

Attachment 5

Revised Traffic Impact Assessment (TIA)

**Proposed Residential Care Home for Persons
with Disability (“RCHD”) at Lot 827 RP
in D.D.130, Fuk Hang Tsuen Road,
Lam Tei, Tuen Mun**

Traffic Impact Assessment

Final Report

September 2026

Prepared by: CKM Asia Limited

Proposed Residential Care Home for Persons with Disability (“RCHD”) At Lot 827 RP in D.D.130, Fuk Hang Tsuen Road, Lam Tei, Tuen Mun

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**Proposed Residential Care Home for Persons with Disability (“RCHD”)
At Lot 827 RP in D.D.130, Fuk Hang Tsuen Road, Lam Tei, Tuen Mun**

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At Lot 827 RP in D.D.130, Fuk Hang Tsuen Road, Lam Tei, Tuen Mun**

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1.0 INTRODUCTION

Background

- 1.1 The subject site is located at Lot 827 RP in D.D. 130 in Lam Tei. The Owner of the subject site has the intention to develop a residential care home for persons with disability ("Proposed RCHD")
- 1.2 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned by the Owner to conduct a traffic study in support of the Proposed RCHD. This report presents the findings and recommendation of the traffic study for the Proposed RCHD.

Structure of Report

- 1.3 The report is structured as follows:

- | | |
|---------------|---|
| Chapter One | - Gives the background of the project; |
| Chapter Two | - Describes the existing situation; |
| Chapter Three | - Outlines the Proposed RCHD; |
| Chapter Four | - Describes the traffic impact analysis; and |
| Chapter Five | - Describes the public transport impact analysis; |
| Chapter Six | - Gives the overall conclusion. |

2.0 EXISTING SITUATION

The Subject Site

- 2.1 The subject site is located to the southeast of the junction of Fuk Hang Tsuen Road / Lam Tei Main Street. It is occupied by temporary car park, and during the site visit in March 2026, there were no more than 10 private car parked in this temporary car park.

The Road Network

- 2.2 Fuk Hang Tsuen Road is a single carriageway 2-lane local distributor which connects with the Castle Peak Road – Lam Tei to the north and Lam Tei Main Street, to the south.
- 2.3 Lam Tei Main Street is a single carriageway 1-lane 1-way westbound road. It connects Fuk Hang Tsuen Road with Castle Peak Road - Lam Tei.
- 2.4 Castle Peak Road – Lam Tei is a dual carriageway 3-lane rural trunk road which connects with the Lam Tei Interchange to the south and Castle Peak Road – Hung Shui Kiu to the North.

Existing Traffic Flows

- 2.5 To quantify the traffic flows at junctions located in the vicinity of the subject site, manual classified counts were conducted at 0700 – 0900 and 1700 – 1900 hours on Thursday, 5th February 2026 and Friday, 6th February 2026 at the following junctions:
- J1: Castle Peak Road – Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road;
 - J2: Castle Peak Road – Lam Tei / Lam Tei Interchange;
 - J3: Castle Peak Road – Lam Tei / Lam Tei Main Street;
 - J4: Fuk Hang Tsuen Road / Lam Tei Main Street; and
 - J5: Fuk Hang Tsuen Road / Man Chat Road
- 2.6 The locations of these junctions are shown in **Figure 2.1** and the layouts are shown in **Figures 2.2 – 2.5** respectively.
- 2.7 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 are presented in **Figure 2.6**.

Performance of the Surveyed Junctions

- 2.8 The existing junction performance of the surveyed junctions are calculated based on the observed traffic counts, 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 2.1** and the detailed calculations are found in **Appendix A**.

TABLE 2.1 EXISTING JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction (Parameter)	AM Peak	PM Peak
J1	Castle Peak Road – Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road	Signal (RC)	40%	59%
J2	Castle Peak Road – Lam Tei / Lam Tei Interchange	Signal (RC)	135%	212%
J3	Castle Peak Road – Lam Tei / Lam Tei Main Street	Priority (DFC)	0.174	0.151
J4	Fuk Hang Tsuen Road / Lam Tei Main Street	Roundabout (DFC)	0.278	0.207
J5	Fuk Hang Tsuen Road / Man Chat Road	Priority (DFC)	0.532	0.491

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

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

Public Transport Facilities

- 2.10 The Subject Site is located close to high capacity transport services, including franchised bus and public light buses. Details of the road-based public transport facilities are presented in **Table 2.2** and shown in **Figure 2.7**.

TABLE 2.2 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Routing	Frequency (min)
KMB 53	Yoho Mall (Yuen Long) - Tsuen Wan (Nina Tower)	25 - 35
KMB 63X	Hung Shui Kiu (Hung Fuk Estate) - Jordan (West Kowloon Station)	12 - 30
KMB 68A	Long Ping Estate - Tsing Yi Station	12 - 30
KMB 258A ⁽¹⁾	Hung Shui Kiu (Hung Fuk Estate) → Lam Tin Station ^(A)	3 per day
KMB 258P ⁽²⁾	Hung Shui Kiu (Hung Fuk Estate) - Lam Tin Station ^(C)	12 - 30
KMB 261P	Tuen Mun (Siu Hong Court) → Sheung Shui (Tin Ping) ^{(2)(A)}	1-3 per day
	Sheung Shui (Tin Ping) → Tuen Mun (Siu Hong Court) ^{(1)(B)}	1 per day
KMB 960P	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)}	5 per day
KMB 960X ⁽¹⁾	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
LWB A34	Hung Shui Kiu (Hung Yuen Road) - Airport (Ground Transportation Centre)	15 - 45
LWB NA37 ^(D)	Tin Shui Wai Town Centre → Cathay Pacific City	6 per day
	Cathay Pacific City → Tin Shui Wai Town Centre	7 per day
CTB N969 ^(D)	Tin Shui Wai Town Centre - Causeway Bay (Moreton Terrace)	20 - 45
NLB B2	Yuen Long MTR Station - Shenzhen Bay Port	20 - 30
GMB 606S ^(D)	Yuen Long (Fung Cheung Road) - Tsim Sha Tsui East	6 - 13

KMB – Kowloon Motor Bus LWB – Long Win Bus CTB – CityBus

GMB – Green Minibus NLB – New Lantao Bus

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

Occupancy Survey on the Public Transport in the Vicinity

- 2.11 Survey on public transport services listed in **Table 2.2** was conducted during the AM and PM Peak periods on Tuesday, 23rd June 2026 at the bus stops near the subject site. The survey results are summarized in **Table 2.3**.

**TABLE 2.3 OCCUPANCY OF EXISTING PUBLIC TRANSPORT SERVICES
OPERATING NEAR THE SUBJECT SITE**

Direction	AM Peak			PM Peak		
	No. of Passenger		Occupancy [c] = [b]/[a]	No. of Passenger		Occupancy [f] = [e]/[d]
	Capacity [a]	Occupied [b]		Capacity [d]	Occupied [e]	
To other districts	4,200	1,650	39%	1,320	600	45%
From other districts	1,320	660	50%	3,120	1,290	41%

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

3.0 THE PROPOSED RCHD

Development Parameters

3.1 The parameters of the Proposed RCHD are presented in **Table 3.1**.

TABLE 3.1 PARAMETERS OF THE PROPOSED RCHD

Item	Proposed RCHD
Site Area	1,694m ² (About)
No. of beds	No more than 320

Internal Transport Facilities for the Proposed RCHD

3.2 RCHDs typically have significantly fewer visitors and lower staff-to-patient ratio than a hospital. Hence, RCHD has much lower parking demand than a hospital. In view that the recommendation of internal transport facilities for RCHD is not specified in the HKPSG, reference is made to 3 similar RCHDs, in terms of the number of beds, and transport accessibility and these are presented in **Table 3.2**:

TABLE 3.2 SIMILAR RCHD

Similar RCHD	Distance from MTR (km)	No. of beds	Provision of Internal Transport Facility			
			Car parking space	Private car / taxi lay-by	LGV L/UL bay	Light bus/ ambulance
Caritas Jockey Club Lai King Rehabilitation Centre (31 Lai Chi Ling Road, Kwai Chung)	1	505	6 (1 space per 84 beds)	Nil	1	1
Po Leung Kuk Y.C.Cheng Centre (9 Yau Ting Street, Tai Wai)	1.4	212	6 (1 space per 35 beds)	1	Nil	Nil
Jockey Club Tuen Mun Home For The Aged Blind (8 Tsing Fuk Lane, Tuen Mun)	1.2	243	4 (1 space per 61 beds)	1	1	1

Note: LGV L/UL bay – light goods vehicle loading / unloading bay

3.3 **Table 3.2** shows that the 3 similar RCHDs provide around 1 car parking space per 35 – 84 beds. Based on this rate, a total of 7 car parking spaces are provided for the Proposed RCHD with 320 beds.

3.4 In addition to the car parking spaces, 1 private car / taxi lay-by, 1 LGV loading/unloading bay and 1 light bus / ambulance shared-use parking space are provided for the operational needs, and these are presented in **Table 3.3**. The G/F layout plan is shown in **Figure 3.1**.

TABLE 3.3 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR THE PROPOSED RCHD

Internal Transport Facilities	Provision	Dimension (m)		
		Length	Width	Headroom
Car Parking Space	7 nos. ⁽¹⁾	5	2.5	2.4
Private Car / Taxi Lay-by	1 no.	5	2.5	2.4
LGV Loading/ Unloading Bay	1 no.	7	3.5	3.6
Light Bus/ ambulance shared-use parking space	1 no.	9	3.0	3.6

⁽¹⁾ Including one accessible car parking space with dimension of 5m (length) x 3.5m (width) x 2.4m (headroom)

- 3.5 The Proposed RCHD provides LGV loading / unloading bay instead of M/HGV because: (1) all deliveries observed at 3 similar RCHDs were conducted using only LGVs and goods vans, and (2) according to the Project Architect, due to the building design constraints, provision of the M/HGV loading / unloading bay is difficult.

Fuk Hang Tsuen Road Footpath abuts the Proposed RCHD

- 3.6 As shown in **Figure 3.1**, the layout incorporated a setback and provided minimum 2.5m-wide footpath at Fuk Hang Tsuen Road. In view that the existing overhead cable and its supporting poles near the site entrance do not affect the vehicular and pedestrian traffic, these utilities will remain unchanged.

Swept Path Analysis

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

4.0 TRAFFIC IMPACT

Design Year

- 4.1 The Proposed RCHD is expected to be completed in 2031, and the design year adopted for the traffic assessment is: (i) at least 3 years after the planned completion of the development, or (ii) 5 years from the date of this application, whichever is the later. Based on (i), the design year is 2034, and for (ii) the design year is 2031. Since the later year is 2034, the design year adopted for junction capacity analysis for the Proposed RCHD is 2034.

Traffic Forecasting

- 4.2 Year 2034 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the BDTM, which contains the latest planning assumption and has taken into account all committed highway infrastructures; (ii) the estimated traffic growth from 2031 to 2034; (iii) expected traffic generation by the planned / committed development in the vicinity; and (iv) expected traffic generation by the Proposed RCHD.

Estimated Growth Rate from 2031 to 2034

- 4.3 Reference is made to the: (i) the Annual Average Daily Traffic ("AADT") of core stations located in the vicinity of the Proposed RCHD, which is found in the Annual Traffic Census, published by Transport Department, and (ii) the Hong Kong Population Projection published by Census and Statistics Department.
- 4.4 The information for (i) and (ii) are presented in **Tables 4.1** and **4.2** respectively.

TABLE 4.1 AADT OF THE CORE STATIONS FOUND IN THE VICINITY OF THE SUBJECT SITE

Station	6213	6604	Overall
Road	Castle Peak Road - Hung Shui Kiu	Lam Tei Main Street	–
From	Tin Ha Road	Castle Peak Road – Lam Tei	–
To	Lam Tei Interchange	Fuk Hang Tsuen Road	–
2018	32,740	880	33,620
2019	33,220	960	34,180
2020	34,710	950	35,660
2021	34,800	1,020	35,820
2022	34,500	1,070	35,570
2023	34,030	1,150	35,180
2024	32,970	1,220	34,190
Average Annual Growth (2018-2024)	0.46%	2.02%	0.51%

- 4.5 **Table 4.1** shows that the annual average traffic growth of 0.51%.

TABLE 4.2 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

Year	Population in Hong Kong (thousands)
2031	7,820.2
2034	7,945.1
Average Annual Growth (2031 – 2034)	0.53%

- 4.6 **Table 4.2** shows that the annual population growth between 2031 – 2034 is 0.53%. To be conservative, the annual growth rate of 0.53% is adopted for 2031 – 2034.

Planned/ Committed Developments near the Subject Site

- 4.7 The planned/ committed developments near the Subject Site have been incorporated to produce the future year traffic flows are listed in **Table 4.3**.

TABLE 4.3 PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

Ref. No.	Development	Use	No. of Flats
A	Light Public Housing at Yan Po Road	Light Public Housing	5,620
B	Tuen Mun Area 54 Site 4A (South)	PRH	1,475
C	Tuen Mun Area 54 Site 5	SSF	1,020
D	Development at San Hing Road and Hong Po Road, Tuen Mun	PRH / SSF	20,400
E	proposed residential development at Lots 531 RP, 532 S.D. RP and 532 RP in DD 130, Lam Tei (A/TM-LTY/ 426)	Private Housing	184
F	Proposed Residential Development at Lots 220 RP (part) and 221 in D.D. 130, San Hing Tsuen (Y/TM-LTY/ 10)	Private Housing	288
G	Proposed Residential Development at Various Lots in D.D. 130, Lam Tei (Y/TM-LTY/ 11)	Private Housing	1,390
H	Pok Oi Hospital Lam Tei Elderly Home at Fuk Hang Tsuen Road	1434-beds RCHE	N/A
I	Proposed Expansion of Lingnan University	11,000m ² Education Institution	N/A

PRH – Public Rental Housing SSF – Subsidised Sale Flats RCHE – Residential Care Home for the Elderly

Planned Road Improvement Works Nearby

- 4.8 The planned road improvement works are adopted for the Year 2034 junction capacity analysis and are presented below.

Hung Shiu Kiu New Development Area

- 4.9 Road improvement work is planned at J1, i.e., junction of Castle Peak Road – Lam Tei / Fuk Hang Tsuen Road / Ng Lau Road, 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”), and the road improvement work is found in **Appendix C**.

Development at San Hing Road and Hong Po Road

- 4.10 Road improvement work is planned at J3, i.e., junction of Castle Peak Road – Lam Tei / Lam Tei Interchange, under “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” (Agreement no. CE 39/2021 (CE)) by CEDD, and the road improvement work is found in **Appendix D**.
- 4.11 Upon completion of the junction improvement work, Castle Peak Road – Lam Tei southbound will provide 2 right-turn lanes, 1 shared lane for right turn and straight ahead and 1 left turn lane. The improvement work 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.

Net Increase in Traffic Generation of the Proposed RCHD

- 4.12 A survey on existing use of the subject site was conducted on Friday, 6th February 2026, and the results are presented in **Table 4.4**.

TABLE 4.4 TRAFFIC GENERATION OF EXISTING USE

Item	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Existing Use (pcu/hr)	3	2	1	3
	5 (2-way)		4 (2-way)	

- 4.13 **Table 4.4** shows that the existing use generates 5 and 4 pcu per hour (2-way) during AM and PM peaks respectively.
- 4.14 To quantify the traffic generated by the Proposed RCHD, reference is made to 3 similar RCHDs, in terms of the number of beds, and transport accessibility. The traffic generation rate of the RCHDs and adopted traffic generation rates for the Proposed RCHD are summarised in **Table 4.6**.

TABLE 4.5 TRAFFIC GENERATION RATE OF SIMILAR RCHDS AND ADOPTED TRAFFIC GENERATION RATES

Development	Traffic Generation Rates (pcu/bed/hr)					
	AM Peak			PM Peak		
	GEN	ATT	2-way	GEN	ATT	2-way
Caritas Jockey Club Lai King Rehabilitation Centre (31 Lai Chi Ling Road, Kwai Chung) - 505 beds	0.0178	0.0218	0.0396	0.0059	0.0020	0.0079
Po Leung Kuk Y.C.Cheng Centre (9 Yau Ting Street, Tai Wai) - 212 beds	0.0330	0.0425	0.0755	0.0330	0.0236	0.0566
Jockey Club Tuen Mun Home For The Aged Blind (8 Tsing Fuk Lane, Tuen Mun) - 243 beds	0.0206	0.0453	0.0658	0.0412	0.0082	0.0494
Adopted Traffic Generation Rate	0.0330	0.0425	0.0755	0.0330	0.0236	0.0566

GEN – generation, ATT – attraction

- 4.15 Based on the adopted traffic generation rate in **Table 4.5**, the AM and PM peak hour traffic generation of the Proposed RCHD are calculated and presented in **Table 4.6**.

TABLE 4.6 TRAFFIC GENERATION OF THE PROPOSED RCHD

Proposed RCHD (320-bed RCHD)	Parameter	AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
Traffic Generation	pcu/hr	11	14	11	8
		25 (2-way)		19 (2-way)	

- 4.16 **Table 4.6** shows that the Proposed RCHD generates 25 and 19 pcu per hour (2-way) during AM and PM peaks respectively.
- 4.17 The additional traffic generated by the Proposed RCHD is calculated using the traffic generation of Proposed RCHD shown in **Table 4.6**, and the existing uses shown in **Table 4.4**, and is presented in **Table 4.7**.

TABLE 4.7 ADDITIONAL TRAFFIC GENERATIONS BY THE PROPOSED RCHD

Development	Traffic Generations (pcu/ hour)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Proposed RCHD (from Table 4.6) [a]	11	14	11	8
Existing Uses (from Table 4.4) [b]	3	2	1	3
Net Increase in Traffic Generations [a] – [b]	+ 8	+ 12	+ 10	+ 5
	+ 20(2-way)		+ 15(2-way)	

- 4.18 Table 4.7 shows that compared to existing use, the Proposed RCHD is expected to generate additional 20 and 15 pcu / hour (2-way) during AM and PM peak hours respectively.

Year 2034 Traffic Flows

- 4.19 Year 2034 traffic flows for the following cases are derived:

Year 2034 Without the Proposed RCHD [A] = Traffic flows derived with reference to 2031 NTW1 BDTM + estimated traffic growths from 2031 to 2034 + estimated traffic generation of the approved / new developments

Year 2034 With the Proposed RCHD [B] = [A] + Additional traffic generated by the Proposed RCHD

- 4.20 Year 2034 peak hour traffic flows for the above two cases are shown in Figures 4.1 and 4.2 respectively.

Year 2034 Junction Capacity Analysis

- 4.21 Year 2034 junction capacity analysis for the cases without and with the Proposed RCHD are summarised in Table 4.8 and detailed calculations are found in the Appendix A.

TABLE 4.8 YEAR 2034 JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction (Parameter)	Year 2034 without Proposed RCHD		Year 2034 with Proposed RCHD	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Castle Peak Road – Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road	Signal (RC)	18%	23%	18%	23%
J2	Castle Peak Road – Lam Tei / Lam Tei Interchange	Signal (RC)	21%	46%	21%	46%
J3	Castle Peak Road – Lam Tei / Lam Tei Main Street	Priority (DFC)	0.288	0.239	0.307	0.263
J4	Fuk Hang Tsuen Road / Lam Tei Main Street	Roundabout (DFC)	0.300	0.220	0.306	0.228
J5	Fuk Hang Tsuen Road / Man Chat Road	Priority (DFC)	0.568	0.518	0.569	0.518

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

- 4.22 Table 4.8 shows that the traffic generation associated with the Proposed RCHD has negligible traffic impact to the road junctions analysed.

5.0 IMPACT TO PUBLIC TRANSPORT SERVICES

Public Transport Demand of Proposed RCHD

- 5.1 It is estimated that all pedestrian generated by the Proposed RCHD would take public transport. To quantify the public transport demand generated by the Proposed RCHD, reference is made to 3 similar RCHDs, in terms of the number of beds, and transport accessibility. The traffic generation rate of the RCHDs and adopted traffic generation rates for the Proposed RCHD are summarised in Tables 5.1.

TABLE 5.1 PEDESTRIAN GENERATION RATES OF THE SURVEYED RCHD

Development	No. of beds	AM Peak		PM Peak	
		GEN	ATT	GEN	ATT
Pedestrian Generation (ped / hr)					
Caritas Jockey Club Lai King Rehabilitation Centre (31 Lai Chi Ling Road, Kwai Chung)	505	10	45	58	9
Po Leung Kuk Y.C.Cheng Centre (9 Yau Ting Street, Tai Wai)	212	2	2	2	1
Jockey Club Tuen Mun Home For The Aged Blind (8 Tsing Fuk Lane, Tuen Mun)	243	3	20	22	4
Pedestrian Generation Rates (ped / bed/ hr)					
Caritas Jockey Club Lai King Rehabilitation Centre (31 Lai Chi Ling Road, Kwai Chung)	505	0.0198	0.0891	0.1149	0.0178
Po Leung Kuk Y.C.Cheng Centre (9 Yau Ting Street, Tai Wai)	212	0.0094	0.0094	0.0094	0.0047
Jockey Club Tuen Mun Home For The Aged Blind (8 Tsing Fuk Lane, Tuen Mun)	243	0.0123	0.0823	0.0905	0.0165
Adopted Pedestrian Generation Rate		0.0198	0.0891	0.1149	0.0178

GEN – Generation ATT – Attraction

- 5.2 The public transport demand of the Proposed RCHD is estimated based on the pedestrian generation rates in Table 5.1 and is presented in Table 5.2.

TABLE 5.2 PUBLIC TRANSPORT DEMAND OF THE PROPOSED RCHD

Item	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Adopted Pedestrian Generation Rate (ped / bed / hr)				
RCHD (from Table 5.1)	0.0198	0.0891	0.1149	0.0178
Public Transport Demand (passenger / hr)				
The Proposed RCHD – 320 beds	7	29	37	6
	36 (2-way)		43 (2-way)	

- 5.3 Table 5.2 shows that the Proposed RCHD is expected to generate 36 and 43 passenger / hour (2-way) in AM and PM peak respectively.

Public Transport Demand of Planned / Committed Developments in the Vicinity

- 5.4 The public transport demand generated by planned / committed developments found in **Table 4.3**, is included in the Year 2034 public transport occupancy.

Mode Choices of Public Transport Services for the Proposed RCHD

- 5.5 Reference is made to “Travel Characteristic Survey 2022” (“TCS2022”) to determine the public transport services used by the Proposed RCHD, and is presented in **Table 5.3**.

TABLE 5.3 DISTRIBUTION OF TRANSPORT MODE IN TCS2022

Transport Mode	Distribution
Rail	35%
Franchised Bus	26%
Public Light Bus	11%
Private Vehicle	14%
Special Purpose Bus	6%
Taxi	6%
Tram	1%
Ferry	1%
Total	100%

- 5.6 To estimate public transport demand generated by the Proposed RCHD for rail and franchised bus, the following issues are considered:

- (1) There are no public light bus and ferry service provided near the Proposed RCHD.
- (2) The pick-up/drop-off activities of taxi, private vehicles, special purpose buses are expected to be conducted within the Proposed RCHD.

- 5.7 To calculate the public transport demand for the remaining 2 modes, i.e., rail and franchised bus, their distributions are pro-rated as follows:

Rail: $35\% / (35\% + 26\%) * 100\% = 57\%$

Franchised Bus: $26\% / (35\% + 26\%) * 100\% = 43\%$

Estimated Peak Hour Public Transport Demand

- 5.8 The peak hour public transport demand of the Proposed RCHD is estimated based on the adjusted transport mode presented in **Paragraph 5.7**, and are presented in **Table 5.4**.

TABLE 5.4 ESTIMATED PEAK HOUR PUBLIC TRANSPORT DEMAND OF THE PROPOSED RCHD

Transport Mode of Proposed RCHD (Passenger/hr)	Ratio	AM Peak			PM Peak		
		Gen	Att	2-way	Gen	Att	2-way
Total (from Table 5.2)	100%	7	29	36	37	6	43
Rail	57%	4	17	21	21	3	24
Franchised Bus	43%	3	12	15	16	3	19

Gen – Generation

Att – Attraction

- 5.9 **Table 5.4** shows that Proposed RCHD is expected to generate additional of 21

and 24 passengers per hour (2-way) rail demand and 15 and 19 passengers per hour (2-way) franchised bus demand during AM and PM peak hour respectively.

Annual Public Transport Demand Growth Rate between 2026 – 2034

- 5.10 To establish the local public transport demand growth rate from 2026 to 2034, reference is made to several sources of information including:

Between 2026 – 2031: *“2019 - based TPEDM” from Planning Department*

Between 2031 – 2034: *“Hong Kong Population Projections” from the Census and Statistics Department*

- 5.11 Relevant information from the 2019-based TPEDM is presented in **Table 5.5**.

TABLE 5.5 TUEN MUN NEW TOWN POPULATION PROJECTIONS

Year	Population [a]	Employment [b]	Overall [c] = [a] + [b]
2026	538,900	140,200	679,100
2031	606,850	150,750	757,600
Average Annual Growth 2026 to 2031	2.4%	1.5%	2.2%

- 5.12 **Table 5.5** shows that the average annual population growth in the Tuen Mun between 2026 and 2031 is 2.2%.

- 5.13 Relevant information from the *“Hong Kong Population Projections”* is presented in **Table 5.6**.

TABLE 5.6 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

Year	Hong Kong Resident Population ('000)
2031	7,820.2
2034	7,945.1
Average Annual Growth 2031 to 2034	0.53%

- 5.14 **Table 5.6** shows that the average annual population growth in Hong Kong between 2031 – 2034 is 0.53%.

- 5.15 Based on the above, the annual growth rates adopted are 2.2% from 2026 to 2031, and 1.0% from 2031 to 2034.

2034 Public Transport Occupancy

- 5.16 Year 2034 public transport occupancies were derived with reference to the (i) observed public transport trips in **Table 2.3**; (ii) annual public transport demand growth rate between 2026 – 2034; and (iii) expected public transport demand due to the planned / committed developments in the vicinity, and Proposed RCHD.

- 5.17 Year 2034 peak public transport occupancies were derived as follows:

2034 without the Proposed RCHD [A] = *2026 observed occupancy + adopted public transport demand growth from 2026 to 2034 + public transport demand due to the planned / committed developments*

2034 with the Proposed RCHD [B] = *[A] + public transport demand of Proposed RCHD*

5.18 Year 2034 public transport occupancies for the cases without and with the Proposed RCHD are summarised in **Table 5.7**.

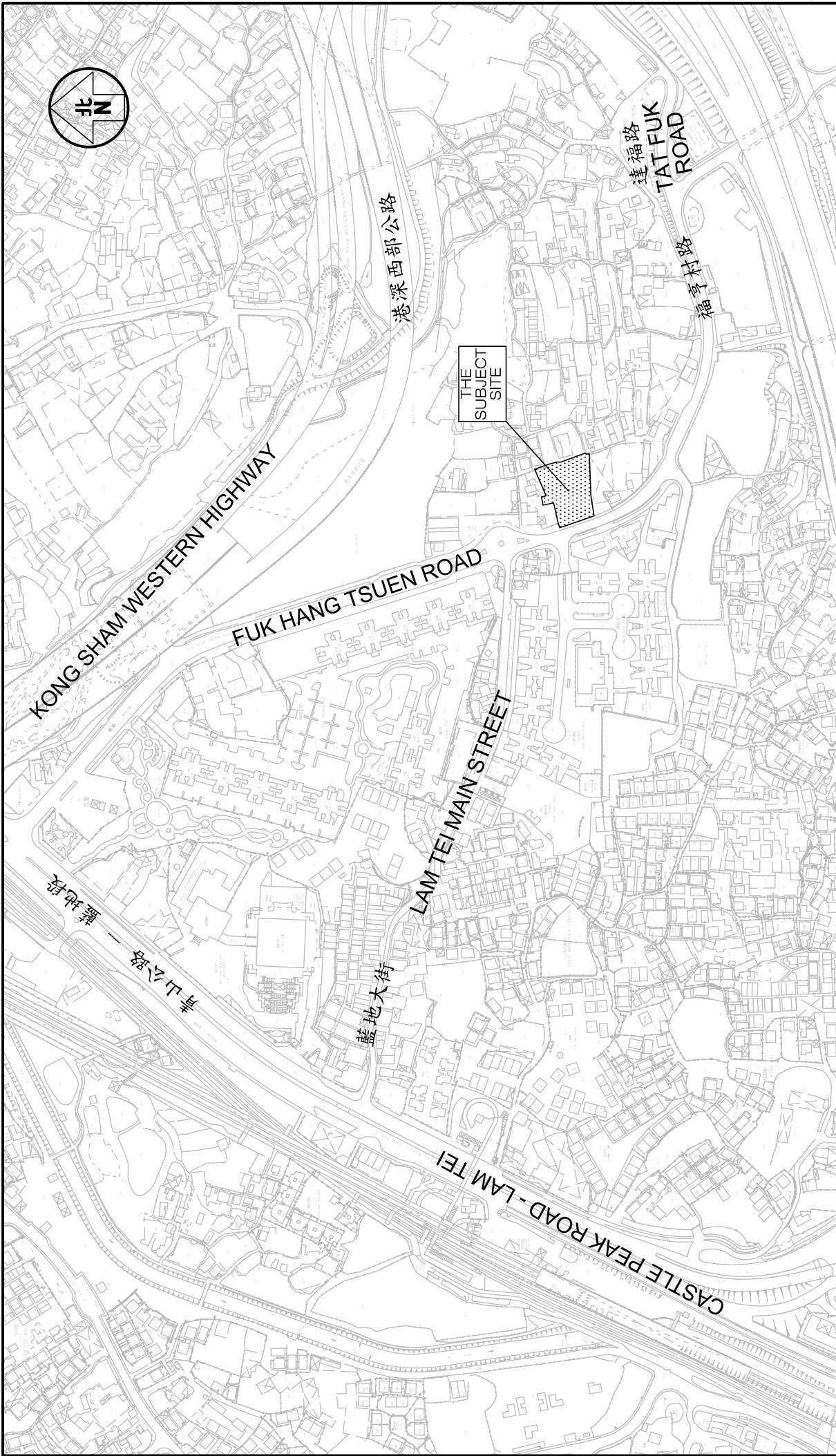
TABLE 5.7 YEAR 2034 PUBLIC TRANSPORT OCCUPANCY OPERATING NEARBY DURING PEAK HOURS

Direction	AM Peak			PM Peak		
	No. of Passenger		Occupancy [c] = [b]/[a]	No. of Passenger		Occupancy [f] = [e]/[d]
	Capacity [a]	Occupied [b]		Capacity [d]	Occupied [e]	
Without the Proposed RCHD						
To other districts	4,200	2,323	55%	1,320	870	66%
From other districts	1,320	928	70%	3,120	1,949	62%
With the Proposed RCHD						
To other districts	4,200	2,326	55%	1,320	886	67%
From other districts	1,320	940	71%	3,120	1,952	63%

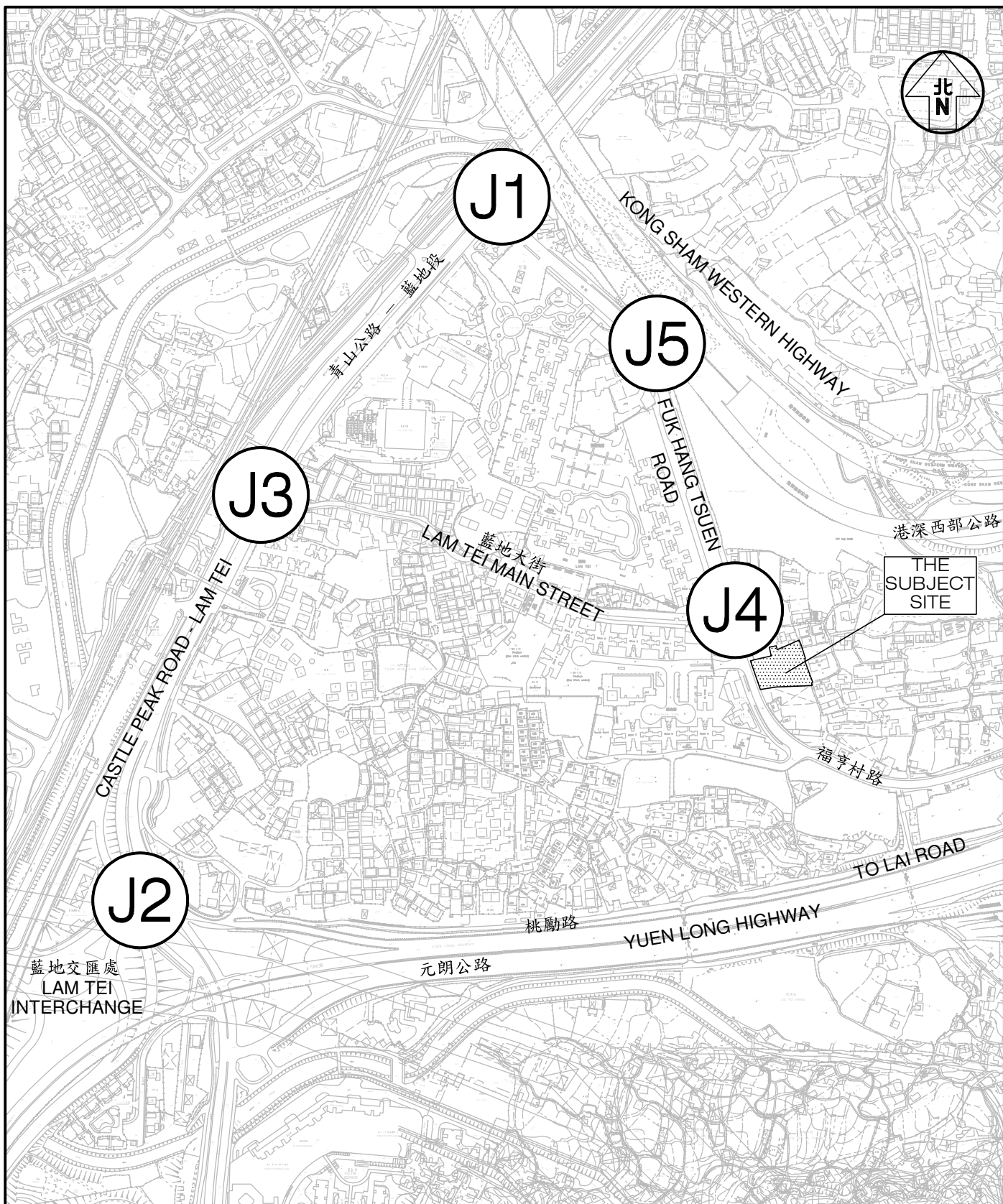
5.19 **Table 5.7** show that public transport demand associated with the Proposed RCHD has negligible impact to the public transport services operating in the vicinity in Year 2034.

6.0 SUMMARY

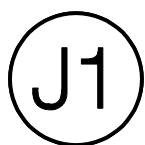
- 6.1 The subject site is located at Lot 827 RP in D.D. 130 in Lam Tei, to the southeast of the junction of Fuk Hang Tsuen Road / Lam Tei Main Street. The subject site is at present occupied by temporary car park. The Owner of the subject site has the intention to develop a RCHD.
- 6.2 Manual classified counts were conducted at junctions, which are located in the vicinity in order to establish the existing traffic flows during weekday AM peak, PM peak and weekend peak.
- 6.3 Internal transport facilities for the Proposed RCHD are provided with reference to similar RCHDs.
- 6.4 Traffic generated by the Proposed RCHD is estimated based on the trip generation rates obtained from the survey of similar RCHDs.
- 6.5 The junction capacity analysis results found that the additional traffic generated by the Proposed RCHD has negligible traffic impact to the analysed junctions in Year 2034. From traffic engineering grounds, the Proposed RCHD is acceptable.
- 6.6 The assessment on nearby public transport services found that the Proposed RCHD has negligible impact.
- 6.7 This TIA concluded that the net increase in traffic generation by the Proposed RCHD has negligible traffic impact to the surrounding road network, and, is acceptable from traffic terms.



Project Title	PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ('RCHD') AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN			
	J7463			
	Figure No.	1.1	Revision	B
Figure Title	Designed by	L K W	Drawn by	S C Y
	Checked by			K C
	Scale in A4	1 : 4,000	Date	25 JUN 2026
LOCATION OF THE SUBJECT SITE				
CKM Asia Limited				



LEGEND :



Surveyed Junction

Project Title
PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD")
 AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN

Figure Title

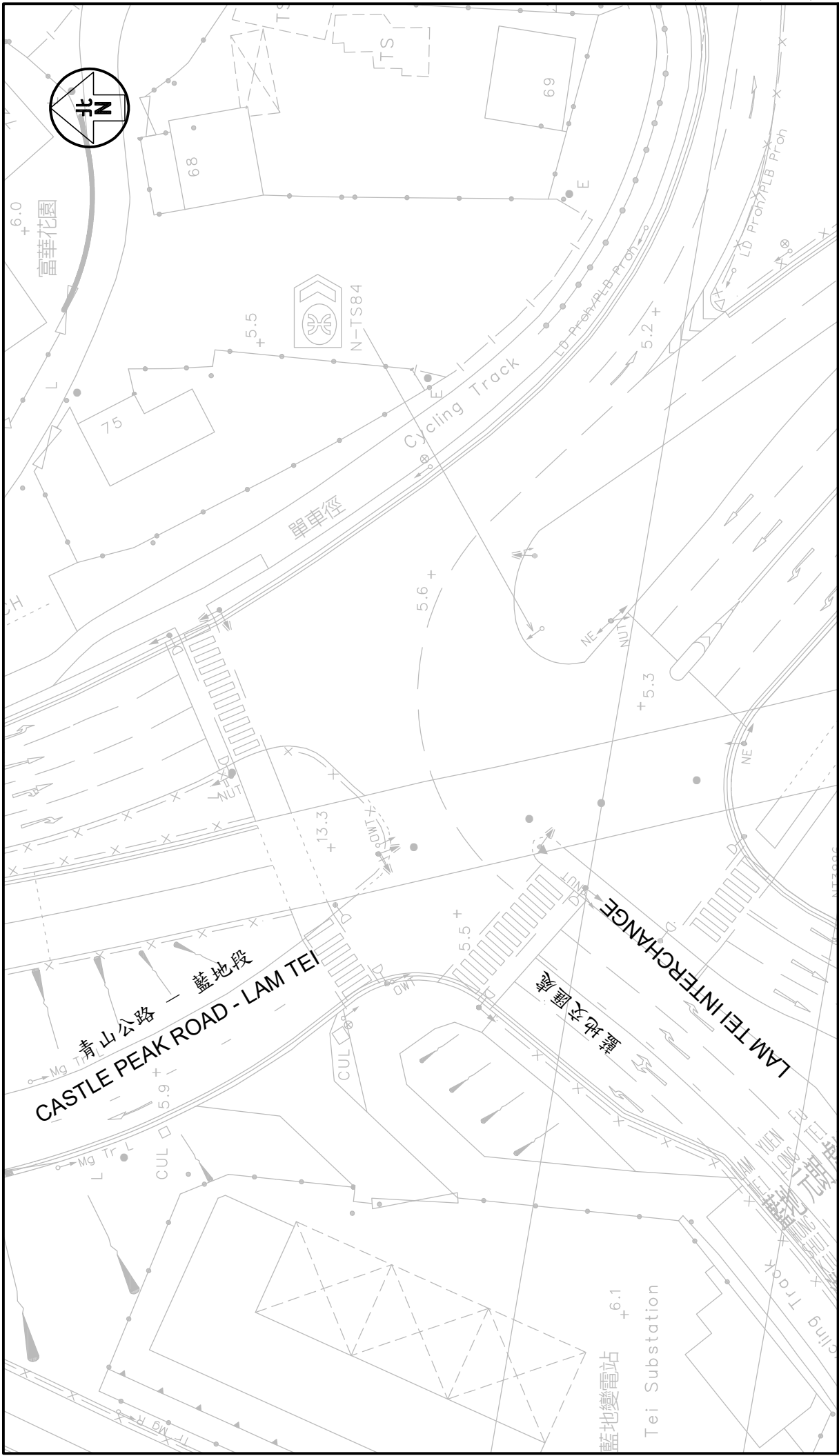
LOCATION OF SURVEYED JUNCTIONS

Job No. J7463	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 B	Date 25 JUN 2026

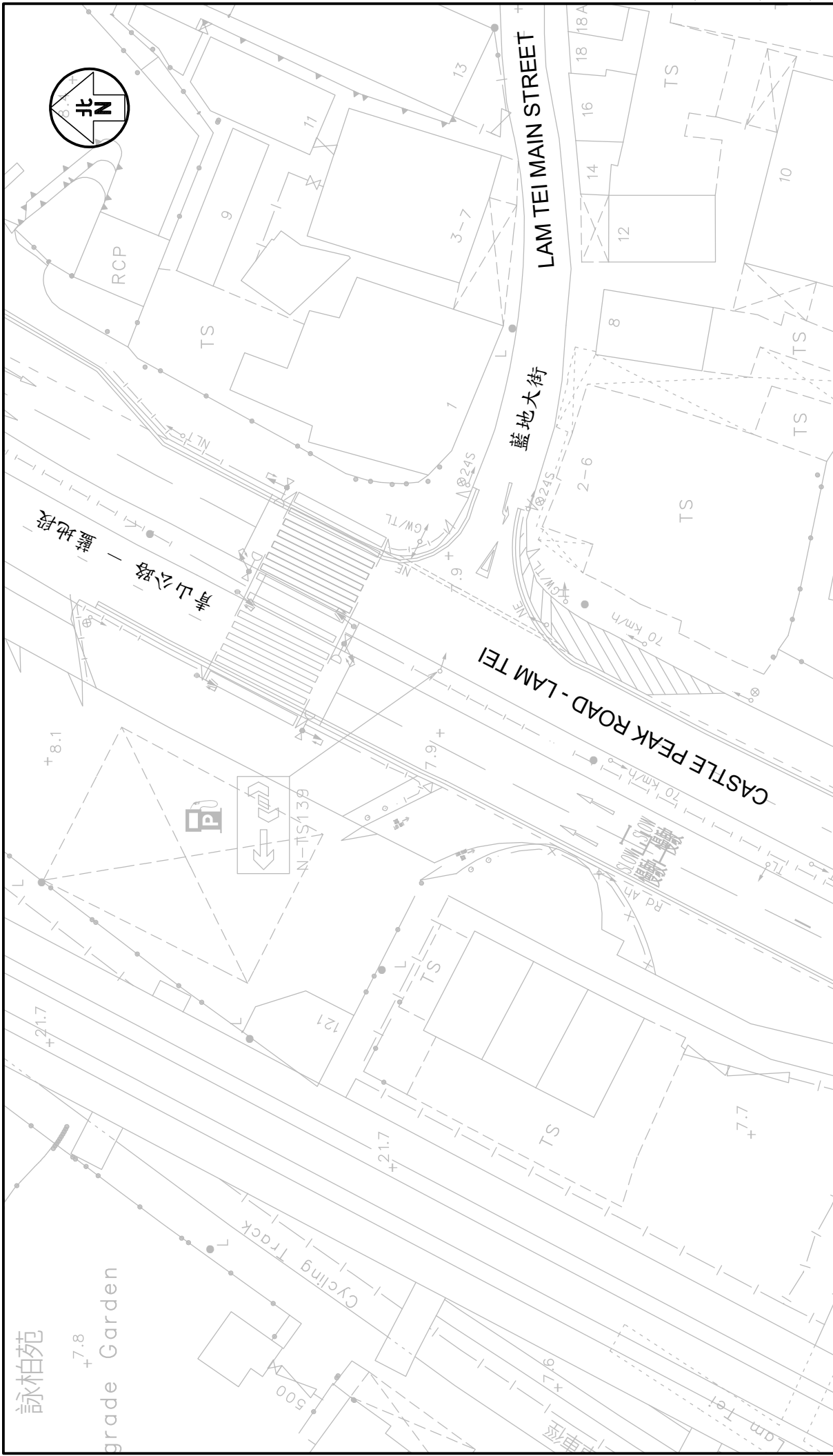
CKM Asia Limited



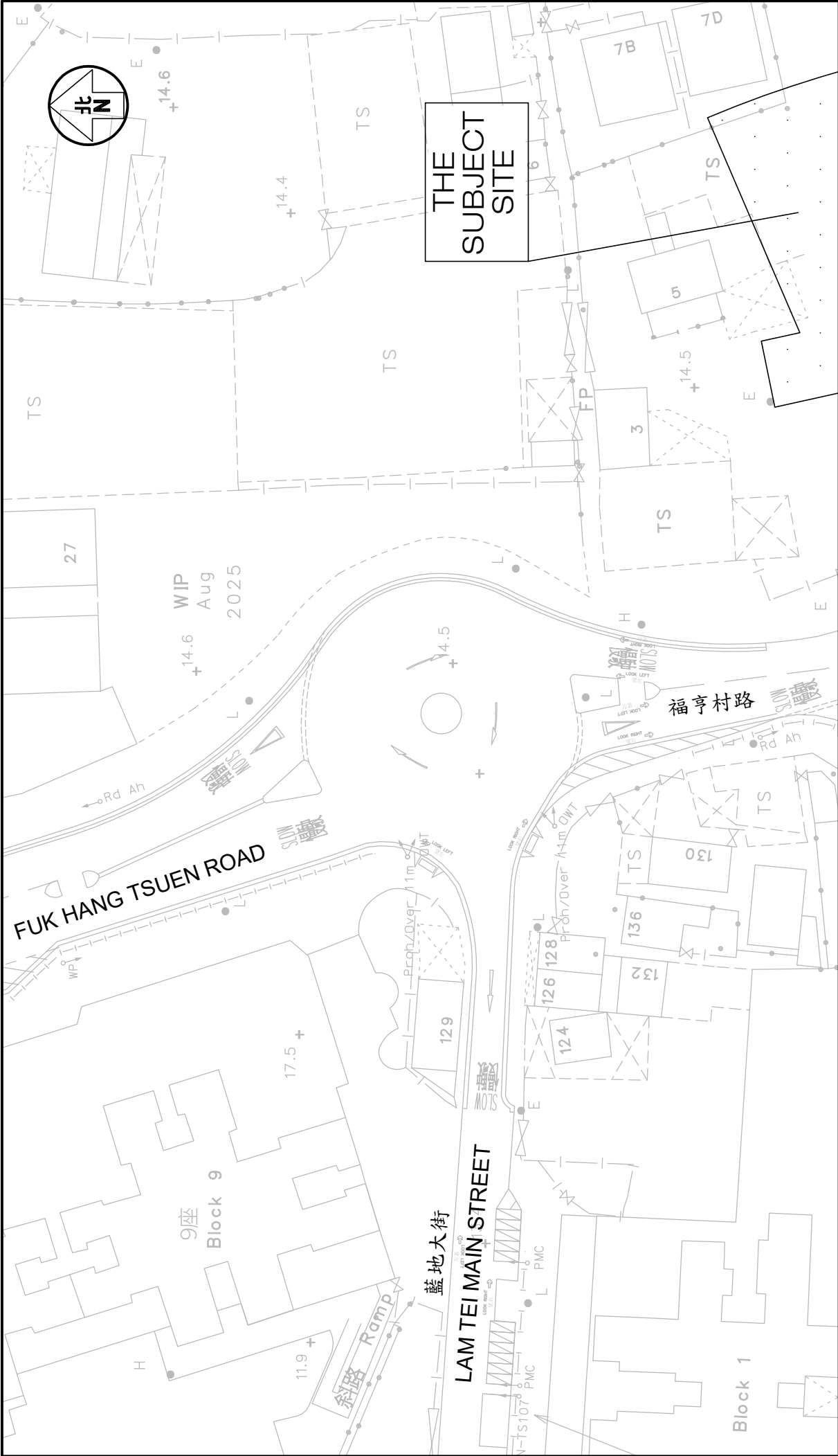
Project Title S12A FOR PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY OR ELDERLY IN LOT 827RP IN DD130 TUEN MUN AND ADJOINING GOVERNMENT LAND (FUK HANG TSUEN ROAD)		Job No. J7463	Figure No. 2.2		Scale in A4 1 : 500	
		Designed by L K W	Drawn by S C Y	Checked by K C	Revision B	Date 25 JUN 2026
Figure Title JUNCTION LAYOUT OF CASTLE PEAK ROAD - LAM TEI / NG LAU ROAD / FUK HANG TSUEN ROAD		CKM Asia Limited				



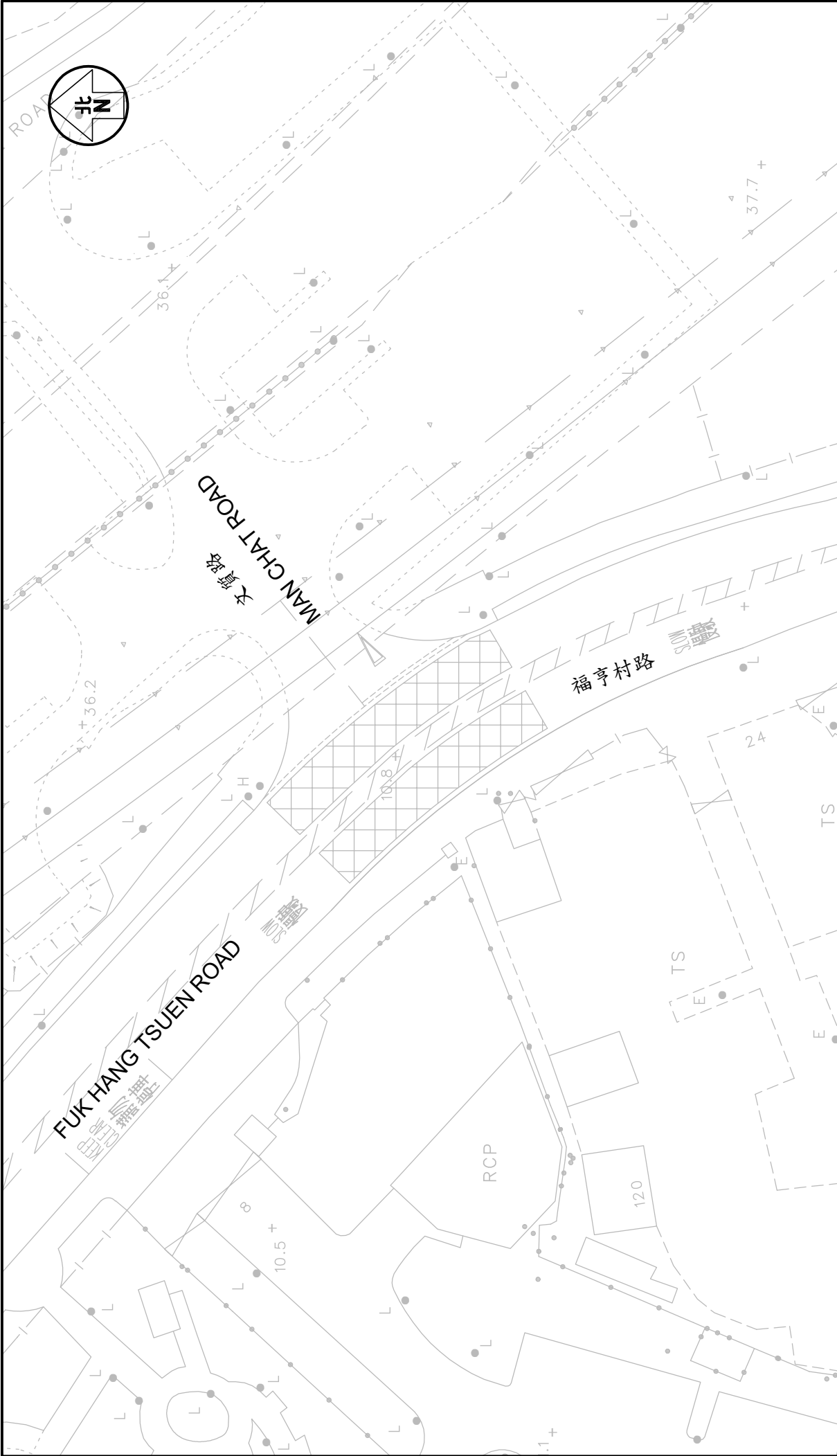
Project Title	S12A FOR PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY OR ELDERLY IN LOT 827RP IN DD130 TUEN MUN AND ADJOINING GOVERNMENT LAND (FUK HANG TSUEN ROAD)				J7463		CKM Asia Limited	
	JUNCTION LAYOUT OF CASTLE PEAK ROAD – LAM TEI / LAM TEI INTERCHANGE				Figure No.		Revision	
					2.3		B	
Figure Title	Designed by		Drawn by		Checked by			
	L K W		S C Y		K C			
	Scale in A4		1 : 500		Date		25 JUN 2026	



Project Title	S12A FOR PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY OR ELDERLY IN LOT 827RP IN DD130 TUEN MUN AND ADJOINING GOVERNMENT LAND (FUK HANG TSUEN ROAD)			Figure No.	2.4	Revision	B	CKM Asia Limited	
	JUNCTION LAYOUT OF CASTLE PEAK ROAD – LAM TEI / LAM TEI MAIN STREET			Designed by	L K W	Drawn by	S C Y		
				Checked by	L K W	Checked by	K C	Date	
Figure Title				Scale in A4	1 : 500	Date		25 JUN 2026	

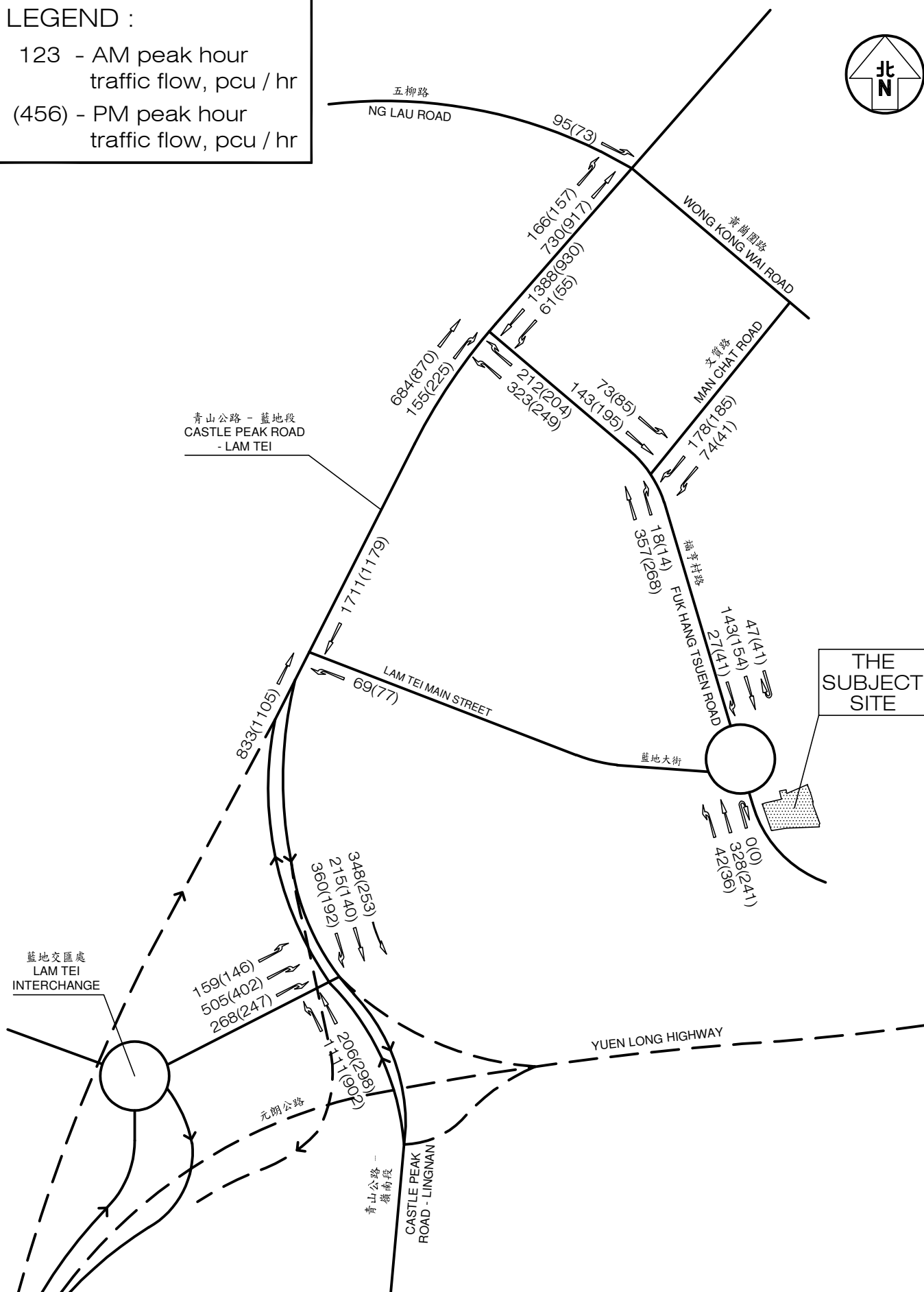
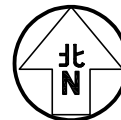


Project Title	S12A FOR PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY OR ELDERLY IN LOT 827RP IN DD130 TUEN MUN AND ADJOINING GOVERNMENT LAND (FUK HANG TSUEN ROAD)			Figure No. J7463	2.5	Revision B	CKM Asia Limited			
Figure Title	JUNCTION LAYOUT OF FUK HANG TSUEN ROAD / LAM TEI MAIN STREET			Designed by L K W	Drawn by S C Y	Checked by K C				
				Scale in A4 1 : 500	Date 25 JUN 2026					



LEGEND :

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

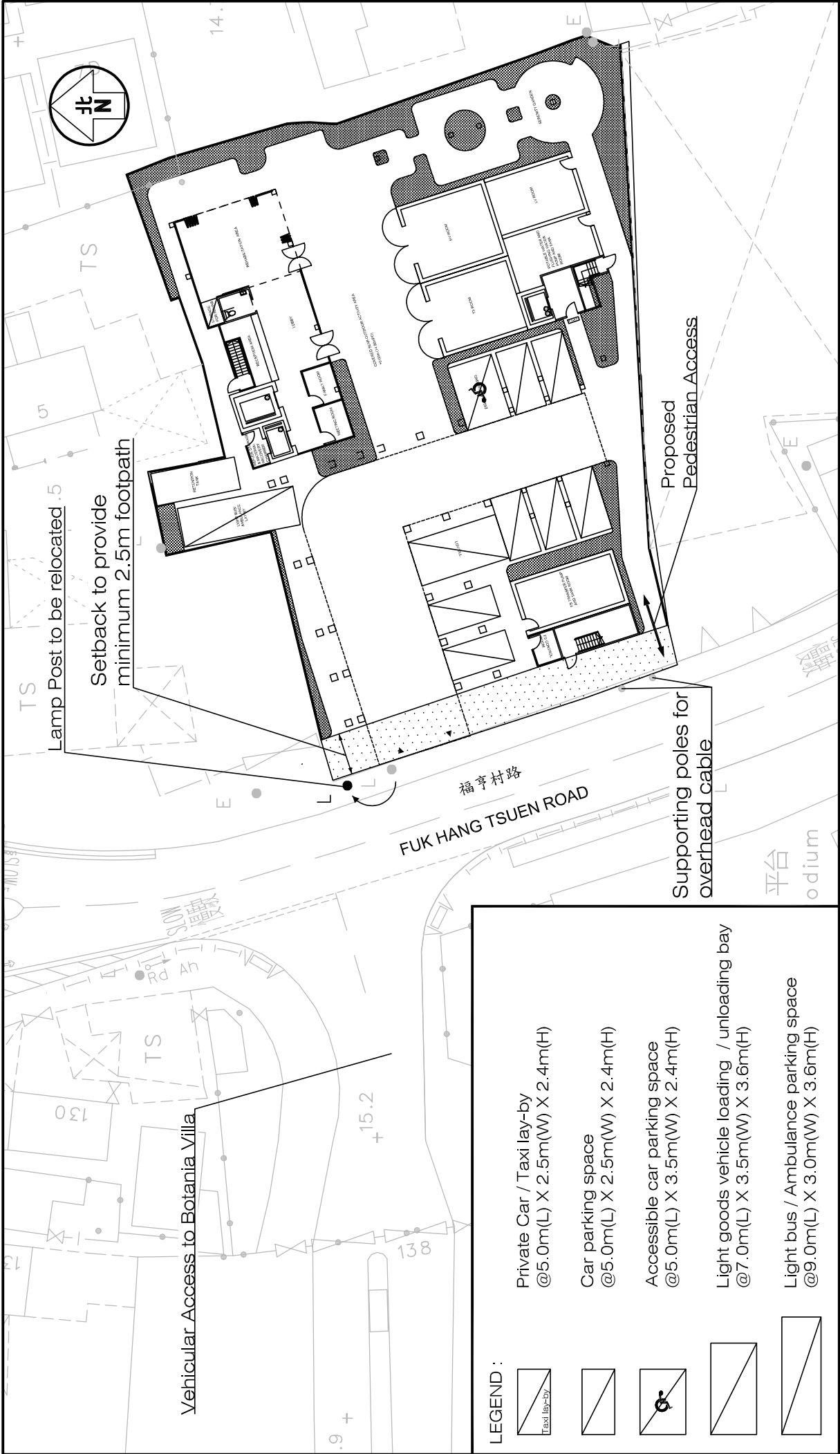


Project Title
PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD")
AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN

Figure Title

OBSERVED PEAK HOUR TRAFFIC FLOWS

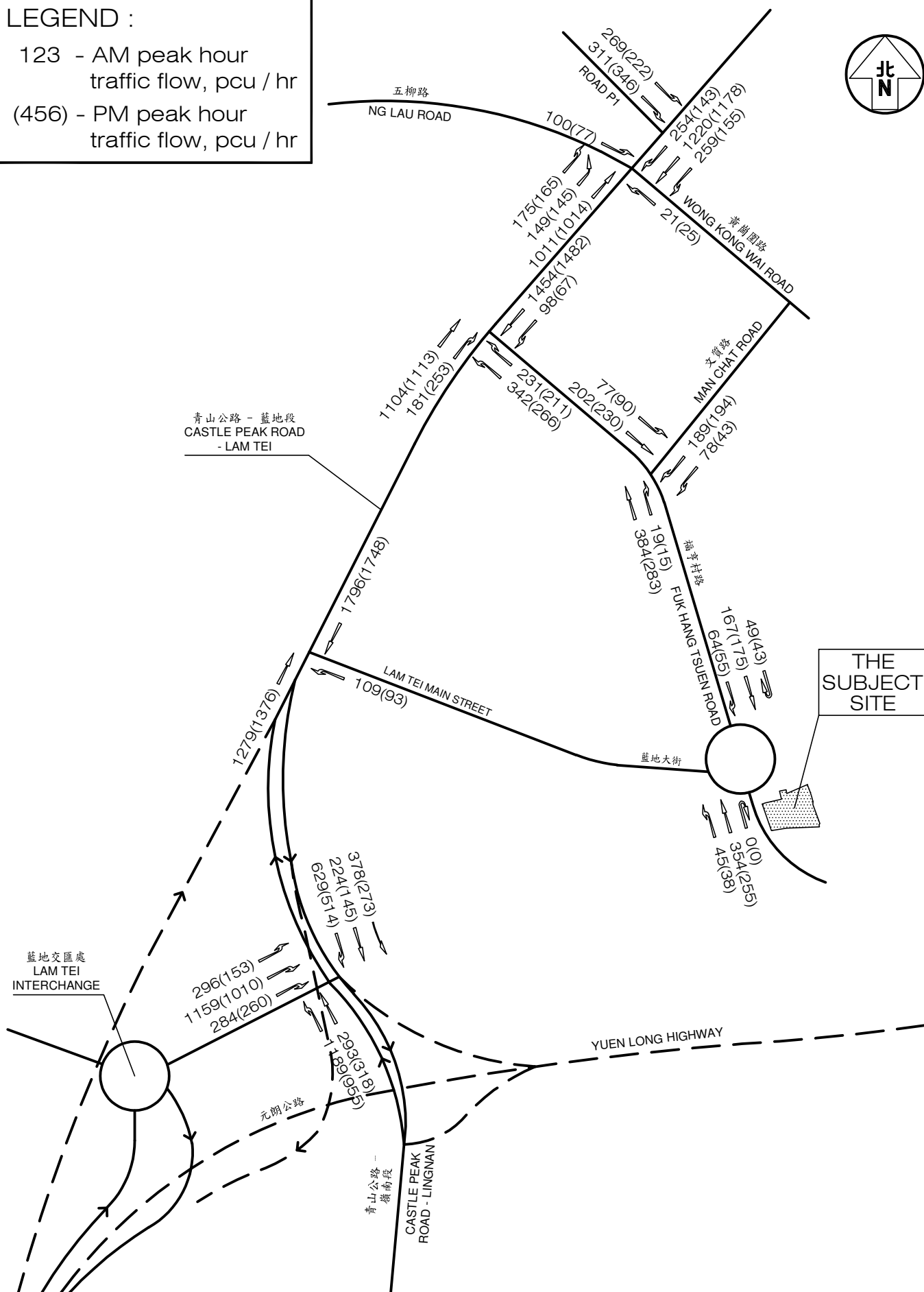
Job No. J7463	Figure No. 2.7	Scale in A4 N.T.S.
Designed by L K W	Drawn by S C Y	Checked by K C
	Revision B	Date 25 JUN 2026



Project Title	PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ('RCHD') AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN										Figure No.	3.1	Revision	B	CKM Asia Limited											
	J7463										Designed by	T T O	Drawn by	S C Y		Checked by	K C									
																					Date					
																					Scale in A4					1 : 400
Figure Title	PROPOSED LAYOUT PLAN																									

LEGEND :

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



Project Title
PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD")
AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN

Job No.
J7463

Figure No.

4.1

Scale in A4
N.T.S.

Designed by
L K W

Drawn by
S C Y

Checked by
K C

Revision
B

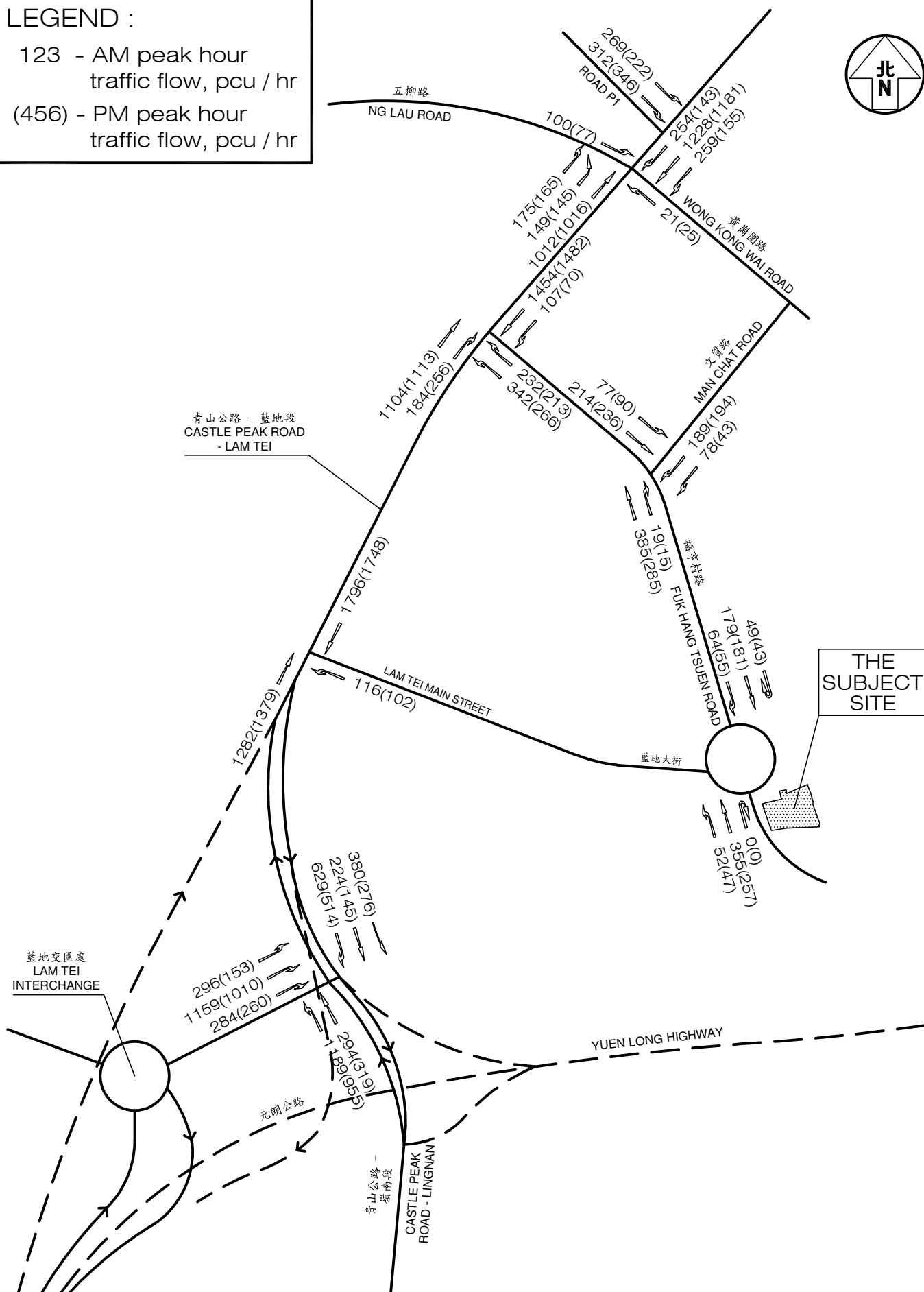
Date
25 JUN 2026

Figure Title

YEAR 2034 PEAK HOUR TRAFFIC FLOWS
WITHOUT THE PROPOSED DEVELOPMENT

LEGEND :

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



Project Title
PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD")
AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN

Job No. J7463	Figure No. 4.2	Scale in A4 N.T.S.
Designed by L K W	Drawn by S C Y	Checked by K C
	Revision B	Date 25 JUN 2026

Figure Title

YEAR 2034 PEAK HOUR TRAFFIC FLOWS
WITH THE PROPOSED DEVELOPMENT

Appendix A

Junction Capacity Analysis

[illegible]

Signal Junction Analysis

Junction: Castle Peak Road - Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road Job Number: J7463
 Scenario: Future Condition (Without Proposed RCHD) P. 2
 Design Year: 2034 Designed By: _____ Checked By: _____ Date: 25 Jun 2026

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak					
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	100	0.055		100	1832	77	0.042	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	351	0.180			1945	354	0.182	
	SA	B2	2,3	3.30				2085	376	0.180			2085	379	0.182	
	SA	B3	2,3	3.30				2085	377	0.181			2085	380	0.182	
	RT	C1	1	3.70	15.0		100	1932	181	0.094	0.094	100	1932	253	0.130	0.130
Castle Peak Road - Lam Tei NB	LT	D1	2	3.70	13.0		100	1780	175	0.098		100	1780	165	0.093	
	LT	D2	2	3.70	15.0		100	1932	149	0.077		100	1932	145	0.075	
	SA	E1	2,3	3.70				2125	506	0.238			2125	508	0.239	
	SA	E2	2,3	3.65				2120	505	0.238			2125	507	0.239	
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		20	1946	487	0.250		14	1958	489	0.250	0.250
	SA	F2	2,3	3.70				2125	532	0.250			2125	531	0.250	
	SA	F3	2,3	3.70				2125	533	0.251	0.251		2125	530	0.249	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.70	10.0		37	1881	694	0.369		25	1913	632	0.330	
	SA	G2	1,2,3	3.70				2125	785	0.369			2125	702	0.330	
	RT	H1	4	3.50	20.0		100	1958	254	0.130	0.130	100	1958	143	0.073	0.073
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	21	0.012		100	1752	25	0.014	
Fuk Hang Tsuen Road WB	LT	J1	5	3.70	15.0		100	1805	277	0.154		100	1805	231	0.128	
	LT+RT	J2	5	3.70	15.0		100	1932	296	0.153		100	1932	247	0.128	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	272	0.153	0.153	100	1773	266	0.150	0.150
	RT	K2	5	3.80	25.0		100	2014	308	0.153		100	2014	302	0.150	

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)	$S = 1940 + 100 (W-3.25)$ $SM = S / (1 + 1.5 f/r)$ $S = 2080 + 100 (W-3.25)$ $SM = (S - 230) / (1 + 1.5 f/r)$	Note:																					
Diagram showing AM traffic flow for a two-lane road. Approach flows: 1104 (left), 181 (right), 175 (left), 149 (right), 1011 (right). Split flows: 311 (left), 269 (right). Approach flows: 1454 (left), 98 (right), 1220 (left), 254 (right), 259 (right), 21 (left), 342 (left), 231 (right).	Diagram showing PM traffic flow for a two-lane road. Approach flows: 1113 (left), 253 (right), 165 (left), 145 (right), 1015 (right). Split flows: 77 (left), 346 (right), 222 (right). Approach flows: 1482 (left), 68 (right), 1179 (left), 143 (right), 155 (right), 25 (left), 212 (left), 268 (left).	<table><thead><tr><th></th><th>AM Peak</th><th>PM Peak</th></tr></thead><tbody><tr><td>1+2,3+4+5</td><td></td><td></td></tr><tr><td>Sum y</td><td>0.628</td><td>0.603</td></tr><tr><td>L (s)</td><td>21</td><td>21</td></tr><tr><td>C (s)</td><td>120</td><td>120</td></tr><tr><td>practical y</td><td>0.743</td><td>0.743</td></tr><tr><td>R.C. (%)</td><td>18%</td><td>23%</td></tr></tbody></table>		AM Peak	PM Peak	1+2,3+4+5			Sum y	0.628	0.603	L (s)	21	21	C (s)	120	120	practical y	0.743	0.743	R.C. (%)	18%	23%	
	AM Peak	PM Peak																						
1+2,3+4+5																								
Sum y	0.628	0.603																						
L (s)	21	21																						
C (s)	120	120																						
practical y	0.743	0.743																						
R.C. (%)	18%	23%																						

1	2	3	4	5
AM	G = I/G = 8	G = I/G = 7	G = I/G =	G = I/G = 5
	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 =	G = I/G =	G = I/G =	G = I/G =

Signal Junction Analysis

Junction: Castle Peak Road - Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road Job Number: J7463
 Scenario: Future Condition (With Proposed RCHD) P. 3
 Design Year: 2034 Designed By: _____ Checked By: _____ Date: 25 Jun 2026

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak					
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	100	0.055		100	1832	77	0.042	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	351	0.180			1945	354	0.182	
	SA	B2	2,3	3.30				2085	376	0.180			2085	379	0.182	
	SA	B3	2,3	3.30				2085	377	0.181			2085	380	0.182	
	RT	C1	1	3.70	15.0		100	1932	184	0.095	0.095	100	1932	256	0.132	0.132
Castle Peak Road - Lam Tei NB	LT	D1	2	3.70	13.0		100	1780	175	0.098		100	1780	165	0.093	
	LT	D2	2	3.70	15.0		100	1932	149	0.077		100	1932	145	0.075	
	SA	E1	2,3	3.70				2125	507	0.239			2125	508	0.239	
	SA	E2	2,3	3.65				2120	505	0.238			2125	508	0.239	
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		22	1942	490	0.252	0.252	16	1954	489	0.250	0.250
	SA	F2	2,3	3.70				2125	536	0.252			2125	532	0.250	
	SA	F3	2,3	3.70				2125	535	0.252			2125	531	0.250	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.70	10.0		37	1881	698	0.371		24	1916	633	0.330	
	SA	G2	1,2,3	3.70				2125	789	0.371			2125	703	0.331	
	RT	H1	4	3.50	20.0		100	1958	254	0.130	0.130	100	1958	143	0.073	0.073
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	21	0.012		100	1752	25	0.014	
Fuk Hang Tsuen Road WB	LT	J1	5	3.70	15.0		100	1805	277	0.154		100	1805	231	0.128	
	LT+RT	J2	5	3.70	15.0		100	1932	297	0.154		100	1932	248	0.128	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	272	0.153		100	1773	266	0.150	0.150
	RT	K2	5	3.80	25.0		100	2014	309	0.153	0.153	100	2014	302	0.150	

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)	$S = 1940 + 100 (W-3.25)$ $SM = S / (1 + 1.5 f/r)$ $S = 2080 + 100 (W-3.25)$ $SM = (S - 230) / (1 + 1.5 f/r)$	Note:																												
		<table><tr><td></td><td>AM Peak</td><td>PM Peak</td><td></td></tr><tr><td></td><td>1+2,3+4+5</td><td>1+2,3+4+5</td><td></td></tr><tr><td>Sum y</td><td>0.631</td><td>0.605</td><td></td></tr><tr><td>L (s)</td><td>21</td><td>21</td><td></td></tr><tr><td>C (s)</td><td>120</td><td>120</td><td></td></tr><tr><td>practical y</td><td>0.743</td><td>0.743</td><td></td></tr><tr><td>R.C. (%)</td><td>18%</td><td>23%</td><td></td></tr></table>		AM Peak	PM Peak			1+2,3+4+5	1+2,3+4+5		Sum y	0.631	0.605		L (s)	21	21		C (s)	120	120		practical y	0.743	0.743		R.C. (%)	18%	23%		
	AM Peak	PM Peak																													
	1+2,3+4+5	1+2,3+4+5																													
Sum y	0.631	0.605																													
L (s)	21	21																													
C (s)	120	120																													
practical y	0.743	0.743																													
R.C. (%)	18%	23%																													

1	2	3	4	5
AM	G = I/G = 8	G = I/G = 7	G = I/G =	G = I/G = 5
PM	G = I/G = 8	G = I/G = 7	G = I/G =	G = I/G = 5

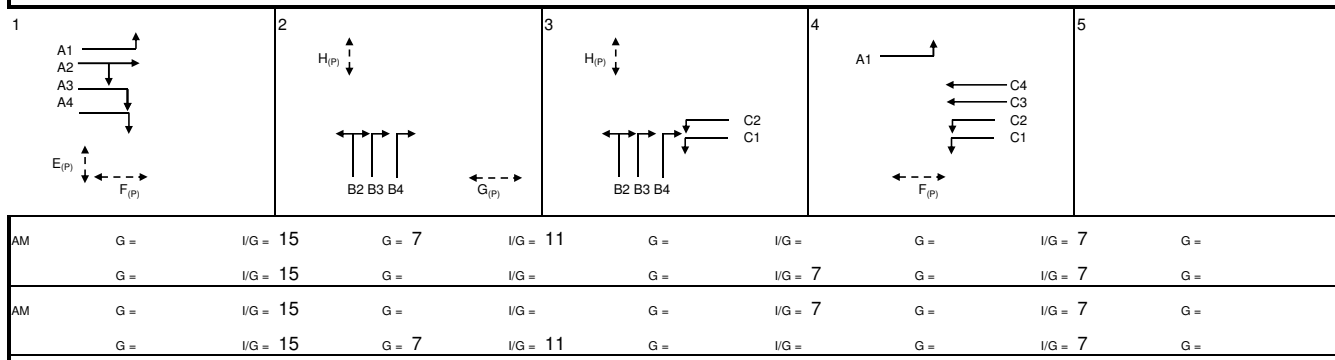
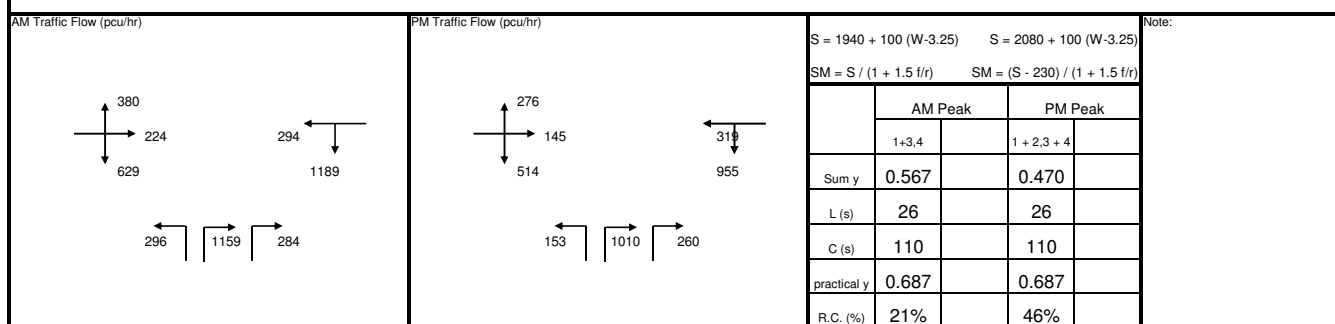
Junction: <u>Castle Peak Road – Lam Tei / Lam Tei Interchange</u>										Job Number: <u>J7463</u>									
Scenario: <u>Existing Condition</u>										P. 4									
Design Year: <u>2026</u>										Designed By: _____									
Checked By: _____										Date: <u>25 Jun 2026</u>									

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak																																														
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y																																										
Castle Peak Road -Lam Tei SB	LT	A1	1,4	3.25	80.0		100	1904	348	0.183	0.183	100	1904	253	0.133	0.133																																									
	SA	A2	1,4	3.25				2080	200	0.096			2080	115	0.055																																										
	SA+RT	A3	1	3.25	22.5		92	1960	189	0.096		77	1978	110	0.056																																										
	RT	A4	1	3.25	20.0		100	1935	186	0.096		100	1935	107	0.055																																										
Slip Road from Lam Tei Interchange	LT	B1	2,3	3.50	8.0		100	1655	159	0.096		100	1655	146	0.088																																										
	LT+RT	B2	2,3	3.50	30.0		100	2005	253	0.126		100	2005	202	0.101																																										
	RT	B3	2,3	3.50	26.0		100	1990	252	0.127	0.127	100	1990	200	0.100	0.100																																									
	RT	B4	2,3	3.50	23.0		100	1976	268	0.136		100	1976	247	0.125																																										
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	529	0.298		100	1775	430	0.242																																										
	LT	C2	3,4	3.50	19.0		100	1951	582	0.298		100	1951	472	0.242																																										
	SA	D1	4	3.50				2105	103	0.049			2105	149	0.071																																										
	SA	D2	4	3.50				2105	103	0.049			2105	149	0.071																																										
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) $S = 1940 + 100 (W-3.25)$ $S = 2080 + 100 (W-3.25)$ $SM = S / (1 + 1.5 f/r)$ $SM = (S - 230) / (1 + 1.5 f/r)$ <table border="1"> <thead> <tr> <th></th> <th>AM Peak</th> <th>PM Peak</th> </tr> </thead> <tbody> <tr> <td>1,4+2,3</td> <td></td> <td></td> </tr> <tr> <td>Sum y</td> <td>0.309</td> <td>0.233</td> </tr> <tr> <td>L (s)</td> <td>21</td> <td>21</td> </tr> <tr> <td>C (s)</td> <td>110</td> <td>110</td> </tr> <tr> <td>practical y</td> <td>0.728</td> <td>0.728</td> </tr> <tr> <td>R.C. (%)</td> <td>135%</td> <td>212%</td> </tr> </tbody> </table> 1 2 3 4 5 <table border="1"> <thead> <tr> <th></th> <th>AM</th> <th>PM</th> </tr> </thead> <tbody> <tr> <td>G =</td> <td>I/G = 15</td> <td>G =</td> <td>I/G = 8</td> <td>G =</td> <td>I/G = 7</td> <td>G =</td> <td>I/G = 7</td> <td>G =</td> </tr> <tr> <td>G =</td> <td>I/G = 15</td> <td>G =</td> <td>I/G = 8</td> <td>G =</td> <td>I/G = 7</td> <td>G =</td> <td>I/G = 7</td> <td>G =</td> </tr> </tbody> </table>																	AM Peak	PM Peak	1,4+2,3			Sum y	0.309	0.233	L (s)	21	21	C (s)	110	110	practical y	0.728	0.728	R.C. (%)	135%	212%		AM	PM	G =	I/G = 15	G =	I/G = 8	G =	I/G = 7	G =	I/G = 7	G =	G =	I/G = 15	G =	I/G = 8	G =	I/G = 7	G =	I/G = 7	G =
	AM Peak	PM Peak																																																							
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G =	I/G = 15	G =	I/G = 8	G =	I/G = 7	G =	I/G = 7	G =																																																	

[illegible]

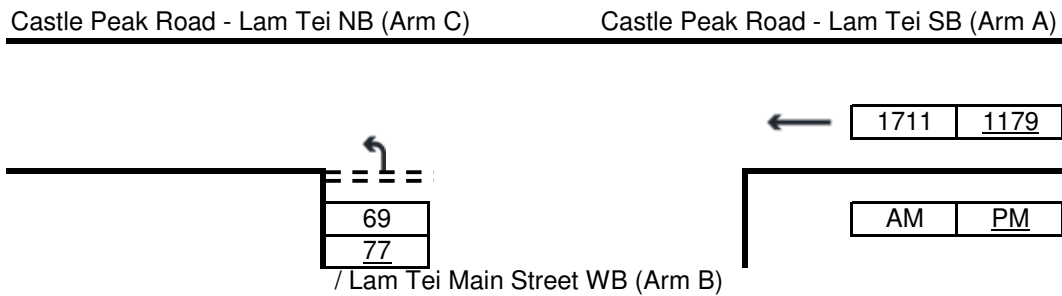
Junction:	Castle Peak Road – Lam Tei / Lam Tei Interchange			Job Number:	J7265
Scenario:	Future Condition (With Proposed RCHD)			P. 6	
Design Year:	2034	Designed By:	Checked By:	Date:	25 Jun 2026

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak					
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	
Castle Peak Road SB	LT	A1	1,4	3.50	80.0		100	1929	380	0.197		100	1929	276	0.143	
	SA+RT	A2	1	3.50	30.0		24	2080	295	0.142		36	2068	227	0.110	
	RT	A3	1	3.50	25.0		100	1986	281	0.142	0.142	100	1986	218	0.110	0.110
	RT	A4	1	3.50	20.0		100	1958	277	0.141		100	1958	214	0.109	
Slip Road from	LT+(To YL Hwy)RT	B2	2,3	3.50	30.0		100	2103	748	0.356		100	2103	598	0.284	
Lam Tei Interchange	(To YL Hwy) RT	B3	2,3	3.50	25.0		100	1986	707	0.356	0.356	100	1986	565	0.285	0.285
	(To CPR) RT	B4	2,3	3.50	20.0		100	1958	284	0.145		100	1958	260	0.133	
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	566	0.319		100	1775	455	0.256	
	LT	C2	3,4	3.50	19.0		100	1951	623	0.319		100	1951	500	0.256	
	SA	D1	4	3.50				2105	147	0.070	0.070		2105	160	0.076	0.076
	SA	D2	4	3.50				2105	147	0.070			2105	159	0.076	
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		



Priority Junction Analysis

Junction:	Castle Peak Road - Lam Tei / Lam Tei Main Street				
Design Year:	2026	Job Number:	J7463	Date:	25 Jun 2026
Scenario:	Existing Condition				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	12.30	V-rBA	20	w-BA	0.00	D	0.5519
	W-CR	0.00	V-lBA	22	w-BC	5.00	E	1.0255
			V-rCB	20	w-CB	0.00	F	0.5860
			V-lCB	0			Y	0.5757

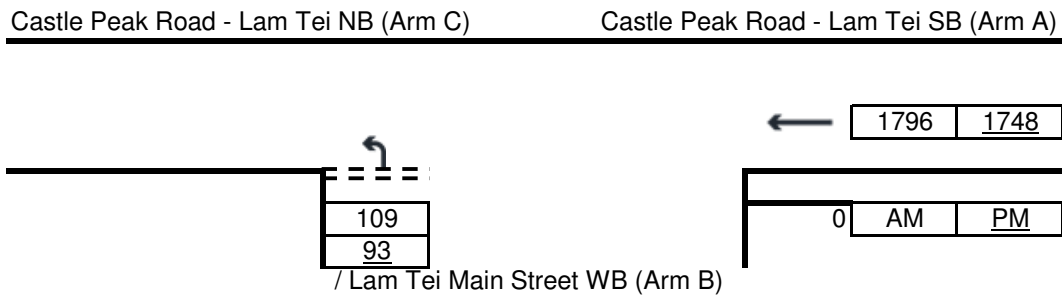
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	148	210
q-CB	0	0	Q-BC	396	511
q-AB	0	0	Q-CB	226	292
q-AC	1711	1179	Q-BAC	396	511
q-BA	0	0			
q-BC	69	77			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.174	0.151
C-B	0.000	0.000
B-AC	0.174	0.151

Priority Junction Analysis

Junction:	Castle Peak Road - Lam Tei / Lam Tei Main Street				
Design Year:	2034	Job Number:	J7463	Date:	25 Jun 2026
Scenario:	Future Condition (Without Proposed RCHD)				P. 8



The predictive equations of capacity of movement are:

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

$$Q\text{-BC} = E[745 - Y(0.364q\text{-AC} + 0.144q\text{-AB})]$$

$$Q\text{-CB} = F[745 - 0.364Y(q\text{-AC} + q\text{-AB})]$$

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

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

$$E = [1 + 0.094(w\text{-BC} - 3.65)][1 + 0.0009(V\text{-rBC} - 120)]$$

$$F = [1 + 0.094(w\text{-CB} - 3.65)][1 + 0.0009(V\text{-rCB} - 120)]$$

where $Y = 1 - 0.0345W$

$q\text{-AB}$, etc = the design flow of movement AB, etc

W = major road width

$W\text{-CR}$ = central reserve width

$w\text{-BA}$, etc = lane width to vehicle

$v\text{-rBA}$, etc = visibility to the right for waiting vehicles in stream BA, etc

$v\text{-lBA}$, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	12.30	V-rBA	20	w-BA	0.00	D	0.5519
	W-CR	0.00	V-lBA	22	w-BC	5.00	E	1.0255
			V-rBC	20	w-CB	0.00	F	0.5860
			V-rCB	0			Y	0.5757

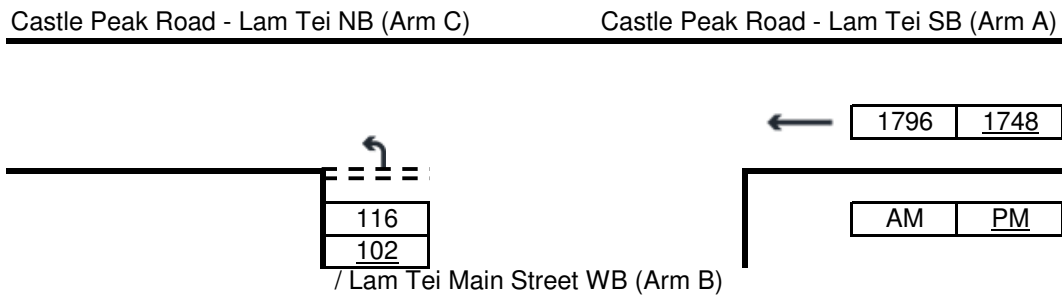
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	138	144
q-CB	0	0	Q-BC	378	388
q-AB	0	0	Q-CB	216	222
q-AC	1796	1748	Q-BAC	378	388
q-BA	0	0			
q-BC	109	93			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.288	0.239
C-B	0.000	0.000
B-AC	0.288	0.239

Priority Junction Analysis

Junction:	Castle Peak Road - Lam Tei / Lam Tei Main Street				
Design Year:	2034	Job Number:	J7463	Date:	25 Jun 2026
Scenario:	Future Condition (With Proposed RCHD)				P. 9



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	12.30	V-rBA	20	w-BA	0.00	D	0.5519
	W-CR	0.00	V-lBA	22	w-BC	5.00	E	1.0255
			V-rCB	20	w-CB	0.00	F	0.5860
			V-lCB	0			Y	0.5757

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	138	144
q-CB	0	0	Q-BC	378	388
q-AB	0	0	Q-CB	216	222
q-AC	1796	1748	Q-BAC	378	388
q-BA	0	0			
q-BC	116	102			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.307	0.263
C-B	0.000	0.000
B-AC	0.307	0.263

Roundabout Analysis

Junction: Fuk Hang Tsuen Road / Lam Tei Main Street Job Number: J7463
 Scenario: Existing Condition P. 10
 Design Year: 2026 Designed By: Checked By: Date: 25 Jun 2026

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q _c
From A	47	27	143					217	42
From B	0	0	0					0	190
From C	328	42	0					370	47
From D									
From E									
From F									
From G									
Total	375	69	143					587	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q _c
From A	41	41	154					236	36
From B	0	0	0					0	195
From C	241	36	0					277	41
From D									
From E									
From F									
From G									
Total	282	77	154					513	

Legend

Arm	Road (in clockwise order)
A	Fuk Hang Tsuen Road SB
B	Lam Tei Main Street EB
C	Fuk Hang Tsuen Road NB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
From A	6.2	4.4	20.0	15.0	28	40	0.2
From B	3.7	3.7	12.0	15.0	28	45	0.0
From C	6.2	3.0	12.0	15.0	28	45	0.3
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	$= 1 - 0.00347(Ø - 30) - 0.978[(1/r) - 0.05]$
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
Ø	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm							Q _E		Entry Flow		DFC	
	x ₂	M	t _D	K	F	f _c	AM	PM	AM	PM	AM	PM
From A	5.68	0.04	1.48	0.97	1720.91	0.66	1634.27	1638	217	236	0.133	0.144
From B	3.70	0.04	1.48	0.92	1121.10	0.54	932.12	930	0	0	0.000	0.000
From C	4.90	0.04	1.48	0.92	1485.23	0.62	1333.02	1336	370	277	0.278	0.207
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Fuk Hang Tsuen Road / Lam Tei Main Street Job Number: J7463
 Scenario: Future Condition (Without Proposed RCHD) P. 11
 Design Year: 2034 Designed By: _____ Checked By: _____ Date: 25 Jun 2026

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q _c
From A	49	64	167					280	45
From B	0	0	0					0	216
From C	354	45	0					399	49
From D									
From E							0		
From F									
From G									
Total	403	109	167					679	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q _c
From A	43	55	176					274	38
From B	0	0	0					0	219
From C	256	38	0					294	43
From D									
From E									
From F									
From G									
Total	299	93	176					568	

Legend

Arm	Road (in clockwise order)
A	Fuk Hang Tsuen Road SB
B	Lam Tei Main Street EB
C	Fuk Hang Tsuen Road NB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	6.2	4.4	20.0	15.0	28	40	0.2
From B	3.7	3.7	12.0	15.0	28	45	0.0
From C	6.2	3.0	12.0	15.0	28	45	0.3
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	$= 1 - 0.00347(\emptyset - 30) - 0.978[(1/r) - 0.05]$
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)

Arm							Q _E		Entry Flow		DFC	
	x ₂	M	t _D	K	F	f _c	AM	PM	AM	PM	AM	PM
From A	5.68	0.04	1.48	0.97	1720.91	0.66	1632	1637	280	274	0.172	0.167
From B	3.70	0.04	1.48	0.92	1121.10	0.54	919	918	0	0	0.000	0.000
From C	4.90	0.04	1.48	0.92	1485.23	0.62	1332	1335	399	294	0.300	0.220
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Fuk Hang Tsuen Road / Lam Tei Main Street Job Number: J7463
 Scenario: Future Condition (With Proposed RCHD) P. 12
 Design Year: 2034 Designed By: _____ Checked By: _____ Date: 25 Jun 2026

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q _c
From A	49	64	179					292	52
From B	0	0	0					0	228
From C	355	52	0					407	49
From D									
From E									
From F									
From G									
Total	404	116	179					699	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q _c
From A	43	55	181					279	47
From B	0	0	0					0	224
From C	257	47	0					304	43
From D									
From E									
From F									
From G									
Total	300	102	181					583	

Legend

Arm	Road (in clockwise order)
A	Fuk Hang Tsuen Road SB
B	Lam Tei Main Street EB
C	Fuk Hang Tsuen Road NB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	6.2	4.4	20.0	15.0	28	40	0.2
From B	3.7	3.7	12.0	15.0	28	45	0.0
From C	6.2	3.0	12.0	15.0	28	45	0.3
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	$= 1 - 0.00347(\emptyset - 30) - 0.978[(1/r) - 0.05]$
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

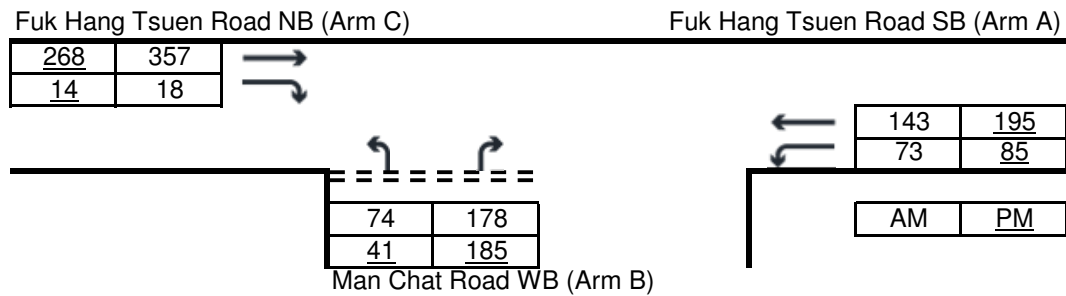
e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm							Q _E		Entry Flow		DFC	
	x ₂	M	t _D	K	F	f _c	AM	PM	AM	PM	AM	PM
From A	5.68	0.04	1.48	0.97	1720.91	0.66	1628	1631	292	279	0.179	0.171
From B	3.70	0.04	1.48	0.92	1121.10	0.54	913	915	0	0	0.000	0.000
From C	4.90	0.04	1.48	0.92	1485.23	0.62	1332	1335	407	304	0.306	0.228
From D												
From E												
From F												
From G												
From H												

Priority Junction Analysis

Junction:	Fuk Hang Tsuen Road / Man Chat Road				
Design Year:	2026	Job Number:	J7463	Date:	25 Jun 2026
Scenario:	Existing Condition				P. 13



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	24.00	V-rBA	35	w-BA	2.10	D	0.7331
	W-CR	0.00	V-lBA	32	w-BC	2.10	E	0.7889
			V-rBC	35	w-CB	2.50	F	0.8678
			V-rCB	90			Y	0.1720

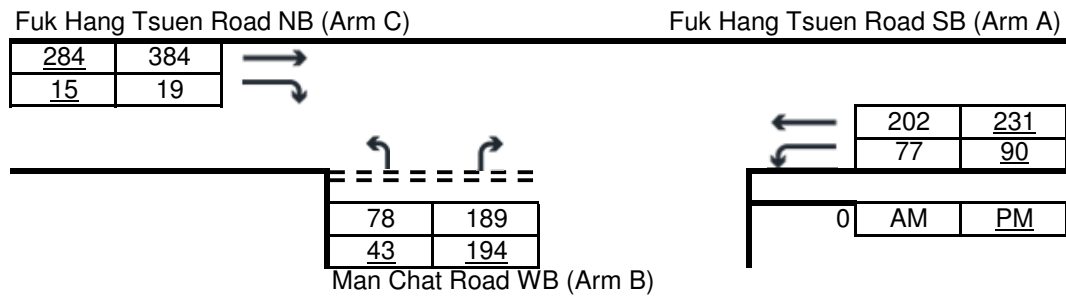
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	357	268	Q-BA	440	440
q-CB	18	14	Q-BC	579	576
q-AB	73	85	Q-CB	635	631
q-AC	143	195	Q-BAC	474	460
q-BA	178	185			
q-BC	74	41			
f	0.294	0.181			

Ratio-of-flow to Capacity	AM	PM
B-A	0.404	0.420
B-C	0.128	0.071
C-B	0.028	0.022
B-AC	0.532	0.491

Priority Junction Analysis

Junction:	Fuk Hang Tsuen Road / Man Chat Road				
Design Year:	2034	Job Number:	J7463	Date:	25 Jun 2026
Scenario:	Future Condition (Without Proposed RCHD)				P. 14



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	24.00	V-rBA	35	w-BA	2.10	D	0.7331
	W-CR	0.00	V-lBA	32	w-BC	2.10	E	0.7889
			V-rBC	35	w-CB	2.50	F	0.8678
			V-rCB	90			Y	0.1720

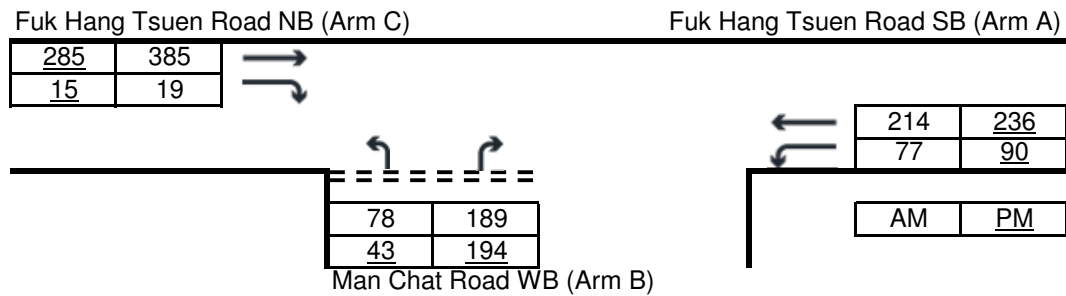
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	384	284	Q-BA	437	438
q-CB	19	15	Q-BC	576	575
q-AB	77	90	Q-CB	631	629
q-AC	202	231	Q-BAC	470	458
q-BA	189	194			
q-BC	78	43			
f	0.292	0.181			

Ratio-of-flow to Capacity	AM	PM
B-A	0.433	0.443
B-C	0.135	0.075
C-B	0.030	0.024
B-AC	0.568	0.518

Priority Junction Analysis

Junction:	Fuk Hang Tsuen Road / Man Chat Road		
Design Year:	2034	Job Number:	J7463
Scenario:	Future Condition (With Proposed RCHD)		Date: 25 Jun 2026
			P. 15



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	24.00	V-rBA	35	w-BA	2.10	D	0.7331
	W-CR	0.00	V-lBA	32	w-BC	2.10	E	0.7889
			V-rBC	35	w-CB	2.50	F	0.8678
			V-rCB	90			Y	0.1720

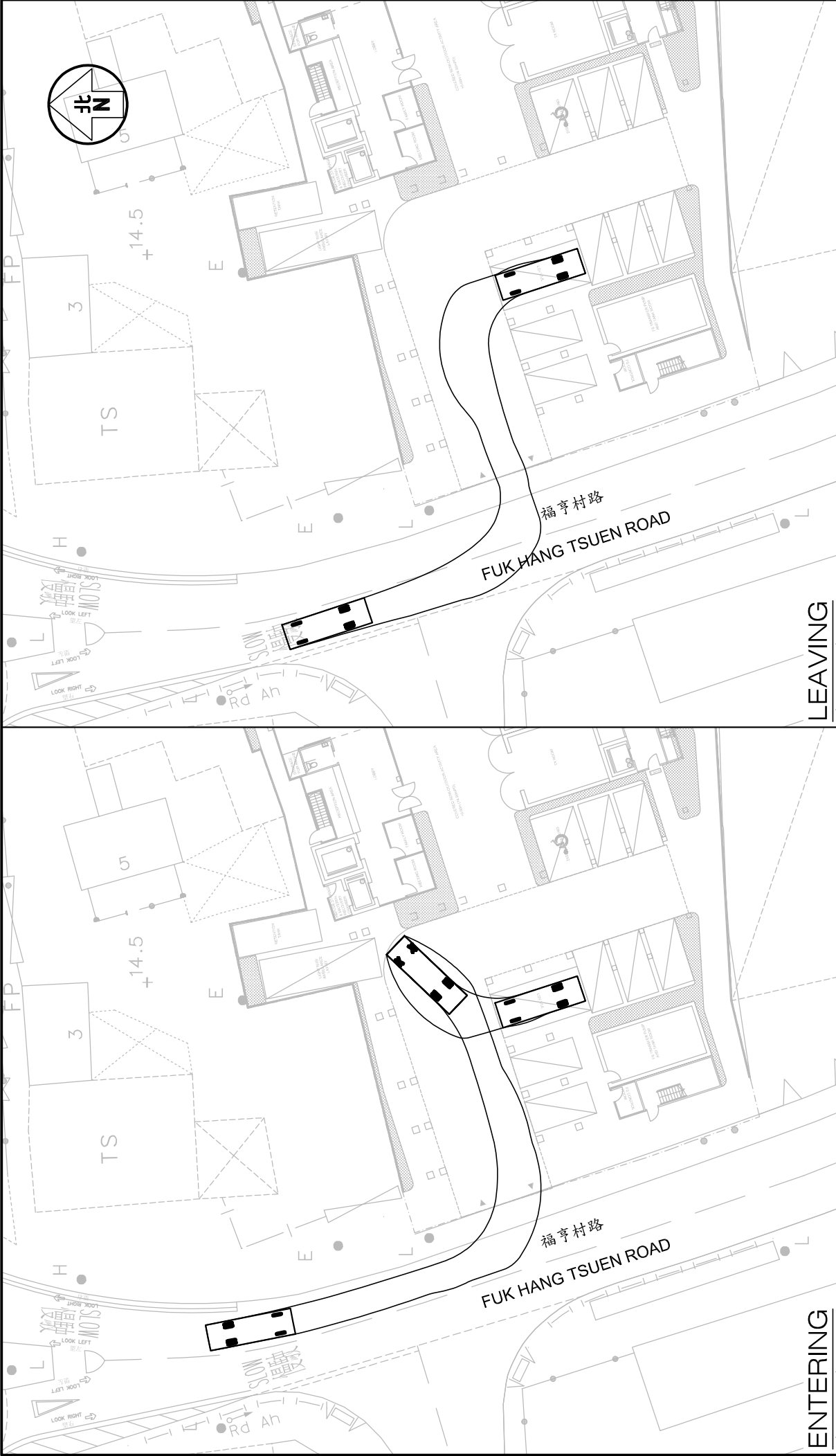
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	385	285	Q-BA	436	438
q-CB	19	15	Q-BC	576	574
q-AB	77	90	Q-CB	631	629
q-AC	214	236	Q-BAC	469	458
q-BA	189	194			
q-BC	78	43			
f	0.292	0.181			

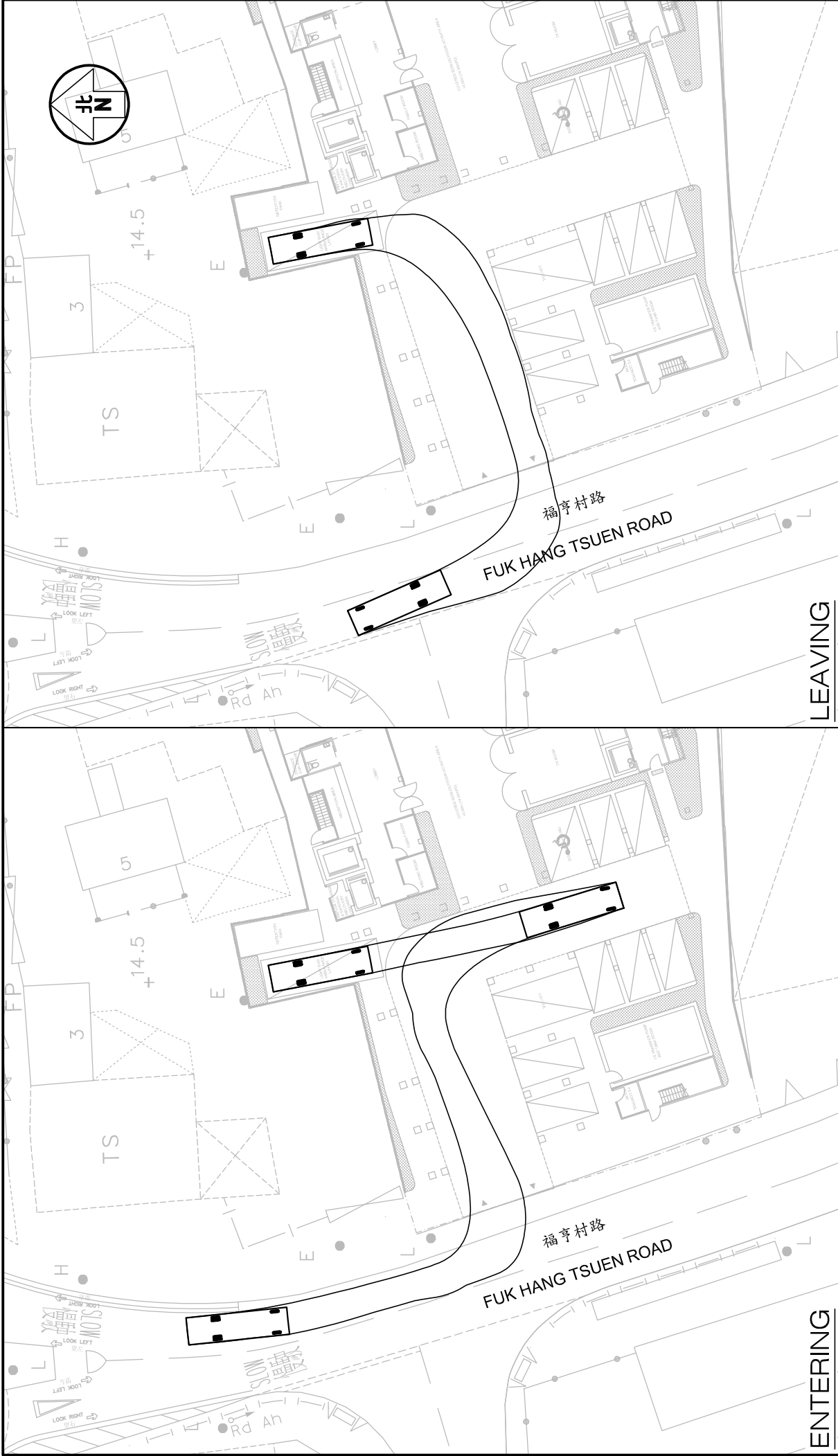
Ratio-of-flow to Capacity	AM	PM
B-A	0.433	0.443
B-C	0.135	0.075
C-B	0.030	0.024
B-AC	0.569	0.518

Appendix B

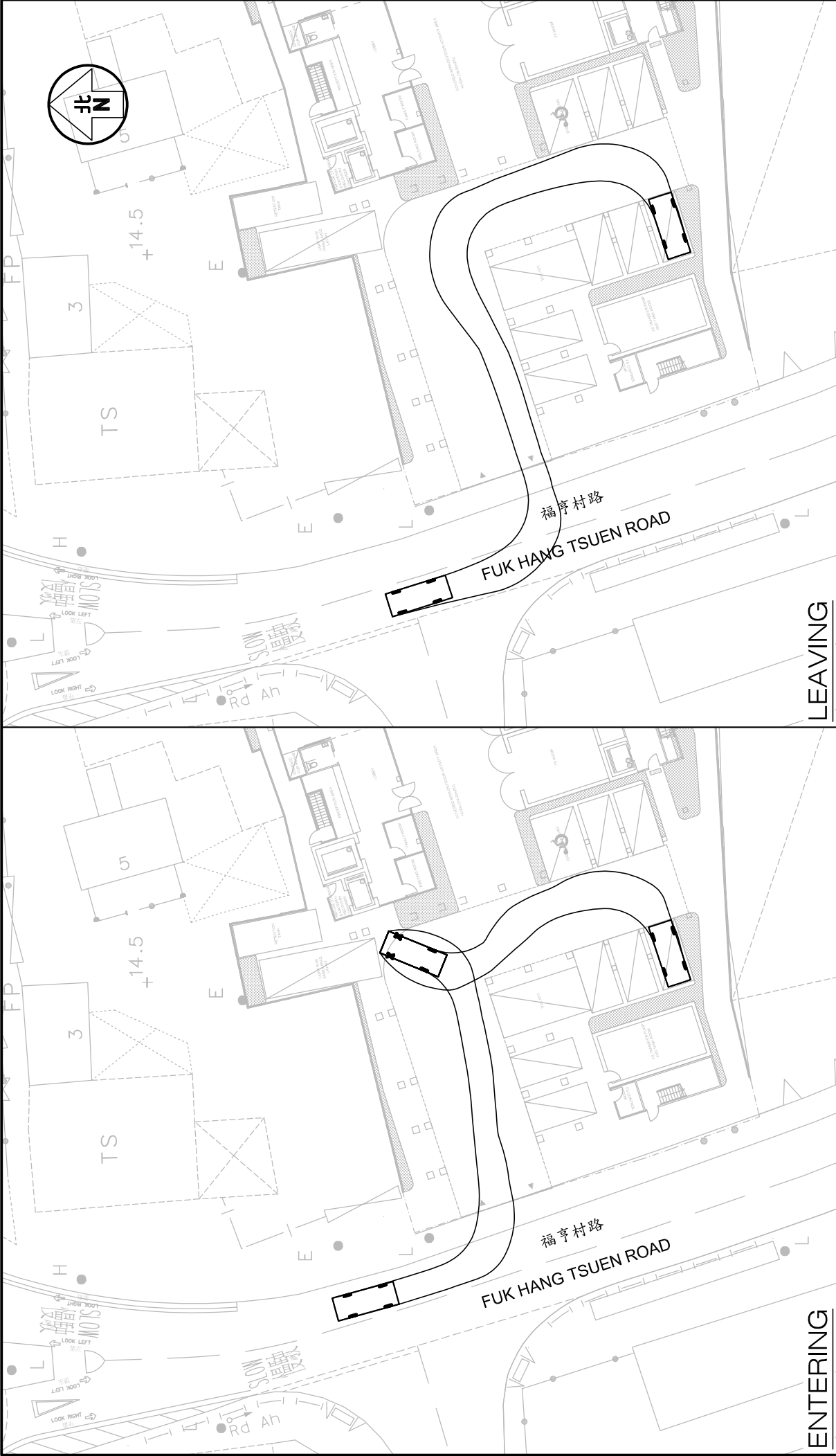
Swept Path Analysis



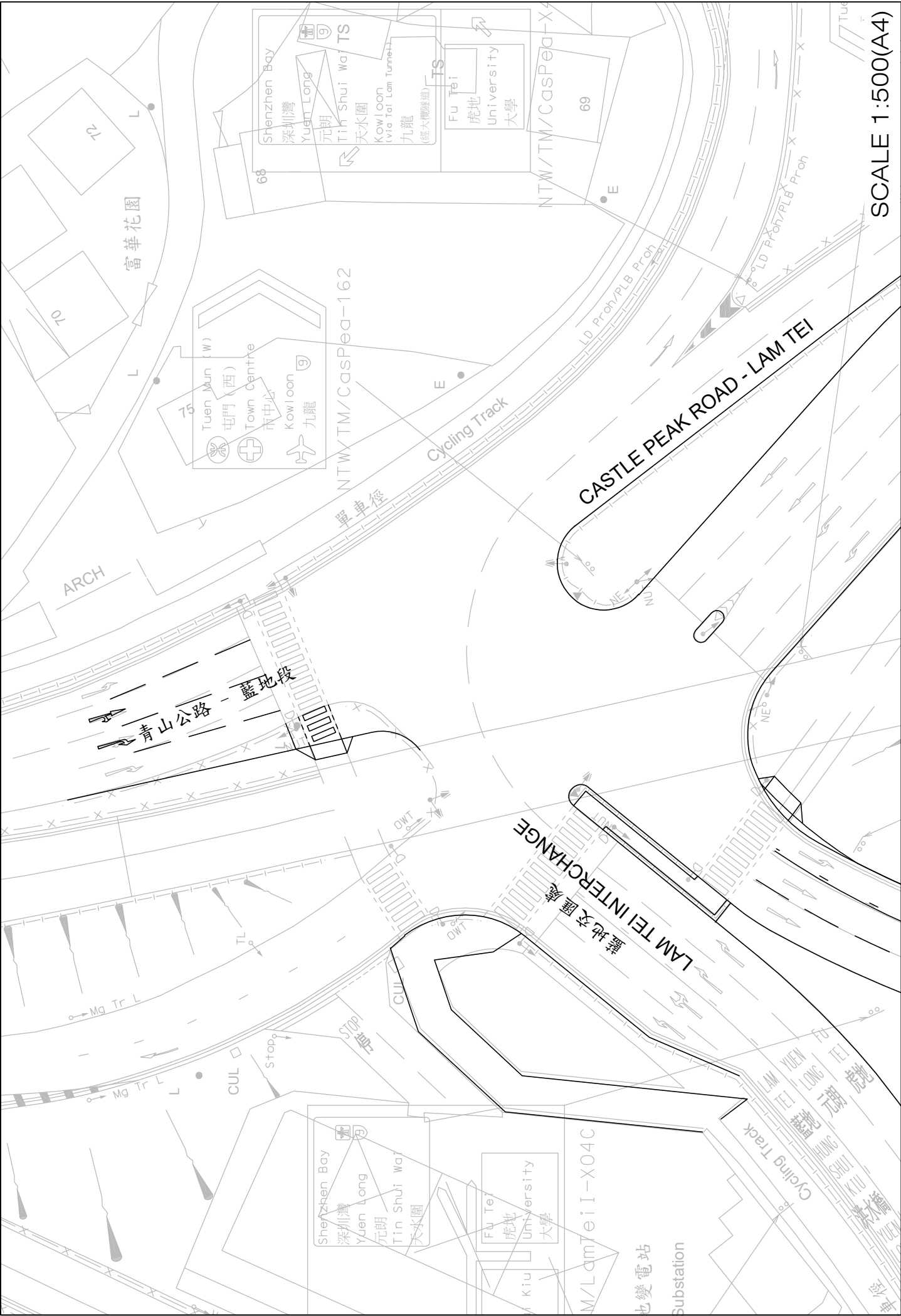
Project Title	PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD") AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN	J7463	Figure No.		Revision		
			SP1		B		
Figure Title	SWEPT PATH OF LIGHT GOODS VEHICLE ENTERING & LEAVING THE LOADING /UNLOADING BAY		Designed by	Drawn by	Checked by		
			T T O	S C Y	K C		
			Scale in A4		Date		
		1 : 400		22 SEP 2026			



Project Title	PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ('RCHD') AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN			
	J7463			
	Figure No. SP2			
Figure Title	Revision B			
	Designed by T T O		Checked by S C Y K C	
	Scale in A4 1 : 400		Date 22 SEP 2026	
SWEPT PATH OF LIGHT BUS ENTERING & LEAVING THE CAR PARKING SPACE				
CKM Asia Limited				



Appendix C
Extract of Planned Road Works under
CE 01/2020 (CE) by CEDD



SCALE 1:500(A4)

Appendix D
Extract of Planned Road Works under
CE 39/2021 (CE) by CEDD

NOTES:
1. FOR NOTES AND LEGEND, REFER TO DWG. NO. 278453/7/0001.

LEGEND:

COMMITTED JUNCTION IMPROVEMENT
SCHEME BY OTHERS

PLANNED JUNCTION IMPROVEMENT SCHEME UNDER HSK/HT NDA SECOND PHASE

ARUP

Agreement No. CE 1/2020 (CE)
Hung Shui Kiu / Ha Tsuen
New Development Area Package A
Works for Second Phase Development
– Design and Construction

JUNCTION LAYOUT PLAN - J38
CASTLE PEAK ROAD / ROAD P1/
FUK HANG TSUEN ROAD

278463/T/0038A

135	12/70
Quota	910

1:250 @ 11	Station
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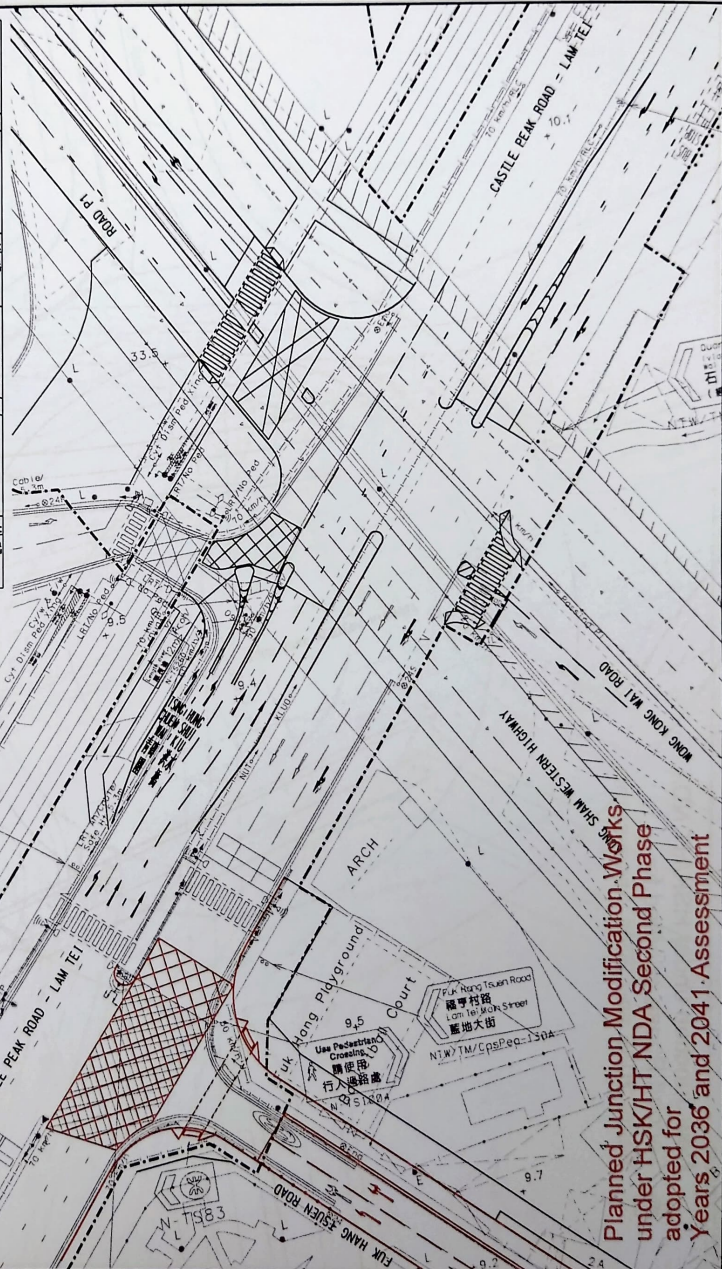
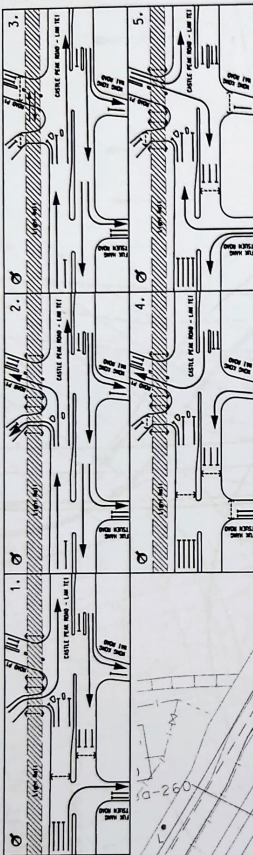
土木工程学报

EDD
Civil Engineer
Development
UNIVERSITY OF NORTH CAROLINA

15 JULY 2004

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Planned Junction-Modification-Works under HSK/HT NDA Second Phase adopted for Years 2036 and 2041 Assessment

Years 2036 and 2041 Assessment

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