

ARUP

By Hand

26 June 2026

The Secretary
Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong
Your ref
Our ref 315341/00/WLTL/NC/HLTL/05810

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon, Hong Kong

t +852 2528 3031
f +852 2779 8428

arup.com

Dear Sir/Madam,

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

Submission of S16 Planning Application

On behalf of the Applicant, Treasure Arts International Group Limited who is the registered owner of No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon, we hereby submit the captioned s.16 Planning Application. An original authorisation letter signed by the Applicant, documentary proof of land ownership, a signed original copy of the application form, and 4 copies of the Supporting Planning Statement are enclosed. The soft copy of the Supporting Planning Statement as required for Non-EPASS submission will be uploaded upon the receipt of the hyperlink from the Town Planning Board.

We sincerely seek favourable consideration from the Town Planning Board to agree to the captioned s.16 Application.

Should you have any queries, please contact the undersigned or our Ms. Natalie CHAN at [REDACTED] or Mr. Thomas LAU at [REDACTED].

Yours faithfully,



Wai-Lam LEE
Director

d [REDACTED]
e [REDACTED]

- Enc - 1 Signed Original Copy of the Authorisation Letter
- Documentary Proof of Land Ownership
- 1 Signed Original Copy of the Application Form
- 4 Copies of the Supporting Planning Statement
cc - Client

Application for Planning Permission
Under Section 16 of the Town Planning
Ordinance (Cap. 131) for Proposed
Hotel Use and Minor Relaxation of Plot
Ratio Restriction at “Other Specified
Uses” Annotated “Business (1)” Zone
at No. 646-648A Castle Peak Road,
Cheung Shan Wan, Kowloon

Supporting Planning Statement

Final | June 2026

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 315341

Arup Hong Kong Limited
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong
arup.com

Contents

Executive Summary	i
行政摘要	ii
1. INTRODUCTION	1
2. SITE CONTEXT	3
2.1 Location	3
2.2 Land status	3
2.3 Existing Land Use	3
2.4 Surrounding Land Use	3
2.5 Accessibility	4
3. PLANNING CONTEXT	5
3.1 Land Use Zoning	5
3.2 Departmental Plan Setback Requirements	5
3.3 Planning History of the Application Site	6
3.4 Transformation of the Cheung Sha Wan Industrial/ Business Area	6
3.5 Government's Policy Initiatives of Promoting Tourism	8
3.6 Government's Policy Initiatives of Attracting and Nurturing Talents	9
4. PROPOSED DEVELOPMENT SCHEME	11
4.1 General Planning and Design Principles	11
4.2 Key Development Parameters	12
4.3 Building Design of the Proposed Development	13
5. PLANNING JUSTIFICATIONS	15
5.1 Proactive Response to the Extension of the IB Revitalisation Scheme 2.0 as Announced in the 2024 Policy Address	15
5.2 Echoing the Government's Policy Initiatives of Promoting Tourism	15
5.3 Echoing the Government's Policy Initiatives of Attracting and Nurturing Talents	15
5.4 Aligning with the Planning Intention of the "OU(B)" Zone and the Recommendations of the 2020 Area Assessments of Industrial Land in the Territory	16
5.5 Introducing Multiple Planning and Design Merits in the Proposed Development	16
5.6 Compliance with Relevant Provisions of Sustainable Building Design Guidelines (SBDG)	17
5.7 No Adverse Impacts on the Surrounding Area	18
5.8 Establishing a Desirable Precedent to Expedite the Transformation of Cheung Sha Wan Industrial/Business Area	18
6. CONCLUSION	19

Tables

Table 3.4.1	S16 Applications for Proposed Minor Relaxation of PR Restriction by up to 20% for Redevelopment of Industrial Buildings in Cheung Sha Wan Industrial/ Business Area	6
Table 4.2.1	Comparison of Key Development Parameters between the Proposed Development, Approved Scheme and the OZP	12

Figures

Figure 2.1	Location Plan
Figure 2.2	Lot Index Plan
Figures 2.3	Existing Condition of the Application Site and Surrounding Conditions
Figures 3.1a-e	Extracted Notes of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – “OU(B)1” Zone
Figures 3.1f-h	Extracted Explanatory Statement of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – “OU(B)1” Zone
Figure 5.6	Building Height Profile of the Surrounding Area of the Application Site

Appendices

Appendix A	Architectural Layout of the Proposed Development
Appendix B	Summary of Planning and Design Merits
Appendix C	Traffic Impact Assessment
Appendix D	Sewerage Impact Assessment

Executive Summary

Pursuant to Section 16 (S16) of the Town Planning Ordinance (TPO) (Cap. 131), this Planning Application is prepared and submitted to seek approval from the Town Planning Board (TPB) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction (the Proposed Development) at “Other Specified Uses” Annotated “Business (1)” Zone at No. 646-648A Castle Peak Road, Cheung Sha Wan, Kowloon (the Application Site). The Application Site is currently vacant and was previously occupied by a pre-1987 industrial building (IB) demolished in 2022. The Application Site is the subject of a previous approved planning application under the IB Revitalisation Scheme 2.0 (Application No. A/K5/838), which was approved with conditions by the TPB on 24 December 2021 for proposed minor relaxation of plot ratio (PR) restriction to 14.4 for permitted non-polluting industrial use (excluding industrial undertakings involving the use/storage of dangerous goods).

The Application Site falls within an area zoned “Other Specified Uses” annotated “Business (1)” (“OU(B)1”) on the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 (the OZP). According to the Notes of the OZP, ‘Hotel’ is a Column 2 use under Schedule I for building other than industrial or industrial-office building, which requires permission from the TPB. Any proposed development/redevelopment at the Application Site is subject to a maximum PR of 12.0 and a maximum building height (BH) of 130 metres above Principal Datum (mPD), or the PR/BH of the existing building, whichever is the greater. In addition, it is stated in the Notes that a minimum setback of 2m from the lot boundary abutting Castle Peak Road shall be provided.

In response to the extension of the IB Revitalisation Scheme 2.0 to the end of 2027 to facilitate the redevelopment of pre-1987 industrial buildings as announced in the 2024 Policy Address, this Application also seeks for minor relaxation of PR restriction from 12.0 to 14.4 to facilitate the proposed hotel development.

The Proposed Development is well justified through the following public planning benefits:

- Proactive Response to the Extension of the IB Revitalisation Scheme 2.0 as Announced in the 2024 Policy Address;
- Echoing the Government’s Policy Initiatives of Promoting Tourism;
- Echoing the Government’s Policy Initiatives of Attracting and Nurturing Talents;
- Aligning with the Planning Intention of the “OU(B)” Zone and the Recommendations of the 2020 Area Assessments of Industrial Land in the Territory;
- Introducing Multiple Planning and Design Benefits in the Proposed Development;
- Complying with the Statutory Building Height Restriction and Relevant Setback Requirements under the OZP and Outline Development Plan;
- Compliance with Relevant Provisions of Sustainable Building Design Guidelines (SBDG);
- Resulting in NO Adverse Impacts to the Surrounding Area; and
- Establishing a Desirable Precedent to Expedite the Transformation of Cheng Sha Wan Industrial/Business Area.

The Applicant has demonstrated their genuine intention and commitment in taking forward the Proposed Development at the Application Site. In light of the planning merits and justifications put forward in this Supporting Planning Statement, we sincerely seek the favourable consideration from the TPB to give its support to this Section 16 Application.

ARUP

行政摘要

(內文如與英文版本有任何差異，應以英文版本為準)

本規劃申請根據《城市規劃條例》（第 131 章）第 16 條，就位於九龍長沙灣青山道 646-648A 號「其他指定用途」註明「商貿(1)」(「申請地點」)的擬議酒店用途及略為放寬地積比率限制(「擬議發展」)向城市規劃委員會(城規會)提出申請。申請地點現時為空置土地，過去曾設有一座於一九八七年前興建，並在二〇二二年被拆卸的工業大廈。申請地點涉及一宗根據活化工業大廈計劃 2.0 已獲批准的先前規劃申請(申請編號 A/K5/838)，該申請於二零二一年十二月二十四日獲城規會有條件批准，以略為放寬地積比率限制至 14.4 倍作准許的非污染工業用途，不包括涉及使用／貯存危險品的工業經營。

申請地點位於長沙灣分區計劃大綱核准圖編號 S/K5/41(「分區計劃大綱圖」)的「其他指定用途」註明「商貿(1)」地帶內。根據分區計劃大綱圖的註釋，「酒店」在附表 I：適用於露天發展或工業樓宇或工業－辦公室樓宇以外的建築物下屬於第二欄用途，必須先取得城規會的許可。申請地點內的任何發展／重建亦受限於 12.0 倍最高地積比率及主水平基準以上 130 米的最高建築物高度限制，或現有建築物的地積比率／高度，兩者中以較大者為準。此外，根據註釋，發展計劃必須從毗連青山道的地段界線後移至少 2 米。

本申請回應行政長官 2024 年施政報告中將活化工業大廈計劃 2.0 延長至 2027 年底、持續鼓勵重建一九八七年前興建的工廈之政策，擬議略為放寬建築物地積比率約 20% (由 12.0 到 14.4)，以促進擬議酒店發展。

擬議發展方案將帶來以下公眾規劃增益：

- 積極回應延長活化工業大廈計劃2.0的政策；
- 積極呼應政府推廣旅遊的政策；
- 積極呼應政府集聚和培育人才的政策；
- 完全符合「其他指定用途(商貿)」地帶的規劃意向和二零二零年全港工業用地分區研究的建議；
- 擬議發展方案為公眾提供多方面的規劃及設計增益；
- 符合分區計劃大綱圖及大綱發展圖下的法定建築物高度限制及相關後移要求；
- 已考慮《可持續建築設計指南》；
- 不會對周邊環境帶來負面影響；及
- 作為推動長沙灣工貿區一帶轉型的良好例子。

申請人以誠懇和積極的態度推進申請地點的擬議發展。基於本規劃報告所闡述的規劃優點和理據，我們衷心希望城規會支持是次第 16 條規劃申請。

ARUP

1. INTRODUCTION

- 1.1.1 Pursuant to Section 16 of the Town Planning Ordinance (TPO), this Supporting Planning Statement is prepared and submitted on behalf of Treasure Arts International Group Limited (“the Applicant”) to seek approval for the proposed hotel use and minor relaxation of plot ratio restriction (PR) at No. 646-648A Castle Peak Road, Cheung Sha Wan, Kowloon (“the Application Site”), which is a vacant site previously occupied by a pre-1987 industrial building (IB) until its demolition in 2022.
- 1.1.2 Situated within the Cheung Sha Wan Industrial/Business Area (CSWIBA), the Application Site is currently zoned “Other Specified Uses” annotated “Business (1)” (“OU(B)1”) on the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 (“the OZP”). According to the Notes for the “OU(B)” zone of the OZP, ‘Hotel’ is a Column 2 use under Schedule I for building other than industrial or industrial-office building, which requires planning permission from the Town Planning Board (TPB). According to the Plan and Remark (1) of the Notes for the “OU(B)1” zone, the Application Site is subject to a maximum PR of 12.0 or the PR of the existing building, and a maximum BH of 130 meters above Principal Datum (mPD) or the height of the existing building, whichever is the greater. In addition, Remark (4) for the “OU(B)1” zone stated that a minimum setback of 2m from the lot boundary abutting Castle Peak Road shall be provided. Remark (11) indicated that minor relaxation of PR/ BH /building gap restrictions may be considered by the Town Planning Board (TPB) based on the individual merits of development or redevelopment proposals, while Remark (12) stated that minor relaxation of setback requirement may also be considered by TPB under exceptional circumstances for a development or redevelopment proposal.
- 1.1.3 The Application Site is the subject of an approved S16 planning application (Application No. A/K5/838) which was approved with conditions by the TPB on 24 December 2021 for proposed minor relaxation of PR restriction to 14.4 for permitted non-polluting industrial use (excluding industrial undertakings involving the use/ storage of dangerous goods).
- 1.1.4 Hong Kong has committed to developing tourism and promoting the concept of “tourism is everywhere” (「無處不旅遊」) in the Chief Executive’s 2024 and 2025 Policy Addresses. At the end of 2024, the Culture, Sports and Tourism Bureau (CSTB) published the Development Blueprint for Hong Kong’s Tourism Industry 2.0 (“Blueprint 2.0”), in which the Government is committed to identifying tourism hotspots in all 18 districts and ensuring sufficient hotel supply for visitors. In addition, Sham Shui Po District, where the Application Site is located, is repositioned as one of the must-visit areas in Hong Kong with contrasting elements of historic architecture, arts and culture, and authentic lifestyles.
- 1.1.5 Furthermore, the Government has been dedicated to attracting and nurturing talents with the implementation of various schemes, such as the Top Talent Pass Scheme (「高端人才通行證計劃」) in the Policy Addresses in recent years, which is expected to drive up the demand for hotels arising from the influx of talents. In addition, to cement Hong Kong as an international hub for post-secondary education that nurtures future talents, the

Government is committed to providing accommodation facilities for the students by allowing the conversion of hotels to student hostels.

- 1.1.6 According to the Chief Executive’s 2018 Policy Address, the Revitalisation Scheme of Industrial Buildings (“IB Revitalisation Scheme 2.0”) has been launched to expedite the transformation of traditional industrial areas. Under the scheme, relaxation of the maximum permissible non-domestic PR by up to 20% would be allowed for redevelopment projects of industrial buildings constructed before 1987 and situated outside residential zones in Main Urban Areas and New Towns. Subsequently, as announced in the 2024 Policy Address, the scheme has been extended to the end of 2027, which demonstrates the Government’s continuous support for the redevelopment of aged industrial buildings.
- 1.1.7 In response to the Government’s policy initiatives, this Application is submitted to redevelop the Application Site into a hotel that provides accommodation facilities for the anticipated increasing demand arising from the tourists and talents. Minor relaxation of PR restriction from 12.0 to 14.4 (+20%) is proposed to facilitate the redevelopment at the Application Site.
- 1.1.8 The Proposed Development would realise the planning intention of “OU(B)” zone to offer quality spaces for general business uses, as well as align with the recommendations of the 2020 Area Assessments of Industrial Lands in the Territory and the recent policy initiatives as mentioned above. The Proposed Development will be in harmony with the surrounding environment. The design of the Proposed Development Scheme has been optimised so that the Proposed Development will be within the maximum BH of 130mPD while providing more hotel rooms to serve the tourism industry.
- 1.1.9 This Application also proposes desirable architectural and streetscape designs to enhance visual amenity and pedestrian environment, including terrace podium design, cut corner design, and ample provision of greenery along the edges of the Castle Peak Road and Tai Nan West Street and at the podium garden. The Application also provides the opportunity to realise the long-planned building setbacks along Castle Peak Road and Tai Nan West Street for improving urban ventilation as well as to facilitate street widening. Technical assessments conducted have also confirmed that the Proposed Development will not generate, nor be susceptible to adverse impacts on the surrounding area.
- 1.1.10 This Supporting Planning Statement is organised into the following sections in support of the suitability and feasibility of the Planning Application for the Proposed Development:
- **Section 2** describes the context of the Application Site and its surrounding areas;
 - **Section 3** explains the planning context of the Application Site;
 - **Section 4** presents the Proposed Development at the Application Site;
 - **Section 5** highlights the planning justifications and planning merits in support of the Proposed Development Scheme; and
 - **Section 6** concludes the highlights and justifications of this Supporting Planning Statement.

2. SITE CONTEXT

2.1 Location

- 2.1.1 The Application Site, with a site area of approximately 856 m², is located at No. 646-648A Castle Peak Road, Cheung Sha Wan. The Application Site is bounded by Castle Peak Road to the south and Tai Nan West Street to the east, and situated in the CSWIBA. The Application Site falls within an area zoned as “Other Specified Uses” annotated “Business (1)” (“OU(B)1”) in the Approved Cheung Sha Wan OZP No. S/K5/41.
- 2.1.2 Please refer to **Figure 2.1** for the location plan of the Application Site.

2.2 Land status

- 2.2.1 The Application Site is held under the New Kowloon Inland Lot (NKIL) Nos. 2213 S.A RP, 2213 S.D, 2213 S.E and 2213 RP, with the Applicant being the current sole landowner.
- 2.2.2 Please refer to **Figure 2.2** for the lot index plan of the Application Site.

2.3 Existing Land Use

- 2.3.1 The Application Site is currently vacant. It was previously occupied by Fung Wah Factorial building, a pre-1987, 7-storey industrial building for workshop and ancillary office uses which was demolished in 2022.

2.4 Surrounding Land Use

- 2.4.1 The Application Site is located at the northern part of the CSWIBA, which is predominantly occupied by a mix of industrial, industrial-office (I-O) and several commercial / office (C/O) developments that have undergone redevelopment in recent years.
- 2.4.2 To the **immediate north** of the Application Site is Easy Tower, a 27-storey industrial/office development completed in 1998. To the immediate northwest is Yick Tai Industrial Building, a 9-storey industrial building built in 1961.
- 2.4.3 To the **immediate south** of the Application Site are Hong Kong Spinner Industrial Centre Phases I and II, together with the Tai Nan West Street Substation and Lai Chi Kok MTR Station, a major railway transport node serving the district.
- 2.4.4 To the **northeast** of the Application Site is Wing Kut Industrial Building, a 12-storey industrial building completed in 1983, and the Oriental International Tower, a 29 storey (including 3-storey basement) industrial building completed in 2022. Further to the northeast is Hotel YX Lai Chi Kok, a 21-storeys hotel with a total of 119 hotel rooms.
- 2.4.5 Please refer to **Figures 2.3** for the existing and surrounding conditions of the Application Site.

2.5 Accessibility

- 2.5.1 The Application Site is supported by a comprehensive public transport connection and is well-served by various modes of public transport services including mass transit railway (MTR) (with about 100m walking distance to the south of the Application Site), franchised buses and green minibuses. Several bus stops are located within about 250m walking distance to the southwest of the Application Site, with regular bus connections to key nodes, including bus route A20 and A23 to the Hong Kong International Airport, and bus route 36B, 42A, 46 to West Kowloon. The Lai Chi Kok MTR Station is also located within 2-minute walking distance from the Application Site and provides convenient connection to all parts of Hong Kong.

3. PLANNING CONTEXT

3.1 Land Use Zoning

- 3.1.1 The Application Site falls within the “Other Specified Uses (Business) 1” (“OU(B)1”) under the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41. According to the Explanatory Statement (ES) of the OZP, the planning intention of the “OU(B)” zone is *“intended primary for general business uses. A mix of information technology and telecommunications industries, non-polluting industrial, office and other commercial uses are always permitted in new “business” buildings”*. In addition, *“less fire-hazard-prone office uses that would not involve the direct provision of customer services or goods to the general public is always permitted in existing industrial or industrial-office buildings.”*
- 3.1.2 According to Schedule I of the Notes of the “OU(B)” zone for open-air development or for building other than industrial or industrial-office building, ‘Hotel’ is classified as a Column 2 use which may be permitted with or without conditions upon application to the Town Planning Board. The proposed hotel development therefore requires planning permission under Section 16 of the Town Planning Ordinance.
- 3.1.3 According to Remarks (1), *“no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 12.0, or the plot ratio of existing building(s), whichever is the greater.”* As stipulated on the Plan of the OZP, the Application Site is subject to a maximum BH of 130mPD, or the height of the existing building, whichever is the greater.
- 3.1.4 It is also stated in Remarks (4) of the Notes for the “OU(B)1” zone, *“a minimum setback of 2m from the lot boundary abutting Castle Peak Road shall be provided.”*. Remarks (11) and (12) of the Notes also stated that, *“based on the individual merits of a development or redevelopment proposal, minor relaxation of the PR/ BH/ building gap restrictions may be considered by the Town Planning Board”* and *“minor relaxation of setback requirements may also be considered by TPB under exceptional circumstances for a development or redevelopment proposal.”*
- 3.1.5 The ES of the OZP supplements that *“Since 2002, for street widening and streetscape improvement, building setback requirements of 2 to 5m along these streets have been incorporated in the Cheung Sha Wan and Sham Shui Po Outline Development Plan according to the comments of the Transport Department. To improve east-west air path as well as to facilitate street widening and streetscape improvement, a building setback of 2m from the lot boundary abutting Castle Peak Road within the “OU(B)1” sub-area”* shall be provided. Please refer to **Figures 3.1a to 3.1h** for the extracts of the Notes, Schedule of Uses and ES of the Approved Cheung Sha Wan OZP No. S/K5/41.

3.2 Departmental Plan Setback Requirements

- 3.2.1 According to the Kowloon Planning Area No. 5 – Cheung Sha Wan and Sham Shui Po (Northern Part) Outline Development Plan No. D/K5A/1B (the ODP), building setbacks

of 2m from the lot boundaries of the Application Site are proposed along Castle Peak Road and Tai Nan West Street.

3.2.2 Please refer to **Figure 3.2** for the relevant extract of the ODP.

3.3 Planning History of the Application Site

3.3.1 The Application Site is the subject of one approved S16 Planning Application.

3.3.2 The planning application (Application No. A/K5/838) was approved with conditions by the TPB on 24 December 2021 for proposed minor relaxation of PR restriction to 14.4 for permitted non-polluting industrial use (excluding industrial undertakings involving the use/ storage of dangerous goods).

3.4 Transformation of the Cheung Sha Wan Industrial/ Business Area

3.4.1 According to the Study Report on 2020 Area Assessments of Industrial Land in the Territory⁵ by the Planning Department, Cheung Sha Wan, where the Application Site is located within, has been undergoing transformation with increasing office and commercial uses since 2014. In term of uses, offices accounted for 46% of the total gross floor area (GFA) in Cheung Sha Wan, which is significantly higher than that in other industrial areas.

3.4.2 Moreover, other commercial uses, such as shops & services and showroom occupied 13.9% of the GFA. Cheung Sha Wan also hosted a relatively high percentage of start-ups, which accounted for 18.5% of business, indicating its transformation into a vibrant area that accommodates diverse commercial uses.

3.4.3 Following the launch of the IB Revitalisation Scheme 2.0 in 2018, a total of 14 planning applications have been approved for proposed minor relaxation of PR restriction for the redevelopment of IBs in Cheung Sha Wan, which include 1 previous approval on the Application Site. Among the 14 applications, 9 of them are proposed for non-polluting industrial use, 2 of them are proposed solely for office use, while the remaining 3 are proposed for multiple uses, including office, shop and services, eating place, institutional, place of recreation, sport or culture and training centre uses.

Table 3.4.1 S16 Applications for Proposed Minor Relaxation of PR Restriction by up to 20% for Redevelopment of Industrial Buildings in Cheung Sha Wan Industrial/ Business Area

Application No.	Location	Proposed Use	Proposed Minor Relaxation of PR and/or BH Restrictions	Decision
A/K5/856	916-922 Cheung Sha Wan Road	Office use (Column 1 use)	PR: from 12 to 14.22 (+18.48%) BH: No change	Approved with condition(s) on 03 Feb 2023
A/K5/855	924-926 Cheung	Office use (Column 1 use)	PR: from 12 to 14.27 (+18.93%)	Approved with

⁵ Source: https://www.pland.gov.hk/file/planning_studies/comp_s/2020AA/MainReportandPlans.pdf

	Sha Wan Road		BH: No change	condition(s) on 03 Feb 2023
A/K5/843	109 King Lam Street	Non-polluting industrial use (Column 1 use)	PR: from 12 to 14.4 (+20%) BH: No change	Approved with condition(s) on 22 Apr 2022
A/K5/842	868-888 Cheung Sha Wan Road	Office, shop and services, eating place uses (Column 1 uses)	PR: from 12 to 14.4 (+20%) BH: No change	Approved with condition(s) on 28 Jan 2022
A/K5/841	800 & 828 Cheung Sha Wan Road and 601-603 Tai Nan West Street	Office, shop and services, eating place, institutional, place of recreation, sport or culture, training centre uses (Column 1 and 2 uses)	PR: from 12 to 14.4 (+20%) BH: No change	Approved with condition(s) on 04 Mar 2022
A/K5/840	800 & 828 Cheung Sha Wan Road and 601-603 Tai Nan West Street	Non-polluting industrial use (Column 1 use)	PR: from 12 to 14.4 (+20%) BH: No change	Approved with condition(s) on 24 Jun 2022
A/K5/838 ^[1]	646-648A Castle Peak Road	Non-polluting industrial use (Column 1 use)	PR: from 12 to 14.4 (+20%) BH: No change	Approved with condition(s) on 24 Dec 2021
A/K5/834	750 Cheung Sha Wan Road	Non-polluting industrial use (Column 1 use)	PR: from 12 to 14.4 (+20%) BH: No change	Approved with condition(s) on 24 Sep 2021
A/K5/829	550-556 Castle Peak Road	Non-polluting industrial use (Column 1 use)	PR: from 12 to 14.4 (+20%) BH: No change	Approved with condition(s) on 23 Jul 2021
A/K5/826	924-926 Cheung Sha Wan Road	Non-polluting industrial use (Column 1 use)	PR: from 12 to 14.352 (+19.6%) BH: No change	Approved with condition(s) on 20 Nov 2020
A/K5/825	916-922 Cheung Sha Wan Road	Non-polluting industrial use (Column 1 use)	PR: from 12 to 13.455 (+12.1%) BH: No change	Approved with condition(s) on 20 Nov 2020

A/K5/820	1016-1018 Tai Nam West Street	Non-polluting industrial use (Column 1 use)	PR: from 12 to 14.3998 (+20%) BH: No change	Approved with condition(s) on 05 Feb 2021
A/K5/816	121 King Lam Road	Non-polluting industrial use (Column 1 use)	PR: from 12 to 14.4 (+20%) BH: No change	Approved with condition(s) on 21 Aug 2020
A/K5/813	822 Lai Chi Kok Road	Office, shop and services, eating place uses (Column 1 uses)	PR: from 12 to 14.4 (+20%) BH: from 120mPD to 125.7mPD (+4.75%)	Approved with condition(s) on 06 Mar 2020

[1] The previous approved s.16 planning application at the Application Site.

3.5 Government's Policy Initiatives of Promoting Tourism

- 3.5.1 The Government has placed strong emphasis on revitalising tourism in recent years. In the Chief Executive's 2023 Policy Address, the Government has promised to *"enhance its efforts in promoting the development of tourism and related industries, such as retail, catering and hotels"*⁷. Subsequently in the 2024 Policy Address, the Government is committed to *"develop Hong Kong into a premier tourism destination through innovative thinking and making better use of our rich and unique resources such as the Victoria Harbour, outlying islands, rural areas, cultures, cuisines, lifestyles and historic buildings"*⁸.
- 3.5.2 According to the 2024 and 2025 Policy Address, the concept of "tourism is everywhere" (「無處不旅遊」) has been established to promote tourism around Hong Kong. In support of this, a Working Group on Developing Tourist Hotspots has been formed to identify and enhance popular and attractive tourist hotspots in all districts. The latest 2025 Policy Address further sets out a range of measures to embed the concept of "tourism is everywhere".
- 3.5.3 At the end of 2024, the Culture, Sports and Tourism Bureau (CSTB) issued the Development Blueprint for Hong Kong's Tourism Industry 2.0 (Blueprint 2.0), which outlines strategic directions and measures for implementing "tourism is everywhere". One key direction is to enrich district tourism resources through the development of city walk routes that showcase the distinctive characteristics and attractions of different districts.
- 3.5.4 Moreover, the Hong Kong Tourism Board has rolled out various "Hong Kong Neighbourhoods" promotions in recent years. Sham Shui Po District, where Cheung Sha Wan is located, is repositioned as one of the must-visit areas in Hong Kong, offering a unique blend of historic architecture, arts and culture, and authentic lifestyles.
- 3.5.5 As suggested in the Blueprint 2.0, the Government has recognised that *"[s]ufficient hotel supply is a key component in driving sustainable development of the tourism industry"* and

⁷ 2023 Policy Address, the Government of Hong Kong. Source: <https://www.policyaddress.gov.hk/2023/en/p85a.html>

⁸ 2024 Policy Address, the Government of Hong Kong. Source: <https://www.policyaddress.gov.hk/2024/en/p129.html>

promised to “*closely monitor the supply of hotels in the market*” to ensure the demand from tourists could be met¹⁰. According to the 2025 Policy Address, “[a]s of August this year, the overall visitor arrivals had reached 33.2 million, a significant increase of 12% over the same period last year”. Based on the Hotel Room Occupancy Reports in December 2025 and April 2026, the average hotel room occupancy rate from January to April in Hong Kong has continued to increase from 85% in 2024 to 87% in 2025 to 88% in 2026^{11 12}, showing an increase in hotel demand.

- 3.5.6 Based on the Hotel Room Occupancy Report in April 2026, the occupancy rate of the hotel rooms in Other Kowloon, within which the hotels in Sham Shui Po/CSWIBA are located, is 90% during the period from January to April 2026, which is higher than that in districts such as Central/ Western (88%), Wan Chai (89%), Tsim Sha Tsui (84%) and Island (75%). In view of the Government’s policy support for promoting tourism everywhere in Hong Kong, it is anticipated that there would be a further increase in the demand for hotels in different districts in future, including Sham Shui Po described by the Hong Kong Tourism Board as a “*historic district rich with charm*”, with vibrant local culture with quirky cafes, independent shops and Michelin-recommended dining.

3.6 Government’s Policy Initiatives of Attracting and Nurturing Talents

- 3.6.1 To strengthen the local labour force and support economic growth, the Government has in recent years placed increasing emphasis on attracting talent from outside Hong Kong. In the Chief Executive’s 2022 Policy Address, the Government has mentioned that “*[a]part from actively nurturing and retaining local talents, the Government will proactively trawl the world for talents*”.
- 3.6.2 Various schemes have been proposed and continuously implemented accordingly in the Policy Addresses in recent years, which includes the Top Talent Pass Scheme (「*高端人才通行證計劃*」) under which eligible talents would be issued a two- to three-year pass to explore opportunities in Hong Kong. Several schemes have also been enhanced to attract talents around the world to Hong Kong, including Admission Scheme for Mainland Talents and Professionals (「*專業人士及企業家入境計劃優化措施*」), Technology Talent Enhancement Scheme (「*科技人才入境計劃*」) and Quality Migrant Admission Scheme (「*優秀人才入境計劃*」).
- 3.6.3 In the recent 2025 Policy Address, “[s]ince the implementation of an array of new talent admission policies by the current-term Government, over 230,000 people have come to Hong Kong for work and development”, and “[t]he Government will continue to implement talent policies to ensure long-term competitiveness to drive sustained economic growth”. With the Government’s continued policy support for attracting and retaining talents, Hong Kong is expected to see a steady inflow of professionals,

¹⁰ Development Blueprint for Hong Kong’s Tourism industry 2.0. Source: https://www.cstb.gov.hk/file_manager/en/documents/consultation-and-publications/Tourism_Blueprint_2.0_English.pdf

¹¹ Hotel Room Occupancy Report – Dec 2025, Hong Kong Tourism Board. Source: <https://partnet.hkta.com/filemanager/researchpub/3634/604112/Occ%2012%202025.pdf>

¹² Hotel Room Occupancy Report – Apr 2026, Hong Kong Tourism Board. Source: <https://partnet.hkta.com/filemanager/researchpub/3634/604332/Occ%2004%202026.pdf>

entrepreneurs and other high-skilled individuals in the coming years, which implies an increase in the demand for hotel facilities.

- 3.6.4 In addition, in the 2024 Policy Address, the Government is committed to “*developing Hong Kong into an international hub for post-secondary education*” to attract and nurture future talents. One of the policies is the Hostels in the City Scheme (「城中學舍計劃」) launched in July 2025, which supported wholesale and partial conversion of hotels and commercial buildings into student hostels to increase the supply of accommodation for students. To facilitate the conversion, revision has been made to the definition of terms (DoTs) of ‘Hotel’ used in Statutory Plan to include student hostels supported by the policy. As mentioned in the 2025 Policy Address, the Government would continue to increase the supply of student hostels to help transform Hong Kong into “*an international hub for post-secondary education and high-calibre talents*”.
- 3.6.5 In view of the above policy initiatives, demand for hotels and hotel-like accommodation, including service apartments and student hostels is expected to increase. Cheung Sha Wan, with its established transport connections, surrounding commercial and community facilities, and proximity to major employment and education-related nodes, is well positioned to help meet such emerging accommodation demand.

4. PROPOSED DEVELOPMENT SCHEME

4.1 General Planning and Design Principles

- 4.1.1 In respecting the planning and design intentions as specified in the “OU(B)” zone in the OZP as well as aligning with the Government’s policy initiatives of the IB Revitalisation Scheme 2.0, promoting tourism and attracting and nurturing talents, the general planning and design principles of the Proposed Development are proposed as follows:
- 4.1.2 **Redeveloping the Application Site in Response to the IB Revitalisation Scheme 2.0 and Latest Policy Initiatives of Promoting Tourism and Attracting Talents** – The Application, previously occupied by a pre-1987 IB and subject of one approved planning application, is proposed to be redeveloped for hotel use with minor relaxation of PR restriction under the IB Revitalisation Scheme 2.0, which responds to the latest Government’s latest policy initiatives in promoting tourism and attracting talents and students, which are expected to drive up the demand for hotel and hotel-like accommodations. The proposed hotel is located within the Kowloon urban area with excellent accessibility to transport nodes and tourist attractions including the MTR Lai Chi Kok Station, various franchised bus stops, Jao Tsung-I Academy, Hong Kong Industrial Centre and D2 Place, a well-known creative hub hosting cultural events and markets.
- 4.1.3 In addition, Cheung Sha Wan and Sham Shui Po are undergoing gradual transformation from traditional industrial districts into vibrant neighbourhoods characterised by a unique blend of creative and cultural industries, as well as authentic local culture. These areas are widely recognised for their diverse array of small local shops, street markets, cafes, and art and gallery spaces, which together create a distinctive and attractive experience for tourists. The provision of sufficient accommodation facilities is essential to support the transformation of Sham Shui Po and Cheung Sha Wan into a future tourist destination, which echoes the concept of “Tourism is Everywhere” as advocated in the 2025 Policy Address to boost tourism.
- 4.1.4 **Synergising with the Surrounding Commercial Development in Support of the Ongoing Transformation of Cheung Sha Wan** – Situated within CSWIBA, which is undergoing transformation to accommodate a wider range of commercial uses, the Application Site is located in proximity to Global Gateway Tower and D2 Place—both former IBs that have been revitalised into an office building and a landmark featuring office, retail and recreational facilities, respectively. Given its convenient location and close proximity to surrounding commercial developments, the Application Site is well-positioned for the provision of accommodation facilities that are expected to create synergy with nearby developments. This is in line with the planning intention of the “OU(B)” zone to provide quality business spaces, and also supports the transformation of Cheung Sha Wan as recommended in the 2020 Area Assessments of Industrial Land in the Territory.
- 4.1.5 **Provision of Setback along Castle Peak Road and Tai Nan West Street, and Voluntary Corner Setback to Enhance Pedestrian Environment** – A 2m setback along the Castle Peak Road and Tai Nan West Street will be provided in full compliance with the requirements stipulated under the OZP and ODP. In addition, a continuous canopy of 2m wide is proposed above G/F along the setback area. The proposed canopy is 0.5m

wider than that approved under the previous Section 16 planning permission to further provide weather protection for pedestrians. An additional voluntary setback of 3m will also be provided at the corner of Castle Peak Road and Tai Nan West Street to create wider pavement to serve as a short cut for pedestrians.

4.1.6 **Ample Greenery Provision and Desirable Architectural Design to Enhance Visual Quality and Thermal Comfort** – While the site area of the Application Site is below 1,000 m² which is not subject to the minimum requirement of site coverage of greenery under the PNAP APP-152, about 23% of greenery coverage is voluntarily proposed to enhance visual amenity and mitigate urban heat island effect. Specifically, about 29.96m² of greenery is provided on the G/F to enhance micro-climate and public visual enjoyment at street level. A podium garden with lush greenery would also be provided on 5/F to improve building permeability and urban ventilation. Moreover, a green roof will be incorporated on R/F to reduce solar heat gain and improve indoor thermal comfort. Simultaneously, desirable architectural designs, such as the terracing podium design at the corner of Castle Peak Road and Tai Nan West Street, are proposed to create visual interest.

4.1.7 Please refer to the Architectural Layout of the Proposed Development in **Appendix A** and the summary of planning and design merits of the Proposed Development in **Appendix B**.

4.2 Key Development Parameters

4.2.1 The Application seeks approval for proposed hotel use with minor relaxation of PR restriction from 12.0 to 14.4 (+20%) in response to the IB Revitalisation Scheme 2.0. A comparison between the key development parameters of the Proposed Development, the development parameters under the Approved Scheme of the previous planning application no. A/K5/838 (“Approved Scheme”), and the OZP are provided in **Table 4.2.1** below.

Table 4.2.1 Comparison of Key Development Parameters between the Proposed Development, Approved Scheme and the OZP

Development Parameters	Proposed Development (a)	Approved Scheme under Application No. A/K5/838 (b)	Difference (a) – (b)	Development Parameters under the OZP
Site Area	About 856 m ²	About 856 m ² ^[1]	<u>N/A</u>	<u>N/A</u>
Proposed Use	‘Hotel’ is a Column 2 use	‘Workshops (Non-polluting Industrial Use)’ is a Column 1 use	Column 2 Use (Requiring Permission from the TPB)	‘Workshops (Non-polluting Industrial Use)’ is a Column 1 use ‘Hotel’ is a Column 2 use
Plot Ratio (PR)	Not more than 14.4	Not more than 14.4	-	Not more than 12
Bonus Plot Ratio (Bonus GFA)	0.25 ^[2] (About 210.26m ²)	0.25 ^[1] (About 210.26m ²)	-	<u>N/A</u>
Gross Floor Area (GFA)	About 12,314.9 m ² ^{[2][3][4]}	About 12,314.9 m ² ^{[2][3][4]}	-	<u>N/A</u>
Building Height	Not more than 130mPD	Not more than 130mPD	-	Not more than 130mPD
No. of Storeys	30	27	+3	<u>N/A</u>

Development Parameters	Proposed Development (a)	Approved Scheme under Application No. A/K5/838 (b)	Difference (a) – (b)	Development Parameters under the OZP
	(Including G/F for car parking and loading/unloading space)	(Including two storeys of basement car park and loading/ unloading space)		
Site Coverage (SC)	Below 15m: Not more than 77.8% Above 15m: Not more than 62.5%	Below 15m: Not more than 77.8% Above 15m: Not more than 62.5%	Below 15m: - Above 15m: -	<u>N/A</u>
No. of Block	1	1	-	<u>N/A</u>
No. of Rooms	About 299	<u>N/A</u>	-	<u>N/A</u>
Average Hotel Room Size	About 27 m ²	<u>N/A</u>	-	<u>N/A</u>
Greenery Coverage	About 23% of total site area (about 11.1% at primary zone)	About 23% of total site area (about 11.1% at primary zone)	-	<u>N/A</u>
Internal Transport Facilities				
No. of Private Car Parking Space	3 (including 1 Accessible Car Parking Space)	19 (including 1 Accessible Car Parking Space)	-16	<u>N/A</u>
No. of Motorcycle Parking Space	1	3	-2	<u>N/A</u>
No. of Loading/Unloading (L/UL) Bay	LGV: 2	LGV: 9	-7	<u>N/A</u>
No. of Lay-by	Taxi and Private Cars: 2 Mini Coach: 1	Taxi and Private Cars: 0 Single-deck Tour Buses: 0	+2 +1	<u>N/A</u>
Building Setback	Castle Peak Road: 2m Tai Nan West Street: 2m	Castle Peak Road: 2m Tai Nan West Street: 2m	-	Castle Peak Road: 2m Tai Nan West Street: 2m
Tentative Completion Year	About 2030	2025	-	<u>N/A</u>

Remarks:

(1) Refer to MPC Paper No. A/K5/838B

(2) Any bonus PR that may be approved by the Buildings Authority (BA) under Building (Planning) Regulations (B(P)R 22(1) or (2) are excluded. According to the Applicant, a bonus PR of about 0.25 (equivalent to a GFA of about 210.26 m² calculated based on 5 times of setback area) will be claimed for the setback areas as dedication area under B(P)R 22(2) subject to approval by the BA during detailed design stage. The building bulk presented in this Proposed Development submitted has already included the bonus PR of about 0.25, as well as in the technical assessment.

(3) Refer to Cap.123F Building (Planning) Regulations and PNAP APP-19, canopy from the face of building should be disregarded for Site Coverage and PR Calculation (GFA exemption subject to BD's comment in detailed design stage).

(4) An additional 2,100 m² of GFA is proposed which should be disregarded for GFA calculation (subject to BD's comment in detailed design stage). They include the GFA for supporting facilities not exceeding 5% of the total hotel GFA that should be disregarded for GFA calculation under PNAP APP-40, the GFA for green/ amenity features and non-mandatory/ non-essential plant rooms and services not exceeding 10% of the total hotel GFA that should be disregarded for GFA calculation under PNAP APP-151, and the GFA of lift shaft that should be disregarded for GFA calculation under PNAP APP-89. The building bulk under this Application, including in the technical assessments, has taken into account the additional GFA.

4.3 Building Design of the Proposed Development

4.3.1 Building design of the Proposed Development has closely followed the general planning and design principles discussed in **Section 4.1** and the planning intention specified under

“OU(B)1” zone on the OZP. Please refer to **Appendices A and B** for the Architectural Layout and Summary of Planning and Design Merits respectively.

- 4.3.2 The Proposed Development comprises a 30-storey hotel development. The proposed BH of the hotel building is 130mPD (at main roof level), which fully complies with the maximum BH restriction stipulated on the OZP and has been optimized to accommodate the increase in PR. It adopts a typical FTFH of about 3.5m for the hotel floor to ensure a high-quality environment for the tourists.
- 4.3.3 In addition, the podium garden on 5/F with a 6m effective headroom has been incorporated with the to enhance the building permeability and facilitate urban ventilation. The podium garden as well as the terrace on 2/F serve as a valuable public space for social interaction and passive recreation, enhancing the vibrancy within the development.
- 4.3.4 With the Proposed Development having more than 30 storeys to accommodate the hotel and its supporting facilities, the provision of a refuge floor is required. The refuge floor is proposed on the 12/F with a headroom of 3.5m¹⁴.
- 4.3.5 Vehicular access of the Proposed Development would be provided at Tai Nan West Street. Internal transport facilities have been provided in accordance with the standards set out in the Hong Kong Planning Standard and Guidelines. Please refer to **Appendix C** - Traffic Impact Assessment for more details.
- 4.3.6 To enhance the pedestrian environment, greenery provision is optimised at the lower levels, including the greenery area fronting Castle Peak Road and Tai Nan West Street at G/F to 3/F and 5/F, as well as a podium garden on 5/F. The Proposed Development would achieve an overall greenery coverage of approximately 23%, with around 11% located within the primary zone, thereby enhancing the visual quality of the area. In addition, a 2m setback along Castle Peak Road and Tai Nan West Street, together with a 3m voluntary setback at the corner, increases pedestrian space and improves walking comfort. A continuous canopy will also be incorporated along the setback area to integrate nature with the urban setting and revitalise the existing CSWIBA, supporting its ongoing transformation from an industrial area into a vibrant district accommodating diverse commercial uses. Please refer to **Appendix A** – Architectural Drawings for more details.
- 4.3.7 In addition, the podium garden on 5/F and terracing podium design create visual amenity and facilitate natural ventilation to improve thermal comfort.

¹⁴ As stated under Clause B18.2(b) of the Code of Practice for Fire Safety in Buildings 2011 (2024 Edition), the net area for refuge should be not less than 50% of the total gross floor area of the refuge floor, with a clear headroom of not less than 2.3m.

5. PLANNING JUSTIFICATIONS

5.1 Proactive Response to the Extension of the IB Revitalisation Scheme 2.0 as Announced in the 2024 Policy Address

- 5.1.1 This Application serves as a proactive response to the IB Revitalisation Scheme 2.0, first introduced in the 2018 Policy Address and later extended to the end of 2027 in the 2024 Policy Address. The scheme encourages the redevelopment of IBs constructed before 1 March 1987 by permitting a PR increase of up to 20%. According to Legislative Council Paper No. CB(1) 323/18-19(03) published in December 2018, the initiative aims to facilitate the redevelopment of pre-1987 IBs within non-residential zones in the Main Urban Areas and New Towns for industrial or commercial uses.

5.2 Echoing the Government's Policy Initiatives of Promoting Tourism

- 5.2.1 As outlined in recent Policy Addresses, the Government has committed to revitalising tourism sector and promoting the concept of “Tourism is Everywhere” through the identification and development of tourist hotspots across various districts in Hong Kong. This is anticipated to increase the demand for accommodation facilities territory-wide, including in Sham Shui Po District.
- 5.2.2 The Application Site is located within a vibrant neighbourhood characterised by a unique blend of creative and cultural industries, as well as authentic local culture. It is situated in close proximity to key tourist attractions such as the Jao Tsung-I Academy, a recognised cultural landmark, the Hong Kong Industrial Centre showcasing local fashion manufacturing history, and D2 Place, a notable creative hub offering a diverse range of retail, dining and entertainment facilities. The Application Site also benefits from excellent accessibility, being conveniently connected to major transport nodes including MTR Lai Chi Kok Station, as well as an extensive network of bus routes providing direct access to the Hong Kong International Airport and Hong Kong West Kowloon Station High Speed Rail Station. These attributes make the Site well-suited as a base for sightseeing and exploration of local industrial heritage and culture. As such, it is considered highly suitable for hotel development, providing approximately 299 hotel rooms at a convenient location, in response to the anticipated increase in demand arising from future tourism development within the district and across Hong Kong.

5.3 Echoing the Government's Policy Initiatives of Attracting and Nurturing Talents

- 5.3.1 This Application represents a timely response to the Government's recent initiatives to attract global talents and establish Hong Kong as an international hub for post-secondary education. With various schemes implemented to attract talents, as discussed in **Section 3.6**, there is an anticipated rise in demand for hotels and hotel-like accommodation, including serviced apartments and student hostels. The Application Site, situated in a convenient location with close proximity to MTR Lai Chi Kok Station and well connected to nearby key residential areas in Cheung Sha Wan and Lai Chi Kok, is considered an

ideal location for the provision of accommodation facilities serving not only tourists, but also talents and students in meeting their daily needs.

5.4 Aligning with the Planning Intention of the “OU(B)” Zone and the Recommendations of the 2020 Area Assessments of Industrial Land in the Territory

- 5.4.1 The transformation of the Application Site, zoned “OU(B)1” and formerly occupied by a pre-1987 IB, into hotel use aligns with the planning intention of the “OU(B)” zone, which is primarily designated for general business uses according to the Notes of the OZP. It also accords with the 2020 Area Assessments of Industrial Land in the Territory, which identify that the CSWIBA, where the Application Site is located, has a high proportion of floor space used for non-industrial purposes and should be retained as “OU(B)1” to support ongoing land use restructuring. The proposed redevelopment would facilitate the phasing out of ageing IBs and introduce a quality hotel development, thereby supporting the continued transformation of the CSWIBA into a vibrant area characterised by diverse commercial uses.

5.5 Introducing Multiple Planning and Design Merits in the Proposed Development

- 5.5.1 The Proposed Development has put effort in introducing and maintaining multiple planning and design merits as committed under the previously approved Section 16 planning application. Summary of these planning and design merits are in **Appendix B** and below descriptions:
- 5.5.2 **Incorporation of 2m wide setback along Castle Peak Road and Tai Nan West Street:** the requirements for building setbacks required in the OZP and ODP, has been fully respected and provided in the Proposed Development. Specifically, the long-planned 2m setback along the lot boundary facing Castle Peak Road and Tai Nan West Street will be realized upon redevelopment at the Application Site to increase pedestrian space.
- 5.5.3 **Incorporation of 3m wide voluntary corner splay on G/F:** A corner splay of 3m- wide will be provided on G/F at the intersection of Castle Peak Road/Tai Nan West Street. The proposed 2m setback and the proposed corner splay will be paved to create wider pavement to serve as a short cut for pedestrians which enhances the walkability. The spacious corner splay could also reduce the risk of accidents related to pedestrian-vehicle interface, and free up public realm for social interactions.
- 5.5.4 **Incorporation of continuous 2m wide canopy:** A continuous canopy of 2m wide along the setback area will be provided along Castle Peak Road and Tai Nan West Street. The proposed canopy is 0.5m wider than that of the previous approved Section 16 planning application to fully cover the building setback area, better weather protection for pedestrians and to further enhance the pedestrian environment.
- 5.5.5 **Incorporation of Podium Garden on 5/F:** The podium garden on 5/F will serve as a social gathering space for tenants and visitors at reasonable hours. The podium garden will have a floor-to-floor height of 6m, which serves as a void to break the monotonous building façade along Castle Peak Road and Tai Nan West Street, to enhance the building permeability and urban ventilation. It will be designed with plenty of greenery, in particular along the edges fronting Castle Peak Road and Tai Nan West Street, and will

become a prominent visual point of interest at the pedestrian level, uplifting the urban amenity at this highly visible location.

- 5.5.6 **Maintaining the committed greenery provision under the approved planning application:** A similar level of greenery provision (i.e. about 23%) as committed under the previous approved planning application will be maintained and provided on G/F to 2/F to enhance the micro-climate and improve the streetscape. This is particularly beneficial to the CSWIBA which is characterised by monotonous industrial building façades. The greenery area will be designated sensibly within the setback area along the edge of the canopy, serving as pedestrian amenities to enhance the street environment within the CSWIBA, while pedestrian circulation beneath the abovementioned weather-protection canopies will remain unobstructed.
- 5.5.7 **Incorporation of Green Roof on R/F:** Apart from the podium garden on 5/F and greenery on G/F to 2/F, greenery will also be incorporated on flat roof on R/F to reduce solar heat gain and improve indoor thermal comfort, thus it could enhance building energy efficiency.
- 5.5.8 **Achieving Ample Greenery Provision Visible from Street Level for Visual Amenity and Thermal Comfort:** With about 23% of greenery coverage, the Proposed Development provides ample greenery all below 20m abutting street level, including the greenery areas along the edges of 1/F, 2/F Castle Peak Road and at the podium garden at 5/F, to create visual amenity, enhance thermal comfort and maximise public visual enjoyment at the street level with greenery at the edges of the lower floors.
- 5.5.9 **Realisation of Green Building Design:** Various strategies have been adopted to realise green building design, which include the provision of the podium garden on 5/F and the green roof on R/F to mitigate heat island effect and reduce solar heat gain to improve indoor thermal comfort and enhance building energy efficiency. Meanwhile, the possibility of using recycled water for irrigation of the landscape features would be explored to reduce water consumption, and the Building Environmental Assessment Method Plus (BEAM Plus) certification would also be explored at the detailed design stage.
- 5.5.10 With the optimised building design, the above-mentioned planning and design merits can be accommodated within the BH restriction of 130mPD as stipulated in the OZP. This assures that the scale of the Proposed Development will be fully compatible with the building height profile of the CSWIBA, while providing additional floor space with ample greenery provision for hotel use in support of the transformation of CSWIBA, tally with the findings of the 2020 Area Assessments of Industrial Land in the Territory.

5.6 Compliance with Relevant Provisions of Sustainable Building Design Guidelines (SBDG)

- 5.6.1 To achieve a quality and sustainable built environment for the Proposed Development, considerations have been made to the relevant sections in PNAP APP-152 Sustainable Building Design Guidelines (SBDG). The committed contributions as identified in the SBDG are listed below:

- 5.6.2 **Building Separation:** The site area of the Application Site is less than 20,000m² and its continuous projected façade length is below 60m. Therefore, this requirement is considered not applicable.
- 5.6.3 **Building Setback:** Both Castle Peak Road and Tai Nan West Street are more than 15m wide, thus no part of building is built within 7.5m from the centreline of Castle Peak Road and Tai Nan West Street to maintain a ventilation corridor. In addition, the Proposed Development complies with the setback requirement required on the ODP and OZP to provide a 2m setback along both streets for the purpose of footpath/carriageway widening and amenity/streetscape enhancement.
- 5.6.4 **Site Coverage of Greenery:** Despite the Application Site has an area below 1,000 m² with no requirement for greenery provision under the SBDG, the Applicant is genuine in optimizing the provision of greenery features at different levels of the Proposed Development. By integrating landscape features by means of greenery area at different levels. The Proposed Development would be able to achieve a total greenery coverage of about 197.08 m² (about 97.44 m² within the primary zone), which amounts to about 23% of the site area (about 11% within the primary zone).

5.7 No Adverse Impacts on the Surrounding Area

- 5.7.1 As demonstrated in the Traffic Impact Assessment (**Appendix C** refers) and the Sewerage Impact Assessment (**Appendix D** refers) attached to this Supporting Planning Statement, the Proposed Development will NOT generate adverse impacts to surrounding area.

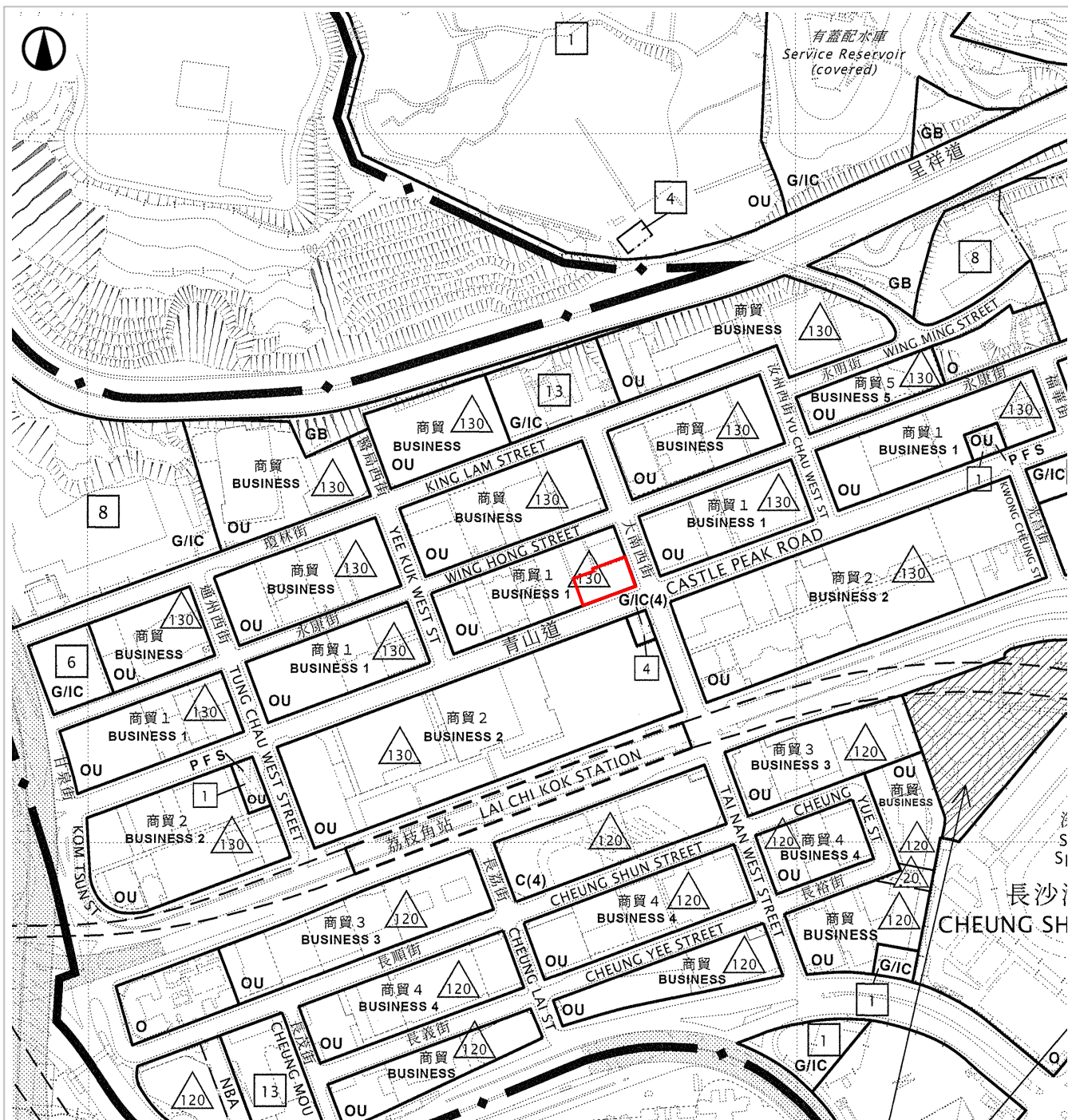
5.8 Establishing a Desirable Precedent to Expedite the Transformation of Cheung Sha Wan Industrial/Business Area

- 5.8.1 This Application is seeking for a minor relaxation of PR restriction from 12.0 to 14.4 (+20%) as a proactive response to the IB Revitalisation Scheme 2.0, as well as the Government's policy initiatives to revitalise tourism sector and attract talents and students. The Proposed Development is in line with the planning intention of the "OU(B)" zone to provide spaces for general business uses, and is consistent with the recommendations of the 2020 Area Assessments of Industrial Land in the Territory in promoting the transformation of the CSWIBA. Through the redevelopment of the Application Site into a hotel with quality architectural design and well-considered planning and design merits, the Proposed Development is expected to generate synergy with adjoining and surrounding commercial developments within the CSWIBA. It would also set a desirable precedent in proximity to the nearby D2 Place and MTR Lai Chi Kok Station, thereby facilitating the ongoing transformation of Cheung Sha Wan into a vibrant area accommodating a diverse range of commercial and office uses.

6. CONCLUSION

- 6.1.1 The Application is submitted under Section 16 of the TPO to seek approval for the proposed hotel use and minor relaxation of PR restriction from 12.0 to 14.4 (+20%) at the Application Site, which was previously occupied by a pre-1987 IB until its demolition in 2022.
- 6.1.2 The proposed hotel use is considered fully justified, as it aligns with the policy initiatives in recent years to promote tourism and the concept of “tourism is everywhere” in Hong Kong. With a projected increase in tourism activities across all districts of Hong Kong, the demand for hotel facilities territory-wide, including Cheung Sha Wan, is expected to rise. At the same time, the Government has maintained its commitment to attracting and nurturing talents from around the world, thereby generating additional demand for hotels and hotel-like accommodations such as service apartments and student hostels. The Application Site, benefiting from high accessibility to nearby tourist attractions and major transport nodes, is well-suited for the provision of accommodation facilities catering to the future needs of tourists, talents and students. The redevelopment is fully in line with the planning intention of the “OU(B)” zone to provide spaces for general business uses, as well as the recommendations of the 2020 Area Assessments of Industrial Land in the Territory to facilitate the transformation of the CSWIBA into a vibrant district with diverse commercial uses.
- 6.1.3 The proposed minor relaxation of PR restriction is considered fully justified, as it serves as a proactive response to the extension of the IB Revitalisation Scheme 2.0 to the end of 2027, which allows minor relaxation of PR restriction by up to 20%.
- 6.1.4 Genuine effort has been made to introduce multiple planning and design merits, including the full-height setback along Castle Peak Road and Tai Nan West Street, a terraced podium design, the provision of a landscaped podium garden and continuous canopy. With approximately 23% greenery coverage, these features would significantly contribute to improved microclimate conditions and enhancement of the streetscape. In addition, the above can be achieved by the Proposed Development without the need to apply for minor relaxation of BHR, therefore is fully compatible with the surrounding urban fabric. The technical assessments also demonstrated that the Proposed Development would not give rise to adverse impacts on the surrounding environment. As such, approval of this Application would establish a desirable precedent to facilitate the transformation of the CSWIBA.
- 6.1.5 In light of the planning merits and justifications put forward in this Supporting Planning Statement, we sincerely seek for the favourable consideration from the TPB to give support to this well-justified Application.

FIGURES



LEGEND



Application Site



Outline Zoning Plan Boundary

ZONING

C

“Commercial”

GB

“Green Belt”

O

“Open Space”

G/IC

“Government, Institution or Community”

OU

“Other Specified Uses”

Figure No.	Scale	Figure Title
2.1	N/A	Location Plan of the Application Site
ARUP	Date	Source
	June 2026	Extracted from the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41



LEGEND

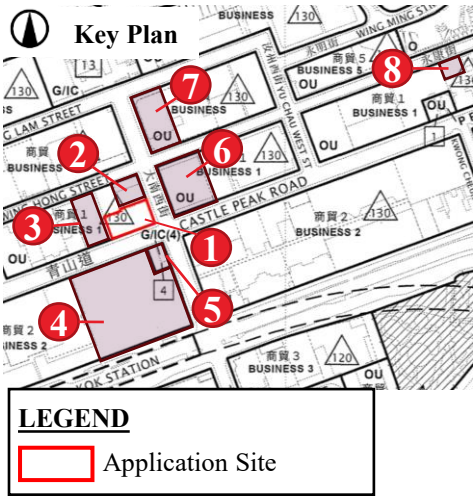


Application Site



Lots under the Applicant's ownership

Figure No.	Scale	Figure Title
2.2	N/A	Lot Index Plan of the Application Site
ARUP	Date	Source
	June 2026	Extracted from Lot Index Plan No. ags_S00000157583_0001 from Lands Department



1 Application Site



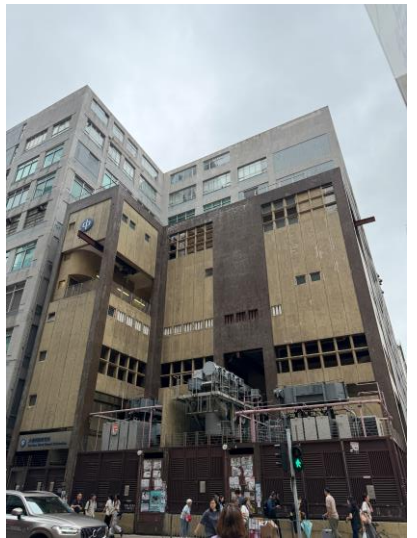
2 Easy Tower



3 Yick Tai Industrial Building



4 Hong Kong Spinner Industrial Centre Phase I & II



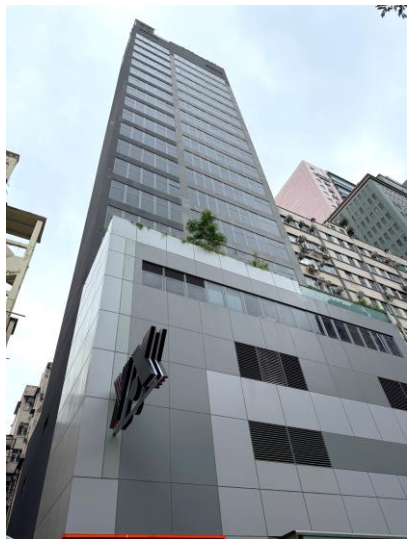
5 Tai Nan West Street Substation



6 Wing Kut Industrial Building



7 Oriental International Tower



8 Hotel YX

Figure No.	Scale	Figure Title
2.3	N/A	Existing Condition of the Application Site and Surrounding Context
ARUP	Date June 2026	Source Image Source: Site Photos Taken in June 2026

OTHER SPECIFIED USES

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
<u>For “Business” Only</u> Schedule I: for open-air development or for building other than industrial or industrial-office building^a	
Ambulance Depot Commercial Bathhouse/Massage Establishment Eating Place Educational Institution Exhibition or Convention Hall Government Use (Police Reporting Centre, Post Office only) Government Refuse Collection Point (on land designated “OU(B)5” only) Information Technology and Telecommunications Industries Institutional Use (not elsewhere specified) Library Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods^a) Off-course Betting Centre Office Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Recyclable Collection Centre Religious Institution Research, Design and Development Centre School (excluding free-standing purpose-designed building and kindergarten) Shop and Services Training Centre Utility Installation for Private Project	Broadcasting, Television and/or Film Studio Cargo Handling and Forwarding Facility Government Refuse Collection Point (not elsewhere specified) Government Use (not elsewhere specified) Hotel Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Non-polluting Industrial Use (not elsewhere specified) Petrol Filling Station School (not elsewhere specified) Social Welfare Facility (excluding those involving residential care) Warehouse (excluding Dangerous Goods Godown) Wholesale Trade

(Please see next page)

Figure No.	Scale	Figure Title
3.1a	N/A	Extracted Notes of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – “OU(B)1” Zone (1 of 5)
ARUP	Date	Source
	June 2026	Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
-----------------------------------	---

For "Business" Only (Cont'd)

Schedule II: for industrial or industrial-office building @

Ambulance Depot	Broadcasting, Television and/or Film Studio
Art Studio (excluding those involving direct provision of services or goods)	Cargo Handling and Forwarding Facility (Container Freight Station, free-standing purpose-designed Logistics Centre only)
Bus Depot	Industrial Use (not elsewhere specified)
Cargo Handling and Forwarding Facility (not elsewhere specified)	Mass Transit Railway Vent Shaft and/or Other Structures above Ground Level other than Entrances
Eating Place (Canteen only)	Off-course Betting Centre
Government Refuse Collection Point	Office (not elsewhere specified)
Government Use (not elsewhere specified)	Petrol Filling Station
Information Technology and Telecommunications Industries	Place of Recreation, Sports or Culture (not elsewhere specified)
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods ^Δ)	Private Club
Office (excluding those involving direct provision of customer services or goods)	Shop and Services (not elsewhere specified) (ground floor only except Ancillary Showroom [#] which may be permitted on any floor)
Public Convenience	Vehicle Repair Workshop
Public Transport Terminus or Station	Wholesale Trade
Public Utility Installation	
Public Vehicle Park (excluding container vehicle)	
Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation	
Recyclable Collection Centre	
Research, Design and Development Centre	
Shop and Services (Motor Vehicle Showroom on ground floor, Service Trades only)	
Utility Installation for Private Project	
Warehouse (excluding Dangerous Goods Godown)	

In addition, for building without industrial undertakings involving offensive trades or the use/storage of Dangerous Goods^Δ, the following use is always permitted:

Office

(Please see next page)

Figure No. 3.1b	Scale N/A	Figure Title Extracted Notes of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – "OU(B)1" Zone (2 of 5)
ARUP	Date June 2026	Source Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41

OTHER SPECIFIED USES (Cont'd)

For "Business" Only (Cont'd)

In addition, the following uses are always permitted in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:

In addition, the following use may be permitted with or without conditions on application to the Town Planning Board in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building provided that the use is separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:

Commercial Bathhouse/Massage Establishment
Eating Place
Educational Institution
Exhibition or Convention Hall
Institutional Use (not elsewhere specified)
Library
Off-course Betting Centre
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Religious Institution
School (excluding kindergarten)
Shop and Services
Training Centre

Social Welfare Facility (excluding those involving residential care)

- @ An industrial or industrial-office building means a building which is constructed for or intended to be used by industrial or industrial-office purpose respectively as approved by the Building Authority.
- △ Dangerous Goods refer to substances classified as Dangerous Goods and requiring a licence for their use/storage under the Dangerous Goods Ordinance (Cap.295).
- # Ancillary Showroom requiring planning permission refers to showroom use of greater than 20% of the total usable floor area of an industrial firm in the same premises or building.

Planning Intention

This zone is intended primarily for general business uses. A mix of information technology and telecommunications industries, non-polluting industrial, office and other commercial uses are always permitted in new "business" buildings. Less fire hazard-prone office use that would not involve direct provision of customer services or goods to the general public is always permitted in existing industrial or industrial-office buildings.

(Please see next page)

Figure No.	Scale	Figure Title
3.1c	N/A	Extracted Notes of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – "OU(B)1" Zone (3 of 5)
ARUP	Date	Source
	June 2026	Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41

OTHER SPECIFIED USES (Cont'd)

For "Business" Only (Cont'd)

Remarks

- (1) On land designated "Other Specified Uses" annotated "Business" ("OU(B)") and "OU(B)1" to "OU(B)5", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 12.0, or the plot ratio of existing building(s), whichever is the greater.
- (2) On land designated "OU(B)" and "OU(B)1" to "OU(B)5", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum building heights in terms of metres above Principal Datum (mPD) as stipulated on the Plan, or the height of the existing building, whichever is the greater.
- (3) On land demarcated for a 15m-wide building gap within parts of the sites at 8 and 10 Cheung Yue Street as shown on the Plan, no new development (except minor addition, alteration and/or modification not affecting the building height of existing building) or redevelopment of an existing building shall exceed the maximum building height of 20mPD.
- (4) On land designated "OU(B)1", a minimum setback of 2m from the lot boundary abutting Castle Peak Road shall be provided.
- (5) On land designated "OU(B)2", a minimum setback of 3.5m from the lot boundary abutting Castle Peak Road shall be provided.
- (6) On land designated "OU(B)3", a minimum setback of 3.5m from the lot boundary abutting Cheung Shun Street or Cheung Yue Street shall be provided.
- (7) On land designated "OU(B)4", a minimum setback of 5m from the lot boundary abutting Cheung Yee Street or Cheung Yue Street shall be provided.
- (8) On land designated "OU(B)5", a refuse collection point shall be provided and included in calculating the maximum plot ratio.
- (9) In determining the relevant maximum plot ratio for the purpose of paragraph (1), any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

(Please see next page)

<i>Figure No.</i>	<i>Scale</i>	<i>Figure Title</i>
3.1d	N/A	Extracted Notes of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – "OU(B)1" Zone (4 of 5)
ARUP	<i>Date</i>	<i>Source</i>
	June 2026	Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41

OTHER SPECIFIED USES (Cont'd)

For “Business” Only (Cont'd)

Remarks (Cont'd)

- (10) Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the plot ratio for the building on land to which paragraph (1) applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum plot ratio specified in paragraph (1) above may thereby be exceeded.
- (11) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/building height/building gap restrictions stated in paragraphs (1) to (3) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.
- (12) Under exceptional circumstances, for a development or redevelopment proposal, minor relaxation of the setback requirements stated in paragraphs (4) to (7) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

<i>Figure No.</i>	<i>Scale</i>	<i>Figure Title</i>
3.1e	N/A	Extracted Notes of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – “OU(B)1” Zone (5 of 5)
ARUP	<i>Date</i>	<i>Source</i>
	June 2026	Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41

- 8.5.3 There are three sub-areas, covering three existing religious institutions (i.e. Fuk Tak Buddhist Association (“G/IC(1)”), Wong Tai Sin Yuen Ching Kwok (“G/IC(2)”) and Tze Yeung Tung Temple (“G/IC(3)”), under this zoning. The development intensity and building height restrictions are stipulated in the Notes of the Plan. These restrictions are intended to contain the three religious institutions to their existing/approved uses and intensity within the existing premises, and to control the building intensity/land uses of any further development/redevelopment.
- 8.5.4 Developments and redevelopments within this zone are subject to building height restrictions in terms of number of storeys (excluding basement floors(s)) or mPD as stipulated on the Plan or in the Notes of the Plan, or the height of the existing building, whichever is the greater. Building height restrictions for most of the “G/IC” sites are stipulated in terms of number of storeys except the relatively high-rise GIC uses, such as Cheung Sha Wan Government Offices, Caritas Medical Centre and Sunrise House, so as to reflect the existing building height and/or to provide a more clear control over the building height profile.
- 8.5.5 In order to enhance the local air ventilation performance and to facilitate road widening and streetscape improvement of the Cheung Sha Wan Industrial/Business Area, a minimum building setback of 3.5m from the lot boundary abutting Castle Peak Road shall be provided within the “G/IC(4)” sub-area.

8.6 Open Space (“O”) - Total Area 24.61 ha

- 8.6.1 This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public.
- 8.6.2 Existing major open spaces include Tung Chau Street Park to the east of Nam Cheong Estate, Sham Shui Po Park at Lai Chi Kok Road, Sham Shui Po Park Stage 2 to the east of Lai Kok Estate, Cheung Sha Wan Playground at the junction of Cheung Sha Wan Road and Fat Tseung Street, Sham Shui Po Sports Ground at Hing Wah Street, Maple Street Playground at Wong Chuk Street, Po On Road Playground and Hing Wah Street Playground to the west of Un Chau Estate.
- 8.6.3 Additional sites have been reserved for the development of open spaces, including two sites at Lai Chi Kok Road and Hing Wah Street which are currently occupied by Cheung Sha Wan Temporary Wholesale Poultry Market, and a site at Cheung Shun Street.

8.7 Other Specified Uses (“OU”) - Total Area 26.26 ha

- 8.7.1 This zone is intended primarily to provide/reserve land for specified purposes/uses.

Figure No.	Scale	Figure Title
3.1f	N/A	Extracted Explanatory Statement of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – “OU(B)1” Zone (1 of 3)
ARUP	Date	Source
	June 2026	Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41

- 8.7.2 The existing Roman Catholic Cemetery to the north of Ching Cheung Road and the petrol filling stations at Un Chau Street, Castle Peak Road, Ching Cheung Road, Tai Po Road and Lai Chi Kok Road are within this zoning.
- 8.7.3 The entire Cheung Sha Wan Industrial/Business Area, bounded by Ching Cheung Road to the north, Yu Chau West Street and Wing Ming Street to the east, Lai Chi Kok Road to the south and Kom Tsun Street to the west, is zoned “OU(B)”. Developments are restricted to a maximum plot ratio of 12.0. This zone is intended primarily for general business uses. A mix of information technology and telecommunications industries, non-polluting industrial, office and other commercial uses are always permitted in new “business” buildings. Less fire hazard-prone office use that would not involve direct provision of customer services or goods to the general public is always permitted in existing industrial or I-O buildings. As it is not possible to phase out existing polluting and hazardous industrial uses all at once, it is necessary to ensure compatibility of the uses within the same industrial or I-O building and in the Cheung Sha Wan Industrial/Business area until the area is transformed to cater for the new non-polluting business uses. The setting back of buildings to cater for the future increase in traffic demand is also required. Development within this zone should make reference to the relevant Town Planning Board Guidelines. In the circumstances set out in Regulation 22 of the B(P)R, the above specified maximum plot ratio may be increased by what is permitted to be exceeded under Regulation 22. This is to maintain flexibility for unique circumstances such as dedication of part of a site for road widening or public uses.
- 8.7.4 To enhance air ventilation of the Cheung Sha Wan Industrial/Business Area, Castle Peak Road, Cheung Shun Street, Cheung Yue Street and Cheung Yee Street shall be widened. Since 2002, for street widening and streetscape improvement, building setback requirements of 2 to 5m along these streets have been incorporated in the Cheung Sha Wan and Sham Shui Po Outline Development Plan according to the comments of the Transport Department. To improve east-west air path as well as to facilitate street widening and streetscape improvement, a building setback of 2m from the lot boundary abutting Castle Peak Road within the “OU(B)1” sub-area; a 3.5m setback from the lot boundary abutting Castle Peak Road within the “OU(B)2” sub-area; a 3.5m setback from the lot boundary abutting Cheung Shun Street/Cheung Yue Street within the “OU(B)3” sub-area; and a 5m setback from the lot boundary abutting Cheung Yee Street/Cheung Yue Street within the “OU(B)4” sub-area shall be provided. Within the “OU(Petrol Filling Station)” zone, a minimum setback of 3.5m from the northern lot boundary abutting Castle Peak Road and a minimum setback of 2m from the southern lot boundary abutting Castle Peak Road shall also be provided.
- 8.7.5 Within the “OU(B)” zone, developments and redevelopments to the south of Cheung Sha Wan Road are subject to a maximum building height of 120mPD, whereas those to the north of Cheung Sha Wan Road are subject to a maximum building height of 130mPD.

<i>Figure No.</i>	<i>Scale</i>	<i>Figure Title</i>
3.1g	N/A	Extracted Explanatory Statement of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – “OU(B)1” Zone (2 of 3)
ARUP	<i>Date</i>	<i>Source</i>
	June 2026	Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41

8.7.6 Within the “OU(B)5” sub-area at the junction of Yu Chau West Street and Wing Hong Street, a Government Refuse Collection Point shall be provided. For the purposes of plot ratio calculation, any floor space that is constructed or intended for use solely as refuse collection point shall be included.

8.7.7 Taking into account the recommendations of the AVA, a 15m-wide building gap above 20mPD at an area covering the footpath between Sham Shui Po Sports Ground and Cheung Yue Street and adjoining parts of 8 and 10 Cheung Yue Street is demarcated on the Plan to create a new air path to facilitate the penetration of south-westerly wind.

8.8 Green Belt (“GB”) - Total Area 50.70 ha

The planning intention of this zone is primarily for the conservation of the existing natural environment amid the built-up areas/at the urban fringe, to safeguard it from encroachment by urban type development, and to provide additional outlets for passive recreational activities. There is a general presumption against development within this zone. This zoning mainly covers the foothills to the north of Ching Cheung Road and Tai Po Road where the steep topography renders development impossible. The foothills are well-wooded slopes providing a green backdrop to the Area. Development within this zone will be carefully controlled and development proposals will be assessed on individual merits taking into account relevant Town Planning Board Guidelines.

8.9 Minor Relaxation Clause

8.9.1 For the zone(s) where minor relaxation of relevant restriction(s) is applicable, based on individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/GFA/building height/site coverage/building gap restrictions and any reduction in the total GFA provided for GIC facilities as stated in the relevant paragraph(s) above or as shown on the Plan may be considered by the Board on application under section 16 of the Ordinance. The criteria given in paragraph 7.6 above would be relevant for the assessment of minor relaxation of building height restrictions. Each application will be considered on its own merits.

8.9.2 However, for any existing building with plot ratio/GFA/building height/site coverage already exceeding the relevant restrictions as stipulated on the Plan or in the Notes of the Plan, there is a general presumption against such application for minor relaxation unless under exceptional circumstances.

8.9.3 For the zone(s) where minor relaxation of relevant restriction(s) is applicable, under exceptional circumstances, minor relaxation of NBA restriction/setback requirement as stated in the relevant paragraph(s) above may be considered by the Board on application under section 16 of the Ordinance. Without compromising the intention of the NBAs stipulated in the Notes of the Plan to enhance the local air ventilation

<i>Figure No.</i>	<i>Scale</i>	<i>Figure Title</i>
3.1h	N/A	Extracted Explanatory Statement of the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 – “OU(B)1” Zone (3 of 3)
ARUP	<i>Date</i>	<i>Source</i>
	June 2026	Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41



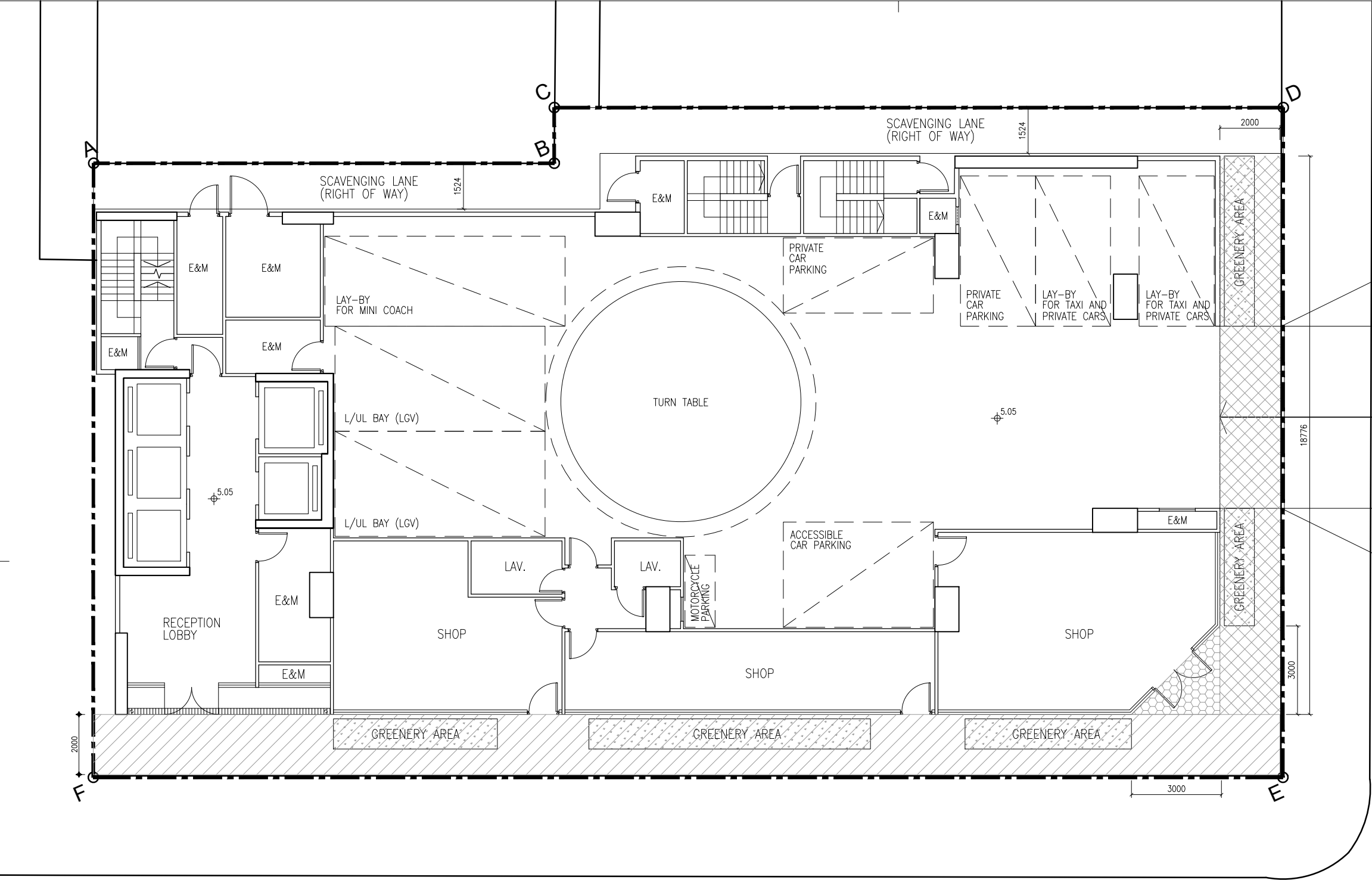
LEGEND

 Application Site

Figure No.	Scale	Figure Title
3.2	N/A	Extracted of Kowloon Planning Area No. 5 Cheung Sha Wan & Sham Shui Po (Northern Part) ODP No. D/K5A/1B
ARUP	Date	Source
	June 2026	Extracted of Kowloon Planning Area No. 5 Cheung Sha Wan & Sham Shui Po (Northern Part) ODP No. D/K5A/1B

Appendix A

Architectural Layout of the Proposed Development



TAI NAN WEST STREET

CASTLE PEAK ROAD

- 2m WIDE DEDICATION ABOVE GROUND SETBACK FOR PAVEMENT ALONG TAI NAN WEST STREET (ODP)
- 3m WIDE VOLUNTARY CORNER SPLAY AT THE INTERSECTION OF CASTLE PEAK ROAD AND TAI NAN WEST STREET
- 2m WIDE ABOVE GROUND SETBACK FROM CASTLE PEAK ROAD (OZP)
- GREENERY AREA

REMARKS: TOTAL AREA OF DEDICATION = 42.052 m²
(REFER TO CAP. 123F BUILDING (PLANNING) REGULATION AND PNAP, APP-108 – FOR DEDICATION OF SET BACK AREA AT STREET LEVEL, BONUS PLOT RATIO THUS APPROVABLE IS FIVE TIMES THE AREA DEDICATED.)



Application Site

Rev.	Description	Drawn	Checked	Approved	Date
-	-	-	-	-	-

Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

B.D. Ref.	-
F.S.D. Ref.	-
D.L.O. Ref.	-
Drawn	-
Checked	-
Approved	-



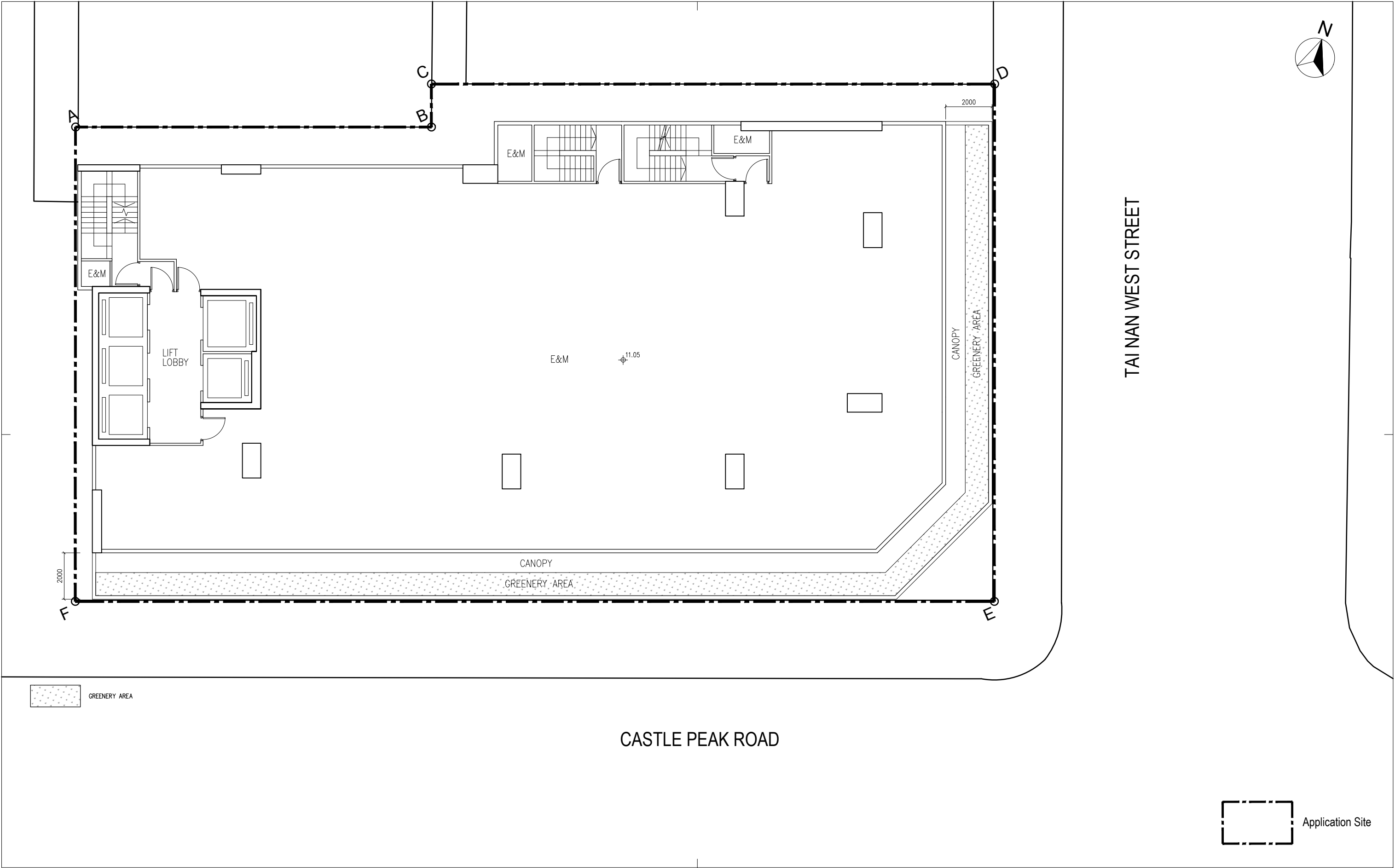
呂元祥建築師事務所

Project Title
APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN

Drawing Title
GROUND FLOOR PLAN

Project No.	Scale
25143KL	1:150
Drawing No.	Issue Date
S-01	JUN, 2026
Cad File No.	-

Drawing Purpose



Rev.	Description	Drawn	Checked	Approved	Date
-	-	-	-	-	-

Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

B.D. Ref.	-
F.S.D. Ref.	-
D.L.O. Ref.	-
Drawn	- Date -
Checked	- Date -
Approved	- Date -



呂元祥建築師事務所

Project Title
APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN

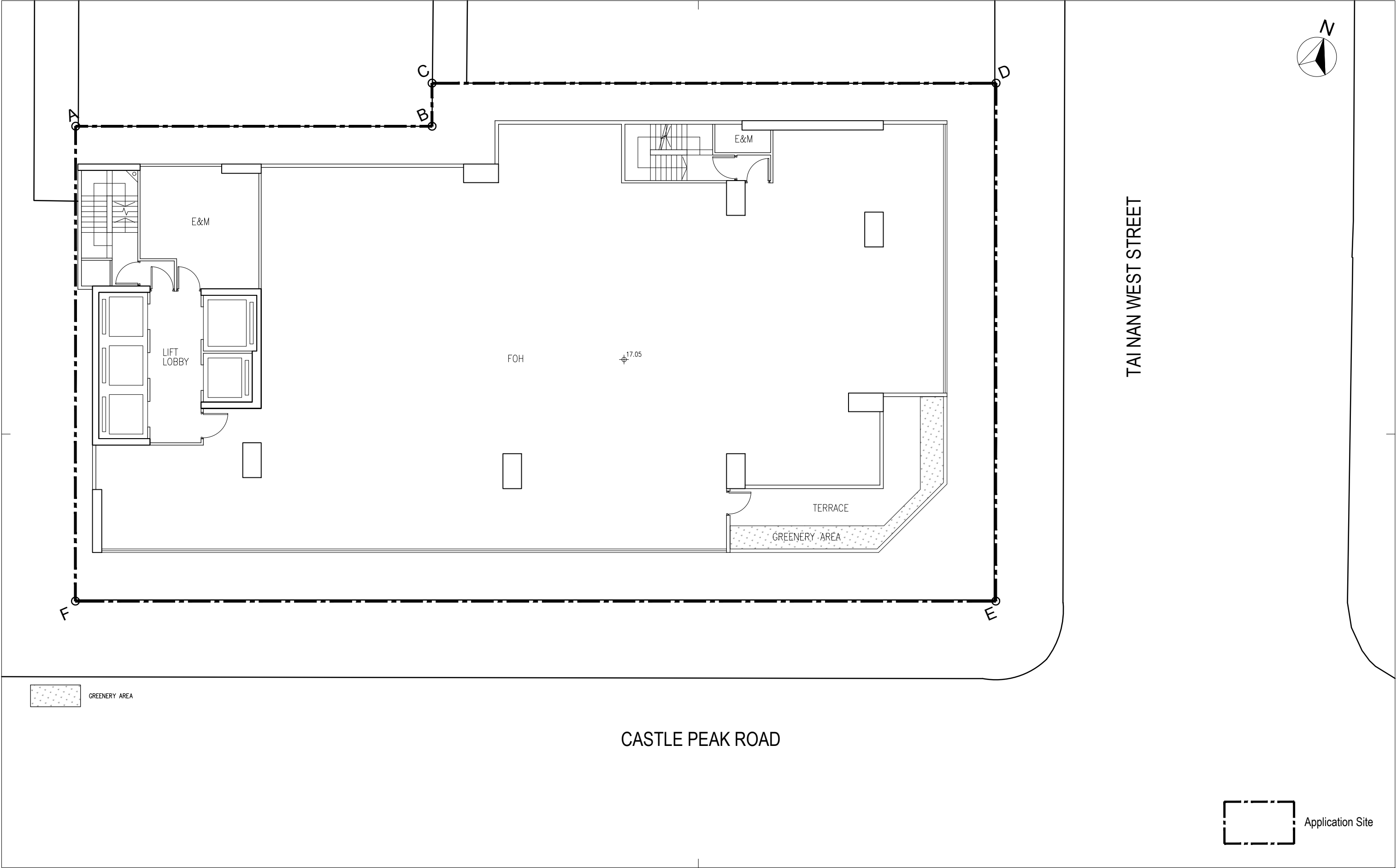
Drawing Title
1ST FLOOR PLAN

Project No.	Scale	1:150
25143KL	Issue Date	JUN, 2026
Drawing No.		S-02
Cad File No.	-	-

Drawing Purpose



Application Site



Rev.	Description	Drawn	Checked	Approved	Date
-	-	-	-	-	-

Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

B.D. Ref.	-
F.S.D. Ref.	-
D.L.O. Ref.	-
Drawn	- Date -
Checked	- Date -
Approved	- Date -



呂元祥建築師事務所

Project Title
APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN

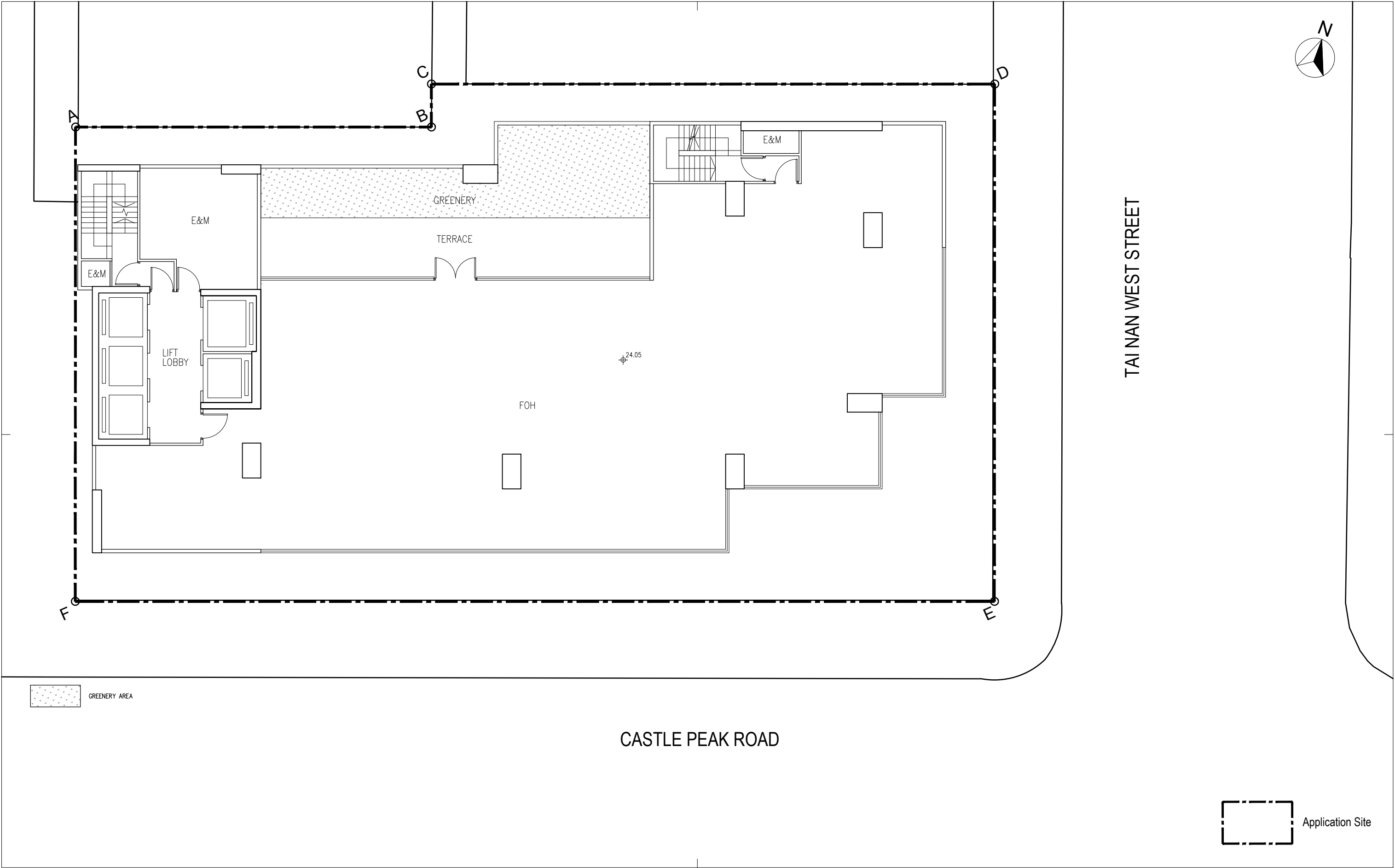
Drawing Title
2ND FLOOR PLAN

Project No.	Scale	1:150
25143KL	Issue Date	JUN, 2026
Drawing No.		S-03
Cad File No.	-	-

Drawing Purpose



Application Site



Rev.	Description	Drawn	Checked	Approved	Date
-	-	-	-	-	-

Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

B.D. Ref.	-
F.S.D. Ref.	-
D.L.O. Ref.	-
Drawn	- Date -
Checked	- Date -
Approved	- Date -



呂元祥建築師事務所

Project Title
APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN

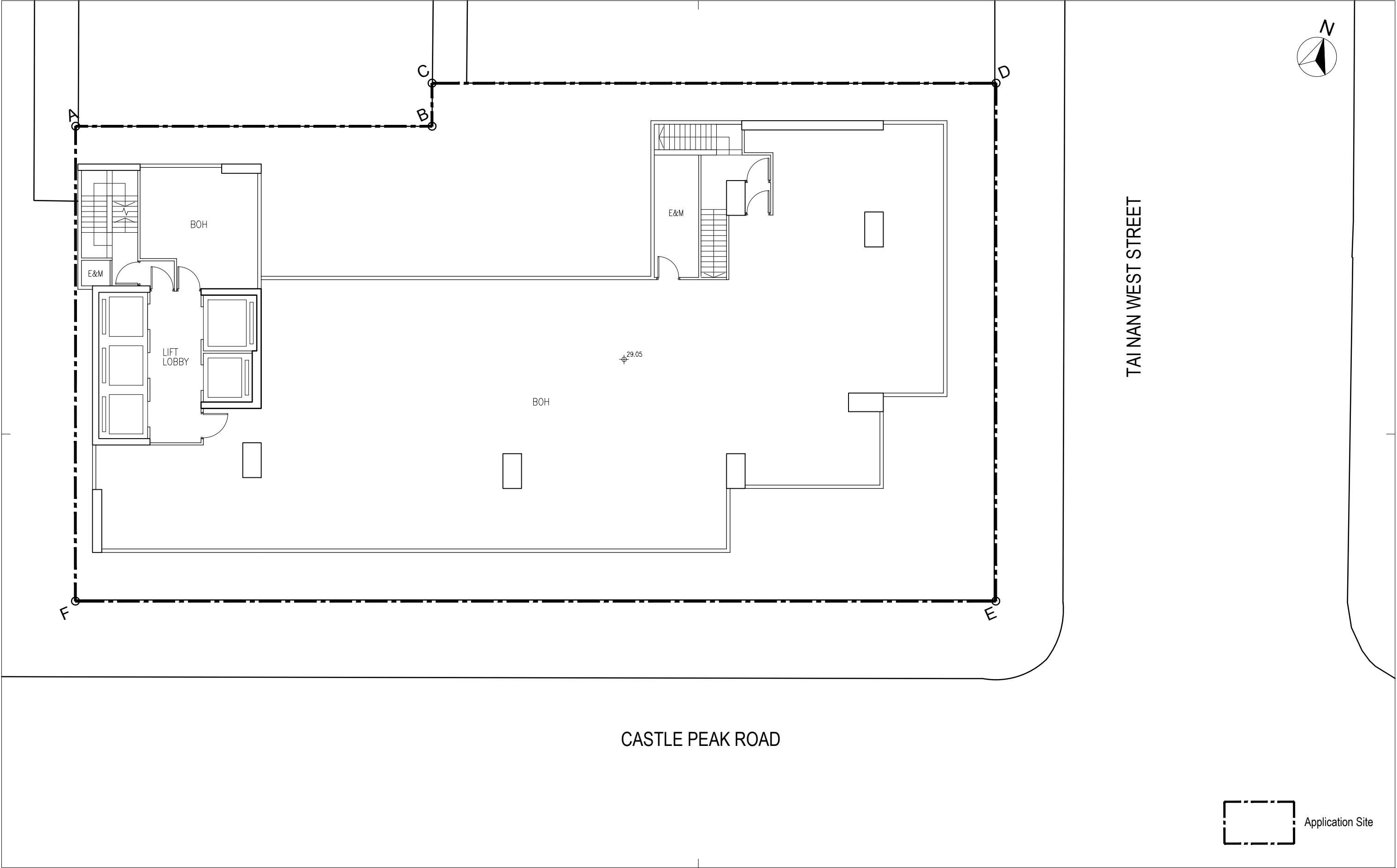
Drawing Title
3RD FLOOR PLAN

Project No.	Scale	1:150
25143KL	Issue Date	JUN, 2026
Drawing No.		S-04
Cad File No.	-	-

Drawing Purpose



Application Site



Rev.	Description	Drawn	Checked	Approved	Date
-	-	-	-	-	-

Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

B.D. Ref.	-
F.S.D. Ref.	-
D.L.O. Ref.	-
Drawn	- Date -
Checked	- Date -
Approved	- Date -



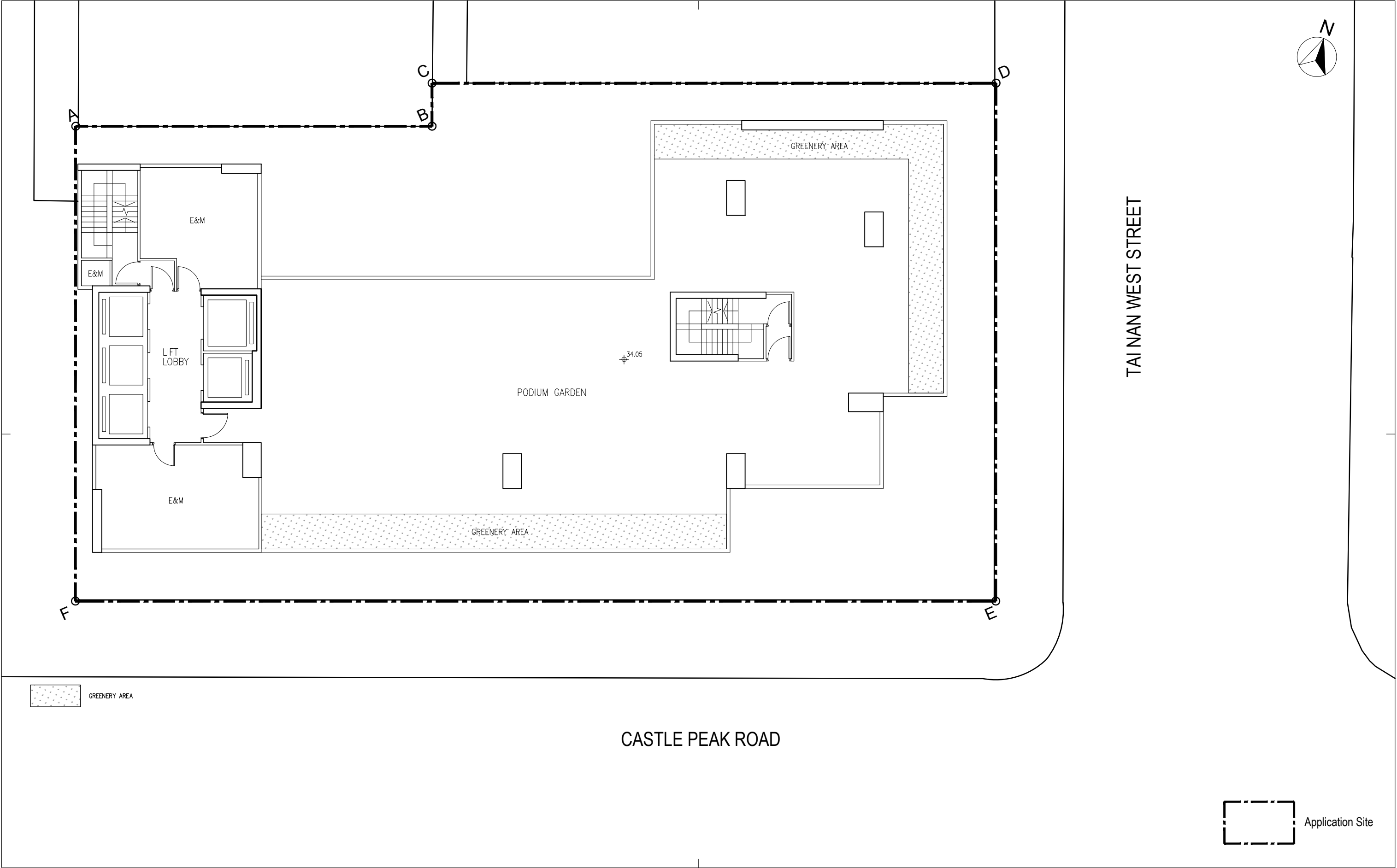
呂元祥建築師事務所

Project Title
APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN

Drawing Title
4TH FLOOR PLAN

Project No.	Scale	1:150
25143KL	Issue Date	JUN, 2026
Drawing No.		S-05
Cad File No.	-	-

Drawing Purpose



Rev.	Description	Drawn	Checked	Approved	Date
-	-	-	-	-	-

Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

B.D. Ref.	-
F.S.D. Ref.	-
D.L.O. Ref.	-
Drawn	- Date -
Checked	- Date -
Approved	- Date -



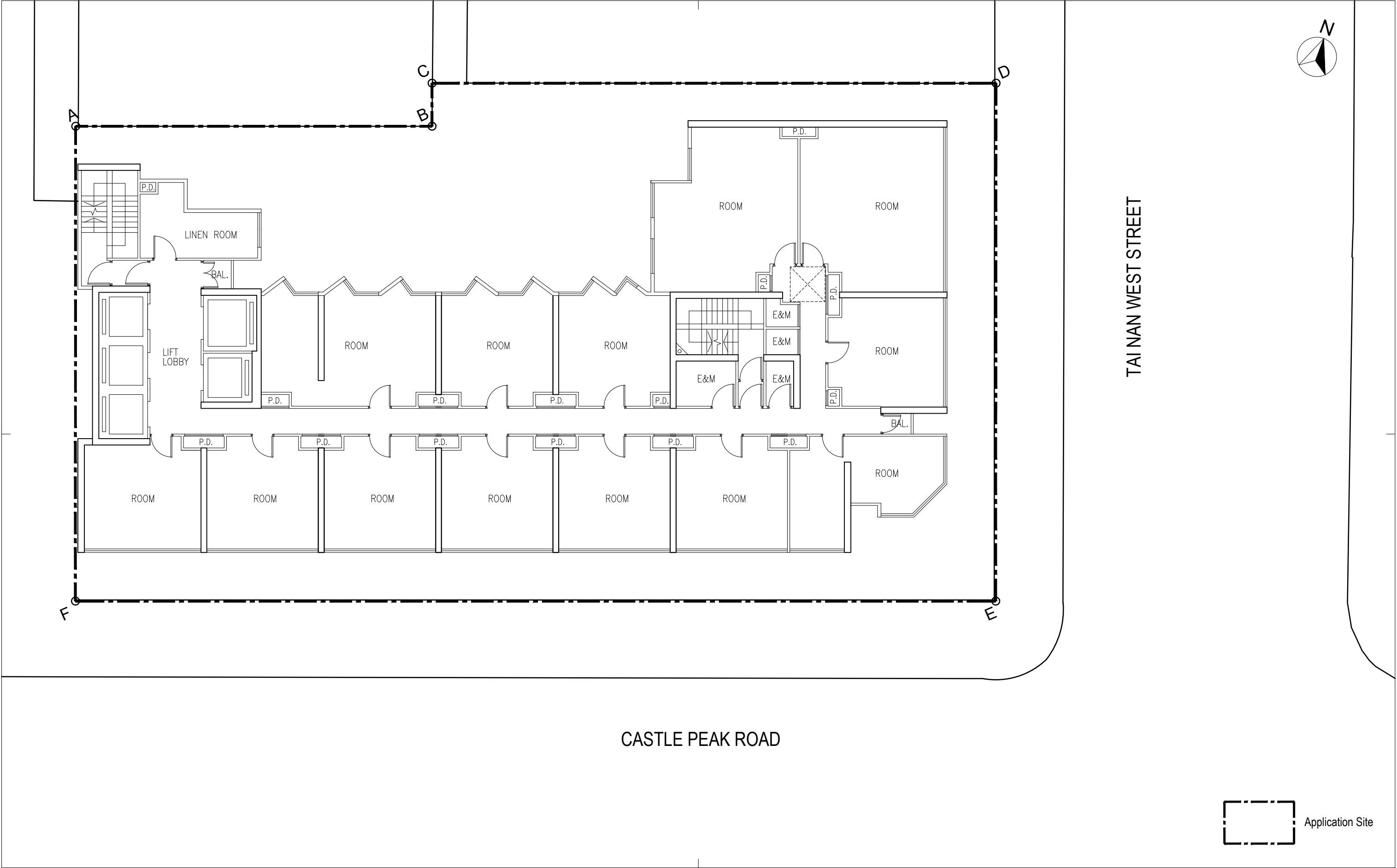
呂元祥建築師事務所

Project Title
APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN

Drawing Title
5TH FLOOR PLAN

Project No.	Scale	1:150
25143KL	Issue Date	JUN, 2026
Drawing No.		S-06
Cad File No.	-	-

Drawing Purpose



Rev.	Description	Drawn	Checked	Approved	Date
-	-	-	-	-	-

Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

B.D. Ref.	-
F.S.D. Ref.	-
D.L.O. Ref.	-
Drawn	- Date -
Checked	- Date -
Approved	- Date -



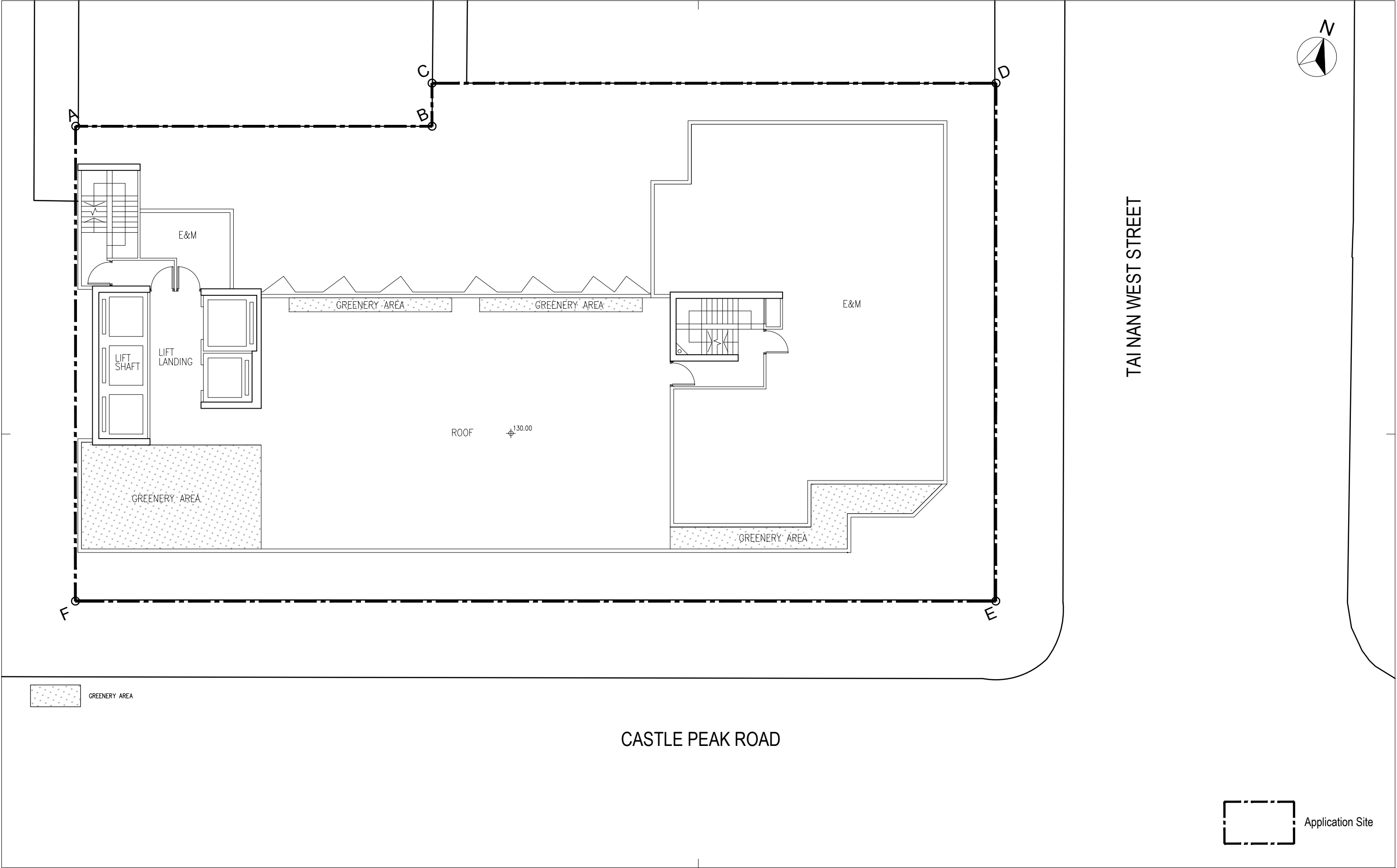
呂元祥建築師事務所

Project Title
APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN

Drawing Title
TYPICAL FLOOR PLAN
6/F - 11/F, 13/F - 29/F

Project No.	Scale	1:150
25143KL	Issue Date	JUN, 2026
Drawing No.		S-07
Cad File No.	-	-

Drawing Purpose



Rev.	Description	Drawn	Checked	Approved	Date
-	-	-	-	-	-

Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

B.D. Ref.	-
F.S.D. Ref.	-
D.L.O. Ref.	-
Drawn	- Date -
Checked	- Date -
Approved	- Date -



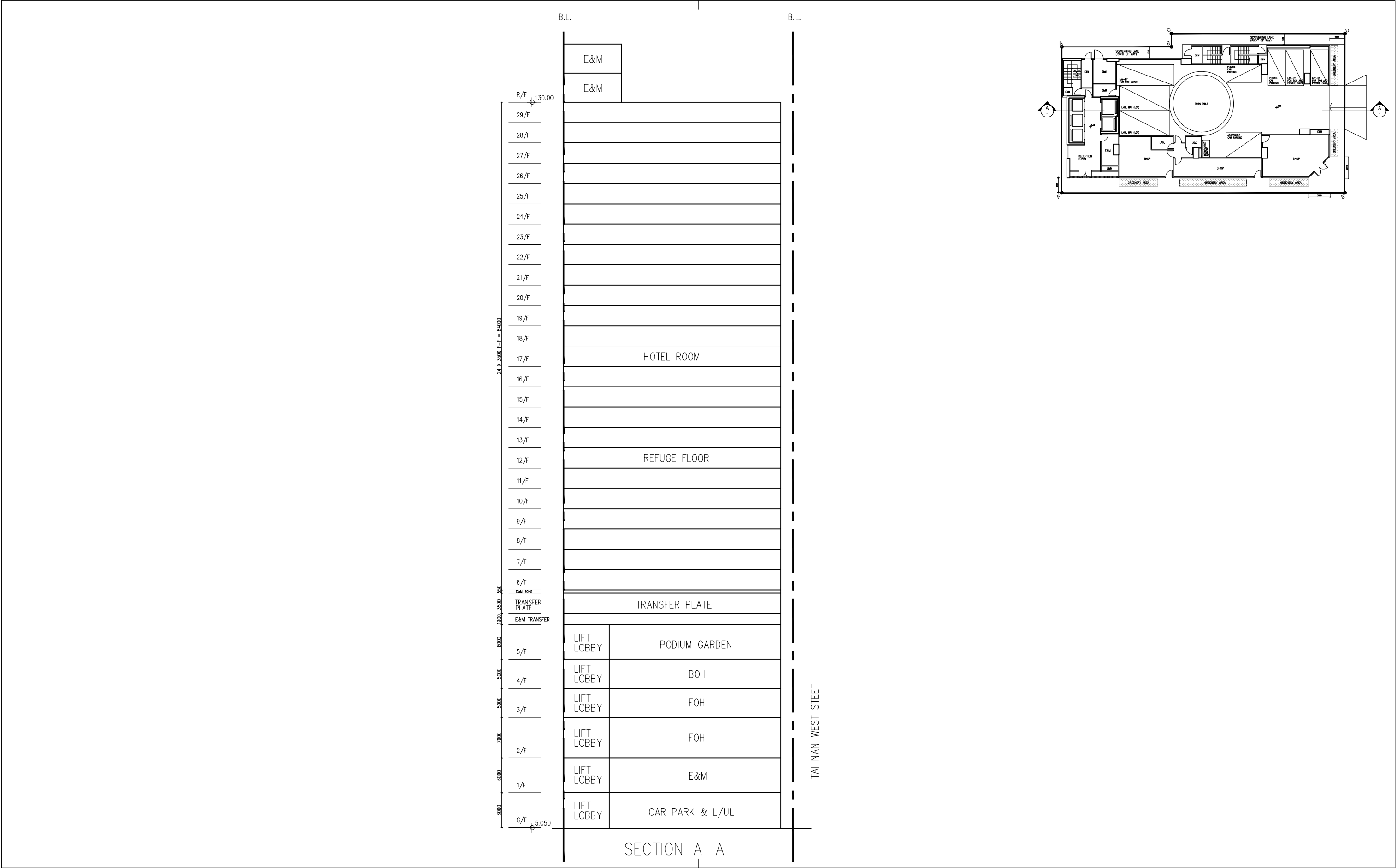
呂元祥建築師事務所

Project Title
APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN

Drawing Title
ROOF FLOOR PLAN

Project No.	Scale	1:150
25143KL	Issue Date	JUN, 2026
Drawing No.		S-08
Cad File No.	-	-

Drawing Purpose



Rev.	Description	Drawn	Checked	Approved	Date
-	-	-	-	-	-

B.D. Ref.	-
F.S.D. Ref.	-
D.L.O. Ref.	-
Drawn	-
Checked	-
Approved	-



呂元祥建築師事務所

Project Title
APPLICATION FOR PLANNING PERMISSION
UNDER SECTION 16 OF THE TOWN PLANNING
ORDINANCE (CAP. 131) FOR PROPOSED HOTEL
USE AND MINOR RELAXATION OF PLOT RATIO
RESTRICTION AT "OTHER SPECIFIED USES"
ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 -
648A CASTLE PEAK ROAD, CHEUNG SHA WAN

Drawing Title
SCHEMATIC SECTION

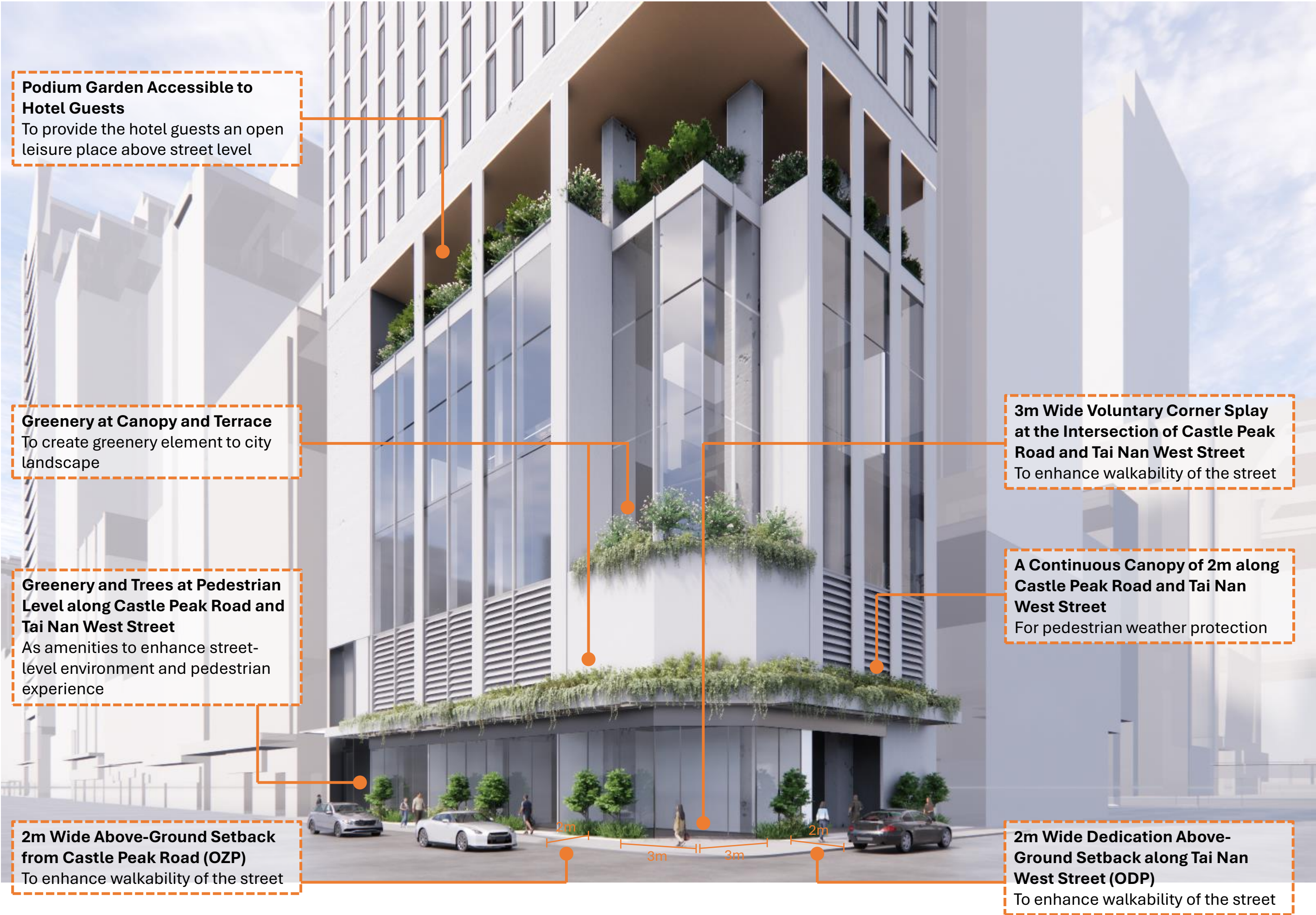
Project No.	Scale	1:150
25143KL	Issue Date	JUN, 2026
Drawing No.		S-09
Cad File No.	-	-

Drawing Purpose

Appendix B

Summary of Planning and Design Merits

Summary of Planning and Design Merits



Podium Garden Accessible to Hotel Guests
To provide the hotel guests an open leisure place above street level

Greenery at Canopy and Terrace
To create greenery element to city landscape

Greenery and Trees at Pedestrian Level along Castle Peak Road and Tai Nan West Street
As amenities to enhance street-level environment and pedestrian experience

2m Wide Above-Ground Setback from Castle Peak Road (OZP)
To enhance walkability of the street

3m Wide Voluntary Corner Splay at the Intersection of Castle Peak Road and Tai Nan West Street
To enhance walkability of the street

A Continuous Canopy of 2m along Castle Peak Road and Tai Nan West Street
For pedestrian weather protection

2m Wide Dedication Above-Ground Setback along Tai Nan West Street (ODP)
To enhance walkability of the street

Appendix C

Traffic Impact Assessment

**Application for Planning Permission
Under Section 16 of the Town
Planning Ordinance (Cap. 131) for
Proposed Hotel Use and Minor
Relaxation of Plot Ratio Restriction at
“Other Specified Uses” Annotated
“Business (1)” Zone at No. 646-648A
Castle Peak Road, Cheung Shan Wan,
Kowloon**

Traffic Impact Assessment Report

1st | June 2026

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 315341-02

Ove Arup & Partners Hong Kong Ltd
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong
www.arup.com

ARUP

Contents

	Page
1 INTRODUCTION	1
1.1 Background	1
1.2 Objectives of this Report	1
1.3 Scope of Study	2
1.4 Structure of the Report	2
2 EXISTING TRAFFIC CONDITION	3
2.1 Site Characteristics	3
2.2 Existing Road Network	3
2.3 Existing Junction Performance	3
2.4 Public Transport Facilities	4
3 THE SUBJECT DEVELOPMENT	9
3.1 Development Schedule	9
3.2 Proposed Vehicular Access Arrangement	9
3.3 Internal Transport Facilities Provision	9
3.4 Justifications on Internal Transport Facilities Provision	10
3.5 Swept Path Assessment	11
4 TRAFFIC IMPACT ASSESSMENT	12
4.1 Trip Generation and Attraction of Proposed Development	12
4.2 Adjacent Developments	13
4.4 Assessment Scenarios	15
4.5 Junction Capacity Assessment	16
5 CONCLUSION	17
5.1 Summary	17
5.2 Conclusion	17

Figures

Figure 1.1	Location of the Proposed Development and its Environs
Figure 2.1	Location of Surveyed Junctions in the Vicinity of Proposed Development
Figure 2.2	Year 2026 Existing Traffic Flow
Figure 2.3	Public Transport Facilities in the Vicinity of the Proposed Developments
Figure 3.1	Proposed Modification of Existing Road Marking and Traffic Sign at Tai Nan West Street
Figure 3.2	Ingress and Egress Vehicular Routes of Proposed Development
Figure 3.3	Proposed Layout for G/F
Figure 3.4	Turntable Arrangement for 12m Long Coach
Figure 3.5	Turntable Arrangement for 11m Long HGV
Figure 3.6	Swept Path Analysis for Mini Coach (Approaching/ Leaving)
Figure 3.7	Swept Path Analysis for 7m Long Light Goods Vehicle (Approaching/ Leaving)
Figure 3.8	Swept Path Analysis for 5m Long Private Car (Approaching/ Leaving)
Figure 3.9	Swept Path Analysis for 5m Long Private Car (Approaching/ Leaving)
Figure 4.1	Year 2033 Reference Traffic Flow
Figure 4.2	Year 2033 Design Traffic Flow

Junction Calculation Sheet

1 INTRODUCTION

1.1 Background

- 1.1.1 Pursuant to Section 16 of the Town Planning Ordinance (TPO), this Traffic Impact Assessment (TIA) report is prepared and submitted on behalf of Treasure Arts International Group Limited ("the Applicant") to seek approval for the proposed hotel use and minor relaxation of plot ratio (PR) restriction at Nos. 646-648A Castle Peak Road, Cheung Sha Wan, Kowloon ("the Application Site"), which was a vacant site previously occupied by a pre-1987 industrial building (IB) until its demolition. The location of Application Site is shown in **Figure 1.1**.
- 1.1.2 Located within the Cheung Sha Wan Industrial/Business Area, the Application Site is currently zoned "Other Specified Uses" annotated "Business (1)" ("OU(B)1") on the Approved Cheung Sha Wan Outline Zoning Plan No. S/K5/41 ("the OZP"). According to the Notes for the "OU(B)" zone of the OZP, 'Hotel' is a Column 2 use under Schedule I for building other than industrial or industrial-office building, which requires planning permission from the Town Planning Board (TPB). According to the Plan and Remark (1) of the Notes for the "OU(B)1" zone, the Application Site is subject to a maximum PR of 12 or the PR of the existing building, and a maximum BH of 130 meters above Principal Datum (mPD) or the height of the existing building, whichever is the greater. Under Remark (11) for the "OU(B)" zone, it is stated that minor relaxation of PR or BH restrictions may be considered by the TPB on application under Section 16 of the TPO.
- 1.1.3 The Application Site is the subject of an approved S16 planning application (Application No. A/K5/838) which was approved with conditions by the TPB on 24 December 2021 for proposed minor relaxation of PR restriction to 14.4 for permitted non-polluting industrial use, excluding industrial undertakings involving the use/storage of dangerous goods.
- 1.1.4 Arup Hong Kong Limited (Arup) was commissioned to carry out a TIA report in support of the Section 16 application to facilitate the proposal at the Application Site.

1.2 Objectives of this Report

- 1.2.1 The purpose of this report is to evaluate the potential traffic impact associated with conversion of the previously approved industrial development under the approved Planning Application No. A/K5/838 to the proposed hotel development at the Application Site.

1.3 Scope of Study

1.3.1 The tasks for this TIA study are outlined as follows:

- Carry out traffic surveys at critical junctions to appreciate current traffic condition;
- Update the inventory regarding traffic circulation patterns, traffic conditions, as well as the constraints of the existing road network in the vicinity;
- Review the access arrangement for the proposed development and to make recommendation;
- Recommend car parking provisions and goods vehicle loading/unloading arrangements and provide justifications to the proposed internal transport facilities, if applicable;
- Assess the volume of traffic likely to be generated by the proposed development;
- Set up the reference scenario should the Application Site be developed into industrial use under the approved Planning Application No. A/K5/838, i.e. reference scenario with the approved industrial development;
- Identify the likely change in traffic generation should the Application Site be developed into hotel development, i.e. design scenario with the proposed hotel development; and
- Compare the above two traffic scenarios for evaluation of the likely traffic impact, if any, associated with the proposed development.

1.4 Structure of the Report

1.4.1 The structure of this TIA report is as follows:

<u>Chapter</u>	<u>Title</u>	<u>Aims</u>
1	Introduction	Provide project background and scope of the Study
2	Existing Traffic Condition	Review and appreciate the existing traffic condition
3	The Subject Development	Provide information of the Proposed Development
4	Traffic Impact Assessment	Illustrate the results of Traffic Impact Assessment
5	Conclusion	Summarize the findings of this Study

2 EXISTING TRAFFIC CONDITION

2.1 Site Characteristics

- 2.1.1 The Application Site is located at No. 648 – 648A Castle Peak Road with a site area of approximate 856m². This corner site is bounded by Tai Nan West Street at its east and Castle Peak Road at its south. The north-west is surrounded by Easy Tower and Yick Tai Industrial Building respectively. **Figure 1.1** shows the location and the environs of the Application Site.

2.2 Existing Road Network

- 2.2.1 The Application Site is well-served by a comprehensive road network to and from all districts. Some major roads in the vicinity of the Application Site are listed as follows:

- Cheung Sha Wan Road is a primary distributor road with 3-traffic lanes configuration at each bound, performing an important distributor road for east-west direction, connecting Sham Shui Po District at its east and Tsuen Wan District at its west..
- As part of the long-formed Castle Peak Road district distributor, this section of Castle Peak Road is a 3-lane arrangement with single direction towards Kowloon. It functioned as a major connecting road with Nathan Road and other local roads at Sham Shu Po district.
- Tai Nan West Street is a one-way carriageway, connecting Cheung Sha Wan Road with King Lam Street.
- Wing Hong Street is a one-way carriageway, connecting Tai Nan West Street with Castle Peak Road.
- King Lam Street is a one-way carriageway, connecting Wing Ming Street and Yu Chau West Street with Wing Hong Street.

2.3 Existing Junction Performance

- 2.3.1 To appreciate the existing traffic conditions, comprehensive classified traffic counts were conducted at the following identified key junctions in the vicinity of the Application Site. Locations of these surveyed junctions are listed below and shown in **Figure 2.1**.

- | | | | |
|----|---|--|-----------------------|
| J1 | - | Tung Chau West Street / Castle Peak Road | (Signalized Junction) |
| J2 | - | Wing Hong Street / Yee Kuk West Street | (Priority Junction) |
| J3 | - | Castle Peak Road / Yee Kuk West Street | (Signalized Junction) |
| J4 | - | Cheung Sha Wan Road / Cheung Lai Street | (Signalized Junction) |
| J5 | - | Wing Hong Street / Tai Nan West Street | (Priority Junction) |

J6	-	Castle Peak Road / Tai Nan West Street	(Signalized Junction)
J7	-	Cheung Sha Wan Road / Tai Nan West Street	(Signalized Junction)
J8	-	Wing Hong Street / Yu Chau West Street	(Priority Junction)
J9	-	Yu Chau West Street / Castle Peak Road	(Priority Junction)
J10	-	Castle Peak Road / Fuk Wa Street	(Signalized Junction)
J11	-	Cheung Sha Wan Road / Cheung Wah Street	(Signalized Junction)

2.3.2 A manual traffic count survey were undertaken on a typical weekday during the periods 07:00-10:00 and 16:30-19:30 hours. The morning and evening peak hour were identified to be 09:00-10:00 and 17:00-18:00 respectively. The observed traffic flows during these peak hours are presented in **Figure 2.2**.

2.3.3 Junction capacity analysis was carried out at the identified key junctions in the vicinity of the Application Site. Results of the capacity assessment are shown in **Table 2.3.1** below.

Table 2.3.1 Year 2026 Existing Junction Performance

Junction		Type	Performance ⁽¹⁾	
			AM	PM
J1	Tung Chau West Street / Castle Peak Road	Signalized	53%	96%
J2	Wing Hong Street / Yee Kuk West Street	Priority	0.23	0.29
J3	Castle Peak Road / Yee Kuk West Street	Signalized	>100%	>100%
J4	Cheung Sha Wan Road / Cheung Lai Street	Signalized	>100%	82%
J5	Wing Hong Street / Tai Nan West Street	Priority	0.29	0.34
J6	Castle Peak Road / Tai Nan West Street	Signalized	56%	>100%
J7	Cheung Sha Wan Road / Tai Nan West Street	Signalized	50%	54%
J8	Wing Hong Street / Yu Chau West Street	Priority	0.36	0.35
J9	Yu Chau West Street / Castle Peak Road	Priority	0.62	0.50
J10	Castle Peak Road / Fuk Wa Street	Signalized	94%	>100%
J11	Cheung Sha Wan Road / Cheung Wah Street	Signalized	75%	81%

Notes:

(1) Figures shown represent "Reserve Capacity" (RC) in % for signalized junctions and "Design Flow Capacity" (DFC) ratio for priority junctions.

2.3.4 Results of the analysis indicate that the identified key junctions in the vicinity of the Application Site are currently operating satisfactorily during both morning and evening peak hours.

2.4 Public Transport Facilities

2.4.1 The Application Site is served by various modes of public transport services as shown in **Figure 2.3**. The MTR Lai Chi Kok Station is located approximately 100m southward to the Application Site, which is estimated to be a 2-minute walking journey. There are also number of franchised bus, Green Minibus (GMB) and Red Minibus (RMB) service routes operating within the surrounding road network. A

summary of the public transport services operating in the vicinity of the Application Site is provided in **Table 2.4.1**.

Table 2.4.1 Existing Franchised Bus and Public Light Bus Services

Route No.	Route Name	AM Peak Hour Headways	PM Peak Hour Headways
2A	Lok Wah - Mei Foo	12	10 to 12
2B	Chuk Yuen Estate - Cheung Sha Wan	30	30
2F	Tsz Wan Shan (North) - Cheung Sha Wan	20	20
2P	Cheung sha Wan – Tsz Wan Shan (North)	Weekday special buses	
2X	Choi Fook - Mei Foo	30	30
6	Star Ferry - Lai Chi Kok	10 to 13	9 to 12
6C	Kowloon City Ferry - Mei Foo	10	9 to 10
6D	Ngau Tau Kok - Mei Foo	15 to 20	12 to 20
30	Allway Gardens - Cheung Sha Wan	25 to 30	25 to 30
30X	Tsuen Wan (Allway Gardens) - Whampoa Garden	20 to 25	20 to 25
31B	Shek Lei (Tai Loong Street) - Olympic Station	12 to 20	12 to 15
32	Tsuen Wan (Shek Wai Kok) - Olympic Station	20 to 25	15 to 25
33A	Tsuen Wan (Nina Tower) - Mong Kok (Park Avenue)	20	17 to 20
35A	On Yam - Tsim Sha Tsui East	8 to 15	12 to 15
36A	Lei Muk Shue Estate Public Transport Interchange - Cheung Sha Wan (Sham Mong Road)	25	15 to 25
36B	Lei Muk Shue - Jordan (West Kowloon Station)	15 to 20	15
36X	Lei Muk Shue - Tsim Sha Tsui East (Mody Road)	Weekday special buses	
37	Olympic Station - Kwai Shing (Central)	15 to 20	13 to 20
40	Tsuen Wan (Belvedere Garden) - Laguna City	15	13
40A	Kwai Hing Station - Ping Tin	Weekday special buses	
42	Tsing Yi (Cheung Hong Estate) - Shun Lee	20	15 to 20
42A	Cheung Hang - Jordan (West Kowloon Station)	6 to 14	6 to 10
43C	Island Harbourview - Tsing Yi (Cheung Hang Estate)	-	15
44	Tsing Yi Estate - Mong Kong East Station	10 to 20	9 to 20
45	Kowloon City Ferry - Lai Yiu	25 to 30	30
46	Jordan (West Kowloon Station) - Lai Yiu	25 to 30	25 to 30
52P	So Kwun Wat – Mong Kok (Park Avenue)	Weekday special buses	
52X	So Kwun Wat - Mong Kok (Park Avenue)	15	15
58X	Tuen Mun (Leung King Estate) - Mong Kok East Station	8 to 12	5 to 12
59X	Lung Mun Oasis - Mong Kok East Station	8	11
60X	Tuen Mun Central - Jordan (West Kowloon Station)	8 to 15	7 to 13

Route No.	Route Name	AM Peak Hour Headways	PM Peak Hour Headways
66X	Tuen Mun (Tai Hing Estate) - Olympic Station	12 to 20	10 to 15
67X	Tuen Mun (Siu Hong Court) - Mong Kok East Station	15	9 to 20
68X	Yuen Long (West) - Mong Kok (Park Avenue)	25	20
69X	Tin Yiu - Jordan (West Kowloon Station)	20	20
72	Tai Wo - Cheung Sha Wan	20 to 25	15 to 25
79X	Queen's Hill Fanling – Cheung Sha Wan (Kom Tsun Street)	40	40
86	Wong Nai Tau - Mei Foo	20	15 to 20
86A	Sha Tin Wai - Cheung Sha Wan (Kom Tsun Street)	20 to 25	20 to 25
86C	Lee On - Cheung Sha Wan	25 to 30	25 to 30
98C	Hang Hau (North) - Mei Foo	12 to 20	9 to 15
98E	Han Hau (North) – Mei Foo	Weekday special buses	
98S	Lohas Park Station - Mei Foo	Weekday special buses	
102	Shau Kei Wan - Mei Foo	5 to 8	5 to 8
102P	Shau Kei Wan - Mei Foo	Weekday special buses	
171	Lai Chi Kok - South Horizons	12	11
171A	Lei Tung Estate - Lai Chi Kok	Weekday special buses	
171P	South Horizons - Lai Chi Kok	Weekday special buses	
214	Po Tat - Cheung Sha Wan (Kom Tsun Street)	20	20
214P	On Sau Road - Cheung Sha Wan (Kom Tsun Street)	Weekday special buses	
234X	Tsim Sha Tsui East (Mody Road) - Bayview Garden	12 to 15	15
238X	Tsuen Wan (Riviera Gardens) - China Ferry Terminal	14 to 18	12 to 18
240X	Wong Nai Tau - Kwai Hing Station	Weekday special buses	
265B	Tin Heng Estate - Mong Kok (Park Avenue)	11 to 15	7 to 20
270B	Sheung Shui - Olympic Station	30	30
270D	Luen Wo Hui Bus Terminus - Sham Shui Po	Weekday special buses	
272E	Tai Wo - Mong Kok (Park Avenue)	-	15
272P	Fu Heng - Kwai Hing Station	Weekday special buses	
286A	Sha Tin Wai – Cheung Sha Wan (Circular)	25	-
286C	Lee On - Cheung Sha Wan (Sham Mong Road)	20 to 30	9 to 30
286D	Ma On Shan Town Centre – Sham Shui Po	Weekday special buses	
286P	Mei Chung Court - Cheung Sha Wan	Weekday special buses	
286X	Hin Keng - Sham Shui Po(Circular)	15	12
293S	Hang Hau (Ngau O Road) – Mei Foo	Special buses	
296P	Sheung Tak - Lai Chi Kok Station	Weekday special buses	
298X	Hang Hau (North) (Tseung Kwan O Hospital) – Mei Foo	30	30
586	Go Park Sai Sha – Tsuen Wan Station	Weekday special buses	
795	Tseung Kwan O Industrial Estate – Cheung Sha wan (Hoi Tat)	Weekday special buses	

Route No.	Route Name	AM Peak Hour Headways	PM Peak Hour Headways
795X	Oscar By The Sea – So Uk	30	30
904	Lai Chi Kok - Kennedy Town	20	18
905	Lai Chi Kok - Wan Chai North	11 to 13	5 to 11
905A	Wan Chai North - Lai Chi Kok	Weekday special buses	
936	Tsuen Wan (Shek Wai Kok) - Causeway Bay (Cotton Path)	20	20
936A	Lei Muk Shue - Causeway Bay (Cotton Path)	Weekday special buses	
970X	Tin Wan - Cheung Sha Wan (Kom Tsun Street)	13	15
A20	Hung Hom Station - Airport (Ground Transportation Centre)	60	60
A23	Tsz Wan Shan (North) - Airport	30	30
E21	Tai Kok Tsui (Island Harbourview) - Asiaworld-Expo	15	10 to 20
E21A	Ho Man Tin (Oi Man Estate) - Tung Chung (Yat Tung Estate)	20	20
E21C	Tai Kok Tsui (Island Harbourview) - Aircraft Maintenance Area	Weekday special buses	
E21B	Tung Chung (Yat Tung Estate) – Ho Man Tin (Oi Man Estate)	20	20
E21D	Skycity – Tai Kok Tsui (Island Harbourview)	20	20
NA20	Whampoa Garden - Hzmb Hong Kong Port	Night services only	
N21	Tsim Sha Tsui (Star Ferry) - Airport (Ground Transportation Centre)	Night services only	
N21A	Tsim Sha Tsui (Star Ferry) - Airport (Via Yat Tung Estate)	Night services only	
N122	Mei Foo - Shau Kei Wan	Night services only	
N171	Lai Chi Kok - Ap Lei Chau Estate	Night services only	
N214	Yau Tong – Mei Foo	Night services only	
N241	Hung Hom Station - Cheung Wang	Night services only	
X6C	Mei Foo – Hong Kong Children’s Hospital	30	30
X970	South Horizons - Cheung Sha Wan (Kom Tsun Street)	Weekday special buses	
Green Minibus			
42	Cheung Sha Wan (Yu Chau West Street) - Chak On Estate	25	25
75	Sham Shui Po (Fu Cheong Estate) - Cheung Sha Wan (Castle Peak Road) (Circular)	8	8
411	Kwai Chung (Lai Kong Street) - Sham Shui Po (Un Chau Street) (Circular)	12	10
Red Minibus			
-	To Kwa Wan (Jubilant Place) - Mei Foo	3-9	3-9
-	Tsz Wan Shan - Cheung Sha Wan And Mei Foo	Depart when fully loaded	Depart when fully loaded
-	Cheung Sha Wan (Hk Spinners Industrial Bldg) - Lam Tin And Yau Tong	10-15	10-15

Route No.	Route Name	AM Peak Hour Headways	PM Peak Hour Headways
-	Ngau Tau Kok Station - Cheung Sha Wan (Hk Spinners Industrial Bldg)	Depart when fully loaded	Depart when fully loaded
-	Cheung Sha Wan (Hk Spinners Industrial Bldg) - Kwun Tong (Yee On St)	Depart when fully loaded	Depart when fully loaded
AN1/2	Tsuen Wan (Belvedere Garden) - Cheung Sha Wan And Sham Shui Po	Scheduled Service	Scheduled Service

2.4.2 In summary, the subject development would have good accessibility to the public transport services via adjacent road network and the existing MTR Lai Chi Kok Station.

3 THE SUBJECT DEVELOPMENT

3.1 Development Schedule

3.1.1 The Applicant intends to redevelop the site into hotel use. The proposed development is envisaged to be completed by Year 2030.

3.1.2 The proposed development schedule is summarized in **Table 3.1.1**.

Table 3.1.1 Proposed Development Schedule

Development Schedule	
Site Area	About 856m ²
GFA	12,525.14m ² (including a bonus PR of 0.25, equivalent to a GFA of about 210.26 m ²)
Description	A 30-storey hotel building with 299 hotel rooms

3.2 Proposed Vehicular Access Arrangement

3.2.1 The vehicular access of proposed development will be situated at the Tai Nan West Street.

3.2.2 To prevent vehicle stopping outside the vehicular access of the proposed development and maintain a smooth traffic flow of the adjacent junction, the road making "KEEP CLEAR" is proposed, and the existing traffic signs and road markings of the overnight parking (8PM – 7AM) for goods vehicles are proposed to be modified that the overall length of the overnight parking spaces for goods vehicle will be reduced from approximately 21m to 16m, as illustrated in **Figure 3.1**.

3.2.3 According to the parking occupancy study conducted for overnight goods vehicle parking spaces in the vicinity, including King Lam Street, Wing Hong Street and Castle Peak Road in Cheung Sha Wan, a surplus of 13 parking spaces and an approximately 45m long overnight parking lay-by was observed. As such, the proposed 5m reduction of the overnight goods vehicle parking space at Tai Nan Street is considered to have no adverse impact on the overall parking provision in the area.

3.2.4 The major ingress and egress routes for vehicular traffic approaching and leaving the Application Site are illustrated in **Figure 3.2**.

3.3 Internal Transport Facilities Provision

3.3.1 Upon to the redevelopment of the site, the Applicant is intended to provide internal transport facilities, reference is made to Hong Kong Planning Standards and Guidelines (HKPSG) requirement and summarized in **Table 3.3.1** below.

Table 3.3.1 Internal Transport Provision for the Proposed Development (Hotel)

Type of Development	Facilities (L x W x H)	HKPSG Requirement		HKPSG Required Provision	Proposed Provision
Hotel (299 rooms)	Car Parking Space (5.0m x 2.5m x 2.4m)	1 car space per 100 rooms		3 (incl. Accessible Car Parking Spaces)	3 (incl. Accessible Car Parking Spaces)
	Accessible Car Parking Space (5.0m x 3.5m x 2.4m)	1 car spaces for total provision of 1-50 nos. car parking spaces in lot		1	1
	Motorcycle Parking Spaces (2.4m x 1.0m x 2.4m)	5-10% of the total provision for private cars with respect to each type of development for all non-residential developments		1	1
	Loading / Unloading Bay for Goods Vehicles (LGV: 7.0m x 3.5m x 3.6m)	Loading/unloading bays for goods vehicles: 0.5-1 goods vehicle bay per 100 rooms		2-3	LGV: 2
	Lay-by for taxi and private cars (5.0m x 2.5m x 2.4m)	≤299 rooms	2	2	2
		350-599 rooms	3		
		≥600 rooms	4		
	Lay-by for single-deck tour buses (Mini Coach: 8.0m x 3m x 3.3m)	≤299 rooms	1	1	Mini Coach: 1
		300-899 rooms	2-3		
		≥900 rooms	3		

3.3.2 From **Table 3.3.1** above, the proposed provision of internal transport facilities for the subject development is in full compliance with the HKPSG requirements whilst the proposed proportion of goods vehicle loading/unloading bay provision and the dimension of lay-by for single-deck tour buses provision will be discussed and justified in **Section 3.4**.

3.3.3 The corresponding preliminary layout plans are demonstrated in **Figures 3.3**.

3.4 Justifications on Internal Transport Facilities Provision

3.4.1 Referring to **Section 3.3** earlier, a total of 2 nos. goods vehicle loading/unloading bays, 1 no. of lay-by for single-deck tour buses, 1 no. motorcycle parking space, 2 nos. of lay-by for taxis and private cars and 3 car parking spaces are provided to in order fulfil the HKPSG requirement. Given the constraints of the site, the proposed loading/unloading bays (7m x 3.5m x 3.6m) will accommodate LGV and the lay-by for single-deck tour buses (8m x 3m x 3.3m) will accommodate mini coach (up to 29 passengers) only. Justifications on the proposed provision are presented in the following sections.

Justification – Infeasibility of Providing 12m long Coach and 11m long HGV Bay and Turntable System

- 3.4.2 The provision of a coach/HGV turntable system to facilitate coach or HGV manoeuvring within the site for loading/unloading at the coach/HGV bay has been explored.
- 3.4.3 Assembling all the development essential facilities (Development structures, E&M facilities, lift core, staircase, etc.) the development has been working with even more difficulties for installing a Coach/ HGV bay and turntable within the site permissible dimension. It would be difficult to be installed without clashing other essential facilities and structural column, as demonstrated in **Figure 3.4** and **3.5**.
- 3.4.4 Furthermore, irrespective of the impacts on structural columns, the provision of a coach/HGV turntable would result in the loss of 2 nos. lay-bys for taxis and private cars, and 2 nos. car parking spaces currently proposed. Given the limited footprint of the ground floor, these facilities could not be fully re-provided elsewhere within the site. Under such arrangement, only 1 nos. car parking space and no lay-by for taxis and private cars could be accommodated, which would will not fulfil the HKPSG requirements, which stipulate the provision of 3 nos. car parking spaces and 2 nos. lay-bys for taxis and private cars.
- 3.4.5 Given the site constrains particularly the site footprint area and the positioning of essential facilities and structural columns, it is not feasible to provide Coach/ HGV bay and turntable.

3.5 Swept Path Assessment

- 3.5.1 Swept path assessment for the critical movements of vehicles entering/leaving the Application Site and vehicle manoeuvring for loading/unloading bays was carried out as demonstrated in **Figures 3.6** to **3.9**.

4 TRAFFIC IMPACT ASSESSMENT

4.1 Trip Generation and Attraction of Proposed Development

4.1.1 The likely amount of traffic generated and attracted by the approved industrial development and the proposed hotel development and were calculated based on 'Traffic Rates for Non-Residential Developments at 95% Confidence Level' adopted in the TPDM Vol. 1 Appendix 1 Table 2. The adopted rates and associated trips for the approved industrial development (i.e. under the approved Planning Application No. A/K5/838) and the proposed hotel development at the Application Site are shown in **Table 4.1.1** and **Table 4.1.2** respectively.

4.1.2 The traffic impact arising from the conversion from the approved development to the proposed development would be due to the difference in the traffic generation and attraction between the two scenarios, the approved industrial development and the proposed hotel development.

Table 4.1.1 Traffic Generation and Attraction of the Approved Industrial Development (pcu/hr)

Development Use	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Industrial (pcu/hr/100 sqm GFA) GFA = 12,525.14m ²	0.1153	0.1727	0.1648	0.1260
Total (pcu/hr)	14	22	21	16

Table 4.1.2 Traffic Generation and Attraction for the Proposed Hotel Development (pcu/hr)

Development Use	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Hotel (pcu/hr/guestroom) No. of Guest Rooms = 299	0.1814	0.2082	0.1697	0.2183
Total (pcu/hr)	54	62	51	65

- 4.1.3 The volume of traffic generation and attraction in pcu/hr under the two scenarios (the approved industrial development and the proposed hotel development) have been compared and are presented in **Table 4.1.3**.

Table 4.1.3 Differences in Trip Generation and Attraction (the Approved Industrial Development vs the Proposed Hotel Development)

Development Use	AM Peak (pcu/hr)			PM Peak (pcu/hr)		
	Generation	Attraction	Total	Generation	Attraction	Total
Approved Industrial Development	14	22	36	21	16	37
Proposed Hotel Development	54	62	116	51	65	116
Net Difference	40	40	80	30	49	79

- 4.1.4 As indicated in **Table 4.1.3**, the proposed change in the use of the Application Site from the approved industrial development to the proposed hotel development would result in increased net trip generation and attraction of 40 pcu/hr and 40 pcu/hr respectively during AM peak, and 30 pcu/hr and 49 pcu/hr respectively during PM peak.

4.2 Adjacent Developments

- 4.2.1 In addition to the development flow, the traffic generated and attracted by adjacent major planned/committed developments in the vicinity of the proposed development were taken into account for the traffic forecast. Details of these adjacent planned developments are summarized below.

- URA Kim Shin Lane/ Fuk Wa Street Development Project (SSP-017)
- URA Cheung Wah Street/ Cheung Sha Wan Road Development (SSP-018)
- 750 Cheung Sha Wan Road, Kowloon (Industrial Use)

4.3 Future Traffic Growth

- 4.3.1 It is anticipated that the proposed redevelopment will be fully completed and occupied by Year 2030. In order to assess the traffic impact of the development-related traffic on the adjacent road network, year 2033 (i.e. 3 years after completion) will be adopted as the design year of the study.

Annual Traffic Census

- 4.3.2 Reference was made to Annual Traffic Census (ATC) on annual average daily traffic (AADT) at counting stations in the vicinity of the proposed development and the corresponding traffic flows are summarized in **Table 4.3.1** below.

Table 4.3.1 Annual Average Growth Rate by ATC

Station No.	2020 AADT	2021 AADT	2022 AADT	2023 AADT	2024 AADT	Average Annual Growth Rate from 2020 to 2024
3101	10,390	10,520	10,440	11,320	11,180	+1.8%
3229	16,690	17,220	17,020	18,760	16,610	-0.12%
3261	12,150	12,720	12,040	13,580	14,080	+3.8%
3427	35,400	36,530	36,080	38,140	32,810	-1.88%
3466	8,580	8,980	8,510	9,140	9,860	+3.5%
3468	9,930	10,390	9,840	10,580	11,850	+4.5%
3627	1,680	1,560	1,230	1,290	1,570	-1.68%
3628	1,500	1,790	1,880	1,980	2,110	+8.9%
3668	39,020	40,600	40,110	42,390	41,740	+1.7%
3671	54,200	50,610	49,990	52,840	52,020	-1.02%
3825	6,180	6,860	6,500	6,980	6,800	+2.4%
3876	6,270	6,650	6,300	6,770	6,590	+1.3%
4022	45,880	41,990	41,580	43,950	43,270	-1.45%
4643	31,230	32,220	28,700	31,300	30,820	-0.33%
4648	7,270	7,950	8,040	8,640	8,410	+3.7%
Total	286,370	286,590	278,260	297,660	289,720	+0.29%

- 4.3.3 The ATC historic data indicates a small growth of traffic in recent years in the region with around +0.29% p.a.

Territorial Population and Employment Data Matrix (TPEDM)

- 4.3.4 Reference was also made to 2021-based TPEDM published by Planning Department. **Table 4.3.2** below summarize the estimated and projected population and employment data as well as their respective annual average growth rate of Sham Shui Po Districts in 2021, 2026 and 2031.

Table 4.3.2 Annual Average Growth Rate of Sham Shui Po District by TPEDM

Year	2021	2026	2031
Population	431,100	432,200	438,600
Employment	228,650	219,000	214,000
TOTAL	659,750	651,200	652,600
Annual Average Growth Rate	-0.11% (from 2021 to 2031)	0.04% (from 2026 to 2031)	

- 4.3.5 From the table above, the annual average growth rate of Sham Shui Po District from 2021 to 2031 is -0.11% p.a. and that from 2026 to 2031 is 0.04% p.a.

- 4.3.6 The average annual growth rate determined from ATC is +0.29% p.a., and that of TPEDM ranges from -0.11% to +0.04% p.a. For conservative purpose, growth rate of **+1% p.a.** is adopted to produce the traffic forecast for 2026–2033.

4.4 Assessment Scenarios

4.4.1 To evaluate the associated traffic impact likely to be induced by the proposed increase in PR restriction for the proposed development, two scenarios were analysed and compared.

4.4.2 The first scenario (i.e. Year 2033 Reference Scenario) refers to the traffic forecast with the approved industrial development (i.e. under the approved Planning Application No. A/K5/838) at the Application Site.

Scenario 1

Year 2033 Reference Scenario

= Year 2026 observed traffic flows × growth factor during the period of year 2026-2033

Plus traffic generations of other major planned/committed developments in the vicinity

Plus trips generated and attracted by the with the approved industrial development (i.e. under the approved Planning Application No. A/K5/838) at the Application Site.

Scenario 2

Year 2033 Design Scenario

= Year 2026 observed traffic flows × growth factor during the period of year 2026-2033

Plus traffic generations of other major planned/committed developments in the vicinity

Plus trips generated and attracted by the proposed hotel development where the development trip ends of the proposed hotel development (as presented in Table 4.1.2)

4.4.3 The forecasted traffic flows for the above two scenarios are presented in **Figures 4.1** and **4.2** respectively.

4.5 Junction Capacity Assessment

4.5.1 Junction capacity assessment was carried out at the identified key junctions for Year 2033 Reference and Design scenarios. Assessment results are summarized in **Table 4.5.1** below.

Table 4.5.1 Year 2033 Future Junction Performance

Junction		Type	Performance ⁽¹⁾			
			2033 Reference		2033 Design	
			AM	PM	AM	PM
J1	Tung Chau West Street / Castle Peak Road	Signalized	36%	72%	33%	67%
J2	Wing Hong Street / Yee Kuk West Street	Priority	0.25	0.32	0.27	0.33
J3	Castle Peak Road / Yee Kuk West Street	Signalized	>100%	>100%	>100%	>100%
J4	Cheung Sha Wan Road / Cheung Lai Street	Signalized	96%	66%	96%	66%
J5	Wing Hong Street / Tai Nan West Street	Priority	0.33	0.39	0.35	0.41
J6	Castle Peak Road / Tai Nan West Street	Signalized	40%	81%	35%	77%
J7	Cheung Sha Wan Road / Tai Nan West Street	Signalized	33%	39%	33%	39%
J8	Wing Hong Street / Yu Chau West Street	Priority	0.39	0.38	0.39	0.38
J9	Yu Chau West Street / Castle Peak Road	Priority	0.71	0.57	0.73	0.57
J10	Castle Peak Road / Fuk Wa Street	Signalized	72%	88%	71%	88%
J11	Cheung Sha Wan Road / Cheung Wah Street	Signalized	55%	64%	55%	64%

Notes:

- (1) Figures shown represent "Reserve Capacity" (RC) in % for the signalized junctions and "Design Flow Capacity" (DFC) ratio for priority junctions.

4.5.2 The above results reveal that the identified key junctions would operate within capacity with the proposed hotel development in Year 2033. The junction performance under the Design Scenario in Year 2033 would be more or less the same as the junction performance under the Reference Scenario during both morning and evening peak hours. The proposed hotel development would not induce adverse traffic impact to the surrounding road network.

5 CONCLUSION

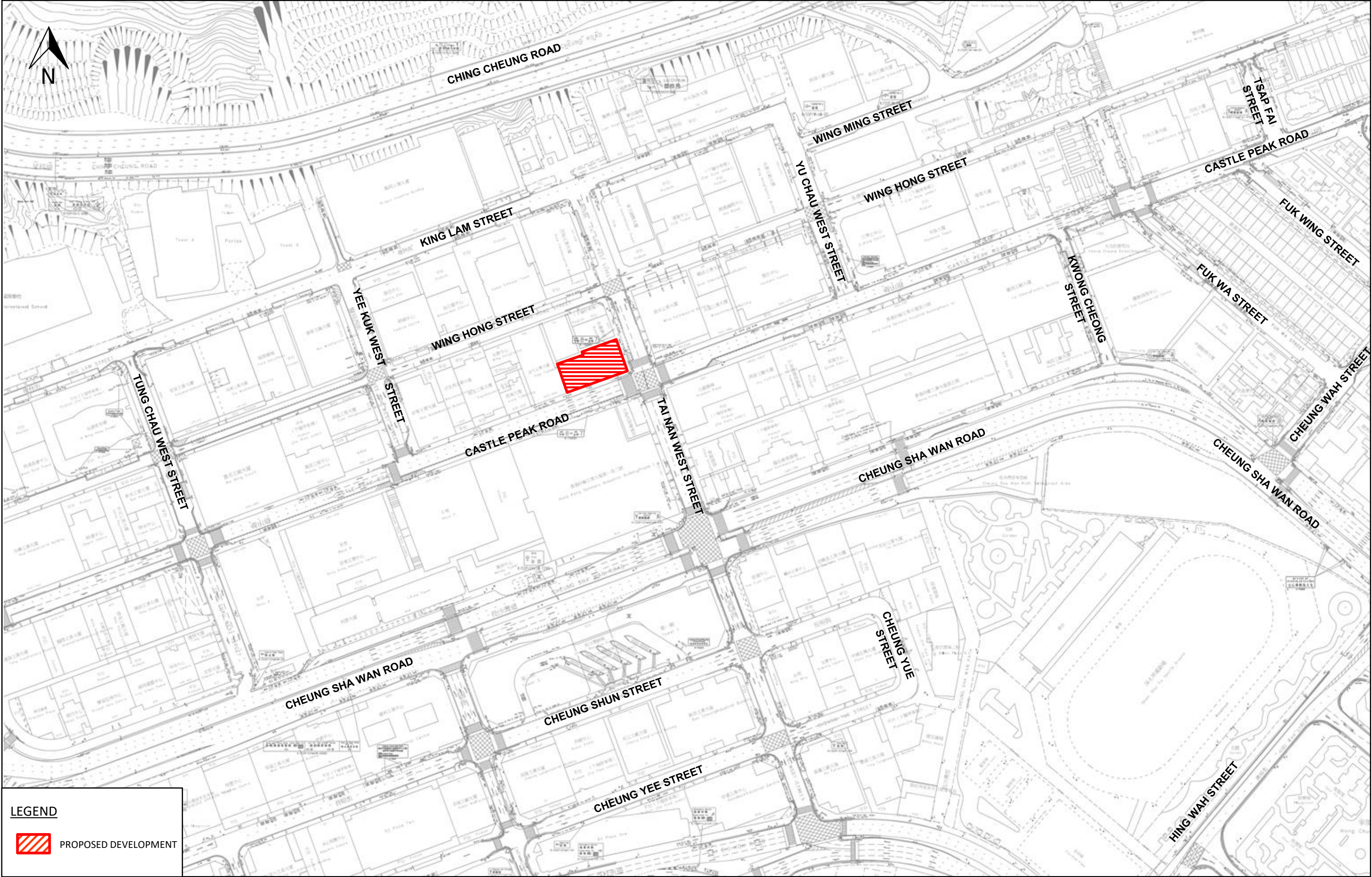
5.1 Summary

- 5.1.1 The Applicant intends to submit this S16 Planning Application for proposed hotel use, which the Application Site is the subject of an approved S16 planning application (Application No. A/K5/838) which was approved with conditions for proposed minor relaxation of PR restriction to 14.4 for non-polluting industrial use. The Application Site is with a site area of about 856m².
- 5.1.2 A Traffic Impact Assessment (TIA) study was carried out to evaluate the likely traffic impact associated with the proposed hotel development, in support of the planning application for the Application Site.
- 5.1.3 The proposed provision of internal parking and servicing facilities for the subject development is in compliance with the HKPSG requirements. The car park, lay-by and goods vehicle loading/unloading area will be located on G/F. The vehicular access of proposed development will be situated at the Tai Nan West Street.
- 5.1.4 The provision of loading/unloading bay for Coach/ HGV using turntable system is not feasible. It is demonstrated that only mini coach and LGV loading/unloading bays with adequate manoeuvring space can be provided within the proposed Application Site .
- 5.1.5 The identified key junctions in the vicinity were assessed with respect to traffic generation of the proposed development upon Year 2033 (3 years after the target Completion Year 2030), taking into account the traffic generation by the major planned/committed developments in the vicinity.
- 5.1.6 Traffic impact assessment scenarios were set up for the proposed development, namely Year 2033 Reference scenario (i.e. the site occupied by the industrial development under the approved Planning Application No. A/K5/838) and Year 2033 Design scenario (i.e. the site occupied by the proposed hotel development).
- 5.1.7 Assessment results showed that the identified key junctions and road links would operate within capacity with the proposed hotel development in Year 2033 The traffic impact due to the proposed development is considered minimal and could be accommodated by the surrounding road network.

5.2 Conclusion

- 5.2.1 It could be concluded that the proposed hotel development at Application Site will not impose adverse traffic impact on the surrounding road network and thus is feasible from the traffic engineering point of view.

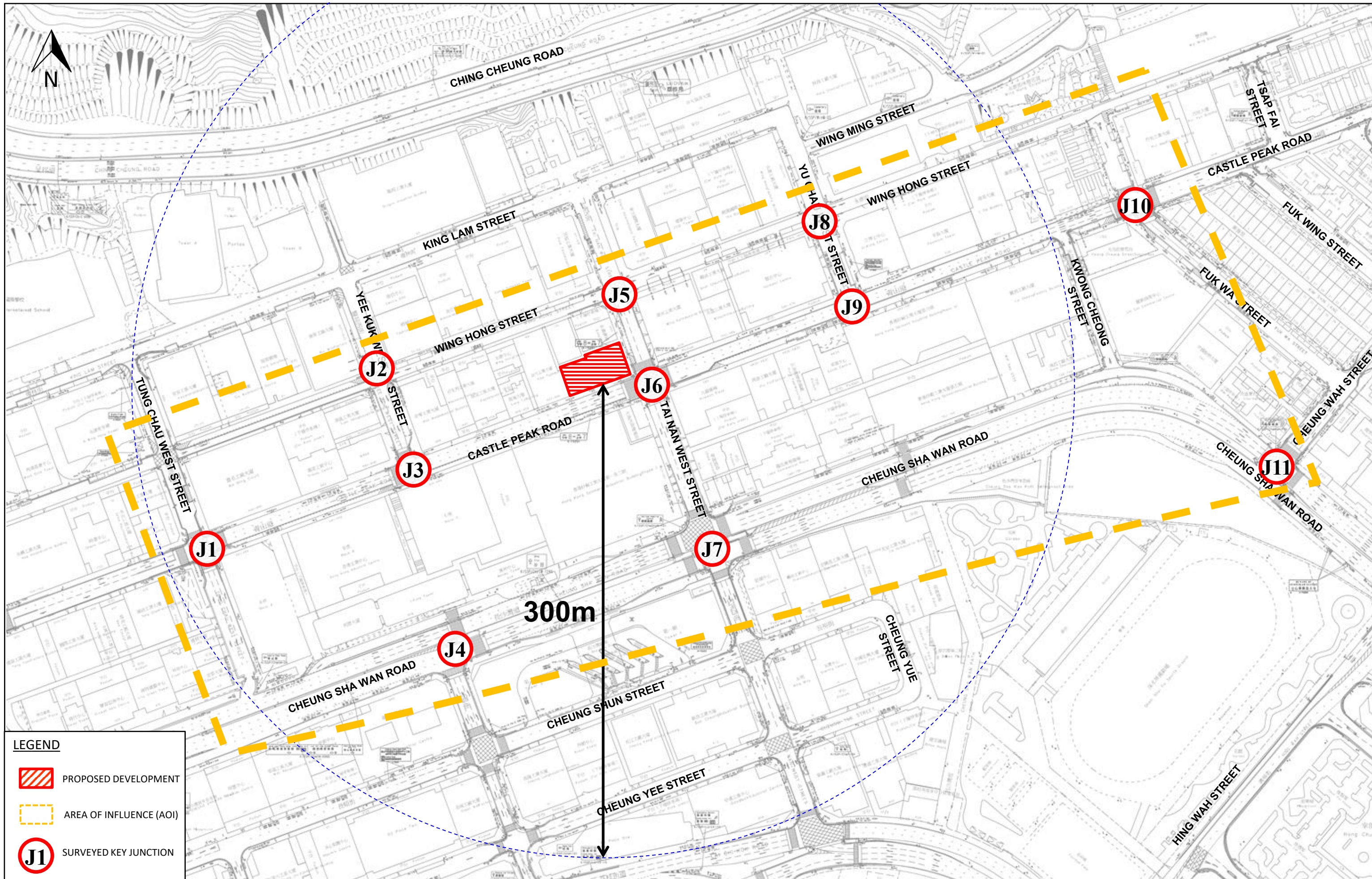
Figures



LEGEND

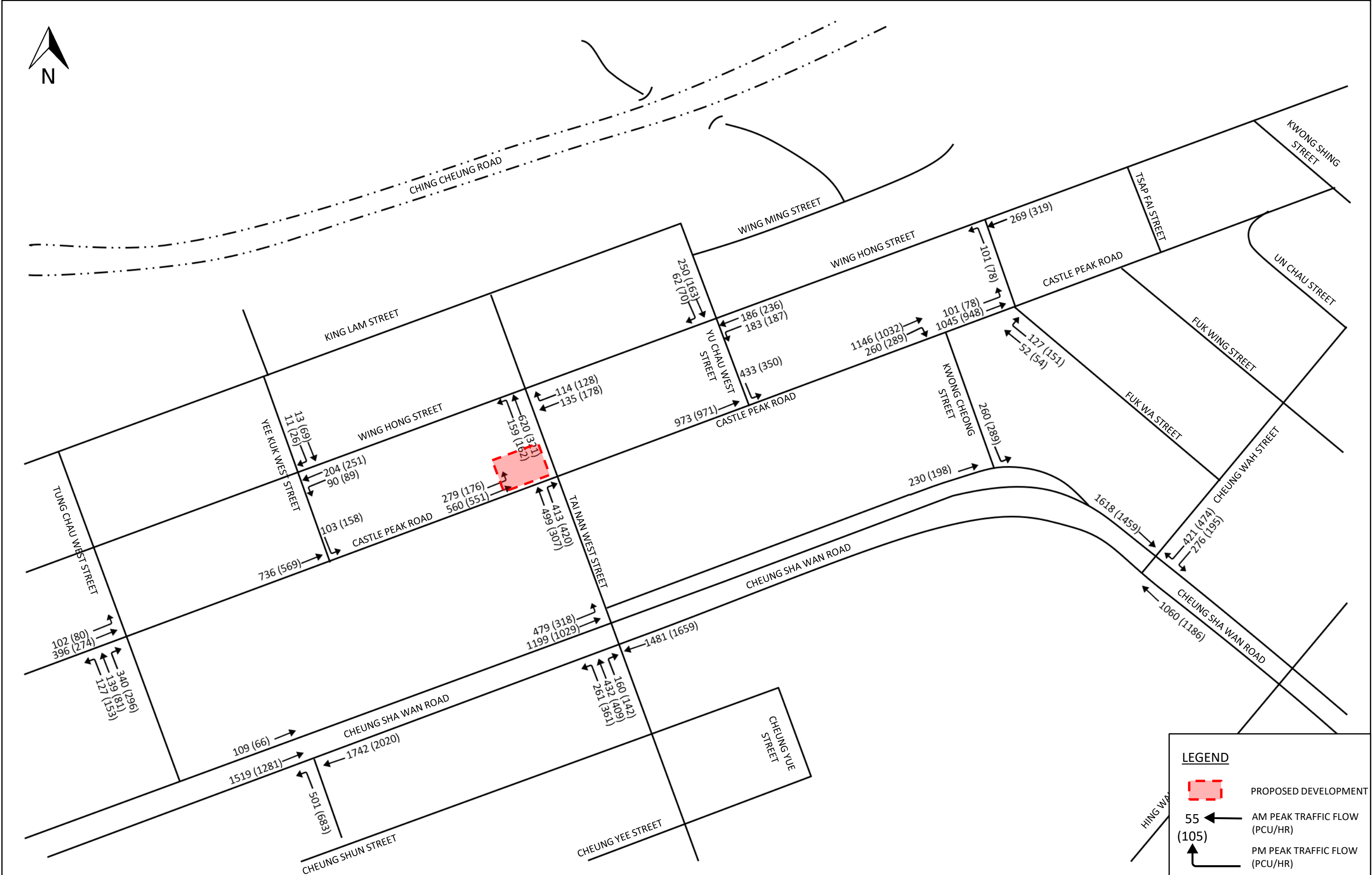
PROPOSED DEVELOPMENT

Job Title APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT “OTHER SPECIFIED USES” ANNOTATED “BUSINESS (1)” ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON			FIGURE 1.1	
Date 6/2026	Scale N.T.S.	Drawing Title LOCATION OF THE PROPOSED DEVELOPMENT AND ITS ENVIRONS	ARUP	
Drawn CNC	Job No. 315341-02			

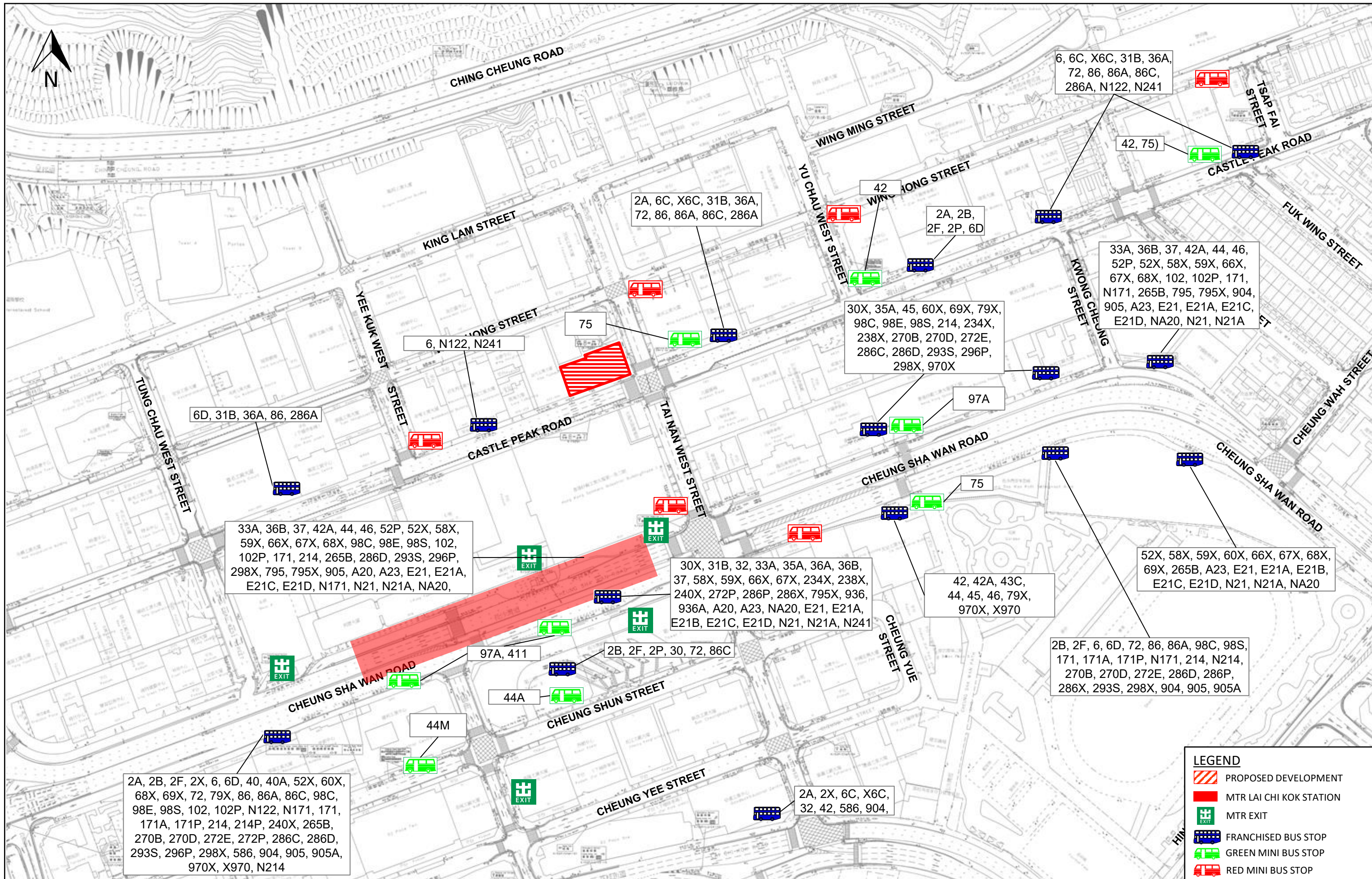


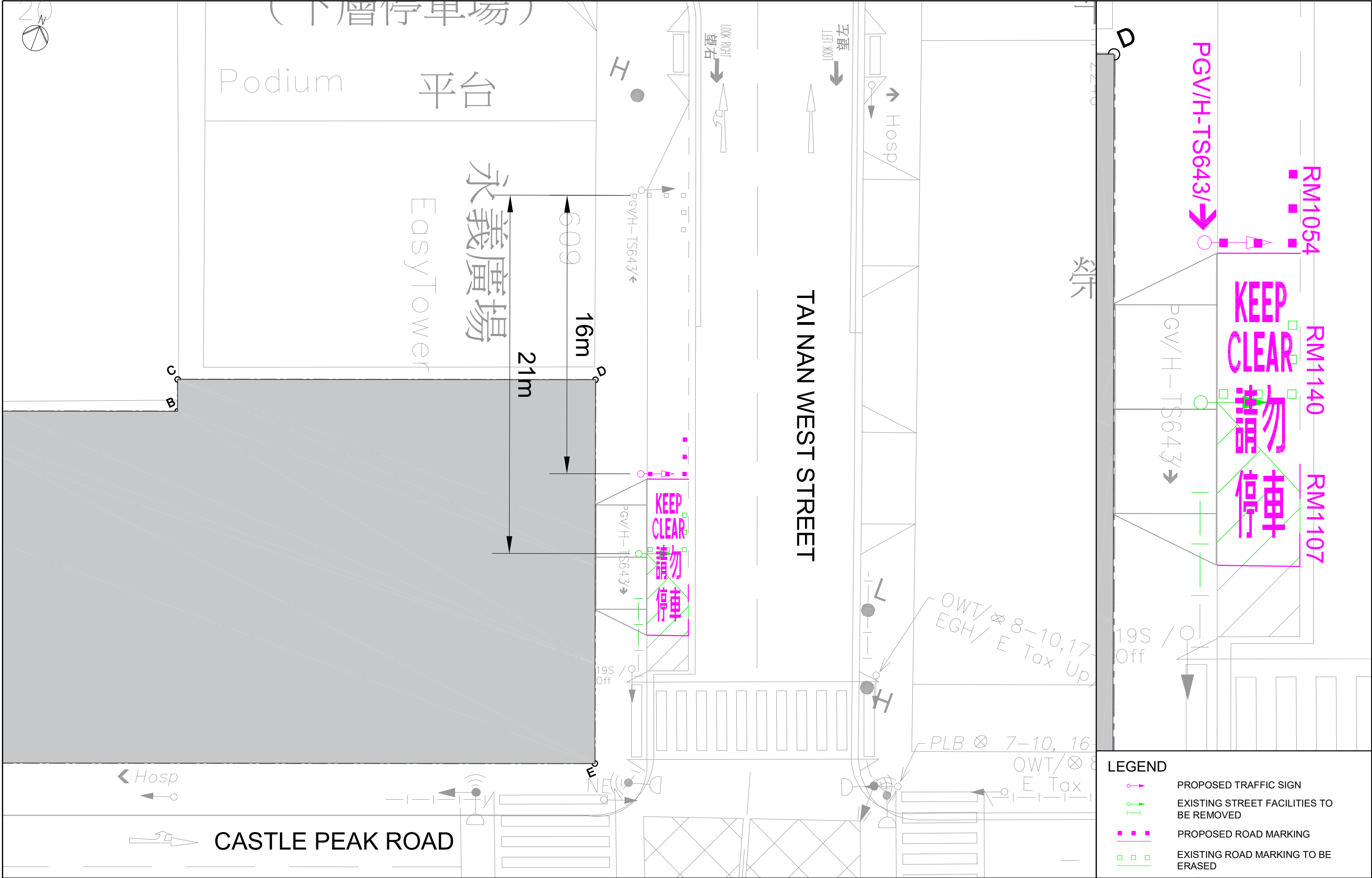
Job Title APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT “OTHER SPECIFIED USES” ANNOTATED “BUSINESS (1)” ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON			FIGURE 2.1
Date 6/2026	Scale N.T.S.	Drawing Title LOCATION OF SURVEYED JUNCTIONS IN THE VICINITY OF PROPOSED DEVELOPMENT	
Drawn CNC	Job No. 315341-02		
			ARUP

ARUP



Job Title			APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT “OTHER SPECIFIED USES” ANNOTATED “BUSINESS (1)” ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON			FIGURE 2.2
Date	Scale	Drawing Title				
6/2026	N.T.S.					
Drawn	Job No.	YEAR 2026 EXISTING TRAFFIC FLOW				ARUP
CNC	315341-02					





Job Title APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON

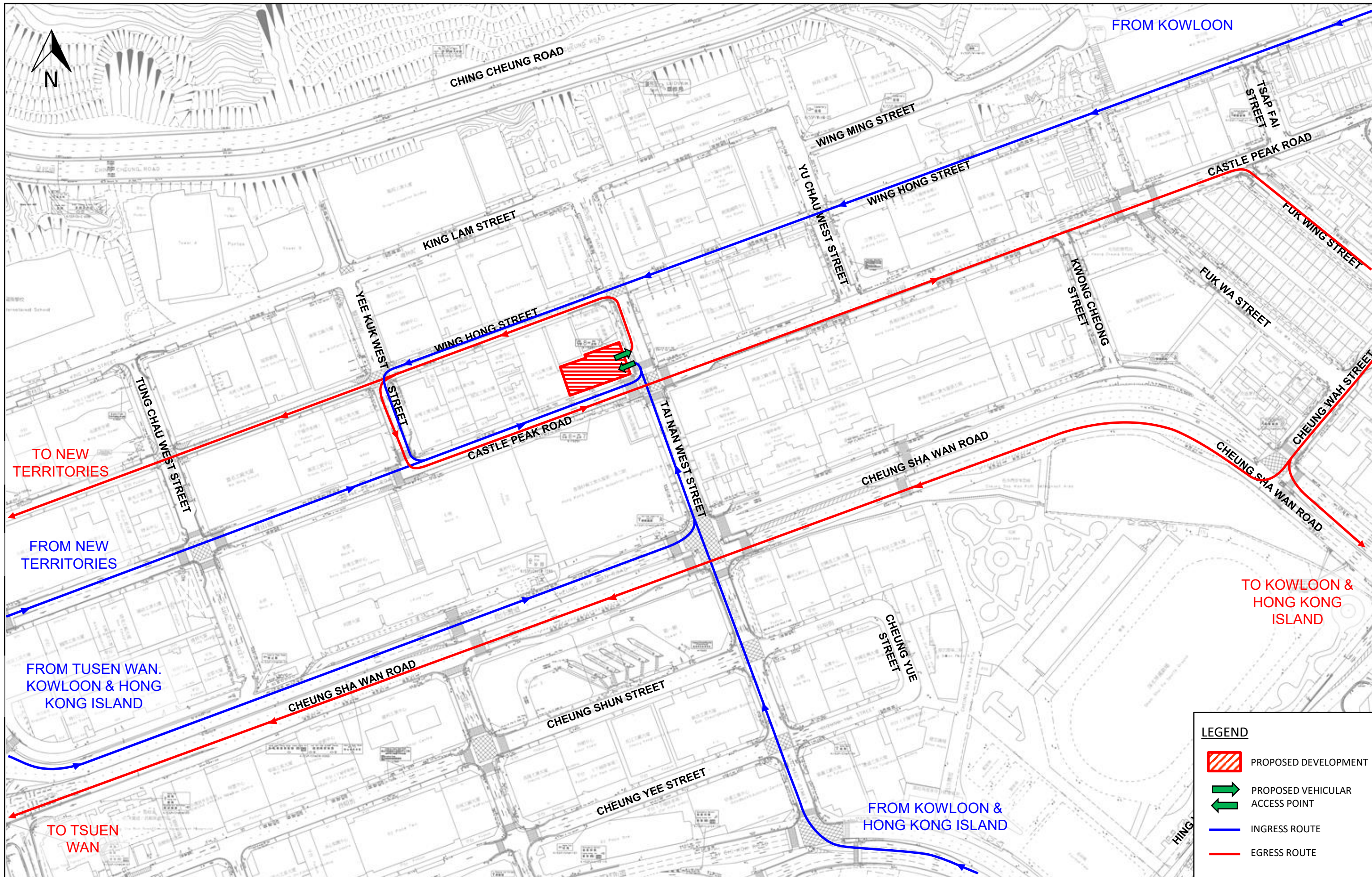
FIGURE 3.1

Date	Scale
22JUN26	NTS
Drawn	Job No.
WLAC	315341-02

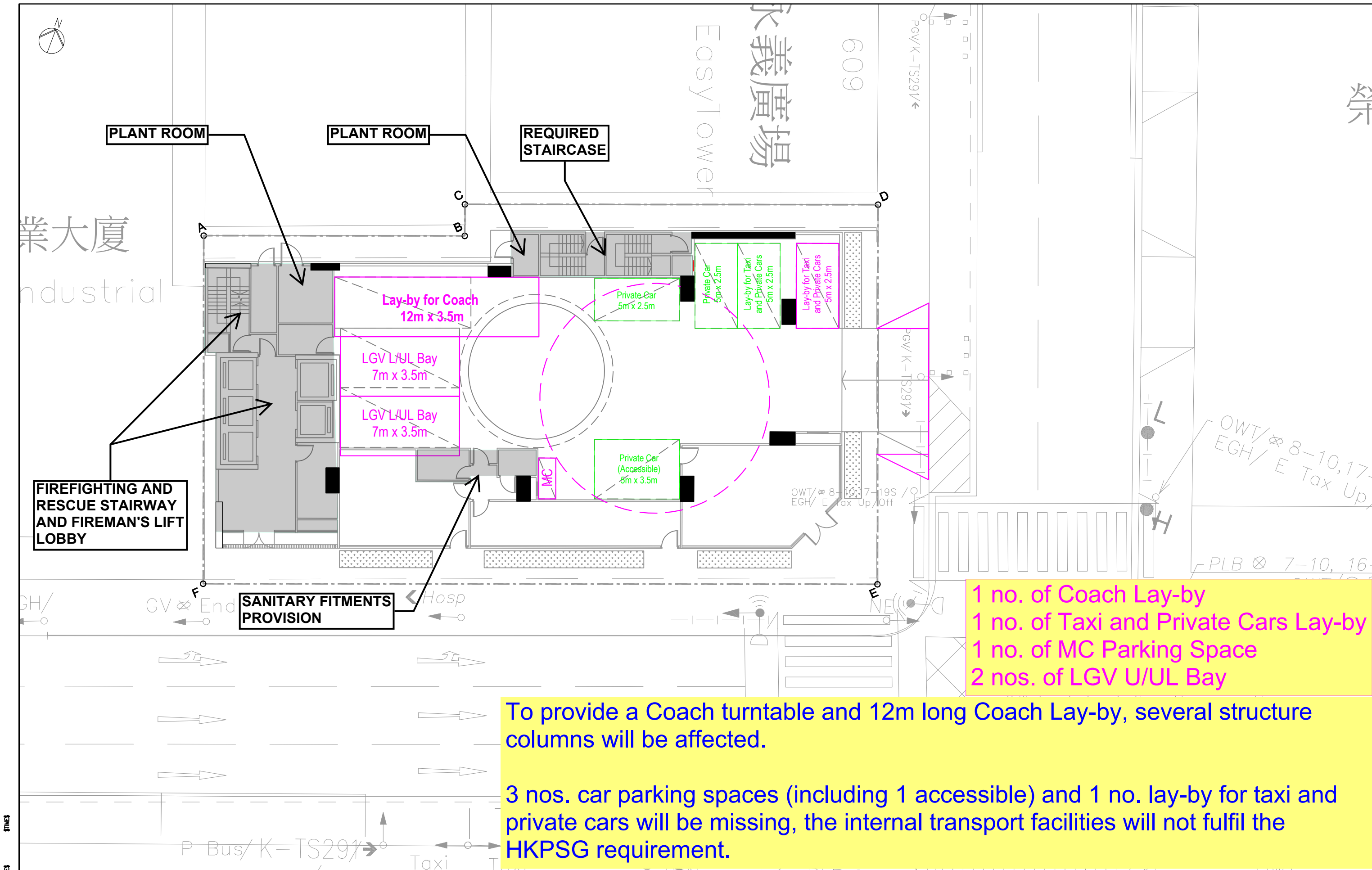
Drawing Title

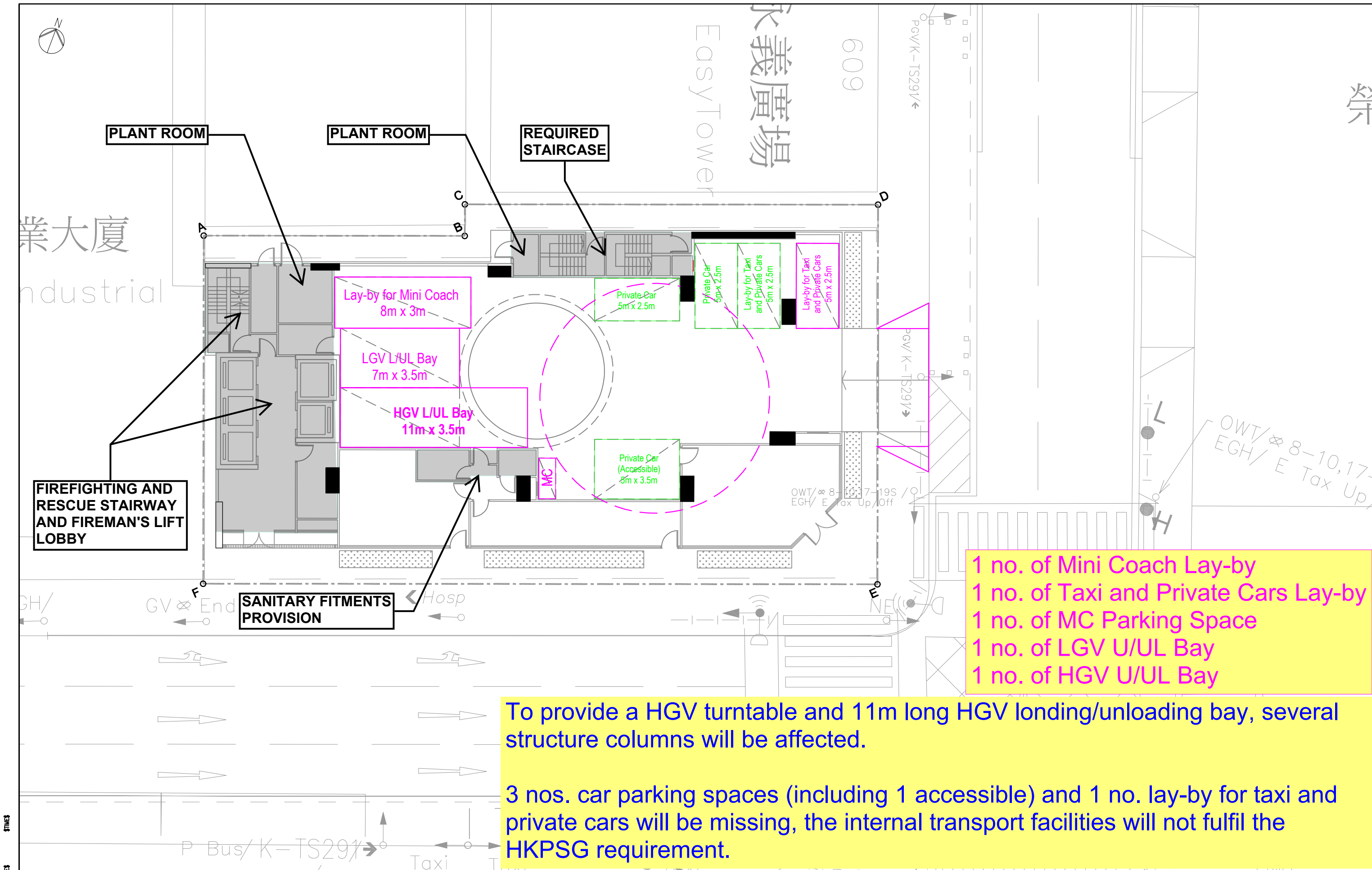
PROPOSED MODIFICATION OF EXISTING ROAD MARKING AND TRAFFIC SIGN AT TAI NAN WEST STREET





Job Title			APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT “OTHER SPECIFIED USES” ANNOTATED “BUSINESS (1)” ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON			FIGURE 3.2
Date	Scale	Drawing Title				
6/2026	N.T.S.					
Drawn	Job No.	INGRESS AND EGRESS VEHICULAR ROUTES OF THE PROPOSED DEVELOPMENT				ARUP
CNC	315341-02					

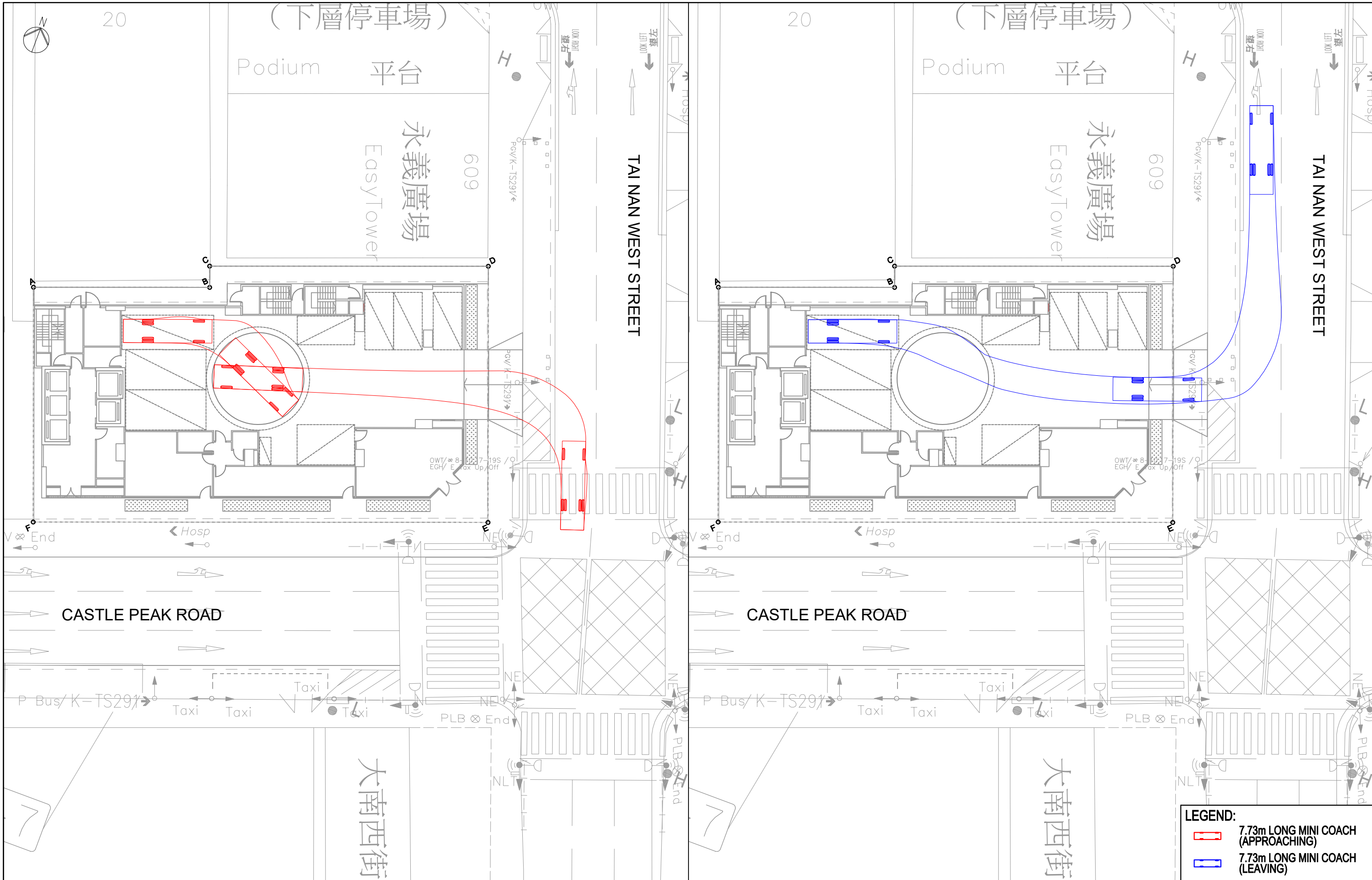




- 1 no. of Mini Coach Lay-by
- 1 no. of Taxi and Private Cars Lay-by
- 1 no. of MC Parking Space
- 1 no. of LGV U/UL Bay
- 1 no. of HGV U/UL Bay

To provide a HGV turntable and 11m long HGV loding/unloading bay, several structure columns will be affected.

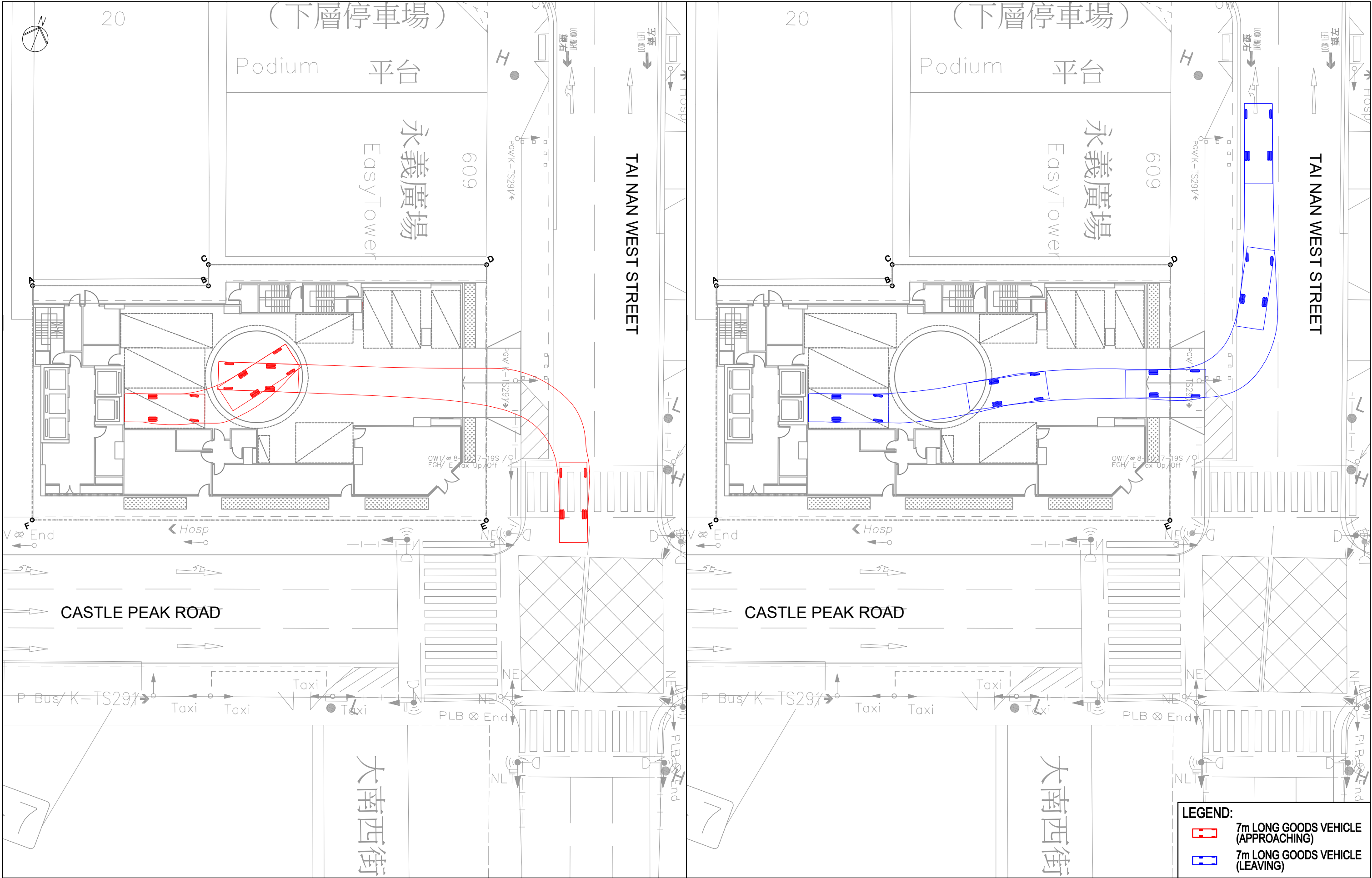
3 nos. car parking spaces (including 1 accessible) and 1 no. lay-by for taxi and private cars will be missing, the internal transport facilities will not fulfil the HKPSG requirement.



Job Title APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON		
Date 22JUN26	Scale 1:300@A3	Drawing Title SWEPT PATH ANALYSIS FOR MINI COACH (APPROACHING/ LEAVING)
Drawn WLAC	Job No. 315341-02	

FIGURE 3.6

ARUP



Job Title APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON

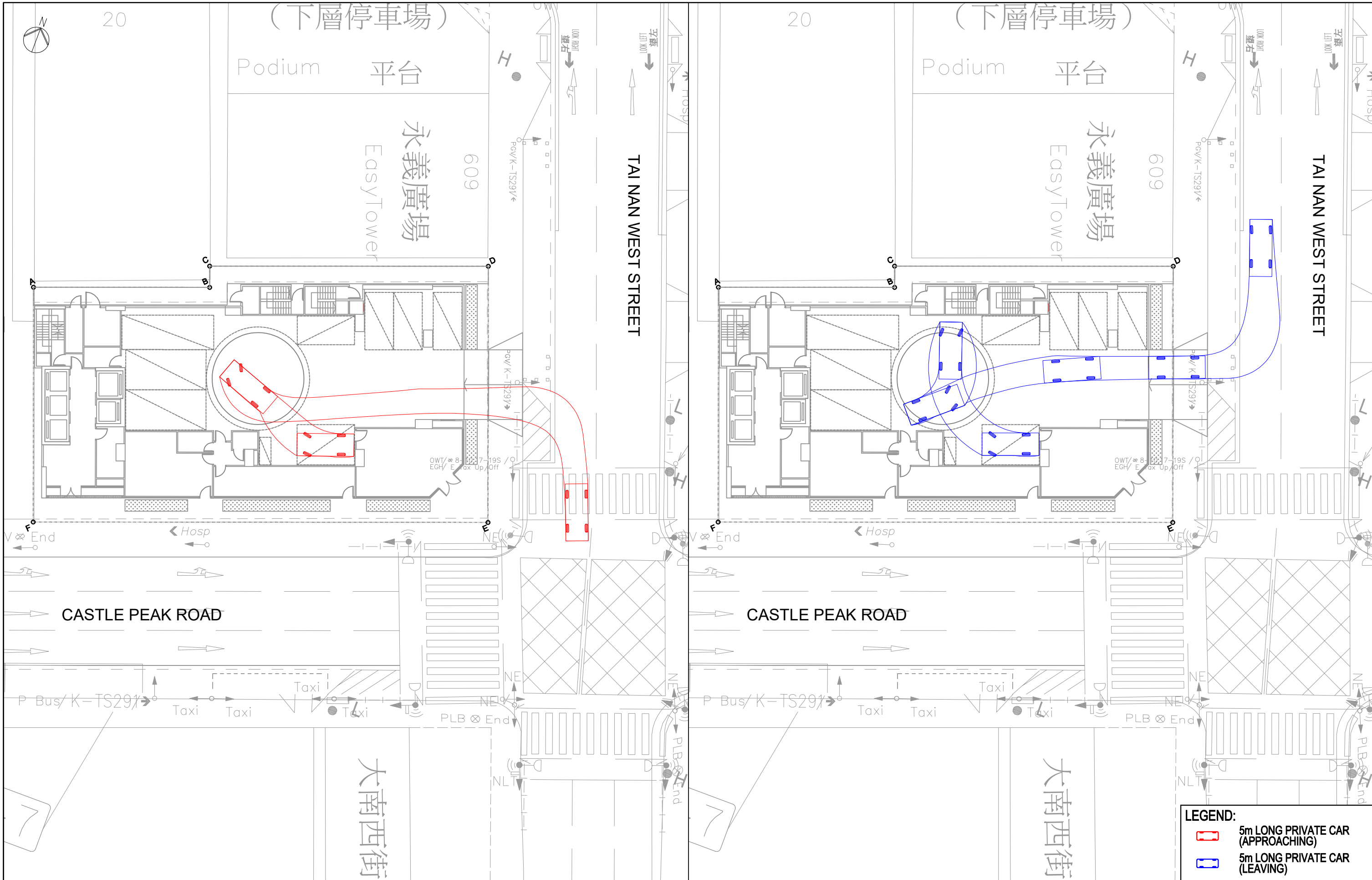
FIGURE 3.7

Date	22JUN26
Scale	1:300@A3
Drawn	WLAC
Job No.	315341-02

SWEPT PATH ANALYSIS FOR 7m LONG GOODS VEHICLE (APPROACHING/ LEAVING)



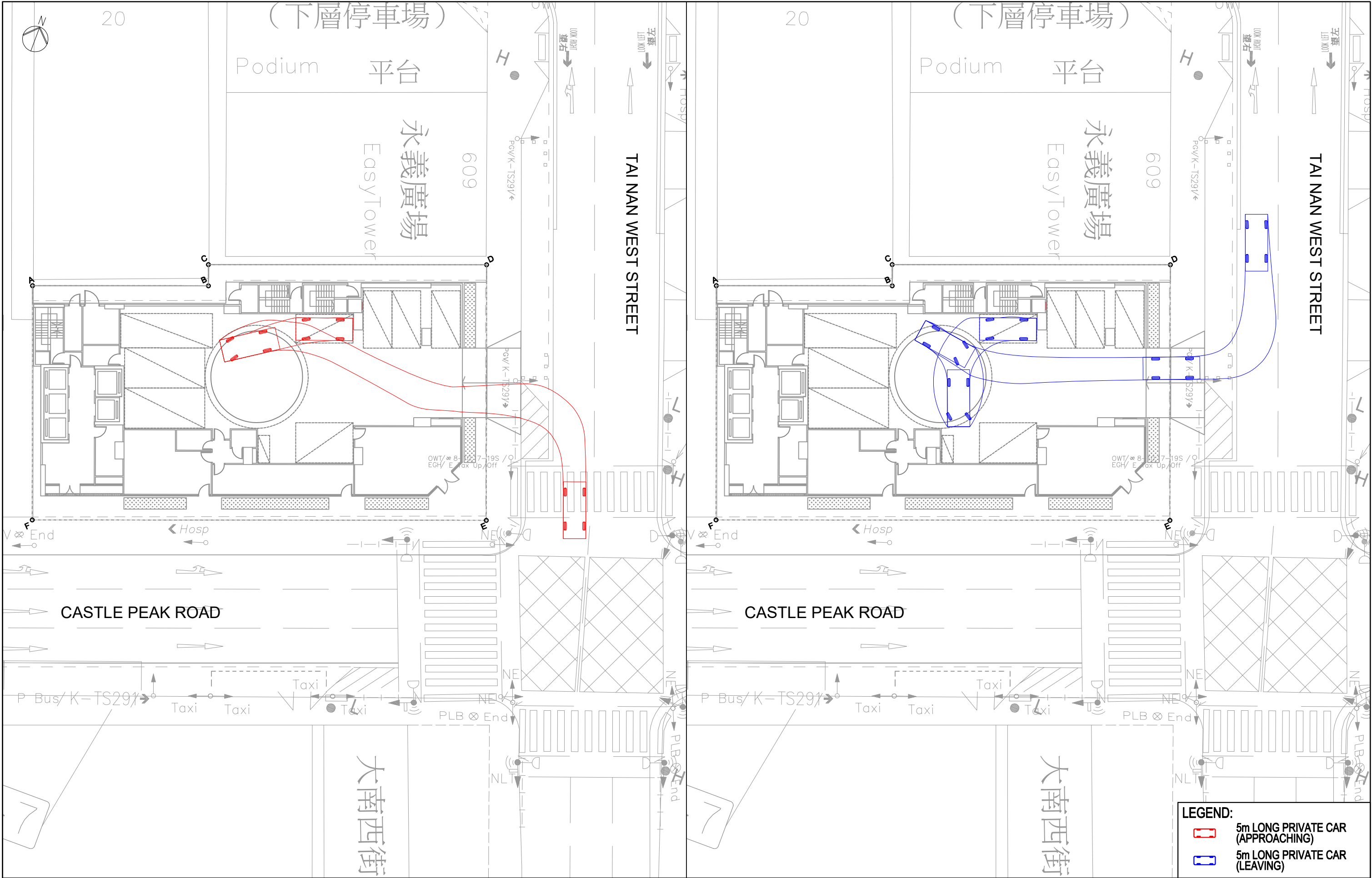
PRINTED BY: \$USER\$
FILE NAME: \$FILE\$



Job Title APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON		
Date 22JUN26	Scale 1:300@A3	Drawing Title SWEPT PATH ANALYSIS FOR 5m LONG PRIVATE CAR (APPROACHING/ LEAVING)
Drawn WLAC	Job No. 315341-02	

FIGURE 3.8

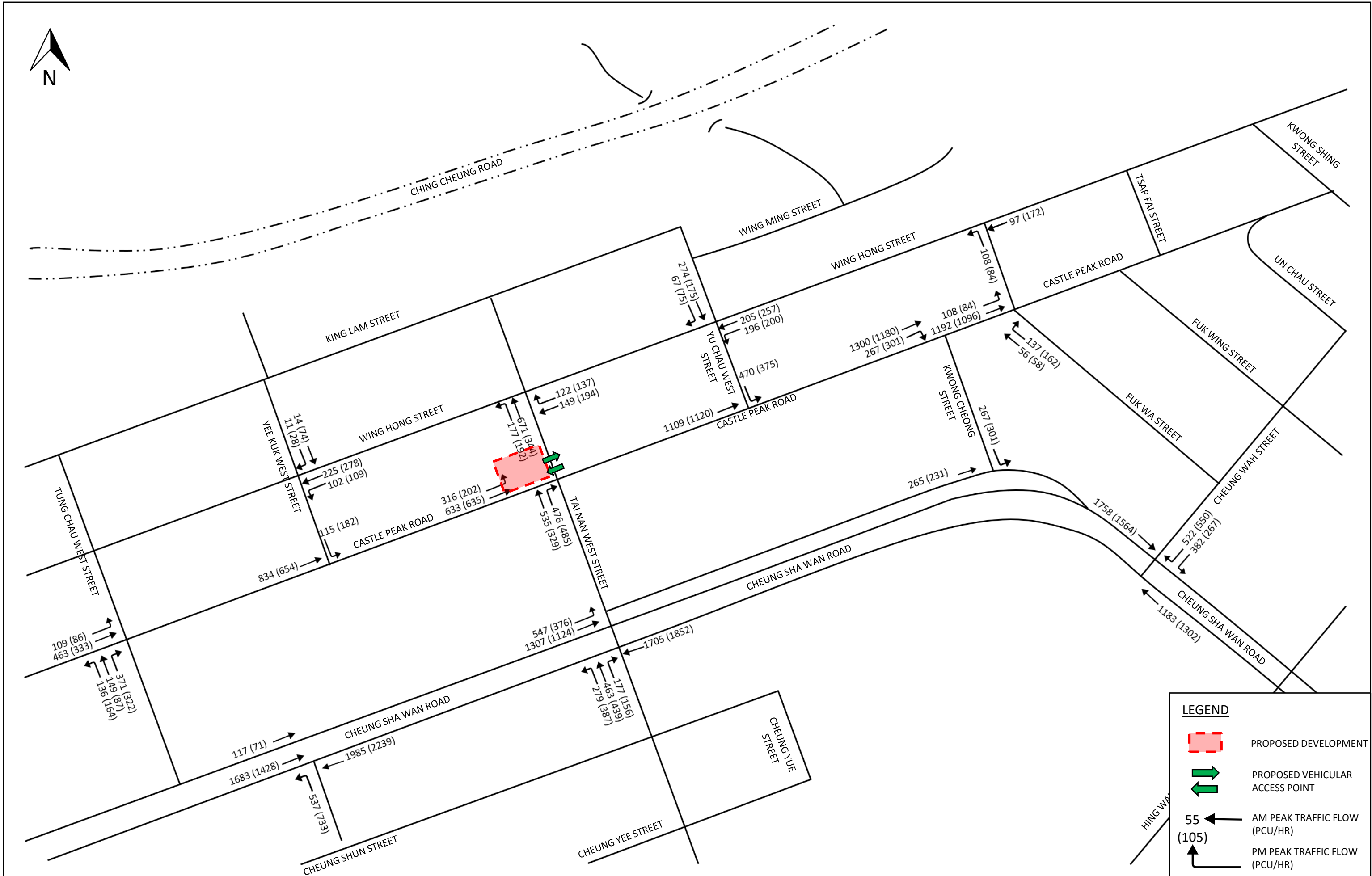
ARUP



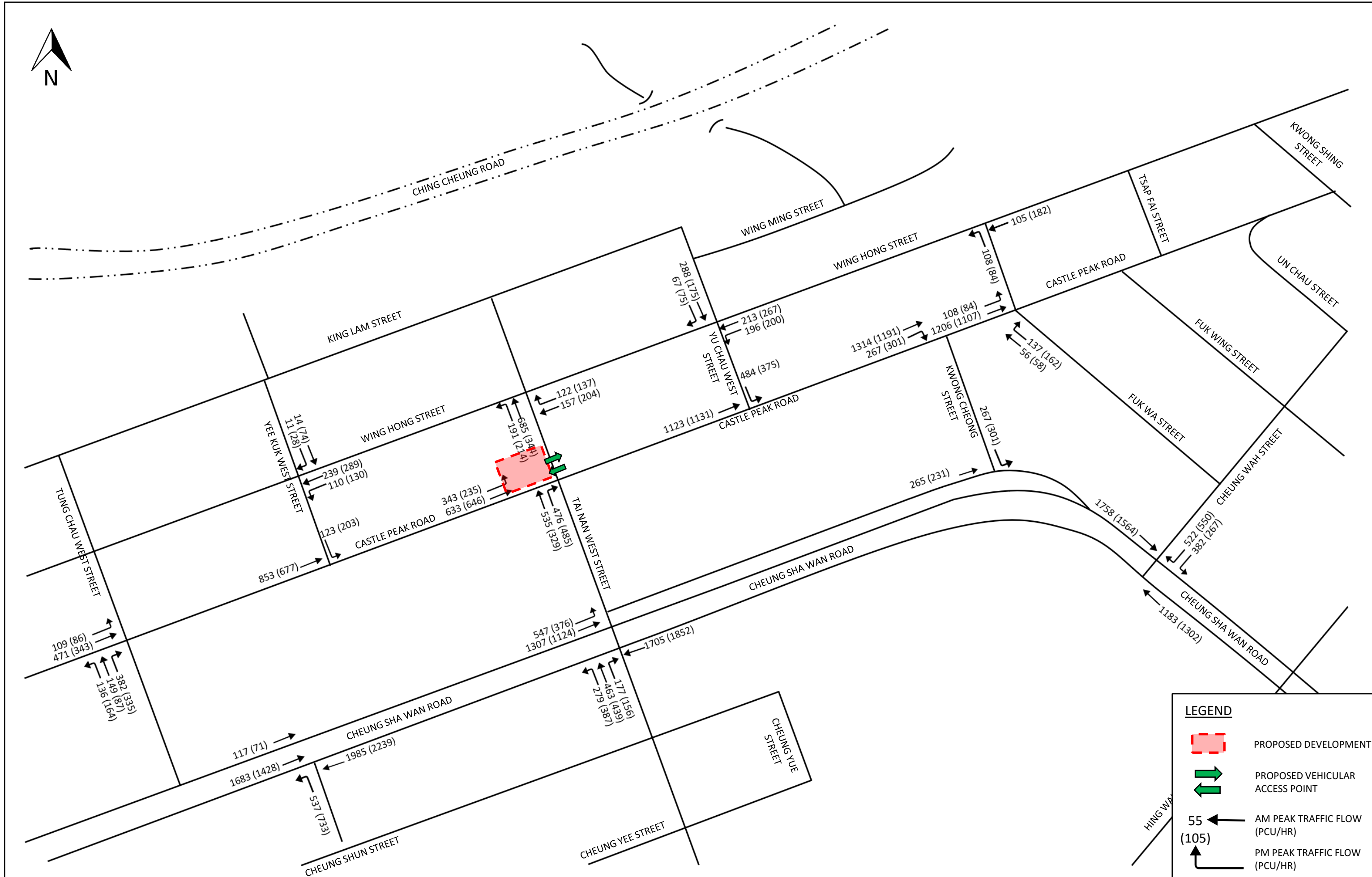
Job Title APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON		
Date 22JUN26	Scale 1:300@A3	Drawing Title SWEPT PATH ANALYSIS FOR 5m LONG PRIVATE CAR (APPROACHING/ LEAVING)
Drawn WLAC	Job No. 315341-02	

FIGURE 3.9

ARUP



Job Title APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT “OTHER SPECIFIED USES” ANNOTATED “BUSINESS (1)” ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON			FIGURE 4.1	
Date 6/2026	Scale N.T.S.	Drawing Title YEAR 2033 REFERENCE TRAFFIC FLOW		
Drawn CNC	Job No. 315341-02			



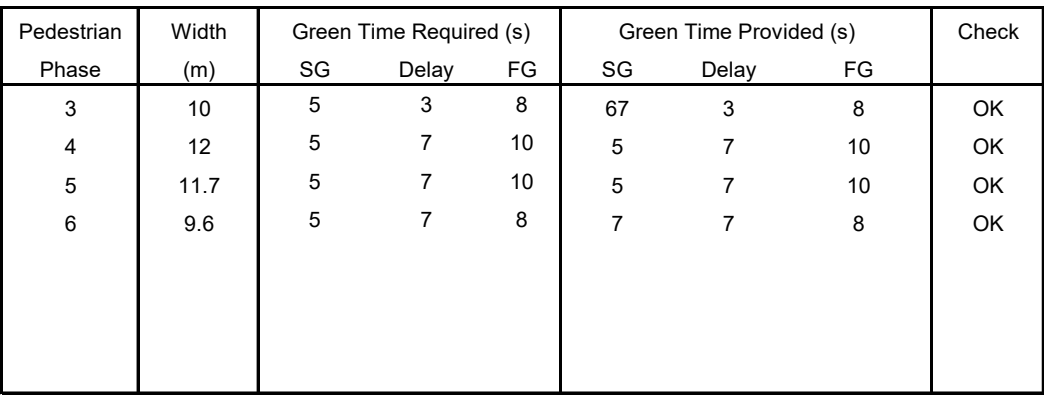
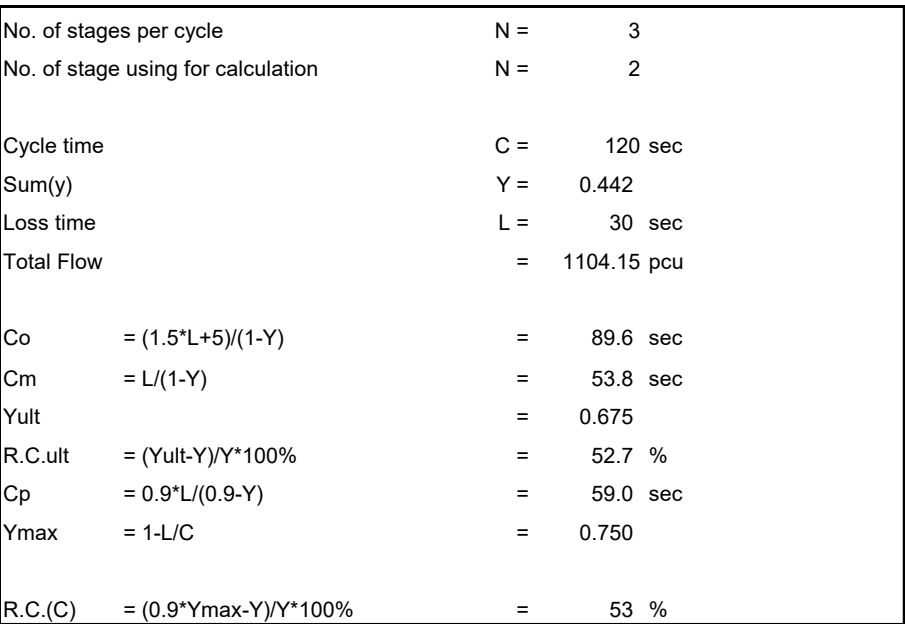
Job Title APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT “OTHER SPECIFIED USES” ANNOTATED “BUSINESS (1)” ZONE AT NO. 646-648A CASTLE PEAK ROAD, CHEUNG SHAN WAN, KOWLOON			FIGURE 4.2	
Date 6/2026	Scale N.T.S.	Drawing Title YEAR 2033 DESIGN TRAFFIC FLOW		
Drawn CNC	Job No. 315341-02			

Junction Calculation Sheet

TRAFFIC SIGNAL CALCULATION

JUNCTION NO: J1

FILENAME :

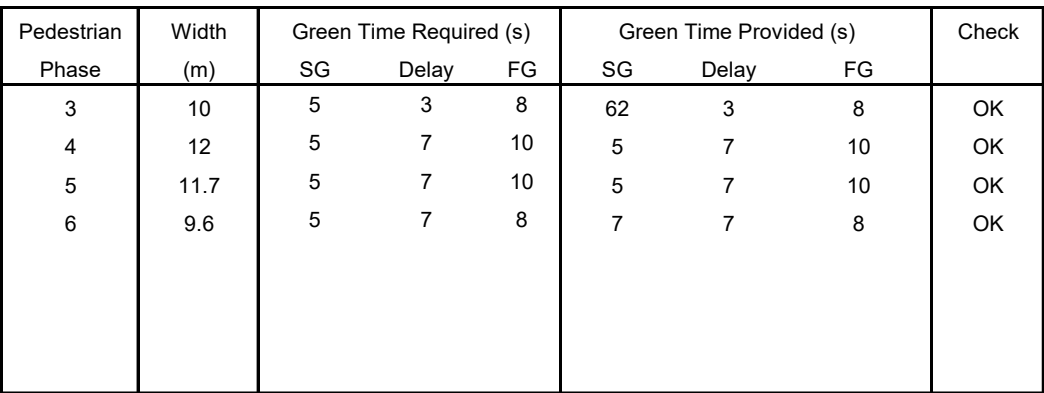
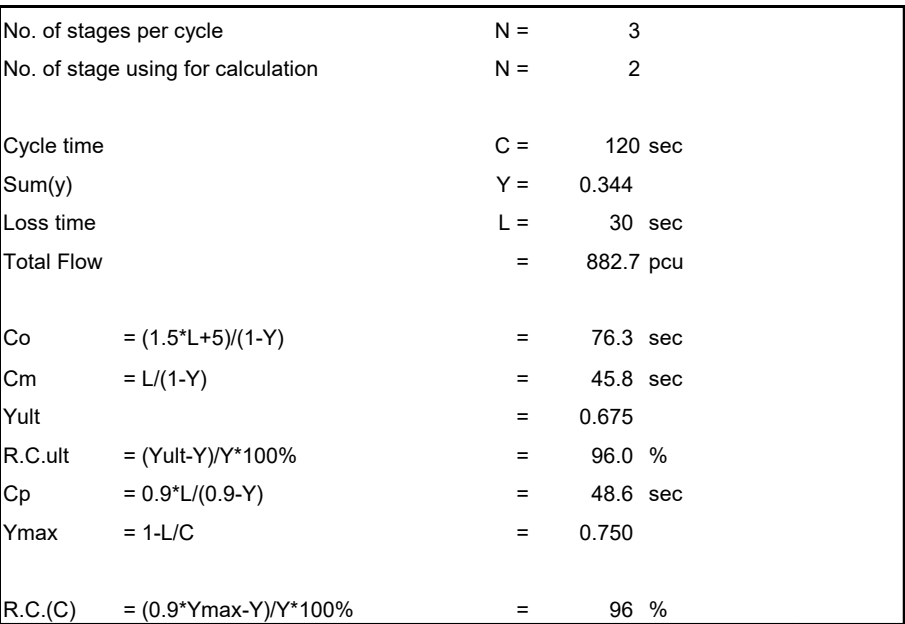


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

TRAFFIC SIGNAL CALCULATION

JUNCTION NO: J1

FILENAME :

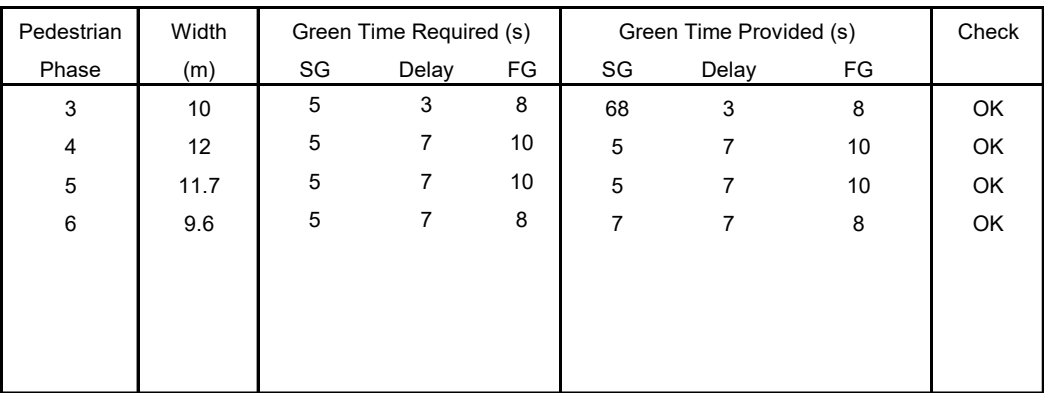
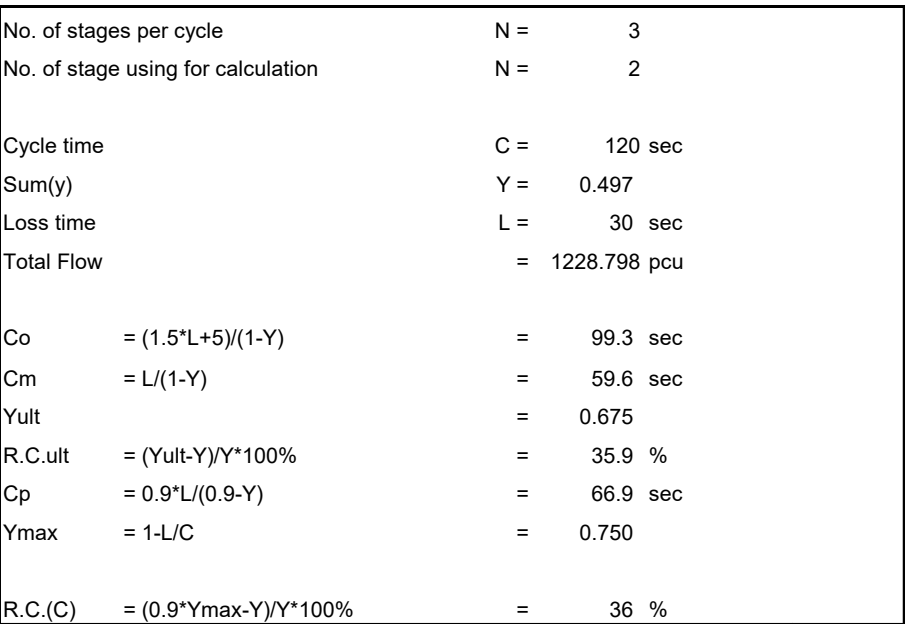


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

TRAFFIC SIGNAL CALCULATION

JUNCTION NO: J1

FILENAME :

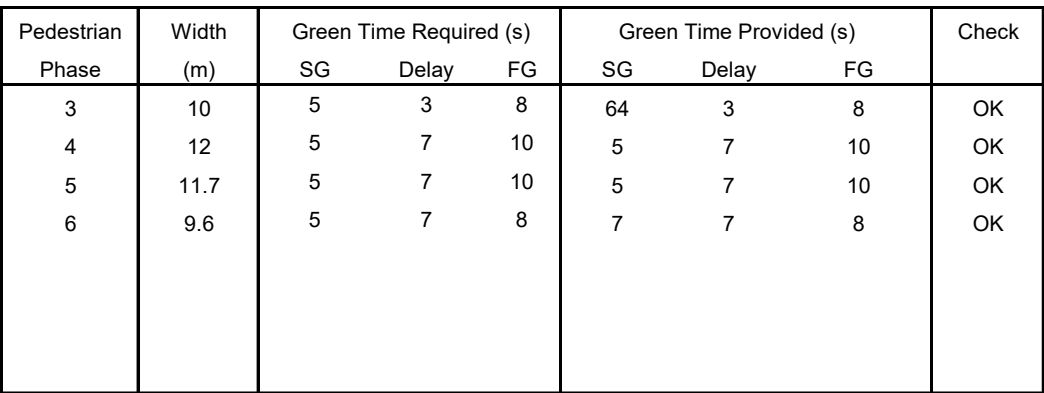
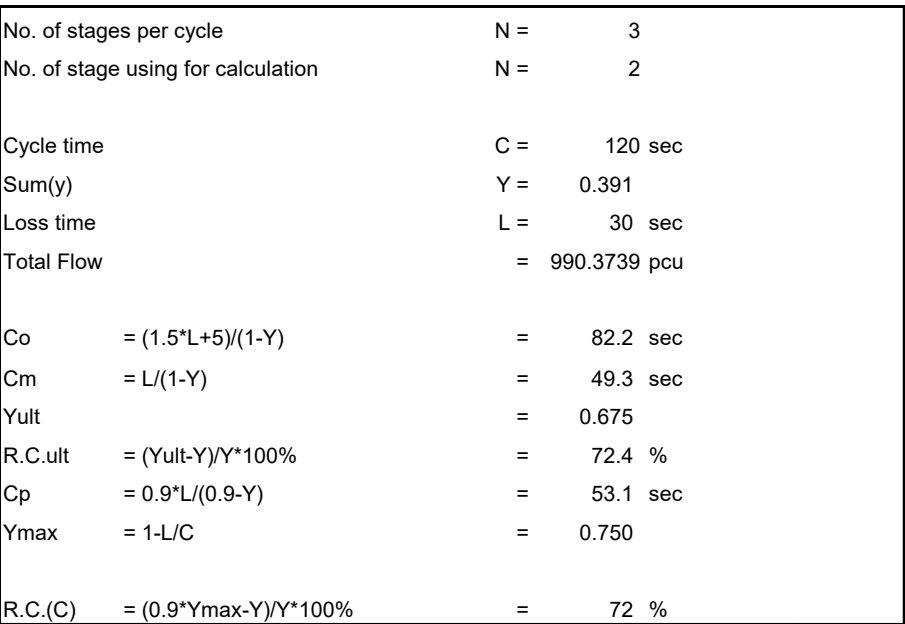


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

TRAFFIC SIGNAL CALCULATION

JUNCTION NO: J1

FILENAME :

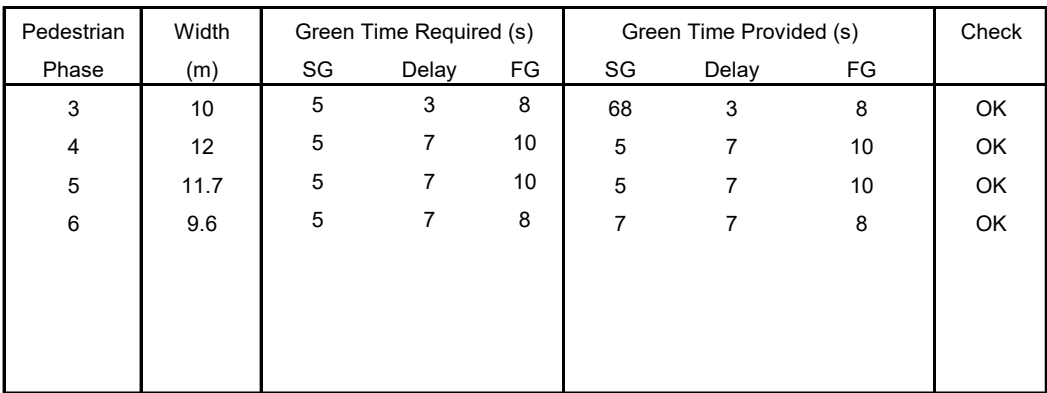
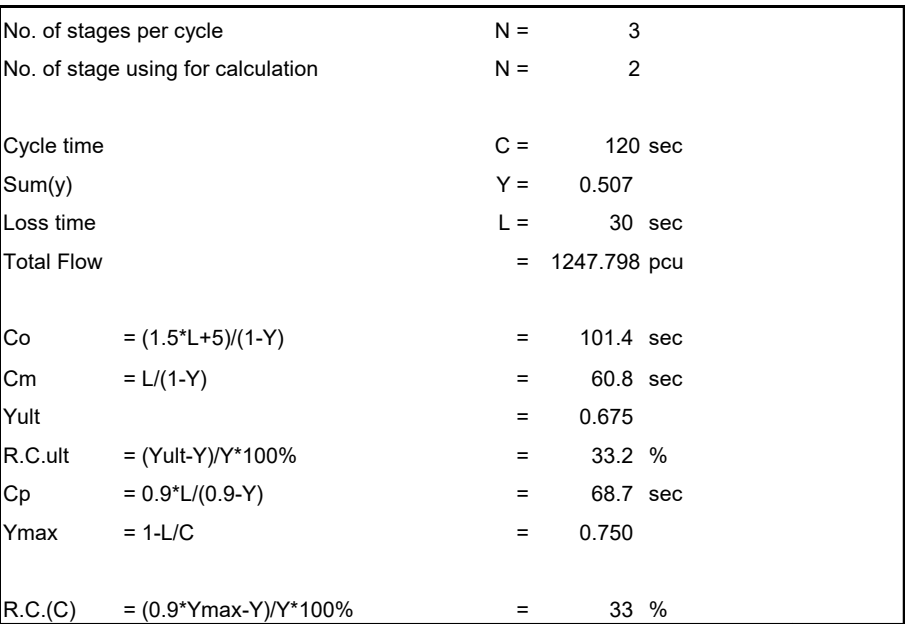


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

TRAFFIC SIGNAL CALCULATION

JUNCTION NO: J1

FILENAME :

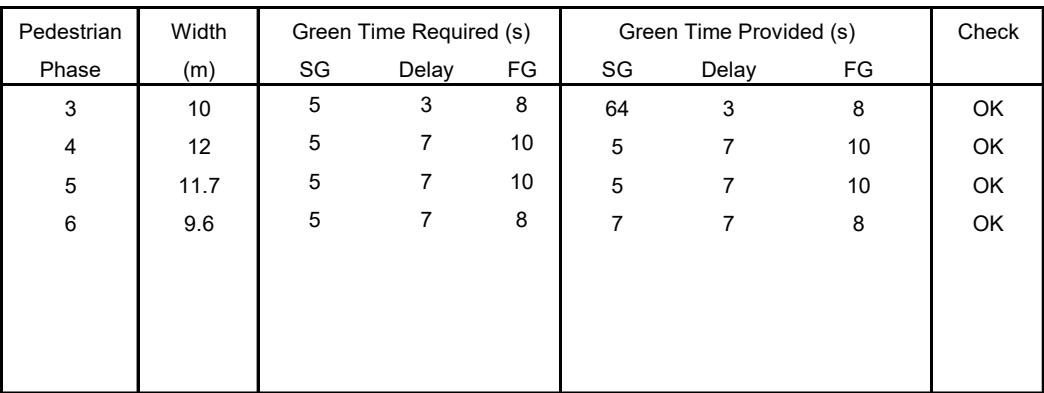
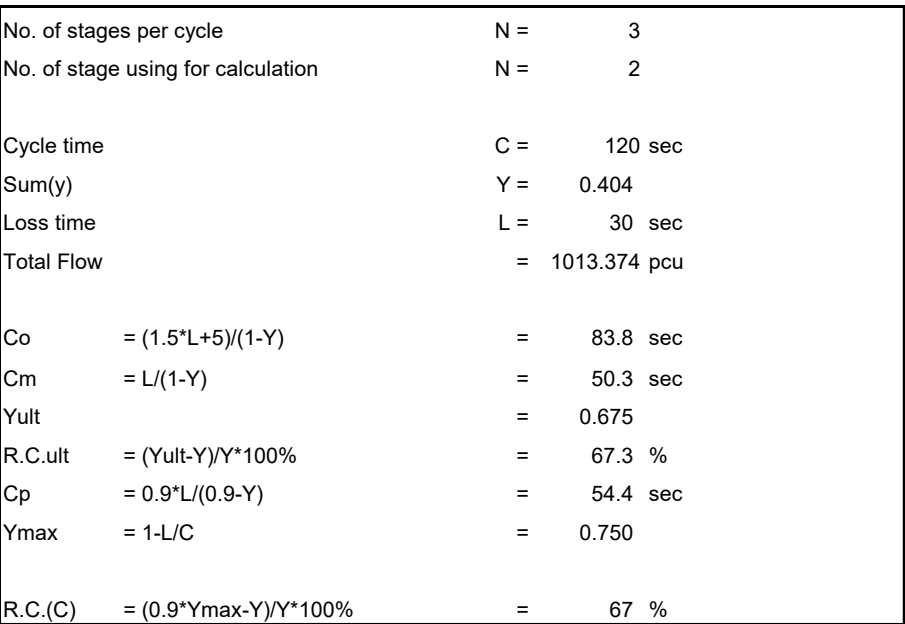


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

TRAFFIC SIGNAL CALCULATION

JUNCTION NO: J1

FILENAME :



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

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

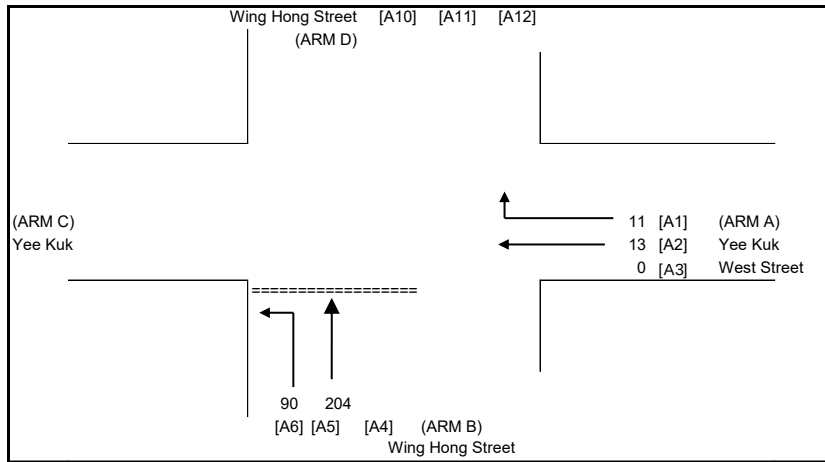
JUNCTION NO: J2

Wing Hong Street / Yee Kuk

Year 2026 Existing AM Peak

DATE : 23-Jun-26

FILENAME :



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
X a = STREAM-SPECIFIC (RIGHT TURN FROM A)
X b = STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b = STREAM-SPECIFIC (LEFT TURN FROM B)
M b = STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y = (1-0.0345W)
r b-a = RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W = 6.00 (metres)
W cr = 0 (metres)
Y = 0.793

MAJOR ROAD (ARM A)

W a-d = 6.00 (metres)
Vr a-d = 50 (metres)
q a-b = 0 (pcu/hr)
q a-c = 13 (pcu/hr)
q a-d = 11 (pcu/hr)

MAJOR 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)
q c-d = 0 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.50 (metres)
W b-c = 2.50 (metres)
Vl b-a = 0 (metres)
Vr b-a = 0 (metres)
Vr b-c = 25 (metres)
q b-a = 0 (pcu/hr)
q b-c = 90 (pcu/hr)
q b-d = 204 (pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b = 0.724
X c = 0.586
Z b = 0.816
M b = 0.742
X a = 1.144
X d = 0.533
Z d = 0.586
M d = 0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a = 0
ql b-d = 101.9 (pcu/hr)
qr b-d = 101.9 (pcu/hr)
r d-c = 0.000
ql d-b = 0 (pcu/hr)
qr d-b = 0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a = 449 (pcu/hr)
Q b-c = 605 (pcu/hr)
Q c-b = 432 (pcu/hr)
Ql b-d = 460 (pcu/hr)
Qr b-d = 449 (pcu/hr)
Q d-c = 286 (pcu/hr)
Q d-a = 437 (pcu/hr)
Q a-d = 852 (pcu/hr)
Ql d-b = 331 (pcu/hr)
Qr d-b = 331 (pcu/hr)

TOTAL FLOW = 317.4069 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0000
DFC b-c = 0.1488
DFC c-b = 0.0000
DFCI b-d = 0.2215
DFCr b-d = 0.2269
DFC d-c = 0.0000
DFC d-a = 0.0000
DFC a-d = 0.0126
DFCI d-b = 0.0000
DFCr d-b = 0.0000

CRITICAL DFC = 0.23

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

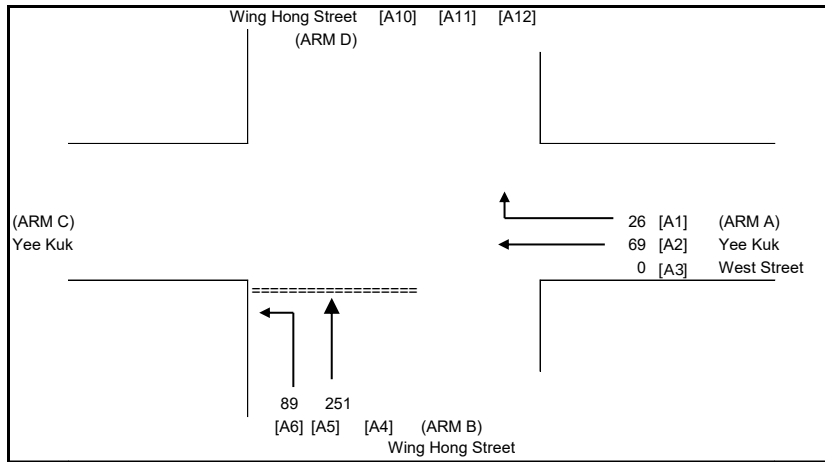
JUNCTION NO: J2

Wing Hong Street / Yee Kuk

Year 2026 Existing PM Peak

DATE : 23-Jun-26

FILENAME :



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
X a = STREAM-SPECIFIC (RIGHT TURN FROM A)
X b = STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b = STREAM-SPECIFIC (LEFT TURN FROM B)
M b = STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y = (1-0.0345W)
r b-a = RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W = 6.00 (metres)
W cr = 0 (metres) Y = 0.793

MAJOR ROAD (ARM A)

W a-d = 6.00 (metres)
Vr a-d = 50 (metres)
q a-b = 0 (pcu/hr)
q a-c = 69 (pcu/hr)
q a-d = 26 (pcu/hr)

MAJOR 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)
q c-d = 0 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.50 (metres)
W b-c = 2.50 (metres)
Vl b-a = 0 (metres)
Vr b-a = 0 (metres)
Vr b-c = 25 (metres)
q b-a = 0 (pcu/hr)
q b-c = 89 (pcu/hr)
q b-d = 251 (pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b = 0.724 X a = 1.144
X c = 0.586 X d = 0.533
Z b = 0.816 Z d = 0.586
M b = 0.742 M d = 0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a = 0 r d-c = 0.000
ql b-d = 125.3 (pcu/hr) ql d-b = 0 (pcu/hr)
qr b-d = 125.3 (pcu/hr) qr d-b = 0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a = 434 (pcu/hr) Q d-c = 270 (pcu/hr)
Q b-c = 591 (pcu/hr) Q d-a = 437 (pcu/hr)
Q c-b = 419 (pcu/hr) Q a-d = 852 (pcu/hr)
Ql b-d = 445 (pcu/hr) Ql d-b = 322 (pcu/hr)
Qr b-d = 434 (pcu/hr) Qr d-b = 322 (pcu/hr)

TOTAL FLOW = 434.3015 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0000
DFC b-c = 0.1511
DFC c-b = 0.0000
DFCI b-d = 0.2815
DFCr b-d = 0.2886
DFC d-c = 0.0000
DFC d-a = 0.0000
DFC a-d = 0.0303
DFCI d-b = 0.0000
DFCr d-b = 0.0000

CRITICAL DFC = 0.29

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J2

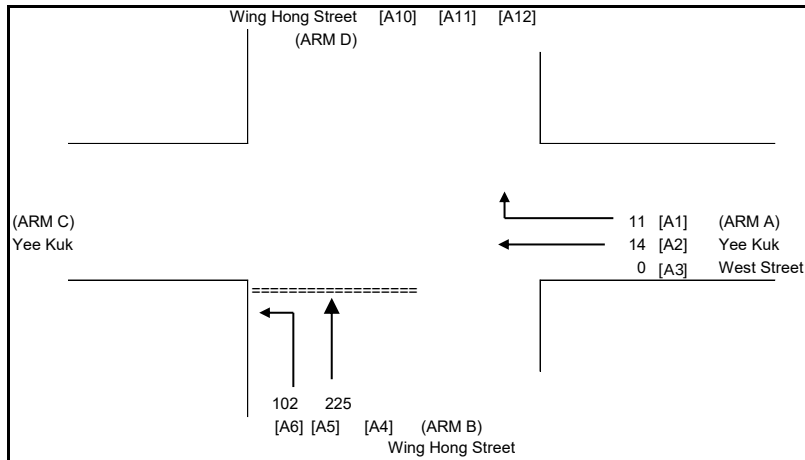
Wing Hong Street / Yee Kuk

Year 2033 Reference AM Peak

DATE :

23-Jun-26

FILENAME :



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
VI 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	6.00	(metres)		
W cr	=	0	(metres)	Y	= 0.793

MAJOR ROAD (ARM A)

W a-d	=	6.00	(metres)	W c-b	=	0.00	(metres)
Vr a-d	=	50	(metres)	Vr c-b	=	0	(metres)
q a-b	=	0	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	14	(pcu/hr)	q c-b	=	0	(pcu/hr)
q a-d	=	11	(pcu/hr)	q c-d	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.50	(metres)	W d-c	=	0.00	(metres)
W b-c	=	2.50	(metres)	W d-a	=	0.00	(metres)
VI b-a	=	0	(metres)	VI d-c	=	0	(metres)
Vr b-a	=	0	(metres)	Vr d-c	=	0	(metres)
Vr b-c	=	25	(metres)	Vr d-a	=	0	(metres)
q b-a	=	0	(pcu/hr)	q d-c	=	0	(pcu/hr)
q b-c	=	102	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	225	(pcu/hr)	q d-b	=	0	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.724	X a	=	1.144
X c	=	0.586	X d	=	0.533
Z b	=	0.816	Z d	=	0.586
M b	=	0.742	M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0	r d-c	=	0.000
ql b-d	=	112.3	ql d-b	=	0 (pcu/hr)
qr b-d	=	112.3	qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	449	(pcu/hr)	Q d-c	=	280	(pcu/hr)
Q b-c	=	604	(pcu/hr)	Q d-a	=	437	(pcu/hr)
Q c-b	=	431	(pcu/hr)	Q a-d	=	852	(pcu/hr)
Ql b-d	=	460	(pcu/hr)	Ql d-b	=	330	(pcu/hr)
Qr b-d	=	449	(pcu/hr)	Qr d-b	=	330	(pcu/hr)

TOTAL FLOW = 351.3031 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1681
DFC c-b	=	0.0000
DFCI b-d	=	0.2440
DFCr b-d	=	0.2500
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0135
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.25

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J2

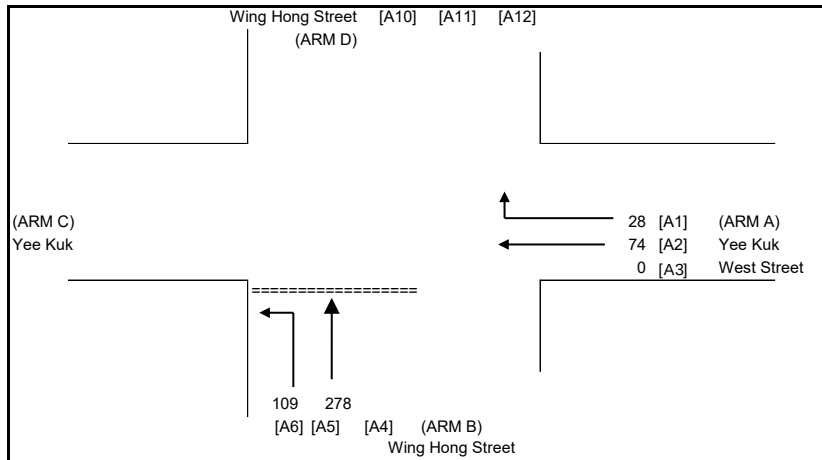
Wing Hong Street / Yee Kuk

Year 2033 Reference PM Peak

DATE :

23-Jun-26

FILENAME :



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
X a = STREAM-SPECIFIC (RIGHT TURN FROM A)
X b = STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b = STREAM-SPECIFIC (LEFT TURN FROM B)
M b = STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y = (1-0.0345W)
r b-a = RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W = 6.00 (metres)
W cr = 0 (metres)
Y = 0.793

MAJOR ROAD (ARM A)

W a-d = 6.00 (metres)
Vr a-d = 50 (metres)
q a-b = 0 (pcu/hr)
q a-c = 74 (pcu/hr)
q a-d = 28 (pcu/hr)

MAJOR 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)
q c-d = 0 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.50 (metres)
W b-c = 2.50 (metres)
Vl b-a = 0 (metres)
Vr b-a = 0 (metres)
Vr b-c = 25 (metres)
q b-a = 0 (pcu/hr)
q b-c = 109 (pcu/hr)
q b-d = 278 (pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b = 0.724
X c = 0.586
Z b = 0.816
M b = 0.742
X a = 1.144
X d = 0.533
Z d = 0.586
M d = 0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a = 0
ql b-d = 138.8 (pcu/hr)
qr b-d = 138.8 (pcu/hr)
r d-c = 0.000
ql d-b = 0 (pcu/hr)
qr d-b = 0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a = 433 (pcu/hr)
Q b-c = 590 (pcu/hr)
Q c-b = 417 (pcu/hr)
Ql b-d = 444 (pcu/hr)
Qr b-d = 433 (pcu/hr)
Q d-c = 262 (pcu/hr)
Q d-a = 437 (pcu/hr)
Q a-d = 852 (pcu/hr)
Ql d-b = 321 (pcu/hr)
Qr d-b = 321 (pcu/hr)

TOTAL FLOW = 487.63 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0000
DFC b-c = 0.1843
DFC c-b = 0.0000
DFCI b-d = 0.3126
DFCr b-d = 0.3206
DFC d-c = 0.0000
DFC d-a = 0.0000
DFC a-d = 0.0324
DFCI d-b = 0.0000
DFCr d-b = 0.0000

CRITICAL DFC = 0.32

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J2

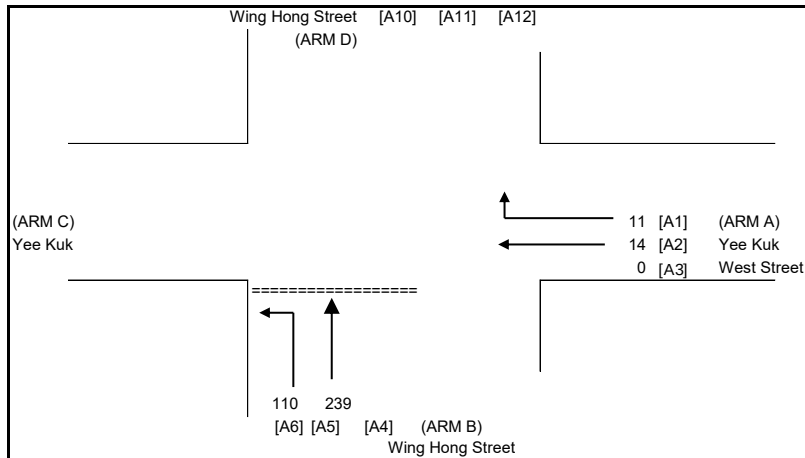
Wing Hong Street / Yee Kuk

Year 2033 Design AM Peak

DATE :

23-Jun-26

FILENAME :



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
VI 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	6.00	(metres)		
W cr	=	0	(metres)	Y	= 0.793

MAJOR ROAD (ARM A)

W a-d	=	6.00	(metres)	W c-b	=	0.00	(metres)
Vr a-d	=	50	(metres)	Vr c-b	=	0	(metres)
q a-b	=	0	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	14	(pcu/hr)	q c-b	=	0	(pcu/hr)
q a-d	=	11	(pcu/hr)	q c-d	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.50	(metres)	W d-c	=	0.00	(metres)
W b-c	=	2.50	(metres)	W d-a	=	0.00	(metres)
VI b-a	=	0	(metres)	VI d-c	=	0	(metres)
Vr b-a	=	0	(metres)	Vr d-c	=	0	(metres)
Vr b-c	=	25	(metres)	Vr d-a	=	0	(metres)
q b-a	=	0	(pcu/hr)	q d-c	=	0	(pcu/hr)
q b-c	=	110	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	239	(pcu/hr)	q d-b	=	0	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.724	X a	=	1.144
X c	=	0.586	X d	=	0.533
Z b	=	0.816	Z d	=	0.586
M b	=	0.742	M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0	r d-c	=	0.000
ql b-d	=	119.3 (pcu/hr)	ql d-b	=	0 (pcu/hr)
qr b-d	=	119.3 (pcu/hr)	qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	449	(pcu/hr)	Q d-c	=	277	(pcu/hr)
Q b-c	=	604	(pcu/hr)	Q d-a	=	437	(pcu/hr)
Q c-b	=	431	(pcu/hr)	Q a-d	=	852	(pcu/hr)
Ql b-d	=	460	(pcu/hr)	Ql d-b	=	330	(pcu/hr)
Qr b-d	=	449	(pcu/hr)	Qr d-b	=	330	(pcu/hr)

TOTAL FLOW = 373.3031 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1814
DFC c-b	=	0.0000
DFCI b-d	=	0.2592
DFCr b-d	=	0.2656
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0135
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.27

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J2

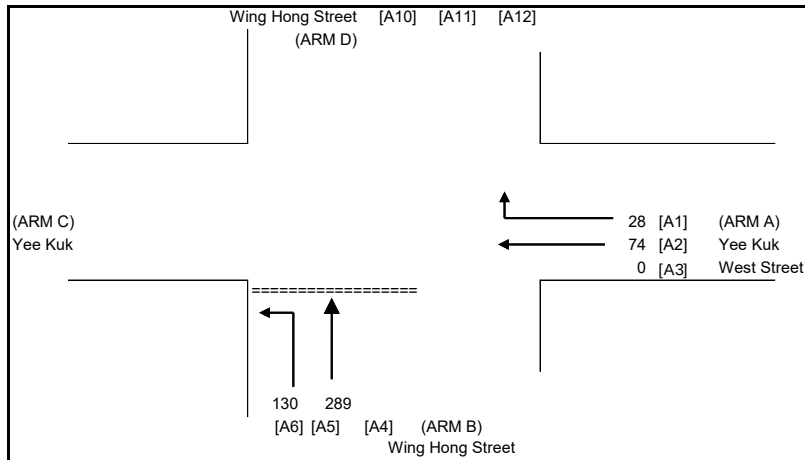
Wing Hong Street / Yee Kuk

Year 2033 Design PM Peak

DATE :

23-Jun-26

FILENAME :



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
VI 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	6.00	(metres)		
W cr	=	0	(metres)	Y	= 0.793

MAJOR ROAD (ARM A)

W a-d	=	6.00	(metres)	W c-b	=	0.00	(metres)
Vr a-d	=	50	(metres)	Vr c-b	=	0	(metres)
q a-b	=	0	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	74	(pcu/hr)	q c-b	=	0	(pcu/hr)
q a-d	=	28	(pcu/hr)	q c-d	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.50	(metres)	W d-c	=	0.00	(metres)
W b-c	=	2.50	(metres)	W d-a	=	0.00	(metres)
VI b-a	=	0	(metres)	VI d-c	=	0	(metres)
Vr b-a	=	0	(metres)	Vr d-c	=	0	(metres)
Vr b-c	=	25	(metres)	Vr d-a	=	0	(metres)
q b-a	=	0	(pcu/hr)	q d-c	=	0	(pcu/hr)
q b-c	=	130	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	289	(pcu/hr)	q d-b	=	0	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.724	X a	=	1.144
X c	=	0.586	X d	=	0.533
Z b	=	0.816	Z d	=	0.586
M b	=	0.742	M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0	r d-c	=	0.000
ql b-d	=	144.3 (pcu/hr)	ql d-b	=	0 (pcu/hr)
qr b-d	=	144.3 (pcu/hr)	qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	433	(pcu/hr)	Q d-c	=	257	(pcu/hr)
Q b-c	=	590	(pcu/hr)	Q d-a	=	437	(pcu/hr)
Q c-b	=	417	(pcu/hr)	Q a-d	=	852	(pcu/hr)
Ql b-d	=	444	(pcu/hr)	Ql d-b	=	321	(pcu/hr)
Qr b-d	=	433	(pcu/hr)	Qr d-b	=	321	(pcu/hr)

TOTAL FLOW = 519.63 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.2198
DFC c-b	=	0.0000
DFCI b-d	=	0.3250
DFCr b-d	=	0.3333
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0324
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.33

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

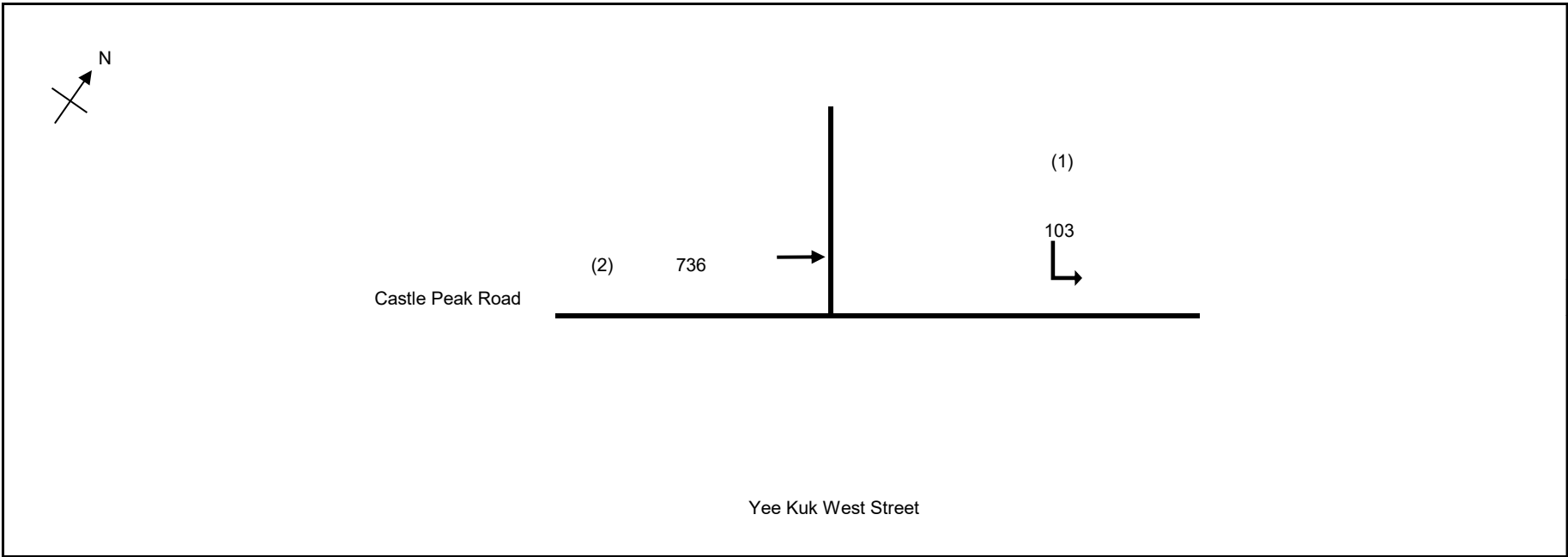
JUNCTION NO: J3

Castle Peak Road / Yee Kuk West Street

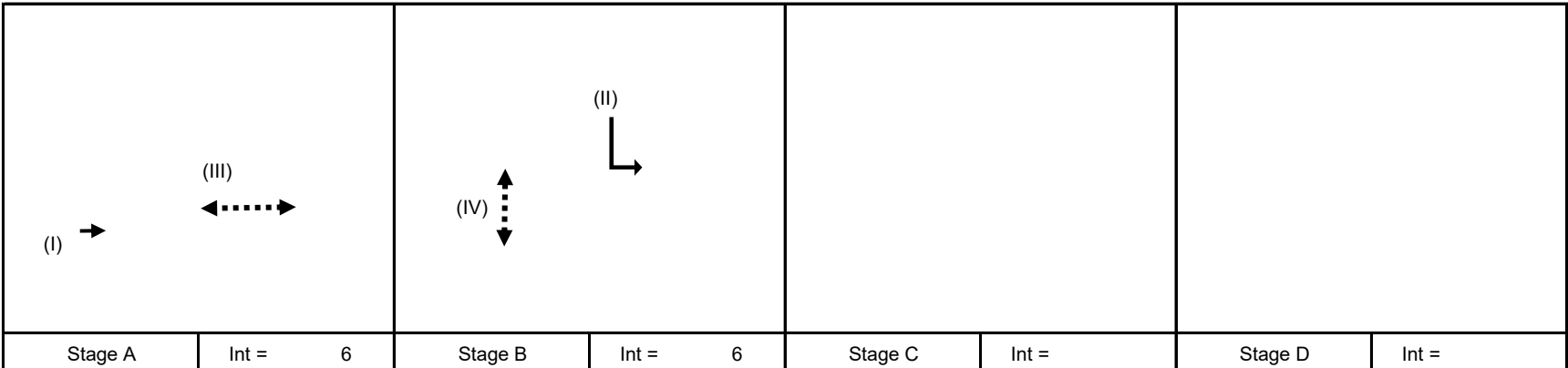
Year 2026 Existing AM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	2
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.252
Loss time	L =	10 sec
Total Flow	=	839 pcu
Co	= (1.5*L+5)/(1-Y)	= 26.8 sec
Cm	= L/(1-Y)	= 13.4 sec
Yult	=	0.825
R.C.ult	= (Yult-Y)/Y*100%	= 226.8 %
Cp	= 0.9*L/(0.9-Y)	= 13.9 sec
Ymax	= 1-L/C	= 0.919
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 228 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	1	8	73	1	8	OK
IV	8	5	1	7	24	1	7	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
2	A	3.30	I	2			N	4030		736		736	0.00	4030			4030	0.183	0.183	10	82	82	0.275	25
1	B	3.00	II	1	5		N	1915	103			103	1.00	1473			1473	0.070	0.070		32	32	0.275	16

NOTE : 'O' - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRIAN WALKING SPEED = 1.2m/s

*Assuming pedestrain stage is activated

QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

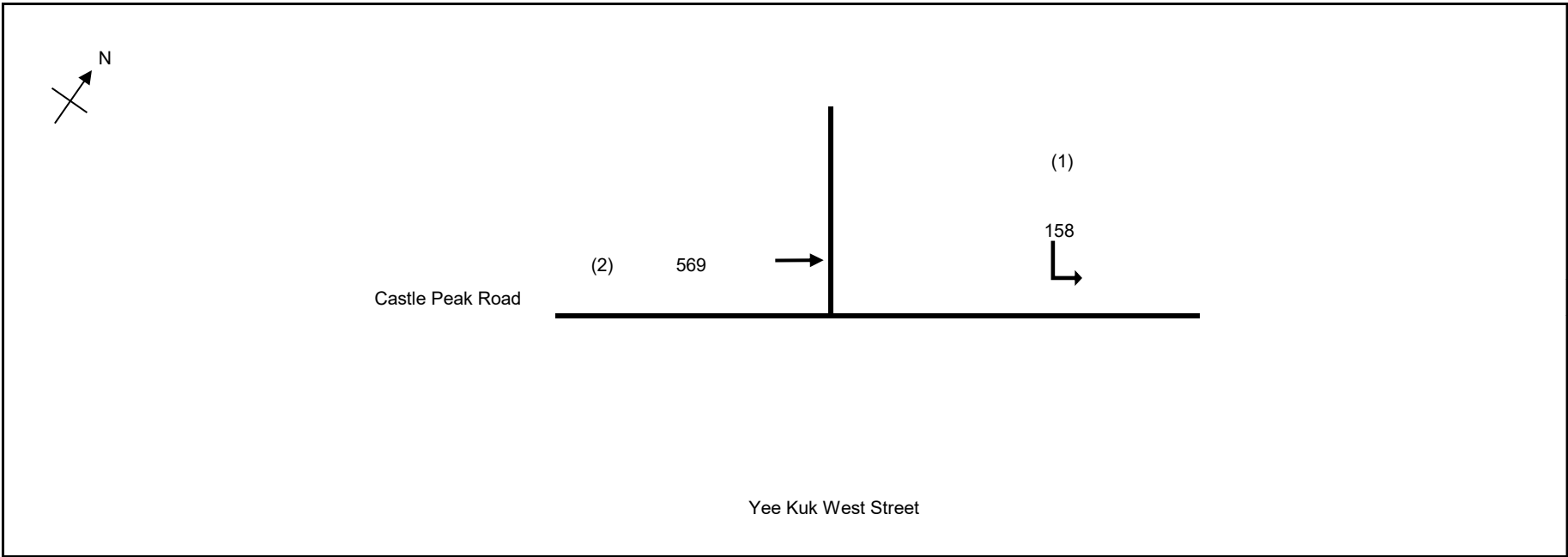
JUNCTION NO: J3

Castle Peak Road / Yee Kuk West Street

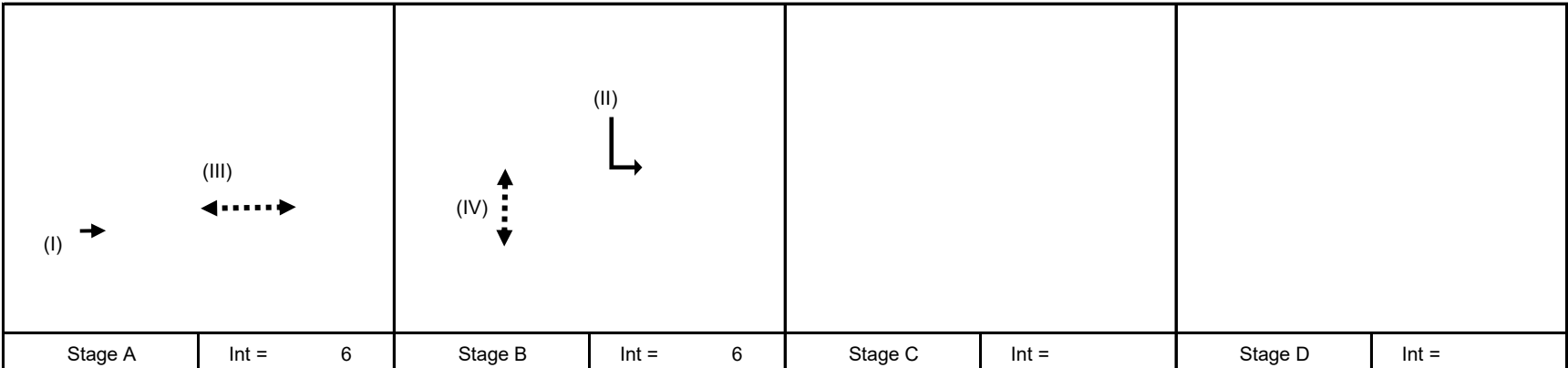
Year 2026 Existing PM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	2
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.249
Loss time	L =	10 sec
Total Flow	=	727 pcu
Co	= (1.5*L+5)/(1-Y)	= 26.6 sec
Cm	= L/(1-Y)	= 13.3 sec
Yult	=	0.825
R.C.ult	= (Yult-Y)/Y*100%	= 232.0 %
Cp	= 0.9*L/(0.9-Y)	= 13.8 sec
Ymax	= 1-L/C	= 0.919
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 233 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	1	8	56	1	8	OK
IV	8	5	1	7	41	1	7	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
2	A	3.30	I	2			N	4030		569		569	0.00	4030			4030	0.141	0.141	10	65	65	0.270	28
1	B	3.00	II	1	5		N	1915	158			158	1.00	1473			1473	0.107	0.107		49	49	0.270	20

NOTE : 'O' - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRIAN WALKING SPEED = 1.2m/s

*Assuming pedestrain stage is activated

QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

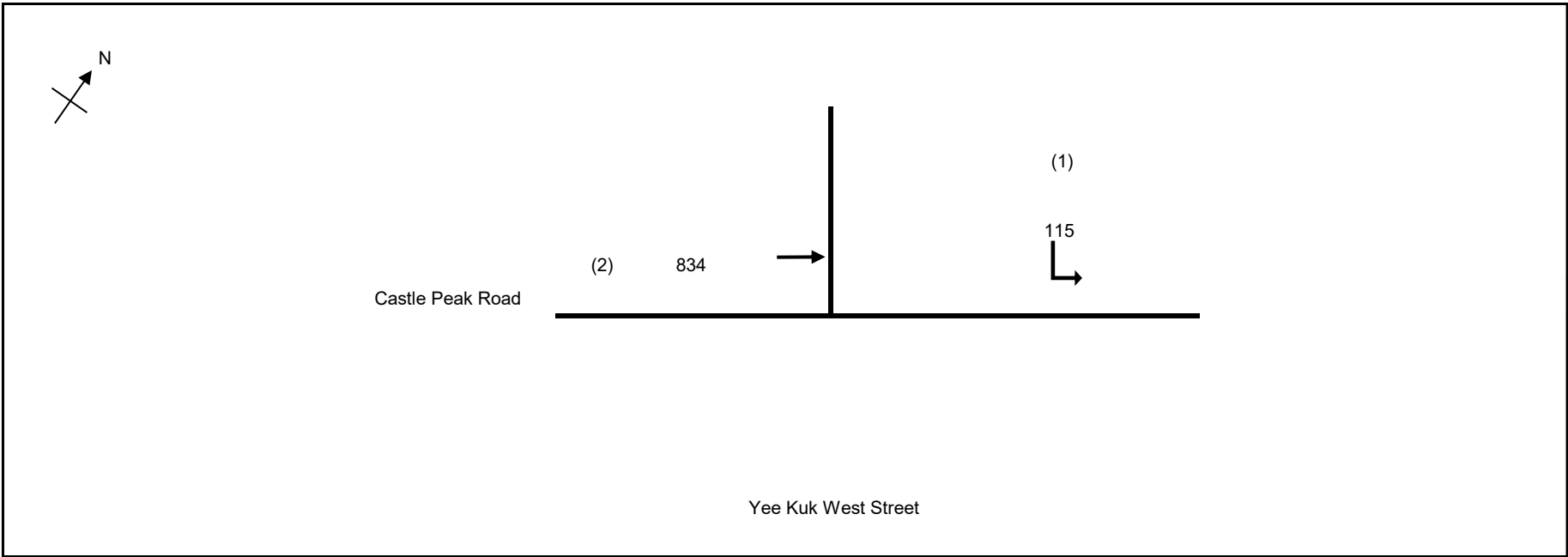
JUNCTION NO: J3

Castle Peak Road / Yee Kuk West Street

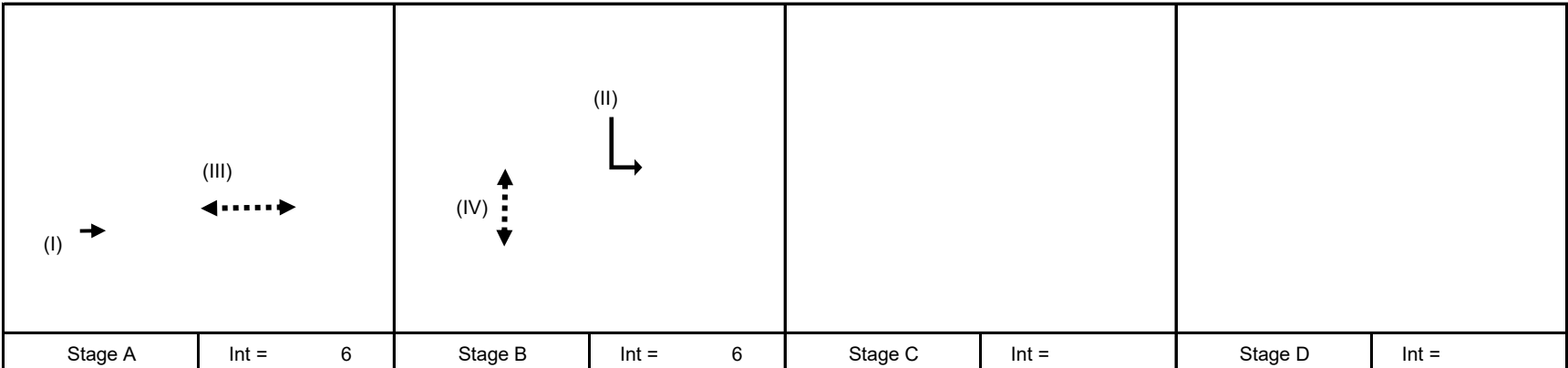
Year 2033 Reference AM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	2
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.285
Loss time	L =	10 sec
Total Flow	=	949 pcu
Co	= (1.5*L+5)/(1-Y)	= 28.0 sec
Cm	= L/(1-Y)	= 14.0 sec
Yult	=	0.825
R.C.ult	= (Yult-Y)/Y*100%	= 189.3 %
Cp	= 0.9*L/(0.9-Y)	= 14.6 sec
Ymax	= 1-L/C	= 0.919
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 190 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	1	8	74	1	8	OK
IV	8	5	1	7	23	1	7	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
2	A	3.30	I	2			N	4030		834		834	0.00	4030			4030	0.207	0.207	10	83	83	0.310	29
1	B	3.00	II	1	5		N	1915	115			115	1.00	1473			1473	0.078	0.078		31	31	0.310	18

NOTE : 'O' - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRIAN WALKING SPEED = 1.2m/s

*Assuming pedestrain stage is activated

QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

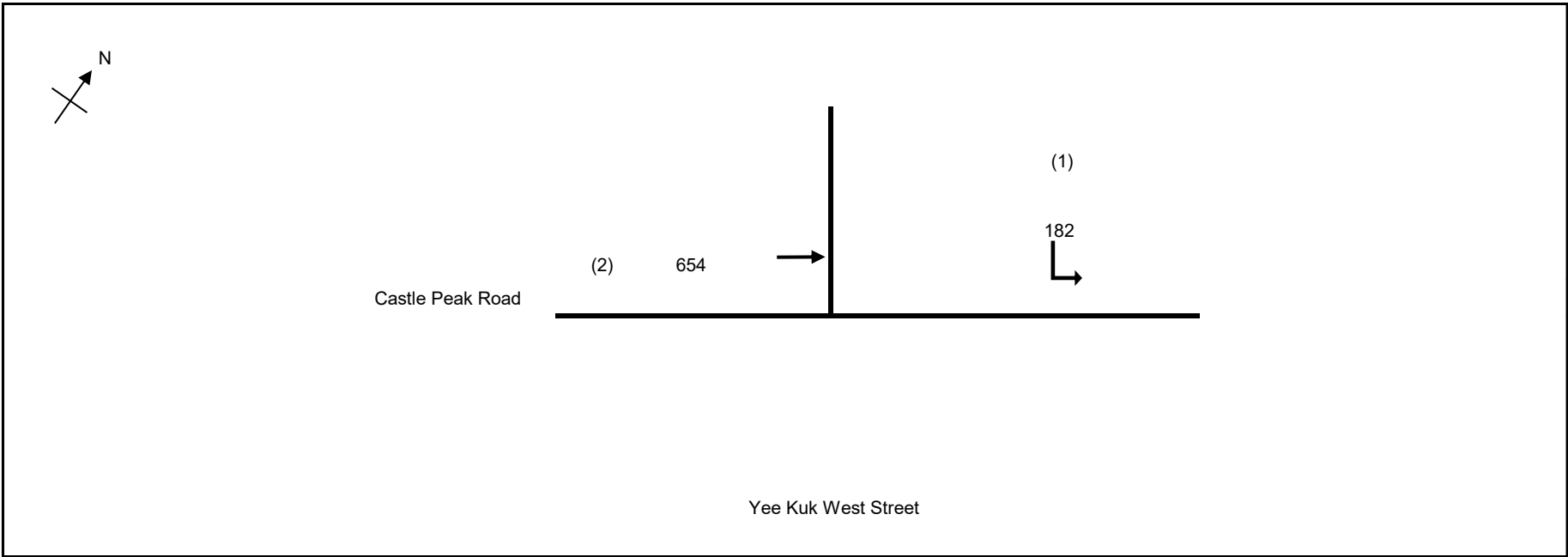
JUNCTION NO: J3

Castle Peak Road / Yee Kuk West Street

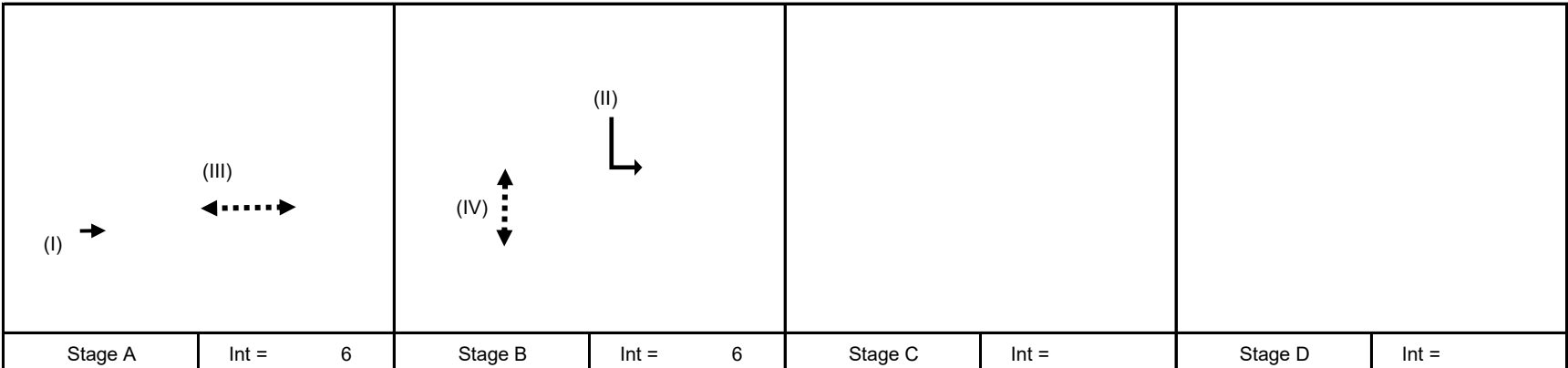
Year 2033 Reference PM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	2
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.286
Loss time	L =	10 sec
Total Flow	=	837 pcu
Co	= (1.5*L+5)/(1-Y)	= 28.0 sec
Cm	= L/(1-Y)	= 14.0 sec
Yult	=	0.825
R.C.ult	= (Yult-Y)/Y*100%	= 188.3 %
Cp	= 0.9*L/(0.9-Y)	= 14.7 sec
Ymax	= 1-L/C	= 0.919
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 189 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	1	8	56	1	8	OK
IV	8	5	1	7	41	1	7	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
2	A	3.30	I	2			N	4030		654		654	0.00	4030			4030	0.162	0.162	10	65	65	0.311	32
1	B	3.00	II	1	5		N	1915	182			182	1.00	1473			1473	0.124	0.124		49	49	0.311	23

NOTE : 'O' - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRIAN WALKING SPEED = 1.2m/s

*Assuming pedestrain stage is activated

QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

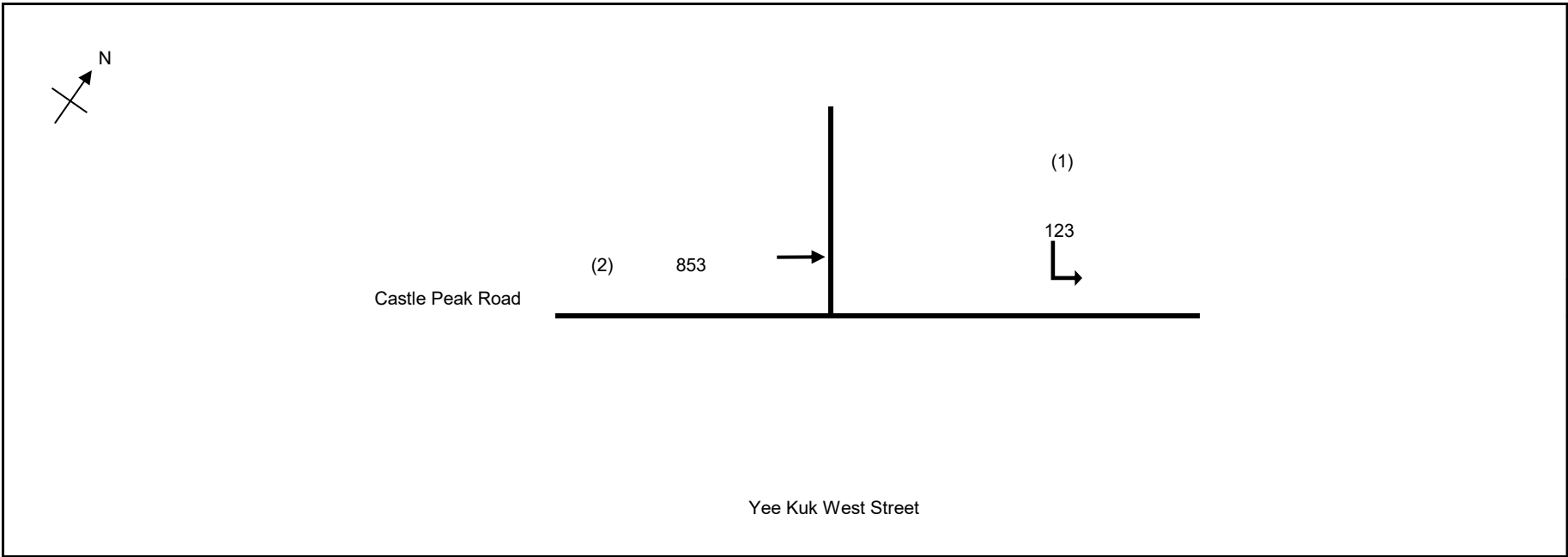
JUNCTION NO: J3

Castle Peak Road / Yee Kuk West Street

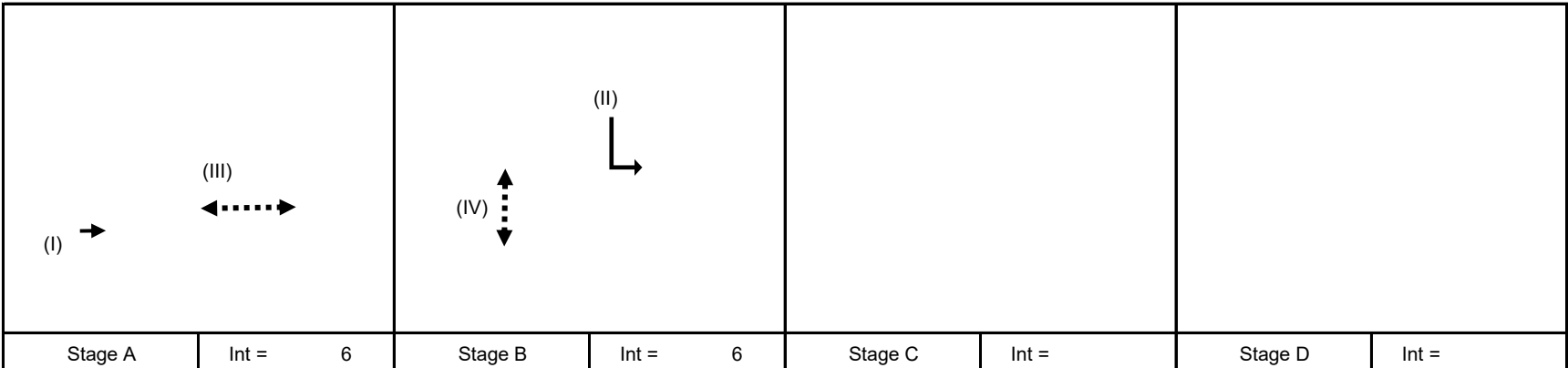
Year 2033 Design AM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	2
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.295
Loss time	L =	10 sec
Total Flow	=	976 pcu
Co	= (1.5*L+5)/(1-Y)	= 28.4 sec
Cm	= L/(1-Y)	= 14.2 sec
Yult	=	0.825
R.C.ult	= (Yult-Y)/Y*100%	= 179.3 %
Cp	= 0.9*L/(0.9-Y)	= 14.9 sec
Ymax	= 1-L/C	= 0.919
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 180 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	1	8	73	1	8	OK
IV	8	5	1	7	24	1	7	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
2	A	3.30	I	2			N	4030		853		853	0.00	4030			4030	0.212	0.212	10	82	82	0.321	30
1	B	3.00	II	1	5		N	1915	123			123	1.00	1473			1473	0.084	0.084		32	32	0.321	19

NOTE : 'O' - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRIAN WALKING SPEED = 1.2m/s

*Assuming pedestrain stage is activated

QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

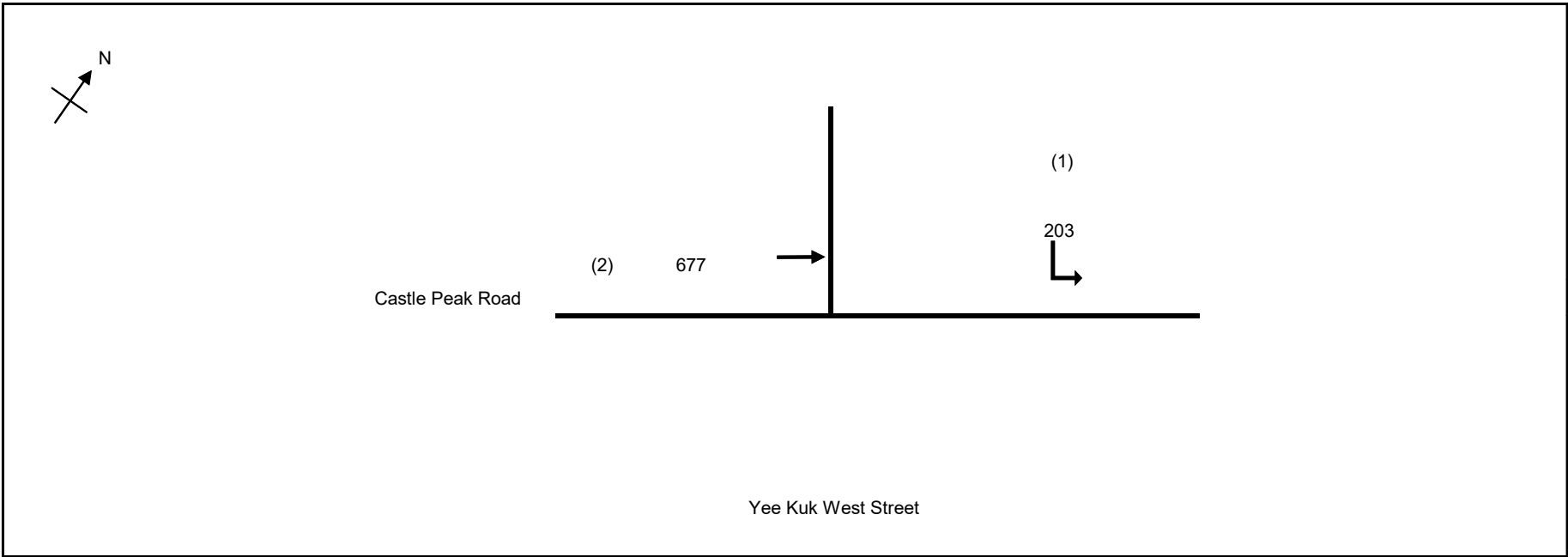
JUNCTION NO: J3

Castle Peak Road / Yee Kuk West Street

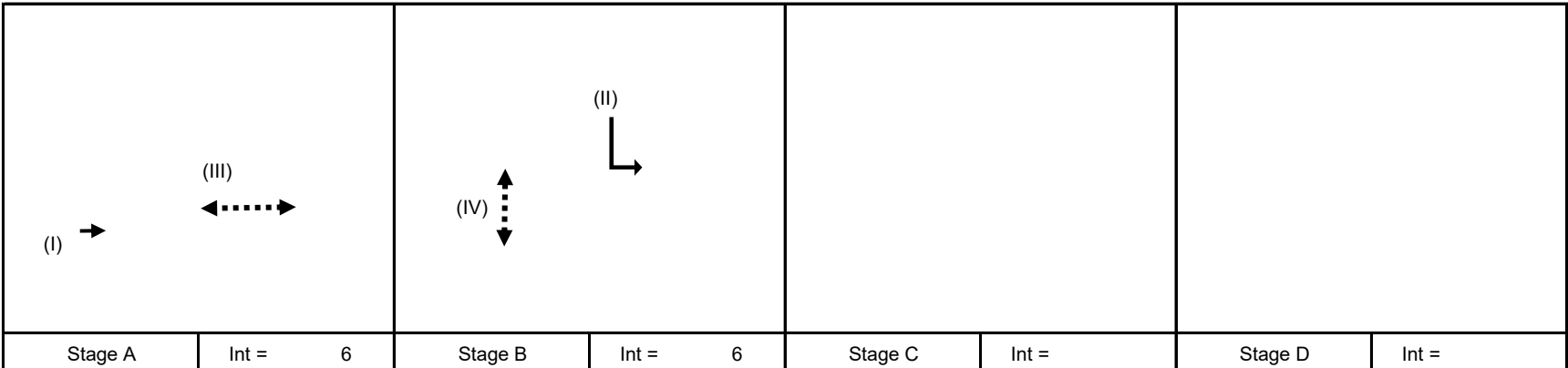
Year 2033 Design PM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	2
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.306
Loss time	L =	10 sec
Total Flow	=	881 pcu
Co	= (1.5*L+5)/(1-Y)	= 28.8 sec
Cm	= L/(1-Y)	= 14.4 sec
Yult	=	0.825
R.C.ult	= (Yult-Y)/Y*100%	= 169.5 %
Cp	= 0.9*L/(0.9-Y)	= 15.2 sec
Ymax	= 1-L/C	= 0.919
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 170 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	1	8	54	1	8	OK
IV	8	5	1	7	43	1	7	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
2 1	A	3.30	I	2			N	4030		677		677	0.00	4030			4030	0.168	0.168	10	63	63	0.333	35
	B	3.00	II	1	5		N	1915	203			203	1.00	1473			1473	0.138	0.138		51	51	0.333	25

NOTE : 'O' - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRIAN WALKING SPEED = 1.2m/s

*Assuming pedestrain stage is activated

QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at “Other Specified Uses” Annotated
“Business (1)” Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

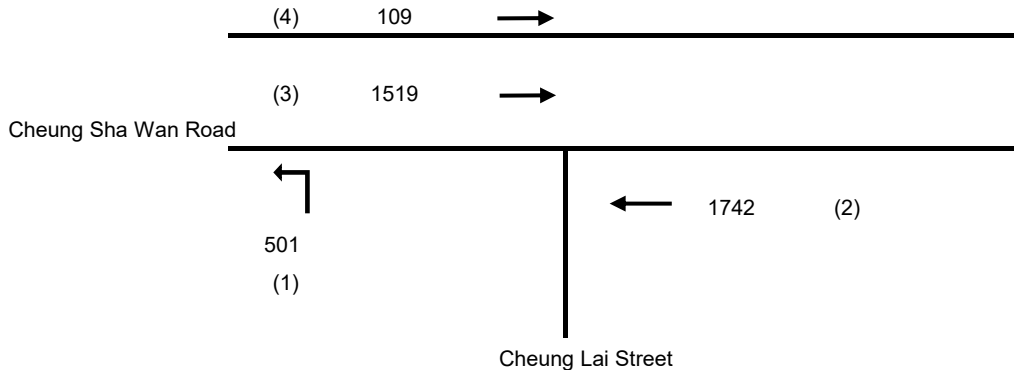
JUNCTION NO: J4

Cheung Sha Wan Road / Cheung Lai Street

Year 2026 Existing AM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	118 sec
Sum(y)	Y =	0.375
Loss time	L =	10 sec
Total Flow	=	3871 pcu
Co	= (1.5*L+5)/(1-Y)	= 32.0 sec
Cm	= L/(1-Y)	= 16.0 sec
Yult	=	0.825
R.C.ult	= (Yult-Y)/Y*100%	= 119.8 %
Cp	= 0.9*L/(0.9-Y)	= 17.2 sec
Ymax	= 1-L/C	= 0.915
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 119 %

	Int = 5		Int = 7		Int = 5		Int = 5
Stage A		Stage B		Stage C		Stage D	

Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
IV	10	5	2	8	21	2	8	OK
V	12	10	2	9	32	2	9	OK
VI	16	7	2	13	72	2	13	OK

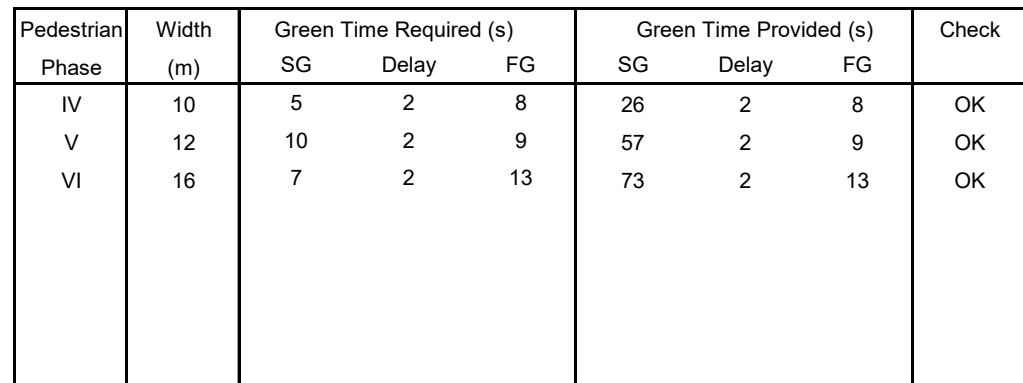
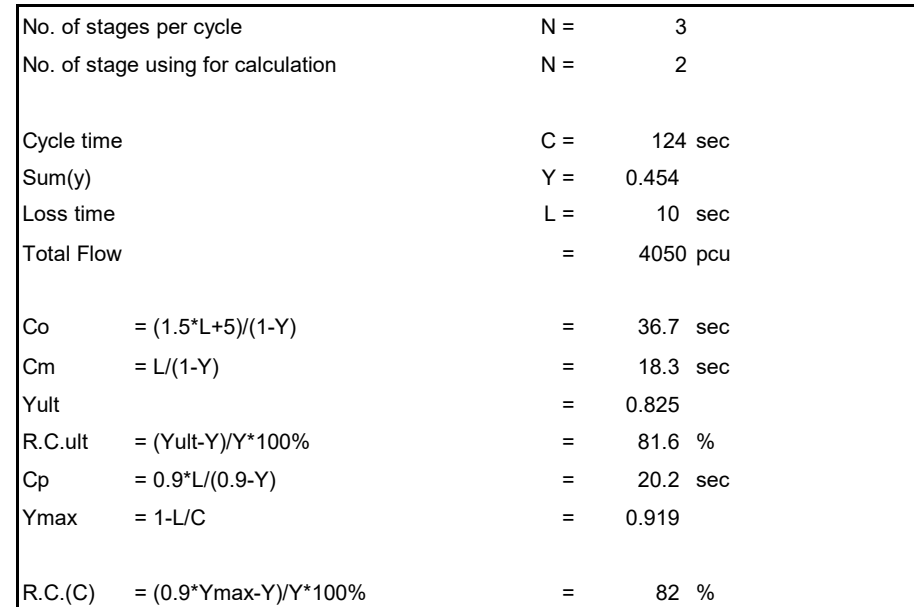
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
4	D,A	3.50	I	1			N	1965		109		109	0.00	1965			1965	0.056		10	16	71	0.093	9
3	D,A	3.50	I	3			N	6175		1519		1519	0.00	6175			6175	0.246			71	71	0.410	40
1	C,D	3.50	II	3	10		N	6175	501			501	1.00	5370			5370	0.093	0.093		27	27	0.410	25
2	A,B	3.50	III	3			N	6175		1742		1742	0.00	6175			6175	0.282	0.282		81	81	0.410	36

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

TRAFFIC SIGNAL CALCULATION

JUNCTION NO: J4

FILENAME :

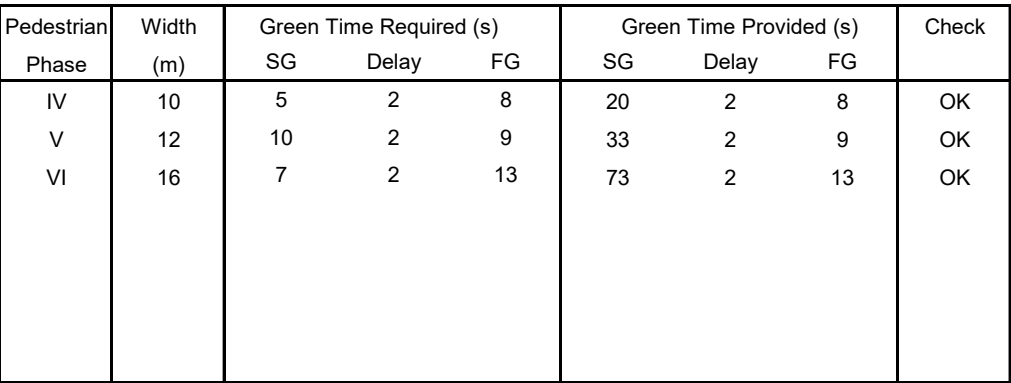
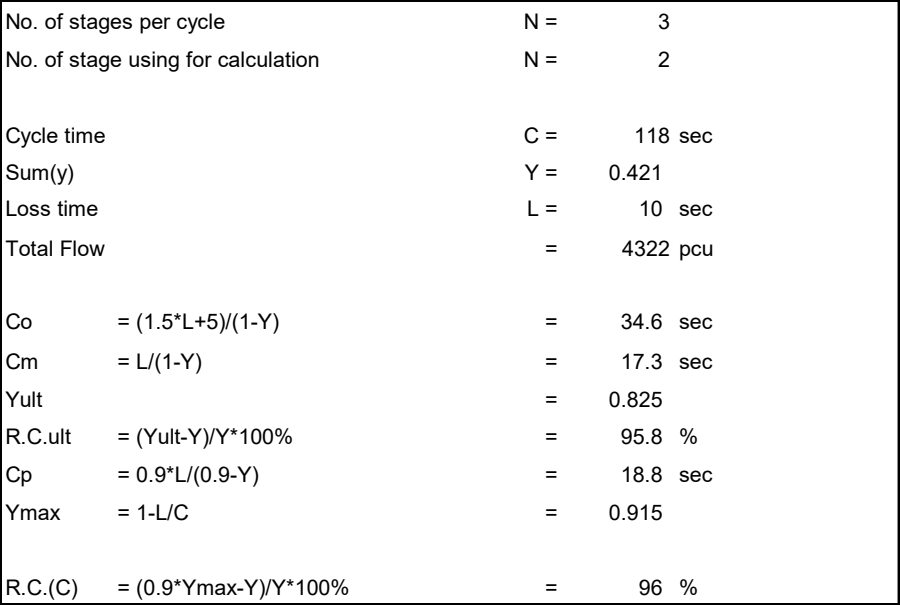


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

TRAFFIC SIGNAL CALCULATION

JUNCTION NO: J4

FILENAME :



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

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at “Other Specified Uses” Annotated
“Business (1)” Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

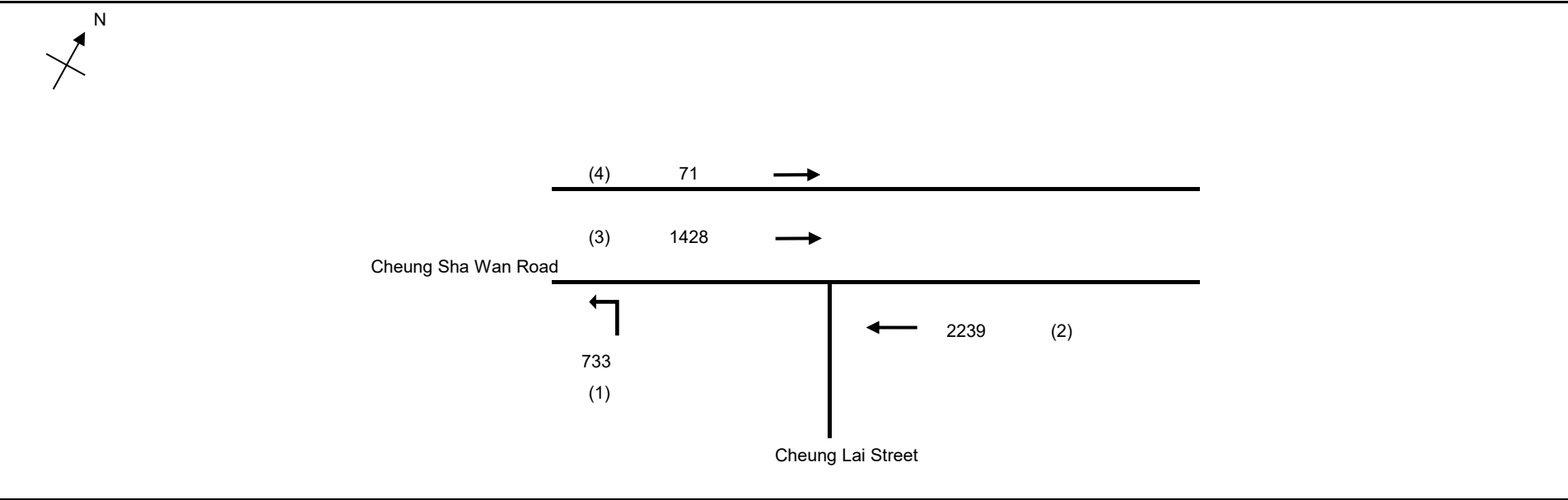
JUNCTION NO: J4

Cheung Sha Wan Road / Cheung Lai Street

Year 2033 Reference PM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.499
Loss time	L =	10 sec
Total Flow	=	4471 pcu
Co	= (1.5*L+5)/(1-Y)	= 39.9 sec
Cm	= L/(1-Y)	= 20.0 sec
Yult	=	0.825
R.C.ult	= (Yult-Y)/Y*100%	= 65.3 %
Cp	= 0.9*L/(0.9-Y)	= 22.4 sec
Ymax	= 1-L/C	= 0.919
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 66 %

	Int = 5		Int = 7		Int = 5		Int = 5
Stage A		Stage B		Stage C		Stage D	

Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
IV	10	5	2	8	25	2	8	OK
V	12	10	2	9	56	2	9	OK
VI	16	7	2	13	74	2	13	OK

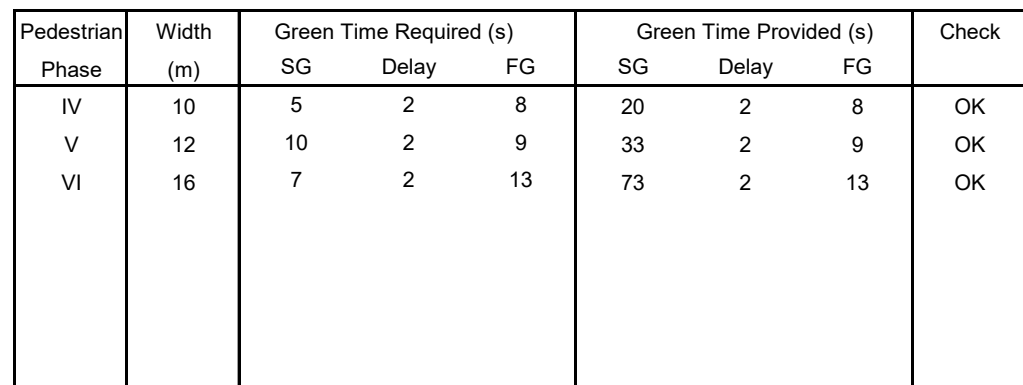
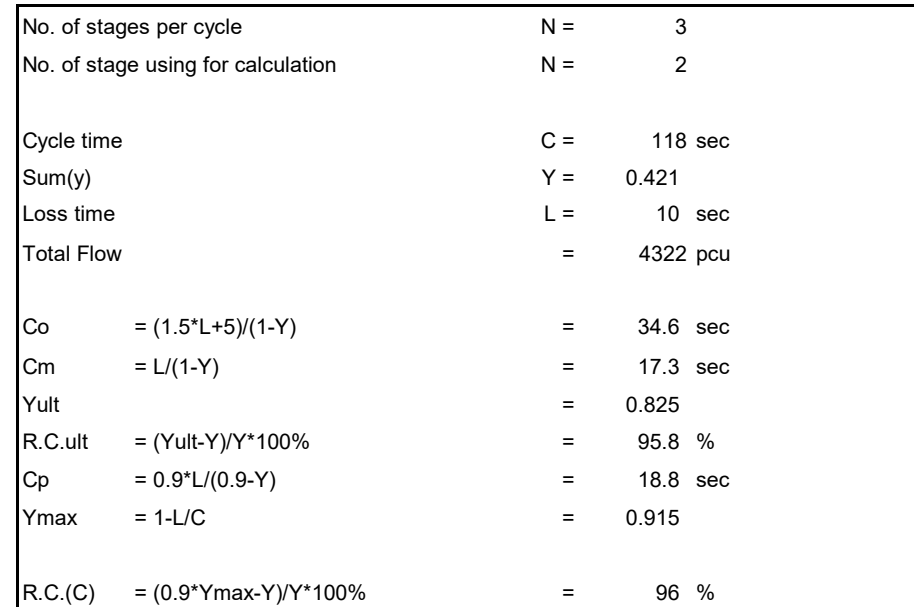
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
4	D,A	3.50	I	1			N	1965		71		71	0.00	1965			1965	0.036		10	8	53	0.085	8
3	D,A	3.50	I	3			N	6175		1428		1428	0.00	6175			6175	0.231			53	53	0.543	56
1	C,D	3.50	II	3	10		N	6175	733			733	1.00	5370			5370	0.136	0.136		31	31	0.543	38
2	A,B	3.50	III	3			N	6175		2239		2239	0.00	6175			6175	0.363	0.363		83	83	0.543	51

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

TRAFFIC SIGNAL CALCULATION

JUNCTION NO:	J4
--------------	----

FILENAME :



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

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

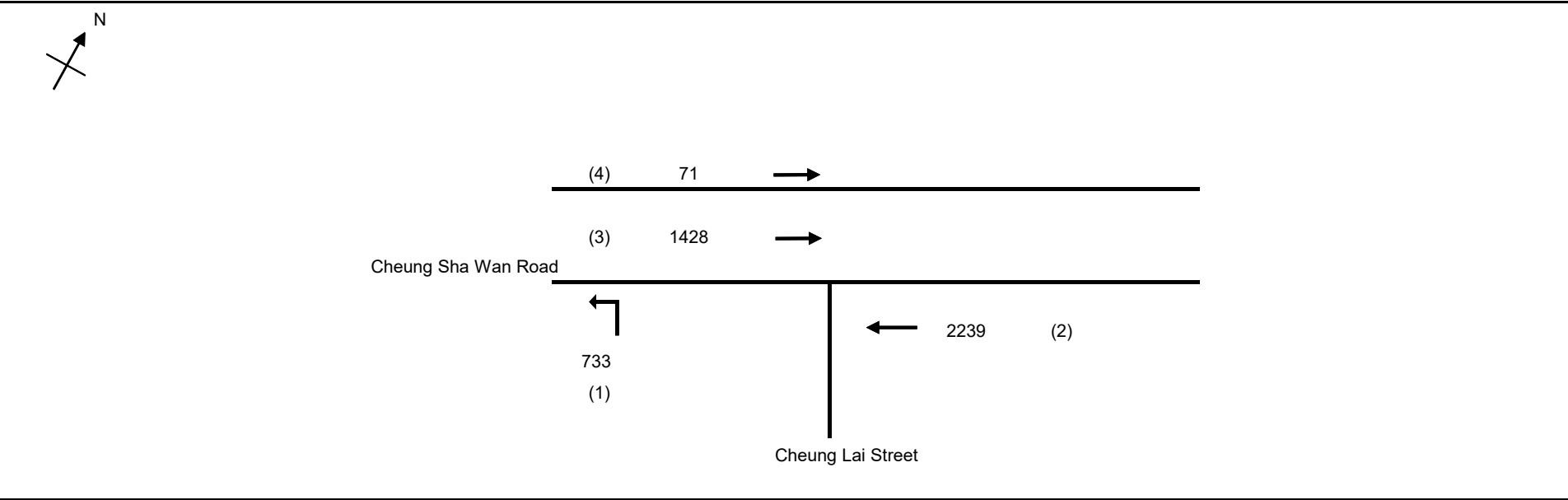
JUNCTION NO: J4

Cheung Sha Wan Road / Cheung Lai Street

Year 2033 Design PM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.499
Loss time	L =	10 sec
Total Flow	=	4471 pcu
Co	= (1.5*L+5)/(1-Y)	= 39.9 sec
Cm	= L/(1-Y)	= 20.0 sec
Yult	=	0.825
R.C.ult	= (Yult-Y)/Y*100%	= 65.3 %
Cp	= 0.9*L/(0.9-Y)	= 22.4 sec
Ymax	= 1-L/C	= 0.919
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 66 %

Stage A	Int = 5	Stage B	Int = 7	Stage C	Int = 5	Stage D	Int = 5

Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
IV	10	5	2	8	25	2	8	OK
V	12	10	2	9	56	2	9	OK
VI	16	7	2	13	74	2	13	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
4	D,A	3.50	I	1			N	1965		71		71	0.00	1965			1965	0.036		10	8	53	0.085	8
3	D,A	3.50	I	3			N	6175		1428		1428	0.00	6175			6175	0.231			53	53	0.543	56
1	C,D	3.50	II	3	10		N	6175	733			733	1.00	5370			5370	0.136	0.136		31	31	0.543	38
2	A,B	3.50	III	3			N	6175		2239		2239	0.00	6175			6175	0.363	0.363		83	83	0.543	51

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

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J5

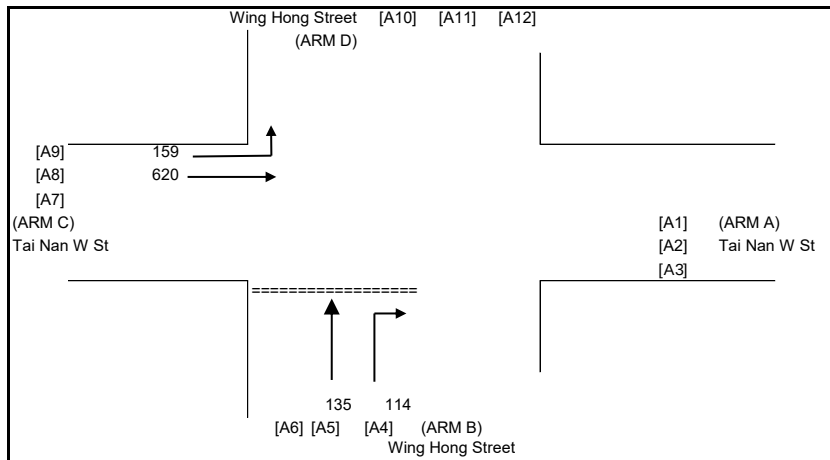
Wing Hong Street / Tai Nan W St

Year 2026 Existing AM Peak

DATE :

23-Jun-26

FILENAME :



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
Vi 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	10.30	(metres)
W cr	=	0	(metres)
Y	=	0.64465	

MAJOR ROAD (ARM A)

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

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	620	(pcu/hr)
q c-b	=	0	(pcu/hr)
q c-d	=	159	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)
W b-c	=	2.00	(metres)
Vi b-a	=	50	(metres)
Vr b-a	=	50	(metres)
Vr b-c	=	0	(metres)
q b-a	=	114	(pcu/hr)
q b-c	=	0	(pcu/hr)
q b-d	=	135	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.744	X a	=	0.586
X c	=	0.586	X d	=	0.533
Z b	=	0.754	Z d	=	0.586
M b	=	0.708	M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.506	r d-c	=	0.000		
ql b-d	=	101.4	(pcu/hr)	ql d-b	=	0	(pcu/hr)
qr b-d	=	33.31	(pcu/hr)	qr d-b	=	0	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	398	(pcu/hr)	Q d-c	=	225	(pcu/hr)
Q b-c	=	491	(pcu/hr)	Q d-a	=	343	(pcu/hr)
Q c-b	=	437	(pcu/hr)	Q a-d	=	329	(pcu/hr)
Ql b-d	=	363	(pcu/hr)	Ql d-b	=	249	(pcu/hr)
Qr b-d	=	381	(pcu/hr)	Qr d-b	=	249	(pcu/hr)

TOTAL FLOW = 1027.6 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2858
DFC b-c	=	0.0000
DFC c-b	=	0.0000
DFCI b-d	=	0.2794
DFCr b-d	=	0.0874
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.29

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J5

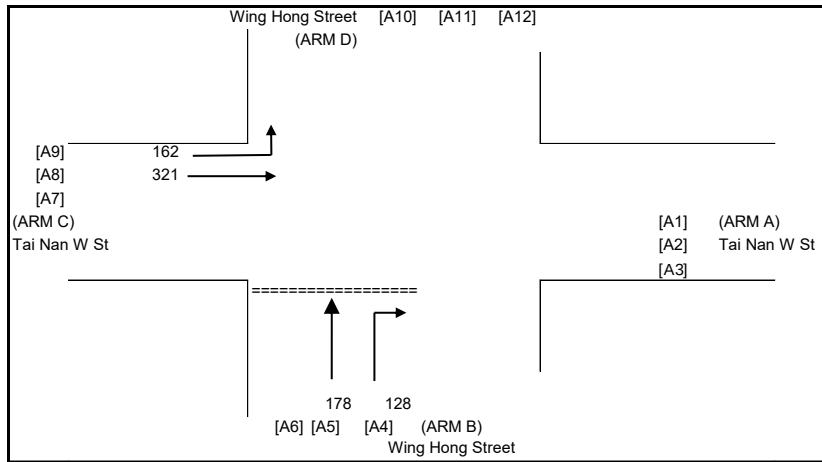
Wing Hong Street / Tai Nan W St

Year 2026 Existing PM Peak

DATE :

23-Jun-26

FILENAME :



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
Vi 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	10.30	(metres)
W cr	=	0	(metres)
Y	=	0.64465	

MAJOR ROAD (ARM A)

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

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	321	(pcu/hr)
q c-b	=	0	(pcu/hr)
q c-d	=	162	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)
W b-c	=	2.00	(metres)
Vi b-a	=	50	(metres)
Vr b-a	=	50	(metres)
Vr b-c	=	0	(metres)
q b-a	=	128	(pcu/hr)
q b-c	=	0	(pcu/hr)
q b-d	=	178	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.744
X c	=	0.586
Z b	=	0.754
M b	=	0.708
X a	=	0.586
X d	=	0.533
Z d	=	0.586
M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.501
ql b-d	=	133.3 (pcu/hr)
qr b-d	=	44.35 (pcu/hr)
r d-c	=	0.000
ql d-b	=	0 (pcu/hr)
qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	431 (pcu/hr)
Q b-c	=	491 (pcu/hr)
Q c-b	=	437 (pcu/hr)
Ql b-d	=	394 (pcu/hr)
Qr b-d	=	414 (pcu/hr)
Q d-c	=	256 (pcu/hr)
Q d-a	=	384 (pcu/hr)
Q a-d	=	370 (pcu/hr)
Ql d-b	=	286 (pcu/hr)
Qr d-b	=	286 (pcu/hr)

TOTAL FLOW = 788.75 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.2973
DFC b-c	=	0.0000
DFC c-b	=	0.0000
DFCI b-d	=	0.3382
DFCr b-d	=	0.1071
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.34

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

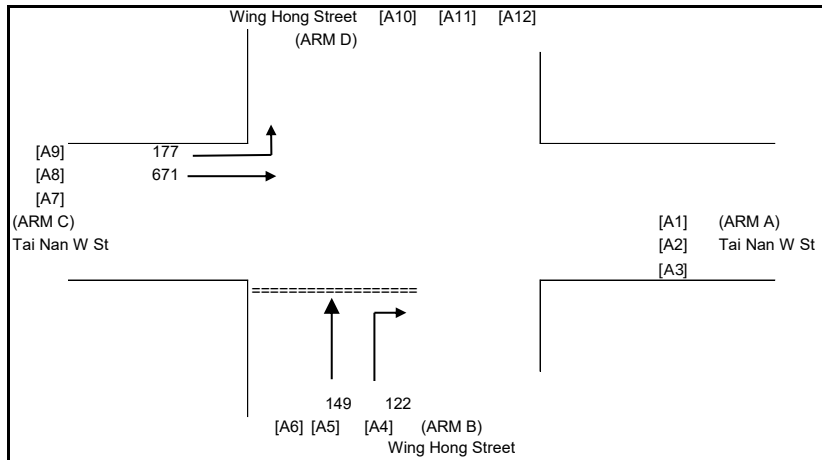
JUNCTION NO: J5

Wing Hong Street / Tai Nan W St

Year 2033 Reference AM Peak

DATE : 23-Jun-26

FILENAME :



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
VI 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	10.30	(metres)
W cr	=	0	(metres)
Y	=	0.64465	

MAJOR ROAD (ARM A)

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

MAJOR MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	671	(pcu/hr)
q c-b	=	0	(pcu/hr)
q c-d	=	177	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)
W b-c	=	2.00	(metres)
VI b-a	=	50	(metres)
Vr b-a	=	50	(metres)
Vr b-c	=	0	(metres)
q b-a	=	122	(pcu/hr)
q b-c	=	0	(pcu/hr)
q b-d	=	149	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.744
X c	=	0.586
Z b	=	0.754
M b	=	0.708
X a	=	0.586
X d	=	0.533
Z d	=	0.586
M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.567
ql b-d	=	117.1 (pcu/hr)
qr b-d	=	32.34 (pcu/hr)
r d-c	=	0.000
ql d-b	=	0 (pcu/hr)
qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	393 (pcu/hr)
Q b-c	=	482 (pcu/hr)
Q c-b	=	437 (pcu/hr)
Ql b-d	=	356 (pcu/hr)
Qr b-d	=	374 (pcu/hr)
Q d-c	=	215 (pcu/hr)
Q d-a	=	335 (pcu/hr)
Q a-d	=	320 (pcu/hr)
Ql d-b	=	242 (pcu/hr)
Qr d-b	=	242 (pcu/hr)

TOTAL FLOW = 1118.726 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3103
DFC b-c	=	0.0000
DFC c-b	=	0.0000
DFCI b-d	=	0.3290
DFCr b-d	=	0.0865
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.33

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

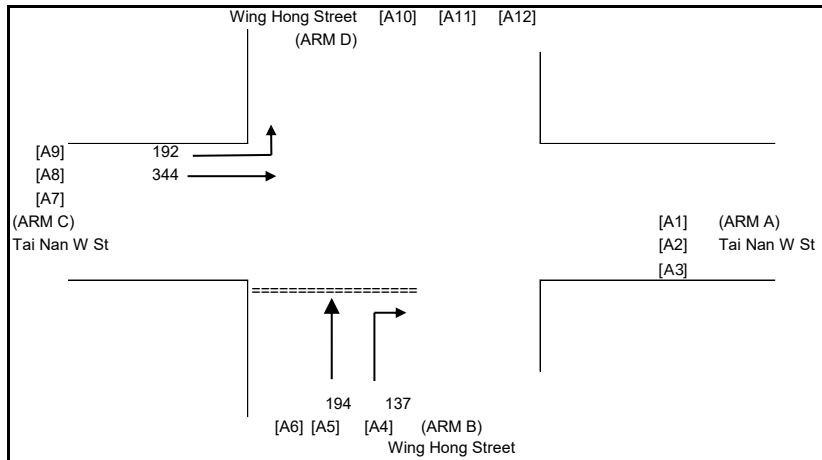
JUNCTION NO: J5

Wing Hong Street / Tai Nan W St

Year 2033 Reference PM Peak

DATE : 23-Jun-26

FILENAME :



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
Vi 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	10.30	(metres)
W cr	=	0	(metres)
Y	=	0.64465	

MAJOR ROAD (ARM A)

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

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	344	(pcu/hr)
q c-b	=	0	(pcu/hr)
q c-d	=	192	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)
W b-c	=	2.00	(metres)
Vi b-a	=	50	(metres)
Vr b-a	=	50	(metres)
Vr b-c	=	0	(metres)
q b-a	=	137	(pcu/hr)
q b-c	=	0	(pcu/hr)
q b-d	=	194	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.744
X c	=	0.586
Z b	=	0.754
M b	=	0.708
X a	=	0.586
X d	=	0.533
Z d	=	0.586
M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.552
ql b-d	=	150.8 (pcu/hr)
qr b-d	=	43.57 (pcu/hr)
r d-c	=	0.000
ql d-b	=	0 (pcu/hr)
qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	429 (pcu/hr)
Q b-c	=	484 (pcu/hr)
Q c-b	=	437 (pcu/hr)
Ql b-d	=	388 (pcu/hr)
Qr b-d	=	408 (pcu/hr)
Q d-c	=	249 (pcu/hr)
Q d-a	=	379 (pcu/hr)
Q a-d	=	363 (pcu/hr)
Ql d-b	=	282 (pcu/hr)
Qr d-b	=	282 (pcu/hr)

TOTAL FLOW = 867.6468 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3203
DFC b-c	=	0.0000
DFC c-b	=	0.0000
DFCI b-d	=	0.3888
DFCr b-d	=	0.1068
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.39

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

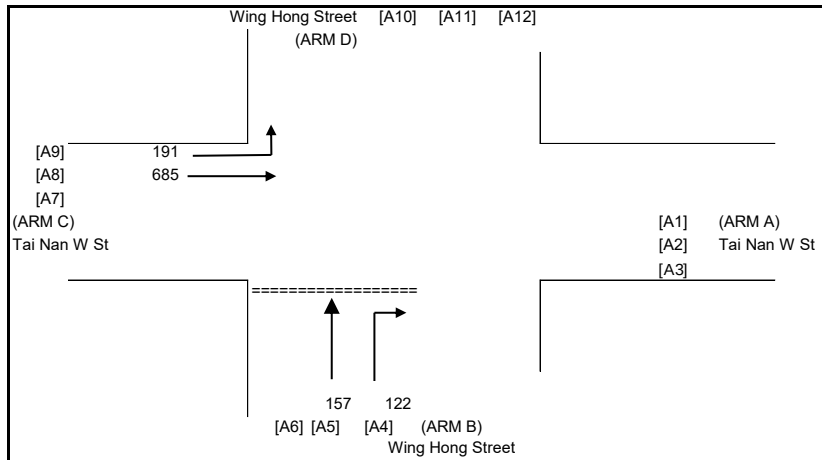
JUNCTION NO: J5

Wing Hong Street / Tai Nan W St

Year 2033 Design AM Peak

DATE : 23-Jun-26

FILENAME :



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
Vi 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	10.30	(metres)
W cr	=	0	(metres)
Y	=	0.64465	

MAJOR ROAD (ARM A)

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

MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	685	(pcu/hr)
q c-b	=	0	(pcu/hr)
q c-d	=	191	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)
W b-c	=	2.00	(metres)
Vi b-a	=	50	(metres)
Vr b-a	=	50	(metres)
Vr b-c	=	0	(metres)
q b-a	=	122	(pcu/hr)
q b-c	=	0	(pcu/hr)
q b-d	=	157	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.744
X c	=	0.586
Z b	=	0.754
M b	=	0.708
X a	=	0.586
X d	=	0.533
Z d	=	0.586
M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.575
ql b-d	=	124 (pcu/hr)
qr b-d	=	33.44 (pcu/hr)
r d-c	=	0.000
ql d-b	=	0 (pcu/hr)
qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	391 (pcu/hr)
Q b-c	=	481 (pcu/hr)
Q c-b	=	437 (pcu/hr)
Ql b-d	=	353 (pcu/hr)
Qr b-d	=	370 (pcu/hr)
Q d-c	=	212 (pcu/hr)
Q d-a	=	332 (pcu/hr)
Q a-d	=	316 (pcu/hr)
Ql d-b	=	239 (pcu/hr)
Qr d-b	=	239 (pcu/hr)

TOTAL FLOW = 1154.726 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3119
DFC b-c	=	0.0000
DFC c-b	=	0.0000
DFCI b-d	=	0.3514
DFCr b-d	=	0.0904
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.35

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

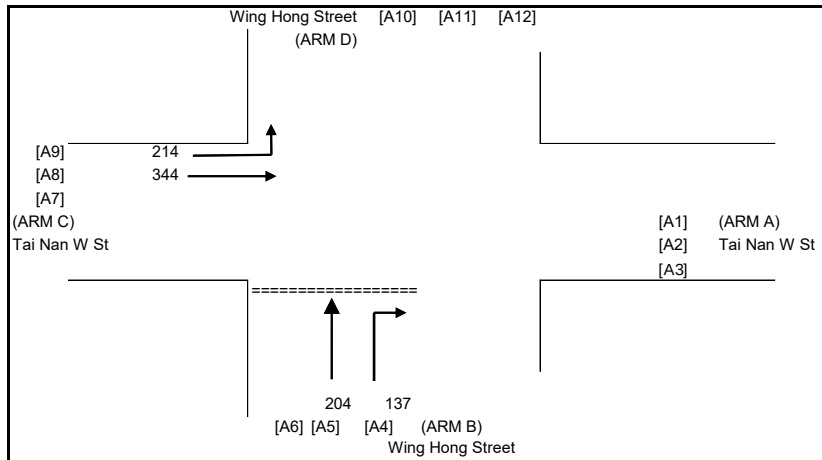
JUNCTION NO: J5

Wing Hong Street / Tai Nan W St

Year 2033 Design PM Peak

DATE : 23-Jun-26

FILENAME :



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
VI 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	10.30	(metres)
W cr	=	0	(metres)
Y	=	0.64465	

MAJOR ROAD (ARM A)

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

MAJOR MAJOR ROAD (ARM C)

W c-b	=	0.00	(metres)
Vr c-b	=	0	(metres)
q c-a	=	344	(pcu/hr)
q c-b	=	0	(pcu/hr)
q c-d	=	214	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)
W b-c	=	2.00	(metres)
VI b-a	=	50	(metres)
Vr b-a	=	50	(metres)
Vr b-c	=	0	(metres)
q b-a	=	137	(pcu/hr)
q b-c	=	0	(pcu/hr)
q b-d	=	204	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.744
X c	=	0.586
Z b	=	0.754
M b	=	0.708
X a	=	0.586
X d	=	0.533
Z d	=	0.586
M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.556
ql b-d	=	159.1 (pcu/hr)
qr b-d	=	45.35 (pcu/hr)
r d-c	=	0.000
ql d-b	=	0 (pcu/hr)
qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	429 (pcu/hr)
Q b-c	=	483 (pcu/hr)
Q c-b	=	437 (pcu/hr)
Ql b-d	=	386 (pcu/hr)
Qr b-d	=	405 (pcu/hr)
Q d-c	=	247 (pcu/hr)
Q d-a	=	378 (pcu/hr)
Q a-d	=	360 (pcu/hr)
Ql d-b	=	281 (pcu/hr)
Qr d-b	=	281 (pcu/hr)

TOTAL FLOW = 899.6468 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3203
DFC b-c	=	0.0000
DFC c-b	=	0.0000
DFCI b-d	=	0.4121
DFCr b-d	=	0.1120
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.41

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

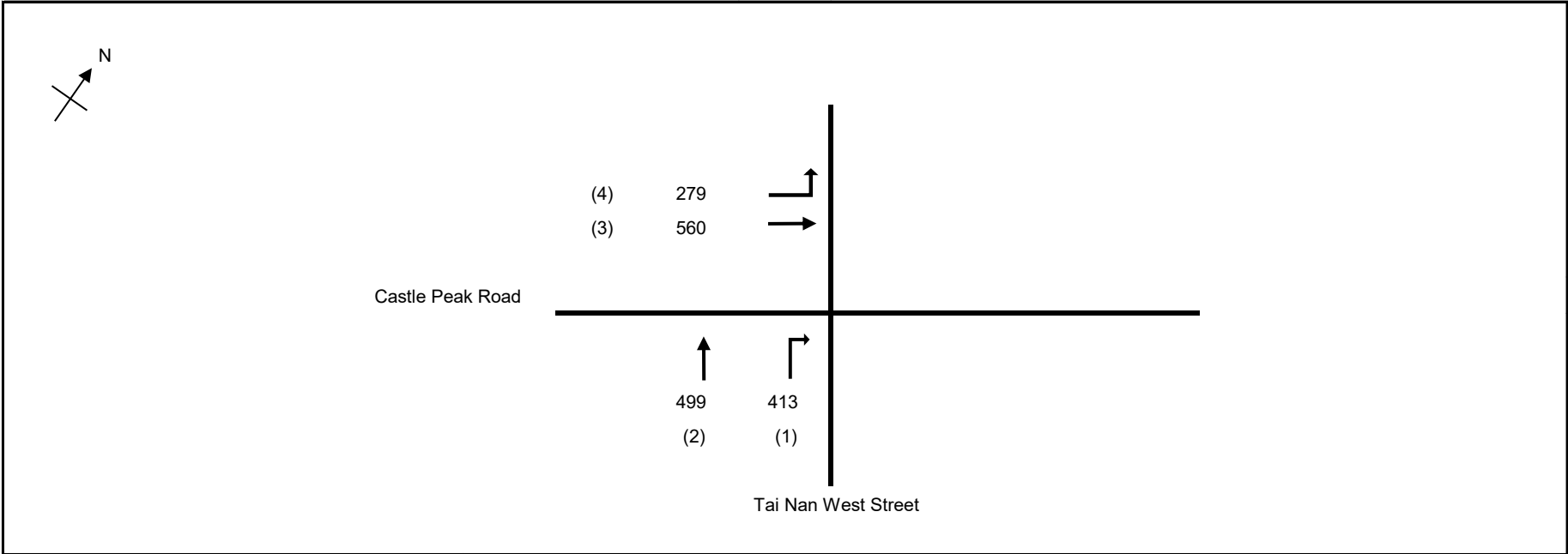
Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02
JUNCTION NO: J6

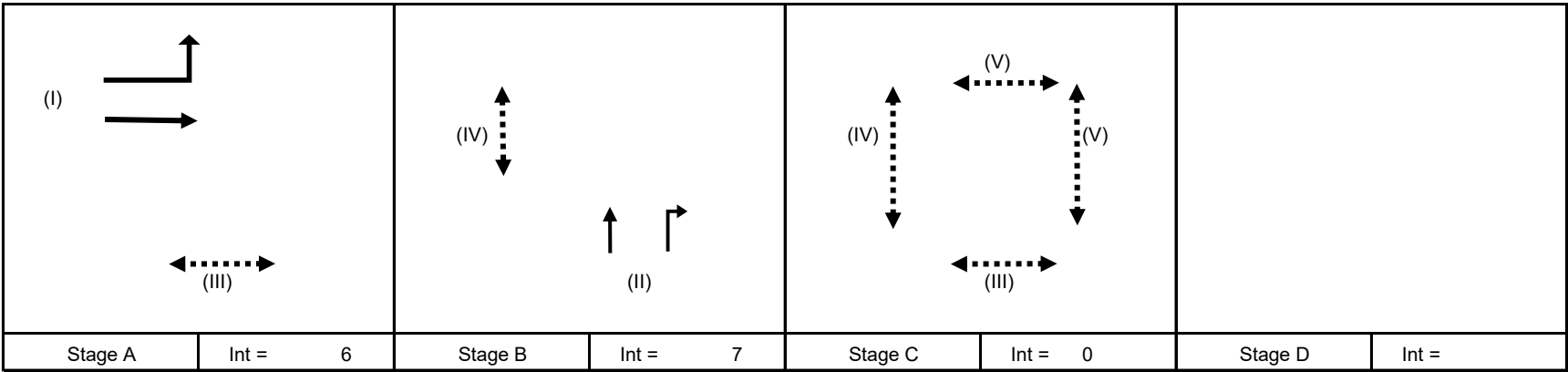
Castle Peak Road / Tai Nan West Street

Year 2026 Existing AM Peak

DATE : 23/Jun/26
FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.432
Loss time	L =	31 sec
Total Flow	=	1750 pcu
Co	= (1.5*L+5)/(1-Y)	= 90.7 sec
Cm	= L/(1-Y)	= 54.6 sec
Yult	=	0.668
R.C.ult	= (Yult-Y)/Y*100%	= 54.5 %
Cp	= 0.9*L/(0.9-Y)	= 59.6 sec
Ymax	= 1-L/C	= 0.750
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 56 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	11	5	2	9	65	2	9	OK
IV	12	5	3	10	26	3	10	OK
V	13	6	3	11	6	3	11	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
3,4	A	3.30	I	1	5		N	1945	279	0		279	1.00	1496			1496	0.186	0.186	11	40	40	0.576	39
	A	3.30	I	2			N	4030		560		560	0.00	4030			4030	0.139			30	40	0.429	39
1,2 1 PED	B	3.50	II	1	8			2105		499	15	514	0.03	2094			2094	0.245	0.246		53	53	0.575	61
	B	3.50	II	1	5			2105			398	398	1.00	1619			1619	0.246			53	53	0.576	47
	C		VII																	20				

NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s *Assuming pedestrain stage is activated QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

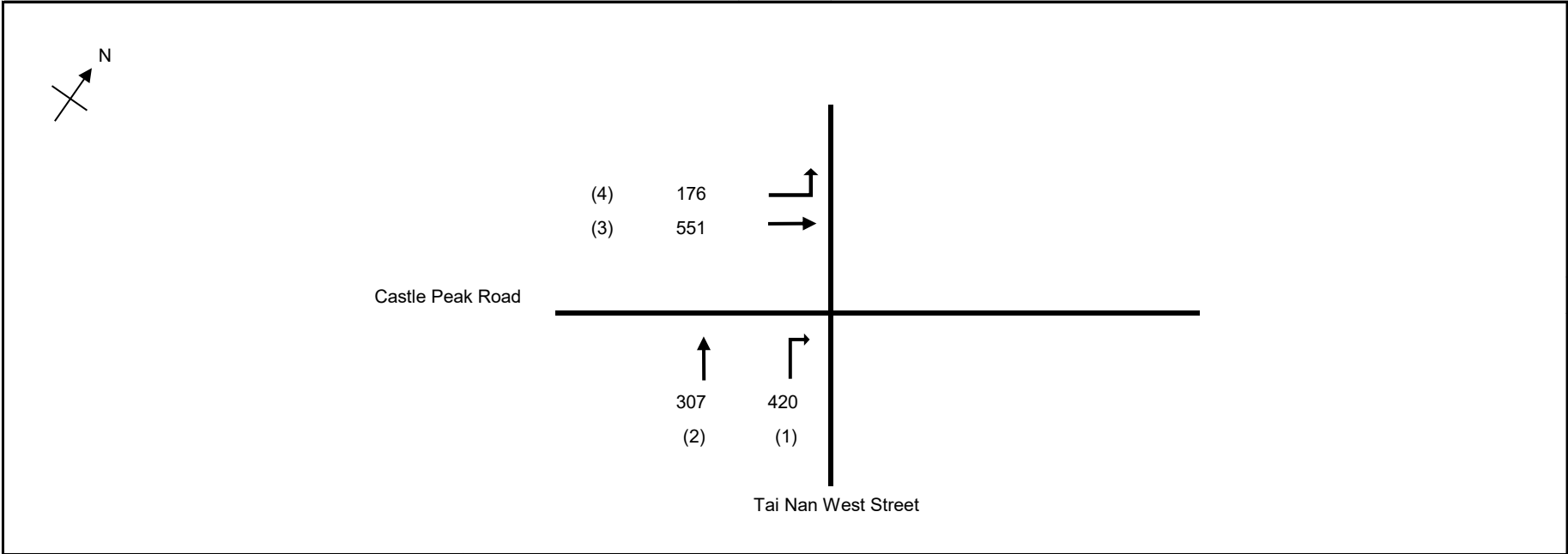
Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02
JUNCTION NO: J6

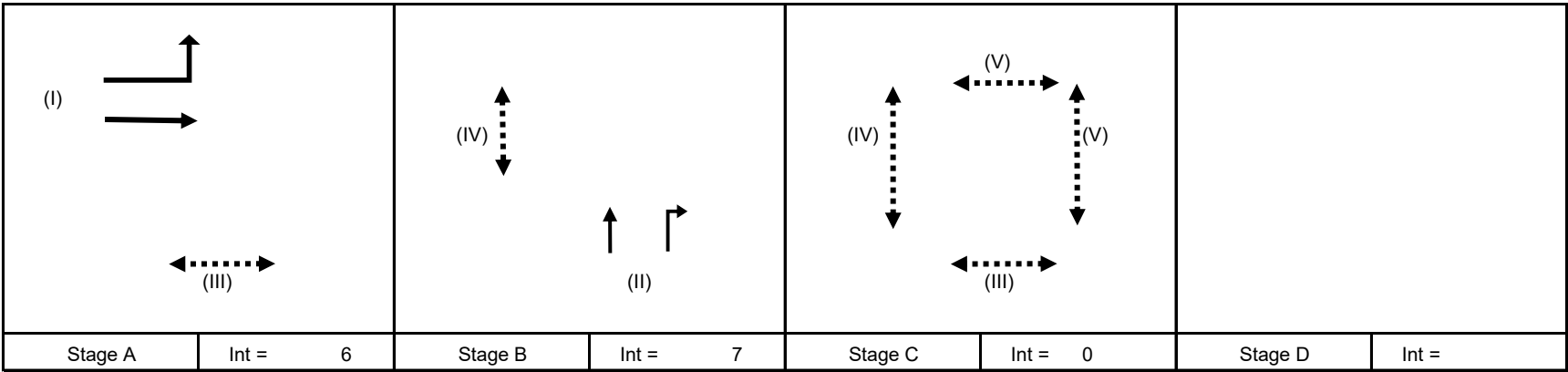
Castle Peak Road / Tai Nan West Street

Year 2026 Existing PM Peak

DATE : 23/Jun/26
FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.329
Loss time	L =	31 sec
Total Flow	=	1453 pcu
Co	= (1.5*L+5)/(1-Y)	= 76.8 sec
Cm	= L/(1-Y)	= 46.2 sec
Yult		= 0.668
R.C.ult	= (Yult-Y)/Y*100%	= 102.8 %
Cp	= 0.9*L/(0.9-Y)	= 48.9 sec
Ymax	= 1-L/C	= 0.750
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 105 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	11	5	2	9	62	2	9	OK
IV	12	5	3	10	26	3	10	OK
V	13	6	3	11	6	3	11	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
3,4	A	3.50	I	1	5		N	1965	176	25		201	0.88	1556			1556	0.129	0.129	11	37	37	0.439	29
	A	3.50	I	2			N	4070		526		526	0.00	4070			4070	0.129			37	37	0.439	38
1,2	B	3.50	II	1	8			2105		307	96	403	0.24	2015			2015	0.200	0.200		56	56	0.439	45
	B	3.50	II	1	5			2105			324	324	1.00	1619			1619	0.200			56	56	0.439	36
	C		VII																20					

NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s *Assuming pedestrain stage is activated QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

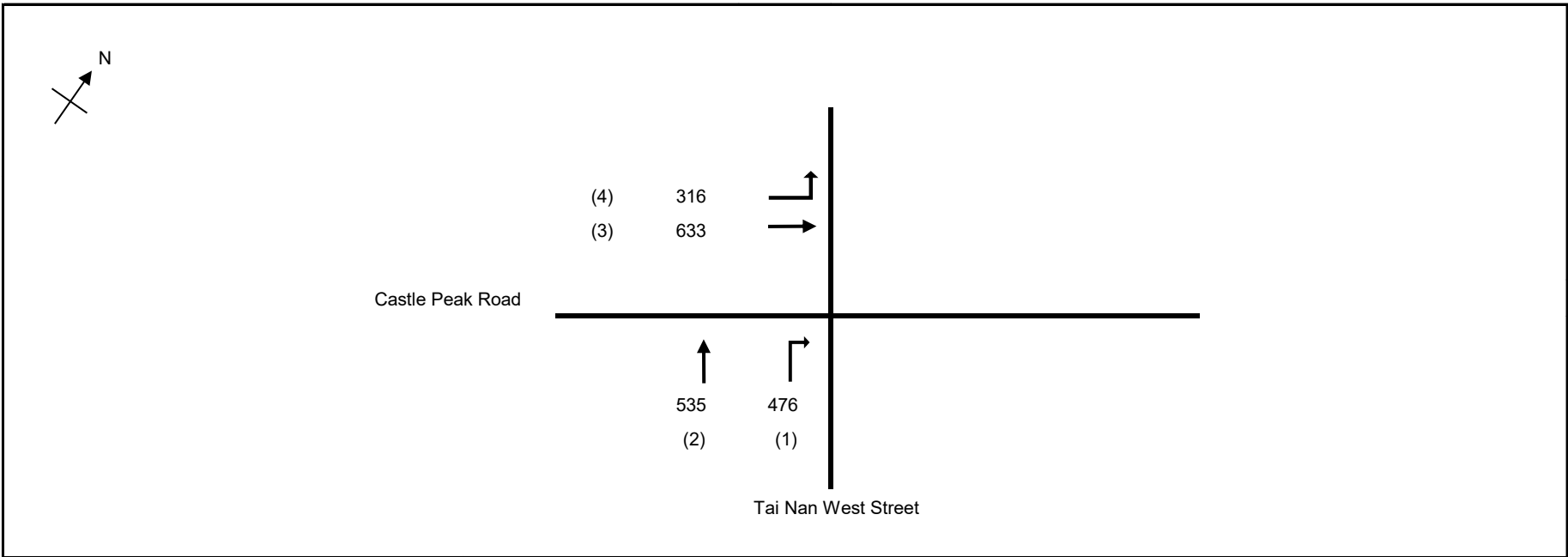
JUNCTION NO: J6

Castle Peak Road / Tai Nan West Street

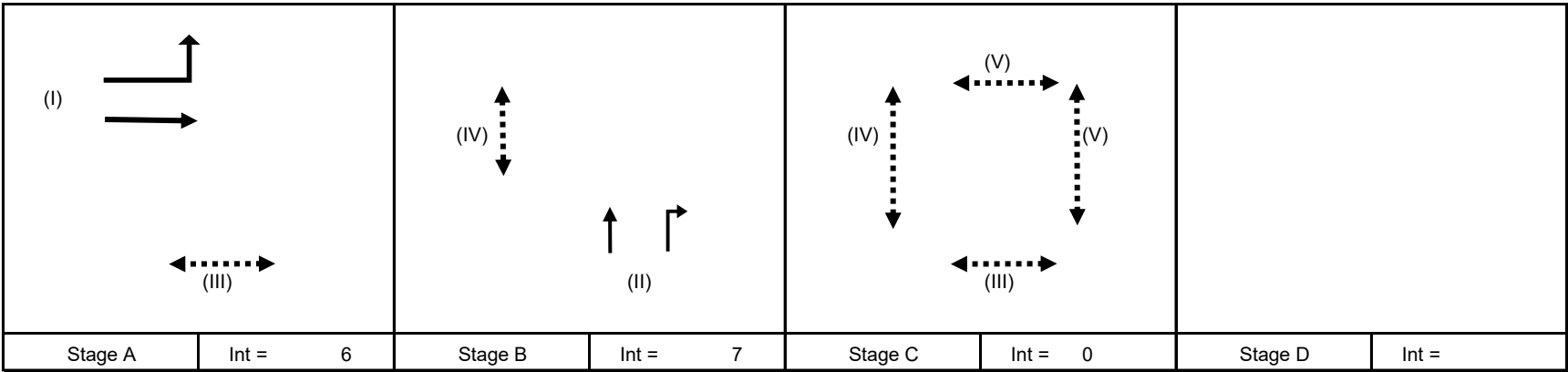
Year 2033 Reference AM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.482
Loss time	L =	31 sec
Total Flow	=	1959 pcu
Co	= (1.5*L+5)/(1-Y)	= 99.5 sec
Cm	= L/(1-Y)	= 59.9 sec
Yult	=	0.668
R.C.ult	= (Yult-Y)/Y*100%	= 38.4 %
Cp	= 0.9*L/(0.9-Y)	= 66.8 sec
Ymax	= 1-L/C	= 0.750
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 40 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	11	5	2	9	65	2	9	OK
IV	12	5	3	10	26	3	10	OK
V	13	6	3	11	6	3	11	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
3,4	A	3.50	I	1	5		N	1965	316	0		316	1.00	1512			1512	0.209	0.209	11	40	40	0.643	44
	A	3.50	I	2			N	4070		633		633	0.00	4070			4070	0.156			30	40	0.479	44
1,2 1 PED	B	3.50	II	1	8			2105		535	34	569	0.06	2082			2082	0.273	0.273		53	53	0.643	68
	B	3.50	II	1	5			2105			442	442	1.00	1619			1619	0.273			53	53	0.642	52
	C		VII																	20				

NOTE : 'O' - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRIAN WALKING SPEED = 1.2m/s

*Assuming pedestrain stage is activated

QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

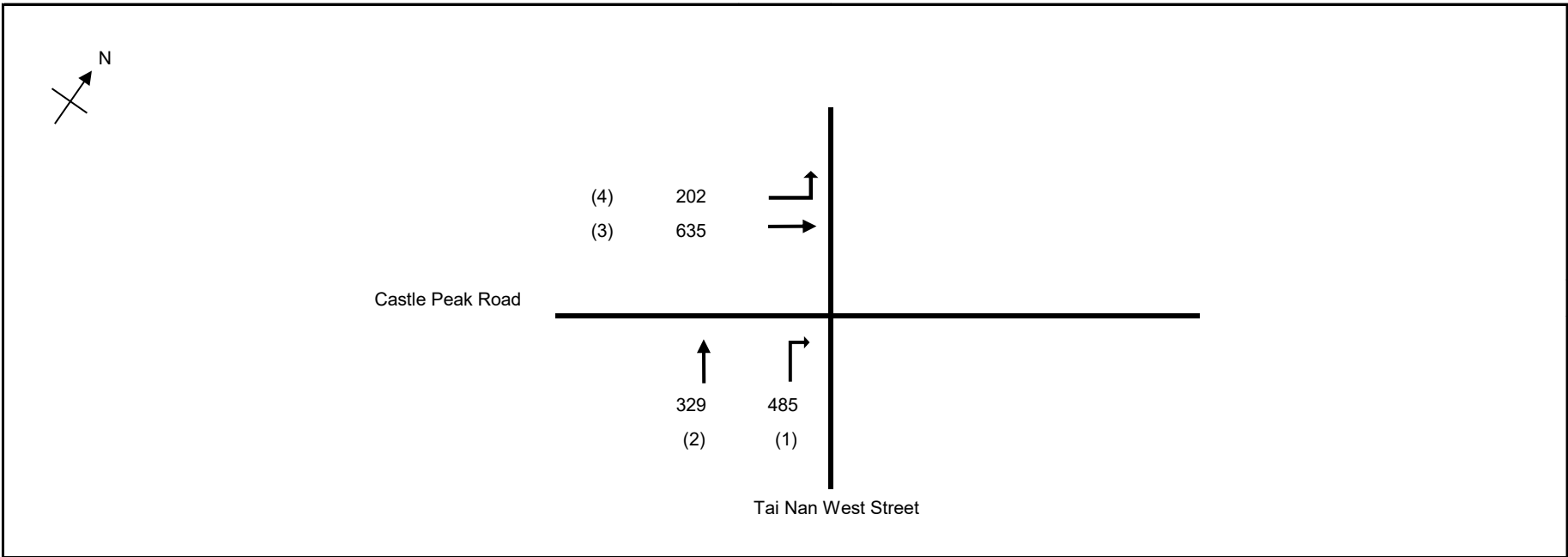
JUNCTION NO: J6

Castle Peak Road / Tai Nan West Street

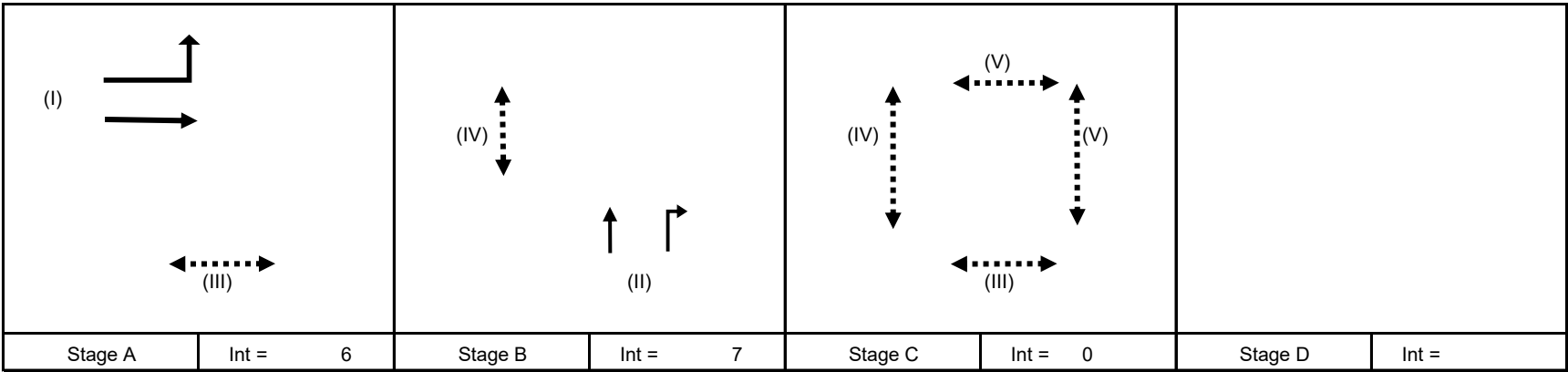
Year 2033 Reference PM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.373
Loss time	L =	31 sec
Total Flow	=	1650 pcu
Co	= (1.5*L+5)/(1-Y)	= 82.2 sec
Cm	= L/(1-Y)	= 49.5 sec
Yult		= 0.668
R.C.ult	= (Yult-Y)/Y*100%	= 78.7 %
Cp	= 0.9*L/(0.9-Y)	= 53.0 sec
Ymax	= 1-L/C	= 0.750
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 81 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	11	5	2	9	62	2	9	OK
IV	12	5	3	10	26	3	10	OK
V	13	6	3	11	6	3	11	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
3,4 3	A	3.50	I	1	5		N	1965	202	30		232	0.87	1558			1558	0.149	0.149	11	37	37	0.498	34
	A	3.50	I	2			N	4070		605		605	0.00	4070			4070	0.149			37	37	0.497	44
1,2 1 PED	B	3.50	II	1	8			2105		329	121	450	0.27	2004			2004	0.224	0.225		56	56	0.497	51
	B	3.50	II	1	5			2105			364	364	1.00	1619			1619	0.225			56	56	0.498	41
	C		VII																	20				

NOTE : 'O' - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRIAN WALKING SPEED = 1.2m/s

*Assuming pedestrain stage is activated

QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

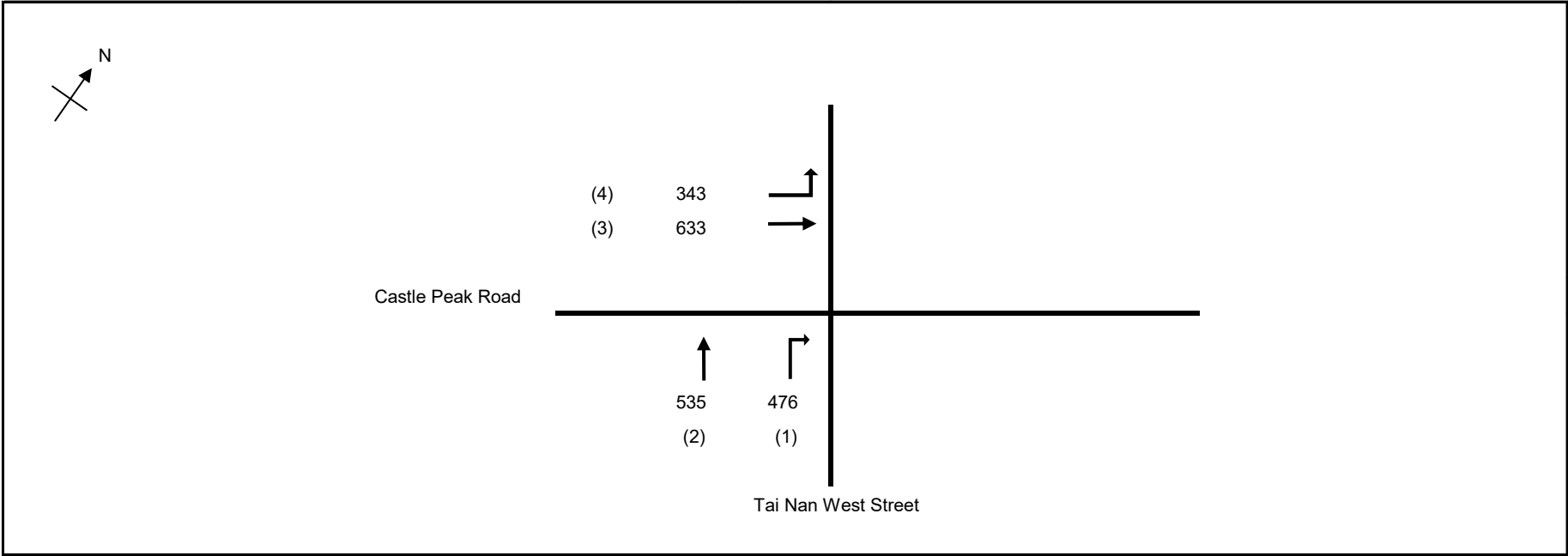
Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02 JUNCTION NO: J6

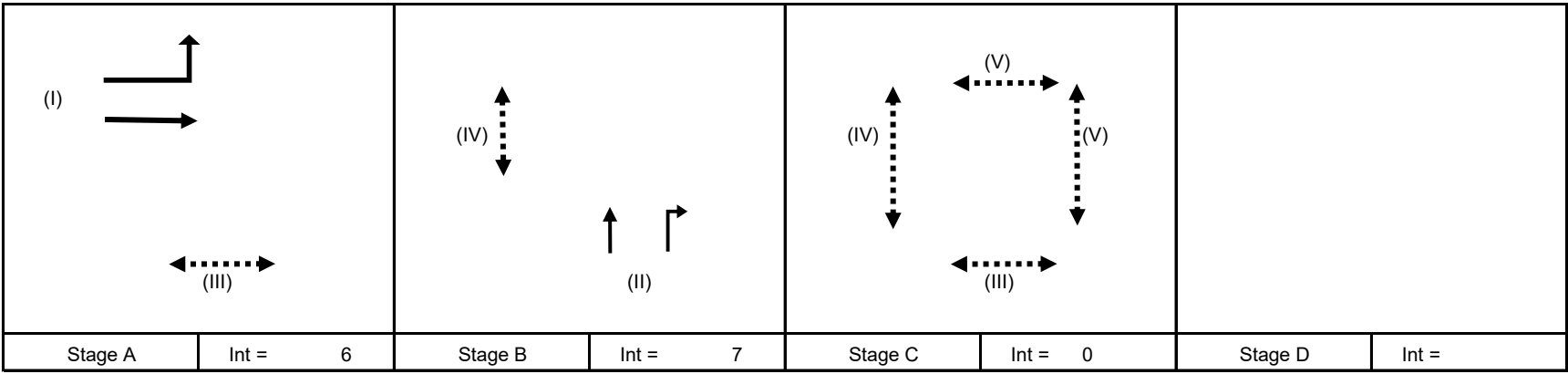
Castle Peak Road / Tai Nan West Street

Year 2033 Design AM Peak

DATE : 23/Jun/26 FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.500
Loss time	L =	31 sec
Total Flow	=	1986 pcu
Co	= (1.5*L+5)/(1-Y)	= 103.0 sec
Cm	= L/(1-Y)	= 62.0 sec
Yult	=	0.668
R.C.ult	= (Yult-Y)/Y*100%	= 33.5 %
Cp	= 0.9*L/(0.9-Y)	= 69.8 sec
Ymax	= 1-L/C	= 0.750
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 35 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	11	5	2	9	67	2	9	OK
IV	12	5	3	10	26	3	10	OK
V	13	6	3	11	6	3	11	OK

Move- ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	m			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
3,4 3	A	3.50	I	1	5		N	1965	343	0		343	1.00	1512			1512	0.227	0.227	11	42	42	0.667	47
	A	3.50	I	2			N	4070		633		633	0.00	4070			4070	0.156			29	42	0.457	43
1,2 1 PED	B	3.50	II	1	8			2105		535	34	569	0.06	2082			2082	0.273	0.273		51	51	0.667	69
	B	3.50	II	1	5			2105			442	442	1.00	1619			1619	0.273			51	51	0.666	54
	C		VII																20					

NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s *Assuming pedestrain stage is activated QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

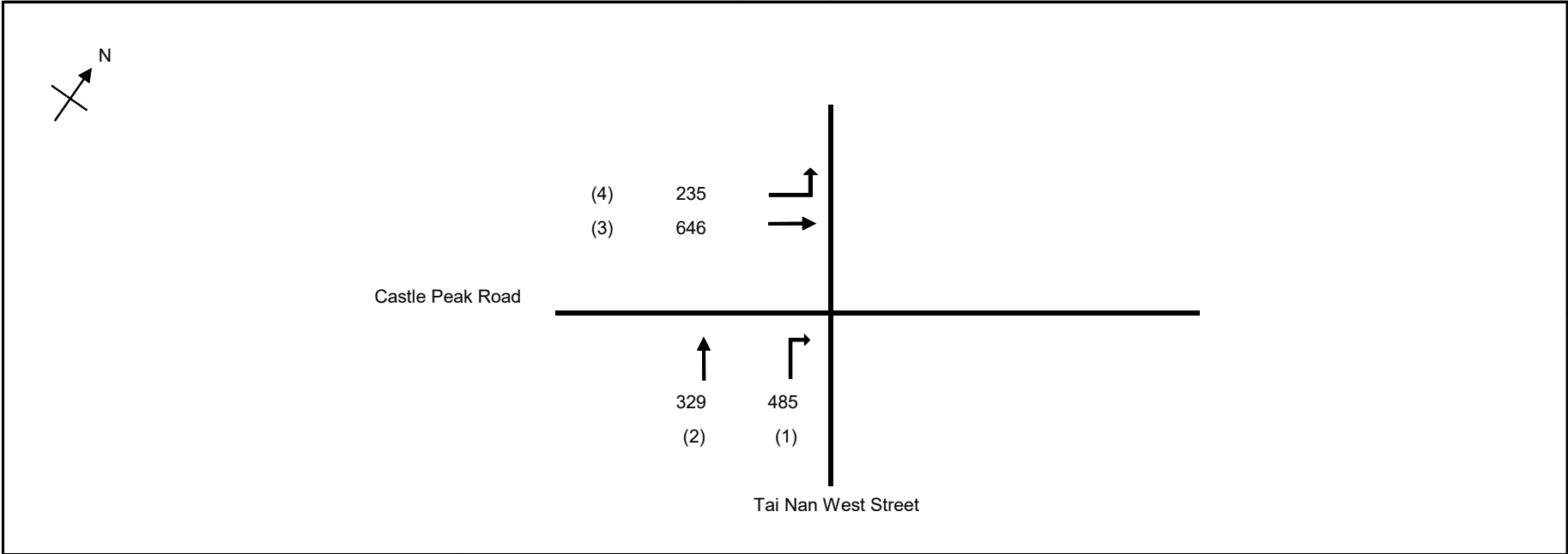
Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02
JUNCTION NO: J6

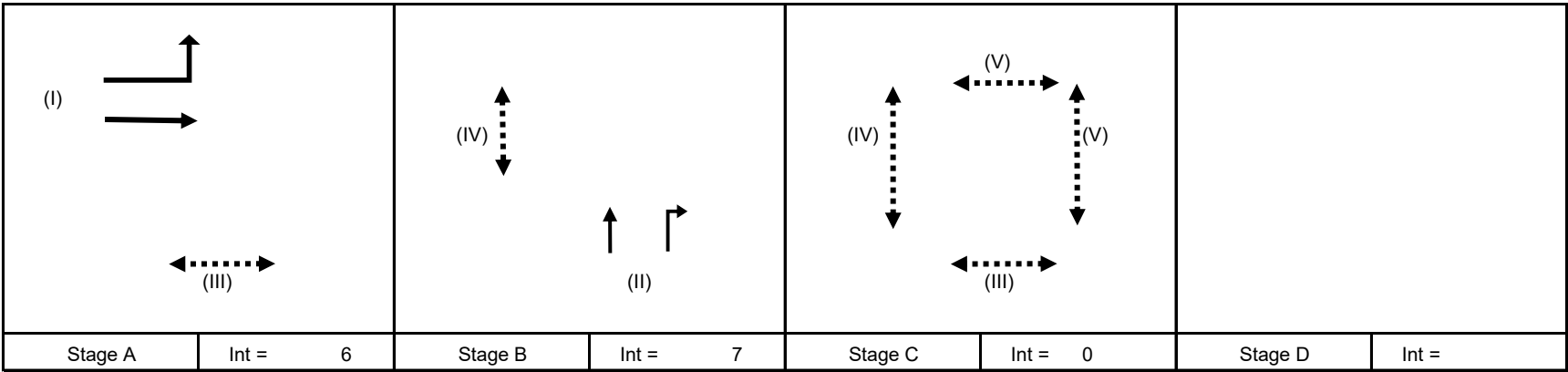
Castle Peak Road / Tai Nan West Street

Year 2033 Design PM Peak

DATE : 23/Jun/26
FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.382
Loss time	L =	31 sec
Total Flow	=	1694 pcu
Co	= (1.5*L+5)/(1-Y)	= 83.4 sec
Cm	= L/(1-Y)	= 50.2 sec
Yult	=	0.668
R.C.ult	= (Yult-Y)/Y*100%	= 74.6 %
Cp	= 0.9*L/(0.9-Y)	= 53.9 sec
Ymax	= 1-L/C	= 0.750
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 77 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	11	5	2	9	63	2	9	OK
IV	12	5	3	10	26	3	10	OK
V	13	6	3	11	6	3	11	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FLOW pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
3,4 3	A	3.50	I	1	5		N	1965	235	4		239	0.98	1517			1517	0.157	0.158	11	38	38	0.509	34
	A	3.50	I	2			N	4070		642		642	0.00	4070			4070	0.158			38	38	0.510	46
1,2 1 PED	B	3.50	II	1	8			2105		329	121	450	0.27	2004			2004	0.224	0.225		55	55	0.509	52
	B	3.50	II	1	5			2105			364	364	1.00	1619			1619	0.225			55	55	0.510	42
	C		VII																	20				

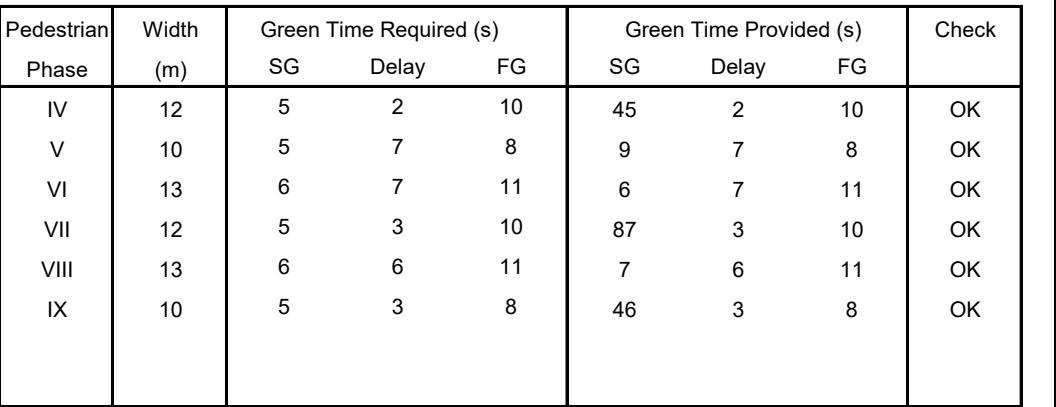
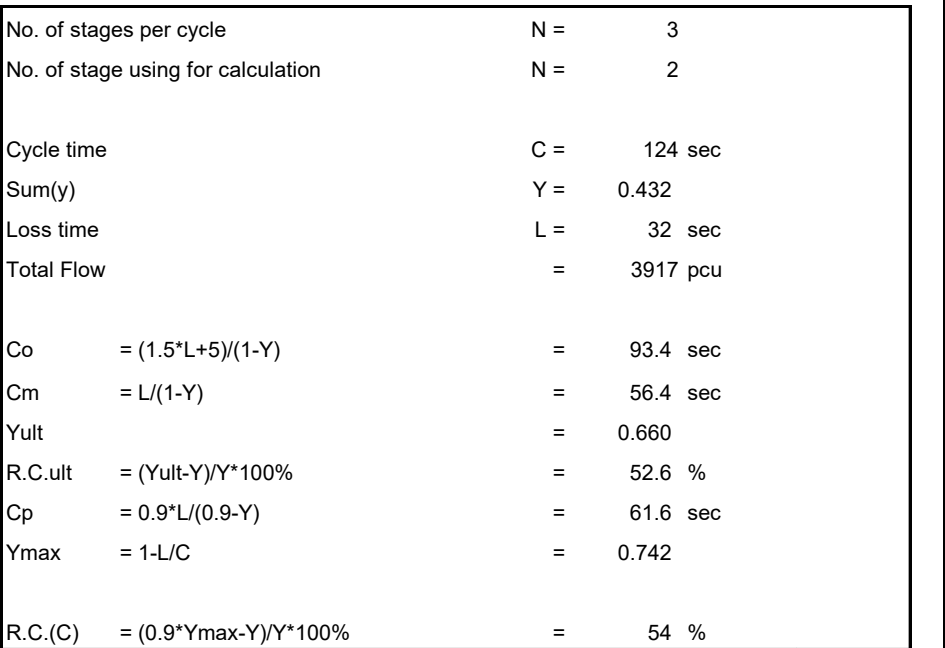
NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s *Assuming pedestrain stage is activated QUEUING LENGTH = AVERAGE QUEUE * 6m

OVE ARUP & PARTNERS				TRAFFIC SIGNAL CALCULATION																	
Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon														PROJECT NO: 315341-02				JUNCTION NO: J7			
Cheung Sha Wan Road / Tai Nan West Street								Year 2026 Existing AM Peak						DATE : 23/Jun/26				FILENAME :			
<																					

TRAFFIC SIGNAL CALCULATION

PROJECT NO: 315341-02	JUNCTION NO: J7
-----------------------	-----------------

DATE :	23/Jun/26	FILENAME :
--------	-----------	------------

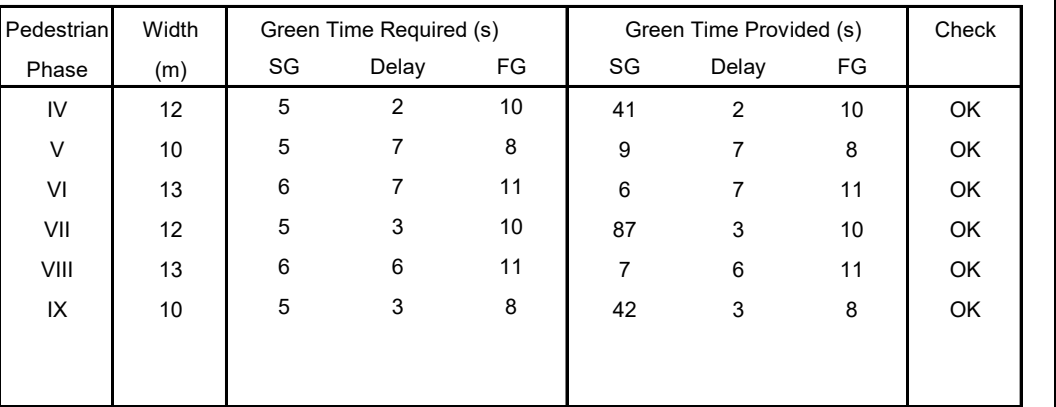
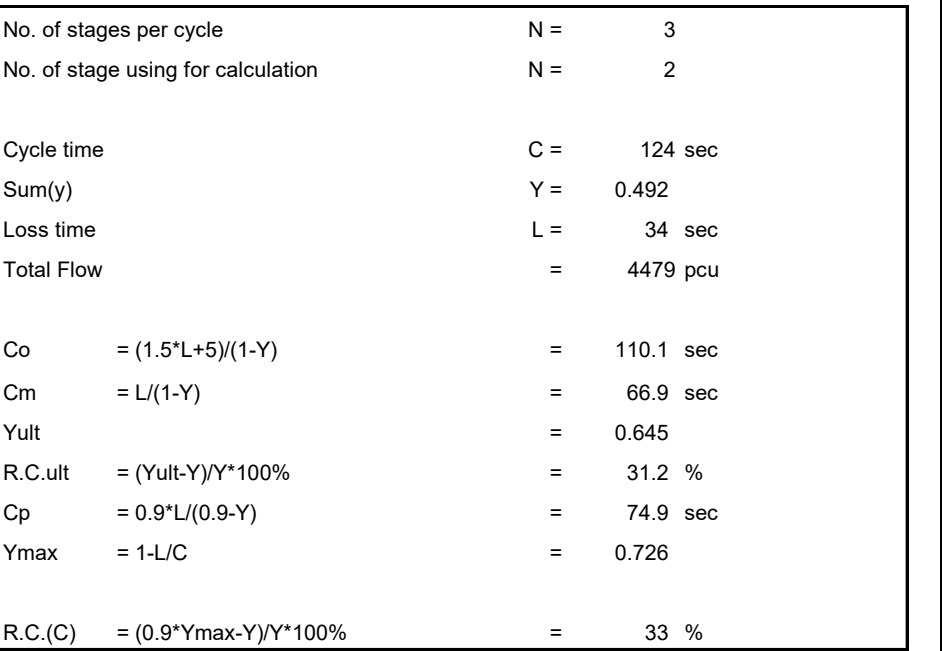


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

TRAFFIC SIGNAL CALCULATION

PROJECT NO: 315341-02	JUNCTION NO: J7
-----------------------	-----------------

DATE : 23/Jun/26	FILENAME :
------------------	------------

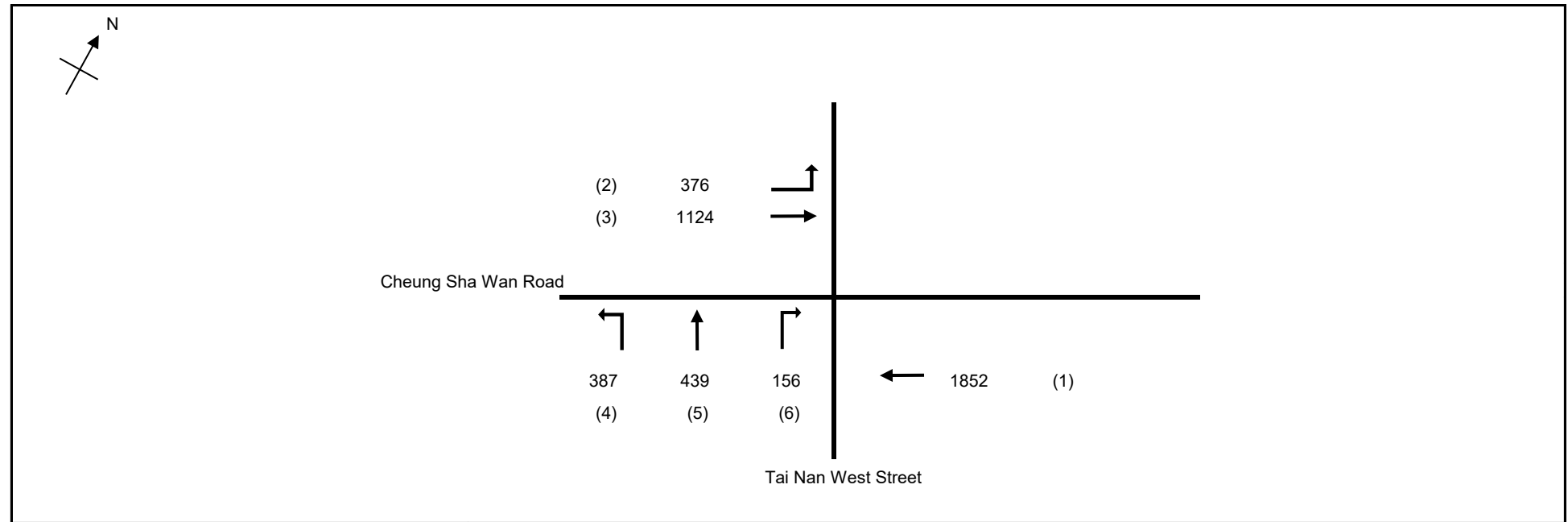


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

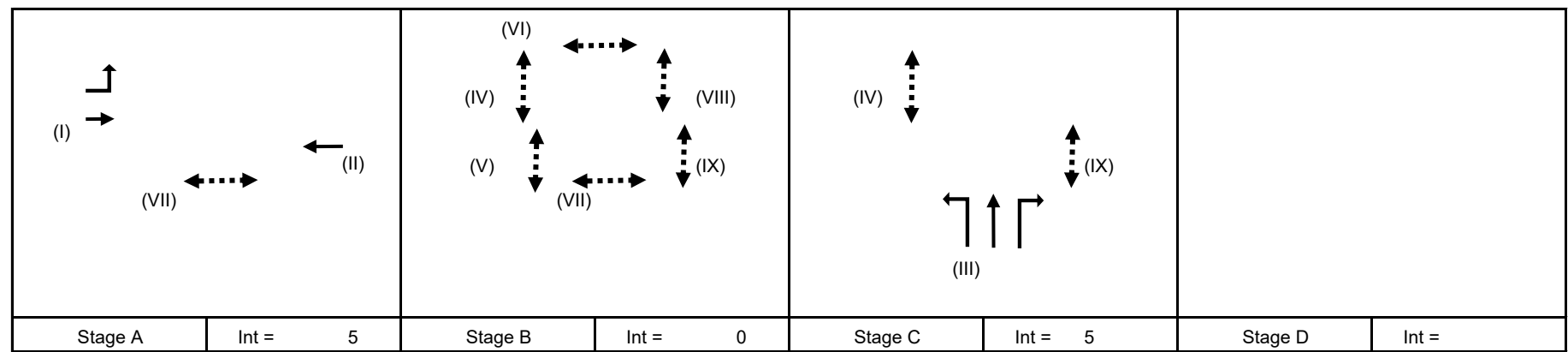
TRAFFIC SIGNAL CALCULATION

PROJECT NO: 315341-02	JUNCTION NO: J7
-----------------------	-----------------

DATE :	23/Jun/26	FILENAME :
--------	-----------	------------



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.482
Loss time	L =	32 sec
Total Flow	=	4333 pcu
Co	= $(1.5 \cdot L + 5) / (1 - Y)$	= 102.3 sec
Cm	= $L / (1 - Y)$	= 61.7 sec
Yult	=	0.660
R.C.ult	= $(Y_{ult} - Y) / Y \cdot 100\%$	= 37.0 %
Cp	= $0.9 \cdot L / (0.9 - Y)$	= 68.9 sec
Ymax	= $1 - L / C$	= 0.742
R.C.(C)	= $(0.9 \cdot Y_{max} - Y) / Y \cdot 100\%$	= 39 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
IV	12	5	2	10	44	2	10	OK
V	10	5	7	8	9	7	8	OK
VI	13	6	7	11	6	7	11	OK
VII	12	5	3	10	87	3	10	OK
VIII	13	6	6	11	7	6	11	OK
IX	10	5	3	8	45	3	8	OK

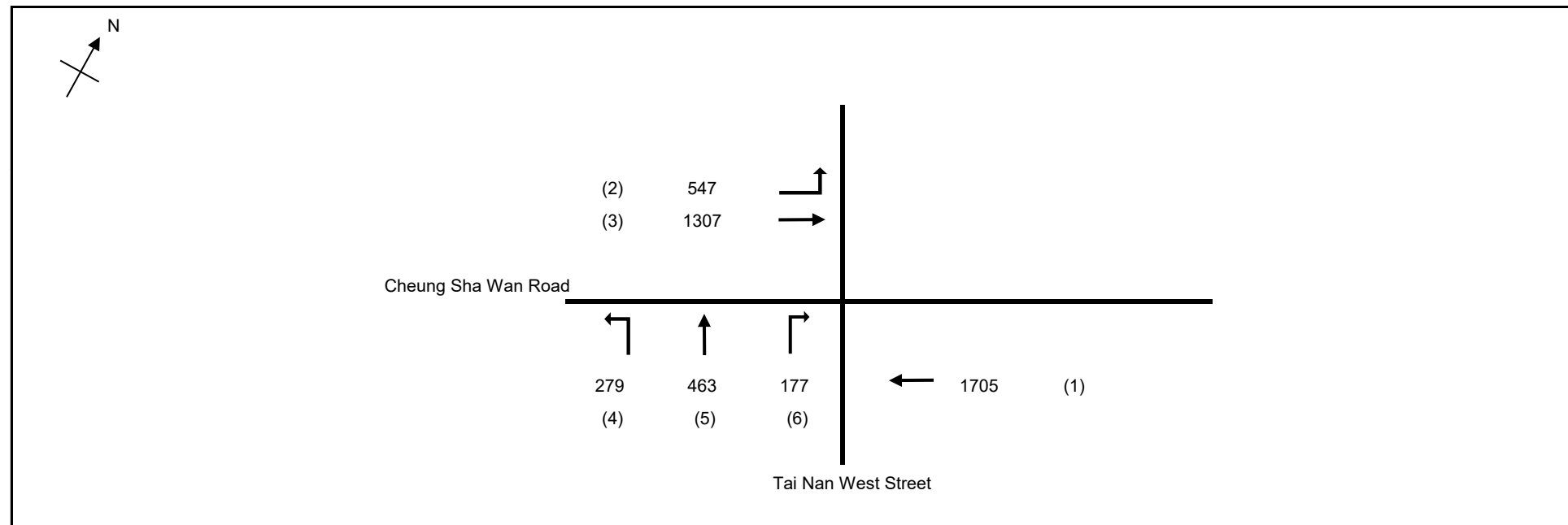
Move- ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	m			Total FLOw pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
1	A	3.00	II	1	10		N	1915		589		589	0.00	1915			1915	0.308	0.308	8	59	59	0.649	64
1	A	3.30	II	2				4170		1263		1263	0.00	4170			4170	0.303			58	59	0.639	69
2,3	A	3.00	I	1	10		N	1915	376	0		376	1.00	1665			1665	0.226			43	59	0.476	41
3	A	3.00	I	3				6165		1124		1124	0.00	6165			6165	0.182			35	59	0.385	41
4	C	3.00	III	1	10		N	1915	290			290	1.00	1665			1665	0.174	0.174		33	33	0.649	0
4,5	C	3.50	III	1	13			2105	97	258		355	0.27	2041			2041	0.174			33	33	0.649	0
5,6	C	3.50	III	1	15			2105		181	156	337	0.46	2012			2012	0.167			32	33	0.624	0
PED	B		V																	24				

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

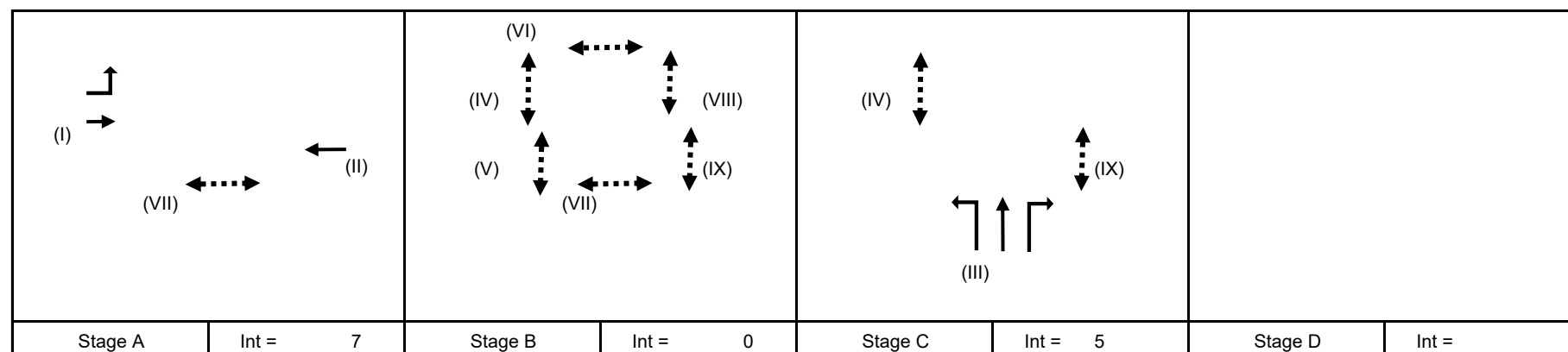
TRAFFIC SIGNAL CALCULATION

PROJECT NO:	315341-02	JUNCTION NO: J7
-------------	-----------	-----------------

DATE : 23/Jun/26	FILENAME :
------------------	------------



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.492
Loss time	L =	34 sec
Total Flow	=	4479 pcu
Co	$= (1.5 \cdot L + 5) / (1 - Y)$	= 110.2 sec
Cm	$= L / (1 - Y)$	= 66.9 sec
Yult		= 0.645
R.C.ult	$= (Y_{ult} - Y) / Y \cdot 100\%$	= 31.1 %
Cp	$= 0.9 \cdot L / (0.9 - Y)$	= 75.0 sec
Ymax	$= 1 - L / C$	= 0.726
R.C.(C)	$= (0.9 \cdot Y_{max} - Y) / Y \cdot 100\%$	= 33 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
IV	12	5	2	10	41	2	10	OK
V	10	5	7	8	9	7	8	OK
VI	13	6	7	11	6	7	11	OK
VII	12	5	3	10	87	3	10	OK
VIII	13	6	6	11	7	6	11	OK
IX	10	5	3	8	42	3	8	OK

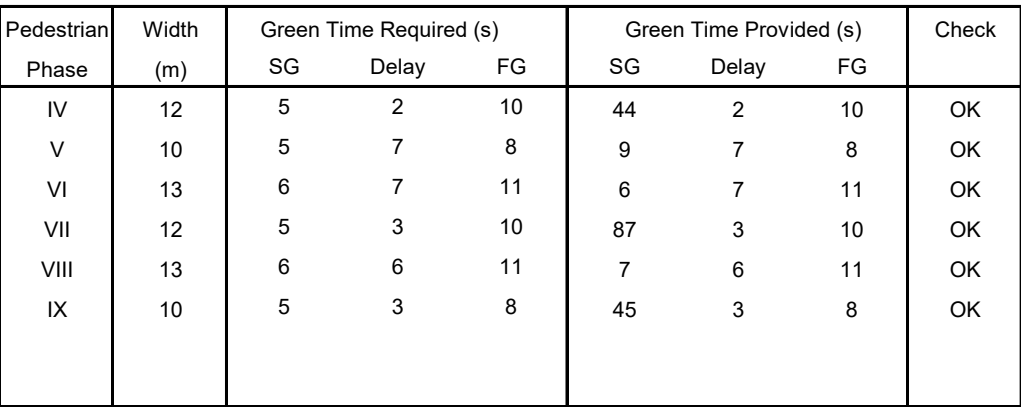
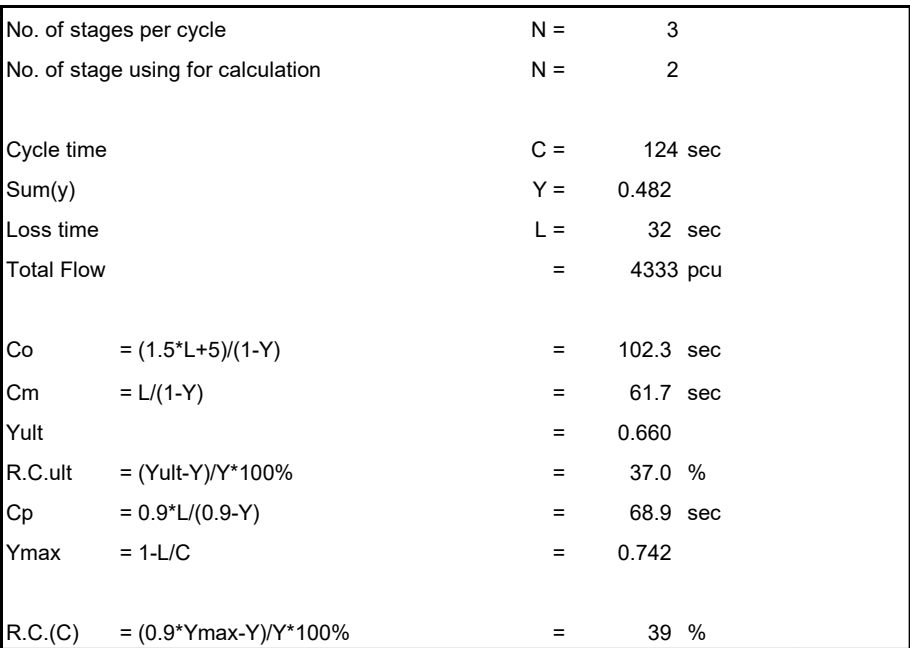
Move- ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
1	A	3.00	II	1	10		N	1915		551		551	0.00	1915			1915	0.288		10	53	62	0.574	57
1	A	3.30	II	2				4170		1154		1154	0.00	4170			4170	0.277			51	62	0.553	60
2,3	A	3.00	I	1	10		N	1915	547	0		547	1.00	1665			1665	0.328	0.328		60	60	0.678	58
3	A	3.00	I	3				6165		1307		1307	0.00	6165			6165	0.212			39	60	0.437	46
4	C	3.00	III	1	10		N	1915	272			272	1.00	1665			1665	0.163	0.163		30	30	0.678	0
4,5	C	3.50	III	1	13			2105	7	335		342	0.02	2100			2100	0.163			30	30	0.676	0
5,6	C	3.50	III	1	15			2105		128	177	305	0.58	1989			1989	0.153			28	30	0.637	0
PED	B		V																	24				

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

TRAFFIC SIGNAL CALCULATION

PROJECT NO: 315341-02	JUNCTION NO: J7
-----------------------	-----------------

DATE :	23/Jun/26	FILENAME :
--------	-----------	------------



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

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J8

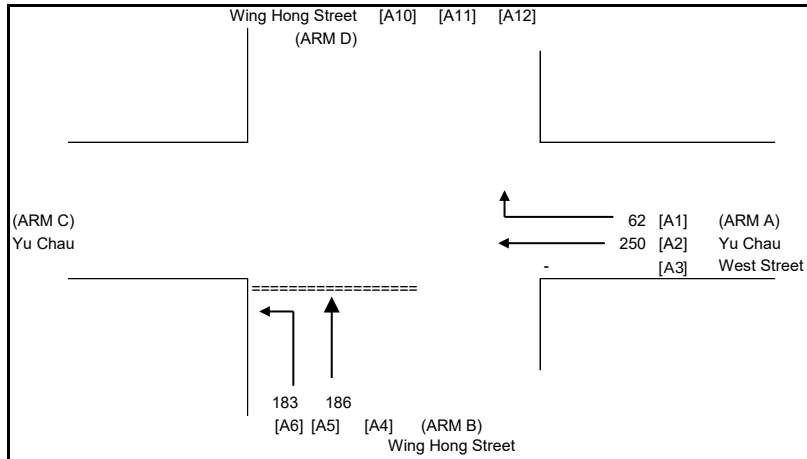
Wing Hong Street / Yu Chau

Year 2026 Existing AM Peak

DATE :

23-Jun-26

FILENAME :



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
Vi 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	4.00	(metres)
W cr	=	0	(metres)
Y	=	0.862	

MAJOR ROAD (ARM A)

W a-d	=	4.00	(metres)
Vr a-d	=	50	(metres)
q a-b	=	-	(pcu/hr)
q a-c	=	250	(pcu/hr)
q a-d	=	62	(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)
q c-d	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)
W b-c	=	2.00	(metres)
Vi b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	25	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	183	(pcu/hr)
q b-d	=	186	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.686	X a	=	0.968
X c	=	0.586	X d	=	0.533
Z b	=	0.773	Z d	=	0.586
M b	=	0.703	M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0	r d-c	=	0.000
ql b-d	=	93.19 (pcu/hr)	ql d-b	=	0 (pcu/hr)
qr b-d	=	93.19 (pcu/hr)	qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	363	(pcu/hr)	Q d-c	=	231	(pcu/hr)
Q b-c	=	515	(pcu/hr)	Q d-a	=	437	(pcu/hr)
Q c-b	=	374	(pcu/hr)	Q a-d	=	721	(pcu/hr)
Ql b-d	=	372	(pcu/hr)	Ql d-b	=	293	(pcu/hr)
Qr b-d	=	363	(pcu/hr)	Qr d-b	=	293	(pcu/hr)

TOTAL FLOW = 681.35 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.3556
DFC c-b	=	0.0000
DFCI b-d	=	0.2505
DFCr b-d	=	0.2567
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0862
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.36

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

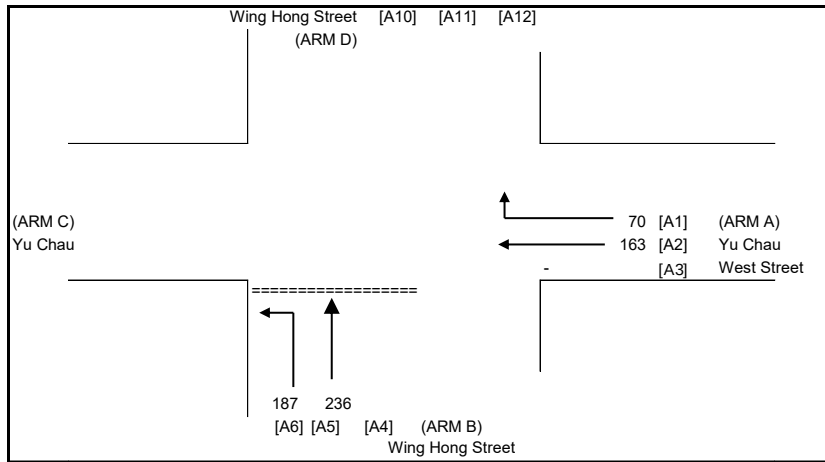
JUNCTION NO: J8

Wing Hong Street / Yu Chau

Year 2026 Existing PM Peak

DATE : 23-Jun-26

FILENAME :



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
X a = STREAM-SPECIFIC (RIGHT TURN FROM A)
X b = STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b = STREAM-SPECIFIC (LEFT TURN FROM B)
M b = STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y = (1-0.0345W)
r b-a = RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W = 4.00 (metres)
W cr = 0 (metres)
Y = 0.862

MAJOR ROAD (ARM A)

W a-d = 4.00 (metres)
Vr a-d = 50 (metres)
q a-b = - (pcu/hr)
q a-c = 163 (pcu/hr)
q a-d = 70 (pcu/hr)

MAJOR 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)
q c-d = 0 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.00 (metres)
W b-c = 2.00 (metres)
Vl b-a = 0 (metres)
Vr b-a = 0 (metres)
Vr b-c = 25 (metres)
q b-a = 0 (pcu/hr)
q b-c = 187 (pcu/hr)
q b-d = 236 (pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b = 0.686
X c = 0.586
Z b = 0.773
M b = 0.703
X a = 0.968
X d = 0.533
Z d = 0.586
M d = 0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a = 0
ql b-d = 117.8 (pcu/hr)
qr b-d = 117.8 (pcu/hr)
r d-c = 0.000
ql d-b = 0 (pcu/hr)
qr d-b = 0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a = 380 (pcu/hr)
Q b-c = 536 (pcu/hr)
Q c-b = 388 (pcu/hr)
Ql b-d = 389 (pcu/hr)
Qr b-d = 380 (pcu/hr)
Q d-c = 230 (pcu/hr)
Q d-a = 437 (pcu/hr)
Q a-d = 721 (pcu/hr)
Ql d-b = 300 (pcu/hr)
Qr d-b = 300 (pcu/hr)

TOTAL FLOW = 655.7 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0000
DFC b-c = 0.3480
DFC c-b = 0.0000
DFCI b-d = 0.3028
DFCr b-d = 0.3100
DFC d-c = 0.0000
DFC d-a = 0.0000
DFC a-d = 0.0973
DFCI d-b = 0.0000
DFCr d-b = 0.0000

CRITICAL DFC = 0.35

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J8

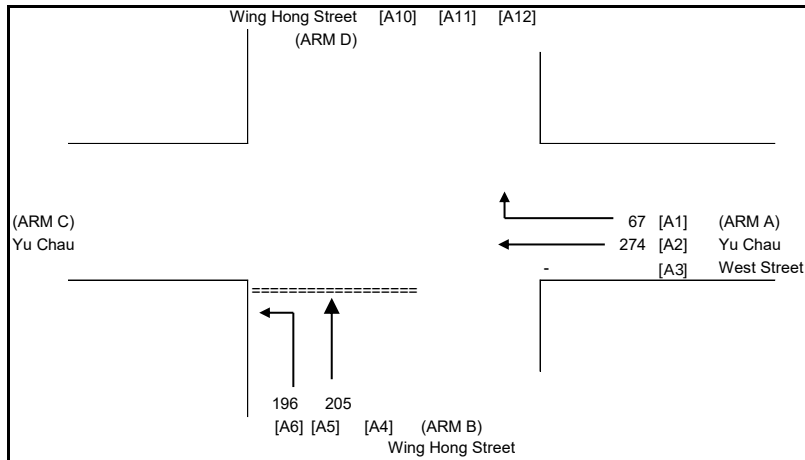
Wing Hong Street / Yu Chau

Year 2033 Reference AM Peak

DATE :

23-Jun-26

FILENAME :



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
VI 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	4.00	(metres)	Y	=	0.862
W cr	=	0	(metres)			

MAJOR ROAD (ARM A)

W a-d	=	4.00	(metres)	W c-b	=	0.00	(metres)
Vr a-d	=	50	(metres)	Vr c-b	=	0	(metres)
q a-b	=	-	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	274	(pcu/hr)	q c-b	=	0	(pcu/hr)
q a-d	=	67	(pcu/hr)	q c-d	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)	W d-c	=	0.00	(metres)
W b-c	=	2.00	(metres)	W d-a	=	0.00	(metres)
VI b-a	=	0	(metres)	VI d-c	=	0	(metres)
Vr b-a	=	0	(metres)	Vr d-c	=	0	(metres)
Vr b-c	=	25	(metres)	Vr d-a	=	0	(metres)
q b-a	=	0	(pcu/hr)	q d-c	=	0	(pcu/hr)
q b-c	=	196	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	205	(pcu/hr)	q d-b	=	0	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.686	X a	=	0.968
X c	=	0.586	X d	=	0.533
Z b	=	0.773	Z d	=	0.586
M b	=	0.703	M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0	r d-c	=	0.000		
ql b-d	=	102.4	(pcu/hr)	ql d-b	=	0	(pcu/hr)
qr b-d	=	102.4	(pcu/hr)	qr d-b	=	0	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	357	(pcu/hr)	Q d-c	=	222	(pcu/hr)
Q b-c	=	509	(pcu/hr)	Q d-a	=	437	(pcu/hr)
Q c-b	=	369	(pcu/hr)	Q a-d	=	721	(pcu/hr)
Ql b-d	=	366	(pcu/hr)	Ql d-b	=	290	(pcu/hr)
Qr b-d	=	357	(pcu/hr)	Qr d-b	=	290	(pcu/hr)

TOTAL FLOW = 741.4994 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.3858
DFC c-b	=	0.0000
DFCI b-d	=	0.2798
DFCr b-d	=	0.2869
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0924
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.39

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J8

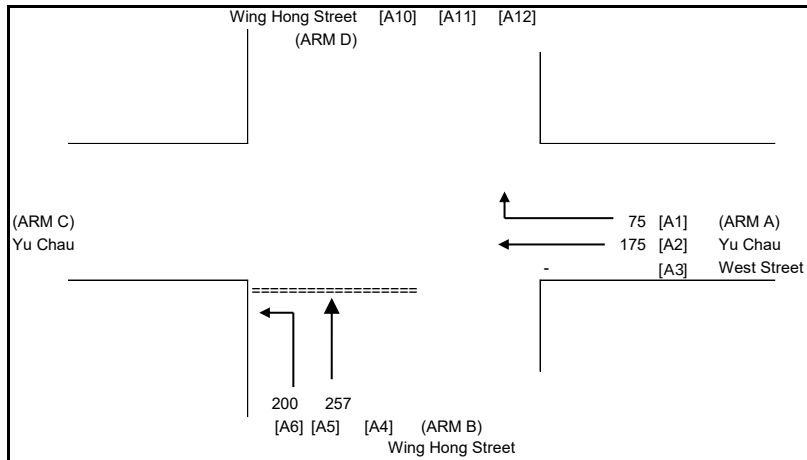
Wing Hong Street / Yu Chau

Year 2033 Reference PM Peak

DATE :

23-Jun-26

FILENAME :



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
VI 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	4.00	(metres)
W cr	=	0	(metres)
Y	=	0.862	

MAJOR ROAD (ARM A)

W a-d	=	4.00	(metres)
Vr a-d	=	50	(metres)
q a-b	=	-	(pcu/hr)
q a-c	=	175	(pcu/hr)
q a-d	=	75	(pcu/hr)

MAJOR 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)
q c-d	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)
W b-c	=	2.00	(metres)
VI b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	25	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	200	(pcu/hr)
q b-d	=	257	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.686
X c	=	0.586
Z b	=	0.773
M b	=	0.703
X a	=	0.968
X d	=	0.533
Z d	=	0.586
M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0
ql b-d	=	128.3 (pcu/hr)
qr b-d	=	128.3 (pcu/hr)
r d-c	=	0.000
ql d-b	=	0 (pcu/hr)
qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	376 (pcu/hr)
Q b-c	=	533 (pcu/hr)
Q c-b	=	385 (pcu/hr)
QI b-d	=	386 (pcu/hr)
Qr b-d	=	376 (pcu/hr)
Q d-c	=	222 (pcu/hr)
Q d-a	=	437 (pcu/hr)
Q a-d	=	721 (pcu/hr)
QI d-b	=	298 (pcu/hr)
Qr d-b	=	298 (pcu/hr)

TOTAL FLOW = 706.9992 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.3752
DFC c-b	=	0.0000
DFCI b-d	=	0.3323
DFCr b-d	=	0.3412
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.1044
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.38

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J8

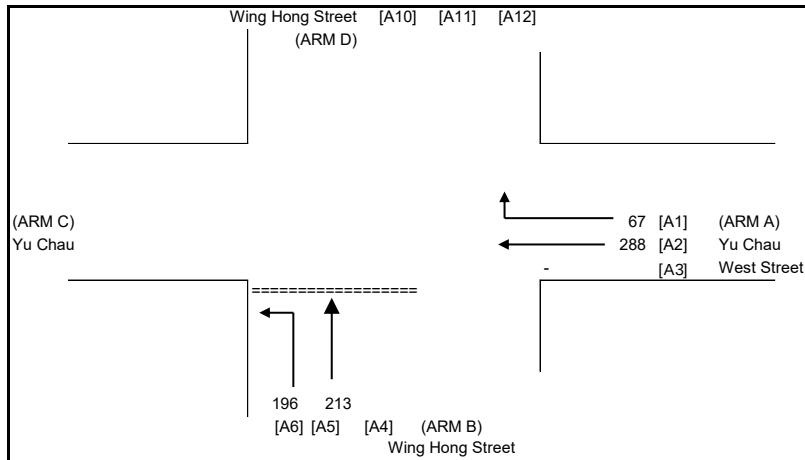
Wing Hong Street / Yu Chau

Year 2033 Design AM Peak

DATE :

23-Jun-26

FILENAME :



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
VI 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	4.00	(metres)	Y	=	0.862
W cr	=	0	(metres)			

MAJOR ROAD (ARM A)

W a-d	=	4.00	(metres)	W c-b	=	0.00	(metres)
Vr a-d	=	50	(metres)	Vr c-b	=	0	(metres)
q a-b	=	-	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	288	(pcu/hr)	q c-b	=	0	(pcu/hr)
q a-d	=	67	(pcu/hr)	q c-d	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)	W d-c	=	0.00	(metres)
W b-c	=	2.00	(metres)	W d-a	=	0.00	(metres)
VI b-a	=	0	(metres)	VI d-c	=	0	(metres)
Vr b-a	=	0	(metres)	Vr d-c	=	0	(metres)
Vr b-c	=	25	(metres)	Vr d-a	=	0	(metres)
q b-a	=	0	(pcu/hr)	q d-c	=	0	(pcu/hr)
q b-c	=	196	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	213	(pcu/hr)	q d-b	=	0	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.686	X a	=	0.968
X c	=	0.586	X d	=	0.533
Z b	=	0.773	Z d	=	0.586
M b	=	0.703	M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0	r d-c	=	0.000
ql b-d	=	106.4	ql d-b	=	0 (pcu/hr)
qr b-d	=	106.4	qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	354	(pcu/hr)	Q d-c	=	220	(pcu/hr)
Q b-c	=	506	(pcu/hr)	Q d-a	=	437	(pcu/hr)
Q c-b	=	366	(pcu/hr)	Q a-d	=	721	(pcu/hr)
Ql b-d	=	363	(pcu/hr)	Ql d-b	=	288	(pcu/hr)
Qr b-d	=	354	(pcu/hr)	Qr d-b	=	288	(pcu/hr)

TOTAL FLOW = 763.4994 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.3880
DFC c-b	=	0.0000
DFCI b-d	=	0.2931
DFCr b-d	=	0.3006
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0924
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.39

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J8

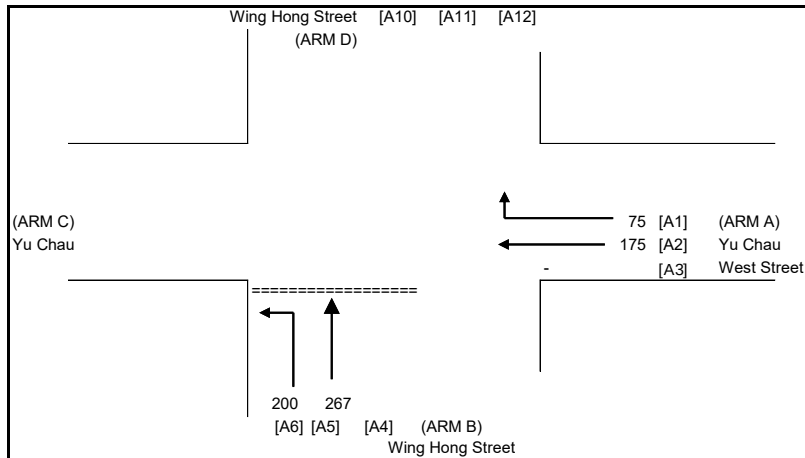
Wing Hong Street / Yu Chau

Year 2033 Design PM Peak

DATE :

23-Jun-26

FILENAME :



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
VI 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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	4.00	(metres)
W cr	=	0	(metres)
Y	=	0.862	

MAJOR ROAD (ARM A)

W a-d	=	4.00	(metres)
Vr a-d	=	50	(metres)
q a-b	=	-	(pcu/hr)
q a-c	=	175	(pcu/hr)
q a-d	=	75	(pcu/hr)

MAJOR 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)
q c-d	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.00	(metres)
W b-c	=	2.00	(metres)
VI b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	25	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	200	(pcu/hr)
q b-d	=	267	(pcu/hr)

MINOR ROAD (ARM D)

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

GEOMETRIC FACTORS :

X b	=	0.686
X c	=	0.586
Z b	=	0.773
M b	=	0.703
X a	=	0.968
X d	=	0.533
Z d	=	0.586
M d	=	0.533

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0
ql b-d	=	133.3 (pcu/hr)
qr b-d	=	133.3 (pcu/hr)
r d-c	=	0.000
ql d-b	=	0 (pcu/hr)
qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	376 (pcu/hr)
Q b-c	=	533 (pcu/hr)
Q c-b	=	385 (pcu/hr)
QI b-d	=	386 (pcu/hr)
Qr b-d	=	376 (pcu/hr)
Q d-c	=	220 (pcu/hr)
Q d-a	=	437 (pcu/hr)
Q a-d	=	721 (pcu/hr)
QI d-b	=	298 (pcu/hr)
Qr d-b	=	298 (pcu/hr)

TOTAL FLOW = 716.9992 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.3752
DFC c-b	=	0.0000
DFCI b-d	=	0.3453
DFCr b-d	=	0.3545
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.1044
DFCI d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.38

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J9

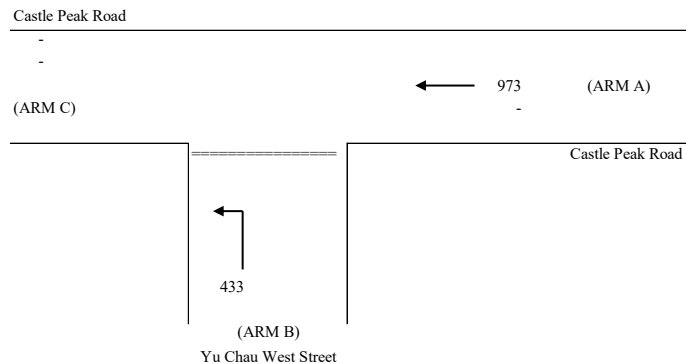
Yu Chau West Street / Castle Peak Road

Year 2026 Existing AM Peak

DATE :

23-Jun-26

FILENAME :



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH (6-20m) (minor road turn left only, 2W)
W cr	=	CENTRAL RESERVE WIDTH (0m, 1.2-9m)
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a (0m, 2.2-5m)
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c (2.2-5m)
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b (0m, 2.2-5m)
VI b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a (0-250m)
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a (0-250)
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c (0-250)
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b (0-250)
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

GEOMETRIC FACTORS :

THE CAPACITY OF MOVEMENT :

COMPARISON OF DESIGN FLOW TO CAPACITY:

MAJOR ROAD (ARM A)

W	=	12.80	(metres)
W cr	=	0	(metres)
q a-b	=	-	(pcu/hr)
q a-c	=	973	(pcu/hr)

D	=	0.5332189
E	=	1.2761003
F	=	1.6592092
Y	=	0.5584

Q b-a	=	229
Q b-c	=	698
Q c-b	=	908
Q b-ac	=	698

DFC b-a	=	0.0000
DFC b-c	=	0.6201
DFC c-b	=	0.0000
DFC b-ac	=	0.6201

MAJOR ROAD (ARM C)

W c-b	=	12.80	(metres)
Vr c-b	=	0	(metres)
q c-a	=	-	(pcu/hr)
q c-b	=	-	(pcu/hr)

TOTAL FLOW = 1405.5 (PCU/HR)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	7.50	(metres)
VI b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	50	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	433	(pcu/hr)

CRITICAL DFC = 0.62

OVE ARUP & PARTNERS		PRIORITY JUNCTION CALCULATION	
Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon		PROJECT NO: 315341-02	JUNCTION NO: J9
Yu Chau West Street / Castle Peak Road	Year 2026 Existing PM Peak	DATE : 23-Jun-26	FILENAME :

NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH (6-20m) (minor road turn left only, 2W)
- W cr = CENTRAL RESERVE WIDTH (0m, 1.2-9m)
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a (0m, 2.2-5m)
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c (2.2-5m)
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b (0m, 2.2-5m)
- VI b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a (0-250m)
- Vr b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a (0-250)
- Vr b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c (0-250)
- Vr c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b (0-250)
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:	GEOMETRIC FACTORS :	THE CAPACITY OF MOVEMENT :	COMPARISON OF DESIGN FLOW TO CAPACITY:
MAJOR ROAD (ARM A) W = 12.80 (metres) W cr = 0 (metres) q a-b = - (pcu/hr) q a-c = 971 (pcu/hr)	D = 0.5332189 E = 1.2761003 F = 1.6592092 Y = 0.5584	Q b-a = 229 Q b-c = 699 Q c-b = 909 Q b-ac = 699	DFC b-a = 0.0000 DFC b-c = 0.5006 DFC c-b = 0.0000 DFC b-ac = 0.5006
MAJOR ROAD (ARM C) W c-b = 12.80 (metres) Vr c-b = 0 (metres) q c-a = - (pcu/hr) q c-b = - (pcu/hr)		TOTAL FLOW = 1320.55 (PCU/HR)	
MINOR ROAD (ARM B) W b-a = 0.00 (metres) W b-c = 7.50 (metres) VI b-a = 0 (metres) Vr b-a = 0 (metres) Vr b-c = 50 (metres) q b-a = 0 (pcu/hr) q b-c = 350 (pcu/hr)			CRITICAL DFC = 0.50

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J9

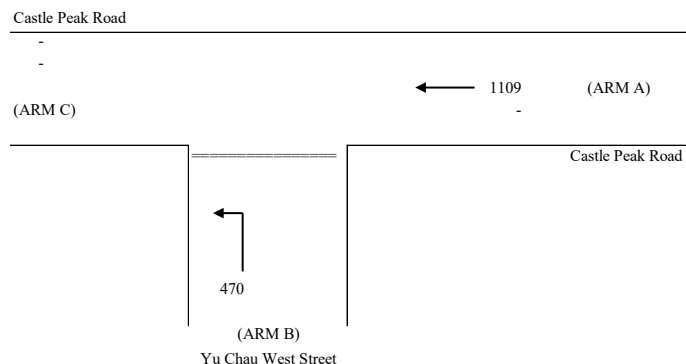
Yu Chau West Street / Castle Peak Road

Year 2033 Reference AM Peak

DATE :

23-Jun-26

FILENAME :



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH (6-20m) (minor road turn left only, 2W)
W cr	=	CENTRAL RESERVE WIDTH (0m, 1.2-9m)
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a (0m, 2.2-5m)
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c (2.2-5m)
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b (0m, 2.2-5m)
VI b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a (0-250m)
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a (0-250)
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c (0-250)
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b (0-250)
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

GEOMETRIC FACTORS :

THE CAPACITY OF MOVEMENT :

COMPARISON OF DESIGN FLOW TO CAPACITY:

MAJOR ROAD (ARM A)

W	=	12.80	(metres)
W cr	=	0	(metres)
q a-b	=	-	(pcu/hr)
q a-c	=	1109	(pcu/hr)

D	=	0.5332189
E	=	1.2761003
F	=	1.6592092
Y	=	0.5584

Q b-a	=	214
Q b-c	=	663
Q c-b	=	862
Q b-ac	=	663

DFC b-a	=	0.0000
DFC b-c	=	0.7090
DFC c-b	=	0.0000
DFC b-ac	=	0.7090

MAJOR ROAD (ARM C)

W c-b	=	12.80	(metres)
Vr c-b	=	0	(metres)
q c-a	=	-	(pcu/hr)
q c-b	=	-	(pcu/hr)

TOTAL FLOW = 1579 (PCU/HR)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	7.50	(metres)
VI b-a	=		(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	50	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	470	(pcu/hr)

CRITICAL DFC = 0.71

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J9

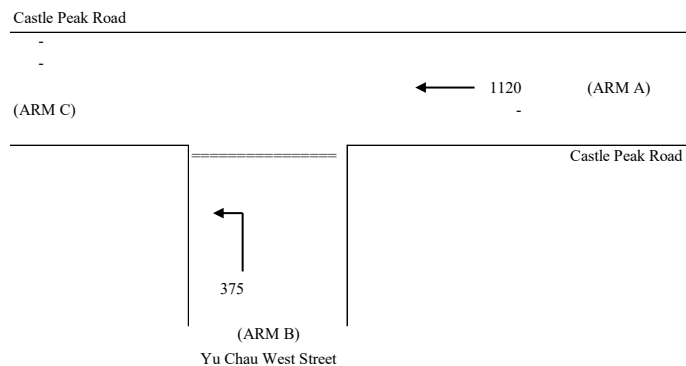
Yu Chau West Street / Castle Peak Road

Year 2033 Reference PM Peak

DATE :

23-Jun-26

FILENAME :



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH (6-20m) (minor road turn left only, 2W)
W cr	=	CENTRAL RESERVE WIDTH (0m, 1.2-9m)
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a (0m, 2.2-5m)
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c (2.2-5m)
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b (0m, 2.2-5m)
VI b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a (0-250m)
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a (0-250)
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c (0-250)
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b (0-250)
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

GEOMETRIC FACTORS :

THE CAPACITY OF MOVEMENT :

COMPARISON OF DESIGN FLOW TO CAPACITY:

MAJOR ROAD (ARM A)

W	=	12.80	(metres)
W cr	=	0	(metres)
q a-b	=	-	(pcu/hr)
q a-c	=	1120	(pcu/hr)

D	=	0.5332189
E	=	1.2761003
F	=	1.6592092
Y	=	0.5584

Q b-a	=	213
Q b-c	=	660
Q c-b	=	859
Q b-ac	=	660

DFC b-a	=	0.0000
DFC b-c	=	0.5685
DFC c-b	=	0.0000
DFC b-ac	=	0.5685

MAJOR ROAD (ARM C)

W c-b	=	12.80	(metres)
Vr c-b	=	0	(metres)
q c-a	=	-	(pcu/hr)
q c-b	=	-	(pcu/hr)

TOTAL FLOW = 1495 (PCU/HR)

MINOR ROAD (ARM B)

W b-a	=	0.00	(metres)
W b-c	=	7.50	(metres)
VI b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	50	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	375	(pcu/hr)

CRITICAL DFC = 0.57

OVE ARUP & PARTNERS

PRIORITY JUNCTION CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO:

315341-02

JUNCTION NO:

J9

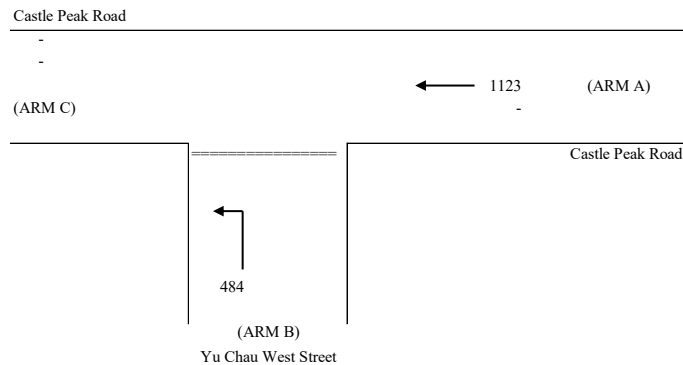
Yu Chau West Street / Castle Peak Road

Year 2033 Design AM Peak

DATE :

23-Jun-26

FILENAME :



NOTES : (GEOMETRIC INPUT DATA)

W = MAJOR ROAD WIDTH (6-20m) (minor road turn left only, 2W)
W cr = CENTRAL RESERVE WIDTH (0m, 1.2-9m)
W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a (0m, 2.2-5m)
W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c (2.2-5m)
W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b (0m, 2.2-5m)
Vl b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a (0-250m)
Vr b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a (0-250)
Vr b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c (0-250)
Vr c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b (0-250)
D = STREAM-SPECIFIC B-A
E = STREAM-SPECIFIC B-C
F = STREAM-SPECIFIC C-B
Y = (1-0.0345W)

GEOMETRIC DETAILS:

GEOMETRIC FACTORS :

THE CAPACITY OF MOVEMENT :

COMPARISON OF DESIGN FLOW TO CAPACITY:

MAJOR ROAD (ARM A)

W = 12.80 (metres)
W cr = 0 (metres)
q a-b = - (pcu/hr)
q a-c = 1123 (pcu/hr)

D = 0.5332189
E = 1.2761003
F = 1.6592092
Y = 0.5584

Q b-a = 213
Q b-c = 659
Q c-b = 857
Q b-ac = 659

DFC b-a = 0.0000
DFC b-c = 0.7346
DFC c-b = 0.0000
DFC b-ac = 0.7346

MAJOR ROAD (ARM C)

W c-b = 12.80 (metres)
Vr c-b = 0 (metres)
q c-a = - (pcu/hr)
q c-b = - (pcu/hr)

TOTAL FLOW = 1607 (PCU/HR)

MINOR ROAD (ARM B)

W b-a = 0.00 (metres)
W b-c = 7.50 (metres)
Vl b-a = 0 (metres)
Vr b-a = 0 (metres)
Vr b-c = 50 (metres)
q b-a = 0 (pcu/hr)
q b-c = 484 (pcu/hr)

CRITICAL DFC = 0.73

OVE ARUP & PARTNERS		PRIORITY JUNCTION CALCULATION	
Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses" Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon		PROJECT NO: 315341-02	JUNCTION NO: J9
Yu Chau West Street / Castle Peak Road	Year 2033 Design PM Peak	DATE : 23-Jun-26	FILENAME :

NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH (6-20m) (minor road turn left only, 2W)
- W cr = CENTRAL RESERVE WIDTH (0m, 1.2-9m)
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a (0m, 2.2-5m)
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c (2.2-5m)
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b (0m, 2.2-5m)
- VI b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a (0-250m)
- Vr b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a (0-250)
- Vr b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c (0-250)
- Vr c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b (0-250)
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:	GEOMETRIC FACTORS :	THE CAPACITY OF MOVEMENT :	COMPARISON OF DESIGN FLOW TO CAPACITY:
MAJOR ROAD (ARM A) W = 12.80 (metres) W cr = 0 (metres) q a-b = - (pcu/hr) q a-c = 1131 (pcu/hr)	D = 0.5332189 E = 1.2761003 F = 1.6592092 Y = 0.5584	Q b-a = 212 Q b-c = 657 Q c-b = 855 Q b-ac = 657	DFC b-a = 0.0000 DFC b-c = 0.5711 DFC c-b = 0.0000 DFC b-ac = 0.5711
MAJOR ROAD (ARM C) W c-b = 12.80 (metres) Vr c-b = 0 (metres) q c-a = - (pcu/hr) q c-b = - (pcu/hr)		TOTAL FLOW = 1506 (PCU/HR)	
MINOR ROAD (ARM B) W b-a = 0.00 (metres) W b-c = 7.50 (metres) VI b-a = 0 (metres) Vr b-a = 0 (metres) Vr b-c = 50 (metres) q b-a = 0 (pcu/hr) q b-c = 375 (pcu/hr)			CRITICAL DFC = 0.57

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

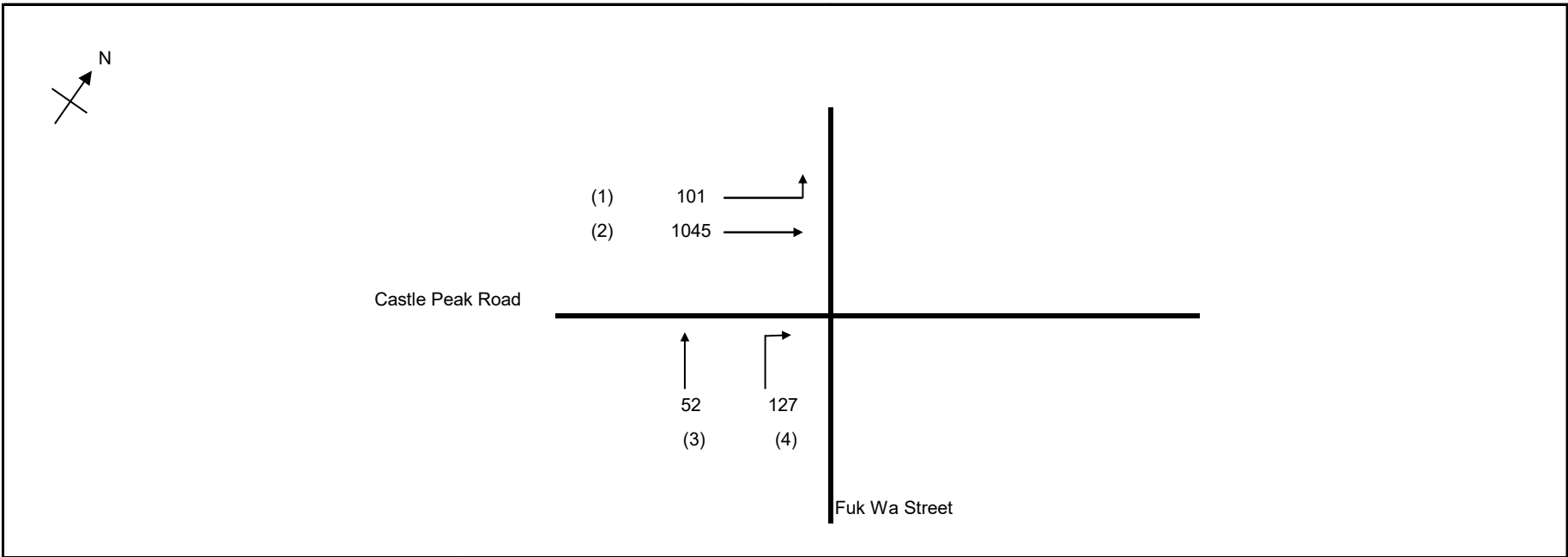
JUNCTION NO: J10

Castle Peak Road / Fuk Wa Street

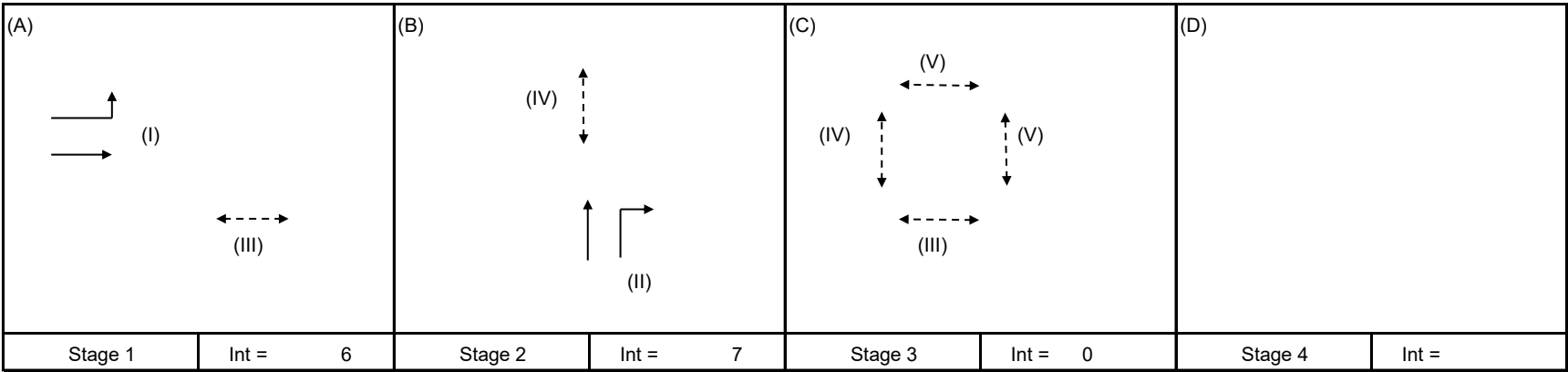
Year 2026 Existing AM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	114 sec
Sum(y)	Y =	0.346
Loss time	L =	29 sec
Total Flow	=	1325 pcu
Co	= (1.5*L+5)/(1-Y)	= 74.2 sec
Cm	= L/(1-Y)	= 44.3 sec
Yult	=	0.683
R.C.ult	= (Yult-Y)/Y*100%	= 97.2 %
Cp	= 0.9*L/(0.9-Y)	= 47.1 sec
Ymax	= 1-L/C	= 0.746
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 94 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	2	8	80	2	8	OK
IV	12	5	2	10	17	2	10	OK
V	12	5	3	10	5	3	10	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
1,2	A	3.50	I	1	8		N	1965	101	467		568	0.18	1902			1902	0.299	0.299	11	73	73	0.464	38
2	A	3.20	I	1			N	1935		578		578	0.00	1935			1935	0.299			73	73	0.464	39
3,4	B	3.70	II	1	10		N	1985		52	36	88	0.41	1870			1870	0.047	0.047		12	12	0.462	15
4	B	3.70	II	1	15			2125			91	91	1.00	1932			1932	0.047			12	12	0.464	16
PED	C		V																	18				

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

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

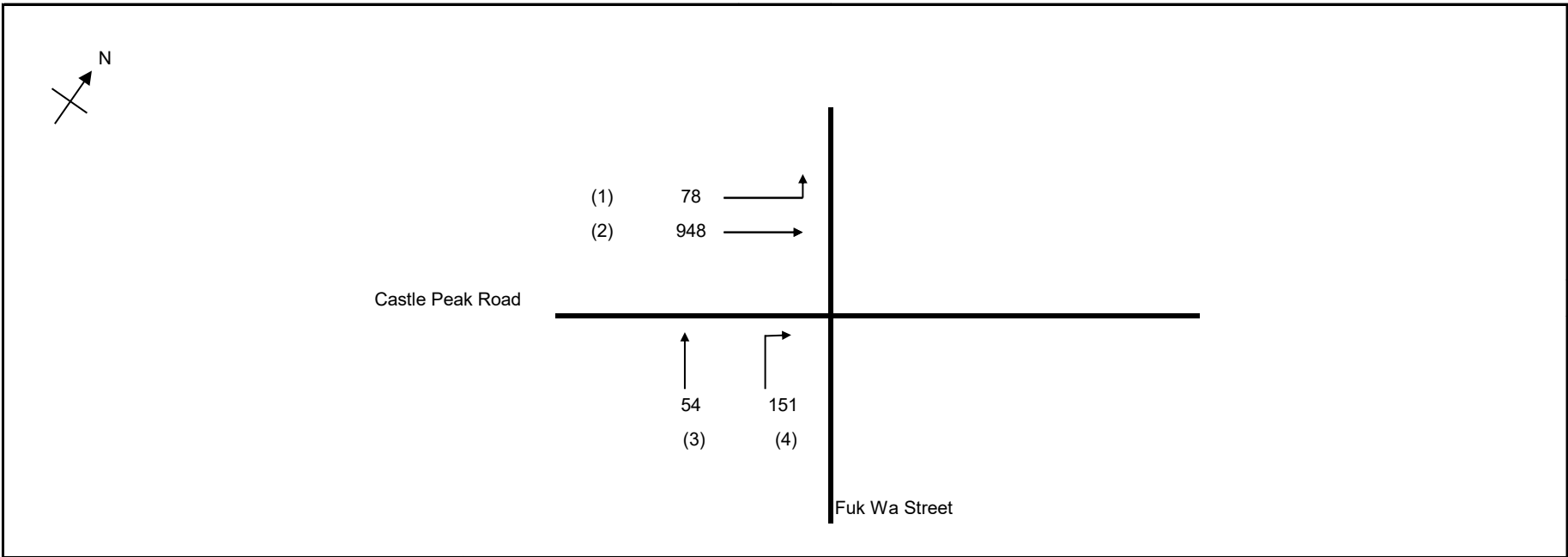
JUNCTION NO: J10

Castle Peak Road / Fuk Wa Street

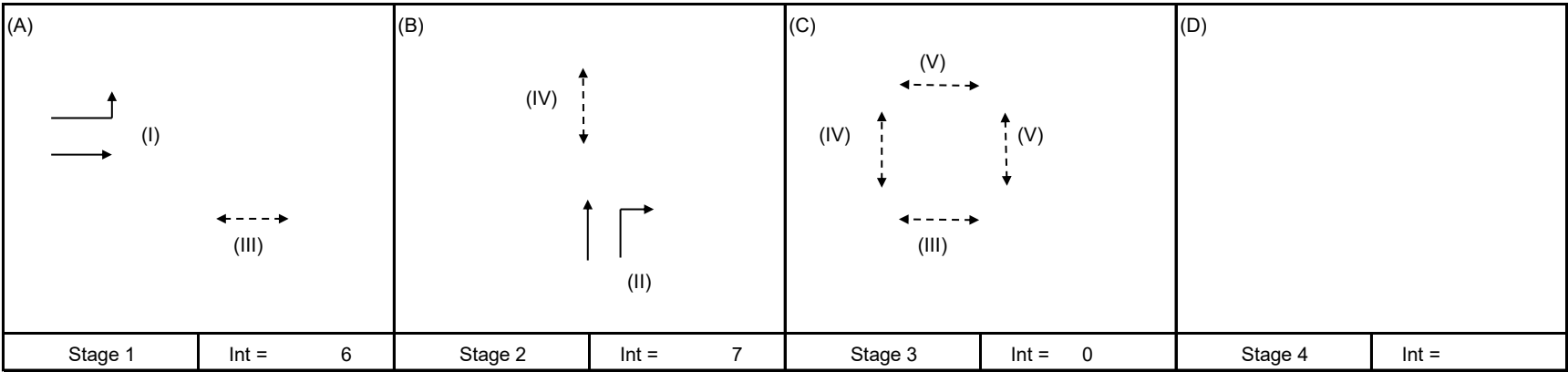
Year 2026 Existing PM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.322
Loss time	L =	29 sec
Total Flow	=	1232 pcu
Co	= (1.5*L+5)/(1-Y)	= 71.5 sec
Cm	= L/(1-Y)	= 42.7 sec
Yult	=	0.683
R.C.ult	= (Yult-Y)/Y*100%	= 112.2 %
Cp	= 0.9*L/(0.9-Y)	= 45.1 sec
Ymax	= 1-L/C	= 0.766
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 114 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	2	8	86	2	8	OK
IV	12	5	2	10	21	2	10	OK
V	12	5	3	10	5	3	10	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
1,2	A	3.50	I	1	8		N	1965	78	432		510	0.15	1910			1910	0.267	0.267	11	79	79	0.420	38
2	A	3.20	I	1			N	1935		516		516	0.00	1935			1935	0.267			79	79	0.419	39
3,4	B	3.70	II	1	10		N	1985		54	47	101	0.47	1855			1855	0.054	0.054		16	16	0.420	18
4	B	3.70	II	1	15			2125			104	104	1.00	1932			1932	0.054			16	16	0.417	19
PED	C		V																	18				

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

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

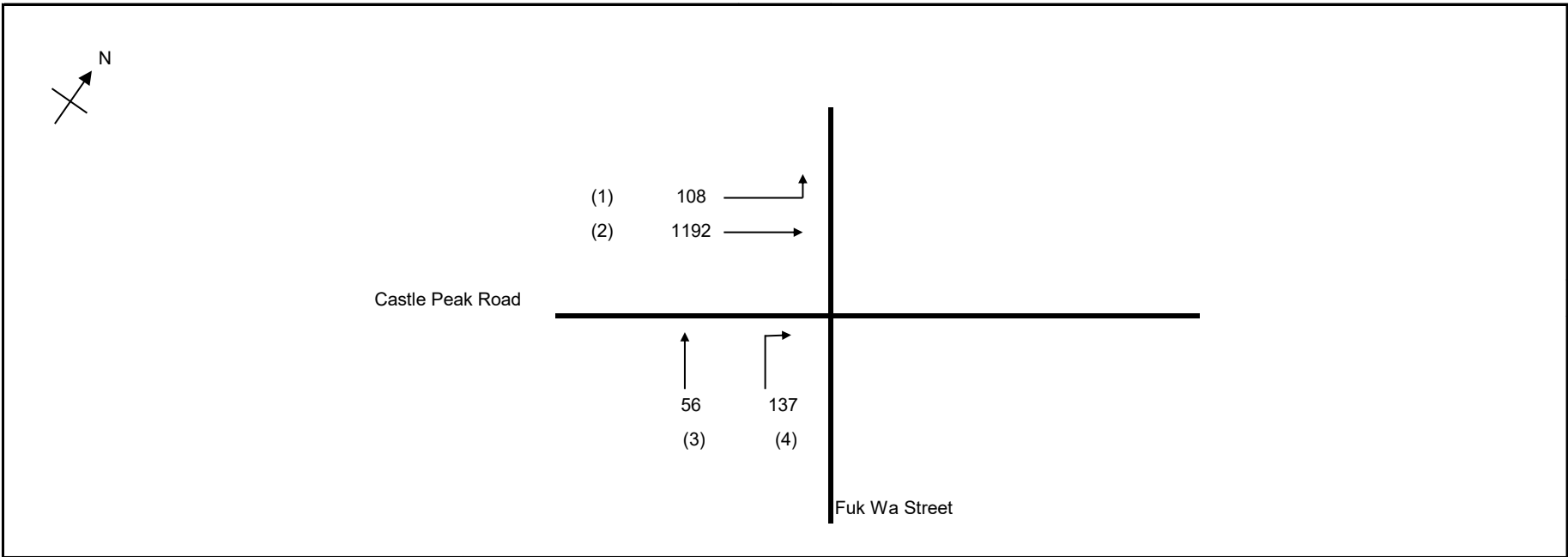
JUNCTION NO: J10

Castle Peak Road / Fuk Wa Street

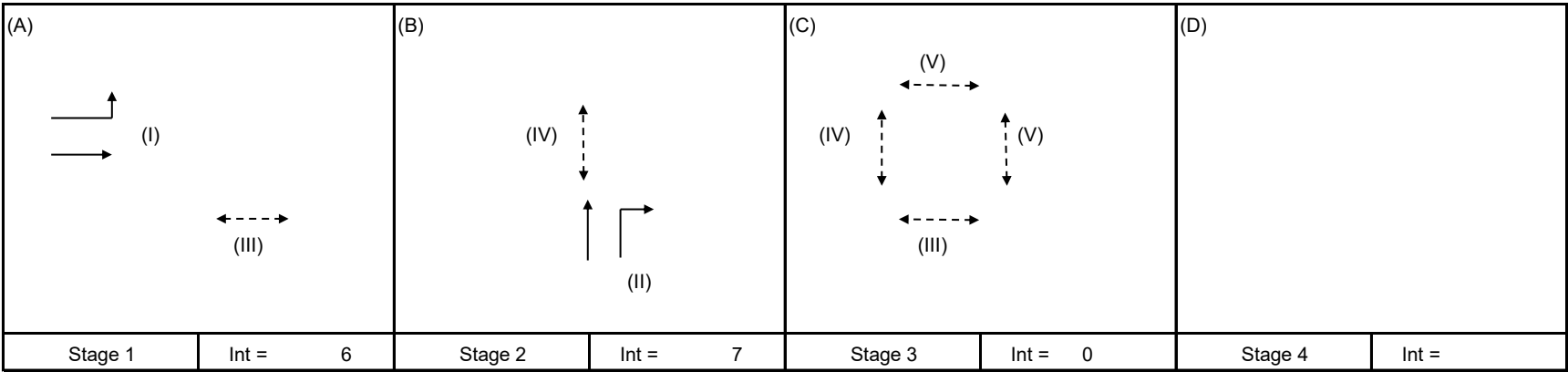
Year 2033 Reference AM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	114 sec
Sum(y)	Y =	0.391
Loss time	L =	29 sec
Total Flow	=	1493 pcu
Co	= (1.5*L+5)/(1-Y)	= 79.6 sec
Cm	= L/(1-Y)	= 47.6 sec
Yult	=	0.683
R.C.ult	= (Yult-Y)/Y*100%	= 74.6 %
Cp	= 0.9*L/(0.9-Y)	= 51.3 sec
Ymax	= 1-L/C	= 0.746
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 72 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	2	8	81	2	8	OK
IV	12	5	2	10	16	2	10	OK
V	12	5	3	10	5	3	10	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
1,2	A	3.50	I	1	8		N	1965	108	534		642	0.17	1905			1905	0.337	0.340	11	73	74	0.520	43
2	A	3.20	I	1			N	1935		658		658	0.00	1935			1935	0.340			74	74	0.524	44
3,4	B	3.70	II	1	10		N	1985		56	39	95	0.41	1870			1870	0.051	0.051		11	11	0.524	16
4	B	3.70	II	1	15			2125			98	98	1.00	1932			1932	0.051			11	11	0.521	17
PED	C		V																	18				

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

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

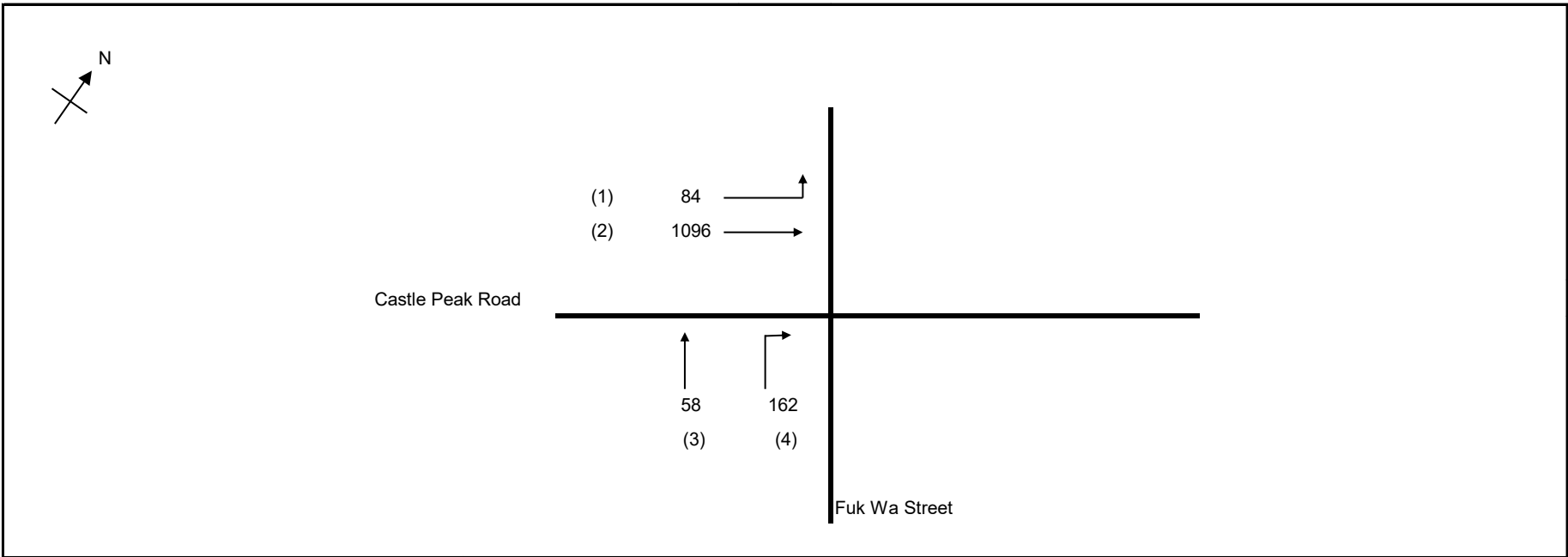
JUNCTION NO: J10

Castle Peak Road / Fuk Wa Street

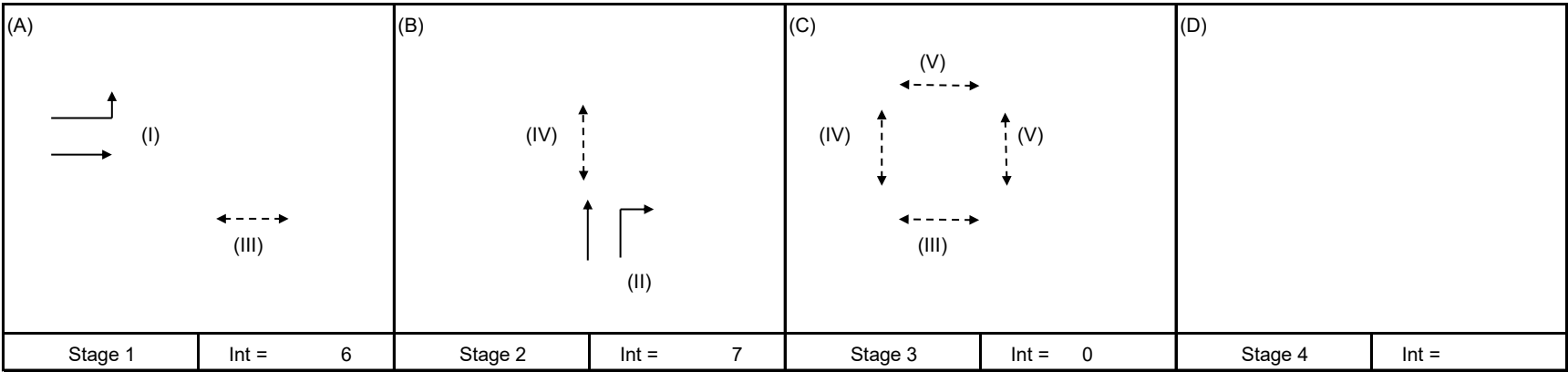
Year 2033 Reference PM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.367
Loss time	L =	29 sec
Total Flow	=	1400 pcu
Co	= (1.5*L+5)/(1-Y)	= 76.6 sec
Cm	= L/(1-Y)	= 45.8 sec
Yult	=	0.683
R.C.ult	= (Yult-Y)/Y*100%	= 85.9 %
Cp	= 0.9*L/(0.9-Y)	= 49.0 sec
Ymax	= 1-L/C	= 0.766
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 88 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	2	8	87	2	8	OK
IV	12	5	2	10	20	2	10	OK
V	12	5	3	10	5	3	10	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
1,2	A	3.50	I	1	8		N	1965	84	498		582	0.14	1913			1913	0.304	0.309	11	79	80	0.472	43
2	A	3.20	I	1			N	1935		598		598	0.00	1935			1935	0.309			80	80	0.479	44
3,4	B	3.70	II	1	10		N	1985		58	50	108	0.46	1856			1856	0.058	0.058		15	15	0.479	20
4	B	3.70	II	1	15			2125			112	112	1.00	1932			1932	0.058			15	15	0.479	20
PED	C		V																	18				

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

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

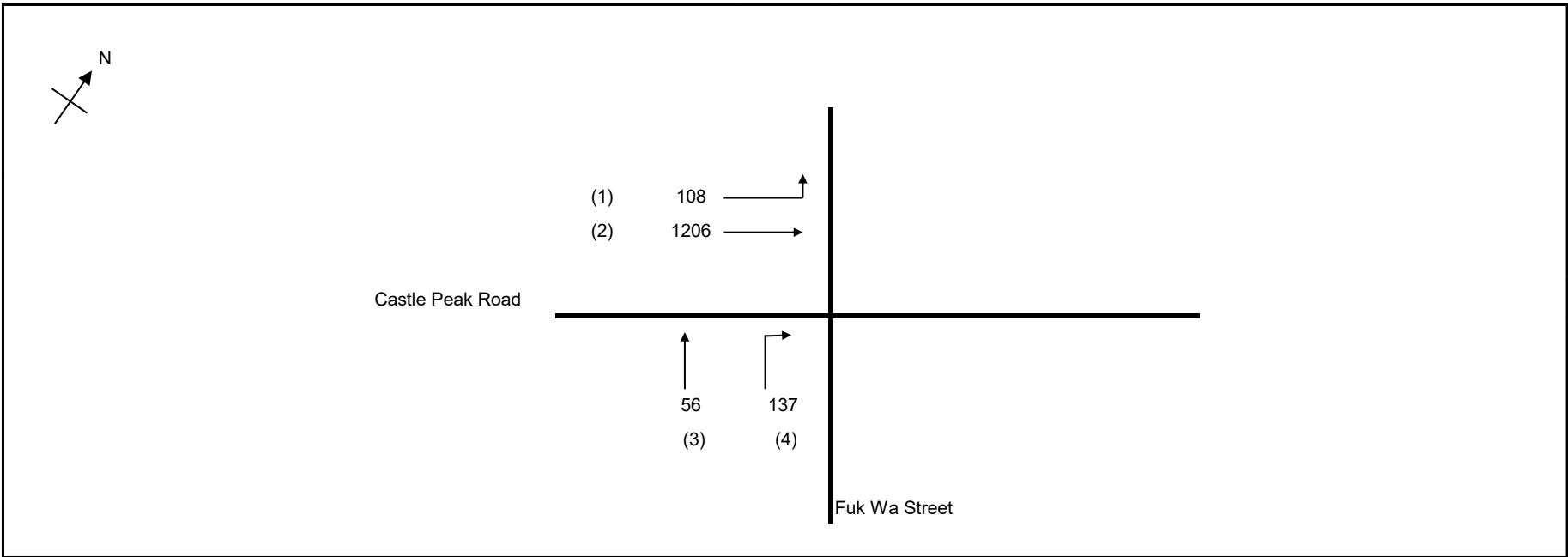
JUNCTION NO: J10

Castle Peak Road / Fuk Wa Street

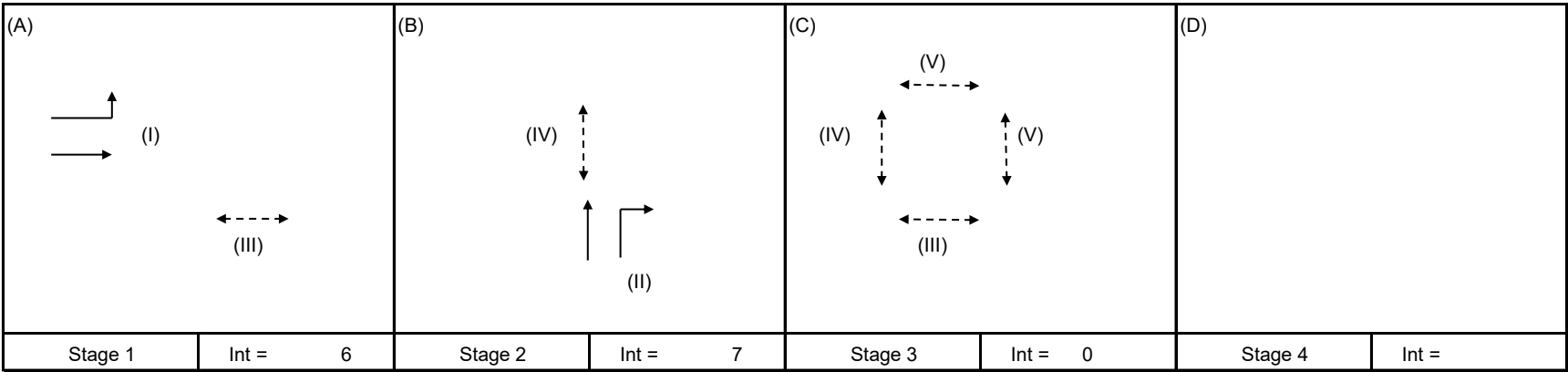
Year 2033 Design AM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	114 sec
Sum(y)	Y =	0.393
Loss time	L =	29 sec
Total Flow	=	1507 pcu
Co	= (1.5*L+5)/(1-Y)	= 79.9 sec
Cm	= L/(1-Y)	= 47.8 sec
Yult	=	0.683
R.C.ult	= (Yult-Y)/Y*100%	= 73.6 %
Cp	= 0.9*L/(0.9-Y)	= 51.5 sec
Ymax	= 1-L/C	= 0.746
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 71 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	2	8	81	2	8	OK
IV	12	5	2	10	16	2	10	OK
V	12	5	3	10	5	3	10	OK

Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
1,2	A	3.50	I	1	8		N	1965	108	544		652	0.17	1906			1906	0.342	0.342	11	74	74	0.527	43
2	A	3.20	I	1			N	1935		662		662	0.00	1935			1935	0.342			74	74	0.527	44
3,4	B	3.70	II	1	10		N	1985		56	39	95	0.41	1870			1870	0.051	0.051		11	11	0.527	16
4	B	3.70	II	1	15			2125			98	98	1.00	1932			1932	0.051		18	11	11	0.524	17
PED	C		V																					

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

OVE ARUP & PARTNERS

TRAFFIC SIGNAL CALCULATION

Application for Planning Permission Under Section 16 of the Town Planning Ordinance (Cap. 131) for Proposed Hotel Use and Minor Relaxation of Plot Ratio Restriction at "Other Specified Uses"
Annotated "Business (1)" Zone at No. 646-648A Castle Peak Road, Cheung Shan Wan, Kowloon

PROJECT NO: 315341-02

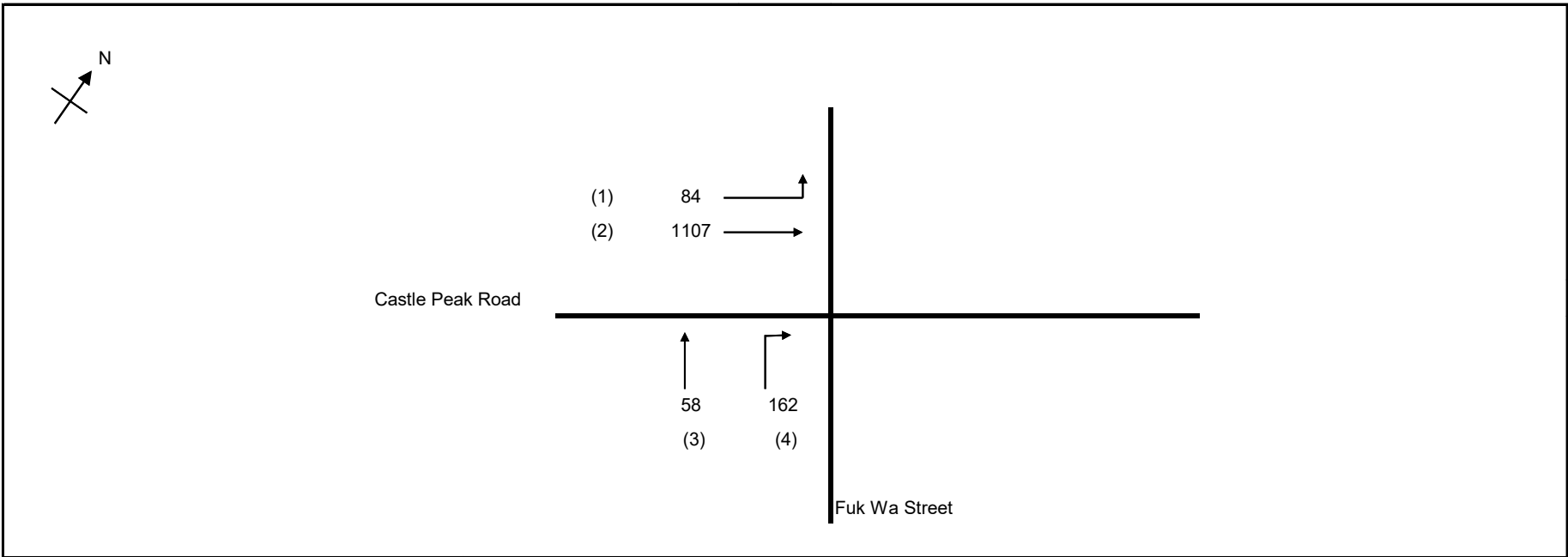
JUNCTION NO: J10

Castle Peak Road / Fuk Wa Street

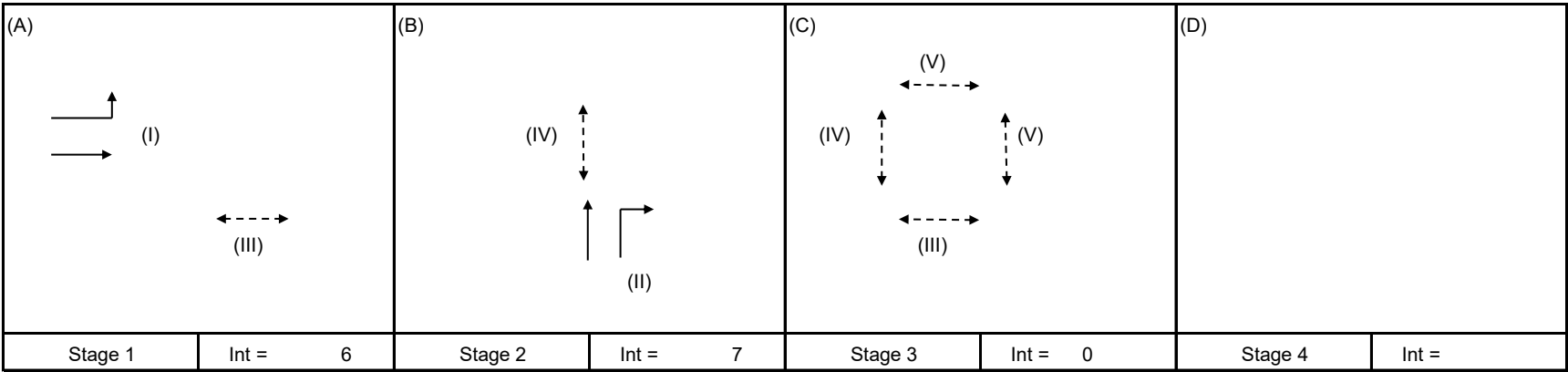
Year 2033 Design PM Peak

DATE : 23/Jun/26

FILENAME :



No. of stages per cycle	N =	3
No. of stage using for calculation	N =	2
Cycle time	C =	124 sec
Sum(y)	Y =	0.368
Loss time	L =	29 sec
Total Flow	=	1411 pcu
Co	= (1.5*L+5)/(1-Y)	= 76.7 sec
Cm	= L/(1-Y)	= 45.9 sec
Yult	=	0.683
R.C.ult	= (Yult-Y)/Y*100%	= 85.7 %
Cp	= 0.9*L/(0.9-Y)	= 49.0 sec
Ymax	= 1-L/C	= 0.766
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	= 88 %



Pedestrian Phase	Width (m)	Green Time Required (s)			Green Time Provided (s)			Check
		SG	Delay	FG	SG	Delay	FG	
III	10	5	2	8	87	2	8	OK
IV	12	5	2	10	20	2	10	OK
V	12	5	3	10	5	3	10	OK

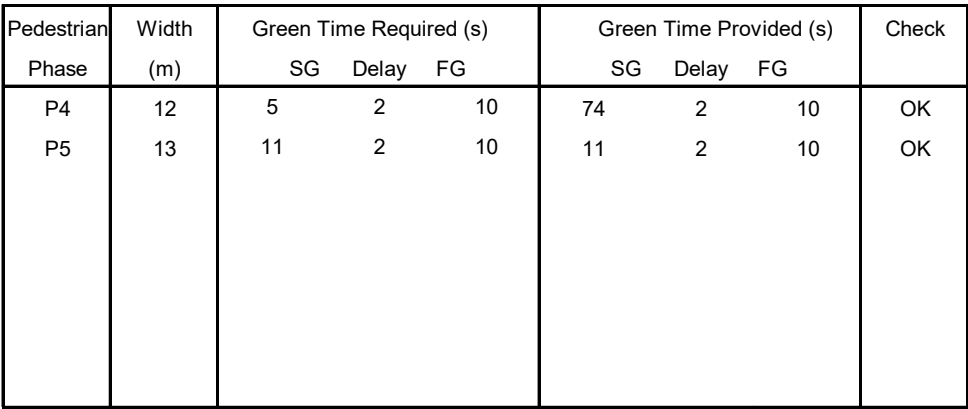
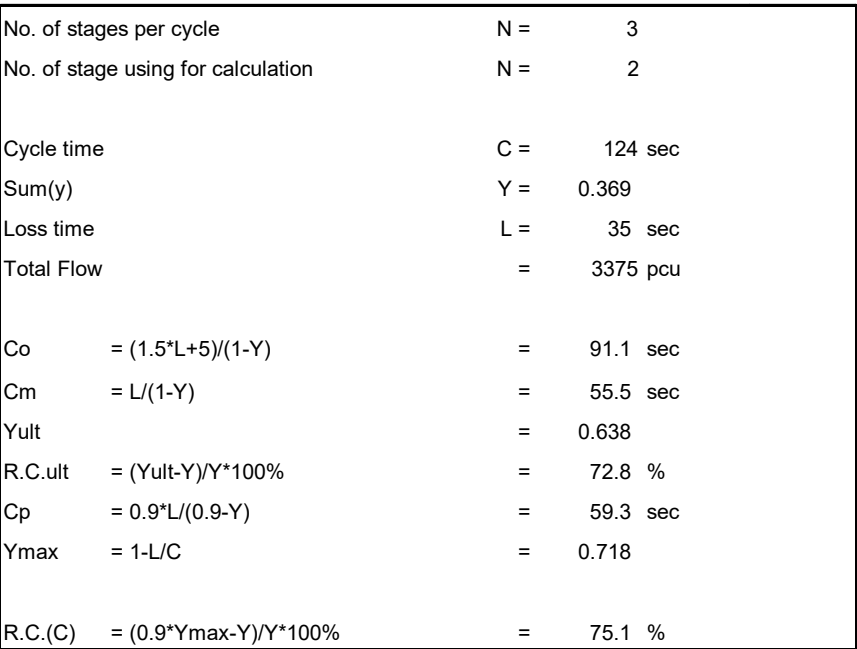
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	m			Total FFlow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Uphill Gradient %	Short lane Effect pcu/h	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queuing Length m.
									Left pcu/h	Straight pcu/h	Right pcu/h													
1,2	A	3.50	I	1	8		N	1965	84	508		592	0.14	1914			1914	0.309	0.309	11	80	80	0.480	43
2	A	3.20	I	1			N	1935		599		599	0.00	1935			1935	0.309			80	80	0.480	44
3,4	B	3.70	II	1	10		N	1985		58	50	108	0.46	1856			1856	0.058	0.058		15	15	0.479	20
4	B	3.70	II	1	15			2125			112	112	1.00	1932			1932	0.058			15	15	0.480	20
PED	C		V																	18				

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

TRAFFIC SIGNAL CALCULATION

FILENAME :

DATE : 23/Jun/26

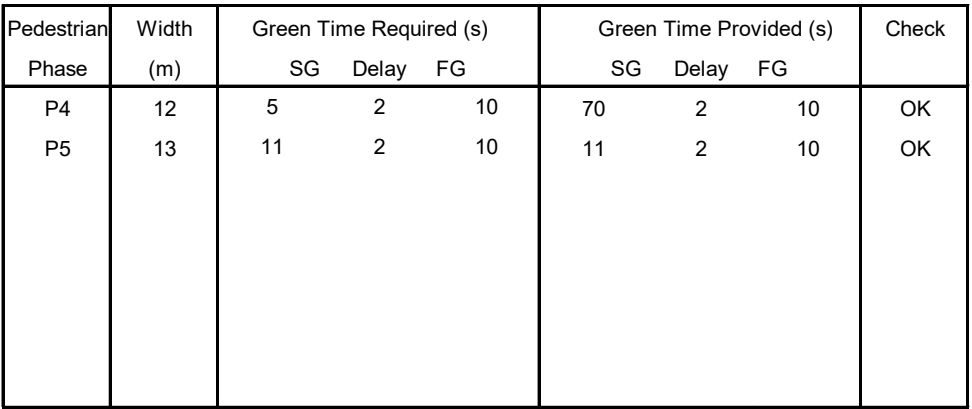
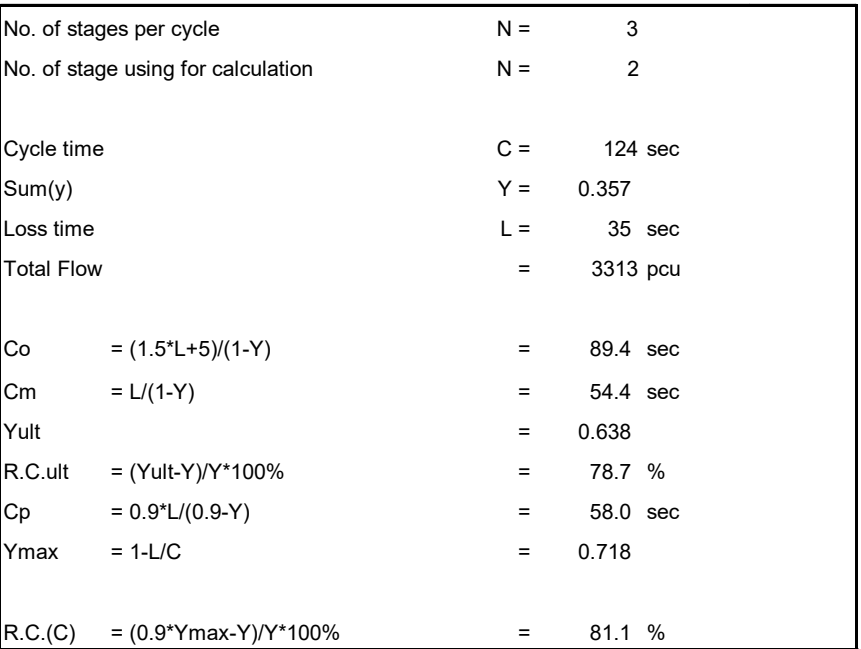


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m/s

TRAFFIC SIGNAL CALCULATION

FILENAME :

DATE : 23/Jun/26

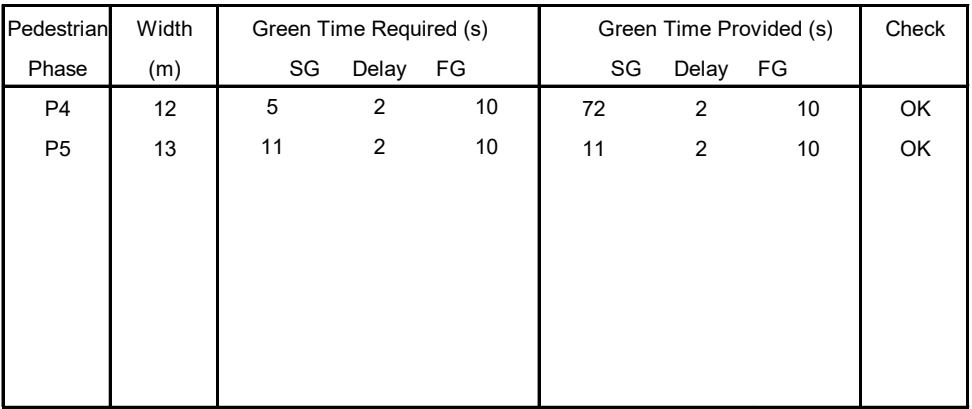
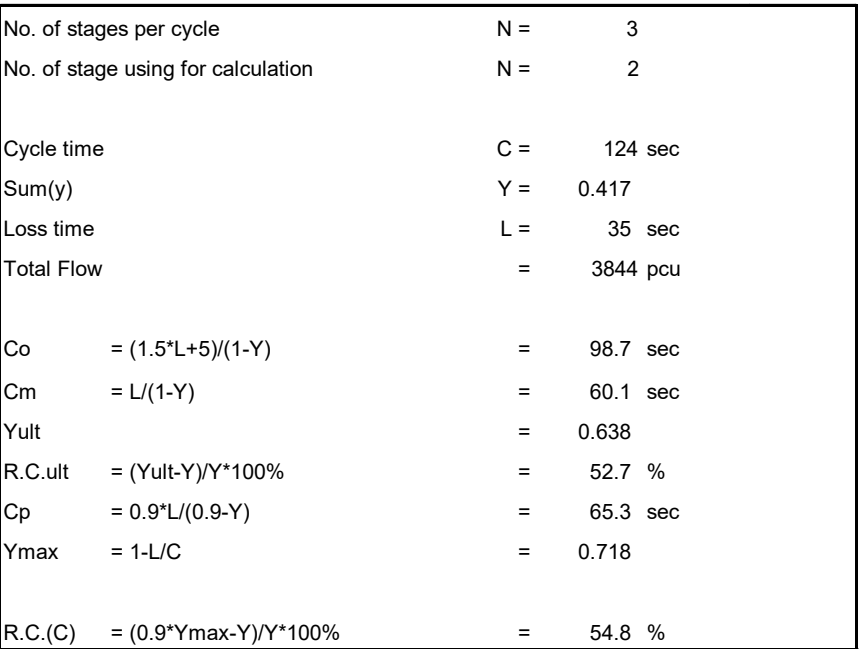


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m/s

TRAFFIC SIGNAL CALCULATION

FILENAME :

DATE : 23/Jun/26

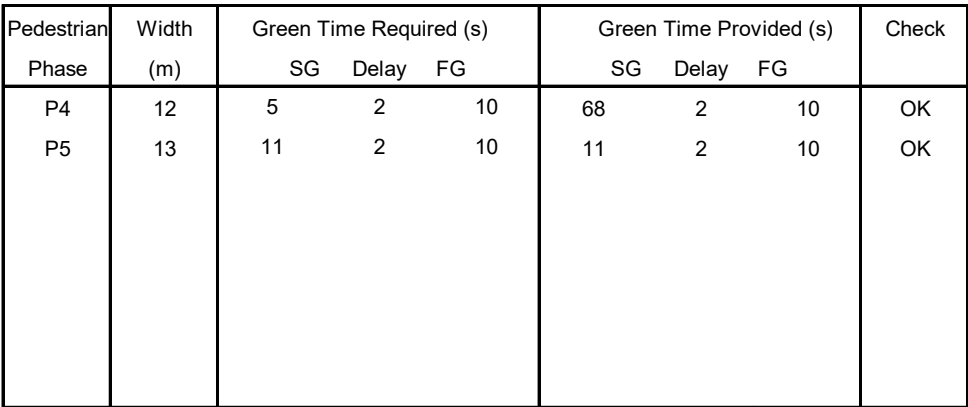
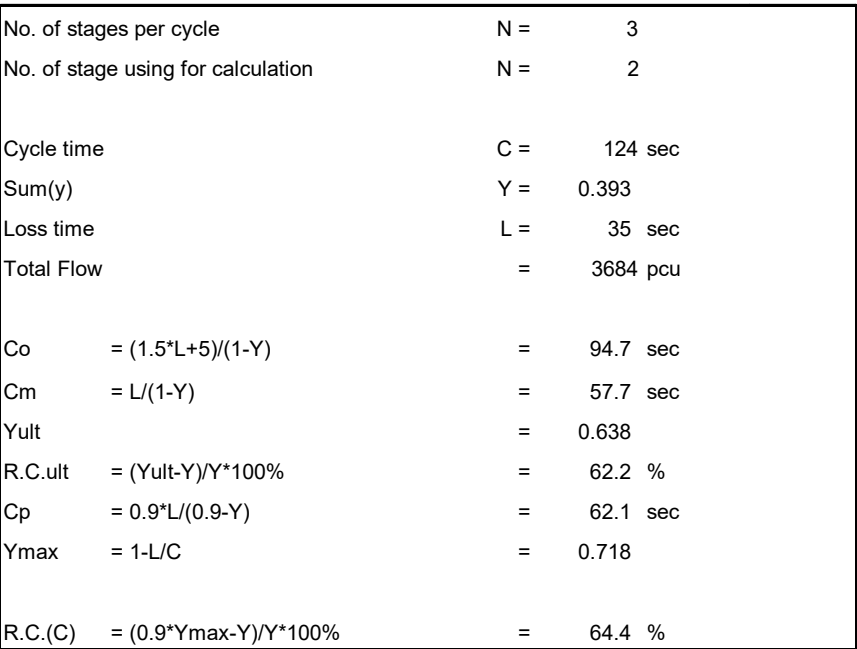


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m/s

TRAFFIC SIGNAL CALCULATION

FILENAME :

DATE : 23/Jun/26

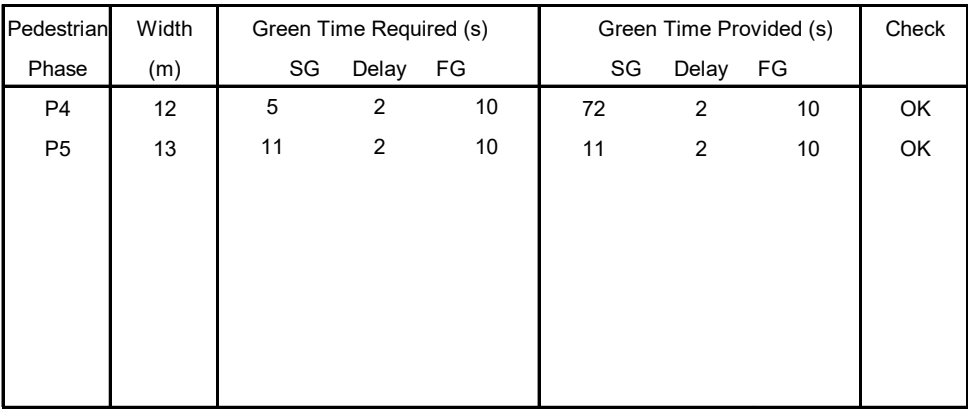
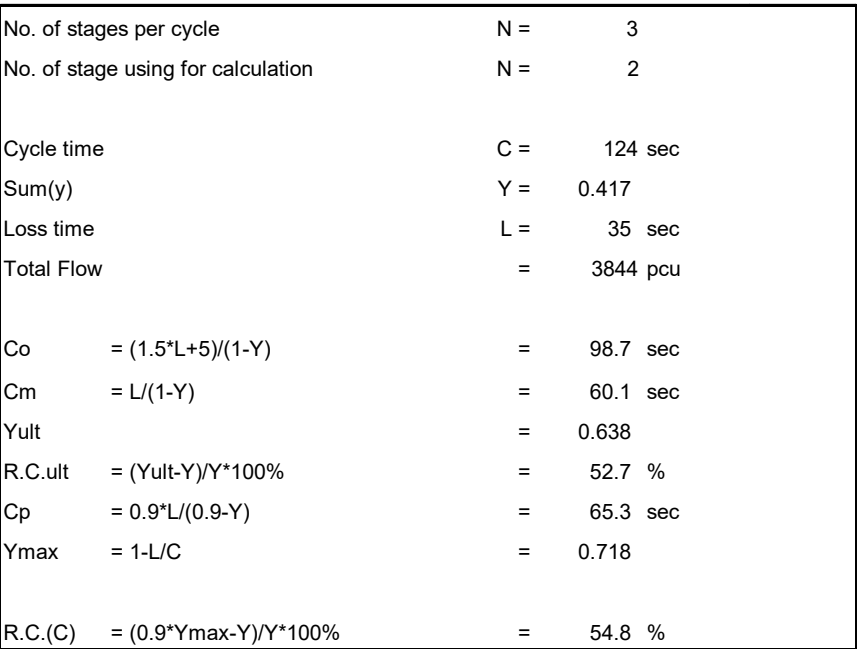


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m/s

TRAFFIC SIGNAL CALCULATION

FILENAME :

DATE : 23/Jun/26

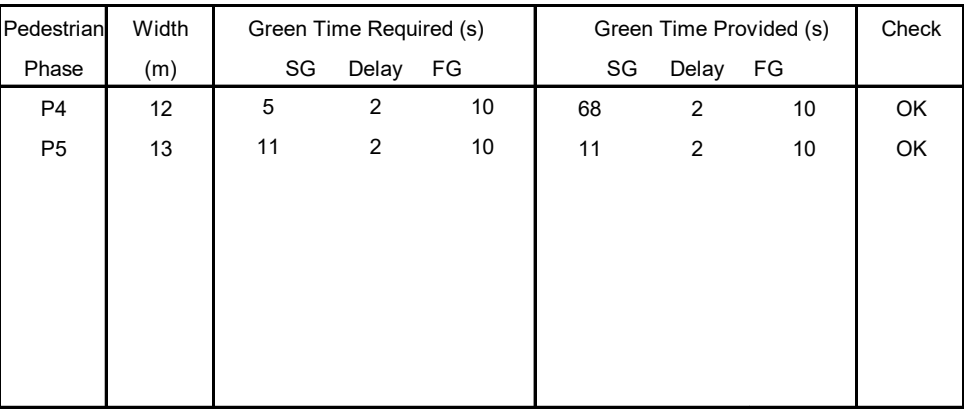
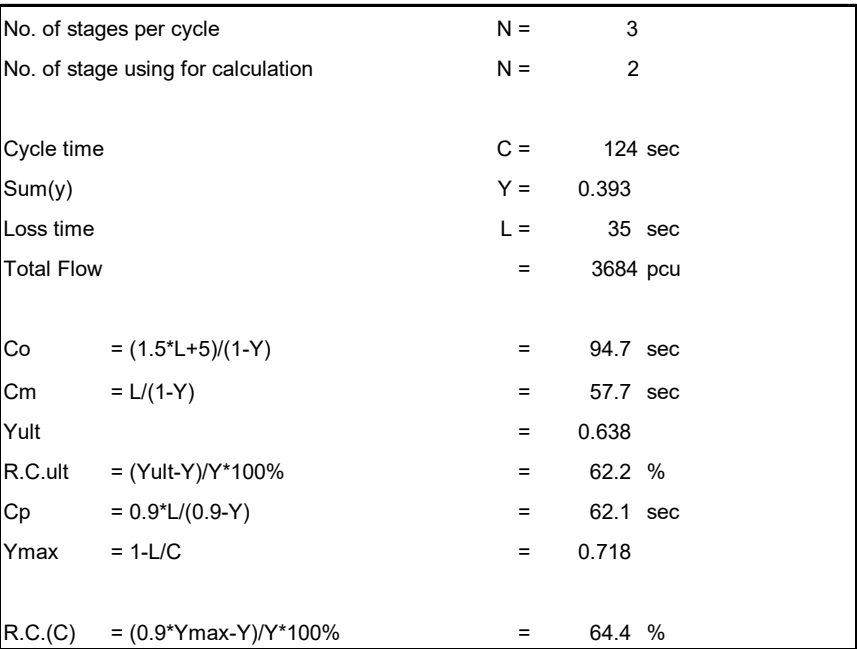


NOTE : 'O' - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRIAN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m/s

TRAFFIC SIGNAL CALCULATION

FILENAME :

DATE : 23/Jun/26



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

Appendix D

Sewerage Impact Assessment

APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON

Sewerage Impact Assessment Report

Reference:

Draft 02 | 26 June 2026

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 315341

Arup Hong Kong Limited
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon, Hong Kong
arup.com

Contents

1.	Introduction	1
1.1	Project Background	1
1.2	Objective and Structure of the Report	2
1.3	Reference Materials	2
2.	Approach and Methodology	3
2.1	Assessment Approach	3
2.2	Existing Sewerage System	3
2.3	Population Estimation	3
2.4	Sewerage Flow Estimation	4
2.5	System Capacity	6
3.	Sewerage Impact Assessment	7
3.1	Proposed Sewerage Connection	7
3.2	Sewage Flow Estimation	7
3.3	Sewerage Impact on Existing Sewers	7
3.4	Proposed Sewerage Improvement Scheme	8
4.	Conclusion	10

Tables

Table 2.1	Unit Flow Factors	4
Table 2.2	Peaking Factors	5
Table 3.1	Sewage Flow Estimate from Sewerage Catchment	7
Table 3.2	Hydraulic Performance of Existing Sewerage System	8
Table 3.3	Hydraulic Performance of Proposed Upgraded Sewerage System	9

Figures

Figure 1	Site Location	1
----------	---------------	---

Appendices

Appendix A	A-1
Sewerage Record	A-1
Appendix B	B-2
Sewerage Catchment Plan	B-2
Appendix C	C-3
Sewage Flow Estimate of Sewerage Catchment	C-3
Appendix D	D-4
Proposed Sewerage Layout Plan	D-4
Appendix E	E-5

Manhole Survey Record	E-5
Appendix F	F-6
Hydraulic Calculation	F-6

1. Introduction

1.1 Project Background

- 1.1.1 Ove Arup & Partners HK Ltd. was commissioned to undertake a Sewerage Impact Assessment (SIA) to support their proposed redevelopment at No. 646-648A Castle Peak Road, Kowloon (“The Application Site”). The Application Site, falls within the “Other Specified Uses” annotated “Business (1)” (“OU(B)1”) Zone.
- 1.1.2 The proposed re-development aligns with the Government’s vision by revitalising an aged industrial building site under the extended IB Revitalisation Scheme 2.0, supporting tourism and talent/student attraction through new hotel accommodation with the flexibility to serve as student hostel, and facilitating the transformation of the Cheung Sha Wan Industrial/Business Area.
- 1.1.3 The parameters of the proposed redevelopment are summarized in the following table.

Description	A 30-storey hotel building with 299 hotel rooms
Location	646 - 648A Castle Peak Road, Kowloon (see Figure 1)
Land Use Zoning	“Other Specified Uses” annotated “Business (1)” zone
Site Area	Approx. 856 m ²
Proposed Total GFA	Approx. 12,525.14 m ² (including a bonus PR of 0.25, equivalent to a GFA of about 210.26 m ²)



Figure 1 Site Location

APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON

1.2 Objective and Structure of the Report

1.2.1 The objective of this report is to provide an assessment of the sewerage impact of the proposed redevelopment with the provision of hotel at 646 - 648A Castle Peak Road, Cheung Sha Wan, Kowloon on the existing public sewerage system and to propose mitigation measures (if any).

1.2.2 The Report is structured as follows:-

- Section 1 introduces the Project background, objectives and structure of this SIA report;
- Section 2 presents the approach and methodology for the sewerage impact assessment;
- Section 3 presents the sewerage impact assessment and proposed sewerage works; and
- Section 4 presents the conclusion.

1.3 Reference Materials

1.3.1 In evaluating the sewerage impact arising from the proposed redevelopment, the following sources of information have been specifically referred to:

- (a) Environmental Protection Department (EPD) Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning No.: EPD/TP 1/05;
- (b) Commercial and Industrial Floor Space Utilization Survey published by Planning Department; and
- (c) Drainage Record obtained from GEOINFO MAP.

2. Approach and Methodology

2.1 Assessment Approach

- 2.1.1 This SIA has been carried out in accordance with the guidelines set out in Environmental Protection Department (EPD)'s Report No. EPD/TP 1/05 Guidelines for Estimating Sewage Flows (GESF) for Sewerage Infrastructure Planning Version 1.0 and DSD's Sewerage Manual.

2.2 Existing Sewerage System

- 2.2.1 Referring to the sewerage record, the sewage from the Application Site is discharged via manhole no. FMH4009923 by a Ø150 sewer connected to the existing Ø300 public sewers along Tai Nan West Street (as shown in **Appendix A**).
- 2.2.2 The existing upstream sewerage network mainly collects the sewage from 5 catchment area which mainly consists of the following usage area according to the OZP,
- a. Residential
 - b. Other Specified Uses
 - c. Commercial
 - d. Government, Institution or Community
- 2.2.3 The sewerage catchment plan of the abovementioned sewerage facilities is appended to **Appendix B**.

2.3 Population Estimation

Proposed Development

Proposed Hotel Development

- 2.3.1 For hotel development, the employee population is estimated according to the hotel GFA based on proposed hotel room number and size (hotel GFA = 299 room x 27m² per room) and the corresponding employment density of 3.2 nos employee per 100m². The proposed total staff population for the hotel is 258 people.

Existing Development

Residential Area

- 2.3.2 The residential population are determined by multiplying the number of flats by the average household size of 2.5, as reported in the 2021 Population Census (Sham Shui Po District).

Other Specified Uses Area

- 2.3.3 The population are calculated using the non-domestic Gross Floor Area (GFA) and employment density, measured as the number of workers per 100m² GFA. These values are taken from the Commercial and Industrial Floor Space Utilisation Survey by the Planning Department. For example, a factory building with a GFA of 4,000m² and an employment density of 5.5 people per 100m² would have an estimated population of $4,000 / 100 \times 5.5 = 220$ people.

Commercial Area

- 2.3.4 Similar approach with Other Specified Uses Area is adopted. The population are calculated using the Gross Floor Area (GFA) and employment density, measured as the number of workers per 100m² GFA. These values are taken from the Commercial and Industrial Floor Space Utilisation Survey by the Planning Department.

Government, Institution or Community

- 2.3.5 The population of the school, i.e. Five Districts Business Welfare Association School, are determined based on the information published in the school website.

2.4 Sewerage Flow Estimation

Unit Flow Factors

- 2.4.1 Unit flow factors (UFF) under EPD's Report No. EPD/TP 1/05 GESF for Sewerage Infrastructure Planning Version 1.0 are generally adopted for sewage flow estimation.

Table 2.1 Unit Flow Factors

Sewerage Catchment	Land Use and Category	Unit Flow Factor (m ³ /day)
Proposed Hotel	Commercial – J10 - Hotel	$0.08 + 1.5 = 1.58$
Existing Residential Area	Domestic – Private R2	0.27
Existing Other Specified Uses Area	Commercial – J6 - Finance, Insurance, Real Estate & Business Services	0.08
Existing Commercial Area	Commercial – J4 - Wholesale & Retail	$0.08 + 0.2 = 0.28$
	Commercial – J10 - Restaurant	$0.08 + 1.5 = 1.58$
Existing Government, Institution or Community	School Student	0.04
	Institutional	$0.08 + 0.2 = 0.28$

Catchment Inflow Factor

- 2.4.2 Catchment Inflow Factor cater for ingress of water to the sewerage system due to misconnection and pipe defects. According to Table T-4 in the GESF, a catchment flow factor of 1.3 is adopted which applicable for North West Kowloon Catchment.

Peaking Factors

- 2.4.3 Peaking factors cater for seasonal/diurnal fluctuation and normal amount of infiltration and inflow. The peaking factors adopted in this study are shown in the table below.

Table 2.2 Peaking Factors

Population Range	Peaking Factor (including stormwater allowance) for Facility with Existing Upstream Sewerage	Peaking Factor (excluding stormwater allowance) for Facility with New Upstream Sewerage
For Sewers		
< 1,000	8	6
1,000 – 5,000	6	5
5,000 – 10,000	5	4
10,000 – 50,000	4	3
> 50,000	Max (7.3/N ^{0.15} , 2.4)	Max (6/N ^{0.175} , 1.6)
For Sewage Treatment Works, Preliminary Treatment Works and Pumping Stations		
< 10,000	4	3
10,000 – 25,000	3.5	2.5
25,000 – 50,000	3	2
> 50,000	Max (3.9/N ^{0.065} , 2.4)	Max (2.6/N ^{0.065} , 1.6)
Notes:		
N = Contributing population in thousands.		
Contributing population = $\frac{\text{Calculated total average flow (m}^3\text{/day)}}{0.27 \text{ (m}^3\text{/person/day)}}$		

2.5 System Capacity

- 2.5.1 The capacity of the proposed and existing sewerage system is checked by using the continuity equation, assuming full-bore flow condition:

$$Q = VA$$

where, Q = peak runoff in m³/s
 V = cross-sectional mean velocity in m/s
 A = cross-sectional area of the pipe/channel in m²

- 2.5.2 The cross-section mean velocity, V , of drainage pipes is estimated using the Colebrook-white equation:

$$V = -\sqrt{32gRS_f} \log \left[\frac{k_s}{14.8R} + \frac{1.255\nu}{R\sqrt{32gRS_f}} \right]$$

where, V = cross-sectional mean velocity in m/s
 R = hydraulic radius in m
 S_f = friction gradient
 k_s = roughness
 ν = kinematic viscosity

- 2.5.3 The existing sewers is assumed to be slimed sewers, clayware and poor. Therefore, in accordance with DSD's Sewerage Manual Table 5, the roughness, k_s for the existing sewers is assumed to be 3 mm and 0.6 mm for velocity, when flowing half full, approximately 0.75 m/s and 1.2 m/s respectively.
- 2.5.4 On the other hand, the roughness, k_s for the proposed upgrading sewers is assumed to be 1.5 mm in accordance with DSD's Sewerage Manual Table 5, i.e., Sewers/ drains slimed to about half depth; velocity, when flowing half full, approximately 0.75 m/s, uPVC, poor.

3. Sewerage Impact Assessment

3.1 Proposed Sewerage Connection

- 3.1.1 To convey the sewage generated from the proposed hotel development, it is proposed to construct a new Ø300 sewer from the terminal manhole within the Application Site to existing sewer along Tai Nan West Street. Potential impact on the existing sewerage system is reviewed and assessed in the following sub-sections.

3.2 Sewage Flow Estimation

- 3.2.1 As shown in the sewerage record plan, the Application Site is at upstream of the existing sewerage network along the section of Tai Nan West Street south of Wing Hong Street, in a conservative manner, the additional flow from the proposed redevelopment is added to the most upstream manhole FMH4009923 for assessment of sewerage impact on downstream network from FMH4009923 to FMH4040663. The corresponding ADWF contributed by the proposed redevelopment of the Application Site and existing development to the downstream sewerage network are summarized in the following table, detailed calculation of sewage flow estimate for the sewerage catchment is appended to **Appendix C**.

Table 3.1 Sewage Flow Estimate from Sewerage Catchment

Sewerage Catchment	Average Dry Weather Flow (m ³ /day)	Assumed / Proposed Sewerage Connection Point
Previous Development (Fung Wah Factorial Building, demolished)	34.24	FMH4009923
Proposed Development	530.62	FMH4009923
Catchment A	2638.22	FMH4009860
Catchment B	748.58	FMH4009860
Catchment C	884.00	FMH4009860
Catchment D	527.98	FMH4009926
Catchment E	47.30	FMH4009932

3.3 Sewerage Impact on Existing Sewers

- 3.3.1 A desktop study using geometric parameters from the GEOINFO MAP identified a potential reverse flow in the sewer section between FMH4009932 and FMH4009860 based on invert levels. A manhole survey at these two manholes on 31 March 2026 to confirm the pipe gradient for pipe capacity assessment. The manhole survey record is appended in **Appendix E**.

- 3.3.2 The capacity of the existing downstream sewers from FMH4009923 to FMH4040663 is checked and summarised in the following table, the detailed calculations are appended in **Appendix F**.
- 3.3.3 From FMH4009924 to FMH4009925 and from FMH4009926 to FMH4009860, the existing sewers are identified as having insufficient capacity.
- 3.3.4 The freeboard for the subject sections was further checked and there is at least 1m freeboard at peak flow and, as well, no overflow at 1.15 times peak flow.

Table 3.2 Hydraulic Performance of Existing Sewerage System

Upstream Manhole	Downstream Manhole	Pipe Size (mm)	Accumulated Peak Flow (m ³ /s)	Pipe Capacity	Freeboard (m)	Freeboard at 1.15 Peak Flow (m)
FMH4009923	FMH4009924	300	0.0368	66%	1.95	1.71
FMH4009924	FMH4009925	300	0.0368	121%	1.84	1.62
FMH4009925	FMH4009926	300	0.0368	59%	1.87	1.67
FMH4009926	FMH4009932	300	0.0735	120%	1.74	1.57
FMH4009932	FMH4009860	300	0.0768	106%	1.75	1.66
FMH4009860	FMH400662	2 x 375	0.2489	36%	-	-
FMH400662	FMH4040663	675	0.2489	86%	-	-

3.4 Proposed Sewerage Improvement Scheme

- 3.4.1 According to the Sewerage Manual published by DSD, the sewer sections from FMH4009924 to FMH4009925 and from FMH4009926 to FMH4009860 are surcharged but with some freeboard. It is considered that the improvement proposal might not be accorded a high priority but to be carried out in conjunction with other upcoming works.
- 3.4.2 Notwithstanding the above observation, it is proposed to upgrade the sewer sections from FMH4009924 to FMH4009860, in order to provide adequate hydraulic capacity to facilitate the subject redevelopment. Details refer to **Appendix D**.
- 3.4.3 The sewer sections from the terminal manhole to FMH4009923 is proposed to be 300 mm diameter HDPE pipes, and the section from FMH4009924 to FMH4009860 will be upgraded to 350 mm diameter HDPE pipe. The hydraulic performance of the proposed upgraded sewerage system is summarized in the following table.

Table 3.3 Hydraulic Performance of Proposed Upgraded Sewerage System

Upstream Manhole	Downstream Manhole	Pipe Size (mm)	Accumulated Peak Flow (m³/s)	Pipe Capacity
Terminal Manhole	FMH4009923	300	0.0368	46%
FMH4009923	FMH4009924	300	0.0368	66%
FMH4009924	FMH4009925	300 -> 350	0.0368	72%
FMH4009925	FMH4009926	300 -> 350	0.0368	35%
FMH4009926	FMH4009932	300 -> 350	0.0735	72%
FMH4009932	FMH4009860	300 -> 350	0.0768	63%
FMH4009860	FMH400662	2 x 375	0.2489	36%
FMH400662	FMH4040663	675	0.2489	86%

4. Conclusion

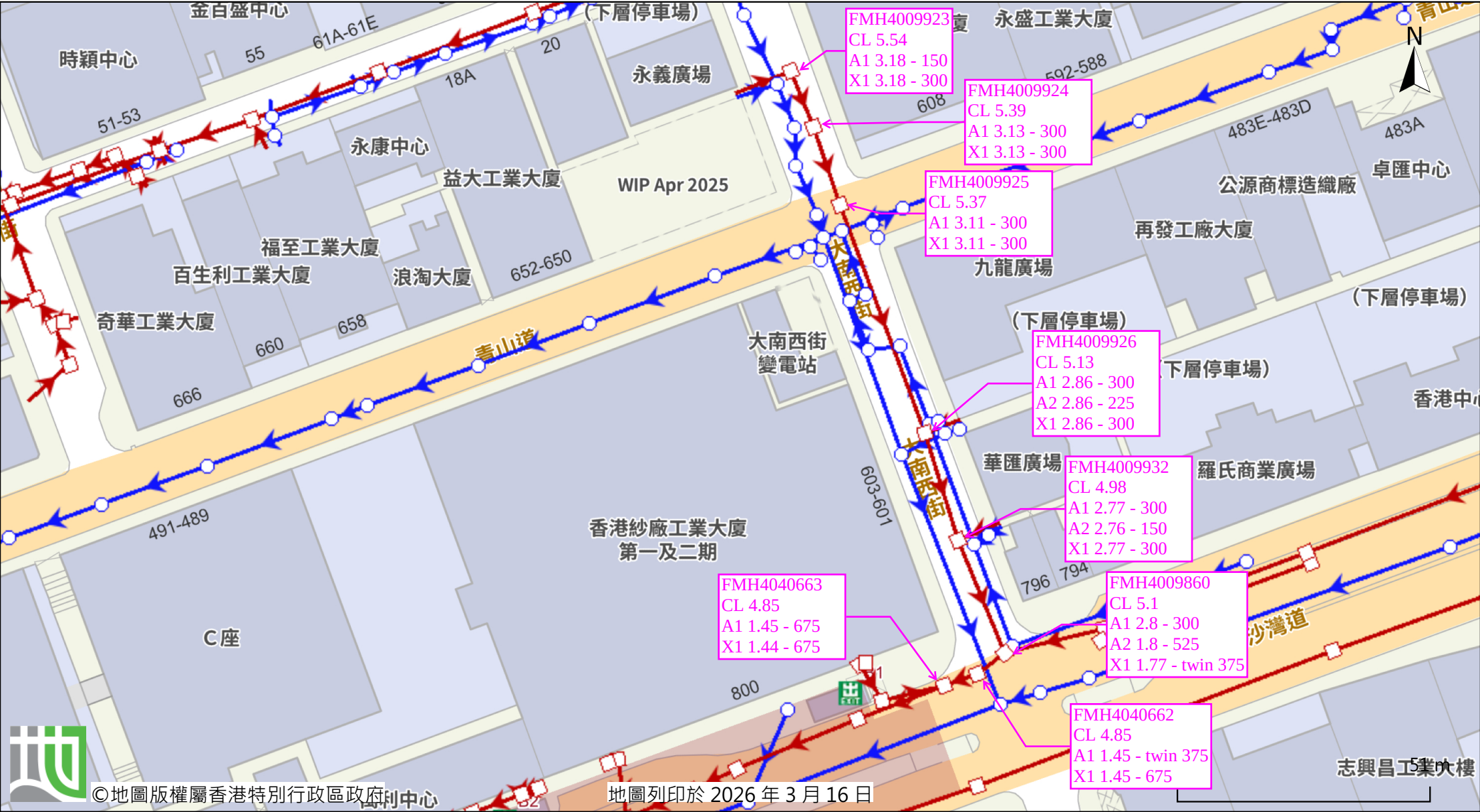
- 4.1.1 The sewage flow from the proposed redevelopment is calculated to be 530.62 m³/day (ADWF).
- 4.1.2 It is observed that the existing public sewerage downstream of the Application Site comprises an existing Ø150 public gravity sewer and Ø300 public gravity sewer running along Tai Nan West Street to the South and the downstream existing public sewer of twin Ø375 and Ø675 running along Castle Peak Road to the west.
- 4.1.3 It is proposed to construct a Ø300 sewer for conveying the sewage from the Application Site to existing Ø300 sewer at FMH4009923 along Tai Nan West Street.
- 4.1.4 Two sections of Ø300 sewers from FMH4009924 to FMH4009925 and from FMH4009926 to FMH4009860 are found to have insufficient capacity but there is no overflow with adequate freeboard for the subject sections of pipes. The improvement proposal will not be accorded a high priority but should still be carried out when the opportunity arises, e.g. in conjunction with road works or nearby sewerage projects. Therefore, it is proposed to upgrade the sewer sections from FMH4009924 to FMH4009860, in order to provide adequate hydraulic capacity. Details of the improvement works would be coordinated with DSD in separate submission.
- 4.1.5 The development parameters of the Application Site are under development and subject to changes. Findings in this report shall be further reviewed and updated.

Appendix A

Sewerage Record

APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE
TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE
AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER
SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A
CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON

Existing Sewerage Record



Appendix B

Sewerage Catchment Plan

APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE
TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE
AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER
SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A
CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON

[illegible]

Appendix C

Sewage Flow Estimate of Sewerage Catchment

APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE
TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE
AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER
SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A
CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON

TABLE B1

Estimation of Sewage Flows Estimation for Proposed and Existing Developments

(Based on EPD Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning)

Design Assumption:

Global Peaking Factor, P (Including Stormwater Allowance) as per Table T-5 Global Unit Flow Factors as per Tables T-2 and T-3

Catchment Inflow Factor for NW Kowloon (PCIF = 1.30) as per Table T-4

Development Schedule		
Sewage Flow Estimates	Estimation	Remark
Catchment Inflow Factor PCIF	1.3	
Proposed Development		
Commercial Hotel		
Non-domestic GFA (m ²)	8073	299 room x 27m ²
Worker Density (No. of Worker per 100m ²)	3.2	Hotels and Boarding House
No. of Employee	258	
Unit flow factor (m ³ /person/day)	1.58	J10 - Restaurants & Hotels
ADWF, (m ³ /day)	530.62	PCIF = 1.30 included
Upstream Catchment		
Catchment Inflow Factor PCIF	1.3	
Catchment A		
Cheung Fai Building 昌輝大廈		Connected to Manhole FMH4066942
No. of Flats	208	
Household Size	2.5	
Population	520	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	182.52	PCIF = 1.30 included
Five Districts Business Welfare Association School 五區工商總會學校		Connected to Manhole FMH4066942
No. of Student	425	School Website
No. of Staff	63	School Website
Unit flow factor for Student (m ³ /person/day)	0.04	School Student
Unit flow factor for Staff (m ³ /person/day)	0.08	Commercial Employee
ADWF, (m ³ /day)	28.65	PCIF = 1.30 included
Lai Bo Garden 麗寶花園		Connected to Manhole FMH4010138
No. of Flats	296	
Household Size	2.5	
Population	740	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	259.74	PCIF = 1.30 included
Beacon Lodge 豐盛居		Connected to Manhole FMH4010135
No. of Flats	166	
Household Size	2.5	
Population	415	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	145.67	PCIF = 1.30 included
Hong Fai Building 康輝大廈		Connected to Manhole FMH4010201
No. of Flats	392	
Household Size	2.5	
Population	980	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	343.98	PCIF = 1.30 included
Lai Kwan Court 麗群閣		Connected to Manhole FMH4010201
No. of Flats	96	
Household Size	2.5	
Population	240	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	84.24	PCIF = 1.30 included
Yee King Court 怡景閣		Connected to Manhole FMH4010201
No. of Flats	78	
Household Size	2.5	
Population	195	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	68.45	PCIF = 1.30 included

Chou Chong Commercial Building 秋創商業大廈		Connected to Manhole FMH4055704
Non-domestic GFA (m ²)	3672	Plan area x 9 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	202	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	21.00	PCIF = 1.30 included
Windland House 永倫大廈 (former Kincheng Commercial Centre)		Connected to Manhole FMH4055705
F&B Area (assume 4 storey)	2000	500m2 x 4 storey
Worker Density (No. of Worker per 100m ²)	5.1	Financial, Insurance, Real Estate & Business Services
No. of Employee	102	
Unit flow factor (m ³ /person/day)	1.58	J10 Restaurants & Hotels
ADWF, (m ³ /day)	209.51	PCIF = 1.30 included
Office Area (assume 22 storey)	5940	270m2 x 22 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	327	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	33.98	PCIF = 1.30 included
Wing Ning Building 永寧大廈		Connected to Manhole FMH4055705
No. of Flats	300	
Household Size	2.5	
Population	750	
Unit flow factor (m3/person/day)	0.27	Private R2
ADWF, (m ³ /day)	263.25	PCIF = 1.30 included
Cheong Lee Building 祥利大廈		Connected to Manhole FMH4010115
No. of Flats	60	
Household Size	2.5	
Population	150	
Unit flow factor (m3/person/day)	0.27	Private R2
ADWF, (m ³ /day)	52.65	PCIF = 1.30 included
Green Court 青華閣		Connected to Manhole FMH4010115
No. of Flats	96	
Household Size	2.5	
Population	240	
Unit flow factor (m3/person/day)	0.27	Private R2
ADWF, (m ³ /day)	84.24	PCIF = 1.30 included
Soyo Square 幸薈		Connected to Manhole FMH4010116
No. of Flats	96	
Household Size	2.5	
Population	240	
Unit flow factor (m3/person/day)	0.27	Private R2
ADWF, (m ³ /day)	84.24	PCIF = 1.30 included
Golden Jade Heights 金碧閣		Connected to Manhole FMH4055145
No. of Flats	130	
Household Size	2.5	
Population	325	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	114.08	PCIF = 1.30 included
Florence Plaza		Connected to Manhole FMH4055147
No. of Flats	198	
Household Size	2.5	
Population	495	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	173.75	PCIF = 1.30 included
Mei Kei Mansion 美奇大廈		Connected to Manhole FMH4055148
No. of Flats	66	
Household Size	2.5	
Population	165	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	57.92	PCIF = 1.30 included
Hoover Mansion 靄華大廈		Connected to Manhole FMH4063053
No. of Flats	44	
Household Size	2.5	
Population	110	
Unit flow factor (m ³ /person/day)	0.27	Private R2
ADWF, (m ³ /day)	41.70	PCIF = 1.30 included

Fu Chau Building 富洲大廈		Connected to Manhole FMH4055151	
No. of Flats	48		
Household Size	2.5		
Population	120		
Unit flow factor (m ³ /person/day)	0.27	Private R2	
ADWF, (m ³ /day)	42.12	PCIF = 1.30 included	
Shiu Hang Building 紹恆大廈		Connected to Manhole FMH4059660	
No. of Flats	45		
Household Size	2.5		
Population	113		
Unit flow factor (m ³ /person/day)	0.27	Private R2	
ADWF, (m ³ /day)	39.49	PCIF = 1.30 included	
473 & 475 Un Chau Street		Connected to Manhole FMH4055154	
No. of Flats	6		
Household Size	2.5		
Population	15		
Unit flow factor (m ³ /person/day)	0.27	Private R2	
ADWF, (m ³ /day)	5.27	PCIF = 1.30 included	
Federal Plaza & Federal Mansion 聯邦閣		Connected to Manhole FMH4010114	
Non-domestic GFA	3210	Plan area x 3 storey	
Worker Density (No. of Worker per 100m ²)	3.5	Retail Trade	
No. of Employee	112		
Unit flow factor (m ³ /person/day)	0.28	J4 - Wholesale & Retail	
ADWF, (m ³ /day)	40.90	PCIF = 1.30 included	
No. of Flats	80		
Household Size	2.5		
Population	200		
Unit flow factor (m ³ /person/day)	0.27	Private R2	
ADWF, (m ³ /day)	70.20	PCIF = 1.30 included	
The Amused 喜遇		Connected to Manhole FMH4055151	
Non-domestic GFA	430	Restaurant	
Worker Density (No. of Worker per 100m ²)	5.1		
No. of Employee	22	J10 Restaurants & Hotels	
Unit flow factor (m ³ /person/day)	1.58	PCIF = 1.30 included	
ADWF, (m ³ /day)	45.04		
No. of Flats	136		
Household Size	2.5		
Population	340		
Unit flow factor (m ³ /person/day)	0.27	Private R2	
ADWF, (m ³ /day)	119.34	PCIF = 1.30 included	
Hung Shuk Chun Building 孔淑珍樓		Connected to Manhole FMH4055154	
No. of Flats	30		
Household Size	2.5		
Population	75		
Unit flow factor (m ³ /person/day)	0.27	Private R2	
ADWF, (m ³ /day)	26.33	PCIF = 1.30 included	
(Catchment A) Sub-Total ADWF, (m ³ /day)	2638.22		

Catchment C		
Lai Sun Commercial Centre 麗新商業中心 Office Area GFA (3 storey) Worker Density (No. of Worker per 100m ²) No. of Employee Unit flow factor (m ³ /person/day) ADWF, (m ³ /day)	9120 5.5 502 0.08 52.17	Connected to Manhole FMH4055144 Plan area 3040m2 x 3 storey Financial, Insurance, Real Estate & Business Services J6 - Financial, Insurance, Real Estate & Business PCIF = 1.30 included Plan area 3040m2 x 3 storey x 50% Retail J4 - Wholesale & Retail PCIF = 1.30 included Plan area 3040m2 x 3 storey x 50% Restaurant J10 - Restaurants & Hotels PCIF = 1.30 included
Retail GFA (50% of 3 storey) Worker Density (No. of Worker per 100m ²) No. of Employee Unit flow factor (m ³ /person/day) ADWF, (m ³ /day)	4560 3.50 160 0.28 58.09	
F&B GFA (50% of 3 storey) Worker Density (No. of Worker per 100m ²) No. of Employee Unit flow factor (m ³ /person/day) ADWF, (m ³ /day)	4560 5.1 233 1.58 477.68	
Hung Cheong Factory Building 鴻昌工廠大廈 Non-domestic GFA (m ²) Worker Density (No. of Worker per 100m ²) No. of Employee Unit flow factor (m ³ /person/day) ADWF, (m ³ /day)	16390 5.5 901 0.08 93.75	Connected to Manhole FMH4055143 plan area 1490m2 x 11storey Financial, Insurance, Real Estate & Business Services J6 - Financial, Insurance, Real Estate & Business PCIF = 1.30 included
Lai Cheong Factory Building 麗昌工廠大廈 Non-domestic GFA (m ²) Worker Density (No. of Worker per 100m ²) No. of Employee Unit flow factor (m ³ /person/day) ADWF, (m ³ /day)	21120 5.5 1162 0.08 120.81	Connected to Manhole FMH4055141 Plan area 2640m2 x 8 storey Financial, Insurance, Real Estate & Business Services J6 - Financial, Insurance, Real Estate & Business PCIF = 1.30 included
Kwong Tai Factory Building (Under redevelopment) Non-domestic GFA (m ²) Worker Density (No. of Worker per 100m ²) No. of Employee Unit flow factor (m ³ /person/day) ADWF, (m ³ /day)	13095 5.5 720 0.08 74.90	Connected to Manhole FMH4009856 Plan area 485m2 x 27storey Financial, Insurance, Real Estate & Business Services J6 - Financial, Insurance, Real Estate & Business PCIF = 1.30 included
Esso Castle Peak Road Non-domestic GFA (m ²) Worker Density (No. of Worker per 100m ²) No. of Employee Unit flow factor (m ³ /person/day) ADWF, (m ³ /day)	466 3.3 15 0.33 6.60	Connected to Manhole FMH4009849 Community, Social & Personal Services J2 - Electricity Gas & Water PCIF = 1.30 included
(Catchment C) Sub-Total ADWF, (m ³ /day)	884.00	

Catchment B		
China Shipbuilding Tower		Connected to Manhole FMH4009977
F&B Area GFA (m2)	2920	Plan area 1460m2 x 2 storey
Worker Density (No. of Worker per 100m ²)	5.1	Restaurant
No. of Employee	149	
Unit flow factor (m ³ /person/day)	1.58	J10 restaurant
ADWF, (m ³ /day)	305.88	PCIF = 1.30 included
Office Area GFA (m2)	18700	Plan area 850m2 x 22 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	1029	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	106.96	PCIF = 1.30 included
High One 曉悅		Connected to Manhole FMH4054602
No. of Flats	187	
Household Size	2.5	
Population	468	Private R2
Unit flow factor (m ³ /person/day)	0.27	PCIF = 1.30 included
ADWF, (m ³ /day)	164.09	
Sea Panorama Court 君凱豪庭		Connected to Manhole FMH4063054
No. of Flats	20	
Household Size	2.5	
Population	54	Private R2
Unit flow factor (m ³ /person/day)	0.27	PCIF = 1.30 included
ADWF, (m ³ /day)	18.95	
Charming Garden 長盛豪苑		Connected to Manhole FMH4010425
No. of Flats	112	
Household Size	2.5	
Population	280	Private R2
Unit flow factor (m ³ /person/day)	0.27	PCIF = 1.30 included
ADWF, (m ³ /day)	98.28	
Amber Place		Connected to Manhole FMH4063054
No. of Flats	42	
Household Size	2.5	
Population	105	Private R2
Unit flow factor (m ³ /person/day)	0.27	PCIF = 1.30 included
ADWF, (m ³ /day)	36.86	
11-13 Cheung Wah Street		Connected to Manhole FMH4063056
No. of Flats	20	
Household Size	2.5	
Population	50	Private R2
Unit flow factor (m ³ /person/day)	0.27	PCIF = 1.30 included
ADWF, (m ³ /day)	17.55	
(Catchment B) Sub-Total ADWF, (m ³ /day)	748.58	

Catchment D		
Excel Centre 卓匯中心		Connected to Manhole FMH4009926
Office Area GFA (m ²) (21 Storey)	8610	Floor area 410m ² x 21 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	474	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	49.25	PCIF = 1.30 included
Kung Yuen Weaving Factory 公源商標織造廠		Connected to Manhole FMH4009926
Non-domestic GFA (m ²)	2660	Plan area 665m ² x 4 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	146	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	15.22	PCIF = 1.30 included
Joy Fat Factory Building 再發工廠大廈		Connected to Manhole FMH4009926
Non-domestic GFA (m ²)	5840	Plan area 730m ² x 8 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	321	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	33.40	PCIF = 1.30 included
Kowloon Plaza 九龍廣場		Connected to Manhole FMH4009926
Non-domestic GFA (m ²)	15200	Floor area 800m ² x 19 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	836	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	86.94	PCIF = 1.30 included
Hong Kong Spinners Industrial Building Phase 5		Connected to Manhole FMH4009926
Non-domestic GFA (m ²)	13035	Floor area 1185m ² x 11 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	717	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	74.56	PCIF = 1.30 included
Hong Kong Spinners Industrial Building Phase 6		Connected to Manhole FMH4009926
Non-domestic GFA (m ²)	18300	Floor area 1830m ² x 10 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	1007	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	104.68	PCIF = 1.30 included
Clifford Centre 香港中心		Connected to Manhole FMH4009926
Non-domestic GFA (m ²)	11660	Floor area 530m ² x 22 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	641	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	66.70	PCIF = 1.30 included
Laws Commercial Plaza		Connected to Manhole FMH4009926
Non-domestic GFA (m ²)	17000	Floor area 500 m ² x 34 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	935	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	97.24	PCIF = 1.30 included
(Catchment D) Sub-Total ADWF, (m ³ /day)	527.98	

Catchment E		
China United Plaza		Connected to Manhole FMH4009932
Non-domestic GFA (m ²)	5750	Plan area 230m2 x 25 storey
Worker Density (No. of Worker per 100m2)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	316	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	32.89	PCIF = 1.30 included
790-796 Cheung Sha Wan Road		Connected to Manhole FMH4009932
Non-domestic GFA (m ²)	2520	Plan area 420m2 x 6 storey
Worker Density (No. of Worker per 100m ²)	5.5	Financial, Insurance, Real Estate & Business Services
No. of Employee	139	
Unit flow factor (m ³ /person/day)	0.08	J6 - Financial, Insurance, Real Estate & Business
ADWF, (m ³ /day)	14.41	PCIF = 1.30 included
(Catchment E) Sub-Total ADWF, (m ³ /day)	47.30	
Summary of Existing Scenario		
Catchment A - Sub-Total ADWF, (m3/day)	2638.22	
Catchment B - Sub-Total ADWF, (m3/day)	748.58	
Catchment C - Sub-Total ADWF, (m3/day)	884.00	
Catchment D - Sub-Total ADWF, (m3/day)	527.98	
Catchment E - Sub-Total ADWF, (m3/day)	47.30	
Total ADWF, (m ³ /day)	4846.09	
Contributing Population	17948	
Global Peaking Factor	4	
Total Peak Flow (L/s)	224.36	
Proposed Scenario		
Total ADWF, (m ³ /day)	5376.71	
Contributing Population	19914	
Global Peaking Factor	4	
Total Peak Flow (L/s)	248.92	

Appendix D

Proposed Sewerage Layout Plan

APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE
TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE
AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER
SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A
CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON

Proposed Sewerage Works



Appendix E

Manhole Survey Record

APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE
TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE
AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER
SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A
CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON

MANHOLE SURVEY FORM A

MANHOLE RECORD CARD

NODE REFERENCE F05

REF. FMH4009932

LOCATION
Tai Nan West Street

YEAR LAID
-

STATUS
PU

FUNCTION
F

NODE TYPE
M

COVER SHAPE
S

HINGED
N

LOCK
N

DUTY
H

SHAFT
SIDE ENTRY
-

REGULAT COURSES
-

DEPTH (mm)
400

CHAMBER SOFFIT
R

STEPS
4

LADDERS
-

LNDGS
-

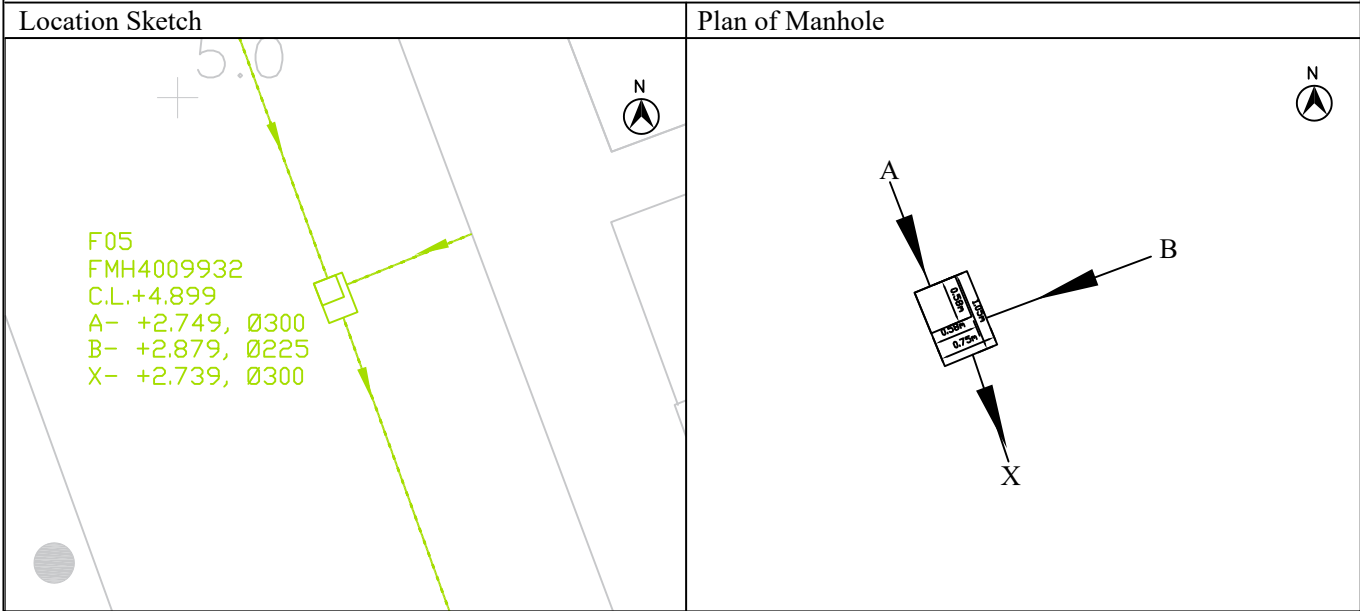
SIZE (mm)
580 X 580
550 X 550
1050 X 750

DEPTH OF FLOW (mm) 10 DEPTH OF SILT (mm) - HEIGHT SURCH (mm) 10 COVER LEVEL (mPD) +4.899

		UPSTREAM REFERENCE	PIPE SHAPE	PIPE SIZE (diam)	BACKDROP DLAM (mm)	PIPE MATERIAL	LINING	DEPTH OF COVER (m)	INVERT LEVEL (mPD)
INCOMING PIPES	A	GNA	C	Ø300		Lining		2.15	+2.749
	B	GNB	C	Ø225		Lining		2.02	+2.879
	C								
	D								
	E								
	F								
	G								
OUTGOING PIPES	X	GNX	C	Ø300		Lining		2.16	+2.739
	Y								

CONDITION (Y if attention required) COVER ☐ IRONS/LADDERS ☐ SHAFT ☐ CHAMBER ☐ BENCHING ☐ OTHER ☐

REMARKS



MANHOLE SURVEY PHOTOGRAPHS



Location:

Tai Nan West Street

Manhole No:

FMH4009932(F05)

Description:

General Location

Photograph saved as .jpeg



Location:

Tai Nan West Street

Manhole No:

FMH4009932(F05)

Description:

Internal Condition

Photograph saved as .jpeg

MANHOLE SURVEY PHOTOGRAPHS



Location:

Tai Nan West Street

Manhole No:

FMH4009932(F05)

Description:

Internal Condition

Photograph saved as .jpeg



Location:

Tai Nan West Street

Manhole No:

FMH4009932(F05)

Description:

Internal Condition

Photograph saved as .jpeg

MANHOLE SURVEY FORM A

MANHOLE RECORD CARD

NODE REFERENCE F06

REF. FMH4009860

LOCATION
Tai Nan West Street

YEAR LAID
-
STATUS
PU
FUNCTION
F
NODE TYPE
M

COVER SHAPE
S
HINGED
N
LOCK
N
DUTY
H

SHAFT
SIDE ENTRY
-
REGULAT COURSES
-
DEPTH (mm)
1350

CHAMBER SOFFIT
R
STEPS
-
LADDERS
-
LNDGS
-

(diam)
DATE
31-3-2026

SIZE (mm)
580 X 580
550 X 550
UTS

TOXIC ATMOSPHERE
N/L
EVIDENCE OF VERMIN
N/L
CONSTRUCT CODE
N/L

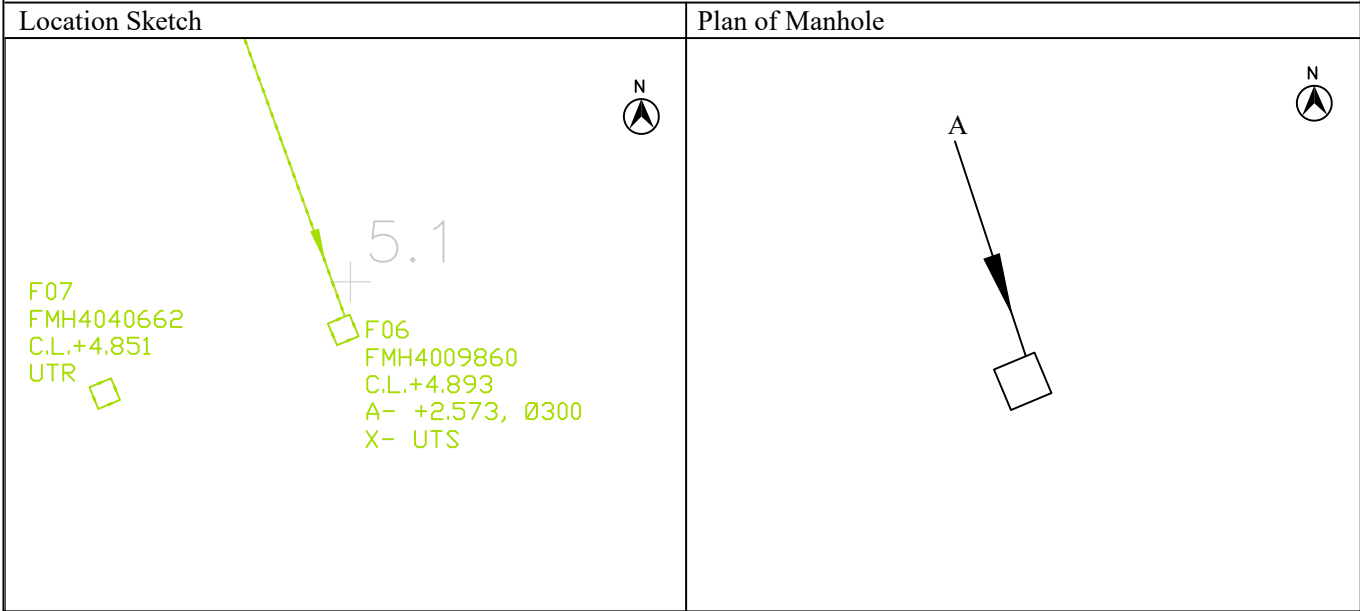
DEPTH OF FLOW (mm)
-
DEPTH OF SILT (mm)
-
HEIGHT SURCH (mm)
-
COVER LEVEL (mPD)
+4.893

INCOMING PIPES	UPSTREAM REFERENCE	PIPE SHAPE	PIPE SIZE (diam)	BACKDROP DLAM (mm)	PIPE MATERIAL	LINING	DEPTH OF COVER (m)	INVERT LEVEL (mPD)
	A	GNA	C	Ø300		Lining	2.32	+2.573
	B							
	C							
	D							
	E							
	F							
	G							

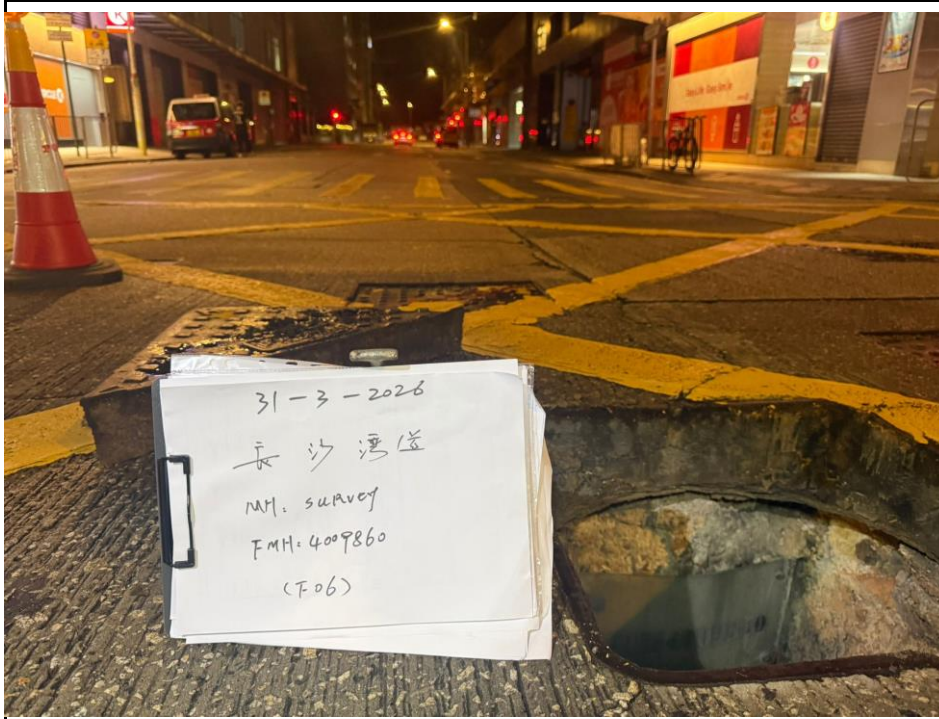
OUTGOING PIPES	DOWNSTREAM REFERENCE		COND		CRITY			
	X	Y	GNX	C	UTS		UTS	UTS

CONDITION (Y if attention required)
COVER
IRONS/LADDERS
SHAFT
CHAMBER
BENCHING
OTHER

REMARKS
Due to the high water level inside the manhole, the outflow pipe could not be measured.



MANHOLE SURVEY PHOTOGRAPHS



Location:

Tai Nan West Street

Manhole No:

FMH4009860(F06)

Description:

General Location

Photograph saved as .jpeg



Location:

Tai Nan West Street

Manhole No:

FMH4009860(F06)

Description:

Internal Condition

Photograph saved as .jpeg

MANHOLE SURVEY PHOTOGRAPHS



Location:

Tai Nan West Street

Manhole No:

FMH4009860(F06)

Description:

Internal Condition

Photograph saved as .jpeg



Location:

Tai Nan West Street

Manhole No:

FMH4009860(F06)

Description:

Internal Condition

Photograph saved as .jpeg

Appendix F

Hydraulic Calculation

APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE
TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE
AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER
SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A
CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON

ARUP	Job No.	Sheet No.	Rev.
		Appendix F	1
	Member/Location		
Job Title	APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON		
Calculation	Checking of Existing Sewerage System with Proposed Development	Drg. Ref.	
	Made by	Date	June 2026
		Chd.	JW

Key Equations and Assumptions

Pipe Design Capacity $Q_p=VA$

Pipe Full-bore Velocity

$$V = -\sqrt{32gRS_f} \log \left[\frac{k_s}{14.8R} + \frac{1.255V}{R\sqrt{32gRS_f}} \right]$$

(By Colebrook-White Equation)

Roughness Coeff., $K_s = 3 \text{ mm}$ (for slimed VC pipe material, poor condition)

$K_s = 1.5 \text{ mm}$ (for slimed uPVC pipe material, poor condition)

Acceleration due to gravity, $g = 9.81 \text{ m/s}^2$

Kinematic Viscosity, $\nu = 0.000001 \text{ m}^2/\text{s}$

Key Notes

(*) Peaking factor is extracted from EPD's GESF Table T-5, under the scenario of "including stormwater allowance".

USMH	DSMH	USGL(mPD)	DSGL(mPD)	USIL(mPD)	DSIL(mPD)	US Cover (m)	DS Cover (m)	Length (m)	Gradient	Gradient (1 in)	Pipe size (mm)	Area (m ²)	sqrt(32gRs)	Perimeter (m)	R (m)	ks (mm)	Pipe Full-bore Velocity, V (m/s)	No. of pipe	Pipe Design Capacity, Q _p (m ³ /s)	Additional ADWF (m ³ /day)	Accumulated ADWF (m ³ /day)	Contributing Population	Peaking Factor (*)	Peak Flow (m ³ /s)	Capacity Check
Proposed Upgraded Sewerage System Checking (with Hotel development)																									
Terminal Manhole	FMH4009923	5.46	5.54	3.30	3.22	1.86	2.02	11.9	0.007	153	300	0.071	0.393	0.942	0.075	1.500	1.122	1	0.079	530.6	530.6	1965.3	6	0.0368	46%
FMH4009923	FMH4009924	5.54	5.39	3.18	3.13	2.06	1.96	12.2	0.004	244	300	0.071	0.311	0.942	0.075	3.000	0.795	1	0.056	0.0	530.6	1965.3	6	0.0368	66%
FMH4009924	FMH4009925	5.39	5.37	3.13	3.11	1.91	1.91	16.6	0.001	830	350	0.096	0.182	1.100	0.088	1.500	0.529	1	0.051	0.0	530.6	1965.3	6	0.0368	72%
FMH4009925	FMH4009926	5.37	5.13	3.11	2.86	1.91	1.92	48.9	0.005	196	350	0.096	0.375	1.100	0.088	1.500	1.095	1	0.105	0.0	530.6	1965.3	6	0.0368	35%
FMH4009926	FMH4009932	5.13	4.90	2.86	2.75	1.92	1.80	22.8	0.005	205	350	0.096	0.366	1.100	0.088	1.500	1.068	1	0.103	528.0	1058.6	3920.7	6	0.0735	72%
FMH4009932	FMH4009860	4.90	4.89	2.74	2.57	1.81	1.97	24.5	0.007	148	350	0.096	0.431	1.100	0.088	1.500	1.261	1	0.121	47.3	1105.9	4095.9	6	0.0768	63%
FMH4009860	FMH400662	4.89	4.85	1.77	1.45	2.75	3.03	6.8	0.047	21	375	0.110	1.177	1.178	0.094	3.000	3.134	2	0.692	4270.8	5376.7	19913.7	4	0.2489	36%
FMH400662	FMH4040663	4.85	4.85	1.45	1.44	2.73	2.74	6.9	0.001	690	675	0.358	0.277	2.121	0.169	3.000	0.807	1	0.289	0.0	5376.7	19913.7	4	0.2489	86%

ARUP

Job No.

Sheet No.

Rev.

Member/Location

Drg. Ref.

Made by

Date

Chd.

Job Title

Calculation

APPLICATION FOR PLANNING PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR PROPOSED HOTEL USE AND MINOR RELAXATION OF PLOT RATIO RESTRICTION AT "OTHER SPECIFIED USES" ANNOTATED "BUSINESS (1)" ZONE AT NO. 646 - 648A CASTLE PEAK ROAD, CHEUNG SHA WAN, KOWLOON

Checking of Existing Sewerage System with Proposed Development

Appendix F

1

June 2026

JW

Key Equations and Assumptions

Pipe Design Capacity $Q_p=VA$

Pipe Full-bore Velocity

$$V = -\sqrt{32gRS_f} \log \left[\frac{k_s}{14.8R} + \frac{1.255V}{R\sqrt{32gRS_f}} \right]$$

(By Colebrook-White Equation)

Roughness Coeff., $K_s = 3 \text{ mm}$ (for slimed VC pipe material, poor condition)

$K_s = 1.5 \text{ mm}$ (for slimed uPVC pipe material, poor condition)

Acceleration due to gravity, $g = 9.81 \text{ m/s}^2$

Kinematic Viscosity, $\nu = 0.000001 \text{ m}^2/\text{s}$

Key Notes

(*) Peaking factor is extracted from EPD's GESF Table T-5, under the scenario of "including stormwater allowance").

USMH	DSMH	USGL(mPD)	DSGL(mPD)	USIL(mPD)	DSIL(mPD)	US Cover (m)	DS Cover (m)	Length (m)	Gradient	Gradient (1 in)	Pipe size (mm)	Area (m ²)	sqrt(32gRs)	Perimeter (m)	R (m)	ks (mm)	Pipe Full-bore Velocity, V (m/s)	No. of pipe	Pipe Design Capacity, Q _p (m ³ /s)	Additional ADWF (m ³ /day)	Accumulated ADWF (m ³ /day)	Contributing Population	Peaking Factor (*)	Peak Flow (m ³ /s)	Capacity Check
Existing Sewerage System Checking (with proposed Hotel development)																									
FMH4009923	FMH4009924	5.54	5.39	3.18	3.13	2.06	1.96	12.2	0.004	244	300	0.071	0.311	0.942	0.075	3.000	0.795	1	0.056	530.6	530.6	1965.2	6	0.0368	66%
FMH4009924	FMH4009925	5.39	5.37	3.13	3.11	1.96	1.96	16.6	0.001	830	300	0.071	0.168	0.942	0.075	3.000	0.430	1	0.030	0.0	530.6	1965.2	6	0.0368	121%
FMH4009925	FMH4009926	5.37	5.13	3.11	2.86	1.96	1.97	48.9	0.005	196	300	0.071	0.347	0.942	0.075	3.000	0.888	1	0.063	0.0	530.6	1965.2	6	0.0368	59%
FMH4009926	FMH4009932	5.13	4.90	2.86	2.75	1.97	1.85	22.8	0.005	205	300	0.071	0.339	0.942	0.075	3.000	0.867	1	0.061	528.0	1058.6	3920.7	6	0.0735	120%
FMH4009932	FMH4009860	4.90	4.89	2.74	2.57	1.86	2.02	24.5	0.007	148	300	0.071	0.399	0.942	0.075	3.000	1.023	1	0.072	47.3	1105.9	4095.9	6	0.0768	106%
FMH4009860	FMH400662	4.89	4.85	1.77	1.45	2.75	3.03	6.8	0.047	21	375	0.110	1.177	1.178	0.094	3.000	3.134	2	0.692	4270.8	5376.7	19913.6	4	0.2489	36%
FMH400662	FMH4040663	4.85	4.85	1.45	1.44	2.73	2.74	6.9	0.001	690	675	0.358	0.277	2.121	0.169	3.000	0.807	1	0.289	0.0	5376.7	19913.6	4	0.2489	86%

Capacity Performance of Existing Sewer (Freeboard Checking)

Notes:

(1) Calculated by Colebrook-White Equation

$$f' = \sqrt{32gRS_y} \ln \left[\frac{k}{14.8R} + \frac{1.25N_v}{R\sqrt{32gRS_y}} \right]$$

where k is roughness value in 0.00mm for vitrified clay sewer, 0.3mm for PE sewer and 0.15mm for ductile iron pipe

v is kinematic viscosity of fluid = $1.14 \times 10^{-6} \text{ m}^2/\text{s}$ at 15°C in the gravity = 9.81 m/s^2

V is the velocity, D is the diameter of the sewer and S is the gradient of the sewer

(2) Calculation of Headloss H

The Reynolds Number is calculated based on the Equation (1)

$Re = VD/\nu$ in column 23

where V = Peak Runoff (m³/s) / Cross Section Area (m²) = mean velocity (m/s)
 D = Hydraulic diameter (m)
 ν = kinematic viscosity (m²/s) (Assumed 1.14×10^{-6})

By applying the Darcy-Weisbach (Colebrook-White) formula with approximation Equation (2)

$2\log_{10} \left(\frac{1}{f'} + \frac{2.51}{Re\sqrt{f'}} \right)$ in column 25

where f_s = internal roughness

Headloss of Conduit due to friction is given by the Equation (3)

$h_f = f'V^2/2g$ in column 26

Headloss of Conduit due to entrance loss is given by Equation (4)

$h_e = K_e V^2/2g$ in column 21

where K_e is the headloss coefficient for entrance loss (Assumed $K_e = 0.5$)

Headloss of Conduit h_{ex} due to exit loss is given by Equation (5)

$h_x = K_x V^2/2g$ in column 22

where K_x is the headloss coefficient for exit loss (Assumed $K_x = 1.0$)

Total Headloss $H = h_f + h_e + h_x$ in column 27

sewerage level at upstream = sewerage level at downstream + Total headloss H in column 29

Freeboard = Cover Level - Sewerage Level in column 30

Abbreviation

UP_MAN	Upstream Manhole	CON_PCP	Contributing Population	In_GL	Downstream Ground Level	CCP	Peak Pipe Capacity	PE	Polyethylene PE 100 Pipe
DN_MAN	Downstream Manhole	DN	Manhole	UP_MAN	Upstream Street Level	DN	Check Capacity	CC	Vitrified Clay Pipe
CCP	Accumulated Average Dry Weather Flow	UP_GL	Upstream Ground Level	VEL	Peak Pipe Velocity	PC	Proposed Concrete Pipe		

Freeboard Checking under Peak Flow x 1.15

Station																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

For the pipe capacity less than 100%, Sewerage level at upstream manhole = Total Head (column 27) + Sewerage level at downstream manhole (column 28)

For the pipe capacity higher than 100%, Sewerage level at upstream manhole = downstream level (column 10) + Hydraulic Diameter (column 18) + Total Head (column 27)

Capacity Performance of Existing Sewer (Freeboard Checking)

Notes:

(1) Calculated by Colebrook-White Equation

$$\frac{1}{f'} = -\sqrt{32gRSY} \log \left[\frac{k_s}{14.8R} + \frac{1.255v}{R_s \sqrt{32gRSY}} \right]$$

where ks is roughness value in 0.00m for unlined city sewer, 0.3mm for PE sewers and 0.15mm for ductile iron pipe

v is kinematic viscosity of fluid = 1.14 x 10⁻⁶ m²/s and g is the gravity = 9.81m/s²
V is the velocity, D is the diameter of the sewer and S is the gradient of the sewer

(2) Calculation of Headloss H

The Reynolds Number is calculated based on the Equation (1)

$$Re = VD/\nu$$

where V = Peak Runoff(m³/s) / Cross Section Area (A) = mean velocity (m/s)
D = Hydraulic diameter (m)
ν = kinematic viscosity (m²/s)(Assumed 1.14 x 10⁻⁶)

By applying the Darcy-Weisbach (Colebrook-White) formula with approximation Equation (2)

$$2\log^{10} f' = -2\log_{10} \left[\frac{k_s}{2.7D} + 5.74/R_s^{0.9} \right]$$

where k_s = internal roughness

Headloss of Conduit due to friction is given by the Equation (3)

$$h_f = f'LV^3/2Dg$$

Headloss of Conduit due to entrance loss is given by Equation (4)

$$h_e = k_e V^3/2g$$

where k_e is the headloss coefficient for entrance loss (Assumed k_e = 0.5)

Headloss of Conduit h_e due to exit loss is given by Equation (5)

$$h_x = k_x V^3/2g$$

where k_x is the headloss coefficient for exit loss (Assumed k_x = 1.0)

Total Headloss H = h_f + h_e + h_x

sewage level at upstream = sewage level at downstream + Total headloss H

Freeboard = Cover Level - Sewage Level

Upstream		Downstream		Sewer		Pipe	
UP_MAN	Upstream Manhole	CDN_PCP	Contributing Population	DN_GL	Downstream Ground Level	QAP	Peak Pipe Capacity
DN_MAN	Downstream Manhole	DA	Discharge	UP_NLV	Upstream Invert Level	PC	Peak Flow Capacity
QAPF	Average Dry Weather Flow	DA	Load	DN_NLV	Downstream Invert Level	QF	Other Flow Pipe
ACC_ADWF	Accumulated Average Dry Weather Flow	UP_GL	Upstream Ground Level	VEL	Peak Pipe Velocity	PC	Present Concrete Pipe

Freeboard Checking under Peak Flow

Sewer		Existing Pipe Parameter														Backwater Analysis (for Freeboard calculation)																		
UP_MAN No.	DN_MAN No.	CDN_PCP	PEAKING FACTOR	ACC_ADWF (m³/s)	Peak Flow (L/s)	DIA (D) (mm)	LEN (m)	UP_GL (mPD)	DN_GL (mPD)	UP_NLV (mPD)	DN_NLV (mPD)	Gradient (S)	Pipe Material (m)	VEL (m/s)	CAP (L/s)	F/C (%)	Adequate Capacity?	Pipe cross area A (m²)	Hydraulic Diameter D (m)	k (m/s)	k (m/s)	H (m/s)	H (m/s)	Reynold number Re	f (1/10)	Hydro head f	Inflow H (m)	Total H (m)	Sewage level at upstream manhole * (mPD)	Crown level of exit pipe at upstream manhole (mPD)	Surcharge at upstream manhole (column 28) (m)	Free board at upstream manhole (X (m))	Adequate Freeboard? (X >= 0.3)	
Terminal Manhole	FMS0009023	S-16 Fung Wah Planning Application	1.085	0	536.6	30.849	300	11.9	5.46	5.54	3.30	1.22	153	PE, ks = 1.5mm	1.12	79.21	48.5%	YES	0.071	0.300	0.5	1	0.0069	0.0139	1.37E+05	0.005+00	3.13E+02	1.7794E+02	0.0380	3.633	3.52	YES	1.63	Freeboard >= 1.0K
FMS0009023	FMS0009024	S-16 Fung Wah Planning Application	1.085	0	536.6	30.849	300	12.2	5.54	5.39	3.19	0.33	244	VC, ks = 3mm	0.79	56.15	65.6%	YES	0.071	0.300	0.5	1	0.0069	0.0139	1.37E+05	0.005+00	3.09E+02	2.1713E+02	0.0420	3.585	3.52	YES	1.95	Freeboard >= 1.0K
FMS0009024	FMS0009025	S-16 Fung Wah Planning Application	1.085	0	536.6	30.849	300	16.6	5.39	5.37	3.15	0.11	850	VC, ks = 3mm	0.43	30.35	121.4%	Check Freeboard	0.071	0.300	0.5	1	0.0069	0.0139	1.37E+05	0.005+00	3.09E+02	2.0943E+02	0.0001	3.952	3.43	YES	1.84	Freeboard >= 1.0K
FMS0009025	FMS0009026	S-16 Fung Wah Planning Application	1.085	0	536.6	30.849	300	46.9	5.37	5.13	3.11	2.86	196	VC, ks = 3mm	0.89	62.74	58.7%	YES	0.071	0.300	0.5	1	0.0069	0.0139	1.37E+05	0.005+00	3.09E+02	6.7028E+02	0.1078	3.902	3.41	YES	1.87	Freeboard >= 1.0K
FMS0009026	FMS0009032	S-16 Fung Wah Planning Application	3.021	6	1058.6	73.514	300	22.8	5.13	4.90	2.86	2.75	205	VC, ks = 3mm	0.87	61.21	120.1%	Check Freeboard	0.071	0.300	0.5	1	0.0276	0.0551	2.74E+05	5.11E+00	3.63E+02	1.6527E+01	0.3430	3.394	3.16	YES	1.74	Freeboard >= 1.0K
FMS0009032	FMS0009060	S-16 Fung Wah Planning Application	4.086	8	1105.9	76.759	300	24.5	4.90	4.89	2.74	2.27	148	VC, ks = 3mm	1.02	72.25	105.3%	Check Freeboard	0.071	0.300	0.5	1	0.0301	0.0602	2.86E+05	5.11E+00	3.63E+02	1.8789E+01	0.2781	3.181	3.05	YES	1.75	Freeboard >= 1.0K
FMS0009060	FMS0009062	S-16 Fung Wah Planning Application	10.914	4	576.7	248.921	Two 375	6.8	4.89	4.85	1.77	1.43	21	VC, ks = 3mm	3.13	891.78	38.0%	YES	0.110	0.375	0.5	1	0.1294	0.2589	7.41E+05	5.32E+00	3.54E+02	1.6880E+01	0.2643					
FMS0009062	FMS0009063	S-16 Fung Wah Planning Application	10.914	4	576.7	248.921	675	6.9	4.85	4.85	1.43	1.44	890	VC, ks = 3mm	0.81	288.33	69.3%	YES	0.398	0.675	0.5	1	0.0123	0.0247	4.12E+05	5.80E+00	2.97E+02	7.4683E+01	0.0445					

Notes:
For the pipe capacity less than 100%, Sewage level at upstream manhole = Total Head (column 27) + Sewage level at downstream manhole (column 28)
For the pipe capacity higher than 100%, Sewage level at upstream manhole = downstream invert level (column 10) + Hydraulic Diameter (column 16) + Total Head (column 27)