2 Reference was also made to the parking provision of the adjoining SCAA. The parking ratio of the adjoining SCAA is 1 space per 340 m^2 GFA (total 64,728.113m^2 GFA with 191 spaces). According to the Applicant, the average carpark occupancy during the operation period is 65%, i.e. 124 occupied spaces, equivalent to a parking ratio of 1 space per 522 m^2 GFA. As compared with the adjoining SCAA, the parking ratio of the proposed sports and recreation centre is 1 space per 497 m^2 GFA (total 31,327.12m^2 GFA with 63 spaces) and therefore is considered appropriate and sufficient to meet the parking demand

2.4.3 At present, there is no designated HGV loading/unloading space provided at the adjoining SCAA. The loading/unloading activities are conducted by LGV within the carpark near the entrance area and the operation was found to be satisfactory. In the proposed development, it is proposed to provide 1 no. of HGV loading/unloading bay to better serve the loading/unloading demand.

2.4.4 The proposed ground floor plan is enclosed in **Appendix A** and a total of 63 car parking spaces, 9 motorcycle parking spaces, 1 pick-up/drop-off layby and 1 goods vehicle loading/unloading space can be provided.

2.4.5 **Table 2.2** lists out the details of the transport facilities provided within the proposed development.

Table 2.2 Summary of Overall Transport Facilities Provision

Facilities	Dimensions	Proposed Provision	
Car Parking Space	2.5m (W) x 5.0m (L) x 2.4 (H)	61	63
Disabled Car Parking Space	3.5m (W) x 5.0m (L) x 2.4 (H)	2	
Motorcycle Parking Space	1.0m (W) x 2.5m (L) x 2.4 (H)	9	
Pick-up/drop-off Lay-by	-	1	
Goods Vehicle Loading / Unloading Bay	HGV: 3.5m (W) x 11.0m (L) x 4.7m (H)	1	

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

3.1.1 Caroline Hill Road connects the local areas of Caroline Hill and So Kon Po with the district distributor Leighton Road in the area. The eastern end of Leighton Road intersects with Causeway Road and Tung Lo Wan Road that leads to the Tin Hau and Tai Hang areas respectively. The western end of Leighton Road links to Morrison Hill Road that leads to the local road network in Wan Chai and Canal Road Flyover.

3.1.2 Caroline Hill Road is a single 2-lane road with a short section adjoining the Disciplined Services Sports and Recreation Club near Cotton Path operating as one-way northbound. According to the 2023 Annual Traffic Census published by the Transport Department ("TD"), the section of Caroline Hill Road between Leighton Road and Yun Ping Road carried an annual average daily traffic ("AADT") of 5,330 vehicles per day.

3.2 Traffic Count Surveys

3.2.1 Having considered that the proposed development will have different traffic generation patterns during weekdays and weekends. For assessment purpose, both weekday and weekend are being considered.

3.2.2 Classified vehicles count surveys were carried out at the following locations in the vicinity of the Site on 17 June 2025 (Tuesday) for the time period of 08:00 – 10:00, 17:30 – 19:30 and 14 June 2025 (Saturday) for the time period of 11:30 to 13:30. The locations of the surveyed junctions are presented in **Figure 3.1**.

J1 – Caroline Hill Road (West) / Link Road

J2 – Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

J3 – Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

J4 – Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

J5 – Tung Lo Wan Road / Eastern Hospital Road

J6 – Eastern Hospital Road / Cotton Path

J7 – Caroline Hill Road/Cotton Path

J8 – Tung Lo Wan Road / Moreton Terrace

J9 – Moreton Terrace / Causeway Road

J10 – Leighton Road / Hysan Avenue / Leighton Lane

J11 – Leighton Road / Percival Street / Hysan Avenue

J12 – Leighton Road / Wong Nai Chung Road

J13 – Broadwood Road / Link Road

J14 – Pennington Street / Irving Street / Jardine's Bazaar

J15 – Hysan Avenue / Hoi Ping Road

3.2.3 The identified weekday AM, weekday PM and weekend peak hours were 08:15 – 09:15, 17:45 – 18:45 and 11:30 – 12:30, respectively and the surveyed traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

3.3.1 Based on the existing traffic flows, the performance of key junctions adjacent to the proposed development was assessed. The assessment results are in **Table 3.1**, and the detailed calculation sheets are attached in **Appendix B**.

Table 3.1 Existing Junction Performance

No.	Junction Location	Type/Capacity Index(1)	Identified Peak Hour		
			Weekday AM	Weekday PM	Weekend
J1	Caroline Hill Road (West) / Link Road	Priority/DFC	0.30	0.38	0.44
J2	Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	Signalised/RC	26%	32%	27%
J3	Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street	Signalised/RC	50%	33%	31%
J4	Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road	Signalised/RC	46%	36%	35%
J5	Tung Lo Wan Road / Eastern Hospital Road	Signalised/RC	63%	83%	74%
J6	Eastern Hospital Road / Cotton Path	Priority/DFC	0.16	0.16	0.32
J7	Caroline Hill Road/Cotton Path	Priority/DFC	0.10	0.06	0.11
J8	Tung Lo Wan Road / Moreton Terrace	Signalised/RC	44%	31%	72%
J9	Moreton Terrace / Causeway Road	Signalised/RC	45%	25%	28%
J10	Leighton Road / Hysan Avenue / Leighton Lane	Signalised/RC	313%	267%	164%
J11	Leighton Road / Percival Street / Hysan Avenue	Signalised/RC	68%	62%	40%
J12	Leighton Road / Wong Nai Chung Road	Signalised/RC	44%	96%	108%
J13	Broadwood Road / Link Road	Signalised/RC	25%	81%	93%
J14	Pennington Street / Irving Street / Jardine's Bazaar	Signalised/RC	247%	308%	339%
J15	Hysan Avenue / Hoi Ping Road	Priority/DFC	0.42	0.31	0.25

Note: (1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio.

3.3.2 It can be seen from **Table 3.1** that all of the key junctions performed satisfactorily during the peak hours.

3.4 Existing Footpath Capacity Assessment

3.4.1 To ascertain the adequacy of footpath width for walking between the proposed development, bus/GMB stops and the MTR Causeway Bay Station, a pedestrian count survey was conducted on 17 June 2025 (Tuesday) for the time period of 08:00 – 10:00, 17:30 – 19:30 and 14 June 2025 (Saturday) for the time period of 11:30 to 13:30. The locations of surveyed footpaths and anticipated pedestrian routings are shown in **Figure 3.3** and the assessment results are shown in **Table 3.2**.

Table 3.2 Capacity Analysis of Existing Footpaths

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Peak 15-minute flow (2) (ped/15-min)			Flow Rate(3) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE	AM	PM	WE
P1	Southern footpath of Caroline Hill Road (between Eastern Hospital Road and Cotton Path)	3.0	2.0	90	38	41	27	12	13	0.9 [A]	0.4 [A]	0.4 [A]
P2	Eastern footpath of Cotton Path (between Caroline Hill Road and Eastern Hospital Road)	4.0	2.0	116	190	204	35	57	62	0.8 [A]	1.3 [A]	1.4 [A]
P3	Northern footpath of Caroline Hill Road (between Cotton Path and Leighton Road)	3.0	2.0	490	724	867	147	218	261	4.9 [A]	7.3 [A]	8.7 [A]
P4	Eastern footpath of Yun Ping Road(between Leighton Road and Hysan Avenue)	2.5	1.5	337	694	653	102	209	196	4.5 [A]	9.3 [A]	8.7 [A]
P5	Western footpath of Pennington Street (between Leighton Road and Keswick Street)	2.2	1.2	867	1,071	1,092	261	322	328	14.5 [A]	17.9 [B]	18.2 [B]
P6	Eastern footpath of Leighton Road (between Caroline Hill Road and Haven Street)	3.3	2.3	908	1,336	1,377	273	401	414	7.9 [A]	11.6 [A]	12.0 [A]
C1	Signalised Crossing	6.4	6.4	1,285	1,795	1,595	386	539	479	4.0 [A]	5.6 [A]	5.0 [A]
C2	Signalised Crossing	4.2	4.2	1,245	1,655	1,540	374	497	462	5.9 [A]	7.9 [A]	7.3 [A]
C3	Signalised Crossing	4.0	4.0	1,050	1,230	1,260	315	369	378	5.3 [A]	6.2 [A]	6.3 [A]
C4	Cautionary Crossing	3.3	3.3	90	38	41	27	12	13	0.5 [A]	0.2 [A]	0.3 [A]

Notes: (1) Clearances of 0.5m on either side were subtracted from the actual widths to produce effective widths, and clearance was increased to 1m for shopping frontage.
(2) According to on-site observation, the peak 15-minute flows are about 30% of the peak hour flows.
(3) For LOS "C" or above, flow rates should be less than 33 pedestrians/metre/minute. The peak 15-minute flows are adopted for assessment.

3.4.2 The assessment results indicate that the existing footpath condition is satisfactory during the identified peak hours on weekday and weekend with LOS "C" or above.

3.5 Existing Public Transport Facilities

3.5.1 There are various franchised bus and scheduled minibus ("GMB") services running in the vicinity of the Site along Leighton Road and Caroline Hill Road and the walking distance to the MTR Causeway Bay Station is about 650m. **Table 3.3** and **Figure 3.4** show the public transport services operated in the vicinity of the Site.

Table 3.3 Existing Public Transport Services near the Proposed Development

Mode	Route No.	Origin-Destination	Frequency (min)
Bus	1	Central (Macau Ferry) – Happy Valley (Upper)	12 – 25
	1M	Exhibition Centre Station – Wong Nai Chung Gap (Circular)	15 – 30
	1P	Wong Nai Chung Road (Broadwood Road) – Central	4 trips per day
	2	Grand Promenade – Central (Macau Ferry)	20 – 30
	2A	Yiu Tung Estate – Exhibition Centre Station	5 – 20
	2X	Grand Promenade – Exhibition Centre Station	6 – 20
	5B	Felix Villas – Hong Kong Stadium	7 – 30
	5X	Causeway Bay (Whitfield Road) – Kennedy Town	20 – 30
	8	Heng Fa Chuen – Exhibition Centre Station	12 – 25
	8H	Siu Sai Wan (Island Resort) – Tung Wah Eastern Hospital	30
	8P	Siu Sai Wan (Island Resort) – Exhibition Centre Station	5 – 20
	8X	Siu Sai Wan (Island Resort) – Happy Valley (Upper)	6 – 20
	10	North Point Ferry Pier – Kennedy Town	8 – 25
	11	Central (Ferry Piers) – Jardine's Lookout (Circular)	15 – 30
	15B	The Peak – Wan Chai (Convention Centre)	2 trips per day
	19P	Shau Kei Wan – Tai Hang Road	1 trip per day
	23	North Point Ferry – Pokfield Road	7 – 20
	23B	Braemar Hill – Park Road / Robinson Road	7 trips per day
	25	Central (Piers 3) – Braemar Hill (Circular)	10 – 20
	25A	Exhibition Centre Station – Braemar Hill (Circular)	12 – 25
	26	Lai Tak Tsuen – Hollywood Road (Circular)	10 – 25
	38	Chi Fu Fa Yuen – North Point Ferry (Omit Wai Fu)	6 – 15
	42	Wah Fu (South) – North Point Ferry	10 – 20
	42C	Cyberport – North Point Ferry	4 trips per day
	63	North Point Ferry – Stanley Market	30
	65	North Point Ferry – Stanley Market	12 – 20
	72	Wah Kwai – Causeway Bay (Moreton Terrace)	6 – 20
	72A	Shum Wan Public Transport Terminus – Causeway Bay (Moreton Terrace)	20 – 30
	76	Shek Pai Wan – Causeway Bay (Pennington Street)(Circular)	30
	77	Tin Wan Estate – Shau Kei Wan	12 – 25
	81	Hing Wah Estate – Lai Tak Tsuen	15 – 20
	99	South Horizons – Shau Kei Wan	12 – 25
	102	Shau Kei Wan – Mei Foo	5 – 20

Mode	Route No.	Origin-Destination	Frequency (min)
	103	Chuk Yuen Estate – Pokfield Rd	15 – 30
	106	Wong Tai Sin – Siu Sai Wan (Island Resort)	6 – 24
	108	Kai Yip – Braemar Hill	10 – 30
	112	North Point – So Uk	5 – 30
	116	Tsz Wan Shan (Central) – Quarry Bay	4 – 20
	117	Sham Shui Po (Yen Chow St) – Happy Valley (Lower)	12 – 23
	170	Shatin Station – Wah Fu (Central)	15 – 30
	307	Tai Po Central – Central (Central Ferry Piers)	8 – 30
	511	Tai Hang Drive – Central (Central Ferry Piers)	4 trips per day
	592	South Horizons – Causeway Bay (Moreton Terrace)	8 – 30
	600	Anderson – Central (Rumsey Street)	20 – 30
	601	Po Tat – Admiralty Station (East)	7 – 23
	601P	Sheung Wan – Po Tat	4 – 10
	603	Ping Tin – Central Ferry Piers	10 – 30
	603A	Ping Tin – Central Market	4 trips per day
	619	Shun Lee – Central (Macau Ferry)	7 – 27
	619X	Shun Lee – Central (Macau Ferry)	7 trips per day
	621	Laguna City – Central (Hong Kong Station)	10 trips per day
	671	Diamond Hill Station – Ap Lei Chau Lee Lok St	15 – 30
	673	Sheung Shui – Central (Hong Kong Station)	20 – 30
	673A	Central (Hong Kong Station) – Sheung Shui	2 trips per day
	678	Sheung Shui – Causeway Bay	16 trips per day
	679	Queen'S Hill Fanling – Central (Hong Kong Station)	3 trips per day
	680	Lee On – Admiralty Station (East) (Via Chung On Estate)	12 – 30
	680B	Chevalier Garden Bus Terminus – Admiralty Station (East)	2 trips per day
	680P	Wu Kai Sha Station – Admiralty Station (East)	3 trips per day
	680X	Wu Kai Sha Station – Central (Macau Ferry)	8 trips per day
	681	Central (Hong Kong Station) – Ma On Shan Town Centre	9 – 30
	681P	Yiu On – Sheung Wan	5 trips per day
	690	Hong Sing Garden – Central (Exchange Square) (Via Leighton Road)	20 – 30
	690S	Hang Hau – Central (Exchange Square) (Via Lohas Park)	14 trips per day
	914	Hoi Lai Estate – Causeway Bay (Tin Hau)	13 – 30
	914P	Hoi Lai Estate – Causeway Bay (Tin Hau)	1 trip per day
	914X	Hoi Lai Estate – Causeway Bay (Tin Hau)	3 trips per day
	930B	Kwai Shing Circuit – Causeway Bay (Moreton Terrace)	1 trip per day
	930X	Causeway Bay (Moreton Terrace) – Tsuen Wan (Discovery Park) (Via Nina Tower On Journey To Causeway Bay)	8 – 25
	936	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	15 – 30
	936A	Tsuen Wan (Shek Wai Kok) – Causeway Bay (Cotton Path)	7 trips per day

Mode	Route No.	Origin-Destination	Frequency (min)
	948	Tsing Yi (Cheung On Estate) – Causeway Bay (Tin Hau)	8 – 30
	948A	Cheung On Estate – Causeway Bay (Tin Hau)	5 – 7
	948B	Greenfield Garden – Causeway Bay (Tin Hau)	2 trips per day
	948P	Cheung On Estate – Causeway Bay (Tin Hau)	5 trips per day
	948X	Cheung Wang – Causeway Bay (Tin Hau)	5 trips per day
	952	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	10 – 30
	952P	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	8 – 15
	960C	Causeway Bay – Fu Tai Estate	3 trips per day
	960P	Causeway Bay – Hung Shui Kiu	10 – 35
	960S	Tuen Mun (Fu Tai Estate) – Causeway Bay (Victoria Park)	10
	961	Tuen Mun (Shan King Estate) – Wan Chai (Hkcece)	7 – 25
	962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	8 – 25
	962G	Causeway Bay (Moreton Terrace) – Tuen Mun (Yuet Wu Villa)	3 trips per day
	962P	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	4 – 9
	962X	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	12 – 30
	967X	Tin Shui Wai (Tin Yan Estate) – Causeway Bay (Via Tin Shui Wai North)	12 – 20
	968	Yuen Long (West) – Causeway Bay (Tin Hau)	5 – 25
	968A	Yuen Long (West) – Causeway Bay (Tin Hau)	2 trips per day
	969	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	7 – 30
	969N	Tin Shui Wai Town Center – Causeway Bay (Moreton Terrace)	1 trip per day
	969P	Tin Shui Wai Town Centre – Causeway Bay (Moreton Terrace)	7 – 13
	A11	North Point Ferry Pier – Airport (Ground Transportation Centre)	15 – 60
	A17	Sham Wan – Airport	6 trips per day
	E11	Tin Hau Station – SKYCITY	20 – 40
	E11A	Tin Hau Station – SKYCITY	40
	E11B	Tin Hau Station – Tung Chung (Mun Tung Estate)	40
	E11S	Tung Chung (Mun Tung Estate) – Tin Hau Station	5 – 7
	N8P	Siu Sai Wan (Island Resort) – Wan Chai (Harbour Road) (Circular)	15 – 20
	N8X	Siu Sai Wan (Island Resort) – Kennedy Town	30
	N11	Central (Macau Ferry) – Airport (Ground Transportation Centre)	60
	N72	Wah Kwai – Quarry Bay (Hoi Chak Street)	25 – 30
	N122	Mei Foo – Shau Kei Wan	17 – 30
	N170	Shatin Central – Wah Fu (Central)	22 – 30
	N182	Kwong Yuen – Central (Macau Ferry)	20 – 30
	N307	Tai Wo – Sheung Wan	20 – 30
	N368	Yuen Long (West) – Central (Macau Ferry)	20 – 30
	N373	Fanling (Luen Wo Hui) – Central (Macau Ferry)	20 – 30
	N619	Shun Lee – Central (Macau Ferry)	20 – 30
	N680	Kam Ying Court – Central (Macau Ferry)	20 – 30

Mode	Route No.	Origin-Destination	Frequency (min)
	N691	Tiu Keng Leng – Central (Macau Ferry)	20 – 35
	N930	Tsuen Wan (Discovery Park) – Causeway Bay (Moreton Terrace)	3 trips per day
	N952	Tuen Mun (Chi Lok Fa Yuen) – Causeway Bay (Moreton Terrace)	4 trips per day
	N962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	25 – 45
	N969	Tin Shui Wai Town Centre – Causeway Bay (Moreton Terrace)	20 – 45
	P968	Yuen Long (West) – Causeway Bay (Tin Hau)	16 trips per day
	NA11	North Point Ferry Pier – HZMB Hong Kong Port	3 trips per day
GMB	14M	Causeway Bay (Lan Fong Road) – Moorsom Road (Circular route)	4 – 12
	21A	Causeway Bay (Lan Fong Road) – Lai Tak Tsuen (Circular route)	4 – 12
	21M	Causeway Bay (Lan Fong Road) – Tai Hang Drive (Circular route)	4 – 12
	26	Causeway Bay (Lee Garden Road) – Stubbs Road (Hong Kong Adventist Hospital) (Circular route)	15 – 30
	28	Baguio Villa (Upper) – Causeway Bay (Sun Wui Road)	15 – 20
	28S	Baguio Villa (Upper) – Causeway Bay (Sun Wui Road)	15 – 20
	30	Happy Valley (Holly Road) – Causeway Bay (Lan Fong Road)	6 – 10
	36X	Ap Lei Chau (Ping Lan Street) – Causeway Bay (Jardine's Bazaar)	15 – 20
	39M	Yue On Court (Ap Lei Chau) – Tin Hau Station	60
	40	Stanley Village – Causeway Bay	10 – 20
	40X	Stanley (Stanley Prison) – Causeway Bay	3 – 9
	49S	Tuen Mun Siu Hong Court – Wan Chai	30
	56	Mid-Levels (Robinson Road) – North Point (Marble Road)	20
	56A	Mid-Levels (Robinson Road) – Tin Hau Station	8 – 15
	56B	Mid-levels (Robinson Road) – Wan Chai (Circular route)	20 – 25
	N40	Stanley – Causeway Bay	20

4 FUTURE TRAFFIC SITUATION

4.1 Design Year for Traffic Forecast

4.1.1 The completion year of the proposed development is expected to be 2030. As a result, the design year of the traffic impact assessment should be three years after the completion year, i.e., 2033.

4.2 Traffic Generation of the Proposed Development

Tennis Court

4.2.1 6 tennis courts are provided and the users will be 15 persons/court during a one-hour period. As a result, a total of 60 persons one-way trips will be generated.

5-a-side Artificial Turf Pitch

4.2.2 2 pitches are provided and the users will be 80 persons/court during a 1.5-hour period. As a result, a total of 160 persons one-way trips will be generated.

Activities rooms, Muti-purposes Rooms and Ancillary Facilities

4.2.3 According to the architectural layout, the holding capacity of all these facilities will be about 455 persons. As a result, a total of 455 persons one-way trips will be generated.

4.2.4 The total trips generated from the proposed development is summarized in **Table 4.1**.

Table 4.1 Number of Visitors of the Proposed Development

Use	Generation (in persons)			Attraction (in persons)		
	AM	PM	Weekend	AM	PM	Weekend
Tennis Court	60	60	60	60	60	60
5-a-side Artificial Turf Pitch	160	160	160	160	160	160
Activities rooms, Muti-purposes Rooms and Ancillary Facilities	0	455	228	455	0	227
Total	**220**	**675**	**448**	**675**	**220**	**447**

4.2.5 As there is no established trip rate published in Transport Planning and Design Manual (TPDM) for the proposed use, therefore, the traffic generation of the proposed development will be derived from basic principles and assumptions as described in the ensuing paragraphs.

4.2.6 The following assumptions were made in estimating the traffic and pedestrian movements generated by the proposed development:

- Having considered the good accessibility of the Site, most visitors are anticipated to use public transport services in the vicinity.
- The operation hour of the proposed development would be from 07:00 to 22:00.

Taxi Traffic Generation and Attraction

4.2.7 In order to establish the pedestrian flow pattern to the different public transport facilities, reference was made to the number of passenger journeys by public transport operators recorded in the Monthly Traffic and Transport Digest (MTTD) 2025. The modal split of the public transport for the proposed development was estimated as shown in **Table 4.2**.

Table 4.2 Estimated Modal Split for the Proposed Development

Mode	Distribution of Average Daily Public Transport Passenger Journeys by Mode (1)	Adjusted Modal Split for the Proposed Development
Rail-based PT	45.00%	45.50%
Road-based PT (excluding Taxi)	48.30%	48.80%
Taxi	5.70%	5.80%
Total	**99.0% (2)**	**100.0%**

Notes: (1) Source: Chart 2.7 in Monthly Traffic and Transport Digest (May 2025).
(2) Marine transport is omitted.

4.2.8 The passenger generation to / from the MTR Stations, the bus / mini-bus stops and the taxi stands / the roadside available for taxi passenger pick-up & drop-off in the vicinity of the proposed development in the AM and PM peak hours is estimated in **Table 4.3**.

Table 4.3 Estimated Pedestrian Generation to the Public Transport Facilities

Public Transport Facilities(1)	Adjusted Modal Split	Estimated Peak Hour Pedestrian Flows (person / hr)								
		Weekday AM			Weekday PM			Weekend		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
MTR Station	45.50%	100	307	407	307	100	407	203	203	406
Bus / Mini-bus Stops	48.80%	107	329	436	329	107	436	219	218	437
Taxi Stand / Roadside	5.80%	13	39	52	39	13	52	26	26	52
Total	**100.0%**	**220**	**675**	**895**	**675**	**220**	**895**	**448**	**447**	**895**

Note: Gen. – Generation; Att. - Attraction

4.2.9 Since most visitors are anticipated to use public transport services, only those who use taxis will be considered as the vehicular traffic generation of the proposed development. The vehicular traffic generated and attracted by the proposed development are estimated based on the above presented in **Table 4.4**.

Table 4.4 Estimated Taxi Traffic Generation and Attraction of the Proposed Development

Mode of Transport	Modal Split	Vehicle Capacity	Estimated No. of Vehicle (veh/hr[pcu/hr(2)])								
			Weekday AM			Weekday PM			Weekend		
			Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Taxi Stand / Roadside	5.8%	2.5(1)	6 [6]	16 [16]	22 [22]	16 [16]	6 [6]	22 [22]	11 [11]	11 [11]	22 [22]

Notes: Gen. – Generation; Att. – Attraction.

(1) According to the traffic survey, the average occupancy of taxis to the Existing SCAA is 2.5 passengers per vehicle and is adopted for estimating the future traffic generation and attraction.

(2) 1 pcu is adopted for each taxi.

Private Car Traffic Generation and Attraction

4.2.10 In order to establish private car traffic generation and attraction of the proposed development, reference was made to the existing SCAA car park. Trip generation survey at existing SCAA car park is arranged to collect trip rates. The trip generation survey was conducted on 27 December 2025 (Saturday) and 29 December 2025 (Monday) during the weekday AM, weekday PM peak and weekend hour period. The survey results and the trip rates derived are presented in **Table 4.5**.

Table 4.1 Surveyed Private Car Traffic Generation and Attraction of Existing SCAA

Name	Unit / Content	Weekday AM			Weekday PM			Weekend		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Private Car Traffic Generation of Existing SCAA (pcu/hr)										
Existing SCAA	64,728.113 m^2 GFA	13	23	36	36	39	75	22	29	51
Derived Trip Rates (pcu/hr/100 m^2)										
Sports Centre		0.02	0.036	-	0.056	0.06	-	0.034	0.045	-
Private Car Traffic Generation of Proposed Development (pcu/hr)										
Proposed Development	31,327.12 m^2 GFA	7	12	19	18	19	37	11	15	26

Note: Gen. – Generation; Att. – Attraction.

4.2.11 Based on **Table 4.4** and **Table 4.5** above, the estimated total vehicular traffic generation and attraction of the proposed development is summarised in **Table 4.6**.

Table 4.6 Estimated Traffic Generation and Attraction of Proposed Development

Use	Weekday AM			Weekday PM			Weekend		
	Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Total Traffic Generation (pcu/hr)									
Taxi [a]	6	16	22	16	6	22	11	11	22
Private Car [b]	7	12	19	18	19	37	11	15	26
TOTAL [a] + [b]	**13**	**28**	**41**	**34**	**25**	**59**	**22**	**26**	**48**

Note: Gen. – Generation; Att. – Attraction.

4.2.12 As shown in **Table 4.6**, the proposed development would generate two-way traffic flows of 41 pcu/hr, 59 pcu/hr and 48 pcu/hr during the weekday AM, weekday PM and weekend peak hours, respectively. The development traffic was distributed onto the road work with reference to surveyed traffic flows and presented in **Figure 4.1**.

4.3 Traffic Generation of the Planned Developments

4.3.1 To estimate the future traffic flows, updated information has been obtained from various sources regarding the planned developments in the vicinity of the study area. Although peak hours of the planned developments are not anticipated to coincide with the identified peak hours, for conservative assessment purposes, the traffic generations and attractions induced by these developments during highway peaks are assumed to occur in the identified peak hours.

4.3.2 The corresponding traffic generations and attractions by these adjacent developments are summarised in **Table 4.7,** and these generations and attractions will be considered in the junction capacity analysis for the design year.

Table 4.7 Traffic Generation by Planned Developments in the Vicinity

Proposed Use	Unit / Content	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Mean Trip rates from TPDM										
Retail	pcu/hr/ 100m^2	0.2296	0.2434	-	0.3100	0.3563	-	0.2821[(2)]	0.4817[(2)]	
Office	pcu/hr/ 100m^2	0.1703	0.2452	-	0.1573	0.1175	-	0.1431[(2)]	0.1589[(2)]	-
Traffic Generation/Attraction										
Redevelopment at Po Leung Kuk Headquarter	37,725 m^2 GFA for G/IC use	14[(1)]	15[(1)]	29[(1)]	7[(1)]	6[(1)]	13[(1)]	5[(2)]	6[(2)]	11
Redevelopment at 5-19 Jardine's Bazaar	4,756 m^2 GFA for retail use	11	12	23	15	17	32	14	23	37
Redevelopment at 36 Jardine's Bazaar	979m^2 GFA for office use	2	3	5	2	2	4	2	2	4
Redevelopment of the Ex-EMSD headquarter at Caroline Hill Road, Causeway Bay	102,000 m^2 GFA for commercial and G/IC use	272[(2)]	398[(2)]	670[(2)]	308[(2)]	239[(2)]	547[(2)]	304[(2)]	303[(2)]	607[(2)]

Proposed Use	Unit / Content	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
District Court Site	70,000 m^2 GFA	42(2)	64(2)	106(2)	33(2)	31(2)	64(2)	5(2)	5(2)	10
Commercial Development in 1-5 Irving Street and 14 Pennington Street	7,548.8 m^2 GFA for office use	13	19	32	12	9	21	11	12	23
Total		**354**	**511**	**865**	**377**	**304**	**681**	**341**	**351**	**692**

Notes: (1) Figures extracted from the TIA report enclosed in the Metro Planning Committee paper no. 1/19.
(2) Figures extracted from the TIA report of Planning Application A/H7/181.

4.4 Future Road Network

4.4.1 According to the approved planning application no. A/H7/181, it is understood that two junction improvement schemes will be implemented at the junctions of Caroline Hill Road / Link Road and Leighton Road / Caroline Hill Road / Hoi Ping Road as part of the development of the adjoining Site. The junction improvements are expected to be completed by 2026 and therefore included in the traffic assessment of the proposed development. The proposed junction improvement schemes are enclosed in **Appendix C**.

4.5 Traffic Growth

ATC Data

4.5.1 Reference was made to the ATC reports published by the TD for the years from 2019 to 2023 (5 years) to determine the traffic growth rate of the local road network in the vicinity of the proposed development. The annual average daily traffic flow ("AADT") recorded at the counting stations in the vicinity of the Site are set out in **Table 4.8**.

Table 4.8 Annual Traffic Census Data

Stn. No.	Road Section			AADT(1)					Avg Growth %
	Road	From	To	2019	2020	2021	2022	2023	
1212	Irving St & Pennington St	Leighton Rd	Yee Wo St	12,290	11,730 (-4.6%)	12,250 (4.4%)	11,690 (-4.6%)	10,590 (-9.4%)	-3.7%
1213	Causeway Rd	Tung Lo Wan Rd	Shelter St	30,490	29,090 (-4.6%)	30,410 (4.5%)	29,010 (-4.6%)	29,000 (0%)	-1.2%
1414	Leighton Rd	Tung Lo Wan Rd	Irving St	22,970	21,040 (-8.4%)	21,990 (4.5%)	20,980 (-4.6%)	21,590 (2.9%)	-1.5%
1436	Percival St	Hennessy Rd	Leighton Rd	12,180	12,170 (-0.1%)	12,410 (2%)	11,760 (-5.2%)	12,340 (4.9%)	0.3%
1438	Tung Lo Wan Rd & Tai Hang Rd	Causeway Rd	Ka Ning Path	11,000	10,130 (-7.9%)	10,340 (2.1%)	9,740 (-5.8%)	9,950 (2.2%)	-2.5%
1612	Tai Hang Rd FO <H134>	St. John Ambulance Brigate Wan Rd Headquarters	Ramp to Tung Lo Wan Rd	19,140	19,280 (0.7%)	17,750 (-7.9%)	16,930 (-4.6%)	17,430 (3%)	-2.3%
2035	Leighton Rd	Wong Nai Chung Rd	Percival St	27,830	26,470 (-4.9%)	27,000 (2%)	21,860 (-19%)	23,770 (8.7%)	-3.9%
2036	Leighton Rd	Irving St	Percival St	14,950	14,220 (-4.9%)	14,510 (2%)	13,940 (-3.9%)	16,170 (16%)	2.0%

Stn. No.	Road Section			AADT(1)					Avg Growth %
	Road	From	To	2019	2020	2021	2022	2023	
2214	Causeway Rd	Shelter St	Hing Fat St	33,760	31,440 (-6.9%)	34,000 (8.1%)	34,190 (0.6%)	33,940 (-0.7%)	0.1%
2608	Caroline Hill Rd	Leighton Rd	Yun Ping Rd	4,550	4,800 (5.5%)	4,610 (-4%)	4,890 (6.1%)	5,330 (9%)	4.0%
			Total	**189,160**	**180,370 (-4.6%)**	**185,270 (2.7%)**	**174,990 (-5.5%)**	**180,110 (2.9%)**	**-1.2%**

Note: (1) Figures in bracket indicated the % increase between two years.

4.5.2 **Table 4.8** shows that the AADT at the concerned ATC stations has an overall annual growth of negative 1.2% in between the years 2019 to 2023.

TPEDM Data

4.5.3 Reference was also made to the 2021–based Territorial Population and Employment Data Matrix ("TPEDM") released by the Planning Department. The population and employment data of year 2021 and 2031 in Wan Chai District are summarised in **Table 4.9**.

Table 4.9 Population and Employment Data in Wan Chai District

Year	2021	2026	2031
Population	166,700	156,000	145,700
Employment	299,700	301,700	287,250
Total	466,400	457,700	432,950
Average Growth per annum (%)		-0.4% (2021 to 2026)	-1.1% (2026 to 2031)

4.5.4 As shown in **Table 4.9**, the average annual growth rates for the population and the employment total between 2021–2026 and 2026–2031 are -0.4% and -1.1%, respectively. Having considered the ATC and TPEDM data, a nominal growth rate of +0.5% is adopted for subsequent assessments.

4.6 Reference and Design Flows

4.6.1 The 2033 Reference Flows, i.e., the traffic flows in the vicinity **without** the traffic flows generated by the proposed development, were estimated based on the following equation.

2033 Reference Flows = 2025 Existing Flows x $(1 + 0.5\%)^8$ + Traffic Flows Generated by the Planned/Committed Developments

4.6.2 The 2033 Design Flows, i.e., the traffic flows in the vicinity **with** the traffic flows generated by the proposed development, were estimated based on the following equation:

2033 Design Flows = 2033 Reference Flows + Traffic Flows Generated by the Proposed Development

4.6.3 The 2033 Reference and Design Flows are shown in **Figures 4.2** and **4.3**, respectively.

4.7 Junction Capacity Assessment

4.7.1 Capacity assessments were carried out for the major junctions in the local road network for both the Reference and Design scenarios. The results are summarised and presented in **Table 4.10** with detailed calculation sheets attached in **Appendix D**.

Table 4.10 Year 2033 Junction Capacity Assessment

No.	Junction Location	Type /Capacity Index(1)	2033 Reference			2033 Design		
			AM	PM	WE	AM	PM	WE
J1	Caroline Hill Road (West) / Link Road (2)	Signalised /RC	36%	39%	42%	36%	39%	42%
J2	Leighton Road / Caroline Hill Road (West) / Hoi Ping Road	Signalised /RC	24%	33%	25%	22%	31%	24%
J3	Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street	Signalised /RC	29%	17%	17%	29%	17%	17%
J4	Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road	Signalised/ RC	27%	22%	22%	26%	22%	22%
J5	Tung Lo Wan Road / Eastern Hospital Road	Signalised /RC	39%	59%	53%	38%	56%	49%
J6	Eastern Hospital Road / Cotton Path	Priority/DFC	0.25	0.24	0.34	0.26	0.26	0.34
J7	Caroline Hill Road/Cotton Path	Priority/DFC	0.22	0.14	0.19	0.23	0.14	0.19
J8	Tung Lo Wan Road / Moreton Terrace	Signalised /RC	32%	21%	56%	32%	21%	55%
J9	Moreton Terrace / Causeway Road	Signalised /RC	35%	17%	19%	34%	16%	19%
J10	Leighton Road / Hysan Avenue / Leighton Lane	Signalised /RC	289%	245%	149%	289%	245%	149%
J11	Leighton Road / Percival Street / Hysan Avenue	Signalised /RC	43%	33%	21%	41%	30%	19%
J12	Leighton Road / Wong Nai Chung Road	Signalised /RC	22%	54%	67%	21%	51%	64%
J13	Broadwood Road / Link Road	Signalised /RC	13%	58%	71%	13%	58%	71%
J14	Pennington Street / Irving Street / Jardine's Bazaar	Signalised /RC	222%	275%	303%	222%	275%	303%
J15	Hysan Avenue / Hoi Ping Road	Priority/DFC	0.66	0.43	0.38	0.68	0.45	0.40
J16	Caroline Hill Road / New Road(2)	Priority/DFC	0.13	0.09	0.08	0.13	0.09	0.09

Notes: AM – Weekday AM; PM – Weekday PM; WE - Weekend
(1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio.
(2) Junction improvement scheme to be implemented under planning application A/H7/181 is incorporated.

4.7.2 **Table 4.10** shows that nearly all junctions will operate with 15% RCs and DFCs<1.0 for both the reference and design scenarios, except for Junction J13. It is noted that the reserve capacity of Junction J13 would operate at both 13% in the AM peak hour of 2033 reference ("Without" the development) and design ("With" the development) scenarios. Taking into consideration of the proposed development will only attract 1 pcu/hr to pass Junction J13 during the AM peak hour, it is anticipated that the proposed development will not induce any adverse traffic impact to its surrounding road network.

4.8 Pedestrian Traffic Generation of the Other Planned Developments

4.8.1 It is understood that there are some planned and committed developments in vicinity of the Site. The pedestrian flows that would be induced by these developments have been considered. The pedestrian flows of these planned developments are estimated by adopting the in-house pedestrian trip rates and presented in **Table 4.11**.

Table 4.11 Estimated Pedestrian Generation/Attraction of Planned Developments

Use	Unit	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Adopted Pedestrian Trip Rates (1)										
Headquarter	ped/hr/quota	0.31	0.52	-	0.59	0.08	-	0.17	0.05	-
Court	ped/hr /100 m^2	0.25	2.71	-	1.22	0.43	-	-	-	-
Office	ped/hr /100 m^2	0.27	2.74	-	2.66	0.33	-	0.27	0.37	-
Estimated Pedestrian Generation (2)										
Redevelopment at Po Leung Kuk Headquarter	322 quotas	99	166	265	191	25	216	56	16	72
Redevelopment of the Ex-EMSD headquarter at Caroline Hill Road, Causeway Bay(2)	102,000 m^2 GFA	549	2,727	3,276	2,844	1,064	3,908	1,011	1,183	2,194
District Court Site	70,000 m^2 GFA	175	1,898	2,073	855	303	1,158	20	20	40
Commercial Development in 1- 5 Irving Street and 14 Pennington Street	7,548.8 m^2 GFA	20	207	227	201	25	226	20	28	48
Total		**843**	**4,998**	**5,841**	**4,091**	**1,417**	**5,508**	**1,107**	**1,247**	**2,354**

Notes: Gen. – Generation; Att. – Attraction.
(1) Pedestrian trip rates from TIA report of Planning Application A/H7/181 are adopted.
(2) Figures were abstracted from the approved TIA report of planning application A/H7/181.

4.8.2 The planned developments are estimated to generate 2-way pedestrian flows of 5,841, 5,508 and 2,354 person/ hour during weekday AM, weekday PM and weekend peak hours respectively. The pedestrian flows of planned developments are distributed onto the network based on the future pedestrian connections planned under application A/H7/181. The pedestrian flows of the proposed development are distributed onto the existing pedestrian facilities to demonstrate the worst case scenario.

4.9 Reference and Design Pedestrian Flows

4.9.1 The 2033 Reference Pedestrian Flows, i.e., the pedestrian flows in the local pedestrian network, based on future walkway network **without** the proposed development pedestrian flows, were estimated based on the following equation.

2033 Reference Pedestrian Flows = 2025 Existing Flows x $(1 + 0.5\%)^8$ + Pedestrian Flows Generated by the Planned/Committed Developments

4.9.2 The 2033 Design Pedestrian Flows, i.e., the pedestrian flows in the local pedestrian network, based on future walkway network **with** the proposed development pedestrian flows, were estimated based on the following equation.

2033 Design Pedestrian Flows = 2033 Reference Flows + Pedestrian Flows Generated by the Proposed Development

4.10 Future Capacity of Pedestrian Facilities

4.10.1 The future walkway serviceability is assessed, and the results are shown in **Table 4.12**. The results showed that all of the concerned footpaths will operate satisfactorily with LOS level "C" or above.

Table 4.12 Future Capacity Analysis of Footpaths

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Peak 15-minute flow (2) (ped/15-min)			Flow Rate(3) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE	AM	PM	WE
2033 Reference Scenario												
P1	Southern footpath of Caroline Hill Road	3.0	2.0	94	40	43	29	12	13	1.0 [A]	0.4 [A]	0.4 [A]
P2	Eastern footpath of Cotton Path	4.0	2.0	121	198	212	37	60	64	0.8 [A]	1.3 [A]	1.4 [A]
P3	Northern footpath of Caroline Hill Road	3.0	2.0	1,210	1,433	1,202	363	430	361	12.1 [A]	14.3 [A]	12.0 [A]
P4	Eastern footpath of Yun Ping Road	2.5	1.5	561	953	787	169	286	237	7.5 [A]	12.7 [A]	10.5 [A]
P5	Western footpath of Pennington Street	2.2	1.2	1,392	1,564	1,329	418	470	399	23.2 [C]	26.1 [C]	22.2 [B]
P6	Eastern footpath of Leighton Road	3.3	2.3	945	1,390	1,433	284	417	430	8.2 [A]	12.1 [A]	12.5 [A]
C1	Signalised Crossing	6.4	6.4	2,037	2,548	1,960	612	765	588	6.4 [A]	8.0 [A]	6.1 [A]
C2	Signalised Crossing	4.2	4.2	1,996	2,402	1,903	599	721	571	9.5 [A]	11.4 [A]	9.1 [A]
C3	Signalised Crossing	4.0	4.0	1,793	1,960	1,611	538	588	484	9.0 [A]	9.8 [A]	8.1 [A]
C4	Signalised Crossing	3.3	3.3	94	40	43	29	12	13	0.6 [A]	0.2 [A]	0.3 [A]
2033 Design Scenario												
P1	Southern footpath of Caroline Hill Road	3.0	2.0	937	883	886	282	265	266	9.4 [A]	8.8 [A]	8.9 [A]
P2	Eastern footpath of Cotton Path	4.0	3.0	339	416	431	102	125	130	2.3 [A]	2.8 [A]	2.9 [A]

Ref.	Location	Actual Width (m)	Effective Width (m)(1)	Peak Hour flow (ped/hr)			Peak 15-minute flow (2) (ped/15-min)			Flow Rate(3) ped/m/min [LOS]		
				AM	PM	WE	AM	PM	WE	AM	PM	WE
P3	Northern footpath of Caroline Hill Road	3.0	2.0	1,835	2,058	1,827	551	618	549	18.4 [B]	20.6 [B]	18.3 [B]
P4	Eastern footpath of Yun Ping Road	2.5	1.5	765	1,157	990	230	348	297	10.2 [A]	15.5 [A]	13.2 [A]
P5	Western footpath of Pennington Street	2.2	1.2	1,596	1,768	1,532	479	531	460	26.6 [C]	29.5 [C]	25.6 [C]
P6	Eastern footpath of Leighton Road	3.3	2.3	1,163	1,608	1,652	349	483	496	10.1 [A]	14.0 [A]	14.4 [A]
C1	Signalised Crossing	6.4	6.4	2,444	2,955	2,366	734	887	710	7.6 [A]	9.2 [A]	7.4 [A]
C2	Signalised Crossing	4.2	4.2	2,403	2,809	2,309	721	843	693	11.4 [A]	13.4 [A]	11.0 [A]
C3	Signalised Crossing	4.0	4.0	2,200	2,367	2,017	660	711	606	11.0 [A]	11.9 [A]	10.1 [A]
C4	Signalised Crossing	3.3	3.3	937	883	886	282	265	266	5.7 [A]	5.4 [A]	5.4 [A]

Notes: AM – Weekday AM; PM – Weekday PM; WE - Weekend
(1) Clearances of 0.5m on either side were subtracted from the actual widths to produce effective widths, and clearance was increased to 1m for shopping frontage.
(2) According to on-site observation, the peak 15-minute flows are about 30% of the peak hour flows.
(3) For LOS "C" or above, flow rates should be less than 33 pedestrians/metre/minute. The peak 15-minute flows are adopted for assessment.

4.10.2 **Table 4.12** shows that all the concerned footpaths and walkway will operate satisfactorily with LOS level "C" or above.

4.10.3 Having considered that the MTR is one of the main modes of transport of the proposed development, to facilitate the visitors travelling between the site and the Causeway Bay MTR Station, the applicant has liaised with the adjacent commercial development for the feasibility of establishing a footbridge between the proposed development and the adjacent commercial development. With this footbridge proposal, visitors can reach the proposed development more conveniently and comfortably and relieve the burden of the at-grade walkway network.

4.11 Future Operational Performance of Central Refuge Islands at J3

4.11.1 Apart from footpaths and pedestrian crossing facilities, LOS assessment on pedestrian waiting spaces provided at the two refuge islands at the junction of Leighton Road / Yun Ping Road / Pennington Street / Caroline Hill Road (East) (J3) are also conducted. The average number of pedestrians waiting at refuge island is estimated based on the peak hour pedestrian flows and the cycle time of the junction.

Taking northern refuge island in 2033 reference scenario AM peak hour as an example,

The northbound peak hour flow is 742 ped/hr and the cycle time of the junction is 130 seconds which implies that there will be 27 pedestrians (742 / (3,600 / 130) = 26.8, say 27 waiting at the island per cycle.

4.11.2 The assessment results are summarized in **Table 4.13**, the detail assessment results are enclosed in **Appendix E**.

Table 4.13 Operational Performance of Central Refuge Islands at J3

Location	Effective Area (m^2)	Estimated Average Number of Pedestrian Waiting at Refuge Island(1)			Space (m^2/p) [Level-of-service (LOS)](2)		
		AM	PM	WE	AM	PM	WE
2033 Reference							
Northern Refuge Island	18	27	27	26	0.67 [C]	0.67 [C]	0.69 [C]
Southern Refuge Island	21	6	8	6	3.50 [A]	2.63 [A]	3.50 [A]
2033 Design							
Northern Refuge Island	18	28	29	29	0.64 [C]	0.62 [C]	0.62 [C]
Southern Refuge Island	21	6	8	6	3.50 [A]	2.63 [A]	3.50 [A]

Notes: AM – Weekday AM; PM – Weekday PM; WE – Weekend
(1) Estimated by the forecasted pedestrian crossing demand and cycle time of the signal junction.
(2) Based on the criteria of LOS from Table 18-7 in Chapter 18 of HCM 2000 (see **Appendix F**), the LOS reflects the space per person which is computed by effective waiting area divided by waiting pedestrian. LOS is A for space > 1.2m^2; B for space >0.9 – 1.2m^2; C for space >0.6 – 0.9m^2; D for space >0.3 – 0.6m^2; E for space >0.2 – 0.3m^2 and F for space $\leq$ 0.2m^2.

4.11.3 As shown in **Table 4.13**, the assessment results suggested that the waiting spaces provided on the northern refuge islands at junction J3 would be operating at LOS "C".

4.11.4 In **Section 4.10.3**, it is intended to provide a footbridge connected to the adjacent commercial development and some pedestrians will be diverted to use the footbridge for access, the walking environment along the anticipated pedestrian route could be further improved.

5 SUMMARY AND CONCLUSION

5.1 Summary

5.1.1 The South China Athletic Association intends to develop a comprehensive sports and recreation centre at the northern part of SCAA site in Caroline Hill Road, Causeway Bay.

5.1.2 As there is no specific guideline set in the HKPSG or land grant for the proposed uses, the proposed car parking provisions is based on the proposed operational needs. The proposed development will provide a total of 66 private car parking spaces (including 2 nos. of parking space for disabled users), 9 motorcycle parking spaces, 1 pick-up/drop-off layby and 1 goods vehicle loading/unloading bay.

5.1.3 Existing junction capacity assessments were carried out for the identified peak hours and the results show that all of the key junctions performed satisfactorily during the surveyed peak hours.

5.1.4 The proposed development would generate two-way traffic flows of 41 pcu/hr, 59 pcu/hr and 48 pcu/hr in the weekday AM, weekday PM and weekend peak hours, respectively. By assigning the additional development traffic to the 2033 Reference Flows, the 2033 Design Flows were obtained.

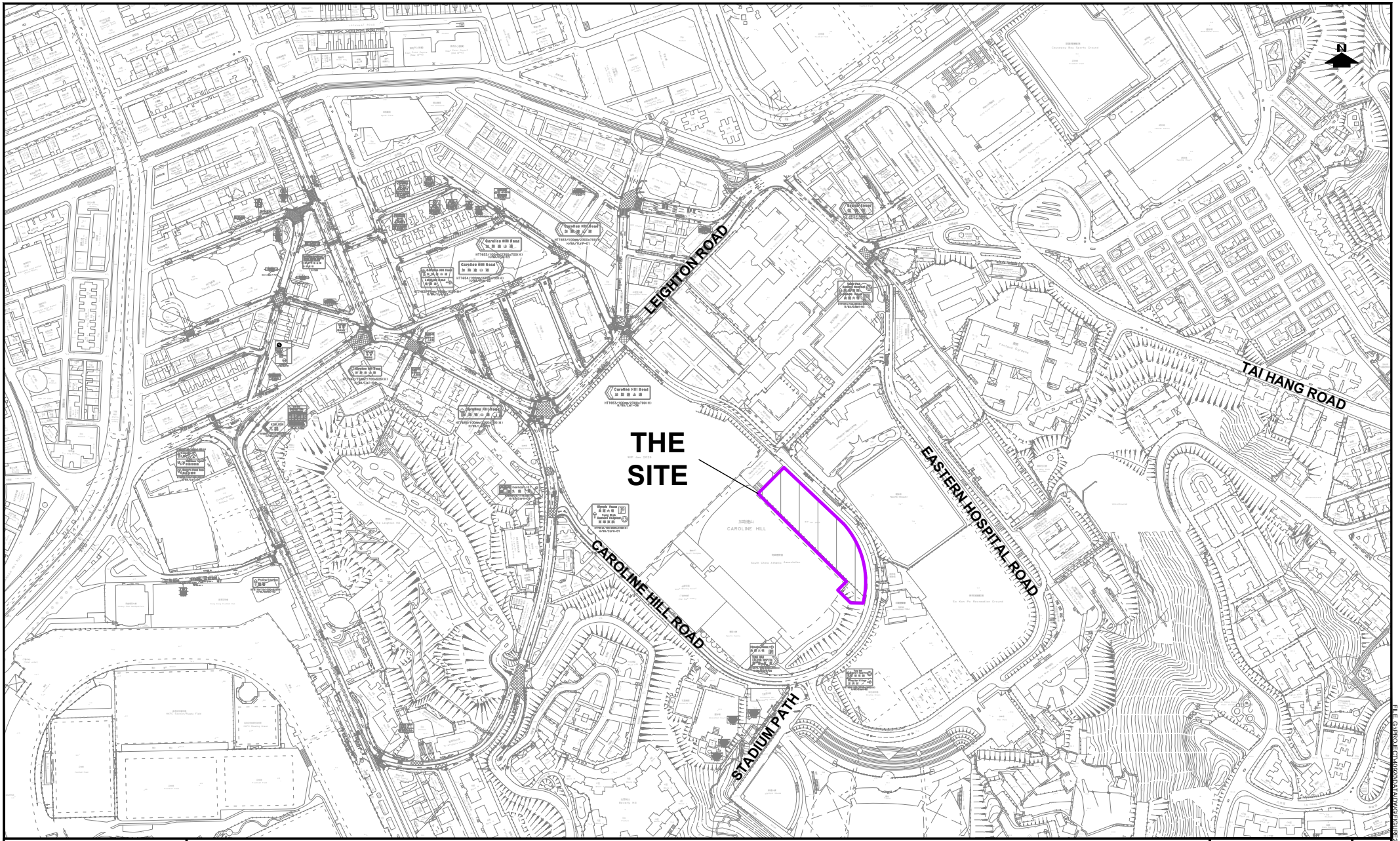
5.1.5 Junction capacity assessments were carried out at the key junctions in the vicinity for the year 2033. The results have indicated that all junctions will operate satisfactorily for both reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce significant traffic impact to the surrounding road network.

5.1.6 The proposed development is estimated to generate 2-way pedestrian flows of 895 person/ hour during weekday AM, weekday PM and weekend peak hours. The condition of the key footpaths , crossings and refuge islands will be satisfactory after accommodating the pedestrians generated and attracted by the proposed development in all scenarios with LOS “C” or above.

5.1.7 Having considered that MTR is one of the main modes of transport of the proposed development to facilitate the visitors travelling between the Site and the Causeway Bay MTR Station, the applicant has liaised with the adjacent commercial development for the feasibility of establishing a footbridge between the proposed development and the adjacent commercial development. With this footbridge proposal, visitors can reach the proposed development more conveniently and comfortably and relieve the burden of the at-grade walkway network.

5.2 Conclusion

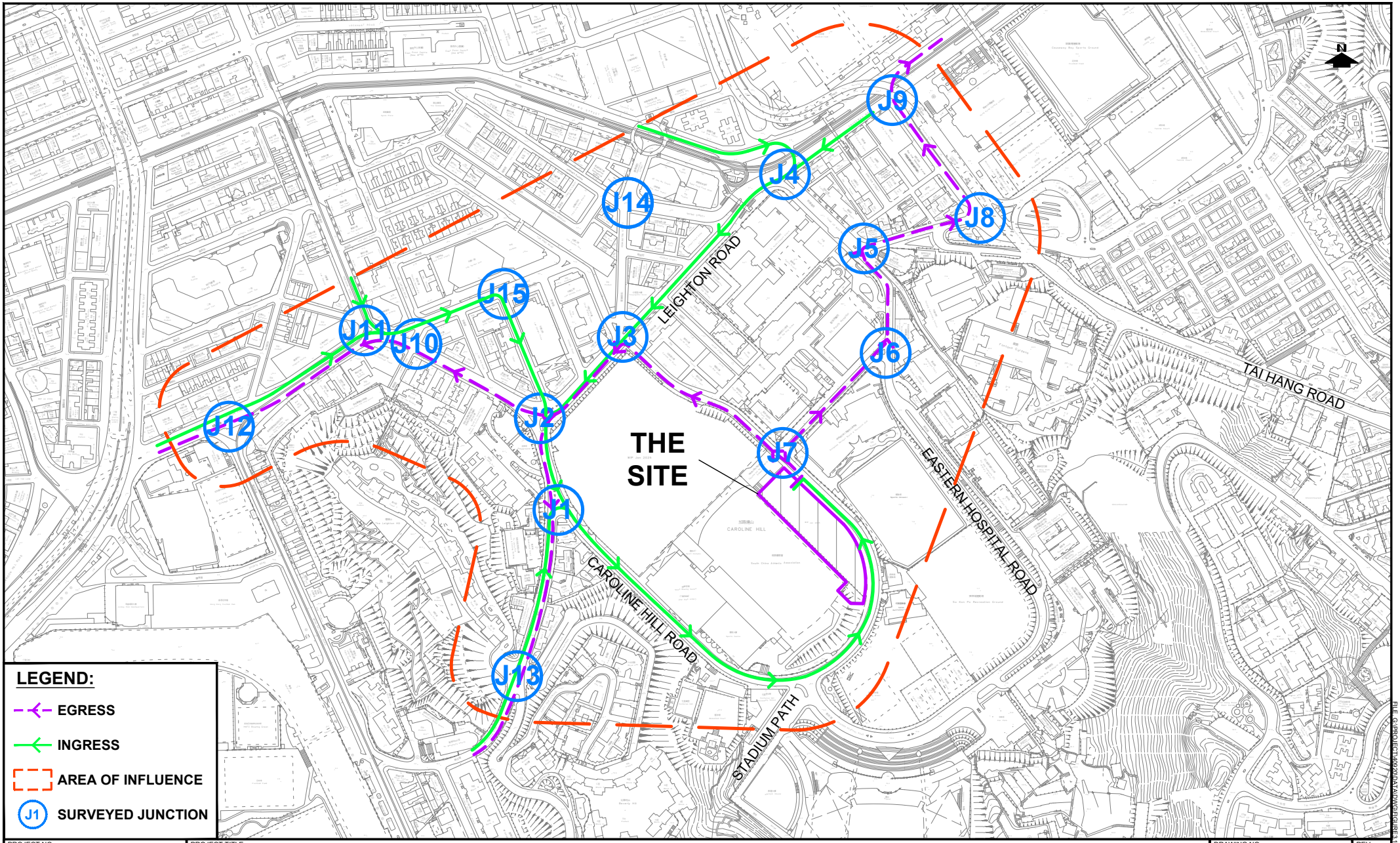
5.2.1 From the assessment results, it can be concluded that the proposed development will not induce significant traffic impact on the surrounding road network and the development proposal is considered acceptable from traffic engineering point of view.



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 2.1	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE SEP 2025 / SCALE 1:5000	DRAWING TITLE: LOCATION PLAN	LLA 顧問有限公司 Consultancy Limited

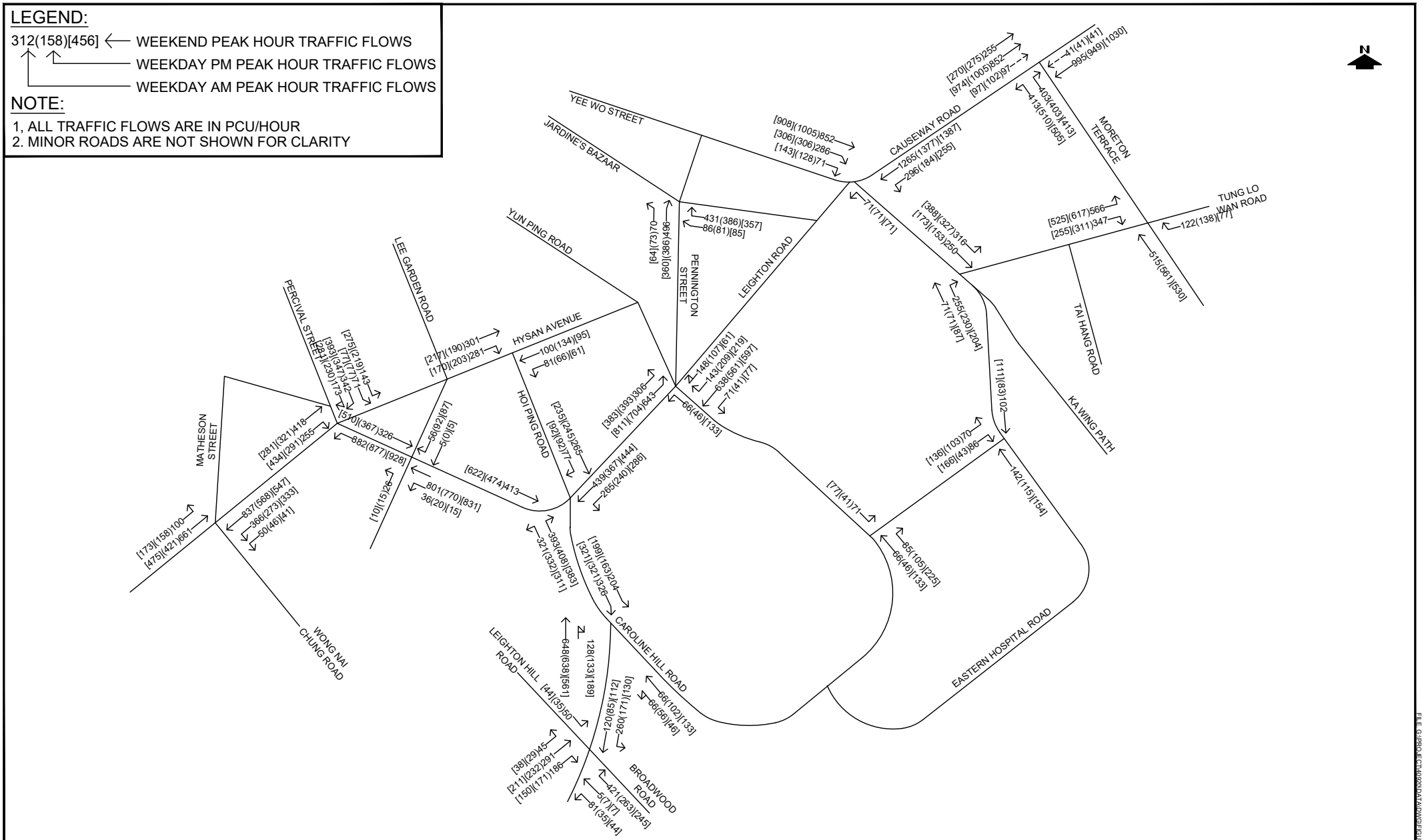
FILE: G:\PROJECT\40920\DATA\DWG\FIGURE2.1.DWG PLOT SCALE : 1 = 1

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE2.1.DWG PLOT SCALE : 1 = 1



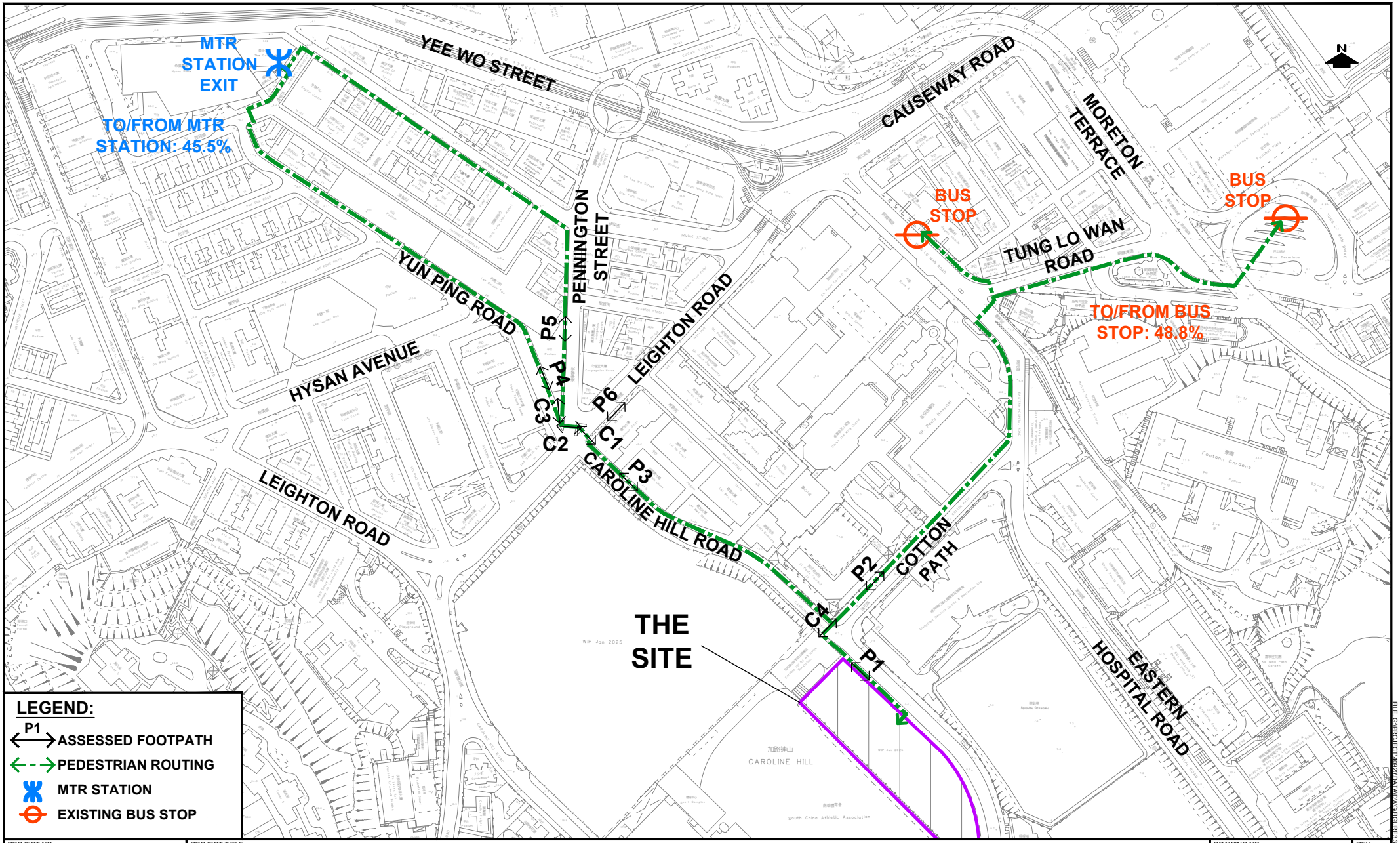
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.1	REV. A
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE DEC 2025 / SCALE 1:5000	DRAWING TITLE: LOCATION OF SURVEYED JUNCTIONS AND AREA OF INFLUENCE	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.1A.DWG PLOT SCALE : 1 = 1



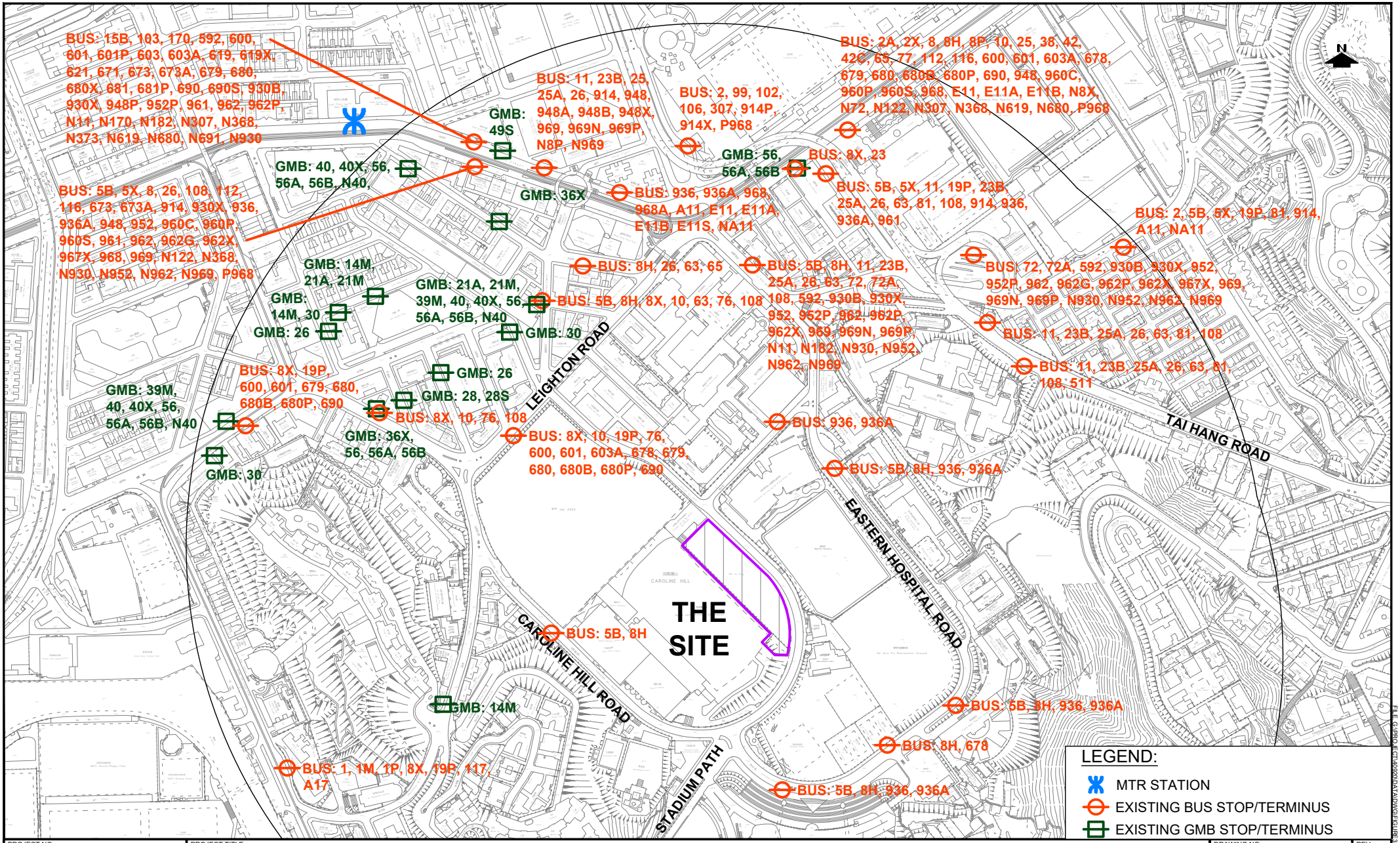
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. **FIGURE 3.2**	REV. **C**
DESIGNED **SLN** / DRAWN **CLL** / CHECKED **SLN**	DATE **MAR 2026** / SCALE **N.T.S.**	DRAWING TITLE: **2025 EXISTING TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.2C.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.3	REV. B
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE FEB 2026 / SCALE 1:3000	DRAWING TITLE: ANTICIPATED PEDESTRIAN ROUTINGS AND LOCATION OF SURVEYED FOOTPATHS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.3B.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 3.4	REV. ·
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE SEP 2025 / SCALE 1:5000	DRAWING TITLE: EXISTING PUBLIC TRANSPORT FACILITIES	LLA 顧問有限公司 Consultancy Limited

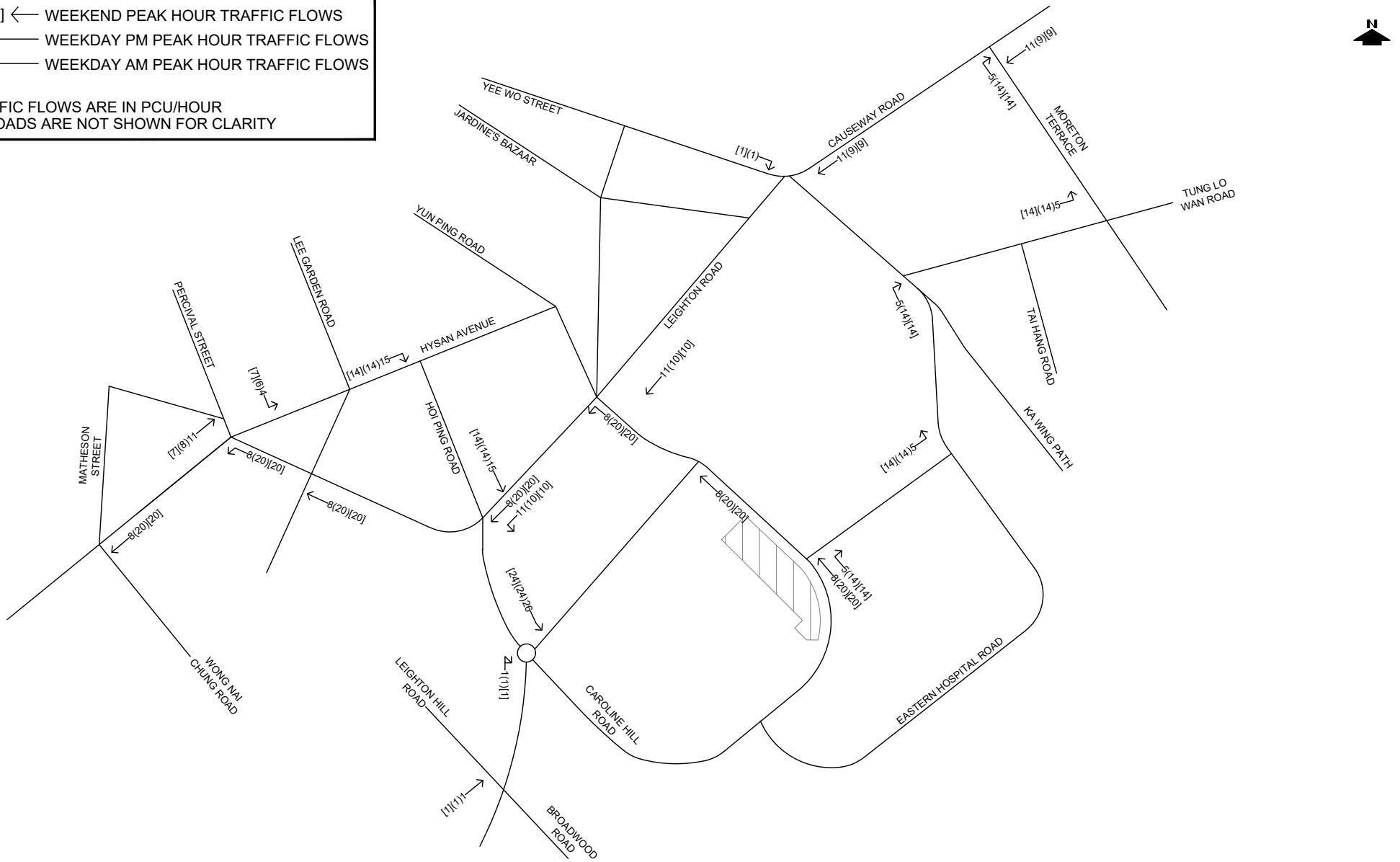
FILE: G:\PROJECT\40920\DATA\DWG\FIGURE3.4.DWG PLOT SCALE : 1 = 1

LEGEND:

312(158)[456] ← WEEKEND PEAK HOUR TRAFFIC FLOWS
WEEKDAY PM PEAK HOUR TRAFFIC FLOWS
WEEKDAY AM PEAK HOUR TRAFFIC FLOWS

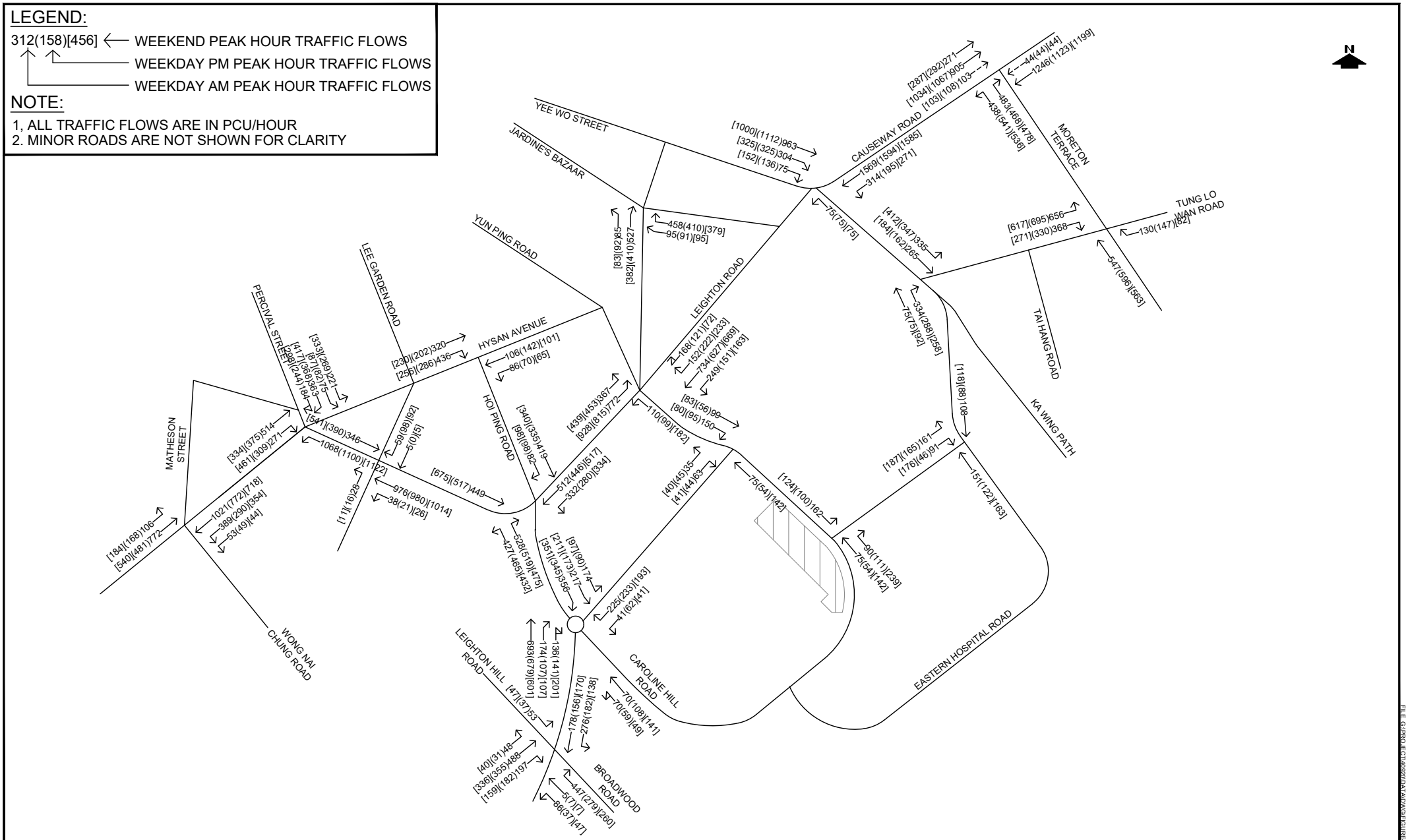
NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY



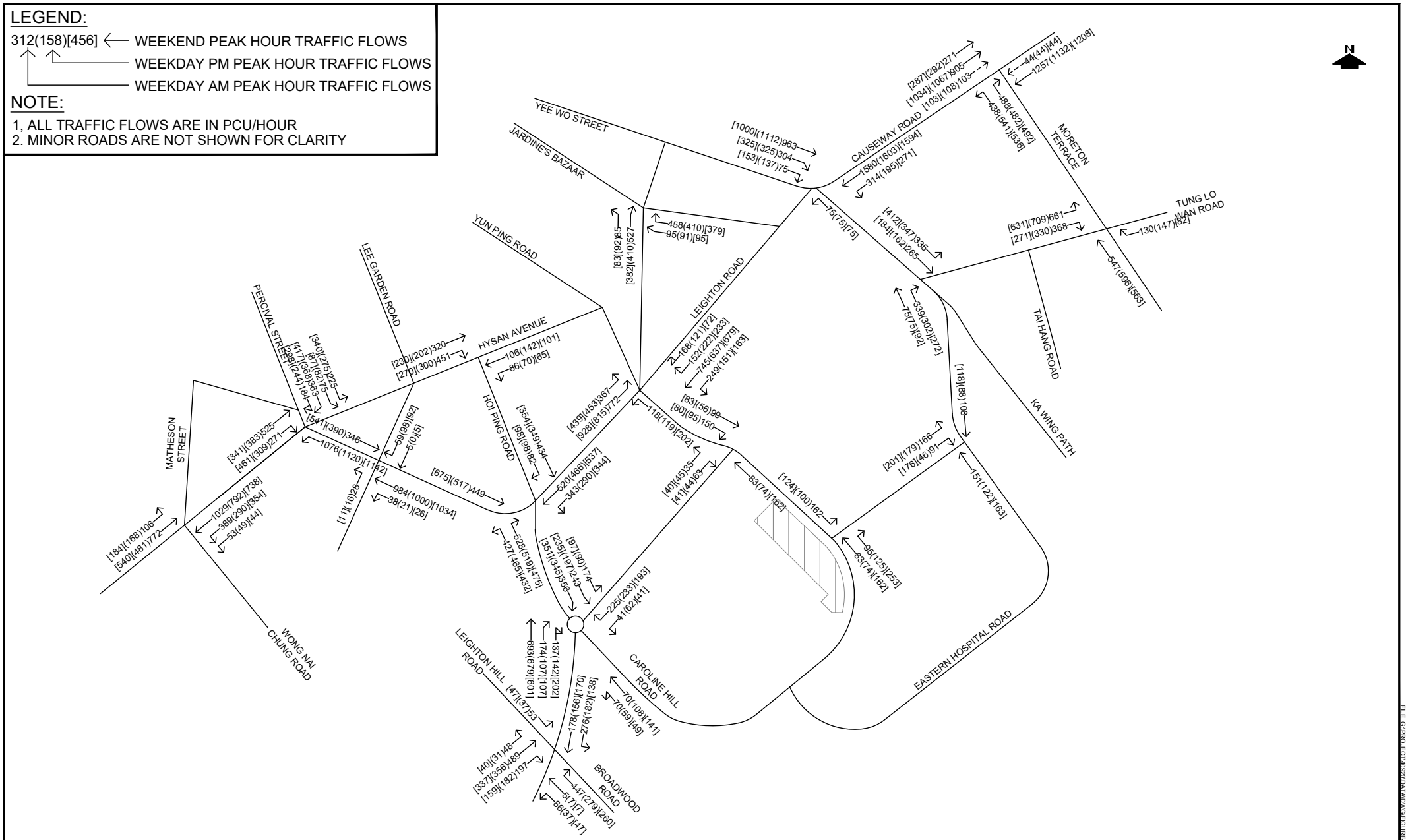
PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. **FIGURE 4.1**	REV. **B**
DESIGNED **SLN** / DATE **FEB 2026**	DRAWING TITLE: **DEVELOPMENT TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited	
DRAWN **CLL** / SCALE **N.T.S.**			
CHECKED **SLN**			

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.1B.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG	DRAWING NO. FIGURE 4.2	REV. C
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE MAR 2026 / SCALE N.T.S.	DRAWING TITLE: 2033 REFERENCE TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.2C.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40920	PROJECT TITLE: PROPOSED SCAA SPORTS LINK AT SOUTH CHINA ATHLETIC ASSOCIATION 88 CAROLINE HILL ROAD IN WONG NAI CHUNG			DRAWING NO. FIGURE 4.3	REV. C
DESIGNED SLN	DATE MAR 2026	DRAWING TITLE: **2033 DESIGN TRAFFIC FLOWS**		LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE N.T.S.				
CHECKED SLN					

FILE: G:\PROJECT\40920\DATA\DWG\FIGURE4.3C.DWG PLOT SCALE : 1 = 1

APPENDIX A

Proposed Car Park Layout

N

COTTON PATH

DISCIPLINED SERVICES SPORTS
& RECREATION CLUB

DISCIPLINED SERVICES SPORTS &
RECREATION CLUB FOOTBALL PITCH

CAROLINE HILL ROAD

+6.93
+7.46
+7.55
+8.36
+9.46
+10.80
+10.65
+12.23
+14.13
+15.83

STAIRCASE
STAIRCASE
STAIRCASE

L/UL

LIFT
LOBBY
+6.93

LIFT
LOBBY

LAY-BY AREA

SCAA
TRAINING
POOL

E&M

RAMP
DOWN

E&M

CARPARK
+7.46

5m
6m
6.43m

ACCESS GATE

UNEXCAVATED AREA

Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong

Car Park Layout ○ 1 : 500 (A3) ○ 07 Jan 2026

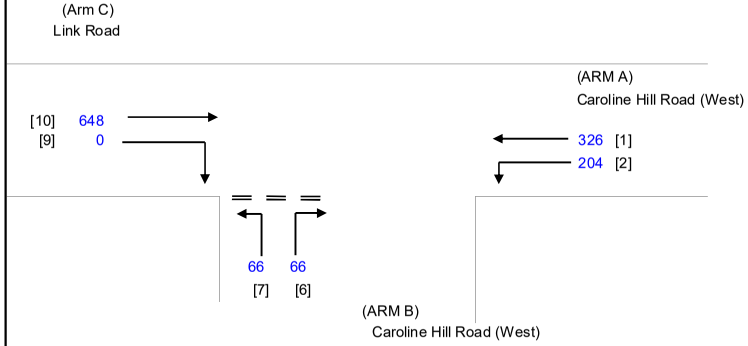
Design 2 (HK) Limited

APPENDIX B

Detail Calculation Sheets

- Existing Scenario

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J1_CHRW_LR	CHECKED BY:	SLN	Feb-26
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	204	(pcu/hr)
q a-c	=	326	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	648	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	66	(pcu/hr)
q b-c	=	66	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.5

THE CAPACITY OF MOVEMENT :

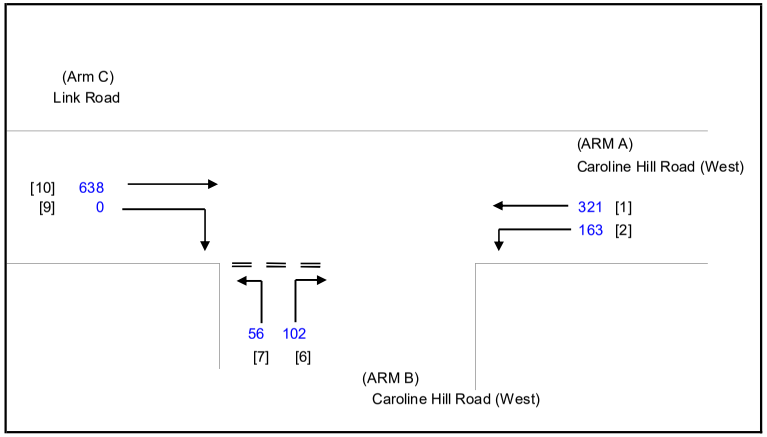
Q b-a	=	358		
Q b-c	=	574	Q b-c (O) =	547.5
Q c-b	=	502		
Q b-ac	=	441		
TOTAL FLOW	=	1310	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1844
DFC b-c	=	0.1150
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2993

CRITICAL DFC = 0.30

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J1_CHRW_LR	CHECKED BY:	SLN	Feb-26
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	163	(pcu/hr)
q a-c	=	321	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	638	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	102	(pcu/hr)
q b-c	=	56	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.35443038

THE CAPACITY OF MOVEMENT :

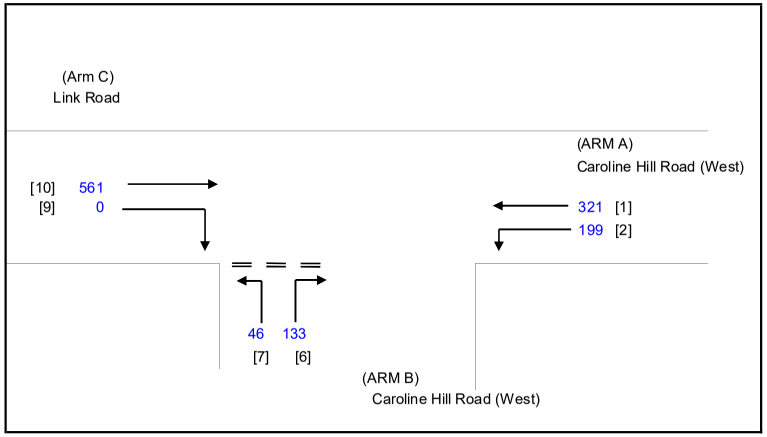
Q b-a	=	364		
Q b-c	=	579	Q b-c (O) =	538.4
Q c-b	=	513		
Q b-ac	=	419		
TOTAL FLOW	=	1280	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2802
DFC b-c	=	0.0967
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3769

CRITICAL DFC = 0.38

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J1_CHRW_LF	CHECKED BY:	SLN	Feb-26
J1 Caroline Hill Road (West) / Link Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	1.5	(metres)
q a-b	=	199	(pcu/hr)
q a-c	=	321	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	2.60	(metres)
Vr c-b	=	40	(metres)
q c-a	=	561	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.00	(metres)
W b-c	=	3.00	(metres)
Vl b-a	=	29	(metres)
Vr b-a	=	80	(metres)
Vr b-c	=	80	(metres)
q b-a	=	133	(pcu/hr)
q b-c	=	46	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.83939
E	=	0.90510
F	=	0.83641
Y	=	0.74815
F for (Qb-ac)	=	0.25698324

THE CAPACITY OF MOVEMENT :

Q b-a	=	372		
Q b-c	=	576	Q b-c (O) =	524.5
Q c-b	=	505		
Q b-ac	=	409		
TOTAL FLOW	=	1260	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3575
DFC b-c	=	0.0799
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.4374

CRITICAL DFC = 0.44

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

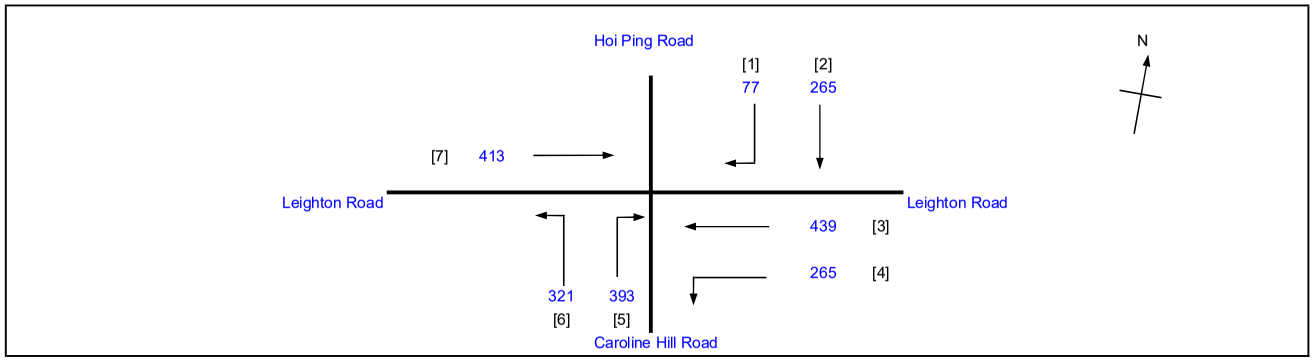
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

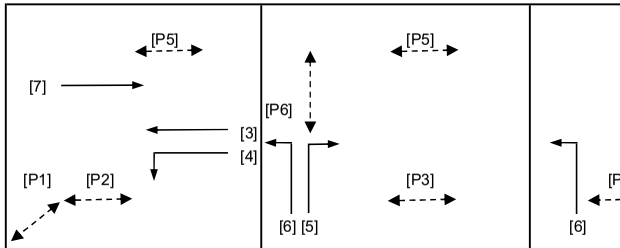
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2025 Existing AM

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx

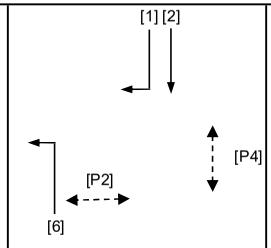


No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.602
Loss time		L =	20 sec
Total Flow		=	2173 pcu
Co	= (1.5*L+5)/(1-Y)	=	88.0 sec
Cm	= L/(1-Y)	=	50.3 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	24.5 %
Cp	= 0.9*L/(0.9-Y)	=	60.5 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**26 %**



Stage 1 G= 46 Int = 8

Stage 2 G= 35 Int = 7



Stage 3 G= 26 Int = 8

Stage 4 G= Int =

Stage 5 G= Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	47	5
P2	1,3	4	14	5	0	83	5
P3	2	4.5	14	5	3	34	5
P4	3	15	10	7	4	23	7
P5	1,2	7	11	6	1	89	6
P6	2	15	10	7	4	31	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		413		413	0.00	4020							4020	0.103			19	47	0.712	36	55
3*	1	3.00	1				2055		370		370	0.00	2055			0.7	-617			1438	0.257	0.257		47	47	0.712	48	40
3,4*	1	3.50	1	20		N	1965	265	69		334	0.79	1855			0.7	-556			1299	0.257			47	47	0.712	42	41
6	2,3	3.00	1	30		N	1915	321			321	1.00	1824							1824	0.176			32	42	0.712	48	49
5	2	4.00	1	20			2155			393	393	1.00	2005							2005	0.196	0.196		36	36	0.712	60	45
1,2	3	3.00	1	10		N	1915		265	77	342	0.23	1852	20	444					2297	0.149	0.149		27	27	0.712	54	51

* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

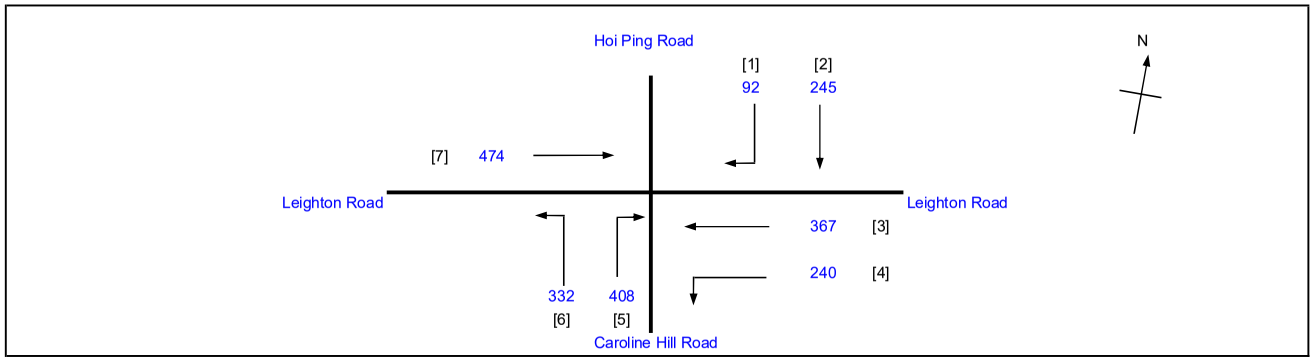
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

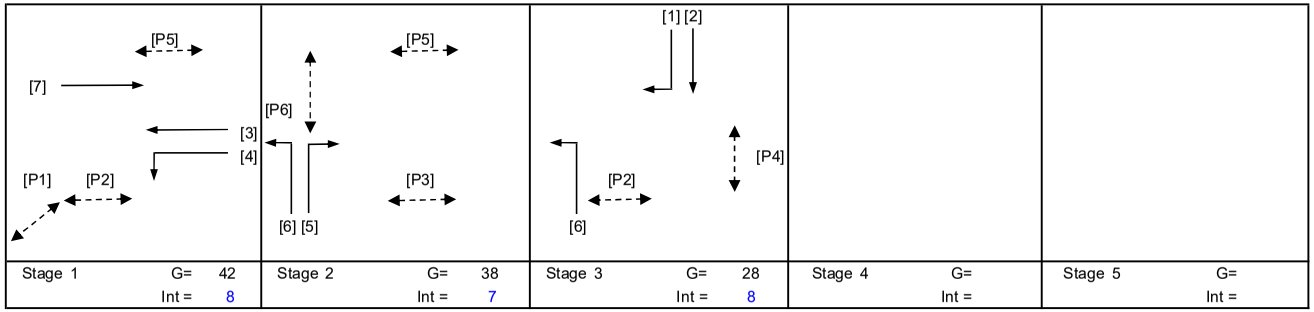
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.576
Loss time	L =	20 sec
Total Flow	=	2158 pcu
Co = (1.5*L+5)/(1-Y)	=	82.5 sec
Cm = L/(1-Y)	=	47.1 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	30.3 %
Cp = 0.9*L/(0.9-Y)	=	55.5 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**32 %**



Stage 1	G= 42	Int = 8
Stage 2	G= 38	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	Green Time Required FG	Green Time Required Delay	Green Time Provided SG	Green Time Provided FG
P1	1	4.5	10	5	2	43	5
P2	1,3	4	14	5	0	80	5
P3	2	4.5	14	5	3	37	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Movement Straight pcu/h	Movement Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		474		474	0.00	4020							4020	0.118			23	43	0.680	42	50
3*	1	3.00	1				2055		319		319	0.00	2055			0.7	-617			1438	0.222			42	43	0.680	42	41
3,4*	1	3.50	1	20		N	1965	240	48		288	0.83	1849			0.7	-555			1294	0.222	0.222		43	43	0.680	36	42
6	2,3	3.00	1	30		N	1915	332			332	1.00	1824							1824	0.182			35	45	0.680	48	45
5	2	4.00	1	20			2155			408	408	1.00	2005							2005	0.204	0.204		39	39	0.680	60	42
1,2	3	3.00	1	10		N	1915		245	92	337	0.27	1840	20	414					2253	0.150	0.150		29	29	0.680	54	49

* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

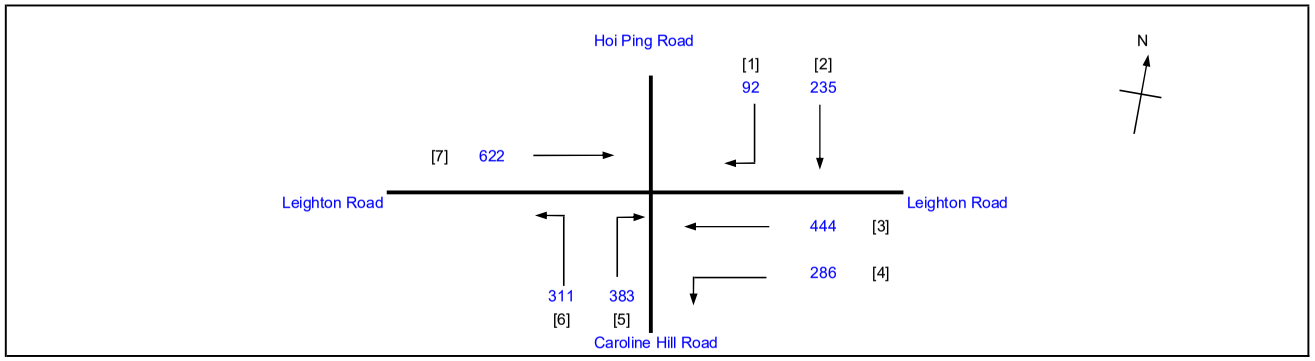
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

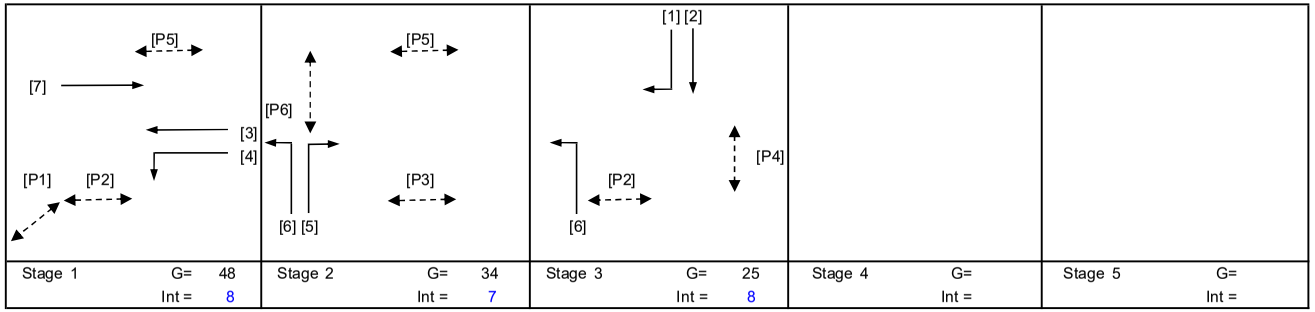
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.600
Loss time		L =	20 sec
Total Flow		=	2373 pcu
Co	= (1.5*L+5)/(1-Y)	=	87.6 sec
Cm	= L/(1-Y)	=	50.1 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	24.9 %
Cp	= 0.9*L/(0.9-Y)	=	60.1 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**27 %**



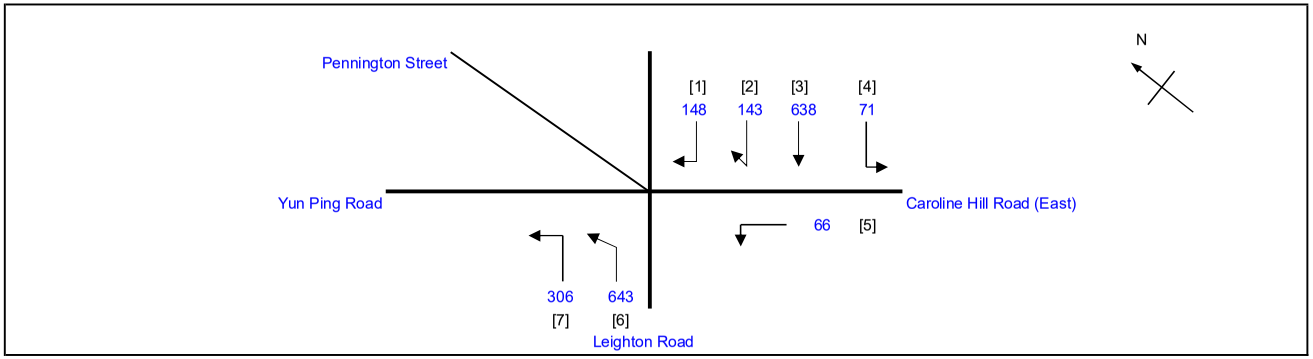
Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	49	5
P2	1,3	4	14	5	0	84	5
P3	2	4.5	14	5	3	33	5
P4	3	15	10	7	4	22	7
P5	1,2	7	11	6	1	90	6
P6	2	15	10	7	4	30	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
7	1	3.25	2			N	4020		622		622	0.00	4020							4020	0.155			28	49	0.710	51	47
3*	1	3.00	1				2055		384		384	0.00	2055			0.7	-617			1438	0.267			49	49	0.710	48	38
3,4*	1	3.50	1	20		N	1965	286	60		346	0.83	1850			0.7	-555			1295	0.267	0.267		49	49	0.710	42	39
6	2,3	3.00	1	30		N	1915	311			311	1.00	1824							1824	0.171			31	41	0.710	48	50
5	2	4.00	1	20			2155			383	383	1.00	2005							2005	0.191	0.191		35	35	0.710	60	46
1,2	3	3.00	1	10		N	1915		235	92	327	0.28	1837	20	462					2299	0.142	0.142		26	26	0.710	54	52

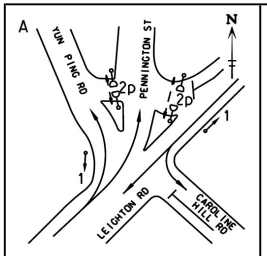
* Site factor is applied to Leighton Road westbound, in view of the short weaving distance at the exit arm of the junction.

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

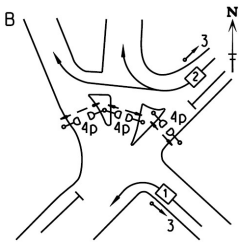
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Feb-26
			Reviewed By:	SLN	Feb-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.550
Loss time	L =	11 sec
Total Flow	=	2015 pcu
Co = (1.5*L+5)/(1-Y)	=	47.8 sec
Cm = L/(1-Y)	=	24.4 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	48.6 %
Cp = 0.9*L/(0.9-Y)	=	28.3 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**50 %**



Stage 1 G= 71
Int = 6



Stage 2 G= 46
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	67	8
4P	2		10	8	2	43	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							11		
3	1	2.50	1				2005		461		461	0.00	2005							2005	0.230			50	72
3,4	1	3.00	1	7		N	1915	71	177		248	0.29	1804			0.6	-722			1082	0.229			50	72
6	1	3.00	1				2055		508		508	0.00	2055			0.7	-534			1521	0.334	0.334		72	72
6,7	1	3.00	1	15		N	1915	306	135		441	0.69	1791			0.7	-466			1325	0.333			72	72
1,2	2	3.50	1	9		N	1965			291	291	1.00	1684			0.8	-337			1347	0.216	0.216		47	47
5	2	4.00	1	5		N	2015	66			66	1.00	1550			0.6	-620			930	0.071			15	47

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

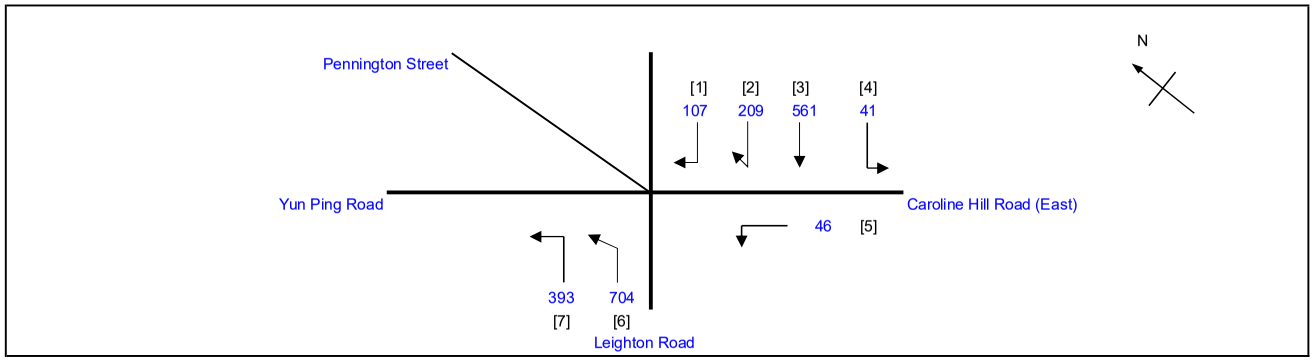
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

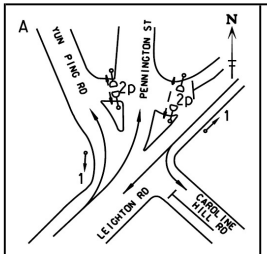
2025 Existing PM

PROJECT NO.: 40920

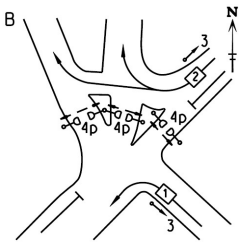
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.621
Loss time		L =	11 sec
Total Flow		=	2061 pcu
Co	= (1.5*L+5)/(1-Y)	=	56.8 sec
Cm	= L/(1-Y)	=	29.1 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	31.6 %
Cp	= 0.9*L/(0.9-Y)	=	35.5 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**33 %**



Stage 1 G= 73 Int = 6



Stage 2 G= 44 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	69	8
4P	2		10	8	2	41	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		388		388	0.00	2005							2005	0.194			37	74
3,4	1	3.00	1	7		N	1915	41	173		214	0.19	1839			0.6	-736			1103	0.194			37	74
6	1	3.00	1				2055		588		588	0.00	2055			0.7	-534			1521	0.387			74	74
6,7	1	3.00	1	15		N	1915	393	116		509	0.77	1778			0.7	-462			1316	0.387	0.387		74	74
1,2	2	3.50	1	9		N	1965			316	316	1.00	1684			0.8	-337			1347	0.235	0.235		45	45
5	2	4.00	1	5		N	2015	46			46	1.00	1550			0.6	-620			930	0.049			9	45

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

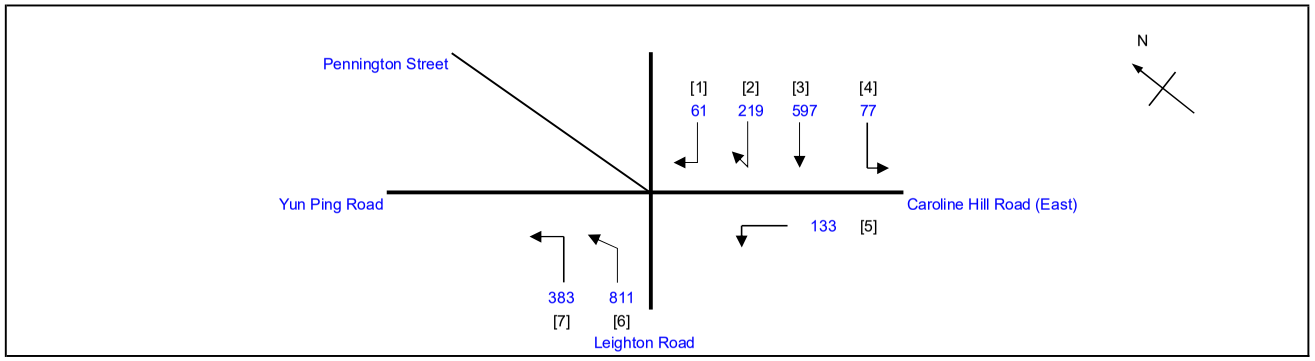
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

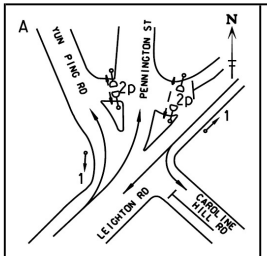
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

2025 Existing Weekend

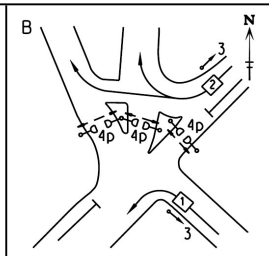
PROJECT NO.:	40920
FILENAME :	J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.627
Loss time		L =	11 sec
Total Flow		=	2281 pcu
Co	= (1.5*L+5)/(1-Y)	=	57.7 sec
Cm	= L/(1-Y)	=	29.5 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	30.3 %
Cp	= 0.9*L/(0.9-Y)	=	36.3 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**31 %**



Stage 1 G= 79 Int = 6



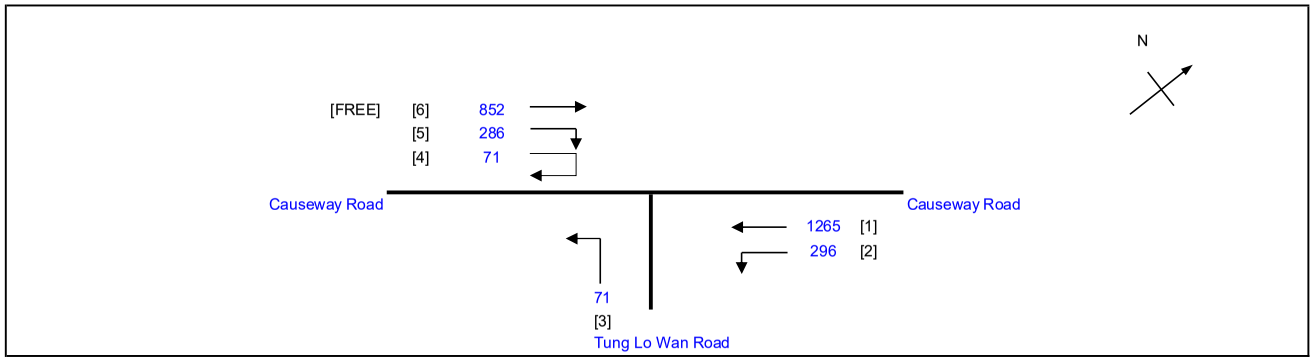
Stage 2 G= 38 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	75	8
4P	2		10	8	2	35	8

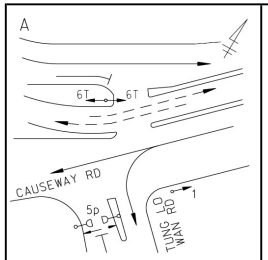
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							11		
3	1	2.50	1				2005		439		439	0.00	2005							2005	0.219			42	80
3,4	1	3.00	1	7		N	1915	77	158		235	0.33	1789			0.6	-716			1073	0.219			42	80
6	1	3.00	1				2055		638		638	0.00	2055			0.7	-534			1521	0.419	0.419		80	80
6,7	1	3.00	1	15		N	1915	383	173		556	0.69	1792			0.7	-466			1326	0.419			80	80
1,2	2	3.50	1	9		N	1965			280	280	1.00	1684			0.8	-337			1347	0.208	0.208		39	39
5	2	4.00	1	5		N	2015	133			133	1.00	1550			0.6	-620			930	0.143			27	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

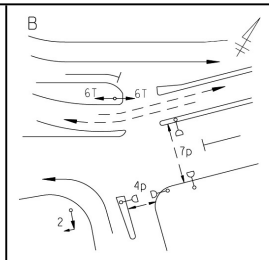
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



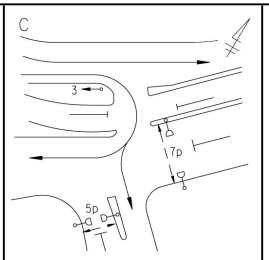
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.412
Loss time	L =	33 sec
Total Flow	=	1989 pcu
Co = (1.5*L+5)/(1-Y)	=	92.7 sec
Cm = L/(1-Y)	=	56.1 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	58.4 %
Cp = 0.9*L/(0.9-Y)	=	60.9 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**46 %**



Stage 1 G= 36 Int = 9



Stage 2 G= 15 Int = 4



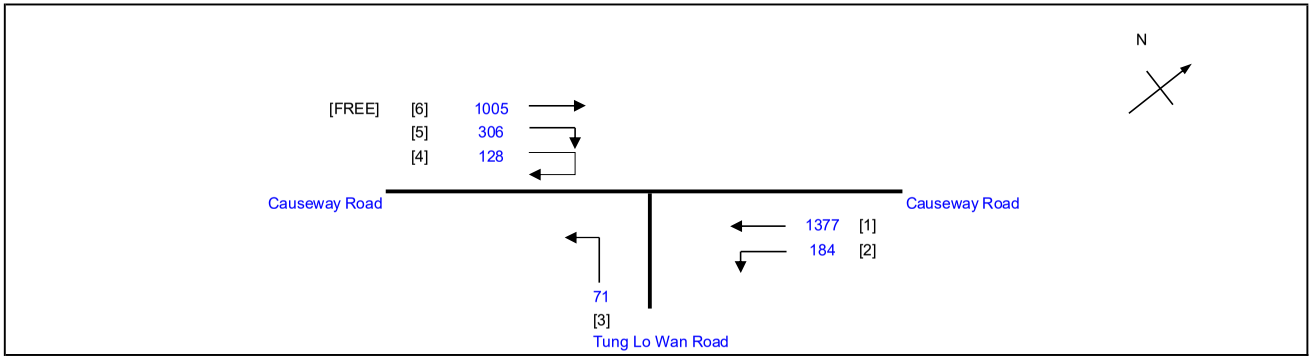
Stage 3 G= 29 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		44	11

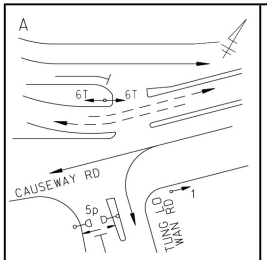
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		343		343	0.00	1915			0.8	-383			1532	0.224			36	37
1	1	3.00	2				4110		922		922	0.00	4110							4110	0.224			36	37
2	1	3.00	1	9		N	1915	296			296	1.00	1641			0.8	-328			1313	0.225	0.225		37	37
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			8	15
5	3	4.00	1	12			2155			286	286	1.00	1916			0.8	-383			1533	0.187	0.187		30	30
4	3	4.50	1	8			2205			71	71	1.00	1857			0.8	-371			1486	0.048			8	30
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

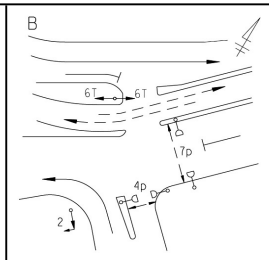
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



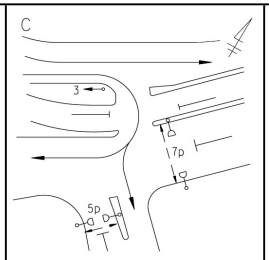
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.444
Loss time	L =	33 sec
Total Flow	=	2066 pcu
Co = (1.5*L+5)/(1-Y)	=	98.0 sec
Cm = L/(1-Y)	=	59.3 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	47.0 %
Cp = 0.9*L/(0.9-Y)	=	65.1 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**36 %**



Stage 1 G= 36 Int = 9



Stage 2 G= 15 Int = 4



Stage 3 G= 29 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		44	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		374		374	0.00	1915			0.8	-383			1532	0.244	0.244		37	37
1	1	3.00	2				4110		1003		1003	0.00	4110							4110	0.244			37	37
2	1	3.00	1	9		N	1915	184			184	1.00	1641			0.8	-328			1313	0.140			21	37
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			7	15
5	3	4.00	1	12			2155			306	306	1.00	1916			0.8	-383			1533	0.200	0.200		30	30
4	3	4.50	1	8			2205			128	128	1.00	1857			0.8	-371			1486	0.086			13	30
PED	2																					15			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

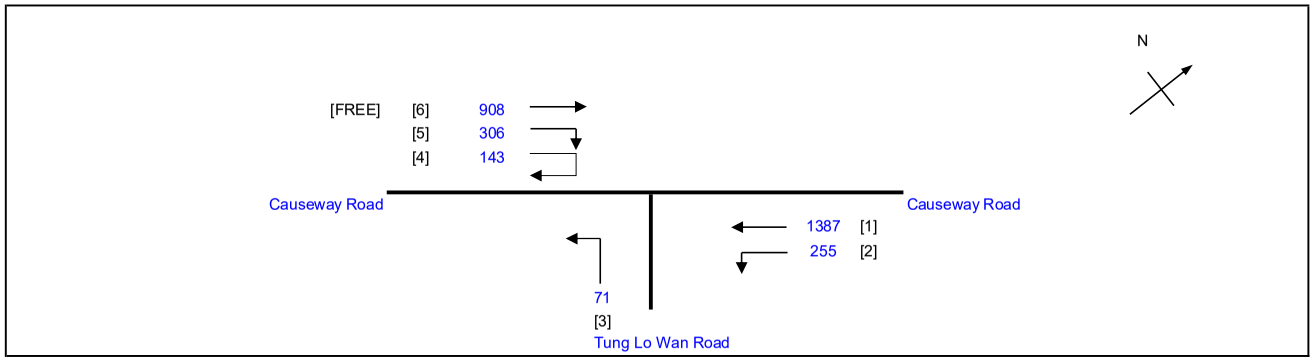
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

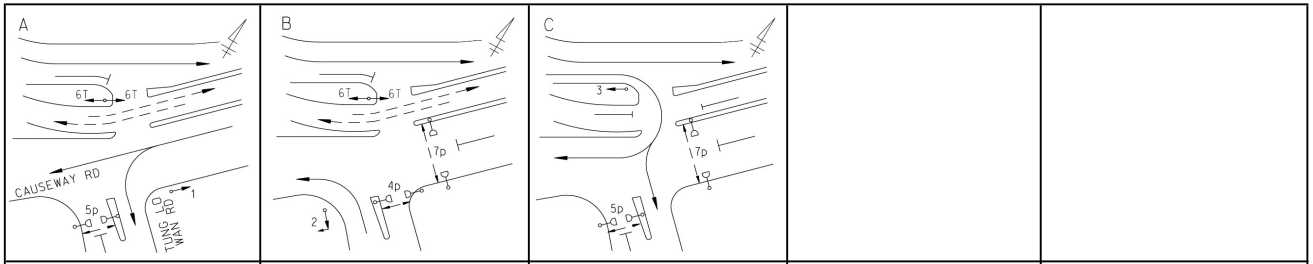
2025 Existing Weekend

PROJECT NO.: 40920

FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.446
Loss time	L =	33 sec
Total Flow	=	2162 pcu
Co = (1.5*L+5)/(1-Y)	=	98.3 sec
Cm = L/(1-Y)	=	59.5 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	46.4 %
Cp = 0.9*L/(0.9-Y)	=	65.4 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**35 %**



Stage 1	G= 36	Int = 9	
Stage 2	G= 15	Int = 4	
Stage 3	G= 29	Int = 7	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		44	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		377		377	0.00	1915			0.8	-383			1532	0.246	0.246		37	37
1	1	3.00	2				4110		1010		1010	0.00	4110							4110	0.246			37	37
2	1	3.00	1	9		N	1915	255			255	1.00	1641			0.8	-328			1313	0.194			29	37
3	2	4.00	1	25		N	2015	71			71	1.00	1901			0.8	-380			1521	0.047			7	15
5	3	4.00	1	12			2155			306	306	1.00	1916			0.8	-383			1533	0.200	0.200		30	30
4	3	4.50	1	8			2205			143	143	1.00	1857			0.8	-371			1486	0.096			14	30
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

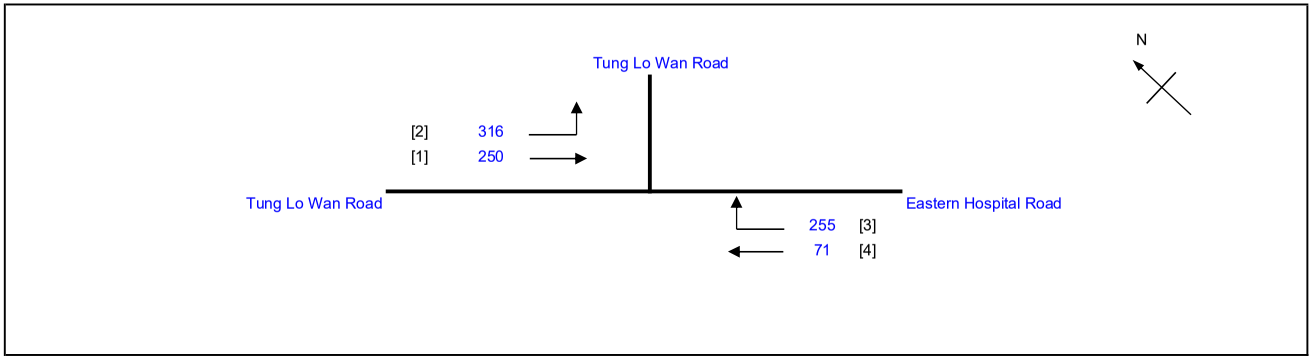
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

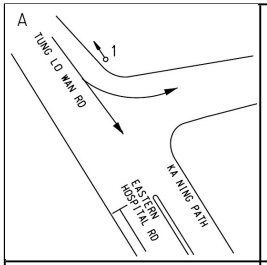
J5 Tung Lo Wan Road / Eastern Hospital Road

2025 Existing AM

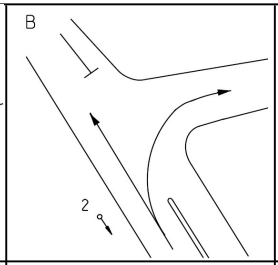
PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



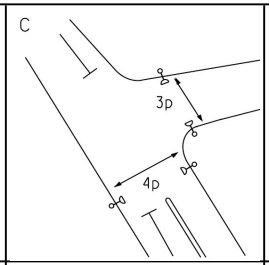
No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.326
Loss time		L =	41 sec
Total Flow		=	892 pcu
Co	= (1.5*L+5)/(1-Y)	=	98.7 sec
Cm	= L/(1-Y)	=	60.8 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	81.7 %
Cp	= 0.9*L/(0.9-Y)	=	64.3 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**63 %**



Stage 1 G= 25 Int = 5



Stage 2 G= 32 Int = 3



Stage 3 G= 33 Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
1,2	1	3.30	1	25			2085	50	250		300	0.17	2064							2064	0.145	0.145		26	26			
1	1	3.30	1	25		N	1945	266			266	1.00	1835							1835	0.145			26	26			
3,4	2	3.65	1	12		N	1980		71	255	326	0.78	1804							1804	0.181	0.181		33	33			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

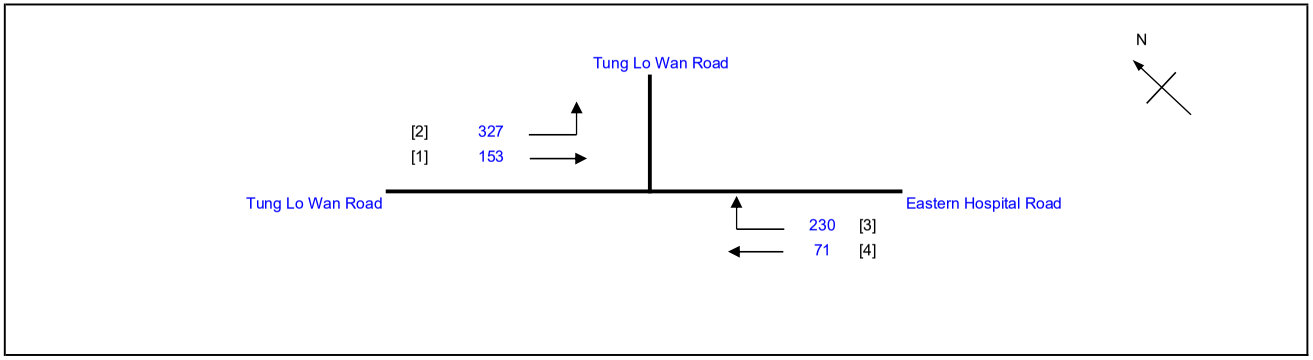
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

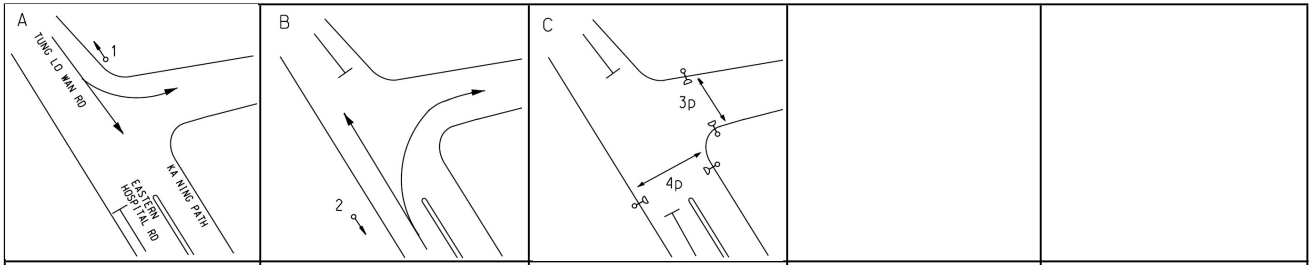
J5 Tung Lo Wan Road / Eastern Hospital Road

2025 Existing PM

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.291
Loss time		L =	41 sec
Total Flow		=	781 pcu
Co	= (1.5*L+5)/(1-Y)	=	93.8 sec
Cm	= L/(1-Y)	=	57.8 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	103.8 %
Cp	= 0.9*L/(0.9-Y)	=	60.6 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**83 %**



Stage 1	G=	24	
	Int =	5	
Stage 2	G=	33	
	Int =	3	
Stage 3	G=	33	
	Int =	2	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						8		
1,2	1	3.30	1	25			2085	99	153		252	0.39	2037							2037	0.124			25	25
1	1	3.30	1	25		N	1945	228			228	1.00	1835							1835	0.124	0.124		25	25
3,4	2	3.65	1	12		N	1980		71	230	301	0.76	1807							1807	0.167	0.167		34	34
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

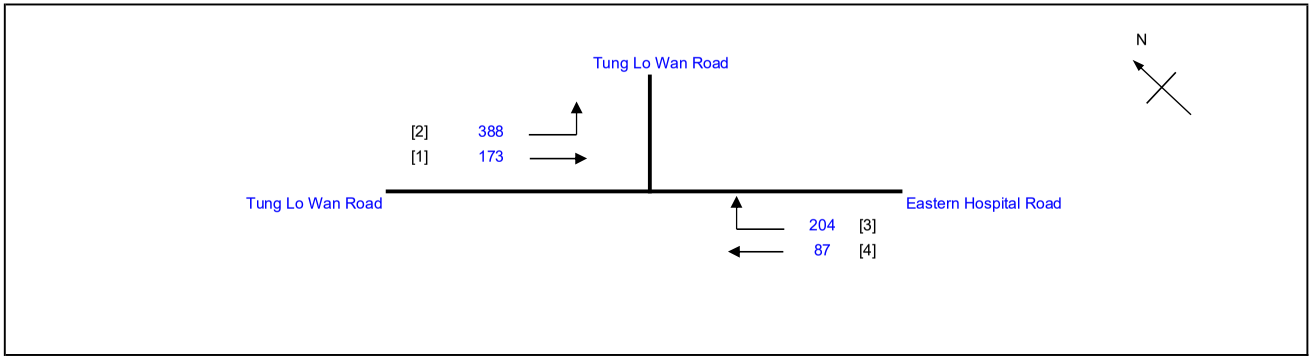
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

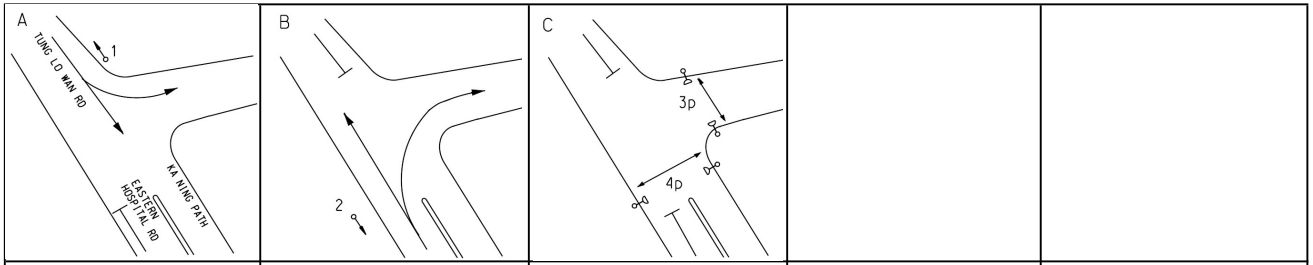
J5 Tung Lo Wan Road / Eastern Hospital Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.305
Loss time		L =	41 sec
Total Flow		=	852 pcu
Co	= (1.5*L+5)/(1-Y)	=	95.7 sec
Cm	= L/(1-Y)	=	59.0 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	94.4 %
Cp	= 0.9*L/(0.9-Y)	=	62.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**74 %**



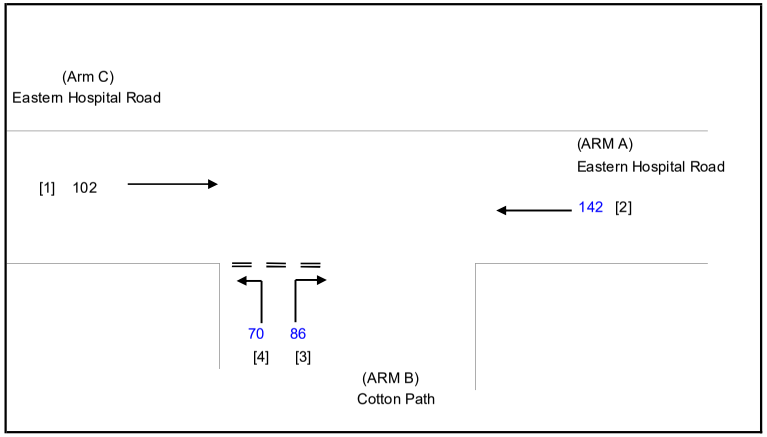
Stage 1	G=	27	
	Int =	5	
Stage 2	G=	30	
	Int =	3	
Stage 3	G=	33	
	Int =	2	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
1,2	1	3.30	1	25			2085	122	173		295	0.41	2035							2035	0.145	0.145		28	28			
1	1	3.30	1	25		N	1945	266			266	1.00	1835							1835	0.145			28	28			
3,4	2	3.65	1	12		N	1980		87	204	291	0.70	1820							1820	0.160	0.160		31	31			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Feb-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	102	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	86	(pcu/hr)
q b-c	=	70	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.44871795

THE CAPACITY OF MOVEMENT :

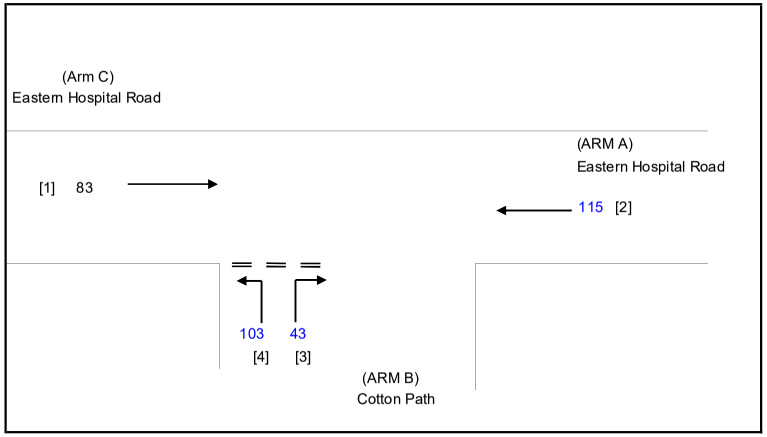
Q b-a	=	528			
Q b-c	=	728	Q b-c (O) =	698.4	
Q c-b	=	414			
Q b-ac	=	602			
TOTAL FLOW	=	400	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1629
DFC b-c	=	0.0962
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1162

CRITICAL DFC = 0.16

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Feb-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	115	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	83	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	43	(pcu/hr)
q b-c	=	103	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.70547945

THE CAPACITY OF MOVEMENT :

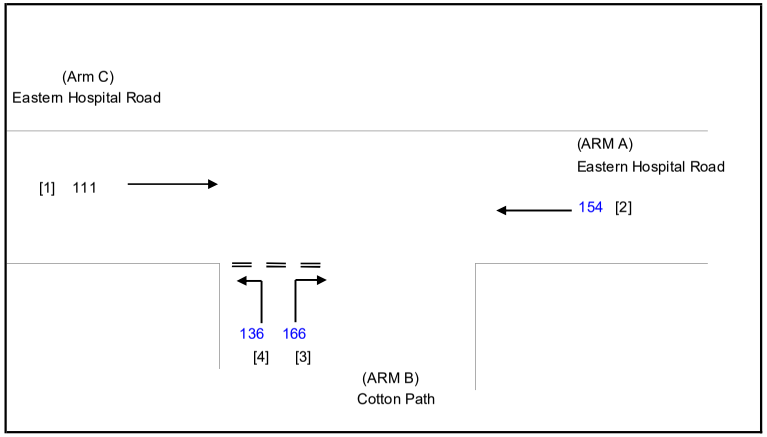
Q b-a	=	538		
Q b-c	=	735	Q b-c (O) =	720.3
Q c-b	=	418		
Q b-ac	=	663		
TOTAL FLOW	=	344	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0799
DFC b-c	=	0.1401
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1552

CRITICAL DFC = 0.16

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Feb-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	154	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	111	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	166	(pcu/hr)
q b-c	=	136	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.45033113

THE CAPACITY OF MOVEMENT :

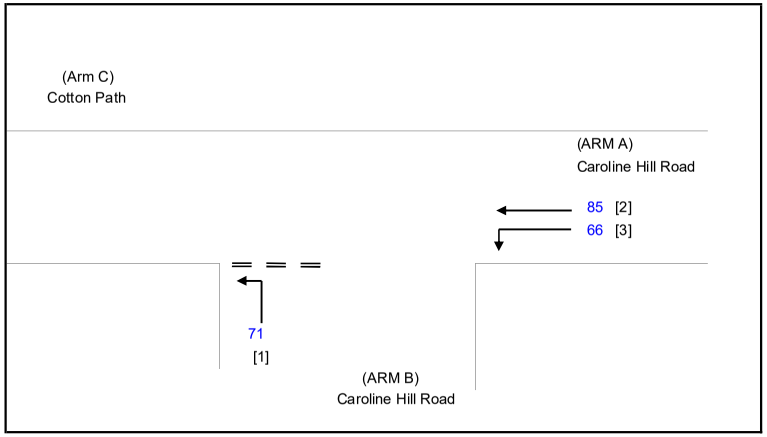
Q b-a	=	524		
Q b-c	=	725	Q b-c (O) =	667.6
Q c-b	=	412		
Q b-ac	=	599		
TOTAL FLOW	=	567	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3168
DFC b-c	=	0.1876
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2271

CRITICAL DFC = 0.32

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Feb-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	66	(pcu/hr)
q a-c	=	85	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	71	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

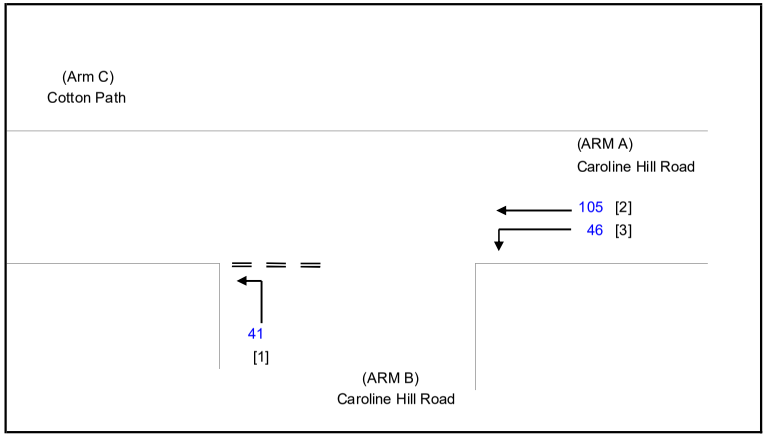
Q b-a	=	317			
Q b-c	=	723	Q b-c (O) =	723	
Q c-b	=	411			
Q b-ac	=	723			
TOTAL FLOW	=	222	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0982
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.0982

CRITICAL DFC = 0.10

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Feb-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	46	(pcu/hr)
q a-c	=	105	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	41	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

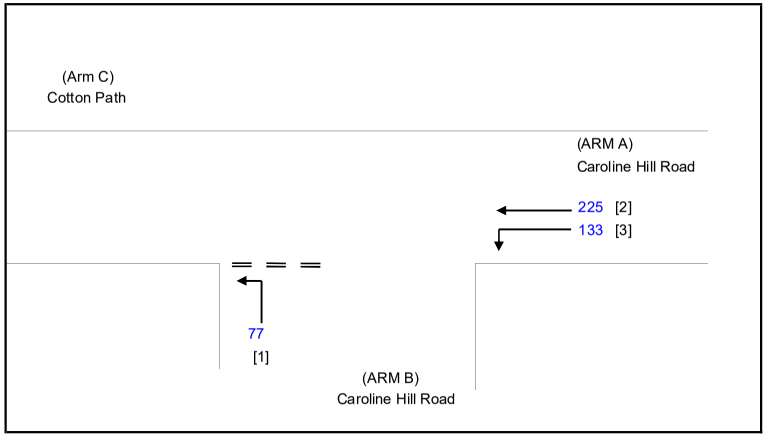
Q b-a	=	315			
Q b-c	=	720	Q b-c (O) =	720	
Q c-b	=	411			
Q b-ac	=	720			
TOTAL FLOW	=	192	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0569
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.0569

CRITICAL DFC = 0.06

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Feb-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	133	(pcu/hr)
q a-c	=	225	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	77	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

Q b-a	=	292			
Q b-c	=	674	Q b-c (O) =	674	
Q c-b	=	376			
Q b-ac	=	674			
TOTAL FLOW	=	435	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

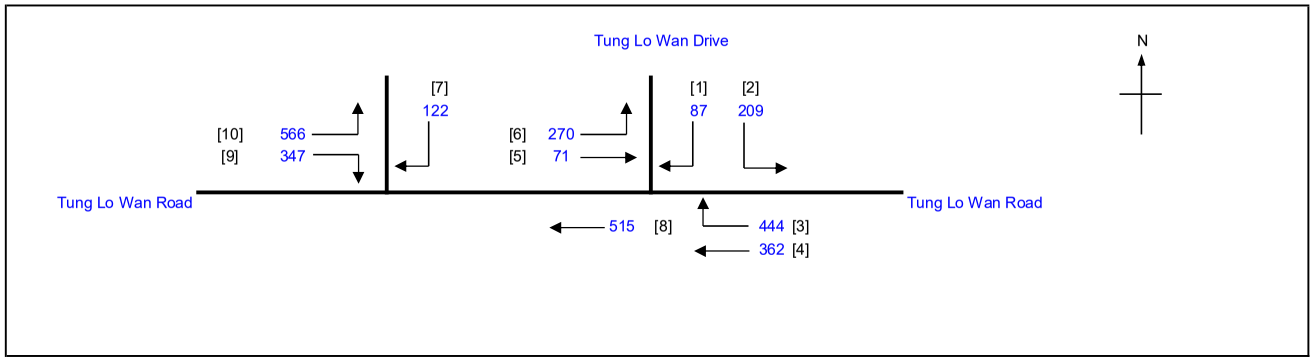
DFC b-a	=	0.0000
DFC b-c	=	0.1142
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1142

CRITICAL DFC = 0.11

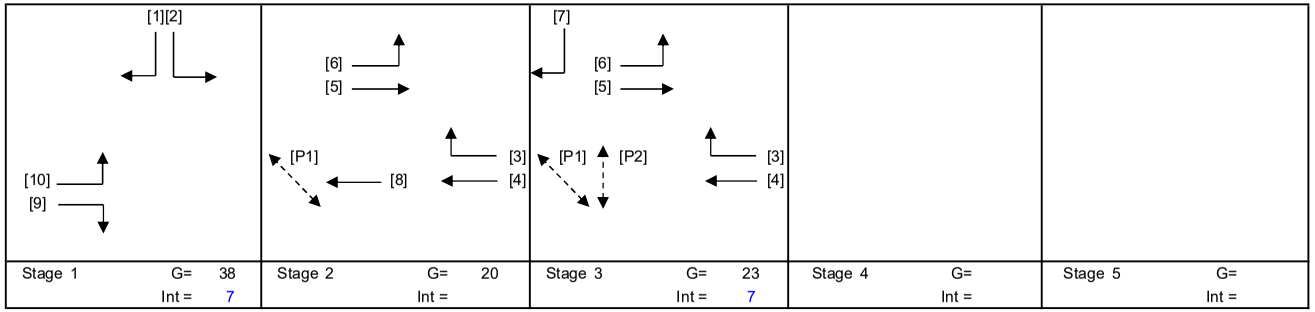
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2025 Existing AM**		
PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Apr-26
	Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.546
Loss time	L =	12 sec
Total Flow	=	2993 pcu
Co = (1.5*L+5)/(1-Y)	=	50.6 sec
Cm = L/(1-Y)	=	26.4 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	48.5 %
Cp = 0.9*L/(0.9-Y)	=	30.5 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**44 %**



Stage 1	G= 38	Stage 2	G= 20	Stage 3	G= 23	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		42	8
P2	3		9	8		22	8

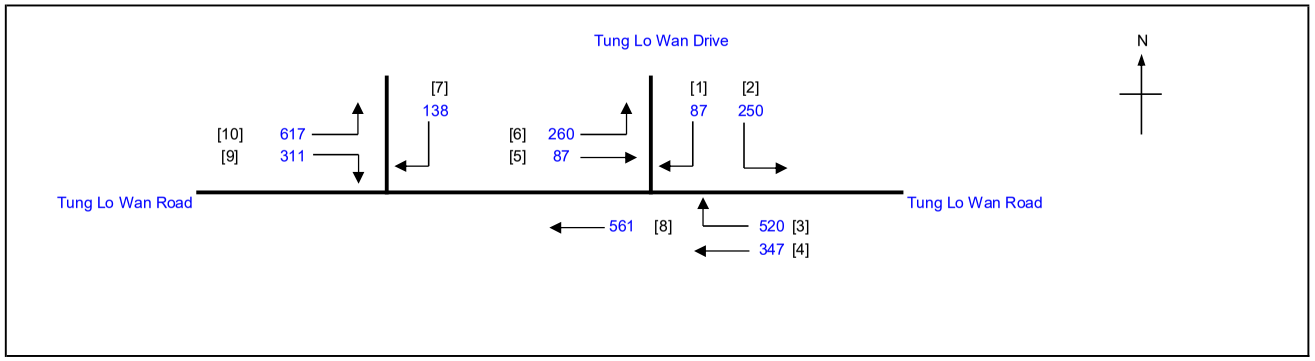
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		515		515	0.00	3970							3970	0.130			20	20	0.624	30	34
10	1	3.70	1	8		N	1985	429			429	1.00	1672							1672	0.257	0.257		39	39	0.624	36	24
9,10	1	3.50	1	13			2105	137		347	484	1.00	1887							1887	0.256			39	39	0.624	42	23
7	3	5.00	1	27		N	2115			122	122	1.00	2004							2004	0.061			9	24	0.624	18	51
4	2,3	3.70	1			N	1985		362		362	0.00	1985							1985	0.182			28	44	0.624	36	31
3,4	2,3	3.00	1	8	O		2055			444	444	1.00	1537							1537	0.289	0.289		44	44	0.624	36	21
5,6	2,3	5.00	1	13		N	2115	270	71		341	0.79	1938							1938	0.176			27	44	0.624	36	32
1,2	1	3.50	1	8		N	1965	209		87	296	1.00	1655							1655	0.179			27	39	0.624	30	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

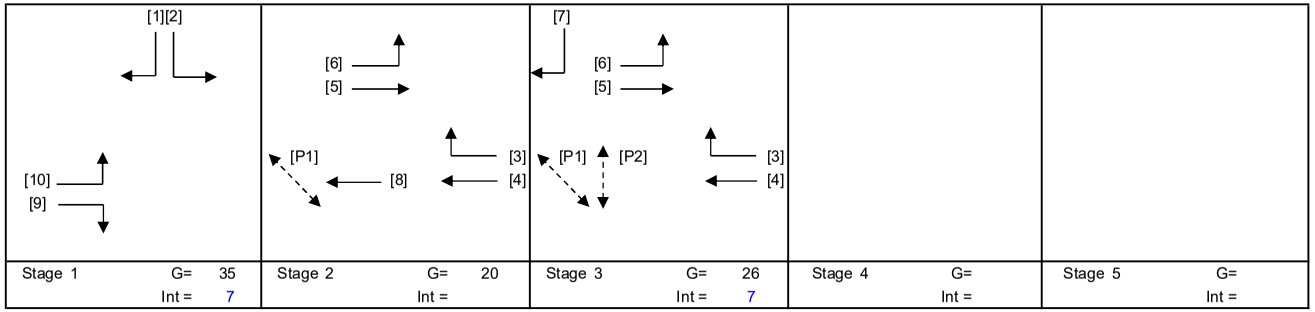
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Apr-26
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.599
Loss time	L =	12 sec
Total Flow	=	3178 pcu
Co = (1.5*L+5)/(1-Y)	=	57.4 sec
Cm = L/(1-Y)	=	29.9 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	35.2 %
Cp = 0.9*L/(0.9-Y)	=	35.9 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**31 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 35	G= 20	G= 26	G=	G=
Int = 7	Int =	Int = 7	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		45	8
P2	3		9	8		25	8

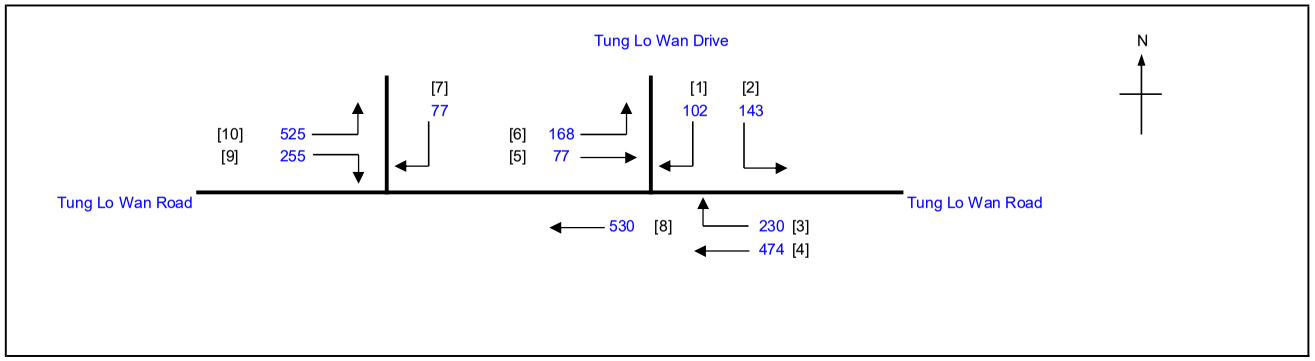
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		561		561	0.00	3970							3970	0.141			20	20	0.686	33	36
10	1	3.70	1	8		N	1985	436			436	1.00	1672							1672	0.261	0.261		36	36	0.686	42	28
9,10	1	3.50	1	13			2105	181		311	492	1.00	1887							1887	0.261			36	36	0.686	48	27
7	3	5.00	1	27		N	2115			138	138	1.00	2004							2004	0.069			10	27	0.686	18	55
4	2,3	3.70	1			N	1985		347		347	0.00	1985							1985	0.175			24	47	0.686	36	36
3,4	2,3	3.00	1	8	O		2055			520	520	1.00	1537							1537	0.338	0.338		47	47	0.686	36	21
5,6	2,3	5.00	1	13		N	2115	260	87		347	0.75	1947							1947	0.178			25	47	0.686	36	35
1,2	1	3.50	1	8		N	1965	250		87	337	1.00	1655							1655	0.204			28	36	0.686	36	34

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

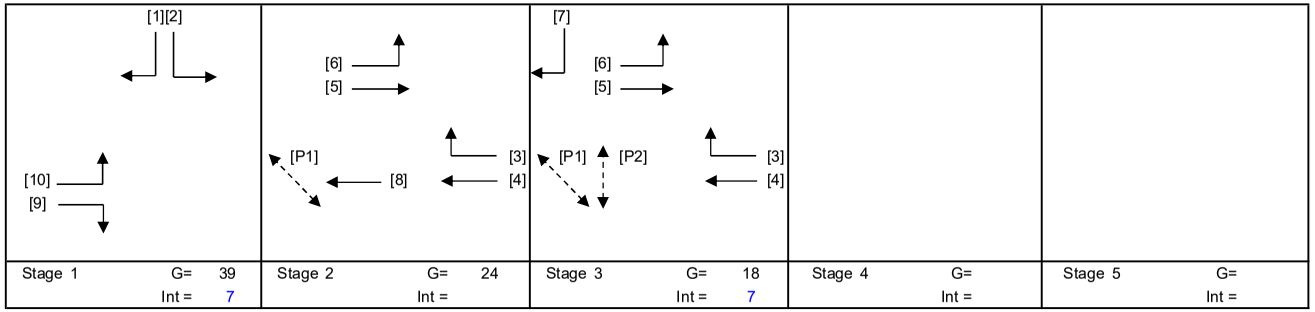
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2025 Existing Weekend**		
PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Apr-26
	Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.458
Loss time	L =	12 sec
Total Flow	=	2581 pcu
Co = (1.5*L+5)/(1-Y)	=	42.4 sec
Cm = L/(1-Y)	=	22.1 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	76.8 %
Cp = 0.9*L/(0.9-Y)	=	24.4 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**72 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 39	G= 24	G= 18	G=	G=
Int = 7	Int =	Int = 7	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		17	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		530		530	0.00	3970							3970	0.134			24	24	0.524	30	29
10	1	3.70	1	8		N	1985	366			366	1.00	1672							1672	0.219			40	40	0.524	30	21
9,10	1	3.50	1	13			2105	159		255	414	1.00	1887							1887	0.219	0.219		40	40	0.524	36	21
7	3	5.00	1	27		N	2115			77	77	1.00	2004							2004	0.038			7	19	0.524	12	50
4	2,3	3.70	1			N	1985		474		474	0.00	1985							1985	0.239	0.239		43	43	0.524	36	19
3,4	2,3	3.00	1	8	O		2055			230	230	1.00	1537							1537	0.150			27	43	0.524	24	30
5,6	2,3	5.00	1	13		N	2115	168	77		245	0.69	1960							1960	0.125			23	43	0.524	24	32
1,2	1	3.50	1	8		N	1965	143		102	245	1.00	1655							1655	0.148			27	40	0.524	24	30

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

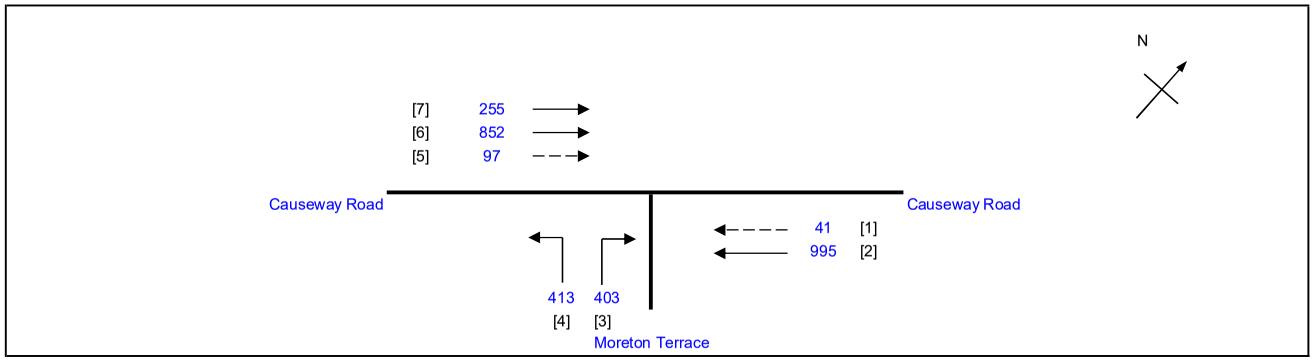
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

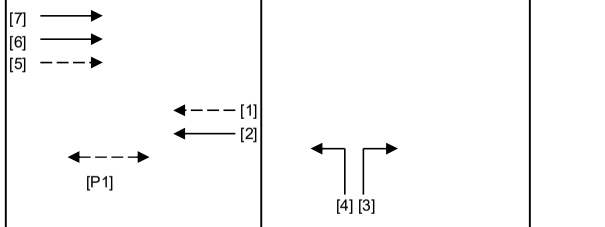
J9 Moreton Terrace / Causeway Road

2025 Existing AM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.554
Loss time	L =	10 sec
Total Flow	=	3056 pcu
Co = (1.5*L+5)/(1-Y)	=	44.8 sec
Cm = L/(1-Y)	=	22.4 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	49.0 %
Cp = 0.9*L/(0.9-Y)	=	26.0 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**45 %**



Stage 1 G= 61 Int = 5
Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		268		268	0.00	1985			0.4	-1191			794	0.338			52	62	0.619	18	19
2	1	4.00	1				2155		727		727	0.00	2155							2155	0.337			52	62	0.619	48	16
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	62	0.619	6	80
4	2	3.50	1	9		N	1965	251			251	1.00	1684							1684	0.149	0.149		23	23	0.619	30	35
3,4	2	3.30	1	15			2085	162		119	281	1.00	1895							1895	0.148			23	23	0.619	30	35
3	2	3.50	1	15			2105			284	284	1.00	1914							1914	0.148			23	23	0.619	30	35
7	1	3.50	1			N	1965		255		255	0.00	1965							1965	0.130			20	62	0.619	30	37
6	1	3.50	1				2105		852		852	0.00	2105							2105	0.405	0.405		62	62	0.619	42	11
5	1	3.00	1				2055		97		97	0.00	2055							2055	0.047			7	62	0.619	12	55

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

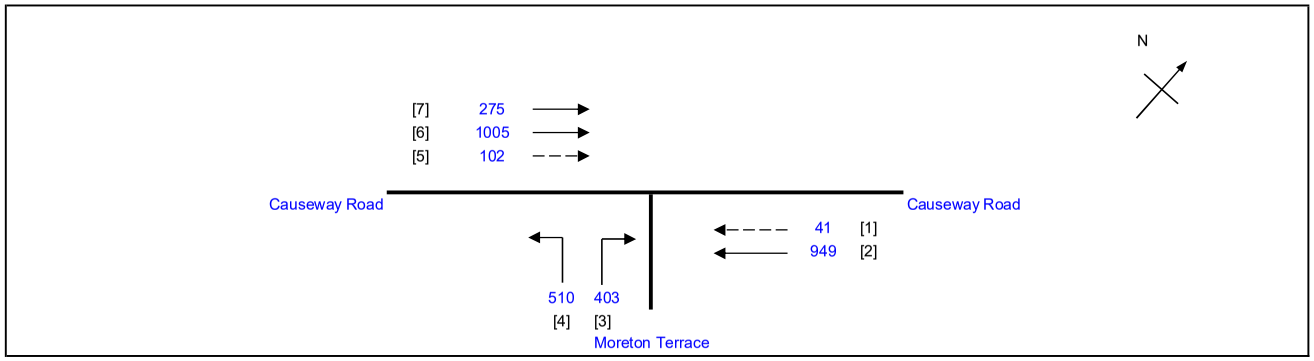
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

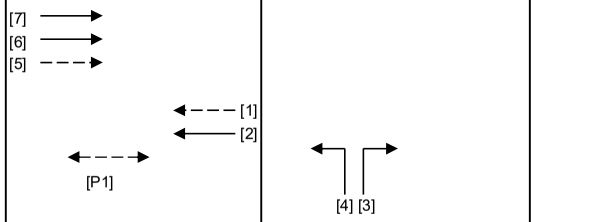
J9 Moreton Terrace / Causeway Road

2025 Existing PM

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.644
Loss time	L =	10 sec
Total Flow	=	3285 pcu
Co = (1.5*L+5)/(1-Y)	=	56.1 sec
Cm = L/(1-Y)	=	28.1 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	28.2 %
Cp = 0.9*L/(0.9-Y)	=	35.1 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**25 %**



Stage 1 G= 62 Int = 5
Stage 2 G= 21 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		57	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		256		256	0.00	1985			0.4	-1191			794	0.322			43	63	0.719	24	31
2	1	4.00	1				2155		693		693	0.00	2155							2155	0.322			42	63	0.719	60	24
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	63	0.719	6	114
4	2	3.50	1	9		N	1965	280			280	1.00	1684							1684	0.166	0.166		22	22	0.719	36	41
3,4	2	3.30	1	15			2085	230		85	315	1.00	1895							1895	0.166			22	22	0.719	36	40
3	2	3.50	1	15			2105			318	318	1.00	1914							1914	0.166			22	22	0.719	36	40
7	1	3.50	1			N	1965		275		275	0.00	1965							1965	0.140			18	63	0.719	36	43
6	1	3.50	1				2105		1005		1005	0.00	2105							2105	0.477	0.477		63	63	0.719	48	12
5	1	3.00	1				2055		102		102	0.00	2055							2055	0.050			7	63	0.719	18	68

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

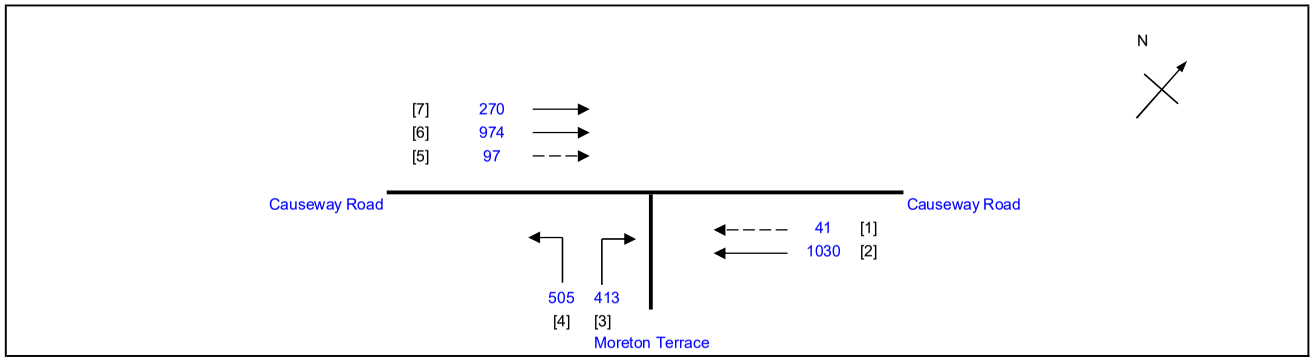
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

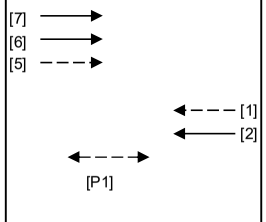
J9 Moreton Terrace / Causeway Road

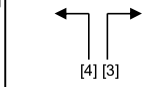
2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.630
Loss time	L =	10 sec
Total Flow	=	3330 pcu
Co = (1.5*L+5)/(1-Y)	=	54.0 sec
Cm = L/(1-Y)	=	27.0 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	31.0 %
Cp = 0.9*L/(0.9-Y)	=	33.3 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**28 %**





Stage 1 G= 61 Int = 5

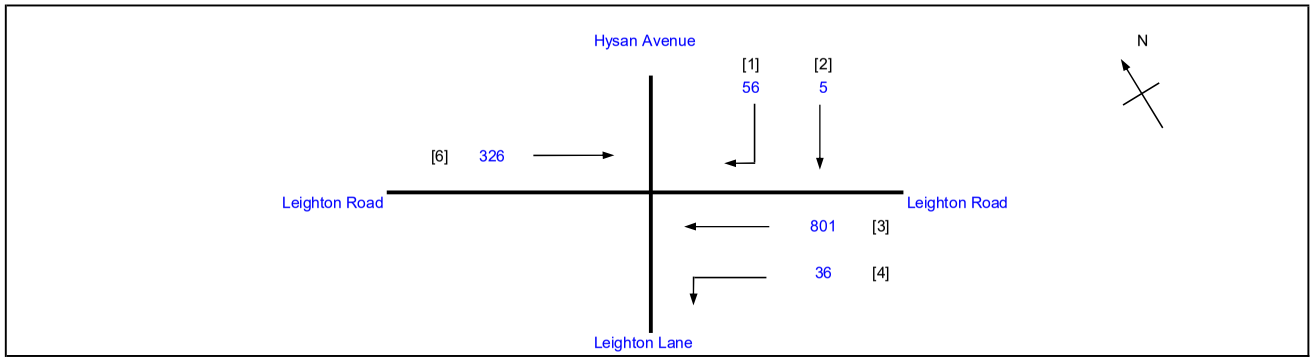
Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

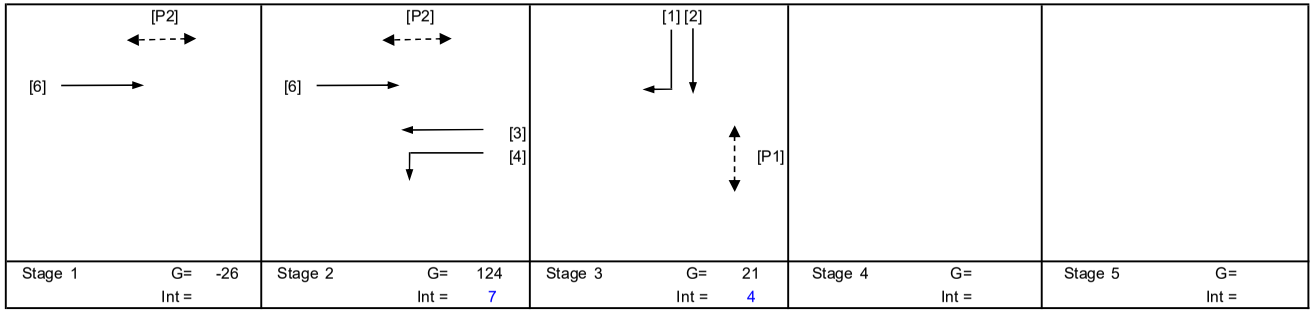
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		277		277	0.00	1985			0.4	-1191			794	0.349			47	62	0.704	18	27
2	1	4.00	1				2155		753		753	0.00	2155							2155	0.349			47	62	0.704	60	20
1	1	3.00	1			N	1915		41		41	0.00	1915							1915	0.021			3	62	0.704	6	107
4	2	3.50	1	9		N	1965	281			281	1.00	1684							1684	0.167			23	23	0.704	30	40
3,4	2	3.30	1	15			2085	224		93	317	1.00	1895							1895	0.167	0.167		23	23	0.704	36	38
3	2	3.50	1	15			2105			320	320	1.00	1914							1914	0.167			23	23	0.704	36	38
7	1	3.50	1			N	1965		270		270	0.00	1965							1965	0.137			19	62	0.704	36	42
6	1	3.50	1				2105		974		974	0.00	2105							2105	0.463	0.463		62	62	0.704	48	12
5	1	3.00	1				2055		97		97	0.00	2055							2055	0.047			6	62	0.704	18	67

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
		FILENAME : J10_LR_HA_LL.xlsx	Checked By:	SLN	Feb-26
J10 Leighton Road / Hysan Avenue / Leighton Lane			Reviewed By:	SLN	Feb-26



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.166
Loss time	L =	31 sec
Total Flow	=	1224 pcu
Co = (1.5*L+5)/(1-Y)	=	61.7 sec
Cm = L/(1-Y)	=	37.2 sec
Yult	=	0.668
R.C.ult = (Yult-Y)/Y*100%	=	302.3 %
Cp = 0.9*L/(0.9-Y)	=	38.0 sec
Ymax = 1-L/C	=	0.762
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**313 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	36	365		401	0.09	1913							1913	0.210			125	125	0.218	0	0
3	2	3.20	1				2075		436		436	0.00	2075							2075	0.210			125	125	0.218	0	0
6	1,2	3.50	1			N	1965		326		326	0.00	1965							1965	0.166	0.166		99	99	0.218	12	4
1,2	3	3.30	1	17		N	1945		5	27	32	0.84	1810							1810	0.018			11	21	0.218	6	53
1	3	3.00	1	10	O		2055			29	29	1.00	1587							1587	0.018			11	21	0.218	0	53
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

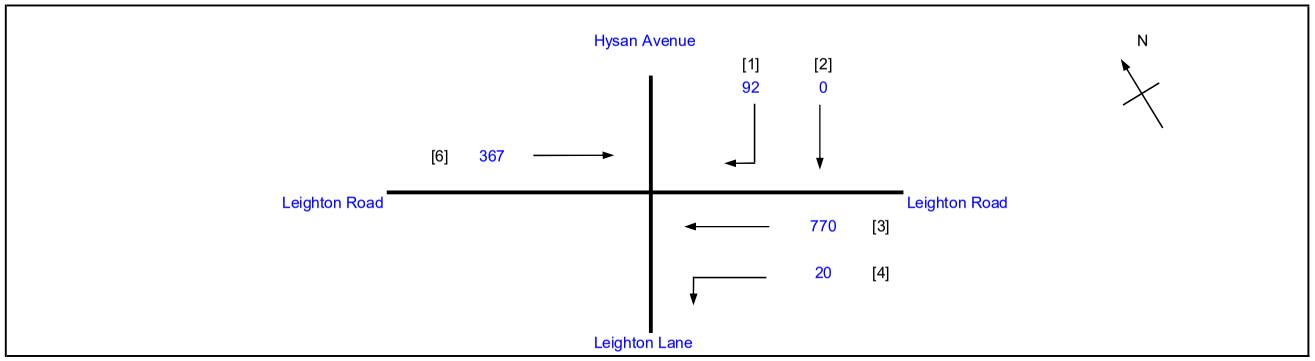
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

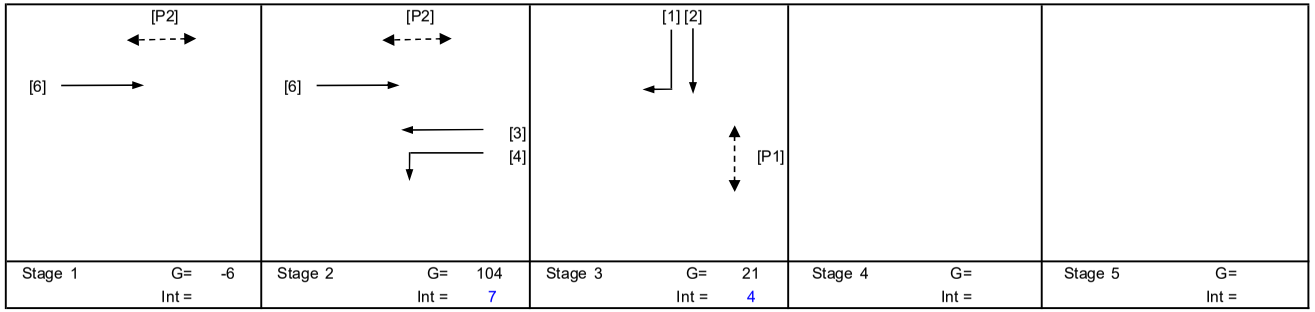
J10 Leighton Road / Hysan Avenue / Leighton Lane

2025 Existing PM

PROJECT NO.:	40920
FILENAME :	J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.187
Loss time		L =	31 sec
Total Flow		=	1249 pcu
Co	= (1.5*L+5)/(1-Y)	=	63.3 sec
Cm	= L/(1-Y)	=	38.1 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	257.4 %
Cp	= 0.9*L/(0.9-Y)	=	39.1 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**267 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	20	362		382	0.05	1935							1935	0.197			105	105	0.245	12	3
3	2	3.20	1				2075		408		408	0.00	2075							2075	0.197			104	105	0.245	12	3
6	1,2	3.50	1			N	1965		367		367	0.00	1965							1965	0.187	0.187		99	99	0.245	18	4
1,2	3	3.30	1	17		N	1945		0	48	48	1.00	1787							1787	0.027			14	21	0.245	6	50
1	3	3.00	1	10	O		2055			44	44	1.00	1587							1587	0.028			15	21	0.245	6	50
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

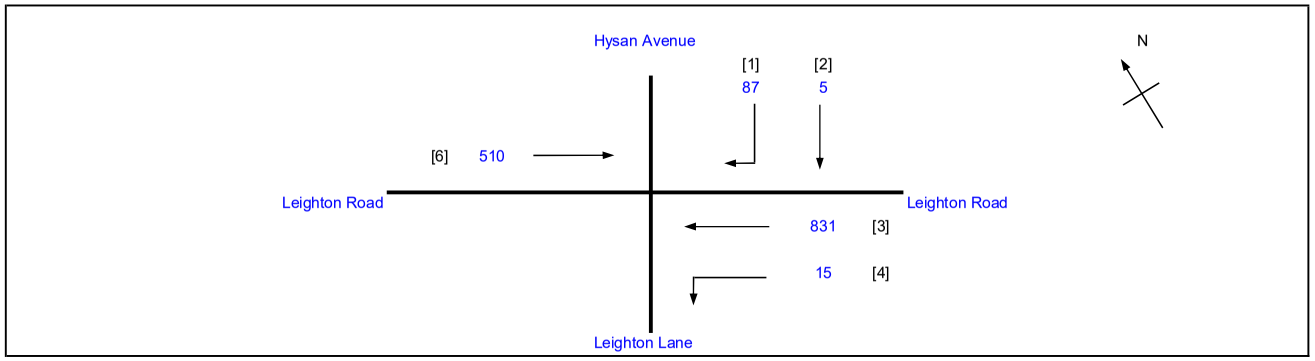
		INITIALS	DATE
Prepared By:		SKL	Feb-26
Checked By:		SLN	Feb-26
Reviewed By:		SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

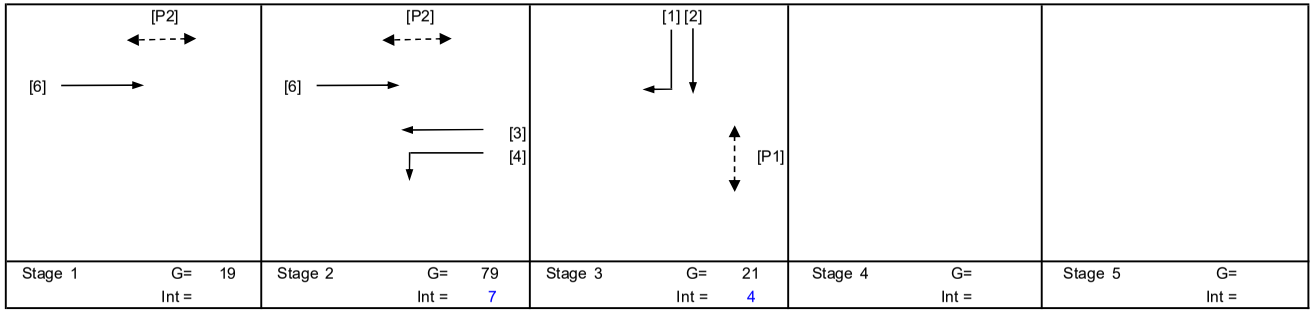
J10 Leighton Road / Hysan Avenue / Leighton Lane

2025 Existing Weekend

PROJECT NO.:	40920
FILENAME :	J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.260
Loss time		L =	31 sec
Total Flow		=	1448 pcu
Co	= (1.5*L+5)/(1-Y)	=	69.6 sec
Cm	= L/(1-Y)	=	41.9 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	157.2 %
Cp	= 0.9*L/(0.9-Y)	=	43.6 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**164 %**



Stage 1	G= 19	Int =	Stage 2	G= 79	Int = 7	Stage 3	G= 21	Int = 4	Stage 4	G=	Int =	Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	15	395		410	0.04	1944							1944	0.211			80	80	0.341	30	11
3	2	3.20	1				2075		436		436	0.00	2075							2075	0.210			80	80	0.341	36	12
6	1,2	3.50	1			N	1965		510		510	0.00	1965							1965	0.260	0.260		99	99	0.341	24	5
1,2	3	3.30	1	17		N	1945		5	44	49	0.90	1802							1802	0.027			10	21	0.341	6	57
1	3	3.00	1	10	O		2055			43	43	1.00	1587							1587	0.027			10	21	0.341	6	58
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

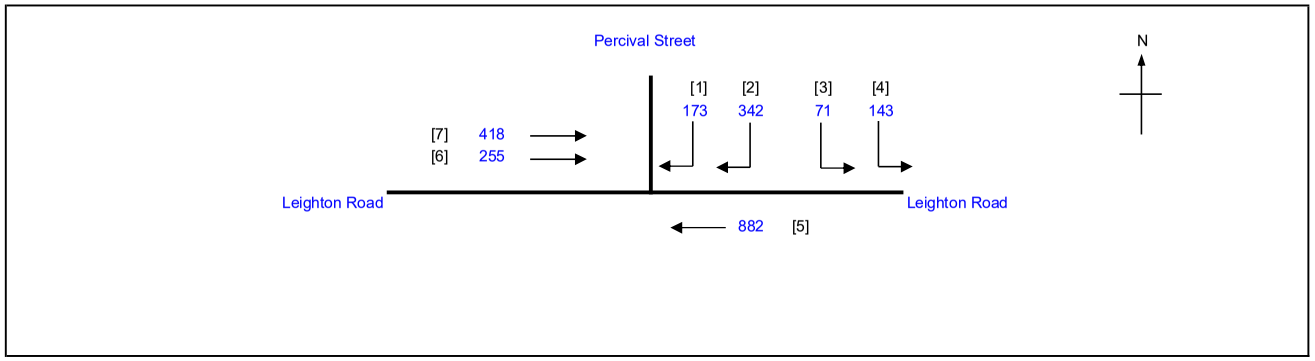
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

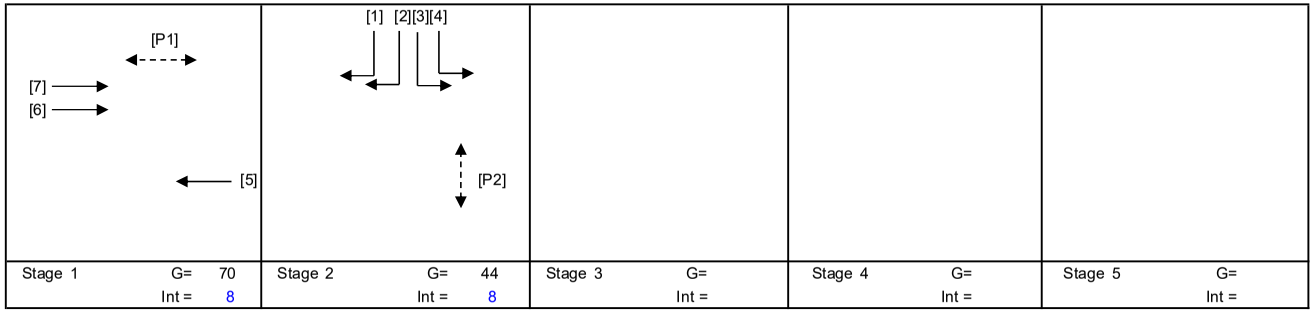
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.477
Loss time	L =	14 sec
Total Flow	=	2284 pcu
Co = (1.5*L+5)/(1-Y)	=	49.7 sec
Cm = L/(1-Y)	=	26.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	66.7 %
Cp = 0.9*L/(0.9-Y)	=	29.8 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**68 %**



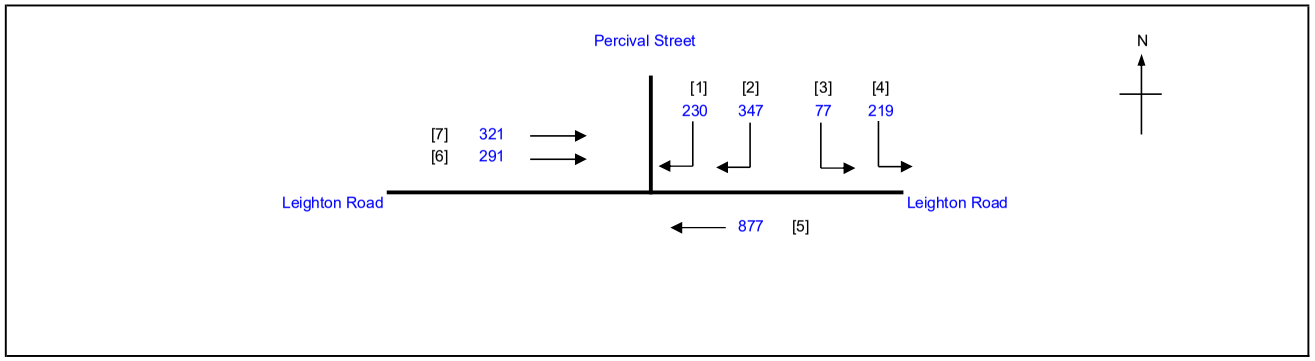
Stage 1	G= 70	Int = 8
Stage 2	G= 44	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		71	7
P2	2		5	12		40	12

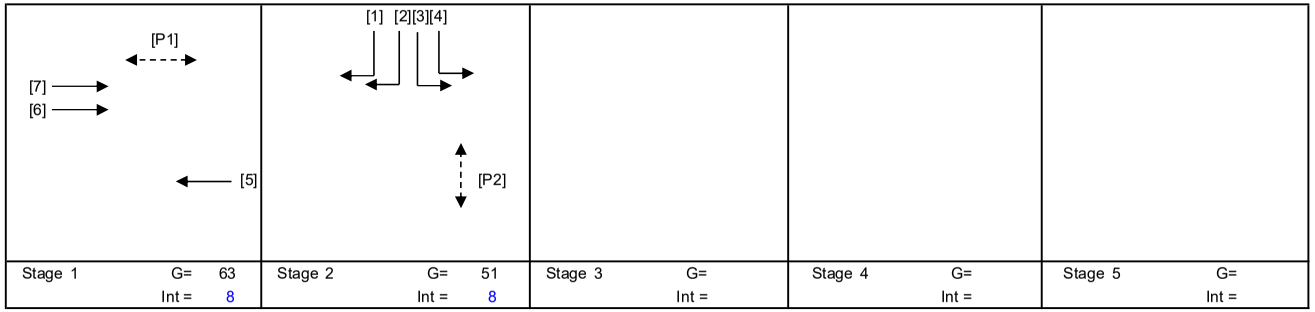
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
5	1	3.50	1			N	1965		431		431	0.00	1965			0.8	-393			1572	0.274			67	71	0.534	42	21
5	1	3.00	1				2055		451		451	0.00	2055			0.8	-411			1644	0.274			67	71	0.534	42	21
6,7	1	2.50	1			N	1865		324		324	0.00	1865			0.6	-746			1119	0.290			70	71	0.534	30	20
6,7	1	2.50	1				2005		349		349	0.00	2005			0.6	-802			1203	0.290	0.290		71	71	0.534	30	20
3,4	2	4.00	1	25		N	2015	214			214	1.00	1901			0.7	-570			1331	0.161			39	45	0.534	30	39
1,2	2	5.00	1	25		N	2115			298	298	1.00	1995			0.8	-399			1596	0.187	0.187		45	45	0.534	42	34
1,2	2	3.30	1	20			2085			217	217	1.00	1940			0.6	-776			1164	0.187			45	45	0.534	30	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	Prepared By:	SKL	Feb-26
J11 Leighton Road / Percival Street / Hysan Avenue		FILENAME : J11_LR_PS_HA.xlsx	Checked By:	SLN	Feb-26
			Reviewed By:	SLN	Feb-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.495
Loss time	L =	14 sec
Total Flow	=	2362 pcu
Co = (1.5*L+5)/(1-Y)	=	51.5 sec
Cm = L/(1-Y)	=	27.7 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	60.5 %
Cp = 0.9*L/(0.9-Y)	=	31.1 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**62 %**



Stage 1	G= 63	Stage 2	G= 51	Stage 3	G=	Stage 4	G=	Stage 5	G=
	Int = 8		Int = 8		Int =		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		64	7
P2	2		5	12		47	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		429		429	0.00	1965			0.8	-393			1572	0.273	0.273		64	64	0.555	42	23
5	1	3.00	1				2055		448		448	0.00	2055			0.8	-411			1644	0.273			64	64	0.555	48	23
6,7	1	2.50	1			N	1865		295		295	0.00	1865			0.6	-746			1119	0.264			62	64	0.555	30	26
6,7	1	2.50	1				2005		317		317	0.00	2005			0.6	-802			1203	0.264			62	64	0.555	36	25
3,4	2	4.00	1	25		N	2015	296			296	1.00	1901			0.7	-570			1331	0.222	0.222		52	52	0.555	36	31
1,2	2	5.00	1	25		N	2115			334	334	1.00	1995			0.8	-399			1596	0.209			49	52	0.555	42	32
1,2	2	3.30	1	20			2085			243	243	1.00	1940			0.6	-776			1164	0.209			49	52	0.555	30	33

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

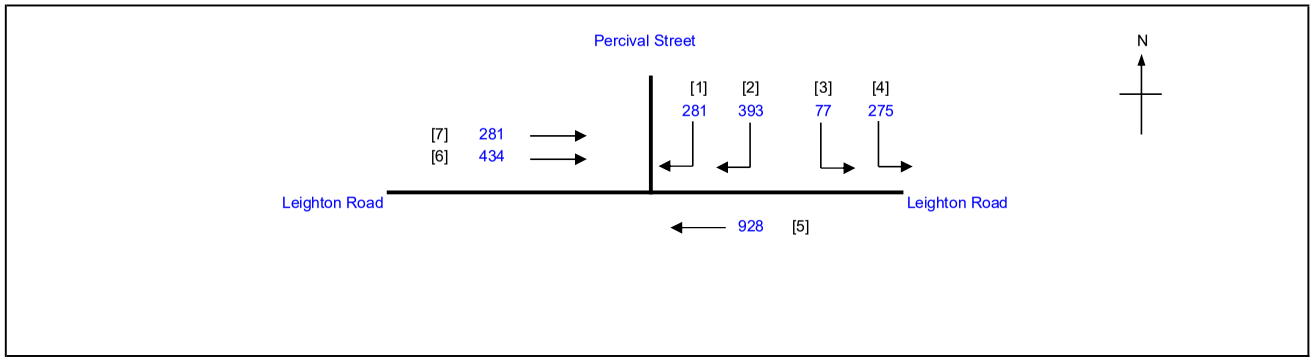
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

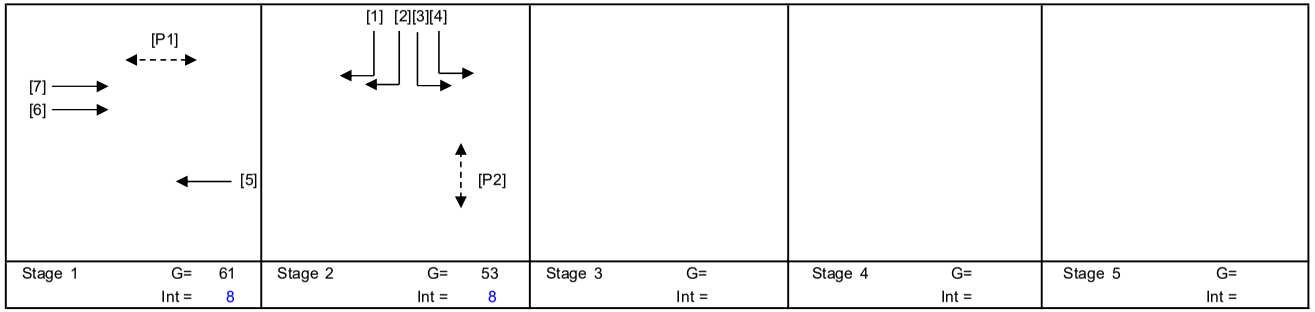
J11 Leighton Road / Percival Street / Hysan Avenue

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.573
Loss time		L =	14 sec
Total Flow		=	2669 pcu
Co	= (1.5*L+5)/(1-Y)	=	60.9 sec
Cm	= L/(1-Y)	=	32.8 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	38.8 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.892
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**40 %**



Stage 1	G= 61	Stage 2	G= 53	Stage 3	G=	Stage 4	G=	Stage 5	G=
	Int = 8		Int = 8		Int =		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		62	7
P2	2		5	12		49	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		454		454	0.00	1965			0.8	-393			1572	0.289			58	62	0.642	54	29
5	1	3.00	1				2055		474		474	0.00	2055			0.8	-411			1644	0.288			58	62	0.642	54	29
6,7	1	2.50	1			N	1865		345		345	0.00	1865			0.6	-746			1119	0.308	0.308		62	62	0.642	36	28
6,7	1	2.50	1				2005		370		370	0.00	2005			0.6	-802			1203	0.308			62	62	0.642	36	28
3,4	2	4.00	1	25		N	2015	352			352	1.00	1901			0.7	-570			1331	0.264	0.264		54	54	0.642	42	33
1,2	2	5.00	1	25		N	2115			390	390	1.00	1995			0.8	-399			1596	0.244			49	54	0.642	48	34
1,2	2	3.30	1	20			2085			284	284	1.00	1940			0.6	-776			1164	0.244			49	54	0.642	36	36

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

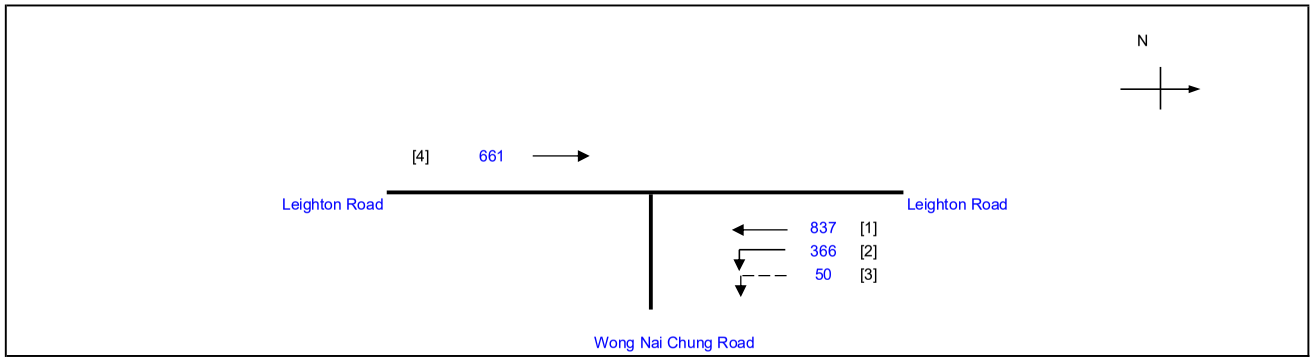
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

2025 Existing AM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.566
Loss time		L =	12 sec
Total Flow		=	1914 pcu
Co	= (1.5*L+5)/(1-Y)	=	53.0 sec
Cm	= L/(1-Y)	=	27.7 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	43.0 %
Cp	= 0.9*L/(0.9-Y)	=	32.4 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**44 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	25	9
P2	2		7	7	0	27	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	301			301	1.00	1828							1828	0.165			34	90	0.624	48	44
2	1	3.50	1	25			2105	65			65	1.00	1986			0.2	-1589			397	0.164			34	90	0.624	12	64
3	2	3.00	1	40		N	1915	50			50	1.00	1846			0.2	-1477			369	0.136	0.136		28	28	0.624	6	75
1	1	3.00	1			N	1915		660		660	0.00	1915			0.8	-383			1532	0.431	0.431		90	90	0.624	42	12
1	1	3.00	1				2055		177		177	0.00	2055			0.2	-1644			411	0.431			90	90	0.624	6	19
4	1	3.50	1			N	1965		106		106	0.00	1965			0.2	-1572			393	0.270			56	90	0.624	12	42
4	1	3.00	1				2055		278		278	0.00	2055			0.5	-1028			1027	0.271			56	90	0.624	30	32
4	1	3.00	1				2055		277		277	0.00	2055			0.5	-1028			1027	0.270			56	90	0.624	30	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

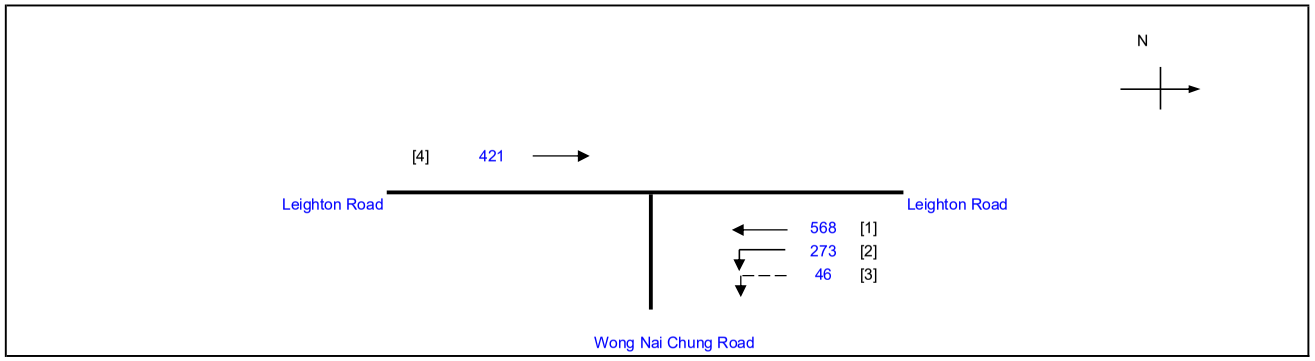
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

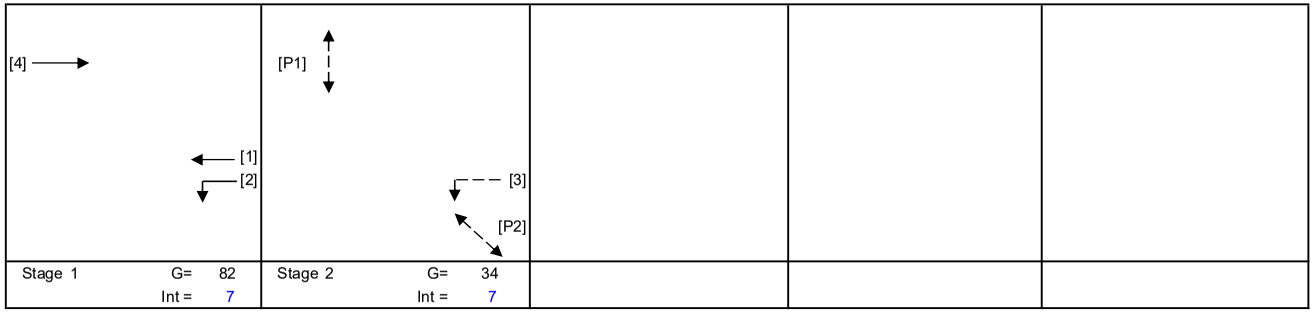
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.417
Loss time	L =	12 sec
Total Flow	=	1308 pcu
Co = (1.5*L+5)/(1-Y)	=	39.5 sec
Cm = L/(1-Y)	=	20.6 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	94.2 %
Cp = 0.9*L/(0.9-Y)	=	22.4 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**96 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	32	9
P2	2		7	7	0	34	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	224			224	1.00	1828							1828	0.123			35	83	0.460	30	39
2	1	3.50	1	25			2105	49			49	1.00	1986			0.2	-1589			397	0.123			35	83	0.460	6	49
3	2	3.00	1	40		N	1915	46			46	1.00	1846			0.2	-1477			369	0.125	0.125		35	35	0.460	6	49
1	1	3.00	1			N	1915		448		448	0.00	1915			0.8	-383			1532	0.292	0.292		83	83	0.460	30	12
1	1	3.00	1				2055		120		120	0.00	2055			0.2	-1644			411	0.292			83	83	0.460	6	16
4	1	3.50	1			N	1965		68		68	0.00	1965			0.2	-1572			393	0.172			49	83	0.460	6	37
4	1	3.00	1				2055		177		177	0.00	2055			0.5	-1028			1027	0.172			49	83	0.460	18	31
4	1	3.00	1				2055		177		177	0.00	2055			0.5	-1028			1027	0.172			49	83	0.460	18	31

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

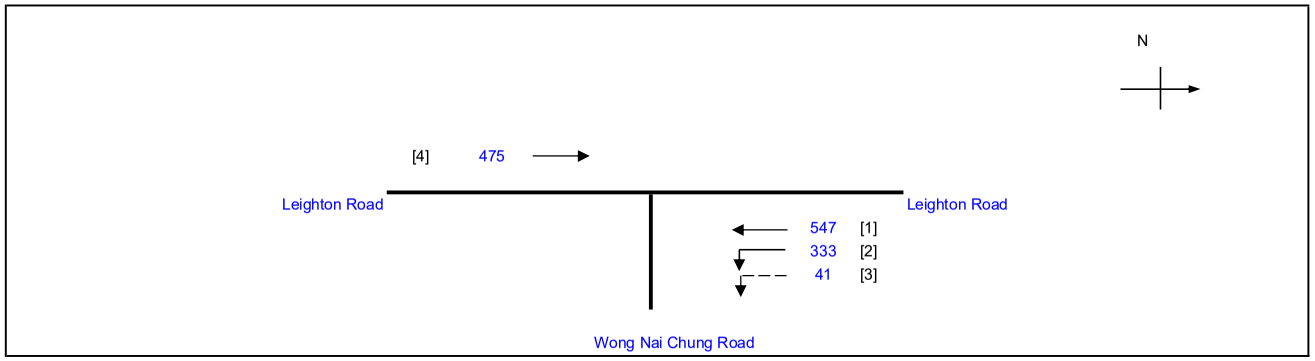
	INITIALS	DATE
Prepared By:	SKL	Feb-26
Checked By:	SLN	Feb-26
Reviewed By:	SLN	Feb-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

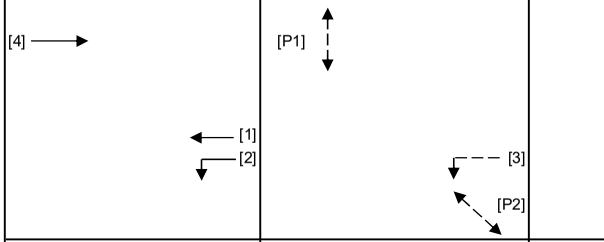
J12 Leighton Road / Wong Nai Chung Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.393
Loss time		L =	12 sec
Total Flow		=	1396 pcu
Co	= (1.5*L+5)/(1-Y)	=	37.9 sec
Cm	= L/(1-Y)	=	19.8 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	105.9 %
Cp	= 0.9*L/(0.9-Y)	=	21.3 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**108 %**



Stage 1 G= 84 Int = 7
Stage 2 G= 32 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	30	9
P2	2		7	7	0	32	7

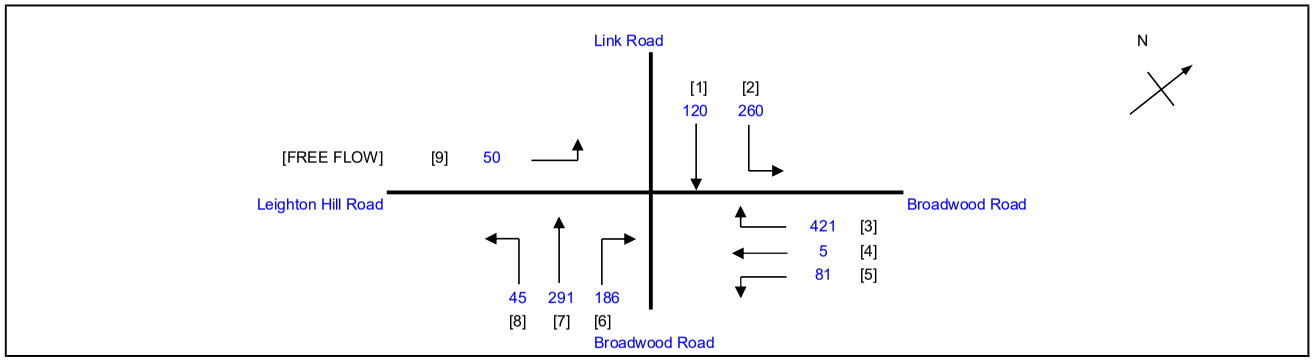
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	274			274	1.00	1828							1828	0.150			45	85	0.433	36	31
2	1	3.50	1	25			2105	59			59	1.00	1986			0.2	-1589			397	0.149			45	85	0.433	6	39
3	2	3.00	1	40		N	1915	41			41	1.00	1846			0.2	-1477			369	0.111	0.111		33	33	0.433	6	49
1	1	3.00	1			N	1915		431		431	0.00	1915			0.8	-383			1532	0.281			84	85	0.433	30	11
1	1	3.00	1				2055		116		116	0.00	2055			0.2	-1644			411	0.282	0.282		85	85	0.433	6	15
4	1	3.50	1			N	1965		76		76	0.00	1965			0.2	-1572			393	0.193			58	85	0.433	6	29
4	1	3.00	1				2055		200		200	0.00	2055			0.5	-1028			1027	0.194			58	85	0.433	18	25
4	1	3.00	1				2055		200		200	0.00	2055			0.5	-1028			1027	0.194			58	85	0.433	18	25

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

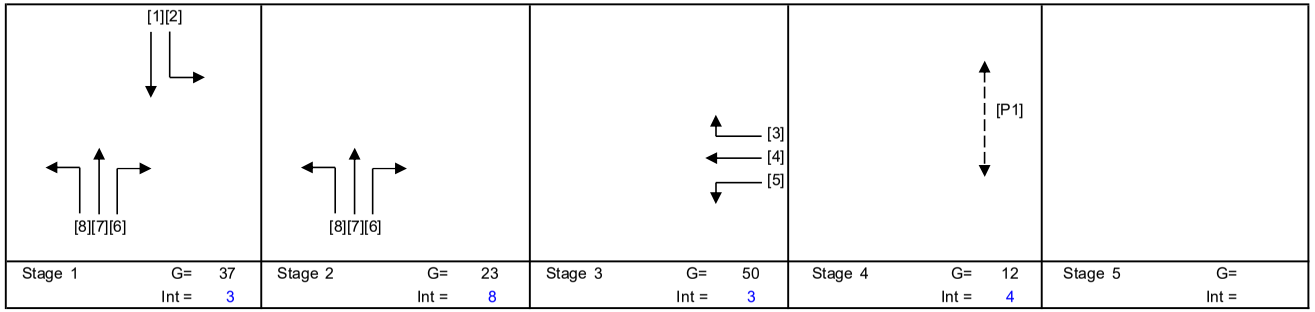
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
2025 Existing AM	FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Apr-26
J13 Broadwood Road / Link Road		Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.581
Loss time	L =	27 sec
Total Flow	=	1409 pcu
Co = (1.5*L+5)/(1-Y)	=	108.7 sec
Cm = L/(1-Y)	=	64.5 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	20.0 %
Cp = 0.9*L/(0.9-Y)	=	76.2 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**25 %**



Stage 1	G= 37	Int = 3
Stage 2	G= 23	Int = 8
Stage 3	G= 50	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	260	120		380	0.68	1940							1940	0.196	0.196	15	38	38	0.720	60	49
7,8	1,2	3.00	1	15		N	1915	45	291		336	0.13	1890							1890	0.178			35	62	0.720	54	52
6	2	3.00	1	8	O		2055			186	186	1.00	1537							1537	0.121	0.121		24	24	0.720	36	66
3,4,5	3	3.50	1	60		N	1965	81	5	421	507	0.99	1918							1918	0.264	0.264		51	51	0.720	72	40
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

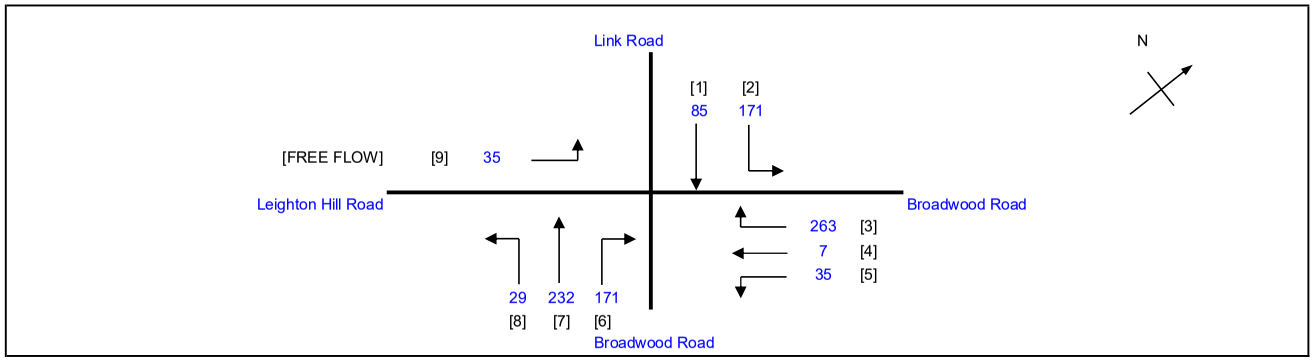
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

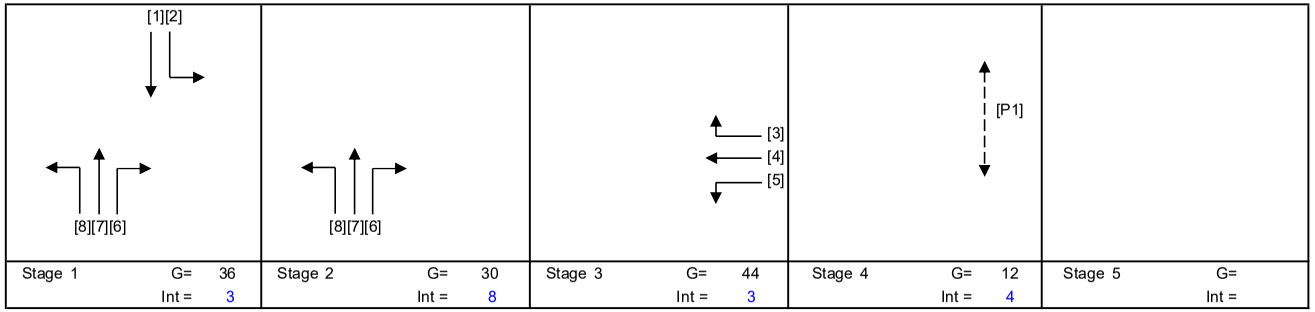
J13 Broadwood Road / Link Road

2025 Existing PM

PROJECT NO.: 40920
FILENAME : J13_BR_LR.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.402
Loss time	L =	27 sec
Total Flow	=	993 pcu
Co = (1.5*L+5)/(1-Y)	=	76.1 sec
Cm = L/(1-Y)	=	45.2 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	73.4 %
Cp = 0.9*L/(0.9-Y)	=	48.8 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**81 %**



Stage 1	G= 36	Int = 3
Stage 2	G= 30	Int = 8
Stage 3	G= 44	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	171	85		256	0.67	1941							1941	0.132	0.132		37	37	0.498	42	42
7,8	1,2	3.00	1	15		N	1915	29	232		261	0.11	1894							1894	0.138			39	68	0.498	42	41
6	2	3.00	1	8	O		2055			171	171	1.00	1537							1537	0.111	0.111		31	31	0.498	30	47
3,4,5	3	3.50	1	60		N	1965	35	7	263	305	0.98	1918							1918	0.159	0.159		45	45	0.498	48	37
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

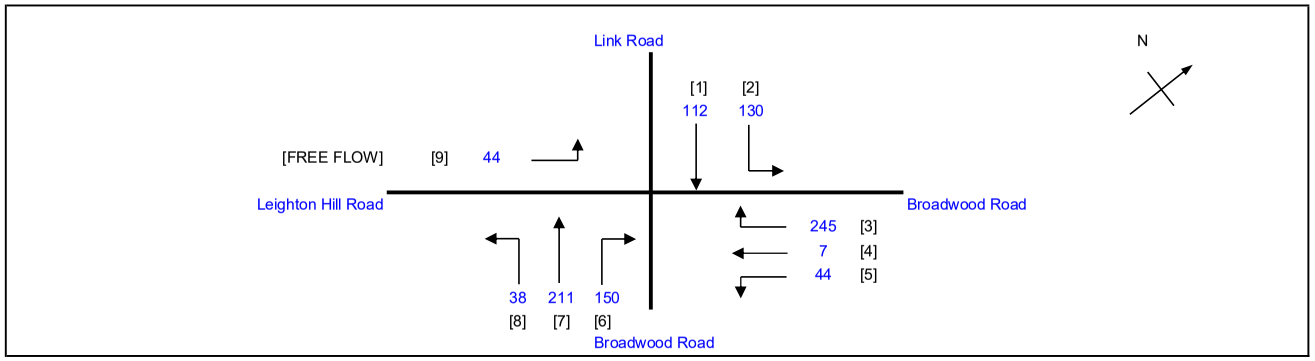
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

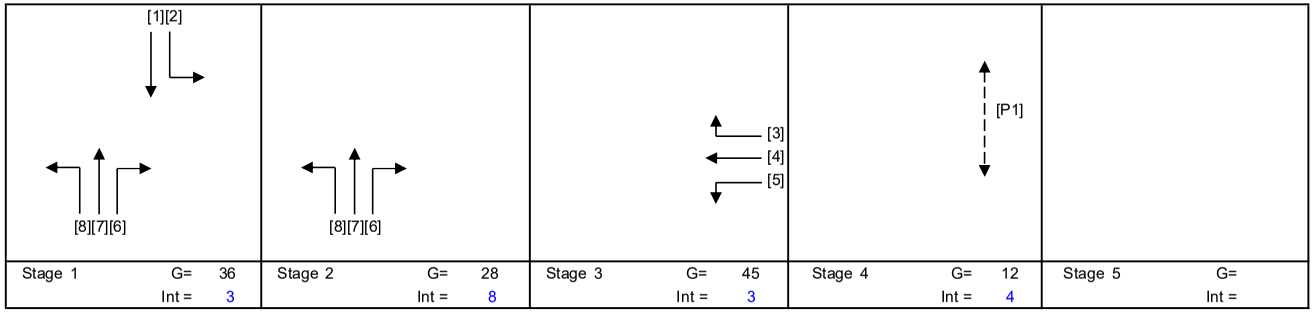
J13 Broadwood Road / Link Road

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J13_BR_LR.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.376
Loss time		L =	27 sec
Total Flow		=	937 pcu
Co	= (1.5*L+5)/(1-Y)	=	73.0 sec
Cm	= L/(1-Y)	=	43.3 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	85.4 %
Cp	= 0.9*L/(0.9-Y)	=	46.4 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**93 %**



Stage 1	G= 36	Int = 3
Stage 2	G= 28	Int = 8
Stage 3	G= 45	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	130	112		242	0.54	1945							1945	0.124	0.124		37	37	0.466	36	41
7,8	1,2	3.00	1	15		N	1915	38	211		249	0.15	1886							1886	0.132			40	67	0.466	36	40
6	2	3.00	1	8	O		2055			150	150	1.00	1537							1537	0.098	0.098		29	29	0.466	24	48
3,4,5	3	3.50	1	60		N	1965	44	7	245	296	0.98	1918							1918	0.154	0.154		46	46	0.466	42	36
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

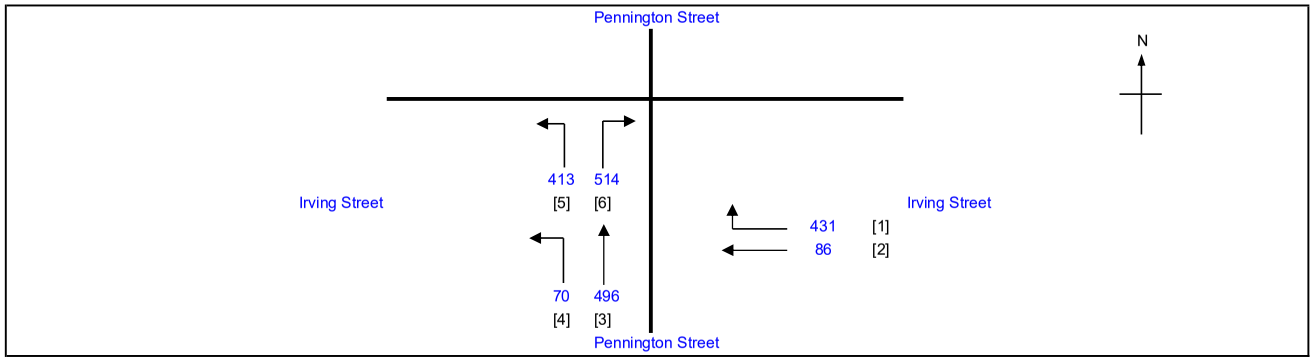
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

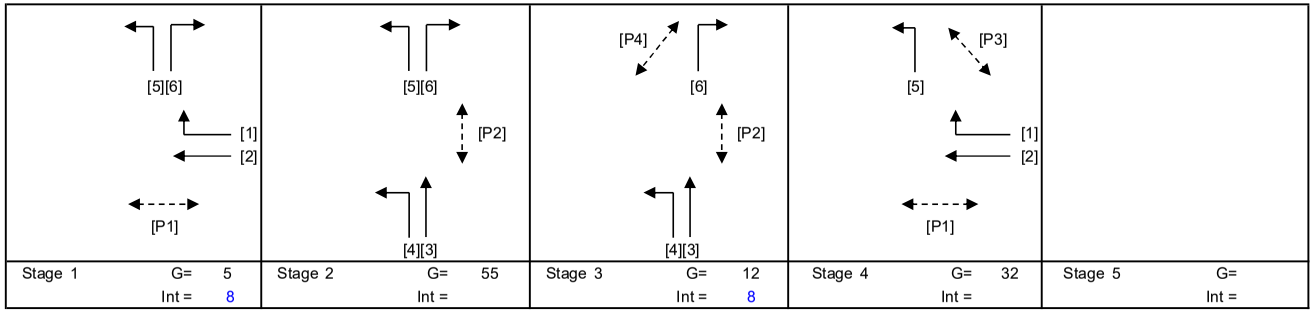
2025 Existing AM

PROJECT NO.: 40920

FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.229
Loss time		L =	14 sec
Total Flow		=	2010 pcu
Co	= (1.5*L+5)/(1-Y)	=	33.7 sec
Cm	= L/(1-Y)	=	18.2 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	247.1 %
Cp	= 0.9*L/(0.9-Y)	=	18.8 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**247 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		37	8
P2	2,3		8	14		61	14
P3	4		7	7		25	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		78		78	0.00	1915			0.5	-958			957	0.082			38	38	0.259	6	30
1,2	1,4	3.00	1	16			2055		8	145	153	0.95	1887							1887	0.081			38	38	0.259	18	29
1	1,4	3.00	1	13			2055			150	150	1.00	1842							1842	0.081			38	38	0.259	18	29
1	1,4	3.00	1	10		N	1915			136	136	1.00	1665							1665	0.082	0.082		38	38	0.259	18	29
3,4	2,3	3.80	1	5		N	1995	70	203		273	0.26	1853							1853	0.147	0.147		68	68	0.259	18	12
3	2,3	3.80	1			N	1995		293		293	0.00	1995							1995	0.147			68	68	0.259	24	12
5	1,2,4	3.50	1	10		N	1965	413			413	1.00	1709							1709	0.242			112	94	0.259	0	1
6	1,2,4	3.50	1	10			2105			274	274	1.00	1830							1830	0.150			69	94	0.259	18	12
6	1,2,4	3.50	1	6.5		N	1965			240	240	1.00	1597							1597	0.150			70	94	0.259	18	12

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

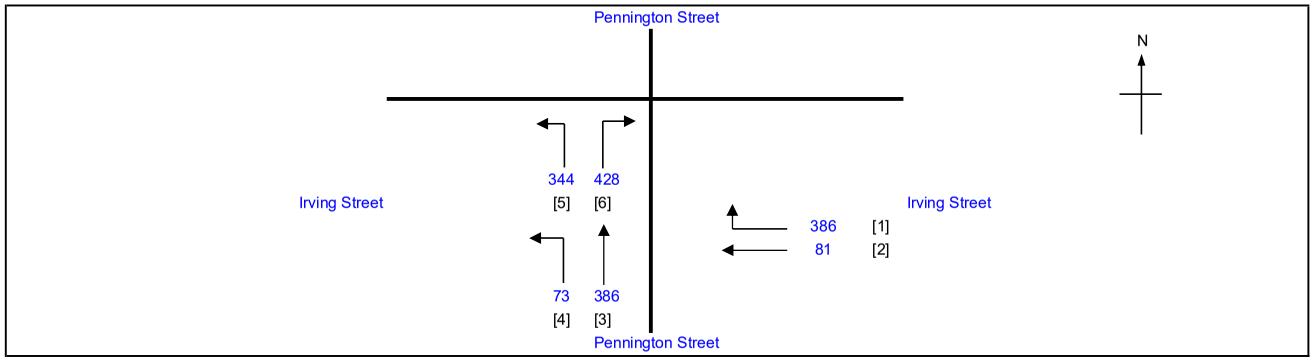
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

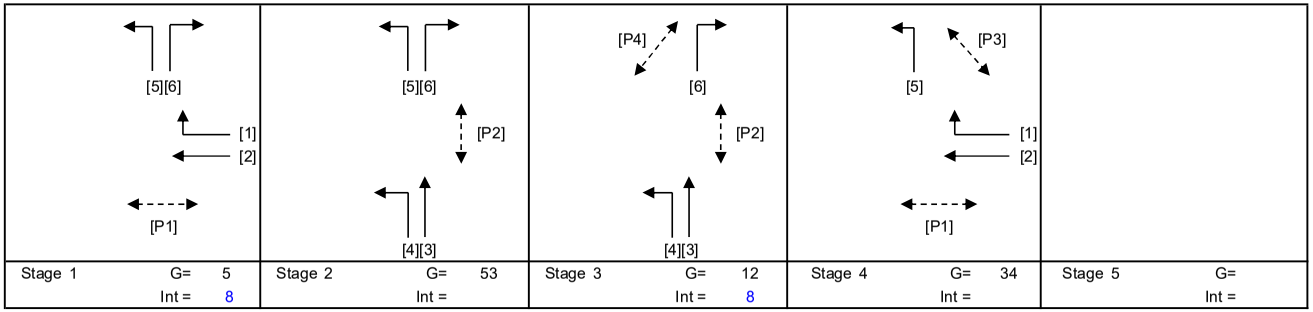
2025 Existing PM

PROJECT NO.: 40920

FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.195
Loss time		L =	14 sec
Total Flow		=	1698 pcu
Co	= (1.5*L+5)/(1-Y)	=	32.3 sec
Cm	= L/(1-Y)	=	17.4 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	307.8 %
Cp	= 0.9*L/(0.9-Y)	=	17.9 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**308 %**



Stage 1	G= 5	Int = 8
Stage 2	G= 53	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 34	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14				
2	1,4	3.00	1			N	1915		71		71	0.00	1915			0.5	-958			957	0.074	0.074		40	40	0.221	6	27
1,2	1,4	3.00	1	16			2055		10	129	139	0.93	1891							1891	0.074			40	40	0.221	18	27
1	1,4	3.00	1	13			2055			136	136	1.00	1842							1842	0.074			40	40	0.221	18	27
1	1,4	3.00	1	10		N	1915			121	121	1.00	1665							1665	0.073			40	40	0.221	12	27
3,4	2,3	3.80	1	5		N	1995	73	146		219	0.33	1814							1814	0.121	0.121		66	66	0.221	18	13
3	2,3	3.80	1			N	1995		240		240	0.00	1995							1995	0.120			65	66	0.221	18	13
5	1,2,4	3.50	1	10		N	1965	344			344	1.00	1709							1709	0.201			109	94	0.221	6	1
6	1,2,4	3.50	1	10			2105			228	228	1.00	1830							1830	0.125			68	94	0.221	18	12
6	1,2,4	3.50	1	6.5		N	1965			200	200	1.00	1597							1597	0.125			68	94	0.221	12	12

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

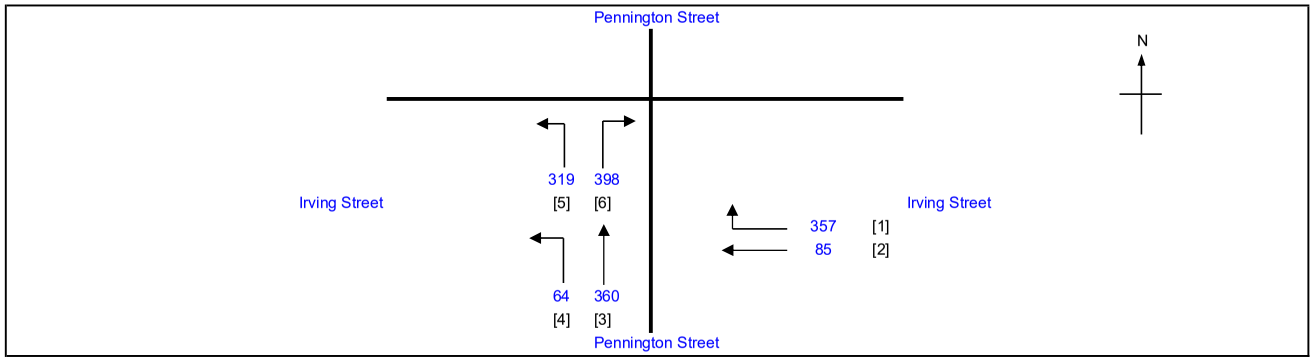
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

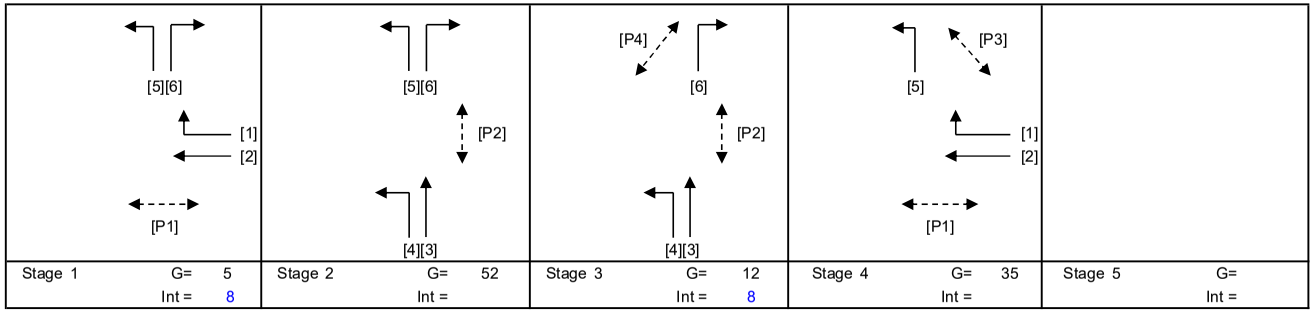
J14 Pennington Street / Irving Street / Jardine's Bazaar

2025 Existing Weekend

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.181
Loss time		L =	14 sec
Total Flow		=	1583 pcu
Co	= (1.5*L+5)/(1-Y)	=	31.8 sec
Cm	= L/(1-Y)	=	17.1 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	338.5 %
Cp	= 0.9*L/(0.9-Y)	=	17.5 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**339 %**

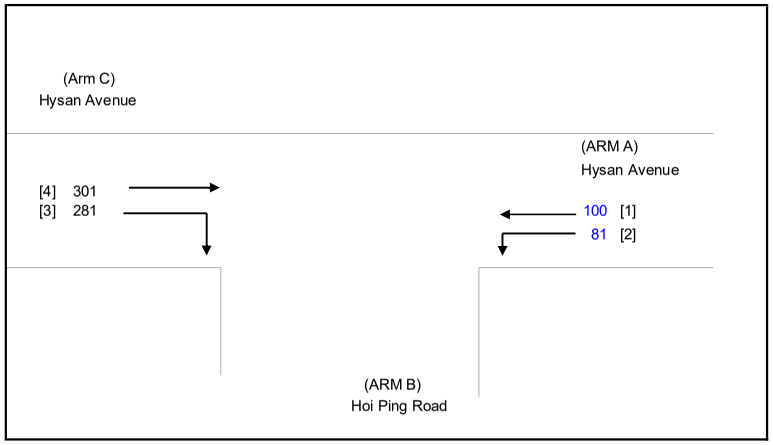


Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		40	8
P2	2,3		8	14		58	14
P3	4		7	7		28	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		67		67	0.00	1915			0.5	-958			957	0.070	0.070		41	41	0.205	6	26
1,2	1,4	3.00	1	16			2055		18	113	131	0.86	1901							1901	0.069			40	41	0.205	12	26
1	1,4	3.00	1	13			2055			128	128	1.00	1842							1842	0.069			41	41	0.205	12	26
1	1,4	3.00	1	10		N	1915			116	116	1.00	1665							1665	0.070			41	41	0.205	12	26
3,4	2,3	3.80	1	5		N	1995	64	138		202	0.32	1822							1822	0.111			65	65	0.205	18	13
3	2,3	3.80	1			N	1995		222		222	0.00	1995							1995	0.111	0.111		65	65	0.205	18	13
5	1,2,4	3.50	1	10		N	1965	319			319	1.00	1709							1709	0.187			109	94	0.205	0	1
6	1,2,4	3.50	1	10			2105			213	213	1.00	1830							1830	0.116			68	94	0.205	18	12
6	1,2,4	3.50	1	6.5		N	1965			185	185	1.00	1597							1597	0.116			68	94	0.205	12	12

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Feb-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	81	(pcu/hr)
q a-c	=	100	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	301	(pcu/hr)
q c-b	=	281	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

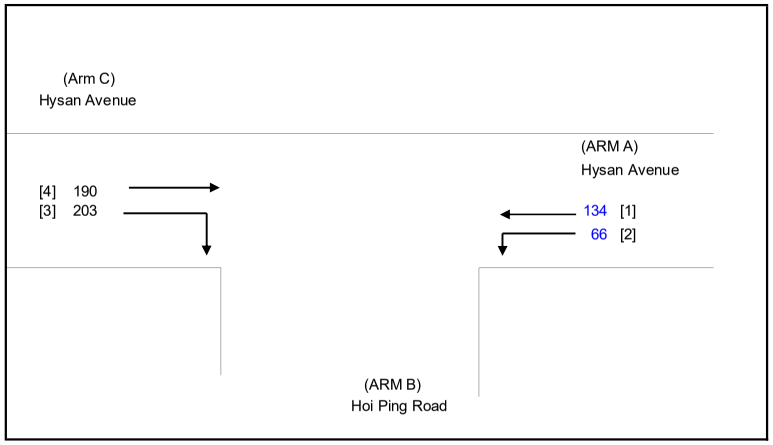
Q b-a	=	242		
Q b-c	=	418	Q b-c (O) =	418
Q c-b	=	667		
Q b-ac	=	242		
TOTAL FLOW	=	763	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4213
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.42

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Feb-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	66	(pcu/hr)
q a-c	=	134	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	190	(pcu/hr)
q c-b	=	203	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

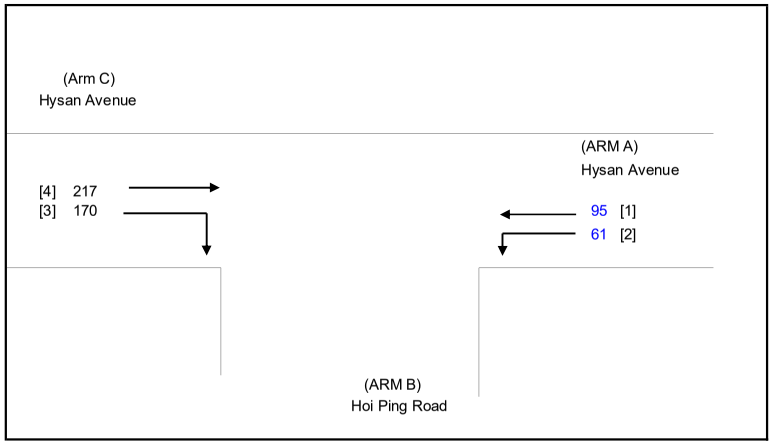
Q b-a	=	262		
Q b-c	=	414	Q b-c (O) =	414
Q c-b	=	662		
Q b-ac	=	262		
TOTAL FLOW	=	593	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.3066
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.31

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2025 Existing Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Feb-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Feb-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Feb-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	61	(pcu/hr)
q a-c	=	95	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	217	(pcu/hr)
q c-b	=	170	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

Q b-a	=	271		
Q b-c	=	420	Q b-c (O) =	420
Q c-b	=	672		
Q b-ac	=	271		
TOTAL FLOW	=	543	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.2530
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.25

APPENDIX C

Proposed Road Schemes

at Adjacent Junctions

HOI PING ROAD

SUNNING ROAD

LEIGHTON ROAD

CAROLINE HILL ROAD

Caroline Hill Road
加路連山道

649/100mm/3200×700(H)
H/WA/Lei/705

24-HR COVERED PEDESTRIAN WALKWAY

TO 1/F

PEDESTRIAN LINK TO B1/F

COMMERCIAL / E&M +8.25

TO LOADING / & LIGHT LAYE

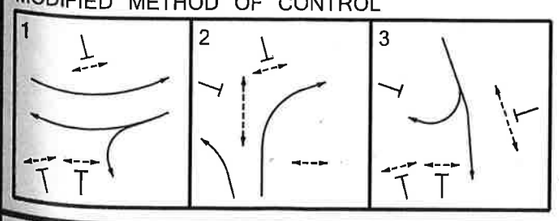
DROP-OFF

PRIVATE L/UL

TO CARPARK

Except goods vehicles loading/unloading
貨車上落貨除外

MODIFIED METHOD OF CONTROL



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	CHC	14APR22
A	TD'S COMMENTS INCORPORATED	CHC	25FEB22

CHK50603110/TIA/F61-B.DWG/KCM/14APR22

Project Title

PROPOSED COMMERCIAL DEVELOPMENT ON
INLAND LOT NO. 8945, CAUSEWAY BAY, HONG KONG
TRAFFIC REVIEW REPORT

Drawing Title

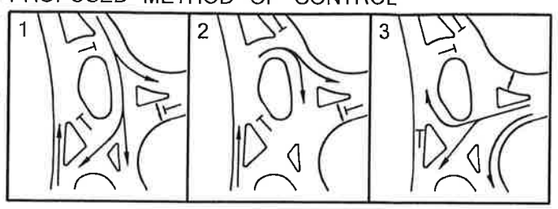
FUTURE JUNCTION LAYOUT OF LEIGHTON ROAD / CAROLINE HILL ROAD (WEST) (J5)

Designed	Checked	Scale	Date	Drawing No.	Rev.
TCW	CHC	1:500(A3)	DEC 2021	6.1	B

SYSTRA MVA

Original Size : A3

PROPOSED METHOD OF CONTROL



NOTE:

THE LAYOUT, MOC, ROAD MARKING AND SIGNAGE ARRANGEMENTS ARE SUBJECT TO FURTHER REFINEMENT/ADJUSTMENT IN THE DETAIL DESIGN STAGE

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	CHC	12APR22
A	TD'S COMMENTS INCORPORATED	CHC	25FEB22

Project Title

PROPOSED COMMERCIAL DEVELOPMENT ON INLAND LOT NO. 8945, CAUSEWAY BAY, HONG KONG TRAFFIC REVIEW REPORT

Drawing Title

PROPOSED LAYOUT AND ARRANGEMENT FOR JUNCTION OF CAROLINE HILL ROAD (WEST) / LINK ROAD / NEW ACCESS ROAD (J6)

Designed	Checked	Scale	Date	Drawing No.	Rev.
TCW	CHC	1:500(A3)	DEC 2021	6.2	B

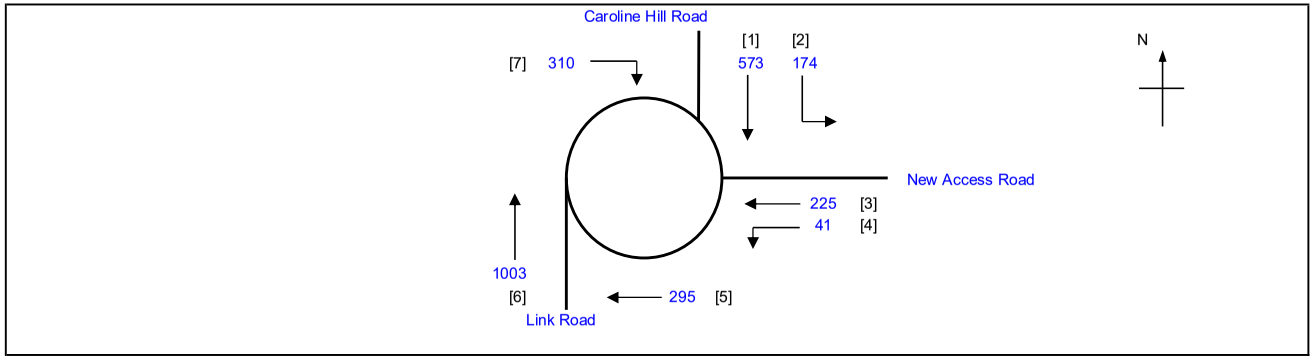
CHK50603110/TIA/F62-B.DWG/KCM/12APR22

APPENDIX D

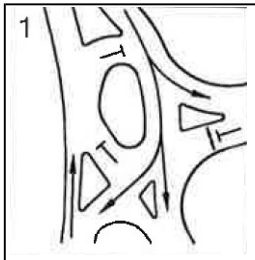
Detail Calculation Sheets

- Reference & Design Scenarios

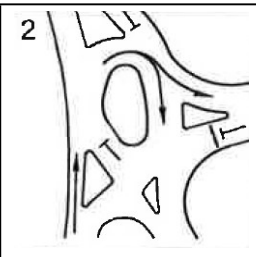
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



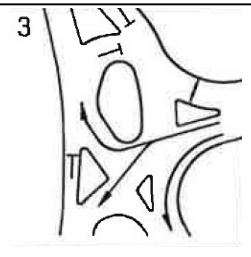
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.613
Loss time	L =	8 sec
Total Flow	=	2621 pcu
Co = (1.5*L+5)/(1-Y)	=	43.9 sec
Cm = L/(1-Y)	=	20.7 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	37.1 %
Cp = 0.9*L/(0.9-Y)	=	25.1 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**36 %**



Stage 1 G= 45
Int =



Stage 2 G= 29
Int = 5



Stage 3 G= 21
Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		21	5
P2	1,2		9	5		74	5

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		1003		1003	0.00	2120							2120	0.473	0.473		75	75	0.663	48	9
7	2	5.00	1	5		N	2115			310	310	1.00	1627							1627	0.191			30	30	0.663	36	36
3	3	3.65	1				2120		225		225	0.00	2120							2120	0.106			17	22	0.663	30	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	22	0.663	6	97
1,2	1	3.65	1	20		N	1980	174	180		354	0.49	1910							1910	0.185			29	45	0.663	42	36
1	1	3.65	1				2120		393		393	0.00	2120							2120	0.185			29	45	0.663	48	35
5	3	5.00	1			N	2115		295		295	0.00	2115							2115	0.139	0.139		22	22	0.663	36	41

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

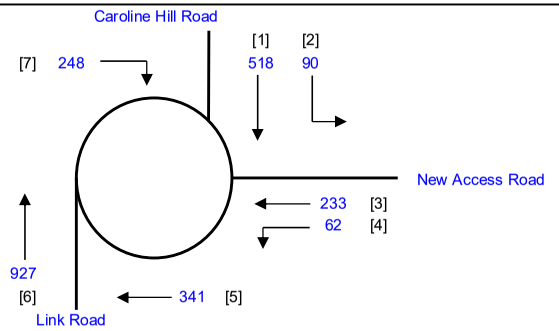
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J1 Caroline Hill Road (West) / Link Road

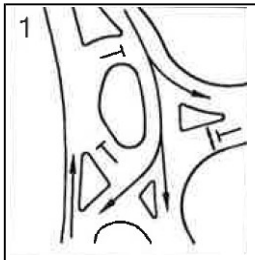
2033 Reference PM

PROJECT NO.: 40920

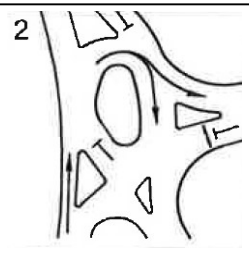
FILENAME : J1_CHRW_LR_IMP.xlsx



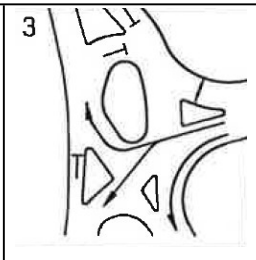
No. of stages per cycle		N =	3
Cycle time		C =	105 sec
Sum(y)		Y =	0.598
Loss time		L =	8 sec
Total Flow		=	2419 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.3 sec
Cm	= L/(1-Y)	=	19.9 sec
Yult		=	0.840
R.C.ult	= (Yult-Y)/Y*100%	=	40.4 %
Cp	= 0.9*L/(0.9-Y)	=	23.9 sec
Ymax	= 1-L/C	=	0.924
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**



Stage 1 G= 46 Int =



Stage 2 G= 24 Int = 5



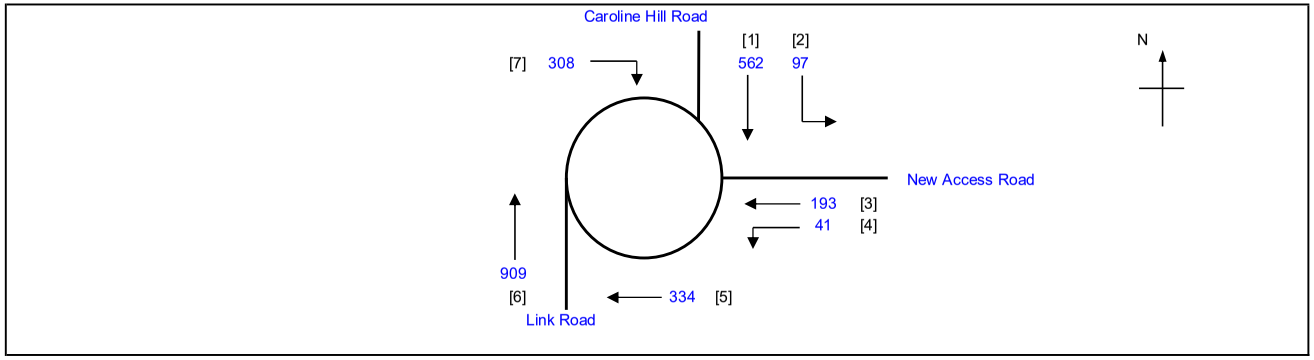
Stage 3 G= 25 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

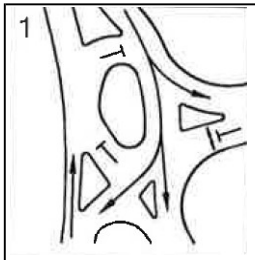
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		927		927	0.00	2120							2120	0.437	0.437		71	71	0.648	48	11
7	2	5.00	1	5		N	2115			248	248	1.00	1627							1627	0.152			25	25	0.648	30	40
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	26	0.648	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	26	0.648	12	75
1,2	1	3.65	1	20		N	1980	90	200		290	0.31	1935							1935	0.150			24	46	0.648	36	39
1	1	3.65	1				2120		318		318	0.00	2120							2120	0.150			24	46	0.648	42	39
5	3	5.00	1			N	2115		341		341	0.00	2115							2115	0.161	0.161		26	26	0.648	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

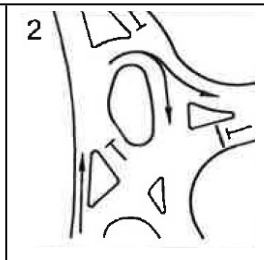
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
J1 Caroline Hill Road (West) / Link Road			Reviewed By:	SLN	Mar-26



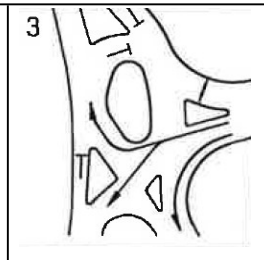
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.587
Loss time	L =	8 sec
Total Flow	=	2444 pcu
Co = (1.5*L+5)/(1-Y)	=	41.1 sec
Cm = L/(1-Y)	=	19.4 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	43.2 %
Cp = 0.9*L/(0.9-Y)	=	23.0 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**42 %**



Stage 1 G= 40 Int =



Stage 2 G= 30 Int = 5



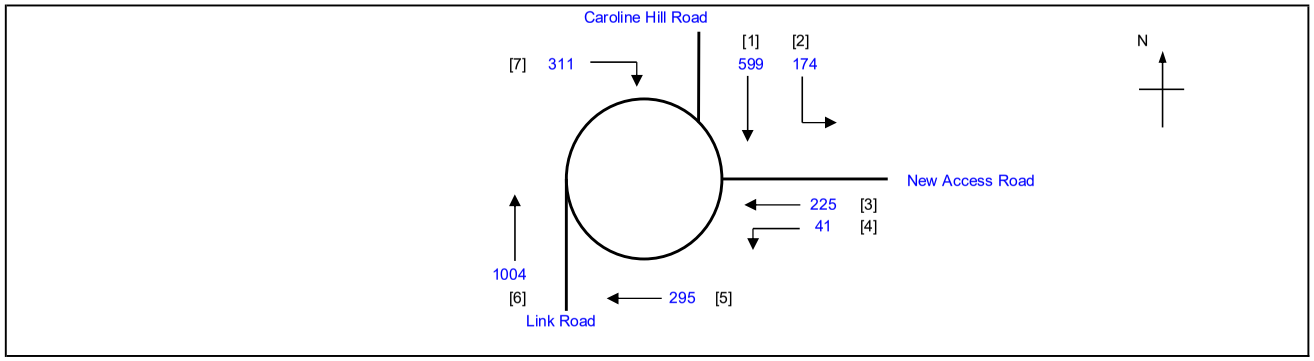
Stage 3 G= 25 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

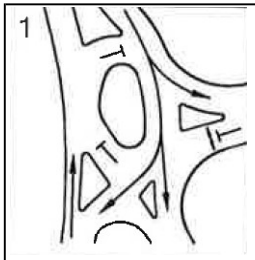
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		909		909	0.00	2120							2120	0.429	0.429		71	71	0.635	48	11
7	2	5.00	1	5		N	2115			308	308	1.00	1627							1627	0.189			31	31	0.635	36	35
3	3	3.65	1				2120		193		193	0.00	2120							2120	0.091			15	26	0.635	24	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	26	0.635	6	89
1,2	1	3.65	1	20		N	1980	97	218		315	0.31	1935							1935	0.163			27	40	0.635	36	37
1	1	3.65	1				2120		344		344	0.00	2120							2120	0.162			27	40	0.635	42	36
5	3	5.00	1			N	2115		334		334	0.00	2115							2115	0.158	0.158		26	26	0.635	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

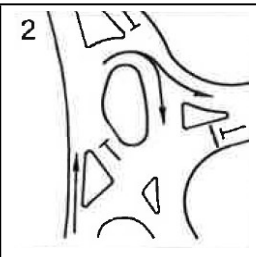
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



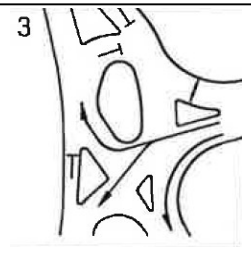
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.613
Loss time	L =	8 sec
Total Flow	=	2649 pcu
Co = (1.5*L+5)/(1-Y)	=	43.9 sec
Cm = L/(1-Y)	=	20.7 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	37.0 %
Cp = 0.9*L/(0.9-Y)	=	25.1 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**36 %**



Stage 1 G= 45
Int =



Stage 2 G= 29
Int = 5



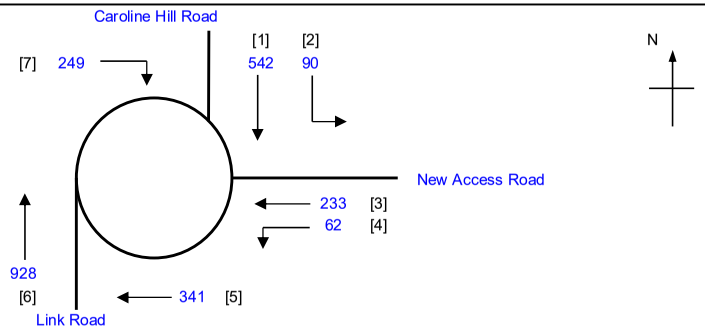
Stage 3 G= 21
Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		21	5
P2	1,2		9	5		74	5

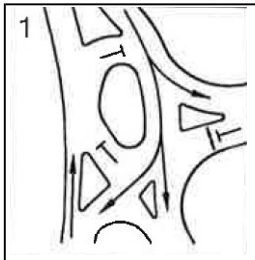
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		1004		1004	0.00	2120							2120	0.474	0.474		75	75	0.664	48	9
7	2	5.00	1	5		N	2115			311	311	1.00	1627							1627	0.191			30	30	0.664	36	36
3	3	3.65	1				2120		225		225	0.00	2120							2120	0.106			17	22	0.664	30	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	22	0.664	6	97
1,2	1	3.65	1	20		N	1980	174	193		367	0.47	1912							1912	0.192			30	45	0.664	42	35
1	1	3.65	1				2120		406		406	0.00	2120							2120	0.192			30	45	0.664	48	35
5	3	5.00	1			N	2115		295		295	0.00	2115							2115	0.139	0.139		22	22	0.664	36	41

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

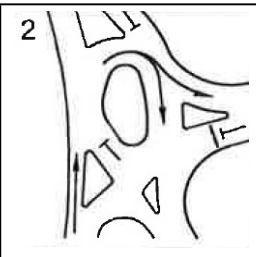
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J1 Caroline Hill Road (West) / Link Road		FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



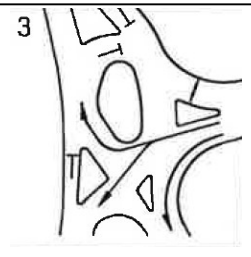
No. of stages per cycle		N =	3
Cycle time		C =	105 sec
Sum(y)		Y =	0.599
Loss time		L =	8 sec
Total Flow		=	2445 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.4 sec
Cm	= L/(1-Y)	=	19.9 sec
Yult		=	0.840
R.C.ult	= (Yult-Y)/Y*100%	=	40.2 %
Cp	= 0.9*L/(0.9-Y)	=	23.9 sec
Ymax	= 1-L/C	=	0.924
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**



Stage 1 G= 46 Int =



Stage 2 G= 24 Int = 5



Stage 3 G= 25 Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

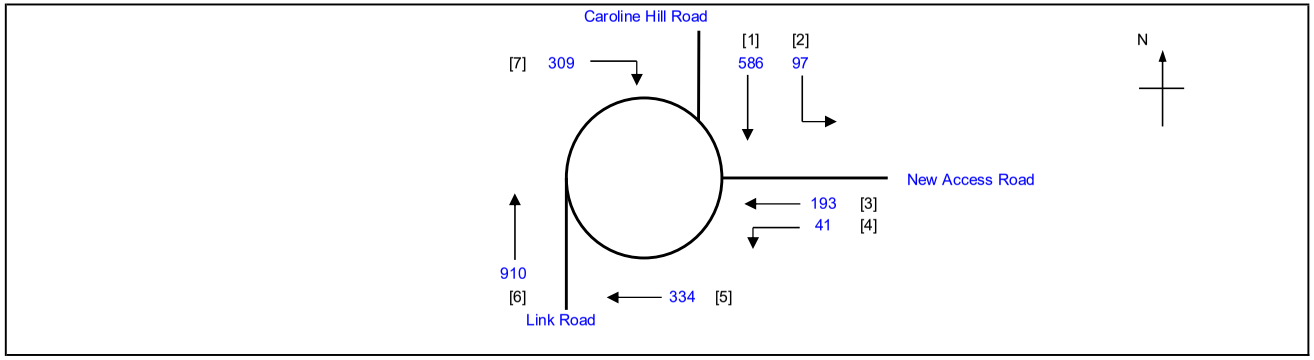
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		928		928	0.00	2120							2120	0.438	0.438		71	71	0.648	48	11
7	2	5.00	1	5		N	2115			249	249	1.00	1627							1627	0.153			25	25	0.648	30	40
3	3	3.65	1				2120		233		233	0.00	2120							2120	0.110			18	26	0.648	30	45
4	3	3.65	1	15		N	1980	62			62	1.00	1800							1800	0.034			6	26	0.648	12	75
1,2	1	3.65	1	20		N	1980	90	212		302	0.30	1937							1937	0.156			25	46	0.648	36	39
1	1	3.65	1				2120		330		330	0.00	2120							2120	0.156			25	46	0.648	42	38
5	3	5.00	1			N	2115		341		341	0.00	2115							2115	0.161	0.161		26	26	0.648	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

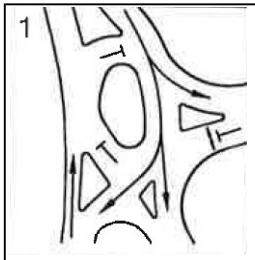
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

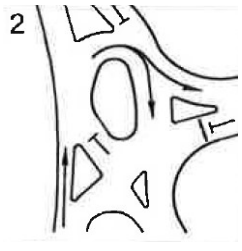
		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J1 Caroline Hill Road (West) / Link Road	**2033 Design Weekend**		
PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
FILENAME : J1_CHRW_LR_IMP.xlsx	Checked By:	SLN	Mar-26
	Reviewed By:	SLN	Mar-26



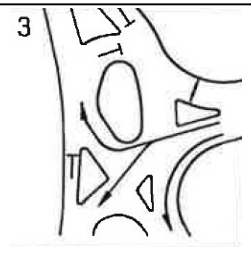
No. of stages per cycle	N =	3
Cycle time	C =	105 sec
Sum(y)	Y =	0.587
Loss time	L =	8 sec
Total Flow	=	2470 pcu
Co = (1.5*L+5)/(1-Y)	=	41.2 sec
Cm = L/(1-Y)	=	19.4 sec
Yult	=	0.840
R.C.ult = (Yult-Y)/Y*100%	=	43.1 %
Cp = 0.9*L/(0.9-Y)	=	23.0 sec
Ymax = 1-L/C	=	0.924
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**42 %**



Stage 1 G= 40
Int =



Stage 2 G= 30
Int = 5



Stage 3 G= 25
Int = 5

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	5		25	5
P2	1,2		9	5		70	5

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
6	1,2	3.65	1				2120		910		910	0.00	2120							2120	0.429	0.429		71	71	0.636	48	11
7	2	5.00	1	5		N	2115			309	309	1.00	1627							1627	0.190			31	31	0.636	36	34
3	3	3.65	1				2120		193		193	0.00	2120							2120	0.091			15	26	0.636	24	47
4	3	3.65	1	15		N	1980	41			41	1.00	1800							1800	0.023			4	26	0.636	6	89
1,2	1	3.65	1	20		N	1980	97	229		326	0.30	1937							1937	0.168			28	40	0.636	36	36
1	1	3.65	1				2120		357		357	0.00	2120							2120	0.168			28	40	0.636	42	36
5	3	5.00	1			N	2115		334		334	0.00	2115							2115	0.158	0.158		26	26	0.636	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

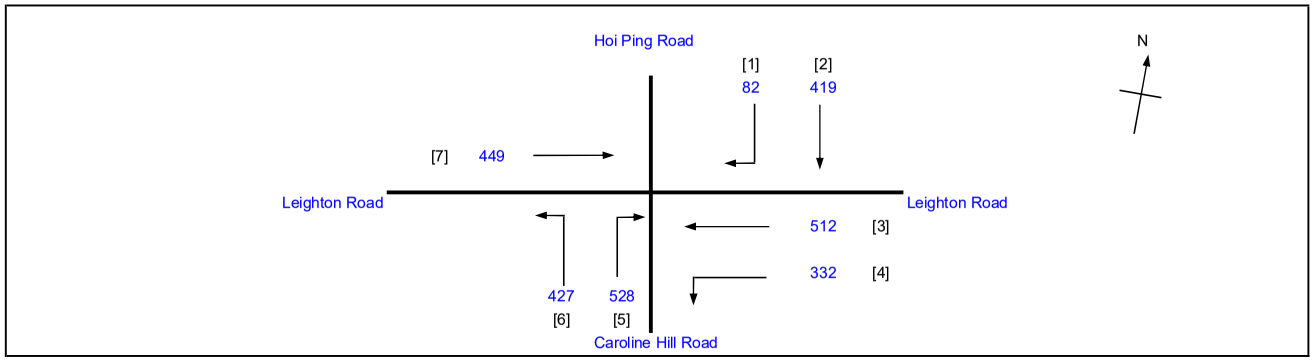
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

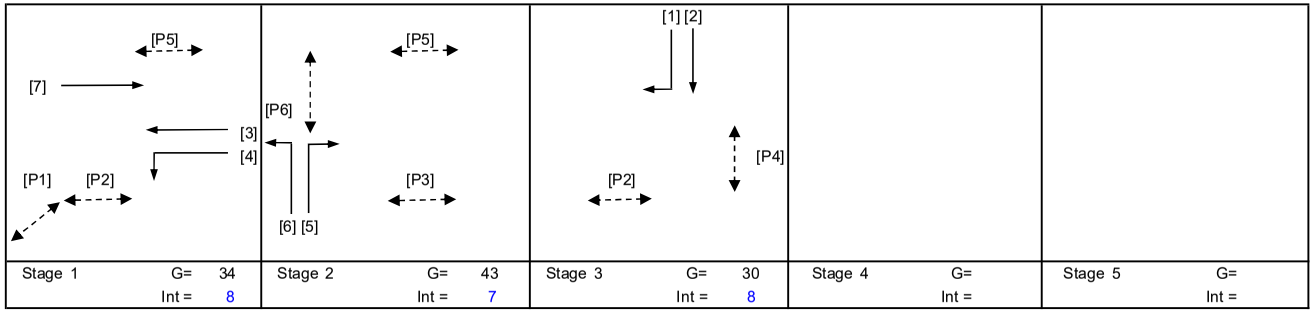
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.613
Loss time		L =	20 sec
Total Flow		=	2749 pcu
Co	= (1.5*L+5)/(1-Y)	=	90.4 sec
Cm	= L/(1-Y)	=	51.7 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	22.3 %
Cp	= 0.9*L/(0.9-Y)	=	62.7 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**24 %**



Stage 1	G= 34	Int = 8
Stage 2	G= 43	Int = 7
Stage 3	G= 30	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	35	5
P2	1,3	4	14	5	0	75	5
P3	2	4.5	14	5	3	42	5
P4	3	15	10	7	4	27	7
P5	1,2	7	11	6	1	85	6
P6	2	15	10	7	4	39	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	175			175	1.00	1828			0.5	-914			914	0.191			34	35	0.724	30	57
3,4	1	3.50	1	25			2105	157	117		274	0.57	2035			0.7	-611			1424	0.192	0.192		35	35	0.724	42	50
3	1	3.00	1				2055		395		395	0.00	2055							2055	0.192			34	35	0.724	60	47
5,6	2	3.50	1	65		N	1965	427		46	473	1.00	1921							1921	0.246	0.246		44	44	0.724	66	40
5	2	3.50	1	20			2105			482	482	1.00	1958							1958	0.246			44	44	0.724	66	40
7	1	3.50	1			N	1965		144		144	0.00	1965			0.5	-983			982	0.147			26	35	0.724	24	65
7	1	3.30	1				2085		305		305	0.00	2085							2085	0.146			26	35	0.724	48	54
2	3	3.50	1			N	1965		340		340	0.00	1965							1965	0.173			31	31	0.724	54	50
1,2	3	3.50	1	12		N	1965		79	82	161	0.51	1847			0.5	-924			923	0.174	0.174		31	31	0.724	24	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

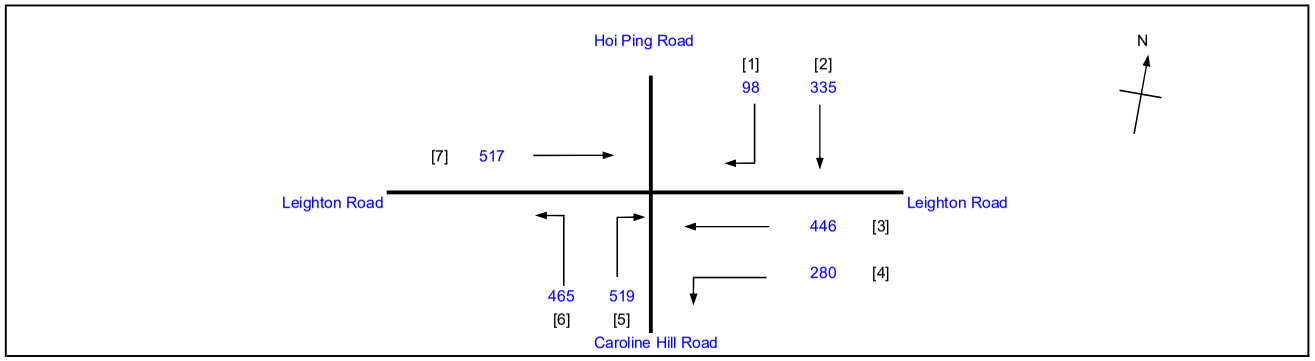
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

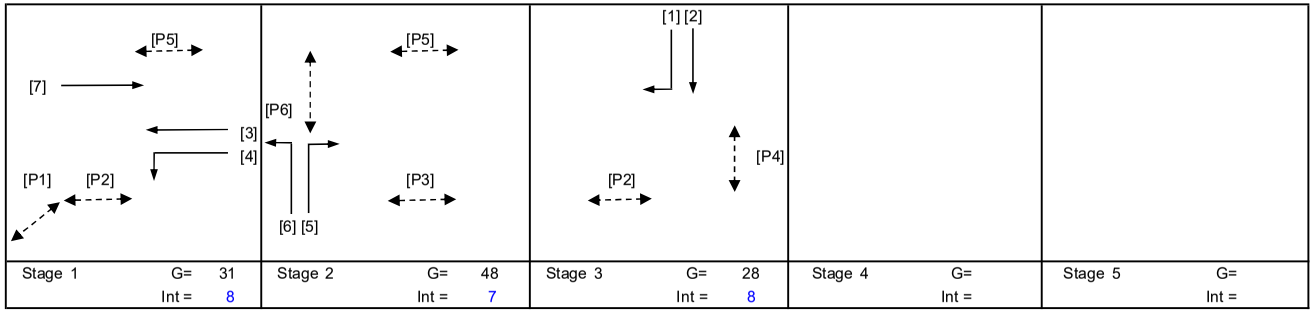
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.574
Loss time		L =	20 sec
Total Flow		=	2660 pcu
Co	= (1.5*L+5)/(1-Y)	=	82.2 sec
Cm	= L/(1-Y)	=	46.9 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	30.7 %
Cp	= 0.9*L/(0.9-Y)	=	55.2 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**33 %**



Stage 1	G= 31	Int = 8
Stage 2	G= 48	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	32	5
P2	1,3	4	14	5	0	70	5
P3	2	4.5	14	5	3	47	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	44	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	151			151	1.00	1828			0.5	-914			914	0.165			32	32	0.678	24	55
3,4	1	3.50	1	25			2105	129	107		236	0.55	2038			0.7	-611			1427	0.165			32	32	0.678	36	50
3	1	3.00	1				2055		339		339	0.00	2055							2055	0.165			32	32	0.678	54	47
5,6	2	3.50	1	65		N	1965	465		22	487	1.00	1921							1921	0.254			49	49	0.678	66	35
5	2	3.50	1	20			2105			497	497	1.00	1958							1958	0.254	0.254		49	49	0.678	66	35
7	1	3.50	1			N	1965		166		166	0.00	1965			0.5	-983			982	0.169	0.169		32	32	0.678	24	54
7	1	3.30	1				2085		351		351	0.00	2085							2085	0.168			32	32	0.678	54	46
2	3	3.50	1			N	1965		297		297	0.00	1965							1965	0.151	0.151		29	29	0.678	48	49
1,2	3	3.50	1	12		N	1965		38	98	136	0.72	1803			0.5	-901			902	0.151			29	29	0.678	24	59

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

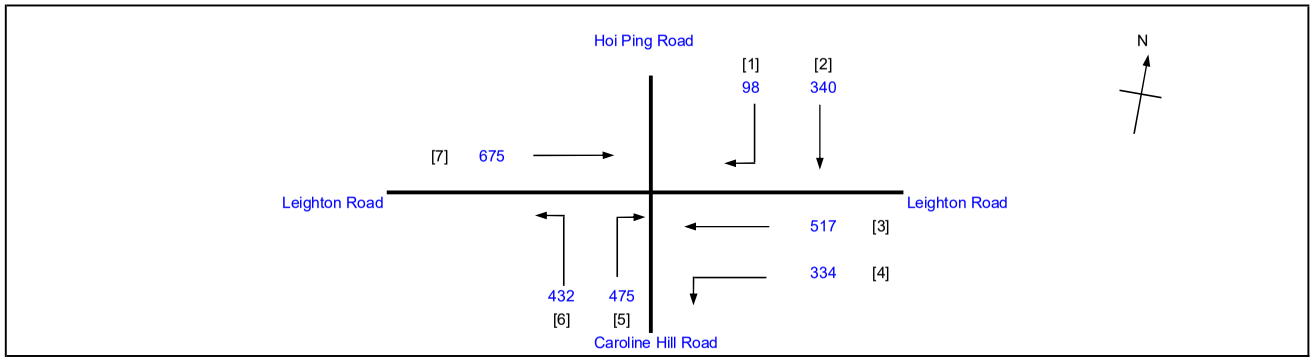
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

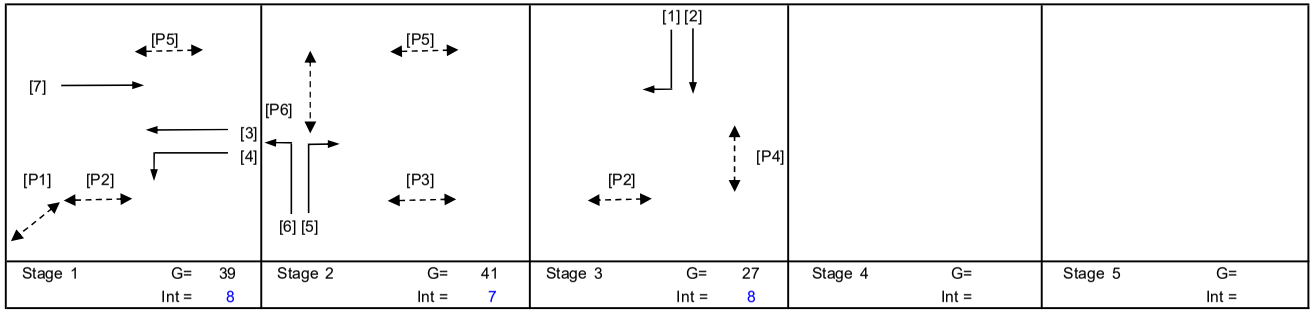
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.607
Loss time		L =	20 sec
Total Flow		=	2871 pcu
Co	= (1.5*L+5)/(1-Y)	=	89.0 sec
Cm	= L/(1-Y)	=	50.9 sec
Yult		=	0.750
R.C.ult	= (Yult-Y)/Y*100%	=	23.6 %
Cp	= 0.9*L/(0.9-Y)	=	61.4 sec
Ymax	= 1-L/C	=	0.846
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**25 %**



Stage 1	G= 39	Int = 8
Stage 2	G= 41	Int = 7
Stage 3	G= 27	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	40	5
P2	1,3	4	14	5	0	77	5
P3	2	4.5	14	5	3	40	5
P4	3	15	10	7	4	24	7
P5	1,2	7	11	6	1	88	6
P6	2	15	10	7	4	37	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	177			177	1.00	1828			0.5	-914			914	0.194			35	40	0.717	30	55
3,4	1	3.50	1	25			2105	157	118		275	0.57	2035			0.7	-611			1424	0.193			35	40	0.717	42	49
3	1	3.00	1				2055		399		399	0.00	2055							2055	0.194			35	40	0.717	60	46
5,6	2	3.50	1	65		N	1965	432		17	449	1.00	1921							1921	0.234			42	42	0.717	60	41
5	2	3.50	1	20			2105			458	458	1.00	1958							1958	0.234	0.234		42	42	0.717	66	41
7	1	3.50	1			N	1965		216		216	0.00	1965			0.5	-983			982	0.220			40	40	0.717	30	50
7	1	3.30	1				2085		459		459	0.00	2085							2085	0.220	0.220		40	40	0.717	66	42
2	3	3.50	1			N	1965		300		300	0.00	1965							1965	0.153			28	28	0.717	48	53
1,2	3	3.50	1	12		N	1965		40	98	138	0.71	1805			0.5	-902			903	0.153	0.153		28	28	0.717	24	64

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

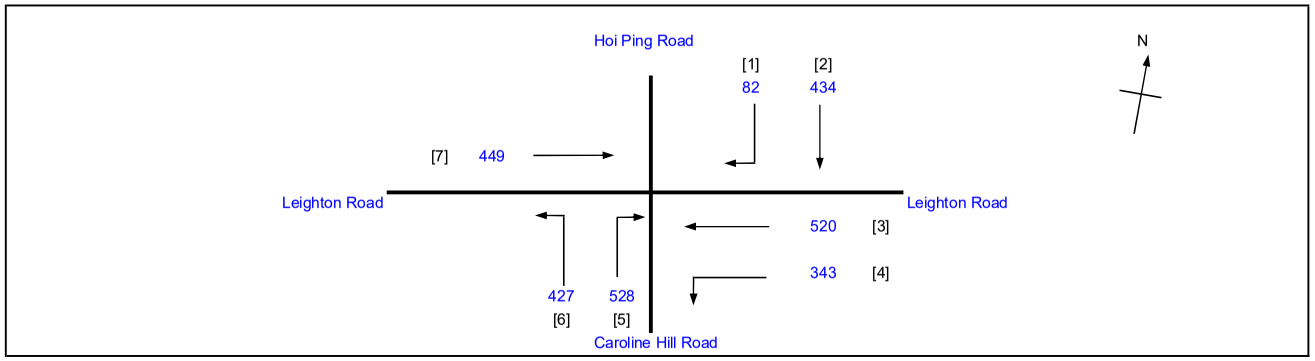
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

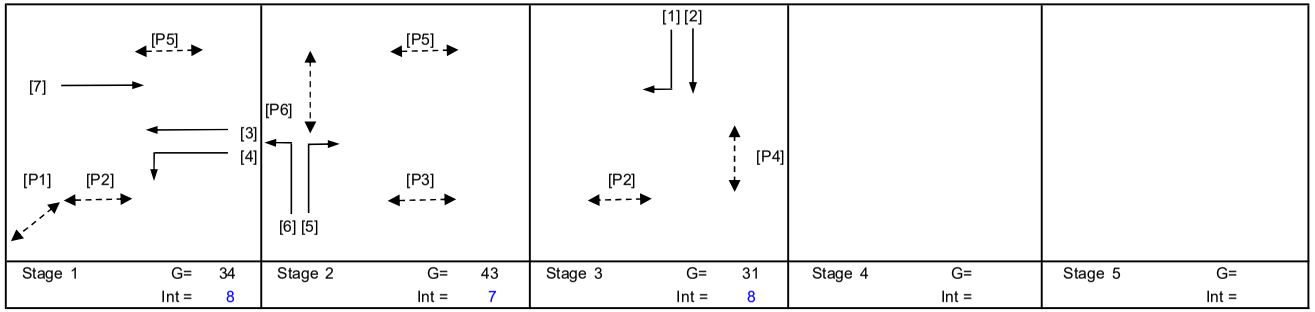
2033 Design AM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.622
Loss time	L =	20 sec
Total Flow	=	2783 pcu
Co = (1.5*L+5)/(1-Y)	=	92.6 sec
Cm = L/(1-Y)	=	52.9 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	20.6 %
Cp = 0.9*L/(0.9-Y)	=	64.7 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**22 %**



Stage 1	G= 34	Int = 8
Stage 2	G= 43	Int = 7
Stage 3	G= 31	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	35	5
P2	1,3	4	14	5	0	75	5
P3	2	4.5	14	5	3	42	5
P4	3	15	10	7	4	28	7
P5	1,2	7	11	6	1	84	6
P6	2	15	10	7	4	39	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	180			180	1.00	1828			0.5	-914			914	0.197	0.197		35	35	0.735	30	57
3,4	1	3.50	1	25			2105	163	116		279	0.58	2034			0.7	-610			1424	0.196			35	35	0.735	42	51
3	1	3.00	1				2055		404		404	0.00	2055							2055	0.197			35	35	0.735	60	47
5,6	2	3.50	1	65		N	1965	427		46	473	1.00	1921							1921	0.246	0.246		44	44	0.735	66	41
5	2	3.50	1	20			2105			482	482	1.00	1958							1958	0.246			44	44	0.735	66	41
7	1	3.50	1			N	1965		144		144	0.00	1965			0.5	-983			982	0.147			26	35	0.735	24	67
7	1	3.30	1				2085		305		305	0.00	2085							2085	0.146			26	35	0.735	54	55
2	3	3.50	1			N	1965		351		351	0.00	1965							1965	0.179	0.179		32	32	0.735	54	50
1,2	3	3.50	1	12		N	1965		83	82	165	0.50	1850			0.5	-925			925	0.178			32	32	0.735	30	61

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

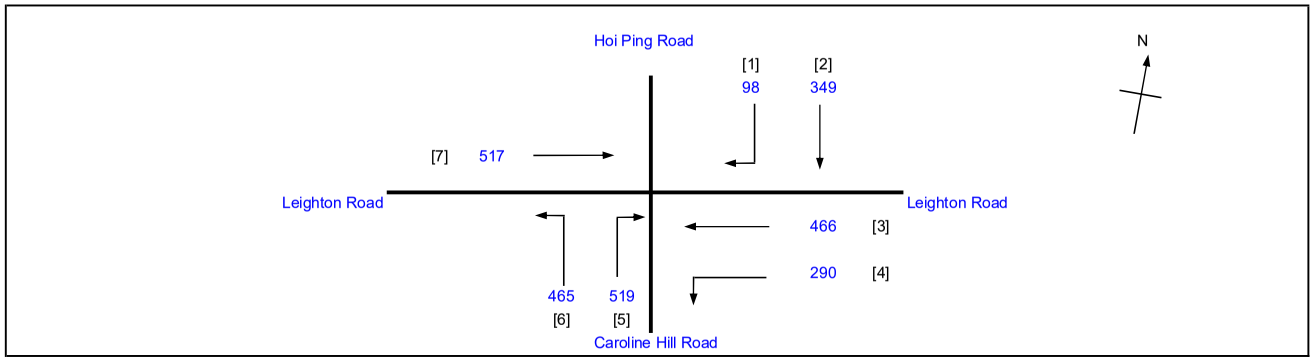
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

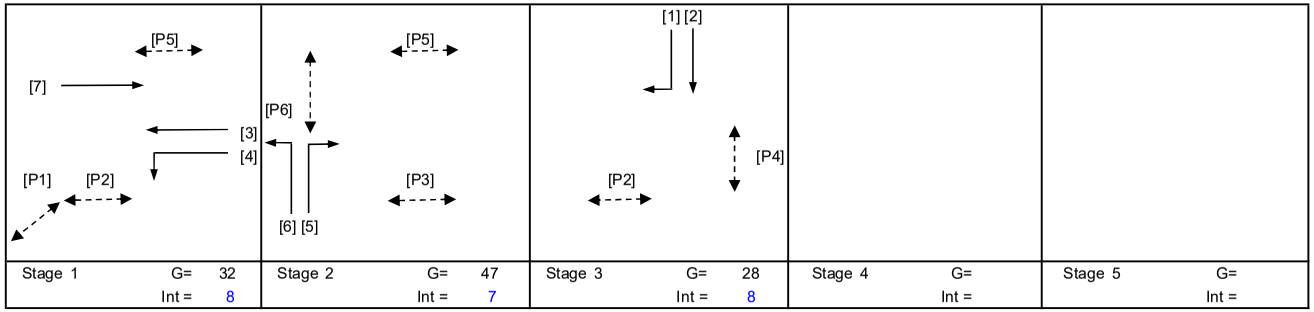
2033 Design PM

PROJECT NO.: 40920

FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.582
Loss time	L =	20 sec
Total Flow	=	2704 pcu
Co = (1.5*L+5)/(1-Y)	=	83.7 sec
Cm = L/(1-Y)	=	47.9 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	28.9 %
Cp = 0.9*L/(0.9-Y)	=	56.6 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**31 %**



Stage 1	G= 32	Int = 8
Stage 2	G= 47	Int = 7
Stage 3	G= 28	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	33	5
P2	1,3	4	14	5	0	71	5
P3	2	4.5	14	5	3	46	5
P4	3	15	10	7	4	25	7
P5	1,2	7	11	6	1	87	6
P6	2	15	10	7	4	43	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	157			157	1.00	1828			0.5	-914			914	0.172			32	33	0.688	24	55
3,4	1	3.50	1	25			2105	133	112		245	0.54	2039			0.7	-612			1427	0.172			32	33	0.688	36	50
3	1	3.00	1				2055		354		354	0.00	2055							2055	0.172	0.172		33	33	0.688	54	47
5,6	2	3.50	1	65		N	1965	465		22	487	1.00	1921							1921	0.254			48	48	0.688	66	36
5	2	3.50	1	20			2105			497	497	1.00	1958							1958	0.254	0.254		48	48	0.688	66	36
7	1	3.50	1			N	1965		166		166	0.00	1965			0.5	-983			982	0.169			32	33	0.688	24	55
7	1	3.30	1				2085		351		351	0.00	2085							2085	0.168			32	33	0.688	54	47
2	3	3.50	1			N	1965		306		306	0.00	1965							1965	0.156			29	29	0.688	48	49
1,2	3	3.50	1	12		N	1965		43	98	141	0.70	1808			0.5	-904			904	0.156	0.156		29	29	0.688	24	59

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

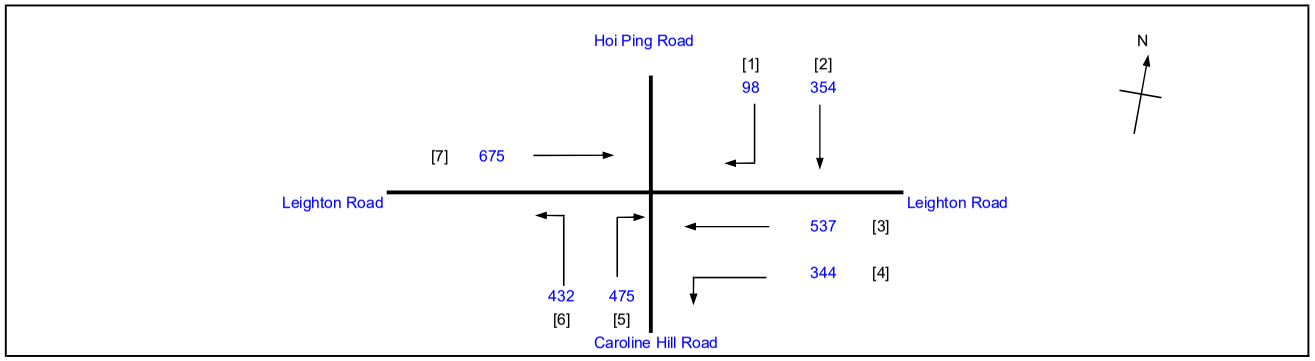
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

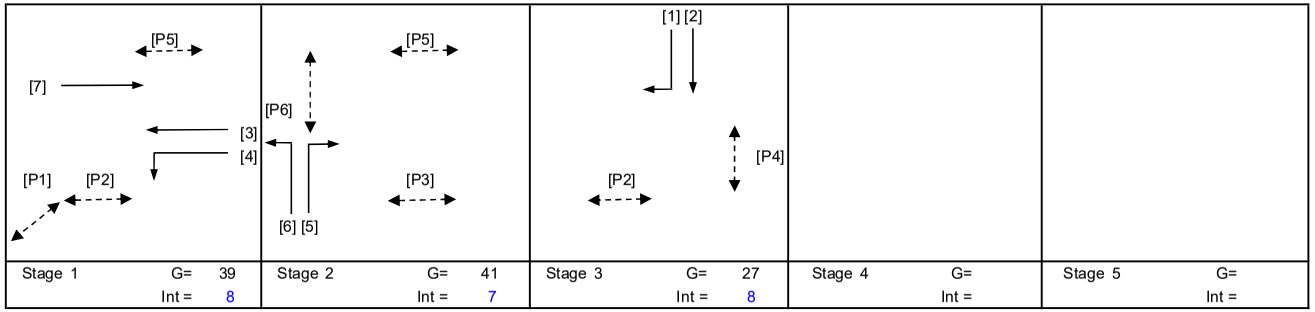
J2 Leighton Road / Caroline Hill Road (West) / Hoi Ping Road

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J2_LR_CHR_HPR.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	130 sec
Sum(y)	Y =	0.612
Loss time	L =	20 sec
Total Flow	=	2915 pcu
Co = (1.5*L+5)/(1-Y)	=	90.2 sec
Cm = L/(1-Y)	=	51.6 sec
Yult	=	0.750
R.C.ult = (Yult-Y)/Y*100%	=	22.5 %
Cp = 0.9*L/(0.9-Y)	=	62.5 sec
Ymax = 1-L/C	=	0.846
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**24 %**



Stage 1	G= 39	Int = 8
Stage 2	G= 41	Int = 7
Stage 3	G= 27	Int = 8
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage	Width (m)	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1	4.5	10	5	2	40	5
P2	1,3	4	14	5	0	77	5
P3	2	4.5	14	5	3	40	5
P4	3	15	10	7	4	24	7
P5	1,2	7	11	6	1	88	6
P6	2	15	10	7	4	37	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							20					
4	1	3.50	1	20		N	1965	184			184	1.00	1828			0.5	-914			914	0.201			36	40	0.723	30	55
3,4	1	3.50	1	25			2105	160	126		286	0.56	2037			0.7	-611			1426	0.201			36	40	0.723	42	49
3	1	3.00	1				2055		411		411	0.00	2055							2055	0.200			36	40	0.723	60	46
5,6	2	3.50	1	65		N	1965	432		17	449	1.00	1921							1921	0.234			42	42	0.723	60	42
5	2	3.50	1	20			2105			458	458	1.00	1958							1958	0.234	0.234		42	42	0.723	66	42
7	1	3.50	1			N	1965		216		216	0.00	1965			0.5	-983			982	0.220			40	40	0.723	30	51
7	1	3.30	1				2085		459		459	0.00	2085							2085	0.220	0.220		40	40	0.723	66	43
2	3	3.50	1			N	1965		309		309	0.00	1965							1965	0.157			28	28	0.723	48	52
1,2	3	3.50	1	12		N	1965		45	98	143	0.69	1810			0.5	-905			905	0.158	0.158		28	28	0.723	24	64

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

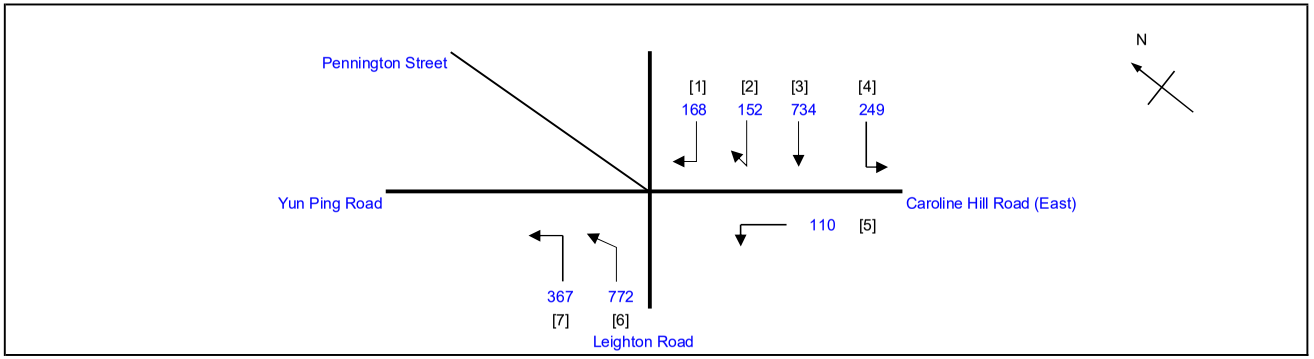
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street

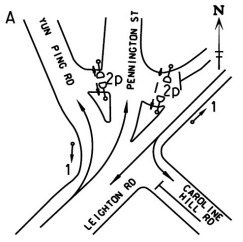
2033 Reference AM

PROJECT NO.: 40920

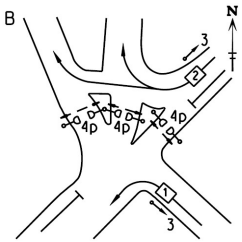
FILENAME : J3_LR_CHRE_YPR_PS.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.638
Loss time		L =	11 sec
Total Flow		=	2552 pcu
Co	= (1.5*L+5)/(1-Y)	=	59.4 sec
Cm	= L/(1-Y)	=	30.4 sec
Yult		=	0.818
R.C.ult	= (Yult-Y)/Y*100%	=	28.2 %
Cp	= 0.9*L/(0.9-Y)	=	37.8 sec
Ymax	= 1-L/C	=	0.915
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**29 %**



Stage 1 G= 74 Int = 6



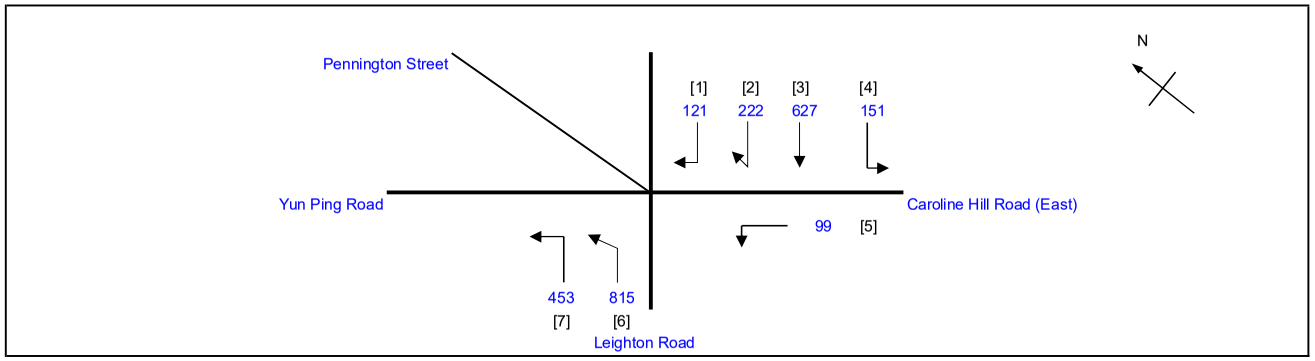
Stage 2 G= 43 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	70	8
4P	2		10	8	2	40	8

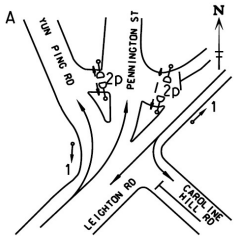
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		659		659	0.00	2005							2005	0.329			61	75
3,4	1	3.00	1	7		N	1915	249	75		324	0.77	1644			0.6	-658			986	0.329			61	75
6	1	3.00	1				2055		609		609	0.00	2055			0.7	-534			1521	0.400	0.400		75	75
6,7	1	3.00	1	15		N	1915	367	163		530	0.69	1791			0.7	-466			1325	0.400			75	75
1,2	2	3.50	1	9		N	1965			320	320	1.00	1684			0.8	-337			1347	0.238	0.238		44	44
5	2	4.00	1	5		N	2015	110			110	1.00	1550			0.6	-620			930	0.118			22	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

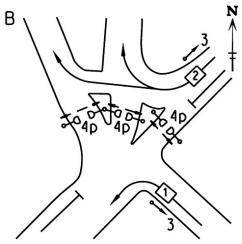
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.702
Loss time	L =	11 sec
Total Flow	=	2488 pcu
Co = (1.5*L+5)/(1-Y)	=	72.1 sec
Cm = L/(1-Y)	=	36.9 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	16.5 %
Cp = 0.9*L/(0.9-Y)	=	49.9 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**17 %**



Stage 1 G= 75
Int = 6



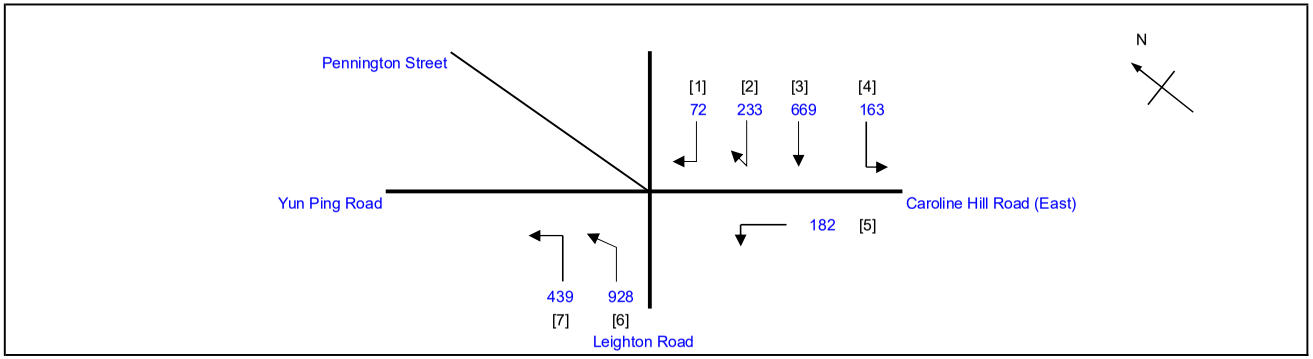
Stage 2 G= 42
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	71	8
4P	2		10	8	2	39	8

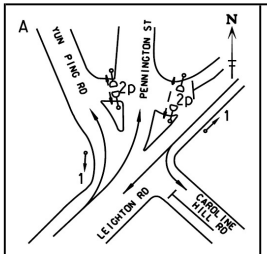
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							11		
3	1	2.50	1				2005		515		515	0.00	2005							2005	0.257			44	76
3,4	1	3.00	1	7		N	1915	151	112		263	0.57	1705			0.6	-682			1023	0.257			44	76
6	1	3.00	1				2055		680		680	0.00	2055			0.7	-534			1521	0.447	0.447		76	76
6,7	1	3.00	1	15		N	1915	453	135		588	0.77	1778			0.7	-462			1316	0.447			76	76
1,2	2	3.50	1	9		N	1965			343	343	1.00	1684			0.8	-337			1347	0.255	0.255		43	43
5	2	4.00	1	5		N	2015	99			99	1.00	1550			0.6	-620			930	0.106			18	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

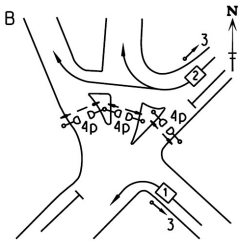
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.707
Loss time	L =	11 sec
Total Flow	=	2686 pcu
Co = (1.5*L+5)/(1-Y)	=	73.4 sec
Cm = L/(1-Y)	=	37.5 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	15.6 %
Cp = 0.9*L/(0.9-Y)	=	51.3 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**17 %**



Stage 1 G= 80 Int = 6



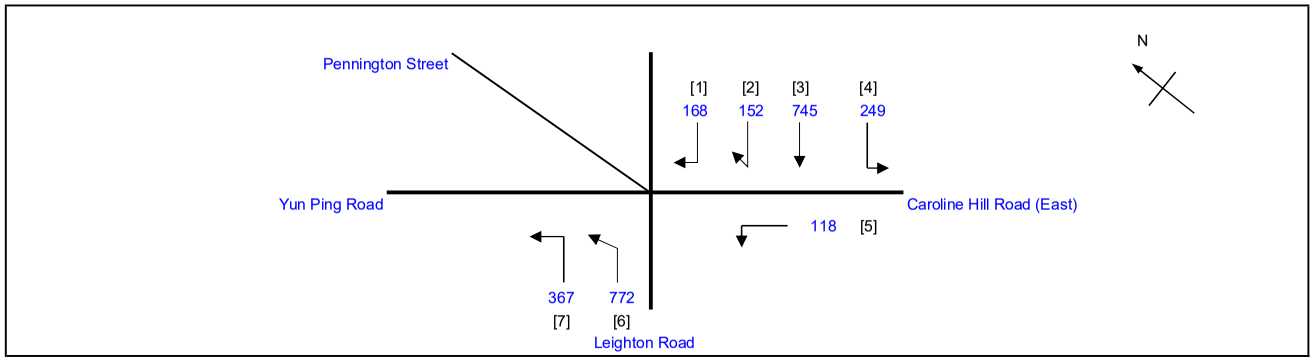
Stage 2 G= 37 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	76	8
4P	2		10	8	2	34	8

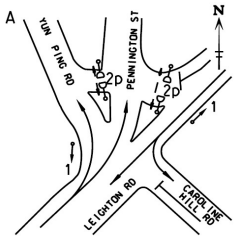
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							11				
3	1	2.50	1				2005		551		551	0.00	2005							2005	0.275			46	81			
3,4	1	3.00	1	7		N	1915	163	118		281	0.58	1703			0.6	-681			1022	0.275			46	81			
6	1	3.00	1				2055		731		731	0.00	2055			0.7	-534			1521	0.481	0.481		81	81			
6,7	1	3.00	1	15		N	1915	439	197		636	0.69	1791			0.7	-466			1325	0.480			81	81			
1,2	2	3.50	1	9		N	1965			305	305	1.00	1684			0.8	-337			1347	0.226	0.226		38	38			
5	2	4.00	1	5		N	2015	182			182	1.00	1550			0.6	-620			930	0.196			33	38			

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

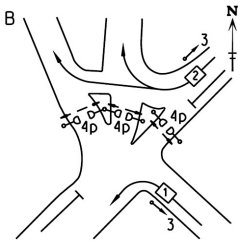
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.638
Loss time	L =	11 sec
Total Flow	=	2571 pcu
Co = (1.5*L+5)/(1-Y)	=	59.4 sec
Cm = L/(1-Y)	=	30.4 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	28.2 %
Cp = 0.9*L/(0.9-Y)	=	37.8 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**29 %**



Stage 1 G= 74
Int = 6



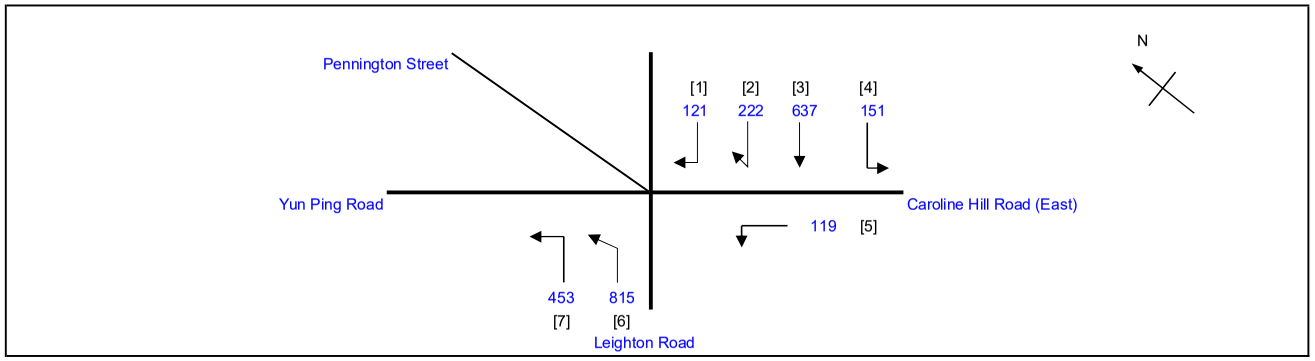
Stage 2 G= 43
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	70	8
4P	2		10	8	2	40	8

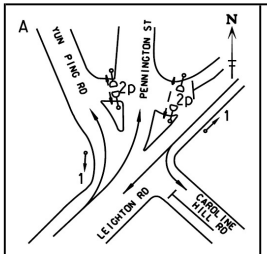
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		666		666	0.00	2005							2005	0.332			62	75
3,4	1	3.00	1	7		N	1915	249	79		328	0.76	1647			0.6	-659			988	0.332			62	75
6	1	3.00	1				2055		609		609	0.00	2055			0.7	-534			1521	0.400	0.400		75	75
6,7	1	3.00	1	15		N	1915	367	163		530	0.69	1791			0.7	-466			1325	0.400			75	75
1,2	2	3.50	1	9		N	1965			320	320	1.00	1684			0.8	-337			1347	0.238	0.238		44	44
5	2	4.00	1	5		N	2015	118			118	1.00	1550			0.6	-620			930	0.127			24	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

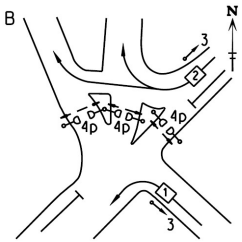
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.702
Loss time	L =	11 sec
Total Flow	=	2518 pcu
Co = (1.5*L+5)/(1-Y)	=	72.1 sec
Cm = L/(1-Y)	=	36.9 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	16.5 %
Cp = 0.9*L/(0.9-Y)	=	49.9 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**17 %**



Stage 1 G= 75 Int = 6



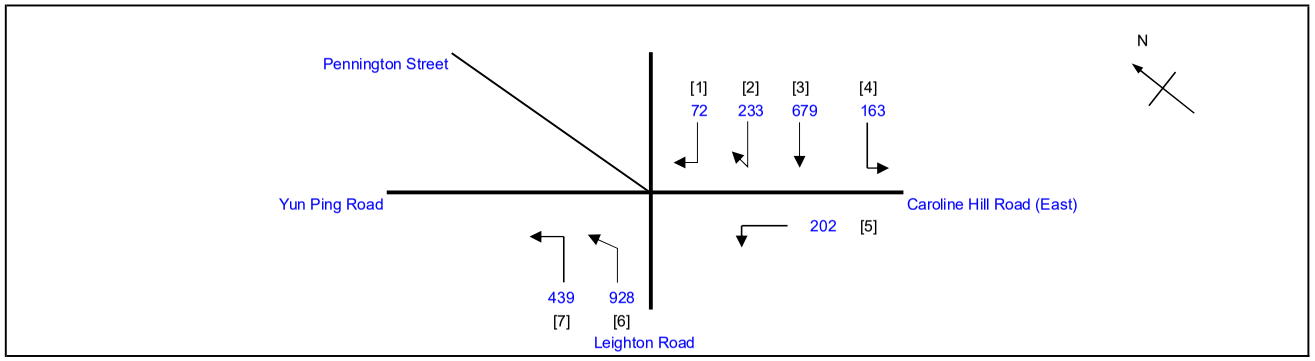
Stage 2 G= 42 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	71	8
4P	2		10	8	2	39	8

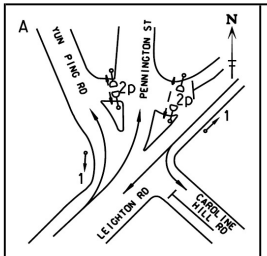
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		521		521	0.00	2005							2005	0.260			44	76
3,4	1	3.00	1	7		N	1915	151	116		267	0.57	1708			0.6	-683			1025	0.260			44	76
6	1	3.00	1				2055		680		680	0.00	2055			0.7	-534			1521	0.447	0.447		76	76
6,7	1	3.00	1	15		N	1915	453	135		588	0.77	1778			0.7	-462			1316	0.447			76	76
1,2	2	3.50	1	9		N	1965			343	343	1.00	1684			0.8	-337			1347	0.255	0.255		43	43
5	2	4.00	1	5		N	2015	119			119	1.00	1550			0.6	-620			930	0.128			22	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

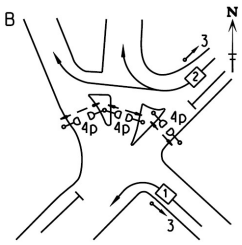
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J3 Leighton Road / Caroline Hill Road (East) / Yun Ping Road / Pennington Street		FILENAME : J3_LR_CHRE_YPR_PS.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.707
Loss time	L =	11 sec
Total Flow	=	2716 pcu
Co = (1.5*L+5)/(1-Y)	=	73.4 sec
Cm = L/(1-Y)	=	37.5 sec
Yult	=	0.818
R.C.ult = (Yult-Y)/Y*100%	=	15.6 %
Cp = 0.9*L/(0.9-Y)	=	51.3 sec
Ymax = 1-L/C	=	0.915
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**17 %**



Stage 1 G= 80
Int = 6



Stage 2 G= 37
Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
2P	1		5	8	2	76	8
4P	2		10	8	2	34	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						11		
3	1	2.50	1				2005		557		557	0.00	2005							2005	0.278			47	81
3,4	1	3.00	1	7		N	1915	163	122		285	0.57	1706			0.6	-682			1024	0.278			47	81
6	1	3.00	1				2055		731		731	0.00	2055			0.7	-534			1521	0.481	0.481		81	81
6,7	1	3.00	1	15		N	1915	439	197		636	0.69	1791			0.7	-466			1325	0.480			81	81
1,2	2	3.50	1	9		N	1965			305	305	1.00	1684			0.8	-337			1347	0.226	0.226		38	38
5	2	4.00	1	5		N	2015	202			202	1.00	1550			0.6	-620			930	0.217			37	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

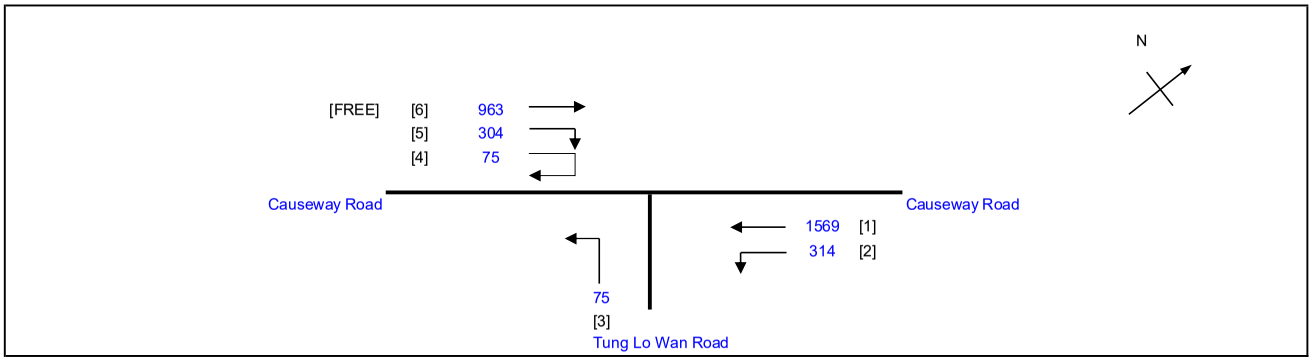
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

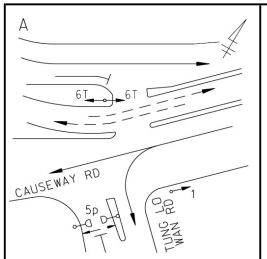
2033 Reference AM

PROJECT NO.: 40920

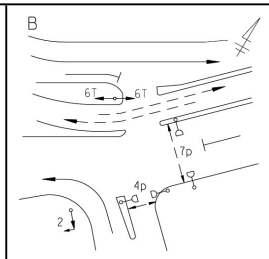
FILENAME : J4_CR_LR_IS.xlsx



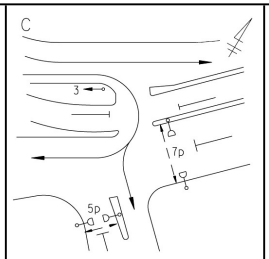
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.476
Loss time	L =	33 sec
Total Flow	=	2337 pcu
Co = (1.5*L+5)/(1-Y)	=	104.1 sec
Cm = L/(1-Y)	=	63.0 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	36.9 %
Cp = 0.9*L/(0.9-Y)	=	70.1 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**27 %**



Stage 1 G= 38 Int = 9



Stage 2 G= 15 Int = 4



Stage 3 G= 27 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		42	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		426		426	0.00	1915			0.8	-383			1532	0.278			39	39
1	1	3.00	2				4110		1143		1143	0.00	4110							4110	0.278	0.278		39	39
2	1	3.00	1	9		N	1915	314			314	1.00	1641			0.8	-328			1313	0.239			34	39
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
5	3	4.00	1	12			2155			304	304	1.00	1916			0.8	-383			1533	0.198	0.198		28	28
4	3	4.50	1	8			2205			75	75	1.00	1857			0.8	-371			1486	0.050			7	28
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

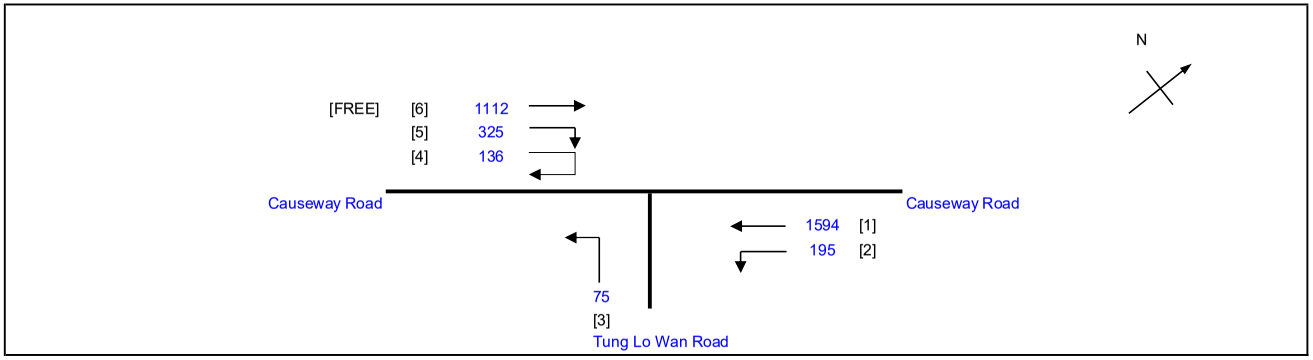
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

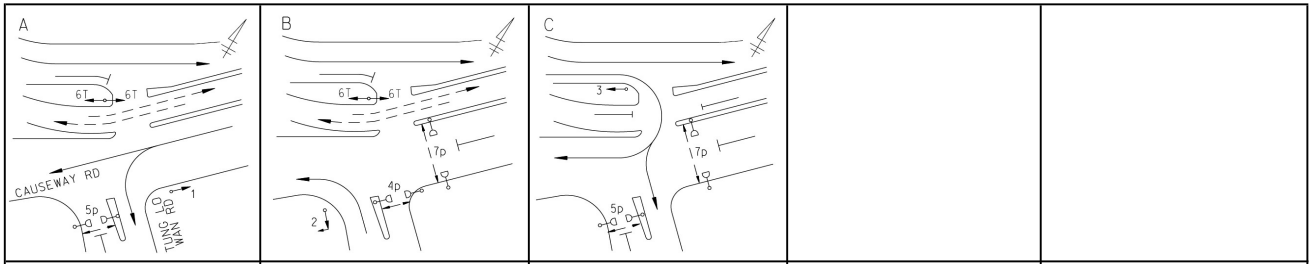
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road

2033 Reference PM

PROJECT NO.: 40920
FILENAME : J4_CR_LR_IS.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.495
Loss time		L =	33 sec
Total Flow		=	2325 pcu
Co	= (1.5*L+5)/(1-Y)	=	107.9 sec
Cm	= L/(1-Y)	=	65.3 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	31.9 %
Cp	= 0.9*L/(0.9-Y)	=	73.3 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**22 %**



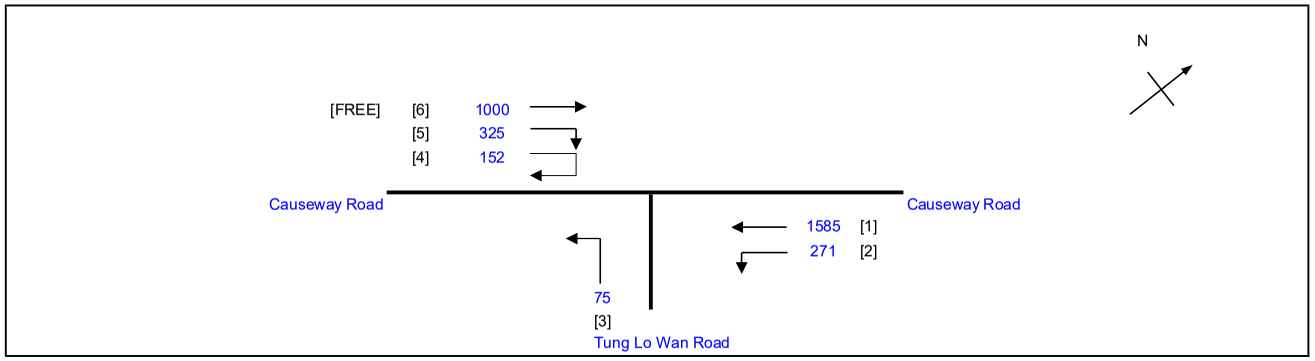
Stage 1	G=	37	
	Int =	9	
Stage 2	G=	15	
	Int =	4	
Stage 3	G=	28	
	Int =	7	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		43	11

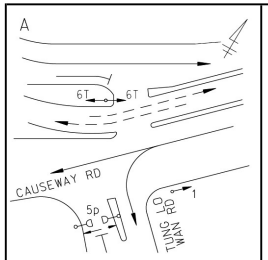
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		433		433	0.00	1915			0.8	-383			1532	0.283	0.283		38	38
1	1	3.00	2				4110		1161		1161	0.00	4110							4110	0.282			38	38
2	1	3.00	1	9		N	1915	195			195	1.00	1641			0.8	-328			1313	0.148			20	38
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
5	3	4.00	1	12			2155			325	325	1.00	1916			0.8	-383			1533	0.212	0.212		29	29
4	3	4.50	1	8			2205			136	136	1.00	1857			0.8	-371			1486	0.092			12	29
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

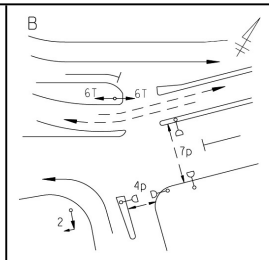
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



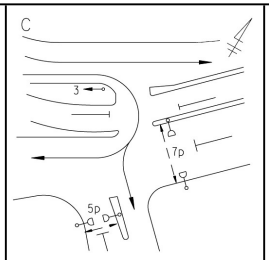
No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.493
Loss time	L =	33 sec
Total Flow	=	2408 pcu
Co = (1.5*L+5)/(1-Y)	=	107.6 sec
Cm = L/(1-Y)	=	65.1 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	32.2 %
Cp = 0.9*L/(0.9-Y)	=	73.0 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**22 %**



Stage 1 G= 37 Int = 9



Stage 2 G= 15 Int = 4



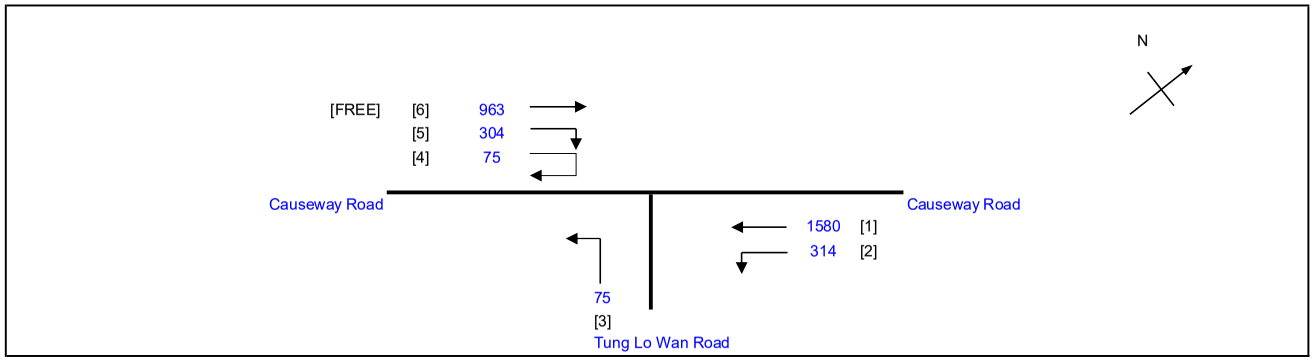
Stage 3 G= 28 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		43	11

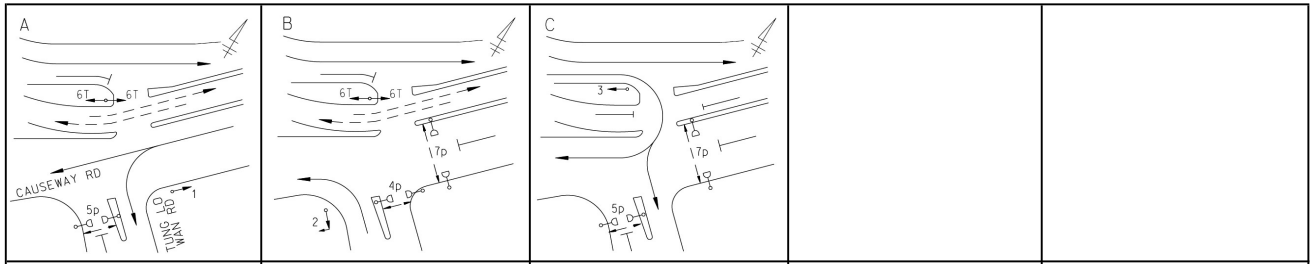
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		431		431	0.00	1915			0.8	-383			1532	0.281	0.281		38	38
1	1	3.00	2				4110		1154		1154	0.00	4110							4110	0.281			38	38
2	1	3.00	1	9		N	1915	271			271	1.00	1641			0.8	-328			1313	0.206			28	38
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
5	3	4.00	1	12			2155			325	325	1.00	1916			0.8	-383			1533	0.212	0.212		29	29
4	3	4.50	1	8			2205			152	152	1.00	1857			0.8	-371			1486	0.102			14	29
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.478
Loss time	L =	33 sec
Total Flow	=	2348 pcu
Co = (1.5*L+5)/(1-Y)	=	104.5 sec
Cm = L/(1-Y)	=	63.3 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	36.4 %
Cp = 0.9*L/(0.9-Y)	=	70.4 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**26 %**



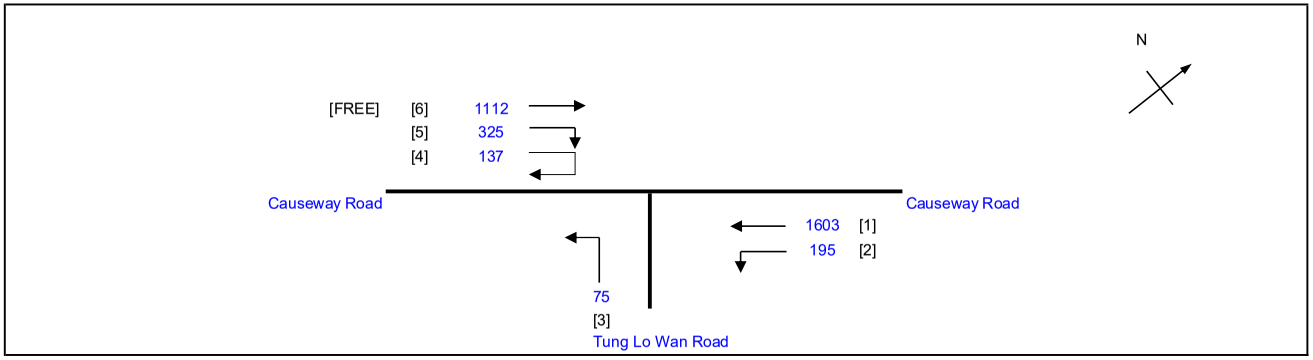
Stage 1	G= 38	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 27	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		42	11

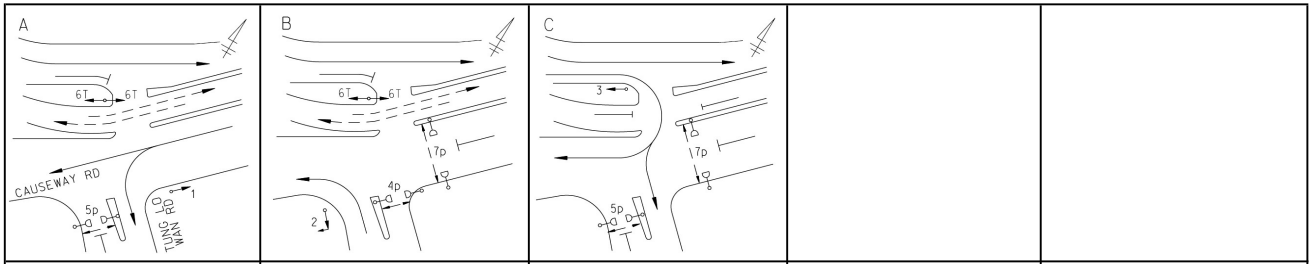
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		429		429	0.00	1915			0.8	-383			1532	0.280			39	39
1	1	3.00	2				4110		1151		1151	0.00	4110							4110	0.280	0.280		39	39
2	1	3.00	1	9		N	1915	314			314	1.00	1641			0.8	-328			1313	0.239			33	39
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
5	3	4.00	1	12			2155			304	304	1.00	1916			0.8	-383			1533	0.198	0.198		28	28
4	3	4.50	1	8			2205			75	75	1.00	1857			0.8	-371			1486	0.050			7	28
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME : J4_CR_LR_IS.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	3
Cycle time	C =	100 sec
Sum(y)	Y =	0.496
Loss time	L =	33 sec
Total Flow	=	2335 pcu
Co = (1.5*L+5)/(1-Y)	=	108.2 sec
Cm = L/(1-Y)	=	65.5 sec
Yult	=	0.653
R.C.ult = (Yult-Y)/Y*100%	=	31.5 %
Cp = 0.9*L/(0.9-Y)	=	73.6 sec
Ymax = 1-L/C	=	0.670
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**22 %**



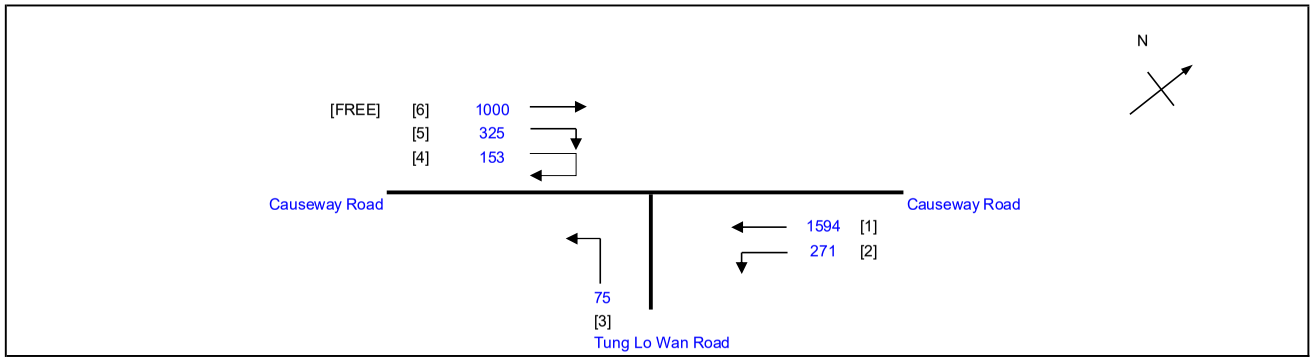
Stage 1	G= 37	Stage 2	G= 15	Stage 3	G= 28
	Int = 9		Int = 4		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		43	11

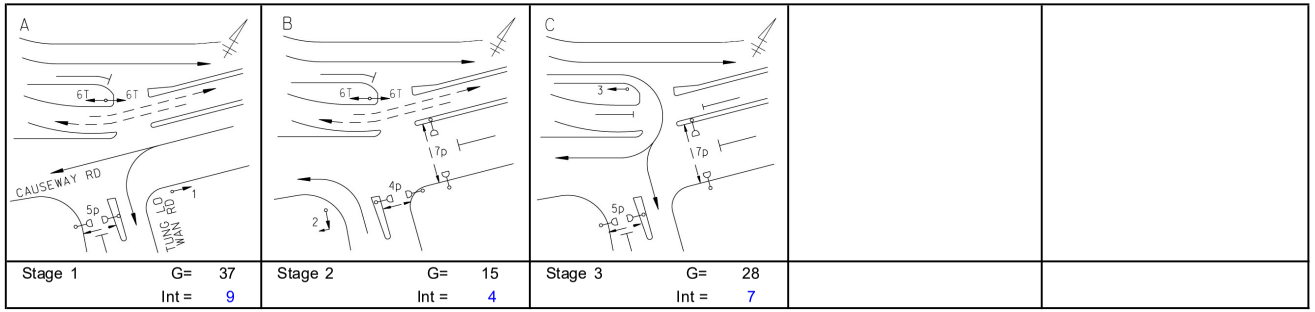
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		435		435	0.00	1915			0.8	-383			1532	0.284			38	38
1	1	3.00	2				4110		1168		1168	0.00	4110							4110	0.284	0.284		38	38
2	1	3.00	1	9		N	1915	195			195	1.00	1641			0.8	-328			1313	0.148			20	38
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
5	3	4.00	1	12			2155			325	325	1.00	1916			0.8	-383			1533	0.212	0.212		29	29
4	3	4.50	1	8			2205			137	137	1.00	1857			0.8	-371			1486	0.092			12	29
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.:	40920	Prepared By:	SKL	Apr-26
J4 Causeway Road / Leighton Road/Irving Street / Tung Lo Wan Road		FILENAME :	J4_CR_LR_IS.xlsx	Checked By:	SLN	Apr-26
				Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.495
Loss time		L =	33 sec
Total Flow		=	2418 pcu
Co	= (1.5*L+5)/(1-Y)	=	107.9 sec
Cm	= L/(1-Y)	=	65.3 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	31.9 %
Cp	= 0.9*L/(0.9-Y)	=	73.3 sec
Ymax	= 1-L/C	=	0.670
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**22 %**



Stage 1	G= 37	Int = 9
Stage 2	G= 15	Int = 4
Stage 3	G= 28	Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
4P	2		7	8		11	8
5P	1,3		10	5		76	5
7P	2,3		9	11		43	11

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																						18		
1	1	3.00	1			N	1915		433		433	0.00	1915			0.8	-383			1532	0.283	0.283		38	38
1	1	3.00	2				4110		1161		1161	0.00	4110							4110	0.282			38	38
2	1	3.00	1	9		N	1915	271			271	1.00	1641			0.8	-328			1313	0.206			28	38
3	2	4.00	1	25		N	2015	75			75	1.00	1901			0.8	-380			1521	0.049			7	15
5	3	4.00	1	12			2155			325	325	1.00	1916			0.8	-383			1533	0.212	0.212		29	29
4	3	4.50	1	8			2205			153	153	1.00	1857			0.8	-371			1486	0.103			14	29
PED	2																						15		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

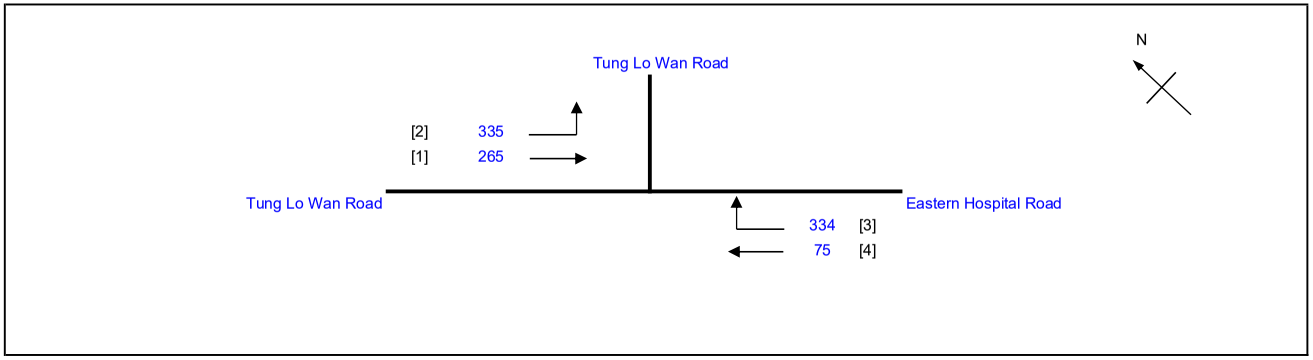
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

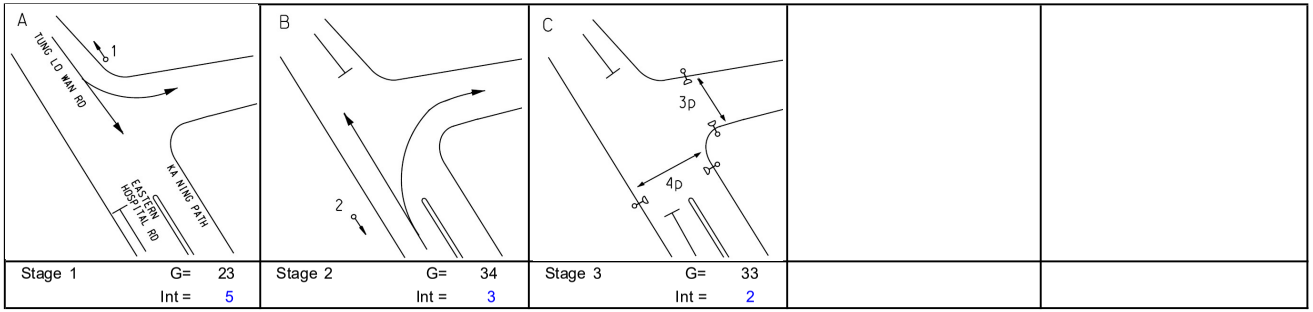
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Reference AM

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.382
Loss time		L =	41 sec
Total Flow		=	1009 pcu
Co	= (1.5*L+5)/(1-Y)	=	107.6 sec
Cm	= L/(1-Y)	=	66.3 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	55.2 %
Cp	= 0.9*L/(0.9-Y)	=	71.2 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**39 %**



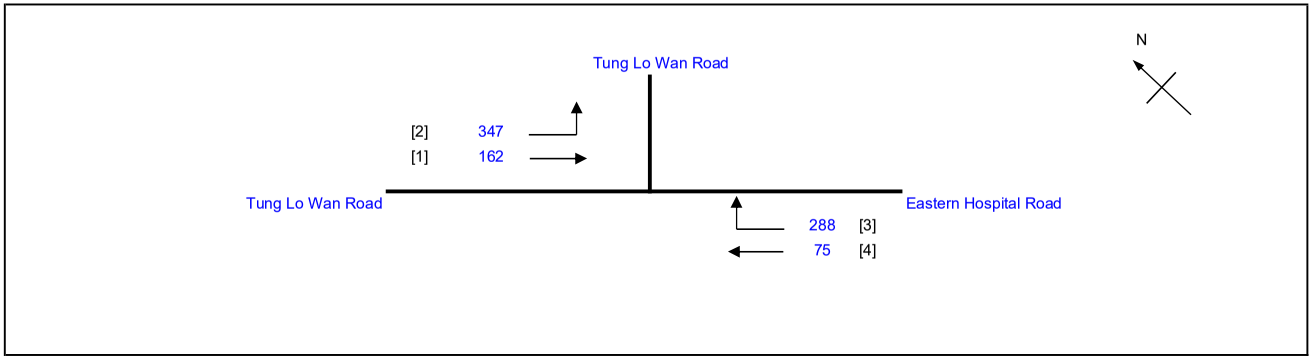
Stage 1	G=	23	Stage 2	G=	34
	Int =	5		Int =	3
Stage 3	G=	33			
	Int =	2			

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

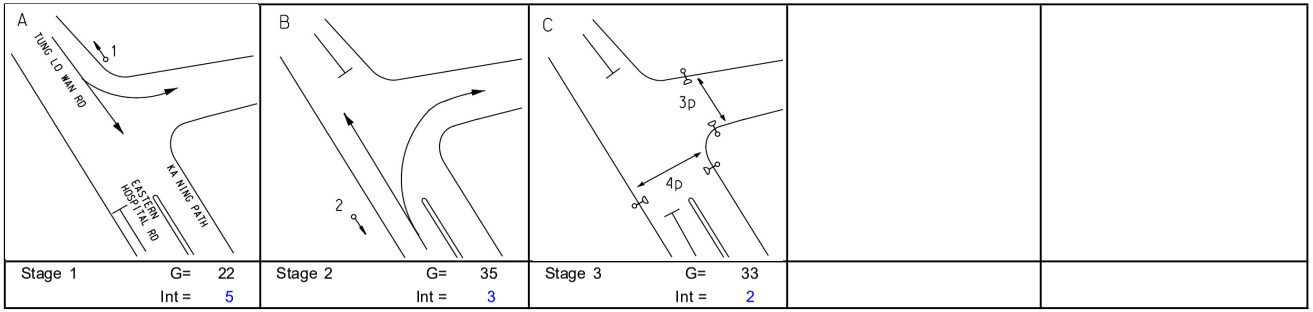
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
1,2	1	3.30	1	25			2085	53	265		318	0.17	2064							2064	0.154	0.154		24	24
1	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			24	24
3,4	2	3.65	1	12		N	1980		75	334	409	0.82	1797							1797	0.228	0.228		35	35
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.333
Loss time		L =	41 sec
Total Flow		=	872 pcu
Co	= (1.5*L+5)/(1-Y)	=	99.7 sec
Cm	= L/(1-Y)	=	61.5 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	77.9 %
Cp	= 0.9*L/(0.9-Y)	=	65.1 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**59 %**



Stage 1	G= 22	Stage 2	G= 35
	Int = 5		Int = 3
Stage 3	G= 33		
	Int = 2		

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
1,2	1	3.30	1	25			2085	106	162		268	0.40	2037							2037	0.132	0.132		23	23			
1	1	3.30	1	25		N	1945	241			241	1.00	1835							1835	0.131			23	23			
3,4	2	3.65	1	12		N	1980		75	288	363	0.79	1801							1801	0.202	0.202		36	36			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

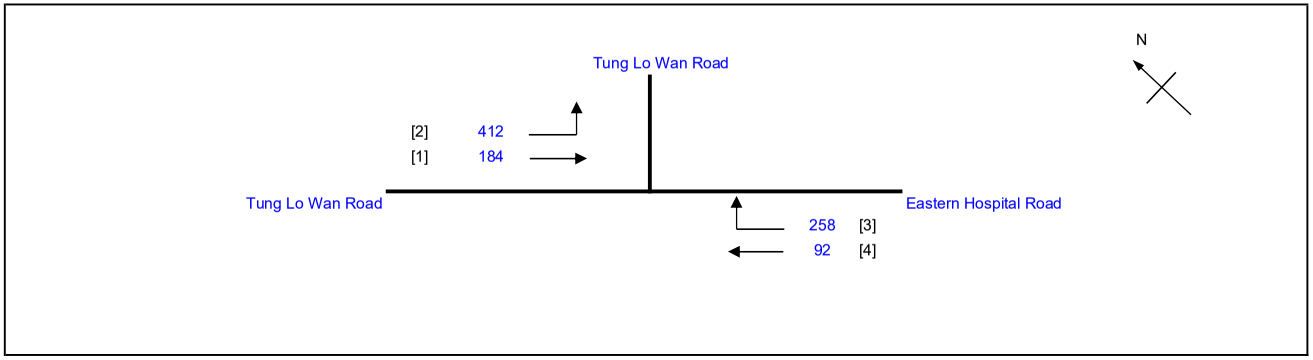
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

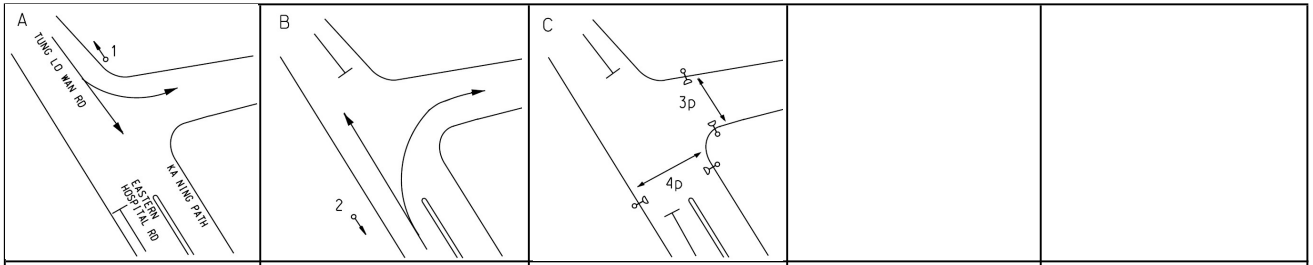
J5 Tung Lo Wan Road / Eastern Hospital Road

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J5_TLWR_EHR.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.347
Loss time		L =	41 sec
Total Flow		=	946 pcu
Co	= (1.5*L+5)/(1-Y)	=	101.9 sec
Cm	= L/(1-Y)	=	62.8 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	70.6 %
Cp	= 0.9*L/(0.9-Y)	=	66.8 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**53 %**



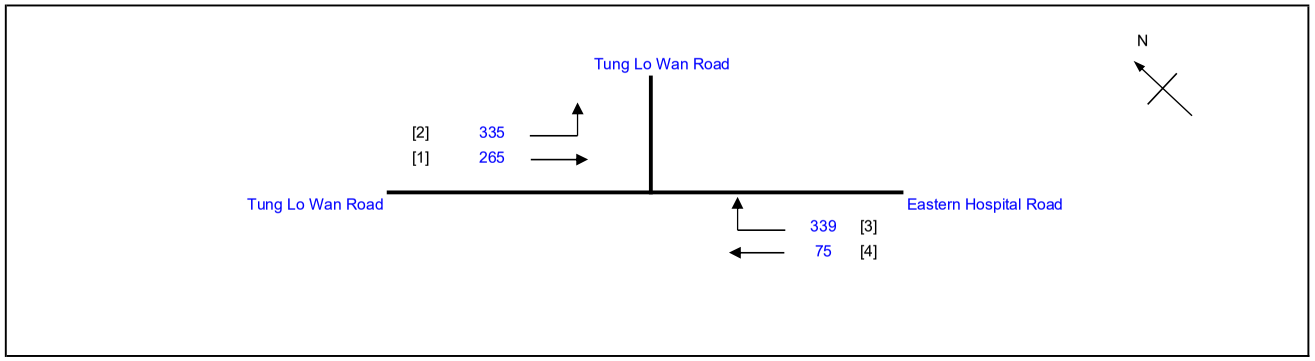
Stage 1	G=	25	
	Int =	5	
Stage 2	G=	32	
	Int =	3	
Stage 3	G=	33	
	Int =	2	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

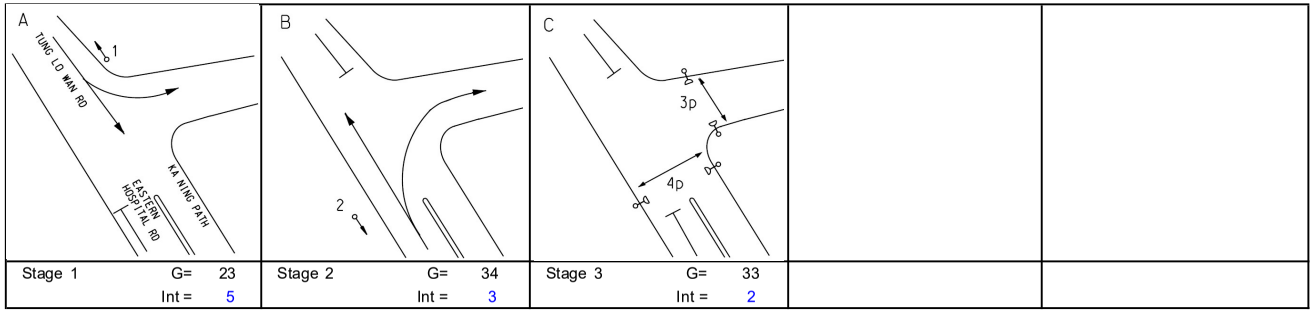
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
1,2	1	3.30	1	25			2085	130	184		314	0.41	2034							2034	0.154	0.154		26	26
1	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			26	26
3,4	2	3.65	1	12		N	1980		92	258	350	0.74	1813							1813	0.193	0.193		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.385
Loss time		L =	41 sec
Total Flow		=	1014 pcu
Co	= (1.5*L+5)/(1-Y)	=	108.1 sec
Cm	= L/(1-Y)	=	66.6 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	54.0 %
Cp	= 0.9*L/(0.9-Y)	=	71.6 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**38 %**



Stage 1	G= 23	Int = 5
Stage 2	G= 34	Int = 3
Stage 3	G= 33	Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

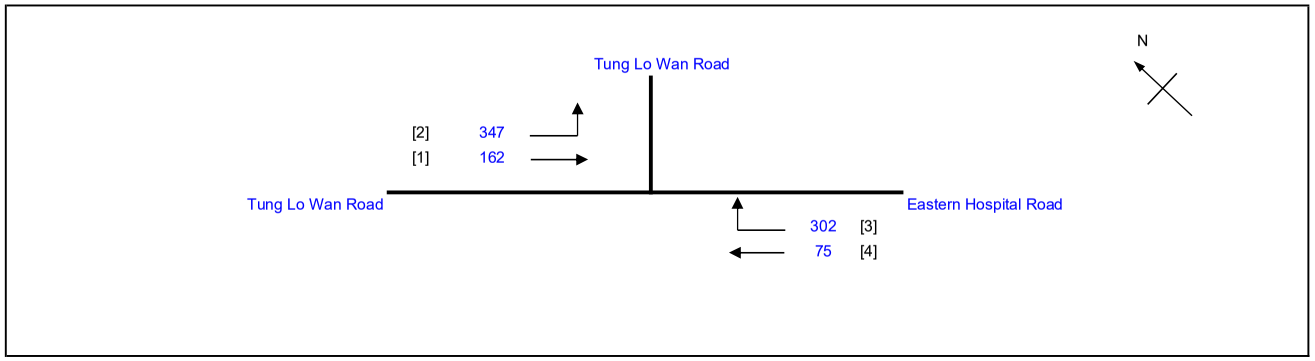
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
1,2	1	3.30	1	25			2085	52	265		317	0.16	2065							2065	0.154			24	24
1	1	3.30	1	25		N	1945	283			283	1.00	1835							1835	0.154	0.154		24	24
3,4	2	3.65	1	12		N	1980		75	339	414	0.82	1796							1796	0.230	0.230		35	35
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

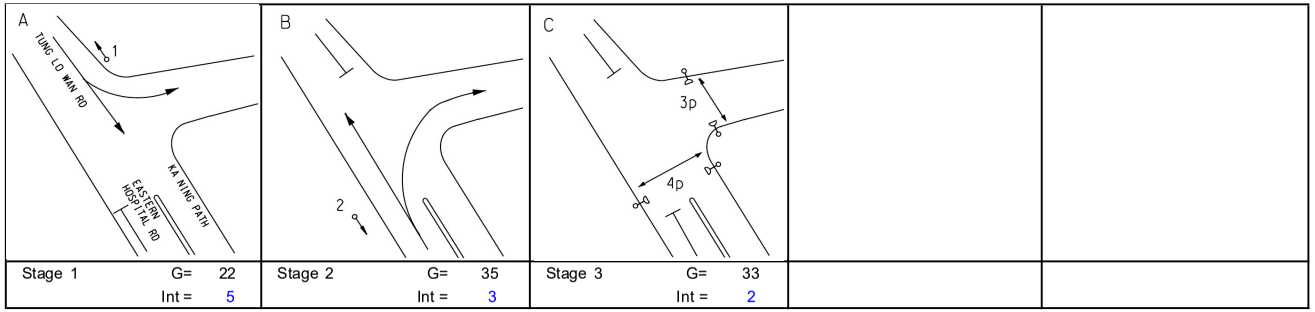
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J5 Tung Lo Wan Road / Eastern Hospital Road		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.341
Loss time		L =	41 sec
Total Flow		=	886 pcu
Co	= (1.5*L+5)/(1-Y)	=	100.9 sec
Cm	= L/(1-Y)	=	62.2 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	73.7 %
Cp	= 0.9*L/(0.9-Y)	=	66.0 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**56 %**



Stage 1	G= 22	Stage 2	G= 35	Stage 3	G= 33	
	Int = 5		Int = 3		Int = 2	

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

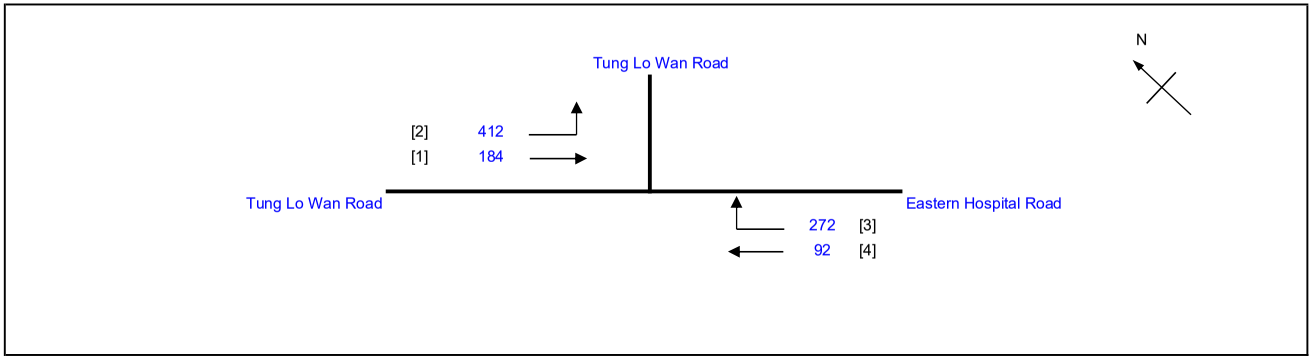
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec			
																							8					
1,2	1	3.30	1	25			2085	106	162		268	0.40	2037							2037	0.132	0.132		23	23			
1	1	3.30	1	25		N	1945	241			241	1.00	1835							1835	0.131			23	23			
3,4	2	3.65	1	12		N	1980		75	302	377	0.80	1800							1800	0.209	0.209		36	36			
PED	3																						33					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

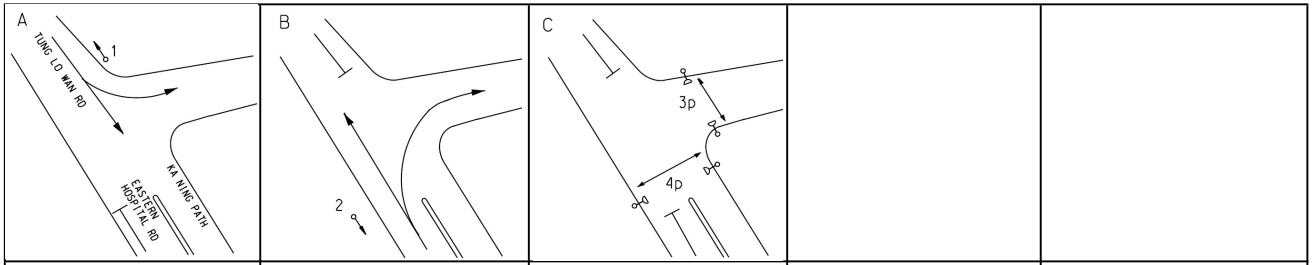
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
		FILENAME : J5_TLWR_EHR.xlsx	Checked By:	SLN	Apr-26
J5 Tung Lo Wan Road / Eastern Hospital Road			Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	3
Cycle time		C =	100 sec
Sum(y)		Y =	0.355
Loss time		L =	41 sec
Total Flow		=	960 pcu
Co	= (1.5*L+5)/(1-Y)	=	103.2 sec
Cm	= L/(1-Y)	=	63.6 sec
Yult		=	0.593
R.C.ult	= (Yult-Y)/Y*100%	=	66.7 %
Cp	= 0.9*L/(0.9-Y)	=	67.8 sec
Ymax	= 1-L/C	=	0.590
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**49 %**



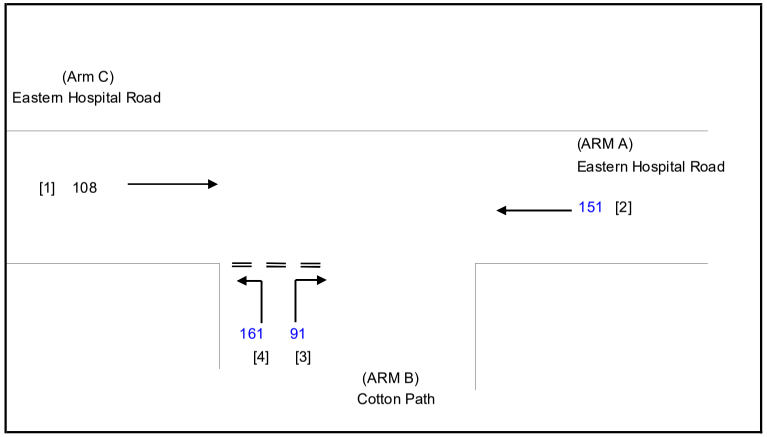
Stage 1	G= 25	Stage 2	G= 32	Stage 3	G= 33
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
3P	3		7	8	6	21	8
4P	3		8	14	2	19	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec
																							8		
1,2	1	3.30	1	25			2085	130	184		314	0.41	2034							2034	0.154	0.154		26	26
1	1	3.30	1	25		N	1945	282			282	1.00	1835							1835	0.154			26	26
3,4	2	3.65	1	12		N	1980		92	272	364	0.75	1811							1811	0.201	0.201		33	33
PED	3																						33		

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	151	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	108	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	91	(pcu/hr)
q b-c	=	161	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.63888889

THE CAPACITY OF MOVEMENT :

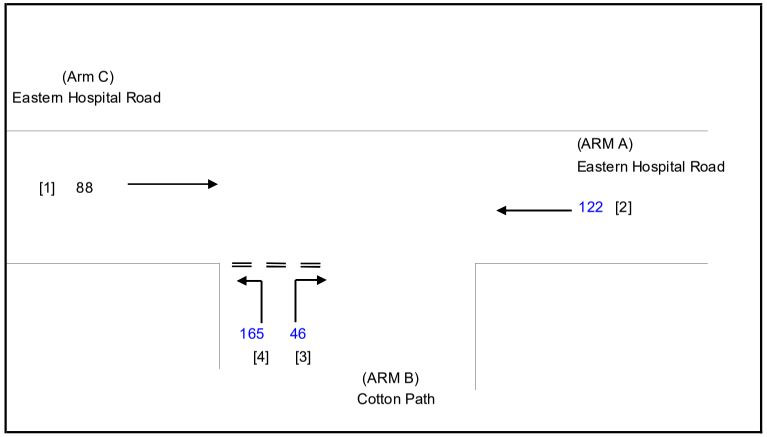
Q b-a	=	525		
Q b-c	=	725	Q b-c (O) =	693.6
Q c-b	=	412		
Q b-ac	=	637		
TOTAL FLOW	=	511	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1733
DFC b-c	=	0.2221
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2526

CRITICAL DFC = 0.25

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	122	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	88	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	46	(pcu/hr)
q b-c	=	165	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.78199052

THE CAPACITY OF MOVEMENT :

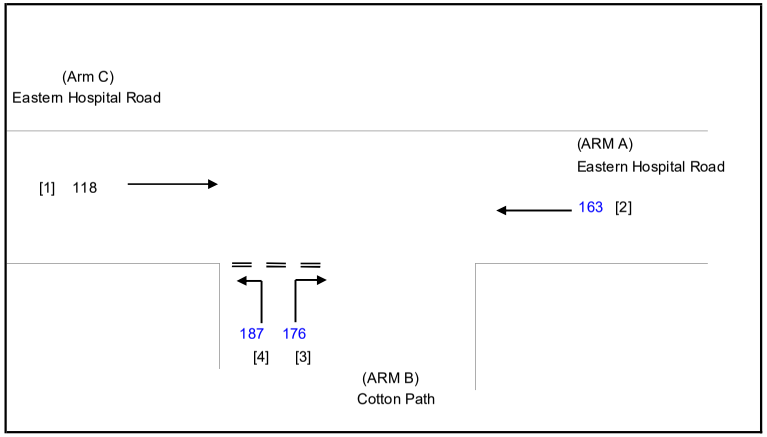
Q b-a	=	535		
Q b-c	=	734	Q b-c (O) =	718.2
Q c-b	=	417		
Q b-ac	=	679		
TOTAL FLOW	=	421	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0860
DFC b-c	=	0.2248
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2430

CRITICAL DFC = 0.24

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	163	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	118	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	176	(pcu/hr)
q b-c	=	187	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.51515152

THE CAPACITY OF MOVEMENT :

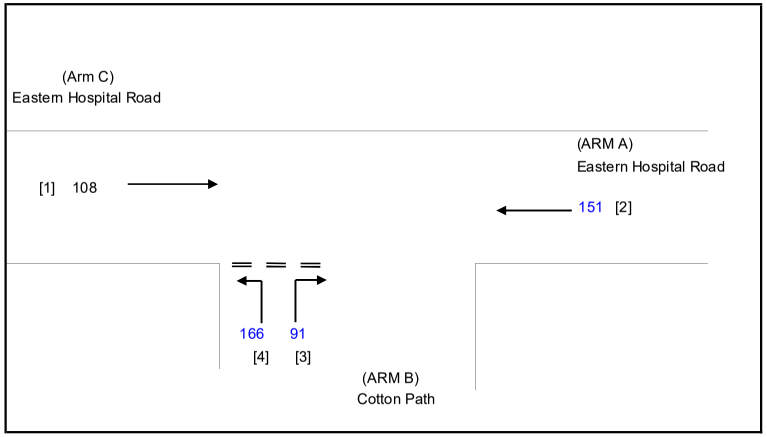
Q b-a	=	520			
Q b-c	=	722	Q b-c (O) =	660.9	
Q c-b	=	411			
Q b-ac	=	608			
TOTAL FLOW	=	644	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3385
DFC b-c	=	0.2590
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3078

CRITICAL DFC = 0.34

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	151	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	108	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	91	(pcu/hr)
q b-c	=	166	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.6459144

THE CAPACITY OF MOVEMENT :

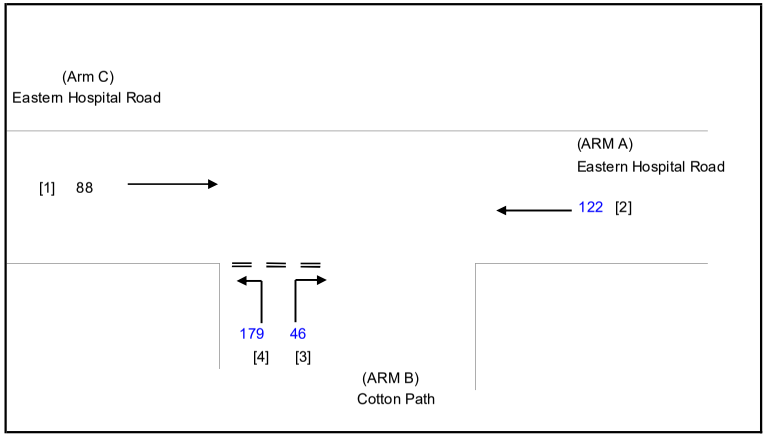
Q b-a	=	525		
Q b-c	=	725	Q b-c (O) =	693.6
Q c-b	=	412		
Q b-ac	=	639		
TOTAL FLOW	=	516	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1733
DFC b-c	=	0.2290
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2599

CRITICAL DFC = 0.26

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	122	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	88	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	46	(pcu/hr)
q b-c	=	179	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.79555556

THE CAPACITY OF MOVEMENT :

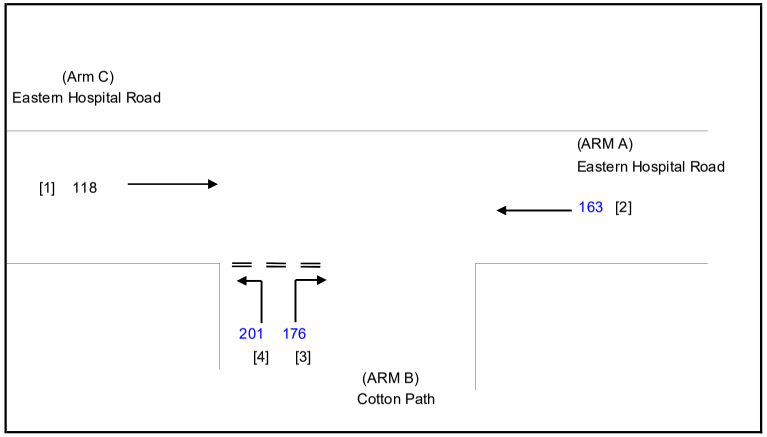
Q b-a	=	535		
Q b-c	=	734	Q b-c (O) =	718.2
Q c-b	=	417		
Q b-ac	=	682		
TOTAL FLOW	=	435	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0860
DFC b-c	=	0.2439
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2624

CRITICAL DFC = 0.26

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J6_EHR_CP.x	CHECKED BY:	SLN	Mar-26
J6 Eastern Hospital Road / Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.30	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	163	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	118	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.70	(metres)
W b-c	=	4.30	(metres)
Vl b-a	=	53	(metres)
Vr b-a	=	95	(metres)
Vr b-c	=	88	(metres)
q b-a	=	176	(pcu/hr)
q b-c	=	201	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.92494
E	=	1.03054
F	=	0.58595
Y	=	0.74815
F for (Qb-ac)	=	0.5331565

THE CAPACITY OF MOVEMENT :

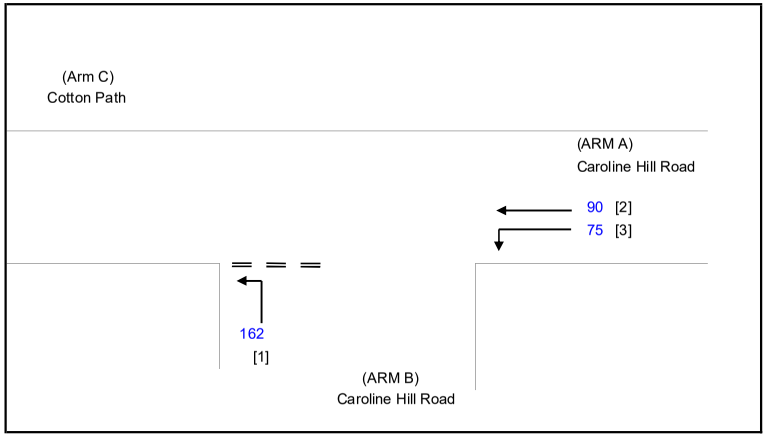
Q b-a	=	520		
Q b-c	=	722	Q b-c (O) =	660.9
Q c-b	=	411		
Q b-ac	=	611		
TOTAL FLOW	=	658	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3385
DFC b-c	=	0.2784
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.3289

CRITICAL DFC = 0.34

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	75	(pcu/hr)
q a-c	=	90	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	162	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

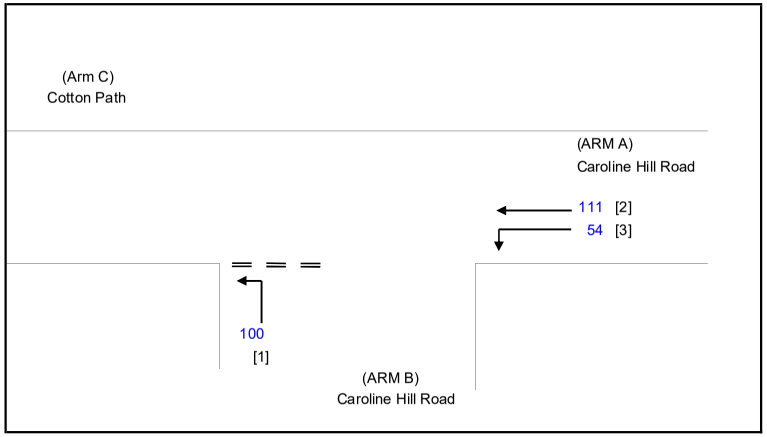
Q b-a	=	316			
Q b-c	=	721	Q b-c (O) =	721	
Q c-b	=	409			
Q b-ac	=	721			
TOTAL FLOW	=	327	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2247
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2247

CRITICAL DFC = 0.22

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	54	(pcu/hr)
q a-c	=	111	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	100	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

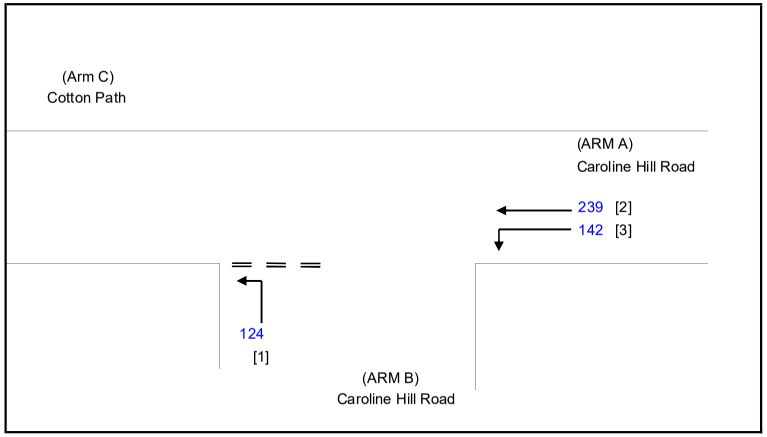
Q b-a	=	314		
Q b-c	=	717	Q b-c (O) =	717
Q c-b	=	409		
Q b-ac	=	717		
TOTAL FLOW	=	265	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1395
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1395

CRITICAL DFC = 0.14

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	142	(pcu/hr)
q a-c	=	239	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	124	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

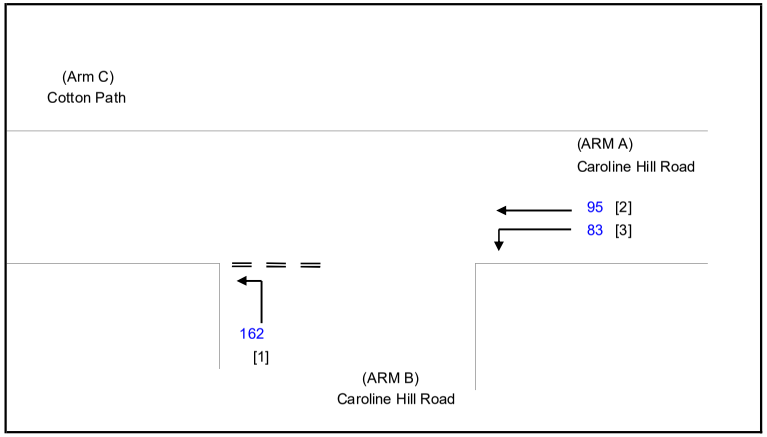
Q b-a	=	289		
Q b-c	=	669	Q b-c (O) =	669
Q c-b	=	372		
Q b-ac	=	669		
TOTAL FLOW	=	505	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1854
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1854

CRITICAL DFC = 0.19

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	83	(pcu/hr)
q a-c	=	95	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	162	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

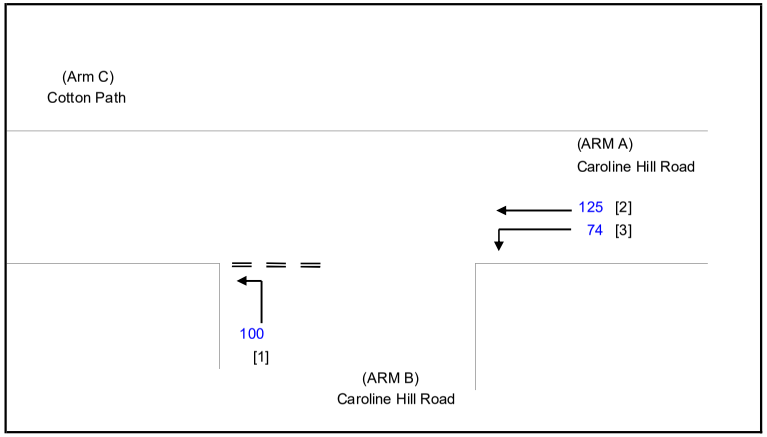
Q b-a	=	315			
Q b-c	=	718	Q b-c (O) =	718	
Q c-b	=	406			
Q b-ac	=	718			
TOTAL FLOW	=	340	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2256
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.2256

CRITICAL DFC = 0.23

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	74	(pcu/hr)
q a-c	=	125	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	100	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

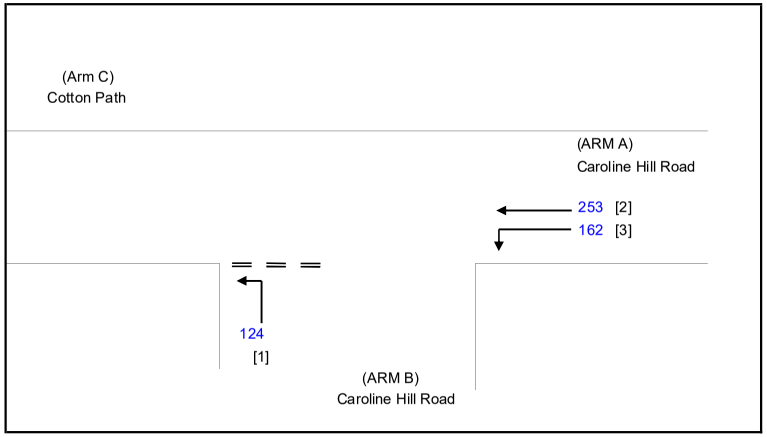
Q b-a	=	311		
Q b-c	=	710	Q b-c (O) =	710
Q c-b	=	403		
Q b-ac	=	710		
TOTAL FLOW	=	299	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1408
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1408

CRITICAL DFC = 0.14

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J7_CHR_CP.x	CHECKED BY:	SLN	Mar-26
J7 Caroline Hill Road/Cotton Path		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	6.00	(metres)
W cr	=	0	(metres)
q a-b	=	162	(pcu/hr)
q a-c	=	253	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	4.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	100	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	124	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	1.01431
F	=	0.58595
Y	=	0.79300
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

Q b-a	=	286			
Q b-c	=	663	Q b-c (O) =	663	
Q c-b	=	366			
Q b-ac	=	663			
TOTAL FLOW	=	539	(PCU/HR)		

COMPARISION OF DESIGN FLOW TO CAPACITY:

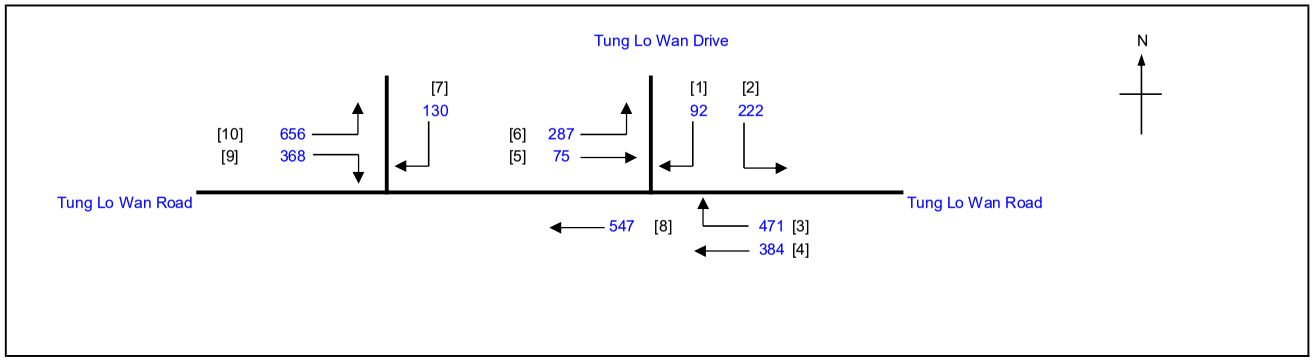
DFC b-a	=	0.0000
DFC b-c	=	0.1870
DFC c-b	=	0.0000
DFC b-c (share lane)	=	0.1870

CRITICAL DFC = 0.19

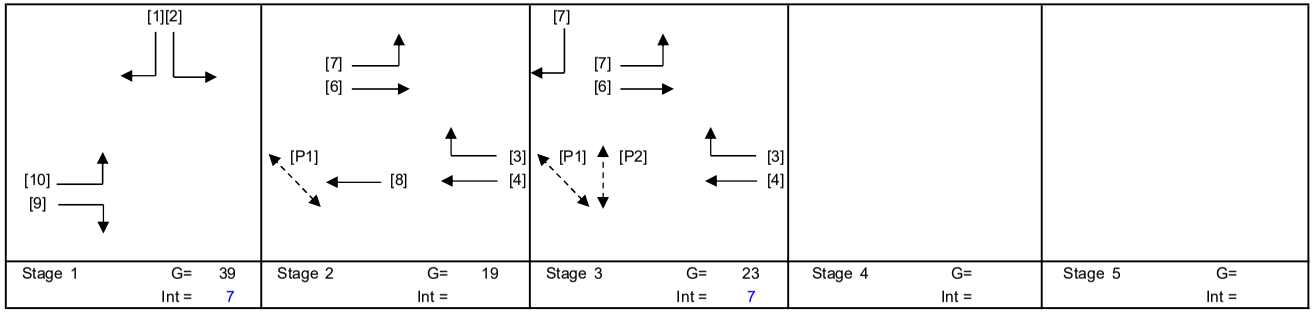
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2033 Reference AM**		
PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Apr-26
	Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.594
Loss time	L =	12 sec
Total Flow	=	3232 pcu
Co = (1.5*L+5)/(1-Y)	=	56.7 sec
Cm = L/(1-Y)	=	29.6 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	36.3 %
Cp = 0.9*L/(0.9-Y)	=	35.3 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**32 %**



Stage 1	G= 39	Stage 2	G= 19	Stage 3	G= 23	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		22	8

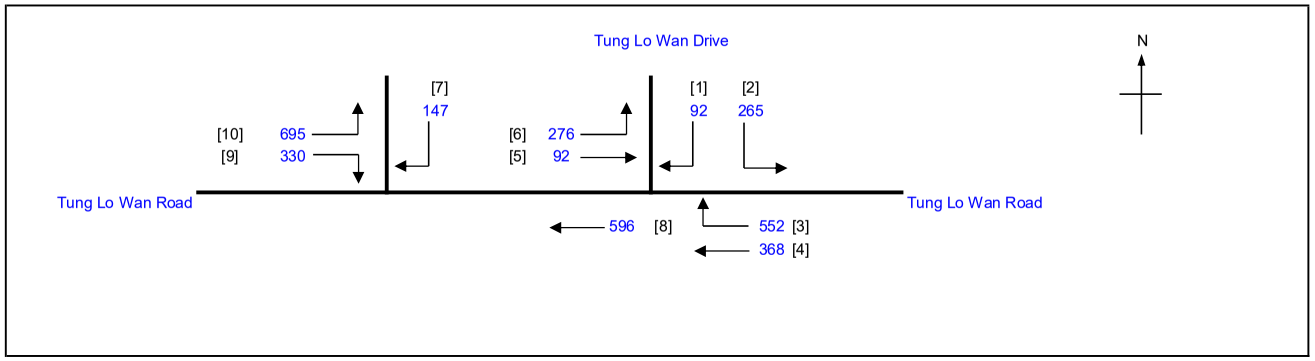
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		547		547	0.00	3970							3970	0.138			19	19	0.680	33	36
10	1	3.70	1	8		N	1985	481			481	1.00	1672							1672	0.288	0.288		40	40	0.680	42	25
9,10	1	3.50	1	13			2105	175		368	543	1.00	1887							1887	0.288			40	40	0.680	48	24
7	3	5.00	1	27		N	2115			130	130	1.00	2004							2004	0.065			9	24	0.680	18	55
4	2,3	3.70	1			N	1985		384		384	0.00	1985							1985	0.193			27	43	0.680	42	33
3,4	2,3	3.00	1	8	O		2055			471	471	1.00	1537							1537	0.306	0.306		43	43	0.680	36	24
5,6	2,3	5.00	1	13		N	2115	287	75		362	0.79	1938							1938	0.187			26	43	0.680	36	34
1,2	1	3.50	1	8		N	1965	222		92	314	1.00	1655							1655	0.190			27	40	0.680	36	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

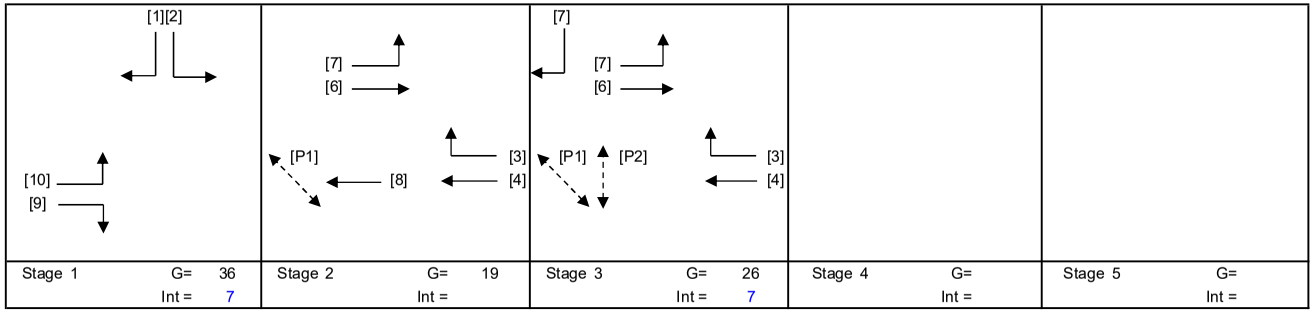
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J8 Tung Lo Wan Road / Moreton Terrace	**2033 Reference PM**		
PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Apr-26
	Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.647
Loss time	L =	12 sec
Total Flow	=	3413 pcu
Co = (1.5*L+5)/(1-Y)	=	65.2 sec
Cm = L/(1-Y)	=	34.0 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	25.1 %
Cp = 0.9*L/(0.9-Y)	=	42.8 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**21 %**



Stage 1	G= 36	Stage 2	G= 19	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		44	8
P2	3		9	8		25	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		596		596	0.00	3970							3970	0.150			19	19	0.741	36	38
10	1	3.70	1	8		N	1985	481			481	1.00	1672							1672	0.288			37	37	0.741	42	30
9,10	1	3.50	1	13			2105	214		330	544	1.00	1887							1887	0.288	0.288		37	37	0.741	48	29
7	3	5.00	1	27		N	2115			147	147	1.00	2004							2004	0.073			9	27	0.741	24	61
4	2,3	3.70	1			N	1985		368		368	0.00	1985							1985	0.185			24	46	0.741	42	39
3,4	2,3	3.00	1	8	O		2055			552	552	1.00	1537							1537	0.359	0.359		46	46	0.741	42	24
5,6	2,3	5.00	1	13		N	2115	276	92		368	0.75	1947							1947	0.189			24	46	0.741	42	39
1,2	1	3.50	1	8		N	1965	265		92	357	1.00	1655							1655	0.216			28	37	0.741	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

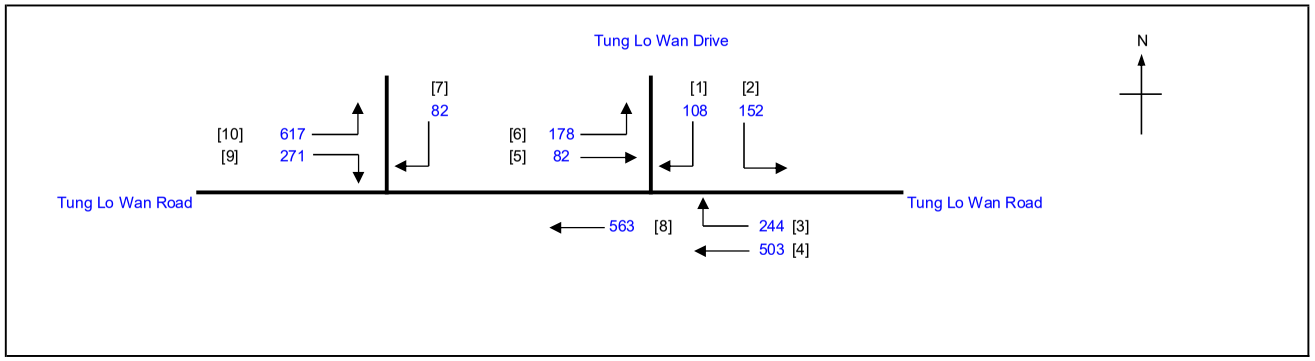
		INITIALS	DATE
Prepared By:		SKL	Apr-26
Checked By:		SLN	Apr-26
Reviewed By:		SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

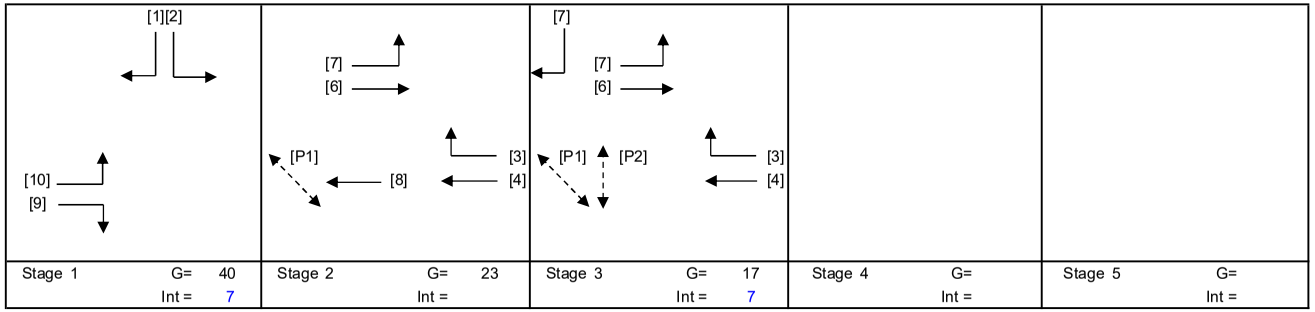
J8 Tung Lo Wan Road / Moreton Terrace

2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J8_TLWR_MT.xlsx



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.503
Loss time	L =	12 sec
Total Flow	=	2800 pcu
Co = (1.5*L+5)/(1-Y)	=	46.3 sec
Cm = L/(1-Y)	=	24.1 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	61.0 %
Cp = 0.9*L/(0.9-Y)	=	27.2 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**56 %**



Stage 1	G= 40	Int = 7
Stage 2	G= 23	Int =
Stage 3	G= 17	Int = 7
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		40	8
P2	3		9	8		16	8

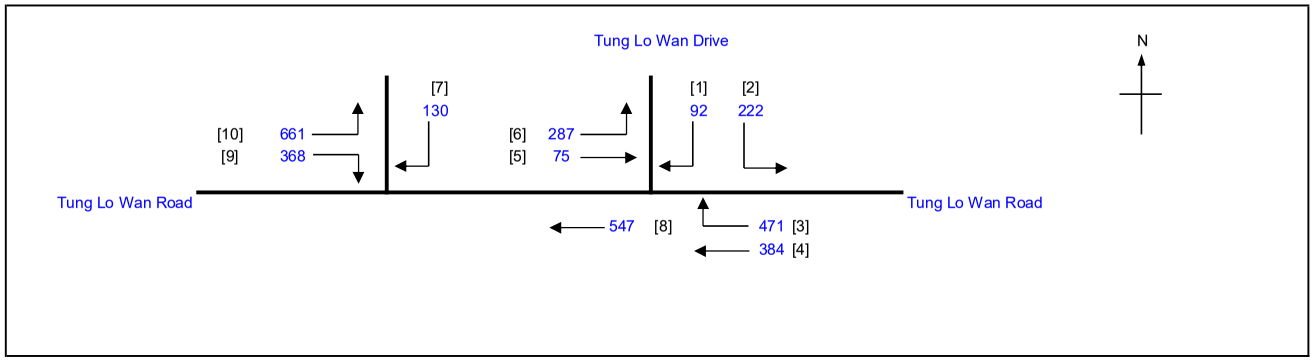
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		563		563	0.00	3970							3970	0.142			23	23	0.576	33	31
10	1	3.70	1	8		N	1985	417			417	1.00	1672							1672	0.249			41	41	0.576	36	21
9,10	1	3.50	1	13			2105	200		271	471	1.00	1887							1887	0.250	0.250		41	41	0.576	42	21
7	3	5.00	1	27		N	2115			82	82	1.00	2004							2004	0.041			7	18	0.576	12	54
4	2,3	3.70	1			N	1985		503		503	0.00	1985							1985	0.253	0.253		42	42	0.576	42	20
3,4	2,3	3.00	1	8	O		2055			244	244	1.00	1537							1537	0.159			26	42	0.576	24	32
5,6	2,3	5.00	1	13		N	2115	178	82		260	0.68	1960							1960	0.133			22	42	0.576	30	34
1,2	1	3.50	1	8		N	1965	152		108	260	1.00	1655							1655	0.157			26	41	0.576	24	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

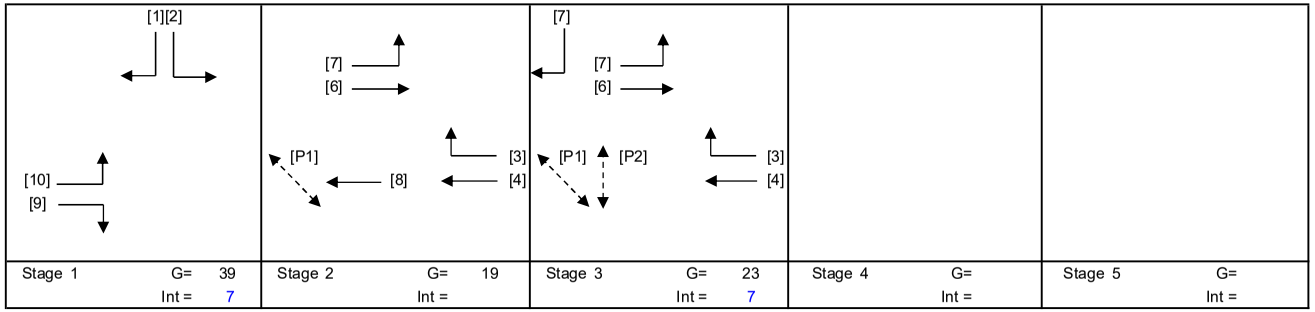
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Apr-26
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	3
Cycle time		C =	95 sec
Sum(y)		Y =	0.596
Loss time		L =	12 sec
Total Flow		=	3237 pcu
Co	= (1.5*L+5)/(1-Y)	=	56.9 sec
Cm	= L/(1-Y)	=	29.7 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	36.0 %
Cp	= 0.9*L/(0.9-Y)	=	35.5 sec
Ymax	= 1-L/C	=	0.874
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**32 %**



Stage 1	G= 39	Stage 2	G= 19	Stage 3	G= 23	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		41	8
P2	3		9	8		22	8

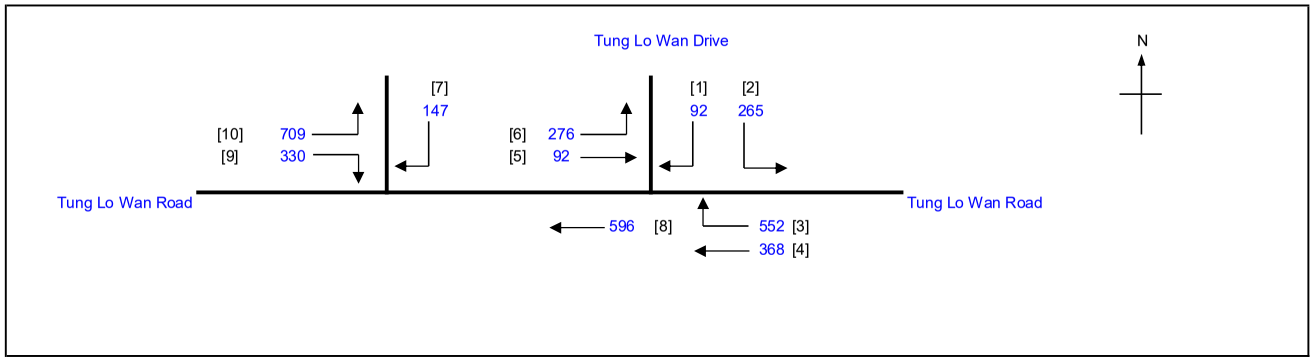
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		547		547	0.00	3970							3970	0.138			19	19	0.682	33	36
10	1	3.70	1	8		N	1985	483			483	1.00	1672							1672	0.289			40	40	0.682	42	25
9,10	1	3.50	1	13			2105	178		368	546	1.00	1887							1887	0.289	0.289		40	40	0.682	48	24
7	3	5.00	1	27		N	2115			130	130	1.00	2004							2004	0.065			9	24	0.682	18	56
4	2,3	3.70	1			N	1985		384		384	0.00	1985							1985	0.193			27	43	0.682	42	33
3,4	2,3	3.00	1	8	O		2055			471	471	1.00	1537							1537	0.306	0.306		43	43	0.682	36	24
5,6	2,3	5.00	1	13		N	2115	287	75		362	0.79	1938							1938	0.187			26	43	0.682	36	34
1,2	1	3.50	1	8		N	1965	222		92	314	1.00	1655							1655	0.190			26	40	0.682	36	35

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

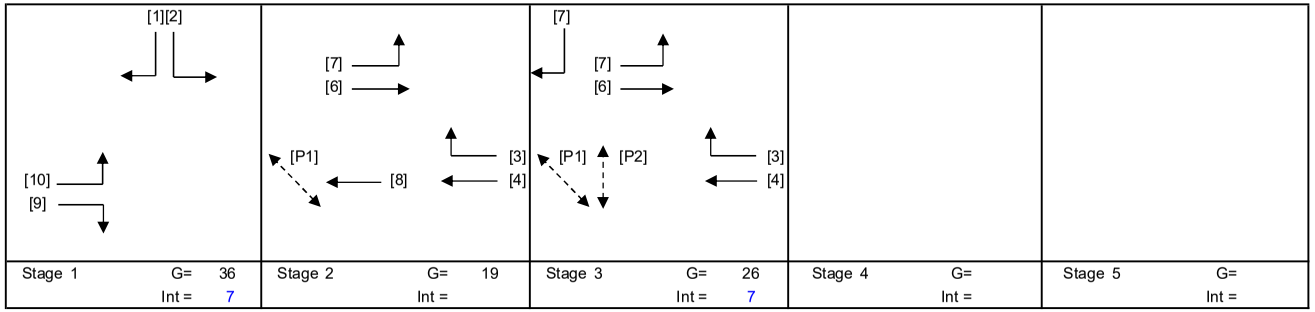
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
		FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Apr-26
J8 Tung Lo Wan Road / Moreton Terrace			Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.651
Loss time	L =	12 sec
Total Flow	=	3427 pcu
Co = (1.5*L+5)/(1-Y)	=	65.9 sec
Cm = L/(1-Y)	=	34.4 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	24.4 %
Cp = 0.9*L/(0.9-Y)	=	43.4 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**21 %**



Stage 1	G= 36	Stage 2	G= 19	Stage 3	G= 26	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		44	8
P2	3		9	8		25	8

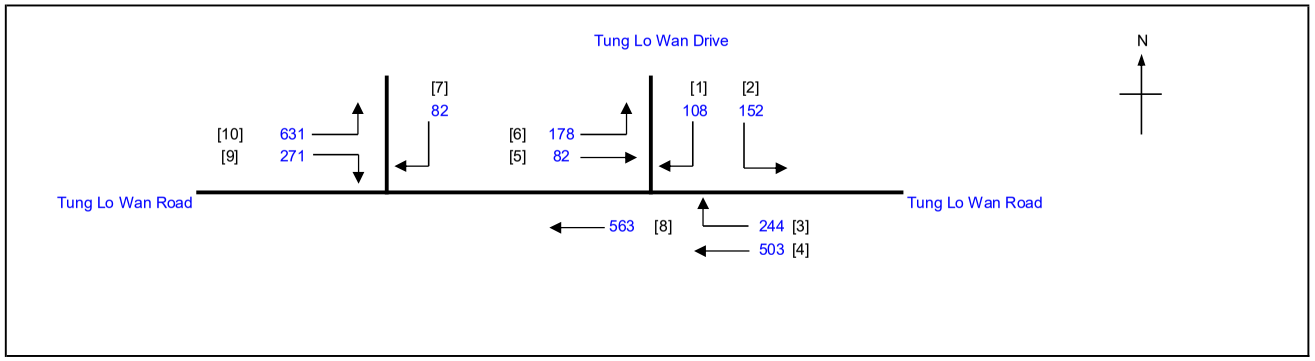
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		596		596	0.00	3970							3970	0.150			19	19	0.745	36	38
10	1	3.70	1	8		N	1985	488			488	1.00	1672							1672	0.292			37	37	0.745	42	30
9,10	1	3.50	1	13			2105	221		330	551	1.00	1887							1887	0.292	0.292		37	37	0.745	48	29
7	3	5.00	1	27		N	2115			147	147	1.00	2004							2004	0.073			9	27	0.745	24	62
4	2,3	3.70	1			N	1985		368		368	0.00	1985							1985	0.185			24	46	0.745	42	39
3,4	2,3	3.00	1	8	O		2055			552	552	1.00	1537							1537	0.359	0.359		46	46	0.745	42	24
5,6	2,3	5.00	1	13		N	2115	276	92		368	0.75	1947							1947	0.189			24	46	0.745	42	39
1,2	1	3.50	1	8		N	1965	265		92	357	1.00	1655							1655	0.216			28	37	0.745	42	37

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

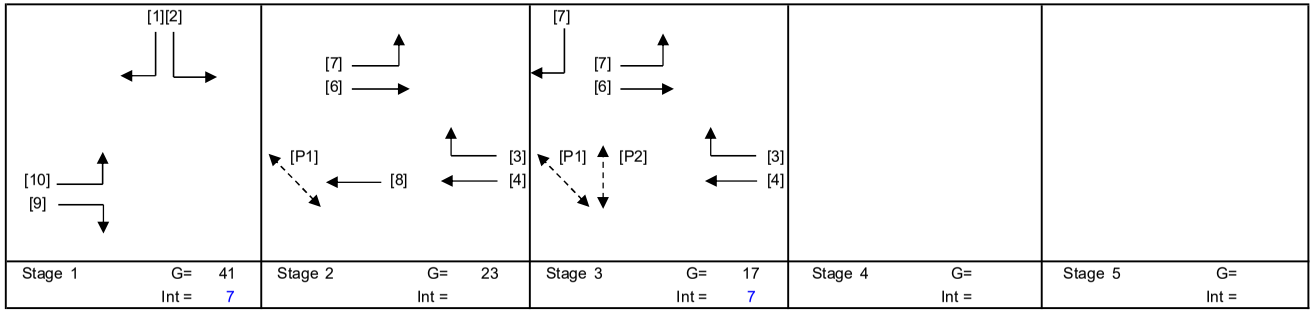
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
2033 Design Weekend	FILENAME : J8_TLWR_MT.xlsx	Checked By:	SLN	Apr-26
J8 Tung Lo Wan Road / Moreton Terrace		Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	3
Cycle time	C =	95 sec
Sum(y)	Y =	0.507
Loss time	L =	12 sec
Total Flow	=	2814 pcu
Co = (1.5*L+5)/(1-Y)	=	46.7 sec
Cm = L/(1-Y)	=	24.3 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	59.7 %
Cp = 0.9*L/(0.9-Y)	=	27.5 sec
Ymax = 1-L/C	=	0.874
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**55 %**



Stage 1	G= 41	Stage 2	G= 23	Stage 3	G= 17	Stage 4	G=	Stage 5	G=
	Int = 7		Int =		Int = 7		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2,3		8	8		39	8
P2	3		9	8		16	8

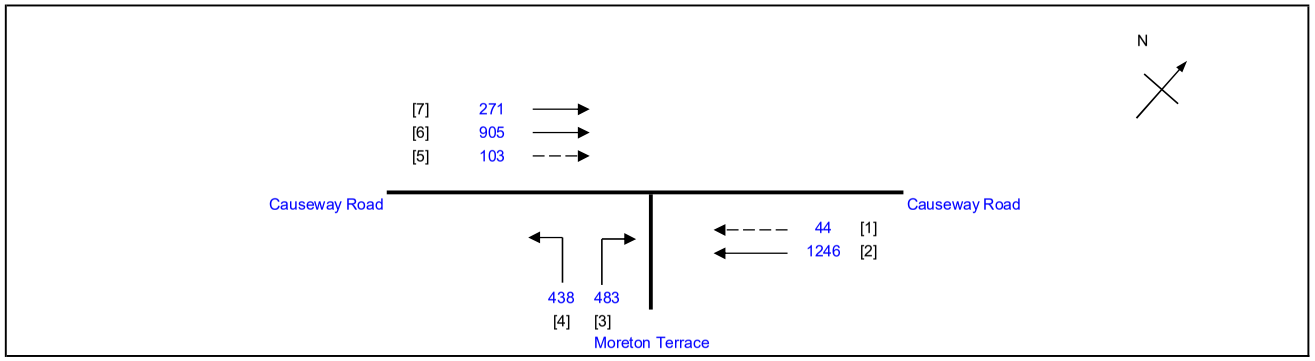
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
8	2	3.00	2			N	3970		563		563	0.00	3970							3970	0.142			23	23	0.580	33	31
10	1	3.70	1	8		N	1985	424			424	1.00	1672							1672	0.254	0.254		42	42	0.580	36	21
9,10	1	3.50	1	13			2105	207		271	478	1.00	1887							1887	0.253			41	42	0.580	42	21
7	3	5.00	1	27		N	2115			82	82	1.00	2004							2004	0.041			7	18	0.580	12	54
4	2,3	3.70	1			N	1985		503		503	0.00	1985							1985	0.253	0.253		41	41	0.580	42	21
3,4	2,3	3.00	1	8	O		2055			244	244	1.00	1537							1537	0.159			26	41	0.580	24	32
5,6	2,3	5.00	1	13		N	2115	178	82		260	0.68	1960							1960	0.133			22	41	0.580	30	34
1,2	1	3.50	1	8		N	1965	152		108	260	1.00	1655							1655	0.157			26	42	0.580	30	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

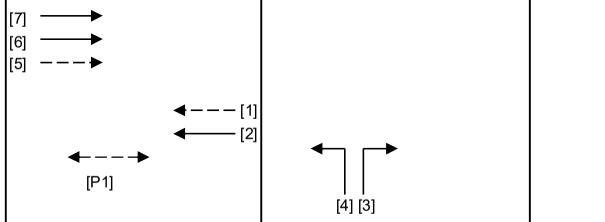
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J9 Moreton Terrace / Causeway Road	**2033 Reference AM**		
PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
FILENAME : J9_MT_CR.xlsx	Checked By:	SLN	Mar-26
	Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.598
Loss time	L =	10 sec
Total Flow	=	3490 pcu
Co = (1.5*L+5)/(1-Y)	=	49.7 sec
Cm = L/(1-Y)	=	24.9 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	38.0 %
Cp = 0.9*L/(0.9-Y)	=	29.8 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**35 %**



Stage 1	G= 60	Stage 2	G= 23
	Int = 5		Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

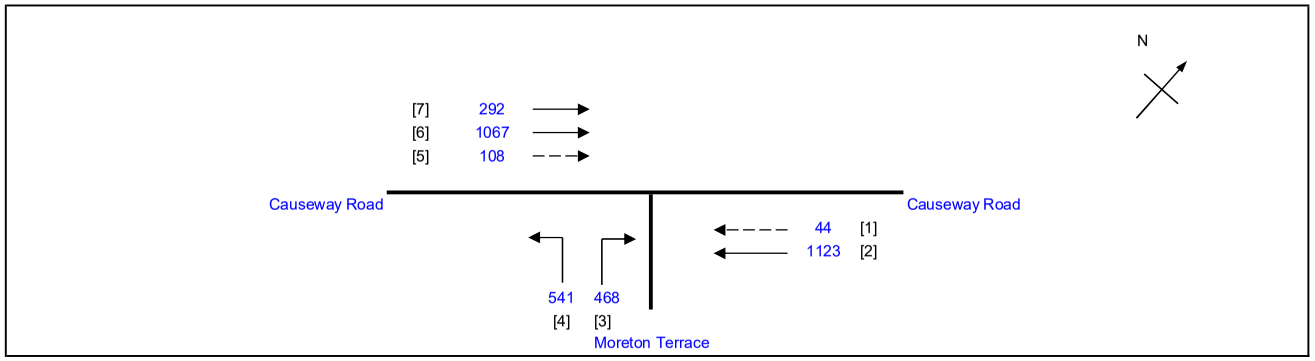
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		336		336	0.00	1985			0.4	-1191			794	0.423			60	61	0.668	18	16
2	1	4.00	1				2155		910		910	0.00	2155							2155	0.422			60	61	0.668	48	12
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	61	0.668	6	90
4	2	3.50	1	9		N	1965	282			282	1.00	1684							1684	0.167			24	24	0.668	30	37
3,4	2	3.30	1	15			2085	156		162	318	1.00	1895							1895	0.168	0.168		24	24	0.668	36	36
3	2	3.50	1	15			2105			321	321	1.00	1914							1914	0.168			24	24	0.668	36	36
7	1	3.50	1			N	1965		271		271	0.00	1965							1965	0.138			20	61	0.668	30	39
6	1	3.50	1				2105		905		905	0.00	2105							2105	0.430	0.430		61	61	0.668	48	12
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			7	61	0.668	12	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

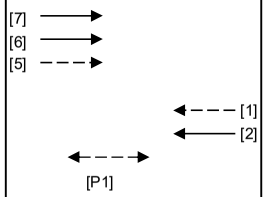
LLA CONSULTANCY LIMITED

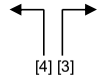
TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung			
J9 Moreton Terrace / Causeway Road	**2033 Reference PM**		
PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
FILENAME : J9_MT_CR.xlsx	Checked By:	SLN	Mar-26
	Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.691
Loss time	L =	10 sec
Total Flow	=	3643 pcu
Co = (1.5*L+5)/(1-Y)	=	64.7 sec
Cm = L/(1-Y)	=	32.4 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	19.4 %
Cp = 0.9*L/(0.9-Y)	=	43.1 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**17 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		302		302	0.00	1985			0.4	-1191			794	0.380			47	62	0.772	24	32
2	1	4.00	1				2155		821		821	0.00	2155							2155	0.381			47	62	0.772	60	23
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.772	12	138
4	2	3.50	1	9		N	1965	309			309	1.00	1684							1684	0.183			23	23	0.772	36	44
3,4	2	3.30	1	15			2085	232		117	349	1.00	1895							1895	0.184	0.184		23	23	0.772	42	43
3	2	3.50	1	15			2105			351	351	1.00	1914							1914	0.183			23	23	0.772	42	43
7	1	3.50	1			N	1965		292		292	0.00	1965							1965	0.149			18	62	0.772	36	47
6	1	3.50	1				2105		1067		1067	0.00	2105							2105	0.507	0.507		62	62	0.772	54	14
5	1	3.00	1				2055		108		108	0.00	2055							2055	0.053			6	62	0.772	18	78

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

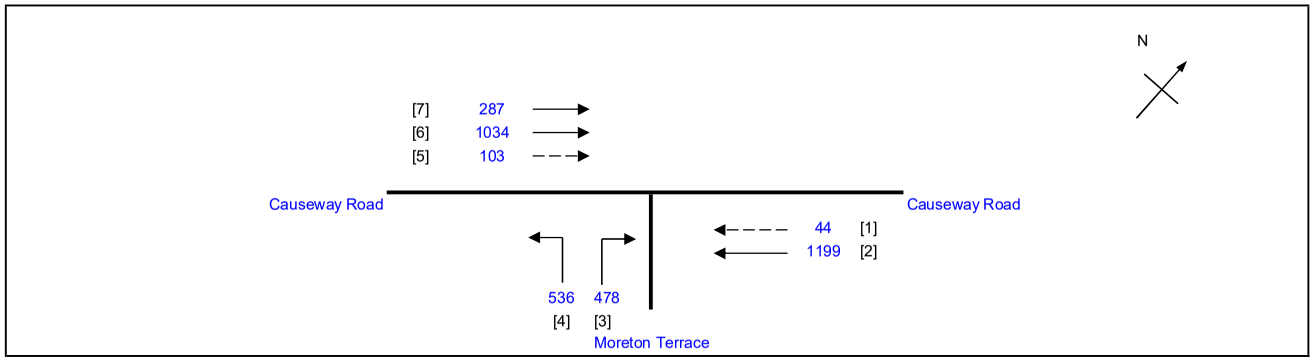
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

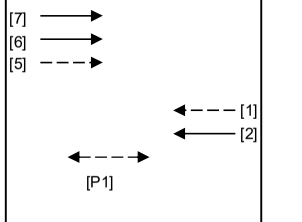
J9 Moreton Terrace / Causeway Road

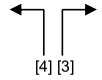
2033 Reference Weekend

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.676
Loss time	L =	10 sec
Total Flow	=	3681 pcu
Co = (1.5*L+5)/(1-Y)	=	61.8 sec
Cm = L/(1-Y)	=	30.9 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	22.0 %
Cp = 0.9*L/(0.9-Y)	=	40.2 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**19 %**





Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		322		322	0.00	1985			0.4	-1191			794	0.406			51	62	0.756	24	27
2	1	4.00	1				2155		877		877	0.00	2155							2155	0.407			51	62	0.756	60	20
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.756	12	127
4	2	3.50	1	9		N	1965	311			311	1.00	1684							1684	0.185			23	23	0.756	36	42
3,4	2	3.30	1	15			2085	225		124	349	1.00	1895							1895	0.184			23	23	0.756	42	41
3	2	3.50	1	15			2105			354	354	1.00	1914							1914	0.185	0.185		23	23	0.756	42	41
7	1	3.50	1			N	1965		287		287	0.00	1965							1965	0.146			18	62	0.756	36	46
6	1	3.50	1				2105		1034		1034	0.00	2105							2105	0.491	0.491		62	62	0.756	54	14
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			6	62	0.756	18	76

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

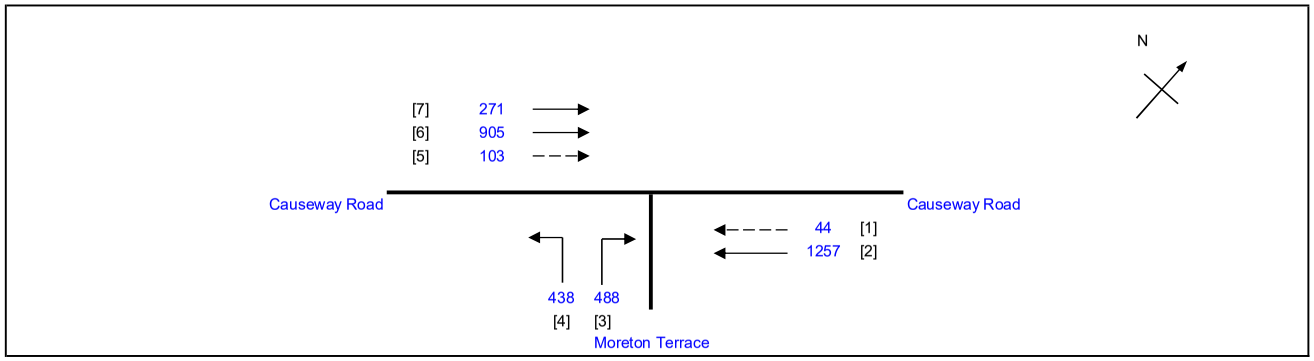
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J9 Moreton Terrace / Causeway Road

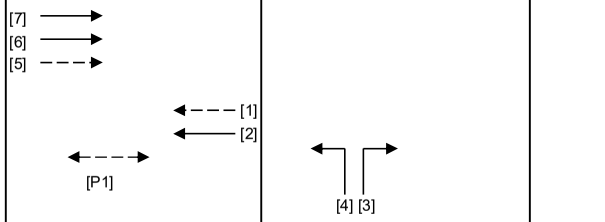
2033 Design AM

PROJECT NO.: 40920

FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.599
Loss time	L =	10 sec
Total Flow	=	3506 pcu
Co = (1.5*L+5)/(1-Y)	=	49.8 sec
Cm = L/(1-Y)	=	24.9 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	37.8 %
Cp = 0.9*L/(0.9-Y)	=	29.9 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**34 %**



Stage 1 G= 60 Int = 5

Stage 2 G= 23 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		338		338	0.00	1985			0.4	-1191			794	0.426			60	61	0.669	18	16
2	1	4.00	1				2155		919		919	0.00	2155							2155	0.426			61	61	0.669	48	12
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	61	0.669	6	91
4	2	3.50	1	9		N	1965	284			284	1.00	1684							1684	0.169			24	24	0.669	30	36
3,4	2	3.30	1	15			2085	154		165	319	1.00	1895							1895	0.168			24	24	0.669	36	36
3	2	3.50	1	15			2105			323	323	1.00	1914							1914	0.169	0.169		24	24	0.669	36	36
7	1	3.50	1			N	1965		271		271	0.00	1965							1965	0.138			20	61	0.669	30	39
6	1	3.50	1				2105		905		905	0.00	2105							2105	0.430	0.430		61	61	0.669	48	12
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			7	61	0.669	12	60

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

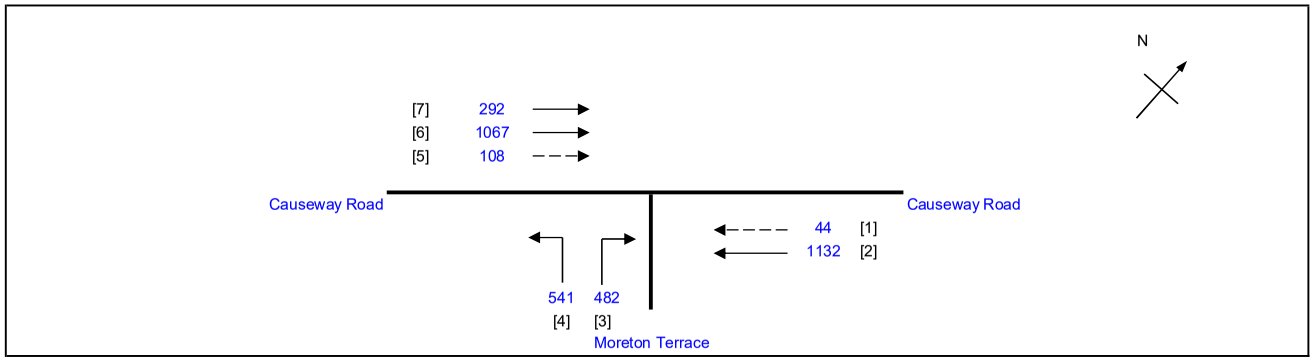
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J9 Moreton Terrace / Causeway Road

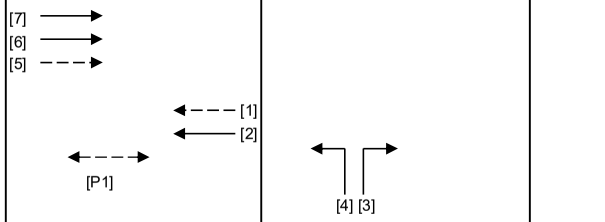
2033 Design PM

PROJECT NO.: 40920

FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.694
Loss time	L =	10 sec
Total Flow	=	3666 pcu
Co = (1.5*L+5)/(1-Y)	=	65.3 sec
Cm = L/(1-Y)	=	32.6 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	18.9 %
Cp = 0.9*L/(0.9-Y)	=	43.6 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**16 %**



Stage 1 G= 61 Int = 5

Stage 2 G= 22 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		56	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		305		305	0.00	1985			0.4	-1191			794	0.384			47	62	0.775	24	32
2	1	4.00	1				2155		827		827	0.00	2155							2155	0.384			47	62	0.775	66	23
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	62	0.775	12	140
4	2	3.50	1	9		N	1965	314			314	1.00	1684							1684	0.186			23	23	0.775	36	44
3,4	2	3.30	1	15			2085	227		127	354	1.00	1895							1895	0.187	0.187		23	23	0.775	42	43
3	2	3.50	1	15			2105			355	355	1.00	1914							1914	0.186			23	23	0.775	42	43
7	1	3.50	1			N	1965		292		292	0.00	1965							1965	0.149			18	62	0.775	36	48
6	1	3.50	1				2105		1067		1067	0.00	2105							2105	0.507	0.507		62	62	0.775	54	14
5	1	3.00	1				2055		108		108	0.00	2055							2055	0.053			6	62	0.775	18	79

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

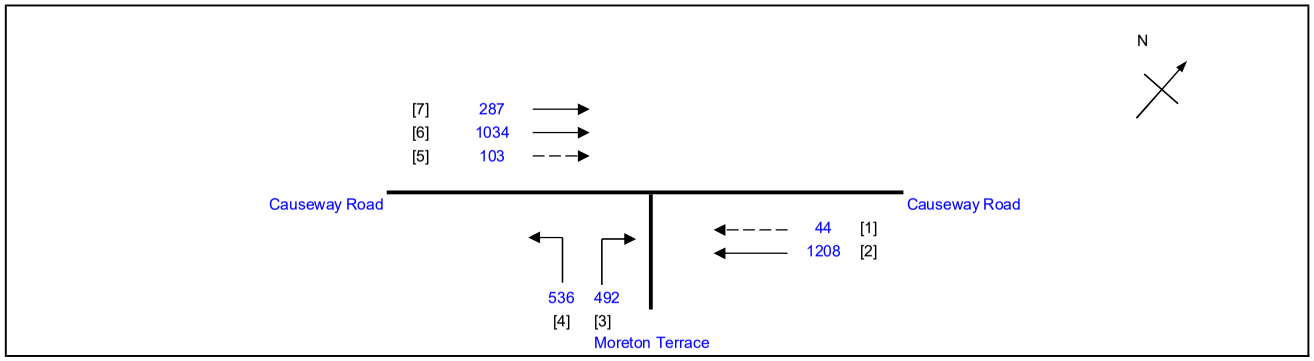
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

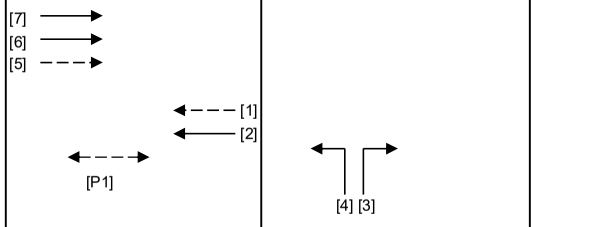
J9 Moreton Terrace / Causeway Road

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J9_MT_CR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	95 sec
Sum(y)	Y =	0.679
Loss time	L =	10 sec
Total Flow	=	3704 pcu
Co = (1.5*L+5)/(1-Y)	=	62.3 sec
Cm = L/(1-Y)	=	31.2 sec
Yult	=	0.825
R.C.ult = (Yult-Y)/Y*100%	=	21.5 %
Cp = 0.9*L/(0.9-Y)	=	40.7 sec
Ymax = 1-L/C	=	0.895
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**19 %**



Stage 1 G= 60 Int = 5
Stage 2 G= 23 Int = 7

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		8	10		55	10

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
2	1	3.70	1			N	1985		325		325	0.00	1985			0.4	-1191			794	0.409			51	61	0.759	24	27
2	1	4.00	1				2155		883		883	0.00	2155							2155	0.410			51	61	0.759	60	20
1	1	3.00	1			N	1915		44		44	0.00	1915							1915	0.023			3	61	0.759	12	129
4	2	3.50	1	9		N	1965	315			315	1.00	1684							1684	0.187			23	24	0.759	36	42
3,4	2	3.30	1	15			2085	221		135	356	1.00	1895							1895	0.188	0.188		24	24	0.759	42	41
3	2	3.50	1	15			2105			357	357	1.00	1914							1914	0.187			23	24	0.759	42	41
7	1	3.50	1			N	1965		287		287	0.00	1965							1965	0.146			18	61	0.759	36	46
6	1	3.50	1				2105		1034		1034	0.00	2105							2105	0.491	0.491		61	61	0.759	54	14
5	1	3.00	1				2055		103		103	0.00	2055							2055	0.050			6	61	0.759	18	77

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

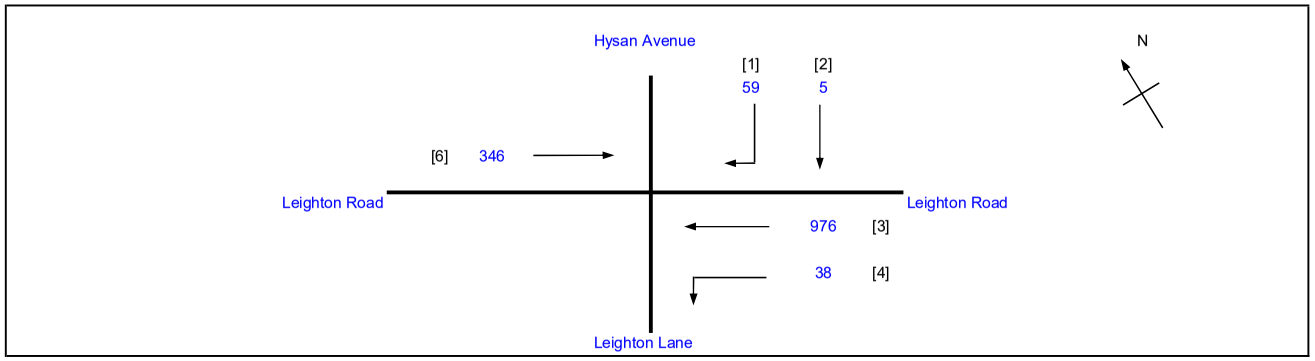
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

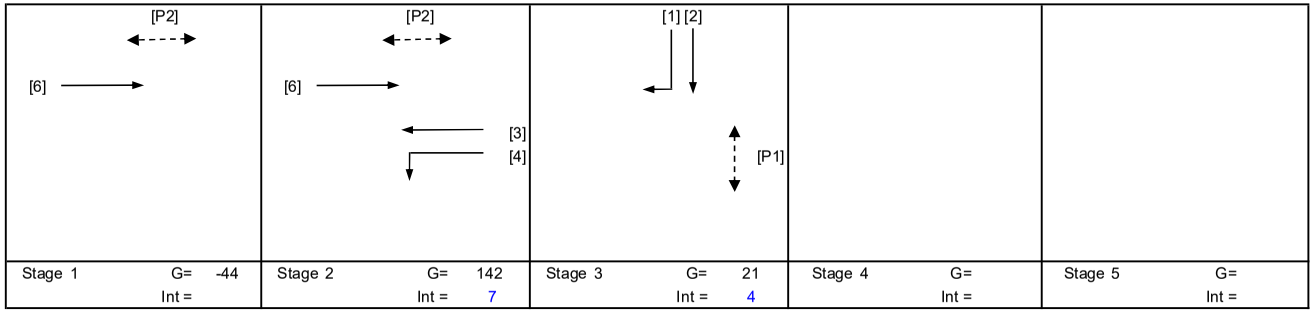
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.176
Loss time		L =	31 sec
Total Flow		=	1424 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.5 sec
Cm	= L/(1-Y)	=	37.6 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	279.1 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**289 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	38	449		487	0.08	1920							1920	0.254			143	143	0.231	-6	1
3	2	3.20	1				2075		527		527	0.00	2075							2075	0.254			143	143	0.231	-6	1
6	1,2	3.50	1			N	1965		346		346	0.00	1965							1965	0.176	0.176		99	99	0.231	12	4
1,2	3	3.30	1	17		N	1945		5	29	34	0.85	1809							1809	0.019			11	21	0.231	6	54
1	3	3.00	1	10	O		2055			30	30	1.00	1587							1587	0.019			11	21	0.231	0	54
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

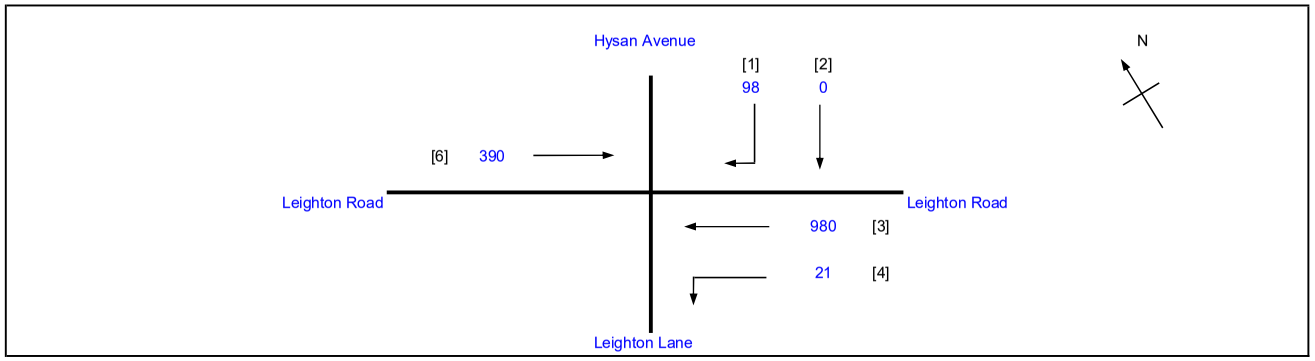
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

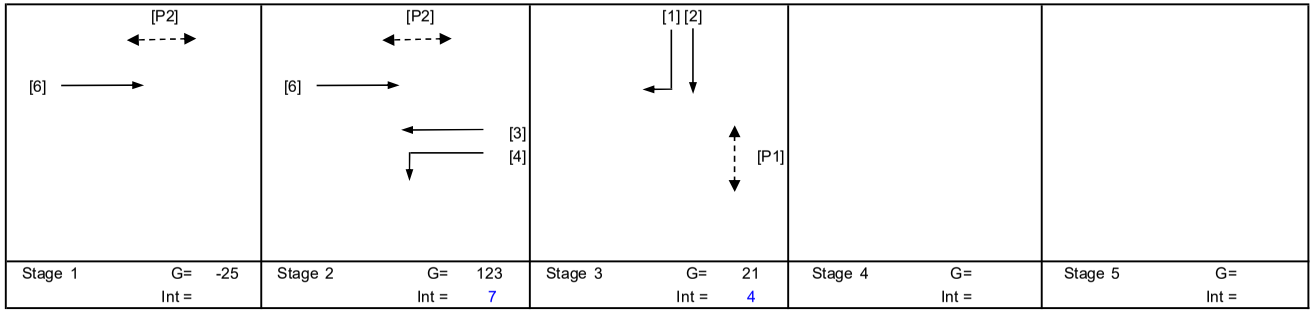
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Reference PM

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.198
Loss time		L =	31 sec
Total Flow		=	1489 pcu
Co	= (1.5*L+5)/(1-Y)	=	64.3 sec
Cm	= L/(1-Y)	=	38.7 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	236.3 %
Cp	= 0.9*L/(0.9-Y)	=	39.8 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**245 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	21	463		484	0.04	1940							1940	0.250			124	124	0.261	0	0
3	2	3.20	1				2075		517		517	0.00	2075							2075	0.249			124	124	0.261	0	0
6	1,2	3.50	1			N	1965		390		390	0.00	1965							1965	0.198	0.198		99	99	0.261	18	5
1,2	3	3.30	1	17		N	1945		0	52	52	1.00	1787							1787	0.029			15	21	0.261	6	50
1	3	3.00	1	10	O		2055			46	46	1.00	1587							1587	0.029			14	21	0.261	6	51
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

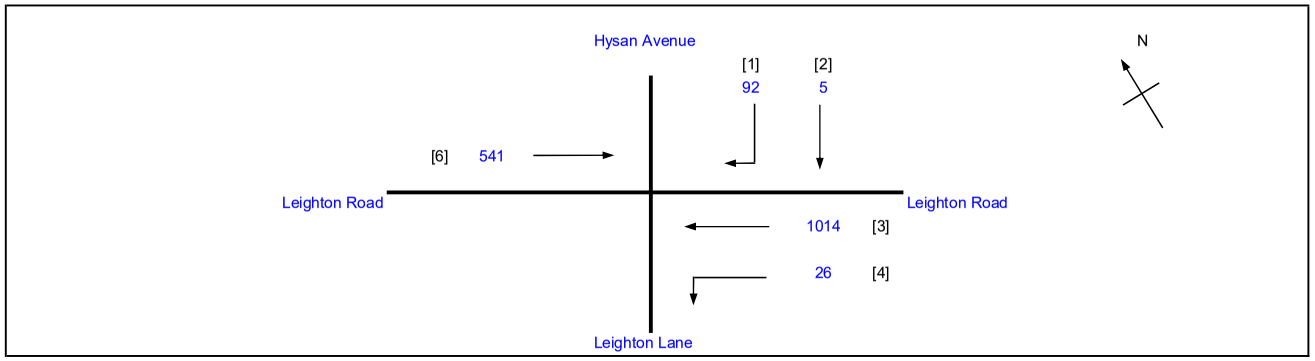
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

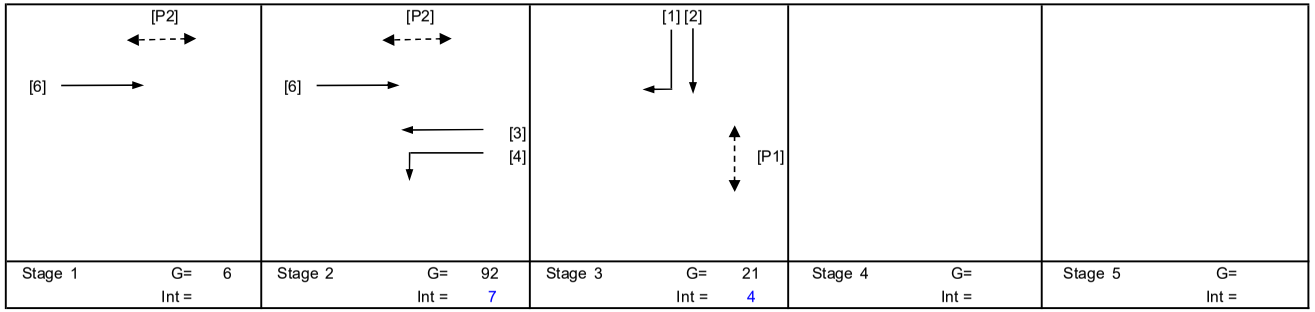
2033 Reference Weekend

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.275
Loss time		L =	31 sec
Total Flow		=	1678 pcu
Co	= (1.5*L+5)/(1-Y)	=	71.1 sec
Cm	= L/(1-Y)	=	42.8 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	142.4 %
Cp	= 0.9*L/(0.9-Y)	=	44.7 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**149 %**



Stage 1	G= 6	Int =	Stage 2	G= 92	Int = 7	Stage 3	G= 21	Int = 4	Stage 4	G=	Int =	Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	26	476		502	0.05	1935							1935	0.259			93	93	0.362	30	7
3	2	3.20	1				2075		538		538	0.00	2075							2075	0.259			93	93	0.362	30	7
6	1,2	3.50	1			N	1965		541		541	0.00	1965							1965	0.275	0.275		99	99	0.362	24	5
1,2	3	3.30	1	17		N	1945		5	47	52	0.90	1801							1801	0.029			10	21	0.362	6	57
1	3	3.00	1	10	O		2055			45	45	1.00	1587							1587	0.028			10	21	0.362	6	59
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

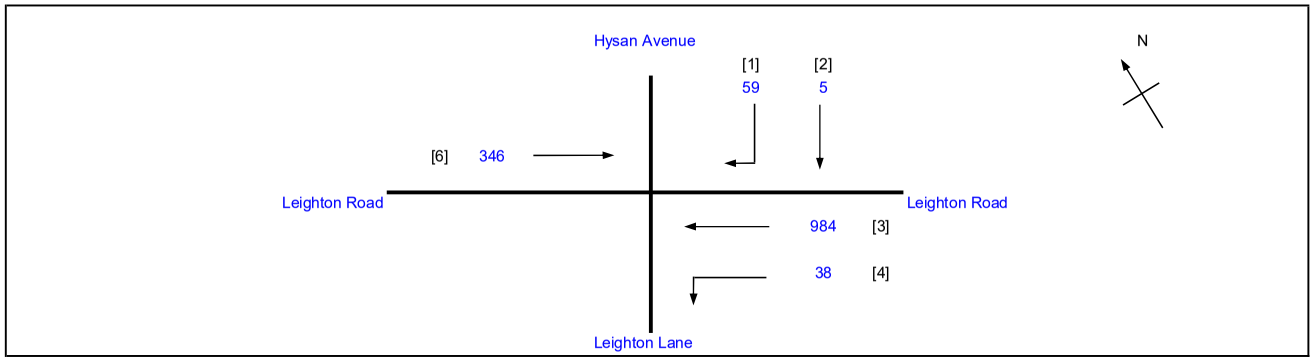
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J10 Leighton Road / Hysan Avenue / Leighton Lane

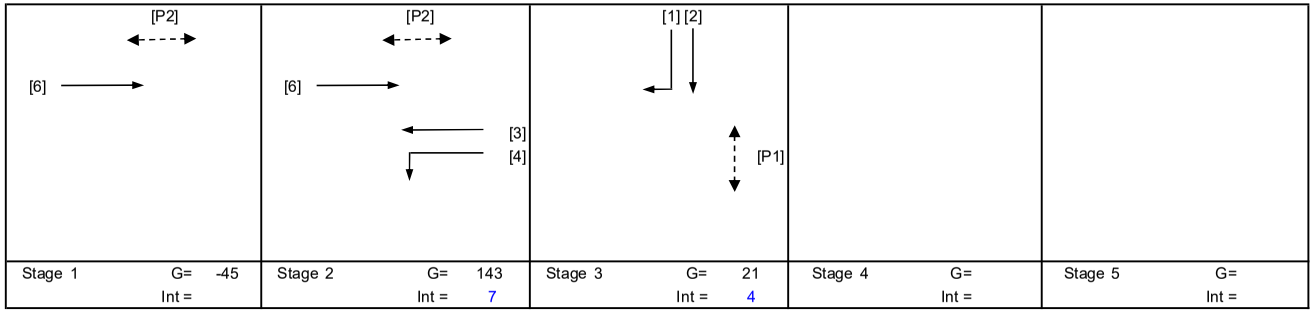
2033 Design AM

PROJECT NO.: 40920

FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.176
Loss time		L =	31 sec
Total Flow		=	1432 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.5 sec
Cm	= L/(1-Y)	=	37.6 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	279.1 %
Cp	= 0.9*L/(0.9-Y)	=	38.5 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**289 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	38	453		491	0.08	1920							1920	0.256			144	144	0.231	-6	1
3	2	3.20	1				2075		531		531	0.00	2075							2075	0.256			144	144	0.231	-6	1
6	1,2	3.50	1			N	1965		346		346	0.00	1965							1965	0.176	0.176		99	99	0.231	12	4
1,2	3	3.30	1	17		N	1945		5	29	34	0.85	1809							1809	0.019			11	21	0.231	6	54
1	3	3.00	1	10	O		2055			30	30	1.00	1587							1587	0.019			11	21	0.231	0	54
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

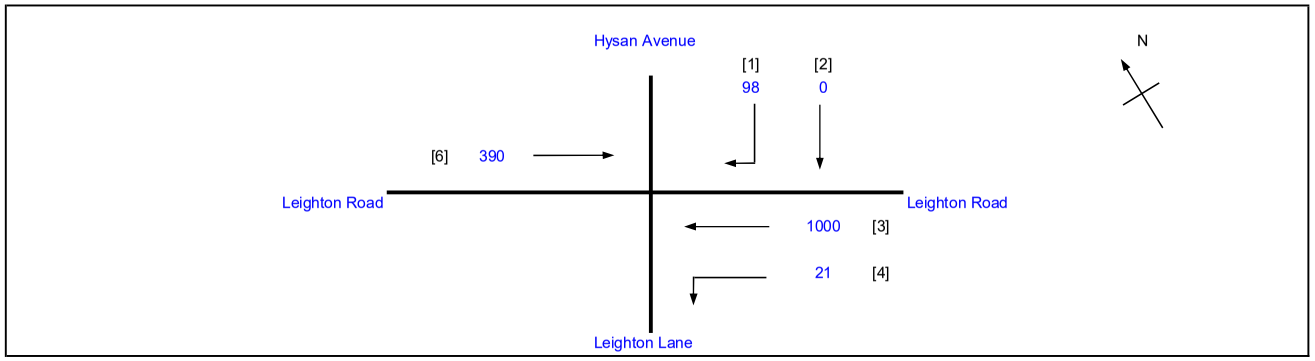
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

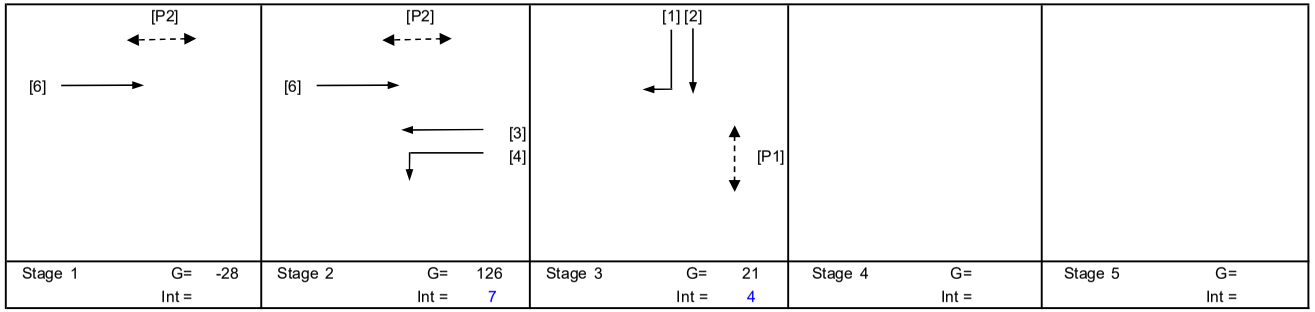
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Design PM

PROJECT NO.:	40920	
FILENAME :	J10_LR_HA_LL.xlsx	



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.198
Loss time		L =	31 sec
Total Flow		=	1509 pcu
Co	= (1.5*L+5)/(1-Y)	=	64.3 sec
Cm	= L/(1-Y)	=	38.7 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	236.3 %
Cp	= 0.9*L/(0.9-Y)	=	39.8 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**245 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	21	472		493	0.04	1940							1940	0.254			127	127	0.261	0	0
3	2	3.20	1				2075		528		528	0.00	2075							2075	0.254			127	127	0.261	0	0
6	1,2	3.50	1			N	1965		390		390	0.00	1965							1965	0.198	0.198		99	99	0.261	18	5
1,2	3	3.30	1	17		N	1945		0	52	52	1.00	1787							1787	0.029			15	21	0.261	6	50
1	3	3.00	1	10	O		2055			46	46	1.00	1587							1587	0.029			14	21	0.261	6	51
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

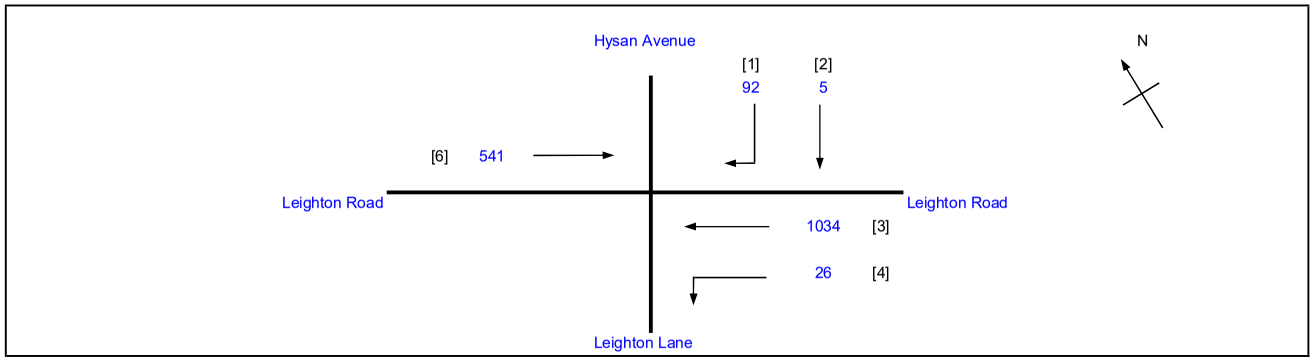
	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

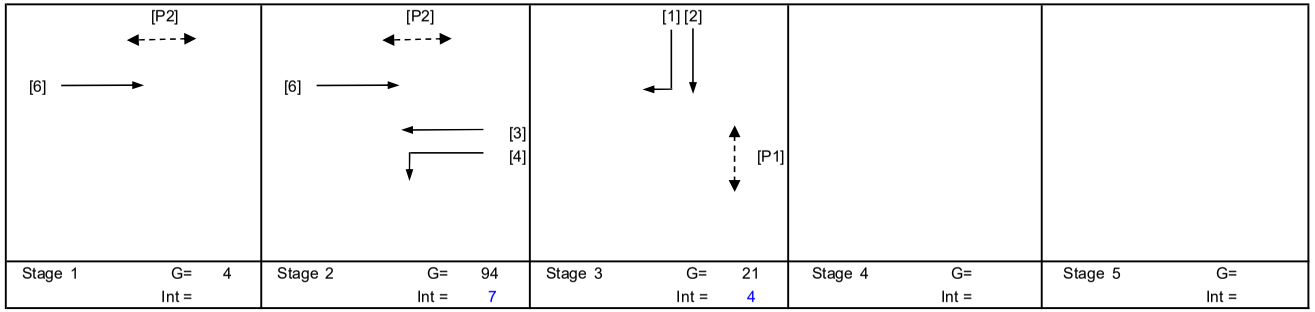
J10 Leighton Road / Hysan Avenue / Leighton Lane

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J10_LR_HA_LL.xlsx



No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.275
Loss time		L =	31 sec
Total Flow		=	1698 pcu
Co	= (1.5*L+5)/(1-Y)	=	71.1 sec
Cm	= L/(1-Y)	=	42.8 sec
Yult		=	0.668
R.C.ult	= (Yult-Y)/Y*100%	=	142.4 %
Cp	= 0.9*L/(0.9-Y)	=	44.7 sec
Ymax	= 1-L/C	=	0.762
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**149 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		11	10		15	10
P2	1,2		6	7		98	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							10					
3,4	2	3.50	1	5		N	1965	26	486		512	0.05	1936							1936	0.265			95	95	0.362	24	6
3	2	3.20	1				2075		548		548	0.00	2075							2075	0.264			95	95	0.362	30	6
6	1,2	3.50	1			N	1965		541		541	0.00	1965							1965	0.275	0.275		99	99	0.362	24	5
1,2	3	3.30	1	17		N	1945		5	47	52	0.90	1801							1801	0.029			10	21	0.362	6	57
1	3	3.00	1	10	O		2055			45	45	1.00	1587							1587	0.028			10	21	0.362	6	59
PED	3																						21					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

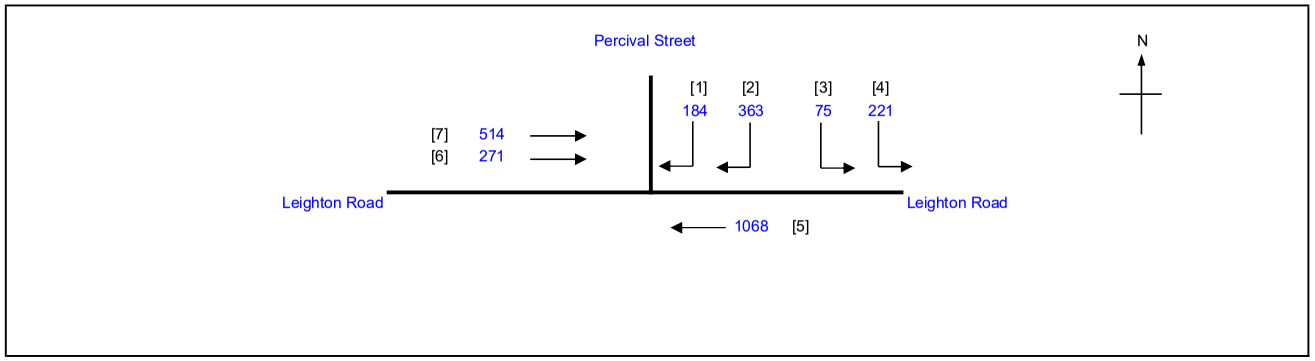
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

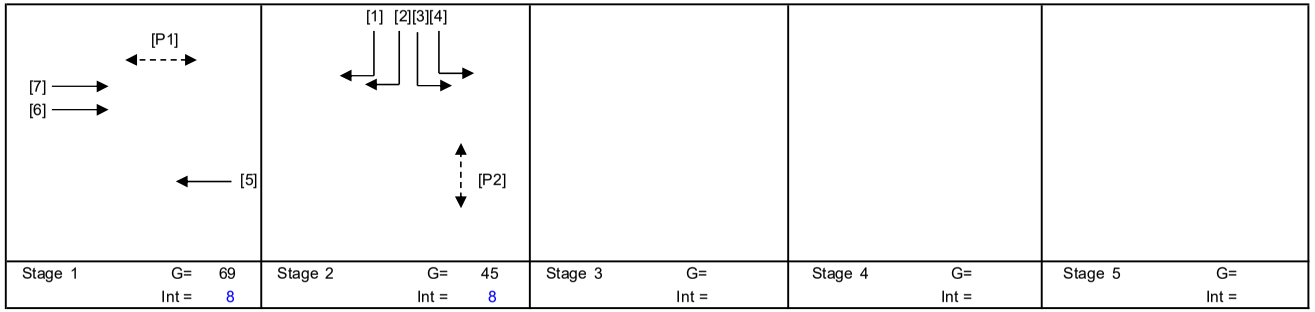
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.561
Loss time	L =	14 sec
Total Flow	=	2696 pcu
Co = (1.5*L+5)/(1-Y)	=	59.2 sec
Cm = L/(1-Y)	=	31.9 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	41.8 %
Cp = 0.9*L/(0.9-Y)	=	37.1 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**43 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 69	G= 45	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		70	7
P2	2		5	12		41	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		522		522	0.00	1965			0.8	-393			1572	0.332			69	70	0.628	48	23
5	1	3.00	1				2055		546		546	0.00	2055			0.8	-411			1644	0.332			69	70	0.628	54	23
6,7	1	2.50	1			N	1865		378		378	0.00	1865			0.6	-746			1119	0.338			70	70	0.628	36	23
6,7	1	2.50	1				2005		407		407	0.00	2005			0.6	-802			1203	0.338	0.338		70	70	0.628	36	23
3,4	2	4.00	1	25		N	2015	296			296	1.00	1901			0.7	-570			1331	0.222	0.222		46	46	0.628	36	37
1,2	2	5.00	1	25		N	2115			317	317	1.00	1995			0.8	-399			1596	0.199			41	46	0.628	42	40
1,2	2	3.30	1	20			2085			230	230	1.00	1940			0.6	-776			1164	0.198			41	46	0.628	30	42

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

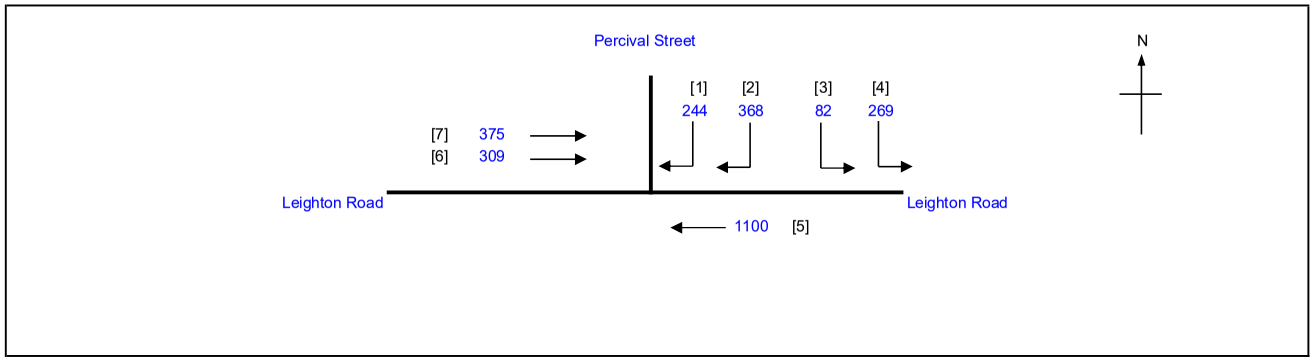
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

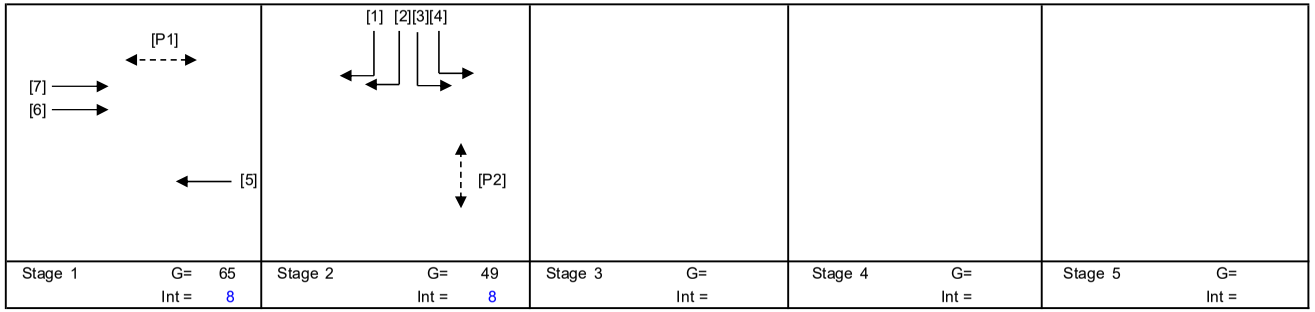
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.606
Loss time	L =	14 sec
Total Flow	=	2747 pcu
Co = (1.5*L+5)/(1-Y)	=	66.0 sec
Cm = L/(1-Y)	=	35.5 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	31.2 %
Cp = 0.9*L/(0.9-Y)	=	42.9 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**33 %**



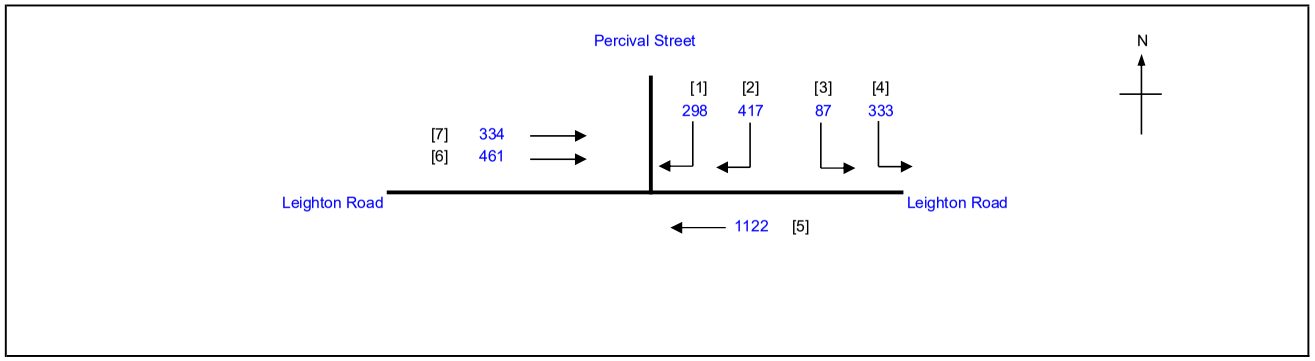
Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 65	G= 49	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		66	7
P2	2		5	12		45	12

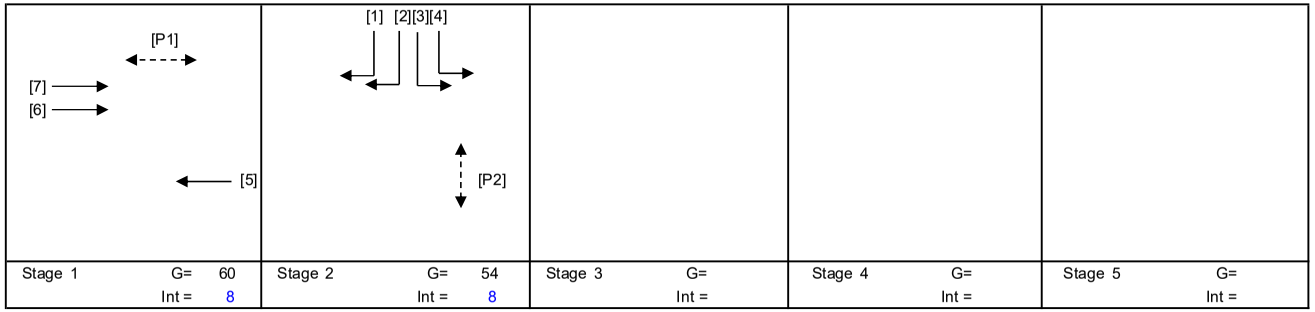
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		538		538	0.00	1965			0.8	-393			1572	0.342	0.342		66	66	0.679	54	26
5	1	3.00	1				2055		562		562	0.00	2055			0.8	-411			1644	0.342			65	66	0.679	60	26
6,7	1	2.50	1			N	1865		330		330	0.00	1865			0.6	-746			1119	0.295			56	66	0.679	36	34
6,7	1	2.50	1				2005		354		354	0.00	2005			0.6	-802			1203	0.294			56	66	0.679	42	33
3,4	2	4.00	1	25		N	2015	351			351	1.00	1901			0.7	-570			1331	0.264	0.264		50	50	0.679	42	36
1,2	2	5.00	1	25		N	2115			354	354	1.00	1995			0.8	-399			1596	0.222			42	50	0.679	48	41
1,2	2	3.30	1	20			2085			258	258	1.00	1940			0.6	-776			1164	0.222			42	50	0.679	36	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Mar-26
J11 Leighton Road / Percival Street / Hysan Avenue		FILENAME : J11_LR_PS_HA.xlsx	Checked By:	SLN	Mar-26
			Reviewed By:	SLN	Mar-26



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.665
Loss time	L =	14 sec
Total Flow	=	3052 pcu
Co = (1.5*L+5)/(1-Y)	=	77.6 sec
Cm = L/(1-Y)	=	41.8 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	19.6 %
Cp = 0.9*L/(0.9-Y)	=	53.6 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**21 %**



Stage 1	G= 60	Stage 2	G= 54	Stage 3	G=	Stage 4	G=	Stage 5	G=
	Int = 8		Int = 8		Int =		Int =		Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		61	7
P2	2		5	12		50	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		549		549	0.00	1965			0.8	-393			1572	0.349	0.349		61	61	0.745	60	32
5	1	3.00	1				2055		573		573	0.00	2055			0.8	-411			1644	0.349			61	61	0.745	66	32
6,7	1	2.50	1			N	1865		383		383	0.00	1865			0.6	-746			1119	0.342			60	61	0.745	42	35
6,7	1	2.50	1				2005		412		412	0.00	2005			0.6	-802			1203	0.342			60	61	0.745	48	35
3,4	2	4.00	1	25		N	2015	420			420	1.00	1901			0.7	-570			1331	0.316	0.316		55	55	0.745	48	37
1,2	2	5.00	1	25		N	2115			414	414	1.00	1995			0.8	-399			1596	0.259			45	55	0.745	54	42
1,2	2	3.30	1	20			2085			301	301	1.00	1940			0.6	-776			1164	0.259			45	55	0.745	42	45

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

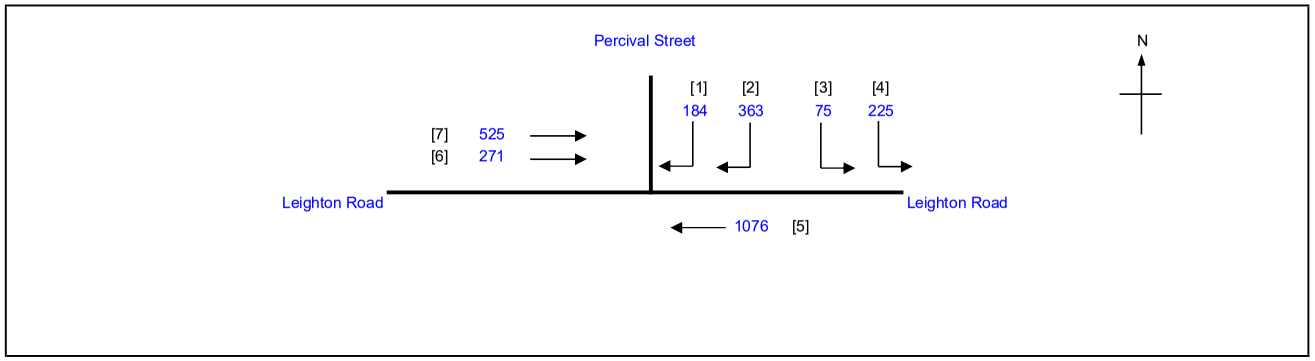
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

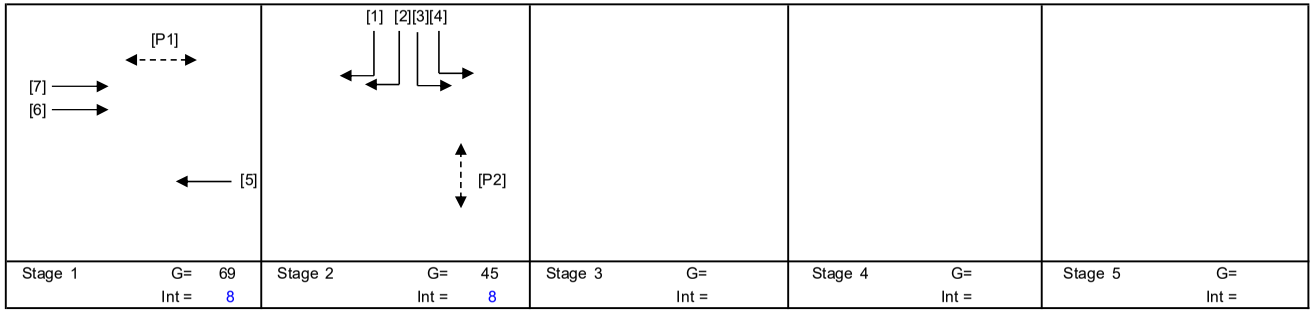
2033 Design AM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.569
Loss time	L =	14 sec
Total Flow	=	2719 pcu
Co = (1.5*L+5)/(1-Y)	=	60.3 sec
Cm = L/(1-Y)	=	32.5 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	39.8 %
Cp = 0.9*L/(0.9-Y)	=	38.0 sec
Ymax = 1-L/C	=	0.892
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**41 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 69	G= 45	G=	G=	G=
Int = 8	Int = 8	Int =	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		70	7
P2	2		5	12		41	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		526		526	0.00	1965			0.8	-393			1572	0.335			68	70	0.637	54	23
5	1	3.00	1				2055		550		550	0.00	2055			0.8	-411			1644	0.335			68	70	0.637	54	23
6,7	1	2.50	1			N	1865		384		384	0.00	1865			0.6	-746			1119	0.343	0.343		70	70	0.637	36	24
6,7	1	2.50	1				2005		412		412	0.00	2005			0.6	-802			1203	0.342			70	70	0.637	36	23
3,4	2	4.00	1	25		N	2015	300			300	1.00	1901			0.7	-570			1331	0.225	0.225		46	46	0.637	42	38
1,2	2	5.00	1	25		N	2115			317	317	1.00	1995			0.8	-399			1596	0.199			41	46	0.637	42	40
1,2	2	3.30	1	20			2085			230	230	1.00	1940			0.6	-776			1164	0.198			40	46	0.637	30	43

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

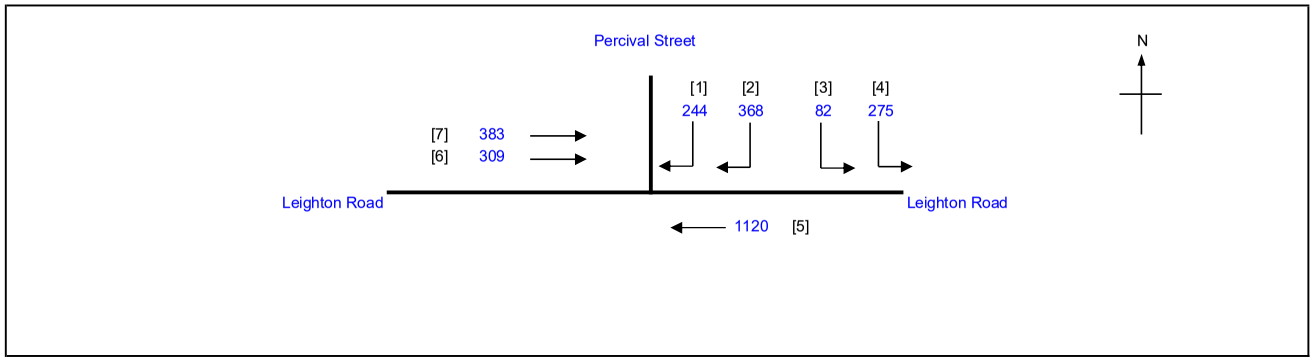
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J11 Leighton Road / Percival Street / Hysan Avenue

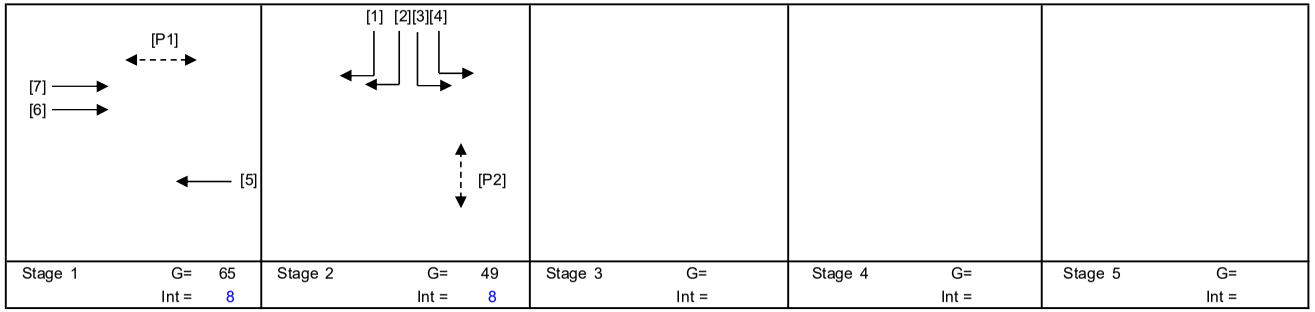
2033 Design PM

PROJECT NO.: 40920

FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.617
Loss time		L =	14 sec
Total Flow		=	2781 pcu
Co	= (1.5*L+5)/(1-Y)	=	67.8 sec
Cm	= L/(1-Y)	=	36.5 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	28.9 %
Cp	= 0.9*L/(0.9-Y)	=	44.5 sec
Ymax	= 1-L/C	=	0.892
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**30 %**



Stage 1	G= 65	Int = 8
Stage 2	G= 49	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		66	7
P2	2		5	12		45	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		547		547	0.00	1965			0.8	-393			1572	0.348			65	66	0.691	54	27
5	1	3.00	1				2055		573		573	0.00	2055			0.8	-411			1644	0.349	0.349		66	66	0.691	60	26
6,7	1	2.50	1			N	1865		334		334	0.00	1865			0.6	-746			1119	0.298			56	66	0.691	36	34
6,7	1	2.50	1				2005		358		358	0.00	2005			0.6	-802			1203	0.298			56	66	0.691	42	34
3,4	2	4.00	1	25		N	2015	357			357	1.00	1901			0.7	-570			1331	0.268	0.268		50	50	0.691	42	37
1,2	2	5.00	1	25		N	2115			354	354	1.00	1995			0.8	-399			1596	0.222			42	50	0.691	48	42
1,2	2	3.30	1	20			2085			258	258	1.00	1940			0.6	-776			1164	0.222			42	50	0.691	36	44

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

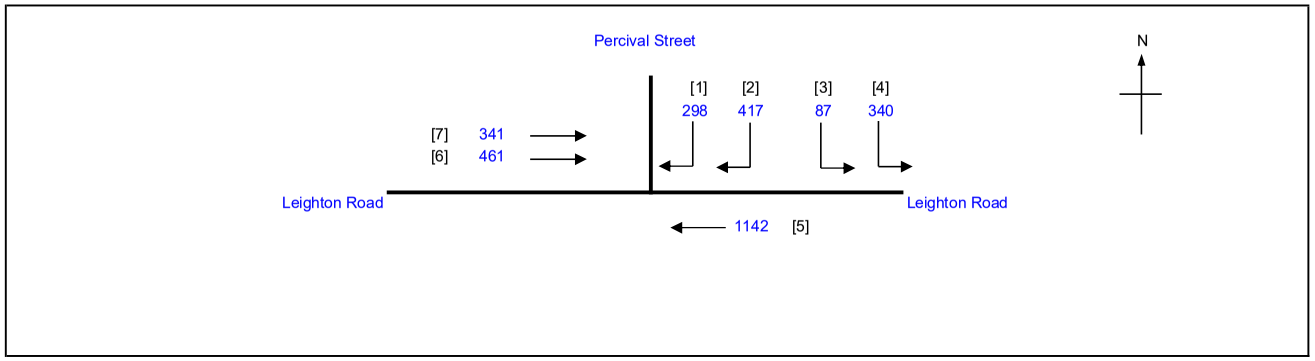
		INITIALS	DATE
Prepared By:		SKL	Mar-26
Checked By:		SLN	Mar-26
Reviewed By:		SLN	Mar-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

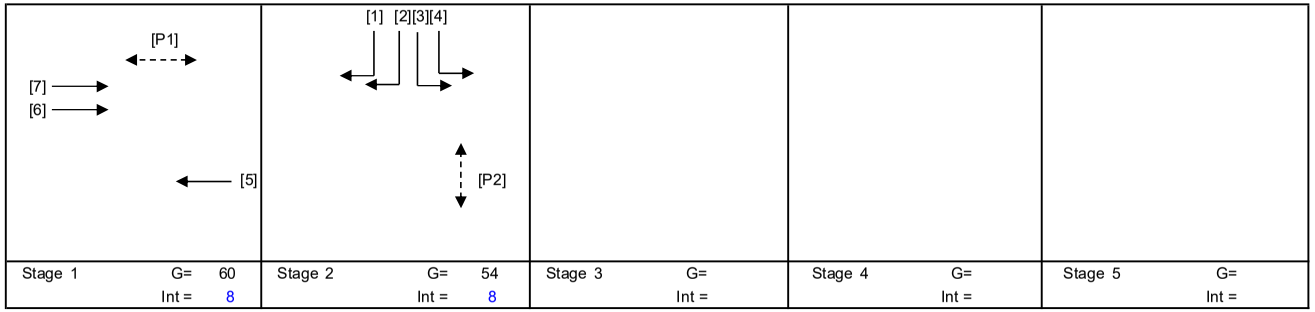
J11 Leighton Road / Percival Street / Hysan Avenue

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J11_LR_PS_HA.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.676
Loss time		L =	14 sec
Total Flow		=	3086 pcu
Co	= (1.5*L+5)/(1-Y)	=	80.3 sec
Cm	= L/(1-Y)	=	43.2 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	17.6 %
Cp	= 0.9*L/(0.9-Y)	=	56.3 sec
Ymax	= 1-L/C	=	0.892
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**19 %**



Stage 1	G= 60	Int = 8
Stage 2	G= 54	Int = 8
Stage 3	G=	Int =
Stage 4	G=	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1		16	7		61	7
P2	2		5	12		50	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
5	1	3.50	1			N	1965		558		558	0.00	1965			0.8	-393			1572	0.355			61	61	0.758	60	32
5	1	3.00	1				2055		584		584	0.00	2055			0.8	-411			1644	0.355	0.355		61	61	0.758	66	32
6,7	1	2.50	1			N	1865		386		386	0.00	1865			0.6	-746			1119	0.345			59	61	0.758	42	36
6,7	1	2.50	1				2005		416		416	0.00	2005			0.6	-802			1203	0.346			59	61	0.758	48	36
3,4	2	4.00	1	25		N	2015	427			427	1.00	1901			0.7	-570			1331	0.321	0.321		55	55	0.758	48	38
1,2	2	5.00	1	25		N	2115			414	414	1.00	1995			0.8	-399			1596	0.259			45	55	0.758	54	43
1,2	2	3.30	1	20			2085			301	301	1.00	1940			0.6	-776			1164	0.259			44	55	0.758	42	47

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

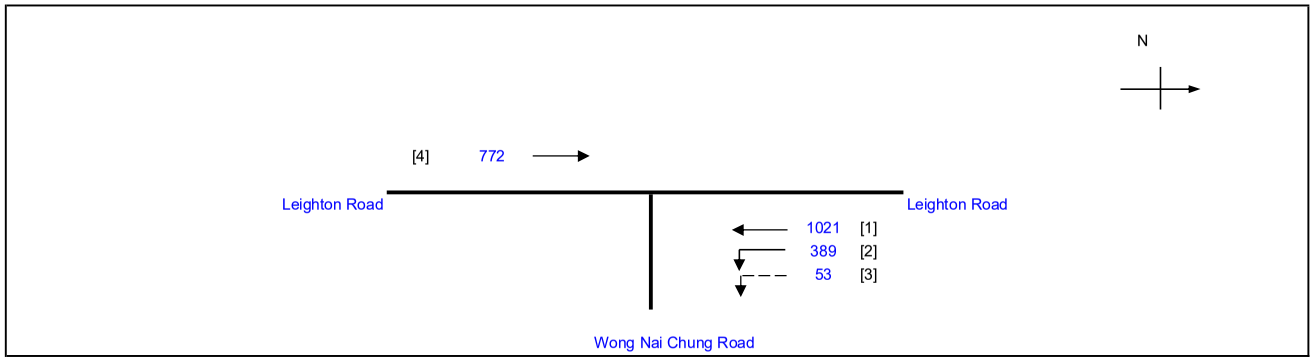
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

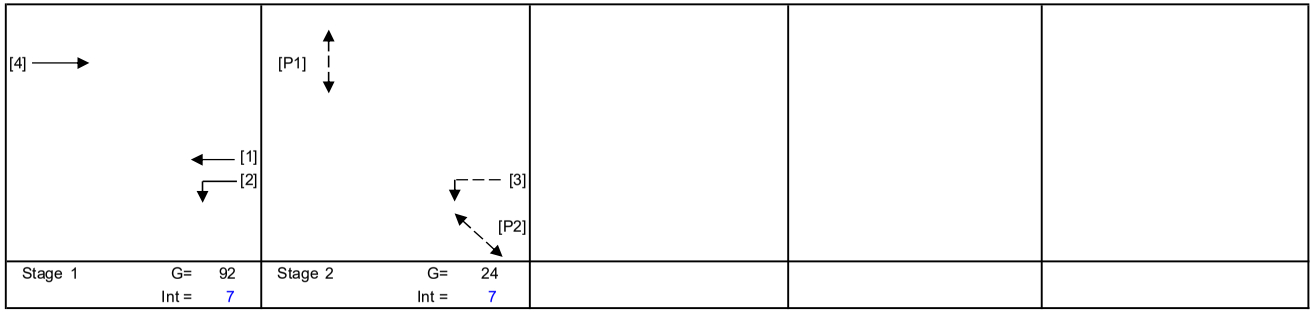
2033 Reference AM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.669
Loss time		L =	12 sec
Total Flow		=	2235 pcu
Co	= (1.5*L+5)/(1-Y)	=	69.5 sec
Cm	= L/(1-Y)	=	36.3 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	21.0 %
Cp	= 0.9*L/(0.9-Y)	=	46.8 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**22 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	22	9
P2	2		7	7	0	24	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	320			320	1.00	1828							1828	0.175			31	93	0.737	54	52
2	1	3.50	1	25			2105	69			69	1.00	1986			0.2	-1589			397	0.174			31	93	0.737	12	90
3	2	3.00	1	40		N	1915	53			53	1.00	1846			0.2	-1477			369	0.144	0.144		25	25	0.737	12	108
1	1	3.00	1			N	1915		805		805	0.00	1915			0.8	-383			1532	0.525			93	93	0.737	48	14
1	1	3.00	1				2055		216		216	0.00	2055			0.2	-1644			411	0.526	0.526		93	93	0.737	12	26
4	1	3.50	1			N	1965		124		124	0.00	1965			0.2	-1572			393	0.316			56	93	0.737	18	55
4	1	3.00	1				2055		324		324	0.00	2055			0.5	-1028			1027	0.315			56	93	0.737	36	38
4	1	3.00	1				2055		324		324	0.00	2055			0.5	-1028			1027	0.315			56	93	0.737	36	38

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

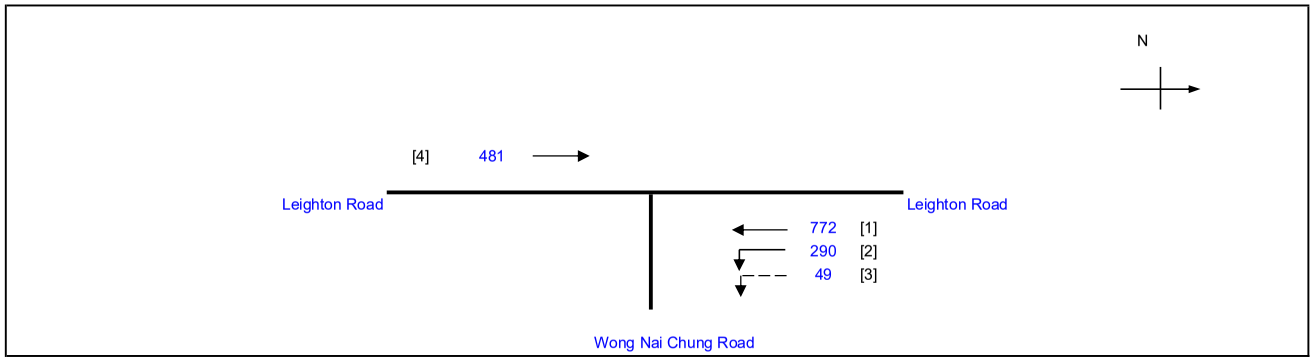
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

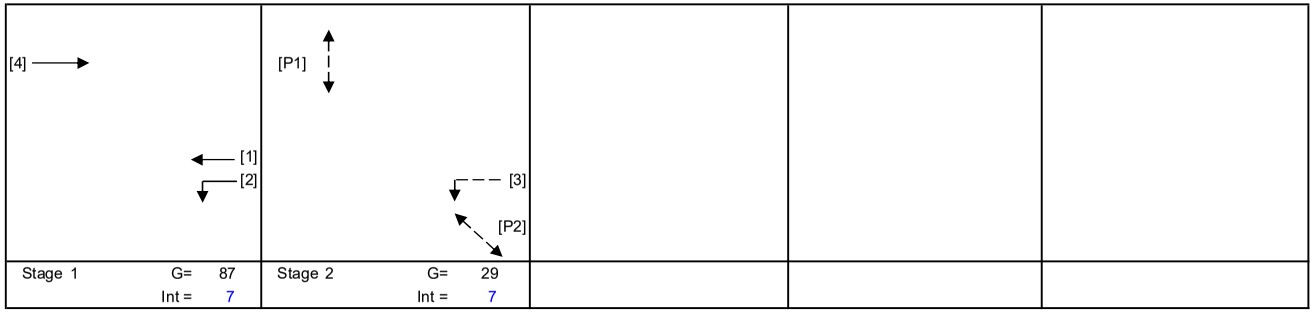
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.530
Loss time	L =	12 sec
Total Flow	=	1592 pcu
Co = (1.5*L+5)/(1-Y)	=	49.0 sec
Cm = L/(1-Y)	=	25.6 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	52.7 %
Cp = 0.9*L/(0.9-Y)	=	29.2 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**54 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	27	9
P2	2		7	7	0	29	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	238			238	1.00	1828							1828	0.130			29	88	0.584	36	46
2	1	3.50	1	25			2105	52			52	1.00	1986			0.2	-1589			397	0.131			29	88	0.584	6	66
3	2	3.00	1	40		N	1915	49			49	1.00	1846			0.2	-1477			369	0.133	0.133		30	30	0.584	6	67
1	1	3.00	1			N	1915		609		609	0.00	1915			0.8	-383			1532	0.398	0.398		88	88	0.584	42	12
1	1	3.00	1				2055		163		163	0.00	2055			0.2	-1644			411	0.397			88	88	0.584	6	18
4	1	3.50	1			N	1965		77		77	0.00	1965			0.2	-1572			393	0.196			44	88	0.584	6	49
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			44	88	0.584	24	39
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			44	88	0.584	24	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

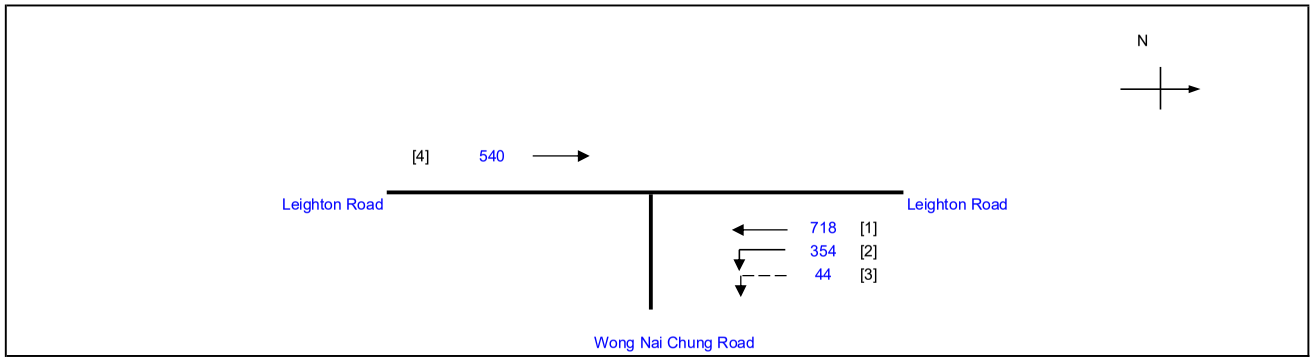
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

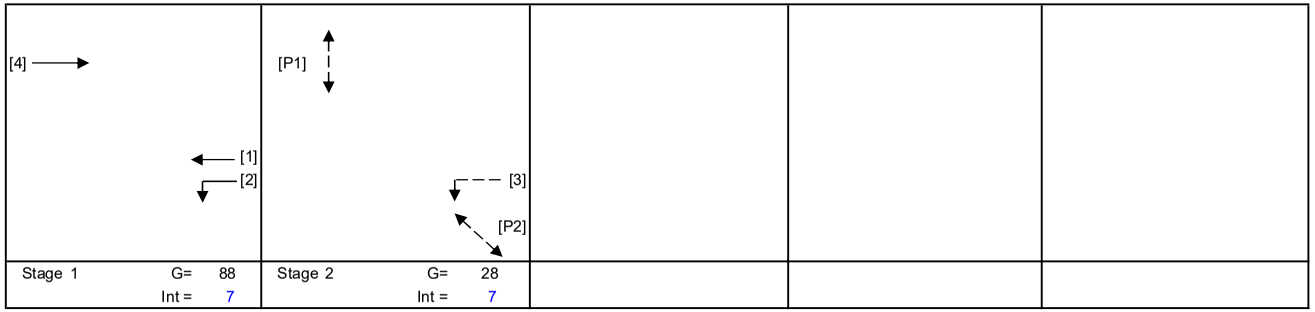
2033 Reference Weekend

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.489
Loss time		L =	12 sec
Total Flow		=	1656 pcu
Co	= (1.5*L+5)/(1-Y)	=	45.0 sec
Cm	= L/(1-Y)	=	23.5 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	65.6 %
Cp	= 0.9*L/(0.9-Y)	=	26.3 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**67 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	26	9
P2	2		7	7	0	28	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	291			291	1.00	1828							1828	0.159			38	89	0.539	42	38
2	1	3.50	1	25			2105	63			63	1.00	1986			0.2	-1589			397	0.159			38	89	0.539	6	51
3	2	3.00	1	40		N	1915	44			44	1.00	1846			0.2	-1477			369	0.119	0.119		29	29	0.539	6	63
1	1	3.00	1			N	1915		566		566	0.00	1915			0.8	-383			1532	0.369			89	89	0.539	36	11
1	1	3.00	1				2055		152		152	0.00	2055			0.2	-1644			411	0.370	0.370		89	89	0.539	6	16
4	1	3.50	1			N	1965		87		87	0.00	1965			0.2	-1572			393	0.221			53	89	0.539	6	38
4	1	3.00	1				2055		226		226	0.00	2055			0.5	-1028			1027	0.220			53	89	0.539	24	31
4	1	3.00	1				2055		227		227	0.00	2055			0.5	-1028			1027	0.221			53	89	0.539	24	31

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

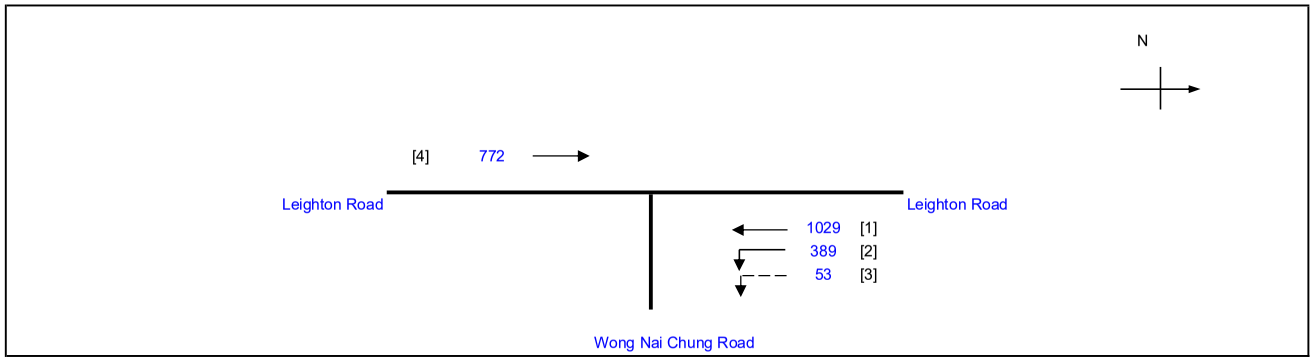
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

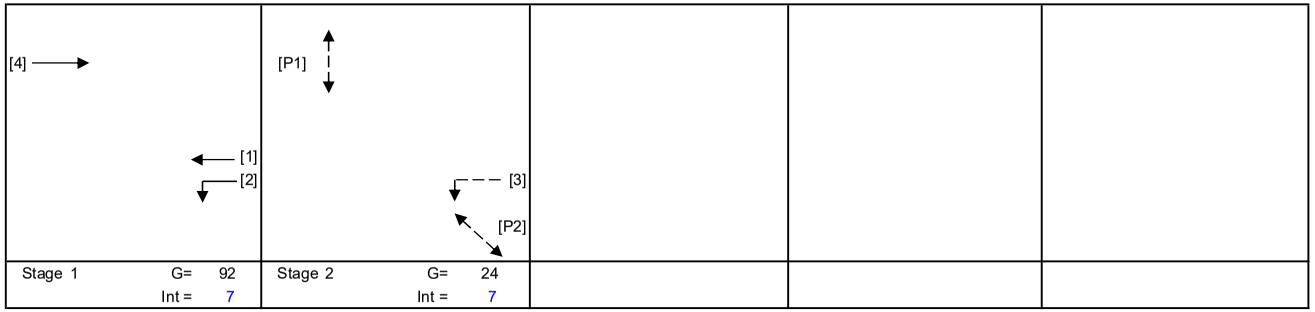
2033 Design AM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle	N =	2
Cycle time	C =	130 sec
Sum(y)	Y =	0.674
Loss time	L =	12 sec
Total Flow	=	2243 pcu
Co = (1.5*L+5)/(1-Y)	=	70.6 sec
Cm = L/(1-Y)	=	36.8 sec
Yult	=	0.810
R.C.ult = (Yult-Y)/Y*100%	=	20.2 %
Cp = 0.9*L/(0.9-Y)	=	47.8 sec
Ymax = 1-L/C	=	0.908
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**21 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	22	9
P2	2		7	7	0	24	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	320			320	1.00	1828							1828	0.175			31	93	0.743	54	52
2	1	3.50	1	25			2105	69			69	1.00	1986			0.2	-1589			397	0.174			30	93	0.743	12	92
3	2	3.00	1	40		N	1915	53			53	1.00	1846			0.2	-1477			369	0.144	0.144		25	25	0.743	12	110
1	1	3.00	1			N	1915		811		811	0.00	1915			0.8	-383			1532	0.529			93	93	0.743	48	15
1	1	3.00	1				2055		218		218	0.00	2055			0.2	-1644			411	0.530	0.530		93	93	0.743	12	26
4	1	3.50	1			N	1965		124		124	0.00	1965			0.2	-1572			393	0.316			55	93	0.743	18	56
4	1	3.00	1				2055		325		325	0.00	2055			0.5	-1028			1027	0.316			55	93	0.743	36	39
4	1	3.00	1				2055		323		323	0.00	2055			0.5	-1028			1027	0.315			55	93	0.743	36	39

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

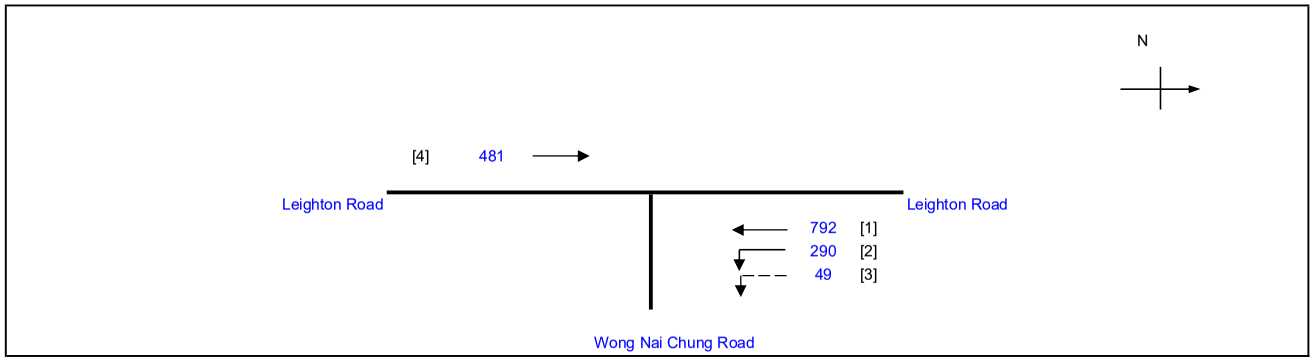
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

2033 Design PM

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.541
Loss time		L =	12 sec
Total Flow		=	1612 pcu
Co	= (1.5*L+5)/(1-Y)	=	50.1 sec
Cm	= L/(1-Y)	=	26.1 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	49.9 %
Cp	= 0.9*L/(0.9-Y)	=	30.0 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**51 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	26	9
P2	2		7	7	0	28	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	238			238	1.00	1828							1828	0.130			28	89	0.595	36	47
2	1	3.50	1	25			2105	52			52	1.00	1986			0.2	-1589			397	0.131			29	89	0.595	6	68
3	2	3.00	1	40		N	1915	49			49	1.00	1846			0.2	-1477			369	0.133	0.133		29	29	0.595	6	70
1	1	3.00	1			N	1915		625		625	0.00	1915			0.8	-383			1532	0.408	0.408		89	89	0.595	42	12
1	1	3.00	1				2055		168		168	0.00	2055			0.2	-1644			411	0.408			89	89	0.595	6	18
4	1	3.50	1			N	1965		77		77	0.00	1965			0.2	-1572			393	0.196			43	89	0.595	12	51
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			43	89	0.595	24	40
4	1	3.00	1				2055		202		202	0.00	2055			0.5	-1028			1027	0.197			43	89	0.595	24	40

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Mar-26
Checked By:	SLN	Mar-26
Reviewed By:	SLN	Mar-26

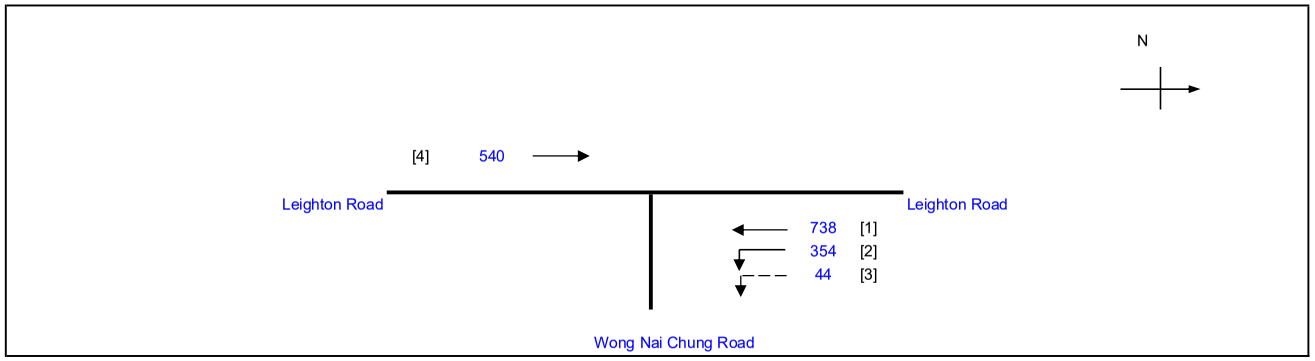
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J12 Leighton Road / Wong Nai Chung Road

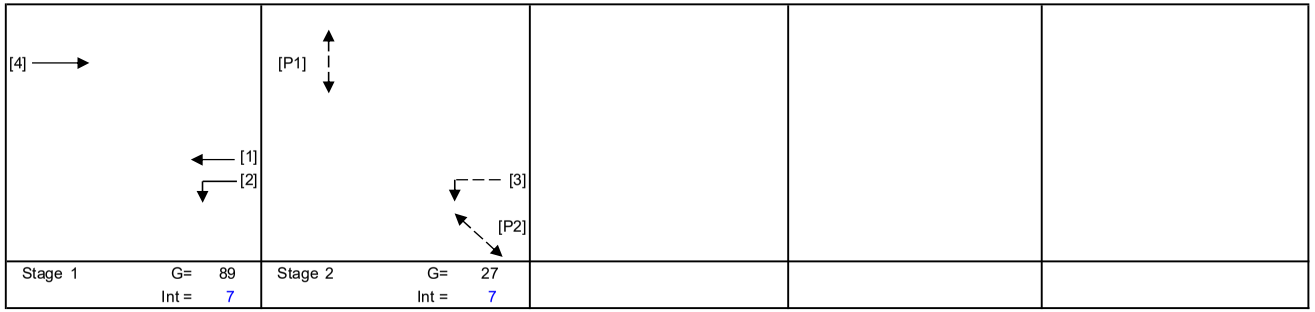
2033 Design Weekend

PROJECT NO.: 40920

FILENAME : J12_LR_WNCR.xlsx



No. of stages per cycle		N =	2
Cycle time		C =	130 sec
Sum(y)		Y =	0.499
Loss time		L =	12 sec
Total Flow		=	1676 pcu
Co	= (1.5*L+5)/(1-Y)	=	45.9 sec
Cm	= L/(1-Y)	=	24.0 sec
Yult		=	0.810
R.C.ult	= (Yult-Y)/Y*100%	=	62.3 %
Cp	= 0.9*L/(0.9-Y)	=	26.9 sec
Ymax	= 1-L/C	=	0.908
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**64 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	2		10	9	0	25	9
P2	2		7	7	0	27	7

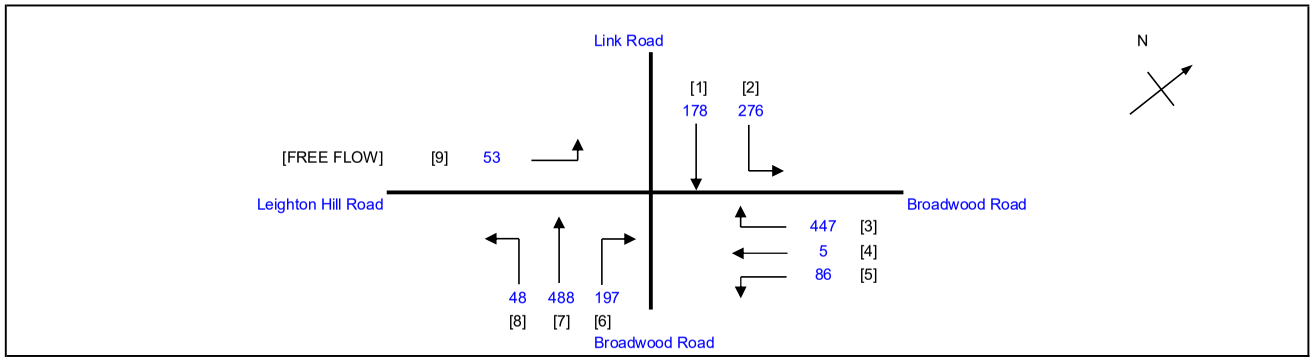
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							12					
2	1	3.50	1	20		N	1965	291			291	1.00	1828							1828	0.159			38	90	0.550	42	39
2	1	3.50	1	25			2105	63			63	1.00	1986			0.2	-1589			397	0.159			38	90	0.550	6	52
3	2	3.00	1	40		N	1915	44			44	1.00	1846			0.2	-1477			369	0.119	0.119		28	28	0.550	6	65
1	1	3.00	1			N	1915		582		582	0.00	1915			0.8	-383			1532	0.380	0.380		90	90	0.550	36	11
1	1	3.00	1				2055		156		156	0.00	2055			0.2	-1644			411	0.380			90	90	0.550	6	16
4	1	3.50	1			N	1965		87		87	0.00	1965			0.2	-1572			393	0.221			52	90	0.550	6	39
4	1	3.00	1				2055		226		226	0.00	2055			0.5	-1028			1027	0.220			52	90	0.550	24	32
4	1	3.00	1				2055		227		227	0.00	2055			0.5	-1028			1027	0.221			52	90	0.550	24	32

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

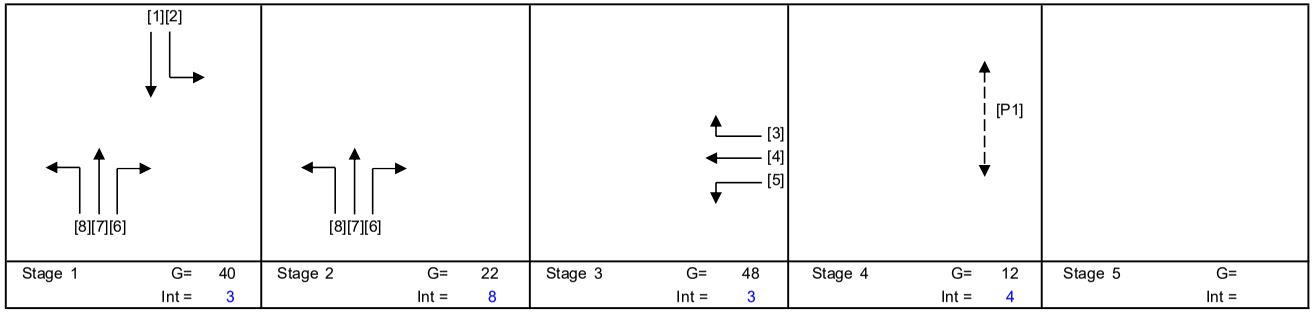
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
2033 Reference AM	FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Apr-26
J13 Broadwood Road / Link Road		Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.642
Loss time		L =	27 sec
Total Flow		=	1725 pcu
Co	= (1.5*L+5)/(1-Y)	=	127.2 sec
Cm	= L/(1-Y)	=	75.5 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	8.6 %
Cp	= 0.9*L/(0.9-Y)	=	94.3 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**13 %**



Stage 1	G= 40	Int = 3
Stage 2	G= 22	Int = 8
Stage 3	G= 48	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

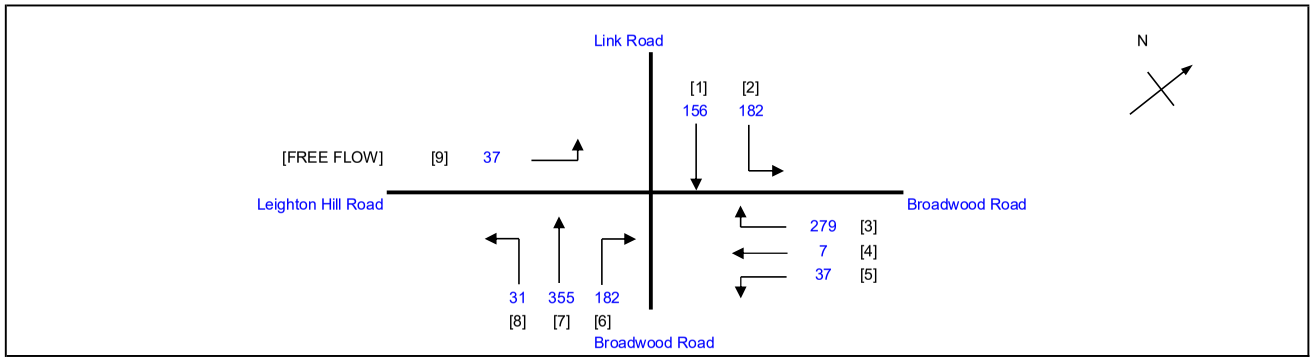
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	276	178		454	0.61	1943							1943	0.234	0.234		41	41	0.796	72	52
7,8	1,2	3.00	1	15		N	1915	48	488		536	0.09	1898							1898	0.282			50	64	0.796	78	46
6	2	3.00	1	8	O		2055			197	197	1.00	1537							1537	0.128	0.128		23	23	0.796	42	76
3,4,5	3	3.50	1	60		N	1965	86	5	447	538	0.99	1918							1918	0.281	0.281		49	49	0.796	78	46
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

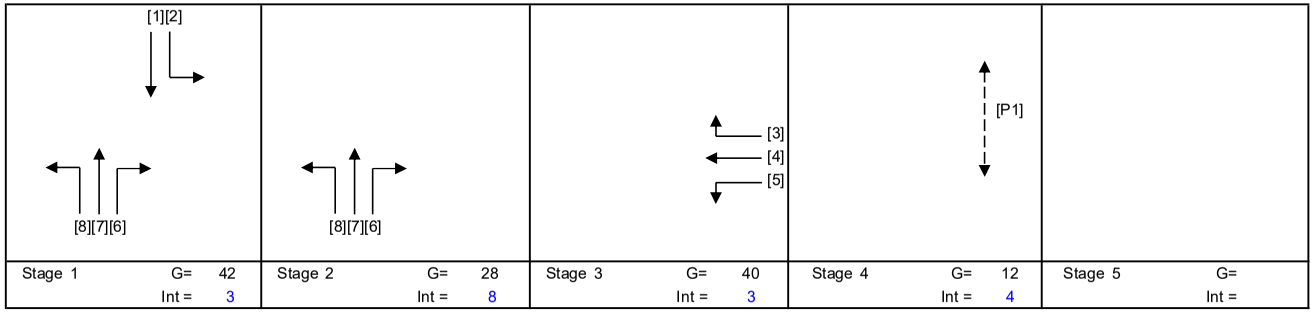
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
2033 Reference PM	FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Apr-26
J13 Broadwood Road / Link Road		Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.461
Loss time		L =	27 sec
Total Flow		=	1229 pcu
Co	= (1.5*L+5)/(1-Y)	=	84.3 sec
Cm	= L/(1-Y)	=	50.1 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	51.4 %
Cp	= 0.9*L/(0.9-Y)	=	55.3 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**58 %**



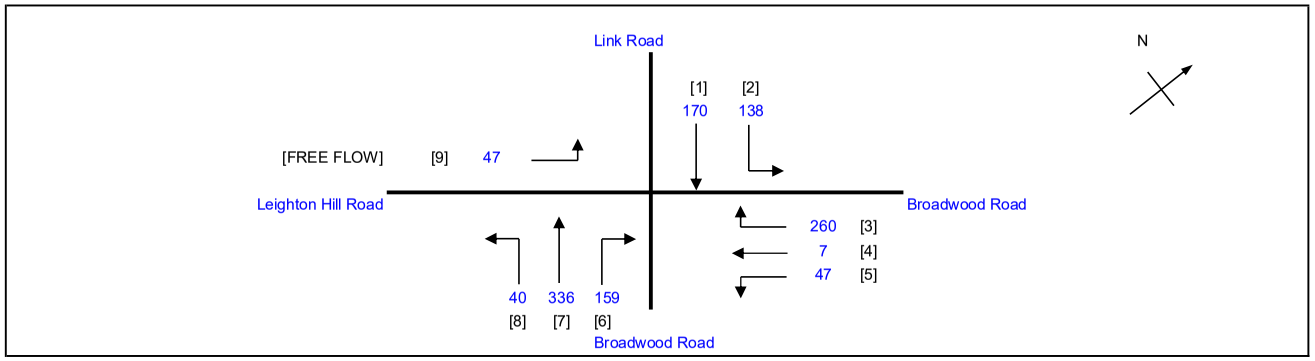
Stage 1	G= 42	Int = 3
Stage 2	G= 28	Int = 8
Stage 3	G= 40	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

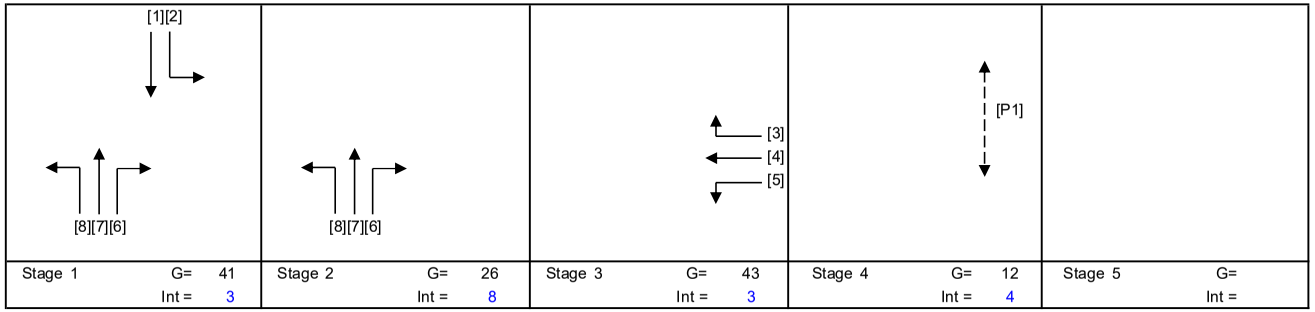
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	182	156		338	0.54	1945							1945	0.174	0.174	15	43	43	0.571	54	41
7,8	1,2	3.00	1	15		N	1915	31	355		386	0.08	1900							1900	0.203			50	72	0.571	54	36
6	2	3.00	1	8	O		2055			182	182	1.00	1537							1537	0.118	0.118		29	29	0.571	30	52
3,4,5	3	3.50	1	60		N	1965	37	7	279	323	0.98	1918							1918	0.168	0.168		41	41	0.571	48	41
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J13 Broadwood Road / Link Road		FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.425
Loss time		L =	27 sec
Total Flow		=	1157 pcu
Co	= (1.5*L+5)/(1-Y)	=	79.2 sec
Cm	= L/(1-Y)	=	47.0 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	64.0 %
Cp	= 0.9*L/(0.9-Y)	=	51.2 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**71 %**



Stage 1	G= 41	Int = 3
Stage 2	G= 26	Int = 8
Stage 3	G= 43	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

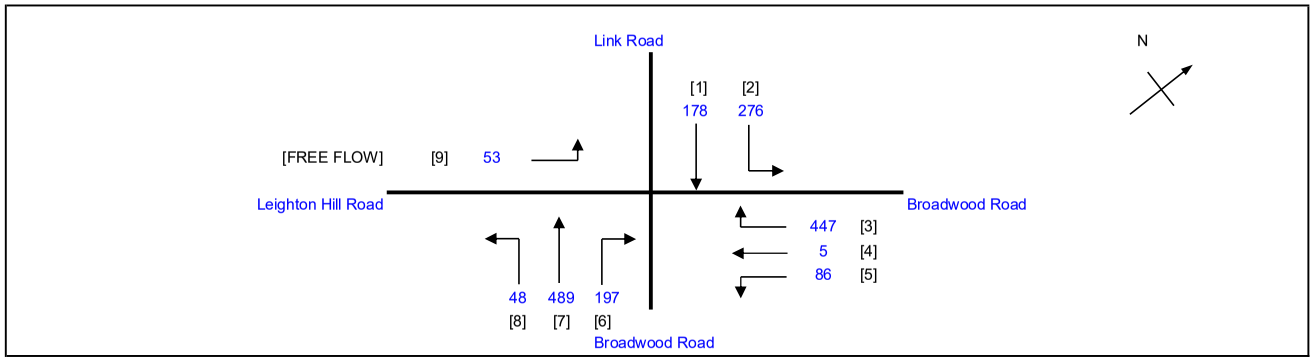
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	138	170		308	0.45	1949							1949	0.158	0.158		42	42	0.527	48	40
7,8	1,2	3.00	1	15		N	1915	40	336		376	0.11	1895							1895	0.198			53	69	0.527	54	33
6	2	3.00	1	8	O		2055			159	159	1.00	1537							1537	0.103	0.103		27	27	0.527	24	51
3,4,5	3	3.50	1	60		N	1965	47	7	260	314	0.98	1918							1918	0.164	0.164		44	44	0.527	48	39
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

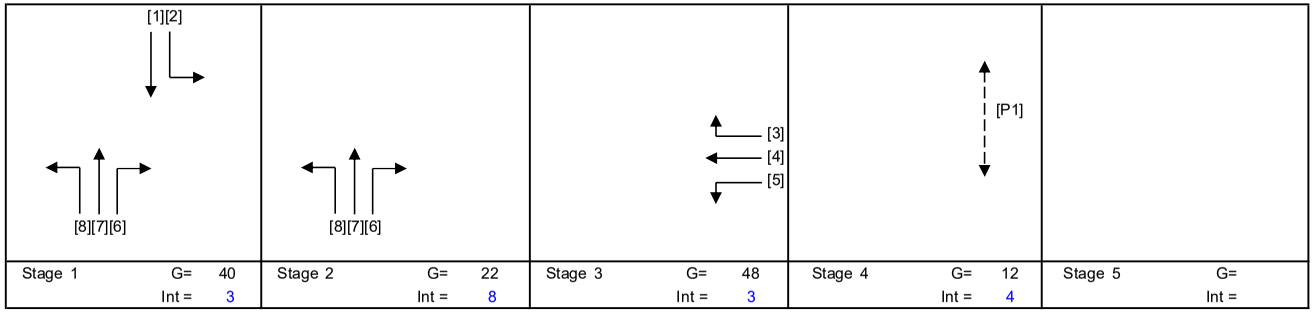
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
J13 Broadwood Road / Link Road		FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Apr-26
			Reviewed By:	SLN	Apr-26



No. of stages per cycle	N =	4
Cycle time	C =	140 sec
Sum(y)	Y =	0.642
Loss time	L =	27 sec
Total Flow	=	1726 pcu
Co = (1.5*L+5)/(1-Y)	=	127.2 sec
Cm = L/(1-Y)	=	75.5 sec
Yult	=	0.698
R.C.ult = (Yult-Y)/Y*100%	=	8.6 %
Cp = 0.9*L/(0.9-Y)	=	94.3 sec
Ymax = 1-L/C	=	0.807
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**13 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 40	G= 22	G= 48	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

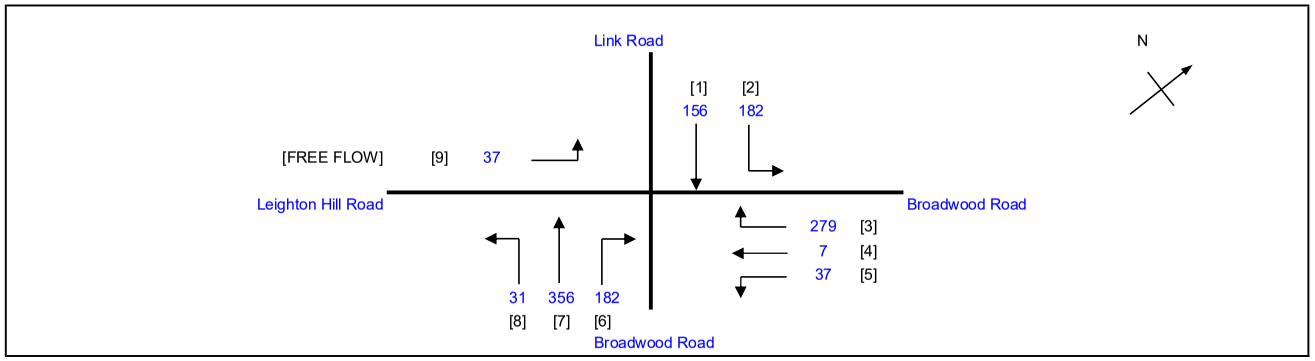
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	276	178		454	0.61	1943							1943	0.234	0.234	15	41	41	0.796	72	52
7,8	1,2	3.00	1	15		N	1915	48	489		537	0.09	1898							1898	0.283			50	64	0.796	78	46
6	2	3.00	1	8	O		2055			197	197	1.00	1537							1537	0.128	0.128		23	23	0.796	42	76
3,4,5	3	3.50	1	60		N	1965	86	5	447	538	0.99	1918							1918	0.281	0.281		49	49	0.796	78	46
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

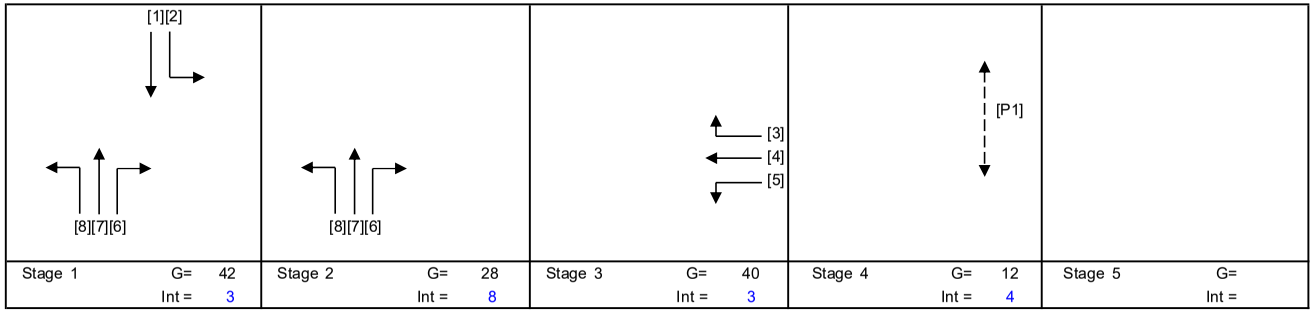
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
2033 Design PM	FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Apr-26
J13 Broadwood Road / Link Road		Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.461
Loss time		L =	27 sec
Total Flow		=	1230 pcu
Co	= (1.5*L+5)/(1-Y)	=	84.3 sec
Cm	= L/(1-Y)	=	50.1 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	51.4 %
Cp	= 0.9*L/(0.9-Y)	=	55.3 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**58 %**



Stage 1	G= 42	Int = 3
Stage 2	G= 28	Int = 8
Stage 3	G= 40	Int = 3
Stage 4	G= 12	Int = 4
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

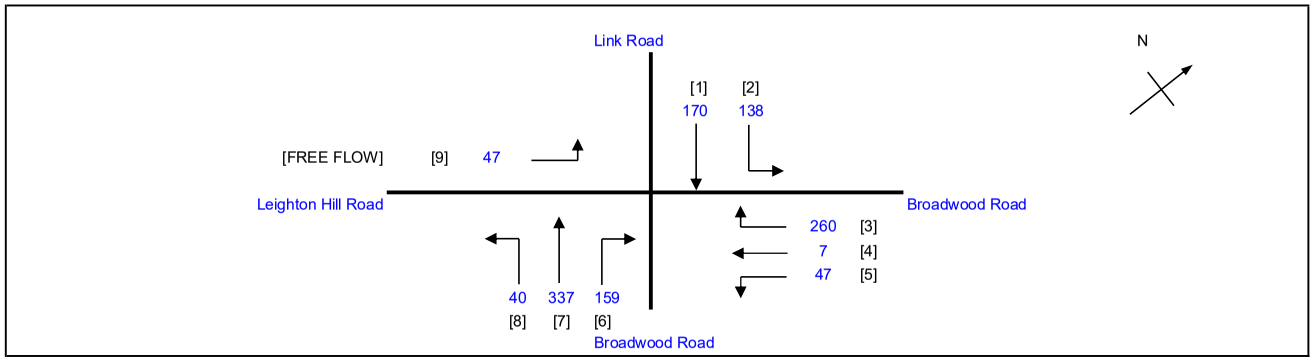
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							15					
1,2	1	3.50	1	80		N	1965	182	156		338	0.54	1945							1945	0.174	0.174		43	43	0.571	54	41
7,8	1,2	3.00	1	15		N	1915	31	356		387	0.08	1900							1900	0.204			50	72	0.571	54	36
6	2	3.00	1	8	O		2055			182	182	1.00	1537							1537	0.118	0.118		29	29	0.571	30	52
3,4,5	3	3.50	1	60		N	1965	37	7	279	323	0.98	1918							1918	0.168	0.168		41	41	0.571	48	41
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

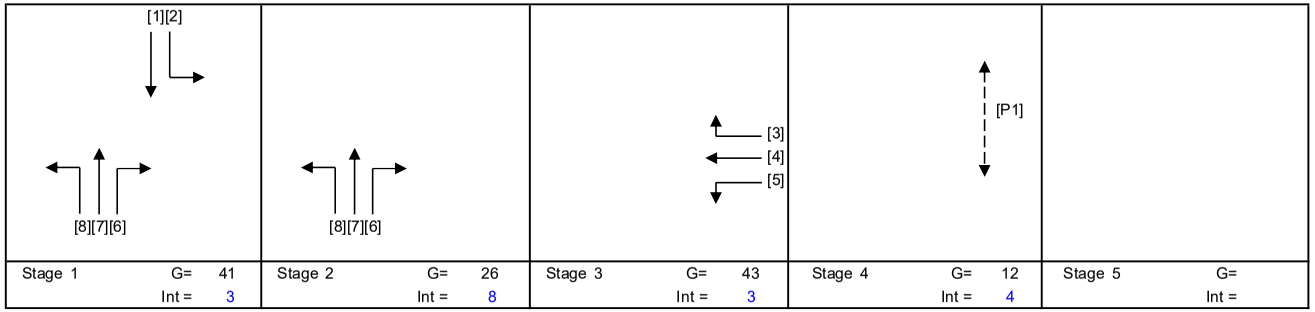
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

		INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	PROJECT NO.: 40920	Prepared By:	SKL	Apr-26
2033 Design Weekend	FILENAME : J13_BR_LR.xlsx	Checked By:	SLN	Apr-26
J13 Broadwood Road / Link Road		Reviewed By:	SLN	Apr-26



No. of stages per cycle		N =	4
Cycle time		C =	140 sec
Sum(y)		Y =	0.425
Loss time		L =	27 sec
Total Flow		=	1158 pcu
Co	= (1.5*L+5)/(1-Y)	=	79.2 sec
Cm	= L/(1-Y)	=	47.0 sec
Yult		=	0.698
R.C.ult	= (Yult-Y)/Y*100%	=	64.0 %
Cp	= 0.9*L/(0.9-Y)	=	51.2 sec
Ymax	= 1-L/C	=	0.807
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**71 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 41	G= 26	G= 43	G= 12	G=
Int = 3	Int = 8	Int = 3	Int = 4	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	4		5	7	0	9	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
1,2	1	3.50	1	80		N	1965	138	170		308	0.45	1949							1949	0.158	0.158	15	42	42	0.527	48	40
7,8	1,2	3.00	1	15		N	1915	40	337		377	0.11	1895							1895	0.199			53	69	0.527	54	33
6	2	3.00	1	8	O		2055			159	159	1.00	1537							1537	0.103	0.103		27	27	0.527	24	51
3,4,5	3	3.50	1	60		N	1965	47	7	260	314	0.98	1918							1918	0.164	0.164		44	44	0.527	48	39
PED	4																						12					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

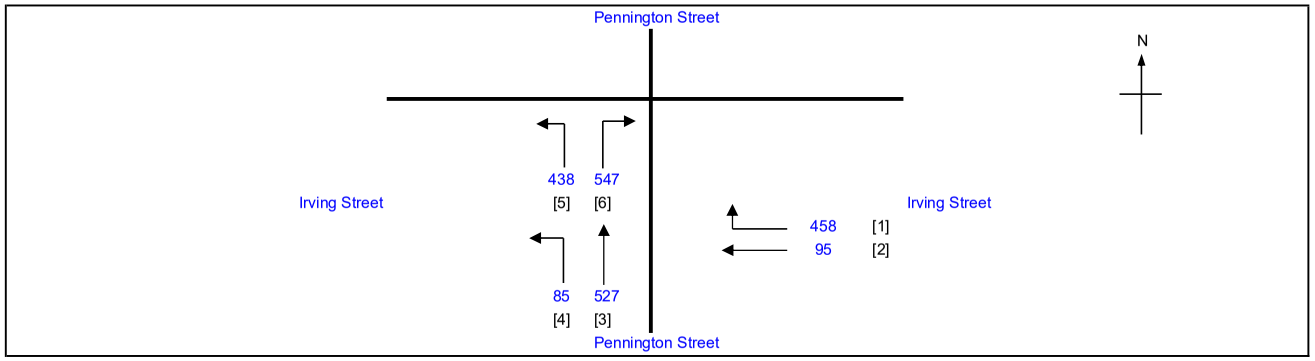
		INITIALS	DATE
Prepared By:		SKL	Apr-26
Checked By:		SLN	Apr-26
Reviewed By:		SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

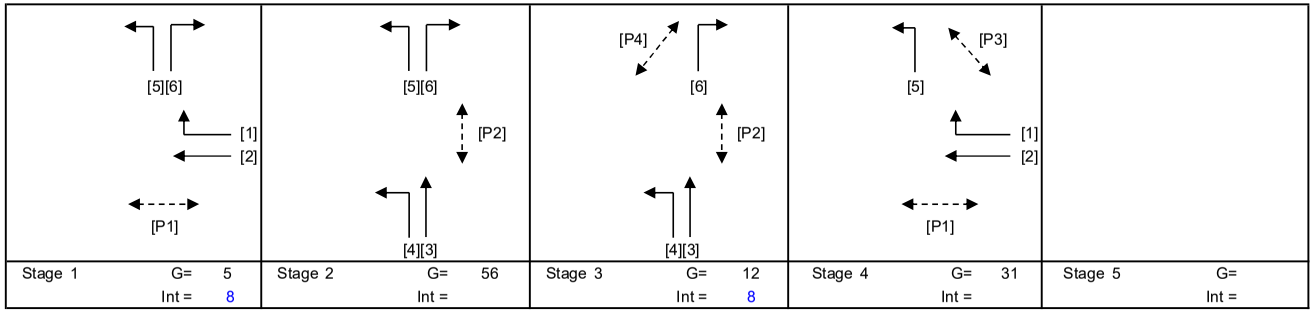
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Reference AM

PROJECT NO.:	40920		
FILENAME :	J14_PS_IS_JB.xlsx		



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.247
Loss time	L =	14 sec
Total Flow	=	2150 pcu
Co = (1.5*L+5)/(1-Y)	=	34.5 sec
Cm = L/(1-Y)	=	18.6 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	221.6 %
Cp = 0.9*L/(0.9-Y)	=	19.3 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**222 %**



Stage 1	G= 5	Int = 8
Stage 2	G= 56	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 31	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		36	8
P2	2,3		8	14		62	14
P3	4		7	7		24	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		83		83	0.00	1915			0.5	-958			957	0.087			37	37	0.280	6	30
1,2	1,4	3.00	1	16			2055		12	153	165	0.93	1891							1891	0.087	0.087		37	37	0.280	18	29
1	1,4	3.00	1	13			2055			160	160	1.00	1842							1842	0.087			37	37	0.280	18	29
1	1,4	3.00	1	10		N	1915			145	145	1.00	1665							1665	0.087			37	37	0.280	18	29
3,4	2,3	3.80	1	5		N	1995	85	208		293	0.29	1835							1835	0.160			68	69	0.280	24	12
3	2,3	3.80	1			N	1995		319		319	0.00	1995							1995	0.160	0.160		69	69	0.280	24	12
5	1,2,4	3.50	1	10		N	1965	438			438	1.00	1709							1709	0.256			110	94	0.280	6	1
6	1,2,4	3.50	1	10			2105			292	292	1.00	1830							1830	0.160			68	94	0.280	24	12
6	1,2,4	3.50	1	6.5		N	1965			255	255	1.00	1597							1597	0.160			68	94	0.280	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

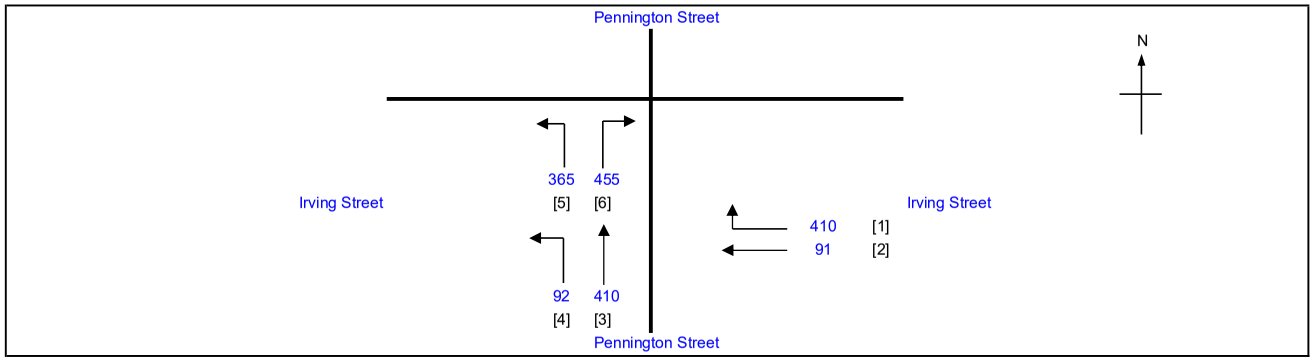
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

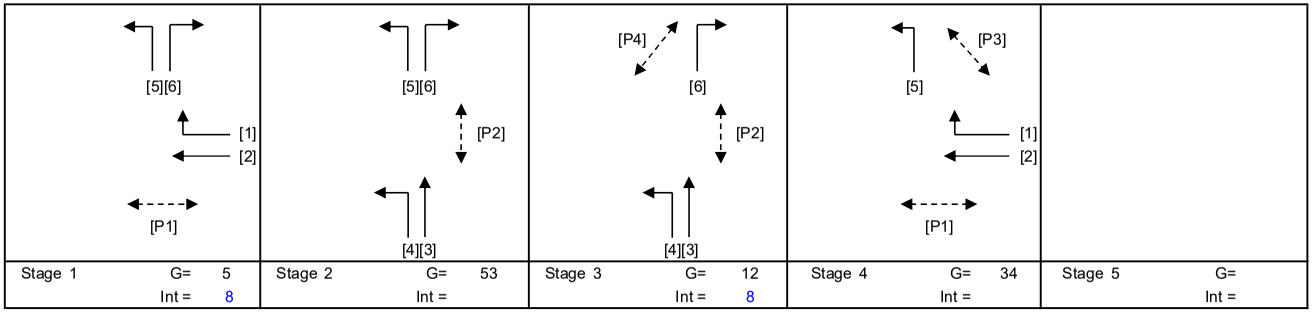
2033 Reference PM

PROJECT NO.: 40920

FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.212
Loss time		L =	14 sec
Total Flow		=	1823 pcu
Co	= (1.5*L+5)/(1-Y)	=	33.0 sec
Cm	= L/(1-Y)	=	17.8 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	274.6 %
Cp	= 0.9*L/(0.9-Y)	=	18.3 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**275 %**



Stage 1	G= 5	Int = 8
Stage 2	G= 53	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 34	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		76		76	0.00	1915			0.5	-958			957	0.079	0.079		40	40	0.240	6	28
1,2	1,4	3.00	1	16			2055		15	133	148	0.90	1895							1895	0.078			39	40	0.240	18	28
1	1,4	3.00	1	13			2055			146	146	1.00	1842							1842	0.079			40	40	0.240	18	27
1	1,4	3.00	1	10		N	1915			131	131	1.00	1665							1665	0.079			39	40	0.240	12	27
3,4	2,3	3.80	1	5		N	1995	92	145		237	0.39	1787							1787	0.133			66	66	0.240	18	13
3	2,3	3.80	1			N	1995		265		265	0.00	1995							1995	0.133	0.133		66	66	0.240	18	13
5	1,2,4	3.50	1	10		N	1965	365			365	1.00	1709							1709	0.214			107	94	0.240	6	1
6	1,2,4	3.50	1	10			2105			243	243	1.00	1830							1830	0.133			66	94	0.240	18	13
6	1,2,4	3.50	1	6.5		N	1965			212	212	1.00	1597							1597	0.133			66	94	0.240	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

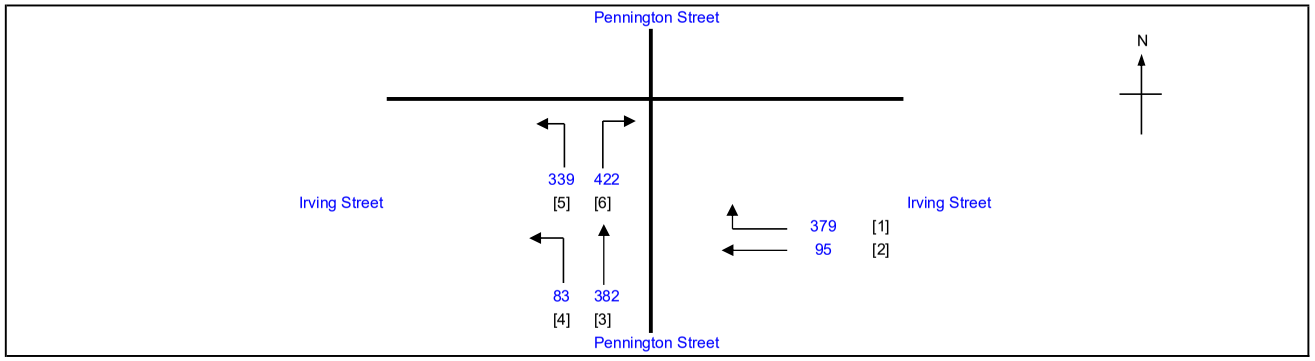
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

J14 Pennington Street / Irving Street / Jardine's Bazaar

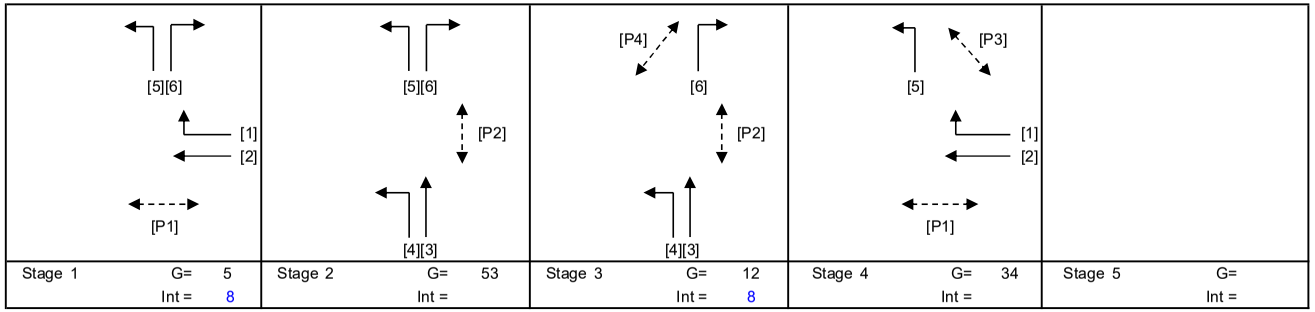
2033 Reference Weekend

PROJECT NO.: 40920

FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.197
Loss time	L =	14 sec
Total Flow	=	1700 pcu
Co = (1.5*L+5)/(1-Y)	=	32.4 sec
Cm = L/(1-Y)	=	17.4 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	303.0 %
Cp = 0.9*L/(0.9-Y)	=	17.9 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**303 %**



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
G= 5	G= 53	G= 12	G= 34	G=
Int = 8	Int =	Int = 8	Int =	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																						14					
2	1,4	3.00	1			N	1915		71		71	0.00	1915			0.5	-958			957	0.074			40	40	0.223	6	27
1,2	1,4	3.00	1	16			2055		24	118	142	0.83	1906							1906	0.074	0.074		40	40	0.223	18	27
1	1,4	3.00	1	13			2055			137	137	1.00	1842							1842	0.074			40	40	0.223	18	27
1	1,4	3.00	1	10		N	1915			124	124	1.00	1665							1665	0.074			40	40	0.223	12	27
3,4	2,3	3.80	1	5		N	1995	83	137		220	0.38	1792							1792	0.123			66	66	0.223	18	13
3	2,3	3.80	1			N	1995		245		245	0.00	1995							1995	0.123	0.123		66	66	0.223	18	13
5	1,2,4	3.50	1	10		N	1965	339			339	1.00	1709							1709	0.198			107	94	0.223	6	1
6	1,2,4	3.50	1	10			2105			225	225	1.00	1830							1830	0.123			66	94	0.223	18	13
6	1,2,4	3.50	1	6.5		N	1965			197	197	1.00	1597							1597	0.123			66	94	0.223	12	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

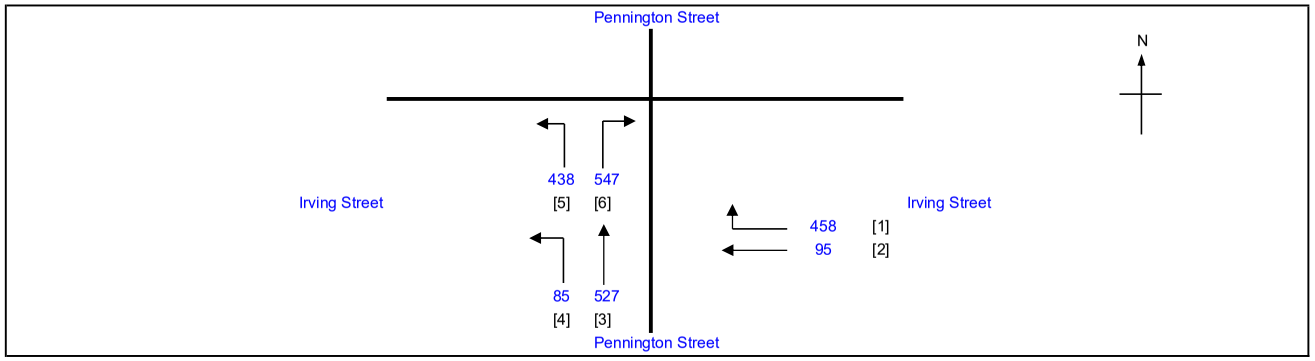
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

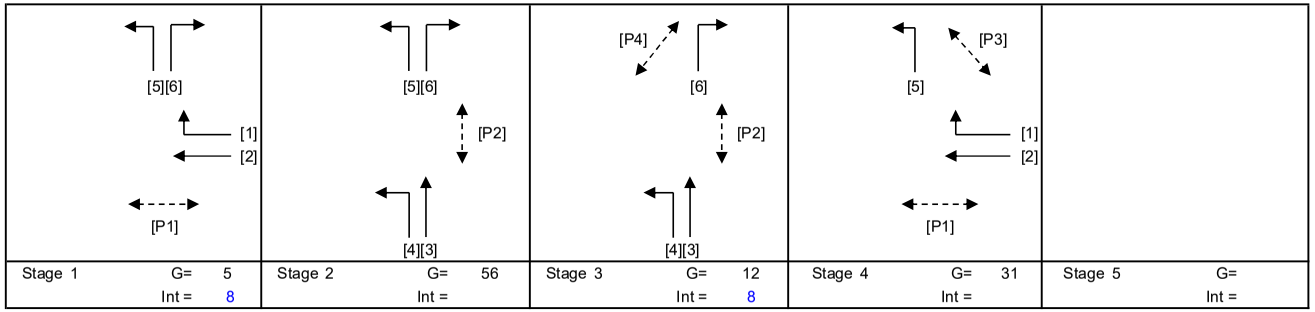
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Design AM

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle	N =	4
Cycle time	C =	120 sec
Sum(y)	Y =	0.247
Loss time	L =	14 sec
Total Flow	=	2150 pcu
Co = (1.5*L+5)/(1-Y)	=	34.5 sec
Cm = L/(1-Y)	=	18.6 sec
Yult	=	0.795
R.C.ult = (Yult-Y)/Y*100%	=	221.6 %
Cp = 0.9*L/(0.9-Y)	=	19.3 sec
Ymax = 1-L/C	=	0.883
R.C.(C) = (0.9*Ymax-Y)/Y*100%	=	**222 %**



Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		36	8
P2	2,3		8	14		62	14
P3	4		7	7		24	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14				
2	1,4	3.00	1			N	1915		83		83	0.00	1915			0.5	-958			957	0.087			37	37	0.280	6	30
1,2	1,4	3.00	1	16			2055		12	153	165	0.93	1891							1891	0.087	0.087		37	37	0.280	18	29
1	1,4	3.00	1	13			2055			160	160	1.00	1842							1842	0.087			37	37	0.280	18	29
1	1,4	3.00	1	10		N	1915			145	145	1.00	1665							1665	0.087			37	37	0.280	18	29
3,4	2,3	3.80	1	5		N	1995	85	208		293	0.29	1835							1835	0.160			68	69	0.280	24	12
3	2,3	3.80	1			N	1995		319		319	0.00	1995							1995	0.160	0.160		69	69	0.280	24	12
5	1,2,4	3.50	1	10		N	1965	438			438	1.00	1709							1709	0.256			110	94	0.280	6	1
6	1,2,4	3.50	1	10			2105			292	292	1.00	1830							1830	0.160			68	94	0.280	24	12
6	1,2,4	3.50	1	6.5		N	1965			255	255	1.00	1597							1597	0.160			68	94	0.280	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

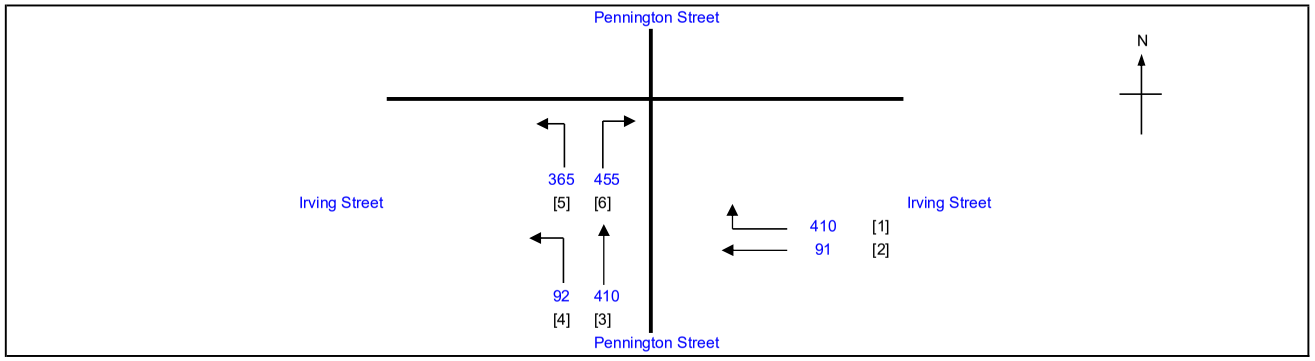
	INITIALS	DATE
Prepared By:	SKL	Apr-26
Checked By:	SLN	Apr-26
Reviewed By:	SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

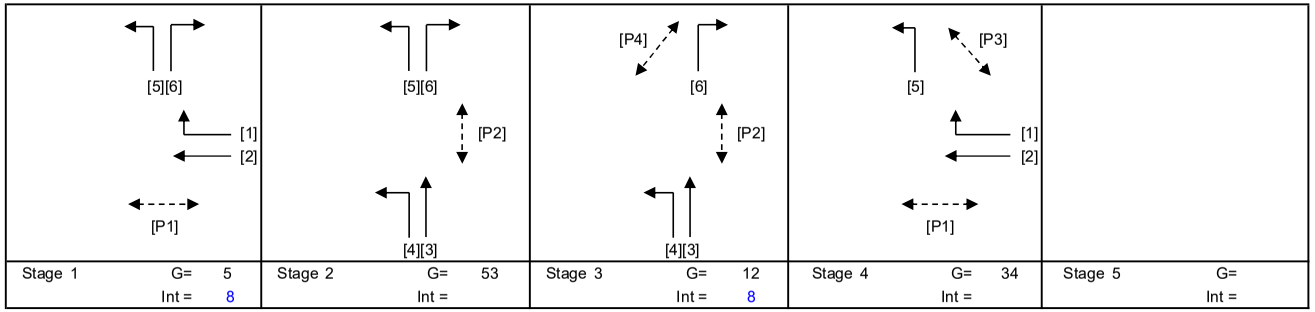
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Design PM

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.212
Loss time		L =	14 sec
Total Flow		=	1823 pcu
Co	= (1.5*L+5)/(1-Y)	=	33.0 sec
Cm	= L/(1-Y)	=	17.8 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	274.6 %
Cp	= 0.9*L/(0.9-Y)	=	18.3 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	=	**275 %**



Stage 1	G= 5	Int = 8
Stage 2	G= 53	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 34	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		76		76	0.00	1915			0.5	-958			957	0.079	0.079		40	40	0.240	6	28
1,2	1,4	3.00	1	16			2055		15	133	148	0.90	1895							1895	0.078			39	40	0.240	18	28
1	1,4	3.00	1	13			2055			146	146	1.00	1842							1842	0.079			40	40	0.240	18	27
1	1,4	3.00	1	10		N	1915			131	131	1.00	1665							1665	0.079			39	40	0.240	12	27
3,4	2,3	3.80	1	5		N	1995	92	145		237	0.39	1787							1787	0.133			66	66	0.240	18	13
3	2,3	3.80	1			N	1995		265		265	0.00	1995							1995	0.133	0.133		66	66	0.240	18	13
5	1,2,4	3.50	1	10		N	1965	365			365	1.00	1709							1709	0.214			107	94	0.240	6	1
6	1,2,4	3.50	1	10			2105			243	243	1.00	1830							1830	0.133			66	94	0.240	18	13
6	1,2,4	3.50	1	6.5		N	1965			212	212	1.00	1597							1597	0.133			66	94	0.240	18	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

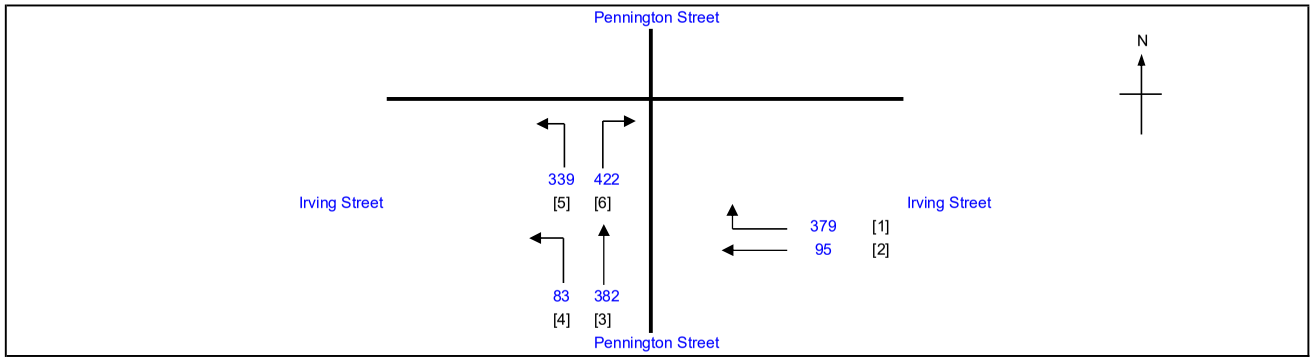
		INITIALS	DATE
Prepared By:		SKL	Apr-26
Checked By:		SLN	Apr-26
Reviewed By:		SLN	Apr-26

Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung

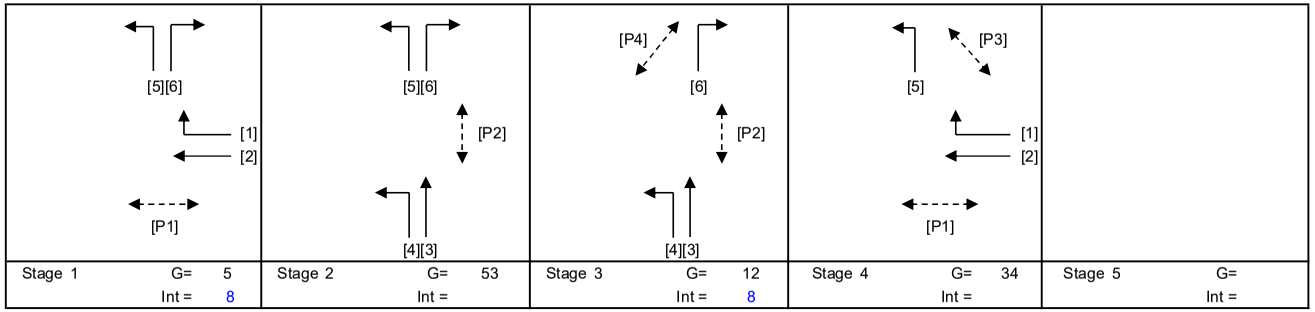
J14 Pennington Street / Irving Street / Jardine's Bazaar

2033 Design Weekend

PROJECT NO.: 40920
FILENAME : J14_PS_IS_JB.xlsx



No. of stages per cycle		N =	4
Cycle time		C =	120 sec
Sum(y)		Y =	0.197
Loss time		L =	14 sec
Total Flow		=	1700 pcu
Co	= (1.5*L+5)/(1-Y)	=	32.4 sec
Cm	= L/(1-Y)	=	17.4 sec
Yult		=	0.795
R.C.ult	= (Yult-Y)/Y*100%	=	303.0 %
Cp	= 0.9*L/(0.9-Y)	=	17.9 sec
Ymax	= 1-L/C	=	0.883
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**303 %**



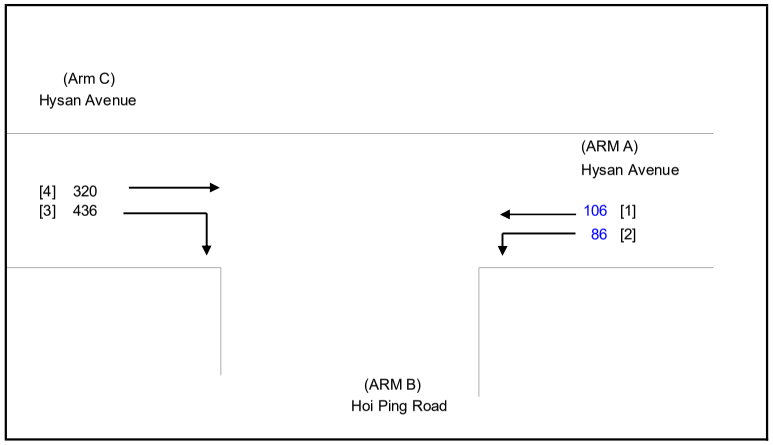
Stage 1	G= 5	Int = 8
Stage 2	G= 53	Int =
Stage 3	G= 12	Int = 8
Stage 4	G= 34	Int =
Stage 5	G=	Int =

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	1,4		8	8		39	8
P2	2,3		8	14		59	14
P3	4		7	7		27	7
P4	3		6	6		14	6

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							14					
2	1,4	3.00	1			N	1915		71		71	0.00	1915			0.5	-958			957	0.074			40	40	0.223	6	27
1,2	1,4	3.00	1	16			2055		24	118	142	0.83	1906							1906	0.074	0.074		40	40	0.223	18	27
1	1,4	3.00	1	13			2055			137	137	1.00	1842							1842	0.074			40	40	0.223	18	27
1	1,4	3.00	1	10		N	1915			124	124	1.00	1665							1665	0.074			40	40	0.223	12	27
3,4	2,3	3.80	1	5		N	1995	83	137		220	0.38	1792							1792	0.123			66	66	0.223	18	13
3	2,3	3.80	1			N	1995		245		245	0.00	1995							1995	0.123	0.123		66	66	0.223	18	13
5	1,2,4	3.50	1	10		N	1965	339			339	1.00	1709							1709	0.198			107	94	0.223	6	1
6	1,2,4	3.50	1	10			2105			225	225	1.00	1830							1830	0.123			66	94	0.223	18	13
6	1,2,4	3.50	1	6.5		N	1965			197	197	1.00	1597							1597	0.123			66	94	0.223	12	13

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	86	(pcu/hr)
q a-c	=	106	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	320	(pcu/hr)
q c-b	=	436	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

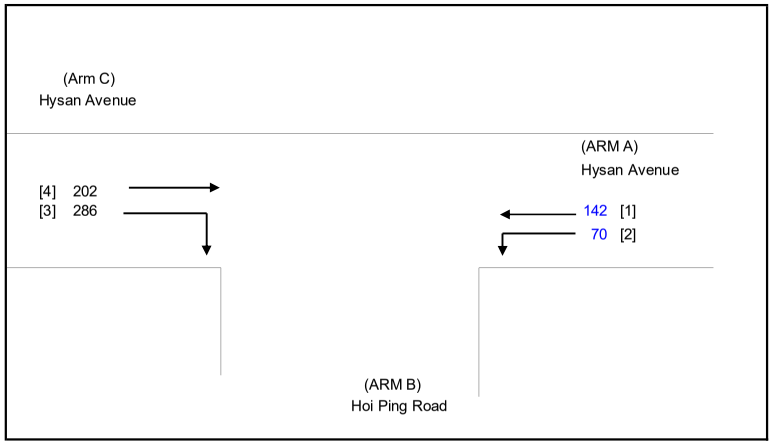
Q b-a	=	212		
Q b-c	=	417	Q b-c (O) =	417
Q c-b	=	664		
Q b-ac	=	212		
TOTAL FLOW	=	948	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.6566
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.66

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	70	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	202	(pcu/hr)
q c-b	=	286	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

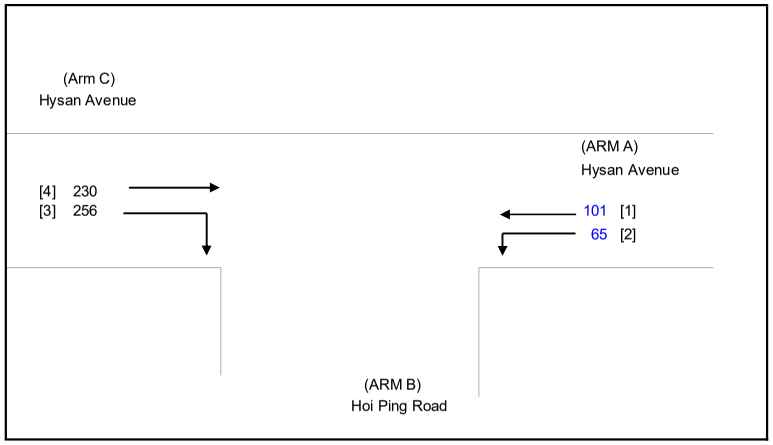
Q b-a	=	245		
Q b-c	=	413	Q b-c (O) =	413
Q c-b	=	660		
Q b-ac	=	245		
TOTAL FLOW	=	700	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4333
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.43

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	65	(pcu/hr)
q a-c	=	101	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	230	(pcu/hr)
q c-b	=	256	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

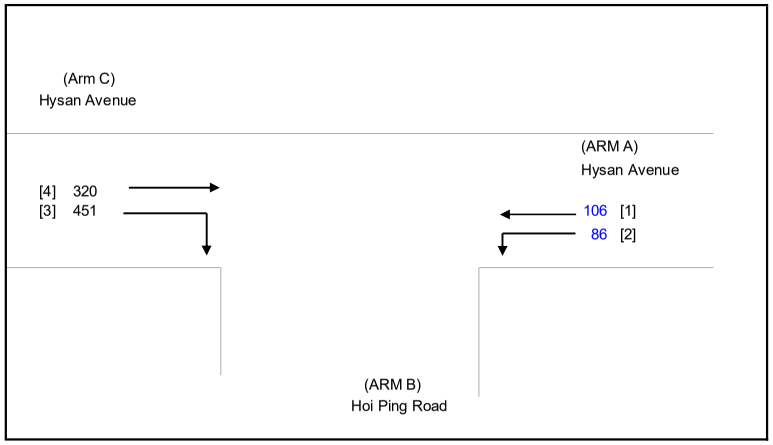
Q b-a	=	253		
Q b-c	=	419	Q b-c (O) =	419
Q c-b	=	670		
Q b-ac	=	253		
TOTAL FLOW	=	652	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.3821
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.38

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	86	(pcu/hr)
q a-c	=	106	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	320	(pcu/hr)
q c-b	=	451	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

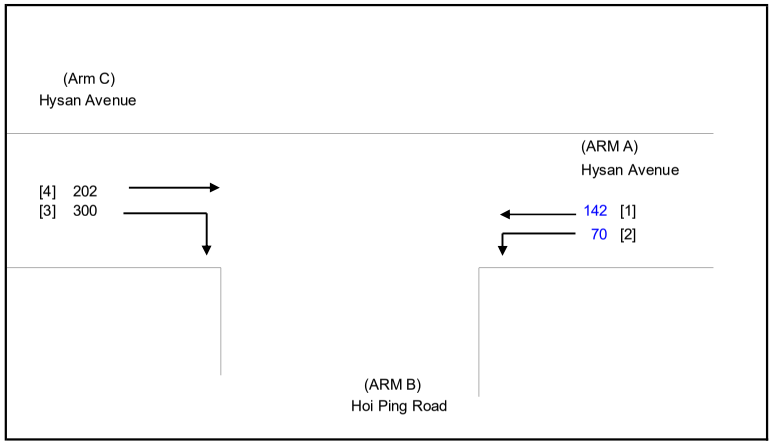
Q b-a	=	209		
Q b-c	=	417	Q b-c (O) =	417
Q c-b	=	664		
Q b-ac	=	209		
TOTAL FLOW	=	963	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.6792
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.68

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	70	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	202	(pcu/hr)
q c-b	=	300	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

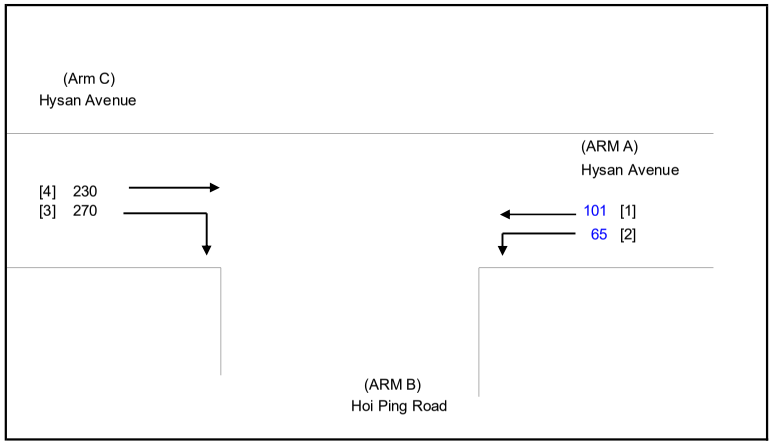
Q b-a	=	242		
Q b-c	=	413	Q b-c (O) =	413
Q c-b	=	660		
Q b-ac	=	242		
TOTAL FLOW	=	714	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4545
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.45

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J15_HA_HPR	CHECKED BY:	SLN	Mar-26
J15 Hysan Avenue / Hoi Ping Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	10.00	(metres)
W cr	=	0	(metres)
q a-b	=	65	(pcu/hr)
q a-c	=	101	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	100	(metres)
q c-a	=	230	(pcu/hr)
q c-b	=	270	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	0.00	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.53322
E	=	0.58595
F	=	0.94969
Y	=	0.65500
F for (Qb-ac)	=	0

THE CAPACITY OF MOVEMENT :

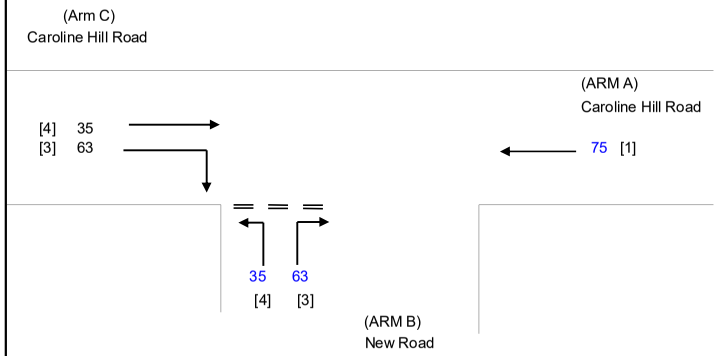
Q b-a	=	251		
Q b-c	=	419	Q b-c (O) =	419
Q c-b	=	670		
Q b-ac	=	251		
TOTAL FLOW	=	666	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.4030
DFC b-c (share lane)	=	0.0000

CRITICAL DFC = 0.40

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	75	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	35	(pcu/hr)
q c-b	=	63	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	63	(pcu/hr)
q b-c	=	35	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.35714286

THE CAPACITY OF MOVEMENT :

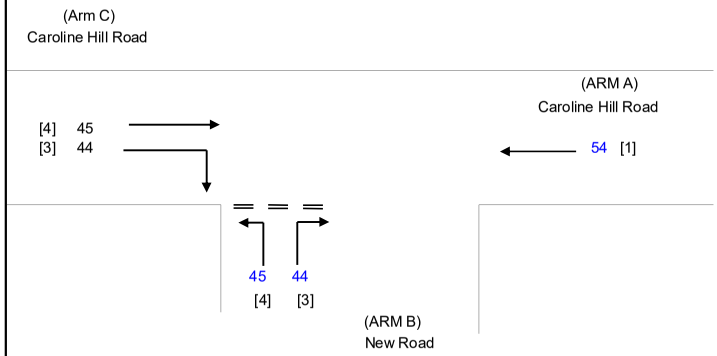
Q b-a	=	493		
Q b-c	=	669	Q b-c (O) =	647.6
Q c-b	=	668		
Q b-ac	=	544		
TOTAL FLOW	=	271	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1278
DFC b-c	=	0.0523
DFC c-b	=	0.0943
DFC b-c (share lane)	=	0.0643

CRITICAL DFC = 0.13

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	54	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	45	(pcu/hr)
q c-b	=	44	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	44	(pcu/hr)
q b-c	=	45	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.50561798

THE CAPACITY OF MOVEMENT :

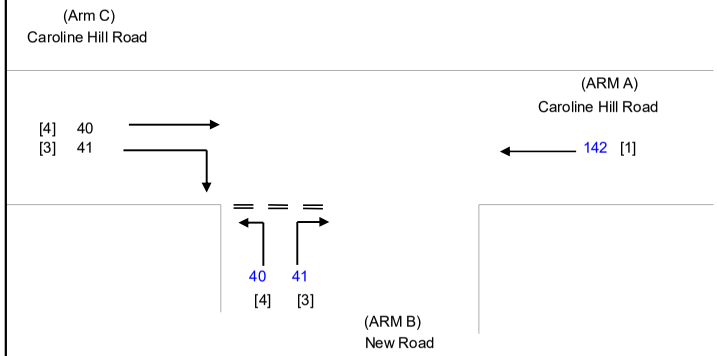
Q b-a	=	503		
Q b-c	=	675	Q b-c (O) =	660.2
Q c-b	=	673		
Q b-ac	=	577		
TOTAL FLOW	=	232	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0875
DFC b-c	=	0.0667
DFC c-b	=	0.0654
DFC b-c (share lane)	=	0.0779

CRITICAL DFC = 0.09

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Reference Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	142	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	40	(pcu/hr)
q c-b	=	41	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	41	(pcu/hr)
q b-c	=	40	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.49382716

THE CAPACITY OF MOVEMENT :

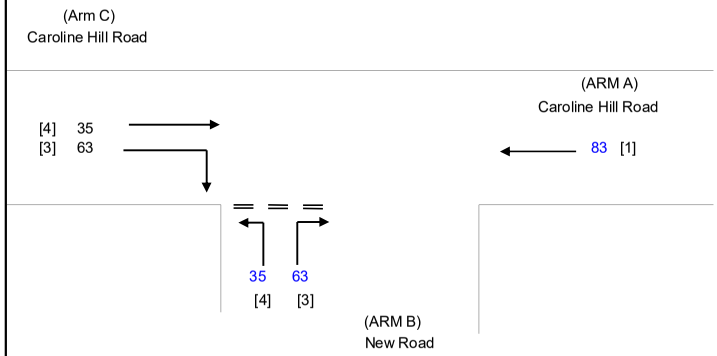
Q b-a	=	484		
Q b-c	=	652	Q b-c (O) =	638.2
Q c-b	=	651		
Q b-ac	=	555		
TOTAL FLOW	=	304	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0847
DFC b-c	=	0.0613
DFC c-b	=	0.0630
DFC b-c (share lane)	=	0.0721

CRITICAL DFC = 0.08

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design AM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	83	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	35	(pcu/hr)
q c-b	=	63	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	63	(pcu/hr)
q b-c	=	35	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.35714286

THE CAPACITY OF MOVEMENT :

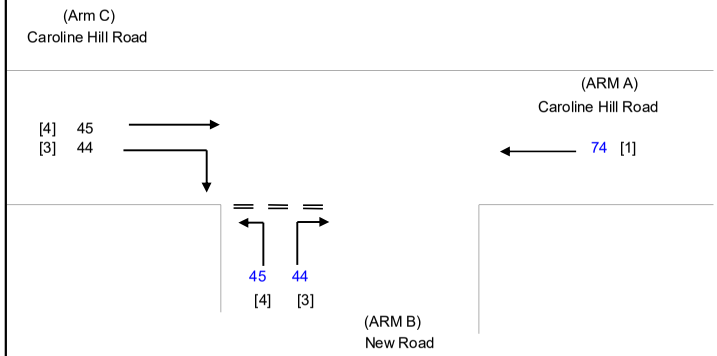
Q b-a	=	491		
Q b-c	=	667	Q b-c (O) =	645.6
Q c-b	=	666		
Q b-ac	=	542		
TOTAL FLOW	=	279	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1283
DFC b-c	=	0.0525
DFC c-b	=	0.0946
DFC b-c (share lane)	=	0.0646

CRITICAL DFC = 0.13

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design PM**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	74	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	45	(pcu/hr)
q c-b	=	44	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	44	(pcu/hr)
q b-c	=	45	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.50561798

THE CAPACITY OF MOVEMENT :

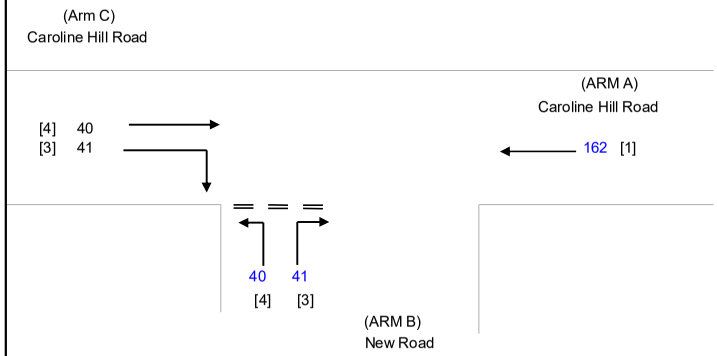
Q b-a	=	498		
Q b-c	=	670	Q b-c (O) =	655.2
Q c-b	=	668		
Q b-ac	=	572		
TOTAL FLOW	=	252	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0884
DFC b-c	=	0.0672
DFC c-b	=	0.0659
DFC b-c (share lane)	=	0.0786

CRITICAL DFC = 0.09

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed SCAA Sports Link at South China Athletic Association 88 Caroline Hill Road in Wong Nai Chung	**2033 Design Weekend**	PROJECT NO.: 40920	PREPARED BY:	SKL	Mar-26
		FILENAME : J16_CHR_NR	CHECKED BY:	SLN	Mar-26
J16 Caroline Hill Road / New Road		REFERENCE NO.:	REVIEWED BY:	SLN	Mar-26



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.25	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	162	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.00	(metres)
Vr c-b	=	100	(metres)
q c-a	=	40	(pcu/hr)
q c-b	=	41	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.50	(metres)
W b-c	=	3.50	(metres)
Vl b-a	=	35	(metres)
Vr b-a	=	45	(metres)
Vr b-c	=	50	(metres)
q b-a	=	41	(pcu/hr)
q b-c	=	40	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.85592
E	=	0.92379
F	=	0.92200
Y	=	0.74988
F for (Qb-ac)	=	0.49382716

THE CAPACITY OF MOVEMENT :

Q b-a	=	479		
Q b-c	=	647	Q b-c (O) =	633.2
Q c-b	=	646		
Q b-ac	=	549		
TOTAL FLOW	=	324	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0856
DFC b-c	=	0.0618
DFC c-b	=	0.0635
DFC b-c (share lane)	=	0.0728

CRITICAL DFC = 0.09

APPENDIX E

Operational Performance of Central Refuge Islands at J3 & Sensitivity Test

Appendix E - Operational Performance of Central Refuge Islands at J3

Location	Direction	Cycle Time (sec)	Pedestrian Flow						Effective Area (sqm) [d]	Space (sqm/p) [e] = [d] / [e]		
			per hour			per cycle [b]						
			AM	PM	WE	AM	PM	WE		AM	PM	WE
2033 Reference												
Northern Refuge Island	NB	130	742	706	702	27	26	26	18	0.67	0.69	0.69
	SB	130	561	722	716	21	27	26	18	0.86	0.67	0.69
Southern Refuge Island	NB	130	120	197	130	5	8	5	21	4.20	2.63	4.20
	SB	130	140	93	166	6	4	6	21	3.50	5.25	3.50
2033 Design												
Northern Refuge Island	NB	130	772	798	763	28	29	28	18	0.64	0.62	0.64
	SB	130	653	752	777	24	28	29	18	0.75	0.64	0.62
Southern Refuge Island	NB	130	120	197	130	5	8	5	21	4.20	2.63	4.20
	SB	130	140	93	166	6	4	6	21	3.50	5.25	3.50

Location	Direction	Level-of-service (LOS)			Space (sqm/p) [Level-of-service (LOS)]		
		AM	PM	WE	AM	PM	Weekend
2033 Reference							
Northern Refuge Island	NB	C	C	C	0.67 [C]	0.69 [C]	0.69 [C]
	SB	C	C	C	0.86 [C]	0.67 [C]	0.69 [C]
Southern Refuge Island	NB	A	A	A	4.20 [A]	2.63 [A]	4.20 [A]
	SB	A	A	A	3.50 [A]	5.25 [A]	3.50 [A]
2033 Design							
Northern Refuge Island	NB	C	C	C	0.64 [C]	0.62 [C]	0.64 [C]
	SB	C	C	C	0.75 [C]	0.64 [C]	0.62 [C]
Southern Refuge Island	NB	A	A	A	4.20 [A]	2.63 [A]	4.20 [A]
	SB	A	A	A	3.50 [A]	5.25 [A]	3.50 [A]

APPENDIX F

Abstract of Highway Capacity Manual (HCM) 2000

transportation terminals is provided in Chapter 27, "Transit;" for more discussion, refer to the *Transit Quality of Service Manual* (*3*).

EXHIBIT 18-4. PLATOON-ADJUSTED LOS CRITERIA FOR WALKWAYS AND SIDEWALKS

LOS	Space (m^2/p)	Flow Rate[a] (p/min/m)
A	> 49	≤ 1.6
B	> 8–49	> 1.6–10
C	> 4–8	> 10–20
D	> 2–4	> 20–36
E	> 1–2	> 36–59
F	≤ 1	> 59

Note:
a. Rates in the table represent average flow rates over a 5- to 6-min period.

Stairs

Institute of Transportation Engineers stairway standards

Research (*4*) has developed LOS thresholds based on the Institute of Transportation Engineers stairways standards, which provide space and flow values listed in Exhibit 18-5. These modified LOS criteria are to ensure that the basic equation of traffic flow is satisfied. The volume to capacity (v/c) ratios are based on a stairway capacity of 49 p/min/m.

EXHIBIT 18-5. LOS CRITERIA FOR STAIRWAYS

LOS	Space (m^2/p)	Flow Rate (p/min/m)	Average Horizontal Speed (m/s)	v/c Ratio
A	> 1.9	≤ 16	> 0.53	≤ 0.33
B	> 1.6–1.9	> 16–20	> 0.53	> 0.33–0.41
C	> 1.1–1.6	> 20–26	> 0.48–0.53	> 0.41–0.53
D	> 0.7–1.1	> 26–36	> 0.42–0.48	> 0.53–0.73
E	> 0.5–0.7	> 36–49	> 0.40–0.42	> 0.73–1.00
F	≤ 0.5	variable	≤ 0.40	variable

Cross Flows

A cross flow is a pedestrian flow that is approximately perpendicular to and crosses another pedestrian stream. In general, the smaller of the two flows is referred to as the cross-flow condition. Research (*5*) notes that pedestrian cross flows occur in hallways and corridors. The same procedure for estimating walkway and sidewalk space is used to analyze pedestrian facilities with cross flows. LOS criteria A through D are to be used from Exhibit 18-3 or, if platoons are observed, from Exhibit 18-4. In addition, Exhibit 18-6 lists LOS E criteria for pedestrian facilities with cross flows.

EXHIBIT 18-6. LOS CRITERIA FOR PEDESTRIAN CROSS FLOWS

LOS	Space (m^2/p)	Flow[a] (p/min/m)	Speed (m/s)	Density (p/m^2)
E	≥ 1.25	≤ 75	≥ 1.0	≤ 0.8

Note:
a. Total of the major and minor flows.

Queuing Areas

The average space available to pedestrians also can apply as the walkway service measure for queuing or waiting areas. The pedestrian stands temporarily in these areas, waiting to be served. The LOS thresholds listed in Exhibit 18-7 are related to the average space available to each pedestrian and to the degree of mobility allowed. In dense

standing crowds, there is little room to move, but limited circulation is possible as the average space per pedestrian increases.

EXHIBIT 18-7. LOS CRITERIA FOR PEDESTRIAN QUEUING AREAS

LOS	Space (m^2/p)
A	> 1.2
B	> 0.9–1.2
C	> 0.6–0.9
D	> 0.3–0.6
E	> 0.2–0.3
F	≤ 0.2

Shared Pedestrian-Bicycle Facilities

Shared pedestrian facilities typically are open to use by nonmotorized modes such as bicycles, skate boards, and wheelchairs. Shared-use paths often are constructed to serve areas without city streets and to provide recreational opportunities for the public. These paths are common on university campuses, where motor vehicle traffic and parking are often restricted. In the United States, there are few paths exclusively for pedestrians; most off-street paths, therefore, are for shared use.

On shared facilities, bicycles—because of their markedly higher speeds—can have a negative effect on pedestrian capacity and LOS. However, it is difficult to establish a bicycle-pedestrian equivalent because the relationship between the two differs depending on their respective flows, directional splits, and other factors.

This chapter deals with the LOS provided to pedestrians on shared facilities. Bicyclists have a different perspective as discussed in Chapter 19 of this manual.

LOS is based on the overtaking of pedestrians by bicycles. Pedestrian-to-pedestrian interaction is negligible.

LOS for shared paths is based on hindrance. Research (*6*) has established LOS guidelines both for pedestrians and for bicyclists based on the frequency of passing (same direction) and of meeting (opposite direction) other users on paths 2.4 m wide. Because pedestrians seldom overtake other pedestrians, the LOS for a pedestrian on a shared path depends on the frequency that the average pedestrian is overtaken by bicyclists (*6*). However, the analyst should observe pedestrian behavior in the field before assuming there is no pedestrian-to-pedestrian interaction.

Equation 18-3 is used to calculate the total number of bicycle passing events and the total number of opposing bicycle meeting events, per hour, for the average pedestrian on the shared path.

$$F_p = Q_{sb}\left(1 - \frac{S_p}{S_b}\right) \qquad (18\text{-}3)$$

$$F_m = Q_{ob}\left(1 + \frac{S_p}{S_b}\right)$$

where

F_p = number of passing events (events/h),
F_m = number of opposing events (events/h),
Q_{sb} = bicycle flow rate in the same direction (bicycles/h),
Q_{ob} = bicycle flow rate in the opposing direction (bicycles/h),
S_p = mean pedestrian speed on the path (m/s), and
S_b = mean bicycle speed on the path (m/s).

The total number of events is calculated according to Equation 18-4.

$$F = F_p + 0.5\,F_m \qquad (18\text{-}4)$$

Appendix II of
MPC Paper No. A/H7/189A

Previous Applications covering the Application Site

Approved Applications

Application No.	Proposed Use(s)/Development(s)	Date of Consideration	Approval Conditions
A/H7/113	Proposed Staff Quarters	6.11.1998 (on review by TPB)	(1), (3), (4), (5), (6) and (7)
A/H7/123	Proposed Staff Quarters	3.12.1999 (MPC)	(1) to (7)
	Proposed Staff Quarters (To vary/delete approval conditions)	10.5.2002 (MPC)	(2), (3), (5) to (8)

Approval Conditions

(1) The retention of the Jacaranda acuitifolia (Tree No. T169) and the revision in the layout design for the redevelopment, as proposed by the applicant, to the satisfaction of the Director of Planning or of the Town Planning Board (the Board).

(2) The setting back of the building along Caroline Hill Road on the section of the extended area to provide sufficient area for planting of trees to the satisfaction of the Director of Planning or of the Board.

(3) The submission of detailed working drawings, method statements and monitoring system for the implementation of the tree preservation scheme to the satisfaction of the Director of Planning or of the Board.

(4) The submission of monthly reports on the construction works as related to Tree No. T169, and the ongoing condition and status of this tree to the satisfaction of the Director of Planning or of the Board.

(5) The submission and implementation of a Master Landscape Plan to the satisfaction of the Director of Planning or of the Board.

(6) The provision of car-parking spaces to the satisfaction of the Commissioner for Transport or of the Board.

(7) The permission shall cease to have effect on a specific date unless prior to the said date either the development hereby permitted is commenced or this permission is renewed.

(8) The submission and implementation of a proposal to compensate for the Jacaranda acutifolia (Tree No. T169) and to enhance the streetscape of Caroline Hill Road and the provision of public amenity, as proposed by the applicant, to the satisfaction of the Director of Planning or of the Board.

Rejected Application

Application No.	Proposed Use(s)/Development(s)	Date of Consideration	Rejection Reasons
A/H7/110	Proposed Staff Quarters	16.5.1997 (MPC)	(1), (2), (3)

Rejection Reasons

(1) The proposed redevelopment which would result in the felling of 104 trees on the application site was excessive and unacceptable, as it would seriously affect a significant greenery area which was a key landscape element and landmark in the locality.

(2) The tree felling and transplanting proposals derived from the tree survey were unsatisfactory and the replanting and landscaping proposals would not compensate the loss of the existing nice greenery.

(3) There was insufficient information in the submission to demonstrate that the additional traffic generated by the 162 visitor car-parking spaces in the proposed development would not adversely affect the local road network.

Appendix III of
MPC Paper No. A/H7/189A

Similar Application within "OU(SRC)" zone
on the approved Wong Nai Chung Outline Zoning Plan No. S/H7/21

Approved Application

Application No.	Proposed Use(s)/Development(s)	Date of Consideration (MPC)	Approval Condition
A/H7/177	Proposed Private Club	26.2.2021	The provision of fire service installations and water supplies for firefighting

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tpbpd/PLAND

寄件者: [redacted]
寄件日期: 2025年12月09日星期二 21:15
收件者: tpbpd/PLAND
主旨: A/H7/189 South China Athletic Association

類別: Internet Email

A/H7/189 South China Athletic Association

88 Caroline Hill Road, Wong Nai Chung (Inland Lot No. 9041 (Part)

Site area: About 6,132sq.m

Zoning: "Other Specified Uses" annotated "Sports and Recreation Club"

Applied development: Sports and Recreation Centre / PR 5.11 / SC 69% / 4 floors / 65 Vehicle Parking

Dear TPD Members,

182 withdrawn. The new plan for SCAA Sports Link is more modest in size. The facilities in line with the planning intention, unlike the e-Sports concept.

While the plan is appropriate, question the need for so much parking. This is a substantial increase on the 182 plan that was for a larger venue. Sports facilities should encourage users to walk more and use public transport, in line with prevailing government policy. Local roads have significant traffic issues.

Mary Mulvihill

From: [redacted]
To: tpbpd <tpbpd@pland.gov.hk>
Date: Monday, 16 January 2023 1:55 AM HKT
Subject: Re: A/H7/182 South China Athletic Association

Dear TPB Members,

The updated drawings/plans Nov 22 shows that there are quite a number of shops and services on various floors. This reinforces the fact that this development is commercial in nature. Allowing the use of facilities for traditional athletic sports between competitions is not a reliable contribution as this arrangement does not provide any certainty with regard to availability of the premises.

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This is in violation of the intention of the lease conditions.

News Clipping on Shenzhen's E-sports Development reinforces the commercial nature of this 'sport' and also highlights the issue of addiction, an outcome rarely encountered among participants in traditional athletic sports.

As for support from Hysan, this is the same developer that has deprived the community of a large outdoor open space by applying to amend the original plans for its Caroline Hill Road development from two commercial towers to three by reducing the previously pledged park to nothing more than a landscaped area underneath the third tower. Regrettably TPB failed to uphold the best interests of the community by approving the removal of the park from the plan.

It is quite shocking that ever more space that was originally zoned for healthy recreational activities is being subsumed into the commercial realm at a time when there is increasing interest on the part of the public in engaging in physical exercise but find that the provision of facilities limits the options available at affordable charges.

Mary Mulvihill

Mary Mulvihill

From: [redacted]
To: tpbpd <tpbpd@pland.gov.hk>
Date: Friday, 23 September 2022 3:21 AM CST
Subject: Re: A/H7/182 South China Athletic Association

Dear TPB Members,

Visual Impact:

Proposed E-sports Complex with ancillary facilities in Inland Lot 9041 (Part), 88 Caroline Hill Road, Wong Nai Chung REV A JUNE 2022 Viewpoint D - Existing View and Photomontage Fig V3.4

This image shows how the windowless concrete wall along the notably densely trafficked narrow street , infamous for illegal parking, would create a claustrophobic panorama. Members should note that the **inevitable shadow created by the wall has been omitted from the image.**

The VIA itself admits that there will be considerable negative impact but passes this off as "*proposed building is therefore compatible with the existing urbanised and **recreational landscape** and visual context. Proposed building is considered to be acceptable from visual perspectives.*"

This ignores the fact that a recreational node should be open to the skies and provide a relaxing background. This development would create a wall effect that would not be out of place on Nathan Road.

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As for support from Cyberport, I would remind members that this is the organization that recently withdrew A/K4/73 application to transform 3 floors of its Innocentre in Kowloon Tong to restaurant use.

InnoCentre is an integral part of HKSTP's ecosystem tailored for design talents to hone their skills, spurring development of high value-adding design and creative industries.

Mary Mulvihill

From: [redacted]
To: tpbpd <tpbpd@pland.gov.hk>
Date: Tuesday, 16 August 2022 1:42 AM CST
Subject: Re: A/H7/182 South China Athletic Association

Dear TPB Members,

The most recent Audit Commission Report :

- Reveals city is estimated to lack 4.6 sports grounds, based on provision standard of one per 250,000 residents
- Average usage rate of sports grounds reached 99 per cent annually from 2016 to 2020.
- One million residents have no access to sports grounds

In response the administration has pledged to develop additional facilities but this will take time. It does indicate that private clubs should play their part as they encourage people with means to use the facilities and this eases the pressure on the public facilities. It is unacceptable that a site zoned for athletic pursuits be devoted to an activity that does not take place on a daily basis and can be accommodated in a commercial venue like the facilities being built at Kai Tak.

UNACCEPTABLEFAILURE TO CONSULT WITH THE DISTRICT COUNCIL:
SCAA will attend the Wan Chai District Council in September to consult local community on the proposed E-sports Complex Project.

Seriously, the plan would be considered by TPB before then. If for no other reason this application should be rejected. There is already considerable negative sentiment in the community with regard to the privileges granted to private clubs and their failure to give back to the community.

Mary Mulvihill

From: [redacted]
To: tpbpd <tpbpd@pland.gov.hk>
Date: Tuesday, 3 May 2022 9:30 PM CST
Subject: A/H7/182 South China Athletic Association

A/H7/182 South China Athletic Association

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88 Caroline Hill Road, Wong Nai Chung (Inland Lot No. 9041 (Part)

Site area : About 5,281sq.m

Zoning : "Other Specified Uses" annotated "Sports and Recreation Club"

Applied development :E-Sports Centre / Eating Place / Shops / 9 floors / 46 Vehicle Parking

Dear TPB Members,

Strong objections. This is another plan to commercialize the facility on the same lines as the failed 2005 application Y/H7/1 to build an hotel on the site.

Proposed incorporation of 'Hotel' and 'Residential Institution' into Column 1 or Column 2 of the Notes of the "Other Specified Uses" annotated "Sports and Recreation Club" zone, 88 Caroline Hill Road, Happy Valley

At that time there were a total seven sports clubs in the vicinity, including the SCAA, the Indian Recreation Club, the Disciplinary Services Sports and Recreation Club, the Hong Kong Football Club, the Craigengower Cricket Club, the Post Office Recreation Club and the PCCW Recreation Club. The last two were rezoned to accommodate land sale for a commercial tower and to a new court complex so **the supply of active recreational facilities in the district that was zoned specifically for this purpose has already been significantly reduced.**

One of the reasons for the rejection was **"The cumulative effects of which would defeat the original intention of providing land for sports and recreation club use"**

That e-Sport is actually a sport is debatable as it involves more mental dexterity than physical input. A more appropriate term would be that it is a game. In addition it has essentially a commercial bent as :

The Numbers Behind Esports - Gaming is the fastest-growing form of entertainment globally, with revenues increasing at 9%+ per year. By 2022 the global video game market is expected to surpass $190 billion in revenues. According to Newzoo, esports revenues were $856 million in 2018 and are expected to grow to $1.79 billion by 2022.

These numbers include tournaments with cash prizes, media rights, merchandise and ticket sales, advertising, sponsorship, and game publisher fees. Note that the application mentions tournaments, shops, etc.

This is not the type of activity envisaged in 1927 when the Government allotted the present site at Caroline Hill to the Association. Over the decades the facilities have grown and there were approximately 75,000 members as at end December 2021. They currently enjoy a variety of sports facilities such as bowling centre, golf driving range, artificial turf pitch, swimming pool, sports hall and sports activity rooms, **together with a small E-sports training centre**.

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While the application mentions that some rooms in the planned facility could be used for other activities, this does not provide any guarantee that active sport amenities would in fact be increased.

Justification put forward *:This is evident in the Report on Promotion of E-sports Development in Hong Kong that, "Hong Kong needs* ***more well-located and affordable venues with good infrastructure****" and "the main requirements for* ***these venues are a location easily accessible to the majority of players***

With the rapid development of E-sports industry in the Asia Pacific region, the Esports industry is rising to prominence and will be included in the 2022 Asian Games., the Hong Kong SAR Government has been proactive in the development of E-sports in the Territory with various investment efforts in recent years. ***This includes the injection of 100 million funding for an E-sports centre at Cyberport.***

So Hong Kong Island will have such a facility. If alternative facilities are to be provided then they should be planned for the new towns in NT where there will be a large pool of young people to be catered for. They should not have to travel long distances.

A further increase in parking facilities is not appropriate in view of the impact the commercial development/court house will have on local traffic. There are already 170 parking slots for Members on monthly and hourly rates.

The amount of GFA to be devoted to e-Sports is out of proportion with that dedicated to active recreational facilities. Members should reject this application as it is commercial in intent and does not comply with the original intention of the zoning and land grant.

Mary Mulvihill

Recommended Advisory Clauses

(a) to note the comments of the Secretary for Culture, Sports and Tourism that detailed development, financial and operation proposal should be submitted to the Culture, Sports and Tourism Bureau (CSTB) for consideration of granting policy support to the alteration and addition works involved in the proposed development project at a later stage;

(b) to note the comments of the District Lands Officer/Hong Kong East, Lands Department (LandsD) that:

(i) to note Special Condition (SC) No. (12) of the Conditions of Lease Extension No. 20200 (the Conditions), Inland Lot 9041 (the Lot) shall not be used for any purposes other than for sporting and recreational purposes and in accordance with the Memorandum and Articles of Association of the Grantee including such reasonable social functions and other ancillary/associated recreational activities. The Grantee should not use or permit the use of the Lot or any part thereof or any building or part of any building thereon (i) by any persons other than members of the Grantee or their guests, guests of the Grantee, and members of sports teams competing with the Grantee; or (ii) for any meetings, rallies or assemblies whatsoever of a political nature; or (iii) for commercial purposes; or (iv) for commercial advertising; or (v) for residential purposes other than persons employed on the Lot by the Grantee, subject to those uses as may be permitted with the prior written consent of the Director of Lands (the Director) under SC No. (6) of the Conditions;

(ii) the lease term of the Lot will be expired on 25.12.2026. Approval of the current application from the Town Planning Board (the Board) would not give rise to the renewal of the lease term of the Lot. Such renewal will be processed and considered separately by LandsD in the capacity of a landlord provided that the policy support is given from CSTB. Besides, the Grantee shall not be entitled to any compensation on the expiration or sooner determination of the lease term in respect of the Lot or any building or structure erected thereon pursuant to SC No. (21) of the Conditions;

(iii) to seek comments from CSTB as to whether the use and operation of the proposed development would contravene the user restriction under the Conditions;

(iv) to observe SC Nos. (16) and (17) of the Conditions which provide, amongst others, the use of the Lot by outside bodies and national sports associations, etc.;

(v) to obtain prior written approval of the Director in accordance with SC No. (12) of the Conditions under which the Grantee shall not erect any building or structure other than the Existing Structures and the Projections as referred in the Conditions, except with the prior written approval of the Director;

(vi) to observe SC No. (8) of the Conditions concerning preservation of trees;

(vii) to note SC No. (23) of the Conditions, the proposed number and type of parking space shall be provided to the satisfaction of the Director. Relevant department, particularly Transports Department (TD) should be consulted in this regard; and

(viii) there is no requirement under the Conditions and Conditions of Sale governing IL 8945 to provide any links between the Lot and IL 8945. The proposed pedestrian linkage at the existing SCAA's swimming pool might involve erection of new structures and alteration and addition works to the Existing Structures. Therefore, the Applicant is reminded to observe SC No. (12) of the Conditions under which prior written approval from the Director should be obtained;

(c) to note the comments of the Commissioner for Transport that an indicative scheme of footbridge connecting the subject site to the commercial site (IL 8945) was proposed by the applicant and further discussion will be made with the owner of the adjoining development and relevant government departments regarding land lease issue, maintenance liability and funding arrangement. The applicant should allow provision for the proposed pedestrian linkage system in the subsequent building plan submission and future construction of the development;

(d) to note the comments of the Commissioner of Police that the proposed sports and recreation centre should not cause adverse traffic impact to the local community. Each Temporary Traffic Arrangement involving works on footpath and/or carriageway has to be submitted to the Road Management Office of the Police and TD for detailed comment before implementation;

(e) to note the comments of the Chief Town Planner/Urban Design and Landscape, Planning Department that approval of the application by the Board does not imply approval of tree works such as pruning, transplanting, felling and compensatory/new tree planting. The applicant is reminded to seek approval for any proposed tree works from relevant departments prior to commencement of the works;

(f) to note the comments of the Executive Secretary 1 (Antiquities and Monuments) of the Antiquities and Monuments Office (AMO) of the Development Bureau that the Masonry Wall and Earthenware Pipes at Caroline Hill Road (slopes No. 11SW-B/FR 193 and 11SW-B/FR 32), a Grade 3 historic structure, is located in the vicinity of the application site. She has no adverse comment on the application provided that the works arising from the proposed development, if approved by the Board, will not cause any adverse impact on the concerned Grade 3 historic structures which includes the masonry walls;

(g) to note the comments of the Chief Building Surveyor/Hong Kong East & Heritage, Buildings Department (BD) that:

(i) the development intensities based on the whole Inland Lot 9041 have to be demonstrated (i.e. all the existing buildings and all the previous approved/proposed developments should be taken into account), and the overall plot ratio and site coverage should not exceed the First Schedule of the Buildings (Planning) Regulations (B(P)R);

(ii) exempting/disregarding green/amenity features (which include the voids of the high headroom ball courts) and non-mandatory/non-essential plant rooms and services from gross floor area (GFA) and/or site coverage calculations (GFA concession) under Practice Note for Authorised Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) APP-151 would only be considered when the pre-requisites in PNAP APP-151 have been complied with;

(iii) for acquiring GFA concession for carparking spaces or loading/unloading areas, relevant requirements as laid down in PNAP APP-2 should be complied with; and

(iv) access and facilities for persons with a disability should be provided in compliance with regulation 72 of the B(P)R;

(h) to note the comments of the Director of Food and Environmental Hygiene (DFEH) that prior consent of the Food and Environmental Hygiene Department (FEHD) must be obtained if any FEHD's facility is affected by the development. No environmental nuisance should be generated to the surroundings. Besides, arrangement shall be made to dispose any waste so generated from commercial/trading activities properly at own expenses. Moreover, proper licence/permit issued by FEHD is required if there is any food business/catering service/activities regulated by the DFEH under the Public Health and Municipal Services Ordinance (Cap. 132) and other relevant legislation for the public;

(i) to note the comments of the Director of Fire Services that detailed fire services requirements will be formulated upon receipt of formal submission of general building plans. Furthermore, the provision of emergency vehicular access (EVA) in the proposed work shall comply with the requirements as stipulated in Section 6, Part D of the Code of Practice for Fire Safety in Buildings 2011. Moreover, if the proposed work affects any provision of EVA to nearby buildings, the consultant should make a separate enquiry to his department to ensure the feasibility of the work; and

(j) to note the comments of the Director of Electrical and Mechanical Services that in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organizing and supervising any activity near the underground cable or overhead line under the mentioned works should approach the electricity supplier (i.e. HK Electric) for the requisition of cable plans (and overhead line alignment drawings, where applicable) to find out whether there is any underground cable and/or overhead line within and/or in the vicinity of the Site. The Electricity Supply Lines (Protection) Regulation and the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation should be observed when carrying out works in the vicinity of the electricity supply lines.