Appendix 4

Revised Traffic Impact Assessment (TIA)

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Lots 3670 RP (Part), 3671 RP (Part), 3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104, Nam Sang Wai, Yuen Long

Traffic Impact Assessment
Revised Report
October 2025

Prepared by: CKM Asia Limited

Proposed Social Welfare Facilities (Residential Care Home for the Elderly (RCHE)) in "Village Type Development" Zone, Lots 3670 RP (Part), 3671 RP (Part),3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104,Nam Sang Wai, Yuen Long

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FIGURES

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1.0 INTRODUCTION

Background

1.1 The Subject Site is located at lots 3670 RP (Part), 3671 RP (Part), 3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104, Nam Sang Wai, Yuen Long. The location of the Subject Site is shown in Figure 1.1.

1.2 The owner has the intention to develop the Subject Site into a Residential Care Home for the Elderly with no more than 240 beds (the "Proposed RCHE").

1.3 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned to conduct a Traffic Impact Assessment ("TIA") in support of the Proposed RCHE. The report presents the findings and recommendations of the TIA for the Proposed RCHE.

Scope of the Assessment

1.4 The main objectives of this TIA are as follows:

- To assess the existing traffic issues in the vicinity of the Subject Site;
- To quantify the amount of traffic generated by the Proposed RCHE; and
- To examine the traffic impact on the local road network in the vicinity of the Subject Site.

Contents of the Report

1.5 After this introduction, the remaining chapters contain the following:

Chapter Two	-	describes the existing situation;
Chapter Three	-	outlines the development proposal;
Chapter Four	-	presents the traffic impact analysis; and
Chapter Five	-	summarises the overall conclusion

2.0 THE EXISTING SITUATION

The Subject Site

2.1 The Subject Site is located to the immediate north of Kam Pok Road East. At present, the Subject Site has no vehicular access.

Existing Road Network

2.2 Kam Pok Road East is a rural road, and it is of single carriageway 2-lane standard. It connects with Kam Pok Road to the west and Castle Peak Road – Tam Mi to the east.

2.3 Castle Peak Road – Tam Mi is a rural road, and it is of single carriageway2-lane standard. It connects with The Fairview Park Roundabout to the north and Kam Pok Road East to the south.

Traffic Survey

2.4 To quantify the traffic flows at the junctions chosen for the capacity analysis, manual classified counts were conducted on Friday, 7th March 2025 during the AM and PM peak periods. The locations of the surveyed junctions are presented in Figure 2.1 and their layouts are shown in Figures 2.2 to 2.4.

2.5 The surveyed junctions include the following:

- J1: Kam Pok Road / Kam Pok Road East;
- J2: Castle Peak Road – Tam Mi / Kam Pok Road; and
- J3: The Fairview Park Roundabout

2.6 The counts were classified by vehicle type to enable traffic flows in passenger car units ("pcu") to be calculated. From the survey, the AM and PM peak hours were found to be between 0800 – 0900 and 1700 – 1800 hours respectively.

2.7 Reference is made to the 2023 Annual Traffic Census ("ATC") closest core station, which is 5016 San Tin Highway, Castle Peak Road & San Tam Road (from Kam Tin Road to Fairview Park Boulevard), and found that traffic flow for the month of March, when the traffic survey for the captioned was conducted, is around 1.5% lower than the annual monthly average. Hence, the observed traffic flows are adjusted upwards by 1.5%. The revised existing AM and PM peak hour traffic flows are presented in Figure 2.5.

Operational Performance of the Surveyed Junctions

2.8 The existing operational performance of the surveyed junctions is calculated based on the observed traffic counts and the analysis is undertaken using the methods outlined in Volume 2 of Transport Planning and Design Manual ("TPDM"). The existing operational performance of the junctions are summarised in Table 2.1 and the detailed calculations are found in Appendix 1.

TABLE 2.1 EXISTING JUNCTION OPERATIONAL PERFORMANCE

Ref.	Junction	Type of Junction	Parameter(1)	AM Peak Hour	PM Peak Hour
J1	Kam Pok Road / Kam Pok Road East	Priority	RFC	0.315	0.220
J2	Castle Peak Road – Tam Mi / Kam Pok Road	Signal	RC	22%	35%
J3	The Fairview Roundabout	Roundabout	RFC	0.492	0.507

Notes: (1) RC – reserve capacity RFC – Ratio of Flow to Capacity

2.9 Table 2.1 shows that the junctions now operate with capacity.

Public Transport Facilities

2.10 The Subject Site is located close to public transport services with franchised bus and public light bus routes operating in the vicinity. Details of the franchised bus and green minibus ("GMB") routes operating in the vicinity of the Subject Site are presented in Figure 2.6 and Table 2.2.

TABLE 2.2 FRANCHISED BUS AND GMB SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Routing	Frequency (minutes)
KMB 76K	Long Ping Estate – Ching Ho Estate	20 – 30
KMB 268	Sham Tseng – Kwun Tong (Tsui Ping North Estate)	30 – 35
CTB 976	Sai Wan Ho – Lok Ma Chau (San Tin)	6 per day
CTB 976A	Siu Sai Wan (Island Resort) – Lok Ma Chau (San Tin)	2 per day
GMB 36	Yuen Long (Fook Hong Street) – Tai Sang Wai Rural Office	10 – 15
GMB 37	Yuen Long (Fook Hong Street) – Yau Tan Mei Village Office	12 – 15
GMB 38	Yuen Long (Fook Hong Street) – Yau Tam Mei West	10 – 15
GMB 75	Yuen Long (Fook Hong Street) – Lok Ma Chau Spur Line Public Transport Interchange	7 – 9
GMB 76	Yuen Long (Fook Hong Street) – Siu Hum Tsuen	15 – 20
GMB 78	Pat Heung Road (near Tai Lam Bus-Bus Interchange) – Lok Ma Chau (San Tin) Public Transport Interchange	20 – 25

Note: KMB – Kowloon Motor Bus CTB – Citybus GMB – Green Minibus

Trip Generation Rates for RCHE

2.11 In view that the TPDM does not have trip generation rates for RCHE, trip generation surveys were conducted at 4 RCHEs. Details of these RCHEs are found in Table 2.3, and survey results are presented in Table 2.4.

TABLE 2.3 DETAILS OF THE SURVEYED RCHEs

Ref.	RCHE	Address	No. of beds	Distance from nearest MTR Station
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	60 - 62 Tin Wan Street, Tin Wan	392	2.8 km (Wong Chuk Hang Station)
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	16 Wah Fat Street, Tuen Mun	260	2.2 km (Tuen Mun Station)
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	5 Sha Wan Drive, Pok Fu Lam, Hong Kong	175	3.5km (Kennedy Town Station)
4	Forward Living	9 Fu Tei Road, Tuen Mun	229	1km (Siu Hong Station)

TABLE 2.4 TRIP RATES OF THE SURVEYED RCHEs

Ref.	RCHE	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Traffic Generation (pcu/hr)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	6	3	4	6
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	12	8	7	13
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	6	2	3	7
4	Forward Living	7	5	6	10
Trip Rates (pcu/hour/ bed)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	0.0153	0.0077	0.0102	0.0153
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	0.0462	0.0308	0.0269	0.0500
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	0.0343	0.0114	0.0171	0.0400
4	Forward Living	0.0306	0.0218	0.0262	0.0437
	Adopted (maximum rates) =	0.0462	0.0308	0.0269	0.0500

Pedestrian Generation Rates for RCHE

2.12 In view that the TPDM does not have pedestrian generation rates for RCHE, pedestrian generation surveys were also conducted at the 4 RCHEs found in Table 2.3, and the survey results are presented in Table 2.5.

TABLE 2.5 PEDESTRIAN TRIP RATES OF THE SURVEYED RCHEs

Ref.	RCHE	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
Pedestrian Generation (pedestrian/15 min)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	16	7	5	18
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	16	5	3	17
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	9	2	1	7
4	Forward Living	14	4	2	13
Pedestrian Generation Rates (pedestrian/15 min/bed)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	0.0408	0.0179	0.0128	0.0459
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	0.0615	0.0192	0.0115	0.0654
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	0.0514	0.0114	0.0057	0.0400
4	Forward Living	0.0611	0.0175	0.0087	0.0568
	Adopted (maximum rates) =	0.0615	0.0192	0.0128	0.0654

Utilisation of Surveyed Bus Stops

2.13 An utilisation survey was conducted during the AM and PM peak periods at Tai Sang Wai (towards San Tin) and Long Ha (towards Yuen Long) bus stops and the

pedestrian route to 2 surveyed bus stops is presented in Figure 2.7. The results are presented in Tables 2.6 and 2.7 respectively.

TABLE 2.6 RESULTS OF THE UTILISATION SURVEY AT TAI SANG WAI (TOWARDS SAN TIN) BUS STOP

Route[1]	No. of Vehicle	No. of Passengers on-board[2] [a]	Capacity[3] [b]	Vacancy [b] – [a]	Occupancy [a] / [b]
AM Peak					
KMB 76K	3	146	384	238	38.0%
KMB 268	2	14	124	110	11.3%
GMB 37	5	65	86	21	75.6%
GMB 38	6	77	102	25	75.5%
GMB 75	3	27	51	24	52.9%
GMB 76	2	15	32	17	46.9%
GMB 78	2	12	38	26	31.6%
Total	23	356	817	461	43.6%
PM Peak					
KMB 76K	3	154	384	230	40.1%
KMB 268	2	14	124	110	11.3%
GMB 37	7	93	118	25	78.8%
GMB 38	9	95	147	52	64.6%
GMB 75	3	36	48	12	75.0%
GMB 76	1	10	19	9	52.6%
GMB 78	2	12	38	26	31.6%
Total	27	414	878	464	47.2%

Note: [1] KMB – Kowloon Motor Bus GMB – Green Minibus
[2] Passengers counted the moment before the vehicles departed from the bus stop
[3] Assumed capacities: Double-decker = 128, Single-decker = 62

TABLE 2.7 RESULTS OF THE UTILISATION SURVEY AT LONG HA (TOWARDS YUEN LONG) BUS STOP

Route[1]	No. of Vehicle	No. of Passengers on-board[2] [a]	Capacity[3] [b]	Vacancy [b] – [a]	Occupancy [a] / [b]
AM Peak					
KMB 76K	3	89	384	295	23.2%
KMB 268	2	14	124	110	11.3%
GMB 37	6	71	99	28	71.7%
GMB 38	2	22	32	10	68.8%
GMB 75	5	70	86	16	81.4%
GMB 76	2	16	32	16	50.0%
Total	20	282	757	475	37.3%
PM Peak					
KMB 76K	2	70	256	186	27.3%
KMB 268	3	21	186	165	11.3%
GMB 37	5	46	86	40	53.5%
GMB 38	4	40	67	27	59.7%
GMB 75	3	38	48	10	79.2%
GMB 76	3	33	51	18	64.7%
Total	20	248	694	446	35.7%

Note: [1] KMB – Kowloon Motor Bus GMB – Green Minibus
[2] Passengers counted the moment before the vehicles departed from the bus stop
[3] Assumed capacities: Double-decker = 128, Single-decker = 62

2.14 Table 2.6 shows that the utilisation of the franchised buses at Tai Sang Wai (towards San Tin) bus stop is 43.6% during the AM Peak Hour and 47.2% during the PM Peak Hour. Whilst, Table 2.7 shows that the utilisation of the franchised buses at Long Ha (towards Yuen Long)) bus stop is 37.3% during the AM Peak Hour and 35.7% during the PM Peak Hour.

3.0 THE PROPOSED RCHE

Proposed RCHE

3.1 The Proposed RCHE consists of 1 building block with no more than 240 beds and is targeted for completion by 2030. The vehicular assess of Proposed RCHE is provided at Kam Pok Road East.

Provision of Internal Transport Facilities

3.2 The HKPSG has no recommendation on the provision of internal transport facilities for RCHE, hence, reference is made to the 4 RCHEs listed in Table 2.3. The internal transport facilities provision rate derived from the 4 RCHEs are found in Table 3.1.

TABLE 3.1 INTERNAL TRANSPORT FACILITIES PROVIDED IN SURVEYED RCHEs

Ref.	RCHE	No. of beds	Internal Transport Facilities		
			Car	Light Bus / Ambulance	LGV
Parking Provision					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	392	8	0	1
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	260	5	1	0
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	175	8	0	0
4	Forward Living	229	4	0	0
Provision rate (space / bed)					
1	The Hong Kong Society for the Aged Bradbury Home for the Elderly and Quan Chuen Home for the Elderly	392	0.020	0.000	0.003
2	Caritas Li Ka Shing Care and Attention Home, Tuen Mun	260	0.019	0.004	0.000
3	Chuk Lam Ming Tong Care and Attention Home for the Aged	175	0.045	0.000	0.000
4	Forward Living	229	0.018	0.000	0.000
	Adopted provision rate =		0.045	0.004	0.003

3.3 Based on the adopted provision rate in Table 3.1, the calculated internal transport facilities for the Proposed RCHE are presented in Table 3.2.

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES THE FOR PROPOSED RCHE

Use	No. of beds	Internal Transport facilities	Provision	Dimensions
RCHE	240	Car Parking Space	11	10 @ 5m (L) x 2.5m (W) x 2.4m (H), and 1 @ 5m (L) x 3.5m (W) x 2.4m (H) for persons with disabilities
		LGV loading / unloading bay	1	1 @ 7m (L) x 3.5m (W) x 3.6m (H)
		Light Bus / Ambulance Parking Space	1	1 @ 9m (L) x 3.0m (W) x 3.3m (H)

3.4 The carpark layout plans for G/F and B/F are shown in Figures 3.1 – 3.2.

3.5 The measured length of visibility splay for the motorists leaving the Proposed RCHE is 60m to the left and 60m to the right, which is illustrated in Figure 3.3.

Swept Path Analysis

3.6 The CAD-based swept path analysis program, Autodesk Vehicle Tracking, was used to check the ease of vehicle manoeuvring. Vehicles are found to have no manoeuvring problems and all vehicles could enter and leave the spaces with ease. The swept path analysis drawings for critical movements are found in Appendix 2.

4.0 TRAFFIC IMPACT

Design Year

4.1 The Proposed RCHE is expected to be completed by 2030, and the design year adopted for the capacity analysis is 2033, i.e. 3 years after the completion of the Proposed RCHE.

Traffic Forecasting

4.2 The 2033 traffic flows used for the junction analysis are produced with reference to the following:

(i) 2031 traffic flows derived based on the NTW1 Base District Traffic Model ("BDTM");

(ii) estimated traffic growth from 2031 to 2033 based on the higher of: (a) Hong Kong Population Projections 2022 – 2046, published by Census and Statistics Department, or (b) historic Annual Average Daily Traffic ("AADT") in ATC produced by Transport Department;

(iii) the other developments in the vicinity of the Proposed RCHE; and

(iv) Traffic generated by the Proposed RCHE.

4.3 The (ii) estimated traffic growth from 2031 to 2033, (iii) the other development in the vicinity of the Proposed RCHE and (iv) traffic generated by the Proposed RCHE are presented in the paragraphs below.

Estimated Growth Rate from 2031 to 2033

4.4 The (a) Hong Kong Population Projections 2022 – 2046, and (b) historic AADT in ATC are summarised in Tables 4.1 – 4.2 respectively.

TABLE 4.1 HONG KONG POPULATION PROJECTIONS 2022 – 2046

Whole Territory Population		Annual Growth Rate
Year 2031	Year 2033	2031 to 2033
7,820,200	7,903,600	0.53%

TABLE 4.2 AADT OF THE STATION IN THE VICINITY OF THE SUBJECT SITE

Year \ Station	5016	5019	5257	5297	5505	5508	5496	Overall
2013	90,610	34,530	12,620	8,220	9,030	68,040	35,980	259,030
2014	88,800	36,490	10,600	6,200	11,990	72,580	30,750	257,410
2015	86,180	34,380	10,510	6,140	12,090	85,910	27,750	262,960
2016	92,230	31,990	10,940	6,400	12,590	90,760	28,900	273,810
2017	90,650	30,040	10,770	6,300	12,390	90,110	28,450	268,710
2018	86,230	29,300	11,980	8,540	12,700	92,980	29,150	270,880
2019	90,860	30,160	11,910	7,530	13,330	80,460	26,970	261,220
2020	81,870	27,640	11,420	7,220	13,420	82,010	13,100	236,680
2021	86,620	29,600	11,880	7,510	13,960	86,000	13,630	249,200
2022	82,820	28,180	11,520	7,280	13,540	82,190	13,210	238,740
2023	88,760	55,700	10,740	10,960	13,860	87,340	13,520	280,880
Average Annual Growth								0.81%

Note: 5016 – San Tin Highway, Castle Peak Road & San Tam Road (From Kam Tin Road to Fairview Park Boulevard)
5019 – Castle Peak Road – Yuen Long (From Yuen Long On Lok Road to Kam Tin Road)
5257 – Castle Peak Road – Tam Mi, Mai Po & San Tin (From Fairview Park Boulevard to Lok Ma Chau Road)
5297 – San Tam Road (From Castle Peak Road – Mai Po to Fairview Park Boulevard Roundabout)
5505 – Sam Tam Road (From Fairview Park Boulevard RA to End)
5508 – San Tin Highway (From Fairview Park Boulevard to Lok Ma Chau Road)
5496 – San Sham Road (From San Tin Interchange to End of San Sham Road)

4.5 Table 4.1 shows that the annual growth rate from 2031 to 2033 is +0.53%. Table 4.2 shows that in the historic AADT of the stations between 2013 and 2023 in the vicinity has average annual growth rate of +0.81% per annum. To be conservative, the growth rate of +1.00% per annum is adopted for the traffic growth between 2031 and 2033.

Other Developments in the Vicinity of the Proposed RCHE

4.6 The major planned developments in the vicinity of the Proposed RCHE are summarized in Table 4.3, and are included in the traffic forecast.

TABLE 4.3 DETAILS OF MAJOR PLANNED DEVELOPMENTS

Site	Address	Use	Development Parameter (Approx.)
1	TPB ref.: A/YL-KTN/663-1: Lots 1783 (Part), 1784 RP, 1788 RP, 1789 RP, 1790 RP (Part), 1791 RP, 1795 (Part), 1796 (Part), 1797 (Part), 1836 (Part), 1927 S.A and 1927 RP (Part) in D.D. 107 and Adjoining Government Land, Kam Tin, Yuen Long	Residential	Around 1,154 flats
2	TPB ref.: A/YL-MP/205-1: Lots 3054 S.A RP, 3098 RP (Part), 3108 (Part), 3109 (Part), 3100 (Part), 3110, 3111, 3112, 3113, 3114, 3115 RP, 3119 RP, 3122 RP, 3123, 3124, 3126, 3131 S.A, 3131 S.B, 3131 S.C, 3131 S.D, 3131 RP, 3132, 3138, 3146, 3147 RP (Part), 3148, 3150 RP, 3156 RP, 3158 RP, 3162, 3163, 3164 S.A, 3164 RP, 3167, 3168, 3171, 3173, 3176, 3177, 3178, 3179, 3180 RP, 3181 RP, 3182 RP, 3189 RP, 3190, 3191, 3192 RP, 3193RP and 3194 RP in D.D. 104 and Adjoining Government Land, Mai Po, Yuen Long, New Territories	Residential	Around 71 flats
3	TPB ref.: A/YL-MP/344: Lots 50 S.A and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long	Residential	Around 789 flats
4	TPB ref.: A/YL-NTM/178: Lots 435(Part), 436(Part), 438, 439, 442-444, 445(Part), 446-454, 456(Part), 457(Part), 459, 460, 461(Part), 462(Part), 463(Part), 464(Part), 465-474, 476, 478-483, 484(Part), 485, 486(Part), 492495(Part), 516-518, 520, 521(Part), 522(Part), 541(Part), 542(Part), 543-545, 547-552, 555, 556, 559, 560, 562, 563(Part), 564(Part), 572(Part), 573, 574, 575(Part), 576(Part) and Adjoining Government Land in DD 105, Shek Wu Wai, Ngau Tam Mei, Yuen Long	Residential	Around 322 flats
5	TPB ref.: A/YL-MP/341: Various Lots in D.D. 104 and Adjoining Government Land, Yau Pok Road, Mai Po, Yuen Long	Residential	Around 2150 flats
6	TPB ref.: A/YL-MP/247: Lots 3054 S.B RP and 3055 in D.D.104, near Yau Mei San Tsuen, Yuen Long	Residential	Around 105 flats
7	TPB ref.: A/YL-MP/287: Lots 3207 RP, 3209 RP, 3220 RP, 3221 RP, 3224 RP, 3225 S.A RP, 3225 S.C RP, 3225 RP, 3226 S.A RP, 3226 RP, 3228, 3229, 3230 RP, 3250 S.B ss.21 RP, 3250 S.B ss.33 S.B, 3250 S.B ss.40 S.A RP, 3250 S.B ss.40 RP and 4658 RP in D.D. 104 and Adjoining Government Land, Mai Po, Yuen Long, New Territories	Residential	Around 65 flats

Site	Address	Use	Development Parameter (Approx.)
8	TPB ref.: Y/YL-NSW/4: Lots 594, 595 (Part), 600 (Part) , 1288 S.B RP (Part), 1289 S.B RP (Part) and 1292 S.B RP (Part) in D.D. 115, Nam Sang Wai, Yuen Long	Residential	Around 57 flats
9	TPB ref.: A/YL-NSW/274: Lots 592 S.C ss.1 S.A, 592 S.C ss.4 and 1252 S.C in D.D. 115, Tung Shing Lei, Yuen Long	Residential, Office and RCHE	Around 1518 flats, office with 1800m^2 GFA and RCHE with no more than 10 beds
10	TPB ref.: A/YL-NSW/314: Various lots in D.D.104, North of Kam Pok Road East, Pok Wai, Yuen Long, New Territories	Residential	Around 90 flats

Traffic Generated by the Proposed RCHE

4.7 Traffic generation associated with the Proposed RCHE is calculated based on results presented in Table 2.4, and the calculation is presented in Table 4.4.

TABLE 4.4 TRAFFIC GENERATION OF THE PROPOSED RCHE

Item	AM Peak Hour			PM Peak Hour		
	In	Out	2-way	In	Out	2-way
Trip Generation Rates for RCHE (pcu/hour/bed) in Table 2.4						
RCHE	0.0462	0.0308	NA	0.0269	0.0500	NA
Traffic Generation of Proposed RCHE (pcu/hour)						
RCHE: 240 beds	12	8	20	7	12	19

4.8 Table 4.4 shows that the total 2-way traffic generated by the Proposed Development is only 20 and 19 pcu/hour (2-way) during the AM and PM peak hours respectively. Ingress and egress routes for traffic generated by the Proposed RCHE are presented in Figure 4.1.

2033 Traffic Flows

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

2033 without the Proposed RCHE [A]	= (i) 2031 traffic flows derived with reference to BDTM + (ii) estimated total growth from 2031 to 2033 + (iii) Other Developments in the Vicinity of the Proposed RCHE
2033 with the Proposed RCHE [B]	= [A] + (iv) traffic generated by the Proposed RCHE (Table 4.4)

4.10 The 2033 peak hour traffic flows for the cases without and with the Proposed RCHE, are shown in Figures 4.2 - 4.3, respectively.

2033 Junction Operational Performance

4.11 Year 2033 capacity analysis for the cases without and with the Proposed RCHE are summarised in Table 4.5 and detailed calculations are found in the Appendix 1.

TABLE 4.5 2033 JUNCTION OPERATIONAL PERFORMANCE

Ref.	Junction	Type of Junction / Parameter[1]	Without the Proposed RCHE		With the Proposed RCHE	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Kam Pok Road / Kam Pok Road East	Priority / RFC	0.337	0.240	0.338	0.240
J2[2]	Castle Peak Road – Tam Mi / Kam Pok Road	Signal / RC	26%	34%	25%	33%
J3	The Fairview Roundabout	Roundabout / RFC	0.660	0.743	0.662	0.745

Notes: [1] RC – reserve capacity RFC – Ratio of Flow to Capacity
[2] Cycle time increased from 94s to 120s as proposed by the approved A/YL-NSW/314

4.12 Table 4.5 shows that the junctions operate with capacities during the AM and PM peak hours for the cases without and with the Proposed RCHE.

Impact on Utilisation of Surveyed bus stops

4.13 To be conservative, it is assumed that all pedestrians generated by the Proposed RCHE will use public transport services. The number of public transport passengers generated by the Proposed RCHE is calculated based on the pedestrian generation of the Proposed RCHE, as presented in Table 2.5, and the calculation is found in Table 4.6.

TABLE 4.6 PUBLIC TRANSPORT PASSENGERS GENERATED BY THE PROPOSED RCHE

Item	AM Peak Hour			PM Peak Hour		
	In	Out	2-way	In	Out	2-way
Pedestrian Generation Rates for RCHE (pedestrian/15 min/bed) in Table 2.5						
RCHE	0.0615	0.0192	NA	0.0128	0.0654	NA
Pedestrian Generation of Proposed RCHE (pedestrian/15 min)						
RCHE: 240 beds	15	5	20	4	16	20
Pedestrian Generation of Proposed RCHE (pedestrian/1 hour)						
RCHE: 240 beds	60	20	80	16	64	80

4.14 The public transport utilisation analysis is presented in Table 4.7.

TABLE 4.7 THE UTILISATION OF THE PUBLIC TRANSPORT SERVICES FOR THE CASE WITH THE PROPOSED RCHE

No.	Location	Occupancy of Public Transport Service	
		AM Peak	PM Peak
1	Tai Sang Wai (towards San Tin) Bus Stop	48.5%	51.7%
2	Long Ha (towards Yuen Long) Bus Stop	42.5%	41.5%

4.15 Table 4.7 shows that the public transport service have capacity to accommodate the passenger demand generated by the Proposed RCHE.

5.0 CONCLUSION

5.1 The Subject Site is located at lots 3670 RP (Part), 3671 RP (Part), 3672 RP (Part), 3673 RP (Part) and adjoining Government Land in D.D.104, Nam Sang Wai, Yuen Long. The owner has the intention to develop the Subject Site into a RCHE with no more than 240 beds.

5.2 Manual classified counts were conducted at junctions located in the vicinity of the Proposed RCHE in order to establish the peak hour traffic flows. Currently, these junctions operate with capacities during the AM and PM peak hours.

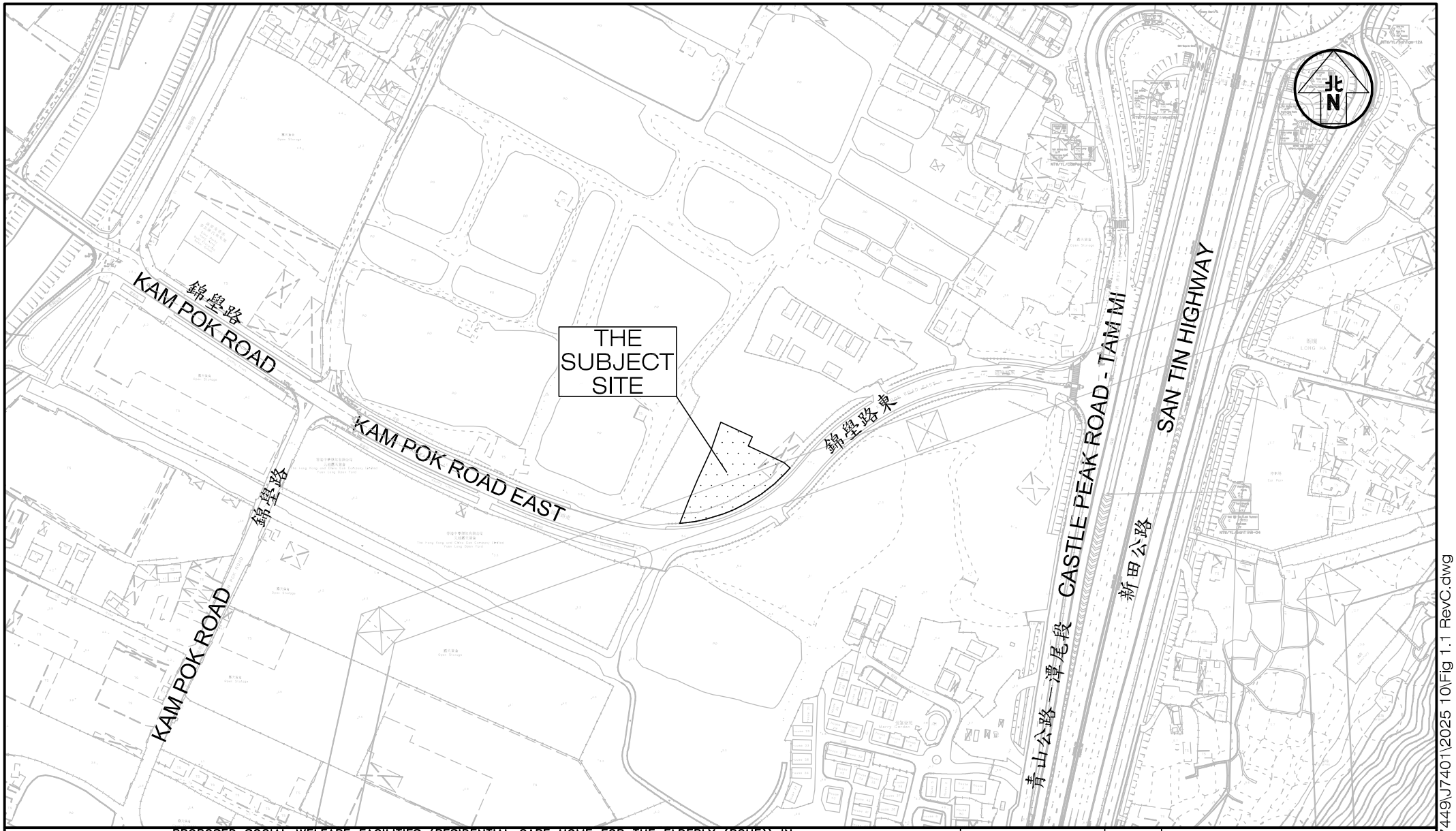
5.3 The internal transport facilities for the Proposed RCHE are provided based on the operational needs with the reference to 4 surveyed RCHEs.

5.4 The Proposed RCHE is expected to be completed by 2030, and the junction capacity analysis is undertaken for year 2033. For the design year 2033, the junctions analysed are expected to operate with capacities during the peak hours for the case without and with the Proposed RCHE.

5.5 The public transport services at 2 surveyed bus stops have capacity to accommodate the passenger demand generated by the Proposed RCHE.

5.6 It is concluded that the Proposed RCHE will result in no adverse traffic impact to the surrounding road network. From traffic engineering grounds, the Proposed RCHE is acceptable.

Figures



Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. 1.1 / Revision C
Figure Title	LOCATION OF SUBJECT SITE		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 3000 / Date 03 OCT 2025

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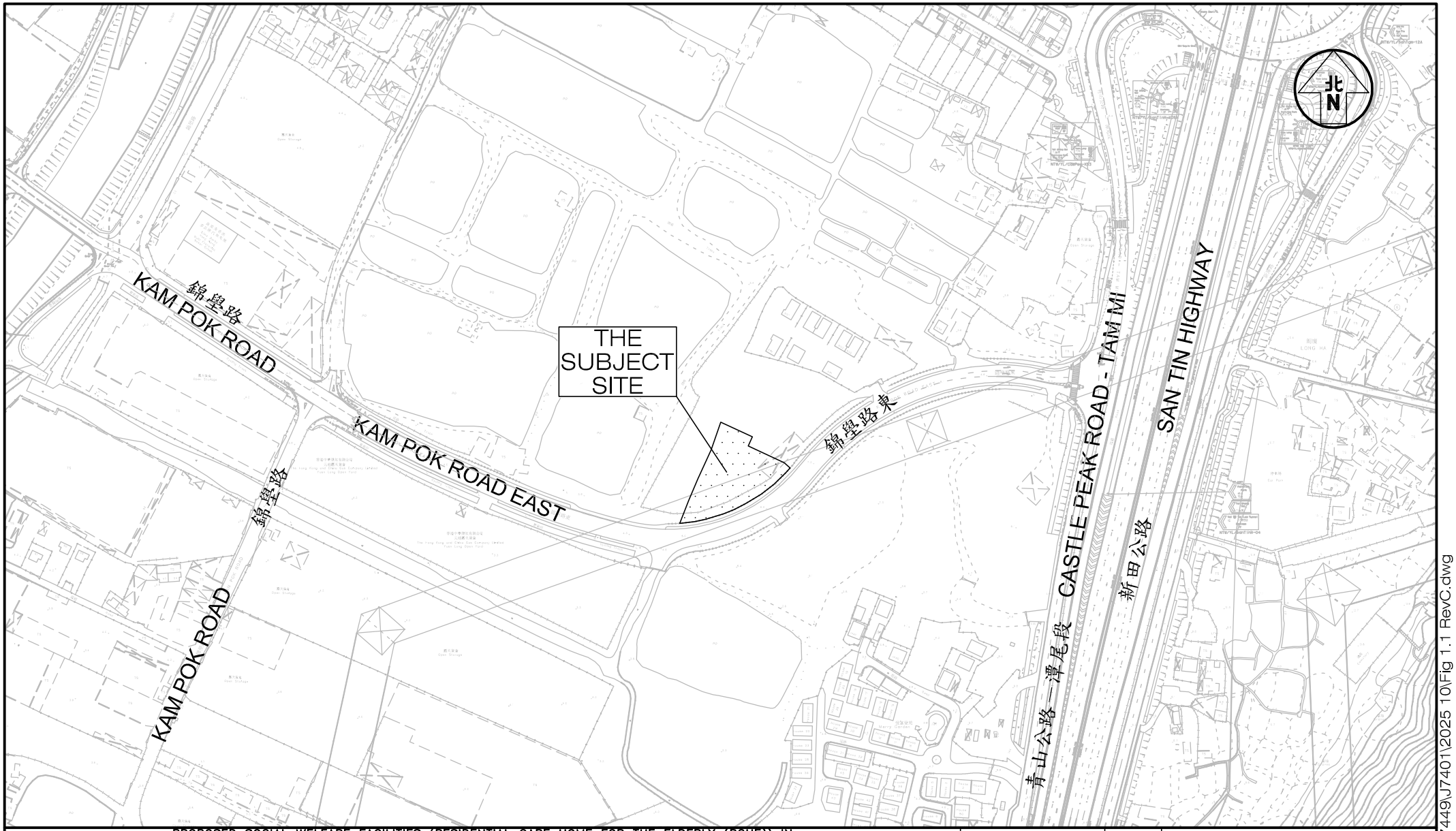

Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. 1.1 / Revision C
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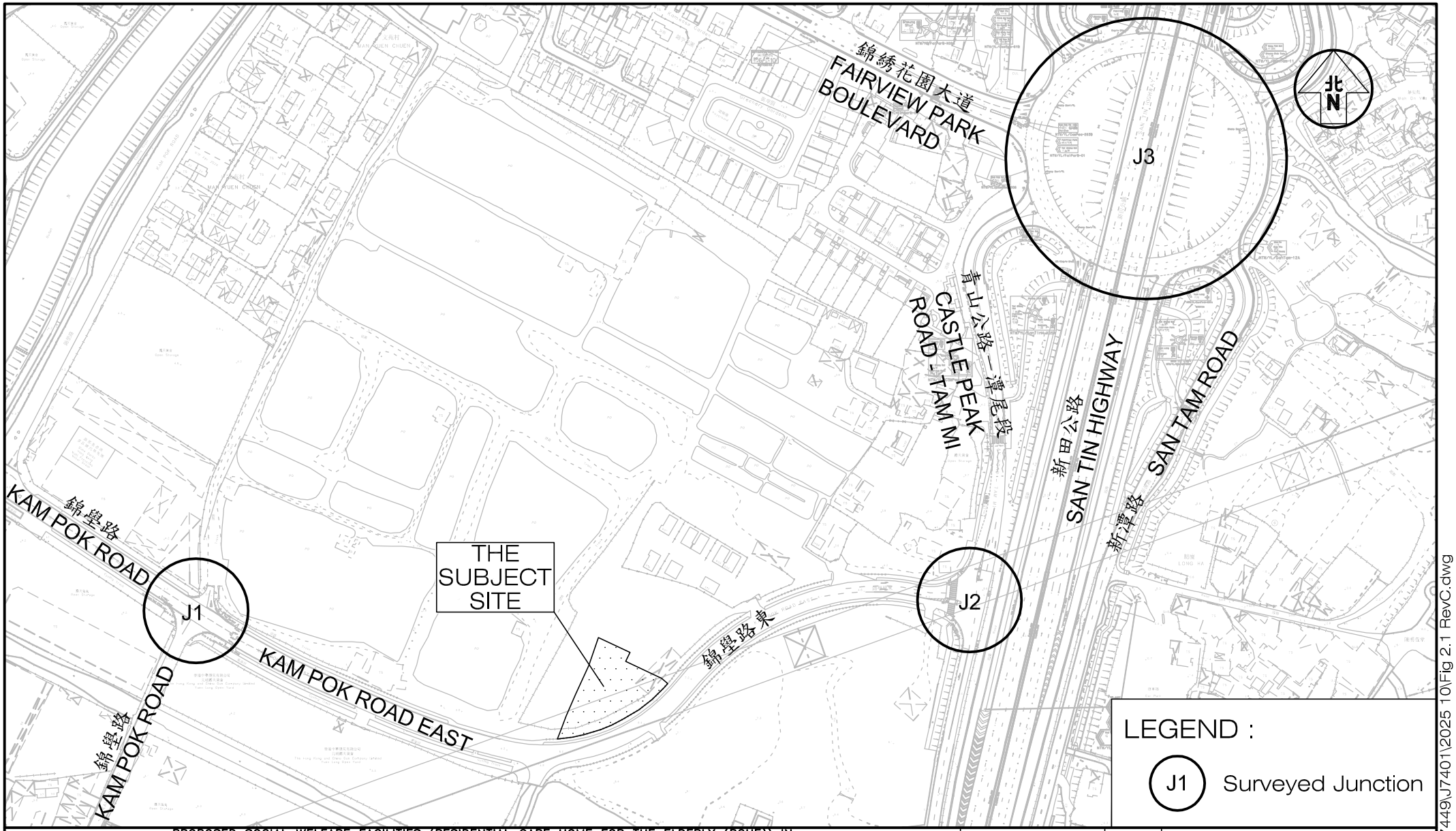

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Figure Title	LOCATION OF SURVEYED JUNCTIONS	Designed by L C H / Drawn by N C M / Checked by K C	Scale in A4 1 : 3000 / Date 03 OCT 2025

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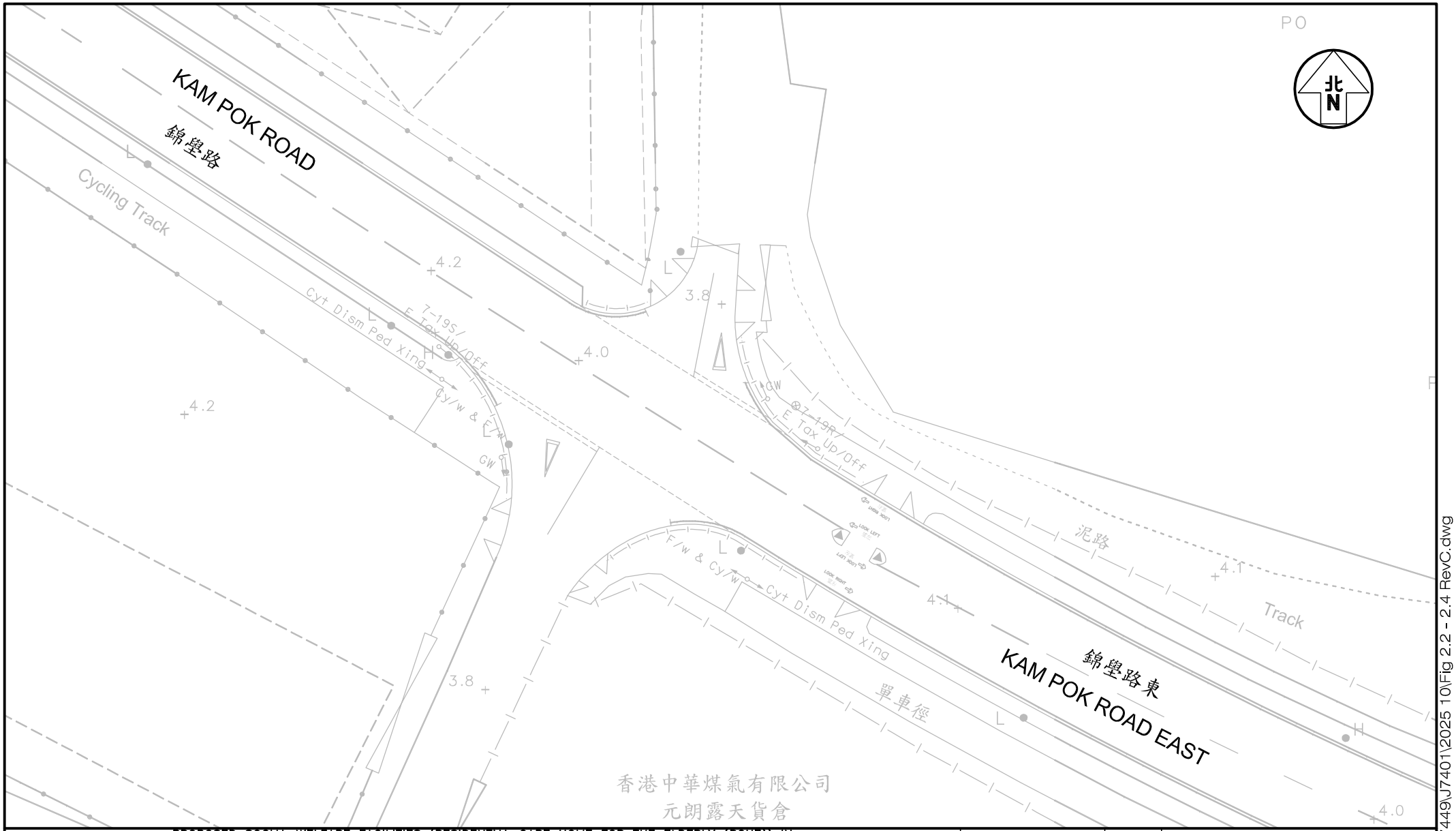

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Figure Title	EXISTING JUNCTION LAYOUT OF KAM POK ROAD / KAM POK ROAD EAST		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 500 / Date 03 OCT 2025

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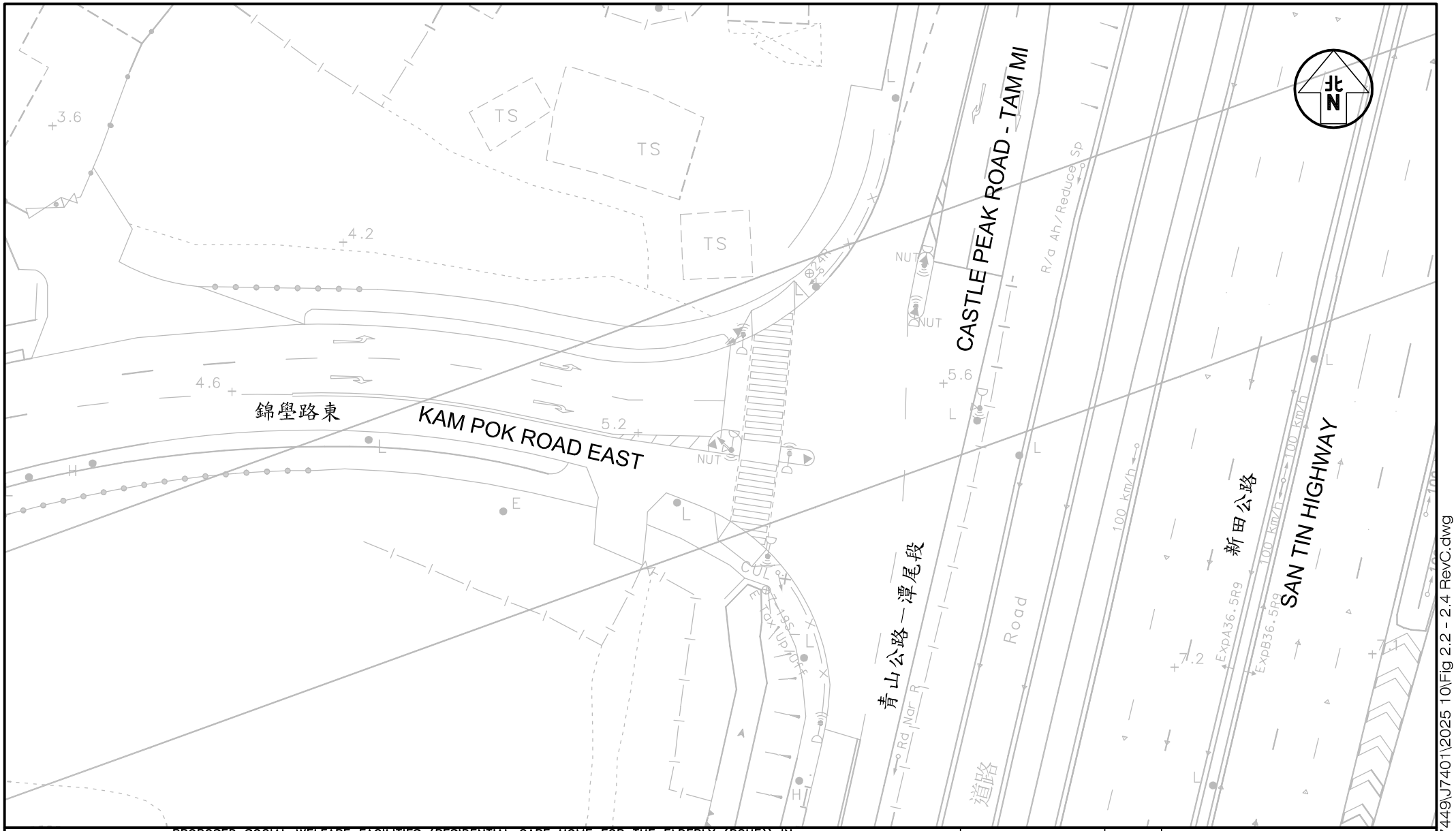

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Figure Title	EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD – TAM MI / KAM POK ROAD		Designed by L C H / Drawn by N C M / Checked by K C
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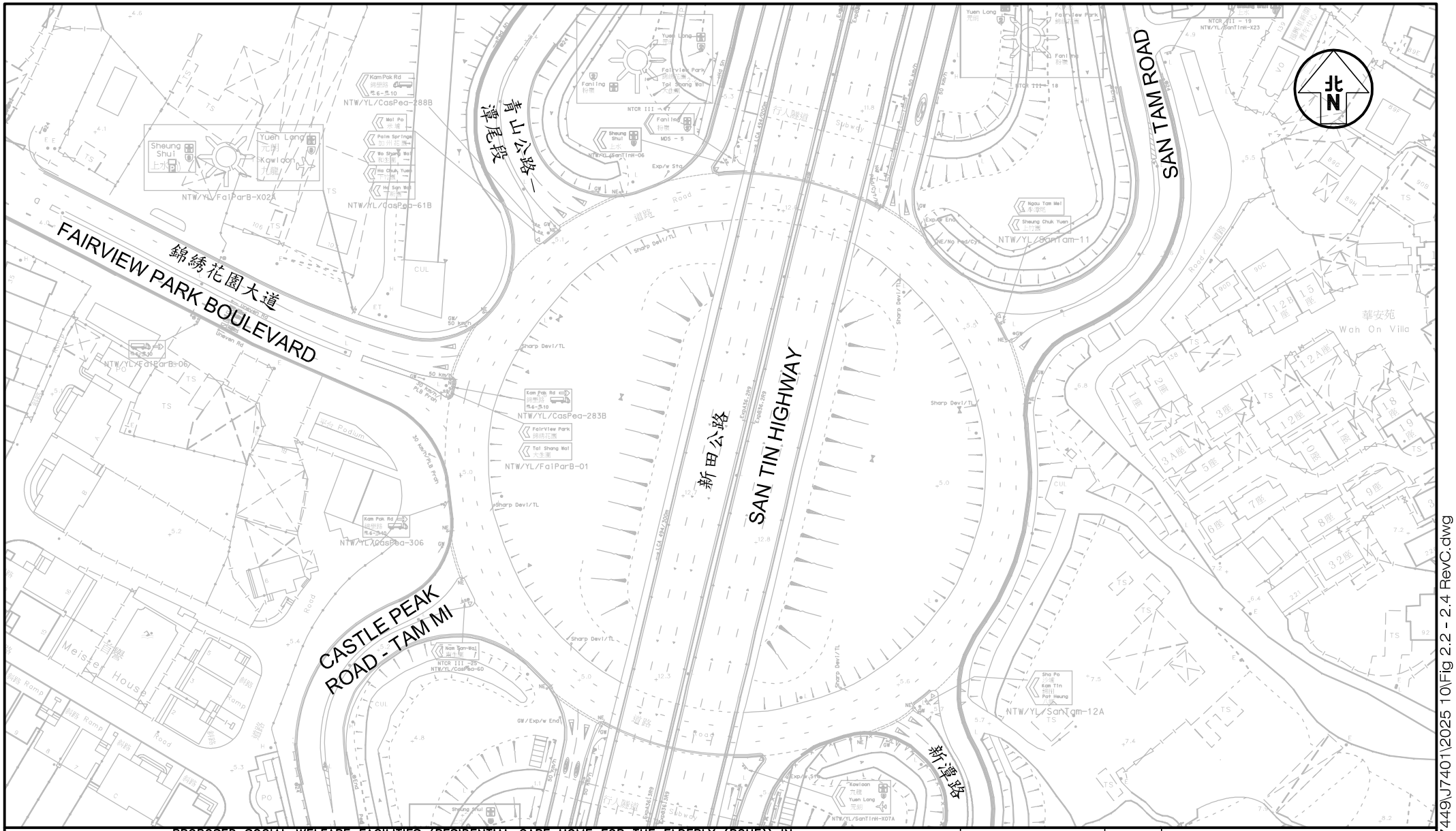

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Figure Title	EXISTING JUNCTION LAYOUT OF THE FAIRVIEW PARK ROUNDABOUT		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 1250 / Date 03 OCT 2025

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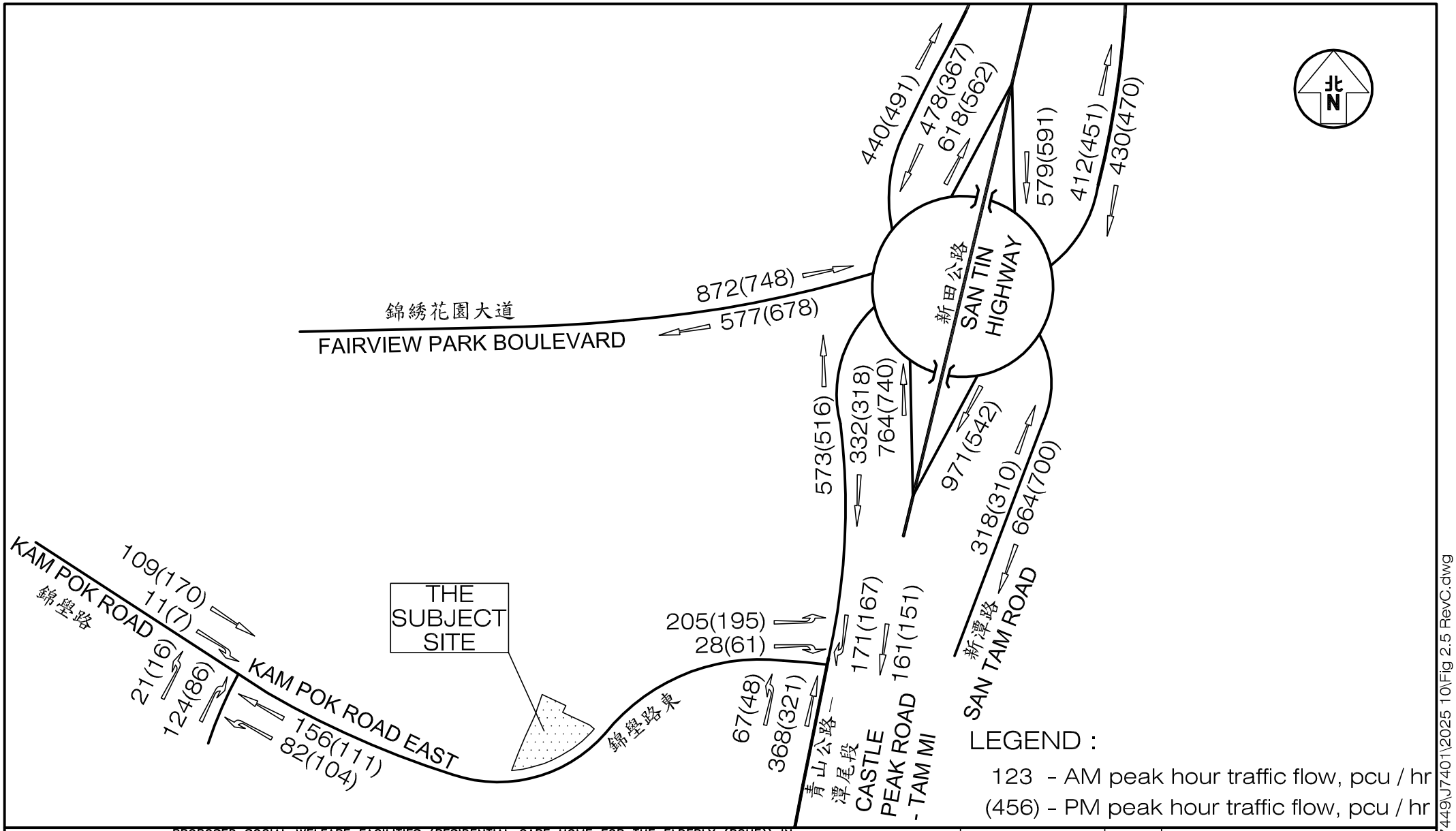

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Figure Title	EXISTING PEAK HOUR TRAFFIC FLOWS	Designed by L C H / Drawn by N C M / Checked by K C	Scale in A4 N.T.S. / Date 03 OCT 2025

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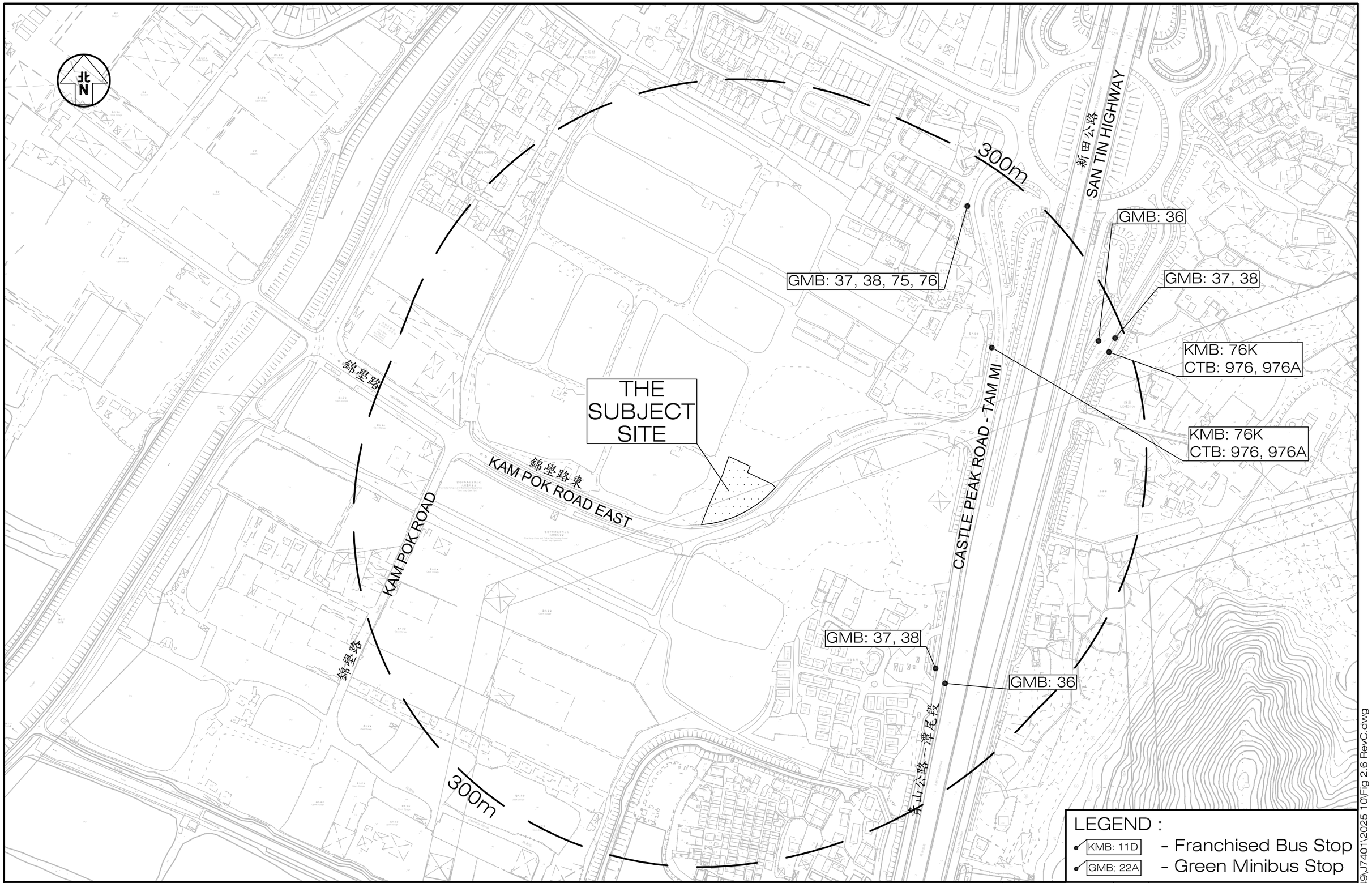

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Figure Title
THE PUBLIC TRANSPORT SERVICES PROVIDED IN THE VICINITY OF THE SUBJECT SITE

Figure No. 2.6 | Revision C

Designed by L C H | Drawn by N C M | Checked by K C

Scale in A3 1 : 3,000 | Date 03 OCT 2025

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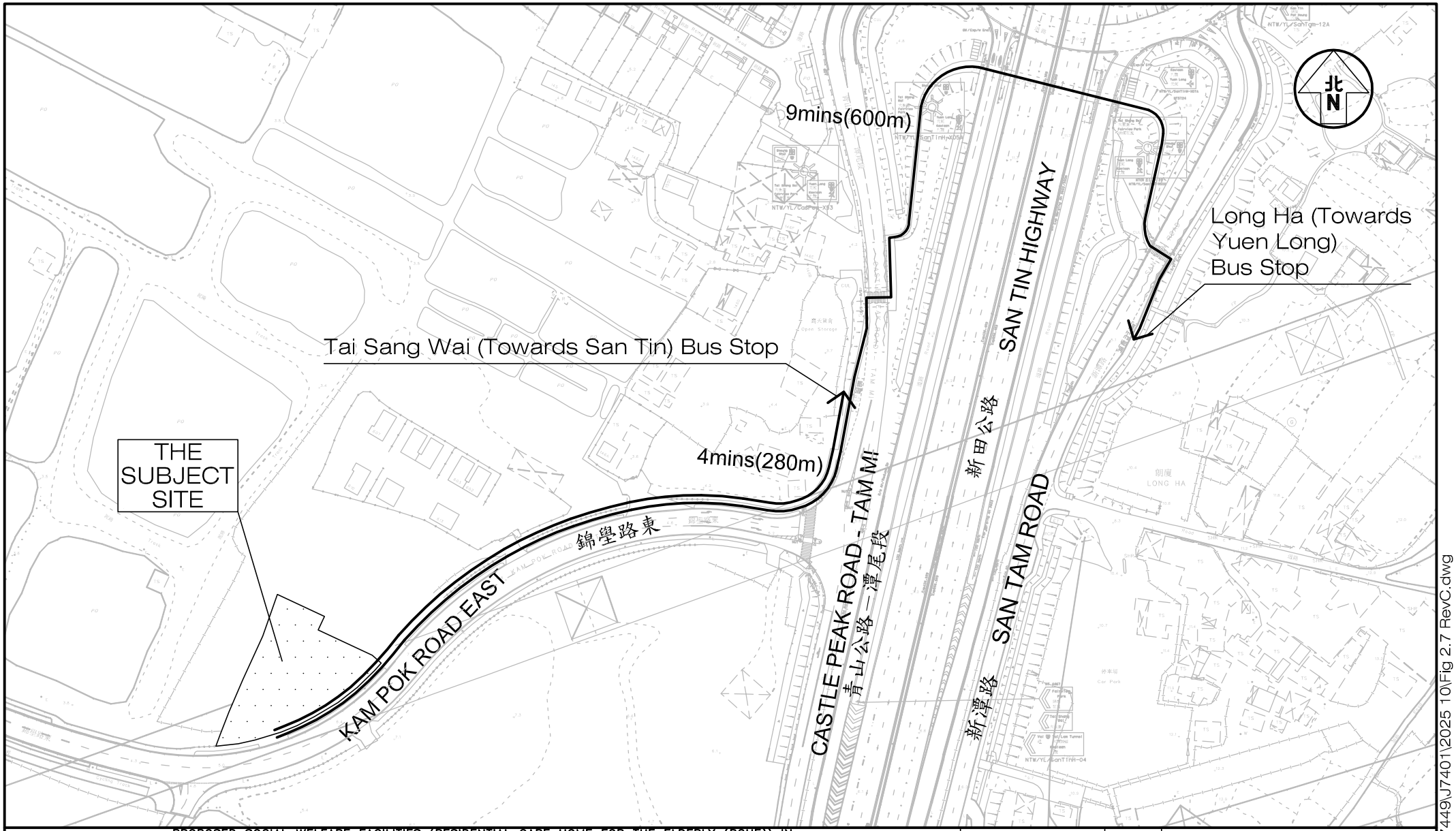

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Figure Title	THE WALKING PATH BETWEEN THE PROPOSED RCHE AND THE NEARBY FRANCHISED BUS STOPS		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 2000 / Date 03 OCT 2025

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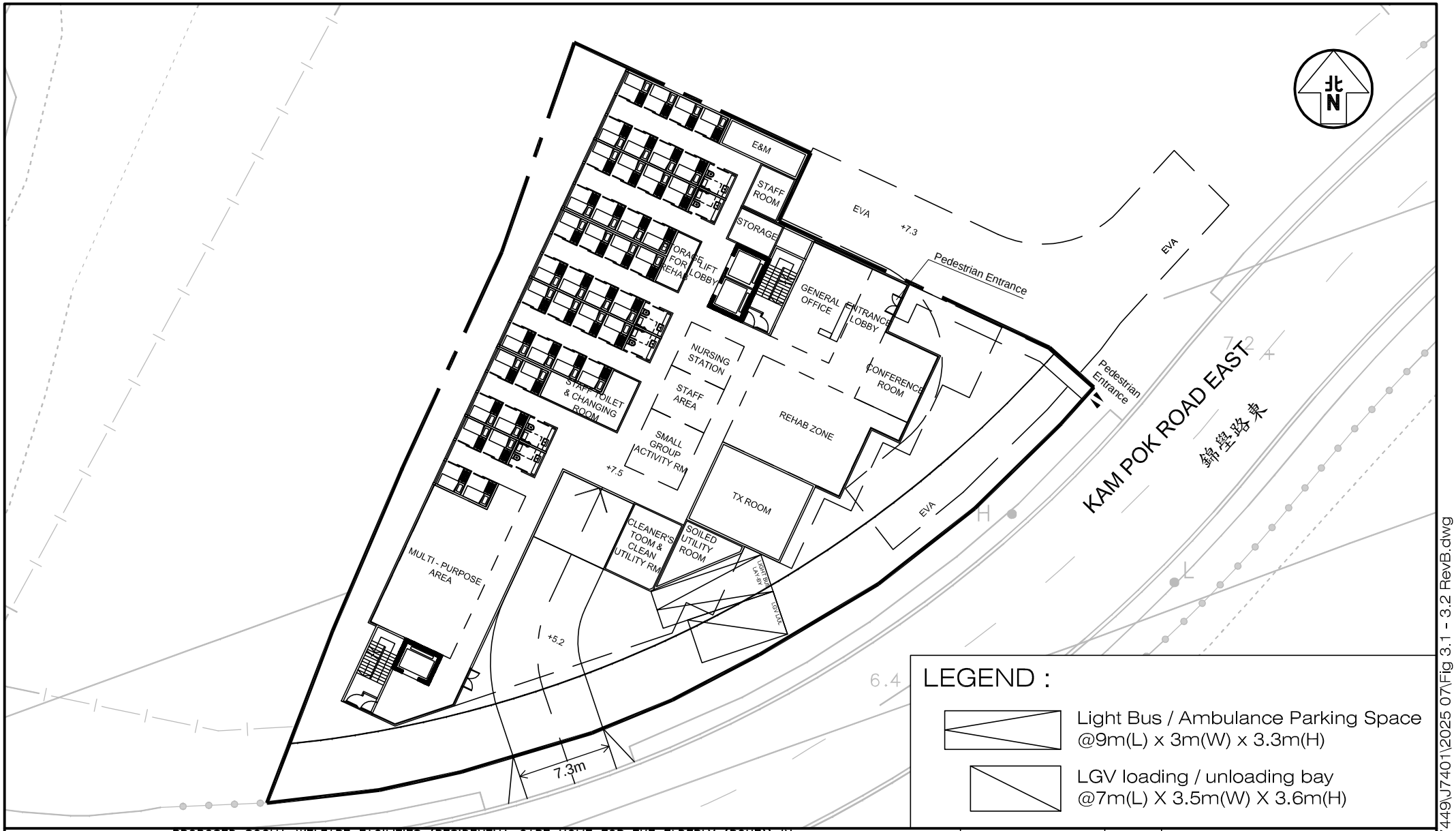

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Figure Title	G/F LAYOUT PLAN	Designed by L C H / Drawn by N C M / Checked by K C	Scale in A4 1 : 400 / Date 03 OCT 2025

CKM Asia Limited
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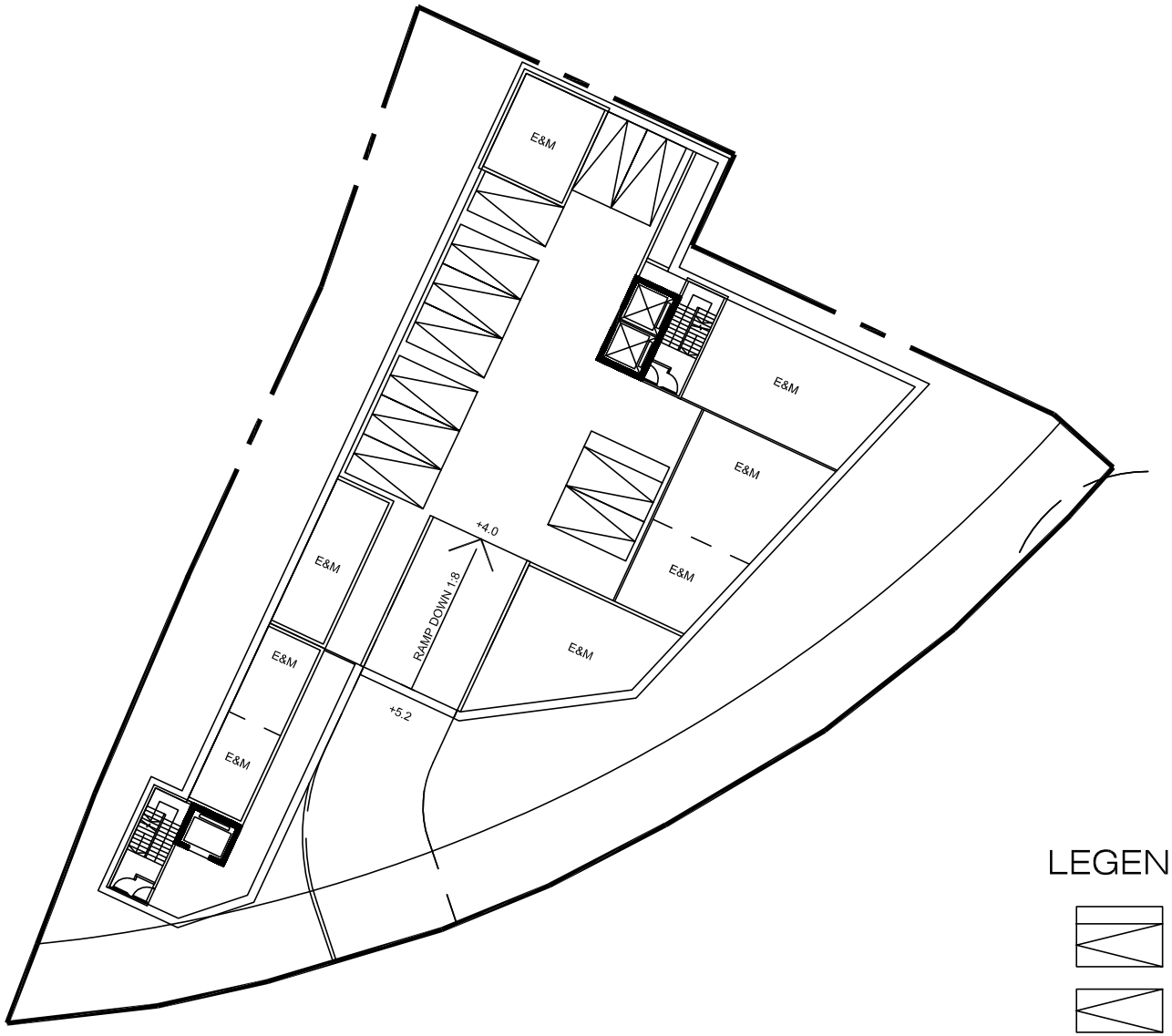

N

LEGEND :

Accessible car parking space
@5m(L) X 3.5m(W) X 2.4m(H)

Private car parking space
@5m(L) X 2.5m(W) X 2.4m(H)

Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. 3.2 / Revision C
Figure Title	B/F LAYOUT PLAN		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 400 / Date 03 OCT 2025

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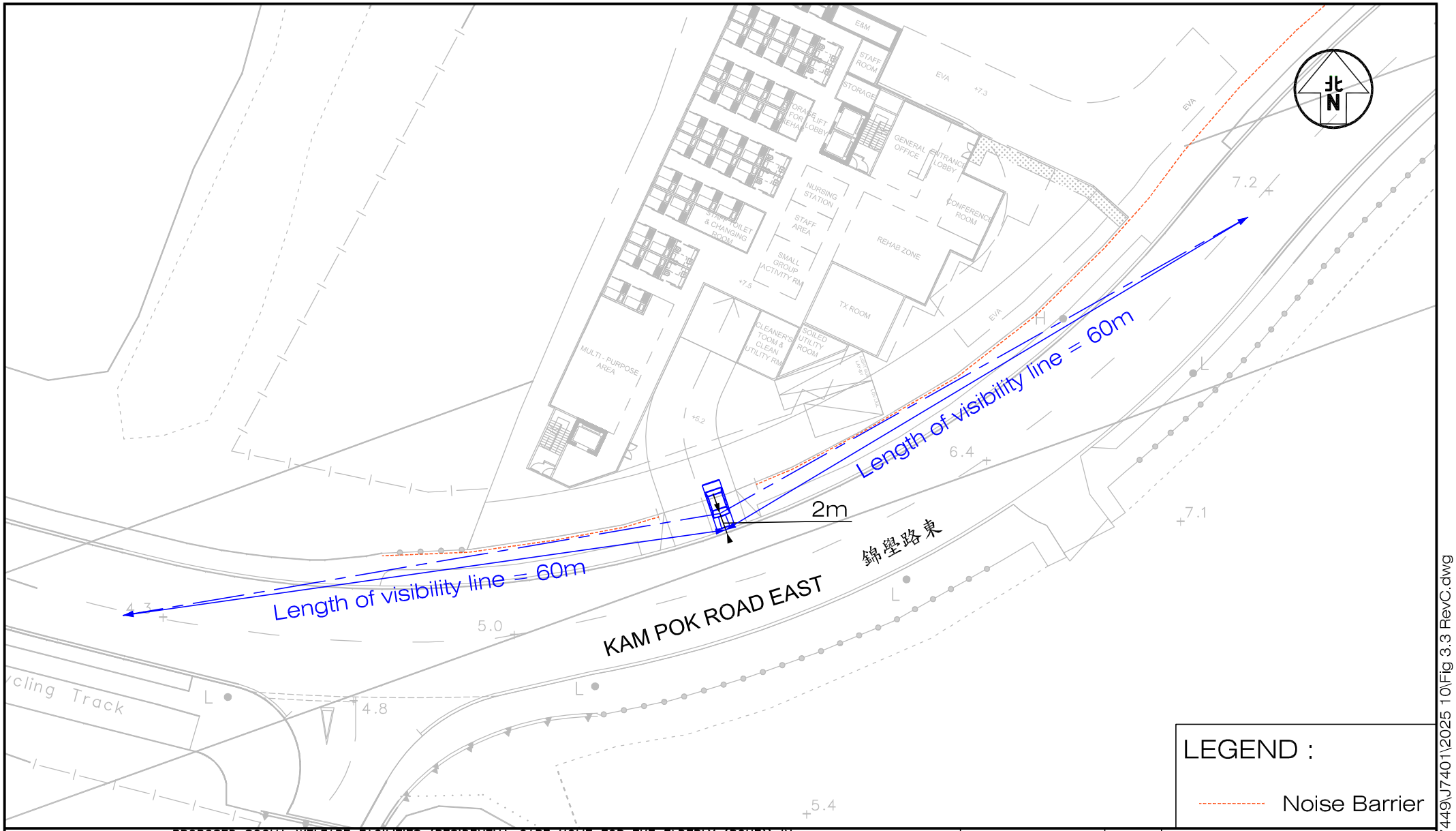

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Figure Title	LENGTH OF VISIBILITY LINE FOR THE MOTORIST LEAVING THE PROPOSED RCHE AT KAM POK ROAD EAST		Designed by C Y Y / Drawn by N C M / Checked by K C	
			Scale in A4 1 : 500 / Date 03 OCT 2025	

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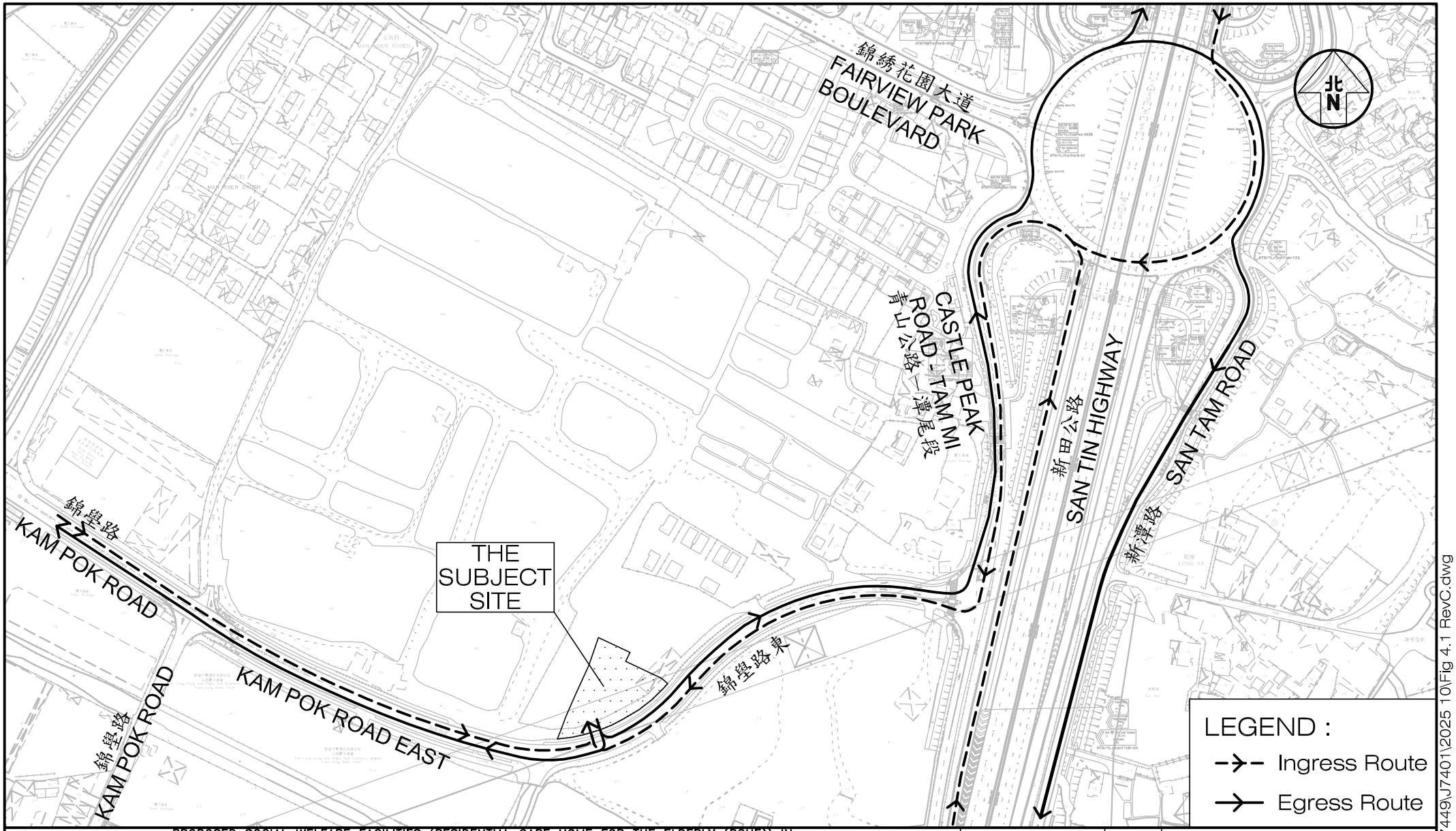

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Figure Title	THE VEHICULAR INGRESS / EGRESS ROUTES OF THE PROPOSED RCHE		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 3000 / Date 03 OCT 2025

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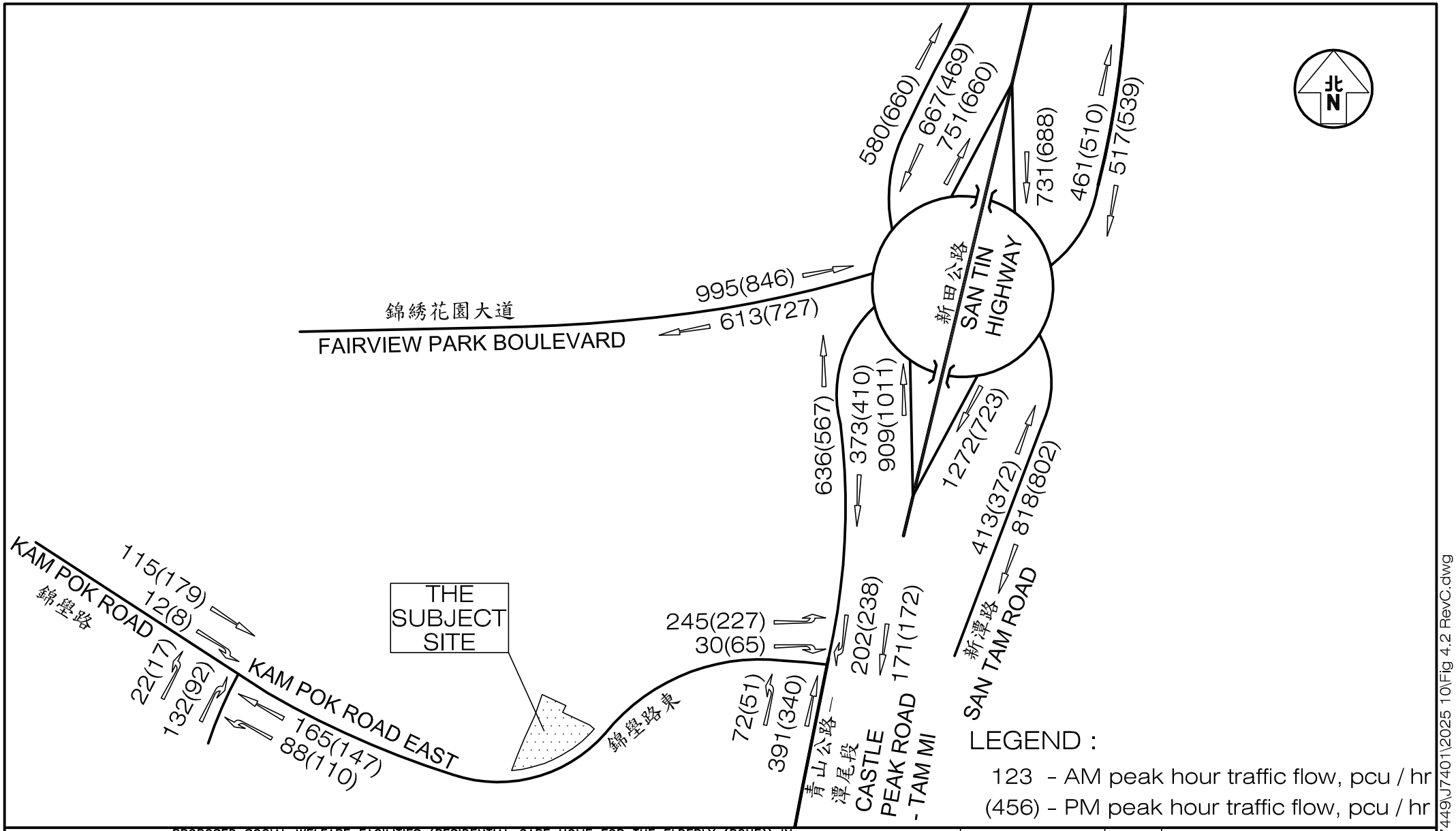

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Figure Title	YEAR 2033 PEAK HOUR TRAFFIC FLOWS WITHOUT THE PROPOSED RCHE		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 N.T.S. / Date 03 OCT 2025

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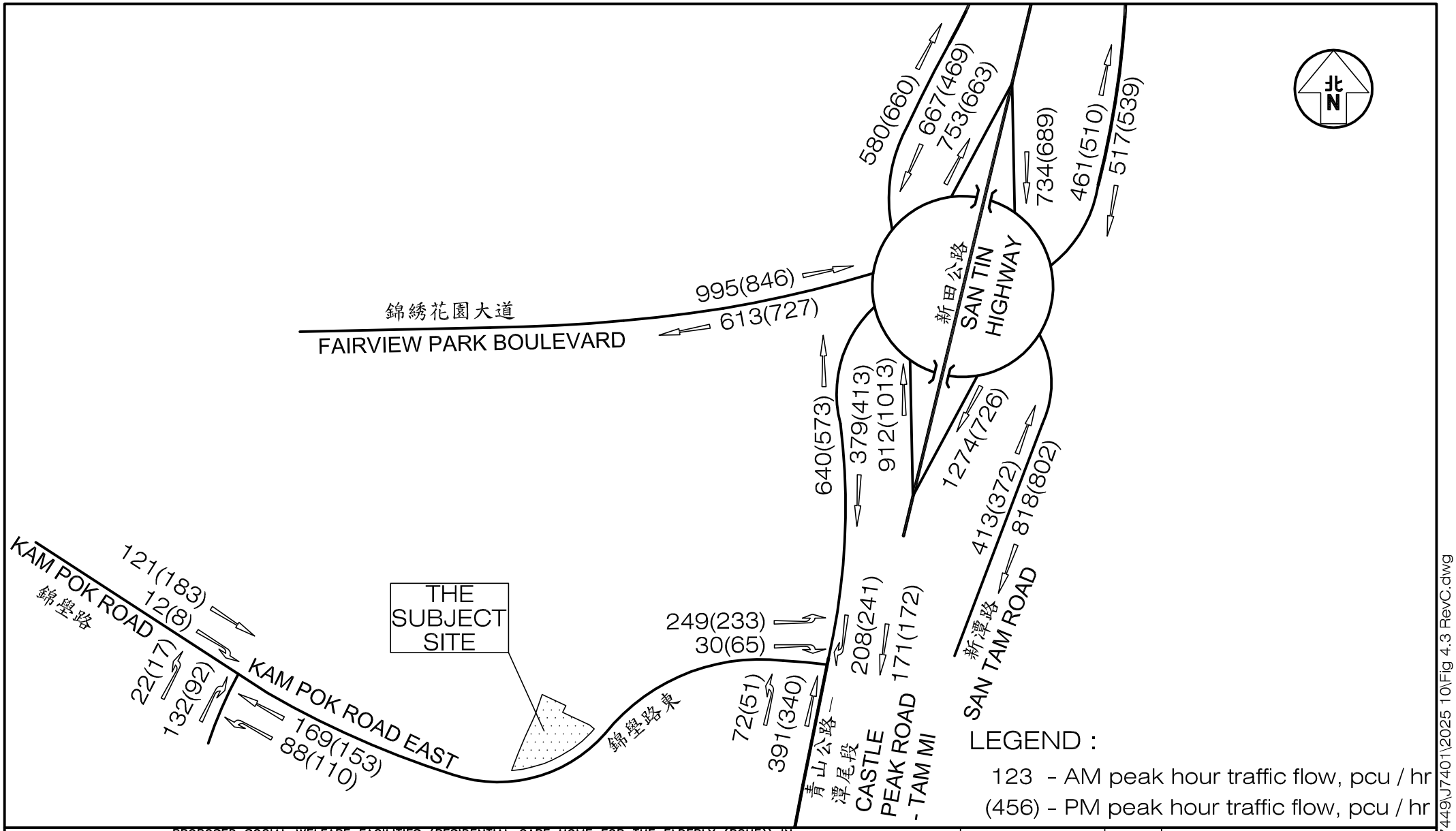

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Figure Title	YEAR 2033 PEAK HOUR TRAFFIC FLOWS WITH THE PROPOSED RCHE		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 N.T.S. / Date 03 OCT 2025

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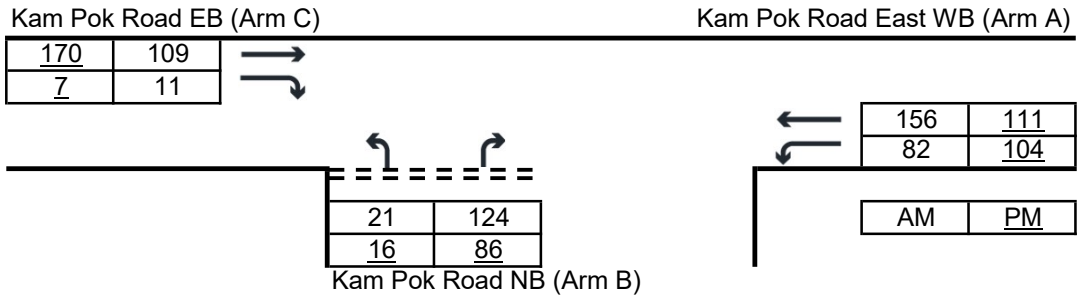
Appendix 1 – Calculation

Priority Junction Analysis

Junction:	Kam Pok Road / Kam Pok Road East				
Design Year:	2025	Job Number:	J7401	Date:	3 Oct 2025
Scenario:	Existing Condition				Page 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	10.30	V-rBA	45	w-BA	2.70	D	0.7881
	W-CR	0.00	V-lBA	30	w-BC	2.70	E	0.8492
			V-rBC	45	w-CB	5.00	F	1.0356
			V-rCB	30			Y	0.6447

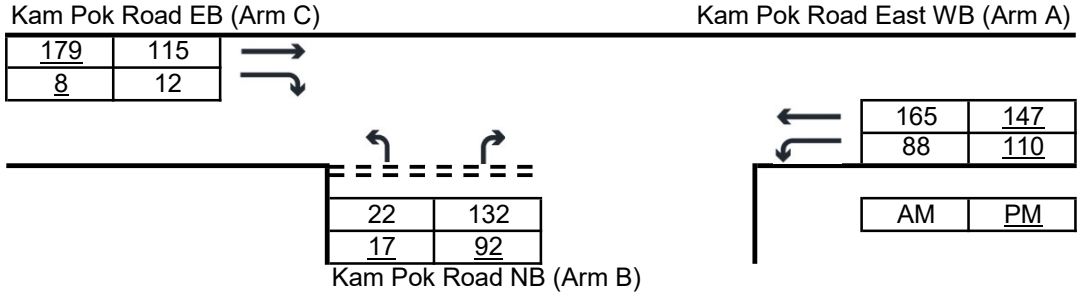
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	109	170	Q-BA	444	444
q-CB	11	7	Q-BC	595	602
q-AB	82	104	Q-CB	714	719
q-AC	156	111	Q-BAC	461	463
q-BA	124	86			
q-BC	21	16			
f	0.145	0.157			

Ratio-of-flow to Capacity	AM	PM
B-A	0.279	0.194
B-C	0.035	0.027
C-B	0.015	0.010
B-AC	0.315	0.220

Priority Junction Analysis

Junction:	Kam Pok Road / Kam Pok Road East				
Design Year:	2033	Job Number:	J7401	Date:	3 Oct 2025
Scenario:	Future Condition (Without Proposed RCHE)			Page	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	10.30	V-rBA	45	w-BA	2.70	D	0.7881
	W-CR	0.00	V-lBA	30	w-BC	2.70	E	0.8492
			V-rBC	45	w-CB	5.00	F	1.0356
			V-rCB	30			Y	0.6447

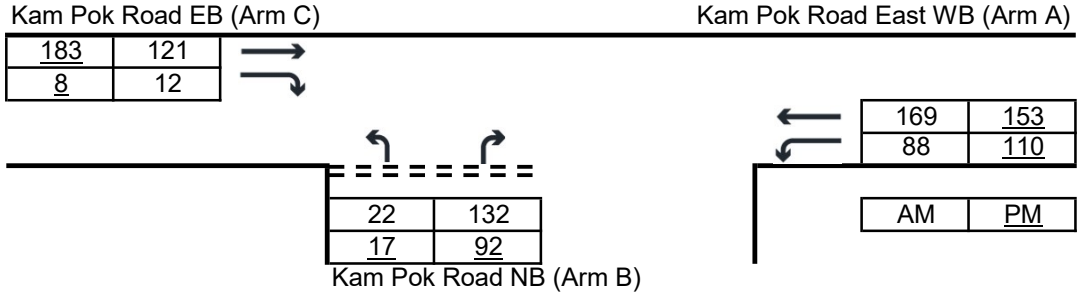
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	115	179	Q-BA	441	436
q-CB	12	8	Q-BC	593	595
q-AB	88	110	Q-CB	710	709
q-AC	165	147	Q-BAC	457	455
q-BA	132	92			
q-BC	22	17			
f	0.143	0.156			

Ratio-of-flow to Capacity	AM	PM
B-A	0.300	0.211
B-C	0.037	0.029
C-B	0.017	0.011
B-AC	0.337	0.240

Priority Junction Analysis

Junction:	Kam Pok Road / Kam Pok Road East				
Design Year:	2033	Job Number:	J7401	Date:	3 Oct 2025
Scenario:	Future Condition (With Proposed RCHE)			Page	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	10.30	V-rBA	45	w-BA	2.70	D	0.7881
	W-CR	0.00	V-lBA	30	w-BC	2.70	E	0.8492
			V-rBC	45	w-CB	5.00	F	1.0356
			V-rCB	30			Y	0.6447

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	121	183	Q-BA	439	434
q-CB	12	8	Q-BC	592	594
q-AB	88	110	Q-CB	709	708
q-AC	169	153	Q-BAC	456	453
q-BA	132	92			
q-BC	22	17			
f	0.143	0.156			

Ratio-of-flow to Capacity	AM	PM
B-A	0.301	0.212
B-C	0.037	0.029
C-B	0.017	0.011
B-AC	0.338	0.240

Signal Junction Analysis

Junction: Castle Peak Road - Tam Mi / Kam Pok Road Job Number: J7401

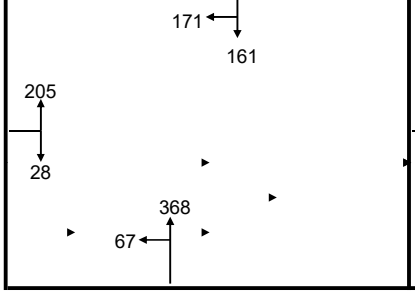
Scenario: Existing Condition P. 4

Design Year: 2025 Designed By: Checked By: Date: 3 Oct 2025

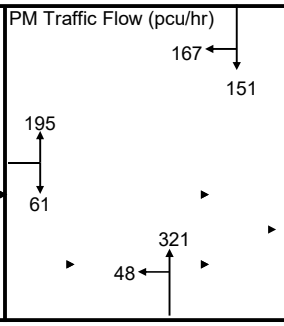
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road - LT+SA	A1	1	3.50	20.0		17	1940	435	0.224	0.224	14	1945	369	0.190	0.190
Tam Mi NB															
Castle Peak Road - Tam Mi SB SA	B1	2	3.30				2085	161	0.077			2085	151	0.072	
RT	B2	2	3.40	15.0		100	1905	171	0.090	0.090	100	1905	167	0.088	0.088
Kam Pok Road EB LT	C1	3	3.50	28.0		100	1865	205	0.110	0.110	100	1865	195	0.105	0.105
RT	C2	3	3.50	13.0		100	1887	28	0.015		100	1887	61	0.032	

pedestrian phase	D(p)	4		min crossing time =	13	sec GM +	12	sec FGM =	25	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

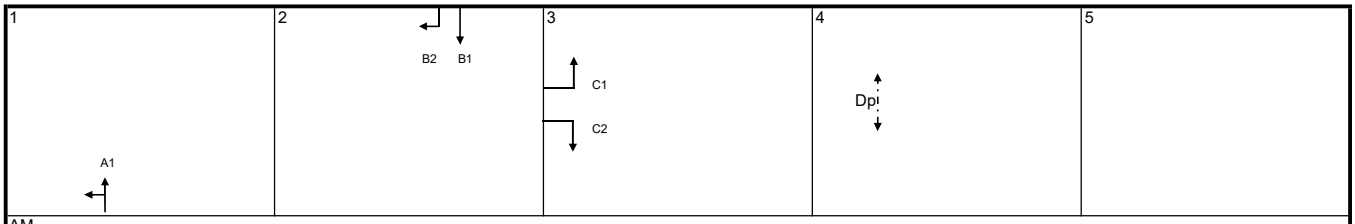


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.424		0.382	
L (s)	40		40	
C (s)	94		94	
practical y	0.517		0.517	
R.C. (%)	22%		35%	

Note:



AM																				
G =	I/G =	6	G =	I/G =	5	G =	I/G =	5	G =	25	I/G =	2	G =	I/G =						
G =	I/G =		G =	I/G =		G =	I/G =		G =		I/G =		G =	I/G =						
PM																				
G =	I/G =	6	G =	I/G =	5	G =	I/G =	5	G =	25	I/G =	2	G =	I/G =						
G =	I/G =		G =	I/G =		G =	I/G =		G =		I/G =		G =	I/G =						

Signal Junction Analysis

Junction: Castle Peak Road - Tam Mi / Kam Pok Road Job Number: J7401

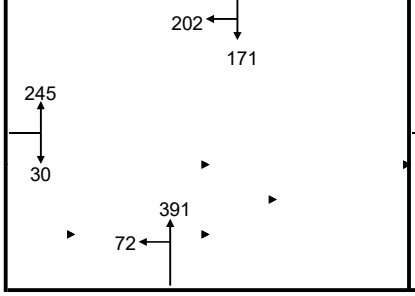
Scenario: Future Condition (Without Proposed RCHE) P. 5

Design Year: 2033 Designed By: Checked By: Date: 3 Oct 2025

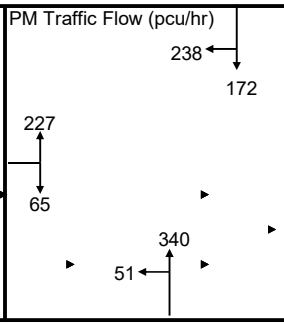
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road - Tam Mi NB	LT+SA	A1	1	3.50	20.0		14	1945	463	0.238	0.238	10	1950	391	0.201	0.201
Castle Peak Road - Tam Mi SB	SA	B1	2	3.30				2085	171	0.082			2085	172	0.082	
	RT	B2	2	3.40	15.0		100	1905	202	0.106	0.106	100	1905	238	0.125	0.125
Kam Pok Road EB	LT	C1	3	3.50	28.0		100	1865	245	0.131	0.131	100	1865	227	0.122	0.122
	RT	C2	3	3.50	13.0		100	1887	30	0.016		100	1887	65	0.034	

pedestrian phase	D(p)	4		min crossing time =	13	sec GM +	12	sec FGM =	25	sec			

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

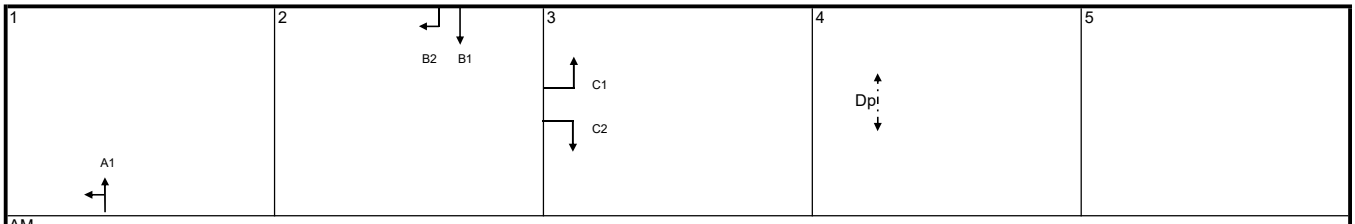


S=1940+100(W–3.25) S=2080+100(W–3.25)

S_M=S÷(1+1.5f/r) S_M=(S–230)÷(1+1.5f/r)

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.475		0.447	
L (s)	40		40	
C (s)	120		120	
practical y	0.600		0.600	
R.C. (%)	26%		34%	

Note:



AM	G =		I/G =	6	G =		I/G =	5	G =		I/G =	5	G =	25	I/G =	2	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		
PM	G =		I/G =	6	G =		I/G =	5	G =		I/G =	5	G =	25	I/G =	2	G =		I/G =		
	G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		G =		I/G =		

Signal Junction Analysis

Junction: Castle Peak Road - Tam Mi / Kam Pok Road Job Number: J7401

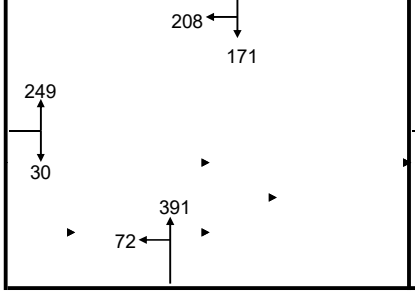
Scenario: Future Condition (With Proposed RCHE) P. 6

Design Year: 2033 Designed By: Checked By: Date: 3 Oct 2025

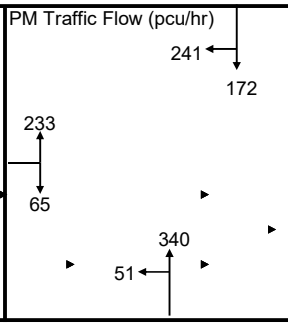
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road - LT+SA	A1	1	3.50	20.0		14	1945	463	0.238	0.238	10	1950	391	0.201	0.201
Tam Mi NB															
Castle Peak Road - Tam Mi SB SA	B1	2	3.30				2085	171	0.082			2085	172	0.082	
RT	B2	2	3.40	15.0		100	1905	208	0.109	0.109	100	1905	241	0.127	0.127
Kam Pok Road EB LT	C1	3	3.50	28.0		100	1865	249	0.134	0.134	100	1865	233	0.125	0.125
RT	C2	3	3.50	13.0		100	1887	30	0.016		100	1887	65	0.034	

pedestrian phase	D(p)	4		min crossing time =	13	sec GM +	12	sec FGM =	25	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

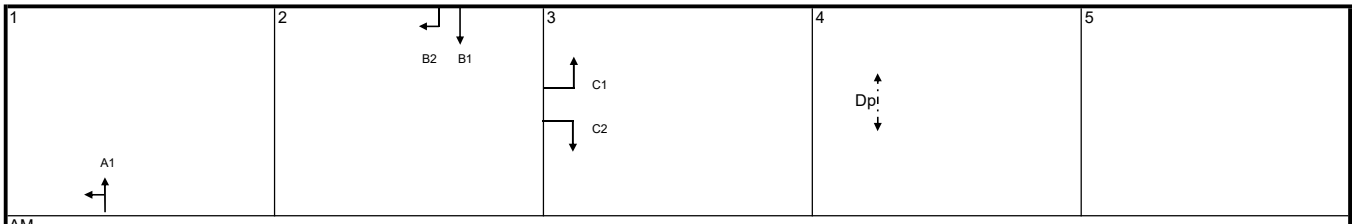


S=1940+100(W–3.25) S=2080+100(W–3.25)

S_M=S÷(1+1.5f/r) S_M=(S–230)÷(1+1.5f/r)

	AM Peak		PM Peak	
Group	1+2+3		1+2+3	
Sum y	0.481		0.452	
L (s)	40		40	
C (s)	120		120	
practical y	0.600		0.600	
R.C. (%)	25%		33%	

Note:



AM																				
G =	I/G =	6	G =	I/G =	5	G =	I/G =	5	G =	25	I/G =	2	G =	I/G =						
G =	I/G =		G =	I/G =		G =	I/G =		G =		I/G =		G =	I/G =						
PM																				
G =	I/G =	6	G =	I/G =	5	G =	I/G =	5	G =	25	I/G =	2	G =	I/G =						
G =	I/G =		G =	I/G =		G =	I/G =		G =		I/G =		G =	I/G =						

Roundabout Analysis

Junction: The Fairview Park Roundabout | Job Number: J7401
Scenario: Existing Condition | P. 7
Design Year: 2025 | Designed By: | Checked By: | Date: 3 Oct 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	35	54	379	140	73	122	69	872	1251
From B	30	11	141	32	53	208	98	573	1791
From C	210	42	43	131	144	69	125	764	1393
From D	29	17	73	14	52	120	13	318	1493
From E	63	35	133	110	10	47	32	430	1399
From F	157	87	112	85	25	29	84	579	1211
From G	53	86	90	152	55	23	19	478	1350
Total	577	332	971	664	412	618	440	4014	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	28	54	153	98	96	255	64	748	1164
From B	68	16	77	45	78	112	120	516	1594
From C	228	77	22	142	102	36	133	740	1568
From D	67	17	49	24	64	72	17	310	1608
From E	100	21	129	135	14	38	33	470	1467
From F	126	74	55	148	52	25	111	591	1375
From G	61	59	57	108	45	24	13	367	1475
Total	678	318	542	700	451	562	491	3742	

Legend

Arm	Road (in clockwise order)
A	Fairview Park Boulevard EB
B	Castle Peak Road NB
C	San Tin Road NB
D	San Tam Road NB
E	San Tam Road SB
F	San Tin Road SB
G	Castle Peak Road SB
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.0	22.0	14.0	142	35	0.5
From B	9.0	5.5	20.0	10.0	142	35	0.6
From C	8.5	6.4	23.0	7.5	142	30	0.4
From D	8.5	6.5	20.0	10.0	142	25	0.3
From E	8.0	6.0	20.0	9.5	142	35	0.3
From F	8.5	6.0	25.0	6.5	142	40	0.6
From G	6.0	5.0	22.0	7.0	142	30	0.2
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	9.09	3640.95	1.00	0.99	2754.13	0.59	1987.75	2039	872	748	0.44	0.37
From B	7.15	3640.95	1.00	0.98	2166.74	0.51	1230.86	1330	573	516	0.47	0.39
From C	7.51	3640.95	1.00	1.01	2274.80	0.53	1552.77	1460	764	740	0.49	0.51
From D	7.72	3640.95	1.00	1.02	2339.01	0.53	1568.05	1506	318	310	0.20	0.21
From E	7.19	3640.95	1.00	0.98	2180.08	0.51	1438.03	1404	430	470	0.30	0.33
From F	7.12	3640.95	1.00	0.98	2157.57	0.51	1502.60	1421	579	591	0.39	0.42
From G	5.69	3640.95	1.00	1.00	1722.94	0.45	1121.91	1066	478	367	0.43	0.34
From H												

Roundabout Analysis

Junction: The Fairview Park Roundabout — Job Number: J7401

Scenario: Future Condition (Without Proposed RCHE) — P. 8

Design Year: 2033 — Designed By: _____ — Checked By: _____ — Date: 3 Oct 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	36	58	444	156	79	148	74	995	1652
From B	32	12	165	37	57	229	104	636	2274
From C	222	55	55	139	167	75	196	909	1638
From D	31	20	78	15	61	180	28	413	1729
From E	67	36	194	126	11	49	34	517	1681
From F	168	100	120	161	27	32	123	731	1447
From G	57	92	216	184	59	38	21	667	1598
Total	613	373	1272	818	461	751	580	4868	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	30	58	191	110	103	286	68	846	1476
From B	73	17	94	49	83	125	126	567	1912
From C	245	146	36	155	134	42	253	1011	1756
From D	72	20	52	26	71	103	28	372	1965
From E	107	22	170	150	15	40	35	539	1827
From F	134	85	60	188	56	30	135	688	1706
From G	66	62	120	124	48	34	15	469	1734
Total	727	410	723	802	510	660	660	4492	

Legend

Arm	Road (in clockwise order)
A	Fairview Park Boulevard EB
B	Castle Peak Road NB
C	San Tin Road NB
D	San Tam Road NB
E	San Tam Road SB
F	San Tin Road SB
G	Castle Peak Road SB
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.0	22.0	14.0	142	35	0.5
From B	9.0	5.5	20.0	10.0	142	35	0.6
From C	8.5	6.4	23.0	7.5	142	30	0.4
From D	8.5	6.5	20.0	10.0	142	25	0.3
From E	8.0	6.0	20.0	9.5	142	35	0.3
From F	8.5	6.0	25.0	6.5	142	40	0.6
From G	6.0	5.0	22.0	7.0	142	30	0.2
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	9.09	3640.95	1.00	0.99	2754.13	0.59	1753	1856	995	846	0.57	0.46
From B	7.15	3640.95	1.00	0.98	2166.74	0.51	989	1170	636	567	0.64	0.48
From C	7.51	3640.95	1.00	1.01	2274.80	0.53	1423	1361	909	1011	0.64	0.74
From D	7.72	3640.95	1.00	1.02	2339.01	0.53	1440	1311	413	372	0.29	0.28
From E	7.19	3640.95	1.00	0.98	2180.08	0.51	1296	1223	517	539	0.40	0.44
From F	7.12	3640.95	1.00	0.98	2157.57	0.51	1385	1257	731	688	0.53	0.55
From G	5.69	3640.95	1.00	1.00	1722.94	0.45	1010	949	667	469	0.66	0.49
From H												

Roundabout Analysis

Junction: The Fairview Park Roundabout | Job Number: J7401

Scenario: Future Condition (With Proposed RCHE) | P. 9

Design Year: 2033 | Designed By: | Checked By: | Date: 3 Oct 2025

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	36	58	444	156	79	148	74	995	1658
From B	32	12	167	37	57	231	104	640	2274
From C	222	58	55	139	167	75	196	912	1640
From D	31	20	78	15	61	180	28	413	1734
From E	67	36	194	126	11	49	34	517	1686
From F	168	103	120	161	27	32	123	734	1450
From G	57	92	216	184	59	38	21	667	1604
Total	613	379	1274	818	461	753	580	4878	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	30	58	191	110	103	286	68	846	1479
From B	73	17	97	49	83	128	126	573	1912
From C	245	148	36	155	134	42	253	1013	1759
From D	72	20	52	26	71	103	28	372	1970
From E	107	22	170	150	15	40	35	539	1832
From F	134	86	60	188	56	30	135	689	1708
From G	66	62	120	124	48	34	15	469	1737
Total	727	413	726	802	510	663	660	4501	

Legend

Arm	Road (in clockwise order)
A	Fairview Park Boulevard EB
B	Castle Peak Road NB
C	San Tin Road NB
D	San Tam Road NB
E	San Tam Road SB
F	San Tin Road SB
G	Castle Peak Road SB
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.0	22.0	14.0	142	35	0.5
From B	9.0	5.5	20.0	10.0	142	35	0.6
From C	8.5	6.4	23.0	7.5	142	30	0.4
From D	8.5	6.5	20.0	10.0	142	25	0.3
From E	8.0	6.0	20.0	9.5	142	35	0.3
From F	8.5	6.0	25.0	6.5	142	40	0.6
From G	6.0	5.0	22.0	7.0	142	30	0.2
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	9.09	3640.95	1.00	0.99	2754.13	0.59	1750	1855	995	846	0.57	0.46
From B	7.15	3640.95	1.00	0.98	2166.74	0.51	989	1170	640	573	0.65	0.49
From C	7.51	3640.95	1.00	1.01	2274.80	0.53	1422	1359	912	1013	0.64	0.75
From D	7.72	3640.95	1.00	1.02	2339.01	0.53	1437	1309	413	372	0.29	0.28
From E	7.19	3640.95	1.00	0.98	2180.08	0.51	1294	1220	517	539	0.40	0.44
From F	7.12	3640.95	1.00	0.98	2157.57	0.51	1384	1256	734	689	0.53	0.55
From G	5.69	3640.95	1.00	1.00	1722.94	0.45	1007	947	667	469	0.66	0.50
From H												

Appendix 2 –
Swept Path Analysis

Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP1 / Revision C
Figure Title	SWEPT PATH OF LIGHT BUS ENTERING AND LEAVING THE LIGHT BUS / AMBULANCE PARKING SPACE ON G/F		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

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Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP2 / Revision C
Figure Title	SWEPT PATH OF AMBULANCE ENTERING AND LEAVING THE LIGHT BUS / AMBULANCE PARKING SPACE ON G/F		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

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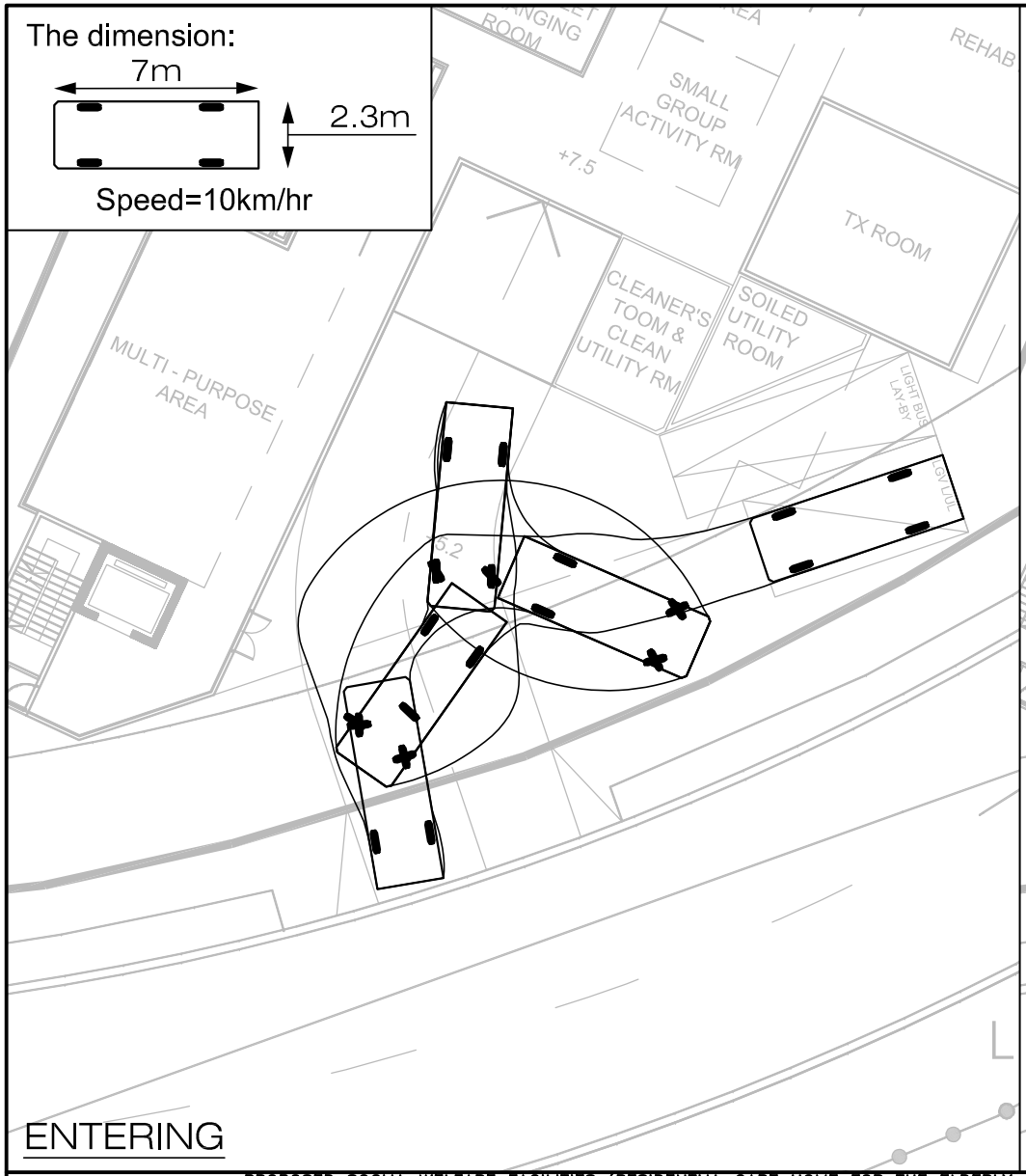
Speed=10km/hr



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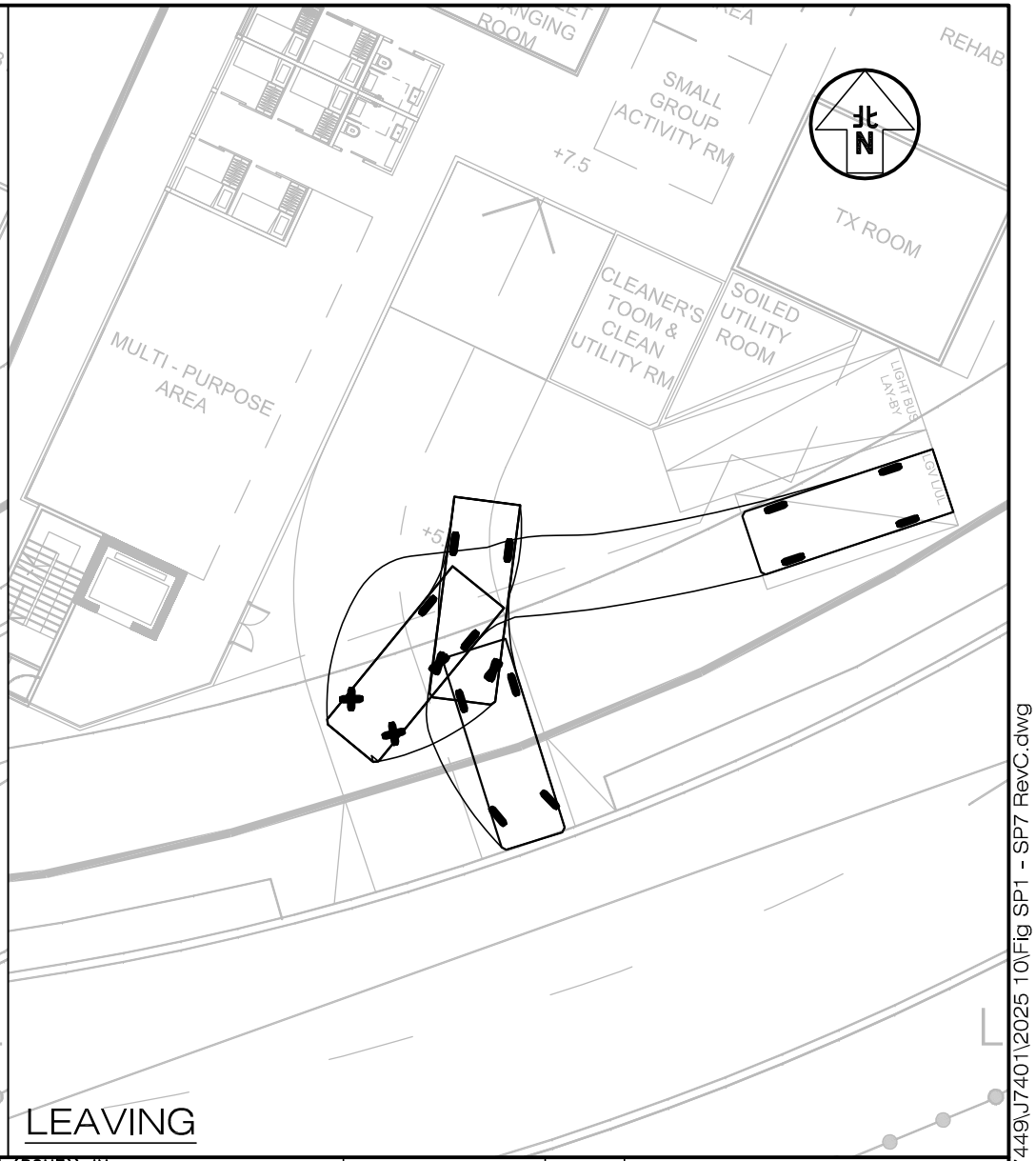

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Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP3 / Revision C
Figure Title	SWEPT PATH OF LGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY ON G/F		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

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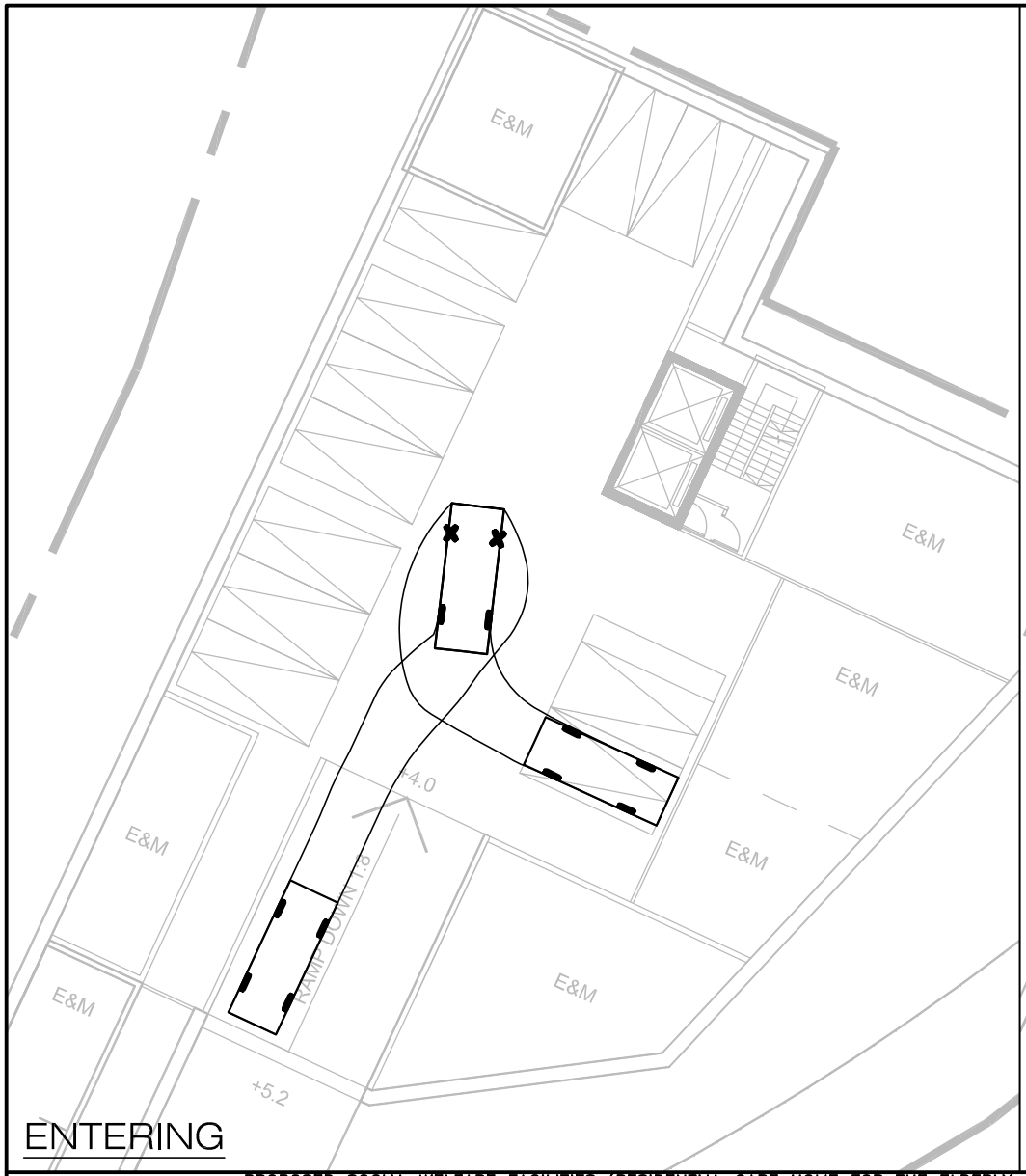

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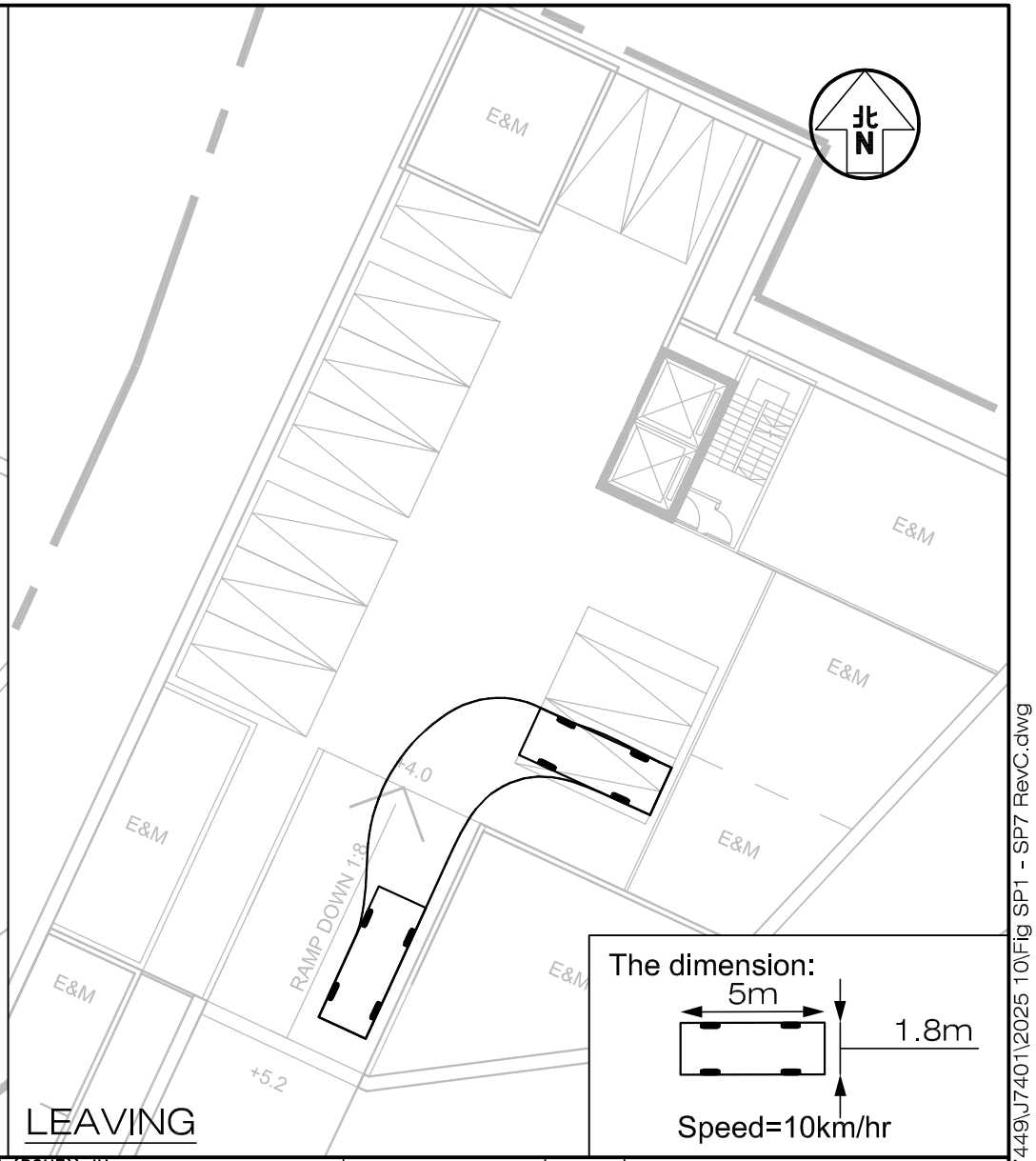

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Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP4 / Revision C
Figure Title	SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON B/F		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

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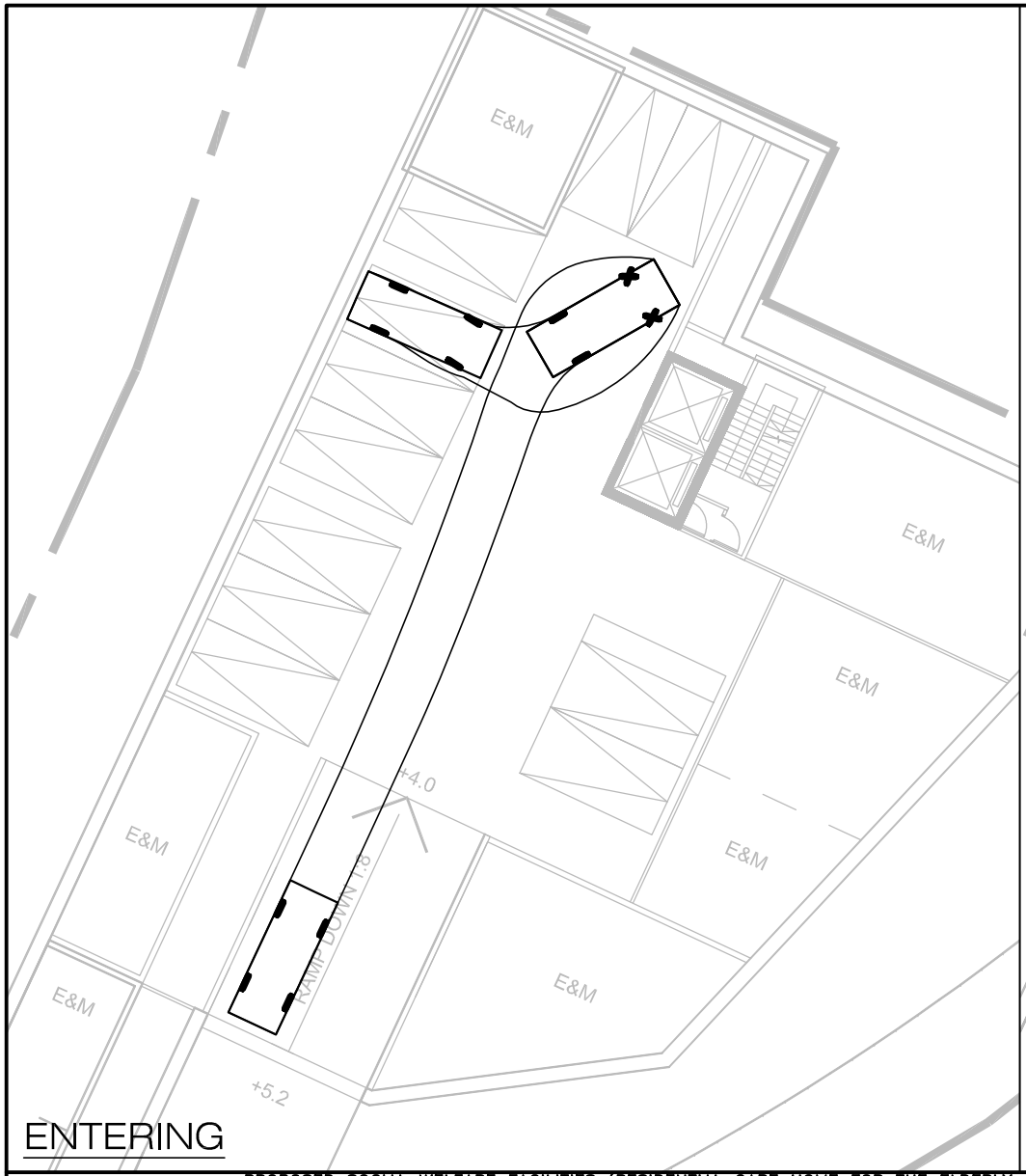

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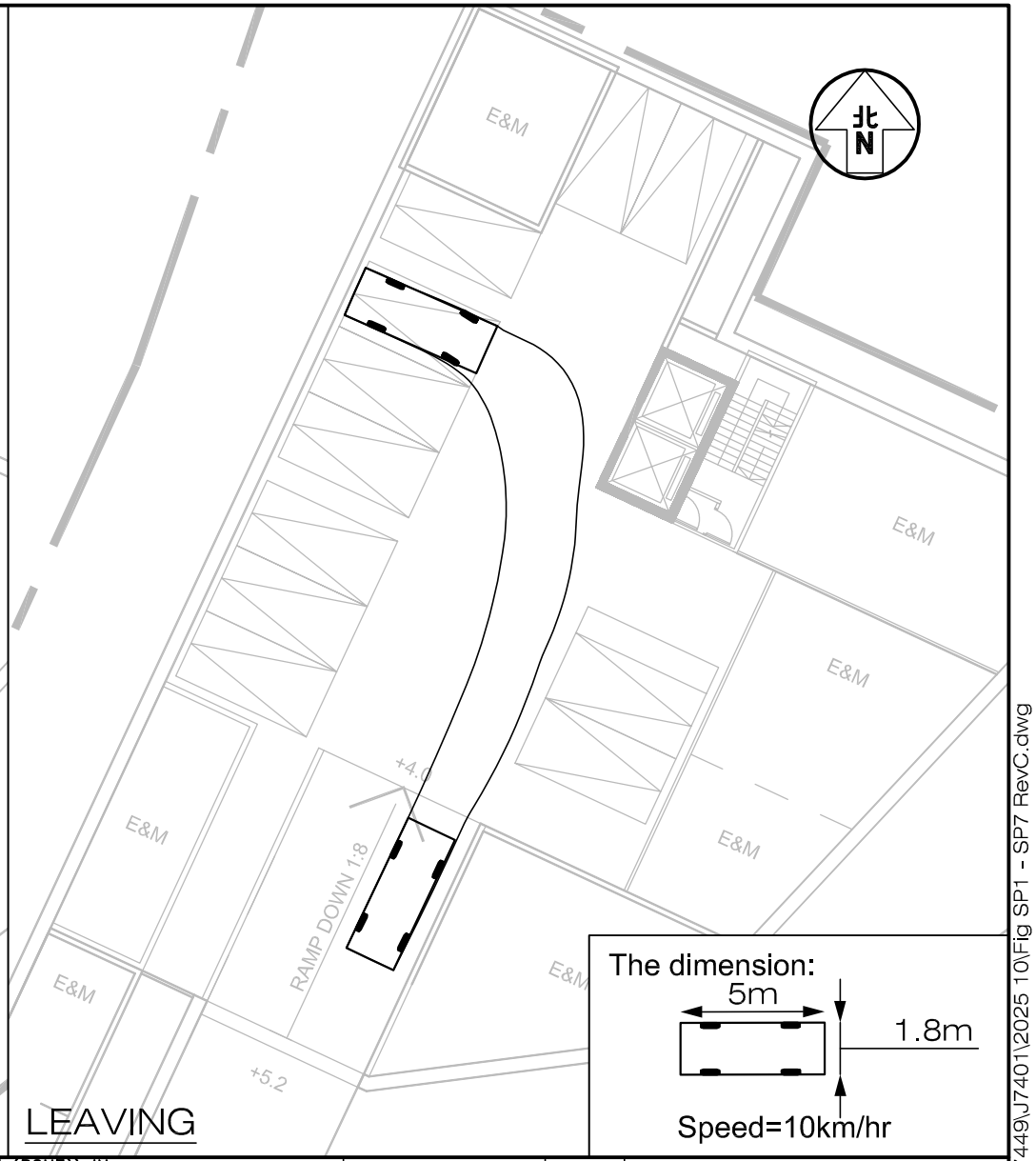

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Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP5 / Revision C
Figure Title	SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON B/F		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

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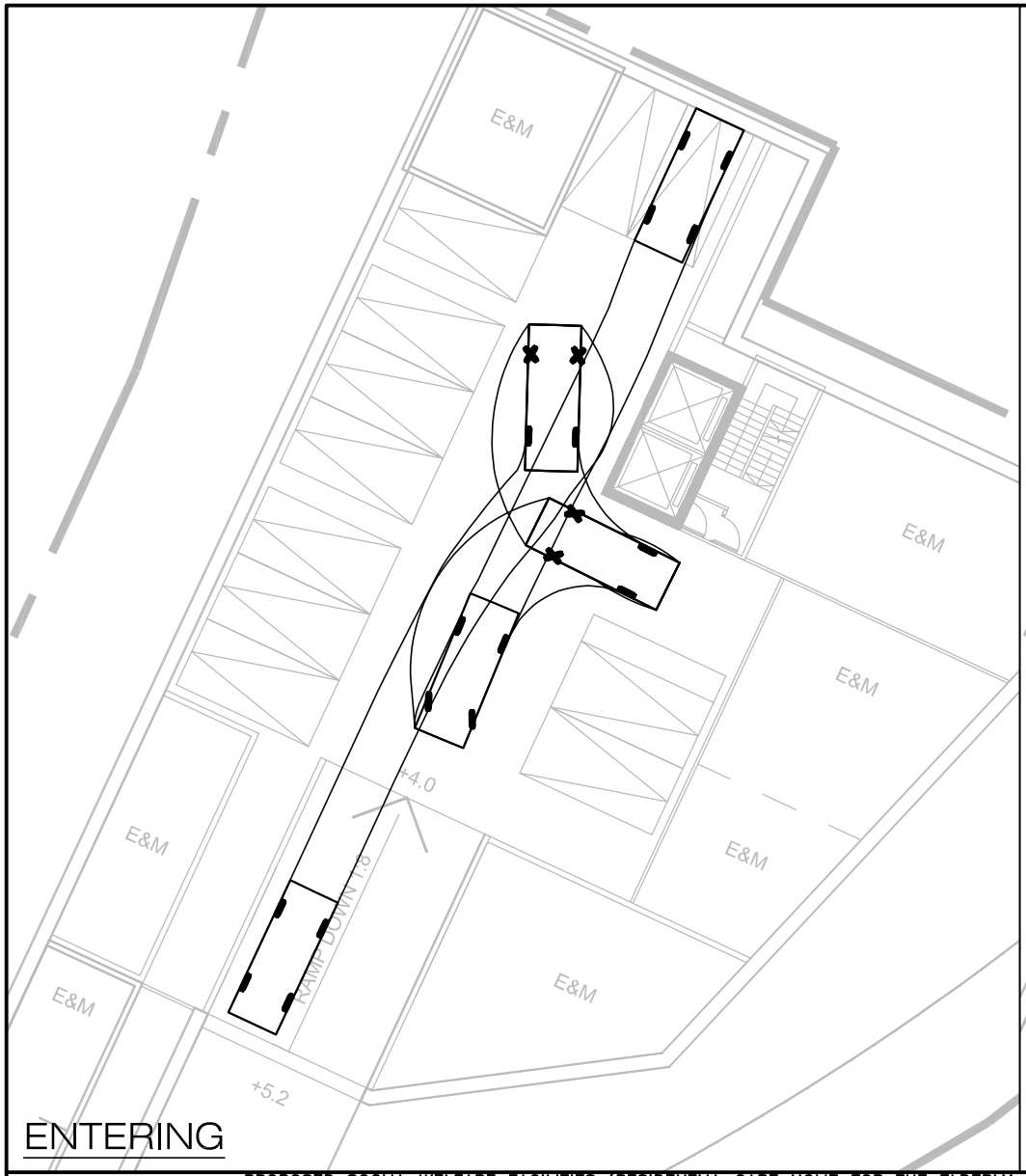

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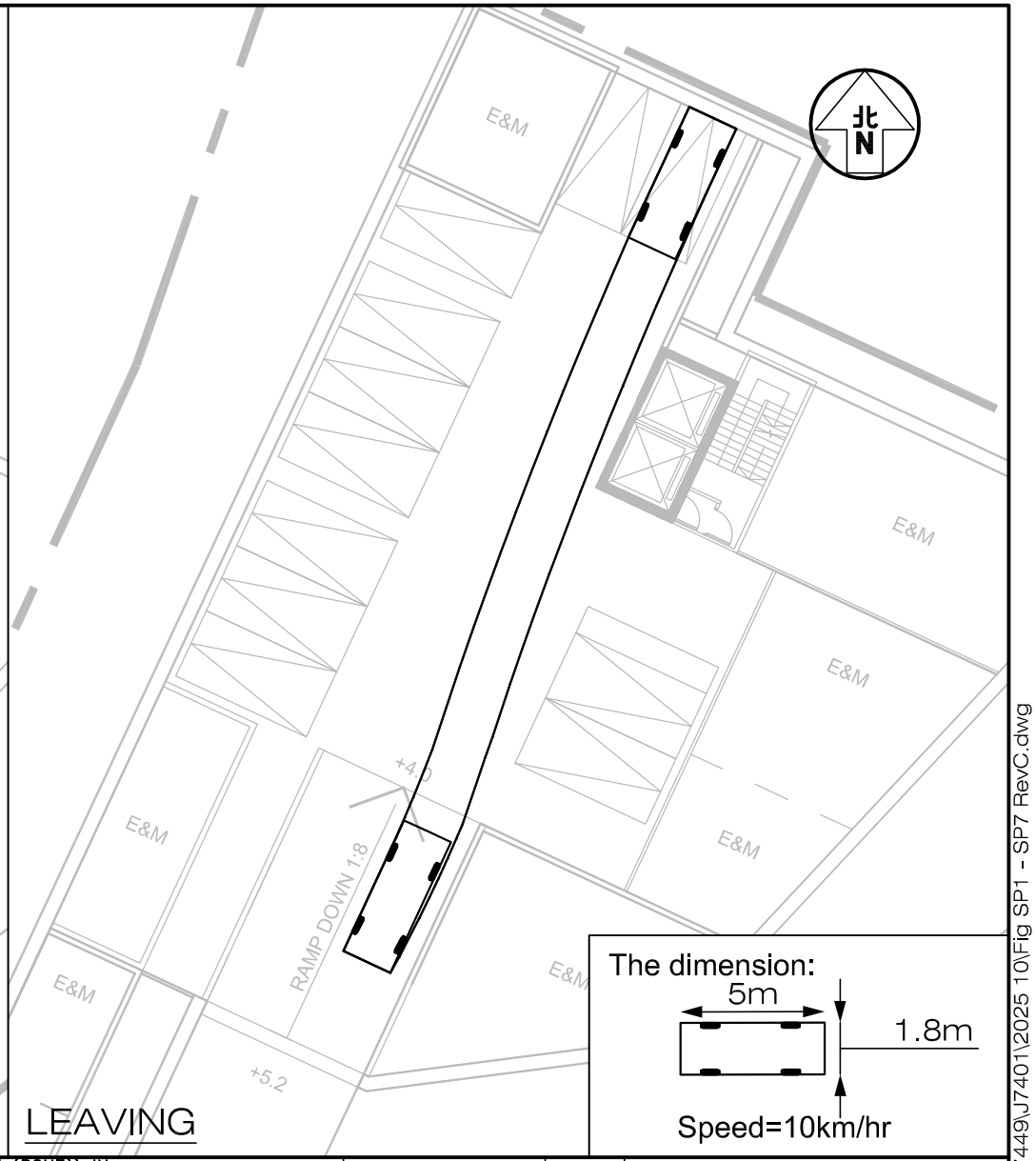

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Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP6 / Revision C
Figure Title	SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE ON B/F		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

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Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. SP7 / Revision C
Figure Title	SWEPT PATH OF TAXI ENTERING AND LEAVING THE SUBJECT SITE		Designed by L C H / Drawn by N C M / Checked by K C
			Scale in A4 1 : 250 / Date 03 OCT 2025

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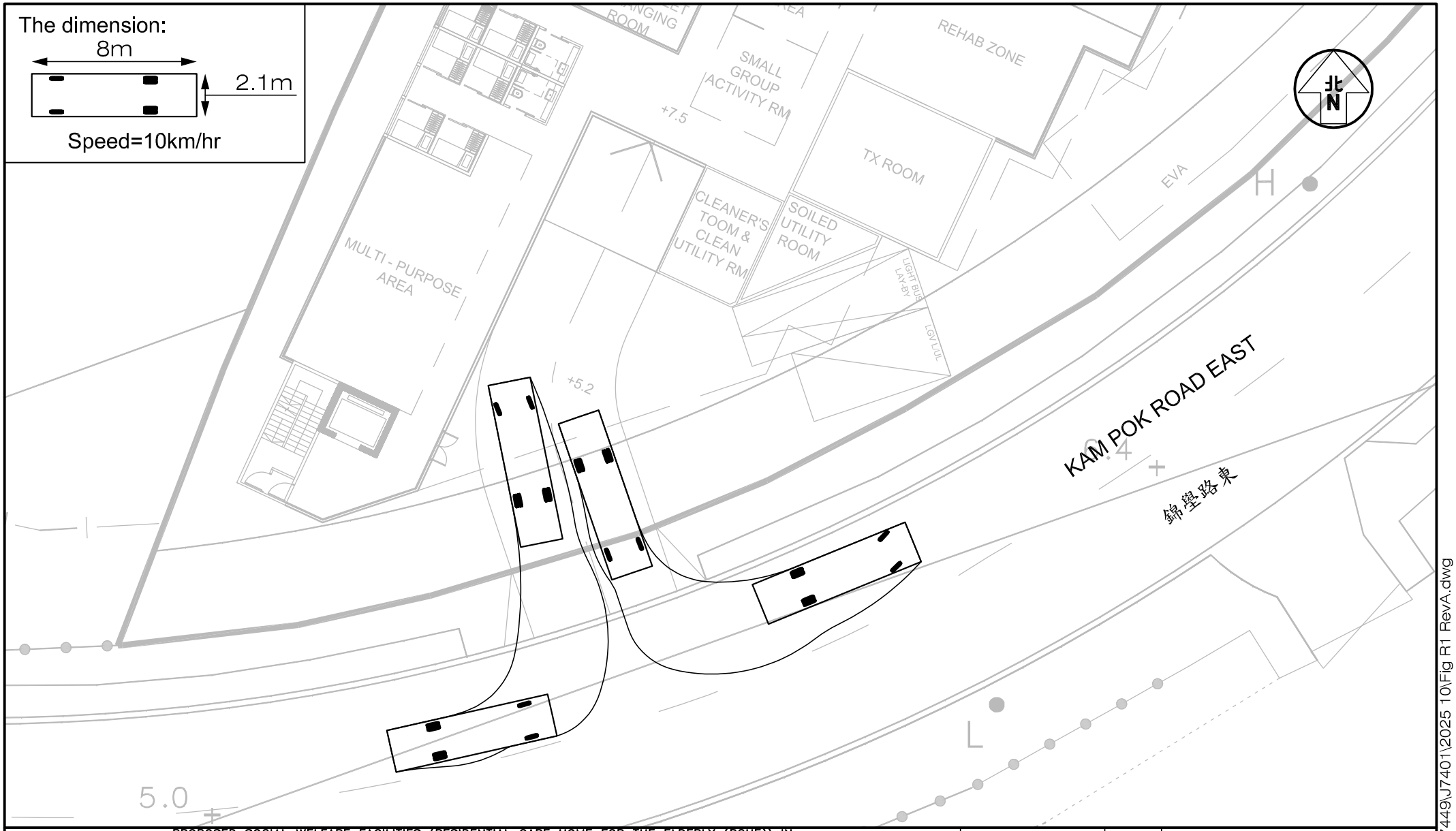
Appendix 5

Supplementary Traffic Information In Response to TD's Comments

Figure



Project Title	PROPOSED SOCIAL WELFARE FACILITIES (RESIDENTIAL CARE HOME FOR THE ELDERLY (RCHE)) IN "VILLAGE TYPE DEVELOPMENT" ZONE, LOTS 3670 RP (PART), 3671 RP (PART),3672 RP (PART), 3673 RP (PART) AND ADJOINING GOVERNMENT LAND IN D.D.104,NAM SANG WAI, YUEN LONG	J7401	Figure No. R1 / Revision A
Figure Title	SWEPT PATH OF LIGHT BUS ENTERTING AND LEAVEING THE SUBJECT SITE		Designed by L C H / Drawn by N C M / Checked by K C
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Appendix A
Vehicle Composition of Traffic Generation Survey

APPENDIX A VEHICLE COMPOSITION OF TRAFFIC GENERATION SURVEY

The survey results with detail breakdown of vehicle composition are presented in **Tables A and B**.

TABLE A TRAFFIC GENERATED BY CARITAS LI KA SHING CARE AND ATTENTION HOME

Period	Vehicle Type (veh/hr)				Traffic generation	
	Car	Taxi	LGV	Rehabus / Ambulance	veh/hr	pcu/hr
In						
08:00-08:59	0	4	1	0	5	6
09:00-09:59	5	3	1	1	**10**	**12**
10:00-10:59	0	4	0	0	4	4
11:00-11:59	1	2	0	1	4	5
12:00-12:59	0	5	0	0	5	5
13:00-13:59	0	2	0	1	3	4
14:00-14:59	3	1	0	0	4	4
15:00-15:59	2	1	1	1	5	7
16:00-16:59	1	4	0	1	**6**	**7**
17:00-17:59	0	1	0	0	1	1
18:00-18:59	0	2	0	0	2	2
19:00-19:59	0	1	0	0	1	1
Out						
08:00-08:59	0	4	1	0	5	6
09:00-09:59	3	3	0	1	**7**	**8**
10:00-10:59	0	4	1	0	5	6
11:00-11:59	1	2	0	1	4	5
12:00-12:59	0	5	0	0	5	5
13:00-13:59	0	2	0	1	3	4
14:00-14:59	1	1	0	0	2	2
15:00-15:59	1	0	0	0	1	1
16:00-16:59	4	5	1	1	**11**	**13**
17:00-17:59	1	1	0	1	3	4
18:00-18:59	1	1	0	0	2	2
19:00-19:59	0	2	0	0	2	2

TABLE B TRIP RATE OF CARITAS LI KA SHING CARE AND ATTENTION HOME

Period	Vehicle Type (veh/hr/bed)				Trip Rate (pcu/hr/bed)
	Car	Taxi	LGV	Rehabus / Ambulance	
In					
08:00-08:59	0.0000	0.0154	0.0038	0.0000	0.0231
09:00-09:59	0.0192	0.0115	0.0038	0.0038	**0.0462**
10:00-10:59	0.0000	0.0154	0.0000	0.0000	0.0154
11:00-11:59	0.0038	0.0077	0.0000	0.0038	0.0192
12:00-12:59	0.0000	0.0192	0.0000	0.0000	0.0192
13:00-13:59	0.0000	0.0077	0.0000	0.0038	0.0154
14:00-14:59	0.0115	0.0038	0.0000	0.0000	0.0154
15:00-15:59	0.0077	0.0038	0.0038	0.0038	0.0269
16:00-16:59	0.0038	0.0154	0.0000	0.0038	**0.0269**
17:00-17:59	0.0000	0.0038	0.0000	0.0000	0.0038
18:00-18:59	0.0000	0.0077	0.0000	0.0000	0.0077
19:00-19:59	0.0000	0.0038	0.0000	0.0000	0.0038
Out					
08:00-08:59	0.0000	0.0154	0.0038	0.0000	0.0231
09:00-09:59	0.0115	0.0115	0.0000	0.0038	**0.0308**
10:00-10:59	0.0000	0.0154	0.0038	0.0000	0.0231
11:00-11:59	0.0038	0.0077	0.0000	0.0038	0.0192
12:00-12:59	0.0000	0.0192	0.0000	0.0000	0.0192
13:00-13:59	0.0000	0.0077	0.0000	0.0038	0.0154
14:00-14:59	0.0038	0.0038	0.0000	0.0000	0.0077
15:00-15:59	0.0038	0.0000	0.0000	0.0000	0.0038
16:00-16:59	0.0154	0.0154	0.0038	0.0038	**0.0500**
17:00-17:59	0.0038	0.0038	0.0000	0.0038	0.0154
18:00-18:59	0.0038	0.0038	0.0000	0.0000	0.0077
19:00-19:59	0.0000	0.0077	0.0000	0.0000	0.0077