Appendix 2

Traffic Impact Assessment

Document Status Control Record

Proposed Wholesale Conversion of Existing Building
into Hotel Development,
at 118 Wai Yip Street, Kwun Tong, Kowloon

Traffic Impact Assessment Report

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	Approved by: SLN		Date: 27 August 2026
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1 INTRODUCTION

1.1 Background

1.1.1 The project proponent proposed to convert the existing building at No. 118 Wai Yip Street, Kwun Tong, Kowloon, (hereinafter, referred as "the Site") into a hotel development. The location of the Site is shown in **Figure 1.1**.

1.1.2 LLA Consultancy Limited was commissioned to carry out the traffic impact assessment study. This report presents the findings of the study.

1.2 Study Objectives

1.2.1 The objectives of this study can be summarised as follows:

- to reveal the existing traffic conditions in vicinity of the Site;
- to estimate the additional traffic generated from the proposed development;
- to assess the future traffic situation of the surrounding network in vicinity of the Site;
- to estimate the internal transport facilities for the proposed development as required by the Hong Kong Planning Standard and Guidelines and propose appropriate internal transport facilities;

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 The Site is located at No. 118 Wai Yip Street, Kwun Tong. It has a site area of 418.064 m^2.

2.2 Proposed Development Scheme

2.2.1 The key parameters of the proposed development are summarized in **Table 2.1**.

Table 2.1 Development Parameters

Components	Development Schedule
Site Area	418.064 m^2
Total No. of Storey	10
Proposed Number of Guest Rooms	99

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

3.1.1 Wai Yip Street is a district distributor running along Kwun Tong CBD. The section of Wai Yip Street along the frontage of the Site is a dual-3 carriageway. In 2024, this section carried an average annual daily traffic (AADT) of 26,930 vehicles.

3.1.2 Lai Yip Street is a district distributor connecting Hoi Bun Road and Kwun Tong Road. It forms a cross junction with Wai Yip Street without right-turn movements at the junction. In 2024, this section carried an average annual daily traffic (AADT) of 16,480 vehicles.

3.1.3 How Ming Street is a local road connecting Wai Yip Street to Chong Yip Street to the north and Hoi Bun Road to the south.

3.2 Traffic Count Survey

3.2.1 In order to assess the existing traffic conditions, traffic count surveys shall be carried to collect the traffic flow information. As the project was commenced in mid-July 2026 during the summer holidays, in-house traffic flow data on a typical weekday in April 2025 at the following locations in the vicinity of the Site were retrieved. The locations of the surveyed junctions are presented in **Figure 3.1**.

- J1 – J/O Wai Yip Street / How Ming Street
- J2 – J/O Hoi Bun Road / Lai Yip Street
- J3 – J/O Wai Yip Street / Lai Yip Street
- J4 – J/O Hoi Bun Road / How Ming Street
- J5 – J/O Wai Yip Street / Tsun Yip Street
- J6 – J/O Wai Yip Street / Hoi Yuen Road

3.2.2 The identified AM and PM peak hours are 08:30 – 09:30 and 17:45 – 18:45, respectively. The recorded peak hour traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

3.3.1 Based on the existing traffic flows, the performance of the key junctions during the AM and PM peak hours were assessed. The results are summarized and presented in **Table 3.1** and detailed junction capacity calculation sheets are presented in **Appendix A**.

Table 3.1 Existing Junction Performance

No.	Junction Location	Type/Capacity Index(1)	AM Peak Hour	PM Peak Hour
J1	Wai Yip Street/ How Ming Street	Signalized/RC	64%	70%
J2	Hoi Bun Road/ Lai Yip Street	Signalized/RC	42%	34%
J3	Wai Yip Street/ Lai Yip Street	Signalized/RC	50%	52%
J4	Hoi Bun Road / How Ming Street	Priority/DFC	0.04	0.04
J5	Wai Yip Street / Tsun Yip Street	Signalized/RC	97%	110%
J6	Wai Yip Street / Hoi Yuen Road	Signalized/RC	28%	18%

Note: (1) RC = Reserved Capacity for signalized junction; DFC = Design Flow to Capacity Ratio for roundabouts and priority junctions.

3.3.2 As shown in **Table 3.1**, it is noted that all junctions are operating with capacities under the existing scenario.

3.4 Existing Public Transport Facilities

3.4.1 The Site enjoys extremely high accessibility to public transport facilities, including MTR and bus services. **Table 3.2** and **Figure 3.3** show the existing bus routes at the nearest bus stops serving the Site.

Table 3.2 Existing Public Transport Routes

Mode	Route No.	Origin - Destination	Frequency (min)
Bus	15A	Ping Tin – Tsz Wan Shan (North)	20 – 30
	16P	Kwun Tong Ferry – Mong Kok (Park Avenue)	2 trips per day
	33	Tsuen Wan West Station – Yau Tong	10 – 30
	33X	Tsuen Wan West Station – Yau Tong	4 trips per day
	38P	Kwai Shing (Central) – Ping Tin	3 trips per day
	49	Ching Fu Court – Tseung Kwan O Industrial Estate	4 trips per day
	55	Tuen Mun (Ching Tin and Wo Tin) – Kwun Tong Ferry Pier	15 – 30
	74	Fu Tip Bus Terminus – Yau Tong	2 trips per day
	74B	Kowloon Bay – Tai Po Central	6 – 15
	78C	Queen's Hill Fanling – Kai Tak	20 – 60
	78X	Queen's Hill Fanling – Kai Tak	8 trips per day
	80A	Mei Lam – Kwun Tong Ferry	1 trip per day
	215X	Lam Tin (Kwong Tin Estate) – Kowloon Station	6 – 30
	252S	Hin Fat Estate –Kwun Tong Ferry	2 trips per day
	258X	Tuen Mun (Po Tin Estate) – Kwun Tong Ferry	3 trips per day
	259S	Tuen Mun (Lung Mun Oasis) – Kwun Tong Ferry	2 trips per day
	259X	Tuen Mun (Lung Mun Oasis) – Kwun Tong Ferry	6 trips per day
	268P	Ma Wang Road (San Shui House) – Kwun Tong Ferry	5 trips per day
	269S	Tin Shui Wai Town Centre – Kwun Tong Ferry	5 trips per day
	589	GO PARK Sai Sha – Kowloon Bay	4 trips per day
	797	LOHAS Park – Kai Tak (Circular)	20 – 30
	T277	Sheung Shui – Lam Tin Station	8 trips per day
	T74	Ng Tung Chai (Pak Ngau Shek) – Kwun Tong Ferry	2 trips per day
	T80	Mei Tin – Kowloon Bay	2 trips per day
	W2	High Speed Rail West Kowloon Station – Kwun Tong (Circular)	15 – 30
	X89D	Nai Chung – Kwun Tong Ferry	10 trips per day
GMB	68	Choi Wan Estate – Kowloon Bay (Circular)	10 – 27

4 FUTURE TRAFFIC SITUATION

4.1 Design Year

4.1.1 The proposed development will be completed in 2028. Therefore, the design year for the subsequent traffic impact assessment will be 2031, i.e. 3 years after the completion of the proposed development.

4.2 Traffic Growth

ATC Historical Data

4.2.1 Reference was made to the 2018 to 2024 Annual Traffic Census Reports, published by the Transport Department, to determine the traffic growth. The traffic data recorded at the counting stations in the vicinity of the Subject Site is shown in **Table 4.1**.

Table 4.1 Annual Traffic Census Data

Stn. No.	Road Section			AADT(1)							Avg Growth %
	Road	From	To	2018	2019	2020	2021	2022	2023	2024	
3020	Wai Yip St	Lai Yip St	Hoi Yuen Rd	27,260	27,830 (2.1%)	27,070 (-2.7%)	30,880 (14.1%)	26,530 (-14.1%)	28,290 (6.6%)	26,930 (-4.8%)	-0.2%
3279	Wai Yip St	Hoi Yuen Rd	Cha Kwo Ling Rd	34,880	28,290 (-18.9%)	27,300 (-3.5%)	28,580 (4.7%)	27,070 (-5.3%)	30,740 (13.6%)	32,450 (5.6%)	-1.2%
3483	Wai Yip St	Lai Yip St	Shun Yip St	26,280	26,390 (0.4%)	28,000 (6.1%)	28,890 (3.2%)	28,540 (-1.2%)	30,160 (5.7%)	30,700 (1.8%)	2.6%
3873	Lai Yip St	Wai Yip St	Kwun Tong Rd	16,560	15,160 (-8.5%)	14,630 (-3.5%)	19,100 (30.6%)	15,740 (-17.6%)	16,920 (7.5%)	16,480 (-2.6%)	-0.1%
4073	Hoi Yuen Rd	Wai Yip St	Kwun Tong Rd RA	17,980	16,460 (-8.5%)	15,880 (-3.5%)	16,620 (4.7%)	17,710 (6.6%)	20,170 (13.9%)	19,640 (-2.6%)	1.5%
			Total	**122,960**	**114,130 (-7.2%)**	**112,880 (-1.1%)**	**124,070 (9.9%)**	**115,590 (-6.8%)**	**126,280 (9.2%)**	**126,200 (-0.1%)**	**0.4%**

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

4.2.2 **Table 4.1** showed that the recorded average annual growth rate of the concerned counting stations is +0.4% between years 2019 to 2024.

Territorial Population and Employment Data Matrix (TPEDM) Projection Data

4.2.3 Reference was also made to the 2021–based TPEDM published by the Planning Department. The population and the employment data of year 2021 and 2031 in Kwun Tong District are summarized in **Table 4.2**.

Table 4.2 Population and Employment Data in Kwun Tong District

Year	2021	2026	2031
Population	673,150	682,500	690,750
Employment	395,900	400,050	441,300
Total	1,069,050	1,082,550	1,132,050
	Average Growth %	+0.3% (2021 to 2026)	+0.9% (2026 to 2031)

4.2.4 As shown in **Table 4.2**, the average annual growth rate for the population and the employment total between 2021–2026 and 2026–2031 are +0.3% and +0.9%, respectively. To be conservative and cater for the planned developments in the vicinity, a nominal growth rate of +2.0% will be adopted for the subsequent traffic forecasting.

4.3 Proposed Development Traffic Generation

4.3.1 The development traffic generation of the proposed development were estimated and summarized in **Table 4.4**, based on the trip rates documented in TPDM Volume 1 Chapter 3 – Transport Considerations of Town Plans.

Table 4.4 Development Traffic Generation

Item	Use / Content	AM Peak Hour			PM Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total
Mean Trip Rates of TPDM for Hotel	pcu/hr/room	0.1329	0.1457	-	0.1290	0.1546	-
Proposed Development	99 rooms	14	15	29	13	16	29

Note: Gen. – Generation; Att. - Attraction

4.3.2 As shown in **Table 4.4**, the proposed development would generate a two-way traffic of 29 pcu/hour and 29 pcu/hour during AM and PM peak hour, respectively. The development traffic is assigned onto the future road network based on the observed traffic pattern. **Figure 4.1** shows the resulting assignment of the development traffic.

4.4 Reference and Design Flows

4.4.1 The 2031 Reference Flows are estimated based on the following equations.

2031 Reference Flows = 2025 Existing Flows x $(1 + 2.0\%)^6$

4.4.2 The 2031 Design Flows, i.e. the traffic flows in the local road network with the additional traffic generated by the proposed conversion, were estimated based on the following equation:

2031 Design Flows = 2031 Reference Flows + Development Traffic Flows

4.4.3 The 2031 Reference and Design Flows are shown in **Figure 4.2** and **Figure 4.3**, respectively.

4.5 Junction Capacity Assessment

4.5.1 Assessments of the junction performance were based on the reference and design flows for the year 2031. The results are summarized and presented in **Table 4.5** and detailed junction capacity calculation sheets are presented in **Appendix B**.

Table 4.5 Junction Capacity Assessment for Design Year 2031

Jun. No.	Junction	Type/ Capacity Index(1)	2031 Reference		2031 Design	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Wai Yip Street/ How Ming Street	Signalized/RC	44%	49%	43%	47%
J2	Hoi Bun Road/ Lai Yip Street	Signalized/RC	26%	19%	24%	17%
J3	Wai Yip Street/ Lai Yip Street	Signalized/RC	33%	35%	32%	34%
J4	Hoi Bun Road / How Ming Street	Priority/DFC	0.05	0.04	0.05	0.05
J5	Wai Yip Street / Tsun Yip Street	Signalized/RC	75%	87%	75%	86%
J6	Wai Yip Street / Hoi Yuen Road (2)	Signalized/RC	44%	36%	43%	36%

Note: (1) RC = Reserved Capacity for signalized junction; DFC = Design Flow to Capacity Ratio for roundabouts and priority junctions.
(2) Junction improvement works by others are incorporated and enclosed in **Appendix C**.

4.5.2 As shown in **Table 4.5**, all concerned junctions will operate with capacities in future scenarios. By comparing the assessment results in the Reference and the Design Scenarios, the RC and DFC numbers are similar and there is less than 2% in RC and 0.01 in DFC differences. Therefore, the additional traffic generated by the proposed development is not anticipated to induce significant traffic impact onto the adjacent junctions.

5 CAR PARKING AND LOADING/UNLOADING PROVISION

5.1 Existing Arrangement

5.1.1 Due to the limited size of the Site, there is no vehicular access for the existing building. Therefore, no car parking and loading/unloading space is provided within the existing building. Meanwhile, a 3m wide loading/unloading zone is provided at the back lane to serve the existing industrial building.

5.2 Proposed Car Parking and Loading/Unloading Provisions

HKPSG Requirement

5.2.1 The requirements of car parking and loading/unloading facilities should be estimated taking into consideration of the latest Hong Kong Planning Standards and Guidelines (HKPSG) requirements. The car parking and loading/unloading facilities for the proposed hotel development as required under the HKPSG are listed in **Table 5.1**.

Table 5.1 Car Parking and Loading/Unloading Facilities as Required by HKPSG

Transport Facilities	Development Content	HKPSG Requirements(1)	Minimum Required Nos.
Proposed Hotel Development			
Car Parking	99 guestrooms	1 car space per 100 rooms	**1**
Loading/ Unloading		0.5 - 1 goods vehicle bay for every 100 rooms	**1**
Lay-by for Taxi and Private Cars		2 spaces for less than 299 rooms	**2**
Lay-by for single-deck tour buses		1 space for less than 299 rooms	**1**

Proposed Arrangement

5.2.2 As the proposal is to convert the existing building for the hotel/student hostel use, the building will not be demolished and it is impossible to accommodate the transport facilities within the development.

5.2.3 **Figure 5.1** shows the proposed car parking and loading/unloading arrangement for the proposed hotel development will make use of the 3m wide space along the existing back lane to provide 1 no. of 3.0m x 7.0m loading/unloading/light bus space and 1 no. of 2.5m x 5.0m private car/taxi space.

5.3 Considerations of Car Parking and Lay-bys Provision

Available Public Car Parking Spaces in the Vicinity

5.3.1 The proposed 1 no. of 2.5m x 5.0m private car/taxi space will be share-used for private car parking and taxi pick-up/drop-off. In fact, several carparks with hourly public car parking spaces are identified in the vicinity. With the off-street car parking spaces available in the vicinity, the minimal parking demand of the proposed hotel development can be easily accommodated.

Existing On-street Taxi Pick-up/drop-off Space

5.3.2 Along the Site frontage at Wai Yip Street, there is an existing on-street taxi layby. The future hotel guest can use the taxi lay-by for pick-up /drop-off purpose. The location of the existing on-street taxi layby is also marked in **Figure 5.1**.

Abundant Public Transport Services Available

5.3.3 Public transport provision in this area is abundant with MTR, bus and minibus services. MTR Ngua Tau Kok Station is at close proximity of around 400m walking distance. Furthermore, there are buses, trams and green minibuses running along Wai Yip Street and Kwun Tong Road. The Site, therefore, is highly accessible by public transport facilities. The hotel guests, which likely to be backpackers with small hotel room area, can access the hotel via public transport facilities easily and the pick-up/drop-off demand by using limousines and small coaches will be minimal.

No Tour Group

5.3.4 The proposed small hotel with 99 rooms is not targeted for tour groups. The owner of the proposed development is committed to undertake that no tour bus services will be provided.

5.4 Considerations of Loading/Unloading Provision

Negligible Loading/unloading Demand

5.4.1 A study was conducted at other small hotels with less than 100 rooms and it was identified that the loading/unloading demand for these hotels was very minimal. In general, the normal operation of a small hotel will induce loading/unloading demand because of the activities as shown in **Table 5.2**. The subsequent recorded/estimated loading/unloading trips are also shown in **Table 5.2**. The proposed 1 no. of 3.0m x 7.0m loading/unloading space is sufficient to meet the demand and shared-use with light bus.

Table 5.2 Small Hotel Operational Activities and Loading/unloading Trips Required

Activity	Loading/unloading Demand	Required Duration
Regular Delivery of Consumables	Maximum 1 trips per day	5 minutes
Out-source Laundry Service	1 trips per day	10 minutes
Total	Not more than 2 trips per day	-

6 CONCLUSIONS

6.1 Summary

6.1.1 The project proponent proposed to convert the existing building at No. 118 Wai Yip Street, Kwun Tong, Kowloon, into a hotel/student hostel development.

6.1.2 In-house traffic count surveys data on a typical weekday in April 2025 in the vicinity of the Site were retrieved. Based on the surveyed traffic flows, the junction assessments show that all junctions are operating satisfactorily during the existing AM and PM peak hours.

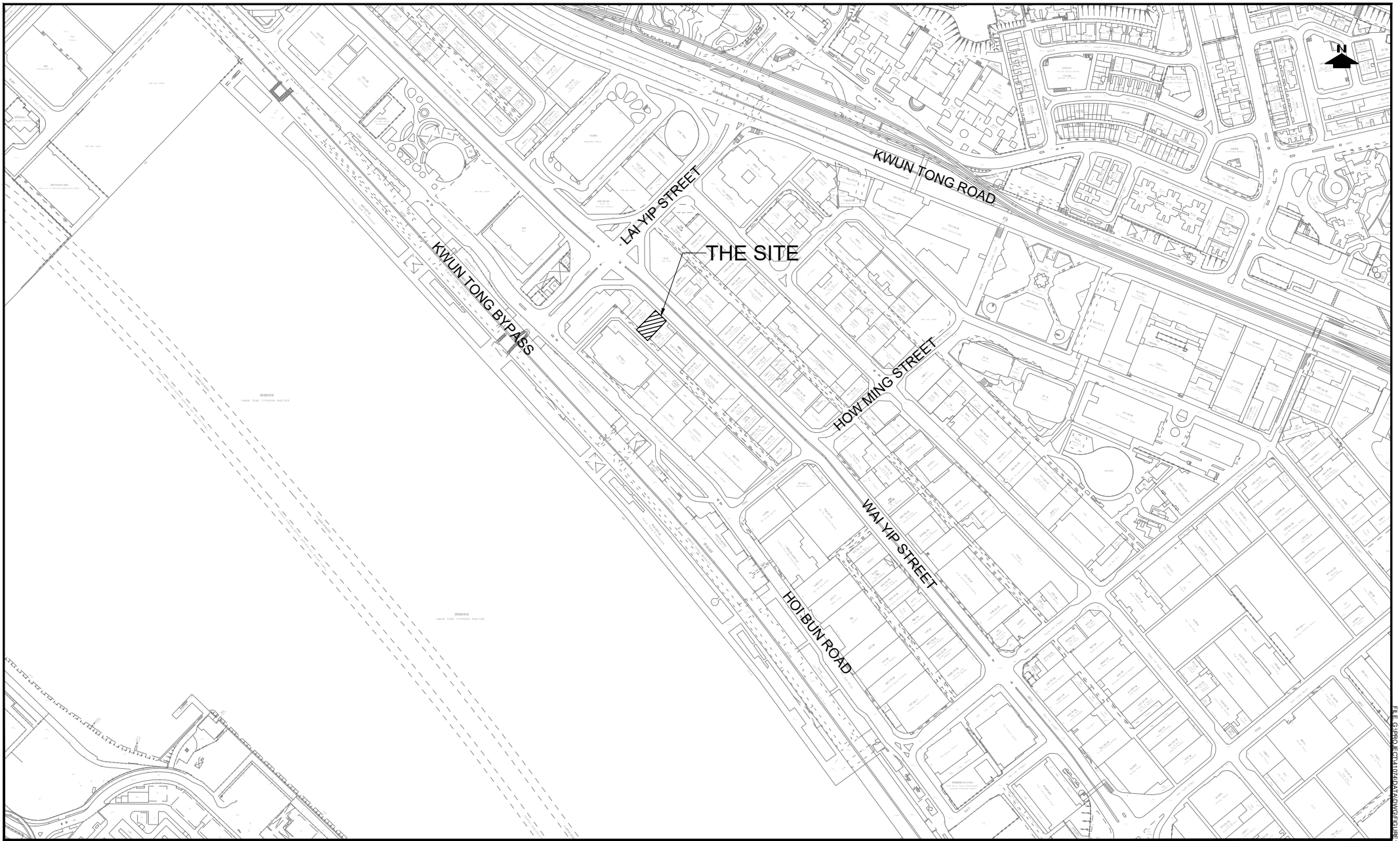
6.1.3 The proposed development is expected to generate an additional two-way traffic of 29 pcu/hr and 29 pcu/hr in the AM and PM peak hour, respectively. By assigning the development traffic to the 2031 Reference Flows, the 2031 Design Flows were obtained. The junction capacity assessment shows that all junctions will operate with positive RCs for both the Reference and Design Scenarios. Therefore, the proposed development will not induce significant traffic impact onto the adjacent road network.

6.1.4 The proposed car parking and loading/unloading arrangement for the proposed hotel development will make use of the 3m wide space along the existing back lane to provide 1 no. of 3.0m x 7.0m loading/unloading/light bus space and 1 no. of 2.5m x 5.0m private car/taxi space. The provision is sufficient for the proposed hotel because of the following consideration:

- Available Public Car Parking Spaces in the Vicinity
- Existing On-street Taxi Pick-up/drop-off Space
- Abundant Public Transport Services Available
- No Tour Group
- Negligible Loading/unloading Demand

6.2 Conclusions

6.2.1 The findings of the traffic impact assessment indicate that the road network in the vicinity of the Site would be able to cope with the traffic generated by the proposed hotel development.



PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
41074	PROPOSED WHOLESALE CONVERSION OF EXISTING BUILDING INTO HOTEL / STUDENT HOSTEL DEVELOPMENT AT 118 WAI YIP STREET, KWUN TONG, KOWLOON	FIGURE 1.1	·

DESIGNED	SKL	DATE	JUL 2025	DRAWING TITLE
DRAWN	CLL	SCALE	1:5000	LOCATION PLAN
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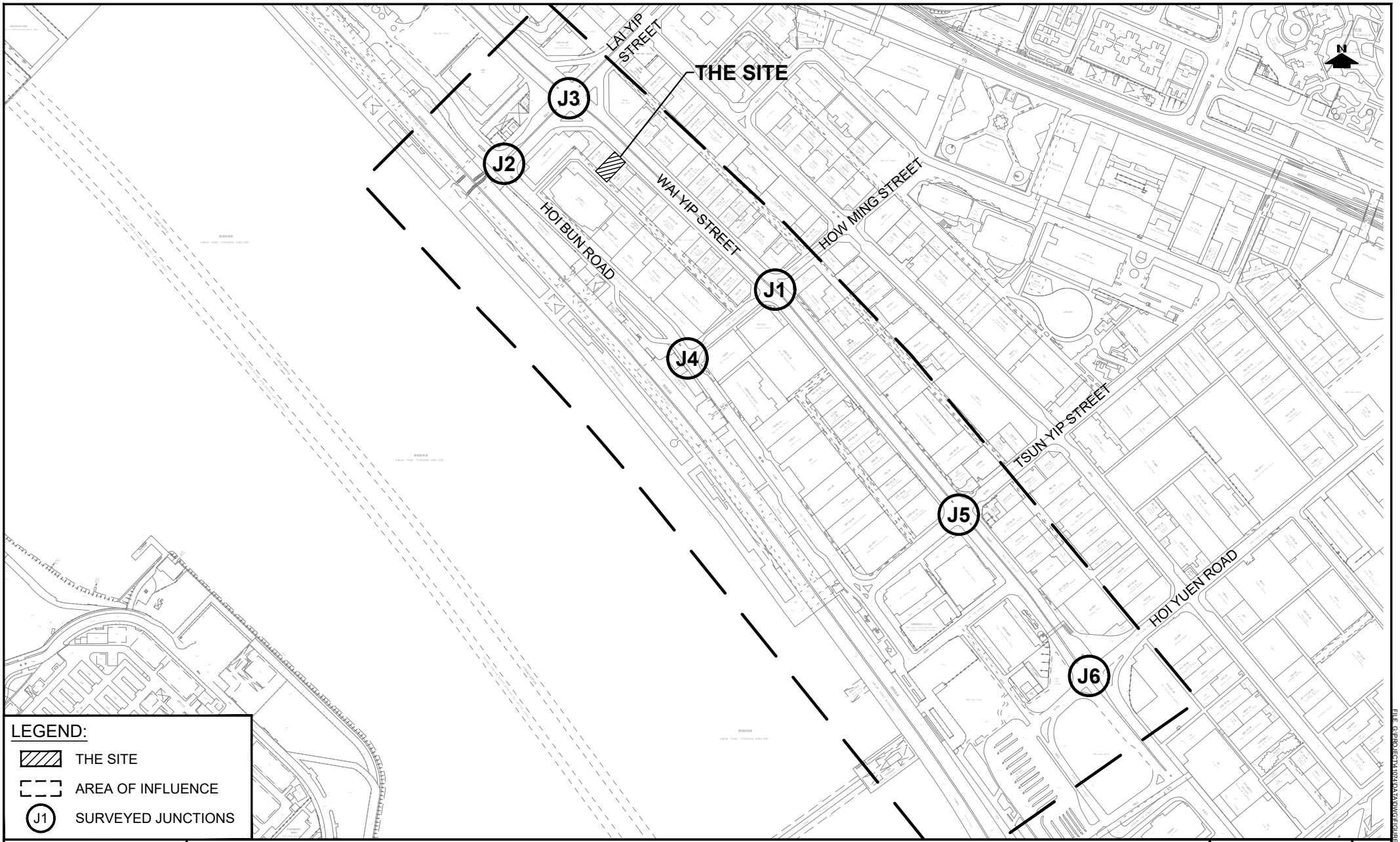

PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
41074	PROPOSED WHOLESALE CONVERSION OF EXISTING BUILDING INTO HOTEL / STUDENT HOSTEL DEVELOPMENT AT 118 WAI YIP STREET, KWUN TONG, KOWLOON	FIGURE 3.1	-

DESIGNED SKL	DATE JUL 2026	DRAWING TITLE
DRAWN CLL	SCALE 1:5000	LOCATION OF SURVEYED JUNCTIONS AND AREA OF INFLUENCE (AOI)
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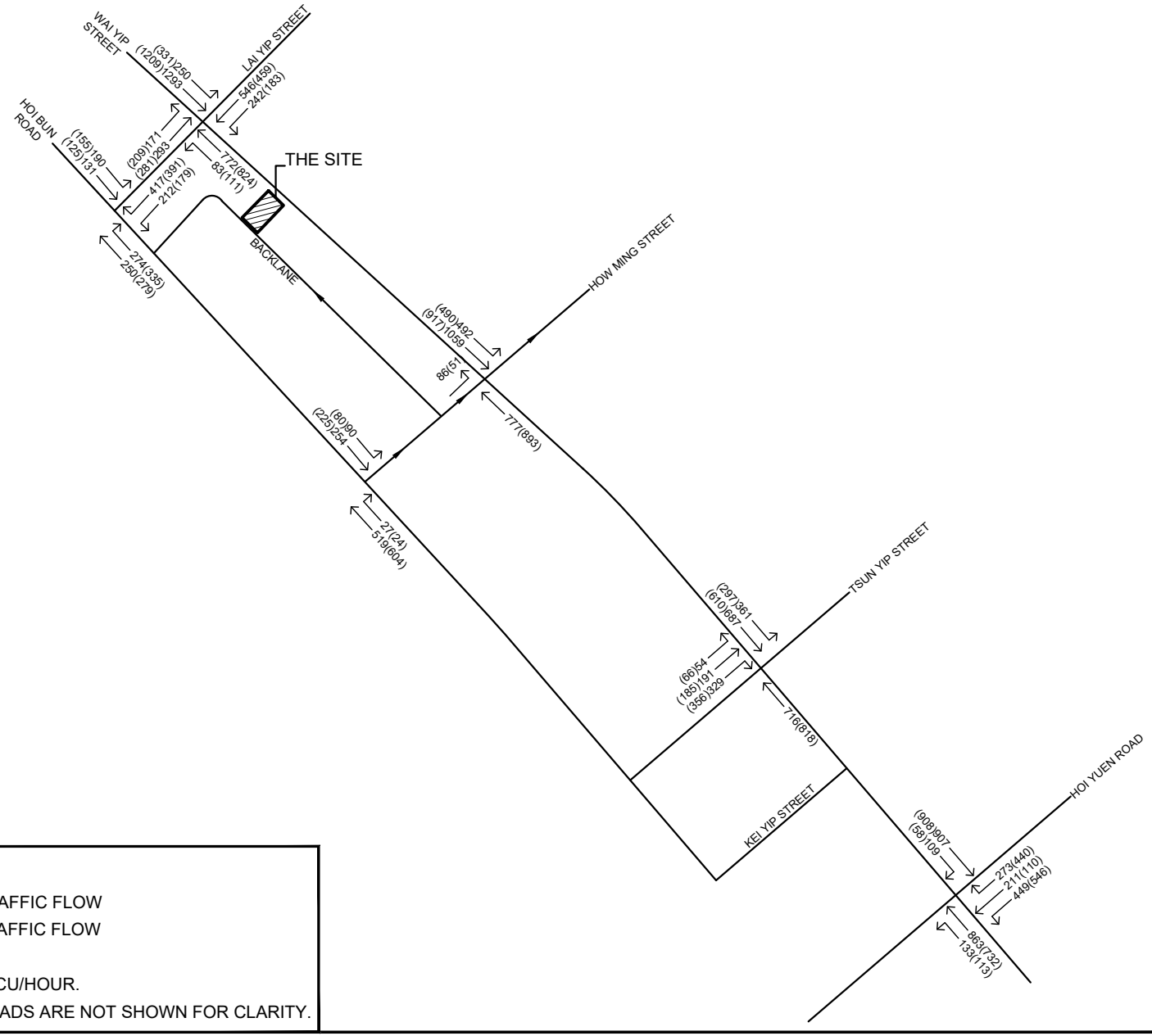

LEGEND:

123 (456) ⟵ PM PEAK HOUR TRAFFIC FLOW

↑ AM PEAK HOUR TRAFFIC FLOW

NOTES:

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

PROJECT NO. 41074	PROJECT TITLE: PROPOSED WHOLESALE CONVERSION OF EXISTING BUILDING INTO HOTEL / STUDENT HOSTEL DEVELOPMENT AT 118 WAI YIP STREET, KWUN TONG, KOWLOON	DRAWING NO. FIGURE 3.2	REV. -
DESIGNED SKL / DATE AUG 2026	DRAWING TITLE: **2025 OBSERVED TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
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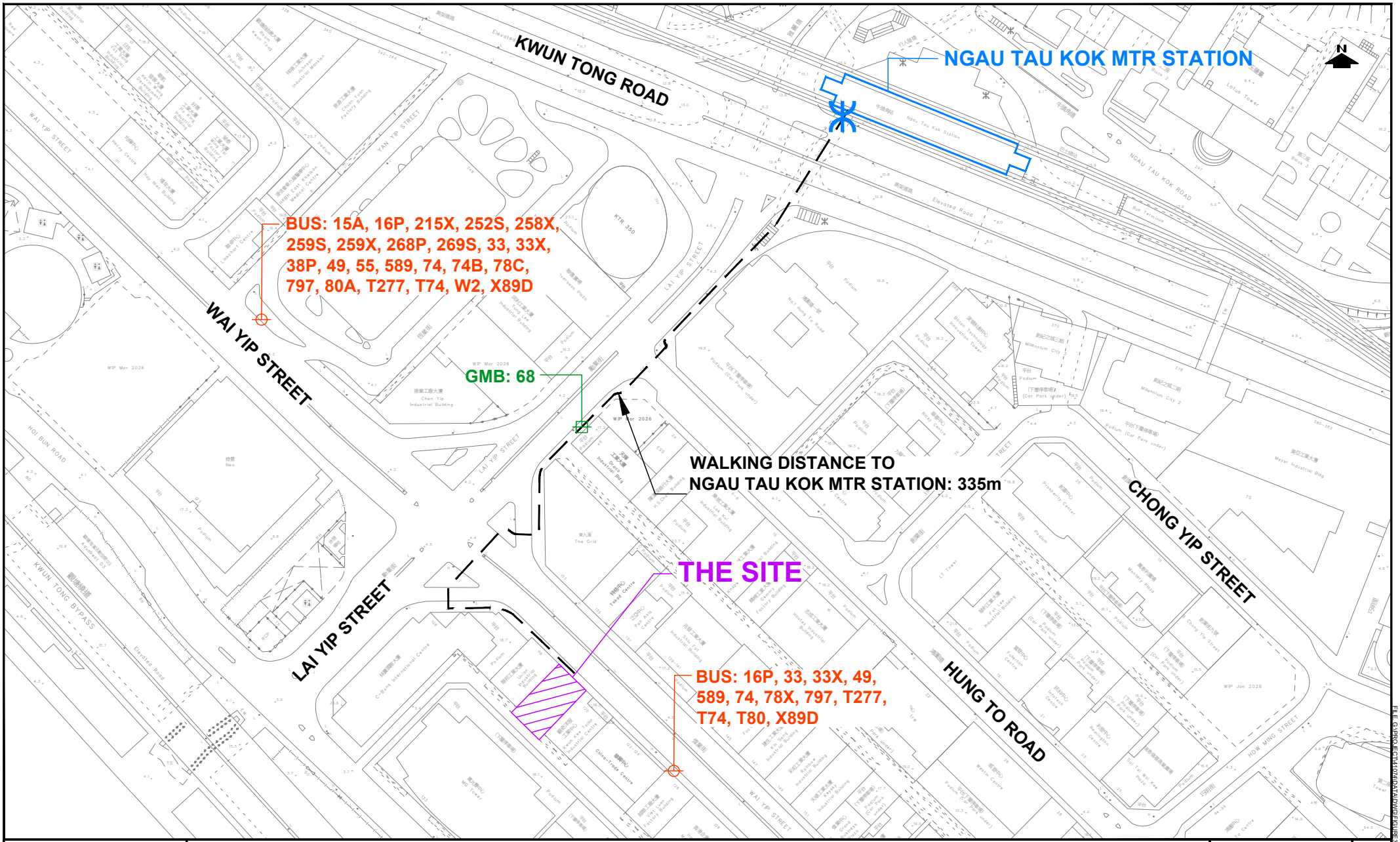

PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
41074	PROPOSED WHOLESALE CONVERSION OF EXISTING BUILDING INTO HOTEL DEVELOPMENT AT 118 WAI YIP STREET, KWUN TONG, KOWLOON	FIGURE 3.3	-
DESIGNED SKL / DATE AUG 2026	DRAWING TITLE		
DRAWN CLL / SCALE 1:2000	PUBLIC TRANSPORT FACILITIES IN THE CLOSE PROXIMITY OF THE SITE	LLA 顧問有限公司 Consultancy Limited	
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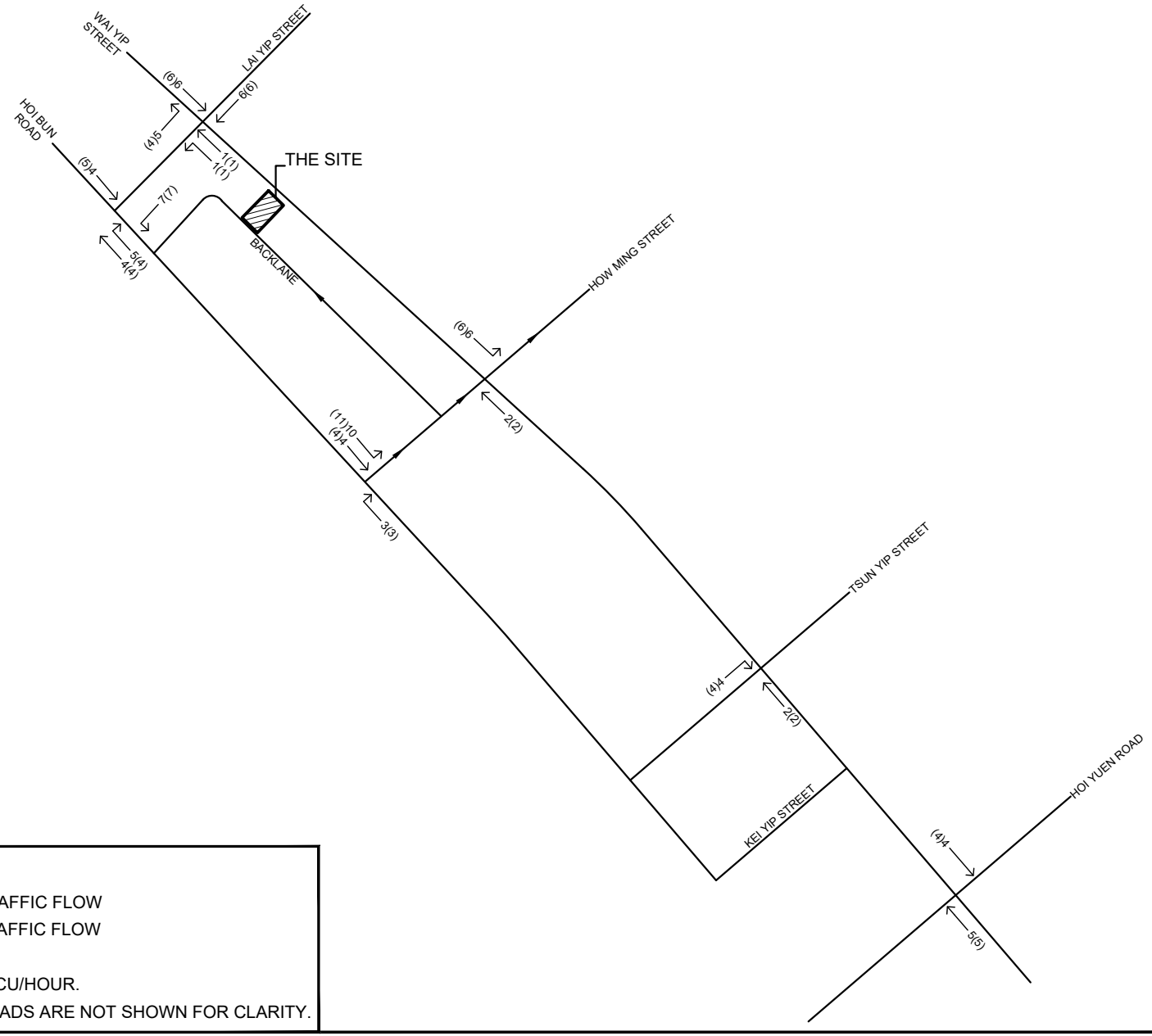

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123 (456) ⟵ PM PEAK HOUR TRAFFIC FLOW

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NOTES:

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PROJECT NO. 41074	PROJECT TITLE PROPOSED WHOLESALE CONVERSION OF EXISTING BUILDING INTO HOTEL / STUDENT HOSTEL DEVELOPMENT AT 118 WAI YIP STREET, KWUN TONG, KOWLOON	DRAWING NO. FIGURE 4.1	REV. -
DESIGNED SKL / DATE AUG 2026	DRAWING TITLE		
DRAWN CLL / SCALE N.T.S.	DEVELOPMENT TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	
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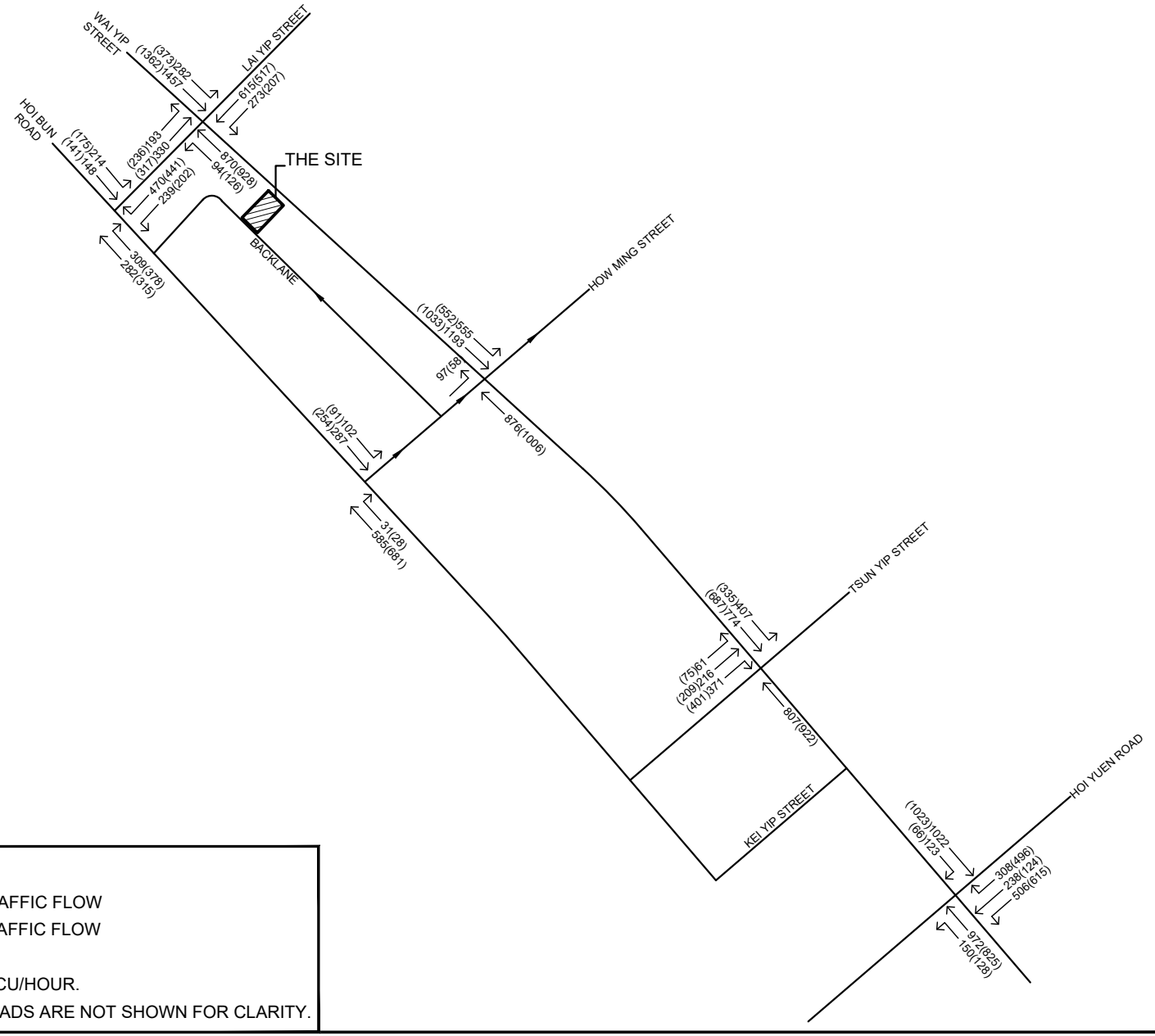

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123 (456) ⟵ PM PEAK HOUR TRAFFIC FLOW

↑ AM PEAK HOUR TRAFFIC FLOW

NOTES:

1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR.
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PROJECT NO. 41074	PROJECT TITLE: PROPOSED WHOLESALE CONVERSION OF EXISTING BUILDING INTO HOTEL / STUDENT HOSTEL DEVELOPMENT AT 118 WAI YIP STREET, KWUN TONG, KOWLOON	DRAWING NO. FIGURE 4.2	REV. -
DESIGNED SKL / DATE AUG 2026	DRAWING TITLE: **2031 REFERENCE TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited	
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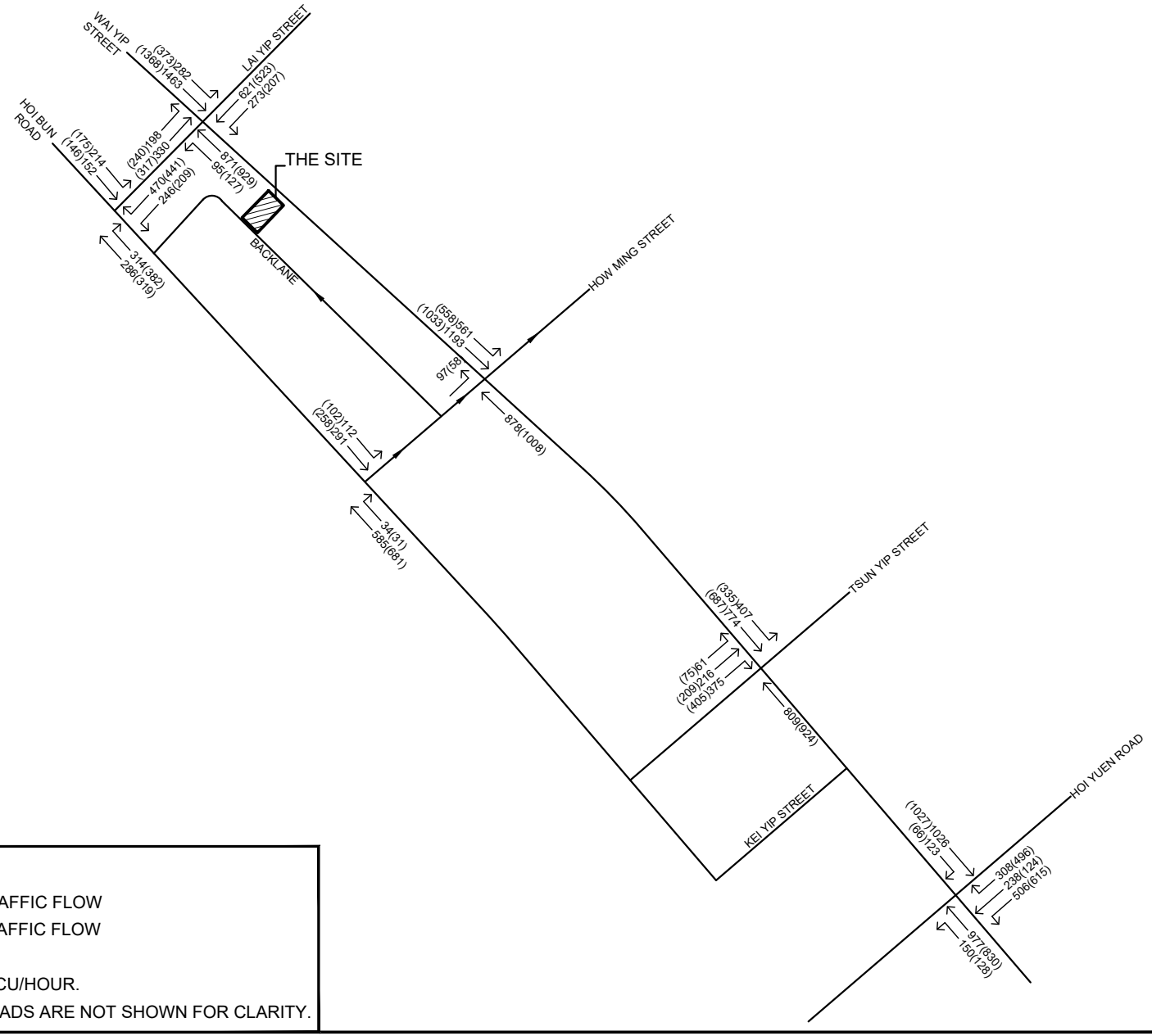

LEGEND:

123 (456) ⟵ PM PEAK HOUR TRAFFIC FLOW

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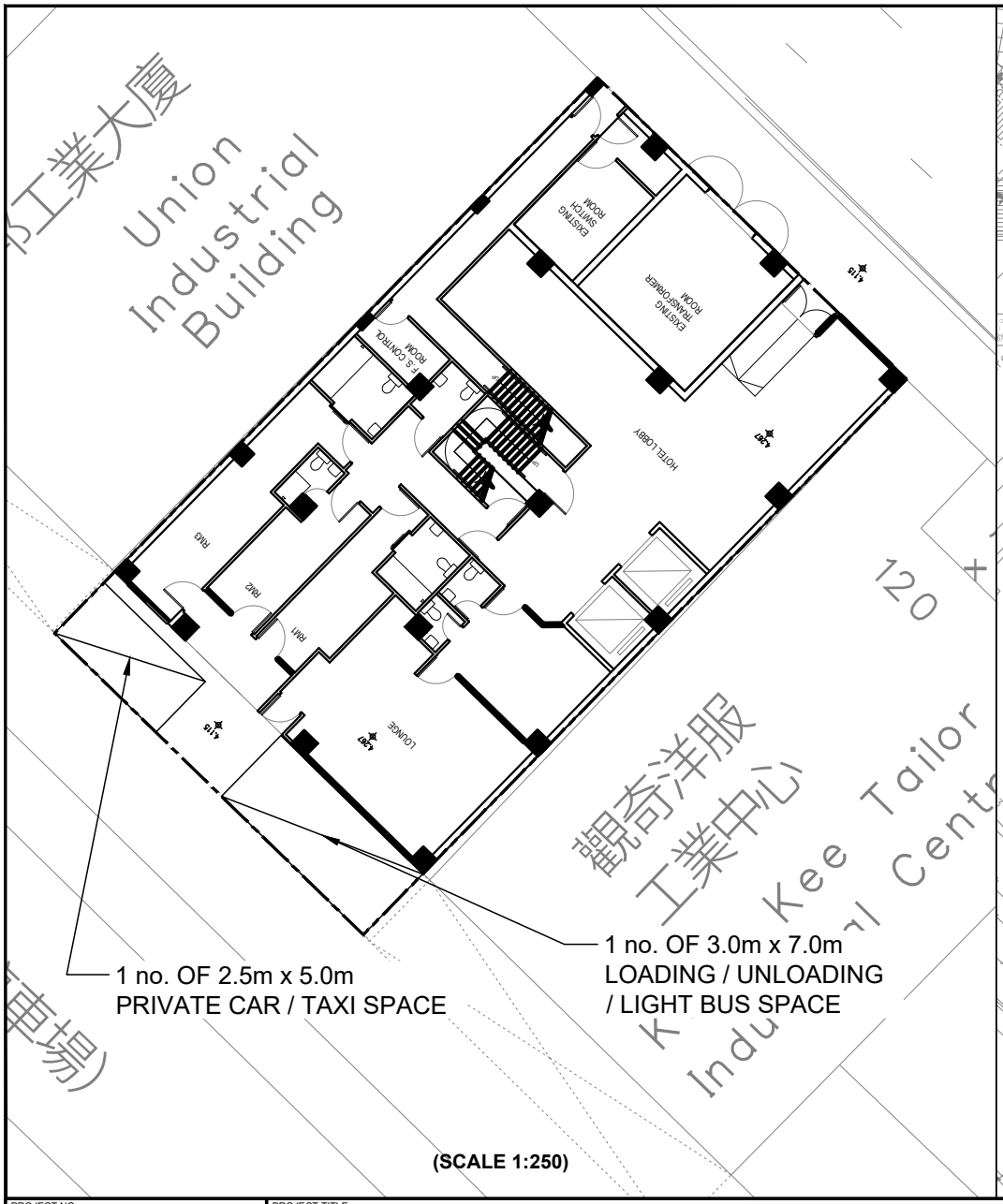
2. TRAFFIC FLOWS AT MINOR ROADS ARE NOT SHOWN FOR CLARITY.

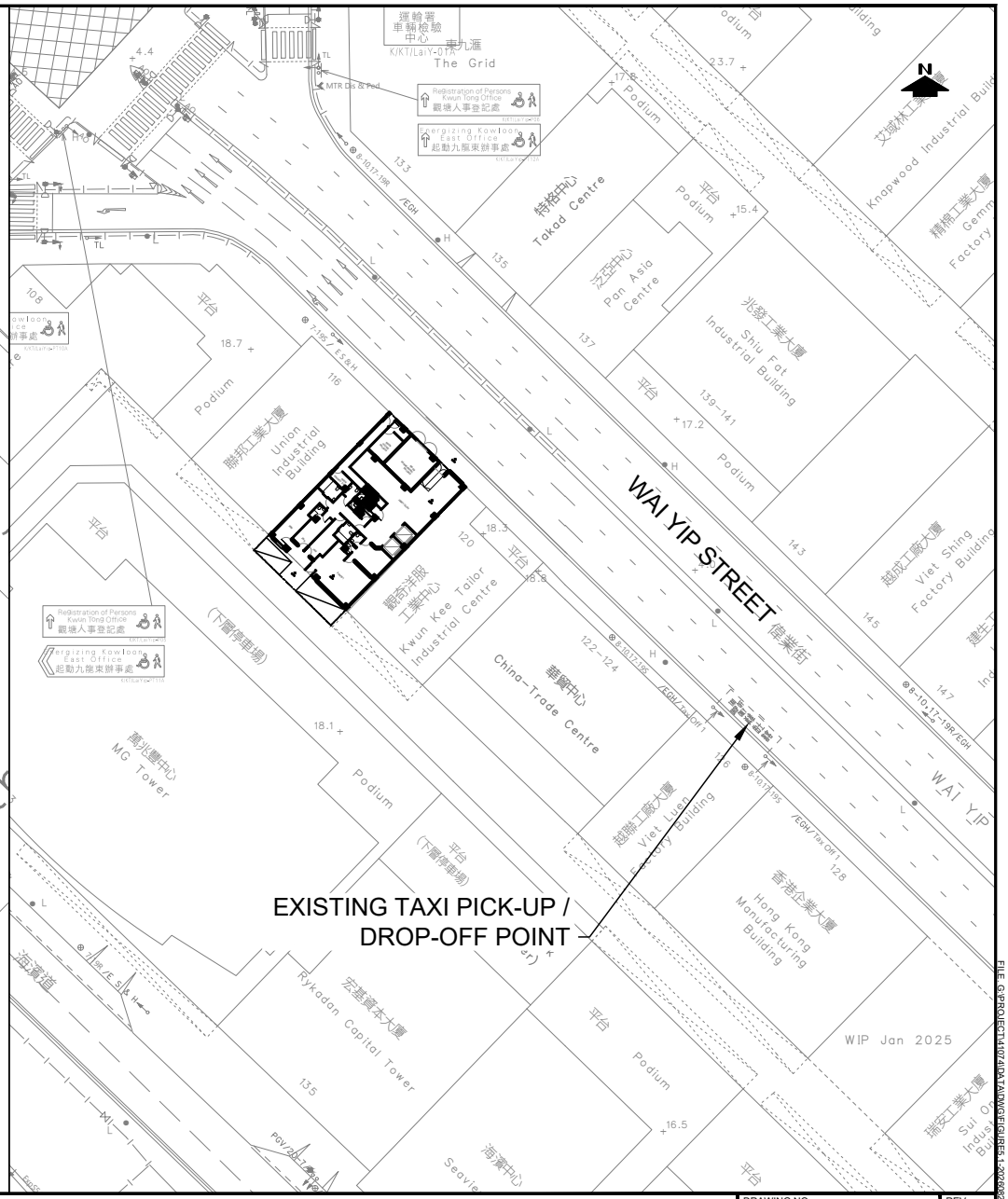
PROJECT NO. 41074	PROJECT TITLE: PROPOSED WHOLESALE CONVERSION OF EXISTING BUILDING INTO HOTEL / STUDENT HOSTEL DEVELOPMENT AT 118 WAI YIP STREET, KWUN TONG, KOWLOON	DRAWING NO. FIGURE 4.3	REV. -
DESIGNED SKL / DATE AUG 2026	DRAWING TITLE: **2031 DESIGN TRAFFIC FLOWS**	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN			

FILE. G:\PROJECT\41074\DATA\DWG\FIGURE4.3.DWG PLOT SCALE : 1 = 1

FILE. G:\PROJECT\41074\DATA\DWG\FIGURE4.3.DWG PLOT SCALE : 1 = 1



(SCALE 1:250)



PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
41074	PROPOSED WHOLESALE CONVERSION OF EXISTING BUILDING INTO HOTEL DEVELOPMENT AT 118 WAI YIP STREET, KWUN TONG, KOWLOON	FIGURE 5.1	-

DESIGNED SKL	DATE AUG 2026	DRAWING TITLE
DRAWN CLL	SCALE 1:1000 @ A4	**PROPOSED CAR PARK FLOOR LAYOUT**
CHECKED SLN		

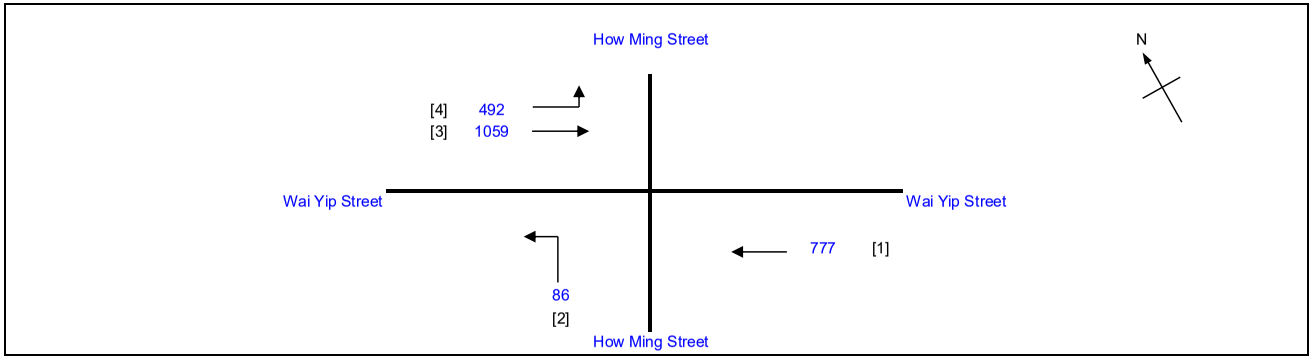
LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\41074\DATA\DWG\FIGURE5.1-20260828.DWG PLOT SCALE : 1 = 1

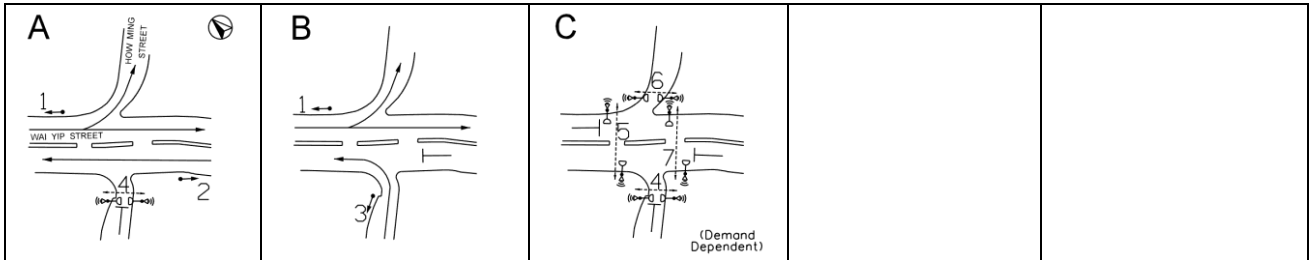
Appendix A

Junction Calculation Sheets
- Existing Scenario

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2025 Existing AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J1_WYS_HMS.xlsx	Checked By:	SLN	Aug-26
J1 Wai Yip Street/ How Ming Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	118 sec
Sum(y)		Y =	0.314
Loss time		L =	51 sec
Total Flow		=	2414 pcu
Co	= (1.5*L+5)/(1-Y)	=	118.8 sec
Cm	= L/(1-Y)	=	74.3 sec
Yult		=	0.518
R.C.ult	= (Yult-Y)/Y*100%	=	64.8 %
Cp	= 0.9*L/(0.9-Y)	=	78.3 sec
Ymax	= 1-L/C	=	0.568
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**63 %**



Stage 1	G= 55	Stage 2	G= 11	Stage 3	G= 42
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P4	1,3	5	7	3	94	7
P5	3	10	9	6	29	9
P6	3	5	7	5	32	7
P7	3	9	8	6	30	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
1	1	3.00	3				6165		777		777	0.00	6165			0.9	-617			5548	0.140			30	55	0.553	38	36
2	2	3.00	1	15		N	1915	86			86	1.00	1741			0.9	-174			1567	0.055			12	12	0.553	12	58
3	1,2	3.00	2				4110		1059		1059	0.00	4110			0.9	-411			3699	0.286			61	67	0.553	48	18
4	1,2	3.00	1	15		N	1915	492			492	1.00	1741			0.9	-174			1567	0.314	0.314		67	67	0.553	36	17
PED	3																						42					

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

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
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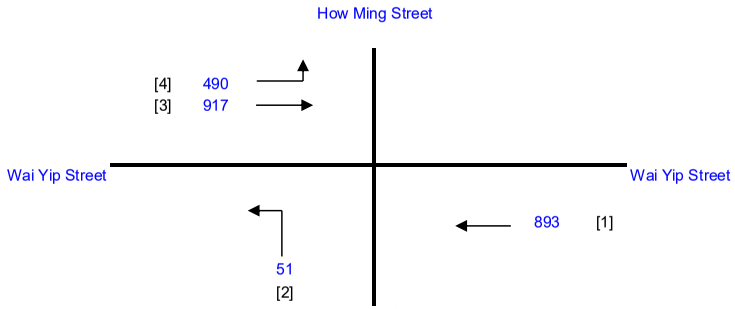
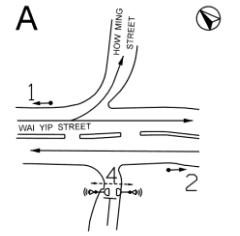
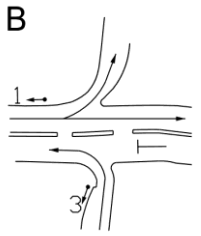
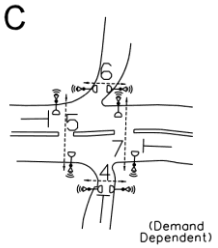
		FILENAME : J1_WYS_HMS.xlsx	Checked By:	SLN	Aug-26
J1 Wai Yip Street/ How Ming Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	108 sec
Sum(y)		Y =	0.313
Loss time		L =	45 sec
Total Flow		=	2351 pcu
Co	= (1.5*L+5)/(1-Y)	=	105.5 sec
Cm	= L/(1-Y)	=	65.5 sec
Yult		=	0.563
R.C.ult	= (Yult-Y)/Y*100%	=	79.9 %
Cp	= 0.9*L/(0.9-Y)	=	69.0 sec
Ymax	= 1-L/C	=	0.583
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**68 %**







Stage 1	G= 56	Stage 2	G= 6	Stage 3	G= 36
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P4	1,3	5	7	3	89	7
P5	3	10	9	6	23	9
P6	3	5	7	5	26	7
P7	3	9	8	6	24	8

Movement	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
1	1	3.00	3				6165		893		893	0.00	6165			0.9	-617			5548	0.161			32	56	0.536	36	29
2	2	3.00	1	15		N	1915	51			51	1.00	1741			0.9	-174			1567	0.033			7	7	0.536	6	64
3	1,2	3.00	2				4110		917		917	0.00	4110			0.9	-411			3699	0.248			50	63	0.536	42	20
4	1,2	3.00	1	15		N	1915	490			490	1.00	1741			0.9	-174			1567	0.313	0.313		63	63	0.536	36	14
PED	3																						36					

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

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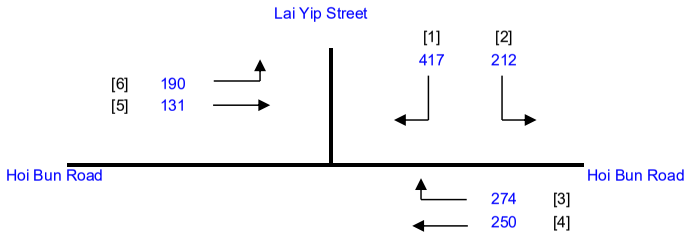
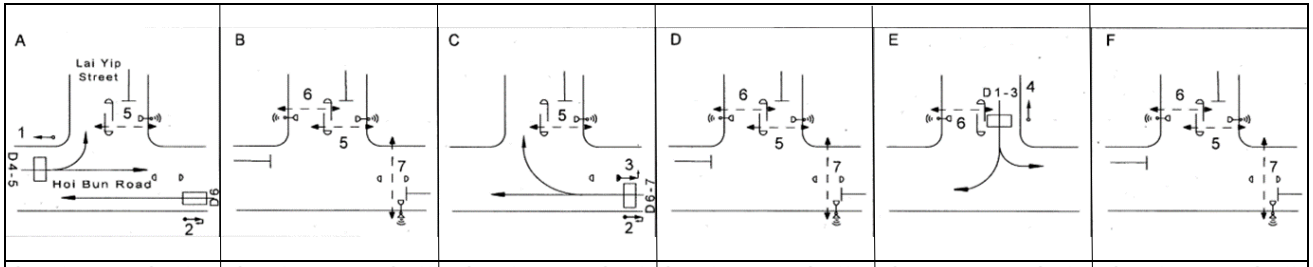
		FILENAME : J2_HBR_LYS.xlsx	Checked By:	SLN	Aug-26
J2 Hoi Bun Road/ Lai Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	6
Cycle time		C =	354 sec
Sum(y)		Y =	0.370
Loss time		L =	148 sec
Total Flow		=	1474 pcu
Co	= (1.5*L+5)/(1-Y)	=	360.3 sec
Cm	= L/(1-Y)	=	234.9 sec
Yult		=	-0.210
R.C.ult	= (Yult-Y)/Y*100%	=	-156.7 %
Cp	= 0.9*L/(0.9-Y)	=	251.3 sec
Ymax	= 1-L/C	=	0.582
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**42 %**



Stage 1	G = 59	Stage 2	G = 69	Stage 3	G = 79	Stage 4	G = 19	Stage 5	G = 65	Stage 6	G = 19
	Int = 9		Int = 6		Int = 9		Int = 3		Int = 15		Int = 2

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P5	1,2,3,4,6	12	9	3	262	9
P6	2,4,5,6	7	6	5	187	6
P7	2,4,6	7	8	4	106	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							41					
5	1	3.40	1				2095		131		131	0.00	2095							2095	0.063			35	60	0.636	66	152
6	1	3.40	1	15		N	1955	190			190	1.00	1777							1777	0.107	0.107		60	60	0.636	90	133
4	1,3	3.40	1			N	1955		250		250	0.00	1955							1955	0.128			71	140	0.636	114	124
3	3	3.40	1	15			2095			274	274	1.00	1905							1905	0.144	0.144		80	80	0.636	120	118
1	5	3.40	2				4190		417		417	0.00	4190							4190	0.100			55	66	0.636	102	130
2	5	3.40	1	15		N	1955	212			212	1.00	1777							1777	0.119	0.119		66	66	0.636	96	128
PED	2																						69					
PED	4*																						19					
PED	6*																						19					

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

* According to on-site observation, Stage 4 and 6 are called around every 3 cycle(s)

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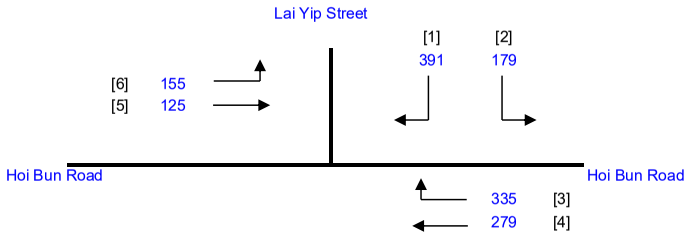
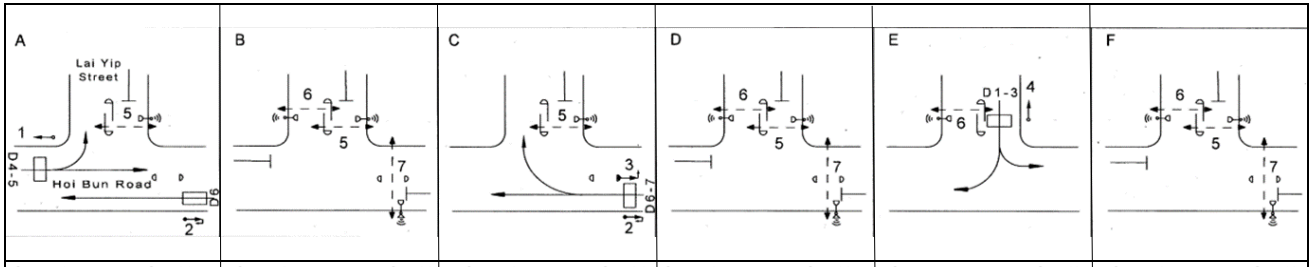
		FILENAME : J2_HBR_LYS.xlsx	Checked By:	SLN	Aug-26
J2 Hoi Bun Road/ Lai Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	6
Cycle time		C =	324 sec
Sum(y)		Y =	0.364
Loss time		L =	148 sec
Total Flow		=	1464 pcu
Co	= (1.5*L+5)/(1-Y)	=	356.8 sec
Cm	= L/(1-Y)	=	232.6 sec
Yult		=	-0.210
R.C.ult	= (Yult-Y)/Y*100%	=	-157.7 %
Cp	= 0.9*L/(0.9-Y)	=	248.4 sec
Ymax	= 1-L/C	=	0.543
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**34 %**



Stage 1	G = 41	Stage 2	G = 69	Stage 3	G = 84	Stage 4	G = 19	Stage 5	G = 48	Stage 6	G = 19
	Int = 9		Int = 6		Int = 9		Int = 3		Int = 15		Int = 2

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P5	1,2,3,4,6	12	9	3	249	9
P6	2,4,5,6	7	6	5	170	6
P7	2,4,6	7	8	4	106	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							41					
5	1	3.40	1				2095		125		125	0.00	2095							2095	0.060			29	42	0.670	60	146
6	1	3.40	1	15		N	1955	155			155	1.00	1777							1777	0.087	0.087		42	42	0.670	72	135
4	1,3	3.40	1			N	1955		279		279	0.00	1955							1955	0.143			69	127	0.670	114	113
3	3	3.40	1	15			2095			335	335	1.00	1905							1905	0.176	0.176		85	85	0.670	132	103
1	5	3.40	2				4190		391		391	0.00	4190							4190	0.093			45	49	0.670	90	125
2	5	3.40	1	15		N	1955	179			179	1.00	1777							1777	0.101	0.101		49	49	0.670	78	129
PED	2																						69					
PED	4*																						19					
PED	6*																						19					

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

* According to on-site observation, Stage 4 and 6 are called around every 3 cycle(s)

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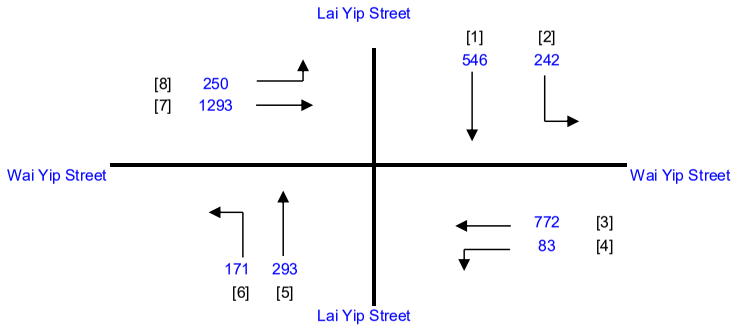
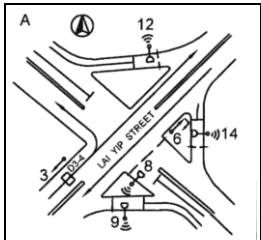
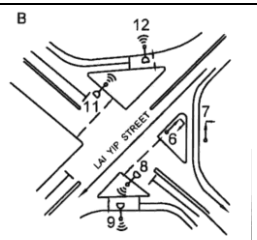
		FILENAME : J3_WYS_LYS.xlsx	Checked By:	SLN	Aug-26
J3 Wai Yip Street/ Lai Yip Street			Reviewed By:	SLN	Aug-26



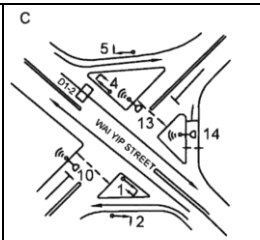
No. of stages per cycle		N =	3
Cycle time		C =	120 sec
Sum(y)		Y =	0.565
Loss time		L =	7 sec
Total Flow		=	3650 pcu
Co	= (1.5*L+5)/(1-Y)	=	35.6 sec
Cm	= L/(1-Y)	=	16.1 sec
Yult		=	0.848
R.C.ult	= (Yult-Y)/Y*100%	=	50.0 %
Cp	= 0.9*L/(0.9-Y)	=	18.8 sec
Ymax	= 1-L/C	=	0.942
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**50 %**



Stage 1 G= 23
Int = 5



Stage 2 G= 33
Int = 5



Stage 3 G= 54
Int = 5

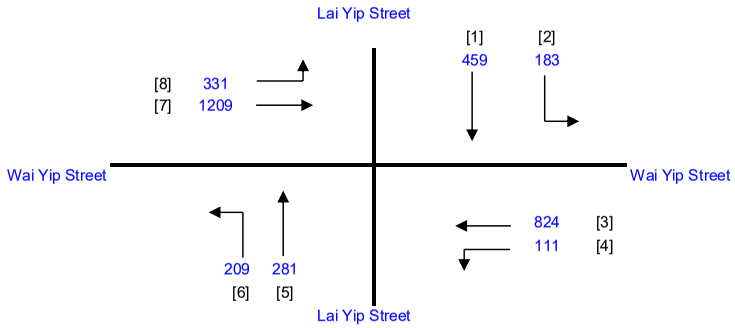
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P8	1,2	11	11	4	51	11
P9	1,2	5	7	2	57	7
P10	3	12	11	5	43	11
P11	2	12	11	6	21	11
P12	1,2	5	7	3	56	7
P13	3	11	10	1	48	10
P14	1,3	5	7	3	77	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							7					
7	3	3.40	2				4190		1151		1151	0.00	4190							4190	0.275	0.275		55	55	0.600	60	23
7,8*	3	3.40	1	10		N	1955	250	142		392	0.64	1784			0.8	-357			1427	0.275			55	55	0.600	42	26
3	3	3.40	2				4190		632		632	0.00	4190							4190	0.151			30	55	0.600	45	38
3,4	3	3.40	1	10		N	1955	83	140		223	0.37	1852			0.8	-370			1482	0.151			30	55	0.600	30	42
1	1,2	3.40	2				4190		546		546	0.00	4190							4190	0.130			26	58	0.600	42	41
2	2	3.40	1	15		N	1955	242			242	1.00	1777			0.8	-355			1422	0.170	0.170		34	34	0.600	30	39
5	1	3.40	1				2095		293		293	0.00	2095	16	400					2495	0.117			23	24	0.600	42	45
6	1	3.40	1	4		N	1955	171			171	1.00	1422							1422	0.120	0.120		24	24	0.600	24	48

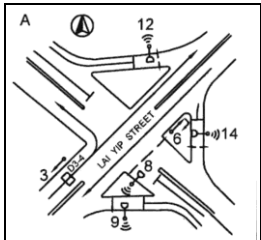
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

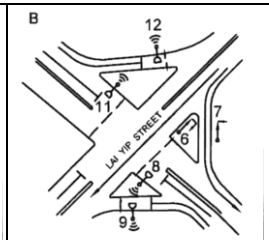
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2025 Existing PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J3_WYS_LYS.xlsx	Checked By:	SLN	Aug-26
J3 Wai Yip Street/ Lai Yip Street			Reviewed By:	SLN	Aug-26



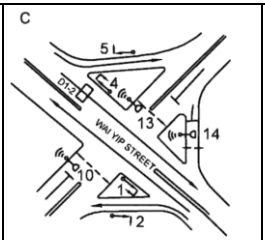
No. of stages per cycle		N =	3
Cycle time		C =	108 sec
Sum(y)		Y =	0.552
Loss time		L =	7 sec
Total Flow		=	3607 pcu
Co	= (1.5*L+5)/(1-Y)	=	34.6 sec
Cm	= L/(1-Y)	=	15.6 sec
Yult		=	0.848
R.C.ult	= (Yult-Y)/Y*100%	=	53.5 %
Cp	= 0.9*L/(0.9-Y)	=	18.1 sec
Ymax	= 1-L/C	=	0.935
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**52 %**



Stage 1 G= 26
Int = 5



Stage 2 G= 23
Int = 5



Stage 3 G= 50
Int = 5

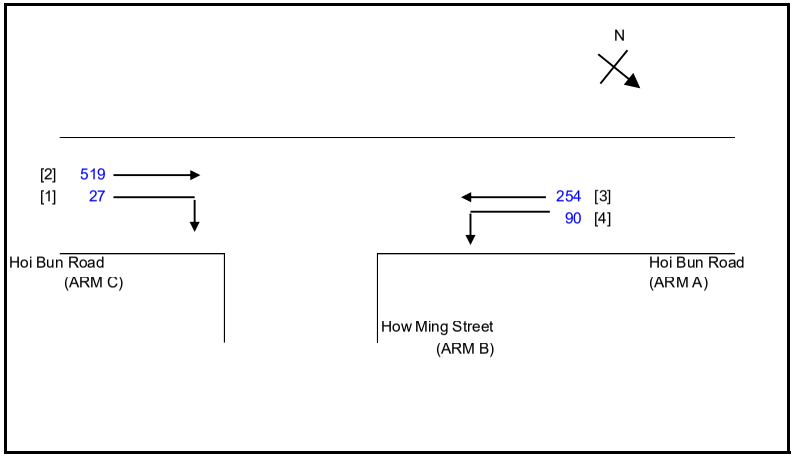
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P8	1,2	11	11	4	43	11
P9	1,2	5	7	2	49	7
P10	3	12	11	5	39	11
P11	2	12	11	6	11	11
P12	1,2	5	7	3	48	7
P13	3	11	10	1	44	10
P14	1,3	5	7	3	75	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							7					
7	3	3.40	2				4190		1158		1158	0.00	4190							4190	0.276	0.276		51	51	0.590	54	20
7,8*	3	3.40	1	10		N	1955	331	51		382	0.87	1730			0.8	-346			1384	0.276			50	51	0.590	36	23
3	3	3.40	2				4190		693		693	0.00	4190							4190	0.165			30	51	0.590	42	32
3,4	3	3.40	1	10		N	1955	111	131		242	0.46	1829			0.8	-366			1463	0.165			30	51	0.590	30	36
1	1,2	3.40	2				4190		459		459	0.00	4190							4190	0.110			20	50	0.590	33	39
2	2	3.40	1	15		N	1955	183			183	1.00	1777			0.8	-355			1422	0.129	0.129		24	24	0.590	24	42
5	1	3.40	1				2095		281		281	0.00	2095	16	356					2451	0.115			21	27	0.590	36	41
6	1	3.40	1	4		N	1955	209			209	1.00	1422							1422	0.147	0.147		27	27	0.590	24	39

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

* Site factor is adopted to consider kerbside activities

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2025 Existing AM**	PROJECT NO.: 41074	PREPARED BY:	SKL	Aug-26
		FILENAME : J4_HBR_HMS	CHECKED BY:	SLN	Aug-26
J4 Hoi Bun Road / How Ming Street		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-26



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	9.0	(metres)
W cr	=	0	(metres)
q a-b	=	90	(pcu/hr)
q a-c	=	254	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.80	(metres)
Vr c-b	=	91	(metres)
q c-a	=	519	(pcu/hr)
q c-b	=	27	(pcu/hr)

MINOR ROAD (ARM B)

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

GEOMETRIC FACTORS :

D	=	0.533219
E	=	0.585955
F	=	0.987632
Y	=	0.6895
F for (Qb-ac)	=	

THE CAPACITY OF MOVEMENT :

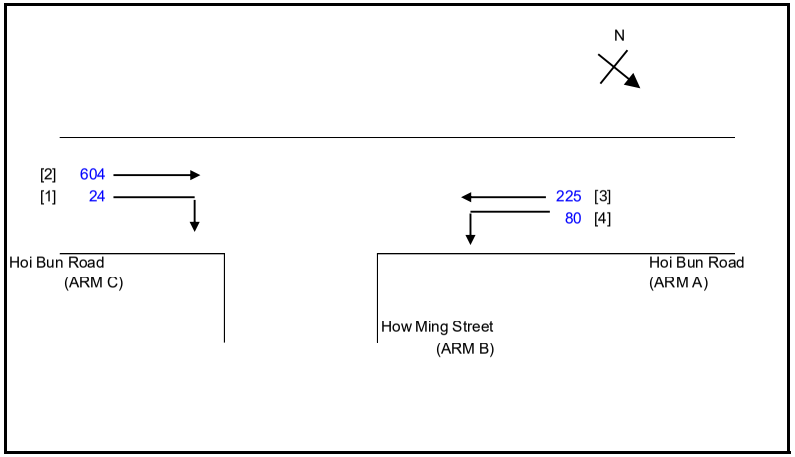
Q b-a	=	247		
Q b-c	=	394	Q b-c (O) =	394
Q c-b	=	651		
Q b-ac	=			
TOTAL FLOW	=	890	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.0415

CRITICAL DFC = 0.04

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2025 Existing PM**	PROJECT NO.: 41074	PREPARED BY:	SKL	Aug-26
		FILENAME : J4_HBR_HMS	CHECKED BY:	SLN	Aug-26
J4 Hoi Bun Road / How Ming Street		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-26



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	9.0	(metres)
W cr	=	0	(metres)
q a-b	=	80	(pcu/hr)
q a-c	=	225	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.80	(metres)
Vr c-b	=	91	(metres)
q c-a	=	604	(pcu/hr)
q c-b	=	24	(pcu/hr)

MINOR ROAD (ARM B)

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

GEOMETRIC FACTORS :

D	=	0.533219
E	=	0.585955
F	=	0.987632
Y	=	0.6895
F for (Qb-ac)	=	

THE CAPACITY OF MOVEMENT :

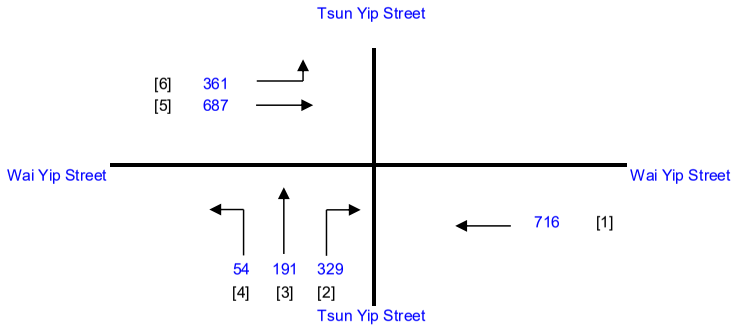
Q b-a	=	245		
Q b-c	=	399	Q b-c (O) =	399
Q c-b	=	660		
Q b-ac	=			
TOTAL FLOW	=	933	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

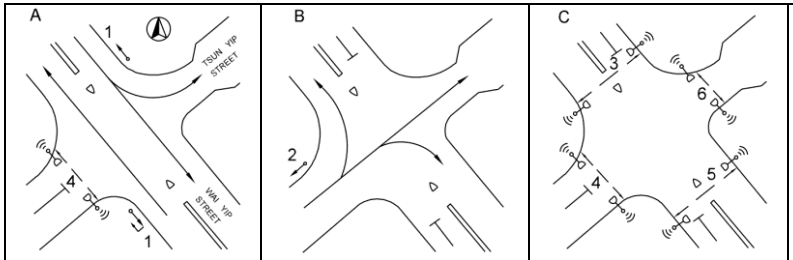
DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.0364

CRITICAL DFC = 0.04

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2025 Existing AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J5_WYS_TYS.xlsx	Checked By:	SLN	Aug-26
J5 Wai Yip Street / Tsun Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	118 sec
Sum(y)		Y =	0.294
Loss time		L =	42 sec
Total Flow		=	2338 pcu
Co	= (1.5*L+5)/(1-Y)	=	96.3 sec
Cm	= L/(1-Y)	=	59.5 sec
Yult		=	0.585
R.C.ult	= (Yult-Y)/Y*100%	=	99.0 %
Cp	= 0.9*L/(0.9-Y)	=	62.4 sec
Ymax	= 1-L/C	=	0.644
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**97 %**



Stage 1	G= 50	Stage 2	G= 24	Stage 3	G= 31
	Int = 7		Int = 4		Int = 2

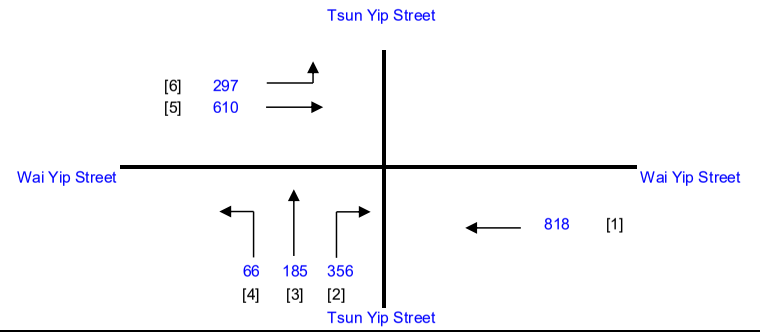
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P3	3	9	8	6	19	8
P4	1,3	14	14	2	74	14
P5	3	9	8	7	18	8
P6	3	12	12	4	17	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							11					
1	1	3.50	3			N	6175		716		716	0.00	6175			0.8	-1235			4940	0.145			37	51	0.457	32	30
5	1	3.00	1				2055		402		402	0.00	2055							2055	0.196	0.196		51	51	0.457	42	23
5,6	1	3.00	1	10			2055	101	285		386	0.26	1977							1977	0.195			50	51	0.457	42	23
6	1	3.00	1	10		N	1915	260			260	1.00	1665			0.8	-333			1332	0.195			50	51	0.457	24	24
2	2	3.50	1	18			2105			191	191	1.00	1943							1943	0.098			25	25	0.457	24	40
2,3	2	3.50	1	18			2105		57	138	195	0.71	1988							1988	0.098			25	25	0.457	30	39
3,4	2	3.50	1	15		N	1965	54	134		188	0.29	1910							1910	0.098	0.098		25	25	0.457	24	40
PED	3																						31					

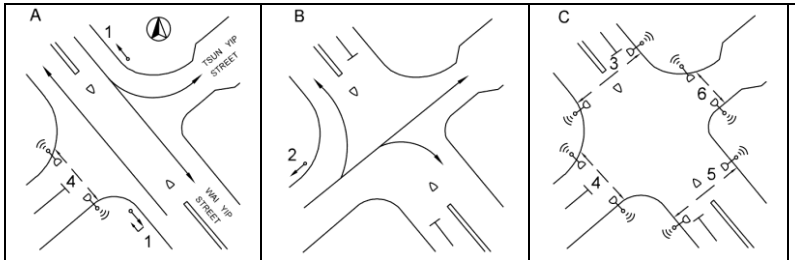
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2025 Existing PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J5_WYS_TYS.xlsx	Checked By:	SLN	Aug-26
J5 Wai Yip Street / Tsun Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	108 sec
Sum(y)		Y =	0.274
Loss time		L =	39 sec
Total Flow		=	2332 pcu
Co	= (1.5*L+5)/(1-Y)	=	87.4 sec
Cm	= L/(1-Y)	=	53.7 sec
Yult		=	0.608
R.C.ult	= (Yult-Y)/Y*100%	=	121.9 %
Cp	= 0.9*L/(0.9-Y)	=	56.1 sec
Ymax	= 1-L/C	=	0.639
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**110 %**



Stage 1	G= 42	Stage 2	G= 25	Stage 3	G= 28
	Int = 7		Int = 4		Int = 2

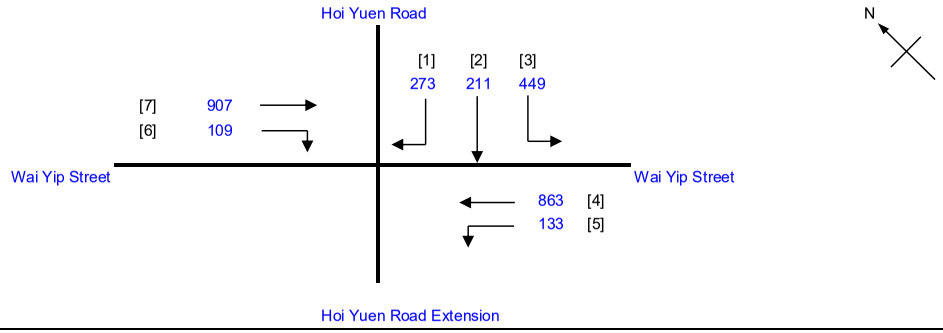
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P3	3	9	8	6	16	8
P4	1,3	14	14	2	63	14
P5	3	9	8	7	15	8
P6	3	12	12	4	14	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							11					
1	1	3.50	3			N	6175		818		818	0.00	6175			0.8	-1235			4940	0.166			42	43	0.429	30	23
5	1	3.00	1				2055		348		348	0.00	2055							2055	0.169	0.169		43	43	0.429	36	23
5,6	1	3.00	1	10			2055	72	262		334	0.22	1991							1991	0.168			42	43	0.429	36	23
6	1	3.00	1	10		N	1915	225			225	1.00	1665			0.8	-333			1332	0.169			43	43	0.429	24	24
2	2	3.50	1	18			2105			202	202	1.00	1943							1943	0.104			26	26	0.429	24	34
2,3	2	3.50	1	18			2105		53	154	207	0.74	1982							1982	0.104	0.104		26	26	0.429	24	34
3,4	2	3.50	1	15		N	1965	66	132		198	0.33	1902							1902	0.104			26	26	0.429	24	34
PED	3																						28					

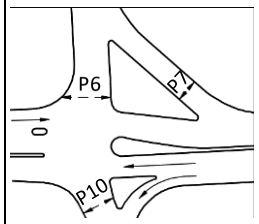
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

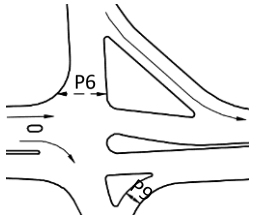
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2025 Existing AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J6_WYS_HYR.xlsx	Checked By:	SLN	Aug-26
J6 Wai Yip Street / Hoi Yuen Road			Reviewed By:	SLN	Aug-26



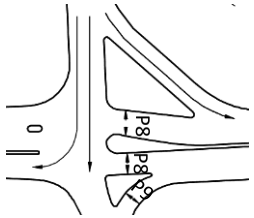
No. of stages per cycle		N =	3
Cycle time		C =	120 sec
Sum(y)		Y =	0.507
Loss time		L =	9 sec
Total Flow		=	2945 pcu
Co	= (1.5*L+5)/(1-Y)	=	37.5 sec
Cm	= L/(1-Y)	=	18.2 sec
Yult		=	0.833
R.C.ult	= (Yult-Y)/Y*100%	=	64.3 %
Cp	= 0.9*L/(0.9-Y)	=	20.6 sec
Ymax	= 1-L/C	=	0.925
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**64 %**



Stage 1 G= 45
Int =



Stage 2 G= 43
Int = 6



Stage 3 G= 21
Int = 5

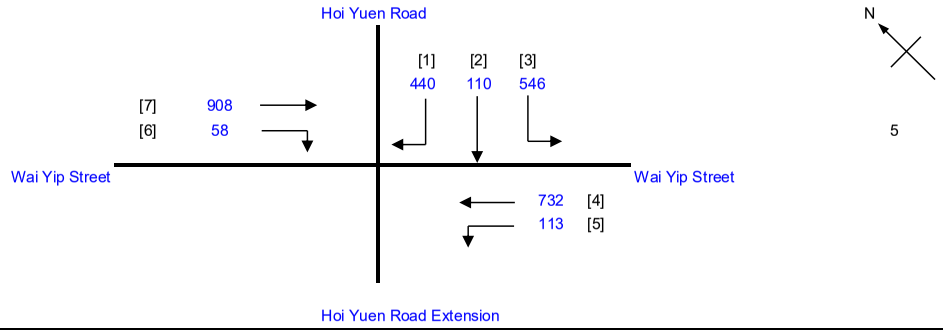
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P6	1,2	5	11	2	81	11
P7	1	5	11	2	32	11
P8	3	13	7	5	14	7
P9	2,3	5	7	2	66	7
P10	1	7	14	6	25	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
7	1,2	3.50	1			N	1965		797		797	0.00	1965							1965	0.406	0.406		89	89	0.548	36	7
Flared Lane *									110																			
6	2	3.50	2	18			4210			109	109	1.00	3886							3886	0.028			6	44	0.548	9	60
4	1	3.50	2				4210		863		863	0.00	4210							4210	0.205			45	45	0.548	54	28
5	1	3.50	1	18		N	1965	133			133	1.00	1814							1814	0.073			16	45	0.548	18	52
3	2,3	3.50	1	15		N	1965	449			449	1.00	1786							1786	0.251			55	66	0.548	48	24
1,2	3	3.30	1	25			2085		211	0	211	0.00	2085							2085	0.101	0.101		22	22	0.548	30	45
1	3	3.30	1	20		N	1945			166	166	1.00	1809							1809	0.092			20	22	0.548	24	48
Flared Lane *										107																		

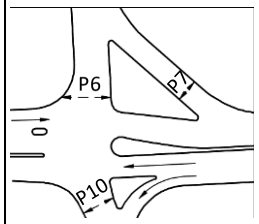
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Remarks: Flows of Wai Yip Street eastbound straight-ahead movement and Hoi Yuen Road southbound right-turning movement are deducted by flows capacity of the flared lane.

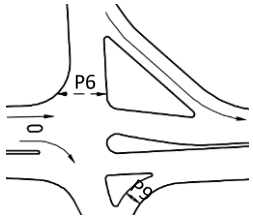
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2025 Existing PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J6_WYS_HYR.xlsx	Checked By:	SLN	Aug-26
J6 Wai Yip Street / Hoi Yuen Road			Reviewed By:	SLN	Aug-26



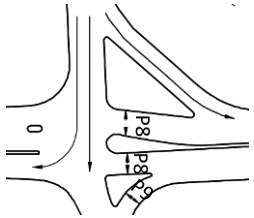
No. of stages per cycle	N =	3
Cycle time	C =	120 sec
Sum(y)	Y =	0.522
Loss time	L =	9 sec
Total Flow	=	2907 pcu
Co = (1.5*L+5)/(1-Y)	=	38.7 sec
Cm = L/(1-Y)	=	18.8 sec
Yult	=	0.833
R.C.ult = (Yult-Y)/Y*100%	=	59.5 %
Cp = 0.9*L/(0.9-Y)	=	21.4 sec
Ymax = 1-L/C	=	0.925
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**60 %**



Stage 1 G= 37
Int =



Stage 2 G= 48
Int = 6



Stage 3 G= 24
Int = 5

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P6	1,2	5	11	2	78	11
P7	1	5	11	2	24	11
P8	3	13	7	5	17	7
P9	2,3	5	7	2	74	7
P10	1	7	14	6	17	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
7	1,2	3.50	1			N	1965		798		798	0.00	1965							1965	0.406	0.406		86	86	0.564	42	9
Flared Lane *									110																			
6	2	3.50	2	18			4210			58	58	1.00	3886							3886	0.015			3	49	0.564	6	72
4	1	3.50	2				4210		732		732	0.00	4210							4210	0.174			37	37	0.564	48	33
5	1	3.50	1	18		N	1965	113			113	1.00	1814							1814	0.062			13	37	0.564	18	56
3	2,3	3.50	1	15		N	1965	546			546	1.00	1786							1786	0.306			65	74	0.564	48	19
1,2	3	3.30	1	25			2085		110	124	234	0.53	2021							2021	0.116	0.116		25	25	0.564	36	44
1	3	3.30	1	20		N	1945			209	209	1.00	1809							1809	0.116			25	25	0.564	30	44
Flared Lane *										107																		

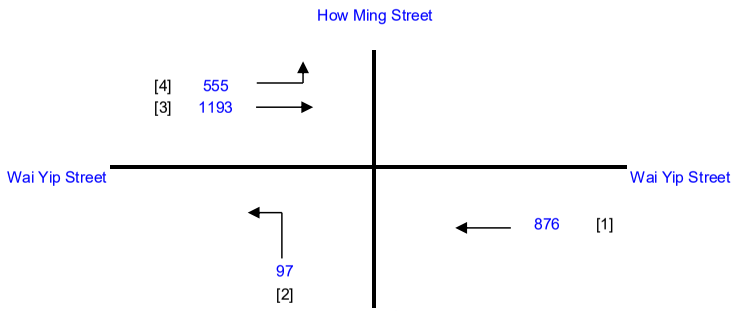
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Remarks: Flows of Wai Yip Street eastbound straight-ahead movement and Hoi Yuen Road southbound right-turning movement are deducted by flows capacity of the flared lane.

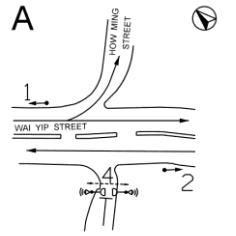
Appendix B

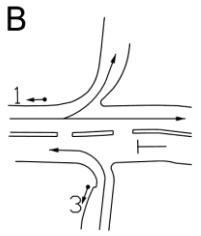
Junction Calculation Sheets
- Reference & Design Scenarios

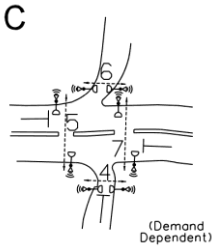
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J1_WYS_HMS.xlsx	Checked By:	SLN	Aug-26
J1 Wai Yip Street/ How Ming Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	118 sec
Sum(y)		Y =	0.354
Loss time		L =	51 sec
Total Flow		=	2721 pcu
Co	= (1.5*L+5)/(1-Y)	=	126.2 sec
Cm	= L/(1-Y)	=	79.0 sec
Yult		=	0.518
R.C.ult	= (Yult-Y)/Y*100%	=	46.1 %
Cp	= 0.9*L/(0.9-Y)	=	84.1 sec
Ymax	= 1-L/C	=	0.568
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**44 %**







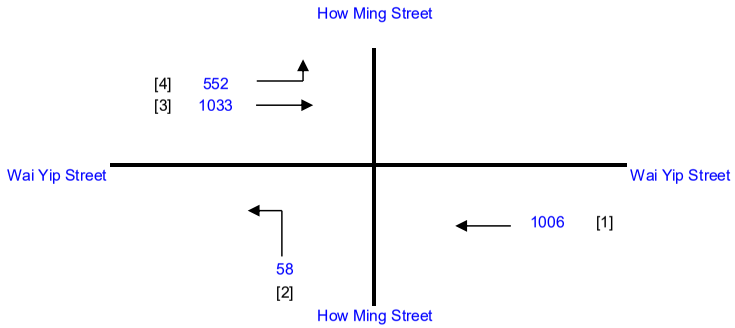
Stage 1	G= 55	Stage 2	G= 11	Stage 3	G= 42
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P4	1,3	5	7	3	94	7
P5	3	10	9	6	29	9
P6	3	5	7	5	32	7
P7	3	9	8	6	30	8

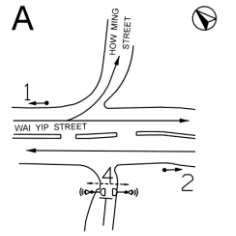
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
1	1	3.00	3				6165		876		876	0.00	6165			0.9	-617			5548	0.158			30	55	0.624	42	37
2	2	3.00	1	15		N	1915	97			97	1.00	1741			0.9	-174			1567	0.062			12	12	0.624	18	63
3	1,2	3.00	2				4110		1193		1193	0.00	4110			0.9	-411			3699	0.323			61	67	0.624	54	20
4	1,2	3.00	1	15		N	1915	555			555	1.00	1741			0.9	-174			1567	0.354	0.354		67	67	0.624	42	18
PED	3																						42					

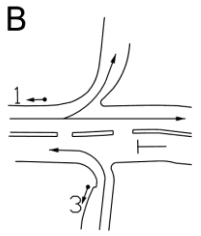
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

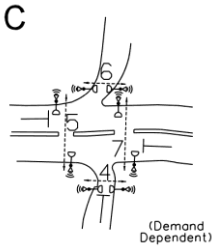
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J1_WYS_HMS.xlsx	Checked By:	SLN	Aug-26
J1 Wai Yip Street/ How Ming Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	108 sec
Sum(y)		Y =	0.352
Loss time		L =	45 sec
Total Flow		=	2649 pcu
Co	= (1.5*L+5)/(1-Y)	=	111.9 sec
Cm	= L/(1-Y)	=	69.5 sec
Yult		=	0.563
R.C.ult	= (Yult-Y)/Y*100%	=	59.7 %
Cp	= 0.9*L/(0.9-Y)	=	73.9 sec
Ymax	= 1-L/C	=	0.583
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**49 %**







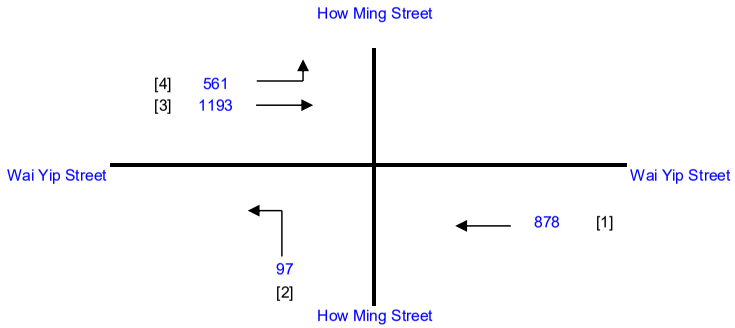
Stage 1	G= 56	Stage 2	G= 6	Stage 3	G= 36
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P4	1,3	5	7	3	89	7
P5	3	10	9	6	23	9
P6	3	5	7	5	26	7
P7	3	9	8	6	24	8

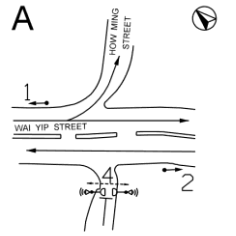
Movement	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
1	1	3.00	3				6165		1006		1006	0.00	6165			0.9	-617			5548	0.181			32	56	0.604	42	31
2	2	3.00	1	15		N	1915	58			58	1.00	1741			0.9	-174			1567	0.037			7	7	0.604	6	70
3	1,2	3.00	2				4110		1033		1033	0.00	4110			0.9	-411			3699	0.279			50	63	0.604	48	21
4	1,2	3.00	1	15		N	1915	552			552	1.00	1741			0.9	-174			1567	0.352	0.352		63	63	0.604	36	16
PED	3																						36					

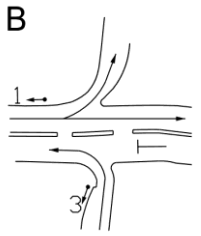
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

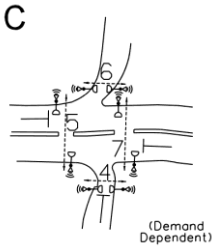
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J1_WYS_HMS.xlsx	Checked By:	SLN	Aug-26
J1 Wai Yip Street/ How Ming Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	118 sec
Sum(y)		Y =	0.358
Loss time		L =	51 sec
Total Flow		=	2729 pcu
Co	= (1.5*L+5)/(1-Y)	=	127.0 sec
Cm	= L/(1-Y)	=	79.4 sec
Yult		=	0.518
R.C.ult	= (Yult-Y)/Y*100%	=	44.5 %
Cp	= 0.9*L/(0.9-Y)	=	84.7 sec
Ymax	= 1-L/C	=	0.568
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**43 %**







Stage 1	G= 55	Stage 2	G= 11	Stage 3	G= 42
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P4	1,3	5	7	3	94	7
P5	3	10	9	6	29	9
P6	3	5	7	5	32	7
P7	3	9	8	6	30	8

Movement	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
1	1	3.00	3				6165		878		878	0.00	6165			0.9	-617			5548	0.158			30	55	0.631	42	37
2	2	3.00	1	15		N	1915	97			97	1.00	1741			0.9	-174			1567	0.062			12	12	0.631	18	64
3	1,2	3.00	2				4110		1193		1193	0.00	4110			0.9	-411			3699	0.323			60	67	0.631	57	20
4	1,2	3.00	1	15		N	1915	561			561	1.00	1741			0.9	-174			1567	0.358	0.358		67	67	0.631	42	19
PED	3																						42					

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

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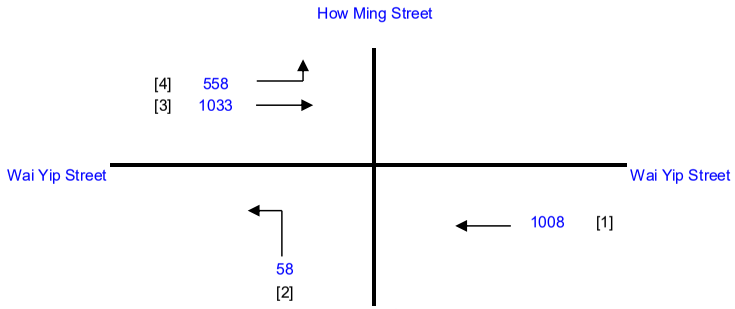
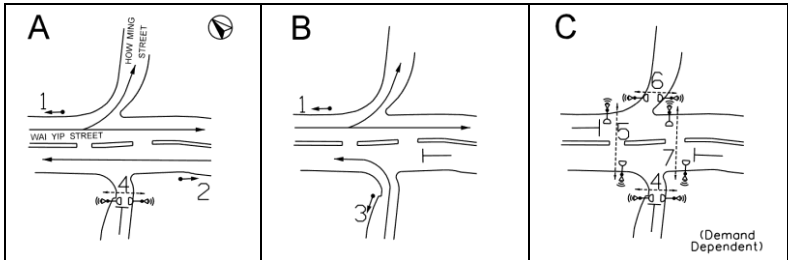
		FILENAME : J1_WYS_HMS.xlsx	Checked By:	SLN	Aug-26
J1 Wai Yip Street/ How Ming Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	108 sec
Sum(y)		Y =	0.356
Loss time		L =	45 sec
Total Flow		=	2657 pcu
Co	= (1.5*L+5)/(1-Y)	=	112.6 sec
Cm	= L/(1-Y)	=	69.9 sec
Yult		=	0.563
R.C.ult	= (Yult-Y)/Y*100%	=	58.0 %
Cp	= 0.9*L/(0.9-Y)	=	74.5 sec
Ymax	= 1-L/C	=	0.583
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**47 %**



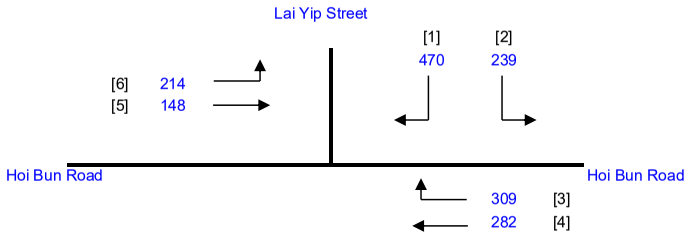
Stage 1	G= 56	Stage 2	G= 6	Stage 3	G= 36
	Int = 5		Int = 3		Int = 2

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P4	1,3	5	7	3	89	7
P5	3	10	9	6	23	9
P6	3	5	7	5	26	7
P7	3	9	8	6	24	8

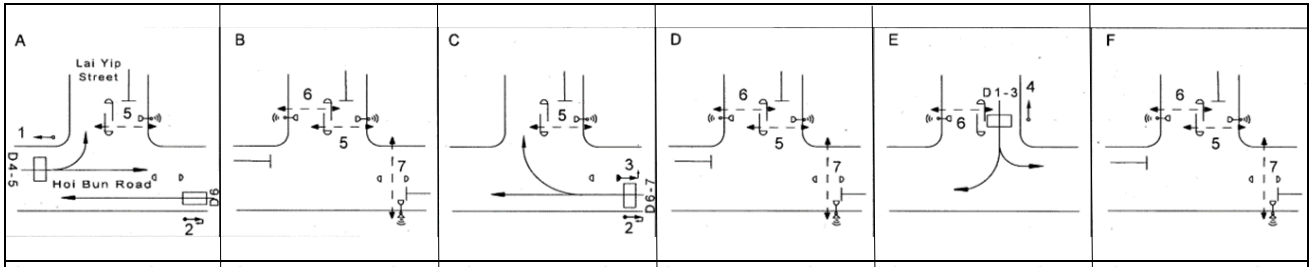
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
1	1	3.00	3				6165		1008		1008	0.00	6165			0.9	-617			5548	0.182			32	56	0.610	42	31
2	2	3.00	1	15		N	1915	58			58	1.00	1741			0.9	-174			1567	0.037			7	7	0.610	6	71
3	1,2	3.00	2				4110		1033		1033	0.00	4110			0.9	-411			3699	0.279			49	63	0.610	48	21
4	1,2	3.00	1	15		N	1915	558			558	1.00	1741			0.9	-174			1567	0.356	0.356		63	63	0.610	36	16
PED	3																						36					

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

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J2_HBR_LYS.xlsx	Checked By:	SLN	Aug-26
J2 Hoi Bun Road/ Lai Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	6
Cycle time		C =	354 sec
Sum(y)		Y =	0.417
Loss time		L =	148 sec
Total Flow		=	1662 pcu
Co	= (1.5*L+5)/(1-Y)	=	389.5 sec
Cm	= L/(1-Y)	=	253.9 sec
Yult		=	-0.210
R.C.ult	= (Yult-Y)/Y*100%	=	-150.3 %
Cp	= 0.9*L/(0.9-Y)	=	275.8 sec
Ymax	= 1-L/C	=	0.582
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**26 %**



Stage 1	G = 58	Stage 2	G = 69	Stage 3	G = 79	Stage 4	G = 19	Stage 5	G = 65	Stage 6	G = 19
	Int = 9		Int = 6		Int = 9		Int = 3		Int = 15		Int = 2

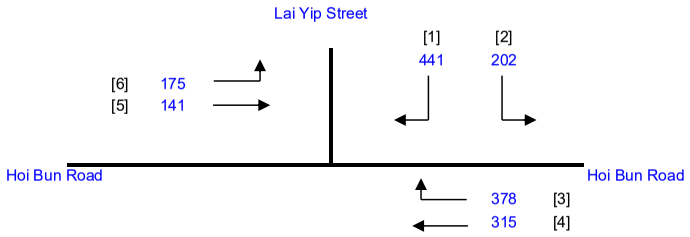
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P5	1,2,3,4,6	12	9	3	262	9
P6	2,4,5,6	7	6	5	187	6
P7	2,4,6	7	8	4	106	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							41					
5	1	3.40	1				2095		148		148	0.00	2095							2095	0.071			35	59	0.717	78	159
6	1	3.40	1	15		N	1955	214			214	1.00	1777							1777	0.120	0.120		59	59	0.717	102	139
4	1,3	3.40	1			N	1955		282		282	0.00	1955							1955	0.144			71	140	0.717	132	129
3	3	3.40	1	15			2095			309	309	1.00	1905							1905	0.162	0.162		80	80	0.717	138	123
1	5	3.40	2				4190		470		470	0.00	4190							4190	0.112			55	66	0.717	114	134
2	5	3.40	1	15		N	1955	239			239	1.00	1777							1777	0.134	0.134		66	66	0.717	114	134
PED	2																						69					
PED	4*																						19					
PED	6*																						19					

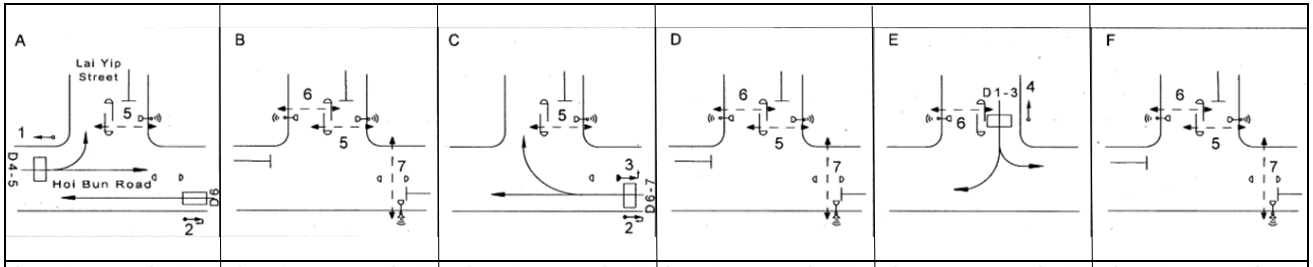
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* According to on-site observation, Stage 4 and 6 are called around every 3 cycle(s)

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J2_HBR_LYS.xlsx	Checked By:	SLN	Aug-26
J2 Hoi Bun Road/ Lai Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	6
Cycle time		C =	324 sec
Sum(y)		Y =	0.411
Loss time		L =	148 sec
Total Flow		=	1652 pcu
Co	= (1.5*L+5)/(1-Y)	=	385.1 sec
Cm	= L/(1-Y)	=	251.1 sec
Yult		=	-0.210
R.C.ult	= (Yult-Y)/Y*100%	=	-151.1 %
Cp	= 0.9*L/(0.9-Y)	=	272.2 sec
Ymax	= 1-L/C	=	0.543
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**19 %**



Stage 1	G = 41	Stage 2	G = 69	Stage 3	G = 84	Stage 4	G = 19	Stage 5	G = 48	Stage 6	G = 19
	Int = 9		Int = 6		Int = 9		Int = 3		Int = 15		Int = 2

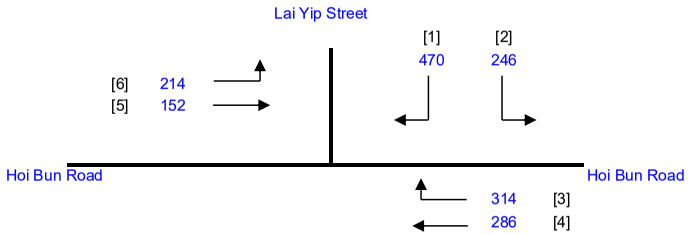
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P5	1,2,3,4,6	12	9	3	249	9
P6	2,4,5,6	7	6	5	170	6
P7	2,4,6	7	8	4	106	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							41					
5	1	3.40	1				2095		141		141	0.00	2095							2095	0.067			29	42	0.756	66	157
6	1	3.40	1	15		N	1955	175			175	1.00	1777							1777	0.098	0.098		42	42	0.756	78	144
4	1,3	3.40	1			N	1955		315		315	0.00	1955							1955	0.161			69	127	0.756	132	120
3	3	3.40	1	15			2095			378	378	1.00	1905							1905	0.198	0.198		85	85	0.756	150	109
1	5	3.40	2				4190		441		441	0.00	4190							4190	0.105			45	49	0.756	102	129
2	5	3.40	1	15		N	1955	202			202	1.00	1777							1777	0.114	0.114		49	49	0.756	90	138
PED	2																						69					
PED	4*																						19					
PED	6*																						19					

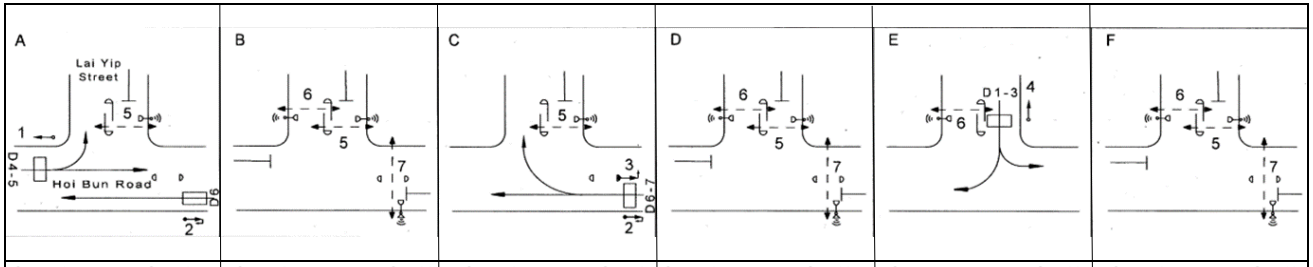
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* According to on-site observation, Stage 4 and 6 are called around every 3 cycle(s)

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J2_HBR_LYS.xlsx	Checked By:	SLN	Aug-26
J2 Hoi Bun Road/ Lai Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	6
Cycle time		C =	354 sec
Sum(y)		Y =	0.424
Loss time		L =	148 sec
Total Flow		=	1682 pcu
Co	= (1.5*L+5)/(1-Y)	=	393.9 sec
Cm	= L/(1-Y)	=	256.8 sec
Yult		=	-0.210
R.C.ult	= (Yult-Y)/Y*100%	=	-149.6 %
Cp	= 0.9*L/(0.9-Y)	=	279.7 sec
Ymax	= 1-L/C	=	0.582
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**24 %**



Stage 1	G = 58	Stage 2	G = 69	Stage 3	G = 79	Stage 4	G = 19	Stage 5	G = 66	Stage 6	G = 19
	Int = 9		Int = 6		Int = 9		Int = 3		Int = 15		Int = 2

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P5	1,2,3,4,6	12	9	3	261	9
P6	2,4,5,6	7	6	5	188	6
P7	2,4,6	7	8	4	106	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							41					
5	1	3.40	1				2095		152		152	0.00	2095							2095	0.073			35	59	0.728	78	160
6	1	3.40	1	15		N	1955	214			214	1.00	1777							1777	0.120	0.120		59	59	0.728	102	141
4	1,3	3.40	1			N	1955		286		286	0.00	1955							1955	0.146			71	139	0.728	132	130
3	3	3.40	1	15			2095			314	314	1.00	1905							1905	0.165	0.165		80	80	0.728	138	124
1	5	3.40	2				4190		470		470	0.00	4190							4190	0.112			55	67	0.728	117	135
2	5	3.40	1	15		N	1955	246			246	1.00	1777							1777	0.138	0.138		67	67	0.728	114	134
PED	2																						69					
PED	4*																						19					
PED	6*																						19					

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

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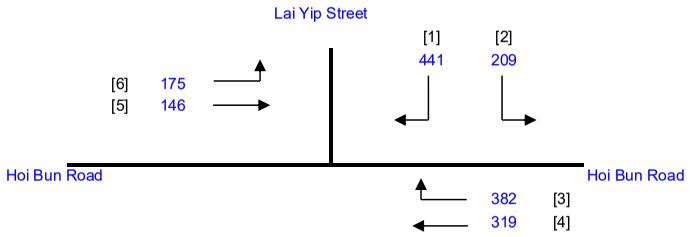
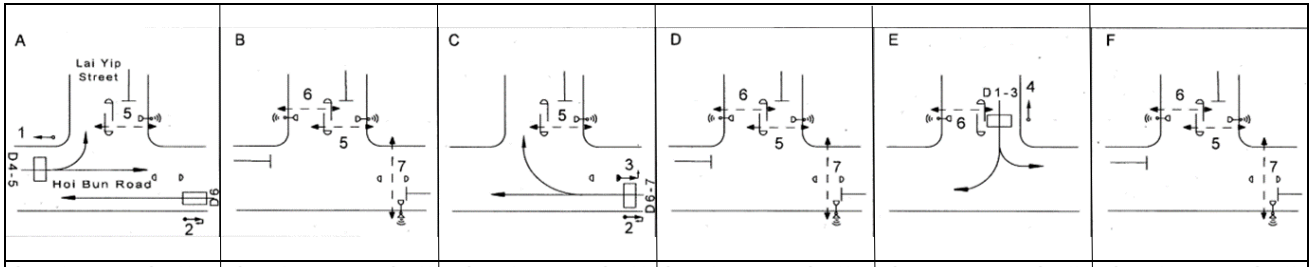
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J2_HBR_LYS.xlsx	Checked By:	SLN	Aug-26
J2 Hoi Bun Road/ Lai Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	6
Cycle time		C =	324 sec
Sum(y)		Y =	0.417
Loss time		L =	148 sec
Total Flow		=	1672 pcu
Co	= (1.5*L+5)/(1-Y)	=	389.1 sec
Cm	= L/(1-Y)	=	253.7 sec
Yult		=	-0.210
R.C.ult	= (Yult-Y)/Y*100%	=	-150.4 %
Cp	= 0.9*L/(0.9-Y)	=	275.6 sec
Ymax	= 1-L/C	=	0.543
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**17 %**



Stage 1	G = 41	Stage 2	G = 69	Stage 3	G = 84	Stage 4	G = 19	Stage 5	G = 49	Stage 6	G = 19
	Int = 9		Int = 6		Int = 9		Int = 3		Int = 15		Int = 2

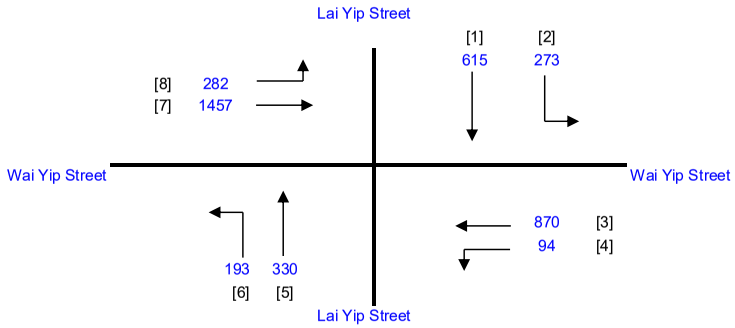
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P5	1,2,3,4,6	12	9	3	248	9
P6	2,4,5,6	7	6	5	171	6
P7	2,4,6	7	8	4	106	8

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							41					
5	1	3.40	1				2095		146		146	0.00	2095							2095	0.070			29	42	0.767	72	158
6	1	3.40	1	15		N	1955	175			175	1.00	1777							1777	0.098	0.098		42	42	0.767	78	146
4	1,3	3.40	1			N	1955		319		319	0.00	1955							1955	0.163			69	126	0.767	132	121
3	3	3.40	1	15			2095			382	382	1.00	1905							1905	0.201	0.201		85	85	0.767	150	110
1	5	3.40	2				4190		441		441	0.00	4190							4190	0.105			44	50	0.767	102	131
2	5	3.40	1	15		N	1955	209			209	1.00	1777							1777	0.118	0.118		50	50	0.767	90	138
PED	2																						69					
PED	4*																						19					
PED	6*																						19					

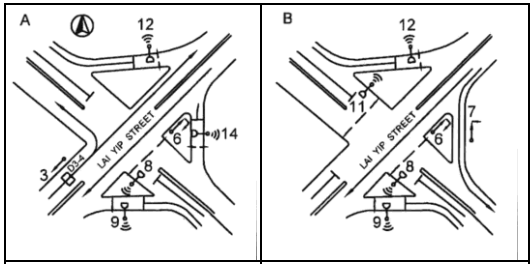
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

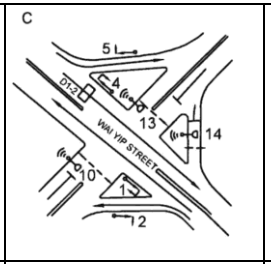
* According to on-site observation, Stage 4 and 6 are called around every 3 cycle(s)

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J3_WYS_LYS.xlsx	Checked By:	SLN	Aug-26
J3 Wai Yip Street/ Lai Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	120 sec
Sum(y)		Y =	0.637
Loss time		L =	7 sec
Total Flow		=	4114 pcu
Co	= (1.5*L+5)/(1-Y)	=	42.7 sec
Cm	= L/(1-Y)	=	19.3 sec
Yult		=	0.848
R.C.ult	= (Yult-Y)/Y*100%	=	33.0 %
Cp	= 0.9*L/(0.9-Y)	=	24.0 sec
Ymax	= 1-L/C	=	0.942
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**33 %**





Stage 1	G= 23	Stage 2	G= 33	Stage 3	G= 54
	Int = 5		Int = 5		Int = 5

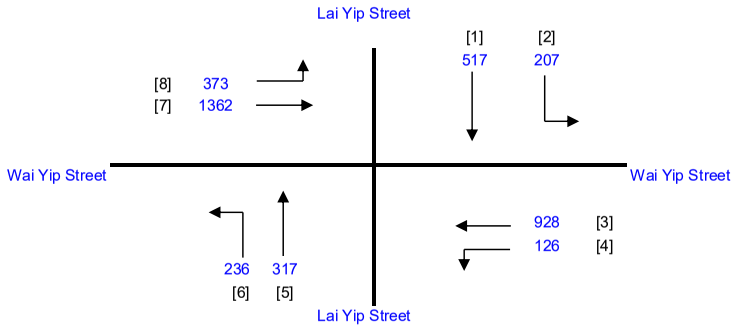
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P8	1,2	11	11	4	51	11
P9	1,2	5	7	2	57	7
P10	3	12	11	5	43	11
P11	2	12	11	6	21	11
P12	1,2	5	7	3	56	7
P13	3	11	10	1	48	10
P14	1,3	5	7	3	77	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							7					
7	3	3.40	2				4190		1297		1297	0.00	4190							4190	0.310			55	55	0.677	69	25
7,8*	3	3.40	1	10		N	1955	282	160		442	0.64	1784			0.8	-357			1427	0.310	0.310		55	55	0.677	42	28
3	3	3.40	2				4190		712		712	0.00	4190							4190	0.170			30	55	0.677	51	40
3,4	3	3.40	1	10		N	1955	94	158		252	0.37	1851			0.8	-370			1481	0.170			30	55	0.677	36	46
1	1,2	3.40	2				4190		615		615	0.00	4190							4190	0.147			26	58	0.677	48	43
2	2	3.40	1	15		N	1955	273			273	1.00	1777			0.8	-355			1422	0.192	0.192		34	34	0.677	36	43
5	1	3.40	1				2095		330		330	0.00	2095	16	400					2495	0.132			23	24	0.677	48	47
6	1	3.40	1	4		N	1955	193			193	1.00	1422							1422	0.136	0.136		24	24	0.677	30	52

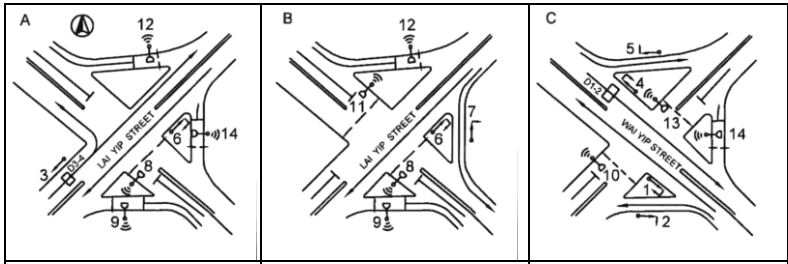
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J3_WYS_LYS.xlsx	Checked By:	SLN	Aug-26
J3 Wai Yip Street/ Lai Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	108 sec
Sum(y)		Y =	0.623
Loss time		L =	7 sec
Total Flow		=	4066 pcu
Co	= (1.5*L+5)/(1-Y)	=	41.1 sec
Cm	= L/(1-Y)	=	18.6 sec
Yult		=	0.848
R.C.ult	= (Yult-Y)/Y*100%	=	36.1 %
Cp	= 0.9*L/(0.9-Y)	=	22.7 sec
Ymax	= 1-L/C	=	0.935
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**35 %**



Stage 1	G= 26	Stage 2	G= 23	Stage 3	G= 49
	Int = 5		Int = 5		Int = 5

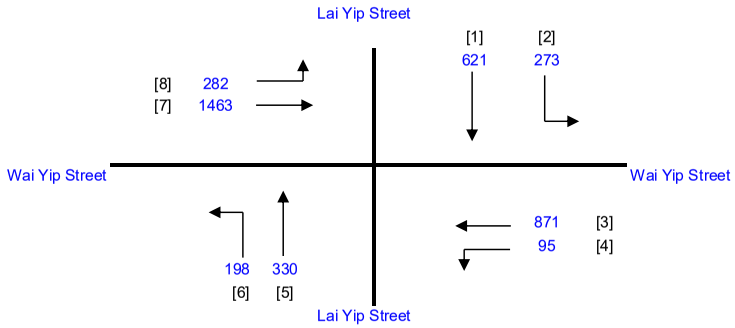
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P8	1,2	11	11	4	44	11
P9	1,2	5	7	2	50	7
P10	3	12	11	5	38	11
P11	2	12	11	6	11	11
P12	1,2	5	7	3	49	7
P13	3	11	10	1	43	10
P14	1,3	5	7	3	75	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							7					
7	3	3.40	2				4190		1304		1304	0.00	4190							4190	0.311			50	50	0.666	60	22
7,8*	3	3.40	1	10		N	1955	373	58		431	0.87	1730			0.8	-346			1384	0.311	0.311		50	50	0.666	36	25
3	3	3.40	2				4190		782		782	0.00	4190							4190	0.187			30	50	0.666	48	34
3,4	3	3.40	1	10		N	1955	126	146		272	0.46	1828			0.8	-366			1462	0.186			30	50	0.666	30	39
1	1,2	3.40	2				4190		517		517	0.00	4190							4190	0.123			20	51	0.666	36	41
2	2	3.40	1	15		N	1955	207			207	1.00	1777			0.8	-355			1422	0.146	0.146		24	24	0.666	30	45
5	1	3.40	1				2095		317		317	0.00	2095	16	356					2451	0.129			21	27	0.666	42	43
6	1	3.40	1	4		N	1955	236			236	1.00	1422							1422	0.166	0.166		27	27	0.666	30	42

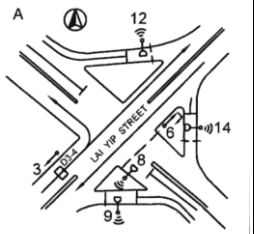
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

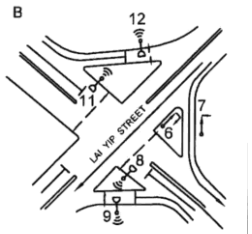
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J3_WYS_LYS.xlsx	Checked By:	SLN	Aug-26
J3 Wai Yip Street/ Lai Yip Street			Reviewed By:	SLN	Aug-26



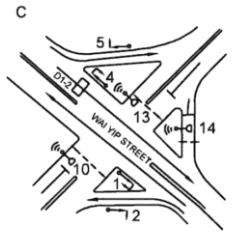
No. of stages per cycle		N =	3
Cycle time		C =	120 sec
Sum(y)		Y =	0.642
Loss time		L =	7 sec
Total Flow		=	4133 pcu
Co	= (1.5*L+5)/(1-Y)	=	43.3 sec
Cm	= L/(1-Y)	=	19.6 sec
Yult		=	0.848
R.C.ult	= (Yult-Y)/Y*100%	=	32.0 %
Cp	= 0.9*L/(0.9-Y)	=	24.4 sec
Ymax	= 1-L/C	=	0.942
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**32 %**



Stage 1 G= 24
Int = 5



Stage 2 G= 33
Int = 5



Stage 3 G= 54
Int = 5

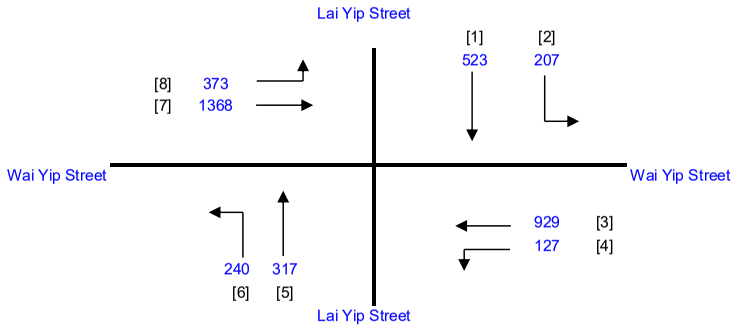
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P8	1,2	11	11	4	51	11
P9	1,2	5	7	2	57	7
P10	3	12	11	5	43	11
P11	2	12	11	6	21	11
P12	1,2	5	7	3	56	7
P13	3	11	10	1	48	10
P14	1,3	5	7	3	77	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							7					
7	3	3.40	2				4190		1301		1301	0.00	4190							4190	0.311			55	55	0.682	69	25
7,8*	3	3.40	1	10		N	1955	282	162		444	0.64	1785			0.8	-357			1428	0.311	0.311		55	55	0.682	48	29
3	3	3.40	2				4190		714		714	0.00	4190							4190	0.170			30	55	0.682	51	40
3,4	3	3.40	1	10		N	1955	95	157		252	0.38	1850			0.8	-370			1480	0.170			30	55	0.682	36	46
1	1,2	3.40	2				4190		621		621	0.00	4190							4190	0.148			26	58	0.682	48	43
2	2	3.40	1	15		N	1955	273			273	1.00	1777			0.8	-355			1422	0.192	0.192		34	34	0.682	36	43
5	1	3.40	1				2095		330		330	0.00	2095	16	384					2479	0.133			23	25	0.682	48	48
6	1	3.40	1	4		N	1955	198			198	1.00	1422							1422	0.139	0.139		25	25	0.682	30	52

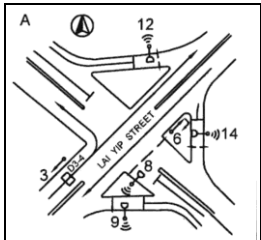
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

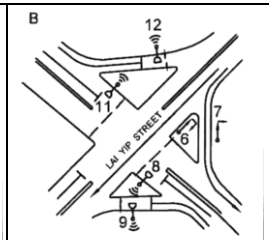
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J3_WYS_LYS.xlsx	Checked By:	SLN	Aug-26
J3 Wai Yip Street/ Lai Yip Street			Reviewed By:	SLN	Aug-26



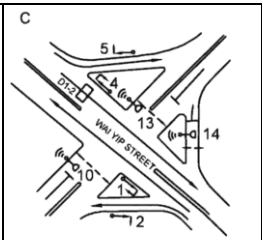
No. of stages per cycle		N =	3
Cycle time		C =	108 sec
Sum(y)		Y =	0.627
Loss time		L =	7 sec
Total Flow		=	4084 pcu
Co	= (1.5*L+5)/(1-Y)	=	41.5 sec
Cm	= L/(1-Y)	=	18.8 sec
Yult		=	0.848
R.C.ult	= (Yult-Y)/Y*100%	=	35.2 %
Cp	= 0.9*L/(0.9-Y)	=	23.1 sec
Ymax	= 1-L/C	=	0.935
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**34 %**



Stage 1 G= 26
Int = 5



Stage 2 G= 22
Int = 5



Stage 3 G= 49
Int = 5

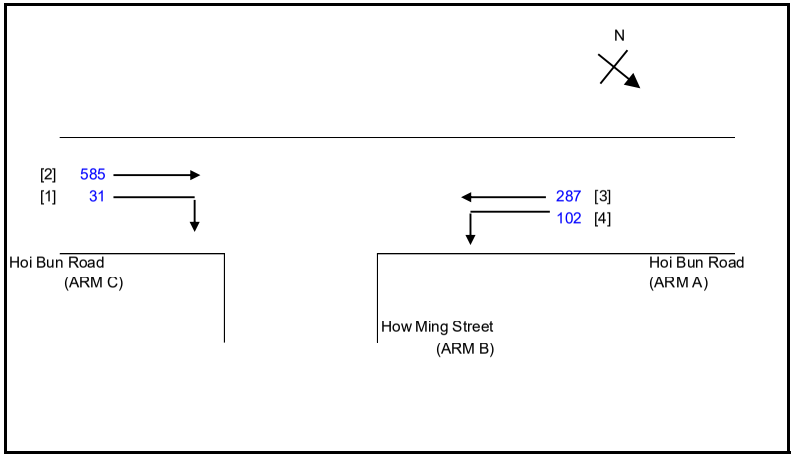
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P8	1,2	11	11	4	44	11
P9	1,2	5	7	2	50	7
P10	3	12	11	5	38	11
P11	2	12	11	6	10	11
P12	1,2	5	7	3	49	7
P13	3	11	10	1	43	10
P14	1,3	5	7	3	76	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							7					
7	3	3.40	2				4190		1309		1309	0.00	4190							4190	0.312	0.312		50	50	0.670	60	22
7,8*	3	3.40	1	10		N	1955	373	59		432	0.86	1731			0.8	-346			1385	0.312			50	50	0.670	36	25
3	3	3.40	2				4190		783		783	0.00	4190							4190	0.187			30	50	0.670	48	34
3,4	3	3.40	1	10		N	1955	127	146		273	0.47	1827			0.8	-365			1462	0.187			30	50	0.670	30	39
1	1,2	3.40	2				4190		523		523	0.00	4190							4190	0.125			20	51	0.670	36	41
2	2	3.40	1	15		N	1955	207			207	1.00	1777			0.8	-355			1422	0.146	0.146		23	23	0.670	30	46
5	1	3.40	1				2095		317		317	0.00	2095	16	356					2451	0.129			21	27	0.670	42	43
6	1	3.40	1	4		N	1955	240			240	1.00	1422							1422	0.169	0.169		27	27	0.670	30	42

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

* Site factor is adopted to consider kerbside activities

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference AM**	PROJECT NO.: 41074	PREPARED BY:	SKL	Aug-26
		FILENAME : J4_HBR_HMS	CHECKED BY:	SLN	Aug-26
J4 Hoi Bun Road / How Ming Street		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-26



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	9.0	(metres)
W cr	=	0	(metres)
q a-b	=	102	(pcu/hr)
q a-c	=	287	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.80	(metres)
Vr c-b	=	91	(metres)
q c-a	=	585	(pcu/hr)
q c-b	=	31	(pcu/hr)

MINOR ROAD (ARM B)

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

GEOMETRIC FACTORS :

D	=	0.533219
E	=	0.585955
F	=	0.987632
Y	=	0.6895
F for (Qb-ac)	=	

THE CAPACITY OF MOVEMENT :

Q b-a	=	235		
Q b-c	=	388	Q b-c (O) =	388
Q c-b	=	639		
Q b-ac	=			

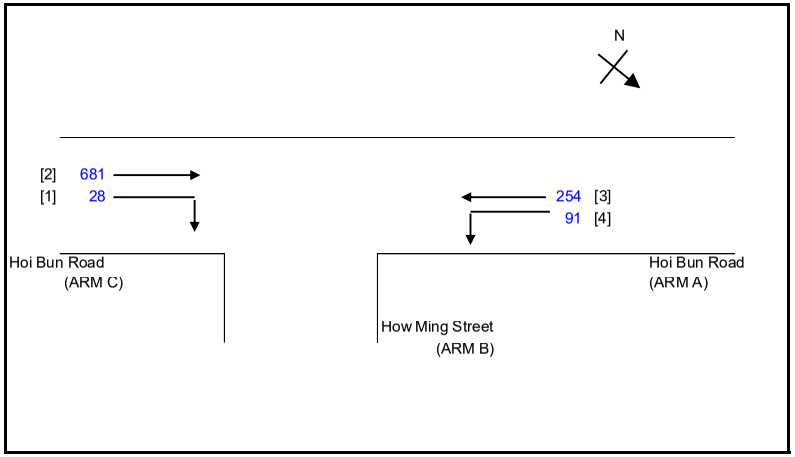
TOTAL FLOW = 1005 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.0485

CRITICAL DFC = 0.05

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference PM**	PROJECT NO.: 41074	PREPARED BY:	SKL	Aug-26
		FILENAME : J4_HBR_HMS	CHECKED BY:	SLN	Aug-26
J4 Hoi Bun Road / How Ming Street		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-26



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	9.0	(metres)
W cr	=	0	(metres)
q a-b	=	91	(pcu/hr)
q a-c	=	254	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.80	(metres)
Vr c-b	=	91	(metres)
q c-a	=	681	(pcu/hr)
q c-b	=	28	(pcu/hr)

MINOR ROAD (ARM B)

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

GEOMETRIC FACTORS :

D	=	0.533219
E	=	0.585955
F	=	0.987632
Y	=	0.6895
F for (Qb-ac)	=	

THE CAPACITY OF MOVEMENT :

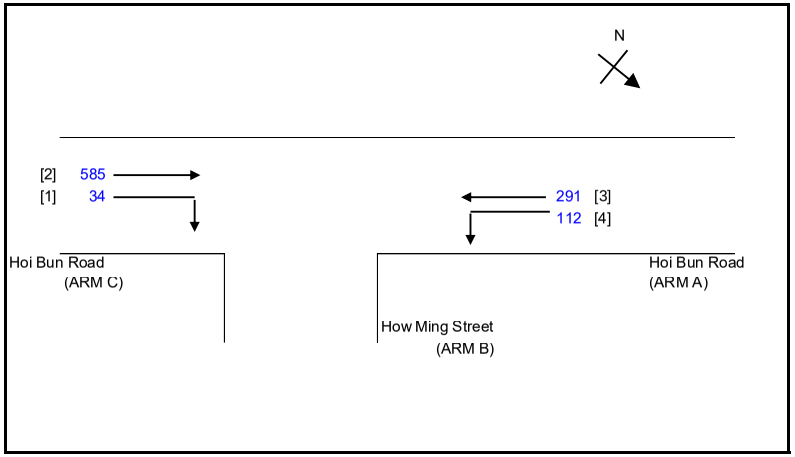
Q b-a	=	233		
Q b-c	=	394	Q b-c (O) =	394
Q c-b	=	650		
Q b-ac	=			
TOTAL FLOW	=	1054	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.0431

CRITICAL DFC = 0.04

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design AM**	PROJECT NO.: 41074	PREPARED BY:	SKL	Aug-26
		FILENAME : J4_HBR_HMS	CHECKED BY:	SLN	Aug-26
J4 Hoi Bun Road / How Ming Street		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-26



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	9.0	(metres)
W cr	=	0	(metres)
q a-b	=	112	(pcu/hr)
q a-c	=	291	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.80	(metres)
Vr c-b	=	91	(metres)
q c-a	=	585	(pcu/hr)
q c-b	=	34	(pcu/hr)

MINOR ROAD (ARM B)

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

GEOMETRIC FACTORS :

D	=	0.533219
E	=	0.585955
F	=	0.987632
Y	=	0.6895
F for (Qb-ac)	=	

THE CAPACITY OF MOVEMENT :

Q b-a	=	234		
Q b-c	=	387	Q b-c (O) =	387
Q c-b	=	636		
Q b-ac	=			

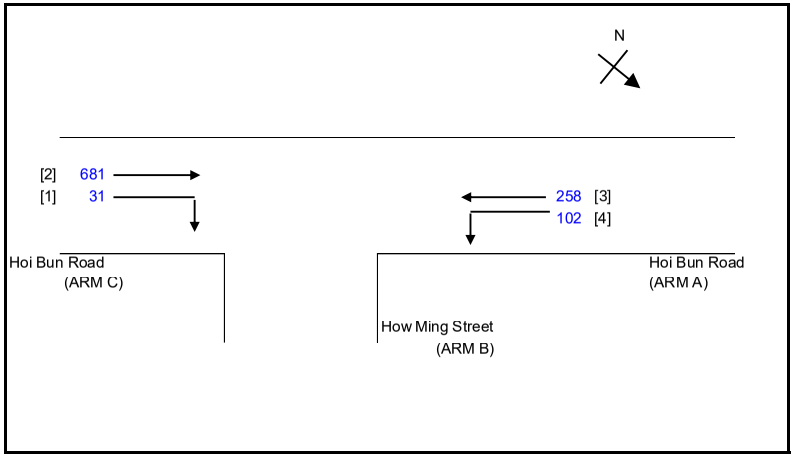
TOTAL FLOW = 1022 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.0535

CRITICAL DFC = 0.05

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design PM**	PROJECT NO.: 41074	PREPARED BY:	SKL	Aug-26
		FILENAME : J4_HBR_HMS	CHECKED BY:	SLN	Aug-26
J4 Hoi Bun Road / How Ming Street		REFERENCE NO.:	REVIEWED BY:	SLN	Aug-26



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	9.0	(metres)
W cr	=	0	(metres)
q a-b	=	102	(pcu/hr)
q a-c	=	258	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.80	(metres)
Vr c-b	=	91	(metres)
q c-a	=	681	(pcu/hr)
q c-b	=	31	(pcu/hr)

MINOR ROAD (ARM B)

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

GEOMETRIC FACTORS :

D	=	0.533219
E	=	0.585955
F	=	0.987632
Y	=	0.6895
F for (Qb-ac)	=	

THE CAPACITY OF MOVEMENT :

Q b-a	=	231		
Q b-c	=	393	Q b-c (O) =	393
Q c-b	=	647		
Q b-ac	=			

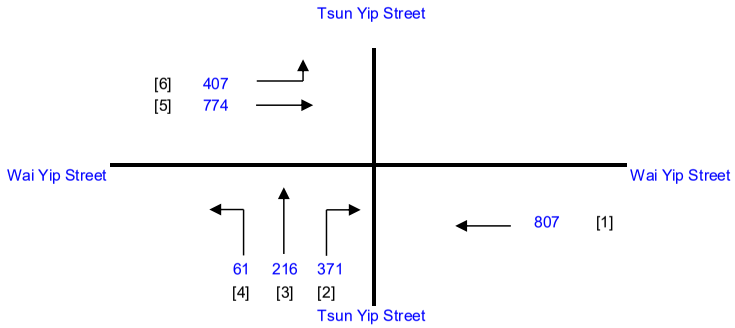
TOTAL FLOW = 1072 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

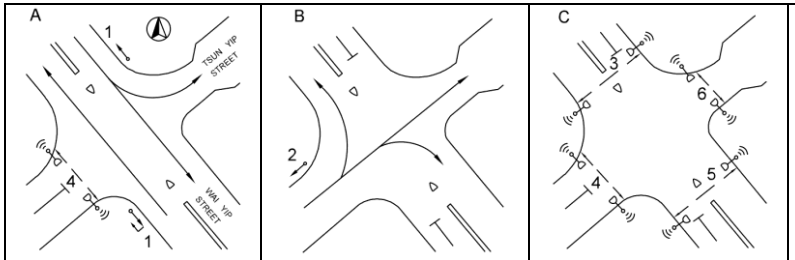
DFC b-a	=	0.0000
DFC b-c	=	0.0000
DFC c-b	=	0.0479

CRITICAL DFC = 0.05

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J5_WYS_TYS.xlsx	Checked By:	SLN	Aug-26
J5 Wai Yip Street / Tsun Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	118 sec
Sum(y)		Y =	0.332
Loss time		L =	42 sec
Total Flow		=	2636 pcu
Co	= (1.5*L+5)/(1-Y)	=	101.7 sec
Cm	= L/(1-Y)	=	62.8 sec
Yult		=	0.585
R.C.ult	= (Yult-Y)/Y*100%	=	76.4 %
Cp	= 0.9*L/(0.9-Y)	=	66.5 sec
Ymax	= 1-L/C	=	0.644
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**75 %**



Stage 1	G= 50	Stage 2	G= 24	Stage 3	G= 31
	Int = 7		Int = 4		Int = 2

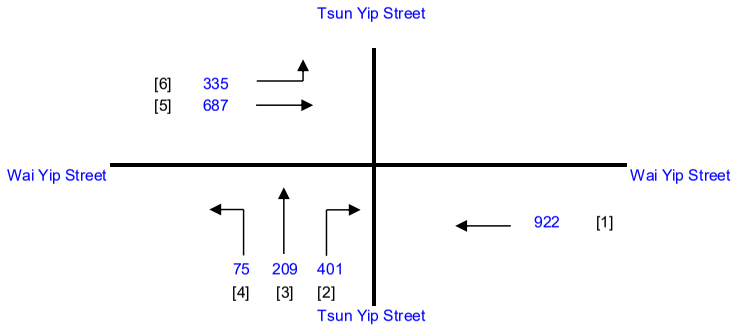
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P3	3	9	8	6	19	8
P4	1,3	14	14	2	74	14
P5	3	9	8	7	18	8
P6	3	12	12	4	17	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							11					
1	1	3.50	3			N	6175		807		807	0.00	6175			0.8	-1235			4940	0.163			37	51	0.515	36	31
5	1	3.00	1				2055		453		453	0.00	2055							2055	0.220	0.220		51	51	0.515	48	24
5,6	1	3.00	1	10			2055	114	321		435	0.26	1977							1977	0.220			50	51	0.515	48	24
6	1	3.00	1	10		N	1915	293			293	1.00	1665			0.8	-333			1332	0.220			50	51	0.515	30	25
2	2	3.50	1	18			2105			215	215	1.00	1943							1943	0.111			25	25	0.515	30	41
2,3	2	3.50	1	18			2105		65	156	221	0.71	1988							1988	0.111	0.111		25	25	0.515	30	41
3,4	2	3.50	1	15		N	1965	61	151		212	0.29	1910							1910	0.111			25	25	0.515	30	41
PED	3																						31					

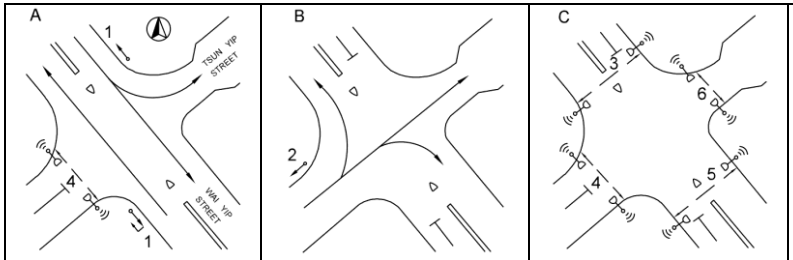
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J5_WYS_TYS.xlsx	Checked By:	SLN	Aug-26
J5 Wai Yip Street / Tsun Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	108 sec
Sum(y)		Y =	0.308
Loss time		L =	39 sec
Total Flow		=	2629 pcu
Co	= (1.5*L+5)/(1-Y)	=	91.8 sec
Cm	= L/(1-Y)	=	56.4 sec
Yult		=	0.608
R.C.ult	= (Yult-Y)/Y*100%	=	97.1 %
Cp	= 0.9*L/(0.9-Y)	=	59.3 sec
Ymax	= 1-L/C	=	0.639
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**87 %**



Stage 1	G= 42	Stage 2	G= 25	Stage 3	G= 28
	Int = 7		Int = 4		Int = 2

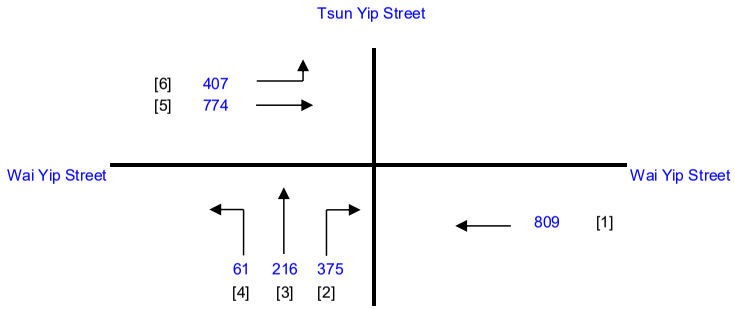
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P3	3	9	8	6	16	8
P4	1,3	14	14	2	63	14
P5	3	9	8	7	15	8
P6	3	12	12	4	14	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							11					
1	1	3.50	3			N	6175		922		922	0.00	6175			0.8	-1235			4940	0.187			42	43	0.483	32	23
5	1	3.00	1				2055		390		390	0.00	2055							2055	0.190			42	43	0.483	42	24
5,6	1	3.00	1	10			2055	82	297		379	0.22	1990							1990	0.190	0.190		43	43	0.483	36	24
6	1	3.00	1	10		N	1915	253			253	1.00	1665			0.8	-333			1332	0.190			43	43	0.483	24	25
2	2	3.50	1	18			2105			229	229	1.00	1943							1943	0.118	0.118		26	26	0.483	30	35
2,3	2	3.50	1	18			2105		61	172	233	0.74	1983							1983	0.117			26	26	0.483	30	35
3,4	2	3.50	1	15		N	1965	75	148		223	0.34	1901							1901	0.117			26	26	0.483	30	35
PED	3																						28					

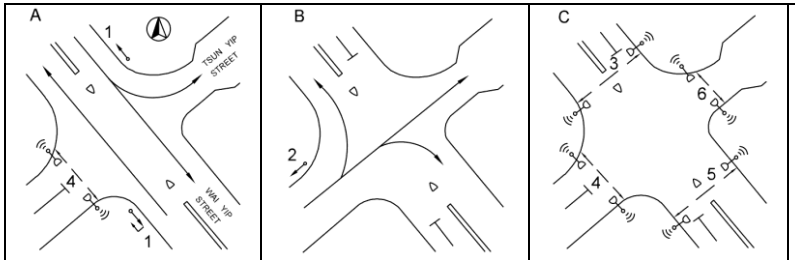
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
J5 Wai Yip Street / Tsun Yip Street		FILENAME : J5_WYS_TYS.xlsx	Checked By:	SLN	Aug-26
			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	118 sec
Sum(y)		Y =	0.332
Loss time		L =	42 sec
Total Flow		=	2642 pcu
Co	= (1.5*L+5)/(1-Y)	=	101.8 sec
Cm	= L/(1-Y)	=	62.9 sec
Yult		=	0.585
R.C.ult	= (Yult-Y)/Y*100%	=	76.1 %
Cp	= 0.9*L/(0.9-Y)	=	66.6 sec
Ymax	= 1-L/C	=	0.644
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**75 %**



Stage 1	G= 49	Stage 2	G= 25	Stage 3	G= 31
	Int = 7		Int = 4		Int = 2

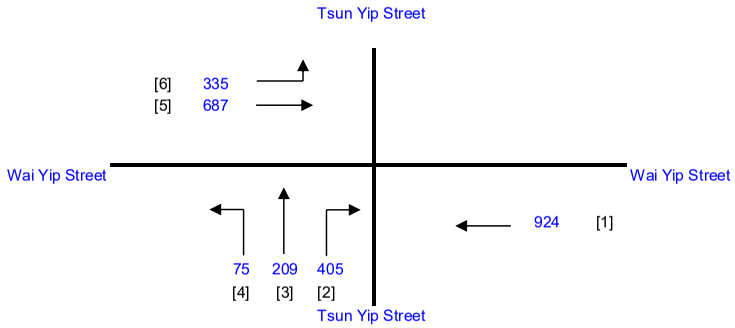
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P3	3	9	8	6	19	8
P4	1,3	14	14	2	73	14
P5	3	9	8	7	18	8
P6	3	12	12	4	17	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							11					
1	1	3.50	3			N	6175		809		809	0.00	6175			0.8	-1235			4940	0.164			37	50	0.516	36	31
5	1	3.00	1				2055		453		453	0.00	2055							2055	0.220	0.220		50	50	0.516	48	24
5,6	1	3.00	1	10			2055	114	321		435	0.26	1977							1977	0.220			50	50	0.516	48	24
6	1	3.00	1	10		N	1915	293			293	1.00	1665			0.8	-333			1332	0.220			50	50	0.516	30	25
2	2	3.50	1	18			2105			217	217	1.00	1943							1943	0.112			26	26	0.516	30	41
2,3	2	3.50	1	18			2105		64	158	222	0.71	1987							1987	0.112	0.112		26	26	0.516	30	41
3,4	2	3.50	1	15		N	1965	61	152		213	0.29	1910							1910	0.112			26	26	0.516	30	41
PED	3																						31					

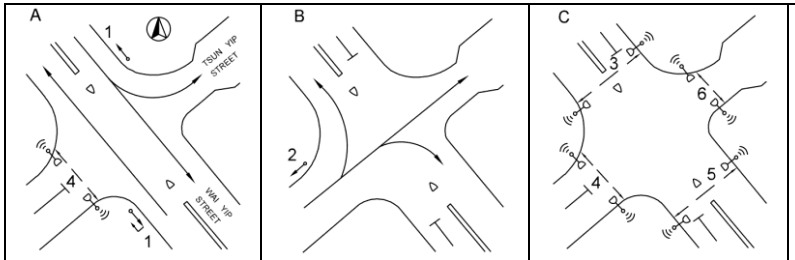
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J5_WYS_TYS.xlsx	Checked By:	SLN	Aug-26
J5 Wai Yip Street / Tsun Yip Street			Reviewed By:	SLN	Aug-26



No. of stages per cycle		N =	3
Cycle time		C =	108 sec
Sum(y)		Y =	0.309
Loss time		L =	39 sec
Total Flow		=	2635 pcu
Co	= (1.5*L+5)/(1-Y)	=	91.9 sec
Cm	= L/(1-Y)	=	56.4 sec
Yult		=	0.608
R.C.ult	= (Yult-Y)/Y*100%	=	96.7 %
Cp	= 0.9*L/(0.9-Y)	=	59.4 sec
Ymax	= 1-L/C	=	0.639
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**86 %**



Stage 1	G= 42	Stage 2	G= 25	Stage 3	G= 28
	Int = 7		Int = 4		Int = 2

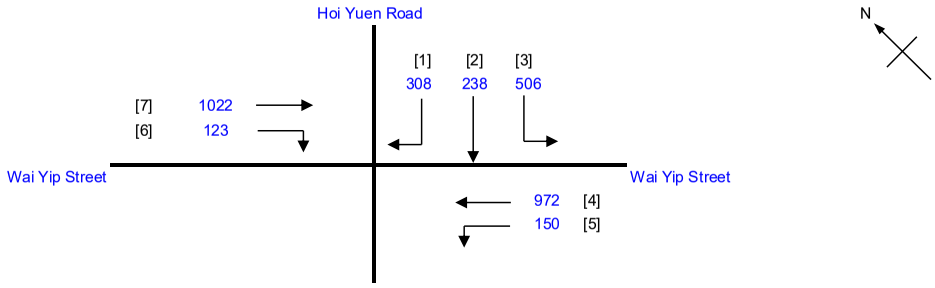
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P3	3	9	8	6	16	8
P4	1,3	14	14	2	63	14
P5	3	9	8	7	15	8
P6	3	12	12	4	14	12

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							11					
1	1	3.50	3			N	6175		924		924	0.00	6175			0.8	-1235			4940	0.187			42	43	0.483	32	23
5	1	3.00	1				2055		390		390	0.00	2055							2055	0.190			42	43	0.483	42	24
5,6	1	3.00	1	10			2055	82	297		379	0.22	1990							1990	0.190	0.190		43	43	0.483	36	24
6	1	3.00	1	10		N	1915	253			253	1.00	1665			0.8	-333			1332	0.190			42	43	0.483	24	25
2	2	3.50	1	18			2105			230	230	1.00	1943							1943	0.118	0.118		26	26	0.483	30	35
2,3	2	3.50	1	18			2105		59	175	234	0.75	1982							1982	0.118			26	26	0.483	30	35
3,4	2	3.50	1	15		N	1965	75	150		225	0.33	1902							1902	0.118			26	26	0.483	30	35
PED	3																						28					

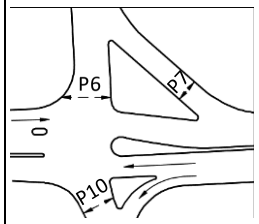
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Site factor is adopted to consider kerbside activities

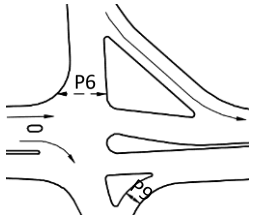
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J6_WYS_HYR.xlsx	Checked By:	SLN	Aug-26
J6 Wai Yip Street / Hoi Yuen Road			Reviewed By:	SLN	Aug-26



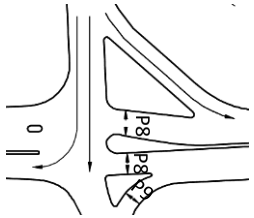
No. of stages per cycle	N =	3
Cycle time	C =	120 sec
Sum(y)	Y =	0.578
Loss time	L =	9 sec
Total Flow	=	3319 pcu
Co = (1.5*L+5)/(1-Y)	=	43.9 sec
Cm = L/(1-Y)	=	21.3 sec
Yult	=	0.833
R.C.ult = (Yult-Y)/Y*100%	=	44.0 %
Cp = 0.9*L/(0.9-Y)	=	25.2 sec
Ymax = 1-L/C	=	0.925
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**44 %**



Stage 1 G= 44
Int =



Stage 2 G= 44
Int = 6



Stage 3 G= 21
Int = 5

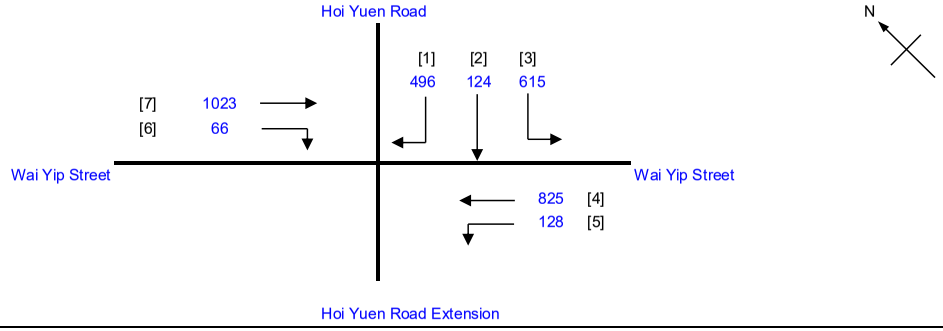
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P6	1,2	5	11	2	81	11
P7	1	5	11	2	31	11
P8	3	13	7	5	14	7
P9	2,3	5	7	2	67	7
P10	1	7	14	6	24	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
7	1,2	3.50	1			N	1965		912		912	0.00	1965							1965	0.464	0.464		89	89	0.625	42	9
Flared Lane *									110																			
6	2	3.50	2	18			4210			123	123	1.00	3886							3886	0.032			6	45	0.625	12	64
4	1	3.50	2				4210		972		972	0.00	4210							4210	0.231			44	44	0.625	60	30
5	1	3.50	1	18		N	1965	150			150	1.00	1814							1814	0.083			16	44	0.625	24	56
3	2,3	3.50	1	15		N	1965	506			506	1.00	1786							1786	0.283			54	67	0.625	54	26
1,2	3	3.30	1	25			2085		238	0	238	0.00	2085							2085	0.114	0.114		22	22	0.625	36	48
1	3	3.30	1	20		N	1945			201	201	1.00	1809							1809	0.111			21	22	0.625	30	49
Flared Lane *										107																		

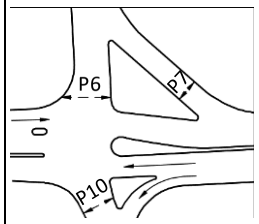
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Remarks: Flows of Wai Yip Street eastbound straight-ahead movement and Hoi Yuen Road southbound right-turning movement are deducted by flows capacity of the flared lane.

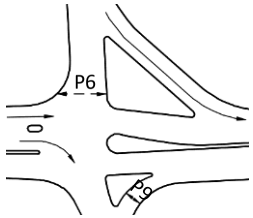
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Reference PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J6_WYS_HYR.xlsx	Checked By:	SLN	Aug-26
J6 Wai Yip Street / Hoi Yuen Road			Reviewed By:	SLN	Aug-26



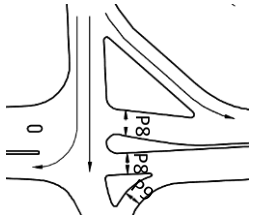
No. of stages per cycle		N =	3
Cycle time		C =	120 sec
Sum(y)		Y =	0.611
Loss time		L =	9 sec
Total Flow		=	3277 pcu
Co	= (1.5*L+5)/(1-Y)	=	47.6 sec
Cm	= L/(1-Y)	=	23.1 sec
Yult		=	0.833
R.C.ult	= (Yult-Y)/Y*100%	=	36.2 %
Cp	= 0.9*L/(0.9-Y)	=	28.0 sec
Ymax	= 1-L/C	=	0.925
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**36 %**



Stage 1 G= 36
Int =



Stage 2 G= 48
Int = 6



Stage 3 G= 26
Int = 5

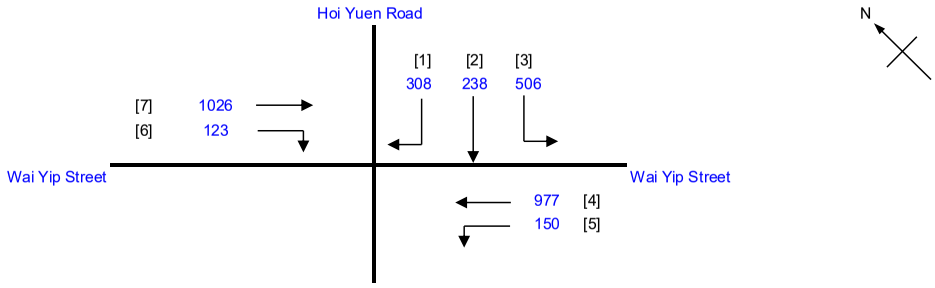
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P6	1,2	5	11	2	76	11
P7	1	5	11	2	23	11
P8	3	13	7	5	19	7
P9	2,3	5	7	2	75	7
P10	1	7	14	6	16	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
7	1,2	3.50	1			N	1965		913		913	0.00	1965							1965	0.465	0.465		84	84	0.661	54	11
Flared Lane *									110																			
6	2	3.50	2	18			4210			66	66	1.00	3886							3886	0.017			3	49	0.661	6	84
4	1	3.50	2				4210		825		825	0.00	4210							4210	0.196			36	36	0.661	57	36
5	1	3.50	1	18		N	1965	128			128	1.00	1814							1814	0.071			13	36	0.661	24	63
3	2,3	3.50	1	15		N	1965	615			615	1.00	1786							1786	0.344			63	75	0.661	54	22
1,2	3	3.30	1	25			2085		124	124	248	0.50	2024							2024	0.123			22	27	0.661	36	49
1	3	3.30	1	20		N	1945			265	265	1.00	1809							1809	0.146	0.146		27	27	0.661	36	46
Flared Lane *										107																		

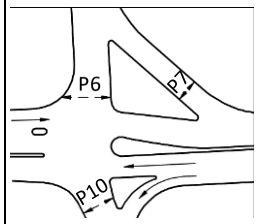
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Remarks: Flows of Wai Yip Street eastbound straight-ahead movement and Hoi Yuen Road southbound right-turning movement are deducted by flows capacity of the flared lane.

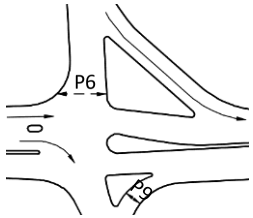
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design AM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J6_WYS_HYR.xlsx	Checked By:	SLN	Aug-26
J6 Wai Yip Street / Hoi Yuen Road			Reviewed By:	SLN	Aug-26



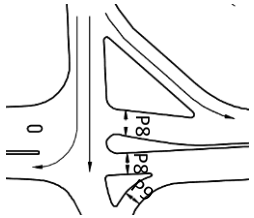
No. of stages per cycle	N =	3
Cycle time	C =	120 sec
Sum(y)	Y =	0.580
Loss time	L =	9 sec
Total Flow	=	3328 pcu
Co = (1.5*L+5)/(1-Y)	=	44.1 sec
Cm = L/(1-Y)	=	21.4 sec
Yult	=	0.833
R.C.ult = (Yult-Y)/Y*100%	=	43.5 %
Cp = 0.9*L/(0.9-Y)	=	25.3 sec
Ymax = 1-L/C	=	0.925
R.C.(C) = (0.9*Ymax-Y)/Y*100%	**=**	**43 %**



Stage 1 G= 44
Int =



Stage 2 G= 44
Int = 6



Stage 3 G= 21
Int = 5

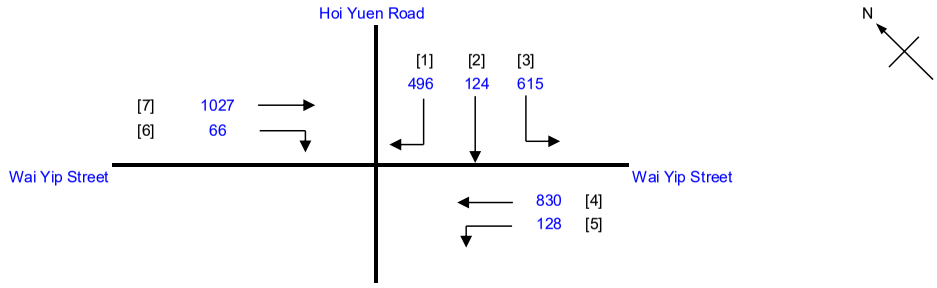
Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P6	1,2	5	11	2	81	11
P7	1	5	11	2	31	11
P8	3	13	7	5	14	7
P9	2,3	5	7	2	67	7
P10	1	7	14	6	24	14

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
7	1,2	3.50	1			N	1965		916		916	0.00	1965							1965	0.466	0.466		89	89	0.627	42	9
Flared Lane *									110																			
6	2	3.50	2	18			4210			123	123	1.00	3886							3886	0.032			6	45	0.627	12	64
4	1	3.50	2				4210		977		977	0.00	4210							4210	0.232			44	44	0.627	60	30
5	1	3.50	1	18		N	1965	150			150	1.00	1814							1814	0.083			16	44	0.627	24	56
3	2,3	3.50	1	15		N	1965	506			506	1.00	1786							1786	0.283			54	67	0.627	54	26
1,2	3	3.30	1	25			2085		238	0	238	0.00	2085							2085	0.114	0.114		22	22	0.627	36	48
1	3	3.30	1	20		N	1945			201	201	1.00	1809							1809	0.111			21	22	0.627	30	50
Flared Lane *										107																		

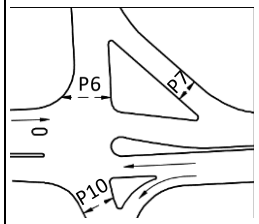
NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

* Remarks: Flows of Wai Yip Street eastbound straight-ahead movement and Hoi Yuen Road southbound right-turning movement are deducted by flows capacity of the flared lane.

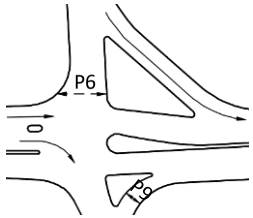
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Proposed Wholesale Conversion of Existing Building into Hotel Development at 118 Wai Yip Street, Kwun Tong, Kowloon	**2031 Design PM**	PROJECT NO.: 41074	Prepared By:	SKL	Aug-26
		FILENAME : J6_WYS_HYR.xlsx	Checked By:	SLN	Aug-26
J6 Wai Yip Street / Hoi Yuen Road			Reviewed By:	SLN	Aug-26



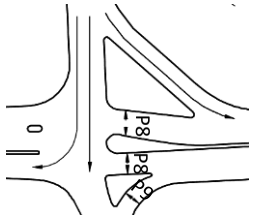
No. of stages per cycle		N =	3
Cycle time		C =	120 sec
Sum(y)		Y =	0.613
Loss time		L =	9 sec
Total Flow		=	3286 pcu
Co	= (1.5*L+5)/(1-Y)	=	47.8 sec
Cm	= L/(1-Y)	=	23.3 sec
Yult		=	0.833
R.C.ult	= (Yult-Y)/Y*100%	=	35.8 %
Cp	= 0.9*L/(0.9-Y)	=	28.2 sec
Ymax	= 1-L/C	=	0.925
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**36 %**



Stage 1 G= 36
Int =



Stage 2 G= 48
Int = 6



Stage 3 G= 26
Int = 5

Pedestrian Phase	Stage	Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P6	1,2	5	11	2	76	11
P7	1	5	11	2	23	11
P8	3	13	7	5	19	7
P9	2,3	5	7	2	75	7
P10	1	7	14	6	16	14

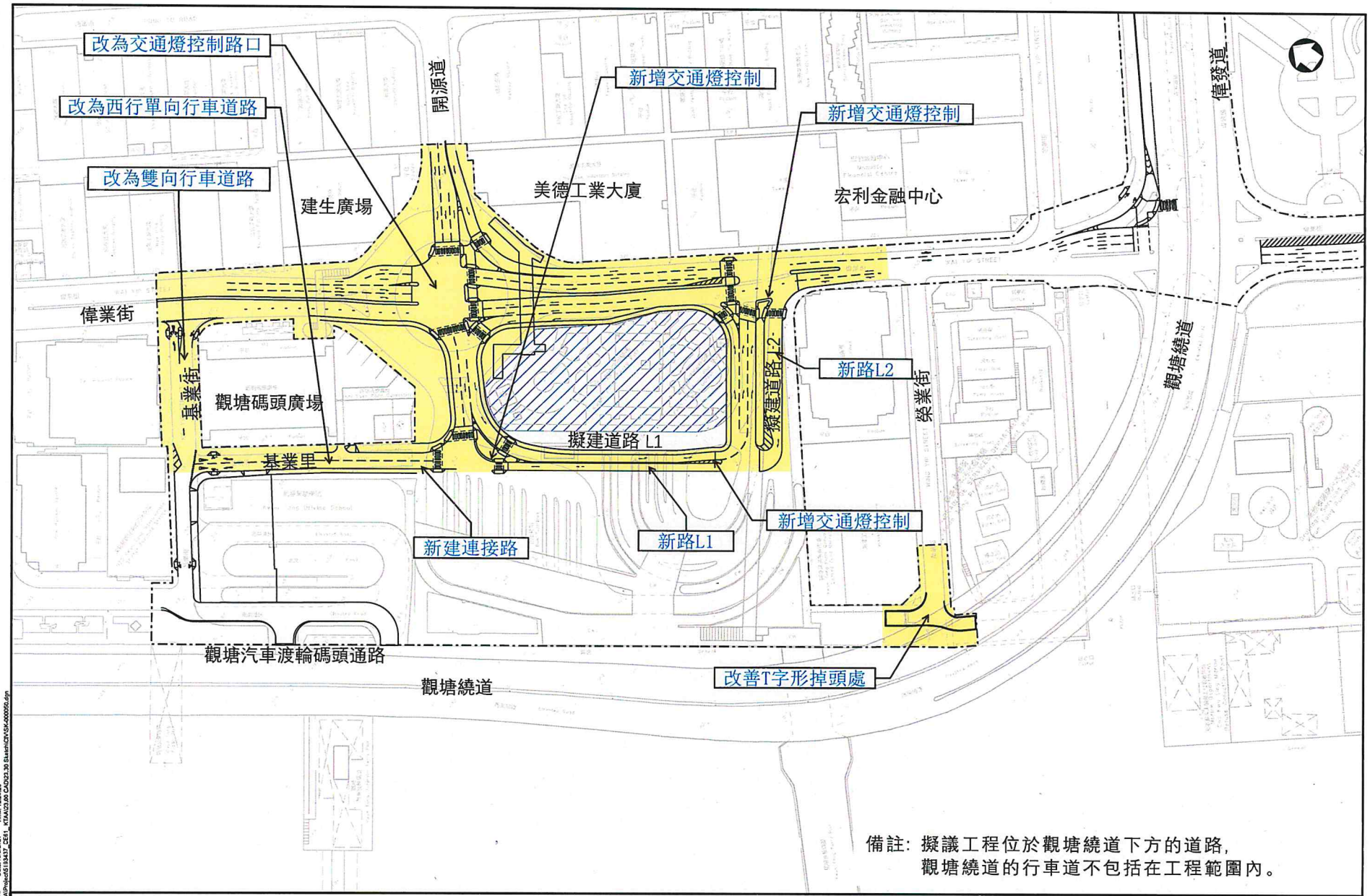
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							9					
7	1,2	3.50	1			N	1965		917		917	0.00	1965							1965	0.467	0.467		84	84	0.663	54	11
Flared Lane *									110																			
6	2	3.50	2	18			4210			66	66	1.00	3886							3886	0.017			3	49	0.663	6	84
4	1	3.50	2				4210		830		830	0.00	4210							4210	0.197			36	36	0.663	57	36
5	1	3.50	1	18		N	1965	128			128	1.00	1814							1814	0.071			13	36	0.663	24	63
3	2,3	3.50	1	15		N	1965	615			615	1.00	1786							1786	0.344			62	75	0.663	54	22
1,2	3	3.30	1	25			2085		124	124	248	0.50	2024							2024	0.123			22	27	0.663	36	49
1	3	3.30	1	20		N	1945			265	265	1.00	1809							1809	0.146	0.146		27	27	0.663	36	46
Flared Lane *										107																		

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

* Remarks: Flows of Wai Yip Street eastbound straight-ahead movement and Hoi Yuen Road southbound right-turning movement are deducted by flows capacity of the flared lane.

Appendix C

Junction Improvement Works by Others



備註: 擬議工程位於觀塘繞道下方的道路,
觀塘繞道的行車道不包括在工程範圍內。

圖則名稱

道路工程計劃(一) – 擬議觀塘行動區道路工程

圖2a

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