Annex A

Revised Traffic Assessment

Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

Traffic Impact Assessment

Final Report
July 2024

Prepared by: CKM Asia Limited

Prepared for: Wing Mau Tea House Limited

Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

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Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

FIGURES

NUMBER

1.0 INTRODUCTION

Background

1.1 The subject site is located in D.D.130, Lam Tei, Tuen Mun (the "Subject Site"). At present, the Subject Site is unoccupied, and access to the Subject Site via an existing unnamed road which is connected to Ng Lau Road. The location of the Subject Site is shown in **Figure 1.1**.

1.2 A Section 12A planning application for the minor relaxation of the maximum plot ratio restriction to 2.5 for residential use at the Subject Site was approved by the Town Planning Board (TPB ref: Y/TM-LTYY/9) on 24th September 2021 (the "Approved Scheme"). This Section 12A planning application is for minor relaxation of the maximum plot ratio restriction for residential use at the Subject Site from the approved 2.5 to 5.0 (the "Proposed Development").

1.3 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned by the Owner to conduct a traffic impact assessment in support of the Proposed Development. This report presents the findings and recommendations of the traffic impact assessment for the Proposed Development.

Structure of Report

1.4 The report is structured as follows:

Chapter One	-	Gives the background of the project;
Chapter Two	-	Describes the existing situation;
Chapter Three	-	Presents the Proposed Development;
Chapter Four	-	Describes the traffic impact analysis; and
Chapter Five	-	Gives the overall conclusion.

2.0 EXISTING SITUATION

The Subject Site

2.1 The Subject Site is bounded by the Light Rail Transit ("LRT") and the Tuen Ma Line to the East, and a nullah to the West. Access to the Subject Site is from the south and is via a bridge over the nullah. The Access Road is connected to Ng Lau Road.

The Road Network

2.2 Ng Lau Road is a single carriageway 2-lane 2-way local distributor which connects with the Lam Tei Interchange to the south and Castle Peak Road - Lam Tei underneath the Kong Sham Western Highway. It provides access to villages, e.g., San Hing Tsuen, Tuen Tsz Wai, and Tsing Chuen Wai.

2.3 Lam Tei Interchange connects Tsing Lun Road, Hong Po Road, Ng Lau Road, Castle Peak Road – Lam Tei, Yuen Long Highway and Tuen Mun Road. It is the main access for traffic accessing the Subject Site and strategic routes.

Existing Traffic Flows

2.4 To quantify the junction and road link flows in the vicinity of the Subject Site, manual classified counts were conducted at 0700 – 0900 and 1700 – 1900 on Tuesday, 18th April 2023, Wednesday, 19th April 2023 and Wednesday, 26th April 2023, and were re-conducted on Wednesday, 8th May 2024 at the junctions and road links listed in **Table 2.1**.

TABLE 2.1 SURVEYED JUNCTIONS AND ROAD LINKS

Reference	Junction
J1:	Unnamed Road/ Access Road
J2:	Ng Lau Road/ Unnamed Road
J3:	Ng Lau Road/ Lam Tei Interchange
J4:	Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange
J5:	Lam Tei Interchange
J6:	Lam Tei Interchange/ Castle Peak Road – Lam Tei
J7:	Tsing Lun Road/ Tsz Tin Road
J8:	San Hing Road/ Ng Lau Road (Southern)
J9:	San Hing Road/ Ng Lau Road (Northern)
J10:	T-junction at San Hing Road
J11:	Ng Lau Road / Castle Peak Road – Lam Tei
J12:	Hong Po Road / Yan Tin Estate Access Road
Reference	**Road Link**
L1:	Castle Peak Road – Lam Tei
L2:	Castle Peak Road – Lingnan
L3:	Yuen Long Highway
L4:	Tuen Mun Road
L5:	San Hing Road
L6:	Ng Lau Road (north of J9)
L7:	Ng Lau Road (south of J2)
L8:	Lam Tei Interchange (between J3 and J5)
L9:	Tsing Lun Road

2.5 The locations of these junctions, road links and the area of influence (the "AOI") are shown in **Figure 2.1** and the junction layouts are shown in **Figures 2.2 – 2.13** respectively.

2.6 The traffic counts are classified by vehicle type to enable traffic flows in passenger car units ("pcu") to be calculated. The AM and PM peak hours identified from the surveys are found to be between 0800 – 0900 hours and 1700 – 1800 hours respectively. The existing AM and PM peak hour junction in pcu/hour and road link flows in veh/hr are presented in **Figures 2.14 – 2.15**.

Existing Junction Performance

2.7 The existing junction performance of the junctions are calculated based on the traffic flows obtained from the survey, and the analysis was undertaken using the methods outlined in Volume 2 of the Transport Planning and Design Manual ("TPDM"). The results are summarised in **Table 2.2** and the detailed calculations are found in **Appendix A**.

TABLE 2.2 EXISTING JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction (Parameter)	AM Peak	PM Peak
J1	Unnamed Road/ Access Road	Priority (DFC)	0.000	0.000
J2	Ng Lau Road/ Unnamed Road	Priority (DFC)	0.033	0.032
J3	Ng Lau Road/ Lam Tei Interchange	Signal (RC)	91%	84%
J4	Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange	RA (DFC)	0.545	0.591
J5	Lam Tei Interchange	RA (DFC)	0.522	0.489
J6	Lam Tei Interchange/ Castle Peak Road – Lam Tei	Signal (RC)	120%	215%
J7	Tsing Lun Road/ Tsz Tin Road	Signal (RC)	58%	92%
J8	San Hing Road/ Ng Lau Road (Southern)	Priority (DFC)	0.061	0.040
J9	San Hing Road/ Ng Lau Road (Northern)	Priority (DFC)	0.227	0.498
J10	T-junction at San Hing Road	Priority (DFC)	0.008	0.002
J11	Ng Lau Road / Castle Peak Road – Lam Tei	Signal (RC)	139%	132%
J12	Hong Po Road / Yan Tin Estate Access Road	Priority (DFC)	0.066	0.011

Note: RC – reserve capacity; DFC – design flow/capacity ratio, RA – Roundabout

2.8 The above results indicate that the surveyed junctions currently operate with capacities during the AM and PM peak hours.

Link Operational Performance

2.9 The link operational performance of the road links are calculated based on the surveyed existing traffic flows, and the analysis was undertaken using the methods outlined in Volume 2 of the Transport Planning and Design Manual ("TPDM"). The results are summarised in **Table 2.3.**

TABLE 2.3 EXISTING LINK CAPACITY ASSESSMENT

Ref	Link		Adjusted Design Flow (veh/hr)		Traffic Demand (veh/hr)		V/C Ratio	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
L1	Castle Peak Road – Lam Tei	NB	2,604	2,604	766	1,317	0.29	0.51
		SB	2,604	2,604	1,448	766	0.56	0.29
L2	Castle Peak Road – Lingnan	NB	2,800	2,800	417	452	0.15	0.16
		SB	2,800	2,800	672	472	0.24	0.17
L3	Yuen Long Highway	NB	4,700	4,700	3,759	3,181	0.80	0.68
		SB	4,700	4,700	3,642	3,988	0.77	0.85
L4	Tuen Mun Road	NB	4,700	4,700	4,108	4,219	0.87	0.90
		SB	4,700	4,700	4,404	3,961	0.94	0.84
L5	San Hing Road	2-way	800	800	46	31	0.06	0.04
L6	Ng Lau Road (north of J9)	2-way	744	800	218	345	0.29	0.43
L7	Ng Lau Road (south of J2)	2-way	800	800	252	373	0.32	0.47
L8	Lam Tei Interchange (between J3 and J5)	EB	2,800	2,800	1,055	713	0.38	0.25
		WB	2,800	2,800	1,108	1,199	0.40	0.43
L9	Tsing Lun Road	NB	1,900	1,900	519	409	0.27	0.22
		SB	1,900	1,900	825	735	0.43	0.39

NB – northbound SB – southbound EB – eastbound WB – westbound

2.10 The above results show that the assessed road links operate with sufficient capacity.

Public Transport Facilities

2.11 The Subject Site is located close to public transport services, including franchised buses and public light buses and these operate within 400 metres or some 8-minutes' walk away. Details of these public transport services are presented in **Table 2.4**. The location and major pedestrian routes of these public transport services are shown in **Figure 2.16**.

TABLE 2.4 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Bus Stop	Destination	Routing	Frequency (min)
CTB 50	LTI	YTM	Tuen Mun (Ching Tin and Wo Tin) → Tsim Sha Tsui (Kowloon Station) (E)	20 - 30
			Tsim Sha Tsui (Kowloon Station) → Tuen Mun (Ching Tin and Wo Tin) (F)	20 - 35
CTB 55(1)	LTI	Kln(E)	Tuen Mun (Ching Tin and Wo Tin) → Kwun Tong Ferry Pier (A)	7 per day
			Kwun Tong Ferry Pier → Tuen Mun (Ching Tin and Wo Tin) (B)	4 per day
CTB 56(1)	LTI	N	Tuen Mun (Ching Tin and Wo Tin) → Sheung Shui (Tin Ping Estate) (G)	30
			Sheung Shui (Tin Ping Estate) → Tuen Mun (Ching Tin and Wo Tin) (G)	30
CTB 56A(1)	LTI	N	Tuen Mun (Ching Tin and Wo Tin) → Queen's Hill Fanling (via: Sheung Shui Station)(C)	15 - 30
			Queen's Hill Fanling (via: Sheung Shui Station) → Tuen Mun (Ching Tin and Wo Tin)(C)	20 - 30
CTB 950(1)	LTI	HKI	Tuen Mun (Ching Tin and Wo Tin) → Exhibition Centre Station (A)	2 per day
			Exhibition Centre Station → Tuen Mun (Ching Tin and Wo Tin) (B)	1 per day
CTB 955(1)	LTI	HKI	Tuen Mun (Ching Tin and Wo Tin) → Sai Wan Ho (A)	1 per day
			Sai Wan Ho → Tuen Mun (Ching Tin and Wo Tin) (B)	1 per day
CTB B3A	LTI	BCP	Shan King Estate - Shenzhen Bay Port	30 - 60
CTB N50(D)	LTI	YTM	Tuen Mun (Ching Tin and Wo Tin) - Tsim Sha Tsui (Kowloon Station)	4 per day
CTB N969(D)	CPR	HKI	Tin Shui Wai Town Centre - Causeway Bay (Moreton Terrace)	20 - 45
KMB 53	CPR	NTW	Yoho Mall (Yuen Long) - Tsuen Wan (Nina Tower)	25 - 35

TABLE 2.4 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE (CONT'D)

Route	Bus Stop	Destination	Routing	Frequency (min)
KMB 63X	CPR	YTM	Hung Shui Kiu (Hung Fuk Estate) - Jordan (West Kowloon Station)	12 - 30
KMB 67M	LTI	NTW	Tuen Mun (Siu Hong Court) - Kwai Fong Station	5 - 20
KMB 67X	LTI	Kln(W)	Tuen Mun (Siu Hong Court) - Mong Kok East Station	7 - 25
KMB 68A	CPR	NTW	Long Ping Estate - Tsing Yi Station	8 - 30
KMB 258A(1)	CPR	Kln(E)	Hung Shui Kiu (Hung Fuk Estate) → Lam Tin Station(A)	2 per day
KMB 258P(2)	CPR	Kln(E)	Hung Shui Kiu (Hung Fuk Estate) - Lam Tin Station(C)	12 - 30
KMB 261P	CPR	N	Tuen Mun (Siu Hong Court) → Sheung Shui (Tin Ping) (2)(A)	2-3 per day
			Sheung Shui (Tin Ping) → Tuen Mun (Siu Hong Court) (1)(B)	1 per day
KMB 267X(1)	LTI	Kln(E)	Tuen Mun (Siu Hong Court) → Lam Tin Station (A)	2 per day
			Lam Tin Station → Tuen Mun (Siu Hong Court) (B)	2 per day
KMB 960A(1)	CPR	HKI	Central → Hung Shui Kiu (Hung Fuk Estate) (B)	1 per day
KMB 960C(1)	LTI	HKI	Tuen Mun (Fu Tai Estate) → Causeway Bay (Victoria Park) (A)	2 per day
			Causeway Bay (Victoria Park) → Tuen Mun (Fu Tai Estate) (B)	1 per day
KMB 960P	CPR	HKI	Hung Shui Kiu (Hung Yuen Road) → Causeway Bay (Victoria Park)(A)	10 - 35
			Causeway Bay (Victoria Park) → Hung Shui Kiu (Hung Yuen Road) (1)(B)	2 per day
KMB 960X(1)	CPR	HKI	Hung Shui Kiu (Hung Yuen Road) → Quarry Bay (King's Road) (A)	9 per day
			Quarry Bay (King's Road) → Hung Shui Kiu (Hung Yuen Road) (B)	10 per day
KMB N260(D)	CPR	NTW	Tuen Mun Pier Head - Mei Foo	20 - 30
LWB A34	CPR	TCL	Hung Shui Kiu (Hung Yuen Road) - Airport (Ground Transportation Centre)	15 - 60
LWB E33P	LTI	TCL	Siu Hong Station (South) - Airport (Ground Transportation Centre)	12 - 45
LWB NA33(D)	LTI	TCL	Tuen Mun (Fu Tai Estate) → Cathay Pacific City	4 per day
			Cathay Pacific City → Tuen Mun (Fu Tai Estate)	6 per day
LWB NA37(D)	CPR	TCL	Tin Shui Wai Town Centre → Cathay Pacific City	5 per day
			Cathay Pacific City → Tin Shui Wai Town Centre	6 per day
NLB B2	CPR	BCP	Yuen Long MTR Station - Shenzhen Bay Port	20 - 30
GMB 42	LTI	NTW	Tsing Chuen Wai - Tuen Mun Town Centre	13 – 15
GMB 606S(D)	CPR	YTM	Yuen Long (Fung Cheung Rd) - Tsim Sha Tsui East	6 - 13

KMB – Kowloon Motor Bus LWB – Long Win Bus CTB – CityBus
GMB – Green Minibus NLB – New Lantao Bus
CPR – Castle Peak Road – Lam Tei LTI – Lam Tei Interchange YTM – Yau Ma Tei/ Tsim Sha Tsui / Mong Kok
Kln(E) – Kowloon (East) Kln(W) – Kowloon (West) N – North
HKI – Hong Kong Island BCP – Boundary Control Point NTW – New Territories West
TCL–Tung Chung / Lantau Island

Note: (1) Monday to Friday. (Except public holidays) (2) Monday to Saturday (Except public holidays)
(A) AM peak only (B) PM peak only (C) AM and PM peak only (D) overnight service
(E) AM service only (F) PM service only (G) daytime non-peak service

Survey on Road-based Public Transport Services Located in the Vicinity

Road-based Public Transport

2.12 Survey on road-based public transport services listed in **Table 2.4** was conducted during the AM and PM peak periods on Thursday, 18th January 2024 at the bus stops near the subject site.

2.13 The AM and PM peak hours identified from the surveys are found to be between 0715 – 0815 hours and 1830 – 1930 hours respectively. The survey locations are shown in **Figure 2.16**. The survey results are summarized in **Table 2.5** and the detailed information are shown in **Appendix B**.

TABLE 2.5 OCCUPANCY OF EXISTING ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING NEAR THE SUBJECT SITE

Direction	AM Peak			PM Peak		
	No. of Pass.		Occupancy	No. of Pass.		Occupancy
	Cap. [a]	Occ. [b]	[c]=[b]/[a]	Cap. [d]	Occ. [e]	[f]=[e]/[d]
Outbound – To other districts	8,476	3,163	37%	2,236	767	34%
Inbound – From other districts	2,476	897	36%	5,356	1,823	34%

Pass. – Passenger Cap. – Capacity Occ. - Occupied

2.14 The above results indicate that the surveyed road-based public transport services currently operate with spare capacities during the AM and PM peak hours.

Rail-based Public Transport

2.15 Based on the information obtained from the Legislative Council, the operational performance for MTR Tuen Ma Line in 2023 is summarized in **Table 2.6**.

TABLE 2.6 OPERATIONAL PERFORMANCE OF MTR TUEN MA LINE

Item	Parameters
Maximum carrying capacity when train frequency is maximized [a]	70,000 passengers / hour
Existing carrying capacity [b]	58,800 passengers / hour (1)
Current Patronage [c]	35,700 passengers / hour
Current Loading [c]/[b] {Critical Link}	61% {Tsuen Wan West to Mei Foo}
Loading compared with maximum carrying capacity [c]/[a]	51%

Source: Reply Serial No. TLB162 for Question Serial No. 2402, Controlling Officer's Reply, Examination of Estimates of Expenditure 2024-25. Finance Committee. Legislative Council. 18 April 2024.
<https://www.tlb.gov.hk/eng/legislative/transport/special/land/TLB-2-e1.pdf>
(1) According to the reply, existing train frequency has not yet increased to the maximum level as permitted by the signalling system.

2.16 **Table 2.6** shows that the MTR Tuen Ma Line operates at 61% of its current capacity, or 51% of its maximum carrying capacity during the peak hour.

Light Rail Transit (LRT) Transport

2.17 Survey on LRT transport services at Lam Tei LRT stops was conducted during the AM and PM peak periods on Thursday, 18th January 2024. The AM and PM peak hours identified from the surveys are found to be between 0715 – 0815 hours and 1830 – 1930 hours respectively. The survey results are summarized in **Table 2.7**.

TABLE 2.7 OPERATIONAL PERFORMANCE OF LRT SERVICES AT LAM TEI STOP

Direction	No. of. Trips.			No. of Passenger		Occupancy [c]=[b]/[a]
	Single	Coupled-set	Total	Capacity[1] [a]	Occupied [b]	
AM Peak Hour						
Yuen Long bound	13	10	23	6,600	3,290	50%
Tuen Mun bound	12	12	24	7,200	5,796	81%
PM Peak Hour						
Yuen Long bound	14	7	21	5,600	4,236	76%
Tuen Mun bound	12	10	22	6,400	3,092	48%

[1] Assumed capacity of 200 passengers per trip for single Light Rail Vehicle (LRV) and 400 passengers per trip for coupled-set LRV

2.18 **Table 2.7** shows that the surveyed LRT services at Lam Tei Stop currently operate with spare capacities during the AM and PM peak hours.

Existing Footpath Level-Of-Service

2.19 To quantify the existing pedestrian flows, pedestrian counts were conducted during the AM and PM peak periods on Thursday, 18th January 2024 at footpaths located in the vicinity of Proposed Development, and the observed peak 15-minute pedestrian flows are shown in **Figure 2.17**.

2.20 The Level-Of-Service ("LOS") of a pedestrian footpath depends on its width and number of pedestrians using the facility. Description of the LOS at walkway is obtained from Volume 6 of the TPDM and is presented in **Table 2.8**.

TABLE 2.8 DESCRIPTION OF PEDESTRIAN FOOTPATH LOS

LOS	Flow Rate (ped/min/m)	Description
A	≤ 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
B	16 – 23	Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
C	23 – 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional stream. Where reverse direction or crossing movement exist, minor conflicts will occur, and speed and volume will be somewhat lower.
D	33 – 49	Freedom to select individual walking speeds and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflicts is high and its avoidance requires changes of speeds and position. The LOS provides reasonable fluid flow; however considerable friction and interactions between pedestrians are likely to occur.
E	49 – 75	Virtually, all pedestrians would have their normal walking speeds restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulties. Design volumes approach the limit of walking capacity with resulting stoppages and interruptions to flow.
F	> 75	Walking speeds are severely restricted. Forward progress is made only by shuffling. There are frequent and unavoidable conflicts with other pedestrians. Cross- and reverse-movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristics of queued pedestrians than of moving pedestrian streams.

Source: Volume 6 Chapter 10 of TPDM

2.21 The observed peak 15-minute pedestrian flows LOS assessment is presented in **Table 2.9**.

TABLE 2.9 EXISTING LOS ASSESSMENT

Location	Clear Width[1] [Effective Width] (m)	Peak Period	Flow (ped/ 15 min)	Flow rate (ped/min/m)	LOS
P1. Footpath on the footbridge connected to Ng Lau Road	2.0[1.5]	AM	50	2.2	A
		PM	33	1.5	A
P2. Footpath between Lam Tei LRT stop and bus stop at Castle Peak Road – Lam Tei	2.5[1.5]	AM	105	4.7	A
		PM	70	3.1	A
P3. Footbridge over Castle Peak Road – Lam Tei	2.5[1.5]	AM	72	3.2	A
		PM	35	1.6	A
P4. Southern Footpath of San Hing Road	1.5[0.5]	AM	15	2.0	A
		PM	10	1.3	A
P5. Eastern Footpath of Ng Lau Road	2.0[1.0]	AM	63	4.2	A
		PM	40	2.7	A

[1] The width excludes railing and obstructions.

2.22 The above results indicate that the surveyed footpaths currently operate with LOS A during the AM and PM peak. As stated in the TPDM, LOS A to C is considered as an acceptable level of service: "In general, LOS C is desirable for most design at streets with dominant 'living' pedestrian activities".

3.0 THE PROPOSED DEVELOPMENT

Key Parameters

3.1 The Proposed Development key parameters are presented in **Table 3.1**.

TABLE 3.1 KEY PARAMETERS

Item		Proposed Development
Development Site Area		About 8,896 m^2
Domestic Plot Ratio		5.0
Domestic GFA		44,480 m^2
Flat Mix (GFA)	Flat Size ≤ 40m^2	1,110
	40m^2 < Flat Size ≤ 70m^2	275
Total number of Flats		**1,385**

Provision of Internal Transport Facilities

3.2 The internal transport facilities for the Proposed Development are provided in accordance with the recommendations of the Hong Kong Planning Standards and Guidelines ("HKPSG") and are presented in **Table 3.2**.

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR PROPOSED DEVELOPMENT

Facility	HKPSG Recommendation	Provision
Car Parking Space	**For Residents:** Parking Requirement = GPS x R1 x R2 x R3 Global Parking Standard (GPS): 1 car parking space per 4 - 7 flats Demand Adjustment Ratio (R1): 0.5 for flat size ≤ 40 m^2 GFA 1.2 for flat size 40 – 70 m^2 GFA Accessibility Adjustment Ratio(R2): 1.0 outside 500m-radius of rail station Development Intensity Adjustment Ratio (R3): 1.0 for Plot Ratio 2.0 – 5.0 For 1,100 flats with flat size less than 40 m^2 GFA Minimum: (1,110 / 7 x 0.5 x 1.0 x 1.0) = 79.3, say 80 nos. Maximum: (1,110 / 4 x 0.5 x 1.0 x 1.0) = 138.8, say 139 nos. For 275 flats with flat size 40 – 70 m^2 GFA Minimum: (275 / 7 x 1.2 x 1.0 x 1.0) = 47.2, say 48 nos. Maximum: (275 / 4 x 1.2 x 1.0 x 1.0) = 82.5, say 83 nos. Total *Minimum = 80 + 48 = 128 nos.* *Maximum = 139 + 83 = 222 nos.*	**222 nos**. @ 5.0m (L) x 2.5m (W) x 2.4m (H) **= HKPSG maximum**
	For Visitors: Visitor car parking for private residential developments with more than 75 units per block should be provided at 5 visitor spaces per block in addition to the recommendations, or as determined by the Authority. For 5 blocks: 5 x 5 nos. = 25 nos.	**25 nos**. (22 nos. @ 5.0m(L) x 2.5m(W) x 2.4m(H) + 3 nos. @ 5.0m(L) x 3.5m(W) x 2.4m(H) for person with disabilities) **= HKPSG maximum**
	Total Car Parking Space: *Minimum = 128 + 25 =* ***153 nos.*** *Maximum = 222 + 25 =* ***247 nos.*** *Note: For total no. of car parking space in lot = 151 – 250 nos., the Building (planning) regulation 72 require provision of 3 accessible car parking spaces*	***247 nos. (including 3 accessible car parking spaces)***

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR PROPOSED DEVELOPMENT (CONT'D)

Facility	HKPSG Recommendation	Provision
Motorcycle Parking Space	**For Residential Uses:** TD Comment: 1 motorcycle parking space shall be provided for every 81 flats For 1,385 flats: 1,385 / 81 = 17.1, say 18 nos.	**18 nos. @** 2.4m (L) x 1.0m (W) x Min. 2.4m (H) **= fulfil TD comment, OK**
Goods Vehicle Loading/ Unloading Bay	**For Residential Uses:** Minimum of 1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block or as determined by the Authority. For 5 blocks, each block less than 800 flats: **5 no.**	**5 nos.** @ 11.0m (L) x 3.5m (W) x Min. 4.7m (H) **= HKPSG minimum, OK**
Bicycle Parking Spaces	**For Residential Uses:** Within 0.5 – 2km to rail station, 1 space per 15 flats with flat size $<70m^2$ = 1,385 ÷ 15 = 93 nos.	***93 no.** @ 1.8m (L) x 0.8m (W) x Min. 2.4m (H)* ***= comply HKPSG, OK***

3.3 **Table 3.2** shows that the internal transport facilities provided comply with the recommendations of the HKPSG. The master layout plan of the Proposed Development is shown in **Figure 3.1**.

Planned Road Works near the Proposed Development

3.4 The existing access road and unnamed road connecting the Proposed Development with Ng Lau Road is planned to be improved, to provide a 7.3m-wide road carriageway, a 2m-wide footpath and a 2m-wide cycle track (the "Planned Road Works"). The Planned Road Works to be implemented by the Owner as part of the Approved Scheme and is found in **Appendix C**.

Swept Path Analysis

3.5 The CAD-based swept path analysis programme, Autodesk Vehicle Tracking, was used to check the ease of manoeuvring of vehicles within the Proposed Development, and the swept path analysis drawings are found in **Appendix D**. Vehicles are found to have no manoeuvring problems.

4.0 TRAFFIC IMPACT

Design Year

4.1 The Proposed Development is expected to be completed in 2030, and the design year adopted for the traffic assessment is, whichever later of the 2: (i) at least 3 years after the planned completion of the development, i.e., 2033, or (ii) 5 years from the date of this application, i.e., 2028. Therefore, Year 2033 is adopted for junction capacity analysis.

Traffic Forecasting

4.2 Year 2033 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the 2019-based BDTM NTW1 (the "BDTM"); (ii) estimated growth from 2031 to 2033; (iii) expected traffic generation by the planned / committed developments in the vicinity; and (iv) expected traffic generation by the 2 cases, i.e., Approved Scheme and Proposed Development.

Modelling and Validation

4.3 The BDTM provides traffic forecasts for the years 2026 and 2031 and these have taken into account the planned developments, changes to the strategic road network, population growth, etc. Therefore, The BDTM is used as the basis to produce the traffic flow for this TIA.

4.4 The BDTM is validated, and the validation meets criteria found in the "BDTM Study". Nevertheless, the traffic network and zone in the vicinity of the Proposed Development were further reviewed to ensure the traffic model is up-to-date and the modelled flow can be adopted. The modelling and validation methodology include, but not limited to, the following:

- The road links and junctions were checked and updated to ensure that any recent change in the existing road network is considered and missing road links or junction does not exist.
- The schedules of public transport services such as franchised bus and green/ red minibus were also checked to ensure that the updated routings and headway information are adopted.
- The zone and centroid connectors were reviewed to ensure that the traffic zones generate/ attract traffic at appropriate locations.
- The traffic flows produced by BDTM at the surveyed junctions were reviewed with reference to the observed traffic flows.
- The validation methodology is same as that adopted in the BDTM. All count locations were reviewed and checked using the GEH statistic (a modified chi squared test to provide a statistic for both the magnitude of the difference and the percentage difference between modelled and observed flows). The GEH statistic is defined by:

$$\sqrt{\frac{(V_2 - V_1)^2}{\frac{1}{2}(V_2 + V_1)}}$$

where V_1 and V_2 are the observed and modelled flows.

4.5 The validation criteria adopted are found in **Table 4.1**.

TABLE 4.1 VALIDATION CRITERIA

Locations	Target
Traffic flows at all count locations	85% return a GEH statistic of 5 or less 100% return a GEH statistic of 10 or less

Estimated Traffic Growth Rate from 2031 to 2033

4.6 Reference is made to the "Hong Kong Population Projections 2022 – 2046" published by Census and Statistics Department, and the information is presented in **Table 4.2**.

TABLE 4.2 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

Year	Population in Hong Kong (thousands)
2031	7,820.2
2033	7,903.6
Average Annual Growth (2031 – 2033)	**0.53%**

4.7 **Table 4.2** shows that the annual population growth between 2031 and 2033 is 0.53%, and is adopted for estimated traffic growth rate from 2031 to 2033.

Additional Planned/ Committed Developments near the Subject Site

4.8 The planned/ committed developments near the Subject Site not included in the BDTM but have been incorporated to produce the future year traffic flows are listed in **Table 4.3** and the locations are presented in **Figure 4.1**.

TABLE 4.3 THE ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

Ref. No.	Development	Intake Year	Land Use	GFA (m^2)	No. of Flat (no.)	Average Flat Size (m^2)	No.
Tuen Mun Area 54 [(1)]							
A	Site 1 &1A Wo Tin Estate	2022	PRH	--	4,232	--	--
			Retail	2,420	--	--	--
			SWF	1,060	--	--	--
			Kindergarten	--	--	--	1 no.
B	Site 2 Yan Tin Estate	2017	PRH	--	4,688	--	--
			Retail	4,250	--	--	--
			SWF	3,600	--	--	--
C	Site 3 & 4 (East) Ching Tin Estate	2022	PRH	--	5,183	--	--
			Retail	3,130	--	--	--
			SWF	1,810	--	--	--
			Kindergarten	--	--	--	1 no.
D	Site 3 & 4 (West) Novo Land	2025	Private Housing	--	4,600	--	--
			Retail	5,000	--	--	--
E	Site 4A (East and West) [(2)]	2026	Light Public Housing	--	5,620	--	--
G	Site 4A (South)	2028	PRH	--	1,475	--	--
			Kindergarten	--	--	--	1 no.
H	Site 5	2028	SSF	--	1,020	--	--
			SWF	1,300	--	--	--

TABLE 4.3 THE ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE (CONT'D)

Ref. No.	Development	Intake Year	Land Use	GFA (m^2)	No. of Flat (no.)	Average Flat Size (m^2)	No.
Development at San Hing Road and Hong Po Road, Tuen Mun[3]							
I	San Hing Road Site	2030 - 2033	PRH / SSF	--	9,400	--	--
			Primary School	--	--	--	1 nos.
			Kindergarten	--	--	--	2 nos.
			SWF	N/A	--	--	--
J	San Hing Road Site Extension	2030 - 2033	PRH / SSF	--	1,500	--	--
			Retail	5,000[4]	--	--	--
			Sport Centre	--	--	--	1 no.
K	Ho Pong Road Site	2030 - 2033	PRH / SSF	--	9,500	--	--
			Retail	5,000[4]	--	--	--
			Kindergarten	--	--	--	2 no.
			SWF	N/A	--	--	--
Other Planning Applications Nearby[5]							
L	A/TM-LTYY/ 426	2026	Private Housing	--	184	31	--
M	Y/TM-LTYY/ 10	--	Private Housing	--	288	40	--
N	A/TM-LTYY/ 301	--	NTEH [3]	--	1	195	--
O	A/TM-LTYY/ 335	--	NTEH [3]	--	1	195	--
P	A/TM-LTYY/ 336	--	NTEH [3]	--	1	195	--
Q	A/TM-LTYY/ 370	--	NTEH [3]	--	1	195	--
R	A/TM-LTYY/ 371	--	NTEH [3]	--	1	195	--
S	A/TM-LTYY/ 372	--	NTEH [3]	--	1	195	--

PRH – Public Rental Housing SSF – Subsidised Sale Flats NTEH – New Territories Exempted House
SWF – Social Welfare Facilities

(1) extracted from TIA of Approved Planning Applications A/TM/500 and A/TM/583
(2) extracted from Legislative Council Panel on Housing discussion paper CB(1)1123/2023(02) on December 2023
(3) extracted from Tuen Mun District Council discussion paper TMDC 19/2023 on September 2023
(4) No information on area for retail uses is found in public domain, assumed 5,000 m^2 GFA of retail
(5) extracted from Planning Statement of Approved Planning Applications

Planned Road Improvement Works Nearby

4.9 The planned road improvement works at assessed junctions are presented below.

Development at San Hing Road and Hong Po Road

4.10 Some road improvement works are planned under various contracts by CEDD, and these are summarized in **Table 4.4**. The road improvement works are found in **Appendix E**.

TABLE 4.4 PLANNED ROAD IMPROVEMENT WORKS

Ref	Brief Description of the Improvement	Contract
J3	Provide 2 left-turn lanes at Ng Lau Road southbound	CE 39/2021 (CE)
	Provide 1 left-turn lane at Lam Tei Interchange eastbound	CE 39/2021 (CE)
J4	Provide exclusive left-turn lane from Hong Po Road southbound	CE 39/2021 (CE)
	Modify the entry lanes from Lam Tei Interchange westbound	CE 39/2021 (CE)
J6	Provide 2 right-turn lanes and 1 shared lane for right turn and straight ahead at Castle Peak Road – Lam Tei southbound	CE 39/2021 (CE)
J7	Provide a channelized island at Tsz Tin Road eastbound ()	CV/2019/04
J10	Widened to provide 2lane 2-way single carriageway at minor road	CE 39/2021 (CE)
J12	Provide signalised cross junction	CE 39/2021 (CE)

CE 39/2021 (CE) - Site Formation and Infrastructure Works for Public Housing Developments at San Hing Road and Hong Po Road, Tuen Mun and Choi Shun Street, Sheung Shui – Investigation, Design and Construction"
CV/2019/04 - Site Formation and Infrastructure Works near Tsz Tin Road and Hing Fu Street in Area 54, Tuen Mun

4.11 The improvement work described in **Table 4.4** will be completed gradually before 2030 – 2033, i.e., the intake of public housing of San Hing Road site, and San Hing Road site extension and Hong Po Road site (Note: These are items I, J and K in **Table 4.3**). These improvement works are adopted for the Year 2033 junction capacity analysis.

Hung Shiu Kiu New Development Area

4.12 Road improvement work is planned at Ng Lau Road / Castle Peak Road – Lam Tei (J11) under the "Hung Shui Kiu/Ha Tsuen New Development Area Package A Works for Second Phase Development - Design and Construction" (Agreement No. CE 01/2020 (CE)) by Civil Engineering and Development Department ("CEDD"). The layout of road improvement at J11 is presented in **Appendix E**.

Net Increase in Traffic Generation between the Approved Scheme and the Proposed Development

4.13 To estimate the traffic generation of the Proposed Development, reference is made to the TPDM. However, the smallest flat size in the TPDM is 60m^2 GFA, which is substantially larger than the Proposed Development average flat size of only 32m^2 GFA. Hence, the estimated traffic generation is conservative, i.e., on the high-side. The adopted trip generation rates and the estimated AM and PM peak hour traffic generation are presented in **Table 4.5**.

TABLE 4.5 ADOPTED TRIP RATES AND TRAFFIC GENERATION FOR PROPOSED DEVELOPMENT

Proposed Development *(1,385 flats with average flat about 32m^2 GFA)*	**Parameter**	**AM Peak**		**PM Peak**	
		Generation	**Attraction**	**Generation**	**Attraction**
Trip Rates: Residential Use with average 60m^2 GFA	pcu/flat/ hr	0.0718	0.0425	0.0286	0.0370
Traffic Generation	pcu/hr	*100*	*59*	*40*	*52*
		159		***92***	
	veh/hr[(1)]	*94*	*56*	*37*	*49*
		150		***86***	

(1) Converted from pcu/hr to veh/hr based on 90% private car/ taxi and 10% heavy goods vehicles

4.14 The traffic generation of Approved Scheme found in the approved traffic impact assessment is presented in **Table 4.6**.

TABLE 4.6 ADOPTED TRAFFIC GENERATION FOR APPROVED SCHEME

Approved Scheme	**Parameter**	**AM Peak**		**PM Peak**	
		Generation	**Attraction**	**Generation**	**Attraction**
Traffic Generation	pcu/hr	*37*	*22*	*18*	*23*
		59 (2-way)		*41 (2-way)*	
	veh/hr[(1)]	*35*	*21*	*17*	*22*
		56 (2-way)		***39 (2-way)***	

(1) Converted from pcu/hr to veh/hr based on 90% private car/ taxi and 10% heavy goods vehicles

4.15 The peak hour traffic generation of Approved Scheme and Proposed Development are shown in **Figures 4.2 – 4.3** respectively.

4.16 The net increase in traffic generation (in pcu/hr and veh/ hr) between the Approved Scheme and the Proposed Development is presented in **Tables 4.7 and 4.8**.

TABLE 4.7 NET INCREASE IN TRAFFIC GENERATION (PCU PER HOUR)

Scheme	Traffic Generation (pcu/ hr)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Proposed Development (from Table 4.5) [a]	100	59	40	52
Approved Scheme (from Table 4.6) [b]	37	22	18	23
Net Increase [a] – [b]:	**+63**	**+37**	**+22**	**+29**
	+100 *(2-way)*		**+51 *(2-way)***	

TABLE 4.8 NET INCREASE IN TRAFFIC GENERATION (VEHICLE PER HOUR)

Scheme	Traffic Generation (veh/ hr)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Proposed Development (from Table 4.5) [a]	*94*	*56*	*37*	*49*
Approved Scheme (from Table 4.6) [b]	*35*	*21*	*17*	*22*
Net Increase [a] – [b]:	**+59**	**+35**	**+20**	**+27**
	+94 *(2-way)*		**+47 *(2-way)***	

4.17 The Proposed Development is expected to generate 100 and 51 additional pcu / hour (2-way) in AM and PM peak respectively, or equivalent to 94 and 47 vehicles / hour (2-way).

Year 2033 Proposed Additional Bus Trips

4.18 It is expected that 4 additional bus trips are required to accommodate the road-based public transport demand of the Proposed Development in Year 2033. The year 2033 proposed additional bus trips are shown in **Figure 4.4**, and details of the additional bus trips are presented in **Paragraphs 5.13 – 5.14.**

Year 2033 Traffic Flows

4.19 Year 2033 traffic flows for the following cases are derived:

Year 2033 Without Proposed Development [A] = *Traffic flows derived with reference to 2031 NTW1 BDTM + estimated traffic growth between 2031 and 2033 + estimated traffic generation of the planned / committed developments after 2019*

Year 2033 With Approved Scheme [B] = *[A]+ estimated traffic generation for Approved Scheme*

Year 2033 With Proposed Development [C] = *[B] + net increase in traffic generation by Proposed Development + Additional Bus Trips*

4.20 Year 2033 peak hour junction flows and link flows for the above three cases are shown in **Figures 4.5 – 4.8** respectively.

Year 2033 Junction Capacity Analysis

4.21 Year 2033 junction capacity analysis for the three cases are summarised in **Table 4.9** and detailed calculations are found in the **Appendix A**.

TABLE 4.9 YEAR 2033 JUNCTION PERFORMANCE

Ref	Junction	Type of Junction (Parameter)	2033 Without Proposed Development		2033 With Approved Scheme		2033 With Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
J1	Unnamed Road/ Access Road	Priority (DFC)	0.055	0.049	0.057	0.050	0.059	0.051
J2	Ng Lau Road/ Unnamed Road	Priority (DFC)	0.052	0.046	0.125	0.081	0.250	0.124
J3	Ng Lau Road/ Lam Tei Interchange	Signal (RC)	36%	42%	33%	40%	29%	38%
J4	Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange	RA (DFC)	0.733	0.695	0.741	0.702	0.754	0.712
J5	Lam Tei Interchange	RA (DFC)	0.802	0.695	0.813	0.704	0.835	0.765
J6	Lam Tei Interchange/ Castle Peak Road – Lam Tei	Signal (RC)	21%	47%	21%	47%	20%	47%
J7	Tsing Lun Road/ Tsz Tin Road	Signal (RC)	23%	58%	23%	57%	23%	57%
J8	San Hing Road/ Ng Lau Road (Southern)	Priority (DFC)	0.091	0.055	0.096	0.060	0.106	0.068
J9	San Hing Road/ Ng Lau Road (Northern)	Priority (DFC)	0.198	0.448	0.198	0.448	0.198	0.448
J10	T-junction at San Hing Road	Priority (DFC)	0.058	0.071	0.061	0.074	0.069	0.080
J11	Ng Lau Road / Castle Peak Road – Lam Tei	Signal (RC)	16%	15%	16%	15%	16%	15%
J12	San Hing Road / Hong Po Road	Signal (RC)	45%	85%	108%	166%	106%	165%

Note: RC – reserve capacity; RA – Roundabout, DFC – design flow/capacity ratio

4.22 **Table 4.9** shows that the Proposed Development has negligible traffic impact to the road junctions analysed.

Year 2033 Link Performance

4.23 The 2033 link performances are assessed and the results are shown in **Table 4.10**.

TABLE 4.10 YEAR 2033 LINK CAPACITY ASSESSMENT

Ref	Link		Adjusted Design Flow (veh /hr)		Year 2033 Traffic Demand (veh/hr)						Year 2033 V/C Ratio					
					Without Proposed Development		With Approved Scheme		With Proposed Development		Without Proposed Development		With Approved Scheme		With Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
L1	Castle Peak Road – Lam Tei	NB	2,604	2,604	866	1,436	866	1,436	866	1,436	0.33	0.55	0.33	0.55	0.33	0.55
		SB	2,604	2,604	1,811	1,240	1,811	1,240	1,813	1,242	0.70	0.48	0.70	0.48	0.70	0.48
L2	Castle Peak Road – Lingnan	NB	2,800	2,800	533	613	534	614	536	616	0.19	0.22	0.19	0.22	0.19	0.22
		SB	2,800	2,800	855	583	857	584	860	585	0.31	0.21	0.31	0.21	0.31	0.21
L3	Yuen Long Highway	NB	4,700	4,700	4,976	4,692	4,990	4,699	5,017	4,708	1.06	1.00	1.06	1.00	1.07	1.00
		SB	4,700	4,700	5,130	5,222	5,139	5,231	5,152	5,242	1.09	1.11	1.09	1.11	1.10	1.12
L4	Tuen Mun Road	NB	4,700	4,700	5,388	5,776	5,396	5,784	5,408	5,792	1.15	1.23	1.15	1.23	1.15	1.23
		SB	4,700	4,700	6,174	5,576	6,187	5,582	6,207	5,589	1.31	1.19	1.32	1.19	1.32	1.19
L5	San Hing Road	2-way	800	800	173	80	181	85	194	91	0.22	0.10	0.23	0.11	0.24	0.11
L6	Ng Lau Road (north of J9)	2-way	744	800	252	371	252	371	252	371	0.34	0.46	0.34	0.46	0.34	0.46
L7	Ng Lau Road (south of J2)	2-way	800	800	405	438	452	470	531	510	0.51	0.55	0.57	0.59	0.66	0.64
L8	Lam Tei Interchange (between J3&J5)	EB	2,800	2,800	1,861	1,252	1,890	1,266	1,940	1,283	0.66	0.45	0.68	0.45	0.69	0.46
		WB	2,800	2,800	1,876	1,798	1,894	1,816	1,923	1,839	0.67	0.64	0.68	0.65	0.69	0.66
L9	Tsing Lun Road	NB	1,900	1,900	889	663	890	664	892	666	0.47	0.35	0.47	0.35	0.47	0.35
		SB	1,900	1,900	1,321	975	1,323	976	1,326	977	0.70	0.51	0.70	0.51	0.70	0.51

NB – northbound SB – southbound EB – eastbound WB – westbound

4.24 The above results show that the assessed road links operate with sufficient capacity, except for Yuen Long Highway (L3) and Tuen Mun Road (L4), both which operate with V/C ratios at 1.2 or above during the AM and PM peak hours in Year 2033. In view that there are no changes on the V/C ratios to L3 and L4 for cases without Proposed Development, with Approved Scheme and with Proposed Development, it can be concluded that the traffic generated by the Proposed Development is negligible.

4.25 As shown in LC paper no. CB(4)619/20-21(03) of Legislative Council Panel on Transport , the planned Route 11 would reduce v/c in Year 2036 from 1.2 to 1.0 at Tuen Mun Road (Siu Lam Section) in morning peak, which indicates the traffic congestion at Tuen Mun Road will be relieved by planned Route 11.

4.26 In addition to the above, other planned strategic road improvements, including, Tuen Mun Bypass and Yuen Long Highway (between Lam Tei and Tong Yan San Tsuen) are planned to be implemented. The traffic condition at L3 and L4 would be further improved by these planned strategic road improvements.

4.27 With the planned strategic road improvement works, both Yuen Long Highway (L3) and Tuen Mun Road (L4) are expected to operate with sufficient capacity in Year 2033.

5.0 IMPACT TO PUBLIC TRANSPORT SERVICES

Transport Mode of the Subject Site

5.1 The transport mode of the Subject Site is assessed with reference to "Travel Characteristic Survey 2011" ("TCS2011"), but adjusted to reflect the nearby public transport provisions. The public transport provisions near the subject site have the following characteristics:

(1) Direct and comprehensive light rail services at Lam Tei LRT stops operating within 50m from the Subject Site, which serve as feeder services to MTR and within Tuen Mun, instead of GMB route 42 at Ng Lau Road.
(2) Comprehensive bus services is identified within 400m walking distance.
(3) There are no special purpose bus, tram and ferry nearby.

5.2 Based on the above public transport characteristics, special purposed bus, tram, ferry, and public light bus found in TCS2011 are converted to rail and bus mode on pro-rata basis. The modified transport mode adopted for the Proposed Development is compared with TCS2011 and is found in **Table 5.1**.

TABLE 5.1 MODIFIED TRANSPORT MODE FOR THE PROPOSED DEVELOPMENT

Transport Mode	TCS 2011	Modified Transport Mode adopted for the Proposed Development
Rail	30%	**44%**
Bus	27%	**38%**
Public Light Bus	13%	0%
Private Car	12%	**12%**
Special Purpose bus	9%	0%
Taxi	6%	**6%**
Tram	2%	0%
Ferry	1%	0%
Total	**100%**	**100%**

5.3 **Table 5.1** shows that 44% and 38% of mechanised trips from the Proposed Development would use MTR and bus respectively. For residents who use MTR, it is assumed that 100% would use the LRT service.

Estimated Peak Hour Mechanised Trip Generation of Proposed Development

5.4 The mechanised trip generation of the Approved Scheme and the Proposed Development is estimated with reference to TCS2011 and is presented in **Table 5.2**.

TABLE 5.2 ESTIMATED PEAK HOUR MECHANISED TRIP GENERATION OF THE PROPOSED DEVELOPMENT

Parameter	Calculation	Unit	Approved Scheme	Proposed Development
No. of Flats	A	flats	307	1,385
Average domestic household size in Tuen Mun[(1)]	B	persons/ flat	2.6	2.6
Population	C = B x A	persons	799	3,601
Average Daily Mechanised Trips[(2)]	D	trips/ persons/ day	1.83	1.83
Peak hour factor of Daily Mechanised Trips[(3)]	E	N/A	12%	12%
Estimated Peak Hour Mechanised Trip Generation	F = C x D x E	persons/ hr	176	791

(1) Extracted from Census and Statistic Department website
(2) From Table 3.3, Travel Characteristics Survey 2011 Final Report
(3) From Para. 3.3.7, Travel Characteristics Survey 2011 Final Report

Estimated Peak Hour Transport Demand

5.5 The peak hour transport demand of the Approved Scheme and the Proposed Development are estimated based on the modified transport mode in **Table 5.1**, and are presented in **Table 5.3**.

TABLE 5.3 ESTIMATED PEAK HOUR TRANSPORT DEMAND

Transport Mode of the Approved Scheme / Proposed Development		Ratio[(1)]	Estimated Peak Hour Transport Demand (Passenger/hr)		
			Approved Scheme [a]	Proposed Development [b]	Net Increase in Passenger Demand [c] = [b] – [a]
Public Transport	Rail-based [a]	44%	77	348	+271
	Road-based [b]	38%	67	301	+234
	Sub- total [c] = [a] + [b]	*82%*	*144*	*649*	***+505***
Private Car / Taxi [d]		18%	32	142	+110
Total [e] = [c] + [d]		**100%**	**176**	**791**	**+615**

(1) From Table 5.1

5.6 **Table 5.3** shows that compared with the Approved Scheme, the Proposed Development is expected to generate additional public transport demand of 505 passengers per hour (2-way) during both AM and PM peak hours.

Road-Based Public Transport Demand Generated

5.7 The road-based public transport demand generated by the subject site is summarised in **Table 5.4**.

TABLE 5.4 ESTIMATED ROAD-BASED PUBLIC TRANSPORT DEMAND

Development	Road-based Public Transport Demand (persons / hour)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Approved Scheme: 307 Flats [a]	61	6	6	61
Proposed Development: 1,385 Flats [b]	271	30	30	271
Net increase [b] – [a]	210	24	24	210
	+234 (2-way)		+234 (2-way)	

5.8 **Tables 5.4** shows that compared with the Approved Scheme, the Proposed Development is expected to generate additional road-based public transport demand of 234 passengers per hour (2-way) during both AM and PM peak hours.

Rail-Based Public Transport Demand Generated

5.9 The rail-based public transport demand generated by the Approved Scheme and Proposed Development are summarised in **Table 5.5**.

TABLE 5.5 ESTIMATED RAIL-BASED PUBLIC TRANSPORT DEMAND

Development	Rail-based Public Transport Demand (persons / hour)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Approved Scheme: 307 Flats [a]	70	7	7	70
Proposed Development: 1,385 Flats [b]	314	34	34	314
Net increase [b] – [a]	244	27	27	244
	+271 (2-way)		+271 (2-way)	

5.10 **Tables 5.5** shows that compared with the Approved Scheme, the Proposed Development is expected to generate additional rail-based public transport demand of 271 passengers per hour (2-way) during both AM and PM peak hours.

Impact to Road-based Public Transport Services

5.11 In view that there is substantial population intake of Tuen Mun Area 54 and "San Hing Road and Hong Po Road Public Housing Development" between year 2024 and 2033, Transport Department will enhance the existing bus routes and propose new bus routes. However, the information is now not available. Hence, to assess the impact to road-based public transport, the followings assumptions are adopted:

1. All bus services provided in Year 2033 remain the same as the existing, i.e., observed from surveys conducted in 2024.
2. By Year 2033, all existing bus services will operate at capacity.

5.12 Based on above the assumptions, the followings paragraphs assess the additional bus services required in Year 2033 for the Proposed Development.

Additional Bus Trip for the Proposed Development

5.13 The additional bus trips for the Proposed Development in Year 2033 is estimated based on the AM peak hour generation of road-based public transport demand as and is summarised in **Table 5.6**.

TABLE 5.6 ADDITIONAL BUS TRIP FOR THE PROPOSED DEVELOPMENT

Parameter	Calculation	Value	Unit
AM peak hour generation of road-based public transport demand (from **Table 5.5**)	A	271	persons
Capacity per double-deck bus	B	120	persons
Design Utilization Rate during peak hour	C	75%	N/A
Additional Bus Trips	**D = A / (B X C)**	**4**	**Trips**

5.14 **Table 5.6** shows that 4 bus trips (10 pcu 2-way) are required to accommodate the

road-based public transport demand for the Proposed Development.

Proposed Bus Route for the Additional Bus Trips

5.15 The working district of working population in Tuen Mun extracted from the "Population Census 2021" published by Census and Statistic Department are summarised in **Table 5.7**.

TABLE 5.7 WORKING DISTRICT OF WORKING POPULATION IN TUEN MUN

Working District	Working Population in Tuen Mun (Percentage)
Hong Kong Island	25,577 (20%)
Kowloon	41,987 (32%)
New Territories	63,466 (48%)

The Population Census 2021 website:
https://idds.census2021.gov.hk/app/idds.html?id=IDDS&param=N4IgxgbiBcoMoFEAaNQH0AuaYgIwgBoQ0AHbaXItAE3IBYjEk0AmAcRwGYQBfIgdQDyAJQDSAFQCaABVz5YxLDnxUyMAAxVaMTgJESZctAA4O0EJ2x8QAQWEIbqReRDrCxNdE3Ft0FkTsHNAARAGE0XFMcdX43a1DQyUkneRAWdRYVZ2j3UnJvGnJcHmsAZygFPJh-EH5pGABtWuk0ADlpBGEQAF1rABsYDAAnAFcAUx4gA&lang=en

5.16 The destination of bus routes are served by the bus stops at Castle Peak Road – Lam Tei ("CPR") and Lam Tei Interchange ("LTI") are presented in **Table 5.8**.

TABLE 5.8 COMPARISON ON DESTINATION OF BUS ROUTES BETWEEN BUS STOP AT CPR AND LTI

Bus Stop	Walking Distance (Time)	No. of Bus Routes at Destination							
		HKI	NTW	YTM	Kln(E)	Kln(W)	N	TCL	BCP
CPR	100 to 200 (2 - 4 mins)	4	3	2	2	0	1	2	1
LTI	350 to 400 (7 - 8 mins)	3	2	2	2	1	2	2	1

HKI – Hong Kong Island
NTW – New Territories West
YTM – Yau Ma Tei/Tsim Sha Tsui/Mong Kok
Kln(E) – Kowloon (East)
Kln(W) – Kowloon (West)
N – North
BCP – Boundary Control Point
TCL–Tung Chung / Lantau Island

5.17 **Table 5.8** shows that the bus stops at CPR are located only 2 – 4 minutes' walk away and it has routes to all destinations as the LTI stop, except to Kowloon West.

5.18 However, it is found that most of the bus routes at CPR are operated by KMB, and residents from the Proposed Development travelling to Kowloon West could change to other bus routes operated by KMB at the Tuen Mun Road interchange, e.g. KMB 59X, 60X and 67X. Therefore, it is concluded that all road-based public transport demand from the Proposed Development would use CPR, and negligible usage of LTI, due to its longer walking time.

5.19 Based on the proportion of working district of working population in Tuen Mun presented in **Table 5.7** and the findings from **Table 5.8**, the proposed bus route for the 4 additional bus trips are presented in **Table 5.9**, and bus route are shown in **Figure 5.1**.

TABLE 5.9 PROPOSED BUS ROUTE FOR THE ADDITIONAL BUS TRIPS

District	Proportion	Additional Passenger Demand (passenger /hr)		Additional Trips	Proposed Bus Route
Hong Kong Island	20%	54		1	KMB 960P
Kowloon	32%	87		1	KMB 63X
New Territories	48%	131	66	1	KMB 68A
			65	1	KMB 261P
Total	**100%**	**271**		**4**	**N/A**

Public Transport Demand Generated by Planned / Committed Developments in the Vicinity

5.20 The public transport demand generated by planned / committed developments in the vicinity as presented in **Table 4.3** is considered for Year 2033. Public transport interchanges are provided for the 2 planned development areas, i.e., "Tuen Mun Area 54" and "Development at San Hing Road and Hong Po Road, Tuen Mun". It is assumed that the public transport services provided would be sufficient to serve the demand generated by these development areas.

2033 Rail-Based Public Transport Occupancies

5.21 As presented in **Table 5.5**, the demand on rail-based public transport services, i.e. MTR Tuen Ma Line, associated with the Proposed Development is no more than 314 passengers during the peak hours. As presented in **Table 2.5**, the MTR Tuen Ma Line has a maximum carrying capacity of 70,000 passenger / hour. Hence, the additional passenger demand is only 0.5% of the maximum carrying capacity [Calculation: 314 ÷ 70,000 = 0.5%], which is negligible on the MTR Tuen Ma Line.

2033 LRT Service Occupancies

5.22 As shown in **Table 2.6**, the Lam Tei Tuen Mun bound LRT stop has a capacity of 7,200 passenger / hour. The additional passenger demand generated by the Proposed Development is 4.3% of the maximum carrying capacity [Calculation: 314 ÷ 7,200 = 4.3%], which is acceptable. The survey results in **Table 2.6** show that 12 out of 24 LRT trips are operated using coupled-set LRV. When necessary, 2 LRT trips operating with single LRV could be converted to coupled-set LRV, thus giving additional capacity of 400, which could accommodate the additional rail-based public transport demand generated by the Proposed Development.

Annual Public Transport Demand Growth Rate between 2024 – 2033

5.23 To establish the local public transport demand growth rate from 2024 to 2033, reference is made to several sources of information including:

- 2024 – 2029: "*Projections of Population Distribution 2021 – 2029*" published by Planning Department
- 2029 – 2033: "*Hong Kong Population Projections*" from the Census and Statistics Department

5.24 The "Projections *of Population Distribution 2021 – 2029*" has Tertiary Planning Units ("TPU"), i.e., the local area population projections up to 2025, and reference is made to 5 relevant TPUs, which are presented in **Table 5.10**.

TABLE 5.10 POPULATION PROJECTIONS OF THE 5 TPUS

Year	TPU				Total
	423 & 428	425	441	442	
2024	225,800	70,200	16,600	7,100	319,700
2025	227,100	71,300	16,300	7,100	321,800
Average Annual Growth (2024 to 2025)	**0.58%**	**1.57%**	**-1.81%**	**0.00%**	**0.66%**

5.25 **Table 5.10** shows that the average annual population growth between 2024 and 2025 is 0.66%.

5.26 Between 2025 and 2029, reference is made to the population growth of Tuen Mun New Town, and population projections are presented in **Table 5.11**.

TABLE 5.11 TUEN MUN NEW TOWN POPULATION PROJECTIONS

Year	Tuen Mun New Town Population
2025	557,400
2029	575,400
Average Annual Growth 2025 to 2029	**0.80%**

5.27 **Table 5.11** shows that the average annual population growth in the Tuen Mun New Town between 2025 and 2029 is 0.8%.

5.28 Beyond 2029, reference is made to the "*Hong Kong Population Projections*" from the Census and Statistics Department, which is presented in **Table 5.12**.

TABLE 5.12 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

Year	Hong Kong Resident Population ('000)
2029	7,731.1
2033	7,903.6
Average Annual Growth 2029 to 2033	**0.55%**

5.29 **Table 5.12** shows that the average annual population growth in Hong Kong between 2029 – 2033 is 0.55%.

5.30 Based on the above, the annual growth factors adopted are 0.66% from 2024 to 2025, 0.8% between 2025 and 2029, and 0.55% between 2029 and 2033.

Review on Public Transport Facilities

5.31 Public Transport Facilities are reviewed and presented in below paragraphs.

Additional Queuing/Waiting Demand due to the Proposed Development

5.32 The estimated additional queuing/waiting related to the Proposed Development at each bus stop / LRT station is presented in **Table 5.13**.

TABLE 5.13 ADDITIONAL QUEUING/WAITING DEMAND RELATED TO THE PROPOSED DEVELOPMENT

Bus Stop / LRT Stop		Boarding Demand (No. of Passenger) (from Table 5.9) [a]	No. of Trips (including additional bus trips in Table 5.9) [b]	Average Queuing / Waiting Passenger (No. of Passenger) [c] = [a] / [b]
CPR – Southbound	KMB 960P	54	7	8
	KMB 63X	87	6	15
	KMB 68A	66	4	17
	Sub-total	*207*	*17*	*40*
CPR – Northbound	KMB 261P	65	2	33
LTI – Westbound		0	2	0
LTI – Eastbound		0	0	0
Lam Tei LRT Stop – Yuen Long bound		0	0	0
Lam Tei LRT Stop – Tuen Mun bound		314	24	14

5.33 **Table 5.13** shows that the estimated additional average queuing /waiting passenger at CPR southbound and CPR northbound bus stops are 40 and 33 passengers respectively and no additional average queuing /waiting passenger at LTI bus stops.

Utilisation of Passenger Waiting/Queuing Areas at Bus Stops / LRT Platforms

5.34 Survey on passenger waiting/queuing areas at bus stops / LRT platforms was conducted during the AM and PM peak periods on Thursday, 8th May 2024, and the peak hours identified from the surveys is found to be between 0715 – 0815 hours. Based on this survey, the year 2033 maximum number of passenger waiting/queuing at the Bus Stops / LRT platforms were derived as follows:

2033 without Proposed Development [A] = *2024 observed maximum queue + adopted passenger demand growth from 2024 to 2033 + estimated passenger demand due to the planned / committed developments*

2033 with Proposed Development [B] = *[A] + average queuing / waiting passenger due to Proposed Development (from **Table 5.13**)*

5.35 Utilisations of passenger waiting/queuing area at the bus stops / LRT platforms for existing, 2033 cases without and with Proposed Development are presented in **Table 5.14**.

TABLE 5.14 UTILISATIONS OF PASSENGER WAITING / QUEUING AREA AT BUS STOPS AND LRT PLATFORMS

Bus Stop / LRT Platform	Queuing/ Waiting Capacity		Existing		Year 2033 Without Proposed Development		Year 2033 With Proposed Development	
	Area (m^2)	Pass[1] [a]	Max Queue [b]	Util [c] = [b] / [a]	Max Queue [d]	Util [e] = [d] / [a]	Max Queue [f]	Util [g] = [f] / [a]
CPR – Southbound	38	125	38	30%	46	37%	86	69%
CPR – Northbound	20	69	10	14%	13	19%	46	67%
LTI – Westbound	8	28	8	29%	9	32%	9	32%
LTI – Eastbound	8	28	0	0%	1	4%	1	4%
Lam Tei LRT Stop – Yuen Long bound	30[2]	104	16	15%	18	17%	18	17%
Lam Tei LRT Stop – Tuen Mun bound	96[2]	229	84	37%	99	43%	113	49%

Pass – Passenger Max – Maximum Util - Utilisation

(1) Refer to Volume 9, Chapter 2.7, TPDM, standing capacity of 5 passengers per 1.44m^2 is adopted.

(2) Deducted minimum of 1.1m walkways from doors of light rail vehicles to the exit of the platforms and utilities on the platforms, e.g. shelter, seats, ticket vending machines and Octopus card readers.

5.36 **Table 5.14** shows that the assessed bus stops /LRT platforms would have sufficient passenger waiting/queuing areas for the case of year 2033 with the Proposed Development.

Length of the Laybys for Bus Stops

5.37 Based on the survey on road-based public transport services, the existing and year 2033 with the Proposed Development bus arrival at the Castle Peak Road – Lam Tei bus stops and Lam Tei Interchange bus stops are presented in **Table 5.12**, and are presented in **Table 5.15**.

TABLE 5.15 ASSESSMENT ON LENGTH OF THE LAYBYS FOR BUS STOPS

Bus Stop	Layby Size (Length)	Capacity of Bus on Arrival[1]	Existing Bus Arrival for Boarding / Alighting[2]		Year 2033 With Proposed Development Bus Arrival for Boarding / Alighting	
			AM Peak	PM Peak	AM Peak	PM Peak
CPR – Southbound	Double (26m)	35	35	10	**39**[3]	**14**[3]
CPR – Northbound	Single (13m)	16	10	20	**14**[3]	**24**[3]
LTI – Westbound	Single (13m)	16	3	4	3	4
LTI – Eastbound	Single (13m)	16	7	2	7	2

(1) Refer to table 2.7.6.1, Volume 9, Chapter 2.7, TPDM.

(2) Refer to Paragraph 5.11, all bus services provided in Year 2033 remain the same as observed from surveys conducted in 2024

(3) The 4 additional bus trips related to the Proposed Development are included in Year 2033 with Proposed Development scenario.

5.38 **Table 5.15** shows that:

- LTI bus stop laybys have sufficient length for bus arrival for boarding / alighting in existing and year 2033 with Proposed Development.
- CPR southbound bus stop layby reached its capacity for boarding / alighting in existing AM peak. With the additional bus trips related to the Proposed Development, the layby would have insufficient capacity for bus arrival.
- CPR northbound bus stop exceed its capacity for boarding / alighting in PM peak for the case of existing and year 2033 with Proposed Development.

Proposed Improvement on the Length of the CPR Bus Stop Laybys

5.39 **Figure 5.2** shows the proposed improvement for the CPR bus stop laybys, which include the following:

- CPR southbound bus stop – Extend the existing 26m-long bus layby to 42m (14m x 3) to accommodate 3 12.8m-long bus boarding /alighting at the same time
- CPR northbound bus stop - Extend the existing 13m-long bus layby to 28m (14m x 2) to accommodate 2 12.8m-long bus boarding /alighting at the same time

5.40 The assessment on bus arrival for boarding / alighting at the Castle Peak Road – Lam Tei Bus Stops taking into consideration the proposed improvement, are summarized in **Table 5.16**.

TABLE 5.16 ASSESSMENT ON LENGTH OF THE LAYBYS FOR BUS STOPS WITH PROPOSED IMPROVEMENT

Bus Stop	Layby Size (Length)	Capacity of Bus on Arrival[1]	Year 2033 Bus Arrival for Boarding / Alighting					
			Without Proposed Development		With Approved Scheme		With Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
CPR – Southbound	Triple (42m)	51 (35+16)	35	10	35	10	39	14
CPR – Northbound	Double (28m)	35	10	20	10	20	14	24

[1] Refer to table 2.7.6.1, Volume 9, Chapter 2.7, TPDM.

5.41 **Table 5.16** shows that the laybys would have sufficient capacity for bus boarding / alighting in Year 2033 with Proposed Development with the proposed improvement on CPR bus stop laybys.

6.0 PEDESTRIAN IMPACT

2033 Pedestrian Flow Forecasting

6.1 2033 peak 15-minute pedestrian flows are produced by estimating (i) the pedestrian growth from 2024 to 2033; and (ii) expected pedestrian generated by the Proposed Development and planned / committed developments in the vicinity.

Annual Pedestrian Growth Rate between 2024 – 2033

6.2 Growth rates of 0.66% per annum from 2024 to 2025, 0.8% per annum for the period between 2025 and 2029, and 0.55% per annum for the period between 2029 and 2033, are adopted, and reference to these are found in **Paragraphs 5.23 – 5.30.**

Peak 15-minute Pedestrian Generated by Planned / Committed Developments in the Vicinity

6.3 Peak 15-minute pedestrian generated by planned / committed developments in the vicinity as presented in **Table 4.3** is included in the Year 2033 pedestrian flow.

Peak hour Pedestrian Generation and Pedestrian Generation Rates

6.4 Based on public transport demand presented in **Table 5.5**, the peak hour and peak 15-mins pedestrian generation and pedestrian generation rates of the Approved Scheme and Proposed Development are presented in **Table 6.1**.

TABLE 6.1 PEDESTRIAN GENERATION AND PEDESTRIAN GENERATION RATES

Item	Parameter	AM Peak		PM Peak	
		GEN	ATT	GEN	ATT
Approved Scheme: 307 Flats					
Pedestrian Generation	ped / hour	61	6	6	61
	ped / 15-min(1) [a]	21	2	2	21
Pedestrian Generation rate	ped / flat / hour	0.199	0.019	0.019	0.199
		0.218 (2-way)		**0.218 (2-way)**	
	ped / flat / 15-min	0.068	0.007	0.007	0.068
Proposed Development: 1385 Flats					
Pedestrian Generation	ped / hour	271	30	30	271
	ped / 15-min(1) [b]	91	10	10	91
Pedestrian Generation rate	ped / flat / hour	0.196	0.022	0.022	0.196
		0.218 (2-way)		**0.218 (2-way)**	
	ped / flat / 15-min	0.066	0.007	0.007	0.066
Net Increase of Pedestrian Generation [b] – [a]		+70	+8	+8	+70
		+78 (2-way)		+78 (2-way)	

GEN – Generation ATT - Attraction

(1) By applying peak hour factor of 33% of peak hour pedestrian flow

6.5 **Tables 6.1** shows that compared with the Approved Scheme, the additional pedestrian generated by the Proposed Development is 78 persons (2-way) during both AM and PM peak 15 minutes.

Year 2033 Pedestrian Flows

6.6 Year 2033 pedestrian flows are produced with reference to (i) the observed 2024 pedestrian flows, (ii) annual pedestrian growth rate between 2024 – 2033, (iii) expected pedestrian generation due to the planned / committed developments between 2024 – 2033 and the Subject Site.

6.7 Year 2033 pedestrian flows for the footpath analysis were derived as follows:

2033 without Proposed Development [A] = *2024 observed pedestrian flows + Adopted pedestrian growth from 2024 to 2033 + estimated pedestrian due to the planned / committed developments*

2033 with Approved Scheme [B] = *[A] + pedestrian generation due to Approved Scheme*

2033 with Proposed Development [C] = *[B] + net increase in pedestrian generation due to Proposed Development*

Year 2033 LOS Analysis

6.8 Year 2033 peak 15-minute pedestrian flows for the three cases are estimated and presented in **Figure 6.1** and the corresponding LOS assessment is presented in **Table 6.2.**

TABLE 6.2 YEAR 2033 LOS ASSESSMENT

Location	Clear Width[1] [Effective Width] (m)	Peak Period	2033 without Proposed Development			2033 with Approved Scheme			2033 with Proposed Development		
			Flow	Flow rate	LOS	Flow	Flow rate	LOS	Flow	Flow rate	LOS
P1. Footpath on the footbridge accessing to Ng Lau Road	2.0[1.5]	AM	80	3.6	A	80	3.6	A	80	3.6	A
		PM	62	2.8	A	62	2.8	A	62	2.8	A
P2. Footpath between Lam Tei LRT stop and bus stop at Castle Peak Road – Lam Tei	2.5[1.5]	AM	130	5.8	A	135	6.0	A	151	6.7	A
		PM	93	4.1	A	112	5.0	A	174	7.7	A
P3. Footbridge over Castle Peak Road – Lam Tei	2.5[1.5]	AM	79	3.5	A	98	4.4	A	160	7.1	A
		PM	40	1.8	A	45	2.0	A	61	2.7	A
P4. Southern Footpath of San Hing Road	2.5[1.5]	AM	16	0.7	A	16	0.7	A	16	0.7	A
		PM	11	0.5	A	11	0.5	A	11	0.5	A
P5. Eastern Footpath of Ng Lau Road	2.0[1.0]	AM	67	4.5	A	67	4.5	A	67	4.5	A
		PM	43	2.9	A	43	2.9	A	43	2.9	A

Note: Flows in pedestrian / 15 minutes flow rates in pedestrian / 15 minutes / meter
[1] The width excludes railing and obstructions.

6.9 **Table 6.2** shows that the assessed footpaths operate with LOS A, i.e., have sufficient capacity to accommodate the expected pedestrian growth and additional pedestrian generated due to Proposed Development.

7.0 SUMMARY

7.1 The Subject Site is located in D.D.130, Lam Tei, Tuen Mun. At present, the Subject Site is unoccupied, and access to the Subject Site is via an existing unnamed road which is connected to Ng Lau Road.

7.2 Manual classified counts were conducted at junctions and road links which are located in the vicinity in order to establish the existing traffic flows during AM Peak and PM peak hours.

7.3 The internal transport facilities provided comply with recommendations of the HKPSG and comments from Transport Department.

7.4 Year 2033 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the BDTM; (ii) estimated growth from 2031 to 2033; (iii) expected traffic generation by the planned / committed developments in the vicinity; and (iv) expected traffic generation by the 2 cases, i.e., Approved Scheme and Proposed Development.

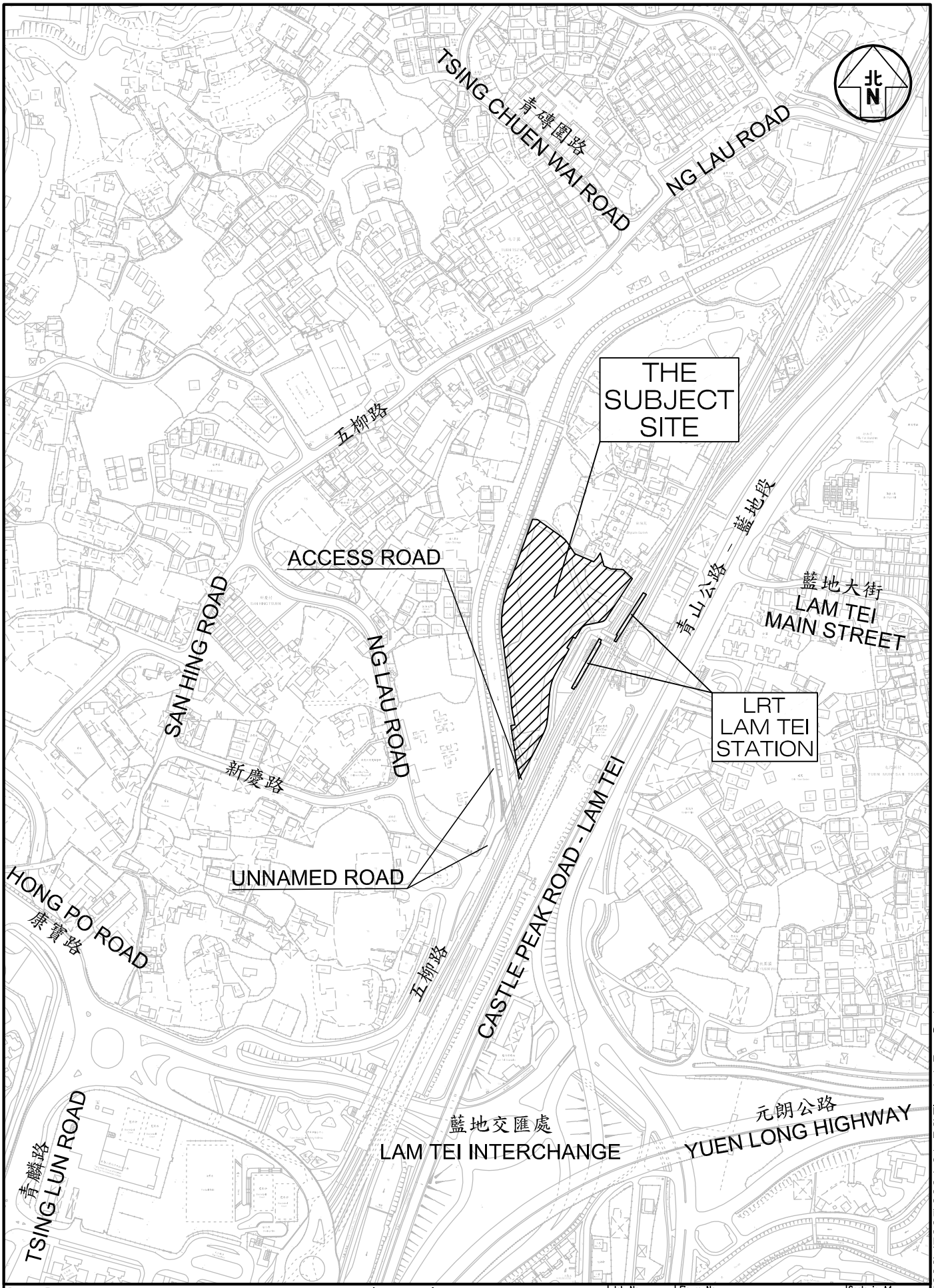
7.5 Compared to the Approved Scheme, the Proposed Development will generate only 100 and 51 additional pcu (2-way) in AM peak and PM peak respectively. In addition, 4 nos. of bus trips are proposed to accommodate the road-based public transport demand of the Proposed Development.

7.6 The assessment of the nearby public transport services found that the Proposed Development has negligible impact. The assessment of footpaths found that the Proposed Development has negligible impact.

7.7 Based on the finding on review of public transport facilities, improvement on the CPR bus stop laybys is proposed, i.e., extend the existing 26m-long bus layby to 42m at CPR southbound bus stop and the existing 13m-long bus layby to 28m at CPR northbound bus stop.

7.8 This TIA concluded that the Proposed Development has no adverse traffic impact and the Proposed Development is acceptable from traffic engineering terms.

Figures



Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 1.1			Scale in A4 1 : 4,000
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024

Figure Title

LOCATION OF THE SUBJECT SITE

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

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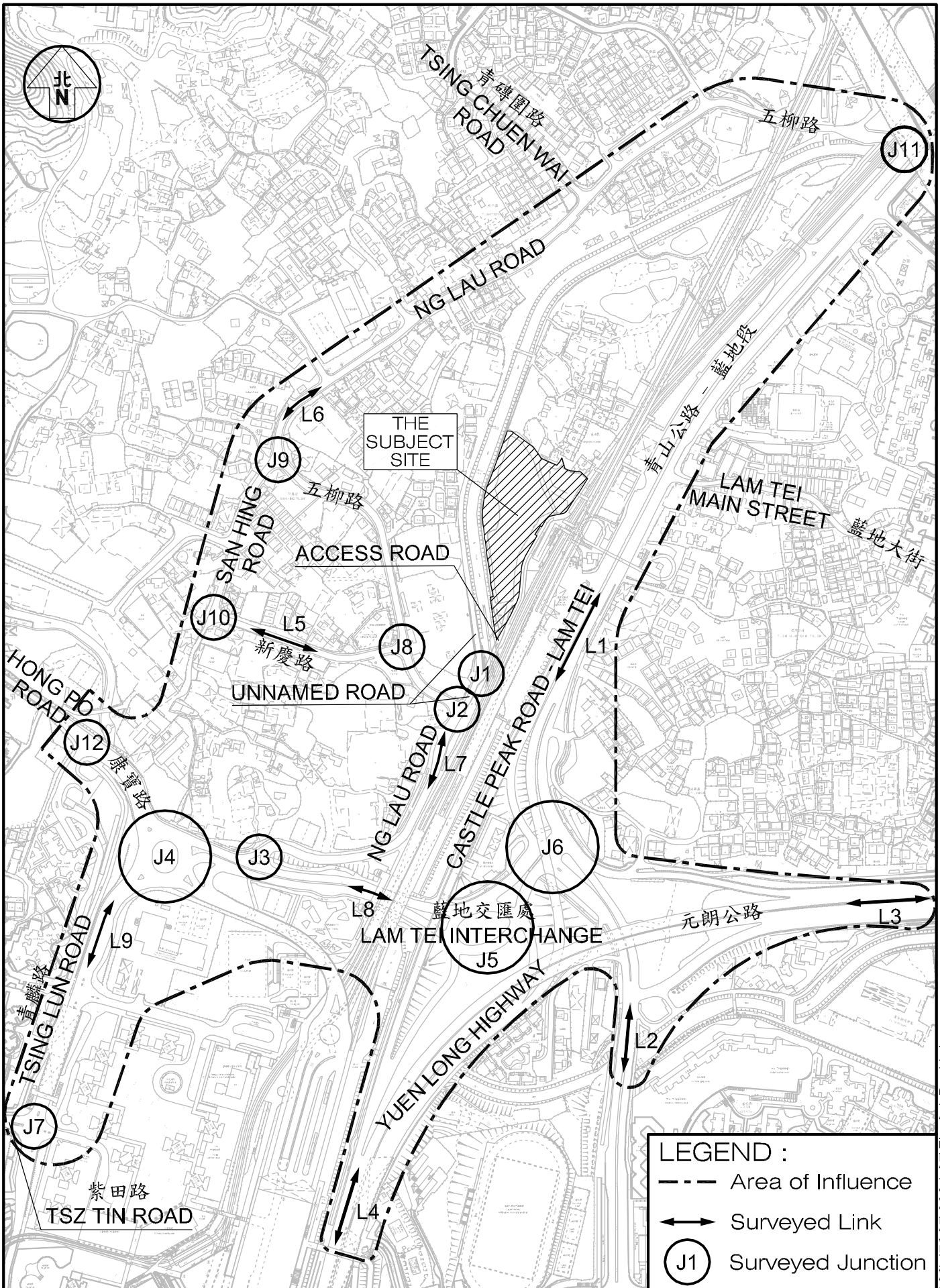

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.1			Scale in A4 1 : 5,000
	Designed by L K W	Drawn by S C Y	Checked by K C	Revision H	Date 10 JUL 2024
Figure Title: LOCATION OF SURVEYED JUNCTIONS	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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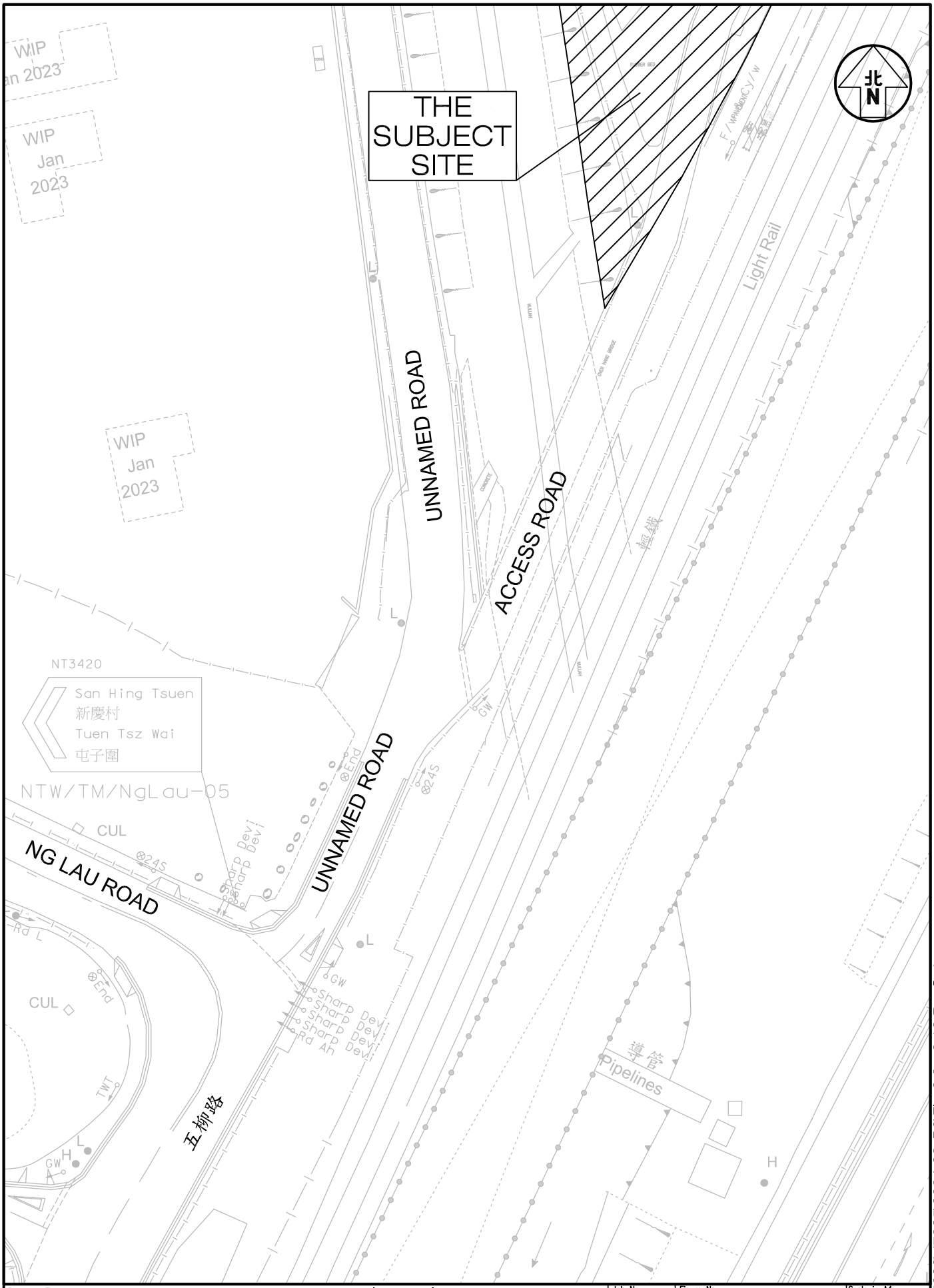

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)				Job No. J7265	Figure No. 2.2	Scale in A4 1 : 500
				Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF UNNAMED ROAD / ACCESS ROAD				CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk		

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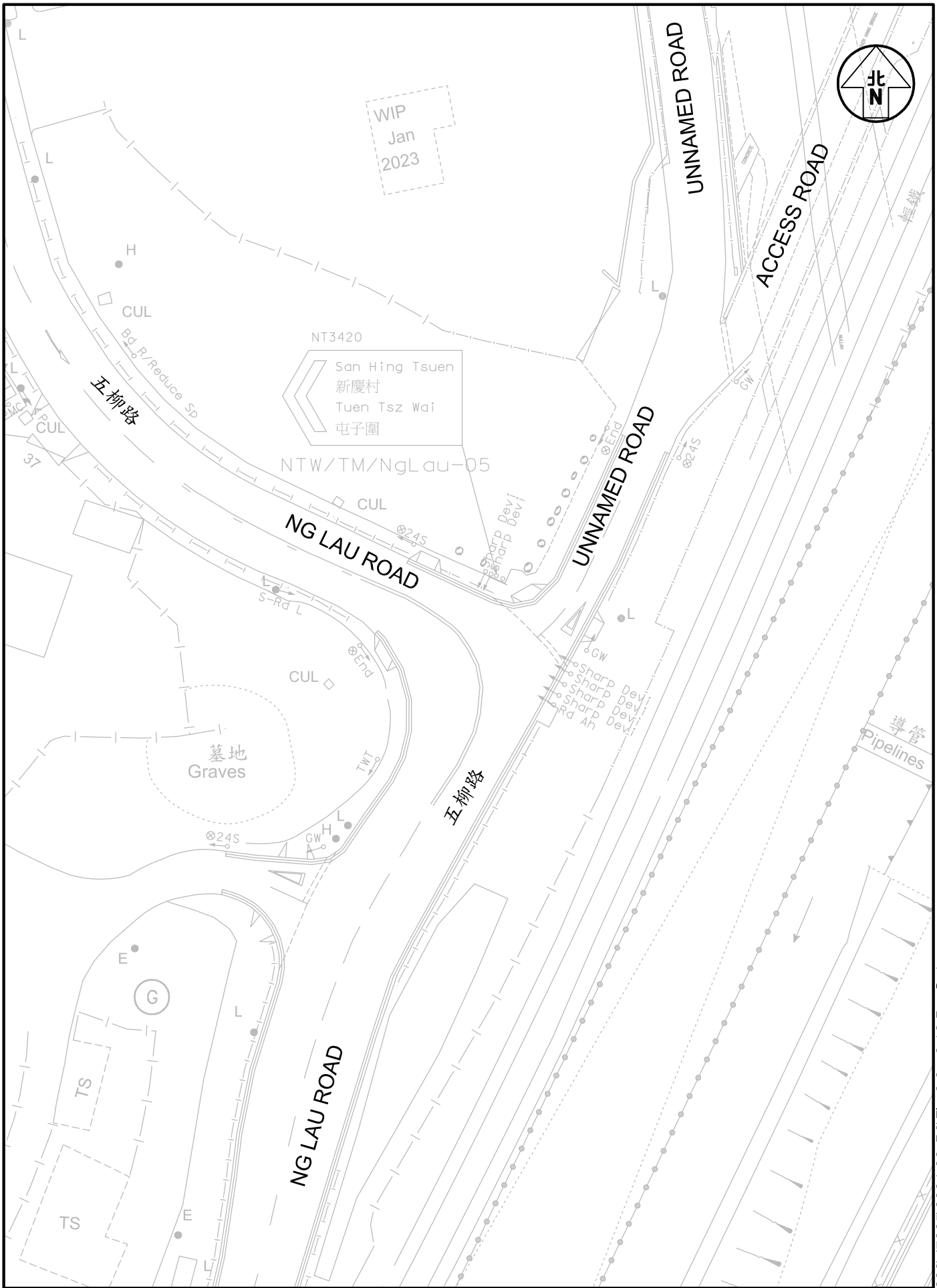

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.3			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: **LAYOUT OF JUNCTION OF NG LAU ROAD / UNNAMED ROAD**					

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

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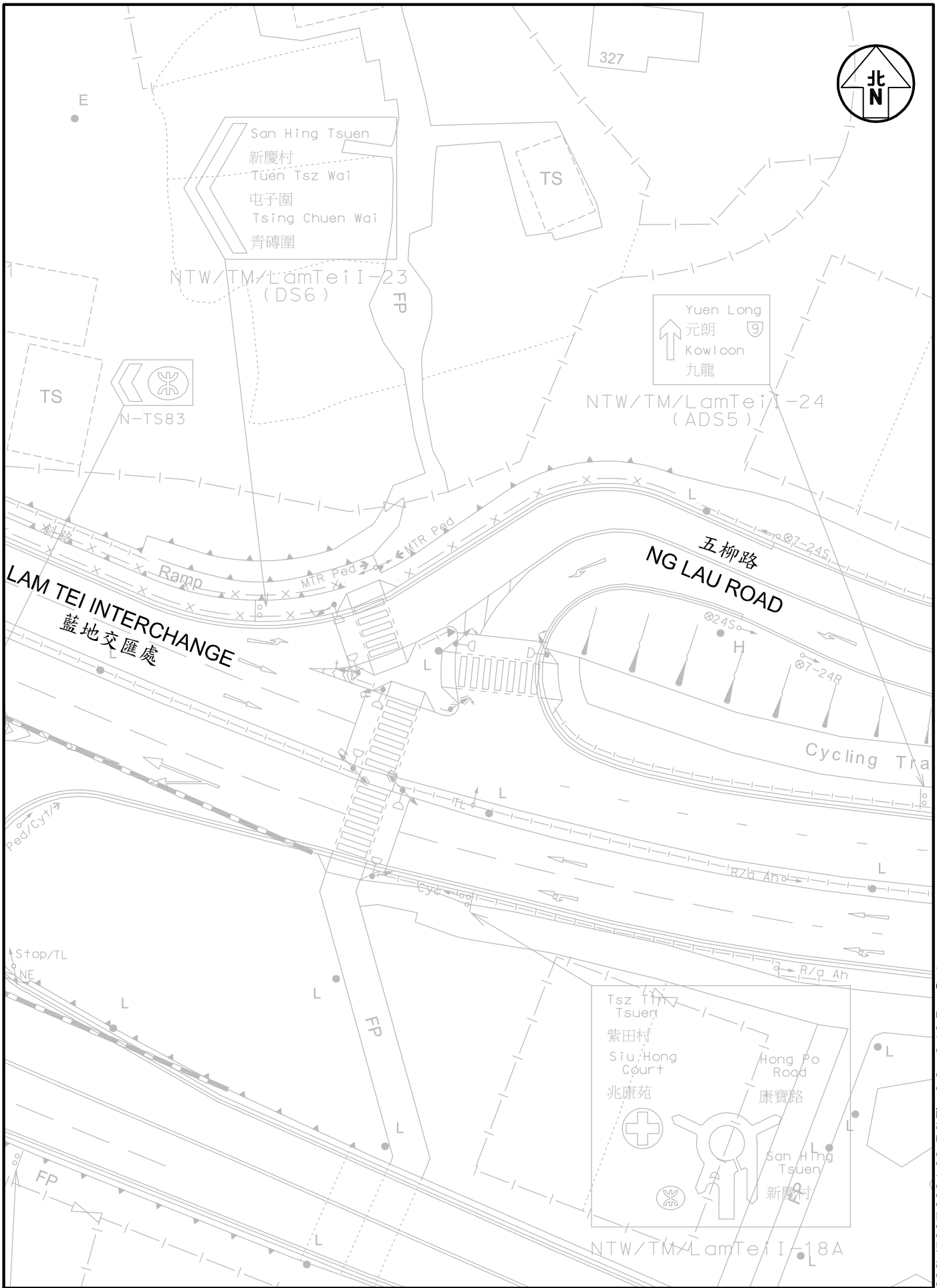

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.4			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF NG LAU ROAD / LAM TEI INTERCHANGE	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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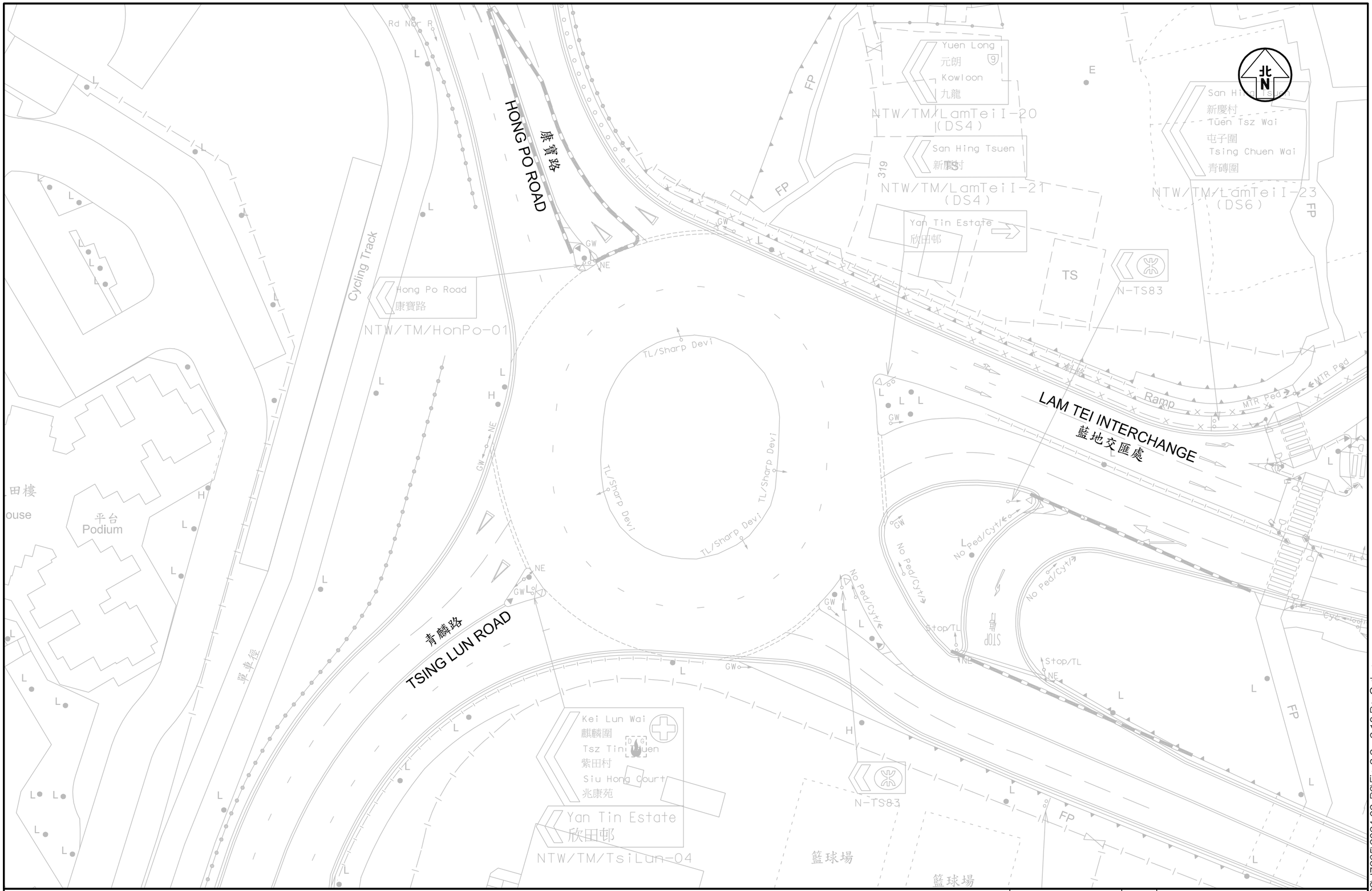

Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 2.5	Revision G
Figure Title	LAYOUT OF JUNCTION OF TSING LUN ROAD / HONG PO ROAD / LAM TEI INTERCHANGE	Designed by L K W / Drawn by W S W / Checked by K C	Scale in A3 1 : 500 / Date 20 FEB 2024

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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藍地交匯處
LAM TEI INTERCHANGE

Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 2.6	Revision G
Figure Title	LAYOUT OF JUNCTION OF LAM TEI INTERCHANGE	Designed by L K W / Drawn by W S W / Checked by K C	
		Scale in A3 1 : 500 / Date 20 FEB 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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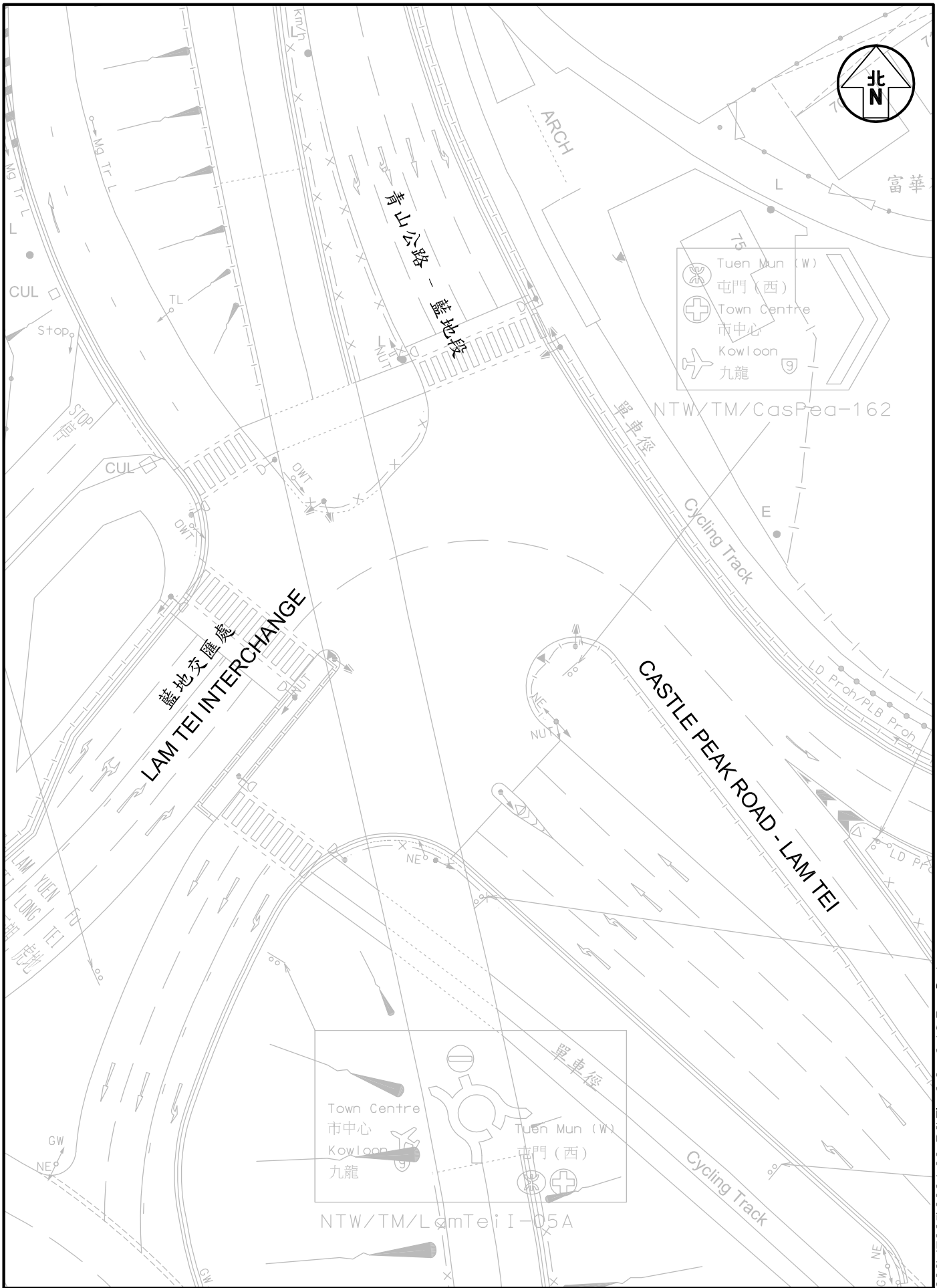

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.7			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF LAM TEI INTERCHANGE / CASTLE PEAK ROAD – LAM TEI	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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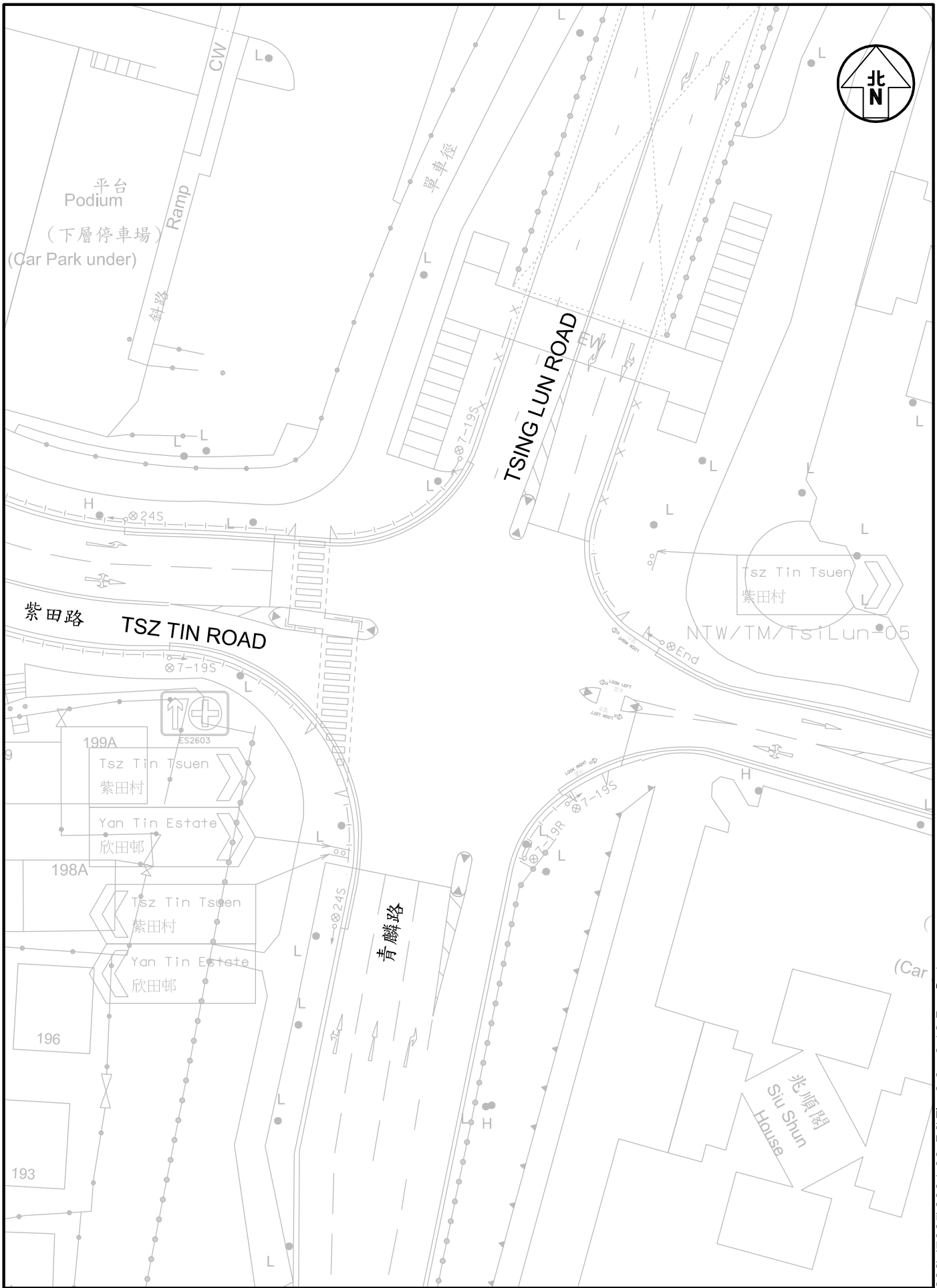

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)					
Figure Title: LAYOUT OF JUNCTION OF TSING LUN ROAD / TSZ TIN ROAD	Job No. J7265	Figure No. 2.8			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

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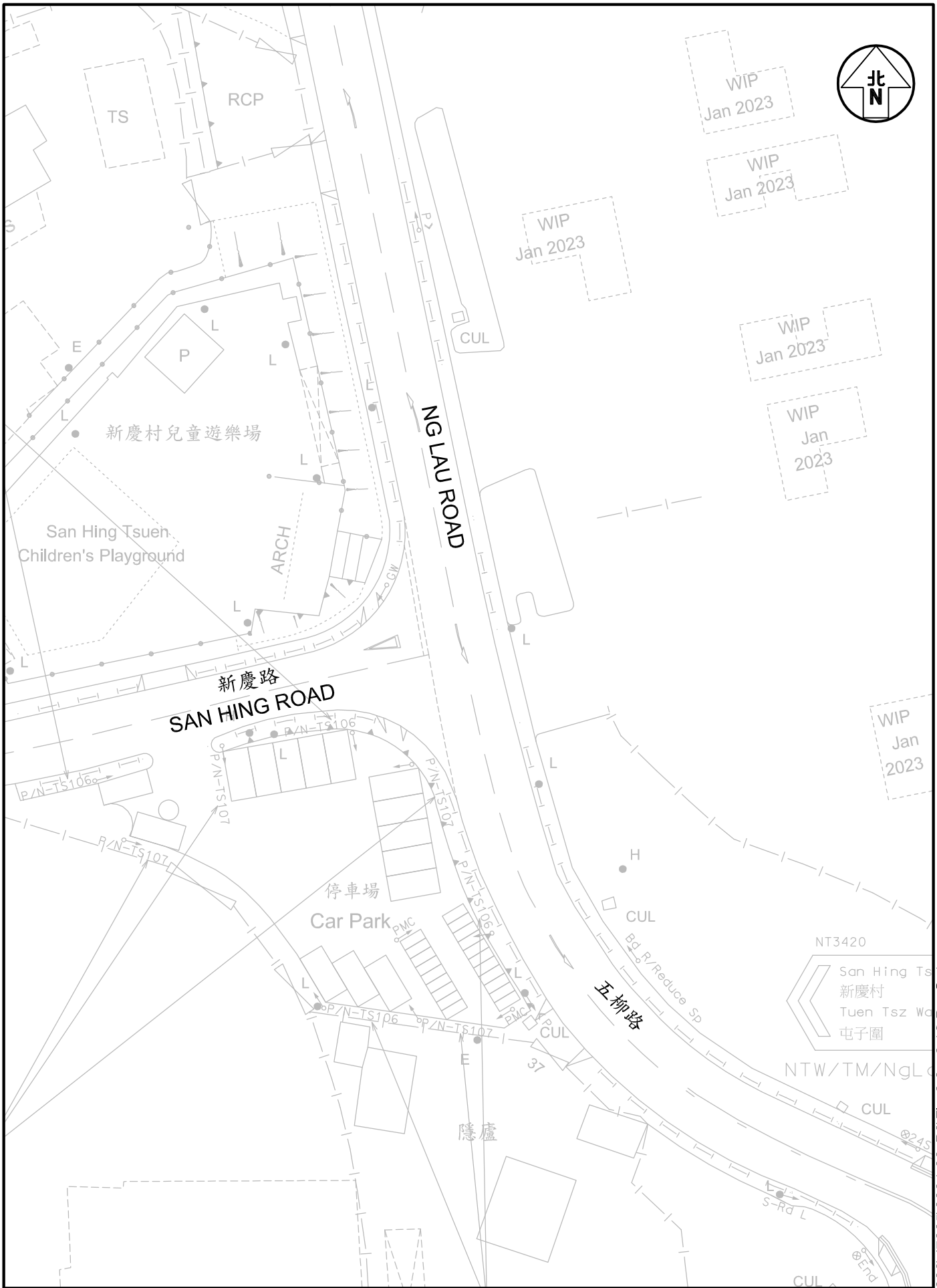

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.9			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF SAN HING ROAD / NG LAU ROAD (SOUTHERN)	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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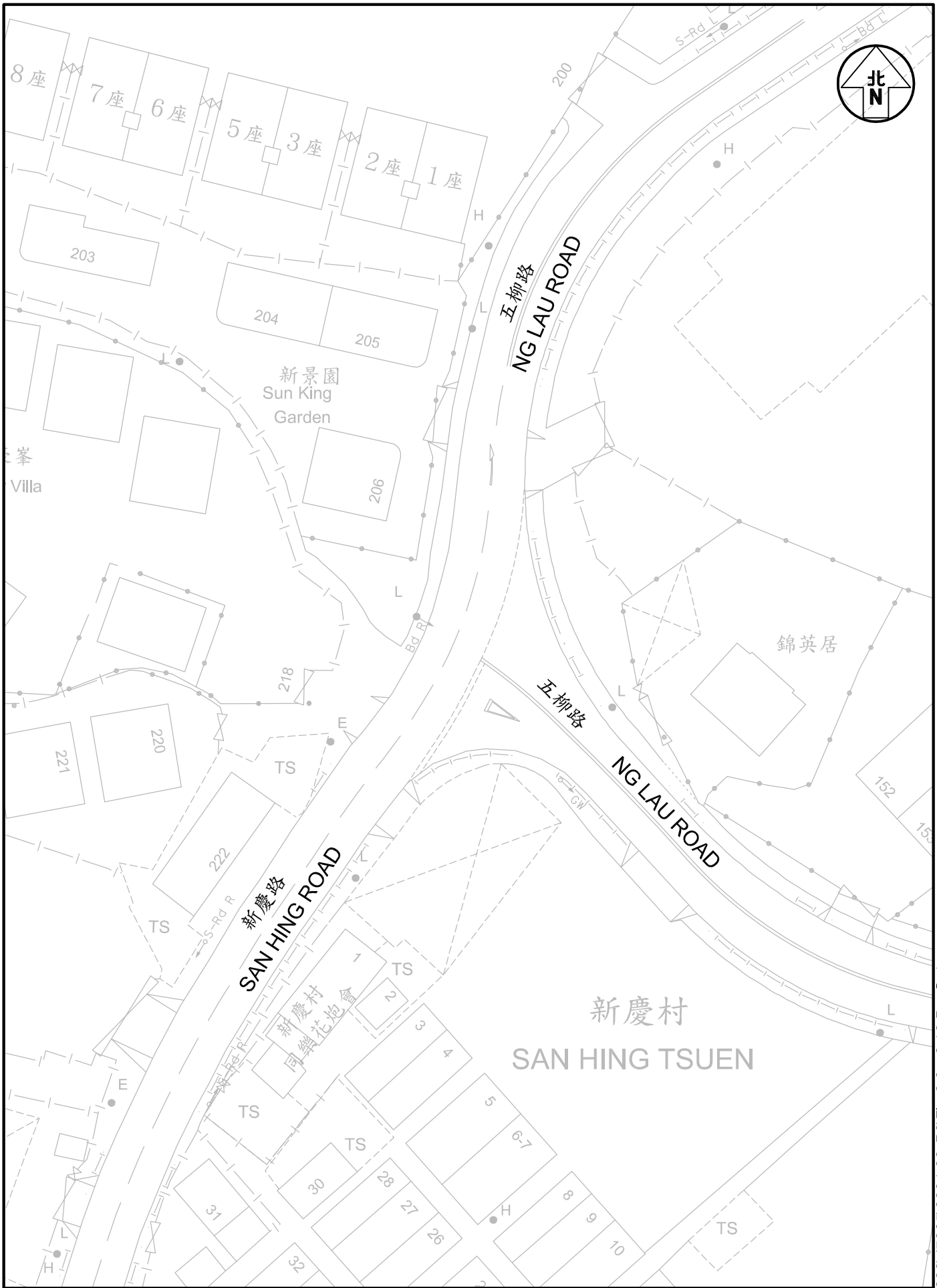

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.10			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF SAN HING ROAD / NG LAU ROAD (NORTHERN)	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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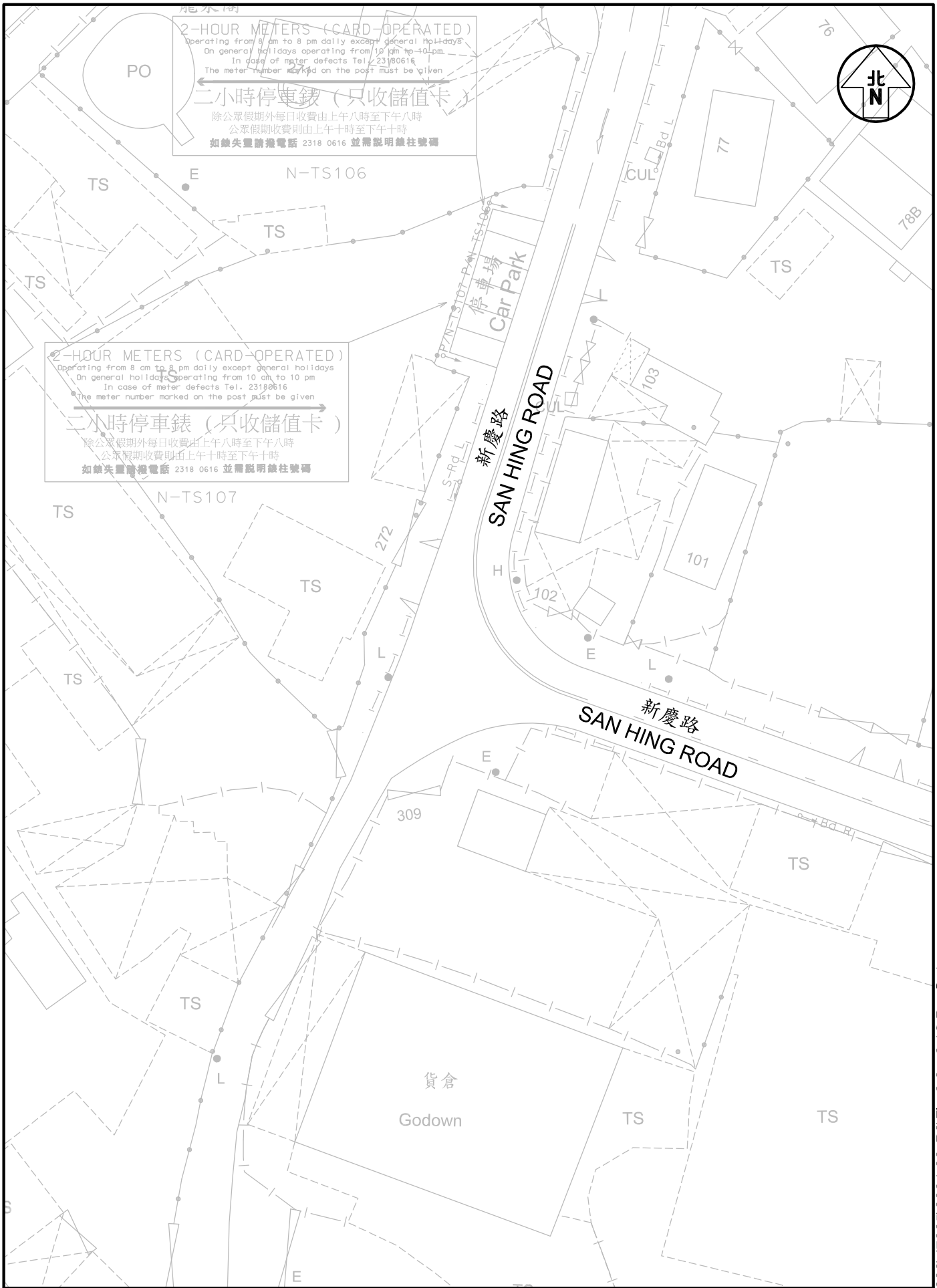

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.11			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF T-JUNCTION AT SAN HING ROAD	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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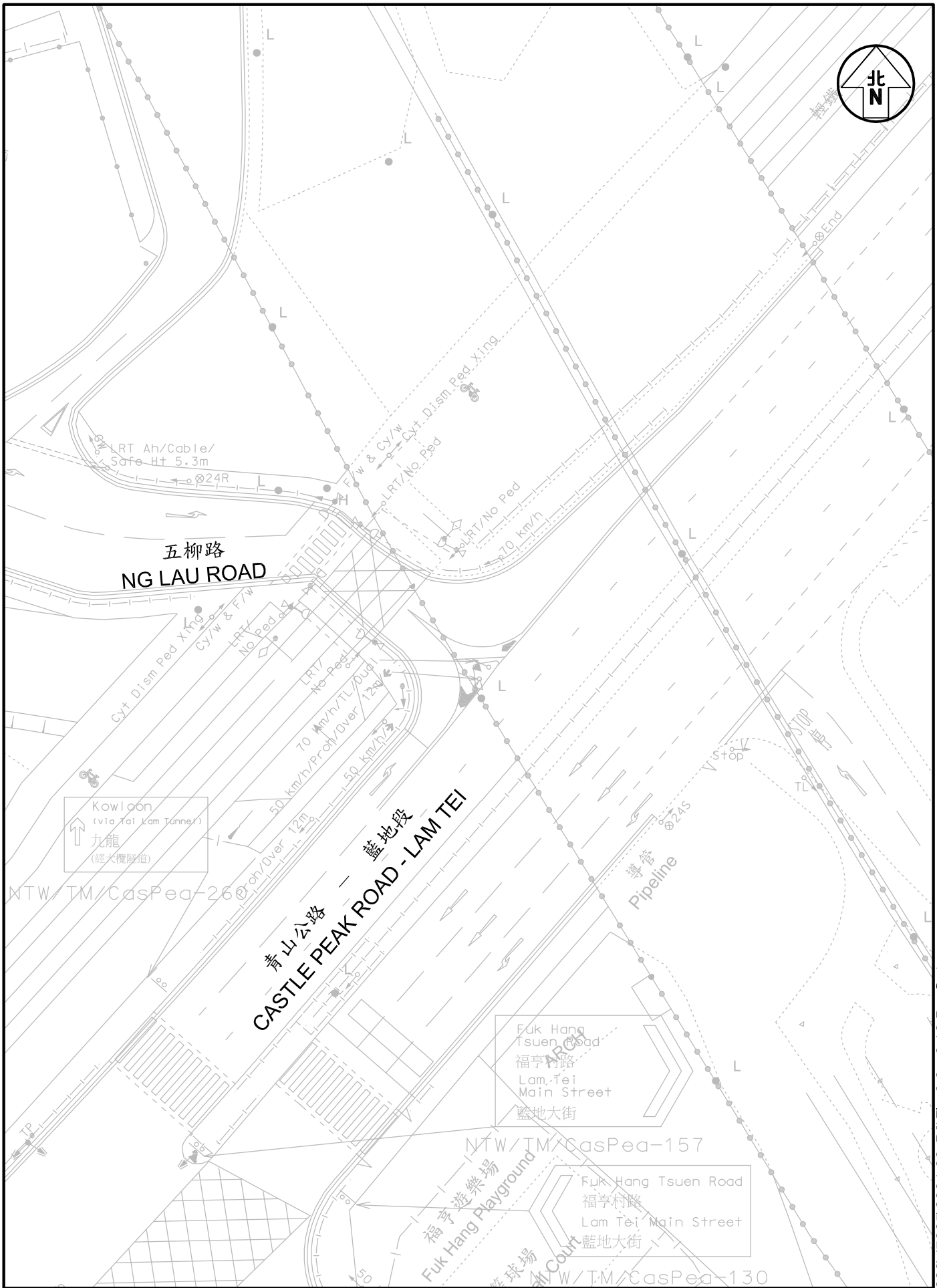

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.12			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF NG LAU ROAD / CASTLE PEAK ROAD – LAM TEI	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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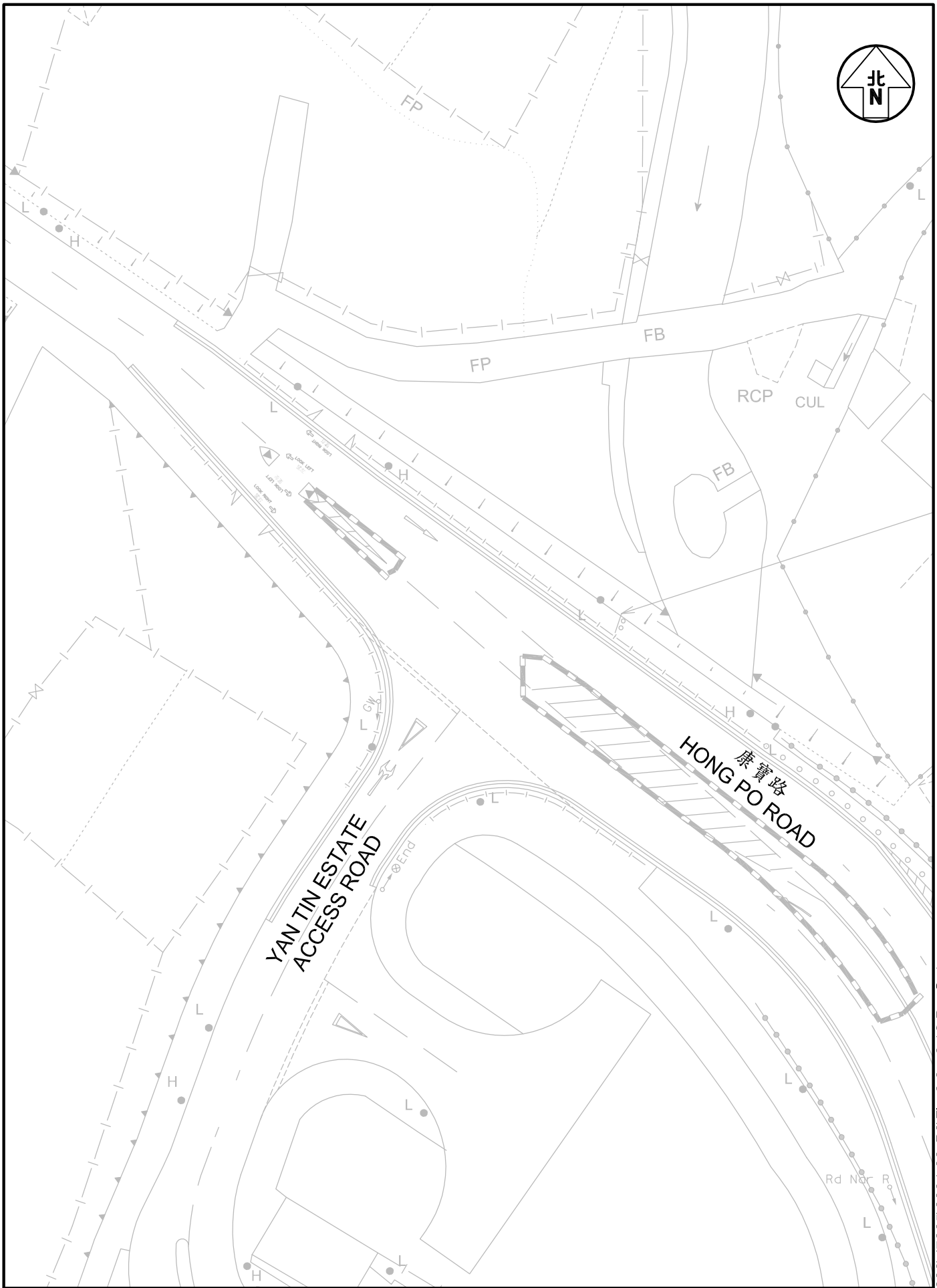

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.13			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF HONG PO ROAD / YAN TIN ESTATE ACCESS ROAD	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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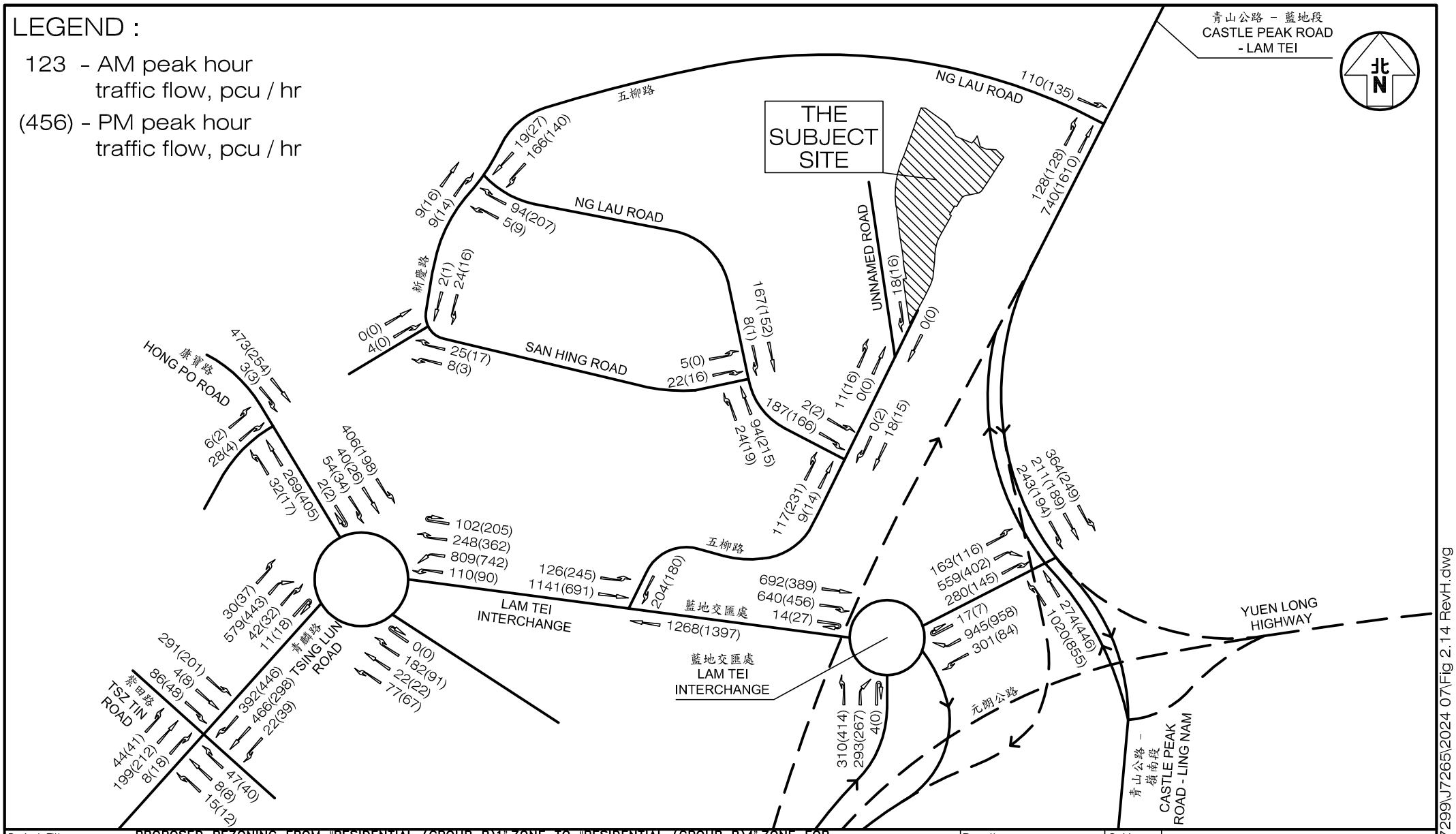

Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 2.14	Revision H
Figure Title	EXISTING PEAK HOUR JUNCTION FLOWS	Designed by L K W / Drawn by S C Y / Checked by K C	
		Scale in A4 N.T.S. / Date 10 JUL 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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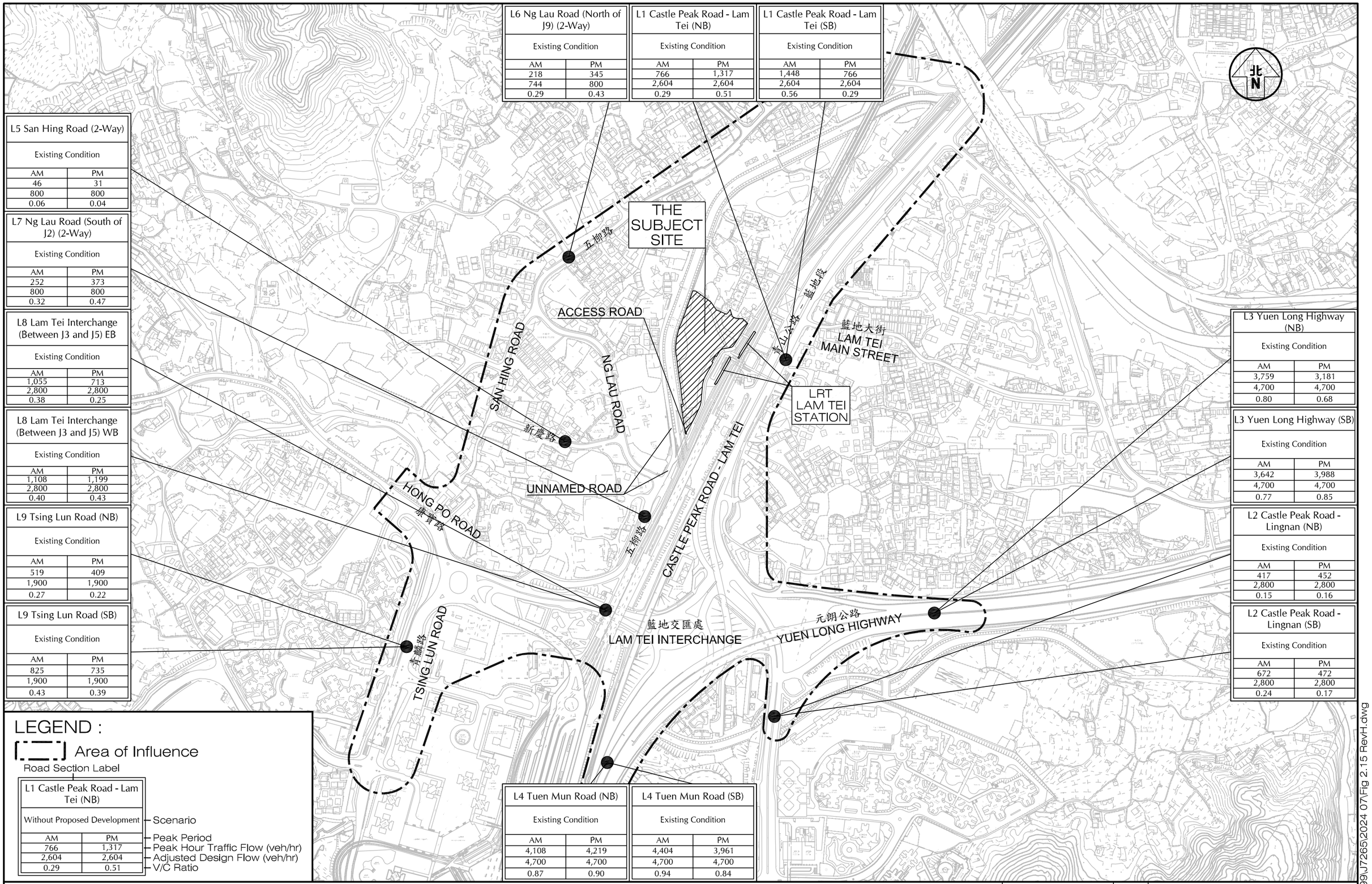

L6 Ng Lau Road (North of J9) (2-Way)	
Existing Condition	
AM	PM
218	345
744	800
0.29	0.43

L1 Castle Peak Road - Lam Tei (NB)	
Existing Condition	
AM	PM
766	1,317
2,604	2,604
0.29	0.51

L1 Castle Peak Road - Lam Tei (SB)	
Existing Condition	
AM	PM
1,448	766
2,604	2,604
0.56	0.29

L5 San Hing Road (2-Way)	
Existing Condition	
AM	PM
46	31
800	800
0.06	0.04

L7 Ng Lau Road (South of J2) (2-Way)	
Existing Condition	
AM	PM
252	373
800	800
0.32	0.47

L8 Lam Tei Interchange (Between J3 and J5) EB	
Existing Condition	
AM	PM
1,055	713
2,800	2,800
0.38	0.25

L8 Lam Tei Interchange (Between J3 and J5) WB	
Existing Condition	
AM	PM
1,108	1,199
2,800	2,800
0.40	0.43

L9 Tsing Lun Road (NB)	
Existing Condition	
AM	PM
519	409
1,900	1,900
0.27	0.22

L9 Tsing Lun Road (SB)	
Existing Condition	
AM	PM
825	735
1,900	1,900
0.43	0.39

L3 Yuen Long Highway (NB)	
Existing Condition	
AM	PM
3,759	3,181
4,700	4,700
0.80	0.68

L3 Yuen Long Highway (SB)	
Existing Condition	
AM	PM
3,642	3,988
4,700	4,700
0.77	0.85

L2 Castle Peak Road - Lingnan (NB)	
Existing Condition	
AM	PM
417	452
2,800	2,800
0.15	0.16

L2 Castle Peak Road - Lingnan (SB)	
Existing Condition	
AM	PM
672	472
2,800	2,800
0.24	0.17

L4 Tuen Mun Road (NB)	
Existing Condition	
AM	PM
4,108	4,219
4,700	4,700
0.87	0.90

L4 Tuen Mun Road (SB)	
Existing Condition	
AM	PM
4,404	3,961
4,700	4,700
0.94	0.84

LEGEND :

Area of Influence

Road Section Label

L1 Castle Peak Road - Lam Tei (NB)		
Without Proposed Development		← Scenario
AM	PM	← Peak Period
766	1,317	← Peak Hour Traffic Flow (veh/hr)
2,604	2,604	← Adjusted Design Flow (veh/hr)
0.29	0.51	← V/C Ratio

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

EXISTING PEAK HOUR LINK FLOWS

Figure No. 2.15

Revision H

Designed by K K Y | Drawn by S C Y | Checked by K C

Scale in A3 1 : 5,000 | Date 23 JUL 2024

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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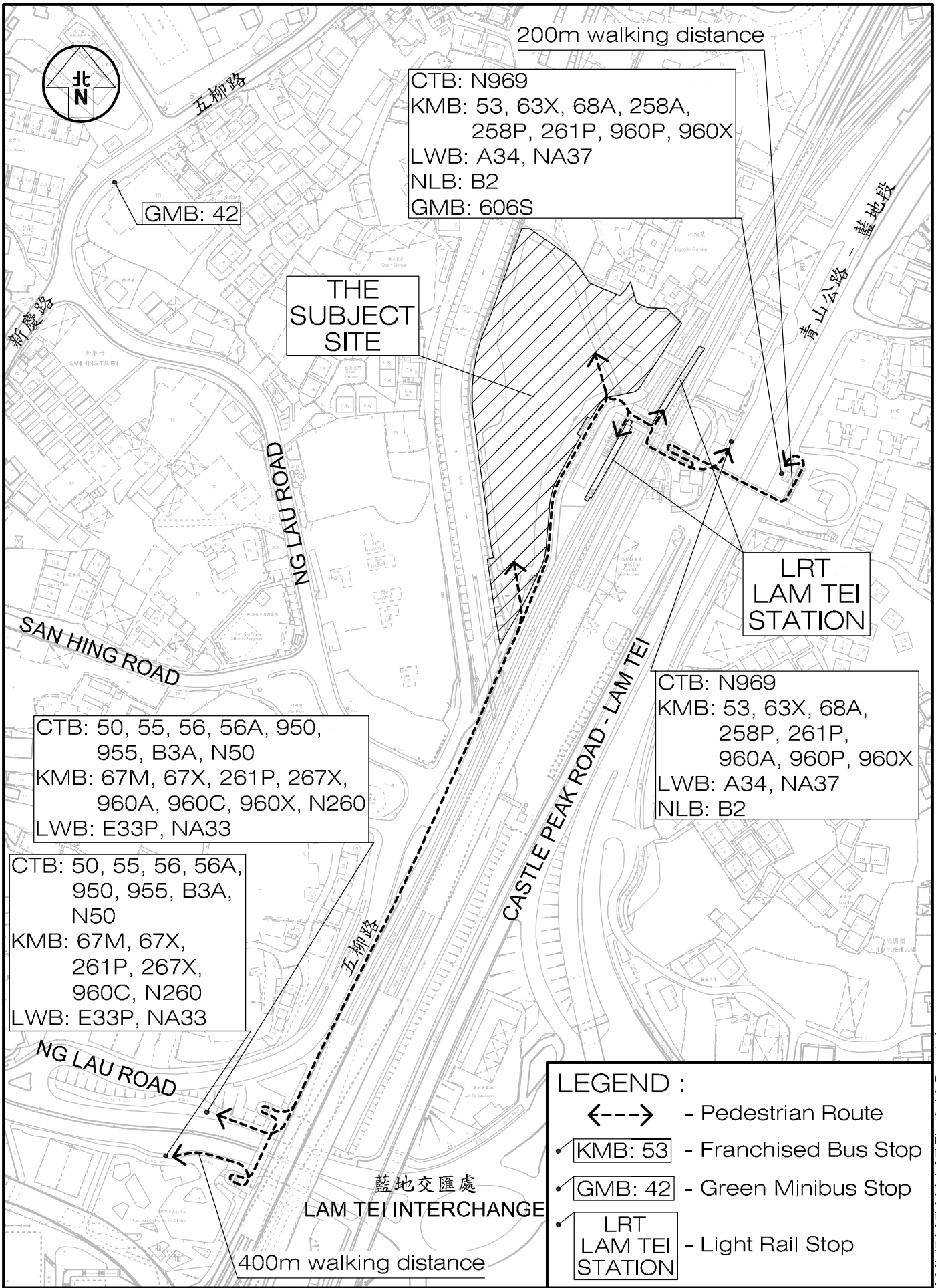

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.16			Scale in A4 1 : 2,500
	Designed by L K W	Drawn by S C Y	Checked by K C	Revision H	Date 23 JUL 2024
Figure Title: ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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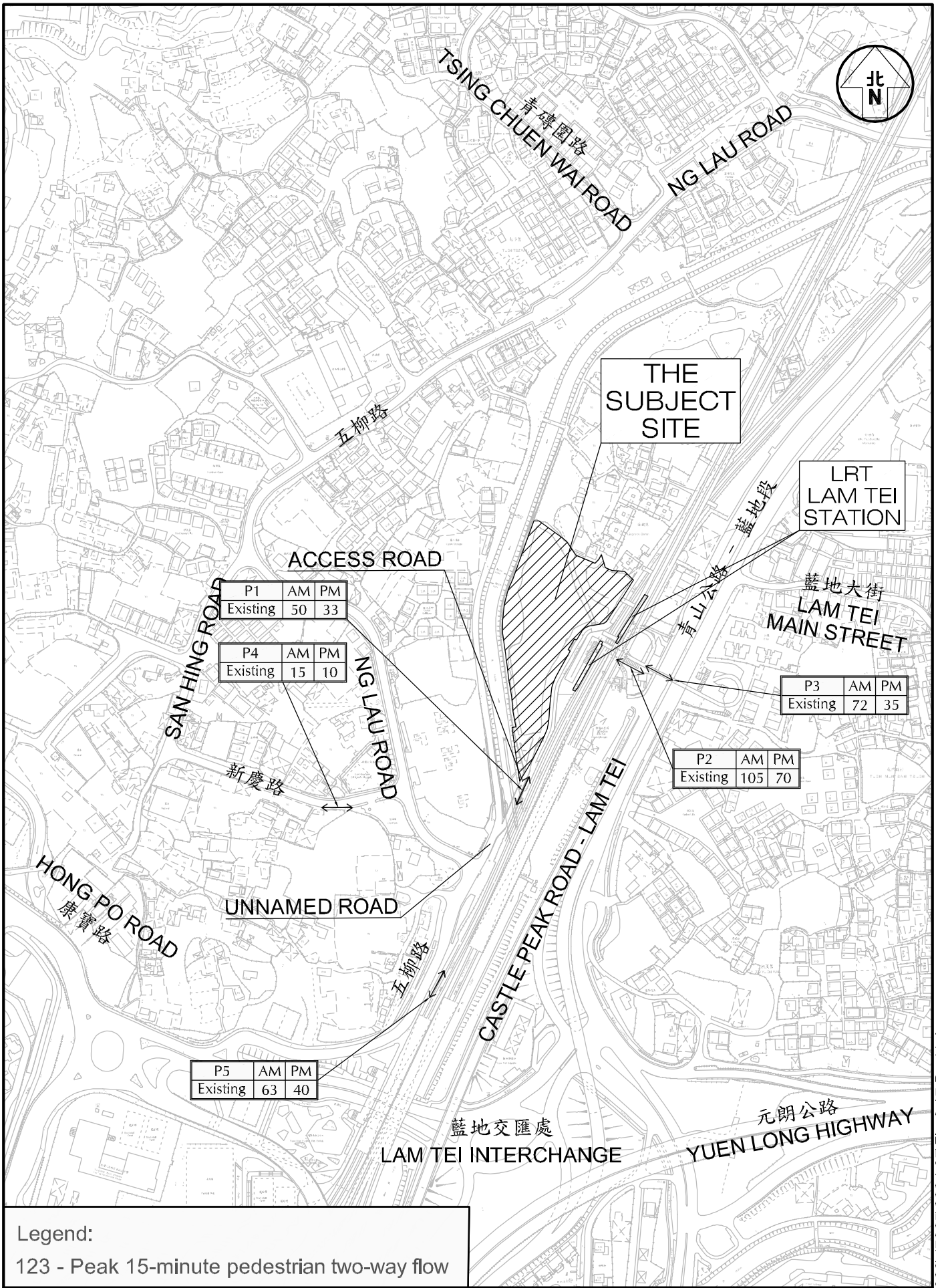

Legend:

123 - Peak 15-minute pedestrian two-way flow

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.17			Scale in A4 1 : 4,000
	Designed by K K Y	Drawn by S C Y	Checked by K C	Revision H	Date 23 JUL 2204
Figure Title: EXISTING PEAK 15-MINUTE PEDESTRIAN FLOWS	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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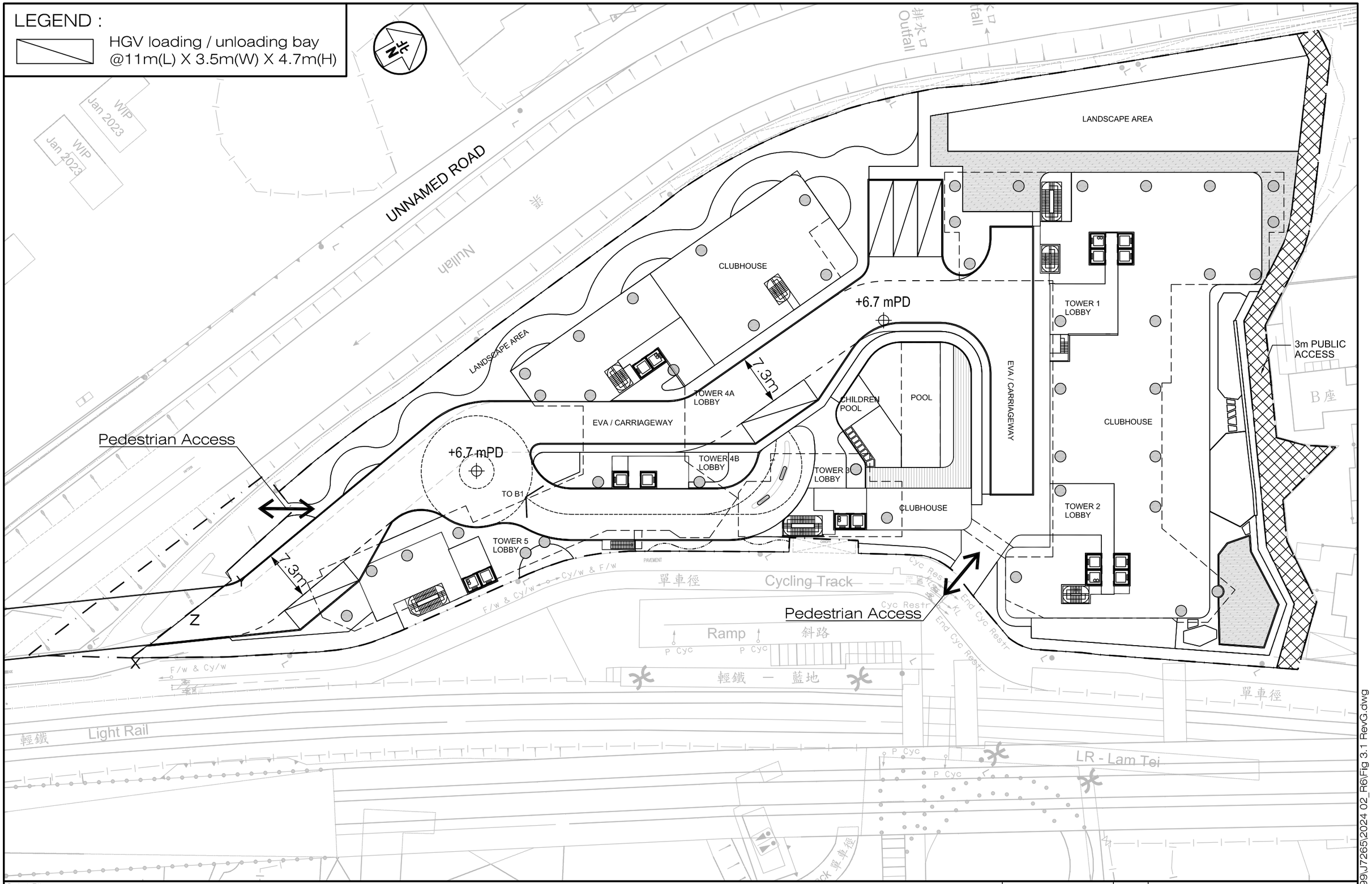
LEGEND :

HGV loading / unloading bay
@11m(L) X 3.5m(W) X 4.7m(H)



Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	J7265	
Figure Title	MASTER LAYOUT PLAN	Figure No. 3.1	Revision G
		Designed by L K W / Drawn by W S W / Checked by K C	
		Scale in A3 1 : 500 / Date 20 FEB 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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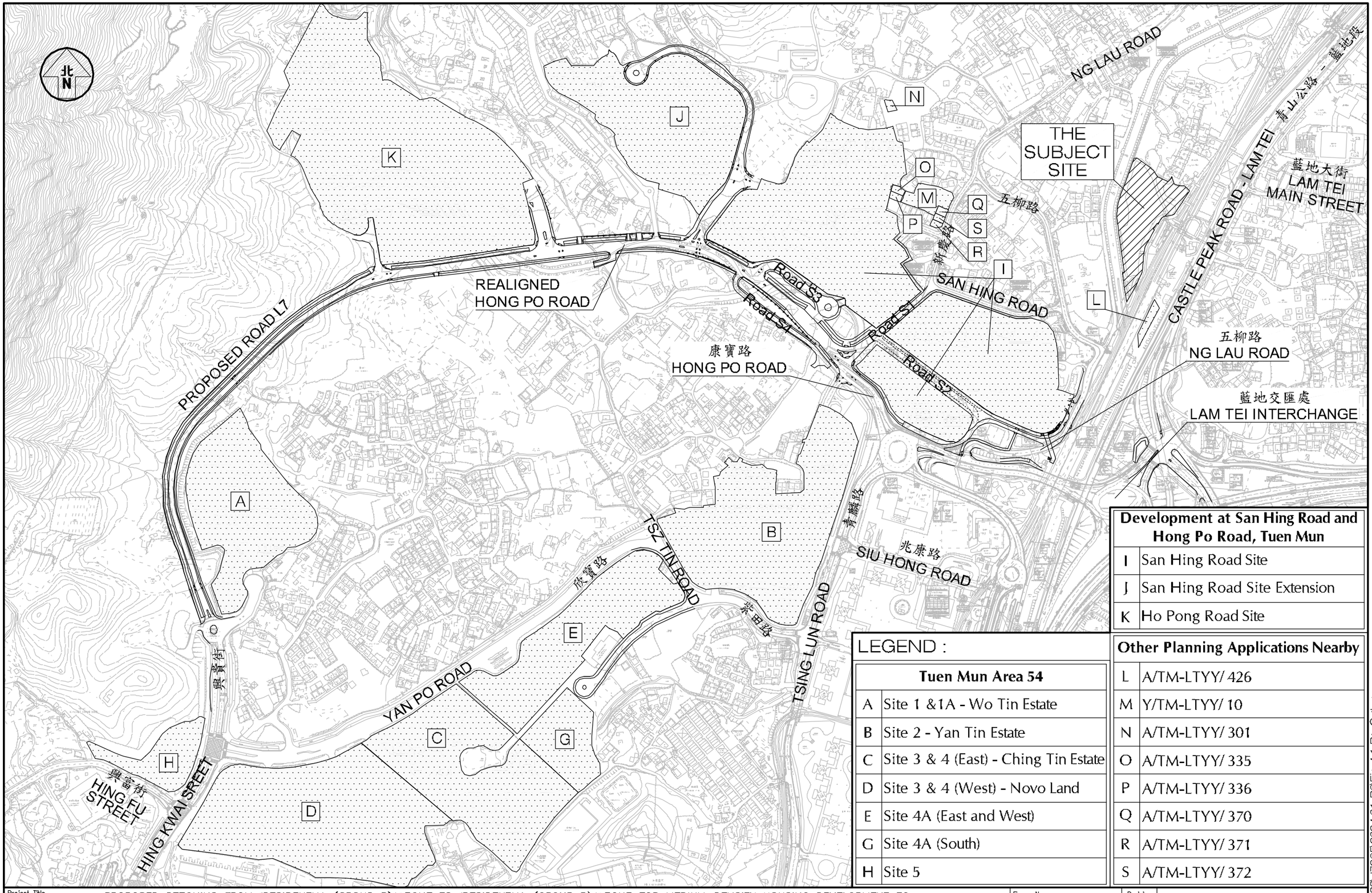

Development at San Hing Road and Hong Po Road, Tuen Mun	
I	San Hing Road Site
J	San Hing Road Site Extension
K	Ho Pong Road Site

LEGEND :

Tuen Mun Area 54	
A	Site 1 &1A - Wo Tin Estate
B	Site 2 - Yan Tin Estate
C	Site 3 & 4 (East) - Ching Tin Estate
D	Site 3 & 4 (West) - Novo Land
E	Site 4A (East and West)
G	Site 4A (South)
H	Site 5

Other Planning Applications Nearby	
L	A/TM-LTYY/ 426
M	Y/TM-LTYY/ 10
N	A/TM-LTYY/ 301
O	A/TM-LTYY/ 335
P	A/TM-LTYY/ 336
Q	A/TM-LTYY/ 370
R	A/TM-LTYY/ 371
S	A/TM-LTYY/ 372

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265

Figure Title: THE MAJOR ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

Figure No. 4.1 | Revision G

Designed by L K W | Drawn by W S W | Checked by K C

Scale in A3: 1 : 5,000 | Date: 20 FEB 2024

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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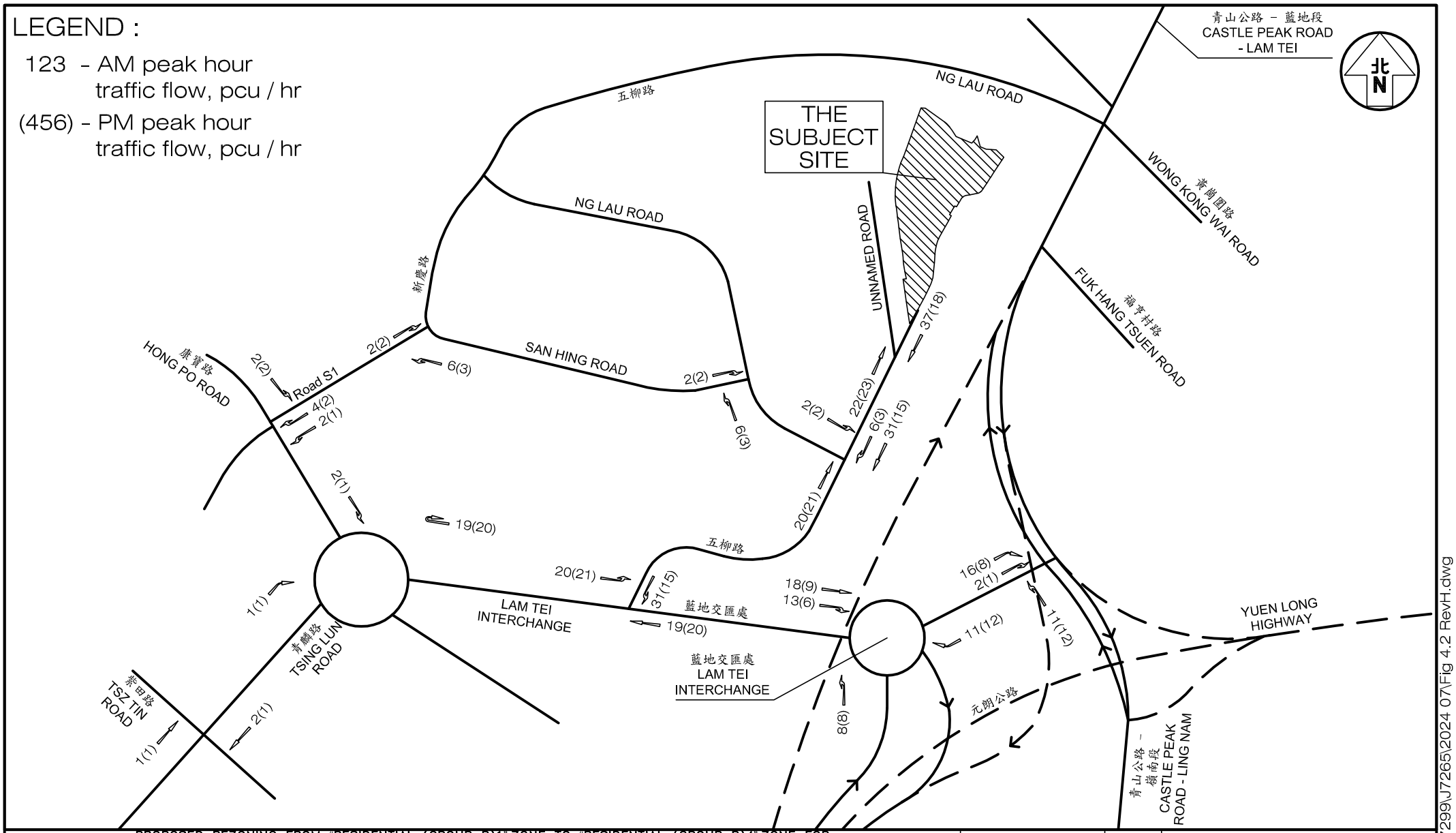
LEGEND :

123 - AM peak hour traffic flow, pcu / hr

(456) - PM peak hour traffic flow, pcu / hr



Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 4.2	Revision H
Figure Title	TRAFFIC GENERATION OF APPROVED SCHEME	Designed by L K W / Drawn by S C Y / Checked by K C	
		Scale in A4 N.T.S. / Date 10 JUL 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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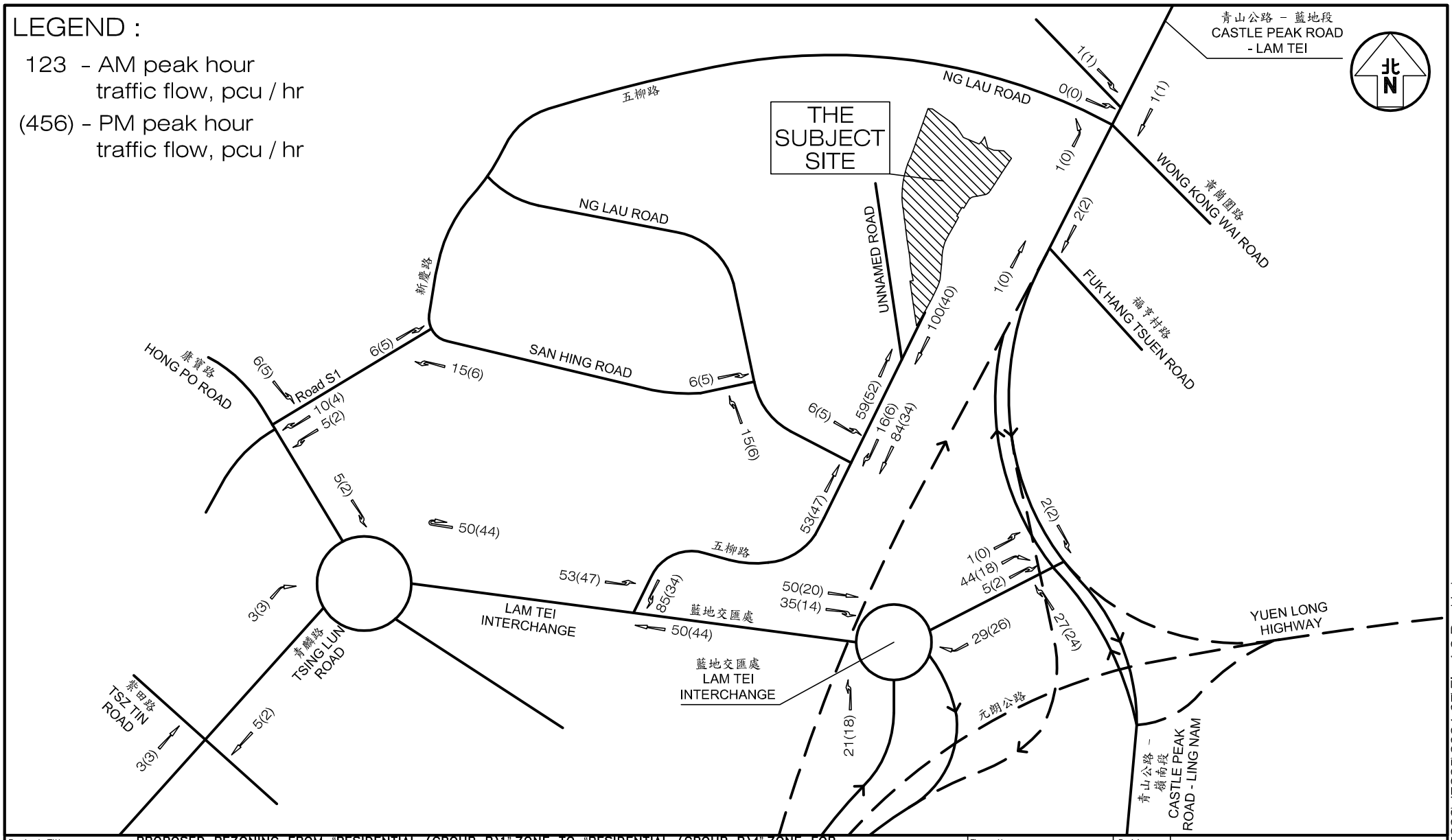

Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 4.3	Revision H
Figure Title	TRAFFIC GENERATION OF PROPOSED DEVELOPMENT	Designed by L K W / Drawn by S C Y / Checked by K C	
		Scale in A4 N.T.S. / Date 10 JUL 2024	

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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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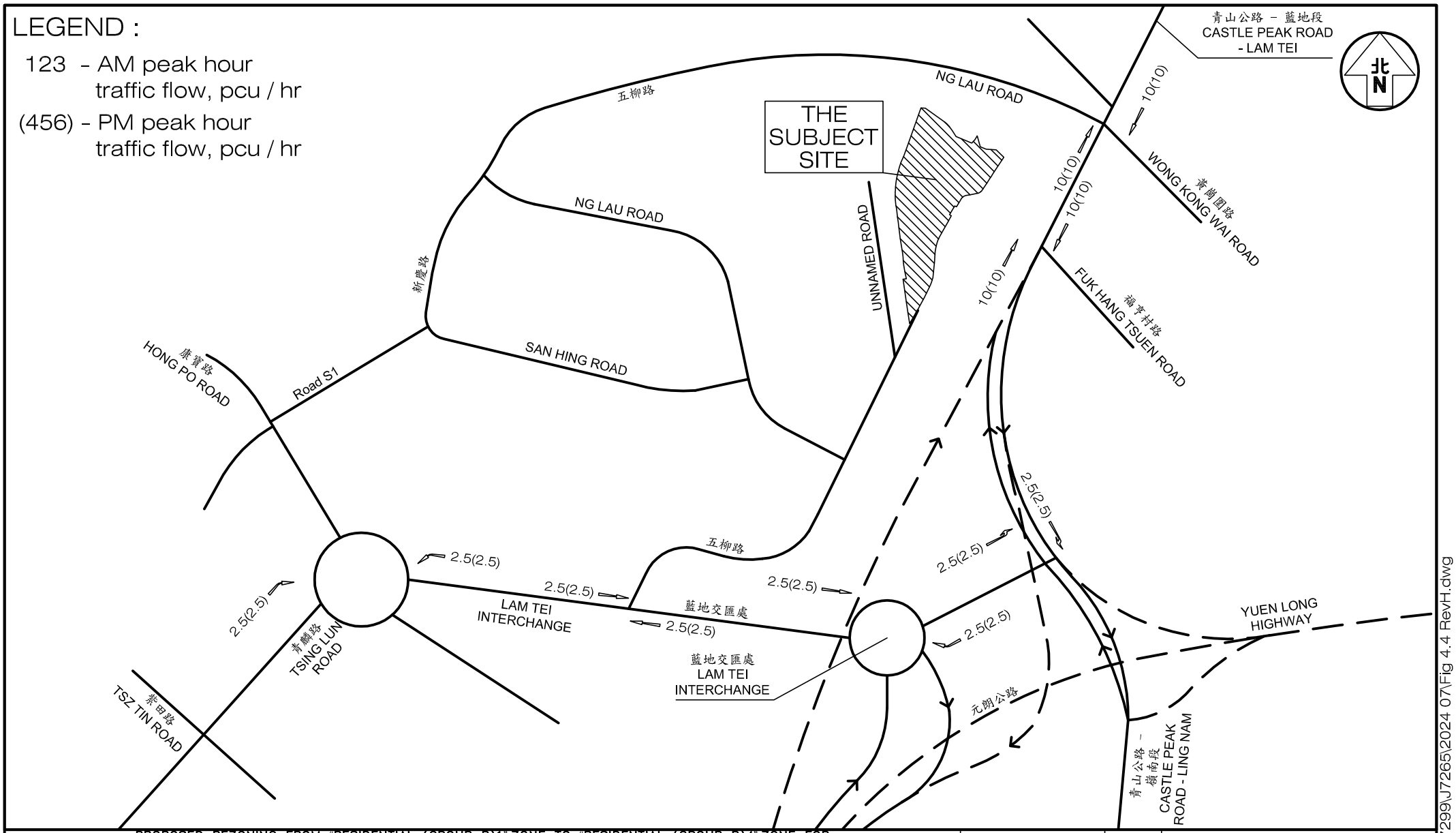

Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 4.4	Revision H
Figure Title	YEAR 2033 PROPOSED ADDITIONAL BUS TRIPS	Designed by L K W / Drawn by S C Y / Checked by K C	
		Scale in A4 N.T.S. / Date 23 JUL 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
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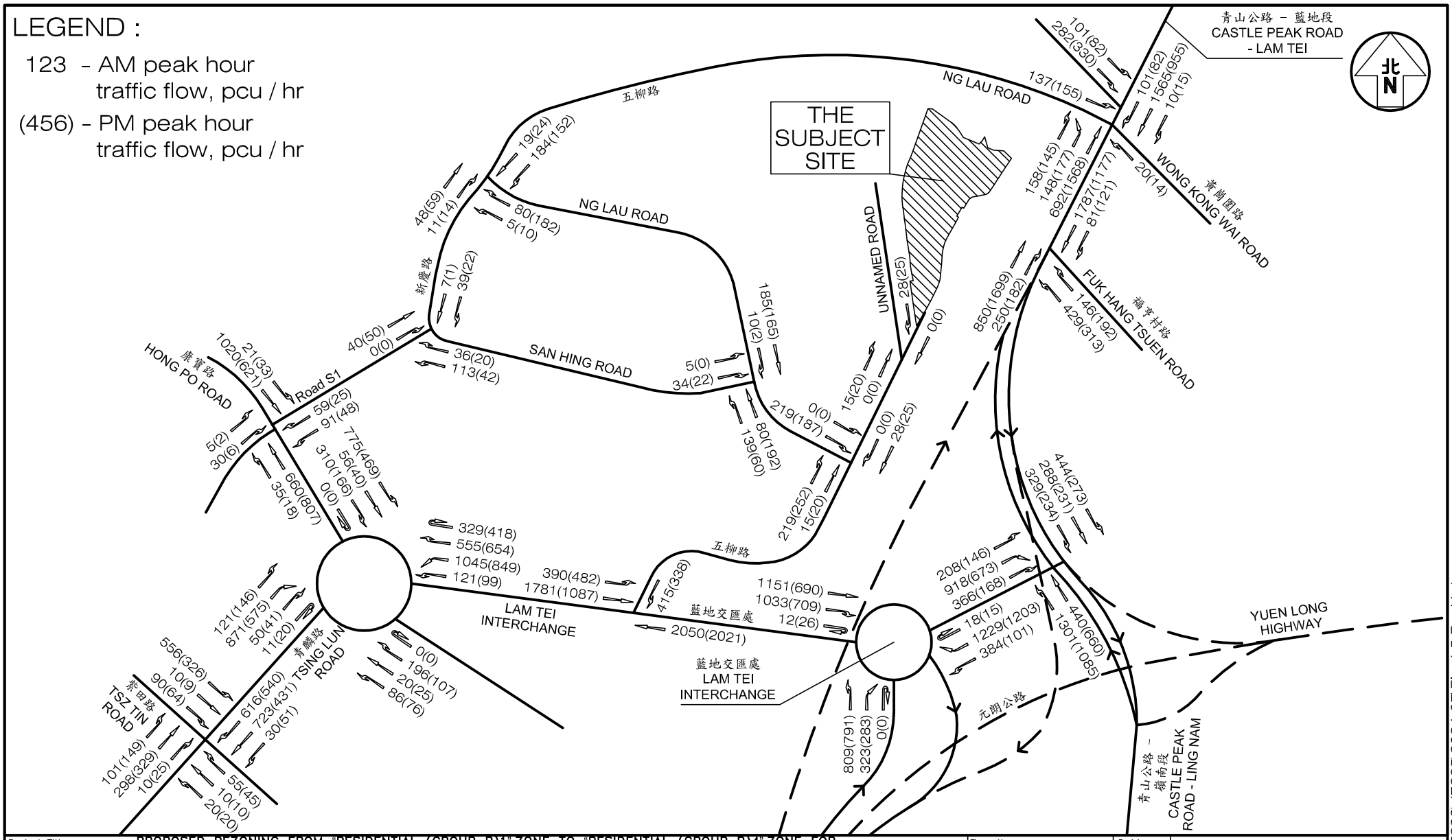

Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 4.5	Revision H
Figure Title	YEAR 2033 PEAK HOUR JUNCTION FLOWS WITHOUT PROPOSED DEVELOPMENT	Designed by L K W / Drawn by S C Y / Checked by K C	
		Scale in A4 N.T.S. / Date 23 JUL 2024	

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21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
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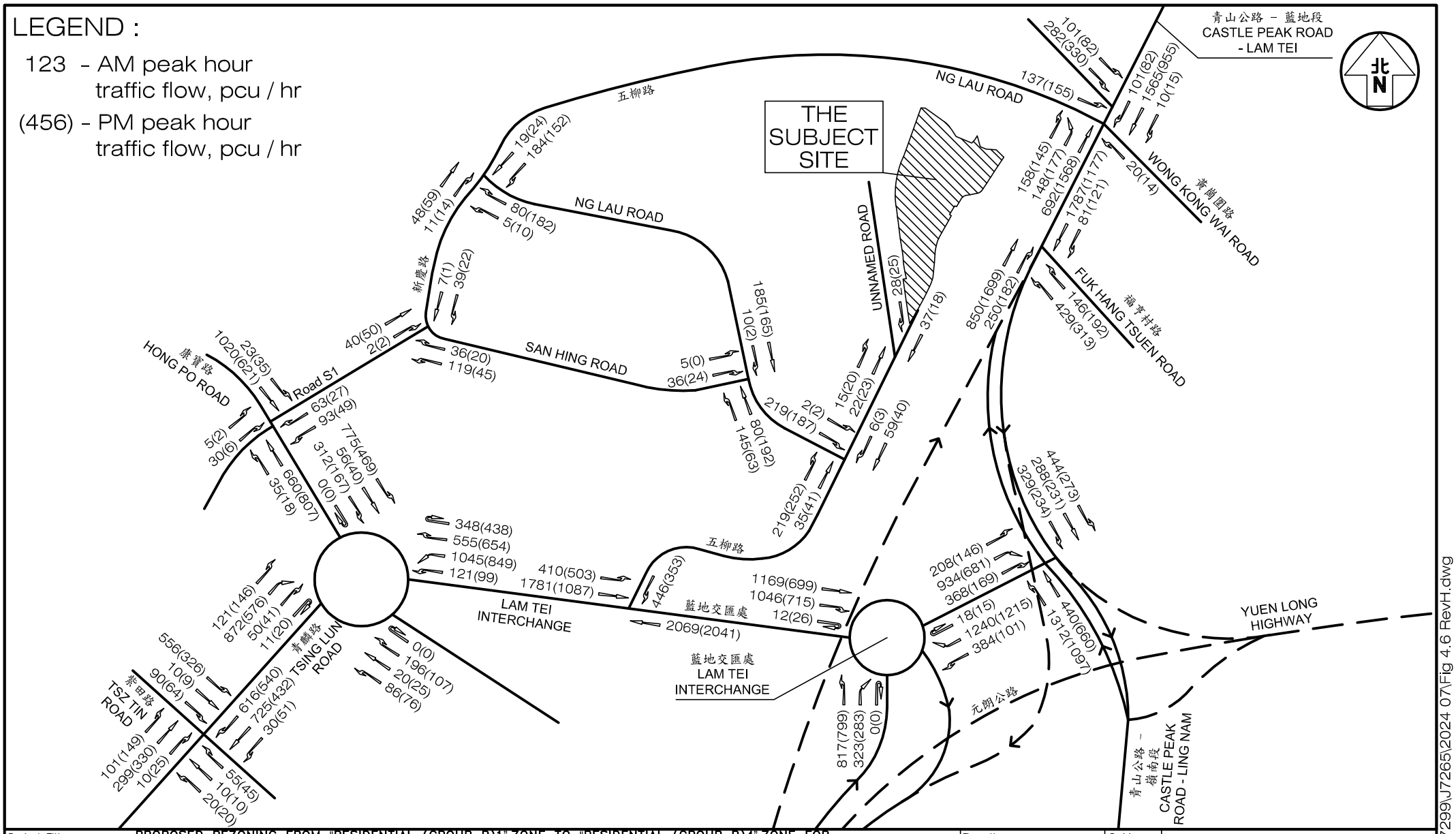

Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 4.6	Revision H
Figure Title	YEAR 2033 PEAK HOUR JUNCTION FLOWS WITH APPROVED SCHEME	Designed by L K W / Drawn by S C Y / Checked by K C	
		Scale in A4 N.T.S. / Date 23 JUL 2024	

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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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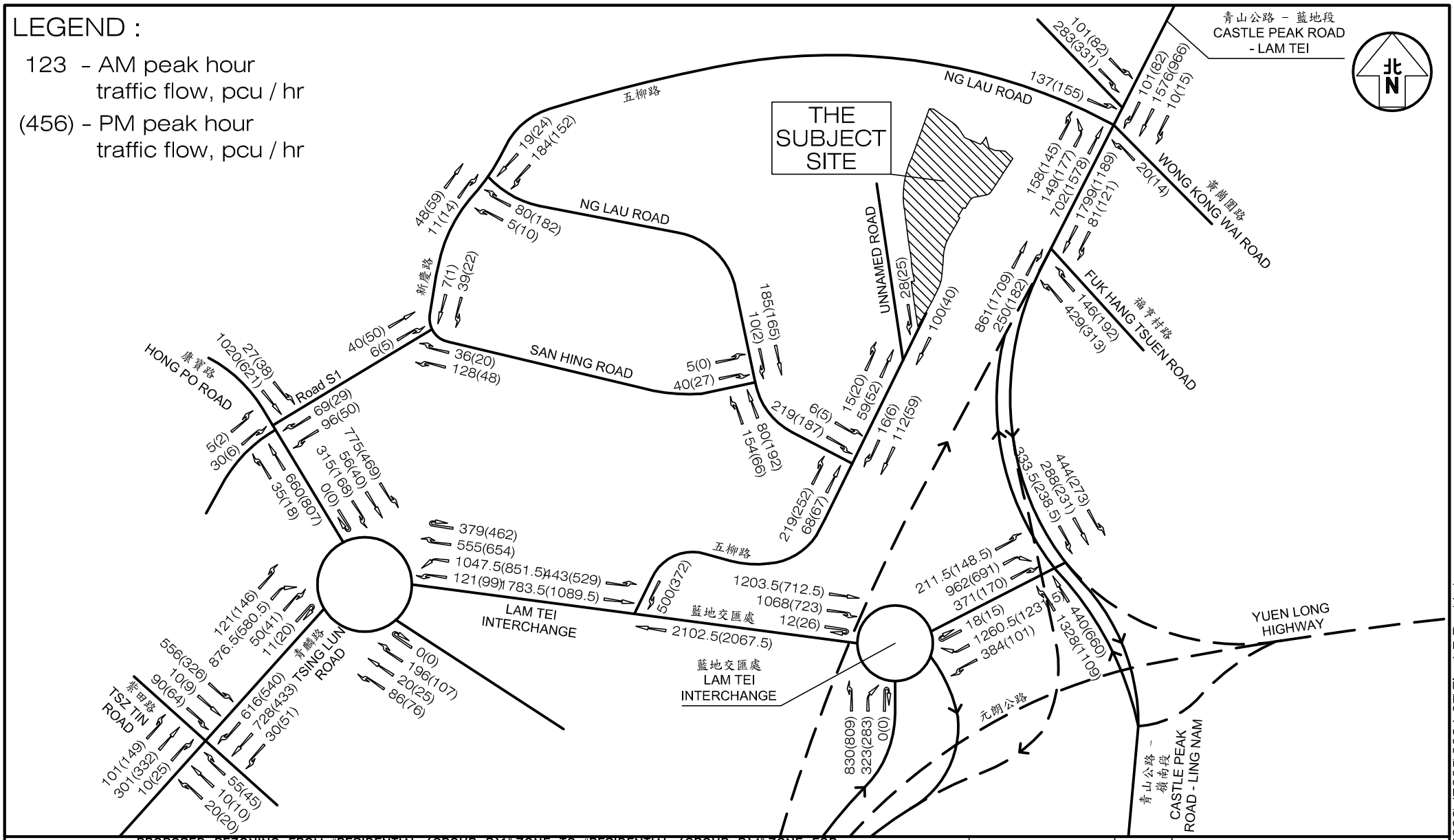

Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	J7265	Figure No. 4.7 / Revision H
Figure Title	YEAR 2033 PEAK HOUR JUNCTION FLOWS WITH PROPOSED DEVELOPMENT		Designed by L K W / Drawn by S C Y / Checked by K C / Scale in A4 N.T.S. / Date 23 JUL 2024

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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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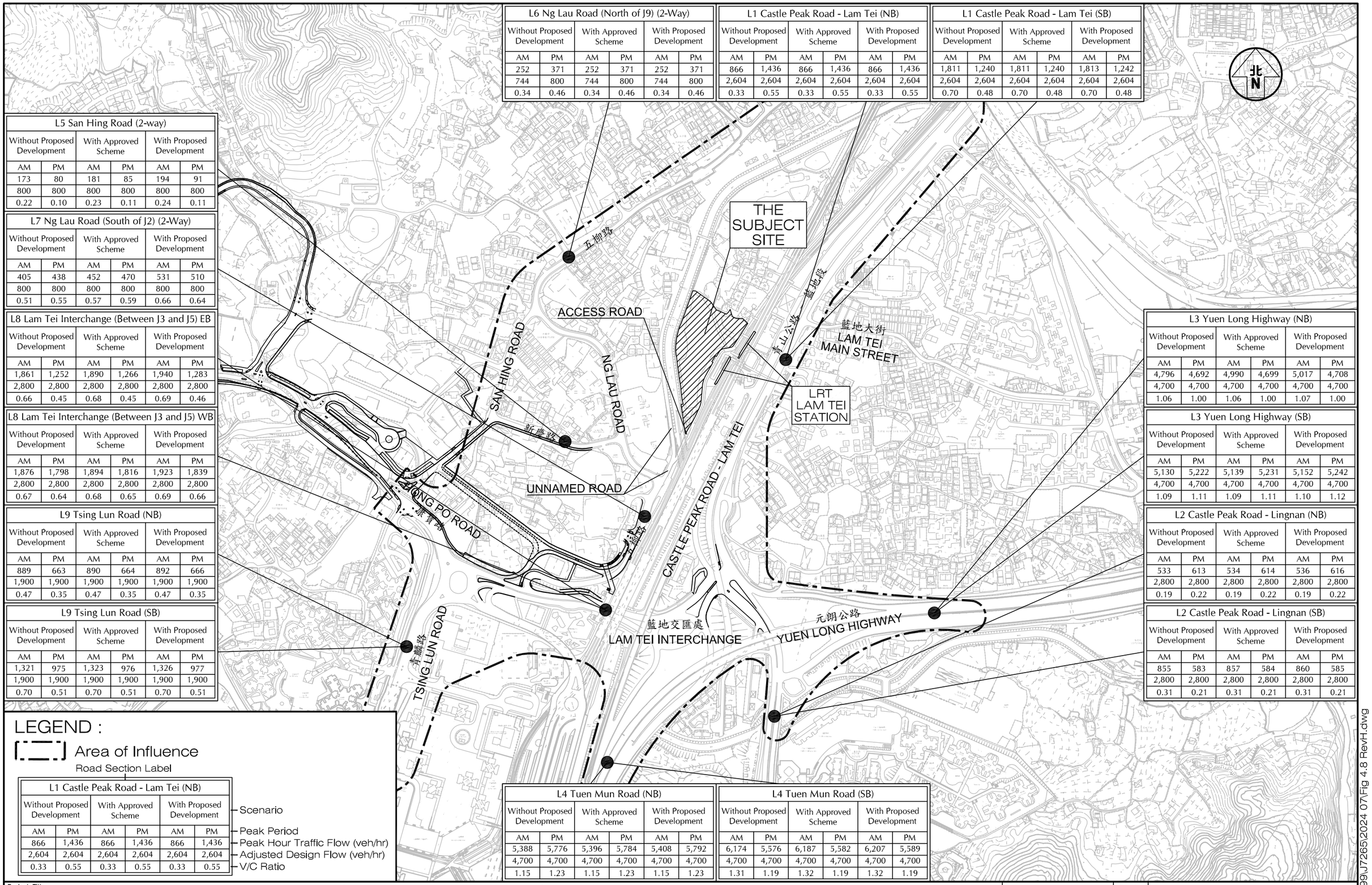

L6 Ng Lau Road (North of J9) (2-Way)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
252	371	252	371	252	371
744	800	744	800	744	800
0.34	0.46	0.34	0.46	0.34	0.46

L1 Castle Peak Road - Lam Tei (NB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
866	1,436	866	1,436	866	1,436
2,604	2,604	2,604	2,604	2,604	2,604
0.33	0.55	0.33	0.55	0.33	0.55

L1 Castle Peak Road - Lam Tei (SB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
1,811	1,240	1,811	1,240	1,813	1,242
2,604	2,604	2,604	2,604	2,604	2,604
0.70	0.48	0.70	0.48	0.70	0.48

L5 San Hing Road (2-way)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
173	80	181	85	194	91
800	800	800	800	800	800
0.22	0.10	0.23	0.11	0.24	0.11

L7 Ng Lau Road (South of J2) (2-Way)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
405	438	452	470	531	510
800	800	800	800	800	800
0.51	0.55	0.57	0.59	0.66	0.64

L8 Lam Tei Interchange (Between J3 and J5) EB					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
1,861	1,252	1,890	1,266	1,940	1,283
2,800	2,800	2,800	2,800	2,800	2,800
0.66	0.45	0.68	0.45	0.69	0.46

L8 Lam Tei Interchange (Between J3 and J5) WB					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
1,876	1,798	1,894	1,816	1,923	1,839
2,800	2,800	2,800	2,800	2,800	2,800
0.67	0.64	0.68	0.65	0.69	0.66

L9 Tsing Lun Road (NB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
889	663	890	664	892	666
1,900	1,900	1,900	1,900	1,900	1,900
0.47	0.35	0.47	0.35	0.47	0.35

L9 Tsing Lun Road (SB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
1,321	975	1,323	976	1,326	977
1,900	1,900	1,900	1,900	1,900	1,900
0.70	0.51	0.70	0.51	0.70	0.51

L3 Yuen Long Highway (NB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
4,796	4,692	4,990	4,699	5,017	4,708
4,700	4,700	4,700	4,700	4,700	4,700
1.06	1.00	1.06	1.00	1.07	1.00

L3 Yuen Long Highway (SB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
5,130	5,222	5,139	5,231	5,152	5,242
4,700	4,700	4,700	4,700	4,700	4,700
1.09	1.11	1.09	1.11	1.10	1.12

L2 Castle Peak Road - Lingnan (NB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
533	613	534	614	536	616
2,800	2,800	2,800	2,800	2,800	2,800
0.19	0.22	0.19	0.22	0.19	0.22

L2 Castle Peak Road - Lingnan (SB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
855	583	857	584	860	585
2,800	2,800	2,800	2,800	2,800	2,800
0.31	0.21	0.31	0.21	0.31	0.21

L4 Tuen Mun Road (NB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
5,388	5,776	5,396	5,784	5,408	5,792
4,700	4,700	4,700	4,700	4,700	4,700
1.15	1.23	1.15	1.23	1.15	1.23

L4 Tuen Mun Road (SB)					
Without Proposed Development		With Approved Scheme		With Proposed Development	
AM	PM	AM	PM	AM	PM
6,174	5,576	6,187	5,582	6,207	5,589
4,700	4,700	4,700	4,700	4,700	4,700
1.31	1.19	1.32	1.19	1.32	1.19

LEGEND :

Area of Influence

Road Section Label

L1 Castle Peak Road - Lam Tei (NB)						
Without Proposed Development		With Approved Scheme		With Proposed Development		Scenario
AM	PM	AM	PM	AM	PM	Peak Period
866	1,436	866	1,436	866	1,436	Peak Hour Traffic Flow (veh/hr)
2,604	2,604	2,604	2,604	2,604	2,604	Adjusted Design Flow (veh/hr)
0.33	0.55	0.33	0.55	0.33	0.55	V/C Ratio

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

YEAR 2033 PEAK HOUR LINK FLOWS

Figure No. 4.8

Revision H

Designed by K K Y | Drawn by S C Y | Checked by K C

Scale in A3 1 : 5,000 | Date 23 JUL 2024

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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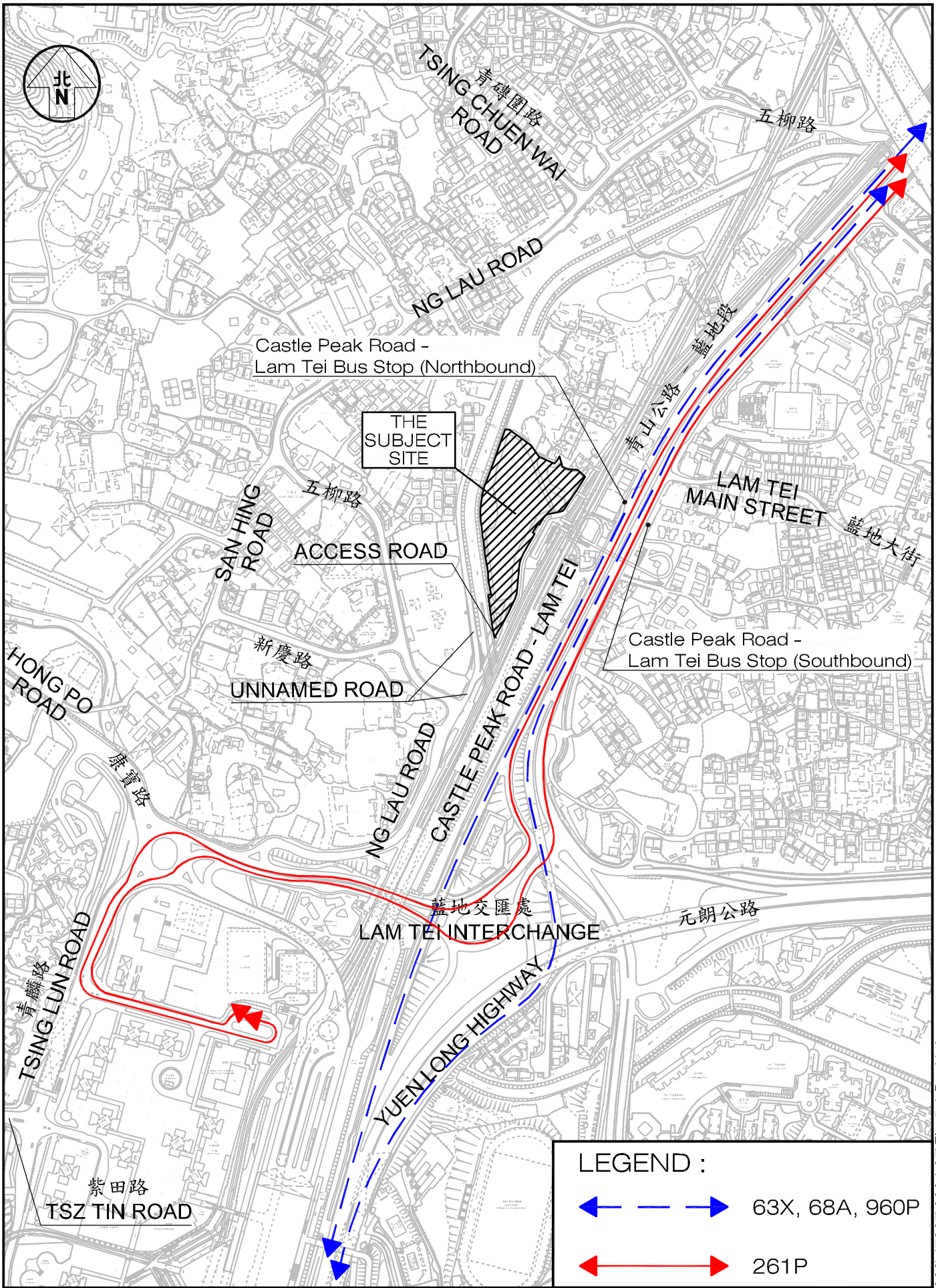

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 5.1		Scale in A4 1 : 5,000
	Designed by K K Y	Drawn by S C Y	Checked by K C	Revision H
				Date 23 JUL 2024
Figure Title: ADDITIONAL BUS TRIP IN YEAR 2033				

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

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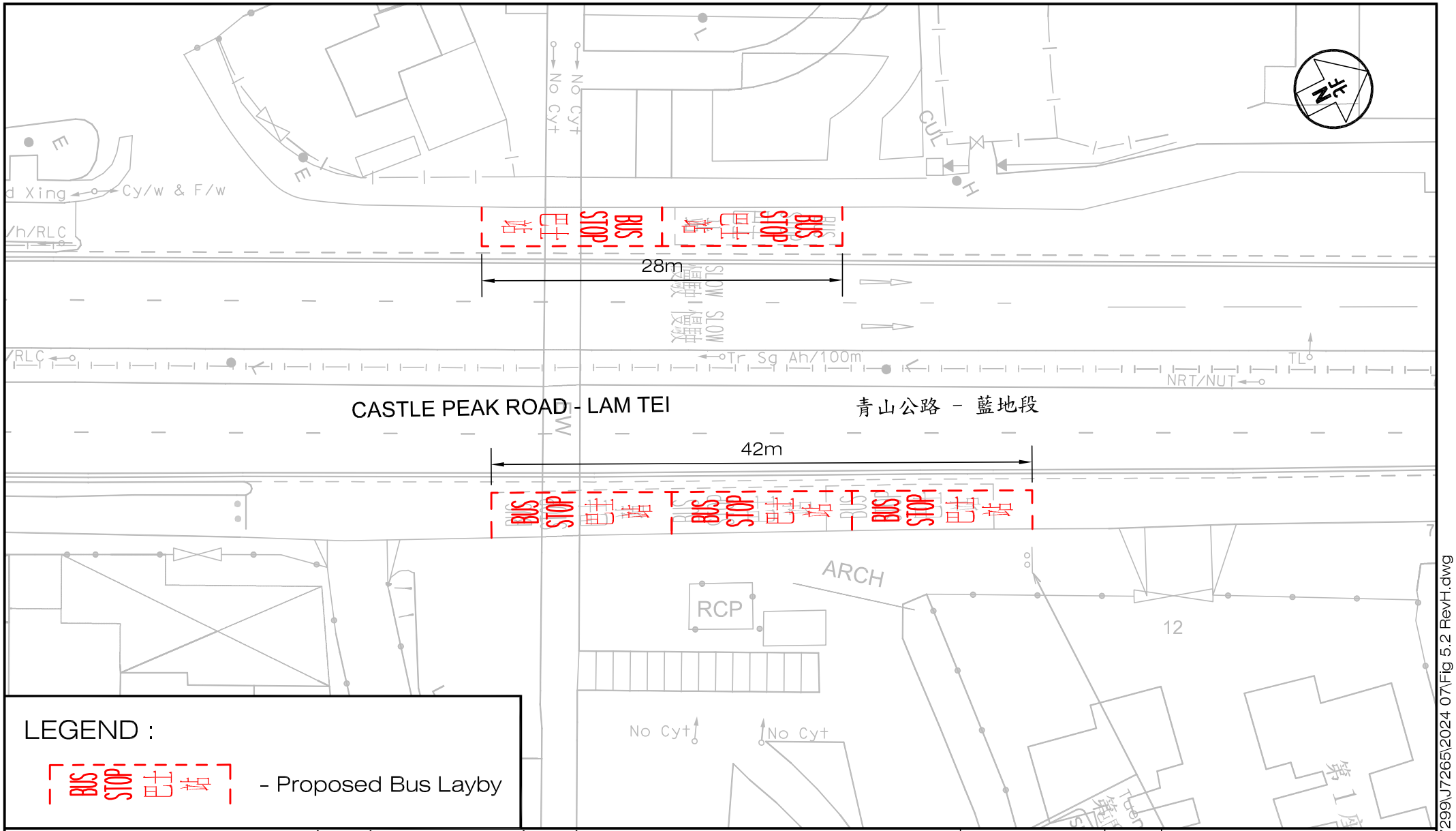

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

PROPOSED IMPROVEMENT OF ON LENGTH OF THE CPR BUS STOPS LAYBYS

Figure No.	Revision
5.2	A

Designed by	Drawn by	Checked by
K K Y	S C Y	K C

Scale in A4	Date
1 : 400	23 JUL 2024

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Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
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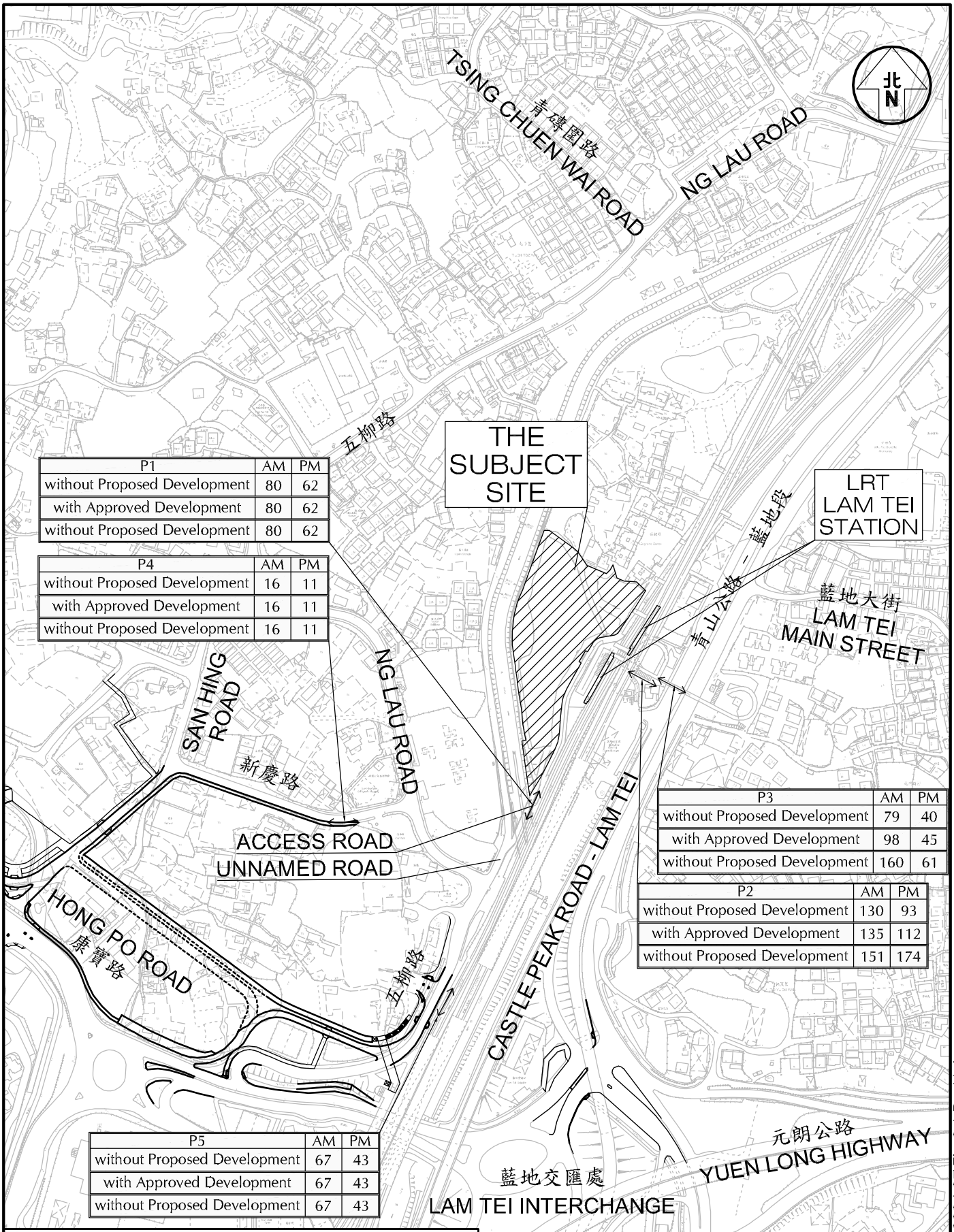

P1	AM	PM
without Proposed Development	80	62
with Approved Development	80	62
without Proposed Development	80	62

P4	AM	PM
without Proposed Development	16	11
with Approved Development	16	11
without Proposed Development	16	11

P3	AM	PM
without Proposed Development	79	40
with Approved Development	98	45
without Proposed Development	160	61

P2	AM	PM
without Proposed Development	130	93
with Approved Development	135	112
without Proposed Development	151	174

P5	AM	PM
without Proposed Development	67	43
with Approved Development	67	43
without Proposed Development	67	43

Legend:

123 - Peak 15-minute pedestrian two-way flow

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

Figure Title: YEAR 2033 PEAK 15-MINUTE PEDESTRIAN FLOWS

Job No.	Figure No.			Scale in A4
J7265	6.1			1 : 4,000
Designed by	Drawn by	Checked by	Revision	Date
K K Y	S C Y	K C	H	23 JUL 2204

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

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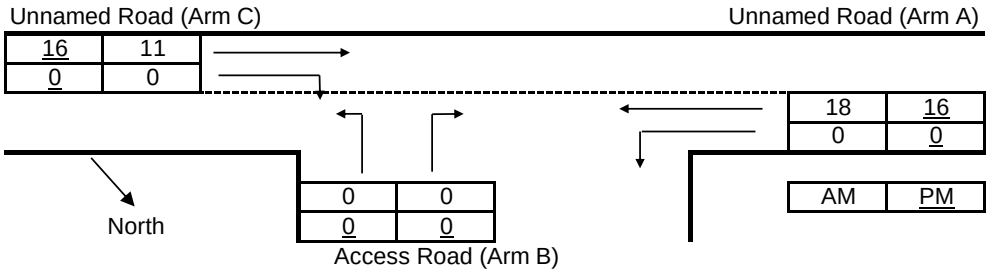
Appendix A – Junction Capacity Analysis

Priority Junction Analysis

Junction:	Unnamed Road / Access Road				
Design Year:	2023	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Existing Condition				P. 1



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	5.70	V-rBA	100	w-BA	2.05	D	0.8093
	W-CR	0.00	V-lBA	100	w-BC	2.05	E	0.8343
			V-rBC	100	w-CB	2.70	F	0.8943
			V-rCB	100			Y	0.8034

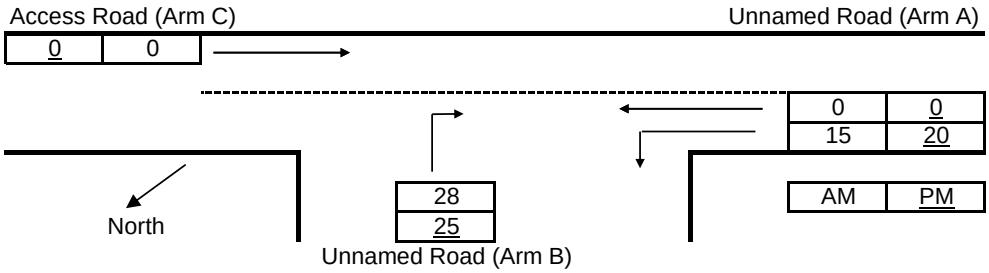
Analysis : c

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu	AM	PM
q-CA	11	16	Q-BA	502	501
q-CB	0	0	Q-BC	617	618
q-AB	0	0	Q-CB	662	662
q-AC	18	16	Q-BAC	502	501
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.000	0.000

Priority Junction Analysis

Junction:	Unnamed Road / Access Road				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Without Development				P. 2



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.90	V-rBA	60	w-BA	4.70	D	0.8093
	W-CR	0.00	V-lBA	90	w-BC	0.00	E	0.8343
			V-rBC	0.00	w-CB	0.00	F	0.8943
			V-rCB	55			Y	0.8034

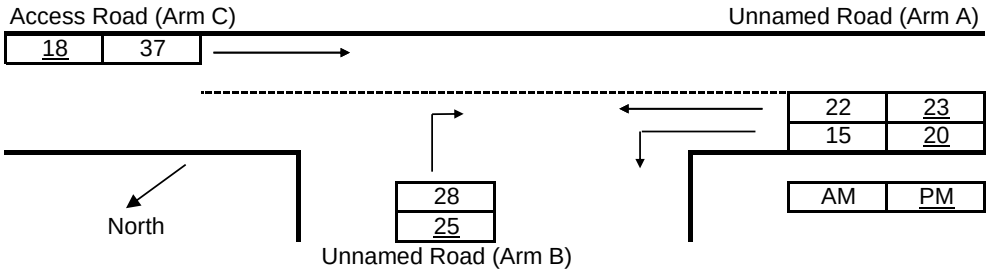
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	506	506
q-CB	0	0	Q-BC	620	620
q-AB	15	20	Q-CB	662	661
q-AC	0	0	Q-BAC	506	506
q-BA	28	25			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.055	0.049
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.055	0.049

Priority Junction Analysis

Junction:	Unnamed Road / Access Road				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Approved Scheme				P. 3



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.90	V-rBA	60	w-BA	4.70	D	0.8093
	W-CR	0.00	V-lBA	90	w-BC	0.00	E	0.8343
			V-rBC	0.00	w-CB	0.00	F	0.8943
			V-rCB	55			Y	0.8034

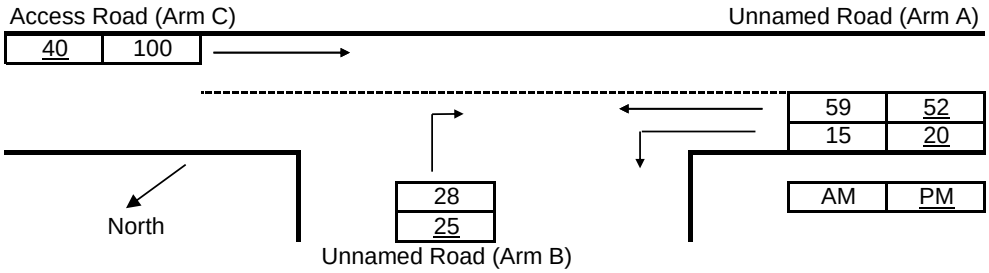
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	37	18	Q-BA	495	497
q-CB	0	0	Q-BC	615	614
q-AB	15	20	Q-CB	657	655
q-AC	22	23	Q-BAC	495	497
q-BA	28	25			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.057	0.050
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.057	0.050

Priority Junction Analysis

Junction:	Unnamed Road / Access Road				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Proposed Scheme				P. 4



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.90	V-rBA	60	w-BA	4.70	D	0.8093
	W-CR	0.00	V-lBA	90	w-BC	0.00	E	0.8343
			V-rBC	0.00	w-CB	0.00	F	0.8943
			V-rCB	55			Y	0.8034

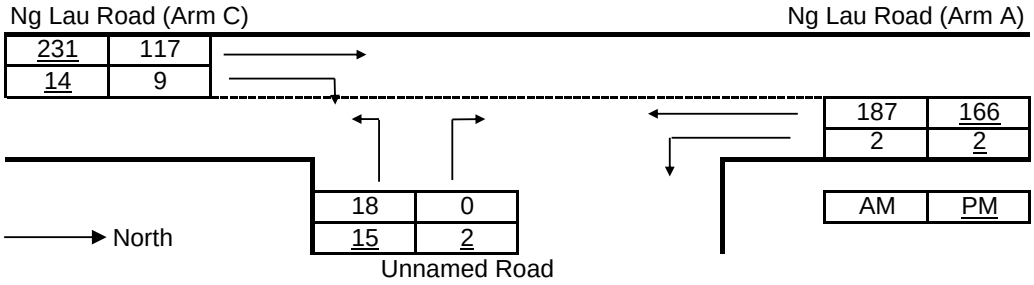
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	100	40	Q-BA	477	487
q-CB	0	0	Q-BC	606	607
q-AB	15	20	Q-CB	647	647
q-AC	59	52	Q-BAC	477	487
q-BA	28	25			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.059	0.051
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.059	0.051

Priority Junction Analysis

Junction:	Ng Lau Road / Unnamed Road				
Design Year:	2023	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Existing Condition				P. 5



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	8.65	V-rBA	30	w-BA	2.05	D	0.7574
	W-CR	0.00	V-lBA	100	w-BC	2.05	E	0.7808
			V-rBC	30	w-CB	4.70	F	1.0394
			V-rCB	60			Y	0.7016

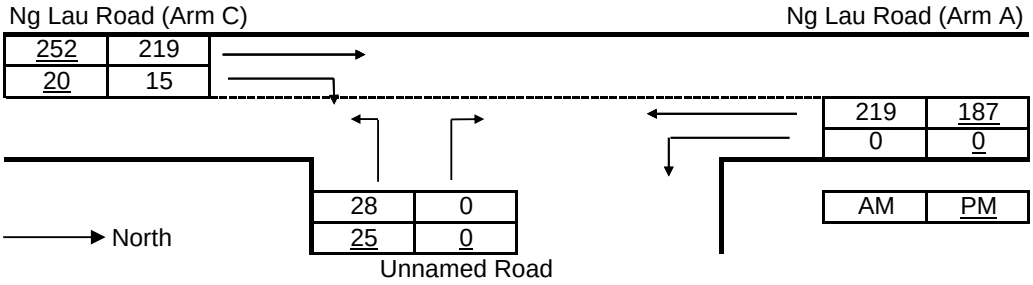
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	117	231	Q-BA	422	411
q-CB	9	14	Q-BC	544	548
q-AB	2	2	Q-CB	724	730
q-AC	187	166	Q-BAC	544	528
q-BA	0	2			
q-BC	18	15			
f	1.000	0.882			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.005
B-C	0.033	0.027
C-B	0.012	0.019
B-AC	0.033	0.032

Priority Junction Analysis

Junction:	Ng Lau Road / Unnamed Road				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Without Development				P. 6



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	7.50	V-rBA	20	w-BA	2.05	D	0.7574
	W-CR	0.00	V-lBA	90	w-BC	2.05	E	0.7808
			V-rBC	20	w-CB	4.70	F	1.0394
			V-rCB	25			Y	0.7016

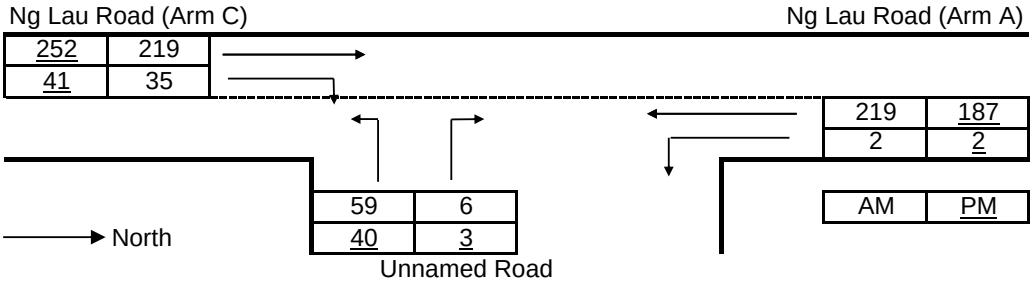
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	219	252	Q-BA	402	403
q-CB	15	20	Q-BC	538	544
q-AB	0	0	Q-CB	716	725
q-AC	219	187	Q-BAC	538	544
q-BA	0	0			
q-BC	28	25			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.052	0.046
C-B	0.021	0.028
B-AC	0.052	0.046

Priority Junction Analysis

Junction:	Ng Lau Road / Unnamed Road				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Approved Scheme				P. 7



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	7.50	V-rBA	20	w-BA	2.05	D	0.7574
	W-CR	0.00	V-lBA	90	w-BC	2.05	E	0.7808
			V-rBC	20	w-CB	4.70	F	1.0394
			V-rCB	25			Y	0.7016

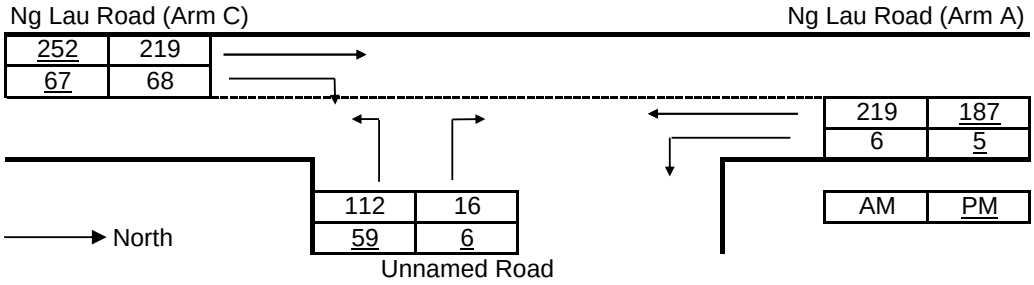
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	219	252	Q-BA	396	397
q-CB	35	41	Q-BC	538	544
q-AB	2	2	Q-CB	716	724
q-AC	219	187	Q-BAC	521	530
q-BA	6	3			
q-BC	59	40			
f	0.908	0.930			

Ratio-of-flow to Capacity	AM	PM
B-A	0.015	0.008
B-C	0.110	0.073
C-B	0.049	0.057
B-AC	0.125	0.081

Priority Junction Analysis

Junction:	Ng Lau Road / Unnamed Road				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Proposed Scheme				P. 8



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	7.50	V-rBA	20	w-BA	2.05	D	0.7574
	W-CR	0.00	V-lBA	90	w-BC	2.05	E	0.7808
			V-rBC	20	w-CB	4.70	F	1.0394
			V-rCB	25			Y	0.7016

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	219	252	Q-BA	387	389
q-CB	68	67	Q-BC	538	544
q-AB	6	5	Q-CB	715	723
q-AC	219	187	Q-BAC	513	525
q-BA	16	6			
q-BC	112	59			
f	0.875	0.908			

Ratio-of-flow to Capacity	AM	PM
B-A	0.041	0.015
B-C	0.208	0.108
C-B	0.095	0.093
B-AC	0.250	0.124

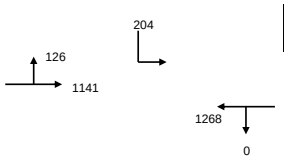
Junction: Ng Lau Road / Lam Tei Interchange Job Number: J7265

Scenario: Existing Condition P. 9

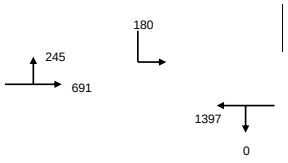
Design Year: 2023 Designed By: Checked By: Date: 24 Jul 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lam Tei Interchange EB	SA+LT	A1	1	3.65	30.0		21	1959	609	0.311	0.311	55	1927	446	0.231	
	SA	A2	1	3.65				2120	658	0.310			2120	490	0.231	
Lam Tei Interchange WB	SA+LT	A3	1	3.65	15.0		0	1980	612	0.309		0	1980	675	0.341	0.341
	SA	A4	1	3.65				2120	656	0.309			2120	722	0.341	
Ng Lau Road SB	LT	B1	2	4.00	12.0		100	1791	204	0.114	0.114	100	1791	180	0.100	0.100
pedestrian phase		$C_{(P)}$	1		min crossing time =		8	sec GM +		8	sec FGM =		16	sec		
		$D_{(P)}$	2		min crossing time =		8	sec GM +		9	sec FGM =		17	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

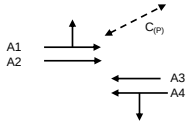
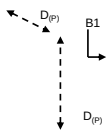


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.425		0.441	
L (s)	8		8	
C (s)	82		82	
practical y	0.812		0.812	
R.C. (%)	91%		84%	

Note:

1	2	3	4	5
				

AM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

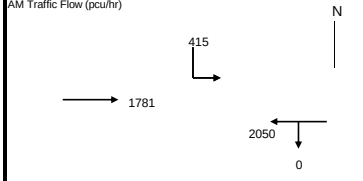
Junction: Ng Lau Road / Lam Tei Interchange Job Number: J7265

Scenario: Without Development P. 10

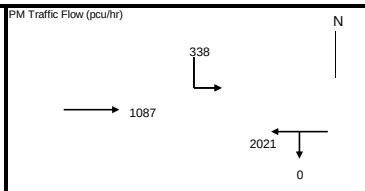
Design Year: 2033 Designed By: Checked By: Date: 24 Jul 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lam Tei Interchange EB	SA	A2	1	4.00				2155	891	0.413			2155	544	0.252	
	SA	A3	1	4.00				2155	890	0.413			2155	543	0.252	
Lam Tei Interchange WB	SA+LT	B1	1	4.00	15.0		0	2015	991	0.492	0.492	0	2015	977	0.485	0.485
	SA	B2	1	4.00				2155	1059	0.491			2155	1044	0.484	
Ng Lau Road SB	LT	C1	2	5.50	10.0		100	1883	199	0.106	0.106	100	1883	162	0.086	0.086
	LT	C2	2	5.00	15.0		100	2050	216	0.105		100	2050	176	0.086	
pedestrian phase		$D_{(P)}$	1		min crossing time =		5	sec GM +		13	sec FGM =		18	sec		
		$E_{(P)}$	2		min crossing time =		10	sec GM +		12	sec FGM =		22	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

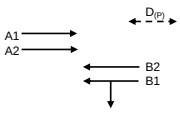
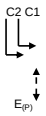


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.598		0.571	
L (s)	8		8	
C (s)	82		82	
practical y	0.812		0.812	
R.C. (%)	36%		42%	

Note:

1	2	3	4	5
				

AM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

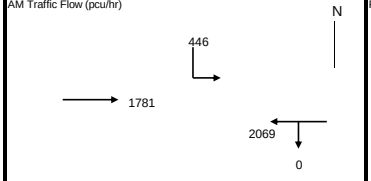
Junction: Ng Lau Road / Lam Tei Interchange Job Number: J7265

Scenario: With Approved Scheme P. 11

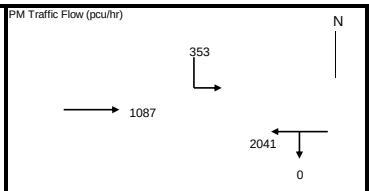
Design Year: 2033 Designed By: Checked By: Date: 24 Jul 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lam Tei Interchange EB	SA	A2	1	4.00				2155	891	0.413			2155	544	0.252	
	SA	A3	1	4.00				2155	890	0.413			2155	543	0.252	
Lam Tei Interchange WB	SA+LT	B1	1	4.00	15.0		0	2015	1000	0.496	0.496	0	2015	986	0.489	
	SA	B2	1	4.00				2155	1069	0.496			2155	1055	0.490	0.490
Ng Lau Road SB	LT	C1	2	5.50	10.0		100	1883	214	0.114	0.114	100	1883	169	0.090	0.090
	LT	C2	2	5.00	15.0		100	2050	232	0.113		100	2050	184	0.090	
pedestrian phase		$D_{(P)}$	1		min crossing time =		5	sec GM +		13	sec FGM =		18	sec		
		$E_{(P)}$	2		min crossing time =		10	sec GM +		12	sec FGM =		22	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

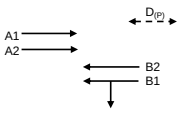


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.610		0.579	
L (s)	8		8	
C (s)	82		82	
practical y	0.812		0.812	
R.C. (%)	33%		40%	

Note:

1	2	3	4	5
				

AM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

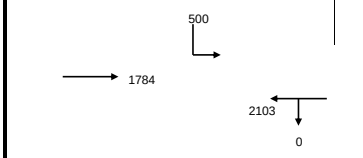
Junction: Ng Lau Road / Lam Tei Interchange Job Number: J7265

Scenario: With Proposed Scheme P. 12

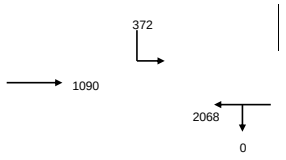
Design Year: 2033 Designed By: Checked By: Date: 24 Jul 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lam Tei Interchange EB	SA	A2	1	4.00				2155	892	0.414			2155	545	0.253	
	SA	A3	1	4.00				2155	892	0.414			2155	545	0.253	
Lam Tei Interchange WB	SA+LT	B1	1	4.00	15.0		0	2015	1016	0.504	0.504	0	2015	999	0.496	0.496
	SA	B2	1	4.00				2155	1087	0.504			2155	1069	0.496	
Ng Lau Road SB	LT	C1	2	5.50	10.0		100	1883	239	0.127	0.127	100	1883	178	0.095	0.095
	LT	C2	2	5.00	15.0		100	2050	261	0.127		100	2050	194	0.095	
pedestrian phase		$D_{(P)}$	1		min crossing time =		5	sec GM +		13	sec FGM =		18	sec		
		$E_{(P)}$	2		min crossing time =		10	sec GM +		12	sec FGM =		22	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

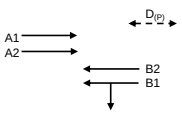
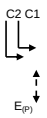


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.631		0.590	
L (s)	8		8	
C (s)	82		82	
practical y	0.812		0.812	
R.C. (%)	29%		38%	

Note:

1	2	3	4	5
				

AM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

Roundabout Analysis

Location Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario Existing Condition Page 13
Design Year 2023 Job Number J7265 Date 24 July 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c *
From A	102	110	809	248					1269	259
From B	182	0	77	22					281	1336
From C	579	42	11	30					662	666
From D	406	40	54	2					502	1026
From E										
From F										
From G										
From H										
Total	1269	192	951	302					2714	

* q_c in existing condition is adjusted due to Temporary Traffic Arrangement

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c *
From A	205	90	742	362					1399	202
From B	91	0	67	22					180	1453
From C	443	32	18	37					530	772
From D	198	26	34	2					260	879
From E										
From F										
From G										
From H										
Total	937	148	861	423					2369	

* q_c in existing condition is adjusted for TTA

Legend

Arm	Road (in clockwise order)
A	Slip Road from Lam Tei Interchange
B	Access Road from Siu Hong Station
C	Tsing Lun Road
D	Hong Po Road
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	10.0	7.3	20.0	10.0	55	45	0.4
From B	9.0	6.8	28.0	4.0	55	19	0.9
From C	11.5	7.8	100.0	9.0	55	23	0.7
From D*	6.0	4.5	27.0	6.0	55	10	0.4
From E							
From F							
From G							
From H							

* Parameter in existing condition is adjusted for TTA

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	8.748	0.607	1.311	0.948	2651	0.757	2327	2368	1269	1399	0.545	0.591
From B	7.597	0.607	1.311	1.051	2302	0.694	1445	1360	281	180	0.194	0.132
From C	9.398	0.607	1.311	1.063	2848	0.793	2467	2377	662	530	0.268	0.223
From D	5.333	0.607	1.311	1.082	1616	0.569	1117	1207	502	260	0.449	0.215
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario Without Development Page 14
Design Year 2033 Job Number J7265 Date 24 July 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	329	0	1045	555					1929	427
From B	196	0	86	20					302	2250
From C	871	50	11	121					1053	1100
From D	775	56	310	0					1141	1457
From E										
From F										
From G										
From H										
Total	2171	106	1452	696					4425	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	418	0	849	654					1921	267
From B	107	0	76	25					208	2107
From C	575	41	20	146					782	1204
From D	469	40	166	0					675	1161
From E										
From F										
From G										
From H										
Total	1569	81	1111	825					3586	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Lam Tei Interchange
B	Access Road to Siu Hong Station
C	Tsing Lun Road
D	Hong Po Road
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.8	30.0	10.0	55	20	0.5
From B	9.0	6.8	28.0	6.0	55	19	0.6
From C	11.5	7.8	100.0	9.0	55	23	0.7
From D	14.0	8.5	40.0	10.0	55	10	0.9
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	$= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$
F	$= 303x_2$
f_c	$= 0.210t_D(1+0.2x_2)$
t_D	$= 1+0.5/(1+M)$
M	$= \exp[(D-60)/10]$
x_2	$= v+(e-v)/(1+2S)$
S	$= 1.6(e-v)/L$

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.381	0.607	1.311	1.051	2842	0.792	2632	2765	1929	1921	0.733	0.695
From B	7.812	0.607	1.311	1.051	2367	0.706	819	925	302	208	0.369	0.225
From C	9.398	0.607	1.311	1.063	2848	0.793	2101	2013	1053	782	0.501	0.388
From D	10.493	0.607	1.311	1.094	3179	0.853	2118	2394	1141	675	0.539	0.282
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario With Approved Scheme Page 15
Design Year 2033 Job Number J7265 Date 24 July 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	348	0	1045	555					1948	429
From B	196	0	86	20					302	2271
From C	872	50	11	121					1054	1119
From D	775	56	312	0					1143	1477
From E										
From F										
From G										
From H										
Total	2191	106	1454	696					4447	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	438	0	849	654					1941	268
From B	107	0	76	25					208	2128
From C	576	41	20	146					783	1224
From D	469	40	167	0					676	1182
From E										
From F										
From G										
From H										
Total	1590	81	1112	825					3608	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Lam Tei Interchange
B	Access Road to Siu Hong Station
C	Tsing Lun Road
D	Hong Po Road
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.8	30.0	10.0	55	20	0.5
From B	9.0	6.8	28.0	4.0	55	19	0.9
From C	11.5	7.8	100.0	9.0	55	23	0.7
From D	14.0	8.5	40.0	10.0	55	10	0.9
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	$= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$
F	$= 303x_2$
f_c	$= 0.210t_D(1+0.2x_2)$
t_D	$= 1+0.5/(1+M)$
M	$= \exp[(D-60)/10]$
x_2	$= v+(e-v)/(1+2S)$
S	$= 1.6(e-v)/L$

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.381	0.607	1.311	1.051	2842	0.792	2630	2764	1948	1941	0.741	0.702
From B	7.597	0.607	1.311	1.051	2302	0.694	763	868	302	208	0.396	0.240
From C	9.398	0.607	1.311	1.063	2848	0.793	2085	1996	1054	783	0.506	0.392
From D	10.493	0.607	1.311	1.094	3179	0.853	2099	2375	1143	676	0.544	0.285
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario With Proposed Scheme Page 16
Design Year 2033 Job Number J7265 Date 24 July 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	379	0	1048	555					1981.5	432
From B	196	0	86	20					302	2307.5
From C	877	50	11	121					1058.5	1150
From D	775	56	315	0					1146	1512.5
From E										
From F										
From G										
From H										
Total	2226.5	106	1459.5	696					4488	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	462	0	852	654					1967.5	269
From B	107	0	76	25					208	2155.5
From C	581	41	20	146					787.5	1248
From D	469	40	168	0					677	1210.5
From E										
From F										
From G										
From H										
Total	1618.5	81	1115.5	825					3640	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Lam Tei Interchange
B	Access Road to Siu Hong Station
C	Tsing Lun Road
D	Hong Po Road
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.8	30.0	10.0	55	20	0.5
From B	9.0	6.8	28.0	4.0	55	19	0.9
From C	11.5	7.8	100.0	9.0	55	23	0.7
From D	14.0	8.5	40.0	10.0	55	10	0.9
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	$= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$
F	$= 303x_2$
f_c	$= 0.210t_D(1+0.2x_2)$
t_D	$= 1+0.5/(1+M)$
M	$= \exp[(D-60)/10]$
x_2	$= v+(e-v)/(1+2S)$
S	$= 1.6(e-v)/L$

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.381	0.607	1.311	1.051	2842	0.792	2628	2764	1982	1968	0.754	0.712
From B	7.597	0.607	1.311	1.051	2302	0.694	737	848	302	208	0.410	0.245
From C	9.398	0.607	1.311	1.063	2848	0.793	2058	1976	1059	788	0.514	0.399
From D	10.493	0.607	1.311	1.094	3179	0.853	2066	2348	1146	677	0.555	0.288
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Lam Tei Interchange
Scenario Existing Condition Page 17
Design Year 2023 Job Number J7265 Date 24 July 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	17	0	945						962	658
From B	293	4	310						607	976
From C	385	640	14						1039	314
From D										
From E										
From F										
From G										
Total	695	644	1269						2608	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	7	0	958						965	483
From B	267	0	414						681	992
From C	202	456	27						685	274
From D										
From E										
From F										
From G										
From H										
Total	476	456	1399						2331	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Castle Peak Road
B	Slip Road to Tuen Mun Road
C	Slip Road to Tsing Lun Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.3	7.3	40.0	1.0	51	22	0.0
From B	8.8	7.3	65.0	3.0	51	26	0.8
From C	7.7	6.8	100.0	8.0	51	17	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.300	0.407	1.355	1.052	2212	0.700	1843	1972	962	965	0.522	0.489
From B	7.877	0.407	1.355	1.048	2387	0.733	1751	1739	607	681	0.347	0.392
From C	7.438	0.407	1.355	1.084	2254	0.708	2203	2233	1039	685	0.472	0.307
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Lam Tei Interchange
Scenario Without Development Page 18
Design Year 2033 Job Number J7265 Date 24 July 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	18	0	1229						1247	1045
From B	323	0	809						1132	1259
From C	704	1033	12						1749	341
From D										
From E										
From F										
From G										
From H										
Total	1045	1033	2050						4128	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	15	0	1203						1218	735
From B	283	0	791						1074	1244
From C	410	709	26						1145	298
From D										
From E										
From F										
From G										
From H										
Total	708	709	2020						3437	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Castle Peak Road
B	Slip Road to Tuen Mun Road
C	Slip Road to Tsing Lun Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.3	7.3	40.0	1.0	51	22	0.0
From B	8.8	7.3	65.0	3.0	51	26	0.8
From C	7.7	6.8	100.0	8.0	51	17	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.300	0.407	1.355	1.052	2212	0.700	1557	1786	1247	1218	0.801	0.682
From B	7.877	0.407	1.355	1.048	2387	0.733	1534	1545	1132	1074	0.738	0.695
From C	7.438	0.407	1.355	1.084	2254	0.708	2182	2215	1749	1145	0.802	0.517
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Lam Tei Interchange
Scenario With Approved Scheme Page 19
Design Year 2033 Job Number J7265 Date 24 July 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	18	0	1240						1258	1058
From B	323	0	817						1140	1270
From C	714	1046	12						1772	341
From D										
From E										
From F										
From G										
From H										
Total	1055	1046	2069						4170	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	15	0	1215						1230	741
From B	283	0	799						1082	1256
From C	415	715	26						1155.768	298
From D										
From E										
From F										
From G										
From H										
Total	713	715	2040						3467.768	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Castle Peak Road
B	Slip Road to Tuen Mun Road
C	Slip Road to Tsing Lun Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.3	7.3	40.0	1.0	51	22	0.0
From B	8.8	7.3	65.0	3.0	51	26	0.8
From C	7.7	6.8	100.0	8.0	51	17	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.300	0.407	1.355	1.052	2212	0.700	1548	1781	1258	1230	0.813	0.690
From B	7.877	0.407	1.355	1.048	2387	0.733	1525	1536	1140	1082	0.747	0.704
From C	7.438	0.407	1.355	1.084	2254	0.708	2182	2215	1772	1156	0.812	0.522
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Lam Tei Interchange
Scenario With Proposed Scheme Page 20
Design Year 2033 Job Number J7265 Date 24 July 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	18	0	1261						1278.5	1080
From B	323	0	830						1153	1290.5
From C	733	1068	12						1813	341
From D										
From E										
From F										
From G										
From H										
Total	1073.853	1068	2102.5						4244	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	15	0	1298						1312.5	783
From B	283	0	843						1126	1338.5
From C	422	757	26						1205	298
From D										
From E										
From F										
From G										
From H										
Total	720	757	2166.5						3644	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Castle Peak Road
B	Slip Road to Tuen Mun Road
C	Slip Road to Tsing Lun Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.3	7.3	40.0	1.0	51	22	0.0
From B	8.8	7.3	65.0	3.0	51	26	0.8
From C	7.7	6.8	100.0	8.0	51	17	0.2
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.300	0.407	1.355	1.052	2212	0.700	1532	1750	1279	1313	0.835	0.750
From B	7.877	0.407	1.355	1.048	2387	0.733	1509	1473	1153	1126	0.764	0.765
From C	7.438	0.407	1.355	1.084	2254	0.708	2182	2215	1813	1205	0.831	0.544
From D												
From E												
From F												
From G												
From H												

Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei Job Number: J7265

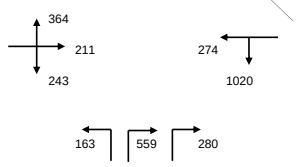
Scenario: Existing Condition P. 21

Design Year: 2023 Designed By: Checked By: Date: 24 Jul 2024

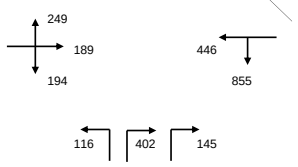
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road -Lam Tei SB LT	A1	1,4	3.25	80.0		100	1904	364	0.191	0.191	100	1904	249	0.131	0.131
SA	A2	1,4	3.25				2080	157	0.075			2080	132	0.063	
SA+RT	A3	1	3.25	22.5		64	1995	151	0.076		55	2006	128	0.064	
RT	A4	1	3.25	20.0		100	1935	146	0.075		100	1935	123	0.064	
Slip Road from Lam Tei Interchange LT	B1	2,3	3.50	8.0		100	1655	163	0.099		100	1655	116	0.070	
LT+RT	B2	2,3	3.50	30.0		100	2005	281	0.140		100	2005	202	0.101	
RT	B3	2,3	3.50	26.0		100	1990	278	0.140	0.140	100	1990	200	0.100	0.100
RT	B4	2,3	3.50	23.0		100	1976	280	0.142		100	1976	145	0.073	
Castle Peak Road NB LT	C1	3,4	3.50	14.0		100	1775	486	0.274		100	1775	407	0.229	
LT	C2	3,4	3.50	19.0		100	1951	534	0.274		100	1951	448	0.230	
SA	D1	4	3.50				2105	137	0.065			2105	223	0.106	
SA	D2	4	3.50				2105	137	0.065			2105	223	0.106	

pedestrian phase	$E_{(P)}$	1,3		min crossing time =	6	sec GM +	12	sec FGM =	18	sec	
	$F_{(P)}$	1		min crossing time =	5	sec GM +	7	sec FGM =	12	sec	
	$G_{(P)}$	2		min crossing time =	6	sec GM +	11	sec FGM =	17	sec	
	$H_{(P)}$	2		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



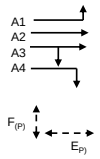
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1,4+2,3		PM Peak 1,4+2,3	
Sum y	0.331		0.231	
L (s)	21		21	
C (s)	110		110	
practical y	0.728		0.728	
R.C. (%)	120%		215%	

Note:

1



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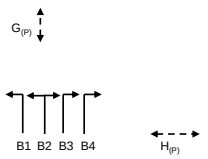

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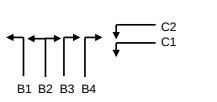

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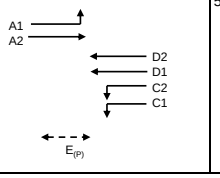


5

AM	G =	I/G = 15	G =	I/G =	G =	I/G = 8	G =	I/G =	G =		
	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =		
PM	G =	I/G = 15	G =	I/G =	G =	I/G = 8	G =	I/G =	G =		
	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =		

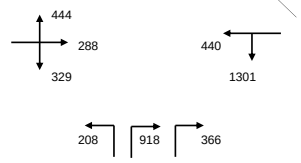
Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei Job Number: J7265

Scenario: Without Development P. 22

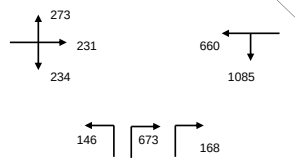
Design Year: 2033 Designed By: Checked By: Date: 24 Jul 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road SB	LT	A1	1,4	3.50	80.0		100	1929	444	0.230		100	1929	273	0.142	
	SA+RT	A2	1	3.50	30.0		0	2105	288	0.137	0.137	0	2105	231	0.110	0.110
	RT	A3	1	3.50	25.0		100	1986	166	0.084		100	1986	118	0.059	
	RT	A4	1	3.50	20.0		100	1958	163	0.083		100	1958	116	0.059	
Slip Road from	LT+(To YL Hwy)RT	B2	2,3	3.50	30.0		100	2105	579	0.275		100	2005	401	0.200	0.200
Lam Tei Interchange	(To YL Hwy) RT	B3	2,3	3.50	25.0		100	1986	547	0.275		100	2086	418	0.200	
	(To CPR) RT	B4	2,3	3.50	20.0		100	1958	366	0.187		100	1958	168	0.086	
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	620	0.349	0.349	100	1775	517	0.291	
	LT	C2	3,4	3.50	19.0		100	1951	681	0.349		100	1951	568	0.291	
	SA	D1	4	3.50				2105	220	0.105			2105	330	0.157	0.157
	SA	D2	4	3.50				2105	220	0.105			2105	330	0.157	
pedestrian phase		$D_{(P)}$	1		min crossing time =		6	sec GM +		12	sec FGM =		18	sec		
		$E_{(P)}$	1,4		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		$F_{(P)}$	2		min crossing time =		6	sec GM +		11	sec FGM =		17	sec		
		$G_{(P)}$	2,3		min crossing time =		5	sec GM +		9	sec FGM =		14	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



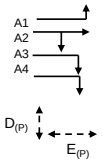
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak		PM Peak	
	1+3,4		1 + 2,3 + 4	
Sum y	0.486		0.467	
L (s)	38		26	
C (s)	110		110	
practical y	0.589		0.687	
R.C. (%)	21%		47%	

Note:

1



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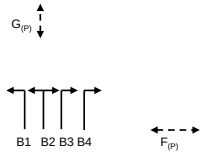

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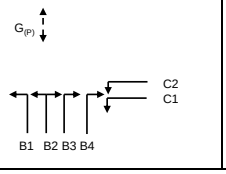

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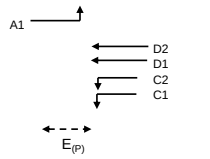


5

AM	G =	I/G = 15	G = 7	I/G = 11	G =	I/G =	G =	I/G = 7	G =							
	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =							
AM	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =							
	G =	I/G = 15	G = 7	I/G = 11	G =	I/G =	G =	I/G = 7	G =							

Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei Job Number: J7265

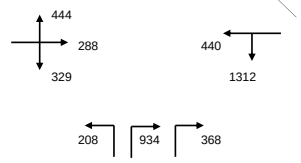
Scenario: With Approved Scheme P. 23

Design Year: 2033 Designed By: Checked By: Date: 24 Jul 2024

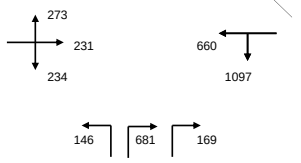
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road SB	LT	A1	1,4	3.50	80.0		100	1929	444	0.230		100	1929	273	0.142	
	SA+RT	A2	1	4.00	85.0		0	2155	288	0.134	0.134	0	2155	231	0.107	0.107
	RT	A3	1	3.50	25.0		100	1986	166	0.084		100	1986	118	0.059	
	RT	A4	1	3.50	20.0		100	1958	163	0.083		100	1958	116	0.059	
Slip Road from	LT+(To YL Hwy)RT	B2	2,3	3.50	30.0		100	2105	588	0.279		100	2005	405	0.202	0.202
Lam Tei Interchange	(To YL Hwy) RT	B3	2,3	3.50	25.0		100	1986	554	0.279		100	2086	422	0.202	
	(To CPR) RT	B4	2,3	3.50	20.0		100	1958	368	0.188		100	1958	169	0.086	
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	625	0.352	0.352	100	1775	523	0.295	
	LT	C2	3,4	3.50	19.0		100	1951	687	0.352		100	1951	574	0.294	
	SA	D1	4	3.50				2105	220	0.105			2105	330	0.157	0.157
	SA	D2	4	3.50				2105	220	0.105			2105	330	0.157	

pedestrian phase	$E_{(P)}$	1		min crossing time =	6	sec GM +	12	sec FGM =	18	sec
	$F_{(P)}$	1,4		min crossing time =	5	sec GM +	7	sec FGM =	12	sec
	$G_{(P)}$	2		min crossing time =	6	sec GM +	11	sec FGM =	17	sec
	$H_{(P)}$	2,3		min crossing time =	5	sec GM +	9	sec FGM =	14	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



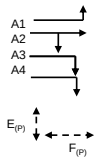
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+3,4		PM Peak 1 + 2,3 + 4	
Sum y	0.486		0.466	
L (s)	38		26	
C (s)	110		110	
practical y	0.589		0.687	
R.C. (%)	21%		47%	

Note:

1



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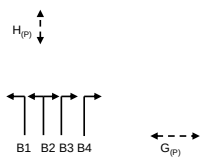

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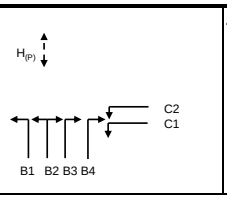

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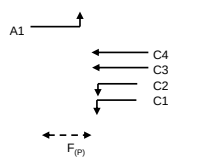


5

AM	G =		I/G = 15	G = 7		I/G = 11	G =		I/G =	G =		I/G = 7	G =			
	G =		I/G = 15	G =		I/G =	G =		I/G = 7	G =		I/G = 7	G =			
AM	G =		I/G = 15	G =		I/G =	G =		I/G = 7	G =		I/G = 7	G =			
	G =		I/G = 15	G = 7		I/G = 11	G =		I/G =	G =		I/G = 7	G =			

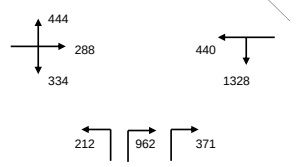
Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei Job Number: J7265

Scenario: With Proposed Scheme P. 24

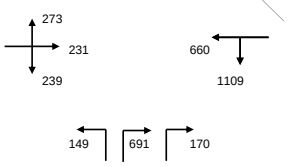
Design Year: 2033 Designed By: Checked By: Date: 24 Jul 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Sat. Flow (pcu/hr)	AM Flow (pcu/hr)	AM y value	AM Critical y	PM Peak Turning %	PM Sat. Flow (pcu/hr)	PM Flow (pcu/hr)	PM y value	PM Critical y
Castle Peak Road SB	LT	A1	1,4	3.50	80.0		100	1929	444	0.230		100	1929	273	0.142	
	SA+RT	A2	1	4.00	85.0		0	2155	288	0.134	0.134	0	2155	231	0.107	0.107
	RT	A3	1	3.50	25.0		100	1986	168	0.085		100	1986	120	0.060	
	RT	A4	1	3.50	20.0		100	1958	166	0.085		100	1958	119	0.061	
Slip Road from	LT+(To YL Hwy)RT	B2	2,3	3.50	30.0		100	2105	604	0.287		100	2005	411	0.205	0.205
Lam Tei Interchange	(To YL Hwy) RT	B3	2,3	3.50	25.0		100	1986	570	0.287		100	2086	429	0.205	
	(To CPR) RT	B4	2,3	3.50	20.0		100	1958	371	0.189		100	1958	170	0.087	
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	633	0.357	0.357	100	1775	528	0.297	
	LT	C2	3,4	3.50	19.0		100	1951	695	0.356		100	1951	581	0.298	
	SA	D1	4	3.50				2105	220	0.105			2105	330	0.157	0.157
	SA	D2	4	3.50				2105	220	0.105			2105	330	0.157	
pedestrian phase		$E_{(P)}$	1		min crossing time =		6	sec GM +		12	sec FGM =		18	sec		
		$F_{(P)}$	1,4		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		$G_{(P)}$	2		min crossing time =		6	sec GM +		11	sec FGM =		17	sec		
		$H_{(P)}$	2,3		min crossing time =		5	sec GM +		9	sec FGM =		14	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



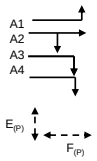
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

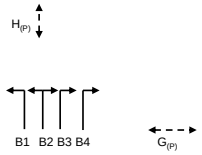
	AM Peak 1+3,4		PM Peak 1 + 2,3 + 4	
Sum y	0.490		0.469	
L (s)	38		26	
C (s)	110		110	
practical y	0.589		0.687	
R.C. (%)	20%		47%	

Note:

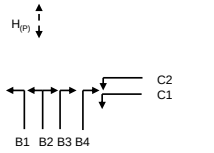
1



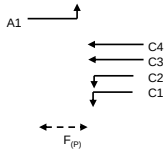
2



3



4



5

AM	G =	I/G = 15	G = 7	I/G = 11	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =									
	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =											
AM	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =											
	G =	I/G = 15	G = 7	I/G = 11	G =	I/G =	G =	I/G = 7	G =											

Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

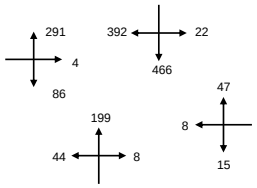
Scenario: Existing Condition — P. 25

Design Year: 2023 — Designed By: — Checked By: — Date: 24 Jul 2024

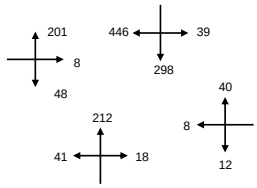
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tsing Lun Road SB	LT+SA	A1	1	3.65	13.0		5	1969	488	0.248	0.248	12	1953	337	0.173	
	RT	A2	1	3.65	15.0		100	1927	392	0.203		100	2120	446	0.210	0.210
Tsing Lun Road NB	LT+SA	C1	2	3.30	23.0		38	1898	116	0.061	0.061	34	1903	120	0.063	0.063
	SA	C2	2	3.40				2095	127	0.061			2095	133	0.063	
	RT	C3	2	3.40	15.0		100	1905	8	0.004		100	1905	18	0.009	
Access Road to Siu Hong Court WB	LT+SA+RT	D1	3	3.50	15.0		89	1804	70	0.039	0.039	87	1808	60	0.033	0.033
Tsz Tin Road EB	LT	B1	4	3.38	10.0		100	1698	180	0.106	0.106	100	1698	115	0.068	0.068
	LT+SA+RT	B2	4	3.37	15.0		98	1905	201	0.105		94	2092	142	0.068	

pedestrian phase	$E_{(P)}$	2		min crossing time =	5	sec GM +	10	sec FGM =	15	sec
	$F_{(P)}$	3		min crossing time =	5	sec GM +	6	sec FGM =	11	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

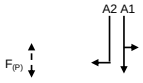
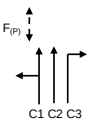
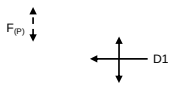
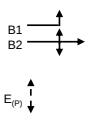


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2+3+4		PM Peak 1+2+3+4	
Sum y	0.454		0.374	
L (s)	24		24	
C (s)	118		118	
practical y	0.717		0.717	
R.C. (%)	58%		92%	

Note:

1	2	3	4	5
				
AM G = I/G = 6	G = I/G = 6	G = I/G = 9	G = I/G = 7	G =
G = I/G = 6	G = I/G = 6	G = I/G = 9	G = 14 I/G = 7	G =
PM G = I/G = 6	G = I/G = 6	G = I/G = 9	G = I/G = 7	G =
G = I/G = 6	G = I/G = 6	G = I/G = 9	G = 14 I/G = 7	G =

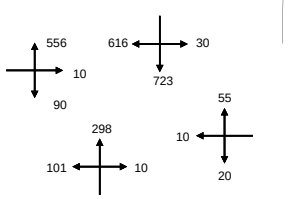
Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

Scenario: Without Development — P. 26

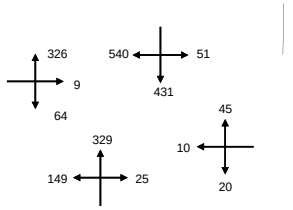
Design Year: 2033 — Designed By: — Checked By: — Date: 24 Jul 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tsing Lun Road SB	LT+SA	A1	1	3.65	13.0		4	1971	753	0.382	0.382	11	1955	482	0.247	
	RT	A2	1	3.65	15.0		100	1927	616	0.320		100	2120	540	0.255	0.255
Tsing Lun Road NB	LT+SA	C1	2	3.30	23.0		53	1880	189	0.101	0.101	66	1865	225	0.121	0.121
	SA	C2	2	3.40				2095	210	0.100			2095	253	0.121	
	RT	C3	2	3.40	15.0		100	1905	10	0.005		100	1905	25	0.013	
Access Road to Siu Hong Court WB	LT+SA+RT	D1	3	3.50	15.0		88	1806	85	0.047	0.047	87	1808	75	0.041	0.041
Tsz Tin Road EB	LT	B1	4,1	3.38	10.0		100	1698	556	0.327		100	1698	326	0.192	
	SA+RT	B2	4	3.37	15.0		90	1919	100	0.052	0.052	88	1923	73	0.038	0.038
pedestrian phase		$E_{(P)}$	2		min crossing time =		5	sec GM +		10	sec FGM =		15	sec		
		$F_{(P)}$	3		min crossing time =		5	sec GM +		6	sec FGM =		11	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



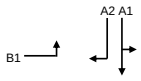
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

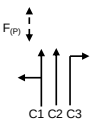
	AM Peak 1+2+3+4		PM Peak 1+2+3+4	
Sum y	0.582		0.455	
L (s)	24		24	
C (s)	118		118	
practical y	0.717		0.717	
R.C. (%)	23%		58%	

Note:

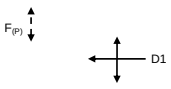
1



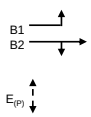
2



3



4



5

AM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =	
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =	
PM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =	
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =	

Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

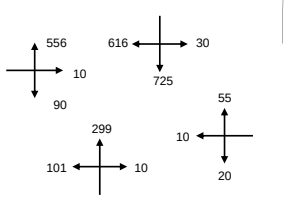
Scenario: With Approved Scheme — P. 27

Design Year: 2033 — Designed By: — Checked By: — Date: 24 Jul 2024

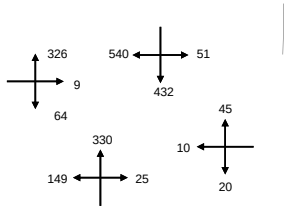
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tsing Lun Road SB LT+SA	A1	1	3.65	13.0		4	1971	755	0.383	0.383	11	1955	483	0.247	
RT	A2	1	3.65	15.0		100	1927	616	0.320		100	2120	540	0.255	0.255
Tsing Lun Road NB LT+SA	C1	2	3.30	23.0		53	1880	189	0.101	0.101	66	1865	226	0.121	0.121
SA	C2	2	3.40				2095	211	0.101			2095	253	0.121	
RT	C3	2	3.40	15.0		100	1905	10	0.005		100	1905	25	0.013	
Access Road to Siu Hong Court WB LT+SA+RT	D1	3	3.50	15.0		88	1806	85	0.047	0.047	87	1808	75	0.041	0.041
Tsz Tin Road EB LT	B1	4,1	3.38	10.0		100	1698	556	0.327		100	1698	326	0.192	
SA+RT	B2	4	3.37	15.0		90	1919	100	0.052	0.052	88	1923	73	0.038	0.038

pedestrian phase	$E_{(P)}$	2		min crossing time =	5	sec GM +	10	sec FGM =	15	sec			
	$F_{(P)}$	3		min crossing time =	5	sec GM +	6	sec FGM =	11	sec			

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



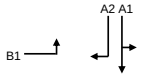
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

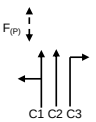
	AM Peak 1+2+3+4		PM Peak 1+2+3+4	
Sum y	0.583		0.455	
L (s)	24		24	
C (s)	118		118	
practical y	0.717		0.717	
R.C. (%)	23%		57%	

Note:

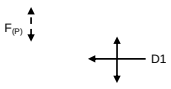
1



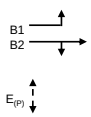
2



3



4



5

AM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =	
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =	
PM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =	
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =	

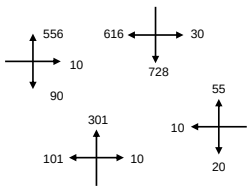
Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

Scenario: With Proposed Scheme — P. 28

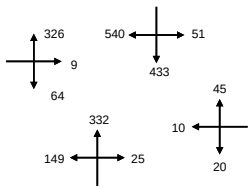
Design Year: 2033 — Designed By: — Checked By: — Date: 24 Jul 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tsing Lun Road SB	LT+SA	A1	1	3.65	13.0		4	1971	758	0.385	0.385	11	1955	484	0.248	
	RT	A2	1	3.65	15.0		100	1927	616	0.320		100	2120	540	0.255	0.255
Tsing Lun Road NB	LT+SA	C1	2	3.30	23.0		53	1880	190	0.101	0.101	66	1865	227	0.122	0.122
	SA	C2	2	3.40				2095	212	0.101			2095	254	0.121	
	RT	C3	2	3.40	15.0		100	1905	10	0.005		100	1905	25	0.013	
Access Road to	LT+SA+RT	D1	3	3.50	15.0		88	1806	85	0.047	0.047	87	1808	75	0.041	0.041
Siu Hong Court WB																
Tsz Tin Road EB	LT	B1	4,1	3.38	10.0		100	1698	556	0.327		100	1698	326	0.192	
	SA+RT	B2	4	3.37	15.0		90	1919	100	0.052	0.052	88	1923	73	0.038	0.038
pedestrian phase		$E_{(P)}$	2		min crossing time =		5	sec GM +		10	sec FGM =		15	sec		
		$F_{(P)}$	3		min crossing time =		5	sec GM +		6	sec FGM =		11	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



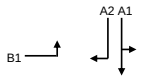
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

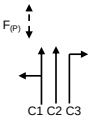
	AM Peak 1+2+3+4		PM Peak 1+2+3+4	
Sum y	0.585		0.456	
L (s)	24		24	
C (s)	118		118	
practical y	0.717		0.717	
R.C. (%)	23%		57%	

Note:

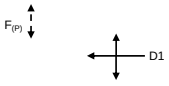
1



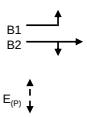
2



3



4

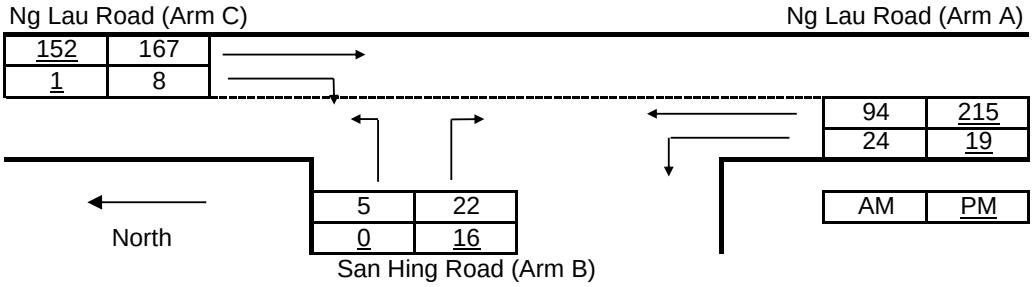


5

AM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =
PM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Southern)				
Design Year:	2023	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Existing Condition				P. 29



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.65	V-rBA	23	w-BA	2.40	D	0.7441
	W-CR	0.00	V-lBA	23	w-BC	2.40	E	0.8078
			V-rBC	26	w-CB	3.00	F	0.8857
			V-rCB	57			Y	0.7706

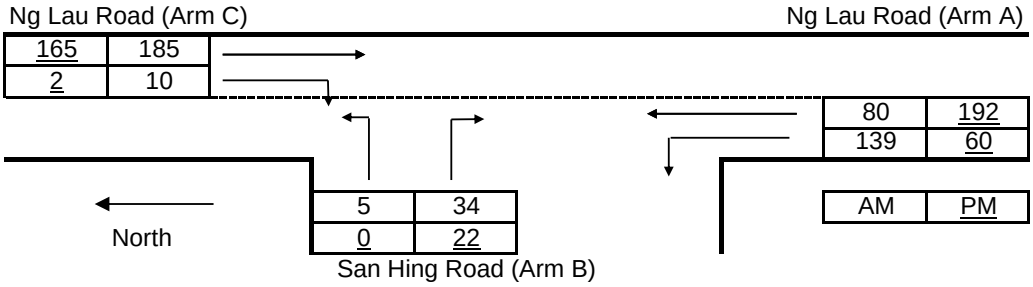
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	167	152	Q-BA	421	400
q-CB	8	1	Q-BC	578	551
q-AB	24	19	Q-CB	631	602
q-AC	94	215	Q-BAC	443	400
q-BA	22	16			
q-BC	5	0			
f	0.185	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.052	0.040
B-C	0.009	0.000
C-B	0.013	0.002
B-AC	0.061	0.040

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Southern)				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Without Development				P. 30



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.65	V-rBA	23	w-BA	2.40	D	0.7441
	W-CR	0.00	V-lBA	23	w-BC	2.40	E	0.8078
			V-rBC	26	w-CB	3.00	F	0.8857
			V-rCB	57			Y	0.7706

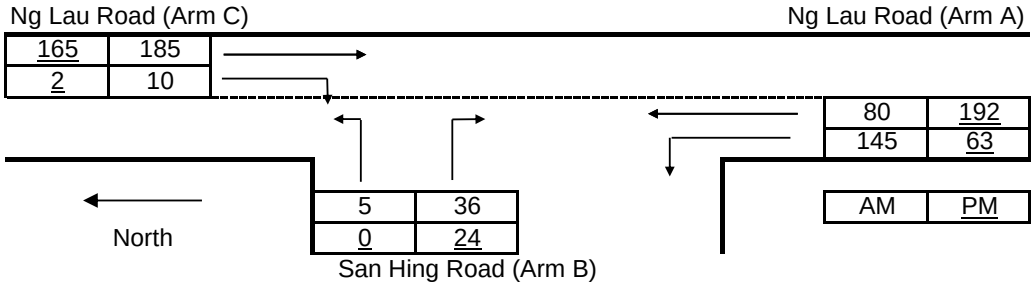
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	185	165	Q-BA	411	399
q-CB	10	2	Q-BC	571	553
q-AB	139	60	Q-CB	605	597
q-AC	80	192	Q-BAC	426	399
q-BA	34	22			
q-BC	5	0			
f	0.128	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.083	0.055
B-C	0.009	0.000
C-B	0.017	0.003
B-AC	0.091	0.055

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Southern)				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Approved Scheme				P. 31



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.65	V-rBA	23	w-BA	2.40	D	0.7441
	W-CR	0.00	V-lBA	23	w-BC	2.40	E	0.8078
			V-rBC	26	w-CB	3.00	F	0.8857
			V-rCB	57			Y	0.7706

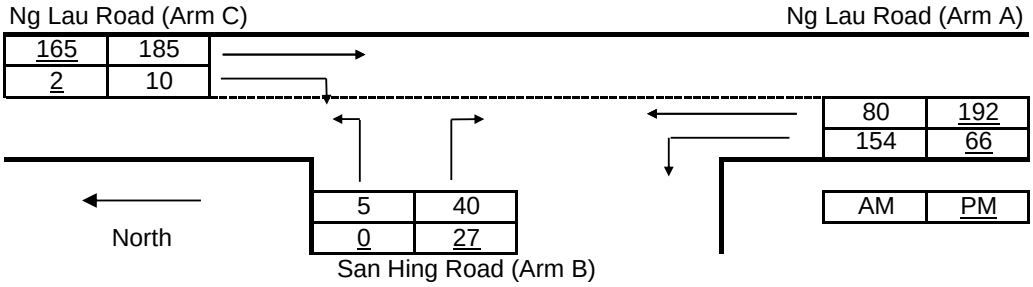
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	185	165	Q-BA	411	399
q-CB	10	2	Q-BC	571	553
q-AB	145	63	Q-CB	604	596
q-AC	80	192	Q-BAC	425	399
q-BA	36	24			
q-BC	5	0			
f	0.122	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.088	0.060
B-C	0.009	0.000
C-B	0.017	0.003
B-AC	0.096	0.060

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Southern)				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Proposed Scheme				P. 32



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.65	V-rBA	23	w-BA	2.40	D	0.7441
	W-CR	0.00	V-lBA	23	w-BC	2.40	E	0.8078
			V-rBC	26	w-CB	3.00	F	0.8857
			V-rCB	57			Y	0.7706

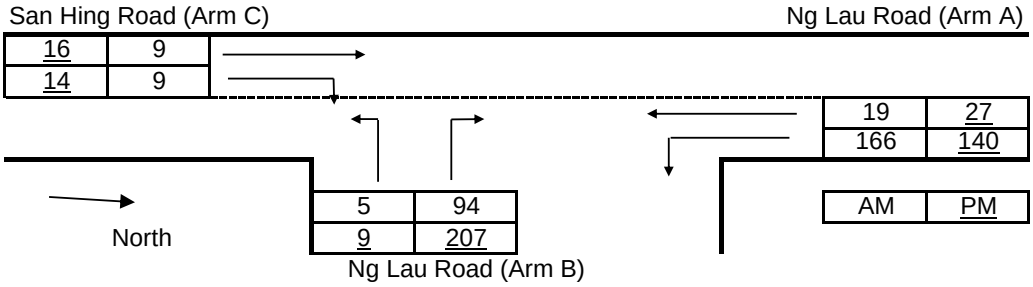
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	185	165	Q-BA	410	399
q-CB	10	2	Q-BC	570	552
q-AB	154	66	Q-CB	602	596
q-AC	80	192	Q-BAC	423	399
q-BA	40	27			
q-BC	5	0			
f	0.111	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.098	0.068
B-C	0.009	0.000
C-B	0.017	0.003
B-AC	0.106	0.068

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Northern)				
Design Year:	2023	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Existing Condition				P. 33



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.63	V-rBA	45	w-BA	1.90	D	0.7207
	W-CR	0.00	V-lBA	25	w-BC	1.90	E	0.7768
			V-rBC	42	w-CB	3.50	F	0.9344
			V-rCB	62			Y	0.7714

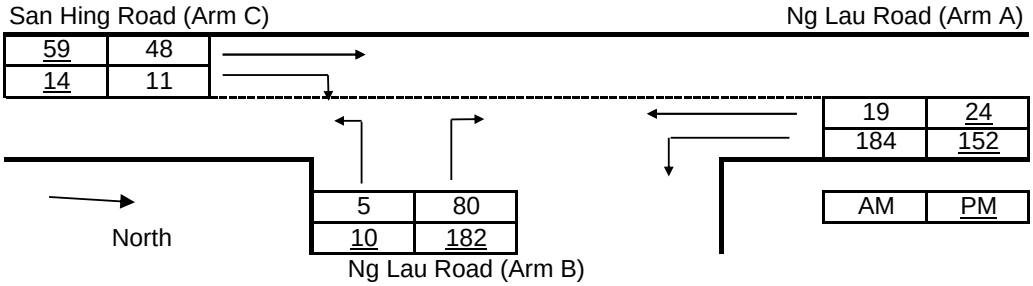
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	9	16	Q-BA	431	429
q-CB	9	14	Q-BC	560	561
q-AB	166	140	Q-CB	648	652
q-AC	19	27	Q-BAC	436	433
q-BA	94	207			
q-BC	5	9			
f	0.051	0.042			

Ratio-of-flow to Capacity	AM	PM
B-A	0.218	0.482
B-C	0.009	0.016
C-B	0.014	0.021
B-AC	0.227	0.498

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Northern)				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Without Development				P. 34



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.63	V-rBA	45	w-BA	1.90	D	0.7207
	W-CR	0.00	V-lBA	25	w-BC	1.90	E	0.7768
			V-rBC	42	w-CB	3.50	F	0.9344
			V-rCB	62			Y	0.7714

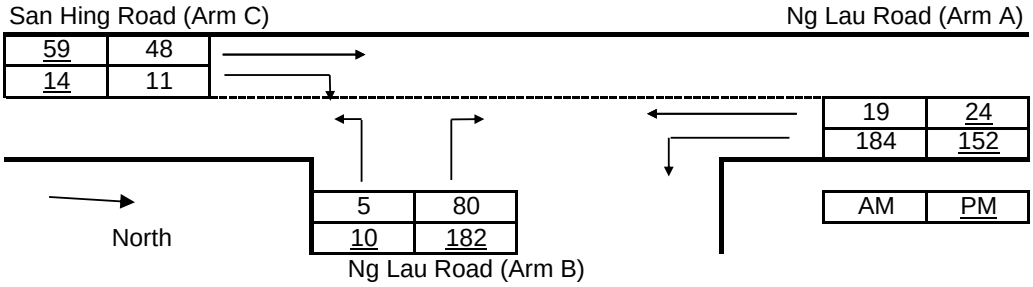
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	48	59	Q-BA	424	423
q-CB	11	14	Q-BC	559	560
q-AB	184	152	Q-CB	643	650
q-AC	19	24	Q-BAC	430	429
q-BA	80	182			
q-BC	5	10			
f	0.059	0.052			

Ratio-of-flow to Capacity	AM	PM
B-A	0.189	0.430
B-C	0.009	0.018
C-B	0.017	0.022
B-AC	0.198	0.448

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Northern)				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Approved Scheme				P. 35



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.63	V-rBA	45	w-BA	1.90	D	0.7207
	W-CR	0.00	V-lBA	25	w-BC	1.90	E	0.7768
			V-rBC	42	w-CB	3.50	F	0.9344
			V-rCB	62			Y	0.7714

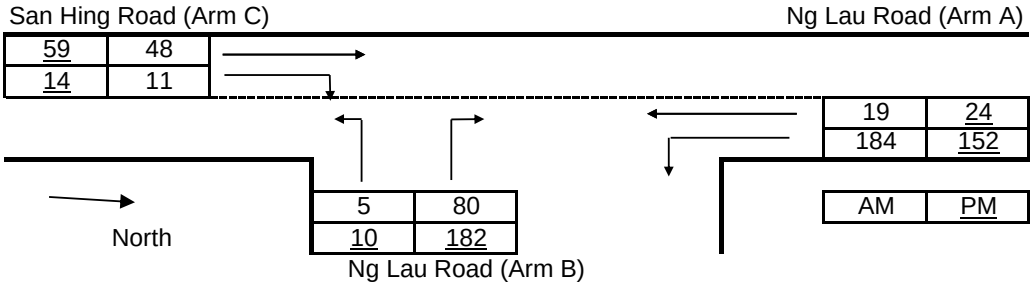
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	48	59	Q-BA	424	423
q-CB	11	14	Q-BC	559	560
q-AB	184	152	Q-CB	643	650
q-AC	19	24	Q-BAC	430	429
q-BA	80	182			
q-BC	5	10			
f	0.059	0.052			

Ratio-of-flow to Capacity	AM	PM
B-A	0.189	0.430
B-C	0.009	0.018
C-B	0.017	0.022
B-AC	0.198	0.448

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Northern)				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Proposed Scheme				P. 36



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.63	V-rBA	45	w-BA	1.90	D	0.7207
	W-CR	0.00	V-lBA	25	w-BC	1.90	E	0.7768
			V-rBC	42	w-CB	3.50	F	0.9344
			V-rCB	62			Y	0.7714

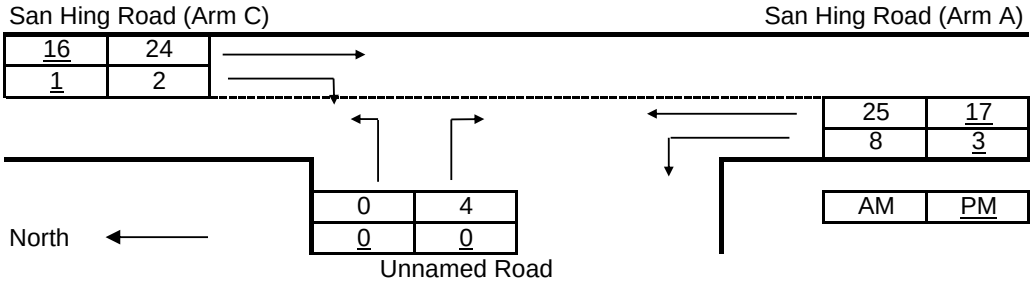
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	48	59	Q-BA	424	423
q-CB	11	14	Q-BC	559	560
q-AB	184	152	Q-CB	643	650
q-AC	19	24	Q-BAC	430	429
q-BA	80	182			
q-BC	5	10			
f	0.059	0.052			

Ratio-of-flow to Capacity	AM	PM
B-A	0.189	0.430
B-C	0.009	0.018
C-B	0.017	0.022
B-AC	0.198	0.448

Priority Junction Analysis

Junction:	T-junction of San Hing Road				
Design Year:	2023	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Existing Condition				P. 37



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.00	V-rBA	25	w-BA	2.50	D	0.7912
	W-CR	0.00	V-lBA	100	w-BC	2.50	E	0.8156
			V-rBC	25	w-CB	3.00	F	0.8586
			V-rCB	25			Y	0.7930

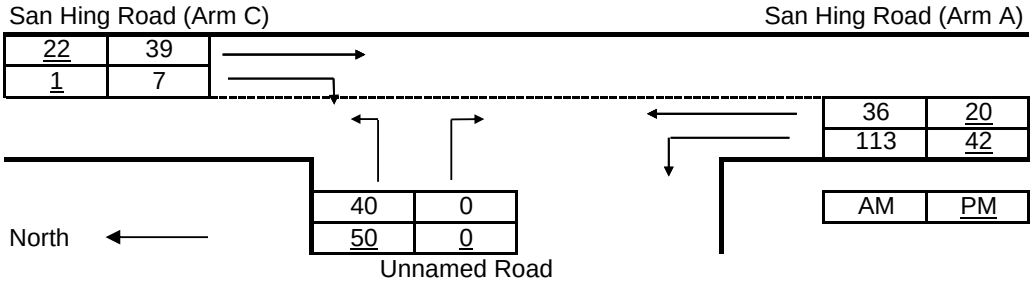
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	24	16	Q-BA	486	489
q-CB	2	1	Q-BC	601	603
q-AB	8	3	Q-CB	631	635
q-AC	25	17	Q-BAC	486	489
q-BA	4	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.008	0.000
B-C	0.000	0.000
C-B	0.003	0.002
B-AC	0.008	0.000

Priority Junction Analysis

Junction:	T-junction of San Hing Road				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Without Development				P. 38



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.00	V-rBA	45	w-BA	4.00	D	0.9343
	W-CR	0.00	V-lBA	100	w-BC	4.00	E	0.9632
			V-rBC	45	w-CB	3.00	F	0.8586
			V-rCB	25			Y	0.7930

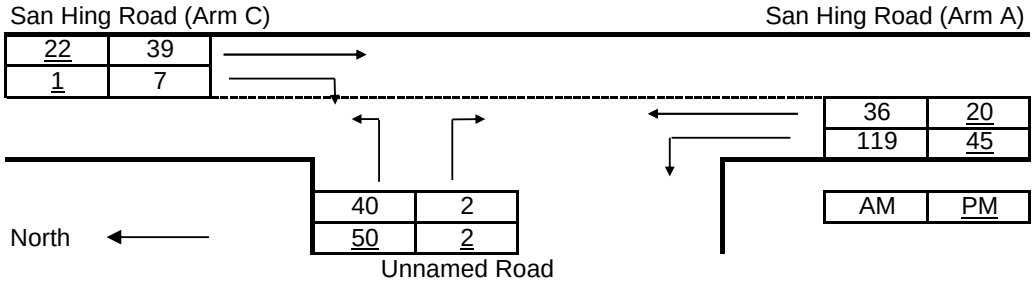
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	39	22	Q-BA	555	572
q-CB	7	1	Q-BC	695	707
q-AB	113	42	Q-CB	603	624
q-AC	36	20	Q-BAC	695	707
q-BA	0	0			
q-BC	40	50			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.058	0.071
C-B	0.012	0.002
B-AC	0.058	0.071

Priority Junction Analysis

Junction:	T-junction of San Hing Road				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Approved Scheme				P. 39



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.00	V-rBA	45	w-BA	4.00	D	0.9343
	W-CR	0.00	V-lBA	100	w-BC	4.00	E	0.9632
			V-rBC	45	w-CB	3.00	F	0.8586
			V-rCB	25			Y	0.7930

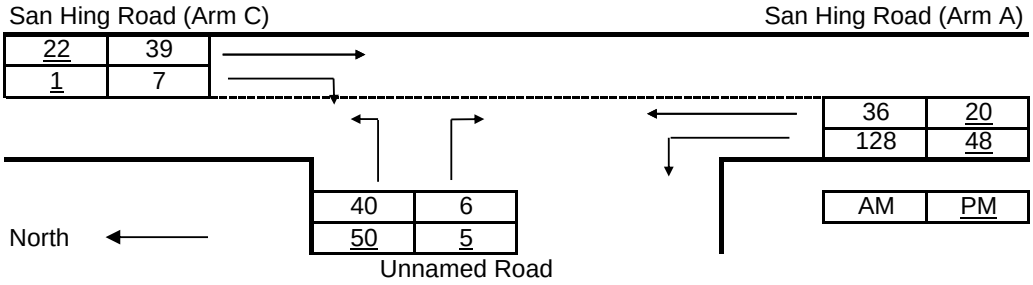
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	39	22	Q-BA	554	571
q-CB	7	1	Q-BC	694	707
q-AB	119	45	Q-CB	601	624
q-AC	36	20	Q-BAC	686	701
q-BA	2	2			
q-BC	40	50			
f	0.952	0.962			

Ratio-of-flow to Capacity	AM	PM
B-A	0.004	0.003
B-C	0.058	0.071
C-B	0.012	0.002
B-AC	0.061	0.074

Priority Junction Analysis

Junction:	T-junction of San Hing Road				
Design Year:	2033	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	With Proposed Scheme				P. 40



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.00	V-rBA	45	w-BA	4.00	D	0.9343
	W-CR	0.00	V-lBA	100	w-BC	4.00	E	0.9632
			V-rBC	45	w-CB	3.00	F	0.8586
			V-rCB	25			Y	0.7930

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	39	22	Q-BA	553	571
q-CB	7	1	Q-BC	693	707
q-AB	128	48	Q-CB	599	623
q-AC	36	20	Q-BAC	671	692
q-BA	6	5			
q-BC	40	50			
f	0.870	0.909			

Ratio-of-flow to Capacity	AM	PM
B-A	0.011	0.009
B-C	0.058	0.071
C-B	0.012	0.002
B-AC	0.069	0.080

Junction: Ng Lau Road / Castle Peak Road - Lam Tei Job Number: J7265

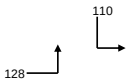
Scenario: Existing Condition P. 41

Design Year: 2023 Designed By: Checked By: Date: 24 Jul 2024

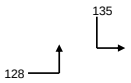
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	2	4.00	20.0		100	1874	110	0.059	0.059	100	1874	135	0.072	0.072
Castle Peak Road - Lam Tei NB	LT	B1	1	3.50	15.0		100	1786	128	0.072	0.072	100	1786	128	0.072	0.072

pedestrian phase	$C_{(P)}$	1,2		min crossing time =		8	sec GM +	8	sec FGM =	16	sec					
	$D_{(P)}$	3		min crossing time =		7	sec GM +	7	sec FGM =	14	sec					

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

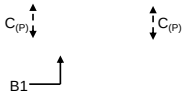
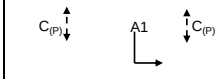
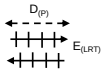


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.130		0.144	
L (s)	2358		2284	
C (s)	3609		3627	
practical y	0.312		0.333	
R.C. (%)	139%		132%	

Note:

1	2	3	4	5
				
AM G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =
G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =
PM G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =
G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =

Junction: Ng Lau Road / Castle Peak Road - Lam Tei Job Number: J7265

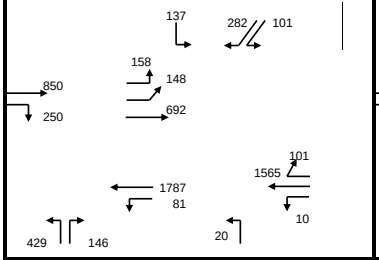
Scenario: Without Development P. 42

Design Year: 2033 Designed By: Checked By: Date: 24 Jul 2024

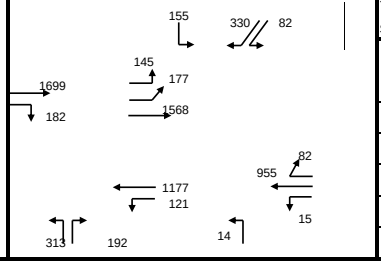
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	137	0.075		100	1832	155	0.085	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	270	0.139			1945	540	0.278	
	SA	B2	2,3	3.30				2085	290	0.139			2085	579	0.278	
	SA	B3	2,3	3.30				2085	290	0.139			2085	580	0.278	
	RT	C1	1	3.40	15.0		100	1905	250	0.131	0.131	100	1905	182	0.096	0.096
Castle Peak Road - Lam Tei NB	LT	D1	2	3.50	13.0		100	1762	158	0.090		100	1762	145	0.082	
	LT	D2	2	3.40	15.0		100	1905	148	0.078		100	1905	177	0.093	
	SA	E1	2,3	3.65				2120	346	0.163			2095	779	0.372	0.372
	SA	E2	2,3	3.65				2120	346	0.163			2120	789	0.372	
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		2	1981	594	0.300	0.300	4	1977	412	0.208	
	SA	F2	2,3	3.70				2125	637	0.300			2125	443	0.208	
	SA	F3	2,3	3.70				2125	637	0.300			2125	443	0.208	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.65	10.0		11	1948	754	0.387		26	1906	459	0.241	
	SA	G2	1,2,3	3.65				2120	821	0.387			2120	511	0.241	
	RT	H1	4	3.50	20.0		100	1958	101	0.052	0.052	100	1958	82	0.042	0.042
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	20	0.011		100	1752	14	0.008	
Fuk Hang Tsuen Road WB	LT	J1	5	3.65	12.0		100	1760	274	0.156	0.156	100	1760	241	0.137	0.137
	LT+RT	J2	5	3.65	15.0		100	1927	301	0.156		100	1927	264	0.137	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	183	0.103		100	1773	197	0.111	
	RT	K2	5	3.80	15.0		100	1941	200	0.103		100	1941	215	0.111	

pedestrian phase	$L_{(P)}$	3,4,5		min crossing time =	5	sec GM +	11	sec FGM =	16	sec	
	$M_{(P)}$	3		min crossing time =	5	sec GM +	15	sec FGM =	20	sec	
	$N_{(P)}$	3,4		min crossing time =	5	sec GM +	16	sec FGM =	21	sec	
	$O_{(P)}$	5		min crossing time =	5	sec GM +	14	sec FGM =	19	sec	
	$P_{(P)}$	4		min crossing time =	5	sec GM +	18	sec FGM =	23	sec	
	$Q_{(P)}$	3		min crossing time =	11	sec GM +	11	sec FGM =	22	sec	
	$R_{(P)}$	1,2,4,5		min crossing time =	5	sec GM +	13	sec FGM =	18	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

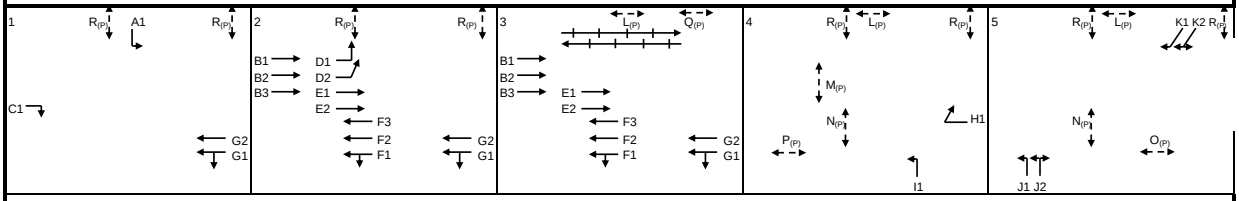


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2,3+4+5	AM Peak	PM Peak 1+2,3+4+5	PM Peak
Sum y	0.638		0.646	
L (s)	21		21	
C (s)	120		120	
practical y	0.743		0.743	
R.C. (%)	16%		15%	

Note:



AM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =
PM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =

Junction: Ng Lau Road / Castle Peak Road - Lam Tei Job Number: J7265

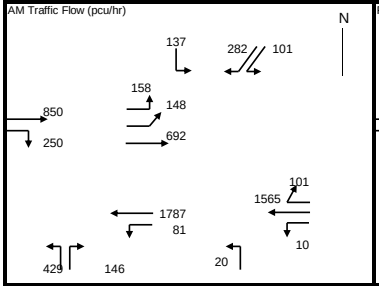
Scenario: With Approved Scheme P. 43

Design Year: 2033 Designed By: Checked By: Date: 24 Jul 2024

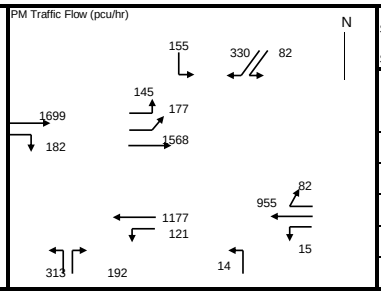
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	137	0.075		100	1832	155	0.085	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	270	0.139			1945	540	0.278	
	SA	B2	2,3	3.30				2085	290	0.139			2085	579	0.278	
	SA	B3	2,3	3.30				2085	290	0.139			2085	580	0.278	
	RT	C1	1	3.50	15.0		100	1914	250	0.131	0.131	100	1914	182	0.095	0.095
Castle Peak Road - Lam Tei NB	LT	D1	2	3.50	13.0		100	1762	158	0.090		100	1762	145	0.082	
	LT	D2	2	3.40	15.0		100	1905	148	0.078		100	1905	177	0.093	
	SA	E1	2,3	3.65				2120	346	0.163			2095	779	0.372	
	SA	E2	2,3	3.65				2120	346	0.163			2120	789	0.372	0.372
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		2	1981	594	0.300		4	1977	412	0.208	
	SA	F2	2,3	3.70				2125	637	0.300			2125	443	0.208	
	SA	F3	2,3	3.70				2125	637	0.300	0.300		2125	443	0.208	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.65	10.0		11	1948	754	0.387		26	1906	459	0.241	
	SA	G2	1,2,3	3.65				2120	821	0.387			2120	511	0.241	
	RT	H1	4	3.50	20.0		100	1958	101	0.052	0.052	100	1958	82	0.042	0.042
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	20	0.011		100	1752	14	0.008	
Fuk Hang Tsuen Road WB	LT	J1	5	3.65	12.0		100	1760	274	0.156	0.156	100	1760	241	0.137	0.137
	LT+RT	J2	5	3.65	15.0		100	1927	301	0.156		100	1927	264	0.137	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	183	0.103		100	1773	197	0.111	
	RT	K2	5	3.80	15.0		100	1941	200	0.103		100	1941	215	0.111	

pedestrian phase	$L_{(P)}$	3,4,5		min crossing time =	5	sec GM +	11	sec FGM =	16	sec
	$M_{(P)}$	3		min crossing time =	5	sec GM +	15	sec FGM =	20	sec
	$N_{(P)}$	3,4		min crossing time =	5	sec GM +	16	sec FGM =	21	sec
	$O_{(P)}$	5		min crossing time =	5	sec GM +	14	sec FGM =	19	sec
	$P_{(P)}$	4		min crossing time =	5	sec GM +	18	sec FGM =	23	sec
	$Q_{(P)}$	3		min crossing time =	11	sec GM +	11	sec FGM =	22	sec
	$R_{(P)}$	1,2,4,5		min crossing time =	5	sec GM +	13	sec FGM =	18	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

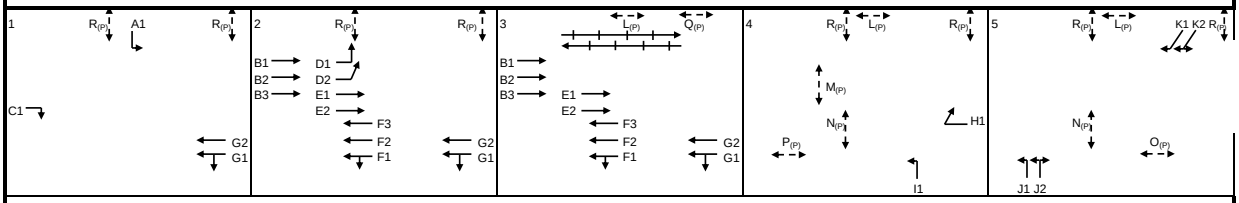


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak		PM Peak	
	1+2,3+4+5		1+2,3+4+5	
Sum y	0.638		0.646	
L (s)	21		21	
C (s)	120		120	
practical y	0.743		0.743	
R.C. (%)	16%		15%	

Note:



AM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =
PM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =

Junction: Ng Lau Road / Castle Peak Road - Lam Tei Job Number: J7265

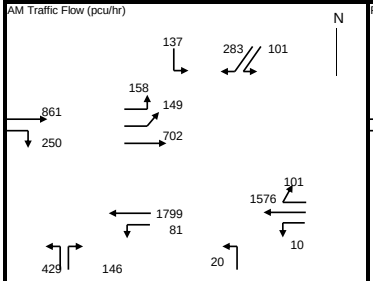
Scenario: With Proposed Scheme P. 44

Design Year: 2033 Designed By: Checked By: Date: 24 Jul 2024

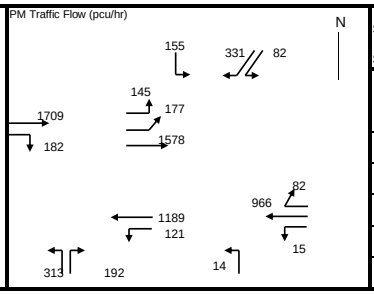
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	137	0.075		100	1832	155	0.085	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	274	0.141			1945	544	0.280	
	SA	B2	2,3	3.30				2085	294	0.141			2085	583	0.280	
	SA	B3	2,3	3.30				2085	293	0.141			2085	582	0.279	
	RT	C1	1	3.50	15.0		100	1914	250	0.131	0.131	100	1914	182	0.095	0.095
Castle Peak Road - Lam Tei NB	LT	D1	2	3.50	13.0		100	1762	158	0.090		100	1762	145	0.082	
	LT	D2	2	3.40	15.0		100	1905	149	0.078		100	1905	177	0.093	
	SA	E1	2,3	3.65				2120	351	0.166			2095	784	0.374	
	SA	E2	2,3	3.65				2120	351	0.166			2120	794	0.375	0.375
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		2	1981	598	0.302		4	1977	416	0.210	
	SA	F2	2,3	3.70				2125	641	0.302			2125	447	0.210	
	SA	F3	2,3	3.70				2125	641	0.302	0.302		2125	447	0.210	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.65	10.0		11	1948	759	0.390		26	1906	464	0.243	
	SA	G2	1,2,3	3.65				2120	827	0.390			2120	517	0.244	
	RT	H1	4	3.50	20.0		100	1958	101	0.052	0.052	100	1958	82	0.042	0.042
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	20	0.011		100	1752	14	0.008	
Fuk Hang Tsuen Road WB	LT	J1	5	3.65	12.0		100	1760	274	0.156	0.156	100	1760	241	0.137	0.137
	LT+RT	J2	5	3.65	15.0		100	1927	301	0.156		100	1927	264	0.137	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	183	0.103		100	1773	197	0.111	
	RT	K2	5	3.80	15.0		100	1941	201	0.104		100	1941	216	0.111	

pedestrian phase	$L_{(P)}$	3,4,5		min crossing time =	5	sec GM +	11	sec FGM =	16	sec
	$M_{(P)}$	3		min crossing time =	5	sec GM +	15	sec FGM =	20	sec
	$N_{(P)}$	3,4		min crossing time =	5	sec GM +	16	sec FGM =	21	sec
	$O_{(P)}$	5		min crossing time =	5	sec GM +	14	sec FGM =	19	sec
	$P_{(P)}$	4		min crossing time =	5	sec GM +	18	sec FGM =	23	sec
	$Q_{(P)}$	3		min crossing time =	11	sec GM +	11	sec FGM =	22	sec
	$R_{(P)}$	1,2,4,5		min crossing time =	5	sec GM +	13	sec FGM =	18	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

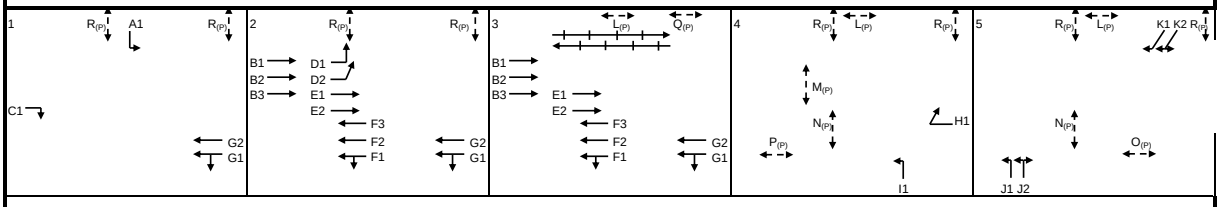


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2,3+4+5	AM Peak	PM Peak 1+2,3+4+5	PM Peak
Sum y	0.640		0.648	
L (s)	21		21	
C (s)	120		120	
practical y	0.743		0.743	
R.C. (%)	16%		15%	

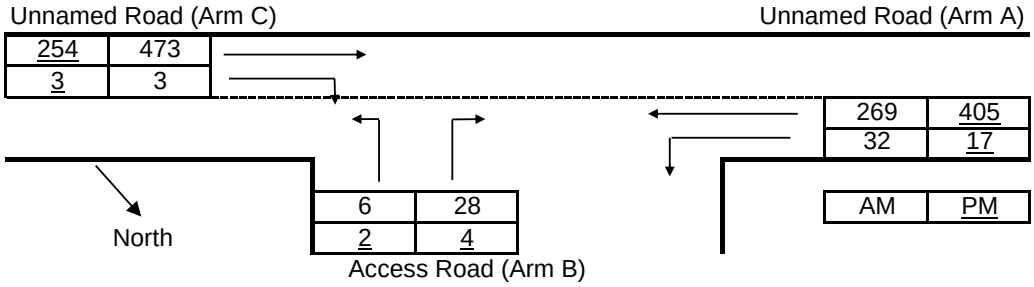
Note:



AM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =
PM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =

Priority Junction Analysis

Junction:	Hong Po Road / Yan Tin Estate Access Road				
Design Year:	2023	Job Number:	J7265	Date:	24 Jul 2024
Scenario:	Existing Condition				P. 45



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	9.50	V-rBA	55	w-BA	4.40	D	0.9323
	W-CR	3.00	V-lBA	25	w-BC	4.40	E	1.0079
			V-rBC	55	w-CB	3.18	F	0.9042
			V-rCB	60			Y	0.6723

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	473	254	Q-BA	491	492
q-CB	3	3	Q-BC	681	649
q-AB	32	17	Q-CB	607	580
q-AC	269	405	Q-BAC	516	535
q-BA	28	4			
q-BC	6	2			
f	0.176	0.333			

Ratio-of-flow to Capacity	AM	PM
B-A	0.057	0.008
B-C	0.009	0.003
C-B	0.005	0.005
B-AC	0.066	0.011

Junction: Hong Po Road / San Hing Road — Job Number: J7265

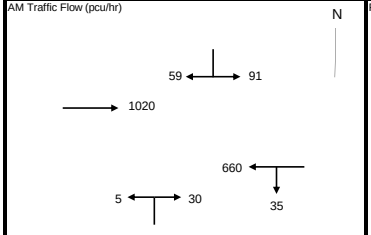
Scenario: Without Development — P. 46

Design Year: 2033 — Designed By: — Checked By: — Date: 24 Jul 2024

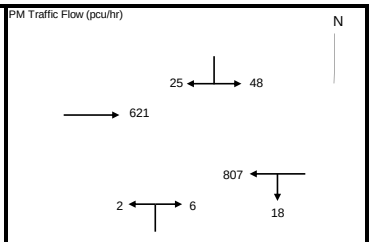
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Hong Po Road WB	SA+LT	A1	1	3.75	10.0		11	1958	333	0.170	0.170	5	1975	397	0.201	0.201
	SA	A2	1	3.75				2130	362	0.170			2130	428	0.201	
Access Road NB	LT+RT	B1	2	3.50	15.0		100	1786	35	0.020	0.020	100	1786	8	0.004	0.004
Hong Po Road EB	SA	C1	1	3.65				1980	493	0.249	0.249		1980	300	0.152	0.152
	SA	C2	1	3.65				2120	527	0.249			2120	321	0.151	
San Hing Road SB	LT	D1	3	3.65	10.0		100	1722	73	0.042	0.042	100	1722	36	0.021	0.021
	LT+RT	D2	3	3.65	15.0		100	1800	77	0.043		100	1800	37	0.021	

pedestrian phase	$E_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec
	$F_{(P)}$	4		min crossing time =	7	sec GM +	6	sec FGM =	13	sec
	$G_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec
	$H_{(P)}$	4		min crossing time =	9	sec GM +	5	sec FGM =	14	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

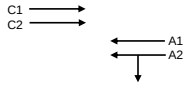
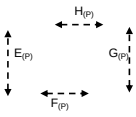


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2+3	AM Peak	PM Peak 1+2+3	PM Peak
Sum y	0.481		0.378	
L (s)	27		27	
C (s)	120		120	
practical y	0.698		0.698	
R.C. (%)	45%		85%	

Note:

1	2	3	4	5
				

AM	G =	I/G = 5	G =	I/G = 5	G =	I/G = 2	G = 15	I/G = 3	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 5	G =	I/G = 2	G = 15	I/G = 3	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

Junction: Hong Po Road / San Hing Road — Job Number: J7265

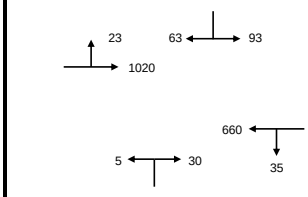
Scenario: With Approved Scheme — P. 47

Design Year: 2033 — Designed By: — Checked By: — Date: 24 Jul 2024

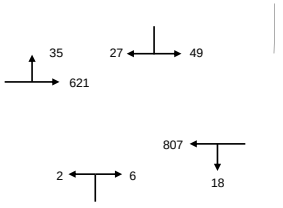
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Hong Po Road WB	SA+LT	A1	1	3.75	10.0		11	1958	333	0.170		5	1975	397	0.201	
	SA	A2	1	3.75				2130	362	0.170			2130	428	0.201	0.201
Access Road NB	LT+RT	B1	2	3.50	15.0		100	1786	35	0.020		100	1786	8	0.004	
Hong Po Road EB	LT	C1	1	3.65	25.0		100	1868	23	0.012		100	1868	35	0.019	
	SA	C2	1	3.65				2120	510	0.241	0.241		2120	311	0.147	
	SA	C3	1	3.65				2120	510	0.241			2120	310	0.146	
San Hing Road SB	LT	D1	3	3.65	10.0		100	1722	76	0.044	0.044	100	1722	37	0.021	0.021
	LT+RT	D2	3	3.65	15.0		100	1800	80	0.044		100	1800	39	0.022	

pedestrian phase	$E_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec	
	$F_{(P)}$	4		min crossing time =	7	sec GM +	6	sec FGM =	13	sec	
	$G_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec	
	$H_{(P)}$	4		min crossing time =	11	sec GM +	9	sec FGM =	20	sec	
	$I_{(P)}$	2,3,4		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



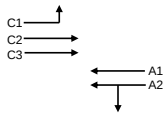
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+3		PM Peak 1+3	
Sum y	0.285		0.222	
L (s)	41		41	
C (s)	120		120	
practical y	0.593		0.593	
R.C. (%)	108%		166%	

Note:

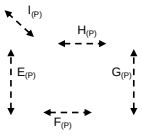
1



2

3

4



5

AM	G =		I/G =	5	G =	5	I/G =	5	G =		I/G =	10	G =	15	I/G =	3	G =	
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	10	G =	15	I/G =	3	G =	
PM	G =		I/G =	5	G =	5	I/G =	5	G =		I/G =	10	G =	15	I/G =	3	G =	
	G =		I/G =	5	G =		I/G =	5	G =		I/G =	10	G =	15	I/G =	3	G =	

Junction: Hong Po Road / San Hing Road — Job Number: J7265

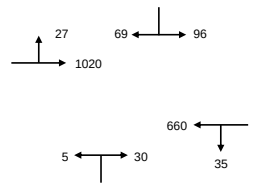
Scenario: With Proposed Scheme — P. 48

Design Year: 2033 — Designed By: — Checked By: — Date: 24 Jul 2024

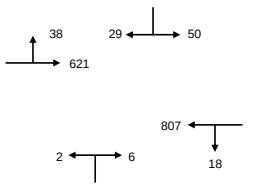
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Hong Po Road WB	SA+LT	A1	1	3.75	10.0		11	1958	333	0.170		5	1975	397	0.201	
	SA	A2	1	3.75				2130	362	0.170			2130	428	0.201	0.201
Access Road NB	LT+RT	B1	2	3.50	15.0		100	1786	35	0.020		100	1786	8	0.004	
Hong Po Road EB	LT	C1	1	3.65	25.0		100	1868	27	0.014		100	1868	38	0.020	
	SA	C2	1	3.65				2120	510	0.241	0.241		2120	311	0.147	
	SA	C3	1	3.65				2120	510	0.241			2120	310	0.146	
San Hing Road SB	LT	D1	3	3.65	10.0		100	1722	81	0.047	0.047	100	1722	39	0.023	0.023
	LT+RT	D2	3	3.65	15.0		100	1800	84	0.047		100	1800	40	0.022	

pedestrian phase	$E_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec
	$F_{(P)}$	4		min crossing time =	7	sec GM +	6	sec FGM =	13	sec
	$G_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec
	$H_{(P)}$	4		min crossing time =	11	sec GM +	9	sec FGM =	20	sec
	$I_{(P)}$	2,3,4		min crossing time =	5	sec GM +	9	sec FGM =	14	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

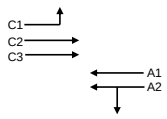
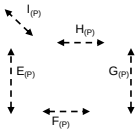


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+3	AM Peak	PM Peak 1+3	PM Peak
Sum y	0.288		0.224	
L (s)	41		41	
C (s)	120		120	
practical y	0.593		0.593	
R.C. (%)	106%		165%	

Note:

1	2	3	4	5
				

AM	G =		I/G = 5	G = 5		I/G = 5	G =		I/G = 10	G = 15		I/G = 3	G =			
	G =		I/G = 5	G =		I/G = 5	G =		I/G = 10	G = 15		I/G = 3	G =			
PM	G =		I/G = 5	G = 5		I/G = 5	G =		I/G = 10	G = 15		I/G = 3	G =			
	G =		I/G = 5	G =		I/G = 5	G =		I/G = 10	G = 15		I/G = 3	G =			

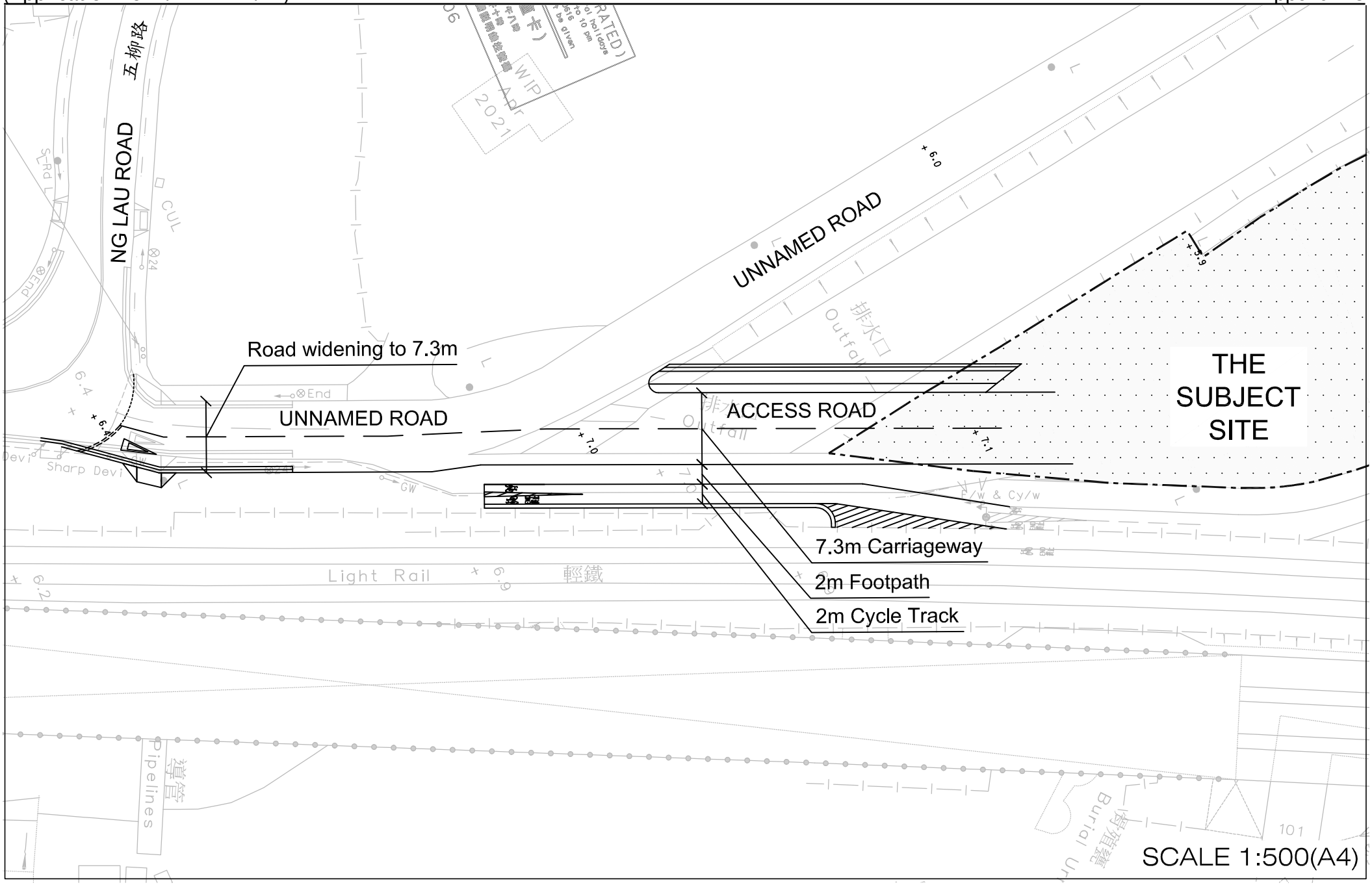
Appendix B –
Public Transport Survey Result

TABLE B1 DETAILED INFORMATION OCCUPANCY SURVEY RESULT ON THE PUBLIC TRANSPORT NEAR THE PROPOSED DEVELOPMENT

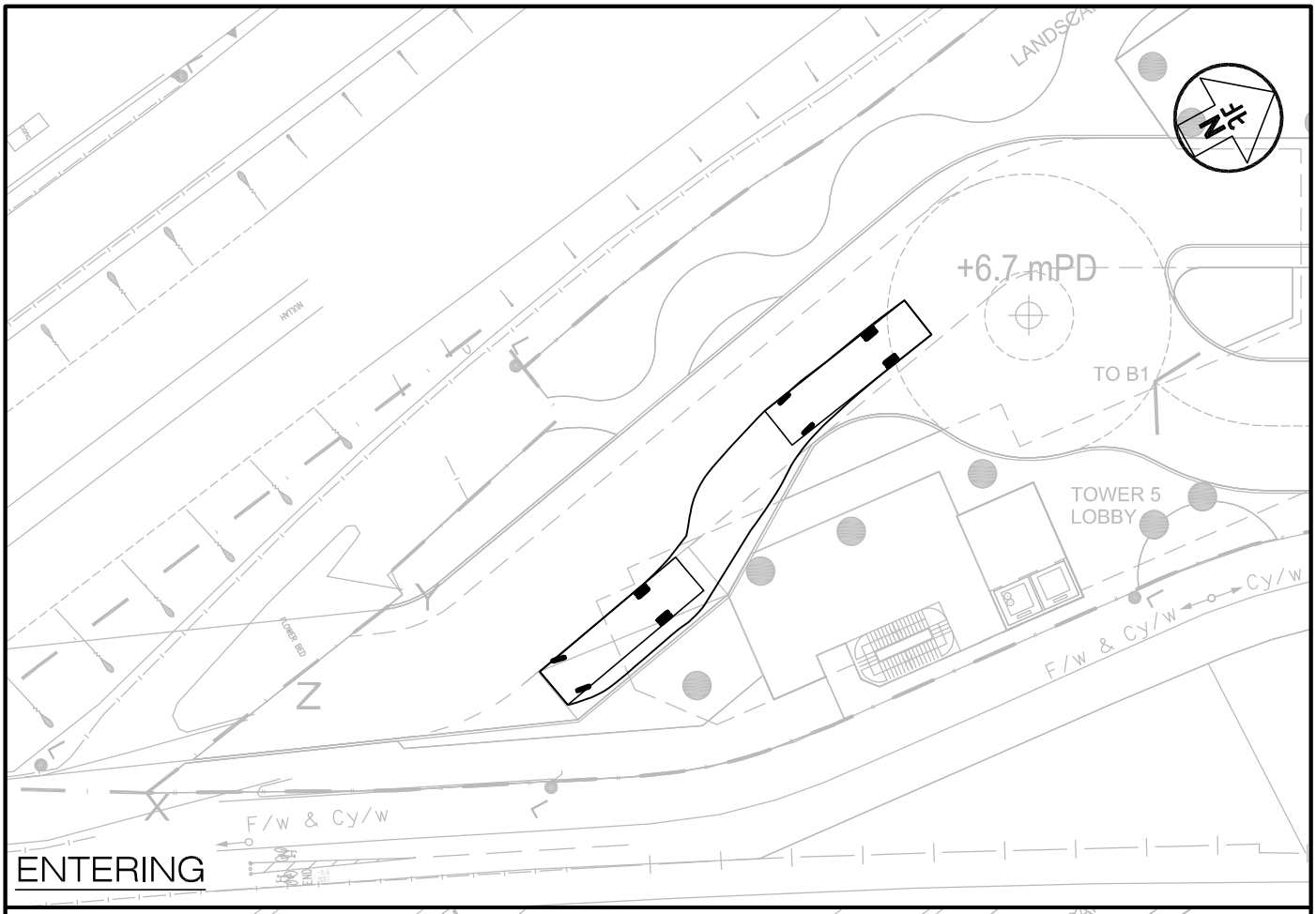
Direction	Routes	Survey Location	AM				PM			
			No. of Trips	No. of Passenger		Occupancy [c]=[b]/[a]	No. of Trips	No. of Passenger		Occupancy [c]=[b]/[a]
				Capacity [a]	Occupied [b]			Capacity [a]	Occupied [b]	
To other districts	CTB 50	LTI - WB	3	360	180	50%	0	-	-	-
	CTB 55	LTI - WB	4	480	320	67%	0	-	-	-
	CTB 56	LTI - WB	0	-	-	-	0	-	-	-
	CTB 56A	LTI - WB	2	240	168	70%	0	-	-	-
	CTB 950	LTI - WB	2	240	150	63%	0	-	-	-
	CTB 955	LTI - WB	1	120	60	50%	0	-	-	-
	CTB B3A	LTI - WB	1	120	108	90%	2	240	120	50%
	KMB 53	CPR - SB	2	240	90	38%	1	120	60	50%
	KMB 63X	CPR - SB	5	600	338	56%	4	480	120	25%
	KMB 67M	LTI - WB	8	960	210	22%	3	360	36	10%
	KMB 67X	LTI - WB	7	840	174	21%	1	120	30	25%
	KMB 68A	CPR - SB	3	360	195	54%	3	360	135	38%
	KMB 258P	CPR - SB	2	240	120	50%	0	-	-	-
	KMB 261P	CPR - SB	4	480	120	25%	0	-	-	-
	KMB 267X	CPR - NB	1	120	36	30%	0	-	-	-
	KMB 960A	LTI - WB	2	240	24	10%	0	-	-	-
	KMB 960C	LTI - EB	1	120	6	5%	0	-	-	-
	KMB 960P	CPR - SB	6	720	412	57%	0	-	-	-
	KMB 960X	CPR - SB	7	840	105	13%	0	-	-	-
	LWB A34	CPR - SB	3	360	66	18%	1	120	10	8%
	LWB E33P	LTI - EB	3	360	77	21%	0	-	-	-
	NLB B2	CPR - SB	3	360	158	44%	3	360	225	63%
	GMB 42	LTI - WB	4	76	46	60%	4	76	31	40%
From other districts	CTB 50	LTI - EB	0	-	-	-	3	360	90	25%
	CTB 55	LTI - EB	0	-	-	-	2	240	60	25%
	CTB 56	LTI - EB	0	-	-	-	0	-	-	-
	CTB 56A	LTI - EB	3	360	180	50%	3	360	270	75%
	CTB 950	LTI - EB	0	-	-	-	0	-	-	-
	CTB 955	LTI - EB	0	-	-	-	1	120	72	60%
	CTB B3A	LTI - EB	1	120	60	50%	2	240	180	75%
	KMB 53	CPR - NB	2	240	90	38%	2	240	180	75%
	KMB 63X	CPR - NB	2	240	90	38%	2	240	180	75%
	KMB 67M	LTI - EB	3	360	27	8%	4	480	150	31%
	KMB 67X	LTI - EB	3	360	50	14%	3	360	90	25%
	KMB 68A	CPR - NB	2	240	140	58%	5	600	350	58%
	KMB 258P	CPR - NB	0	-	-	-	3	360	90	25%
	KMB 261P	CPR - SB	0	-	-	-	0	-	-	-
	KMB 267X	LTI - EB	0	-	-	-	0	-	-	-
	KMB 960A	LTI - WB	0	-	-	-	0	-	-	-
	KMB 960C	LTI - WB	0	-	-	-	0	-	-	-
	KMB 960P	CPR - NB	0	-	-	-	2	240	60	25%
	KMB 960X	CPR - NB	0	-	-	-	3	360	180	50%
	LWB A34	CPR - NB	0	-	-	-	3	360	36	10%
	LWB E33P	LTI - WB	0	-	-	-	3	360	36	10%
	NLB B2	CPR - NB	4	480	240	50%	3	360	135	38%
	GMB 42	LTI - EB	4	76	20	26%	4	76	25	33%

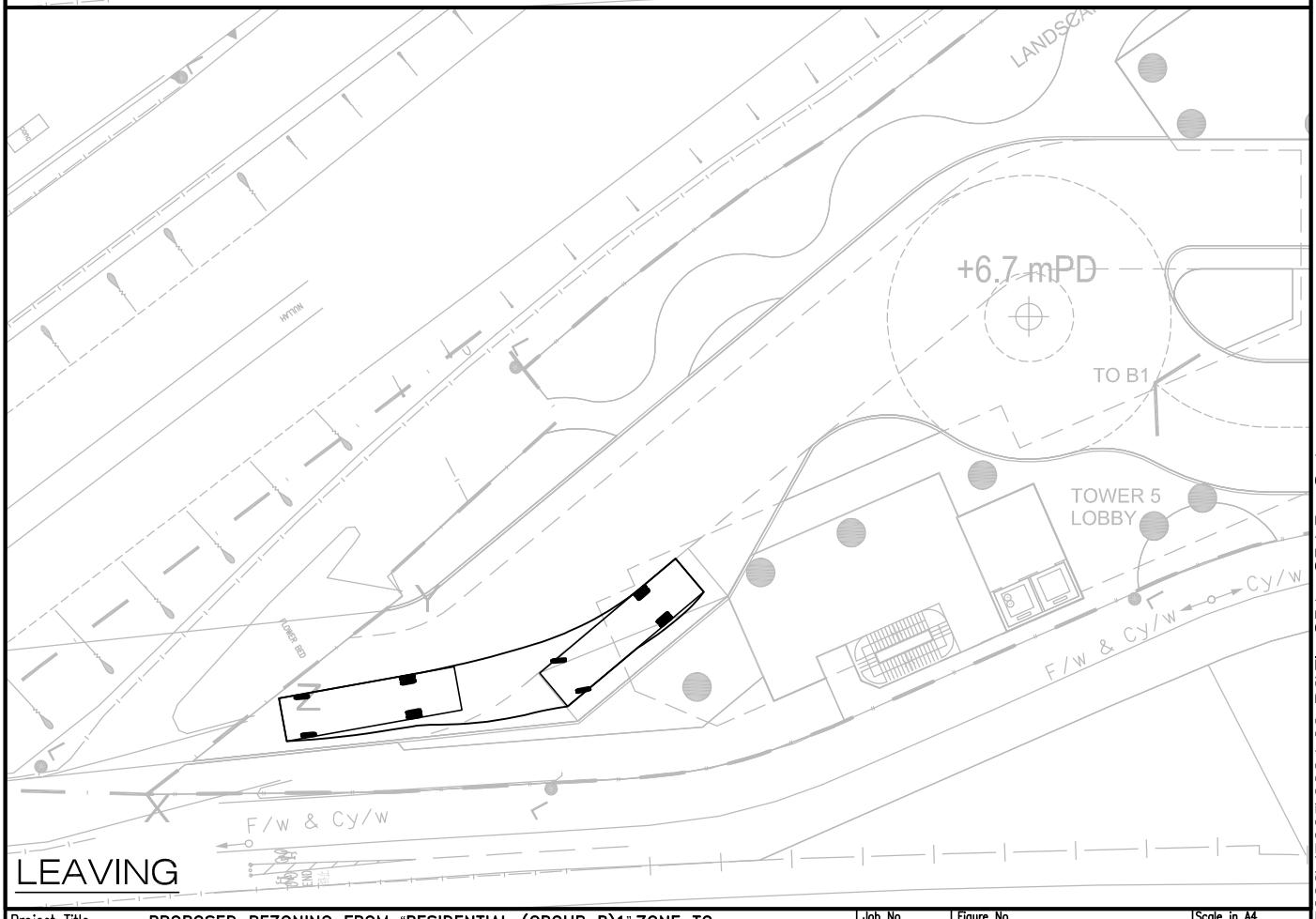
CPR – Castle Peak Road –Lam Tei LTI – Lam Tei Interchange
NB – northbound SB – southbound EB – eastbound WB – westbound

Appendix C – Planned Road Works to be implemented by the Owner


NG LAU ROAD
五柳路
UNNAMED ROAD
Road widening to 7.3m
UNNAMED ROAD
ACCESS ROAD
THE SUBJECT SITE
7.3m Carriageway
2m Footpath
2m Cycle Track
Light Rail
輕鐵
Pipelines
導管
SCALE 1:500(A4)

Appendix D – Swept Path Analysis

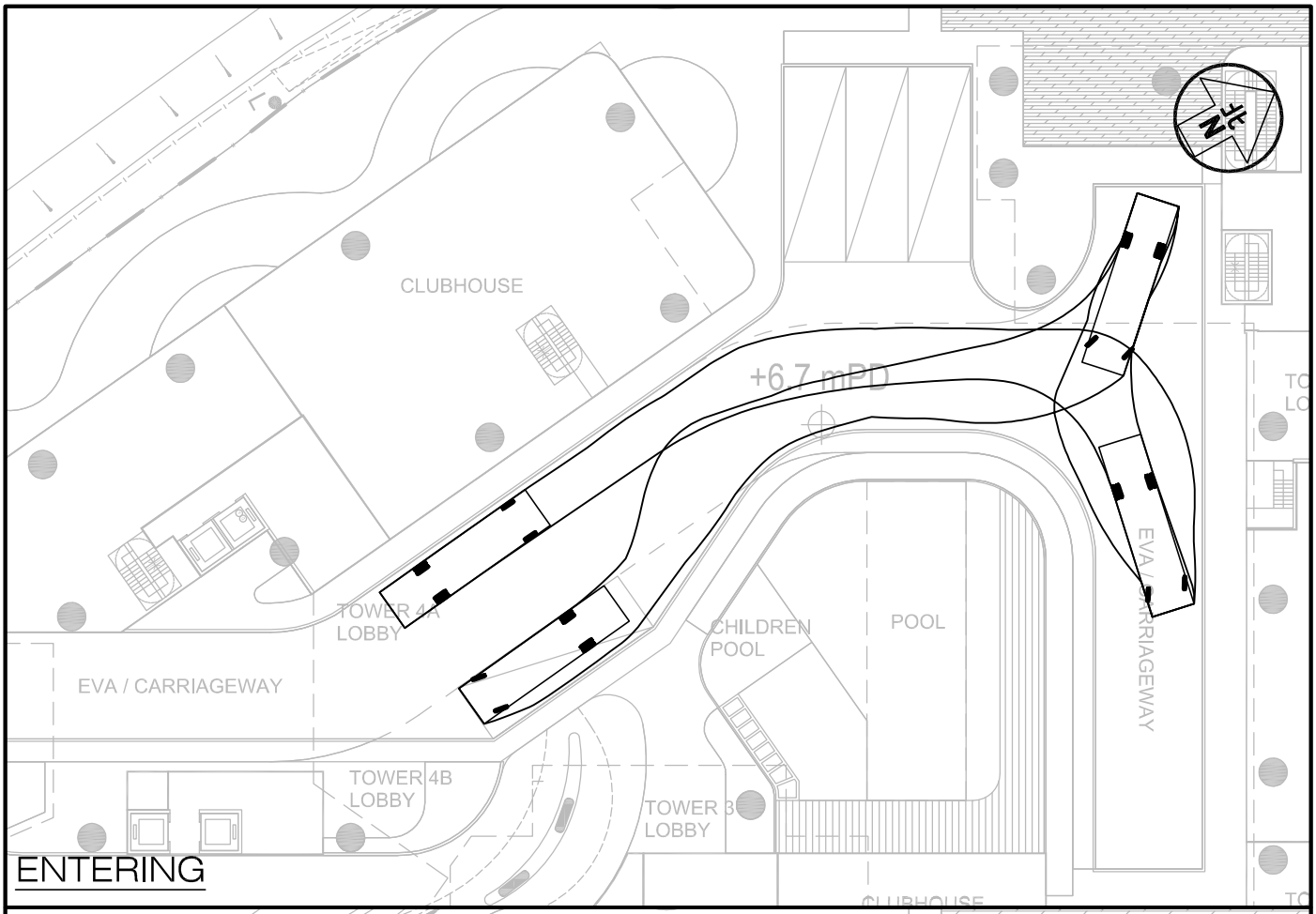


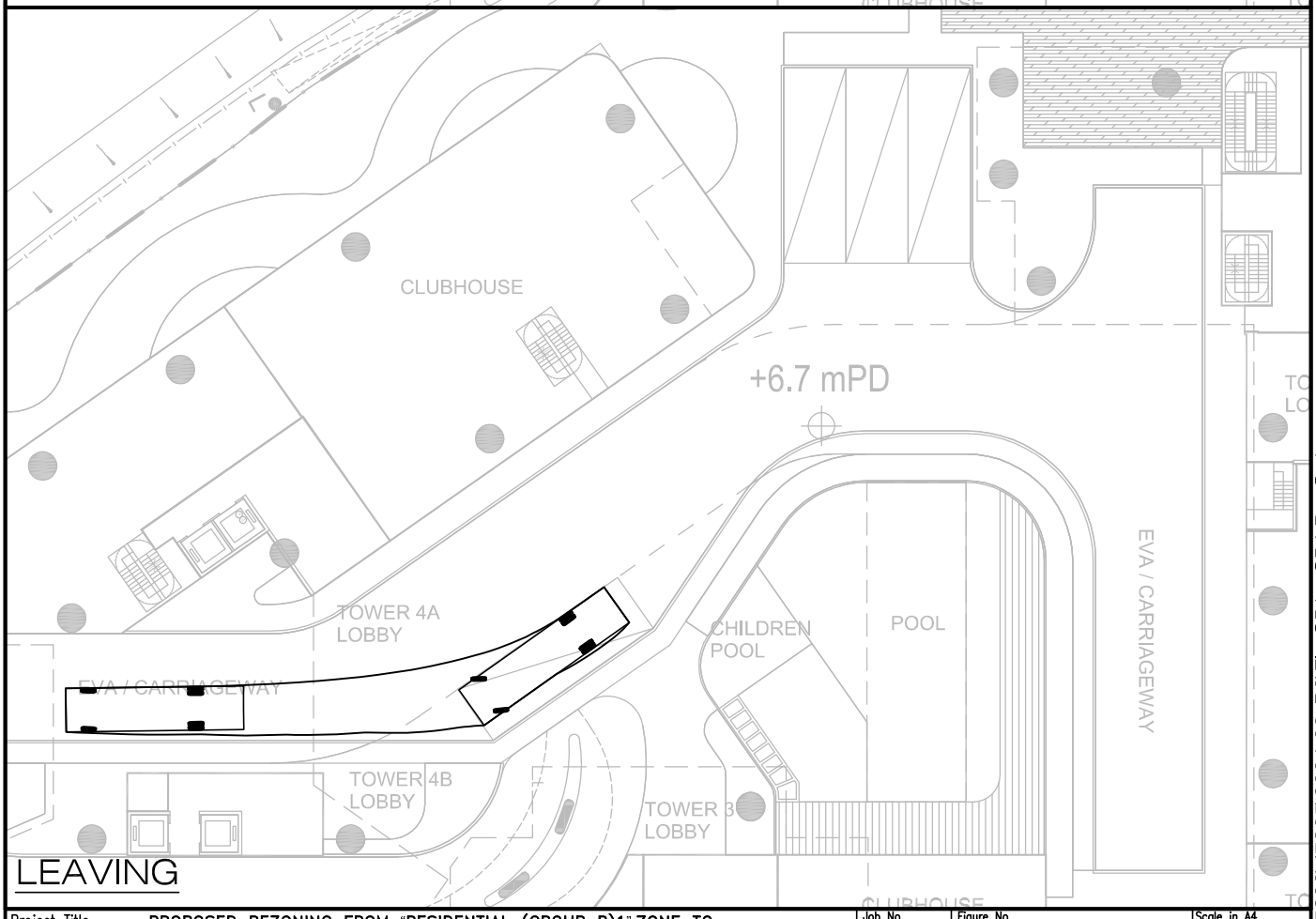


Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. SP1			Scale in A4 1 : 400
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: **SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY**					

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOBs\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg





Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

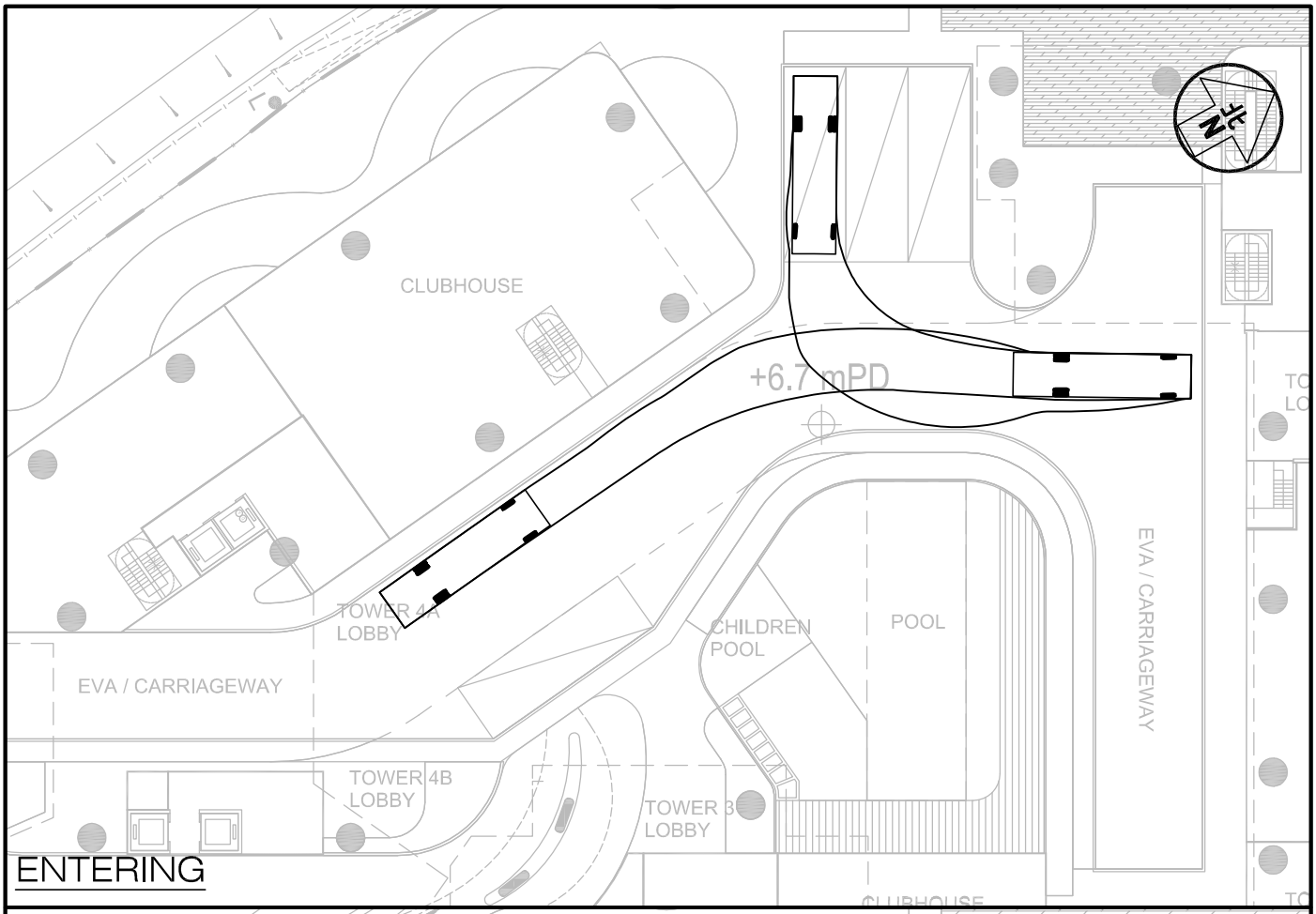
Job No.	Figure No.			Scale in A4
J7265	SP2			1 : 400
Designed by	Drawn by	Checked by	Revision	Date
L K W	W S W	K C	G	20 FEB 2024

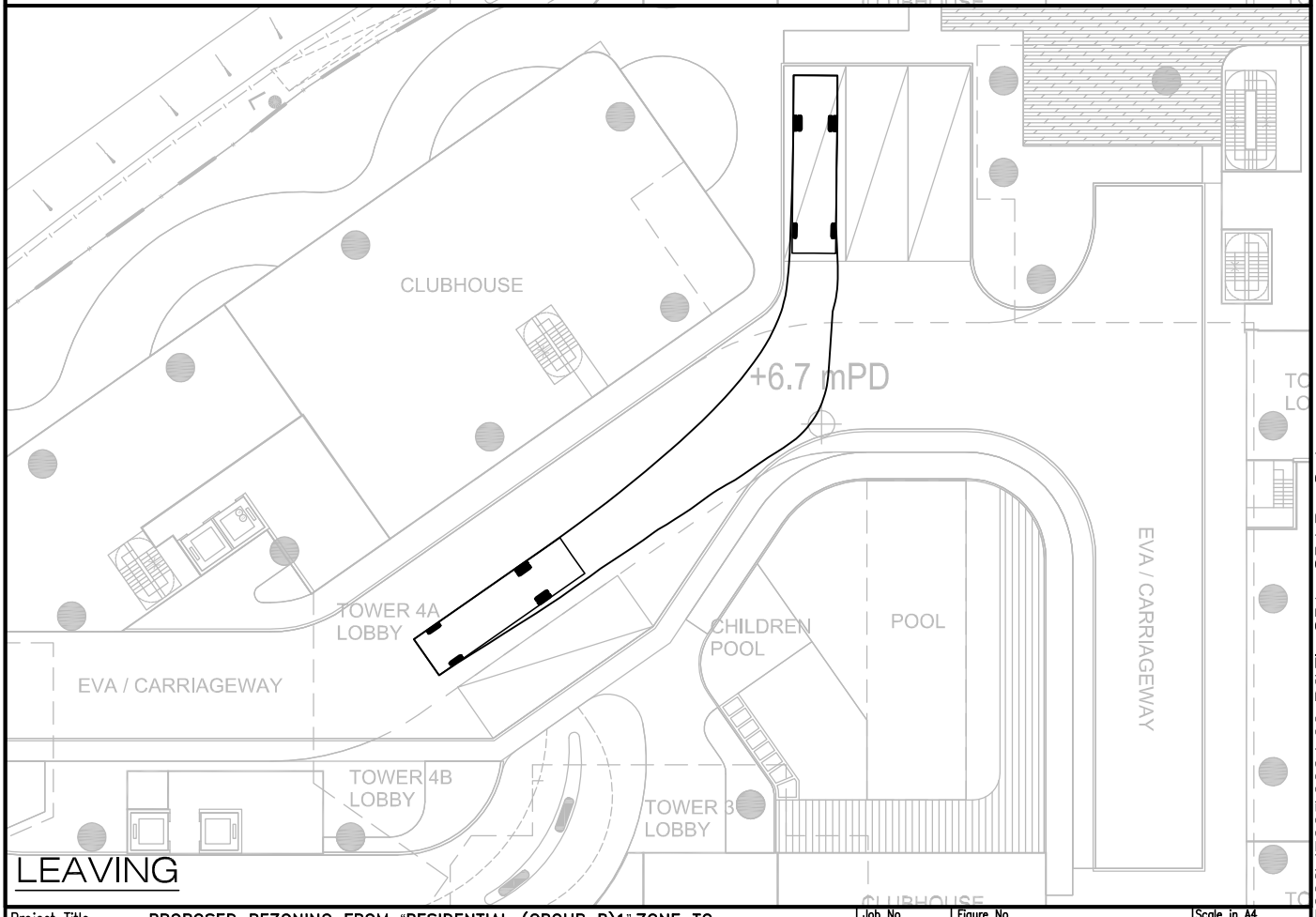
Figure Title

SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg





Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

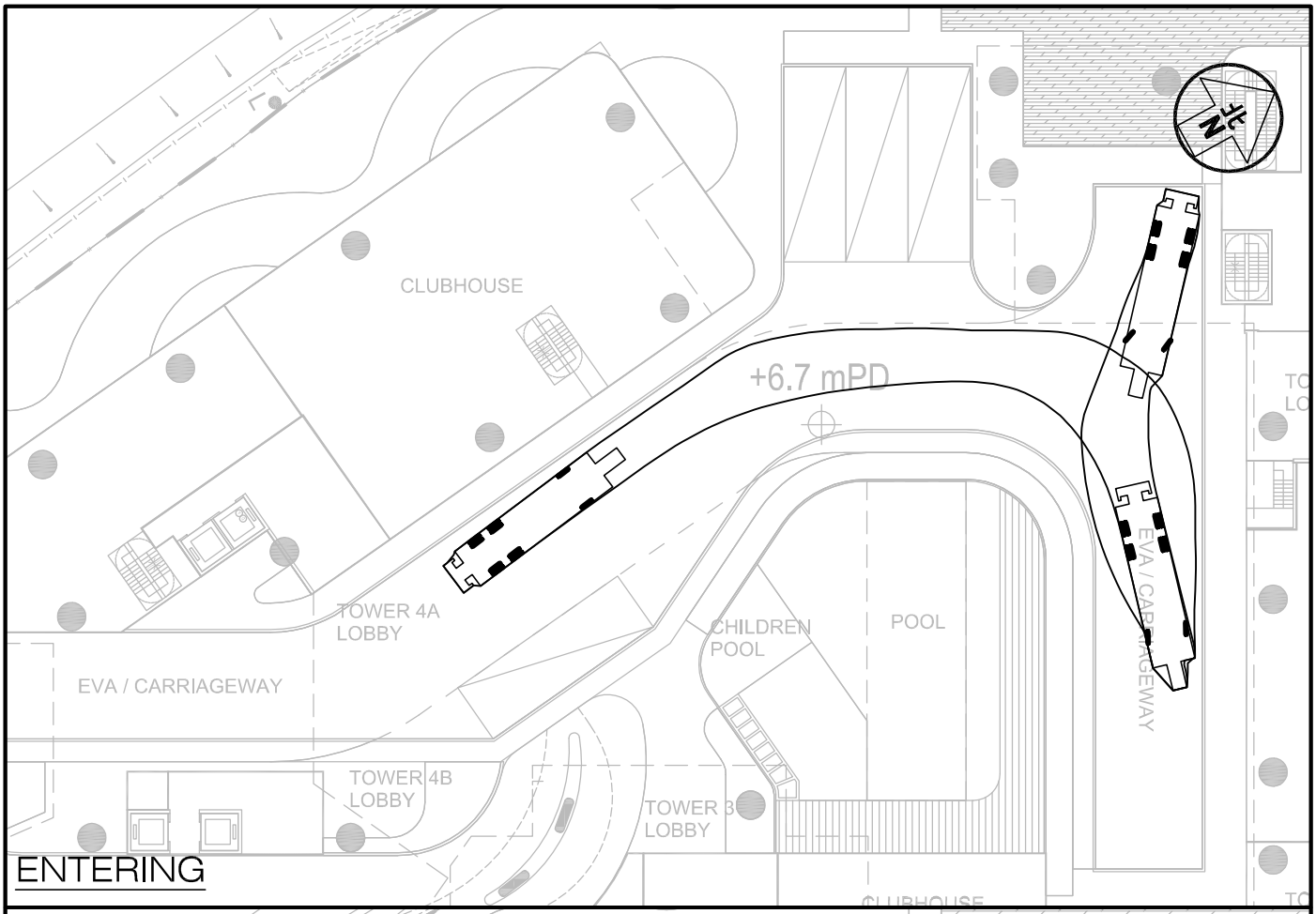
Job No.	Figure No.			Scale in A4
J7265	SP3			1 : 400
Designed by	Drawn by	Checked by	Revision	Date
L K W	W S W	K C	G	20 FEB 2024

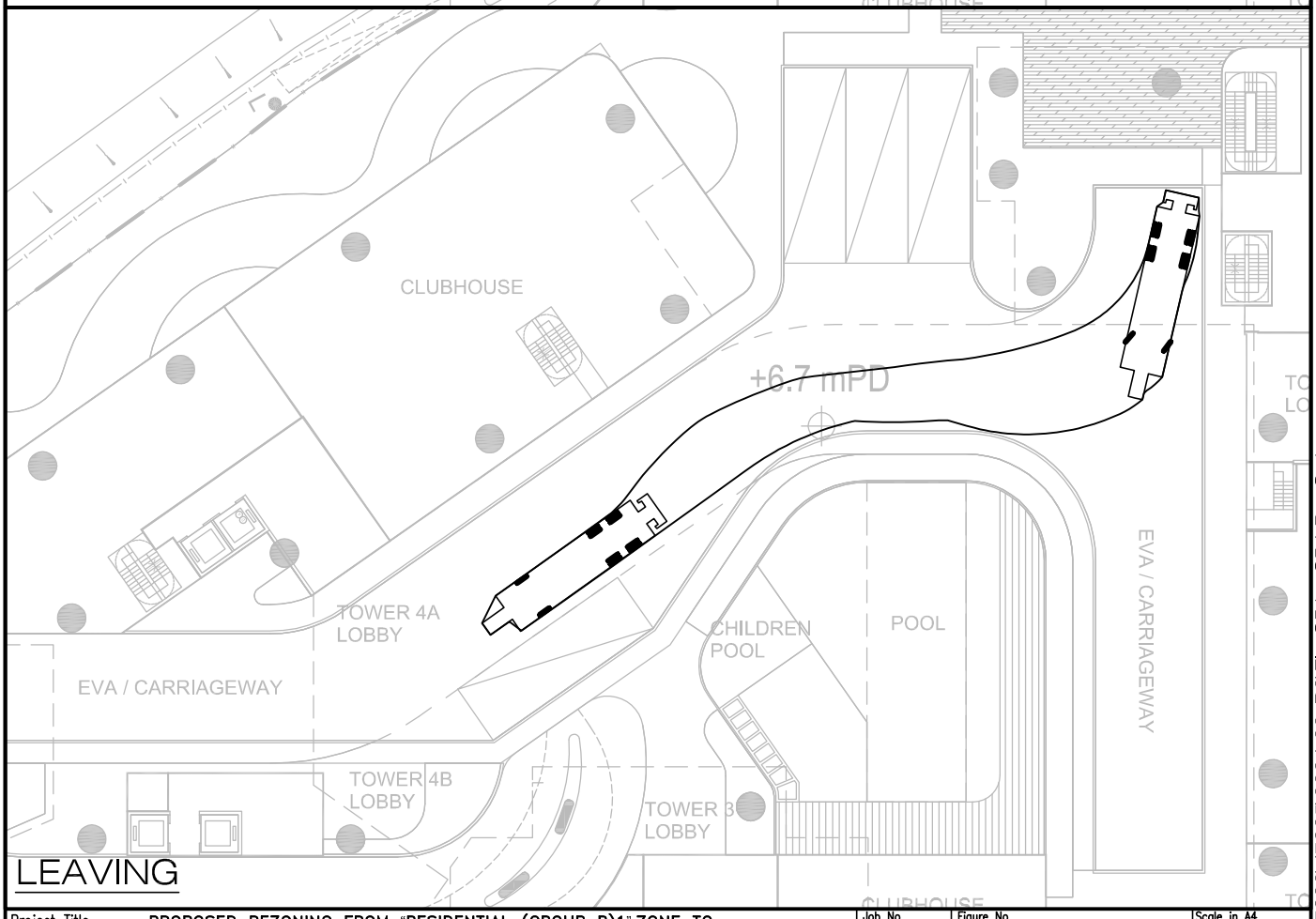
Figure Title

SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg





Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. SP4			Scale in A4 1 : 400
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024

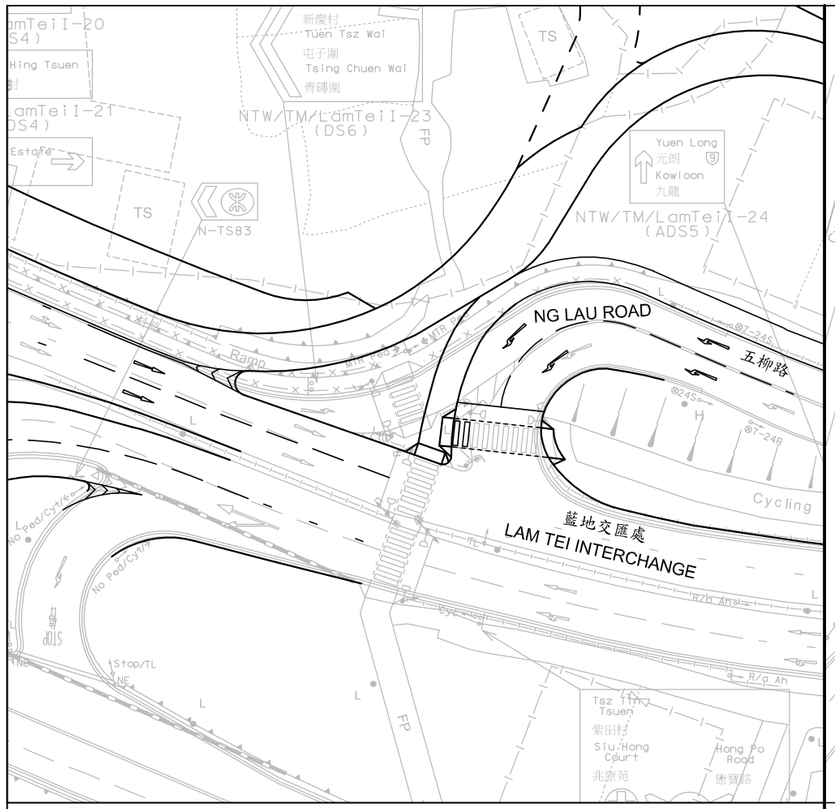
Figure Title

SWEPT PATH OF FIRE APPLIANCE ENTERING AND LEAVING THE SUBJECT SITE

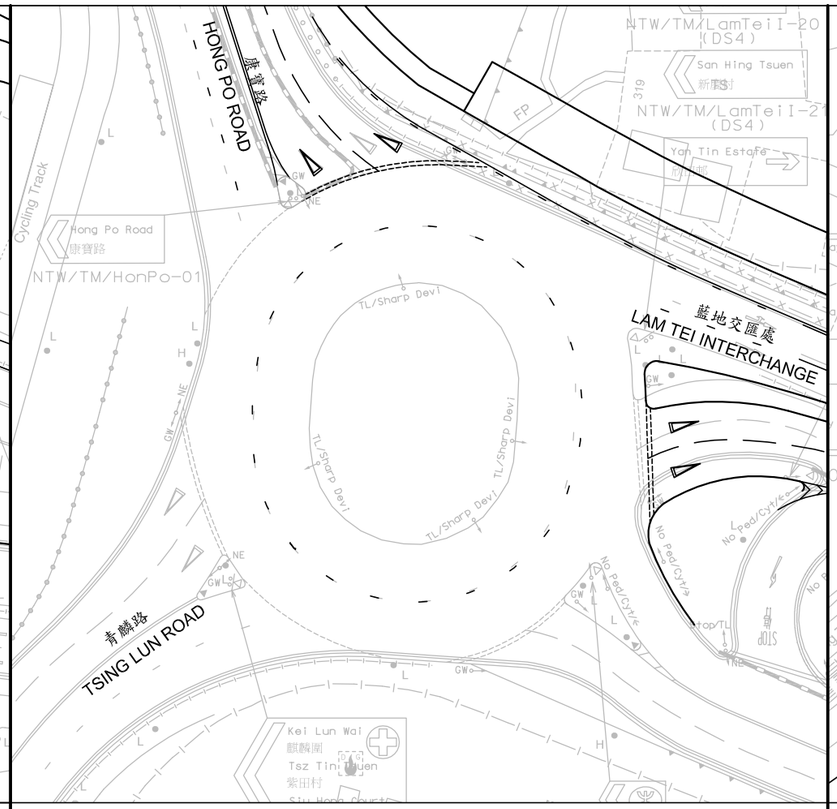
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg

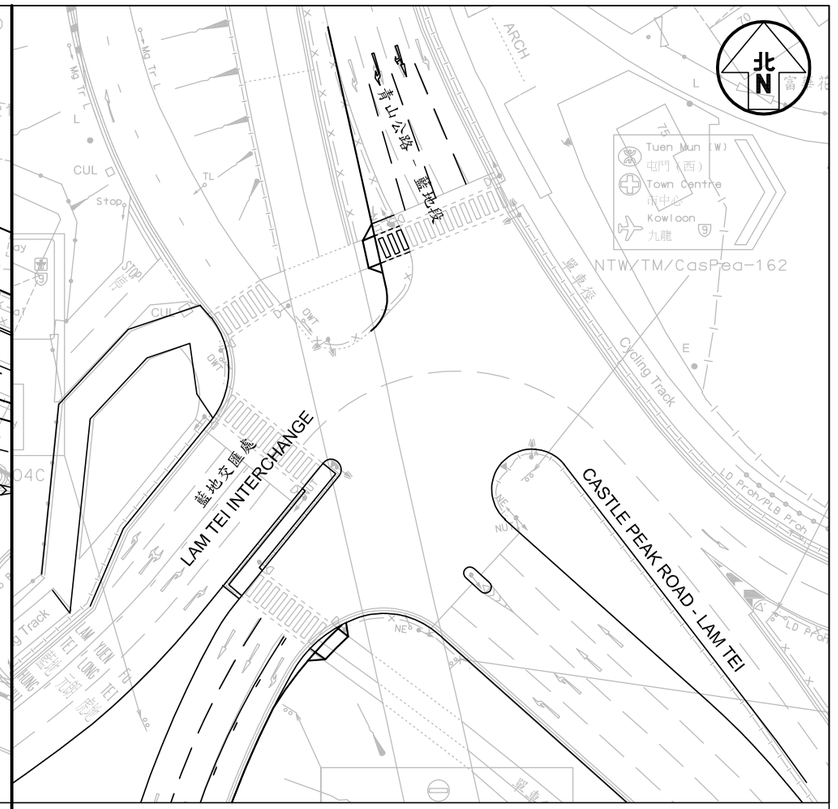
Appendix E – Extract of Planned Road Works under Agreement No. CE 39/2021 (CE) and CV/2019/04 by CEDD



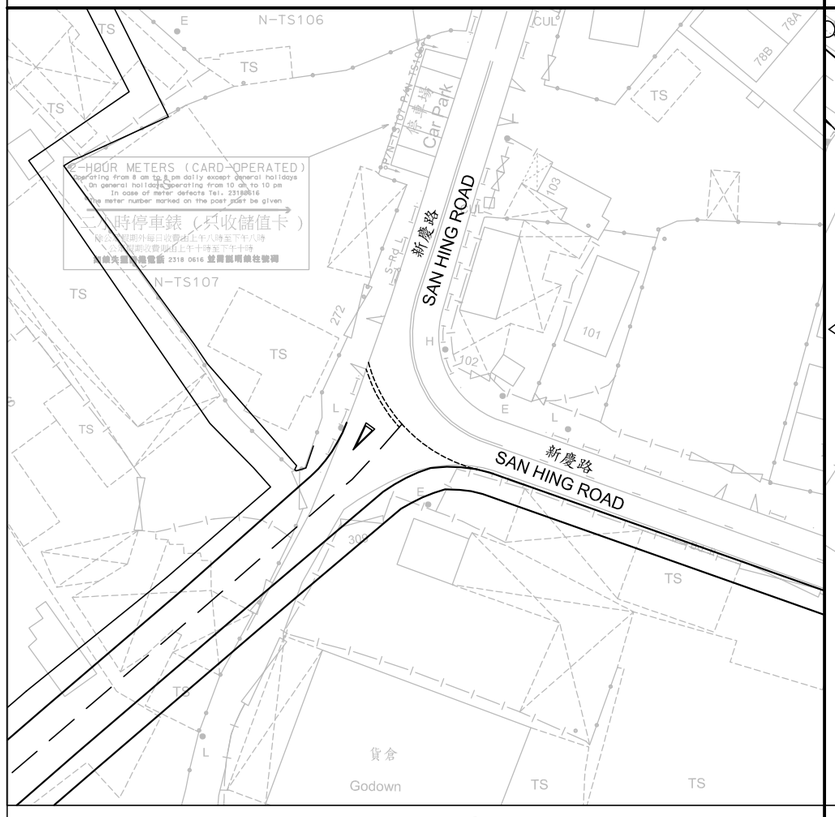
J3 - Ng Lau Road/ Lam Tei Interchange



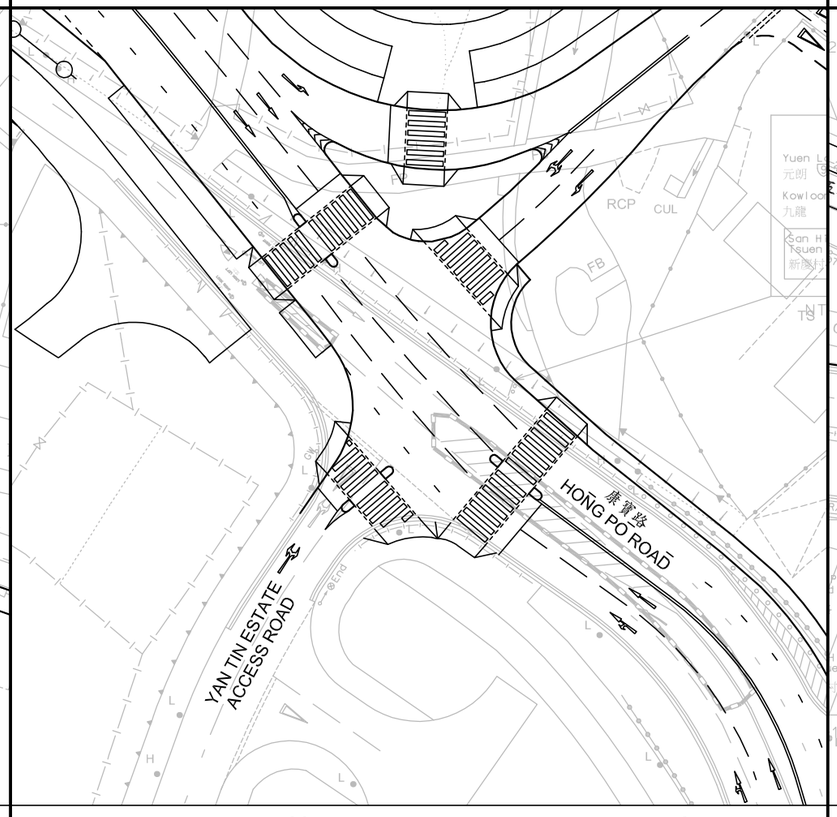
J4 - Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange



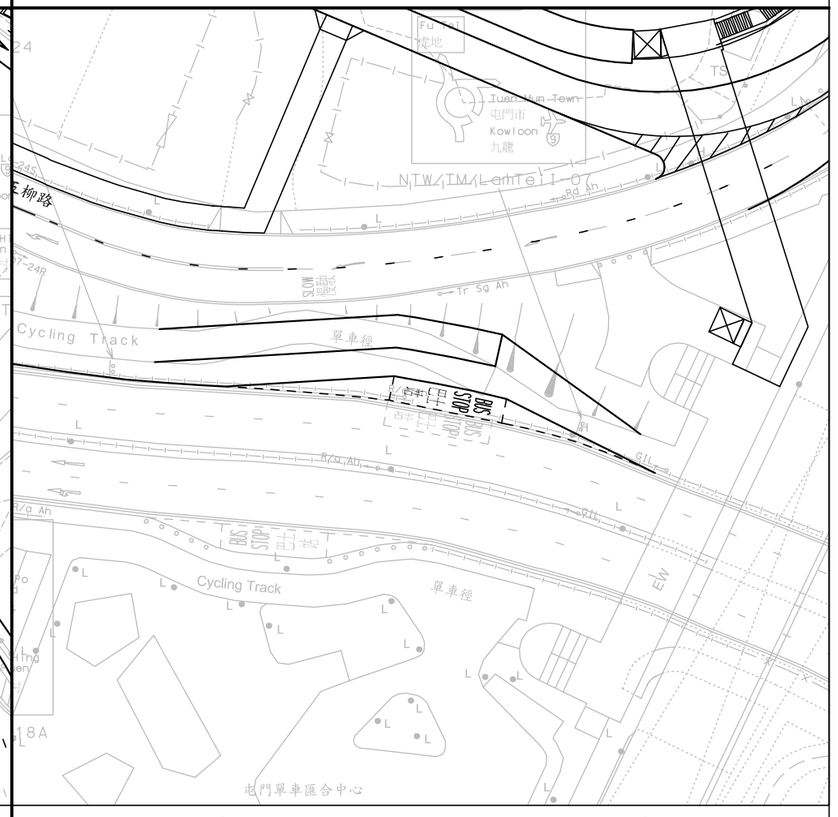
J6 - Lam Tei Interchange/ Castle Peak Road – Lam Tei



J10 - T-junction at San Hing Road

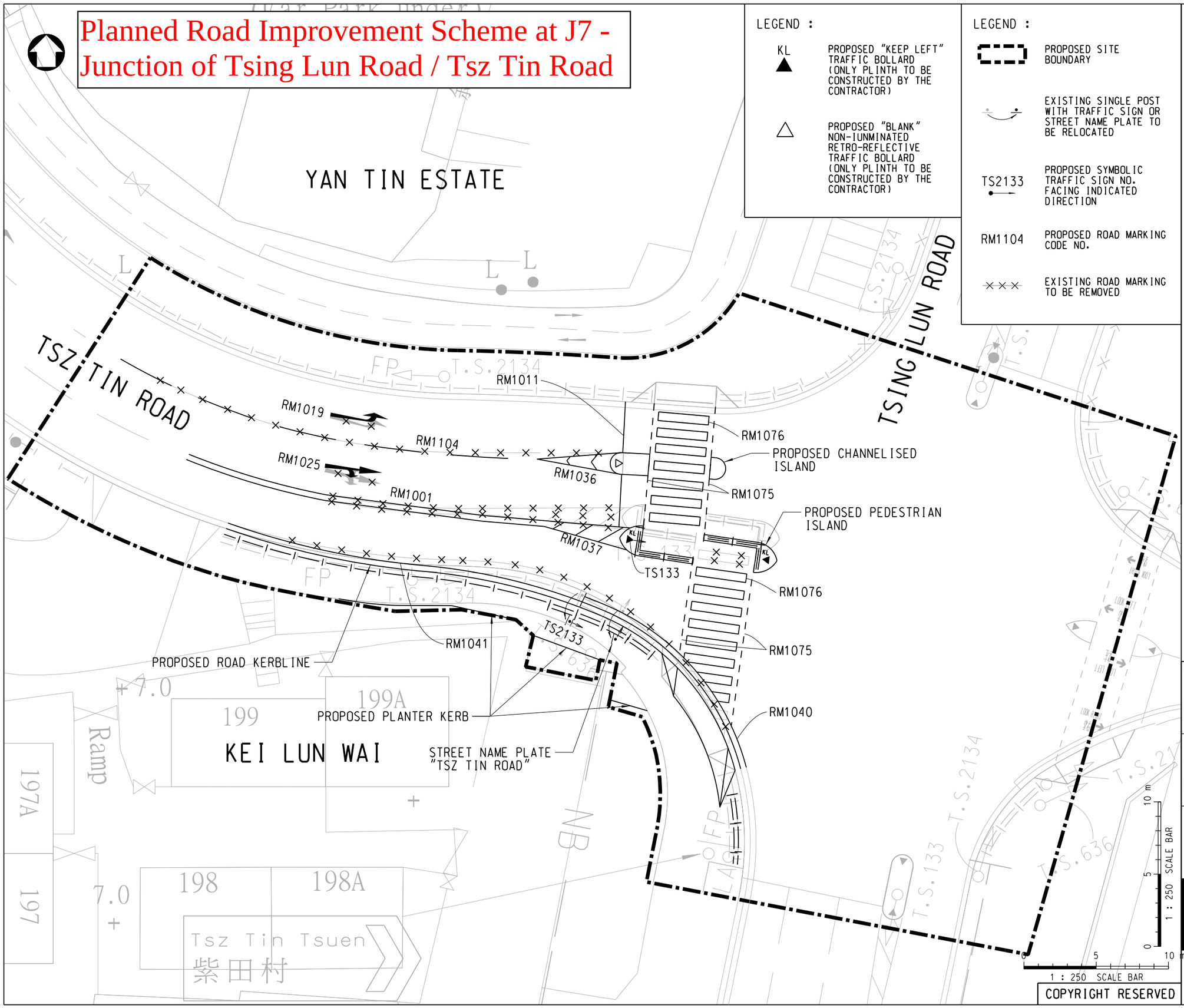


J12 - Hong Po Road/ Yan Tin Estate Access Road



Lam Tei Interchange Bus Stops scale 1:750 (A3)

Planned Road Improvement Scheme at J7 - Junction of Tsing Lun Road / Tsz Tin Road



LEGEND :

KL ▲	PROPOSED "KEEP LEFT" TRAFFIC BOLLARD (ONLY PLINTH TO BE CONSTRUCTED BY THE CONTRACTOR)
△	PROPOSED "BLANK" NON-IUNMINATED RETRO-REFLECTIVE TRAFFIC BOLLARD (ONLY PLINTH TO BE CONSTRUCTED BY THE CONTRACTOR)

LEGEND :

▭	PROPOSED SITE BOUNDARY
	EXISTING SINGLE POST WITH TRAFFIC SIGN OR STREET NAME PLATE TO BE RELOCATED
TS2133 →	PROPOSED SYMBOLIC TRAFFIC SIGN NO. FACING INDICATED DIRECTION
RM1104	PROPOSED ROAD MARKING CODE NO.
×××	EXISTING ROAD MARKING TO BE REMOVED

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. GRID LINES ARE IN HONG KONG METRIC GRID 1980.
3. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (mPD).
4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. LWSK-J5-0010.
5. DETAILS OF CONCRETE PLINTH FOR TRAFFIC BOLLARD SHALL REFER TO HyD STANDARD DRAWING NOS. H2140 TO H2141.
6. FOR DETAILS OF TRAFFIC SIGNS AND ROAD MARKING, REFER TO VOLUME 3 OF TRANSPORT PLANNING AND DESIGN MANUAL (TPDM) PUBLISHED BY TRANSPORT DEPARTMENT.
7. FOR SUPPORT DETAILS OF SINGLE POST TRAFFIC SIGNS INCLUDING COLOR OF POST, REFER TO HyD STANDARD DRAWING NOS. H2147 TO H2148.
8. BACK OF ALL SIGNS SHALL BE PAINTED IN GREY TO BS5252F CODE 18B19.
9. EXISTING ROAD MARKING TO BE AFFECTED SHALL BE REMOVED AND REPLACED BY PROPOSED ROAD MARKING.
10. NEW SUPPORTS, INCLUDING SINGLE/MULTIPLE POSTS AND FRAME SUPPORTS, SHALL BE CONSTRUCTED FOR ALL PROPOSED AND RELOCATED TRAFFIC OR DIRECTIONAL SIGNS.

works order title
IMPROVEMENT WORKS AT JUNCTION OF TSING LUN ROAD AND TSZ TIN ROAD, TUEN MUN

drawing title
TRAFFIC AIDS AND ROAD MARKING LAYOUT

drawing no.	scale
LWSK-J5-0009	1 : 250

office
LAND WORKS DIVISION
CIVIL ENGINEERING OFFICE

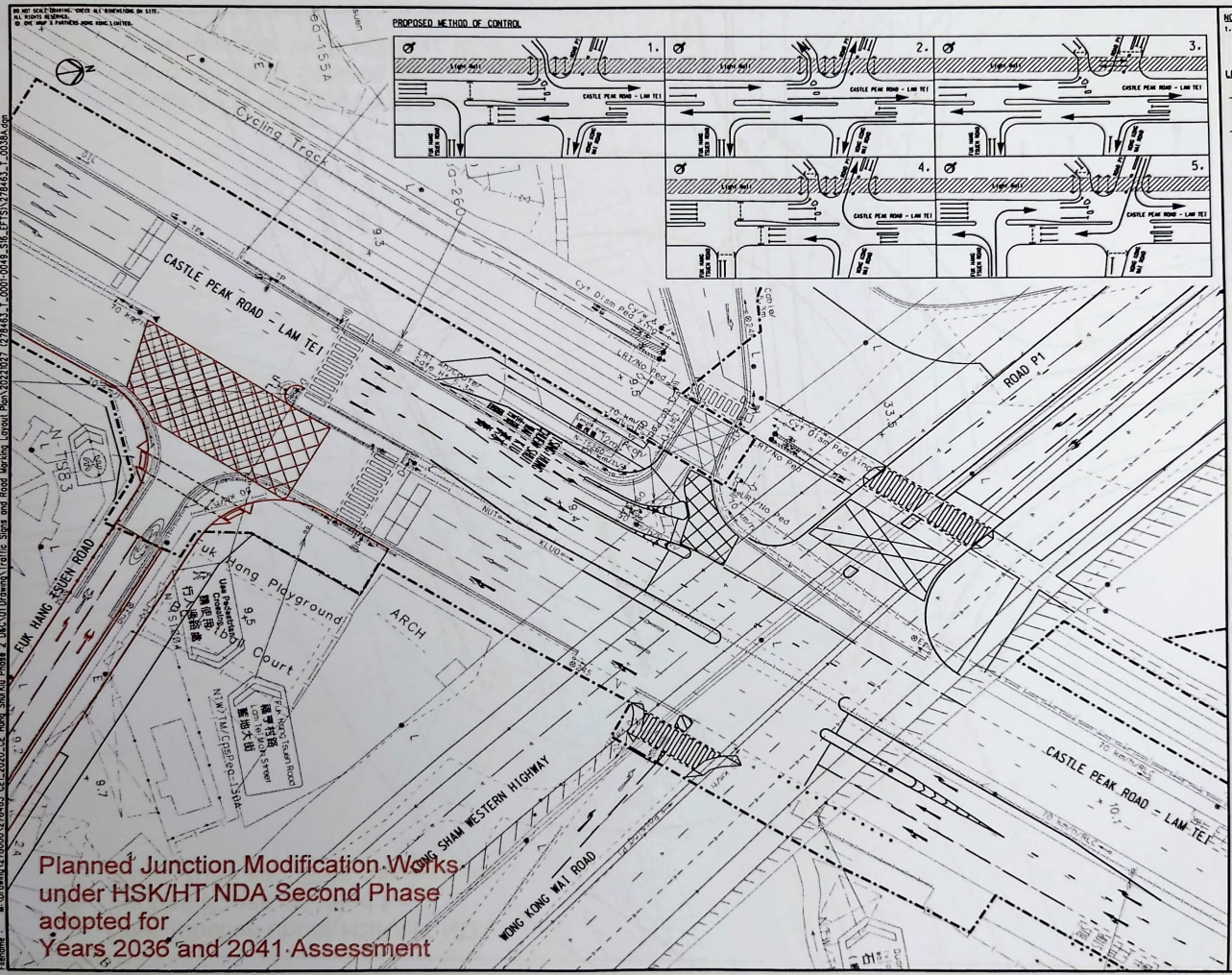
1 : 250 SCALE BAR

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

A3 420 x 297

S:#CV20101#Tsing Lun Road and Tsz Tin Road Junction#Sketches#LWSK-J5-0009.dgn
19/09/2022 **10.9.25.31#CAD_General#CAD_Common#PEN_TABLE#filename&date.tbl

Appendix F –
Extract of Planned Road Works under Agreement No. CE 01/2020 (CE) by CEDD



NOTES:
1. FOR NOTES AND LEGEND, REFER TO DWG.NO. 278463/T/0001.

LEGEND:

COMMITTED JUNCTION IMPROVEMENT SCHEME BY OTHERS

PLANNED JUNCTION IMPROVEMENT SCHEME UNDER HSK/HT NDA SECOND PHASE

Rev	Description	By	Date

Consultant: ARUP

Project Title: Agreement No. CE 1/2020 (CE) Hung Shui Kiu / Ha Tsuen New Development Area Package A Works for Second Phase Development – Design and Construction

Drawing title: JUNCTION LAYOUT PLAN – J38 CASTLE PEAK ROAD / ROAD P1/ FUK HANG TSUEN ROAD

Drawing no. 278463/T/0038A Rev. –

Drawn	Date	Checked	Approved
WAL	04/21	CFE1	DL

Scale: 1:250 @ A1 Status: PRELIMINARY

CEDD 土木工程拓展署 Civil Engineering and Development Department

Printed by : 8/11/2022
Filename : M:\Drawing\278000\278463_CE1_2020_CE_Hung_Shui_Kiu_Phase_2_DNC\01_Drawings\Traffic_Signs_and_Road_Marking_Layout_Plan\20221027_I278463_T_0001-0049_S16_EFTS\I278463_T_0038A.dgn