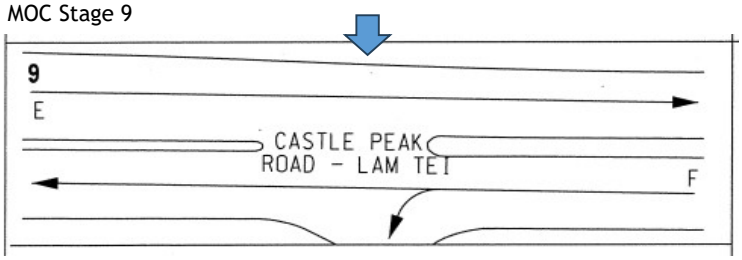
Appendix A

Cycle No.	1	2	3	4	5	6	7	8	
MOC Stage 9 RED/ AMBER Time	08:03:10	08:05:58	08:08:46	08:11:42	08:14:11	08:16:40	08:19:07	08:21:55	08:24:47
Cycle Time (hr:min:sec)	00:02:48	00:02:48	00:02:56	00:02:29	00:02:29	00:02:27	00:02:48	00:02:52	
Cycle Time (sec)	168	168	176	149	149	147	168	172	
Pedestrian Phase Appears?	NO	NO	NO	NO	NO	NO	NO	NO	

MOC Stage 9



MOC Stage 9 RED/ AMBER Time: 08:03:10

MOC Stage 9 RED/ AMBER Time: 08:05:58

MOC Stage 9 RED/ AMBER Time: 08:08:46

MOC Stage 9 RED/ AMBER Time: 08:11:42

MOC Stage 9 RED/ AMBER Time: 08:14:11

MOC Stage 9 RED/ AMBER Time: 08:16:40

MOC Stage 9 RED/ AMBER Time: 08:19:07

MOC Stage 9 RED/ AMBER Time: 08:21:55

MOC Stage 9 RED/ AMBER Time: 08:24:47

Appendix B

Introduction

This technical note is to support the proposed 21m (min.) reduced sight distance at the pedestrian crossing point with relatively lower design speed of 20km/h in the planning application for the subject development.

A design speed of 20 km/h is proposed for the internal driveway of the subject site to safeguard the motorist and the pedestrians. Various speed control facilities (i.e. road humps and road markings) will be proposed at various locations to slow down vehicles.

According to TPDM Vol. 2 Chapter 5.4.3, occupants of vehicles will experience discomfort when the vehicle crossing the road humps with vehicle speed exceeds 15 -20 km/h; based on our on-site observation at similar locations, the vehicle speed at road humps only is around 5 – 10 km/h.

TPDM Standard

With the reference to Transport Planning and Design Manual (TPDM) Volume 2, Chapter 3.3, Section 3.3.5 – Sight Distance, adequate sight distance must be provided at the points of vehicular and pedestrian conflict with the **Table 3.3.5.1** and reproduced below for easy reference:

Table 3.3.5.1
Sight distances

Design speed (km/h)	Desirable minimum (m)	Absolute minimum (m)
120	295	215
100	215	160
85	160	120
80	145	110
70	120	90
60	90	70
50	70	50

However, the required sight distance for road with design speed below 50 km/h is not stated in the TPDM.

Estimation of Sight Distance Requirement for Roads below 50 km/h from First Principle

To estimate the sight distance requirement for road with design speed below 50 km/h, reference has been made to "*Highways, Second Edition, Volume 1 Highways and Traffic - C.A. O'Flaherty" and A Policy on Geometric Design of Highway and Streets, American Association of State Highway and Transportation Officials (AASHTO),* which are references to TPDM.

Stopping sight distance (D_S) is defined as the sum of two distances:

$$D_S = D_R + D_B$$

1. Reaction distance (D_R)—the distance travelled by the vehicle from the instant the driver sees an object necessitating a stop to the instant the brakes are applied; plus

2. Braking distance (D_B)—the distance traveled by the vehicle from the instant brake application begins to the instant when the vehicle has come to complete stop.

The reaction distance is based on the reaction time of the driver and the speed of the vehicle. The braking distance is dependent upon the vehicle speed and the coefficient of friction between the tires and roadway.

The reaction distance (D_R) can be defined in the following formula:

Reaction Distance (D_R) = $tv = 0.278tV$

Where t = perception reaction time (sec), which 1.5 sec is adopted for urban design purpose
v = initial speed (m/sec)
V = initial speed (km/hr)

The Braking distance (D_B) can be defined by visualizing the change in kinetic energy equals to the friction applied along the braking distance as in following formula:

$$\frac{1}{2}\frac{Wv^2}{g} = W\,f\,x\,D_B$$

Therefore,

Reaction Distance (D_B) = $\frac{v^2}{2fg} = \frac{V^2}{254f}$

Where g = acceleration due to gravity = 9.81 (m/sec^2)

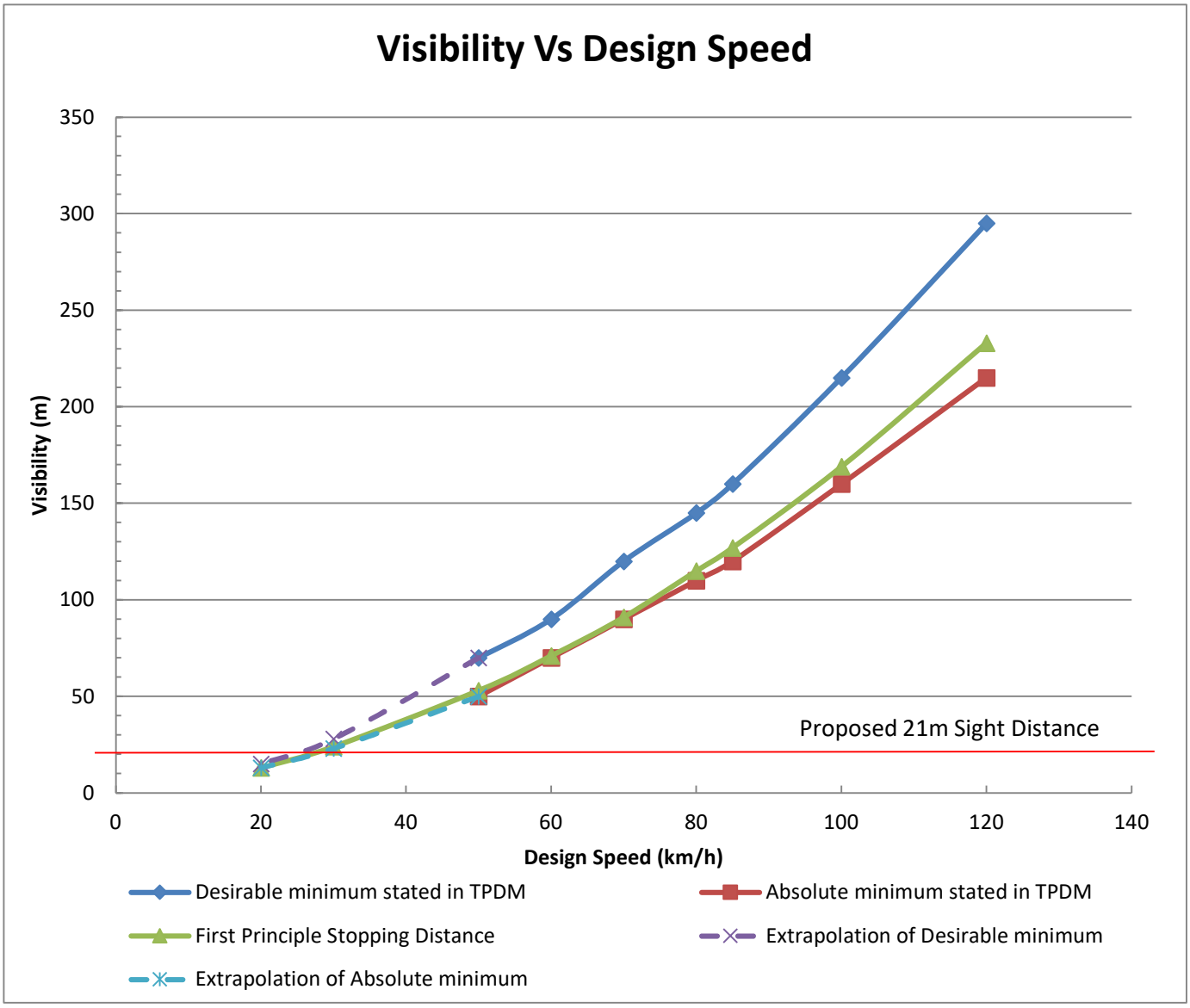
v = initial speed (m/sec)

V = initial speed (km/hr)

f = coefficient of friction developed between the tires and the surface of the carriageway, with reference to American Association of State Highway Officials recommended friction value is around 0.31 for 80 km/h and the value will generally increase with lower speed (i.e. greater deceleration force with shorter stopping distance; 0.31 is adopted for speed below 80km/h for conservative purpose).

The estimated sight distances from first principle are computed based on the above formulas with cross- check with **TPDM Vol. 2 Table 3.5.1.1** as shown in the Table and Graph as below:

Design speed (km/h)	First Principle Reaction Distance (D_R)	First Principle Braking Distance (D_B)	First Principle Stopping Distance (D_S) $D_S = D_R + D_B$	Desirable minimum stated in TPDM (m)	Absolute minimum stated in TPDM (m)
120	50	183	233	295	215
100	42	127	169	215	160
85	35	92	127	160	120
80	33	81	115	145	110
70	29	62	91	120	90
60	25	46	71	90	70
50	21	32	53	70	50
30	13	11	24	N.A.	N.A.
20	8	5	13	N.A.	N.A.



From the above derivation, it is concluded that the estimation of first principle stopping distance is well within the desirable minimum and absolute minimum sight distance stated in TPDM. Thus, the formulas are considered valid for deriving the stopping distance for a design speed below 30 km/h.

It can therefore consider a 20m desirable sight distance is adequate for design road speed below 20 km/h.

Conclusion

For design road speed of 20km/h, a shorter sightline requirement (i.e. 21m min.) at the proposed pedestrian crossing is considered adequate to suit the site constraints and can safeguard for the pedestrian as shown in **Figures 2.2**.

Appendix C Car Lift Queuing Analysis

1.1 Operational Layout

1.1.1 2 car-lifts are provided for vehicles to access from G/F to 1/F and 1 waiting space is provided at G/F and 1/F respectively to avoid waiting vehicles affect the circulation of car park.

1.2 Queuing Theory and Model

1.2.1 One of the critical elements for the car lift's performance is its vertical speed. This speed mainly depends on the power of the drive units and the operation frequency. The result of the survey for a similar carpark shows that the vertical running speed is about 0.5m / second.

1.2.2 The loading / unloading activities of the car-lift have also occupied a large portion of the operation cycle. The length of this activity is partly controlled by the operation speed of lift doors, driver skill and human reaction time.

1.2.3 From the past record of the operation of a similar car-lift, the lift door takes approximate 3 seconds to open / close. The in / out manoeuvring is normally completed within 3 seconds or less. The driver's reaction time of the car is 3 seconds. In addition, an extra 5 seconds for motorists to enter the lift is taken into account for conservative. All these operation time elements are considered in this assessment.

1.2.4 The proposed car-lifts have to travel a maximum vertical distance of 9.1m from G/F to 1/F.

1.2.5 **Table 1-1** summarizes the maximum cycle time of the proposed car-lift. The estimate time is derived by assuming two-way operation of the car-lift in every cycle (i.e. the round trip time of the car-lift).

Table 1-1 Maximum Cycle Time of Proposed Car Lift (The Worst Case)

Location	Activity	Calculation	Time (Sec.)
G/F	Door Open Car Out Car In Door Close	- 3 + 3 3 + 3 + 5 -	3 6 11 8
From G/F to 1/F	Vertical Travelling Time	9.1m @ 0.5m/sec	18.2
Carpark at 1/F	Door Open Car Out Door Close	- 3 + 3	3 6 8
From 1/F to G/F	Vertical Travelling Time	9.1m @ 0.5m/sec	18.2
G/F	Door Open		3
		Total	**85**

1.3 Car-Lift Assessment

1.3.1 The operation performance of the car-lift is assessed by using a multiple car-lifts queuing assessment as detailed in the Transport Department's Standard Publication – 'Traffic Flow Theory'.

1.3.2 As the proposed development will provide two car lifts for queuing, the queuing model for the car lift assessment is calculated as follows:

Number of Car Lift	N = 2
Average Arrival Rate Per Hour (λ)	λ = 30 veh / hr (worst AM peak flow)
Average Service Time of Car Lift	85 sec (for vehicle travelling from G/F to 1/F and back to G/F which is the worst case)
Average Service Rate (μ)	μ = 42.35 veh / hr (3,600 / 85 = 42.35 veh / hr)

$$\rho = \frac{\text{Average Arrival Rate Per Hour } (\lambda)}{\text{Average Service Rate } (\mu)} = 0.7$$

with the probability of having no vehicles in the system is:

$$P_0 = \frac{1}{\sum_{i=0}^{N-1} \frac{\rho^i}{i!} + \frac{\rho^N}{N!\left(1-\frac{\rho}{N}\right)}}$$

and the probability of having n vehicles in the system is:

$$P_n = \frac{\rho^n P_0}{n!} P_n = \frac{\rho^n P_0}{n!} \text{ (for } n \leq N)$$

$$P_n = \frac{\rho^n P_0}{N^{n-N} N!} P_n = \frac{\rho^n P_0}{N^{n-N} N!} \text{ (for} > N))$$

1.3.3 The results of the car-lift queuing analysis are summarised in **Table 1-2**.

Table 1-2 Queuing Analysis for the Proposed Car-Lifts

Number of Vehicles Waiting for the Car Lift (n)		Probability of Number of Vehicles Waiting p(n)	Accumulative Probability of more than n vehicles arrival p (≤n)
(a)	n = 0	0.477	0.477
(b)	n = 1	0.338	0.815
(c)	n = 2	0.120	0.934
(d)	n ≧ 3	1-(a)-(b) = 0.185	NA

1.3.4 From the results of the analysis, the probability of more than 1 vehicle queuing for the car-lift while another 1 vehicle using the car-lift is less than 7% which means almost no vehicle are expected to queue for the car-lift at the G/F and 1/F.

1.3.5 It can therefore be concluded that the proposed 2 car-lifts with 1 waiting space and G/F and 1/F respectively are adequate to meet the proposed development traffic demand and will not affect the circulation of car park.

Queueing Model Calculation (M/M/N)

Arrival Rate =	30	pcu/hr	58.66666667
Service Time	1.42	min/pcu	
N =	2	service points	
ρ =	0.7		

$$P_0 = \left[\sum_{N=0}^{N-1} \frac{\rho^n}{n!} + \frac{\rho^N}{N!\,(1-\rho/N)} \right]^{-1}$$

$$P_n = \frac{\rho^n P_0}{n!} \quad \text{for } n \le N \qquad (1)$$

$$P_n = \frac{\rho^n P_0}{N^{n-N} N!} \quad \text{for } n > N \qquad (2)$$

Average Queue Length: 0.1016

Arrival Rate : 30.0 veh/hr

Service Rate: 42.35 veh/hr

The average time spent in the system (minutes): 1.62

The average waiting time in the queue (minutes): 0.20

P_0 = 0.477

n	ρ^n	n !	N^{n-N}	N !	$\rho^n/n!$	(1)	(2)	P_n (1)+(2)	sum(P_n)	1-sum(P_n)
0	1.000	1	0	2	1	0.4769231	0.00E+00	0.477	0.477	0.523
1	0.708	1	0	2	0.708333333	0.3378205	0.00E+00	0.338	0.815	0.185
2	0.502	2	0	2	0	0.1196448	0.00E+00	0.120	0.934	0.066
3	0.355	6	2	2	0	0	4.24E-02	0.042	0.977	0.023
4	0.252	24	4	2	0	0	1.50E-02	0.015	0.992	0.008
5	0.178	120	8	2	0	0	5.32E-03	0.005	0.997	0.003
6	0.126	720	16	2	0	0	1.88E-03	0.002	0.999	0.001
7	0.089	5040	32	2	0	0	6.67E-04	0.001	1.000	0.000
8	0.063	40320	64	2	0	0	2.36E-04	0.000	1.000	0.000
9	0.045	362880	128	2	0	0	8.36E-05	0.000	1.000	0.000
10	0.032	3628800	256	2	0	0	2.96E-05	0.000	1.000	0.000
11	0.023	39916800	512	2	0	0	1.05E-05	0.000	1.000	0.000
12	0.016	479001600	1024	2	0	0	3.72E-06	0.000	1.000	0.000
13	0.011	6227020800	2048	2	0	0	1.32E-06	0.000	1.000	0.000
14	0.008	87178291200	4096	2	0	0	4.66E-07	0.000	1.000	0.000
15	0.006	1.30767E+12	8192	2	0	0	1.65E-07	0.000	1.000	0.000
16	0.004	2.09228E+13	16384	2	0	0	5.85E-08	0.000	1.000	0.000
17	0.003	3.55687E+14	32768	2	0	0	2.07E-08	0.000	1.000	0.000
18	0.002	6.40237E+15	65536	2	0	0	7.33E-09	0.000	1.000	0.000
19	0.001	1.21645E+17	131072	2	0	0	2.60E-09	0.000	1.000	0.000
20	0.001	2.4329E+18	262144	2	0	0	9.20E-10	0.000	1.000	0.000
21	0.001	5.10909E+19	524288	2	0	0	3.26E-10	0.000	1.000	0.000
22	0.001	1.124E+21	1048576	2	0	0	1.15E-10	0.000	1.000	0.000
23	0.000	2.5852E+22	2097152	2	0	0	4.09E-11	0.000	1.000	0.000
24	0.000	6.20448E+23	4194304	2	0	0	1.45E-11	0.000	1.000	0.000
25	0.000	1.55112E+25	8388608	2	0	0	5.12E-12	0.000	1.000	0.000
26	0.000	4.03291E+26	16777216	2	0	0	1.82E-12	0.000	1.000	0.000
27	0.000	1.08889E+28	33554432	2	0	0	6.43E-13	0.000	1.000	0.000
28	0.000	3.04888E+29	67108864	2	0	0	2.28E-13	0.000	1.000	0.000
29	0.000	8.84176E+30	134217728	2	0	0	8.06E-14	0.000	1.000	0.000
30	0.000	2.65253E+32	268435456	2	0	0	2.86E-14	0.000	1.000	0.000
31	0.000	8.22284E+33	536870912	2	0	0	1.01E-14	0.000	1.000	0.000
32	0.000	2.63131E+35	1073741824	2	0	0	3.58E-15	0.000	1.000	0.000
33	0.000	8.68332E+36	2147483648	2	0	0	1.27E-15	0.000	1.000	0.000
34	0.000	2.95233E+38	4294967296	2	0	0	4.49E-16	0.000	1.000	0.000
35	0.000	1.03331E+40	8589934592	2	0	0	1.59E-16	0.000	1.000	0.000
36	0.000	3.71993E+41	17179869184	2	0	0	5.64E-17	0.000	1.000	0.000
37	0.000	1.37638E+43	34359738368	2	0	0	2.00E-17	0.000	1.000	0.000
38	0.000	5.23023E+44	68719476736	2	0	0	7.07E-18	0.000	1.000	0.000
39	0.000	2.03979E+46	1.37439E+11	2	0	0	2.50E-18	0.000	1.000	0.000
40	0.000	8.15915E+47	2.74878E+11	2	0	0	8.87E-19	0.000	1.000	0.000

Annex 1

Revised Traffic Impact Assessment

S16 Planning Application for Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions For the Proposed Residential Development (Flat) with Shop and Services Use at Lots 531 RP, 532 S.D. RP and 532 RP in DD 130 and the adjoining Government Land, Lam Tei, Tuen Mun

Traffic Impact Assessment Report
January 2026

HWSPB 何黃
Traffic & Transportation Consultants

S16 Planning Application for the Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions For the Proposed Residential Development (Flat) with Shop and Services Use at Lots 531 RP, 532 S.D. RP and 532 RP in DD 130 and the adjoining Government Land, Lam Tei, Tuen Mun

Traffic Impact Assessment Report

January 2026

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TABLES

TABLES – Cont'd

FIGURES

APPENDICES

1. INTRODUCTION

1.1 Background

1.1.1 A similar application for minor relaxation of Plot Ratio and Building Height Restrictions for a proposed residential development with shop and services at this Site has been approved by Town Planning Board [TPB] (TPB Ref.: A/TM-LTYY/426) on May 2023.

1.1.2 Subsequent to the approval of the aforementioned planning application, the Applicant has lodged the land exchange application to the Lands Department to kick-start the approved development. For better management of the residual unmanned land near the Site, and as negotiated with the Lands Department, the Application Site has been modified to include the unmanned land and road works in relation to the proposed run in/out for the Proposed Residential Development. Whilst the resultant development scheme involves material changes to the approved scheme, a fresh Section 16 Planning Application is therefore required.

1.1.3 Due to the increase in site area, the applicant is planning a fresh Section 16 Planning Application for this site with the same approved plot ratio of 5.0 but with a larger site area. Hence, the number of flats will be increased from 184 (previously approved) to 336 (currently proposed).

1.1.4 Ho Wang SPB Ltd is commissioned as the traffic consultant to undertake a traffic impact assessment study for this fresh S16 Planning Application purpose.

1.1.5 The objectives of this TIA study are listed below:

(a) Review and recommend on the car park and loading / unloading provisions for the development site;
(b) Review the vehicular access and the internal parking arrangement of the site;
(c) Conduct vehicle and pedestrian traffic surveys to record existing traffic and pedestrian conditions during AM and PM peak periods within the study area;
(d) Review the existing traffic and pedestrian conditions in the vicinity of the development site including the critical junctions capacities;
(e) Estimate the development traffic generation and attraction; and traffic forecast based on the latest available 2021-Based TPEDM from Planning Department's website and Annual Traffic Census (ATC) from Transport Department; and
(f) Assess the likely traffic and pedestrian impacts generated by the proposed development site upon completion within the study area and develop traffic improvement schemes to mitigate any adverse impact; if necessary.

1.1.6 Following this introductory chapter describes the background and study objectives, this TIA report focuses on the presentation and elaboration of the following Chapters:

Chapter 2 - describes the proposed development schedule, vehicular access arrangements and the proposed internal transport facilities provisions and layout arrangements;

Chapter 3 - describes the baseline traffic and pedestrian surveys and the existing traffic and pedestrian conditions in the vicinity;

Chapter 4 - describes the traffic forecast methodology and future traffic and pedestrian conditions in the appropriate reference and design year;

Chapter 5 - presents the traffic and pedestrian assessment results for the reference and design scenarios, and to propose improvement measures to mitigate adverse traffic and pedestrian impacts, if necessary; and

Chapter 6 - summarizes and concludes the study findings of this TIA study.

2. THE PROPOSED DEVELOPMENT

2.1 Site Location

2.1.1 The Application Site is lied within part of Lots 531 RP, 532 S.D. RP and 532 RP in DD 130 and the adjoining Government Land, Lam Tei, Tuen Mun.

2.1.2 The site is bounded by Castle Peak Road – Lam Tei section to the east, Light Rail Transit (LRT) line and an elevated viaduct of MTR Tuen Ma Line to the west, the Lam Tei Vegetable Collection Centre (LTVCC) and some burial urns and graves to the north, and a nullah to the south.

2.1.3 The location of the Application Site is shown in **Figure 2.1**.

2.2 Development Schedule

2.2.1 The application site has an area of 3936.347m^2 (with 2200.338m^2 development site area) which is slightly larger than that of the previously Approved S16 Application in 2023.

2.2.2 The comparison of the 2023 approved development scheme and the current proposed development scheme is summarized in **Table 2.1**.

Table 2.1 Comparison of the Approved Development Scheme in 2023 and the Proposed Development Scheme

	Approved S16 Scheme in 2023 (a)	**Proposed Scheme (b)**	**Changes (b) – (a)**
Development use	Residential	Residential	No Change
Development Site Area (m^2)	1,569.02	2,200.338	+631.318
Plot Ratio	5	5	No Change
Site Coverage	35.0%	Not more than 33.3%	-1.7%
Total GFA (m^2)	7,845.10	11,001.69	+3,156.59
No. of Block	1	1	No Change
No. of Flat	184	336	+152
Average Flat Size (m^2)	30.58	32.55	+1.97
Retail GFA (m^2)	67.6	65	-2.6

2.2.3 The proposed flat mixes based on the increase in site area and flat numbers are summarized in **Table 2.2.**

Table 2.2 Proposed Development Schedule

Flat Size	**Number of Units**
<40 m^2	320
40 - 70m^2	16
Total	**336**

2.3 Proposed Run-in/out Location and Arrangement [Minor amendment compared to Previously Approved S16 Application]

2.3.1 The site is bounded by Castle Peak Road – Lam Tei section to the east, Light Rail Transit (LRT) line and an elevated viaduct of MTR Tuen Ma Line to the west. A village environ, Lam Tei Vegetable Depot and some burial urns/graves to the north together with a nullah to the south.

2.3.2 Due to the existing nullah and LRT infrastructures, it is not feasible to provide a vehicular access at the western side of the site.

2.3.3 This section of Castle Peak Road is operating with a speed limit of 70 km/h. A deceleration lane is required for the ingress vehicles to slow down from Castle Peak Road prior to access the site in a safely and efficient manner. However, as the eastern side of the site is bounded by Castle Peak Road and CEDD's cycle track, there is inadequate space for the vehicular access at the eastern side of the site.

2.3.4 To further enhance the road safety, a deceleration lane for the ingress vehicles at Castle Peak Road at the southern end of the site is proposed taking into consideration of the road characteristics (i.e. gradient and the design speed of Castle Peak Road) and the site constraint (i.e. slope structures near the nullah). The egress vehicles can await at the slip road with give-way traffic arrangement. This proposed traffic arrangement can ensure vehicles can travel in a safe and efficient manner.

2.3.5 A central island outside the run-in/out is also provided for the pedestrian and cyclist to enhance safety. The existing footpath and cycle track widths outside the subject site is 1.65m and 3.00m respectively. A maximum of 2.00m wide footpath and 3.50m wide cycle track can be provided taking into consideration of the site boundary and Castle Peak Road constraints.

2.3.6 The details of the previously approved run-out with deceleration lane arrangement together with the proposed additional traffic signs at run-in/out at Castle Peak Road and other relevant traffic signs near the run-in which have complied with relevant TPDM requirements and are shown in **Appendix A**.

2.3.7 Both HKPF and TD have no-objection on this proposed run-in/out and the at-grade cycle track arrangements outside the run-in/out in the latest approved S16 Application in 2023.

2.3.8 For this application, the run-in/out is slightly shifted 4m downwards to avoid the WSD pipe for ease of construction and future maintenance purposes. The revised layout is shown in **Figure 2.1**.

2.3.9 Due to the narrow shape of the site (about 25m in width), there is insufficient space to provide a hammer-head within the site for the manoevuring of a 12m emergency vehicle. In case of emergency, the fire engine will need to occupy the inner traffic lane of Castle Peak Road for fire-fighting as in the already approved S16 scheme.

2.3.10 The swept path analysis (**Figure SP1** in **Appendix B)** showing there are adequate manoevuring space for the ingress/egress of a 7m vehicle at the run-in/out.

2.4 Car Parking and Loading/Unloading Provisions

2.4.1 The proposed internal car parking and loading/unloading provisions based on the latest HKPSG's requirements are summarized in **Table 2.3**.

Table 2.3 Proposed Internal Transport Provision

	Car Parking		Motorcycle		Loading/Unloading	
	HKPSG Requirement	Proposed	HKPSG Requirement	Proposed	HKPSG Requirement	Proposed
Residential (336 Flats)	26-45	45	3-5	5	1 [HGV]	2 [LGV]
Residential Visitor Parking (1 block)	5	5	0	0	0	0
Retail* (65m^2 GFA)	0	0	0	0	1 [HGV]	2 [LGV]
Total	**31-50**	**50**	**3-5**	**5**	**2 [HGV]**	**4 [LGV]**

HKPSG Car Parking Requirement:
Residential: GPS x R1 x R2 x R3 + 5 visitor car parking spaces
GPS: 1 car space per 4 -7 flats; R1=0.5 for flat size < 40 m^2; R1 = 1.2 for flat size > 40 m^2 and < 70 m^2;
R2 = 1 for development outside 500 radius of railway station; R3 = 1 for plot ratio between 2 to 5
Retail: 1 car space per 150-300m^2 GFA

HKPSG Motorcycle Parking Requirement:
Residential: 1 M/C space per 100 – 150 flats
Retail: 5 to 10% of the total car parking space

HKPSG Loading / Unloading Requirement:
Residential: Min 1 L/UL bay
Retail: 1 L/UL bay per 800-1200m^2, or part thereof, GFA

(*) According to the "Remarks" under Section 3 in Table 11, Chapter 8 of HKPSG "Generally nil provision is permitted for small road-side retail shops which are mainly serving local residents". As the retail use within the site is only 65m^2 GFAs and is mainly serve for the locals. Hence nil car parking and nil motorcycle parking will be provided for the retail use.

2.4.2 Under the HKPSG's requirement, 1 loading / unloading bay should be provided for each housing block. However due to the site constraint, it is not feasible to provide a 11m HGV loading / unloading bay within the site.

2.4.3 Since the provision of 2 LGV L/UL instead of 1 HGV L/UL for this development site had received no objection from Transport Department in the previous approved S16 Application in 2023 due to the site constraint. 4 nos. 7m LGV loading / unloading bays are provided within the site instead which is considered adequate to serve the small to medium households and the small retail shops.

2.4.4 A total of 50 car parking spaces (including 5 visitor parking spaces), 5 motor-cycle parking spaces and 4 loading / unloading bays (LGV) are provided for this proposed development site based on the latest HKPSG requirement. In addition, under TD's Traffic Impact Assessment Checklist for Development Project's requirement, 1 bicycle parking space per 5 flats should be provided for residents (336 / 5 = 67) and 1 bicycle parking space per 45 flats should be provided for visitors (336 / 45 = 7) and a total of 74 (67 + 7) bicycle parking spaces are provided for this development site.

2.4.5 Two car-lifts with waiting bay will be provided for vehicles to access to/from G/F and 1/F.

2.4.6 All loading / unloading facilities are provided at G/F and parking facilities are provided at G/F and 1/F of the development site as shown in **Figures 2.2** and **2.3**

respectively and summarized in **Table 2.4**.

Table 2.4 Internal Carpark Arrangement

Internal Transport Provision	G/F	1/F
Private Car (Conventional)	10	9
Private Car (double-deck parking system)	0	30
Accessible Parking Space	0	1
Sub-Total (Private Car)	**10**	**40**
Motorcycle	5	0
LGV bay	4	0
Car-lift waiting space	1	1

2.4.7 The proposed carpark provision with 20 conventional parking spaces (including 1 accessible parking space) can fulfil the requirement of Lands Department's [Practice Note (issue No. 2/2000)] which "not less than one-sixth of the total number of space provided shall be accommodated in the conventional system" (i.e. 50 parking space /6 = minimum of 9 conventional parking space).

3. EXISTING TRAFFIC CONDITION

3.1 Existing Road Networks

3.1.1 Castle Peak Road-Lam Tei is a Rural Trunk Road and is a major road connecting Hung Shiu Kiu and Tuen Mun. There is a light rail running along this road. It operates in dual two lane 2-way traffic directions with approximately 3.5m lane width.

3.1.2 Lam Tei interchange is a major roundabout connects with slips road from Castle Peak Road, Tuen Mun Road and Tsing Lun Road.

3.1.3 The section of Tsing Lun Road between Castle Peak Road - Lam Tei and Hong Po Road is a dual carriageway with 2 traffic lanes at each direction.

3.1.4 Lam Tei Main Street is a one-way local road running in westbound direction and connects with Fuk Hang Tsuen Road and Castle Peak Road – Lam Tei.

3.1.5 Fuk Hang Tsuen Road is two-way single carriageway connects with Castle Peak Road – Lam Tei.

3.1.6 The Area of Influence (AOI) covers the 5 key junctions in the vicinity of the site is shown in **Figure 3.1**.

3.2 Public Transport Facilities

3.2.1 This site is well accessible by public transport facilities (franchised buses, GMBs and PLBs) in the vicinity of the site. The details of the nearby public transport facilities are summarised in **Table 3.1**.

Table 3.1 Existing Public Transport Facilities in the Vicinity of the Site

Location	Franchised Bus	GMB	PLB
Castle Peak Road – Lam Tei	53, 63X, 68A, 258A, 258P, 261P, 960P, 960X, A34, B2, N969 and NA37	606S	Causeway Bay to Tuen Mun / Yuen Long, Mongkok to Tuen Mun / Yuen Long and Tuen Mun to Yuen Long
Lam Tei Interchange	50, 55, 56, 56A, 67M, 67X, 261P, 267X, 950, 955, 960A, 960C, 960X, B3A, E33P, E36C, N50, N260, NA33	--	--

3.2.2 The details of the public transport facilities in the vicinity of the site are shown in **Figure 3.2**.

3.2.3 The Lam Tei LRT stop and Siu Hong MTR station is also located at approx. 150m and 800m walking distance respectively from the proposed site as shown in **Figure 3.3.**

3.3 Baseline Traffic Surveys

3.3.1 In order to review the existing traffic conditions, vehicular count survey was carried out on a typical weekday in September 2025 during the AM (07:30-09:30) and PM (17:00-19:00) peak periods.

3.3.2 The AM and PM peak hours of the existing local road network are identified as 07:30-08:30 and 17:30-18:30 hours respectively.

3.3.3 The observed traffic flows for the 5 concerned junctions in 2025 are presented in **Figure 3.4**.

3.4 Existing Junction Performance

3.4.1 Based on the 2025 surveyed traffic flows, the junction capacity analysis for the 5 concerned junctions during the critical AM and PM peak periods have been assessed. The results of the junction capacity analysis are summarized in **Table 3.2**.

Table 3.2 2025 Existing Junction Performance

Junction Location		Junction Type	AM Peak	PM Peak
J1	Lam Tei Interchange	Roundabout (DFC)	0.45	0.45
J2	Castle Peak Road / Tsing Lun Road	Signalized (RC)	106%	107%
J3	Castle Peak Road- Lam Tei/ Lam Tei Main Street	Signalized (RC)	43%	103%
J4	Castle Peak Road- Lam Tei/Fuk Hang Tsuen Road(1)	Signalized (RC)	40%	60%
J5	Tsing Tin Road / Tsun Wen Road	Signalized (RC)	135%	114%

Notes:
DFC = Design Flow/Capacity ratio for priority junction and roundabout.
RC = Reserve Capacity for signalised junction.
(1): By on site observation of J4, there is only 1 pedestrian stage for every 2 cycle, and Phase D is skipped throughout the surveyed period, the calculation is based on 1 pedestrian stage and 1 phase D per every 2 cycles for conservative.

3.4.2 The results of the junction performance enclosed in **Appendix C** show all concerned junctions are operating with adequate junction capacities during the AM and PM peak periods.

3.5 Existing Road Link Performance

3.5.1 Based on the 2025 surveyed traffic flows, the road link capacity of the Castle Peak Road in the vicinity of the site during the critical AM and PM peak periods has been assessed. The results of the road link performance are summarized in **Table 3.3**.

Table 3.3 2025 Existing Road Link Performance

Location		Adopted Capacity (veh/hr)(1)	AM Peak		PM Peak	
			Flow (veh/hr)	V/C	Flow (veh/hr)	V/C
L1	Castle Peak Road (Northbound)	3000	1032	0.34	1096	0.37
	Castle Peak Road (Southbound)	3000	1545	0.52	1144	0.38
L2	Yuen Long Highway (Eastbound)	3000	3301	1.10	3683	1.23
	Yuen Long Highway (Westbound)	3000	2307	0.77	2970	0.99
L3	Tuen Mun Road – Fu Tei Section (Northbound)	4700	4496	0.96	4921	1.05
	Tuen Mun Road – Fu Tei Section (Southbound)	4700	4041	0.86	4189	0.89
L4	Tsing Tin Road (Eastbound)	4200	1521	0.36	1715	0.41
	Tsing Tin Road (Westbound)	4200	1530	0.36	1247	0.30
If one traffic lane is occupied by the emergency vehicles						
L1	Castle Peak Road (Northbound)	1500	1032	0.69	1096	0.73

Note: (1) Adopted from TPDM Vol 2 Chapter 2.4 Table 2.4.1.1.

3.5.2 The road link performance shows that Castle Peak Road and Tsing Tin Road are having adequate capacity, except Tuen Mun Road which is operating at a V/C ratio > 0.85. In addition, Yuen Long Highway is operating at a V/C ratio > 1 during the AM and PM peak periods.

3.5.3 There is adequate traffic flow capacity along Castle Peak Road (Northbound) if one traffic lane is occupied by the emergency vehicles (i.e. V/C ratio <1) in 2025.

3.6 Pedestrian Count Survey

3.6.1 A pedestrian count survey was conducted for the pedestrian footpaths in the vicinity of the site (between site and public transport stop/LRT stop/MTR Station) during the AM and PM peak hour periods on a normal typical weekday in September 2025.

3.6.2 The concerned critical footpath section between Castle Peak Road western footpath and footpath to Lam Tei LRT stop/Siu Hong MTR Station are indicated in **Figure 3.5** and the observed pedestrian flows are presented in **Table 3.4**.

Table 3.4 2025 Surveyed Pedestrian Flows in the Vicinity of the Site

No.	Location	Pedestrian Flows (ped/15 mins)	
		AM Peak	PM Peak
P1	Castle Peak Road – Lam Tei Western Footpath	193	42
P2	Footpath to Lam Tei LRT stop	195	51
P3	Footbridge across Tsing Lun Road	41	35
P4	Footpath to Siu Hong MTR Station	15	13

3.7 Existing Footpath Performance

3.7.1 According to TPDM Volume 6 Chapter 10.4 Section 10.4.2, The Level of Service (LOS) is defined varied from A to F, with the best LOS 'A' and the worst LOS 'F'. According to TPDM Volume 2 Chapter 10.4 Section 3.4.11, "LOS C is considered as an optimal level of service in the HCM. In view of the public expectation for a better walking environment, the upper end of LOS C (23 pedestrians/minute/m as stated in the HCM) is preferred."

3.7.2 The Level of Service for the concerned footpaths during the AM and PM peak hour periods have been assessed and the performance are summarized in **Table 3.5**.

Table 3.5 2025 Existing Footpath Capacity Assessment

No.	Location	AM Peak			PM Peak		
		Flow (ped/15 mins)	Flow Rate (ped/min /m)	LOS	Flow (ped/15 mins)	Flow Rate (ped/min /m)	LOS
P1	Castle Peak Road – Lam Tei Western Footpath(1)	193	12.87	A	42	2.80	A
P2	Footpath to Lam Tei LRT stop(2)	195	1.86	A	51	0.49	A
P3	Footbridge across Tsing Lun Road(3)	41	0.55	A	35	0.47	A
P4	Footpath to Siu Hong MTR Station(4)	15	1.00	A	13	0.87	A

Note:
(1) The clear footpath width = 2.0m actual width – 1m dead width = 1.0m.
(2) The clear footpath width = 8.0m actual width – 1m dead width = 7.0m.
(3) The clear footbridge width = 6.0m actual width – 1m dead width = 5.0m.
(4) The clear footpath width = 2.5m actual width – 1m dead width = 1.5m.

3.7.3 The assessment results show that the concerned pedestrian footpaths can operate with ample capacity [LOS A] in the AM and PM peak periods.

Public Transport Utilization Analysis

3.7.4 The passenger occupancy surveys were carried out at Castle Peak Road – Lam Tei bus

stops during the AM (07:30 to 09:30) and PM (17:00-19:00) peak hour periods in January 2026 for evaluating the public transport services.

3.7.5 The results of the public transport utilization are summarized in **Table 3.6**.

Table 3.6 2026 Existing Public Transport Utilization

Location	Type	AM Peak			PM Peak		
		Observed Frequency (Veh/hr)	Observed Occupancy (%)	Spare Capacity (Pax/hr)	Observed Frequency (Veh/hr)	Observed Occupancy (%)	Spare Capacity (Pax/hr)
Castle Peak Road-Lam Tei Northbound	Franchised Bus	11	37	831	19	29	1,619
Castle Peak Road-Lam Tei Southbound	Franchised Bus	24	52	1,382	14	46	907

Note:
The adopted capacity for a double decker bus is 120 pax/veh.

3.7.6 Currently there are spare passenger capacities for the bus services at Castle Peak Road - Lingnan during the AM and PM peak periods.

4. FUTURE TRAFFIC CONDITIONS

4.1 Traffic Forecast Approach

4.1.1 The proposed residential development is anticipated to be completed by 2030. The design year 2033 is adopted (i.e. 3 years after the completion) to assess the impact of the proposed development traffic on the local road network.

4.1.2 Since there are no major changes of the road network in the vicinity, the traffic forecast has been conducted based on the following data:

- Historical trend data from the Annual Traffic Census (ATC) by Transport Department
- 2021-based Territorial Population and Employment Data Matrix (TPEDM) planning data by Planning Department's website
- Projections of Population Distribution 2023-2031 by Planning Department
- Hong Kong Population Projections 2022-2046 by Census and Statistics Department

4.1.3 The historical traffic data of the surrounding road links are based on the Annual Average Daily Traffic (AADT) extracted from the "Annual Traffic Census" report issued by Transport Department. The relevant AADT data from 2019 to 2023 are summarized in **Table 4.1**.

Table 4.1 AADT at Counting Stations Extracted from Annual Traffic Census - 2019 to 2023

Stn No.	Road	From	To	2019	2020	2021	2022	2023
6604	Lam Tei Main St	Castle Peak Rd - Lam Tei	Fuk Hang Tsuen Rd	960	950	1,020	1,070	1,150
6213	Castle Peak Rd - Hung Shui Kiu	Tin Ha Rd	Fanling Highway	33,220	34,710	34,800	34,500	34,030
5025	Yuen Long Highway	Tin Shui Wai West INT	Lam Tei INT	109,220	103,100	113,690	109,410	116,440
5405	Tuen Mun Rd	Tsing Chui Path	Lam Tei INT	126,570	117,560	123,290	117,820	125,200
5647	Tsing Lun Rd	Tsing Chung Koon Rd	Lam Tei INT	11,500	12,870	13,870	13,450	13,770
All Stations Total				281,470	269,190	286,670	276,250	290,590
Average Growth Rate (% p. a.)					-4.36%	6.49%	-3.63%	5.19%
Overall Growth Rate (% p. a.) from 2019 to 2023				**+0.80%**				

4.1.4 The annual growth factors for future traffic forecasts from various sources from 2023 to 2033 are summarized in **Table 4.2**.

Table 4.2 Summary of Annual Growth Factors Information

Information	Planning Horizon	District	Annual Growth Rates			
			2019-2023	2021-2026	2026-2031	2031-2036
Annual Traffic Census by Transport Department	--	Tuen Mun	+0.8% (1)	--	--	--
2021-based Territorial Population and Employment Data Matrix (TPEDM) by Planning Department's website	2031	Tuen Mun District	--	-0.92%	-1.15%	--
Projections of Population Distribution 2023-2031 by Planning Department	2031	Tuen Mun District	--	+0.92% (2)		--
Hong Kong Population Projections 2022-2046 by Census and Statistics Department	2046	Territorial-wide	--	+0.50%	+0.60%	+0.50%

Note:
(1) Growth rate between 2019 to 2023
(2) Growth rate between 2025 to 2031

4.1.5 Based on the above information, an annual growth rate of +0.92% p.a. from 2025 to 2031 and +0.5% p.a. from 2031 to 2033 is adopted for future traffic forecast.

4.2 Future Planned Developments

4.2.1 The traffic flows generated by adjacent potential planned / committed developments in the vicinity have also been taken into consideration in the reference case scenario.

4.2.2 The planned developments in the vicinity are summarized in **Table 4.3**.

Table 4.3 Summary of Planned Developments in the Vicinity

Planned Development	Development Parameters	Traffic Generation/ Attraction (pcu/hr)
Public Housing Developments at Tuen Mun Area 54	PRH 15,800 flats SSF 1,020 flats Population: 45,410	AM total: 1,270 PM total: 900
Light Public Housing at Yan Po Road, Tuen Mun Area 54	LPH 5,610 flats Population: 15,020	AM total: 150 PM total: 110
Public Housing Developments at San Hing Road and Hong Po Road	PRH 23,520 flats Population: 57,320	AM total: 1,850 PM total: 1,260
Proposed Residential Development at Various Lots in D.D. 130, Lam Tei (Planning Application: Y/TM-LTYY/11)	Private Housing 1,390 flats Population: 3,740	AM total: 430 PM total: 320
Proposed Residential Development at Lots 220 RP (part) and 221 in D.D. 130, San Hing Tsuen (Planning	Private Housing 288 flats	AM total: 90 PM total: 70

Application No: Y/TM-LTYY/10)	Population: 780	
Pok Oi Hospital Lam Tei Elderly Home at Fuk Hang Tsuen Road	1,434 residential care places	AM total: 40 PM total: 90
Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA)	PRH 14,070 flats SSF 1,700 flats Private Housing 1,170 flats Population: 39,540	AM total: 1,610 PM total: 1,140
Proposed Minor Relaxation of Building Height Restriction for Permitted Educational Institution Use [Lingnan University] (Planning Application: A/TM/595)	New Science Building 11,000 m^2 GFA	AM total: 20 PM total: 20

4.2.3 The traffic generations of the above planned / committed developments have also been taken into account in the 2033 reference case scenario.

4.2.4 The 2033 reference traffic flows are shown in **Figure 4.1**.

5. TRAFFIC IMPACT ASSESSMENT

5.1 Proposed Development Traffic Generation

5.1.1 Based on the adopted trip rates, the vehicle trip generations for this development are summarized in **Table 5.1**.

Table 5.1 Vehicular Trips for this Development

Component	Proposed Development	AM Peak		PM Peak	
		Attraction	Generation	Attraction	Generation
Residential (336 flats)	Adopted Trip Rate (1) (pcu/hr/flat)	0.0425	0.0718	0.0370	0.0286
	Vehicular Trips (pcu/hr)	14	24	12	10

Note: (1) Adopted from TPDM Vol 1, Chap. 3.

5.1.2 Since the proposed retail facilities (with small-scale) are mainly serving residents, thus, it is considered that there is nil traffic generation for retail.

5.1.3 The proposed development will attract and generate 38 (i.e. 24 + 14) pcus in the AM peak hour and 22 (i.e. 10 + 12) pcus in the PM peak hour.

5.1.4 The distribution of the proposed development traffic travelling along the concerned junctions is shown in **Figure 5.1**.

5.2 2033 Design Traffic Flows and Traffic Impact Assessments

5.2.1 The 2033 design traffic flows are derived by adding the proposed development traffic flows (**Figure 5.1**) onto the 2033 reference traffic flows (**Figure 4.1**) to provide the 2033 design traffic flows (**Figure 5.2**). (i.e. 2033 design flow = 2033 reference flow + development flow).

The assessments of the junction performance based on the 2033 reference and 2033 design are summarized in
5.2.2 **Table 5.2.**

Table 5.2 Junction Capacity Assessment for Year 2033

Junction No	Junction	Junction Type	2033 Reference		2033 Design	
			AM	PM	AM	PM
J1	Lam Tei Interchange	Roundabout (DFC)	0.75	0.83	0.75	0.83
J2	Castle Peak Road / Tsing Lun Road	Signalized (RC)	29%	48%	29%	48%
J3	Castle Peak Road- Lam Tei/ Lam Tei Main Street	Signalized (RC)	16%	63%	15%	62%
J4	Castle Peak Road- Lam Tei/Fuk Hang Tsuen Road(1)	Signalized (RC)	19%	35%	17%	34%
J5	Tsing Tin Road / Tsun Wen Road	Signalized (RC)	79%	75%	78%	74%

Notes:
DFC = Design Flow/Capacity ratio for priority junction and roundabout.
RC = Reserve Capacity for signalised junction.

(1): By on site observation of J4, there is only 1 pedestrian stage for every 2 cycle, and Phase D is skipped throughout the surveyed period, the calculation is based on 1 pedestrian stage and 1 phase D per every 2 cycles for conservative.

5.2.3 The results of the junction capacity analysis enclosed in **Appendix C** show that all concerned junctions will operate with adequate junction capacity during the AM and PM peak periods in both 2033 reference and design scenarios.

5.2.4 The assessments of the road link performance based on the 2033 reference and 2033 design are summarized in **Table 5.3**.

Table 5.3 2033 Reference and Design Road Link Performance

Location		Adopted Capacity (veh/hr)(1)	2033 Reference				2033 Design			
			AM Peak		PM Peak		AM Peak		PM Peak	
			Flow (veh/hr)	V/C	Flow (veh/hr)	V/C	Flow (veh/hr)	V/C	Flow (veh/hr)	V/C
Normal Situation										
L1	Castle Peak Road (Northbound)	3000	1421	0.47	1404	0.47	1441	0.48	1412	0.47
	Castle Peak Road (Southbound)	3000	1897	0.63	1495	0.50	1914	0.64	1503	0.50
L2	Yuen Long Highway (Eastbound)	3000	3522	1.17	3930	1.31	3522	1.17	3930	1.31
	Yuen Long Highway (Westbound)	3000	2493	0.83	3186	1.06	2496	0.83	3189	1.06
L3	Tuen Mun Road – Fu Tei Section (Northbound)	4700	5041	1.07	5494	1.17	5052	1.07	5504	1.17
	Tuen Mun Road – Fu Tei Section (Southbound)	4700	4774	1.02	4851	1.03	4788	1.02	4861	1.03
L4	Tsing Tin Road (Eastbound)	4200	1624	0.39	1828	0.44	1624	0.39	1828	0.44
	Tsing Tin Road (Westbound)	4200	1635	0.39	1327	0.32	1635	0.39	1327	0.32
If one traffic lane is occupied by the emergency vehicles										
L1	Castle Peak Road (Northbound)	1500	1421	0.95	1404	0.94	1441	0.96	1412	0.94

Note: (1) Adopted from TPDM Vol 2 Chapter 2.4 Table 2.4.1.1.

5.2.5 The road link performance shows that Castle Peak Road and Tsing Tin Road will operate with adequate capacity, except Tuen Mun Road and Yuen Long Highway which are operating at a V/C ratio > 1 during the AM and PM peak periods in both 2033 reference and design scenario. However, the traffic generation to the concerned major roads due to the proposed development are insignificant.

5.2.6 There will be future strategic road network improvement such as Route 11, Tuen Mun

Bypass, Yuen Long Highway widening etc. Upon completion of these new infrastructure and road networks by Government Departments, the traffic capacities in the vicinity are expected to be improved significantly.

5.2.7 In addition, the road link capacity assessment show that V/C ratio along Castle Peak Road (Northbound) during emergency [i.e. one traffic lane is occupied by the emergency vehicles] is closed to 1.0 under the 2033 scenarios. However, during emergency, temporary closure of one traffic lane for fire engine and ambulance etc. is considered tolerable. Consultation with FSD on the EVA arrangement will be carried out in detailed design stage.

5.3 Pedestrian Generation by the Proposed Development

5.3.1 The peak hour pedestrian traffic generations and attractions of the proposed development are derived by using the adopted pedestrian trip rates and are presented in **Table 5.4**.

Table 5.4 Estimated of Pedestrian Generation and Attraction of Proposed Development Site

Proposed Development (336 Flats)	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Adopted Trip Rate (ped/15mins/flat)(1)	0.2312	0.0238	0.0520	0.0933
Estimated Pedestrian Trips (ped/15mins)	78	8	18	32

Note: (1) Conservative trip rates adopted are based on reference projects of similar private residential sites, as shown in the table below.

Reference	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Kornville, Tai Koo (504 flats)	0.1230	**0.0238**	0.0417	**0.0933**
T Plus, Tuen Mun (356 flats)	0.0674	0.0169	0.0140	0.0730
Park Nara, Hung Shui Kiu (173 flats)	**0.2312**	0.0173	**0.0520**	0.0867
Adopted Highest Trip Rate (pcu/15mins/flat)	**0.2312**	**0.0238**	**0.0520**	**0.0933**

5.3.2 The proposed development will attract and generate 86 (i.e. 78 + 8) ped/15mins in the AM peak hour and 50 (i.e. 18 + 32) ped/15mins in the PM peak hour.

5.4 Pedestrian Impact Assessment (Design Year)

5.4.1 The section of Castle Peak Road - Lam Tei footpath adjacent to the development site has been assessed for the 2033 design scenario.

5.4.2 The results of the pedestrian impact assessment in the 2033 design scenario are tabulated in **Table 5.5**.

Table 5.5 Pedestrian Impact Assessment in 2033 Design Scenario

No.	Location	AM Peak			PM Peak		
		Flow (ped/15 mins)	Flow Rate (ped/min /m)	LOS	Flow (ped/15 mins)	Flow Rate (ped/min /m)	LOS
P1	Castle Peak Road – Lam Tei Western Footpath(1)	292	19.47	B	95	6.33	A
P2	Footpath to Lam Tei LRT stop(2)	295	2.81	A	105	1.00	A
P3	Footbridge across Tsing Lun Road(3)	130	1.73	A	88	1.17	A
P4	Footpath to Siu Hong MTR Station(4)	103	6.87	A	64	4.27	A

Note:
(1) The clear footpath width = 2.0m actual width – 1m dead width = 1.0m.
(2) The clear footpath width = 8.0m actual width – 1m dead width = 7.0m.
(3) The clear footbridge width = 6.0m actual width – 1m dead width = 5.0m.
(4) The clear footpath width = 2.5m actual width – 1m dead width = 1.5m.

5.4.3 The results of pedestrian assessment demonstrated that all concerned footpaths adjacent to the site will operate with ample pedestrian capacity [i.e. Level of Service "C" or above] upon the development.

5.5 Public Transport Assessment

5.5.1 The public transport demand by the development is assessed based on the pedestrian trip generation as discussed in **Table 5.4**. The future passenger trips for the proposed development are summarized in **Table 5.6**.

Table 5.6 Pedestrian Trip of Proposed Development Site

Proposed Development (336 Flats)	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Estimated Pedestrian Trips (ped/hr)	312	32	72	128

5.5.2 The adopted growth rate in section 4.1.5 for the franchised bus occupancy from 2026 to 2033 is presented as follows:

2033 Occupancy = 2026 Observed Occupancy [Table 3.6] x $(1+0.92\%)^{(2031-2026)}$ x $(1+0.50\%)^{(2033-2031)}$ + Pedestrian Flows generated from the Site [Table 5.6]

5.5.3 Based on the published franchised bus services schedule, there are 12 bus routes serving each direction of Castle Peak Road- Lam Tei near the development. The existing bus frequencies for these bus routes along Castle Peak Road- Lam Tei bus stops during the AM and PM peak hours are presented in **Table 5.7**.

Table 5.7 Peak Hours Bus Services Demand at Castle Peak Road- Lam Tei near the Development

Bus Stop Location		Castle Peak Road- Lam Tei Bus Stop - Northbound	Castle Peak Road- Lam Tei Bus Stop - Southbound
AM Peak			
Existing Bus Frequency (no. of buses/hr)	[a]	11	24
Total bus capacity (pax/hr) ([b] = [a] x 120)	[b]	1,320	2,880
2033 Bus Occupancy	[c]	39%	55%
2033 Bus Vacancy (pax/hr) ([d] = [b] x (1 – [c]))	[d]	805	1,296
Pedestrian Demand from the proposed development (pax/hr)	[e]	32	128
Deficiency (pax/hr) ([f] = [e] - [d])	[f]	N.A.	N.A.
PM Peak			
Existing Bus Frequency (no. of buses/hr)	[a]	19	14
Total bus capacity (pax/hr) ([b] = [a] x 120)	[b]	2,280	1,680
2033 Bus Occupancy	[c]	30%	49%
2033 Bus Vacancy (pax/hr) ([d] = [b] x (1 – [c]))	[d]	1,596	857
Pedestrian Demand from the proposed development (pax/hr)	[e]	312	72
Deficiency (pax/hr) ([f] = [e] - [d])	[f]	N.A.	N.A.

5.5.4 There are sufficient spare bus capacities to serve the anticipated passenger demands generated by the development. Hence the enhancement of existing public transport facilities at Castle Peak Road- Lam Tei near the development is considered not necessary.

6. SUMMARY AND CONCLUSION

6.1 Summary

6.1.1 A minor amendment in S16 Planning Application for a residential development scheme was submitted to TPB and was approved by Planning Department and Transport Department in March 2023.

6.1.2 The purpose of this Traffic Impact Assessment Report is to support a fresh S16 Planning Application with an increase in 152 flat numbers.

6.1.3 A total of 50 car parking spaces (including 5 visitor parking spaces and accessible parking space), 4 motor-cycle parking spaces and 4 loading / unloading bays (LGV) are provided for this proposed development site based on the latest HKPSG's requirement. In addition, 74 bicycle parking spaces are provided for this development site.

6.1.4 The proposed development will attract and generate 38 pcus in the AM peak hour and 22 pcus in the PM peak hour.

6.1.5 There is adequate traffic flow capacity along Castle Peak Road if one traffic lane is occupied by the emergency vehicles (i.e. V/C ratio <1).

6.1.6 All concerned junctions will be operates with adequate junction capacity during the AM and PM peak periods.

6.1.7 The footpaths adjacent to the site are operating with ample Level of Services [B or above] in the AM and PM peak periods.

6.1.8 A 2033 design year is adopted for this TIA study [i.e. 3 years after the completion of this development].

6.1.9 A growth factor of +0.92% p.a. is adopted from 2025 to 2031 and +0.50% p.a. is adopted from 2031 to 2033 for the traffic forecast.

6.1.10 The traffic assessments show that all the concerned junctions will operate with ample junction capacity in both 2033 reference and 2033 design scenarios.

6.1.11 The results of pedestrian assessment demonstrated that the footpaths adjacent to the site will operate with ample Level of Services [B or above] upon the development in 2033.

6.1.12 There are sufficient spare bus capacities to serve the anticipated passenger demand generated by the development. Hence no enhancement for these facilities are required.

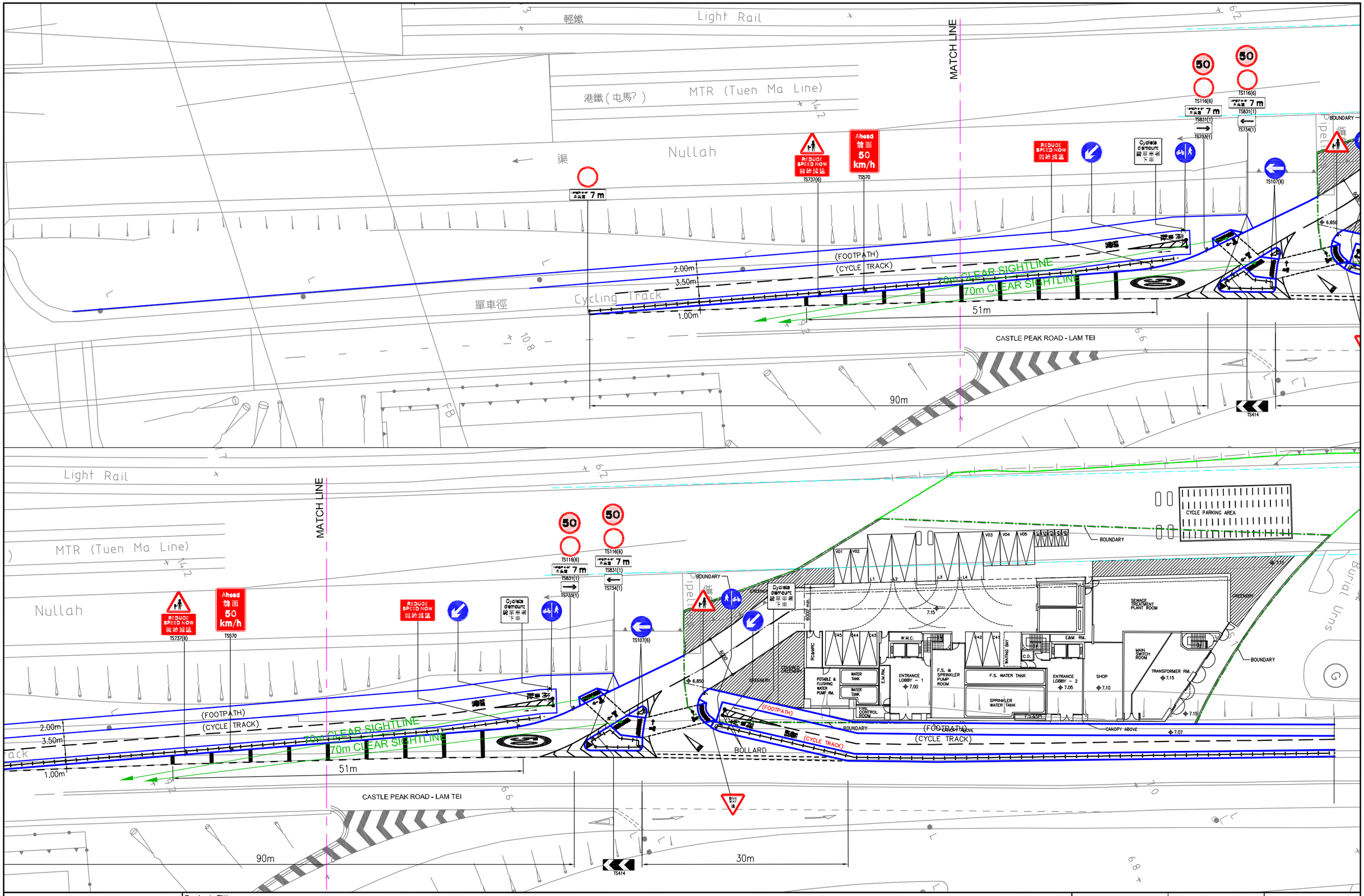
6.2 Conclusion

6.2.1 The findings of this traffic impact study show that the proposed development will not cause any significant traffic impact onto the local road network.

6.2.2 There will be future highway infrastructure projects (e.g. Route 11, Tuen Mun Bypass, Yuen Long Highway widening etc) which will be in place in medium to long terms that the traffic condition in NWNT will be further improved.

6.2.3 The proposed residential development is therefore supported from the traffic engineering point of view.

FIGURES



HWSPB 何黃 Traffic & Transportation Consultants Ho Wang SPB Limited	Project Title: SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: 1 : 500	Date: JAN 2026	Figure No.: 2.1
	Figure Title: PROPOSED RUN-IN/OUT ARRANGEMENT	Project No.: J977.3	CAD Ref.: J977.4/TIA1/F21A/2026-01-16	Rev.: A

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RAILING
LINE OF RAILWAY BRIDGE ABOVE
BOUNDARY
CYCLE PARKING AREA
N
V01 V02 V03 V04 V05 M1 M2 M3 M4 M5
L1 L2 L3 L4
GREENERY
6000 min.
7.15
SEWAGE TREATMENT PLANT ROOM
GRAVE
ACCESS ROUTE TO CYCLE TRACK
6000
6.85
6.850
27m CLEAR SIGHTLINE TO CAR PARK EXIT
21m CLEAR SIGHTLINE TO CAR PARK EXIT
COVERED GREENERY
C45 C44 C43 C42 C41
W.M.C.
WAITING BAY
E&M. RM.
C.D.
RC&MRC
POTABLE & FLUSHING WATER PUMP RM.
WATER TANK
WATER TANK
E.M.RM.
ENTRANCE LOBBY – 1
7.00
F.S. & SPRINKLER PUMP ROOM
F.S. WATER TANK
SPRINKLER WATER TANK
ENTRANCE LOBBY – 2
7.05
SHOP
7.10
MAIN SWITCH ROOM
TRANSFORMER RM.
7.15
FIRE CONTROL ROOM
F.S.&SPI
(FOOTPATH)
(CYCLE TRACK)
BOUNDARY
CANOPY ABOVE
EX. PAVEMENT
CANOPY ABOVE
7.07
KERB
EX. CYCLING TRACK
EX. RAILING
CASTLE PEAK ROAD (LAM TEI)

HWSPB 何黃 Traffic & Transportation Consultants Ho Wang SPB Limited	Project Title: SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: 1 : 250	Date: JAN 2026	Figure No.: 2.2
	Figure Title: PROPOSED G/F LAYOUT PLAN	Project No.: J977.4	CAD Ref.: J977.4/TIA1/F22A/2026-01-16	Rev.: A

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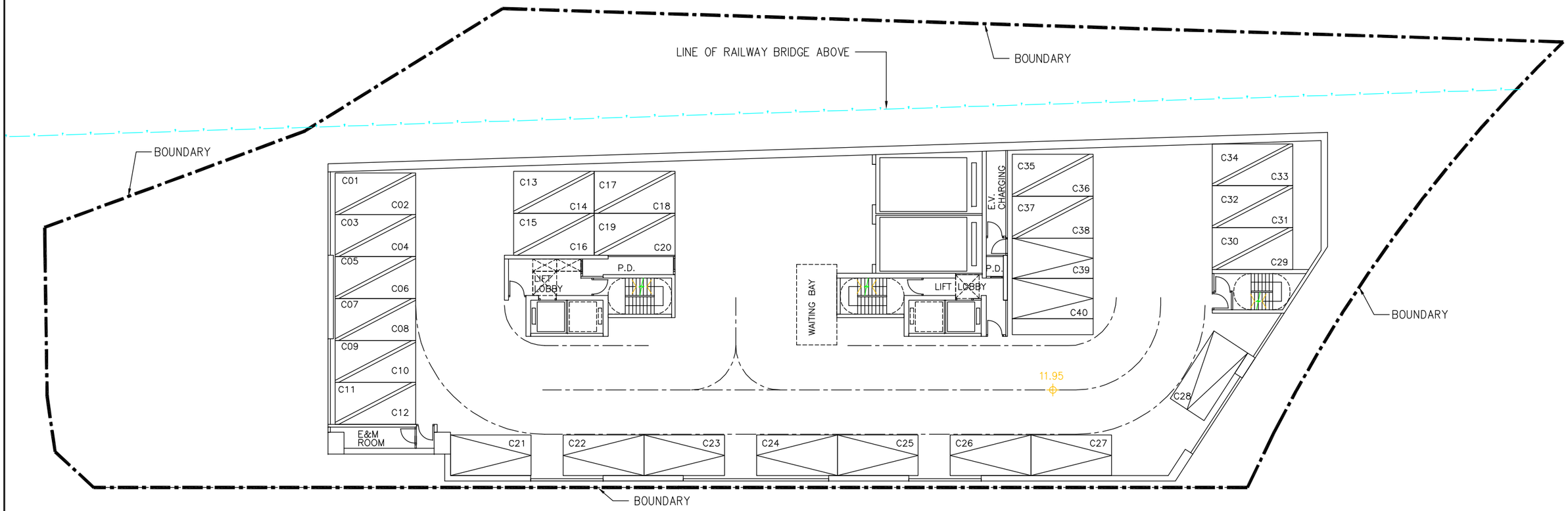

1st FLOOR PLAN

NOS. OF PRIVATE CAR PARKING = 40 NOS.

PRIVATE CAR PARKING

DOUBLE DECK CAR PARKING

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Project Title: SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: 1 : 250	Date: NOV 2025	Figure No.: 2.3	
Figure Title: PROPOSED 1/F LAYOUT PLAN	Project No.: J977.3	CAD Ref.: J977.4/TIA1/F23/2025-11-05	Rev.: –	

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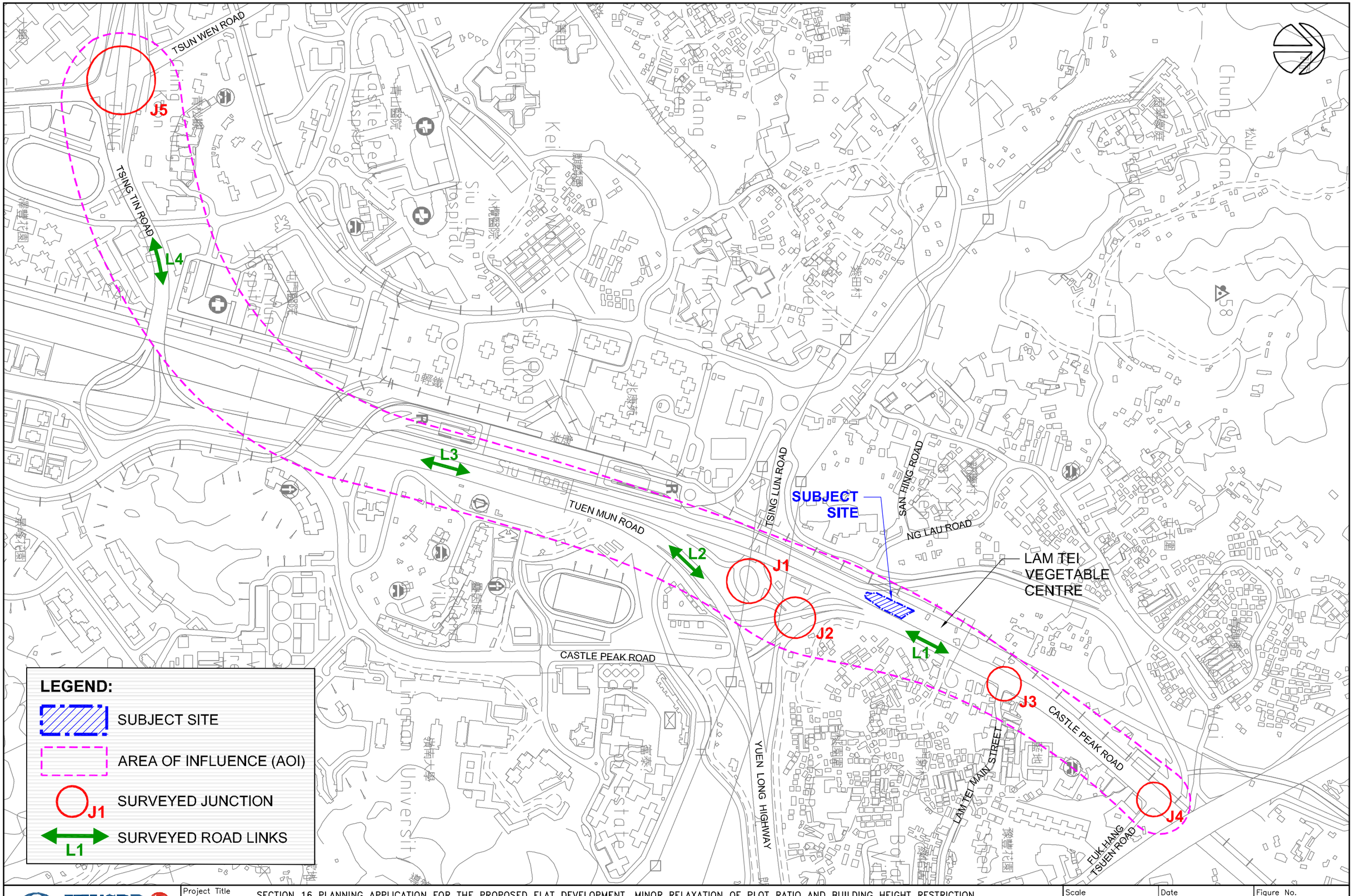

HWSPB 何黃 Traffic & Transportation Consultants Ho Wang SPB Limited	Project Title: SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: N. T. S.	Date: NOV 2025 / Figure No.: 3.1
	Figure Title: SITE LOCATION PLAN AND STUDY AREA	Project No.: J977.4	CAD Ref.: J977.4/TIA1/F31/2025-11-05 / Rev.: –

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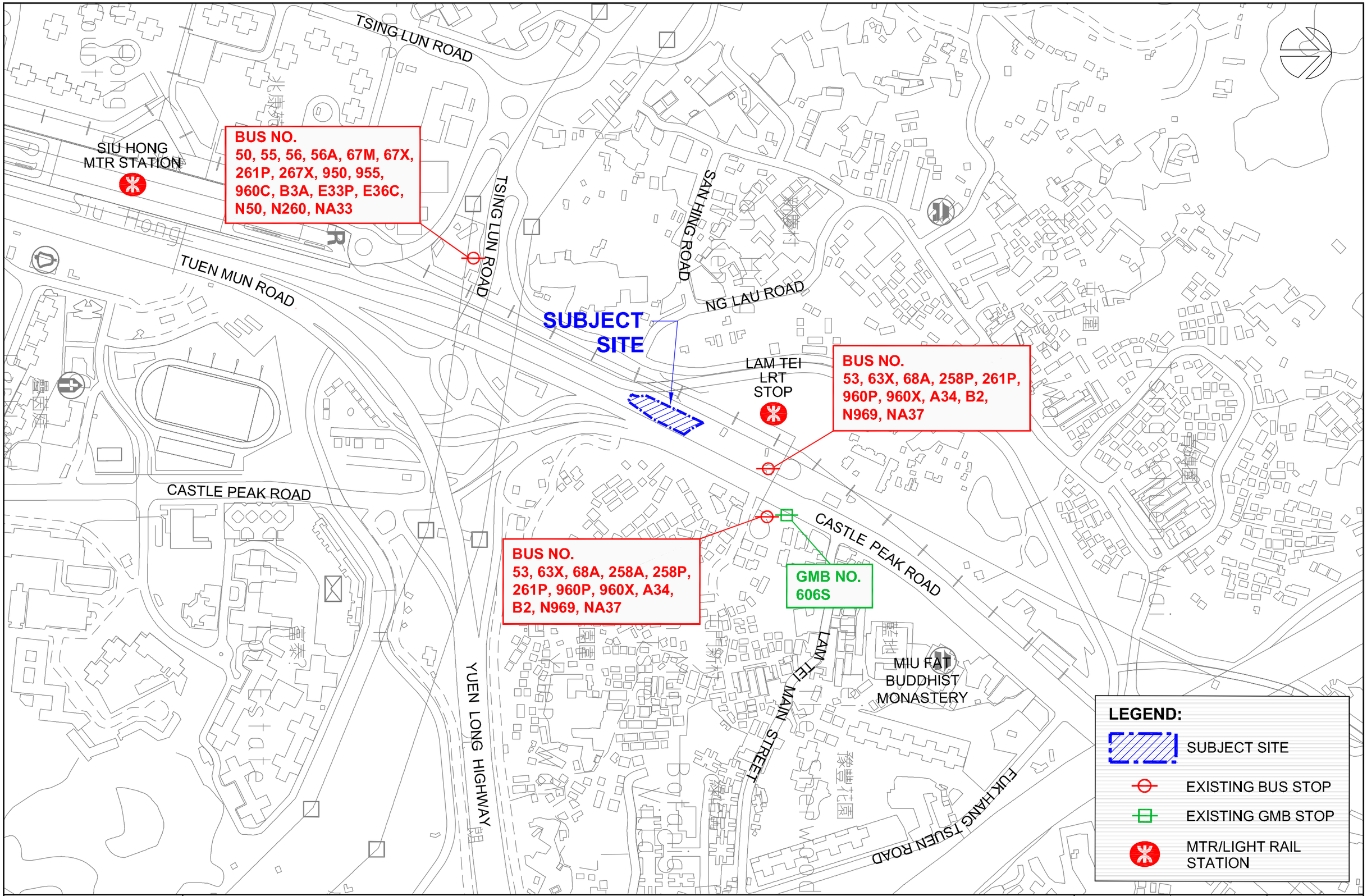

HWSPB 何黃 Traffic & Transportation Consultants Ho Wang SPB Limited	Project Title: SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: N. T. S.	Date: NOV 2025	Figure No.: 3.2
	Figure Title: PUBLIC TRANSPORT FACILITIES IN THE VICINITY OF THE SUBJECT SITE	Project No.: J977.4	CAD Ref.: J977.4/TIA1/F32/2025-11-05	Rev.: –

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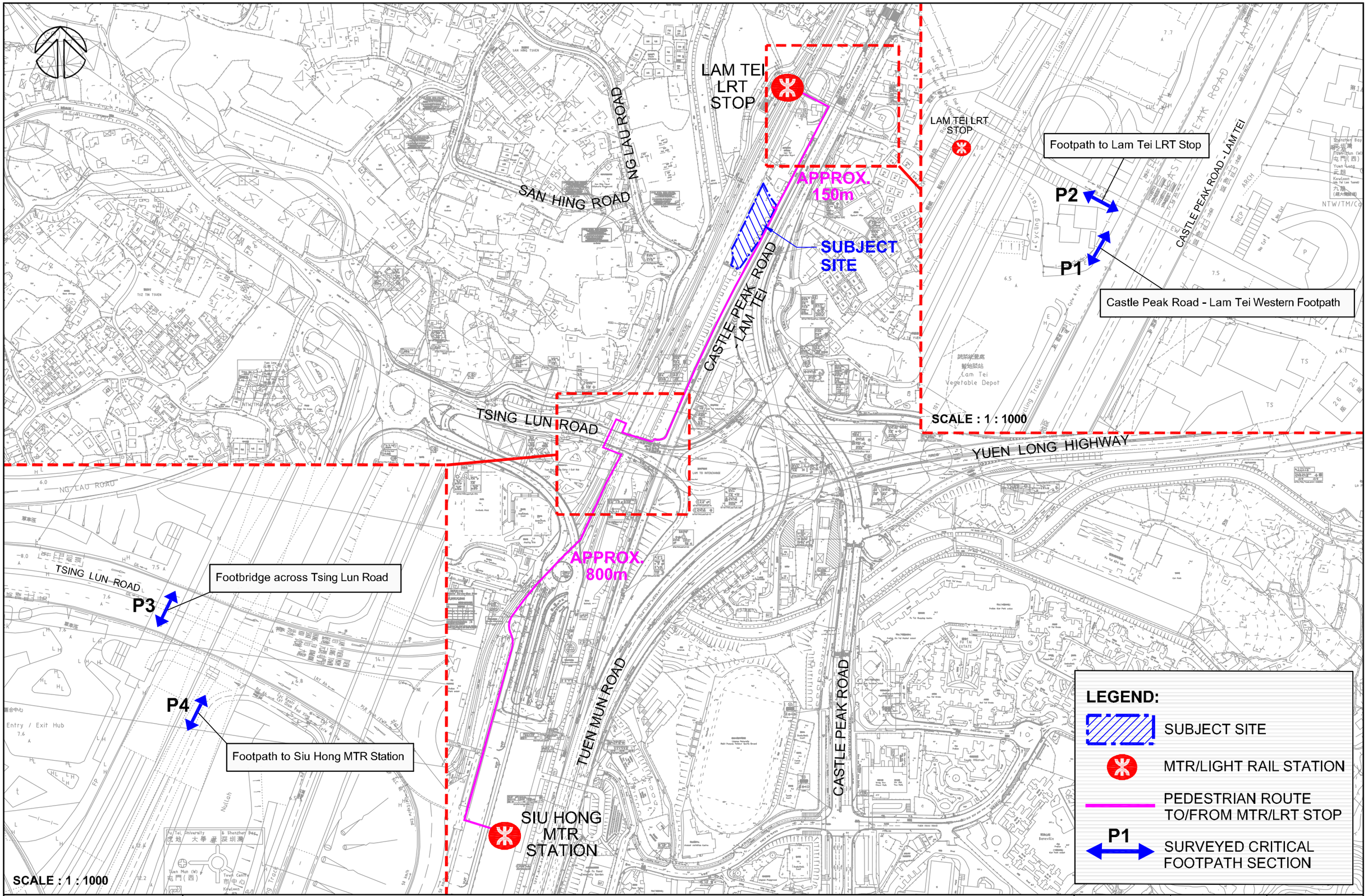

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Project Title: SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: 1 : 3500	Date: NOV 2025	Figure No.: 3.3
Figure Title: PEDESTRIAN ROUTE TO/FROM MTR/LRT STOP OF THE SITE	Project No.: J977.4	CAD Ref.: J977.4/TIA1/F33/2025-11-05	Rev.: –

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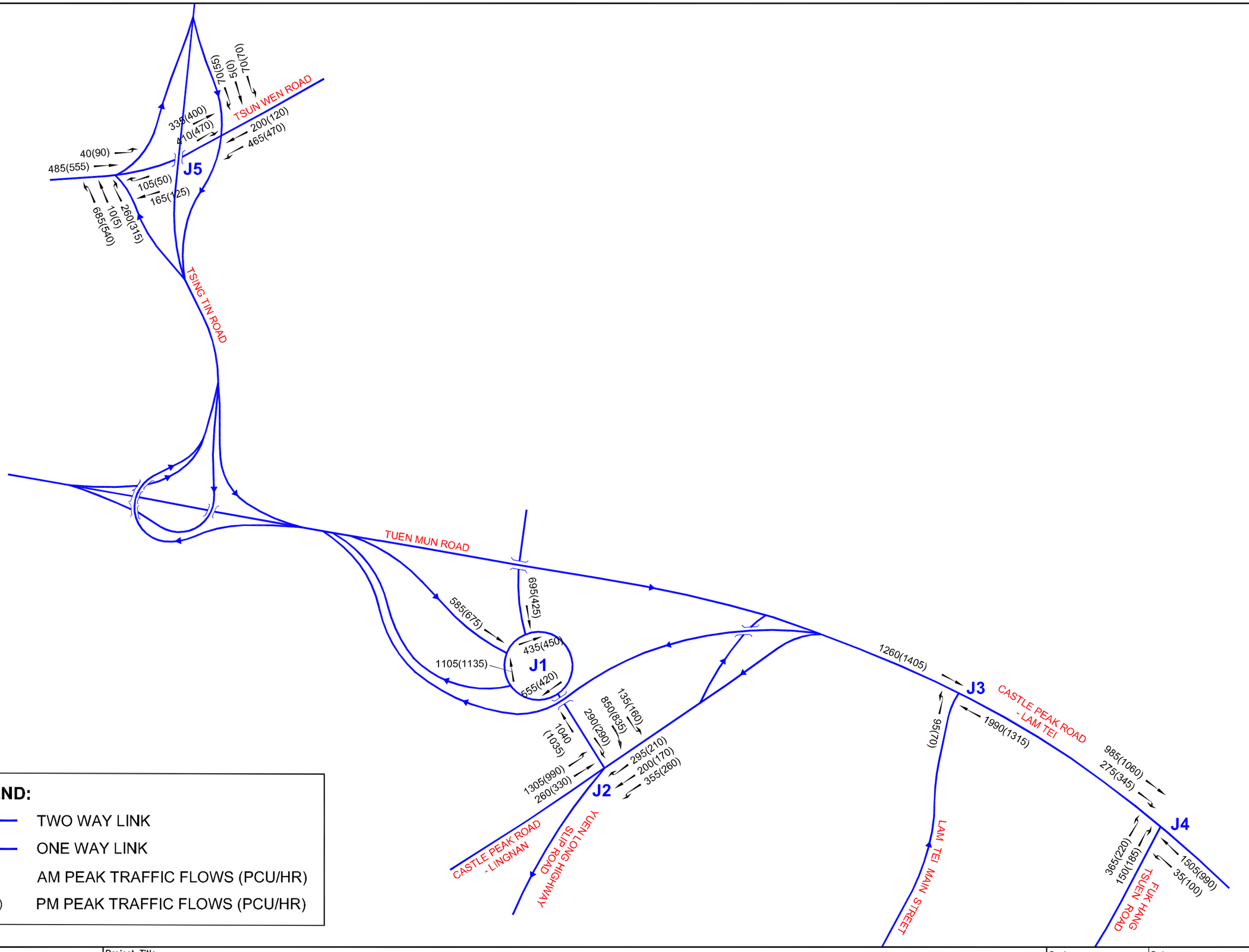

LEGEND:

———	TWO WAY LINK
———→	ONE WAY LINK
380	AM PEAK TRAFFIC FLOWS (PCU/HR)
(400)	PM PEAK TRAFFIC FLOWS (PCU/HR)

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Traffic & Transportation Consultants
Ho Wang SPB Limited

Project Title	SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: N. T. S.	Date: NOV 2025	Figure No.: 3.4
Figure Title	2025 OBSERVED TRAFFIC FLOWS	Project No.: J977.4	CAD Ref.: J977.4/TIA1/F34/2025-11-05	Rev.: –

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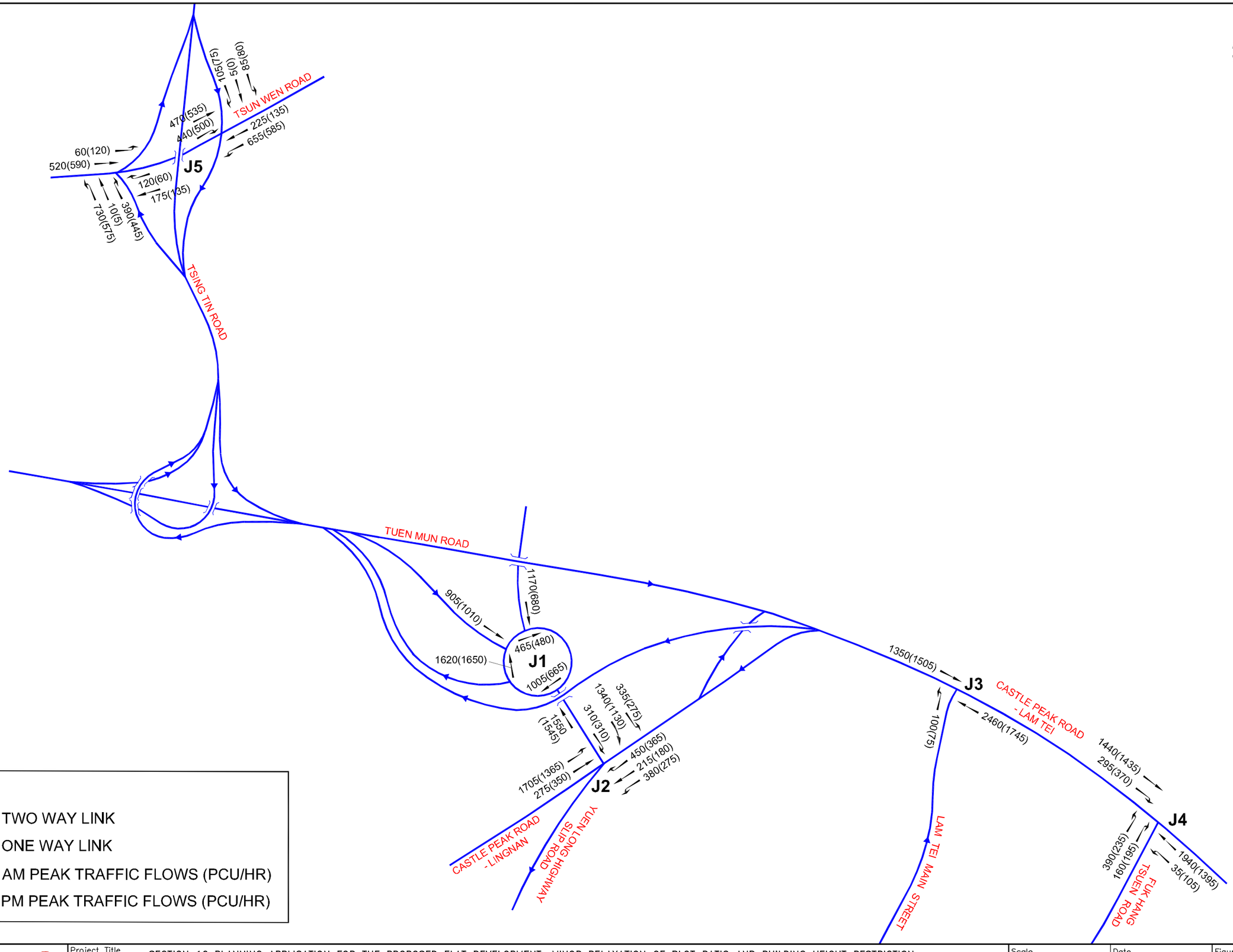

LEGEND:

	TWO WAY LINK
	ONE WAY LINK
380	AM PEAK TRAFFIC FLOWS (PCU/HR)
(400)	PM PEAK TRAFFIC FLOWS (PCU/HR)

HWSPB 何黃 Traffic & Transportation Consultants Ho Wang SPB Limited

Project Title	SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: N. T. S.	Date: JAN 2026 / Figure No.: 4.1
Figure Title	2033 REFERENCE TRAFFIC FLOWS	Project No.: J977.4	CAD Ref.: J977.4/TIA1/F41A/2026-01-16 / Rev.: A

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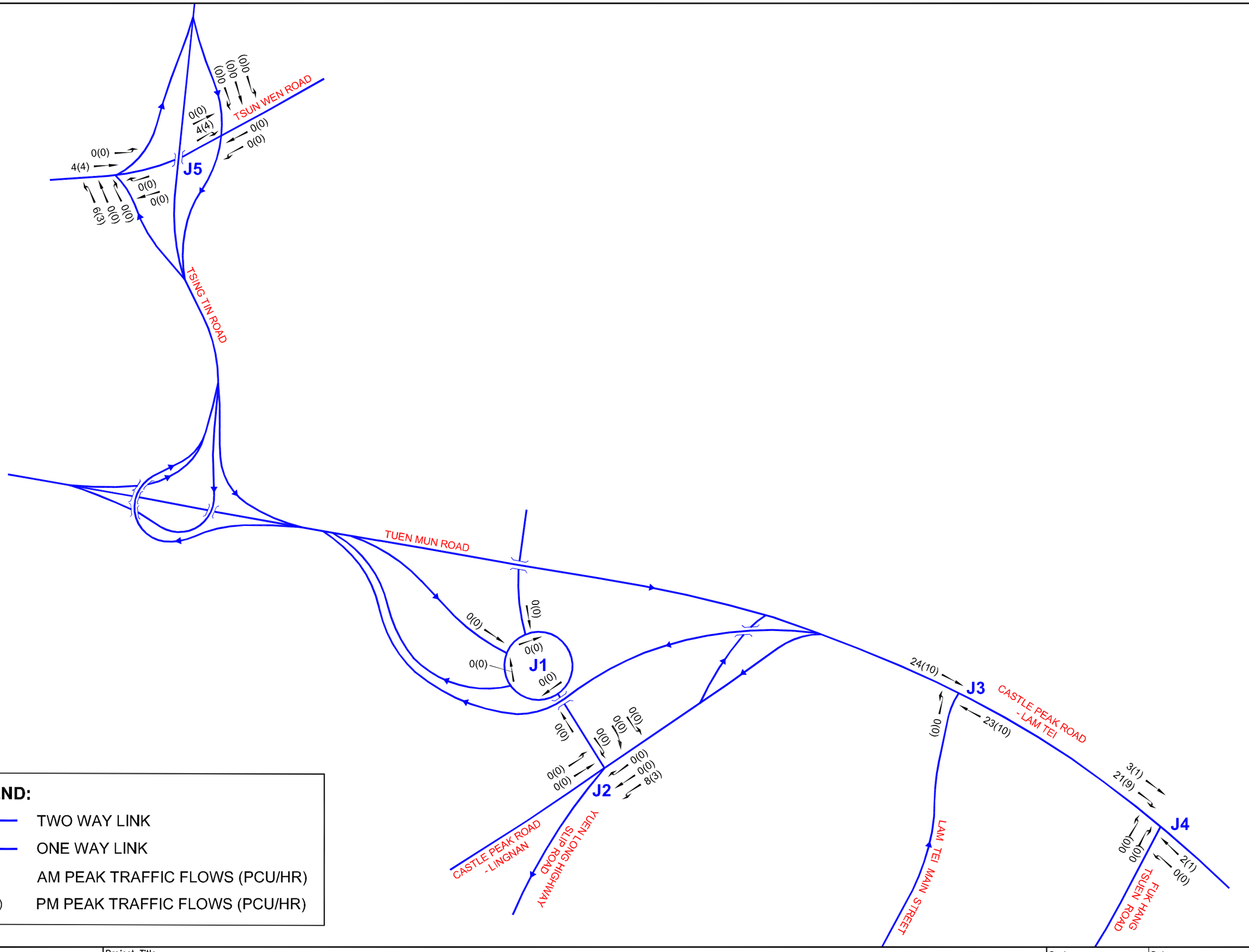

HWSPB 何黃 Traffic & Transportation Consultants Ho Wang SPB Limited

Project Title: SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: N. T. S.	Date: NOV 2025	Figure No.: 5.1
Figure Title: DISTRIBUTION OF DEVELOPMENT TRAFFIC FLOWS	Project No.: J977.4	CAD Ref.: J977.4/TIA1/F51/2025-11-05	Rev.: –

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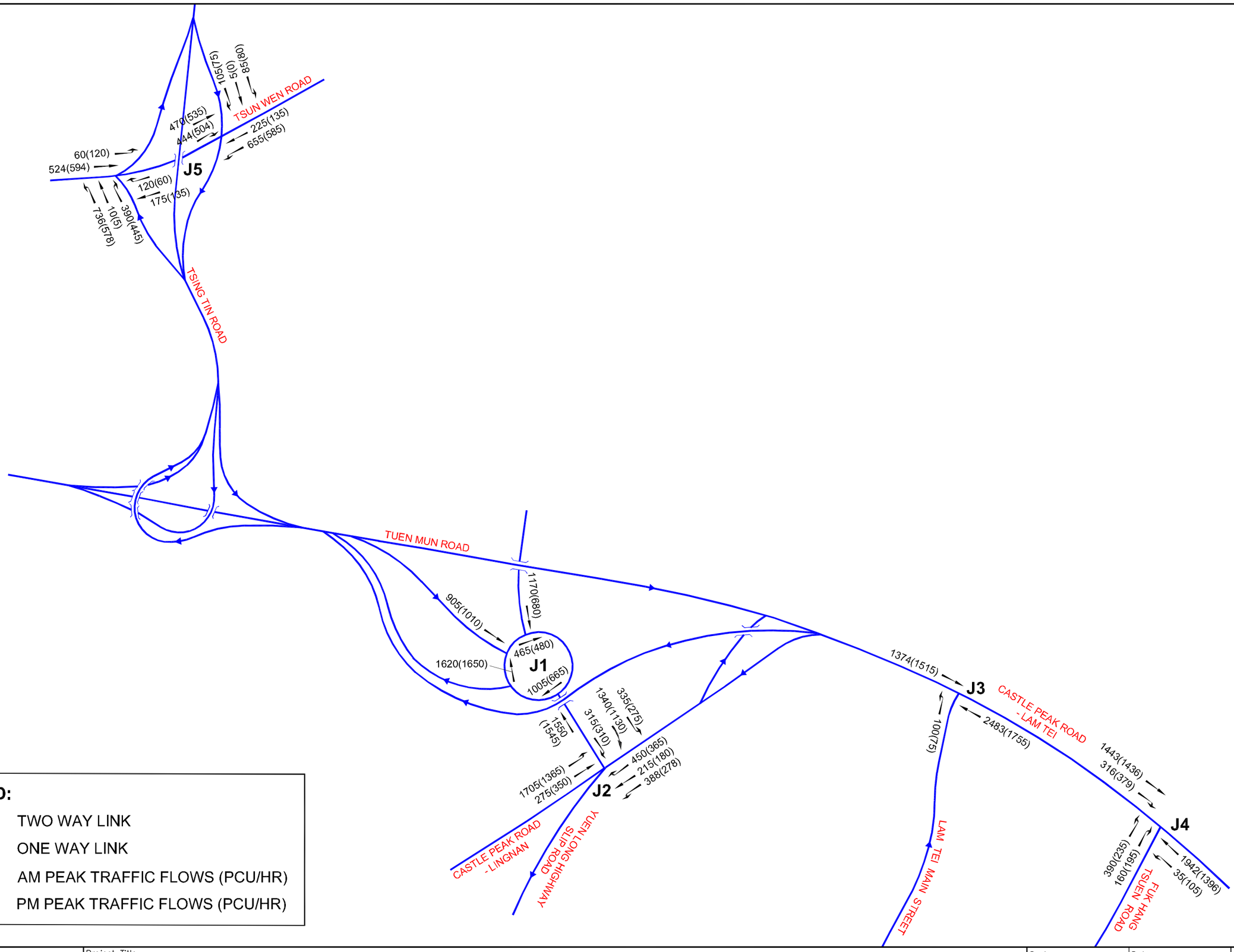

HWSPB 何黃 Traffic & Transportation Consultants Ho Wang SPB Limited

Project Title: SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: N. T. S.	Date: JAN 2026	Figure No.: 5.2
Figure Title: 2033 DESIGN TRAFFIC FLOWS	Project No.: J977.4	CAD Ref.: J977.4/TIA1/F52A/2026-01-16	Rev.: A

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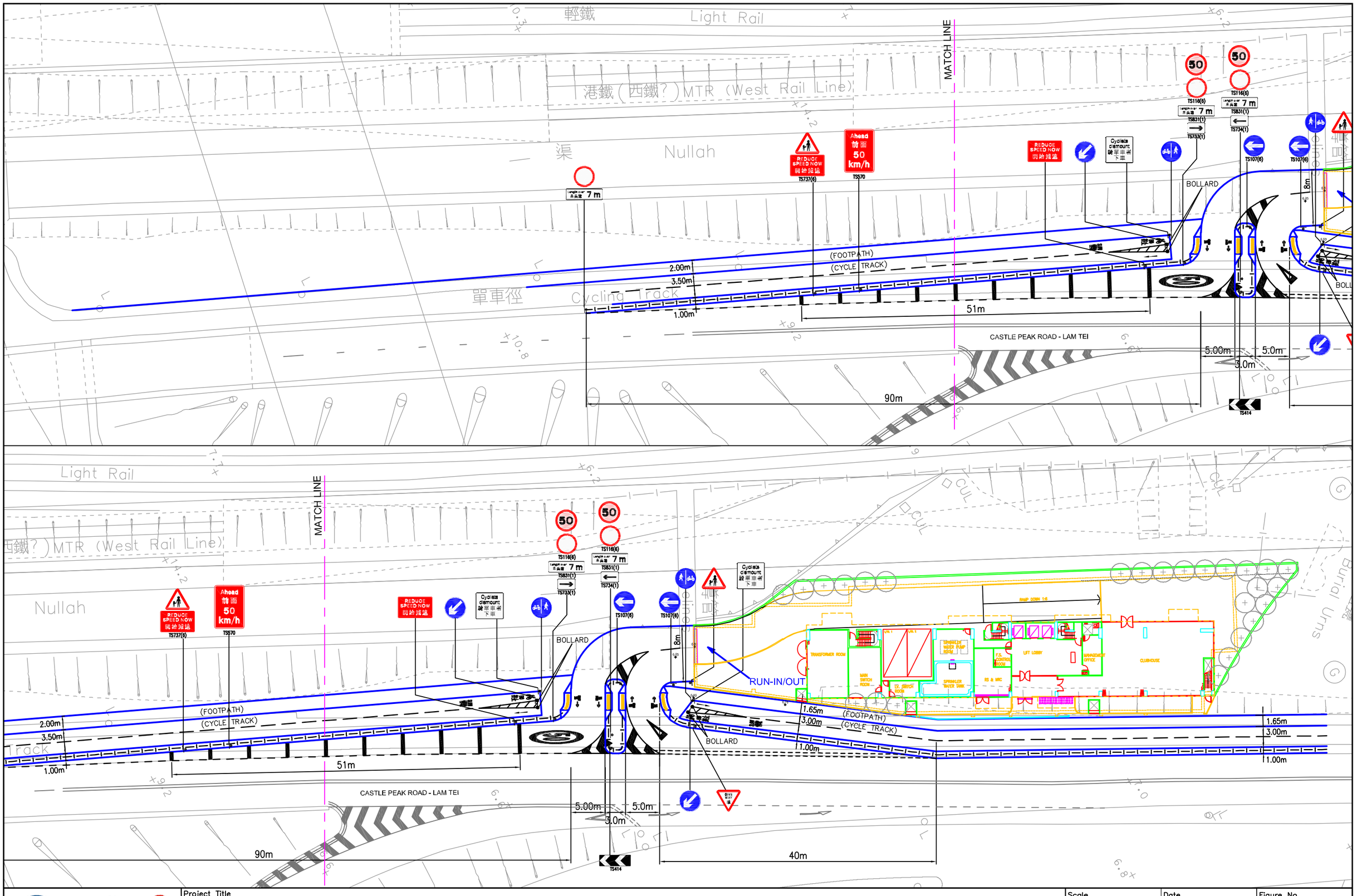
Appendix A
Previous Approved Run-in/out Arrangement



HWSPB 何黃 Traffic & Transportation Consultants Ho Wang SPB Limited	Project Title: PROPOSED RESIDENTIAL DEVELOPMENT AT LOT 531RP, 532SDRP & 532RP IN DD 130 & ADJOINING GOVERNMENT LAND, LAM TEI TUEN MUM	Scale: 1 : 500	Date: DEC 2021	Figure No.: 2.1
	Figure Title: PROPOSED RUN-IN/OUT ARRANGEMENT	Project No.: J977.3	CAD Ref.: J977.3/TIA1/F21A/2022-07-28	Rev.: A

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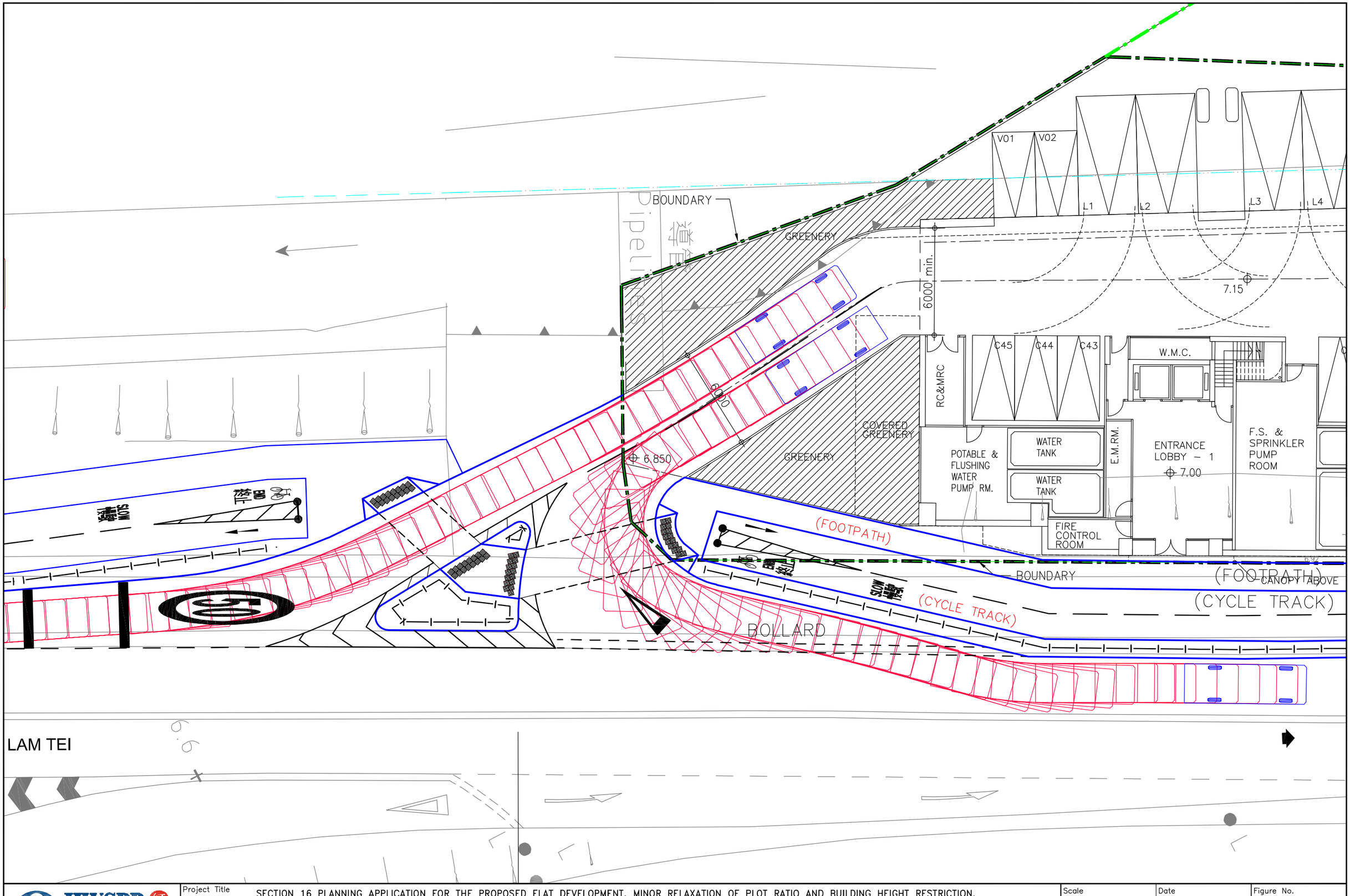
Appendix B
Swept Path Analysis



HWSPB 何黃 Traffic & Transportation Consultants Ho Wang SPB Limited	Project Title: SECTION 16 PLANNING APPLICATION FOR THE PROPOSED FLAT DEVELOPMENT, MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION, LOTS 531 RP, 532 S.D. RP AND 532 RP IN D.D. 130 AND ADJOINING GOVERNMENT LAND, LAM TEI, TUEN MUN, NEW TERRITORIES	Scale: 1 : 200	Date: JAN 2026	Figure No.: SP1
	Figure Title: SWEPT PATH ANALYSIS OF 7m VEHICLE TURNING INTO/OUT OF THE SUBJECT SITE	Project No.: J977.4	CAD Ref.: J977.4/TIA1/F21A/2026-01-16	Rev.: A

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Appendix C
Junction Calculation Sheets

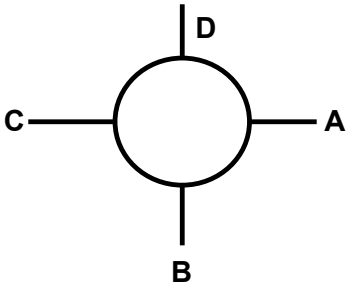
Simplified Roundabout Capacity Calculation

Ho Wang SPB Limited
Traffic & Transportation Consultants

Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun				
Junction:	Lam Tei Interchange			Ref. No.:	J1
Scheme:	2025 Observed			Ref. No.:	
Year:	2025	Job No.:	J977.4	Rev.:	-

AM PM

ARM A: Slip Road to Tuen Mun Road (Exit only)
ARM B: Slip Road from Tuen Mun Road
ARM C: Tsing Lun Road
ARM D: Slip Road from Castle Peak Road



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	7.00	10.00	10	50	70	30	0.48
B	7.00	7.50	5	30	70	45	0.16
C	7.00	7.50	5	60	70	30	0.16
D	7.00	10.00	10	60	70	30	0.48

AM FLOWS

from \ to	A	B	C	D	Circ	Entry
A	0	0	0	0	0	0
B	0	0	0	0	1105	585
C	0	0	0	0	435	695
D	0	0	0	0	555	1040

PM FLOWS

from \ to	A	B	C	D	Circ	Entry
A	0	0	0	0	0	0
B	0	0	0	0	1135	675
C	0	0	0	0	450	425
D	0	0	0	0	420	1035

CALCULATIONS

ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	1.03	8.53	2.72	2585	1.13	0.64	2661	2661	0.00	0.00
B	0.96	7.38	2.72	2236	1.13	0.59	1527	1510	0.38	0.45
C	1.03	7.38	2.72	2236	1.13	0.59	2044	2035	0.34	0.21
D	1.03	8.53	2.72	2585	1.13	0.64	2300	2389	0.45	0.43

Critical Arm: **D** **B**
RFC: **0.45** **0.45**
AM **PM**

- In accordance with TPDM V2.4

Calculated by:	SL	Date:	Jan-26	Checked by:	TA

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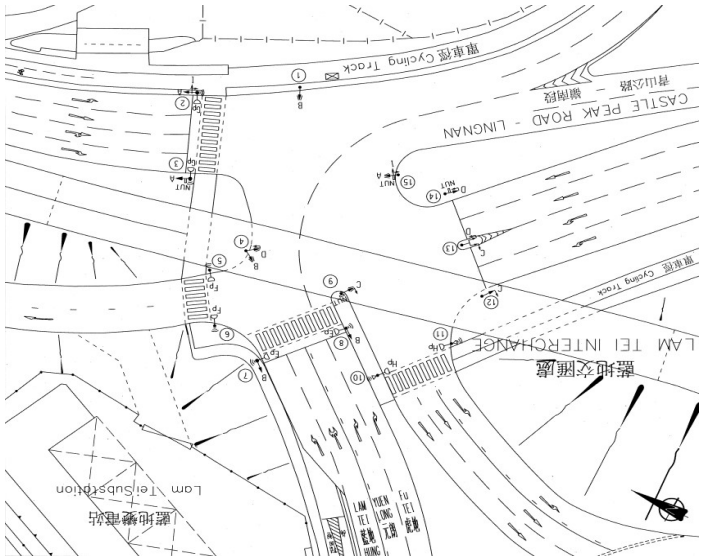
Traffic Signal Junction Calculation Sheet

Ho Wang SPB Limited
Traffic & Transportation Consultants

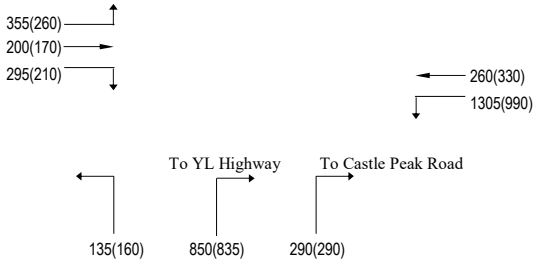
Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Castle Peak Road / Tsing Lun Road	Ref. No.:	J2
Scheme:	2025 Observed	Ref. No.:	

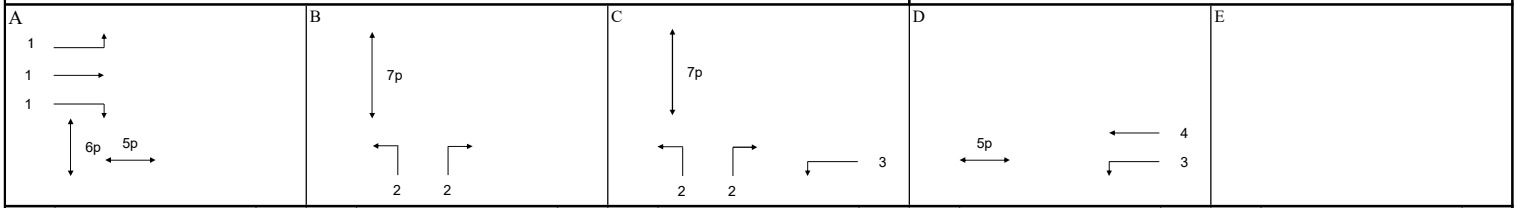


Year:	2025	Job No.:	J977.4	Rev.:	-

Peak Hour Traffic Flows (pcu/hr)

AM
(PM)





4		3	3						3	4		3			
3	12	0	3						3	4		3			

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
9	AD	1	3.50	1		80				100	1930	355	0.184		260	0.135	
9	AD	1	3.50								2105	200	0.095		170	0.081	
1	A	1	3.50				25			100	1985	148	0.075	1	106	0.053	1
1	A	1	3.50				20				1960	147	0.075		104	0.053	
2 (flare)	BC	1	3.50	1		15						65			65		
2	BC	1	3.50			20	25			100	1980	459	0.232	1	464	0.234	1
2	BC	1	3.50				25				1985	460	0.232		465	0.234	
2	BC	1	3.50				20				2105	290	0.138		290	0.138	
4	D	2	3.00								4110	260	0.063	1	330	0.080	1
3	CD	2	3.00	1		15				100	3610	1305	0.361		990	0.274	

Critical Ped. Phase	Stage	Width Across	Min. GM		Min. FGM	Lost Time	Note	Crit.	Note	Crit.
5p	AD		6		12	18				
6p	A		5		7	12				
7p	BC		6		11	17				

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

Check Critical Phase	1,2,4	6p,2,4		1,2,4	6p,2,4	
Sum of y values, Y	0.370	0.295		0.368	0.315	
Lost time, L	17	26		17	26	
Cycle Time, C	110	110		110	110	
Practical Y, Y_{pr}	0.761	0.687		0.761	0.687	
Reserve Capacity, R.C. (%)	106%	133%		107%	118%	

Calculated by:	JL	Date:	Jan-2026	Checked by:	TA

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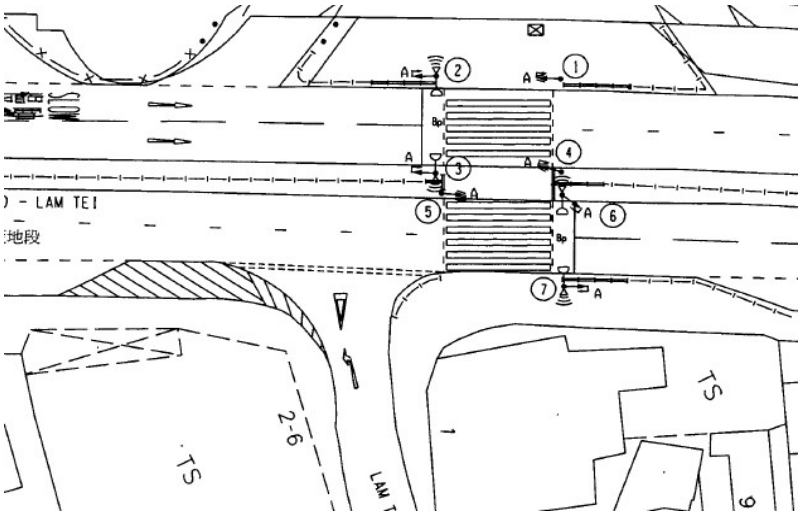
Traffic Signal Junction Calculation Sheet

Ho Wang SPB Limited
Traffic & Transportation Consultants

Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Castle Peak Road- Lam Tei/ Lam Tei Main Street	Ref. No.:	J3
Scheme:	2025 Observed	Ref. No.:	



Year:	2025	Job No.:	J977.4	Rev.:	-

Peak Hour Traffic Flows (pcu/hr)

AM
(PM)

1260(1405) →

← 1990(1315)

A	B	C	D	E
1 →	2p ↕			
← 1				

4		3	2	16		0												

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
1A ⇉	A	2	3.50	1							4070	1260	0.310		1405	0.345	1
1B ⇇	A	2	3.50	1							4070	1990	0.489	1	1315	0.323	

Critical Ped. Phase	Stage	Width Across	Min. GM	Min. FGM	Lost Time	Note	Crit.	Note	Crit.
2p	B		9	7	16		1		1

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

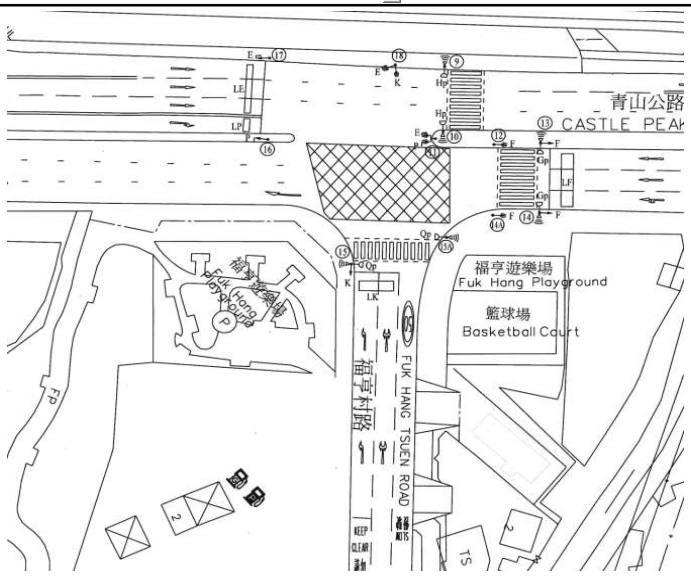
Check Critical Phase	1,2p			1,2p	
Sum of y values, Y	0.489			0.345	
Lost time, L	24			24	
Cycle Time, C	108			108	
Practical Y, Y_{pr}	0.700			0.700	
Reserve Capacity, R.C. (%)	43%			103%	

Calculated by:	SL	Date:	Jan-2026	Checked by:	TA

Traffic Signal Junction Calculation Sheet

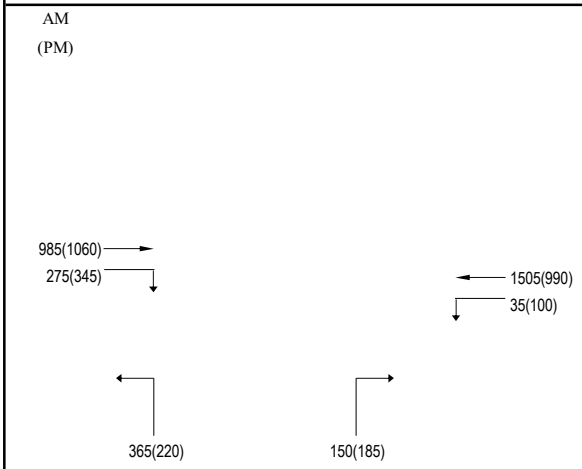
Ho Wang SPB Limited
Traffic & Transportation Consultants

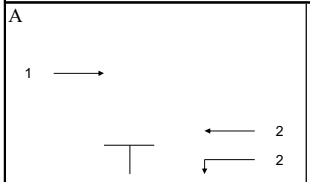
Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Castle Peak Road- Lam Tei/Fuk Hang Tsuen Road	Ref. No.:	J4
Scheme:	2025 Observed	Ref. No.:	

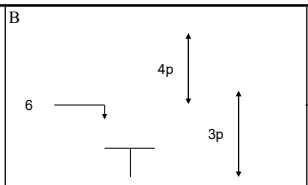


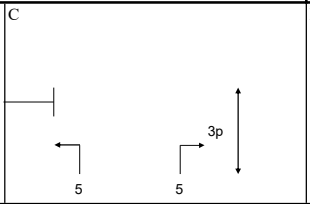
Year:	2025	Job No.:	J977.4	Rev.:	-

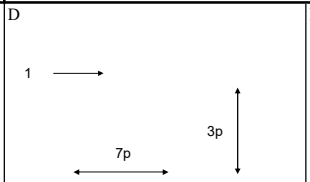
Peak Hour Traffic Flows (pcu/hr)











E

2		3	4		3	4		3	2	18	0			
4		6	8		6	8		6	2	18	0			
4		6	10	40	0	8		6	2	18	0			

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
1	AD	3	3.50	1							6175	985	0.160		1060	0.172	
2	A	2	3.50								4210	1052	0.250		750	0.178	1
2	A	1	3.50	1		15				7 / 29	1950/1910	488	0.250	1	340	0.178	
6	B	1	3.50				25			100	1985	275	0.139	1	345	0.174	1
5	C	1	3.50	1		15					1785	246	0.138	1	192	0.108	
5	C	1	3.50			15	25			100	1955/1975	269	0.138		213	0.108	1

Critical Ped. Phase	Stage	Width Across	Min. GM		Min. FGM	Lost Time	Note	Crit.	Note	Crit.
3p	BCD		10		10	20				
4p	B		10		10	20				
7p	D		6		12	18		1		1

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

Check Critical Phase	2,6,5,7p	2,6,5,7p	2,4p,5,7p	2,6,5,7p	2,6,5,7p	2,4p,5,7p
Sum of y values, Y	0.526	0.526	0.388	0.460	0.460	0.286
Lost time, L	36	55	92	36	55	92
Cycle Time, C	150	300	300	150	300	300
Practical Y, Y_{pr}	0.684	0.735	0.624	0.684	0.735	0.624
Reserve Capacity, R.C. (%)	30%	40%	61%	49%	60%	118%

Calculated by:	SL	Date:	Jan-2026	Checked by:	TA

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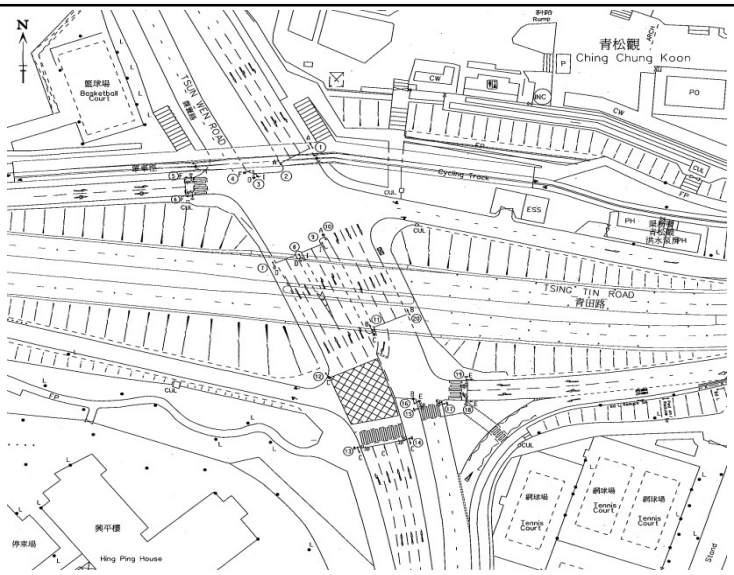
Traffic Signal Junction Calculation Sheet

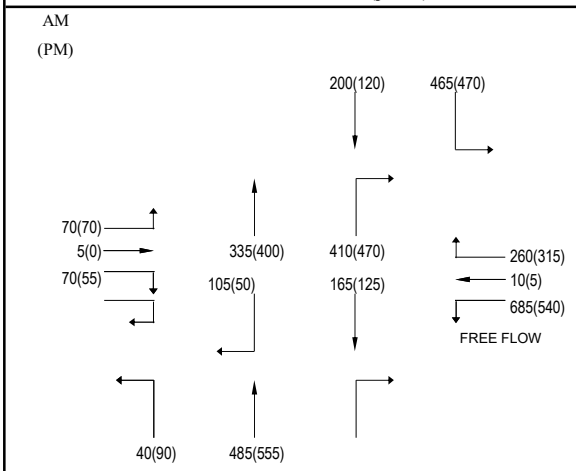
Ho Wang SPB Limited
Traffic & Transportation Consultants

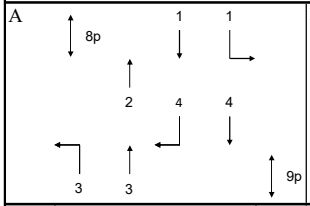
Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Tsing Tin Road / Tsun Wen Road	Ref. No.:	J5
Scheme:	2025 Observed	Ref. No.:	

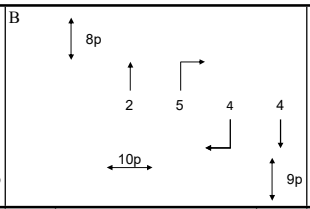


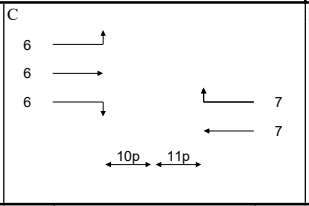
Year:	2025	Job No.:	J977.4	Rev.:	-

Peak Hour Traffic Flows (pcu/hr)









D

E

4		3	2		3	5		3											
4		3	2		3	5	12												

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
1A	A	1	3.30								2085	200	0.096		120	0.058	
1B	A	1	3.30			25				192	1870	242	0.129	1	245	0.131	1
1C	A	1	3.30	1		20					1810	223	0.123		225	0.124	
2A	AB	2	3.30	1							4030	335	0.083		400	0.099	
5A	B	2	3.30				35			100	4000	410	0.103	1	470	0.118	1
6A	C	1	3.00	1		10				100	1665	70	0.042		70	0.042	
6B	C	1	3.00				35			93 / 100	1975/1970	75	0.038		55	0.028	
3A	A	1	3.50	1		20				100	1830	40	0.022		90	0.049	
3B	A	3	3.50								6315	485	0.077		555	0.088	
4A	AB	1	3.30		1		15				1685	83	0.050		50	0.030	
4B	AB	1	3.30		1		20			116 / 82	1705/1750	90	0.053		61	0.035	
4C	AB	1	3.30	1							1945	96	0.050		64	0.033	
7A	C	1	3.30				15				1895	133	0.070		158	0.083	
7B	C	1	3.30				20			190 / 194	1825/1820	137	0.075	1	162	0.089	1

Critical Ped. Phase	Stage	Width Across	Min. GM		Min. FGM	Lost Time	Note	Crit.	Note	Crit.
8P	AB	5.8	6	6	6	12	1 SEC DELAY		1 SEC DELAY	
9P	AB	6.6	6	6	6	12	1 SEC DELAY		1 SEC DELAY	
10P	BC	15	12	12	12	24	2 SEC DELAY		2 SEC DELAY	
11P	C	7.4	6	6	6	12	5 SEC DELAY		5 SEC DELAY	

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

Check Critical Phase	1,5,7	1,5,11P		1,5,7	1,5,11P	
Sum of y values, Y	0.307	0.232		0.337	0.248	
Lost time, L	17	27.1		17	27.1	
Cycle Time, C	86	86		86	86	
Practical Y, Y_{pr}	0.722	0.616		0.722	0.616	
Reserve Capacity, R.C. (%)	135%	166%		114%	148%	

Calculated by:	SL	Date:	Jan-2026	Checked by:	TA

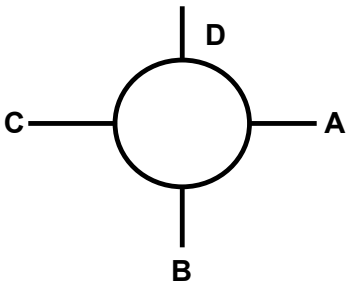
Simplified Roundabout Capacity Calculation

Ho Wang SPB Limited
Traffic & Transportation Consultants

Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun				
Junction:	Lam Tei Interchange			Ref. No.:	J1R
Scheme:	2033 Reference			Ref. No.:	
Year:	2033	Job No.:	J977.4	Rev.:	-

AM PM

ARM A: Slip Road to Tuen Mun Road (Exit only)
ARM B: Slip Road from Tuen Mun Road
ARM C: Tsing Lun Road
ARM D: Slip Road from Castle Peak Road



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	7.00	10.00	10	50	70	30	0.48
B	7.00	7.50	5	30	70	45	0.16
C	7.00	7.50	5	60	70	30	0.16
D	7.00	10.00	15	60	70	30	0.32

AM FLOWS

from \ to	A	B	C	D	Circ	Entry
A	0	0	0	0	0	0
B	0	0	0	0	1615	875
C	0	0	0	0	465	1110
D	0	0	0	0	1005	1550

PM FLOWS

from \ to	A	B	C	D	Circ	Entry
A	0	0	0	0	0	0
B	0	0	0	0	1650	1010
C	0	0	0	0	480	680
D	0	0	0	0	665	1545

CALCULATIONS

ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	1.03	8.53	2.72	2585	1.13	0.64	2661	2661	0.00	0.00
B	0.96	7.38	2.72	2236	1.13	0.59	1237	1217	0.71	0.83
C	1.03	7.38	2.72	2236	1.13	0.59	2025	2016	0.55	0.34
D	1.03	8.83	2.72	2675	1.13	0.66	2079	2310	0.75	0.67

Critical Arm: **D** **B**
RFC: **0.75** **0.83**
AM **PM**

- In accordance with TPDM V2.4

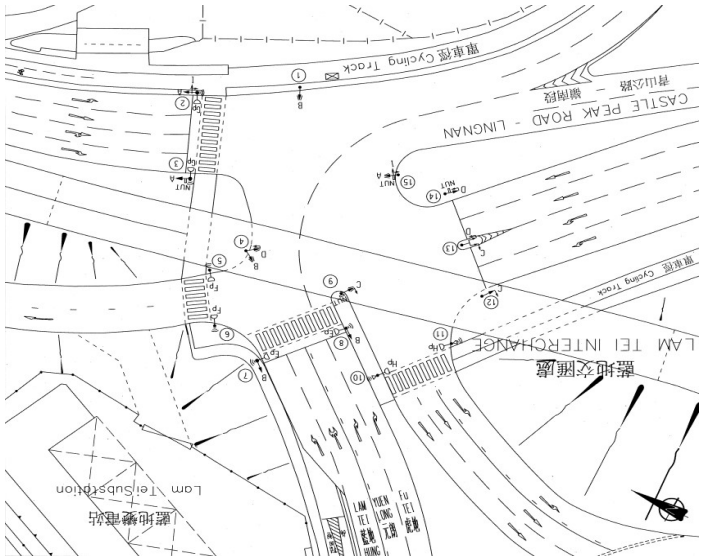
Calculated by:	SL	Date:	Jan-26	Checked by:	TA

Y:\Job\J977.4\04-Working\Sig_Cal\[J977.4-Sig_Cal-TIA1-I1.xls]J1R

Traffic Signal Junction Calculation Sheet

Ho Wang SPB Limited
Traffic & Transportation Consultants

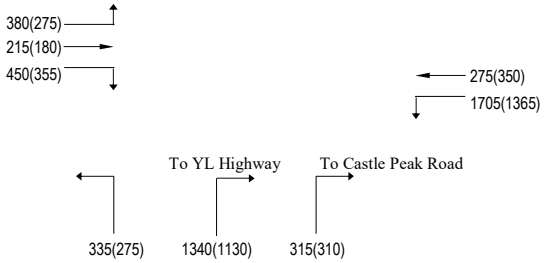
Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Castle Peak Road / Tsing Lun Road	Ref. No.:	J2R
Scheme:	2033 Reference	Ref. No.:	

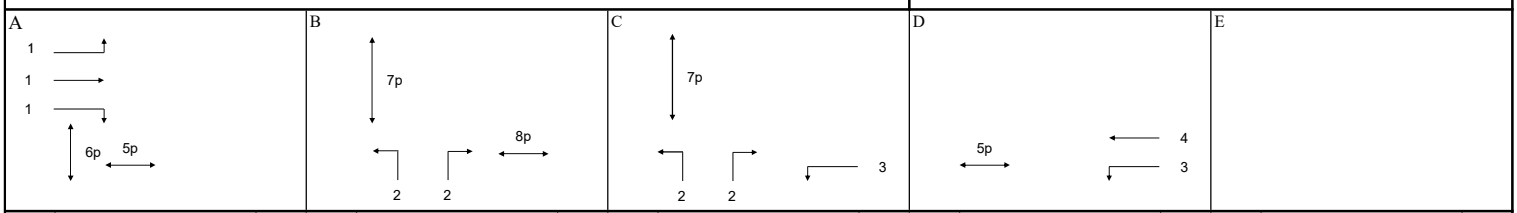


Year:	2033	Job No.:	J977.4	Rev.:	-

Peak Hour Traffic Flows (pcu/hr)

AM
(PM)





4		3	3						3	4		3			
3	12	0	3						3	4		3			

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
9	AD	1	3.50	1		80				100	1930	380	0.197		275	0.142	
9	AD	1	3.50								2105	215	0.102		180	0.086	
1	A	1	3.50				25			100	1985	226	0.114	1	179	0.090	1
1	A	1	3.50				20				1960	224	0.114		176	0.090	
2 (flare)	BC	1	3.50	1		15						65			65		
2	BC	1	3.50			20	25			100	1975	803	0.407	1	668	0.338	1
2	BC	1	3.50				25				1985	807	0.406		671	0.338	
2	BC	1	3.50				20				2105	315	0.150		310	0.147	
4	D	2	3.00								4110	275	0.067	1	350	0.085	1
3	CD	2	3.00	1		15				100	3610	1705	0.472		1365	0.378	

Critical Ped. Phase	Stage	Width Across	Min. GM	Min. FGM	Lost Time	Note	Crit.	Note	Crit.
5p	AD		6	12	18				
6p	A		5	7	12				
7p	BC		6	11	17				

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

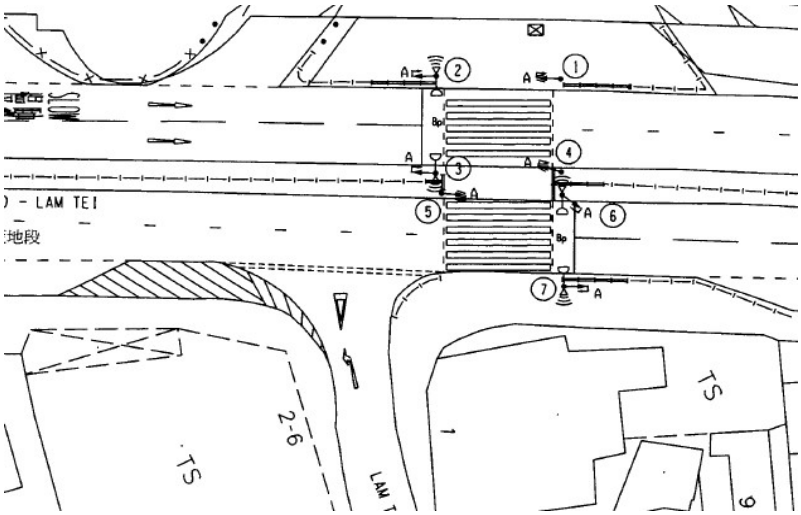
Check Critical Phase	1,2,4	6p,2,4		1,2,4	6p,2,4	
Sum of y values, Y	0.588	0.474		0.514	0.424	
Lost time, L	17	26		17	26	
Cycle Time, C	110	110		110	110	
Practical Y, Y_{pr}	0.761	0.687		0.761	0.687	
Reserve Capacity, R.C. (%)	29%	45%		48%	62%	

Calculated by:	JL	Date:	Jan-2026	Checked by:	TA

Traffic Signal Junction Calculation Sheet

Ho Wang SPB Limited
Traffic & Transportation Consultants

Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Castle Peak Road- Lam Tei/ Lam Tei Main Street	Ref. No.:	J3R
Scheme:	2033 Reference	Ref. No.:	



Year:	2033	Job No.:	J977.4	Rev.:	-

Peak Hour Traffic Flows (pcu/hr)

AM
(PM)

1350(1505) →

← 2460(1745)

A	B	C	D	E
1 →	2p ↕			
← 1				

4		3	2	16		0												

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
1A ⇉	A	2	3.50	1							4070	1350	0.332		1505	0.370	
1B ⇇	A	2	3.50	1							4070	2460	0.604	1	1745	0.429	1

Critical Ped. Phase	Stage	Width Across	Min. GM	Min. FGM	Lost Time	Note	Crit.	Note	Crit.
2p	B		9	7	16		1		1

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

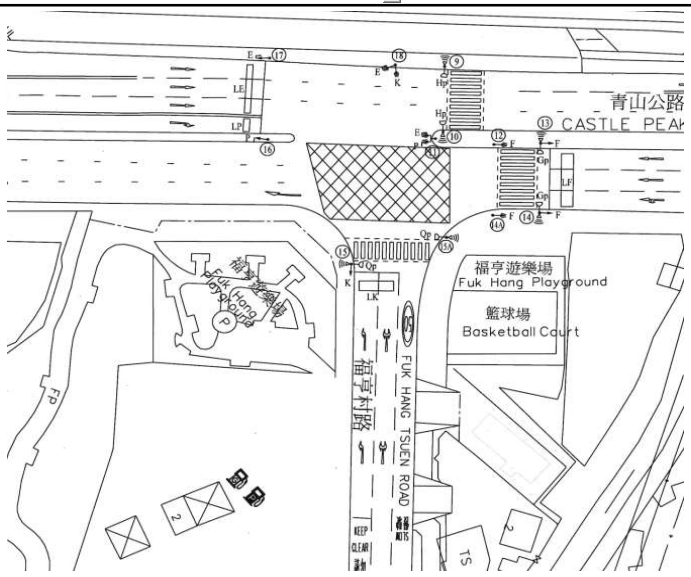
Check Critical Phase	1,2p			1,2p	
Sum of y values, Y	0.604			0.429	
Lost time, L	24			24	
Cycle Time, C	108			108	
Practical Y, Y_{pr}	0.700			0.700	
Reserve Capacity, R.C. (%)	16%			63%	

Calculated by:	SL	Date:	Jan-2026	Checked by:	TA

Traffic Signal Junction Calculation Sheet

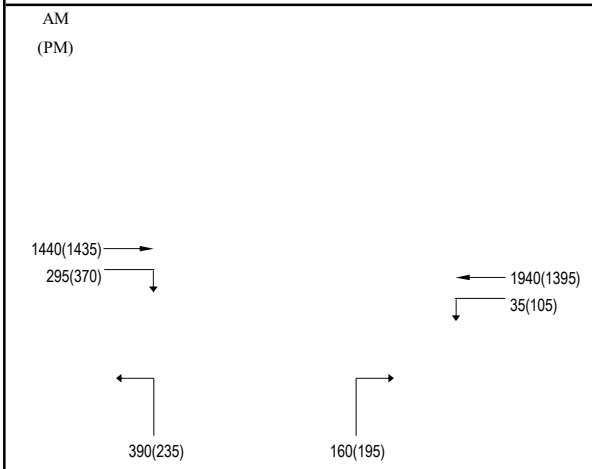
Ho Wang SPB Limited
Traffic & Transportation Consultants

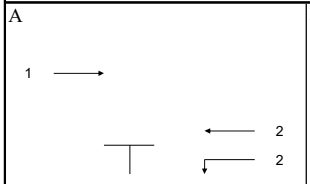
Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Castle Peak Road- Lam Tei/Fuk Hang Tsuen Road	Ref. No.:	J4R
Scheme:	2033 Reference	Ref. No.:	

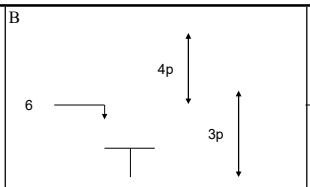


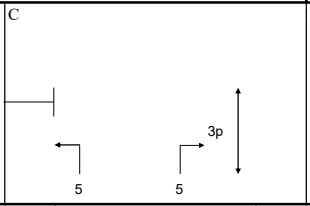
Year:	2033	Job No.:	J977.4	Rev.:	-

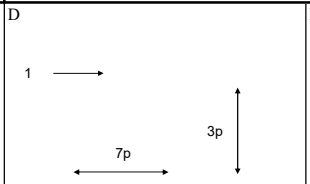
Peak Hour Traffic Flows (pcu/hr)











E

2		3	4		3	4		3	2	18	0			
4		6	8		6	8		6	2	18	0			
4		6	10	40	0	8		6	2	18	0			

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
1	AD	3	3.50	1							6175	1440	0.233		1435	0.232	
2	A	2	3.50								4210	1349	0.320	1	1030	0.245	
2	A	1	3.50	1		15				6 / 22	1955/1920	626	0.320		470	0.245	1
6	B	1	3.50				25			100	1985	295	0.149	1	370	0.186	1
5	C	1	3.50	1		15					1785	263	0.147	1	204	0.114	
5	C	1	3.50			15	25			100	1955/1975	287	0.147		226	0.114	1

Critical Ped. Phase	Stage	Width Across	Min. GM	Min. FGM	Lost Time	Note	Crit.	Note	Crit.
3p	BCD		10	10	20				
4p	B		10	10	20				
7p	D		6	12	18		1		1

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

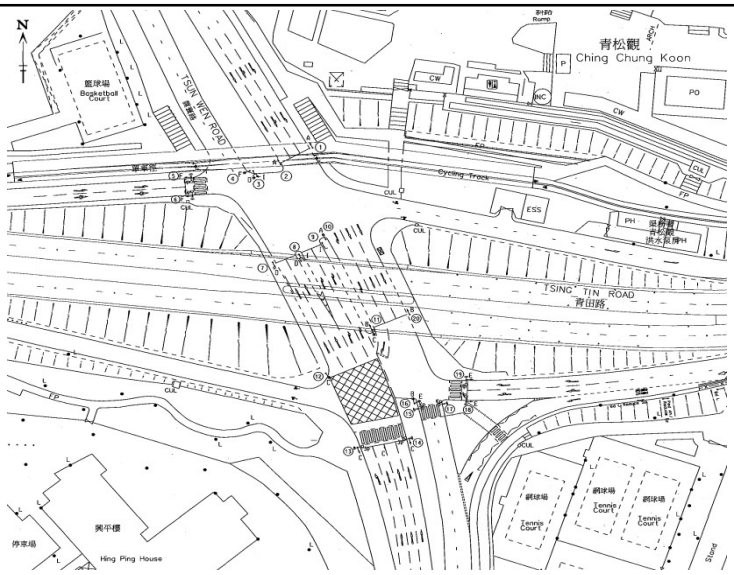
Check Critical Phase	2,6,5,7p	2,6,5,7p	2,4p,5,7p	2,6,5,7p	2,6,5,7p	2,4p,5,7p
Sum of y values, Y	0.616	0.616	0.468	0.546	0.546	0.359
Lost time, L	36	55	92	36	55	92
Cycle Time, C	150	300	300	150	300	300
Practical Y, Y_{pr}	0.684	0.735	0.624	0.684	0.735	0.624
Reserve Capacity, R.C. (%)	11%	19%	33%	25%	35%	74%

Calculated by:	SL	Date:	Jan-2026	Checked by:	TA

Traffic Signal Junction Calculation Sheet

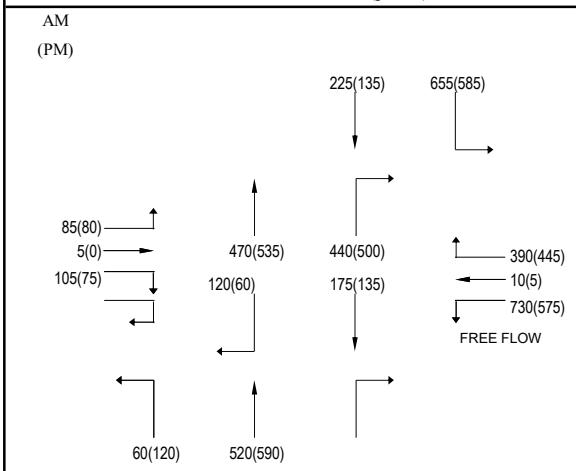
Ho Wang SPB Limited
Traffic & Transportation Consultants

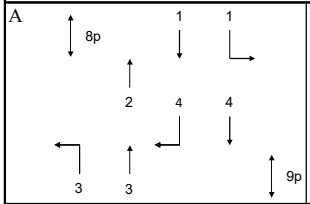
Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Tsing Tin Road / Tsun Wen Road	Ref. No.:	J5R
Scheme:	2033 Reference	Ref. No.:	

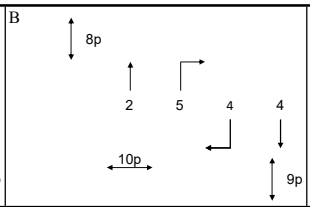


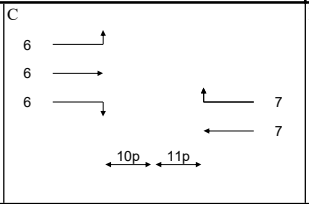
Year:	2033	Job No.:	J977.4	Rev.:	-

Peak Hour Traffic Flows (pcu/hr)









D

E

4		3	2		3	5		3												
4		3	2		3	5	12													

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
1A	A	1	3.30								2085	225	0.108		135	0.065	
1B	A	1	3.30			25				192	1870	341	0.182	1	305	0.163	1
1C	A	1	3.30	1		20					1810	314	0.173		280	0.155	
2A	AB	2	3.30	1							4030	470	0.117		535	0.133	
5A	B	2	3.30				35			100	4000	440	0.110	1	500	0.125	1
6A	C	1	3.00	1		10				100	1665	85	0.051		80	0.048	
6B	C	1	3.00				35			95 / 100	1975/1970	110	0.056		75	0.038	
3A	A	1	3.50	1		20				100	1830	60	0.033		120	0.066	
3B	A	3	3.50								6315	520	0.082		590	0.093	
4A	AB	1	3.30		1		15				1685	91	0.054		60	0.036	
4B	AB	1	3.30		1		20			122 / 91	1700/1735	98	0.058		66	0.038	
4C	AB	1	3.30	1							1945	105	0.054		69	0.036	
7A	C	1	3.30				15				1895	197	0.104		222	0.117	
7B	C	1	3.30				20			192 / 195	1820	203	0.111	1	228	0.125	1

Critical Ped. Phase	Stage	Width Across	Min. GM		Min. FGM	Lost Time	Note	Crit.	Note	Crit.
8P	AB	5.8	6	6	6	12	1 SEC DELAY		1 SEC DELAY	
9P	AB	6.6	6	6	6	12	1 SEC DELAY		1 SEC DELAY	
10P	BC	15	12	12	12	24	2 SEC DELAY		2 SEC DELAY	
11P	C	7.4	6	6	6	12	5 SEC DELAY		5 SEC DELAY	

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

	AM Peak			PM Peak		
Check Critical Phase	1,5,7	1,5,11P		1,5,7	1,5,11P	
Sum of y values, Y	0.404	0.292		0.413	0.288	
Lost time, L	17	27.1		17	27.1	
Cycle Time, C	86	86		86	86	
Practical Y, Y_{pr}	0.722	0.616		0.722	0.616	
Reserve Capacity, R.C. (%)	79%	111%		75%	114%	

Calculated by:	SL	Date:	Jan-2026	Checked by:	TA

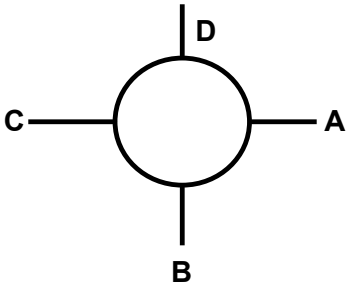
Simplified Roundabout Capacity Calculation

Ho Wang SPB Limited
Traffic & Transportation Consultants

Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun				
Junction:	Lam Tei Interchange			Ref. No.:	J1D
Scheme:	2033 Design			Ref. No.:	
Year:	2033	Job No.:	J977.4	Rev.:	-

AM PM

ARM A: Slip Road to Tuen Mun Road (Exit only)
ARM B: Slip Road from Tuen Mun Road
ARM C: Tsing Lun Road
ARM D: Slip Road from Castle Peak Road



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	7.00	10.00	10	50	70	30	0.48
B	7.00	7.50	5	30	70	45	0.16
C	7.00	7.50	5	60	70	30	0.16
D	7.00	10.00	15	60	70	30	0.32

AM FLOWS

from \ to	A	B	C	D	Circ	Entry
A	0	0	0	0	0	0
B	0	0	0	0	1615	875
C	0	0	0	0	465	1110
D	0	0	0	0	1005	1550

PM FLOWS

from \ to	A	B	C	D	Circ	Entry
A	0	0	0	0	0	0
B	0	0	0	0	1650	1010
C	0	0	0	0	480	680
D	0	0	0	0	665	1545

CALCULATIONS

ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	1.03	8.53	2.72	2585	1.13	0.64	2661	2661	0.00	0.00
B	0.96	7.38	2.72	2236	1.13	0.59	1237	1217	0.71	0.83
C	1.03	7.38	2.72	2236	1.13	0.59	2025	2016	0.55	0.34
D	1.03	8.83	2.72	2675	1.13	0.66	2079	2310	0.75	0.67

Critical Arm: **D** **B**
RFC: **0.75** **0.83**
AM **PM**

- In accordance with TPDM V2.4

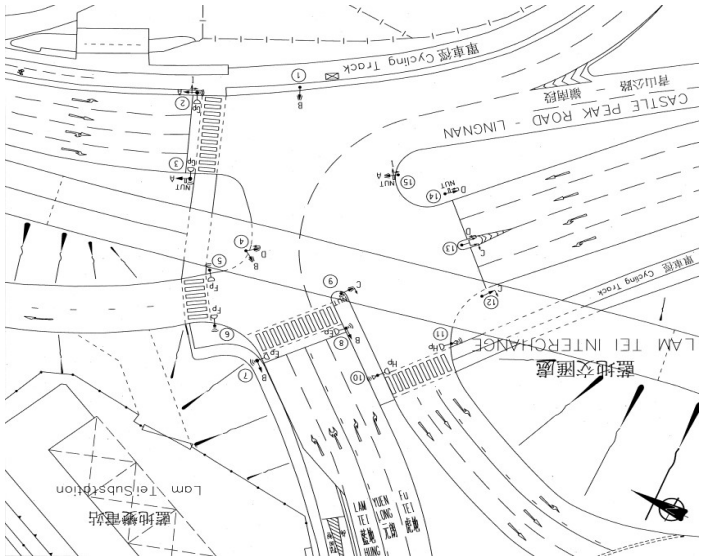
Calculated by:	SL	Date:	Jan-26	Checked by:	TA

Y:\Job\J977.4\04-Working\Sig_Cal\[J977.4-Sig_Cal-TIA1-I1.xls]J1D

Traffic Signal Junction Calculation Sheet

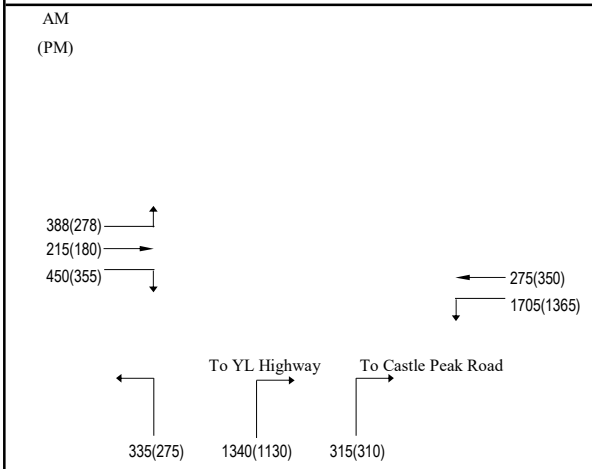
Ho Wang SPB Limited
Traffic & Transportation Consultants

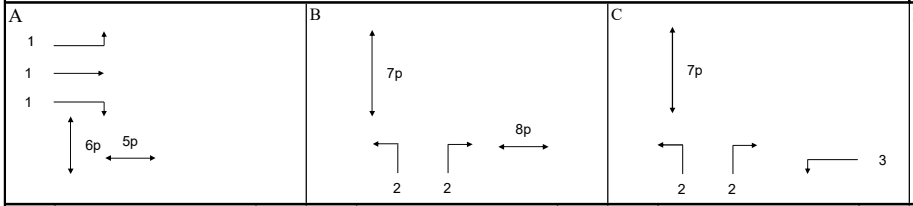
Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Castle Peak Road / Tsing Lun Road	Ref. No.:	J2D
Scheme:	2033 Design	Ref. No.:	



Year:	2033	Job No.:	J977.4	Rev.:	-

Peak Hour Traffic Flows (pcu/hr)





4		3	3						3	4		3			
3	12	0	3						3	4		3			

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
9	AD	1	3.50	1		80				100	1930	388	0.201		278	0.144	
9	AD	1	3.50								2105	215	0.102		180	0.086	
1	A	1	3.50				25			100	1985	226	0.114	1	179	0.090	1
1	A	1	3.50				20				1960	224	0.114		176	0.090	
2 (flare)	BC	1	3.50	1		15						65			65		
2	BC	1	3.50			20	25			100	1975	803	0.407	1	668	0.338	1
2	BC	1	3.50				25				1985	807	0.406		671	0.338	
2	BC	1	3.50				20				2105	315	0.150		310	0.147	
4	D	2	3.00								4110	275	0.067	1	350	0.085	1
3	CD	2	3.00	1		15				100	3610	1705	0.472		1365	0.378	

Critical Ped. Phase	Stage	Width Across	Min. GM	Min. FGM	Lost Time	Note	Crit.	Note	Crit.
5p	AD		6	12	18				
6p	A		5	7	12				
7p	BC		6	11	17				

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

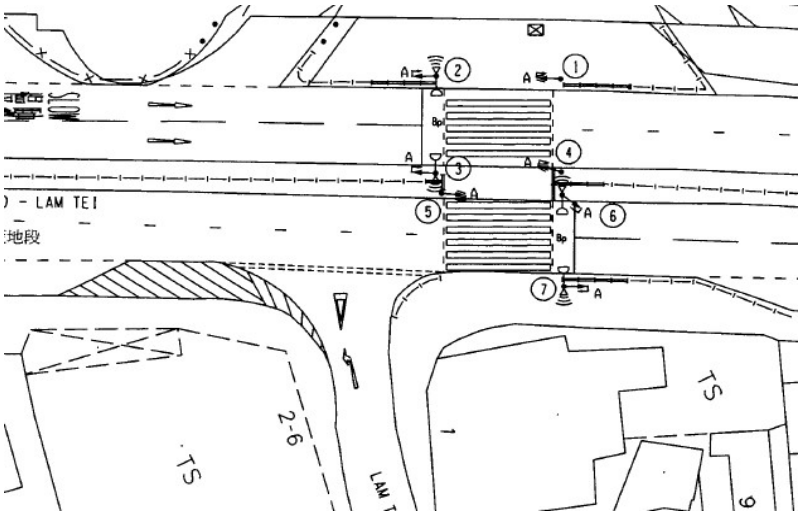
	AM Peak			PM Peak		
Check Critical Phase	1,2,4	6p,2,4		1,2,4	6p,2,4	
Sum of y values, Y	0.588	0.474		0.514	0.424	
Lost time, L	17	26		17	26	
Cycle Time, C	110	110		110	110	
Practical Y, Y_{pr}	0.761	0.687		0.761	0.687	
Reserve Capacity, R.C. (%)	29%	45%		48%	62%	

Calculated by:	JL	Date:	Jan-2026	Checked by:	TA

Traffic Signal Junction Calculation Sheet

Ho Wang SPB Limited
Traffic & Transportation Consultants

Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Castle Peak Road- Lam Tei/ Lam Tei Main Street	Ref. No.:	J3D
Scheme:	2033 Design	Ref. No.:	



Year:	2033	Job No.:	J977.4	Rev.:	-

Peak Hour Traffic Flows (pcu/hr)

AM
(PM)

1374(1515) →

← 2483(1755)

A	B	C	D	E
1 →	2p ↕			
← 1				

4		3	2	16		0												

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
1A ⇉	A	2	3.50	1							4070	1374	0.338		1515	0.372	
1B ⇇	A	2	3.50	1							4070	2483	0.610	1	1755	0.431	1

Critical Ped. Phase	Stage	Width Across	Min. GM	Min. FGM	Lost Time	Note	Crit.	Note	Crit.
2p	B		9	7	16		1		1

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

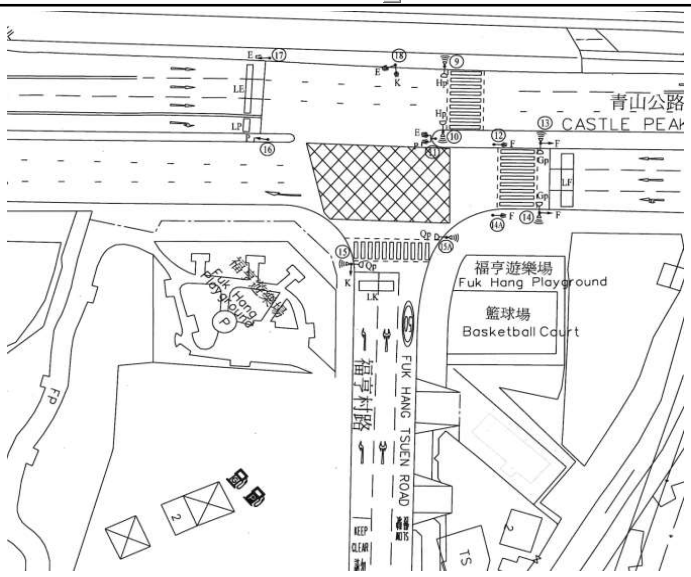
Check Critical Phase	1,2p			1,2p	
Sum of y values, Y	0.610			0.431	
Lost time, L	24			24	
Cycle Time, C	108			108	
Practical Y, Y_{pr}	0.700			0.700	
Reserve Capacity, R.C. (%)	15%			62%	

Calculated by:	SL	Date:	Jan-2026	Checked by:	TA

Traffic Signal Junction Calculation Sheet

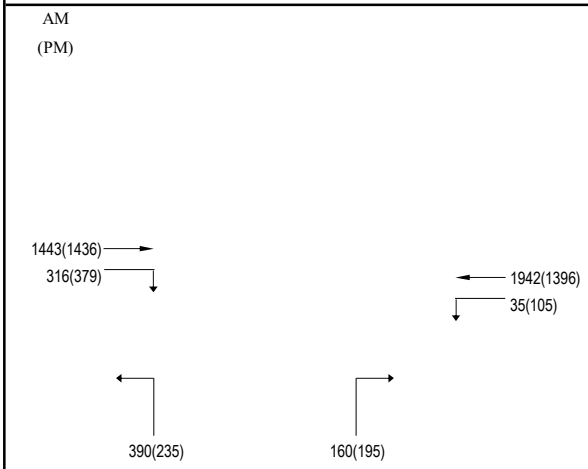
Ho Wang SPB Limited
Traffic & Transportation Consultants

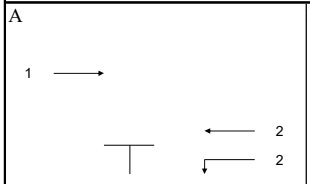
Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Castle Peak Road- Lam Tei/Fuk Hang Tsuen Road	Ref. No.:	J4D
Scheme:	2033 Design	Ref. No.:	

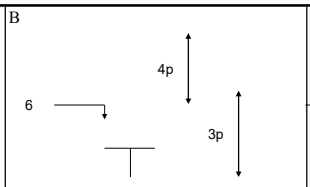


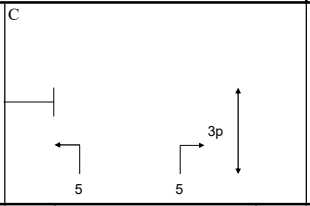
Year:	2033	Job No.:	J977.4	Rev.:	-

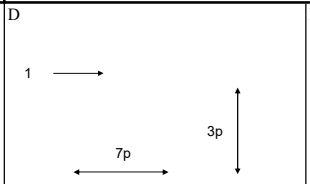
Peak Hour Traffic Flows (pcu/hr)











E

2		3	4		3	4		3	2	18	0			
4		6	8		6	8		6	2	18	0			
4		6	10	40	0	8		6	2	18	0			

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
1	AD	3	3.50	1							6175	1443	0.234		1436	0.233	
2	A	2	3.50								4210	1350	0.321	1	1031	0.245	
2	A	1	3.50	1		15				6 / 22	1955/1920	627	0.321		470	0.245	1
6	B	1	3.50				25			100	1985	316	0.159	1	379	0.191	1
5	C	1	3.50	1		15					1785	263	0.147	1	204	0.114	
5	C	1	3.50			15	25			100	1955/1975	287	0.147		226	0.114	1

Critical Ped. Phase	Stage	Width Across	Min. GM		Min. FGM	Lost Time	Note	Crit.	Note	Crit.
3p	BCD		10		10	20				
4p	B		10		10	20				
7p	D		6		12	18		1		1

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

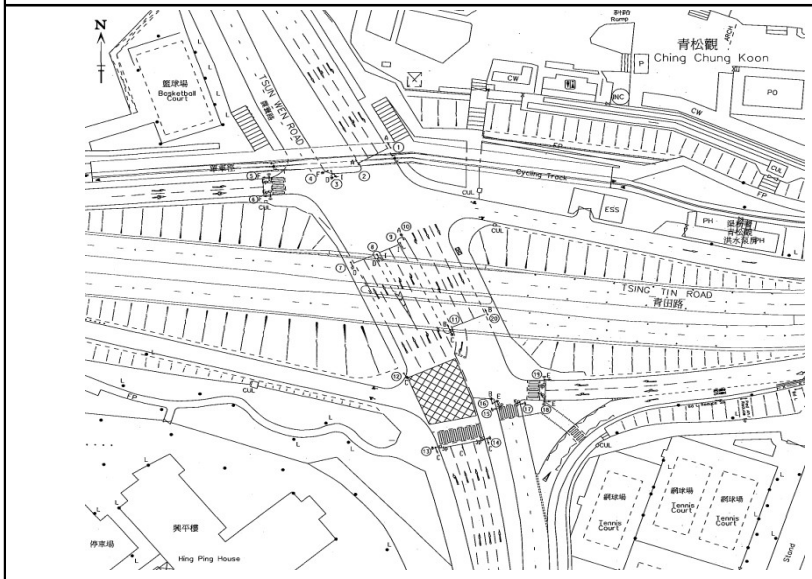
Check Critical Phase	2,6,5,7p	2,6,5,7p	2,4p,5,7p	2,6,5,7p	2,6,5,7p	2,4p,5,7p
Sum of y values, Y	0.627	0.627	0.468	0.550	0.550	0.359
Lost time, L	36	55	92	36	55	92
Cycle Time, C	150	300	300	150	300	300
Practical Y, Y_{pr}	0.684	0.735	0.624	0.684	0.735	0.624
Reserve Capacity, R.C. (%)	9%	17%	33%	24%	34%	74%

Calculated by:	SL	Date:	Jan-2026	Checked by:	TA

Traffic Signal Junction Calculation Sheet

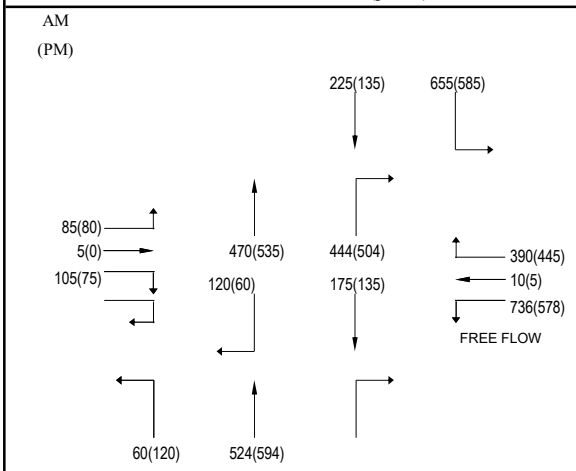
Ho Wang SPB Limited
Traffic & Transportation Consultants

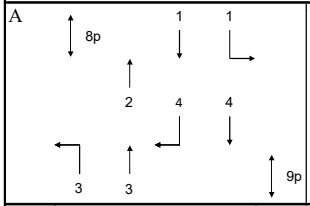
Job Title:	Proposed Residential Development at Lots 531RP, 532DRP & 532RP in DD 130 and Adjoining Government Land, Lam Tei, Tuen Mun		
Junction:	Tsing Tin Road / Tsun Wen Road	Ref. No.:	J5D
Scheme:	2033 Design	Ref. No.:	

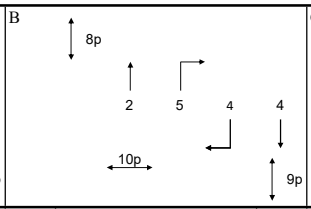


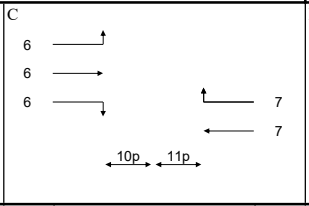
Year:	2033	Job No.:	J977.4	Rev.:	-

Peak Hour Traffic Flows (pcu/hr)









D

E

4		3	2		3	5		3												
4		3	2		3	5	12													

Approach / Phase	Stage	Lane No.	Wide (m)	No. Near	No. Oppo	Rad. L(m)	Rad. R(m)	Grad. (%)	Site Fact.	Turning Pro. (f)	Saturation Flow (pcu/hr)	AM Peak Flow	AM Peak y	AM Peak Crit.	PM Peak Flow	PM Peak y	PM Peak Crit.
1A	A	1	3.30								2085	225	0.108		135	0.065	
1B	A	1	3.30			25				192	1870	341	0.182	1	305	0.163	1
1C	A	1	3.30	1		20					1810	314	0.173		280	0.155	
2A	AB	2	3.30	1							4030	470	0.117		535	0.133	
5A	B	2	3.30				35			100	4000	444	0.111	1	504	0.126	1
6A	C	1	3.00	1		10				100	1665	85	0.051		80	0.048	
6B	C	1	3.00				35			95 / 100	1975/1970	110	0.056		75	0.038	
3A	A	1	3.50	1		20				100	1830	60	0.033		120	0.066	
3B	A	3	3.50								6315	524	0.083		594	0.094	
4A	AB	1	3.30		1		15				1685	91	0.054		60	0.036	
4B	AB	1	3.30		1		20			122 / 91	1700/1735	98	0.058		66	0.038	
4C	AB	1	3.30	1							1945	105	0.054		69	0.036	
7A	C	1	3.30				15				1895	197	0.104		222	0.117	
7B	C	1	3.30				20			192 / 195	1820	203	0.111	1	228	0.125	1

Critical Ped. Phase	Stage	Width Across	Min. GM		Min. FGM	Lost Time	Note	Crit.	Note	Crit.
8P	AB	5.8	6	6	6	12	1 SEC DELAY		1 SEC DELAY	
9P	AB	6.6	6	6	6	12	1 SEC DELAY		1 SEC DELAY	
10P	BC	15	12	12	12	24	2 SEC DELAY		2 SEC DELAY	
11P	C	7.4	6	6	6	12	5 SEC DELAY		5 SEC DELAY	

Nearside Lane:	1940 + 100 x (W - 3.25)
Other Lanes:	2080 + 100 x (W - 3.25)
Gradient & Radius:	-42 x (gradient in %)
Opposed Traffic	-230
Turning Proportion:	x 1 / (1 + 1.5 f /R)
Practical Y (Y_{pr}):	0.9 x (1 - L/C)
Reserve Capacity (RC):	(Y_{pr}/Y - 1) x 100%
In accordance with TPDM - Volume 4.2.4	

	AM Peak			PM Peak		
Check Critical Phase	1,5,7	1,5,11P		1,5,7	1,5,11P	
Sum of y values, Y	0.405	0.293		0.414	0.289	
Lost time, L	17	27.1		17	27.1	
Cycle Time, C	86	86		86	86	
Practical Y, Y_{pr}	0.722	0.616		0.722	0.616	
Reserve Capacity, R.C. (%)	78%	110%		74%	113%	

Calculated by:	SL	Date:	Jan-2026	Checked by:	TA