

Annex 7

Revised Traffic Impact Assessment

Reference number CHK50873110

**PROPOSED AMENDMENTS TO AN APPROVED SCHEME
(APPLICATION NO. A/YL-MP/344) FOR
COMPREHENSIVE RESIDENTIAL DEVELOPMENT TO
INCLUDE A WETLAND RESTORATION AREA AT LOTS 50
S.A AND 77 IN D.D. 101, WO SHANG WAI, MAI PO,
YUEN LONG
TRAFFIC IMPACT ASSESSMENT**



IDENTIFICATION TABLE	
Client/Project owner	Profit Point Enterprises Limited
Project	Proposed Amendments to an Approved Scheme (Application No. A/YL-MP/344) for Comprehensive Residential Development to Include a Wetland Restoration Area at Lots 50 S.A and 77 in D.D. 101, Wo Shang Wai, Mai Po, Yuen Long
Study	Traffic Impact Assessment
Type of document	final Report_v2
Date	24/10/2025
File name	WSW S16_TIA_20251024.docx
Reference number	CHK50873110

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1. INTRODUCTION

1.1 Background

- 1.1.1 The subject site is located in Lots 77 and 50 S.A in D.D.101, Wo Shang Wai, Mai Po, Yuen Long. It is sited on the north of Royal Palms and Palm Springs residential developments. **Drawing 2.1** shows the location of the subject site.
- 1.1.2 The site falls within an area zoned as “Other Specified Uses” annotated “Comprehensive Development to include Wetland Restoration Area” (“OU(CDWRA)”) on the Approved Mai Po and Fairview Park Outline Zoning Plan (OZP) No. S/YL-MP/8. The previous Section 16 Planning Application (Application no. A/YL-MP/344) was approved with conditions with domestic plot ratio of 0.4 on 16 February 2024 for a proposed house development with 789 houses.
- 1.1.3 According to the latest development schedule of San Tin Technopole (STT), the first population intake will start from Year 2031, while the bulk population intake of the Main Phase will start from Year 2034, around the same planned completion year of the Mass Transit Railway (MTR) Northern Link (NOL). The relevant site formation and engineering infrastructure (road works) for STT Development Phase 1 (under PWP Item Nos. 7899CL and 7852CL-2 (Part)) was gazetted on 1 March 2024 and these road works are planned for completion by Year 2031 and the proposed development traffic is expected to be served by the new STT Phase 1 road network (the gazetted new roads) with full road network completion by design year 2034.
- 1.1.4 A planning application is made under section 16 of the Town Planning Ordinance, to propose amendments to the previously approved scheme under application No. A/YL-MP/344, which was approved for a comprehensive residential development, including a Wetland Restoration Area (WRA), with filling and excavation of land. The proposed amendment relates to the approved layout of the residential portion, with no change to the plot ratio and gross floor area. Majority of the basement car parking spaces are relocated to ground level for cost-effectiveness and ease of implementation. No change is proposed to the already completed WRA. This traffic impact assessment is to investigate the potential traffic impact on the adjacent local road network and transport facilities in support of the subject s.16 application.

1.2 Study Objectives

- 1.2.1 The objectives of this TIA study are summarised as follows:
- Present the proposed development schedule and its internal transport provisions;
 - Review the current traffic conditions in the vicinity;
 - Estimate the traffic generation/attraction of the proposed development;
 - Produce traffic forecasts for the local road network at the adopted design year;
 - Investigate the traffic impact on the local road network upon operation of the proposed development; and,
 - Suggest any traffic improvement measures, if considered necessary, to alleviate the potential traffic problem.

1.3 Report Structure

1.3.1 Following this introductory chapter, there are five further chapters;

- Chapter 2 – Proposed Development, introduces the proposed development scheme;
- Chapter 3 – Existing Traffic Context, reviews the current traffic condition in the vicinity;
- Chapter 4 – Traffic Forecasting, describes the traffic forecasting methodology;
- Chapter 5 – Traffic Impact Assessment, describes the assessments conducted;
- Chapter 6 – Conclusions, summarises and concludes the study findings.

2. PROPOSED DEVELOPMENT

2.1 Proposed Development Schedule

2.1.1 Under the current proposed MLP, the number of residential units will decrease from 789 in the approved scheme in Section 16 application to 649. The current scheme will provide 649 units with average house size of 127.8 m².

2.1.2 **Table 2.1** summarises the changes of the previous approved and current proposed scheme.

Table 2.1 Comparison of Flat Mix in Previous Approved Scheme and Current Proposed Scheme

	Previous Approved MLP (Application no. A/YL-MP/344)	Current Proposed MLP	Difference
Domestic GFA	82,963 m ²	82,963 m ²	Nil
Domestic Plot Ratio	0.4	0.4	Nil
No. of Units	789 Units	649 Units	-140 Units
Average House Size	105.1 m ²	127.8 m ²	+22.7 m ²

2.1.3 As indicated in **Table 2.1**, the current proposed MLP has a decrease of 140 units with the same domestic GFA and plot ratio and leading to an increase of average house size.

2.1.4 It is anticipated that the proposed development will be completed by year 2028.

2.2 Vehicular Access

2.2.1 Same as the previous approved scheme, the development vehicular access is off the local access road, Mai Po South Road connecting to Castle Peak Road - Mai Po, which is abutting the site. The location of the vehicular access is illustrated in **Drawing 2.1**. With the gazetted new roads for STT to be completed on or before Year 2031, it is anticipated that the development traffic will mainly access via Fairview Park Boulevard Interchange and the new Shek Wu Wai Interchange, Road L11 onto Castle Peak Road – San Tin and Castle Peak Road - Mai Po, with minority of traffic heading to/from Sheung Shui, as indicated in **Drawing 3.1**.

2.3 Internal Transport Facility

2.3.1 The provision of the internal transport facilities in the current proposed MLP is determined based on the latest Hong Kong Planning Standards and Guidelines (HKPSG). **Table 2.2** summarises the proposed provision of the internal transport facilities for the current proposed MLP, as shown in **Drawing 2.2**.

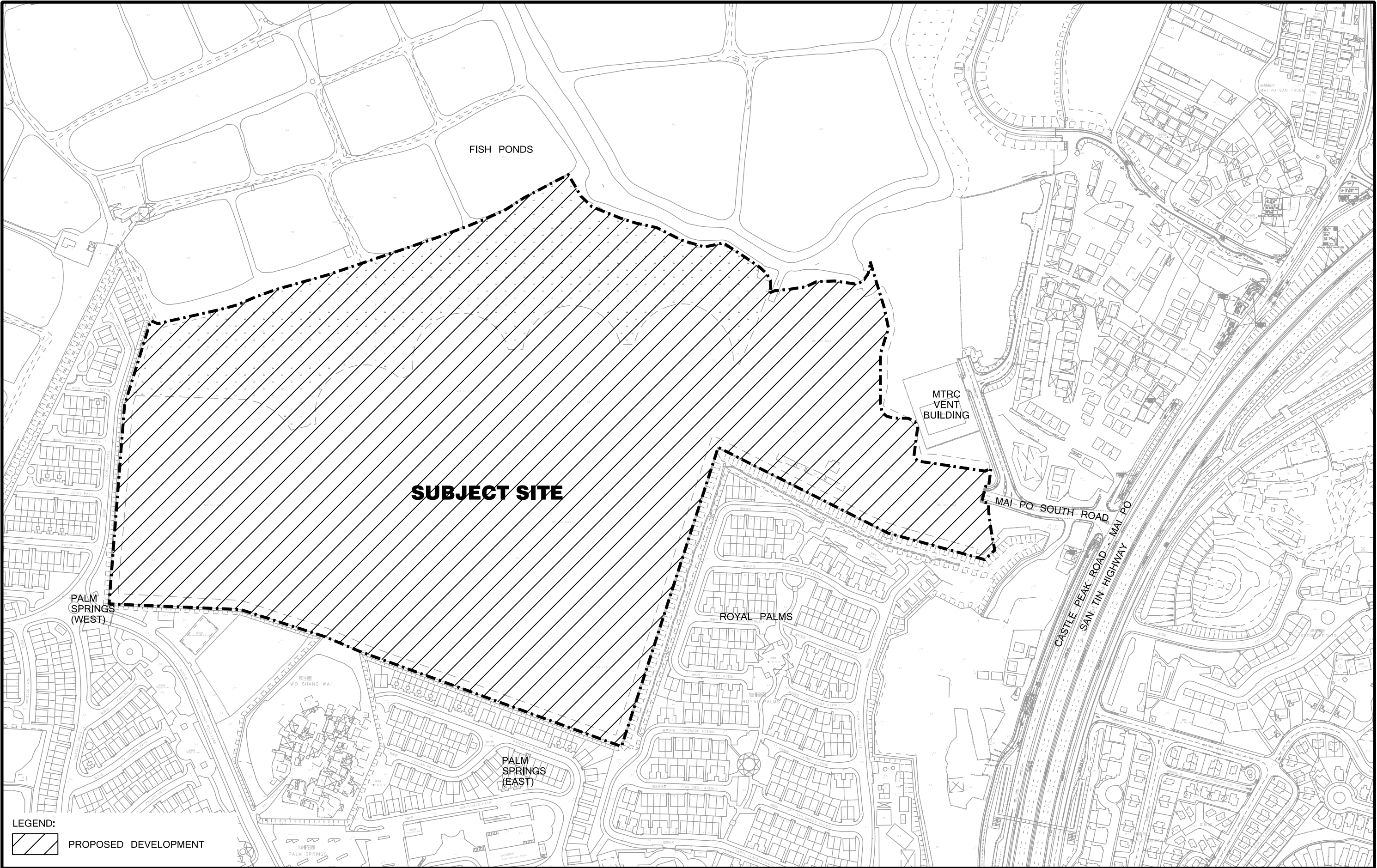
Table 2.2 Proposed Provision of the Internal Transport Facilities

Internal Transport Facilities	Previous Approved MLP (Application no. A/YL-MP/344) – 789 Units		Current Proposed MLP – 649 Units		
	Proposed Requirement	Proposed Provision	Parameters	Proposed Requirement under Lease/HKPSG	Proposed Provision
Residential Parking Provision					
Residential Carparking Space	2 spaces per house	1,578	649 Houses	2 spaces per house ⁽¹⁾	1,298
	Sub -total	1,578		Sub-total	1,298
Visitor Parking Space	5 spaces	5	-	5 spaces ⁽¹⁾	5
Accessible Parking Space	6 accessible car parking space for car parking space in lot above 450 by Building Authority	6	1,303 private car parking spaces	6 accessible car parking space for car parking space in lot above 450 by Building Authority	6
Motorcycle Parking Space	37 spaces	37	649 Houses	37 spaces ⁽¹⁾	37
Loading/unloading Bay	1 bay per 800 units	1	649 Houses	-	1 ⁽²⁾

Remarks: (1) Provision in accordance with lease requirement;
(2) There is nil provision of loading/unloading bay for houses in accordance with lease requirement. The provision of 1 no. of loading/unloading bay is for the operational use for clubhouse.

- 2.3.2 Since the average flat size of the proposed development is over 70 sqm, there will be nil provision of the bicycle parking spaces.
- 2.3.3 The actual carparking provisions may be subject to agreement by the authority.
- 2.3.4 Most of the parking spaces would be proposed on ground level. The actual allocation of related parking provision would be reviewed in later detailed design stage. Drop-bar gate will be provided within the site for access control. Sufficient waiting spaces between the drop-bar gate and public road will be provided for vehicle queueing within the development. The location of the drop-bar gate will be provided at later detailed design stage.

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 PROPOSED DEVELOPMENT

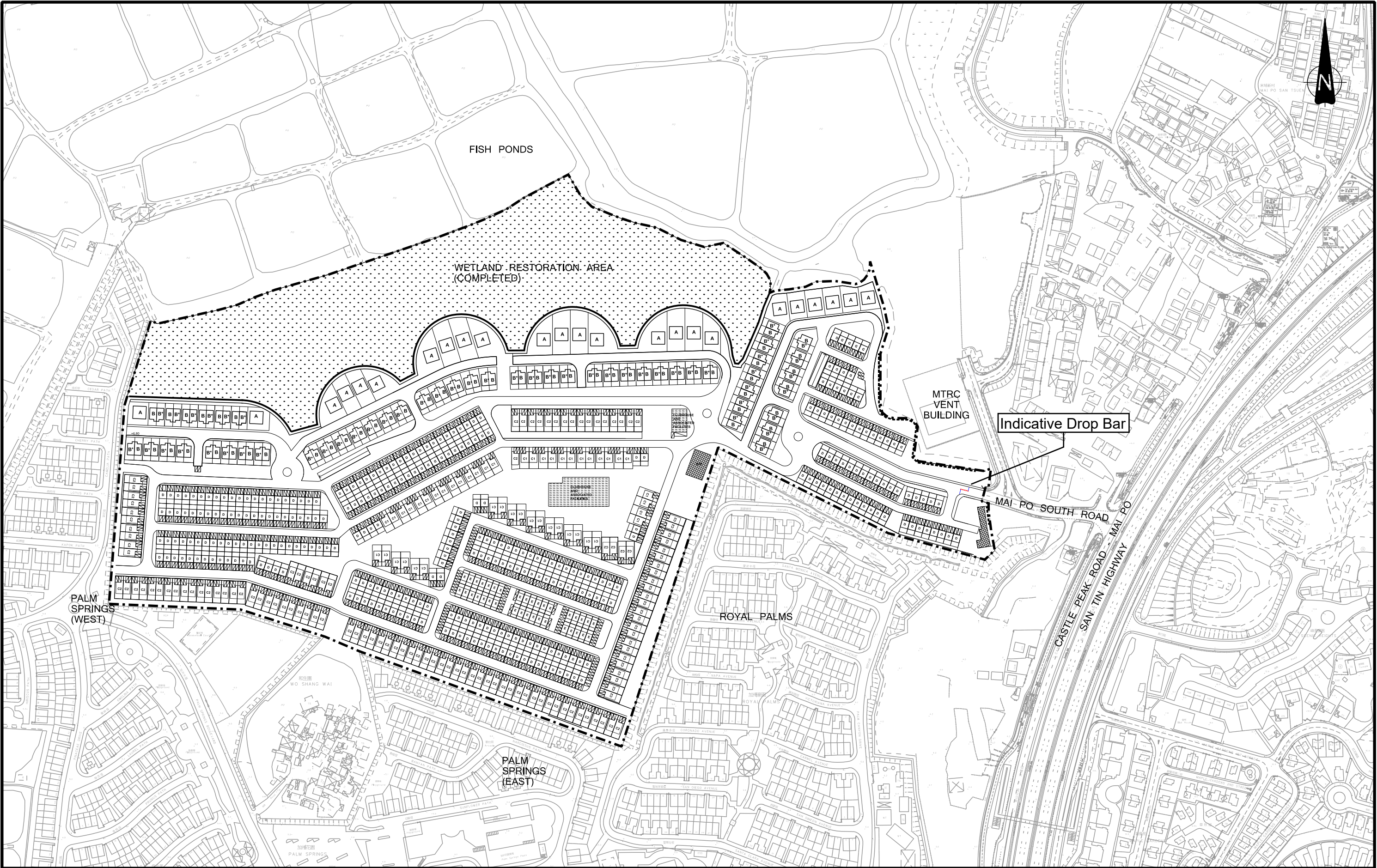
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Project Title
PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101, WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title					
SITE LOCATION					
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Drawing Title											
PROPOSED MASTER LAYOUT PLAN											
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3. EXISTING TRAFFIC CONTEXT

3.1 Surrounding Road Network

- 3.1.1 As indicated in **Drawing 2.1**, the site is bounded by Mai Po South Road to the east, fishponds to the north and Royal Palms & Palm Springs residential development to the south. The development traffic from San Tin Highway to Mai Po South Road connecting the site are either via Castle Peak Road – Mai Po Section from the south or Castle Peak Road – San Tin Section from the north.
- 3.1.2 Subject to the project of San Tin Technopole, the proposed road network will be upgraded to provide better linkage and strengthen future connectivity for developments located at the North and South of the San Tin Highway. At the existing Shek Wu Wai Interchange (SWWI), apart from improvement of existing slip roads at its western side connecting to San Tin Highway, a pair of new slip roads is proposed at the eastern side of SWWI to facilitate traffic movement. Also, the existing junction of Castle Peak Road – San Tin / Shek Wu Wai Road would be upgraded from priority junction to 4-arm signalized junction. With the above consideration of enhanced road network, the future ingress and egress routes of the subject site are illustrated in **Drawing 3.1**.
- 3.1.3 San Tin Highway is a dual 3-lane expressway. It forms a section of Route 9 of the strategic highway network connecting Fanling Highway in the north and Yuen Long Highway/Tai Lam Tunnel in the south.
- 3.1.4 San Tam Road and Castle Peak Road - Mai Po are both single 2-lane carriageways running parallel to San Tin Highway serving the adjacent local developments.
- 3.1.5 Mai Po South Road is about 7.3m wide with 2m footpaths on both sides. It mainly serves as an access to MTRC ventilation building.
- 3.1.6 The existing nearby road network is subject to major changes upon completion of the new roads planned under STT project, with new roads connecting to the future upgraded Shek Wu Wai Interchange.

3.2 Current Junction Operational Performance

- 3.2.1 With the consideration of the road network upgrade due to San Tin Technopole project, a total of 11 local junctions and 6 screenlines, as indicated in **Drawing 3.2**, have been identified for assessment purpose in this study. For the strategic road San Tin Highway, as there will be upcoming planned transport infrastructures and enhanced railway network, including the Northern Metropolis Highway and the Northern Link, the traffic condition and efficiency would be significantly improved in the strategic level. The identified junctions are listed in **Table 3.1**, and their existing layouts are shown in **Drawings 3.3 to Drawings 3.14**.

Table 3.1 Identified Local Key Junctions and Road Links

Ref. ⁽¹⁾	Junction/Road Links	Type	Drawing No.
A1	Shek Wu Wai Road / San Tin Highway Slip Road ⁽²⁾	Priority	3.3
A2	Shek Wu Wai Road / Mai Po Lung Road ⁽²⁾	Priority	3.4
B	Castle Peak Road – San Tin / Shek Wu Wai Road ⁽²⁾	Priority	3.5
C	Castle Peak Road – Mai Po/San Tam Road	Priority	3.6
D	Castle Peak Road – Mai Po/Palm Springs Boulevard	Priority	3.7
E	Castle Peak Road – Mai Po/Geranium Path	Priority	3.8
F	Castle Peak Road – Tam Mi/Yau Pok Road	Priority	3.9
G	Castle Peak Road – Tam Mi/Kam Pok Road	Priority	3.10
H	Fairview Park Interchange	Roundabout	3.11
I	Castle Peak Road – Mai Po/Mai Po South Road	Priority	3.12
J	Castle Peak Road – San Tin/Kwun Tung Road ⁽³⁾	Priority	3.13
K	San Tin Interchange ⁽³⁾	Roundabout	3.14
Screenline L1	Mai Po South Road	Single 2-lane carriageway	3.2
Screenline L2	Castle Peak Road – Mai Po (South to Mai Po South Road)	Single 2-lane carriageway	3.2
Screenline L3	Castle Peak Road – Mai Po (North to Mai Po South Road)	Single 2-lane carriageway	3.2
Screenline L4	Castle Peak Road – Tam Mi	Single 2-lane carriageway	3.2
Screenline L5	San Tin Highway	Dual 3-lane expressway	3.2

Remarks: (1) Refer to **Drawing 3.2** for junction reference;
(2) Junctions will be upgraded by San Tin Technopole project; and,
(3) Subject to the planned road network, the traffic flow induced by subject site would not pass through the concerned junctions in the Design Year of 2031.

Traffic Surveys

- 3.2.2 A series of manual classified traffic surveys have been conducted at the identified junctions to establish the current traffic condition in the vicinity. The surveys were carried out during the morning and evening peak hour periods on a typical weekday in April 2024. The observed traffic data indicates that the morning peak hour and evening peak hour occurred from 8:00am to 9:00am and 5:00pm to 6:00pm. The observed peak periods are adopted for forecasting and assessment purposes in this study.
- 3.2.3 Subject to previous TD comment, since the observed traffic flow in traffic survey in a typical weekday in April 2024 was considered under normal traffic condition, the traffic flow in arm G in Fairview Park Interchange under previous approved Planning Application A/YL-MP/344 was adopted in the assessment in conservative approach. The observed peak hour traffic flows are shown in **Drawing 3.15**.
- 3.2.4 Junction capacity and Volume/Capacity Ratio (V/C Ratio) assessments have been conducted for the identified junctions and road links with respect to the observed traffic flows to evaluate their current operational performance during the weekday peak hours and the results are as shown in **Table 3.2** and **Table 3.3**. The junction calculation sheets are attached in **Annex A**.

Table 3.2 Current Junction Operational Performance

Ref. ⁽¹⁾	Junction	RC/RFC ⁽²⁾	
		AM Peak	PM Peak
A1	Shek Wu Wai Road/ San Tin Highway Slip Road	0.38	0.38
A2	Shek Wu Wai Road/ Mai Po Lung Road	0.48	0.29
B	Castle Peak Road – San Tin/ Shek Wu Wai Road	0.75	0.63
C	Castle Peak Road – Mai Po/ San Tam Road	0.19	0.12
D	Castle Peak Road – Mai Po/ Palm Springs Boulevard	0.56	0.31
E	Castle Peak Road – Mai Po/ Geranium Path	0.02	0.02
F	Castle Peak Road – Tam Mi/ Yau Pok Road	0.03	0.03
G	Castle Peak Road – Tam Mi/ Kam Pok Road	0.12	0.10
H	Fairview Park Interchange	0.56	0.64
I	Castle Peak Road – Mai Po/ Mai Po South Road	0.01	0.02
J	Castle Peak Road – San Tin/Kwun Tung Road	0.54	0.72
K	San Tin Interchange	0.49	0.41

Remarks: (1) Refer to **Drawing 3.2** for junction reference; and,
(2) RC = reserve capacity, RFC = ratio of flow to capacity.

Table 3.3 Current Road Links Performance

Ref. ⁽¹⁾	Road Link	Directions	Design Capacity, (veh/hr)	Design Capacity, (pcu/hr) ⁽⁴⁾	2024 Traffic Flow			
					Traffic Flow (pcu/hr)		V/C ⁽⁵⁾	
					AM	PM	AM	PM
L1	Mai Po South Road	EB	700 ⁽²⁾	910	0	10	0.00	0.01
		WB	700 ⁽²⁾	910	15	10	0.02	0.01
L2	Castle Peak Road – Mai Po	NB	700 ⁽²⁾	910	185	210	0.20	0.23
		SB	700 ⁽²⁾	910	185	155	0.20	0.17
L3	Castle Peak Road – Mai Po	NB	700 ⁽²⁾	910	240	240	0.26	0.26
		SB	700 ⁽²⁾	910	220	185	0.24	0.20
L4	Castle Peak Road – Tam Mi	NB	700 ⁽²⁾	910	420	390	0.46	0.43
		SB	700 ⁽²⁾	910	475	350	0.52	0.38
L5	San Tin Highway	NB	4,700 ⁽³⁾	6,100	4,720	4,280	0.77	0.70
		SB	4,700 ⁽³⁾	6,100	4,630	4,635	0.76	0.76

Remarks: (1) Refer to **Drawing 3.2** for key road links;
(2) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 2-lane single carriageway will be taken as 1400 veh/hr for two-way traffic, which implies 700 veh/hr for one-way direction;
(3) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 3-lane dual expressway will be taken as 4700 veh/hr for one-way direction;
(4) PCU factor of 1.3 adopted; and,
(5) V/C = volume to capacity ratio.

3.2.5 The results in **Table 3.2** and **Table 3.3** have indicated that all identified junctions and road links are currently operating with ample capacity during the typical weekday morning and evening peak hours.

3.3 Nearby Public Transport

- 3.3.1 The current road-based public transport services are available at Castle Peak Road and San Tam Road, with service stops located within 500-metre walking distance from the subject site, as shown in **Drawing 3.16** and as summarized in **Table 3.4** below.

Table 3.4 Existing Nearby Public Transport Services

Route No.	Destination	Frequency (min)
Franchised Bus		
76K	Sheung Shui (Ching Ho) – Long Ping Estate	20 - 30
Green Minibus (GMB)		
75	Yuen Long (Fook Hong Street) – Lok Ma Chau Spur Line PTI	10 - 20
76	Yuen Long (Fook Hong Street) – Siu Hom Tsuen	15 - 20
78	Lok Ma Chau (San Tin) PTI – Pat Heung Road (near Tai Lam Bus-Bus Interchange)	20 - 25
Public Light Bus (PLB)		
17	Sheung Shui – Yuen Long	Flexible ⁽¹⁾

Remarks: (1) Peak hour frequency is observed to be 3-5 minutes.

Public Transport Utilization

- 3.3.2 A traffic survey was also conducted on a typical weekday in April 2024 to identify the peak hour public transport utilization at the existing nearest bus stops near Royal Palms at Castle Peak Road and Maple Garden at San Tam Road. The survey results are summarized in **Table 3.5**.

Table 3.5 Observed Peak Hour Public Transport Utilization

Bound	Mode	Route No.	Observed No. of Vehicles	Total Service Capacity (pax) ⁽¹⁾	Observed Occupancy (pax)	Occupancy Rate (%)
AM Peak (07:00 – 09:00)						
Yuen Long	Bus	76K	5	450	119	26%
	GMB	75	12	198	166	84%
		76	5	83	68	82%
		78	4	76	30	39%
	PLB	17	49	817	579	71%
Total				1,624	962	59%
Sheung Shui / San Tin	Bus	76K	4	360	47	13%
	GMB	75	14	233	157	67%
		76	4	67	45	67%
		78	5	92	42	46%
	PLB	17	41	674	449	67%
Total				1,426	740	52%
PM Peak (17:30 – 19:30)						
Yuen Long	Bus	76K	4	360	135	38%
	GMB	75	18	309	297	96%
		76	6	96	70	73%
		78	4	76	32	42%
	PLB	17	43	718	653	91%
Total				1,559	1,187	76%
Sheung Shui / San Tin	Bus	76K	6	540	47	9%
	GMB	75	10	172	139	81%
		76	6	96	92	96%
		78	4	76	33	43%

	PLB	17	40	667	535	80%
	Total			1,551	846	55%

Remarks: (1) The bus carrying capacity is assumed to be taken at 75% of 120, which equals to 90.

- 3.3.3 From **Table 3.5**, it can be noted that the passenger demands are mostly served by KMB 76K, GMB 75 and PLB 17. The bus service has an extensive service coverage running between Yuen Long and Sheung Shui, however its service level is still relatively low at a peak hour frequency of 20-30 minutes. For the PLB 17, it is a public light bus service with no designated routing, headway and fares.
- 3.3.4 Based on the number of boarding and alighting passengers from the survey, it is noted that the directional split of local residents in the vicinity is about 65% towards Yuen Long and 35% towards Sheung Shui in AM peak periods, while 68% towards Yuen Long and 32% towards Sheung Shui in PM peak periods.

3.4 Pedestrian Flow and Queuing Space Assessment

3.4.1 A pedestrian flows survey was also conducted on a typical weekday in October 2024, the operational performance of identified footpaths and concerned queuing area of bus stops at Castle Peak Road – Mai Po and San Tam Road in term of average flow of Level of Services (LOS), as stipulated in Highway Capacity Manual 2000 and Transport Planning & Design Manual (TPDM), has been assessed. The peak hour pedestrian flows in 2024 are shown in **Drawing 3.17**, and the results are summarized in below **Table 3.6** and **Table 3.7**.

Table 3.6 2024 Observed Level-Of-Service Assessment

Ref. ⁽¹⁾	Actual Width (m)	Effective Width (m) ⁽²⁾	2024 Observed Peak Hourly Flow (ped/hr)		2024 Observed Peak Flow Rate (ped/min/m) ⁽³⁾		LOS ⁽⁴⁾	
			AM	PM	AM	PM	AM	PM
Fp1	2.1	1.1	11	9	0.17	0.14	A	A
Fp2	2.3	1.3	20	41	0.26	0.53	A	A
Fp3	1.5	0.5	22	37	0.73	1.23	A	A
Fp4	1.7	0.7	5	6	0.12	0.14	A	A

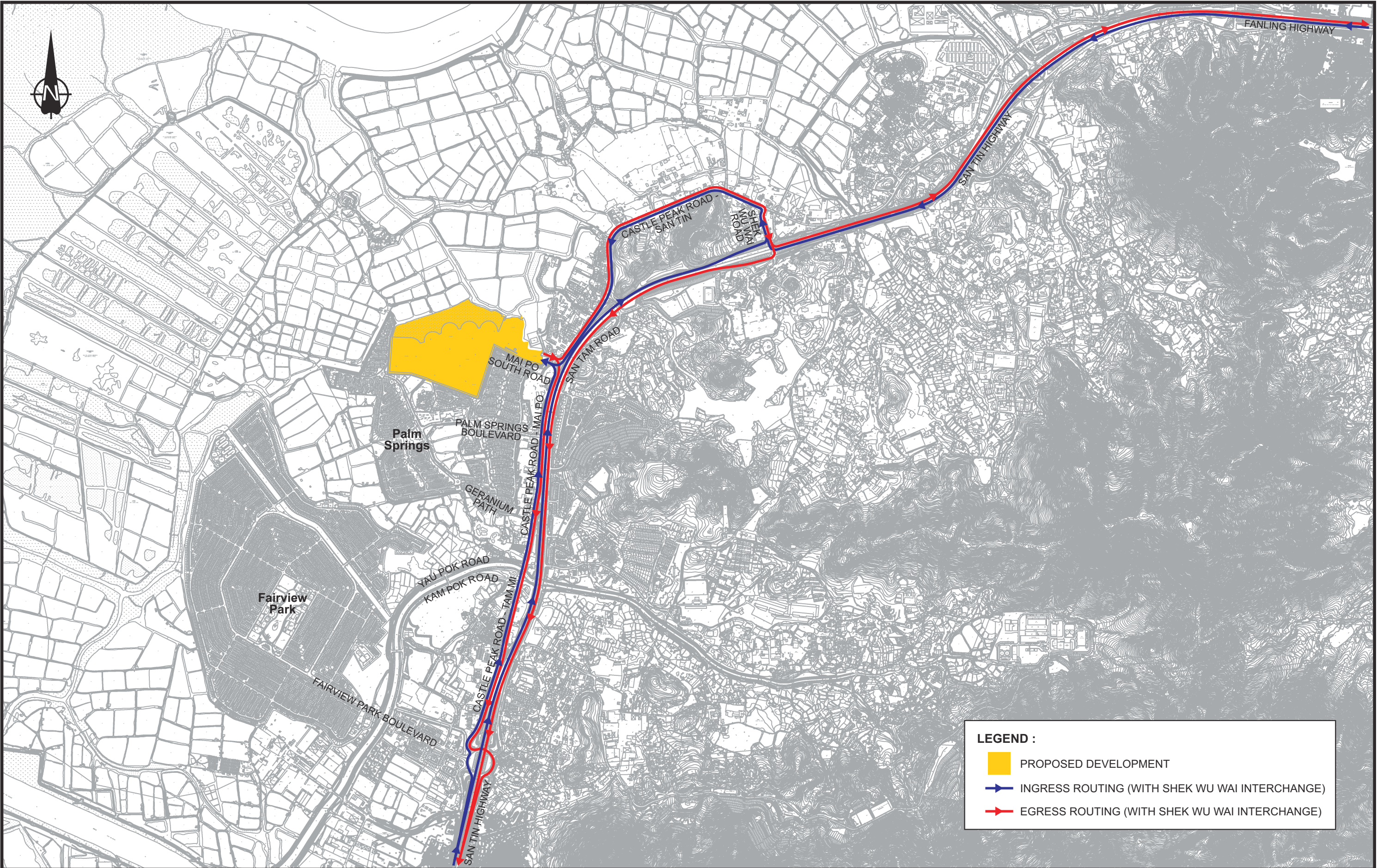
Remarks: (1) Refer to **Drawing 3.17** for locations and operational performance of identified footpaths;
(2) Effective width for footpath = Actual width – 1.0m dead width (0.5m dead width on one side of footpath);
(3) Peak flow rate = Peak hourly flow ÷ 60 ÷ effective width; and,
(4) Refer to TPDM Vol.6 Chapter 10 Chapter 10.5.2.

Table 3.7 2024 Observed Queuing Area Level-Of-Service Assessment at Bus Stops

Ref. ⁽¹⁾	2024 Observed Peak Hourly Passenger Flow at Bus Stop (pax/hr)	2024 Observed Maximum Queue at Queuing Area (pax)	Queuing Area (m ²)	Avg. Queuing Space (m ² /p)	LOS ⁽³⁾
Maple Garden Bus Stop – Yuen Long Bound (SB)	2	1 (i.e. 2/60x25)	5.8	5.8	A
Palm Springs Bus Stop – Sheung Shui Bound (NB)	2	1 (i.e. 2/60x25)	20.3	20.3	A

Remarks: (1) Refer to **Drawing 3.17** for locations of identified queuing area;
(2) Average Queuing Space = Queuing Area ÷ (Maximum Queue); and,
(3) Refer to HCM2000, EXHIBIT 11-9.

3.4.2 As shown in **Table 3.6** and **3.7**, the identified footpaths and queuing area at concerned bus stops are currently operating with adequate spare capacities during the typical weekday morning and evening peak hours.



LEGEND :

PROPOSED DEVELOPMENT

INGRESS ROUTING (WITH SHEK WU WAI INTERCHANGE)

EGRESS ROUTING (WITH SHEK WU WAI INTERCHANGE)

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Rev.	Description	Checked	Date

Project Title

PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT
LOTS 50 S.A. AND 77 IN D.D.101, WO SHANG WAI,
MAI PO, YUEN LONG

Drawing Title

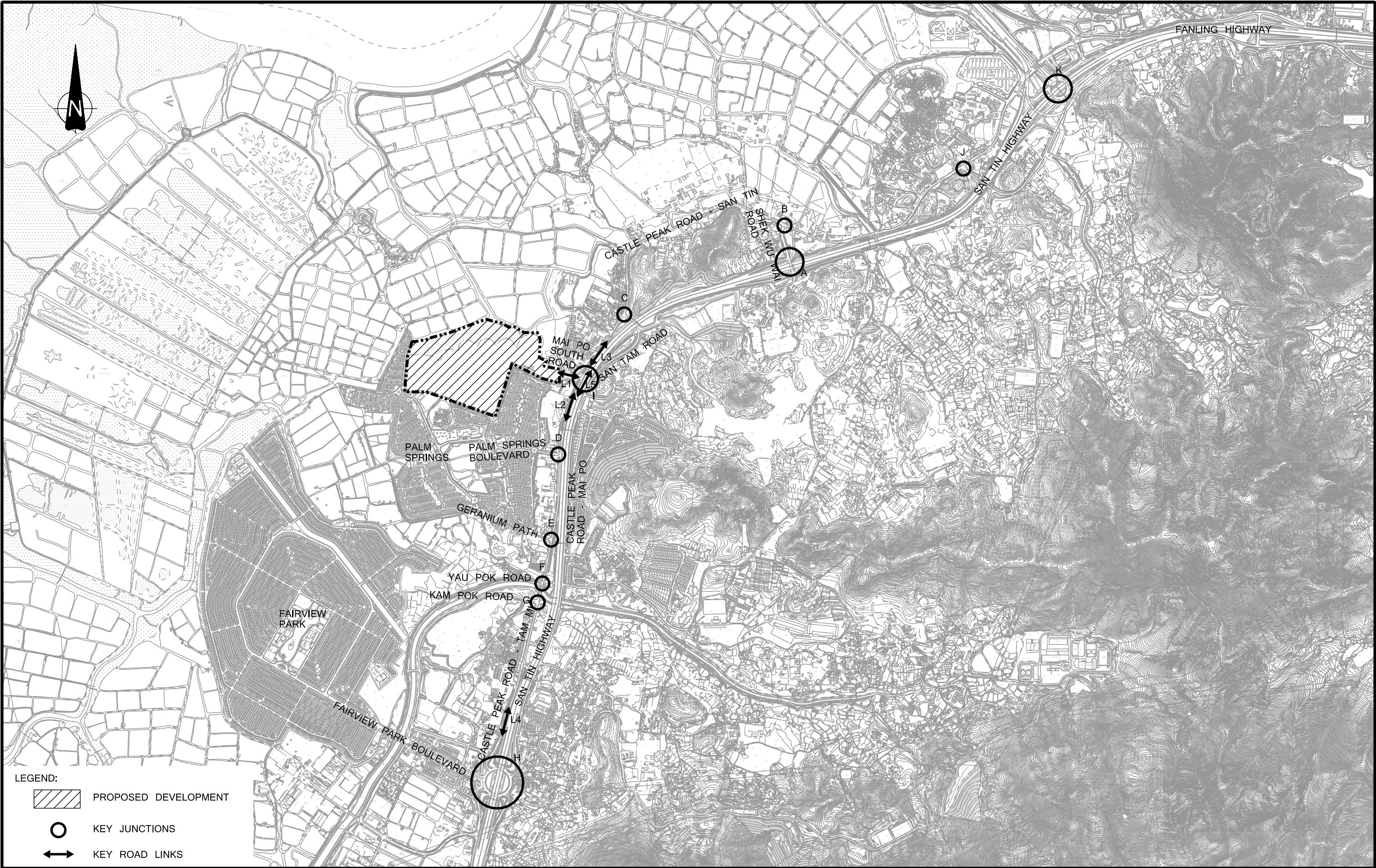
MAJOR INGRESS AND EGRESS ROUTE

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SYSTRA

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- LEGEND:
- PROPOSED DEVELOPMENT
 - KEY JUNCTIONS
 - KEY ROAD LINKS

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Rev.	Description	Checked	Date

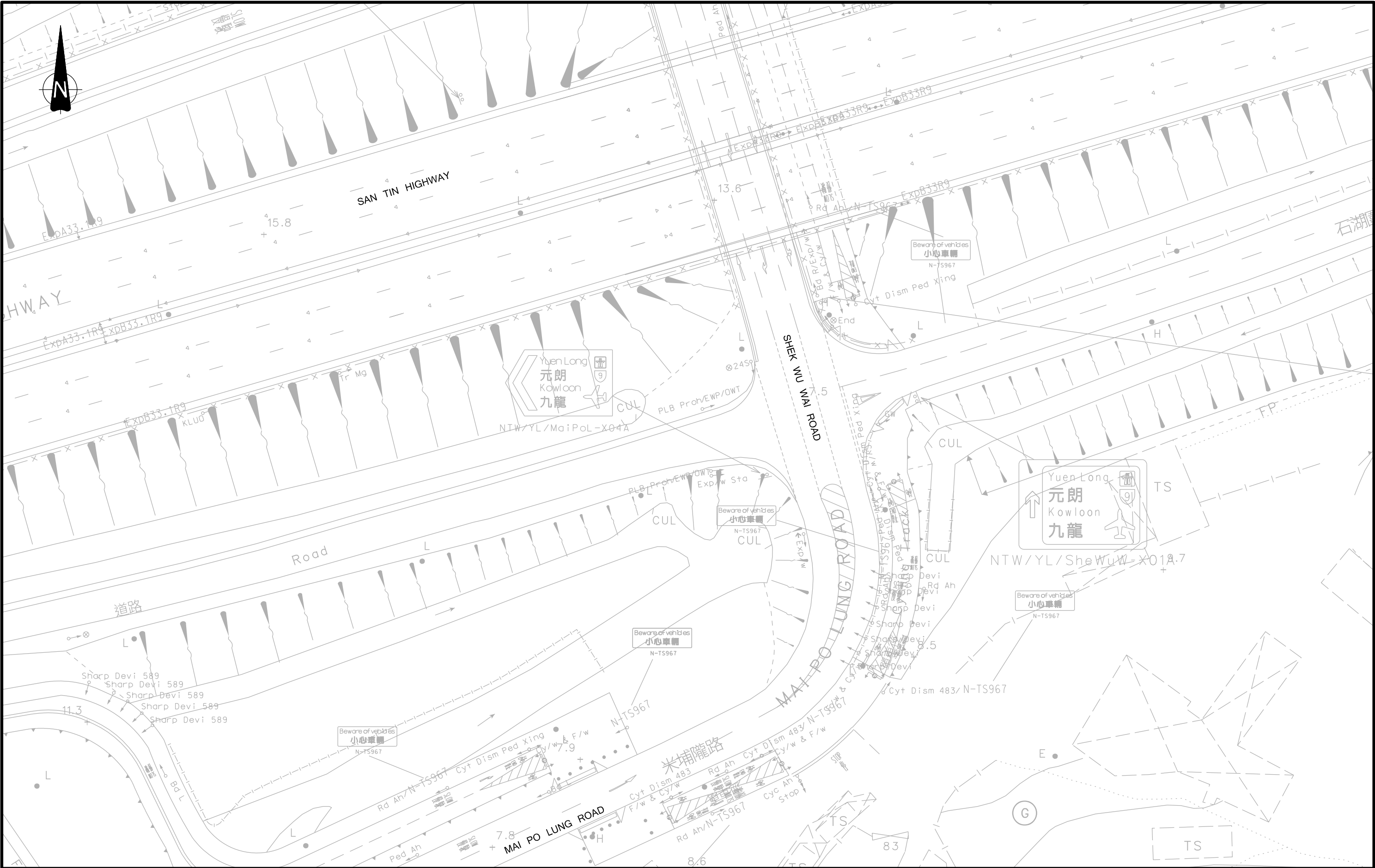
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PROPOSED COMPREHENSIVE RESIDENTIAL
DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101,
WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title			
KEY JUNCTIONS AND ROAD LINKS			
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Drawing No.	3.2	Rev.	-



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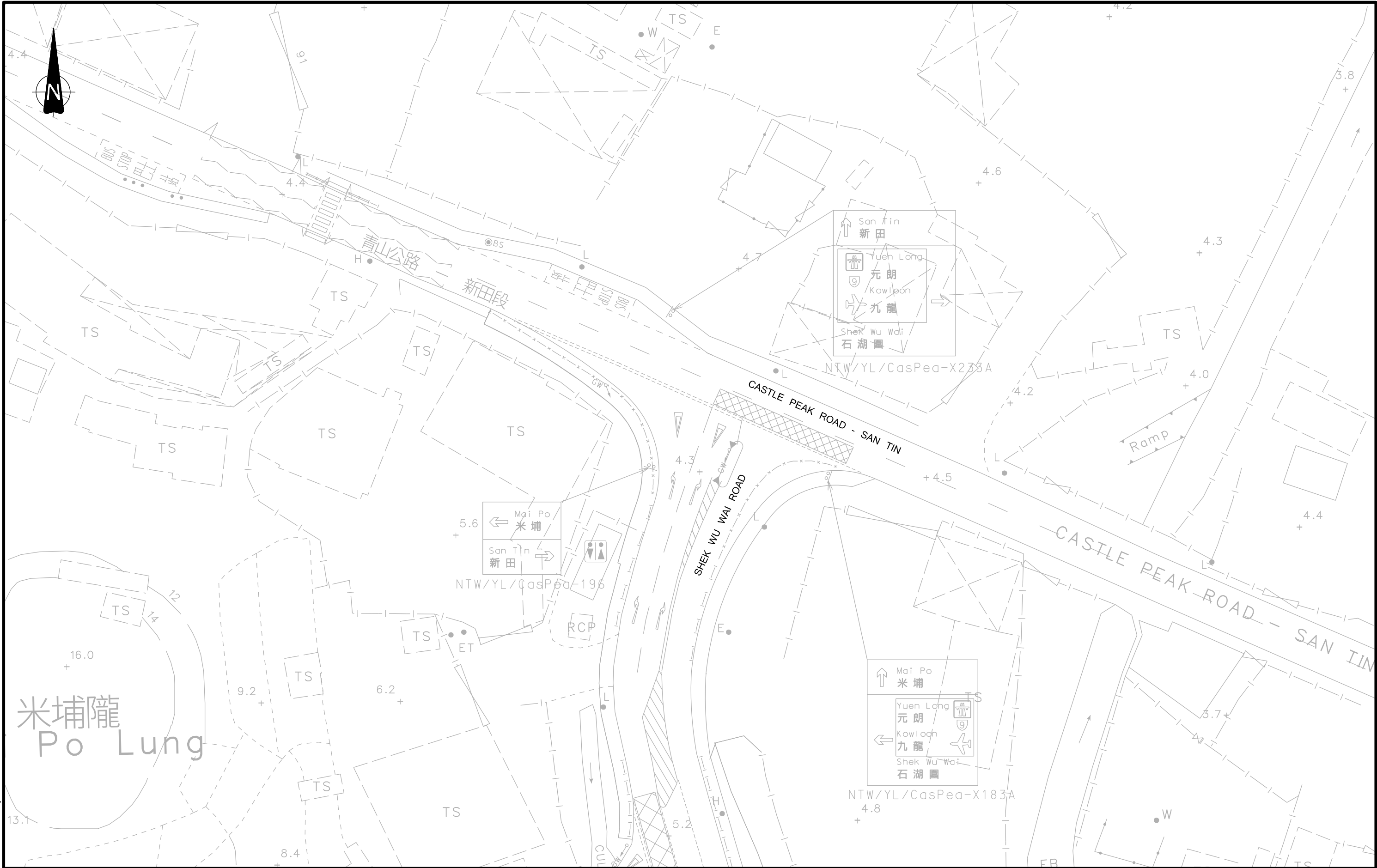
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Rev.	Description	Checked	Date

Project Title
PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101, WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title			
EXISTING JUNCTION LAYOUT OF SHEK WU WAI ROAD / MAI PO LUNG ROAD (A2)			
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Drawing No.	3.4	Rev.	-



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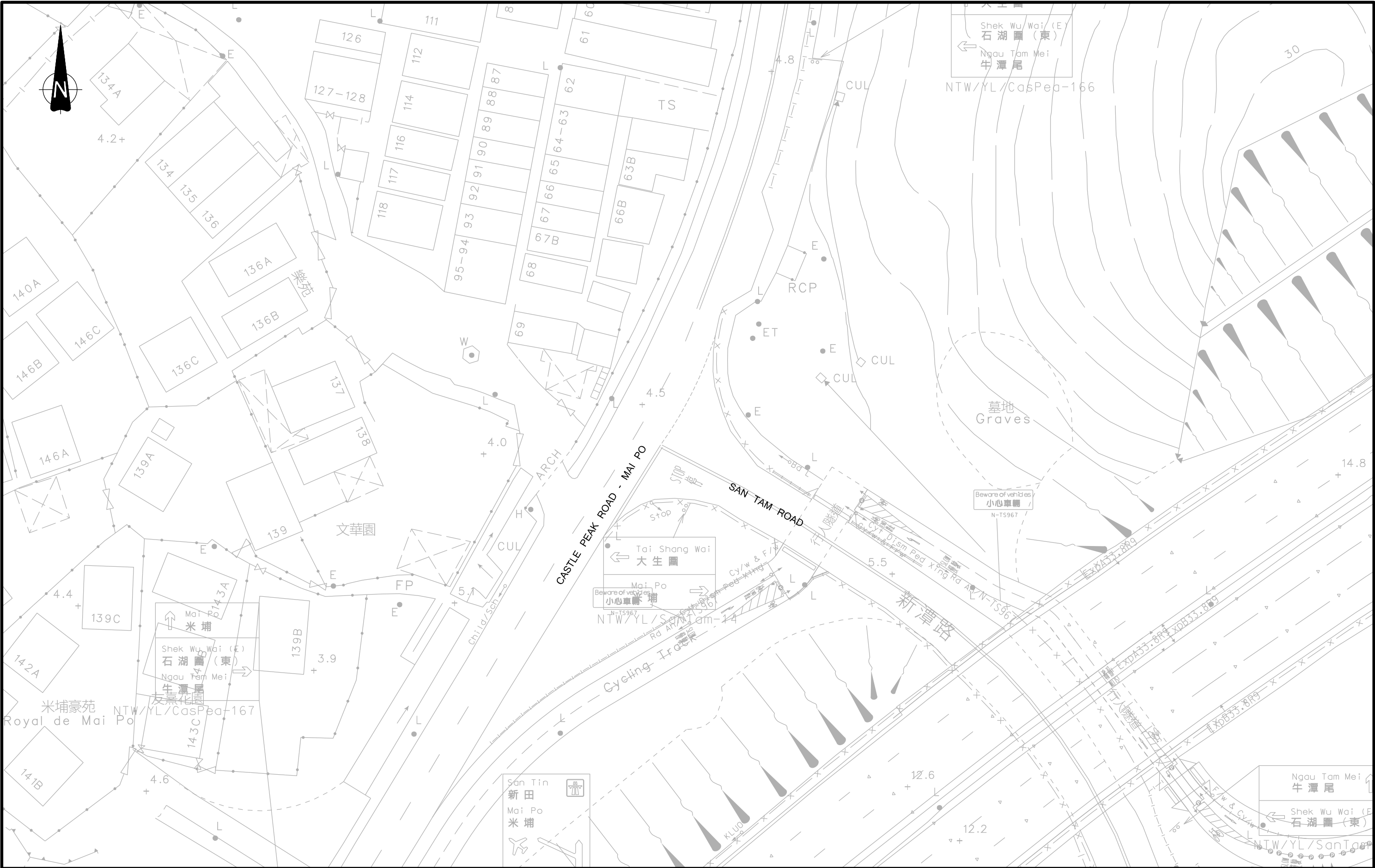
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Rev.	Description	Checked	Date

Project Title
PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101, WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title					
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - SAN TIN / SHEK WU WAI ROAD (B)					
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Date	DEC 2024	Drawing No.	3.5	Rev.	-



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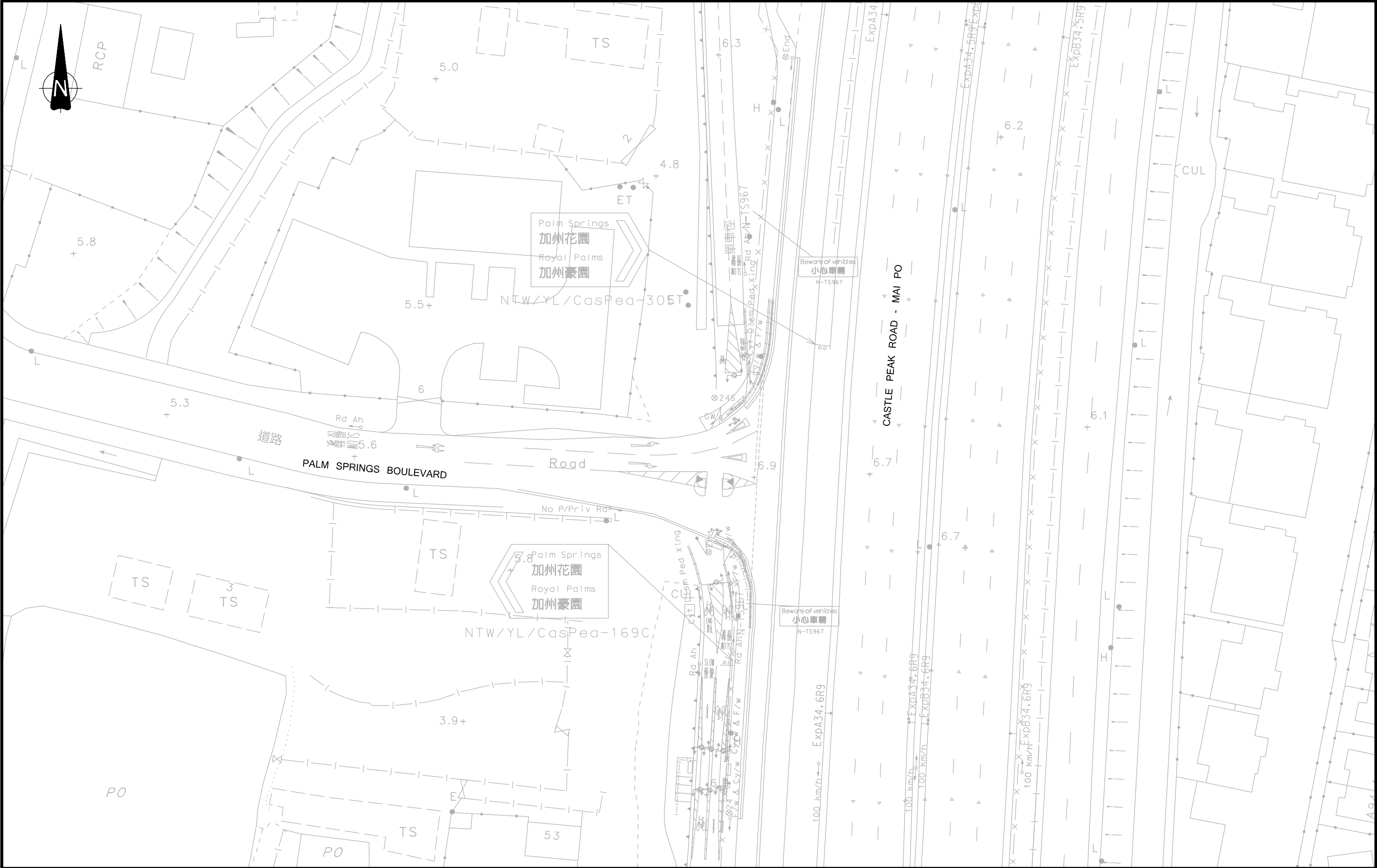
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PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101, WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title			
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - MAI PO / SAN TAM ROAD (C)			
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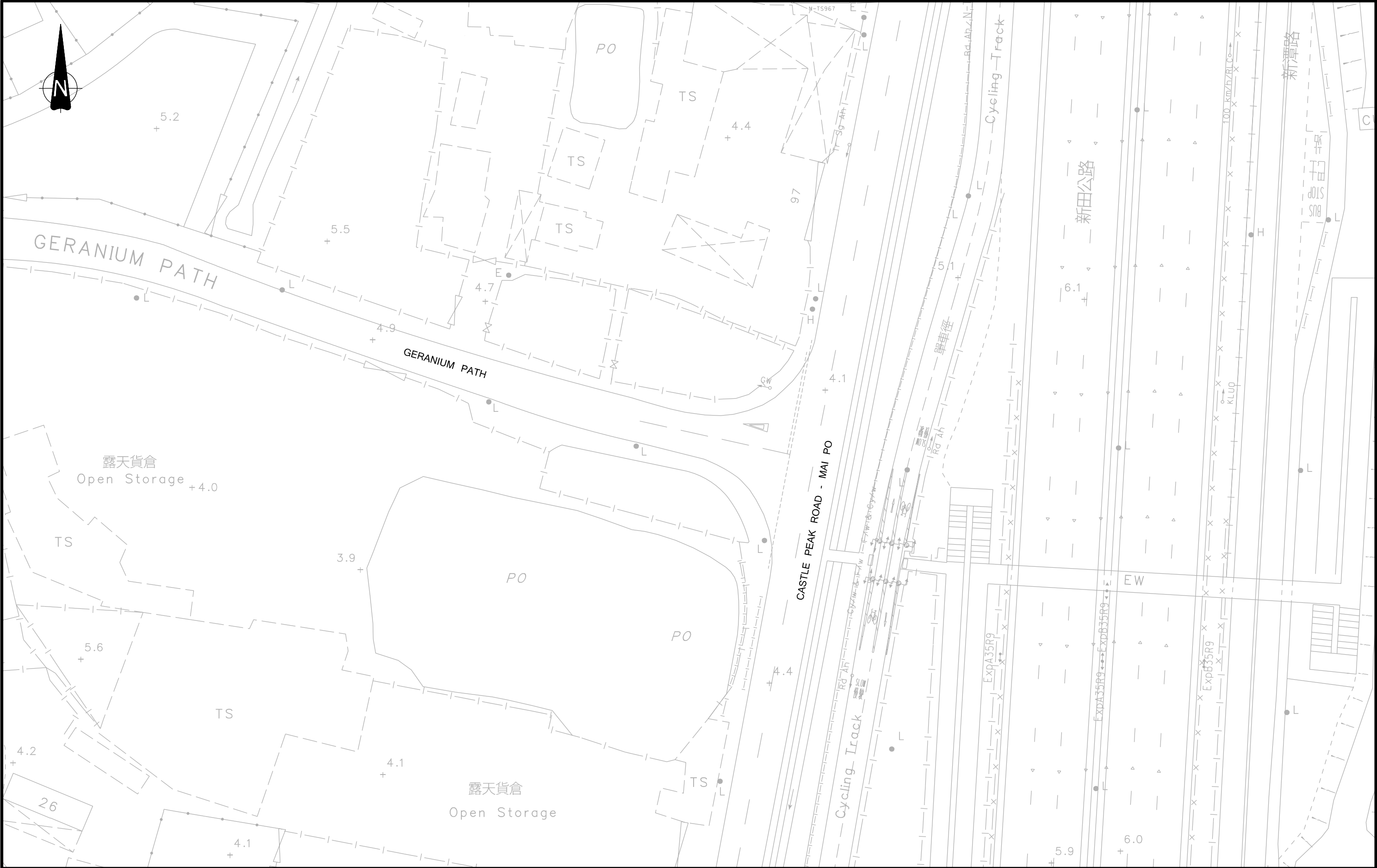
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Rev.	Description	Checked	Date

Project Title
PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101, WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title											
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - MAI PO / PALM SPRINGS BOULEVARD (D)											
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Rev.	Description	Checked	Date

Project Title

PROPOSED COMPREHENSIVE RESIDENTIAL
DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101,
WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title			
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - MAI PO / GERANIUM PATH (E)			
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Drawing No. 3.8		Rev. -	



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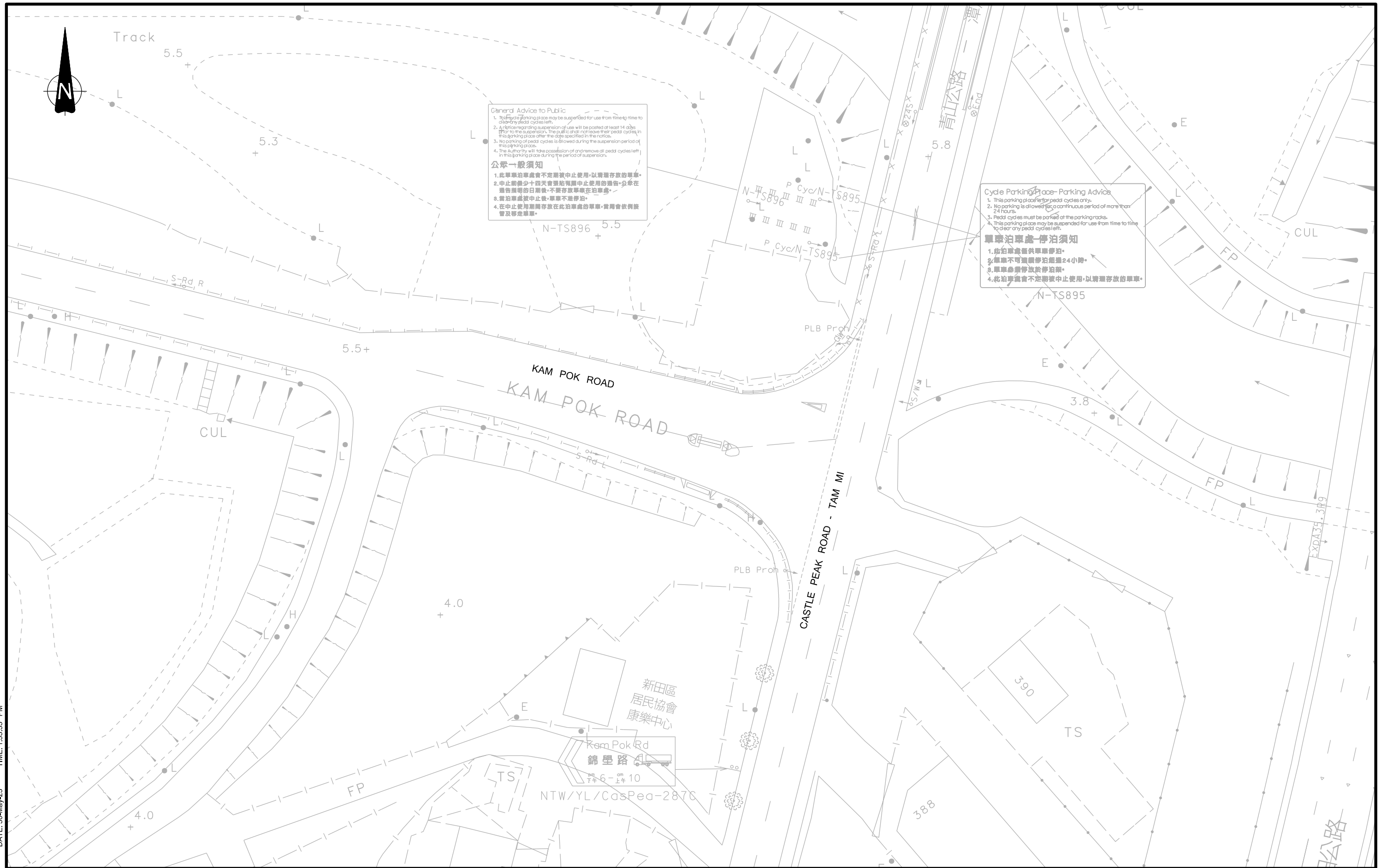


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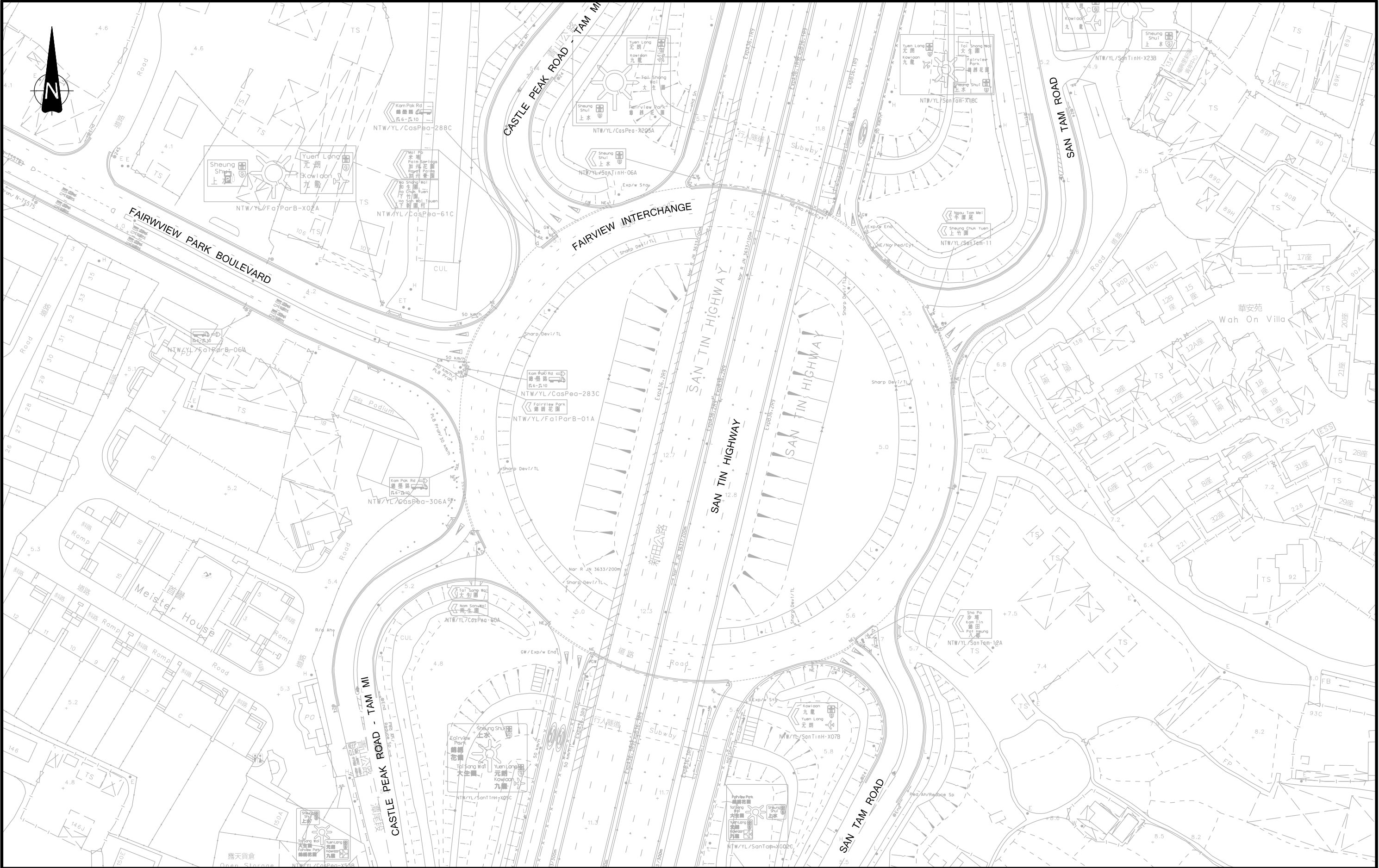
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Drawing Title			
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - TAM MI / YAU POK ROAD (F)			
Designed	MYC	Checked	CFC
Scale	1:500(A3)	Date	MAY 2025
Drawing No.	3.9	Rev.	-





-		-	-	Project Title PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101, WO SHANG WAI, MAI PO, YUEN LONG	Drawing Title EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - TAM MI / KAM POK ROAD (G)					
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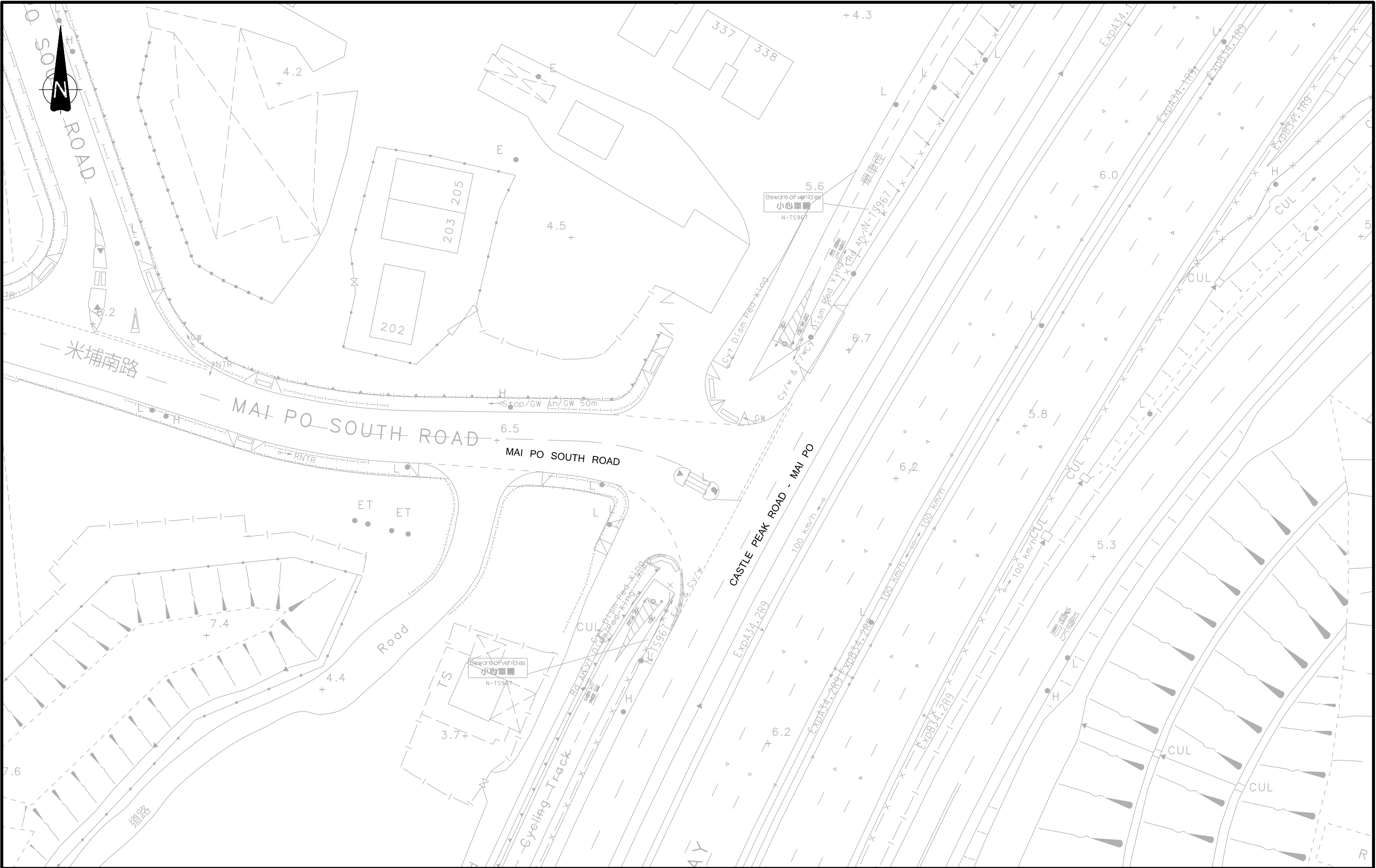
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Rev.	Description	Checked	Date

Project Title
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Drawing Title											
EXISTING JUNCTION LAYOUT OF FAIRVIEW PARK INTERCHANGE (H)											
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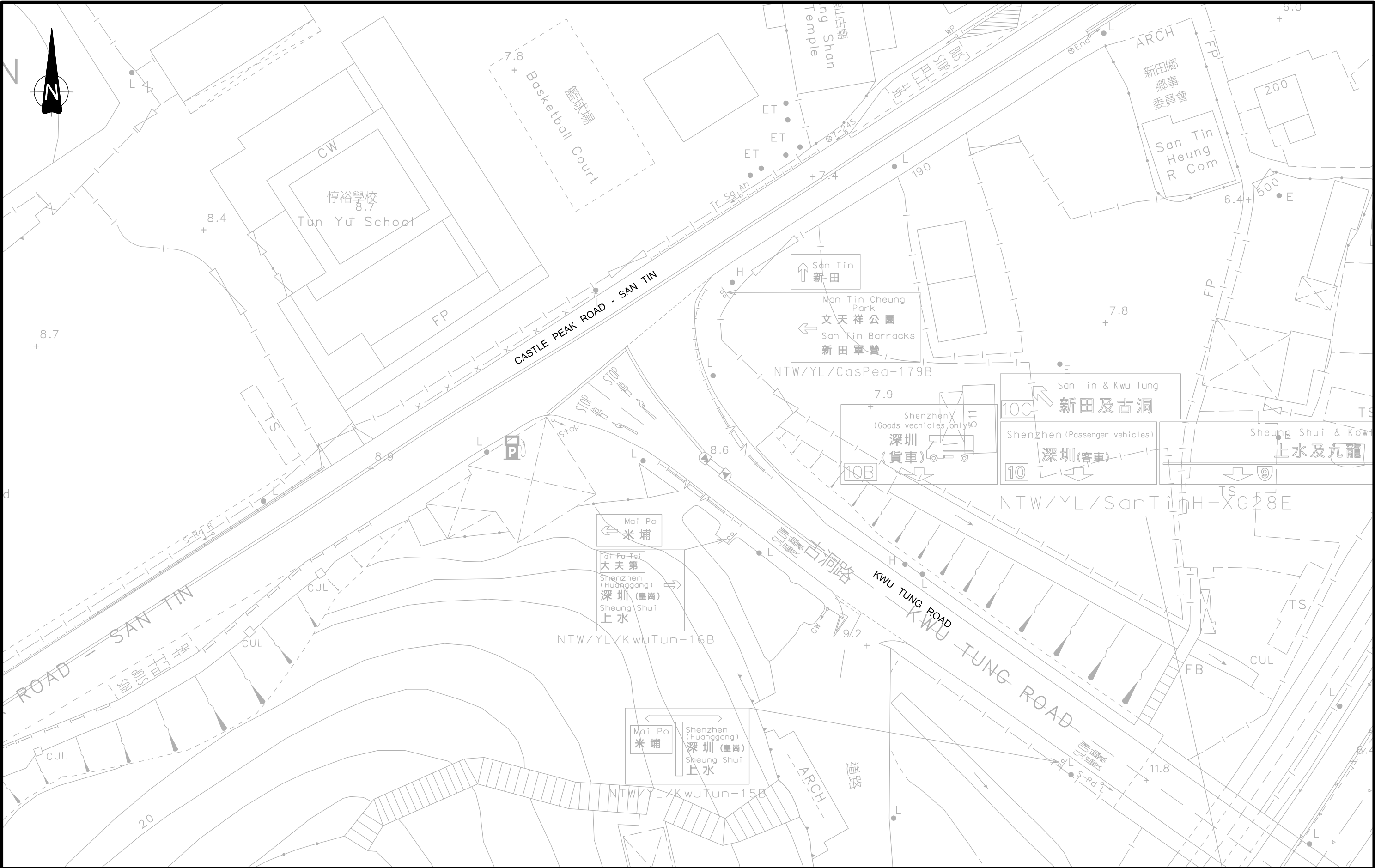
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PROPOSED COMPREHENSIVE RESIDENTIAL
DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101,
WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title			
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - MAI PO / MAI PO SOUTH ROAD (I)			
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Drawing No. 3.12		Rev. -	



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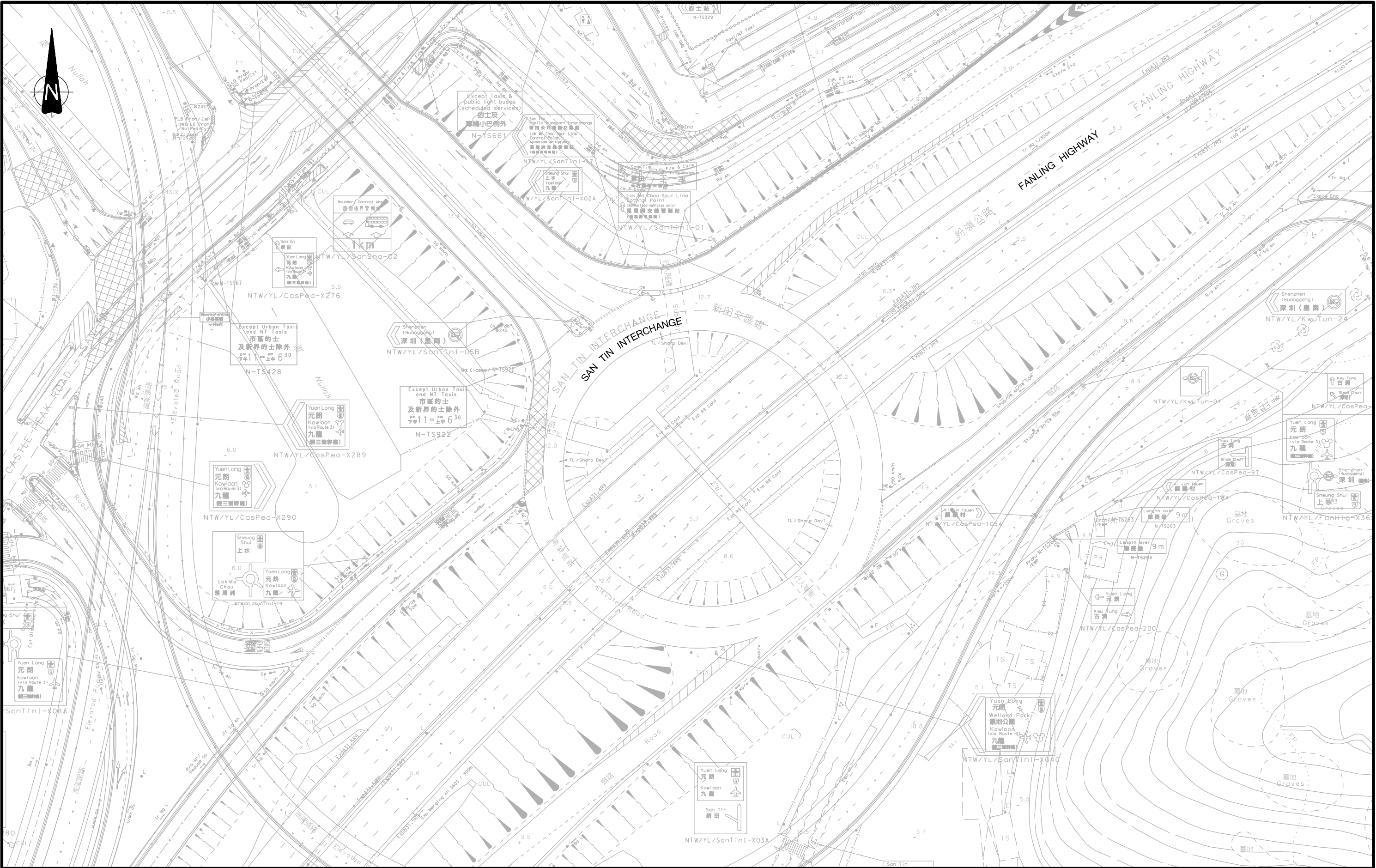
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PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101, WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title			
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD- SAN TIN / KWU TUNG ROAD (J)			
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Drawing No.	3.13	Rev.	-



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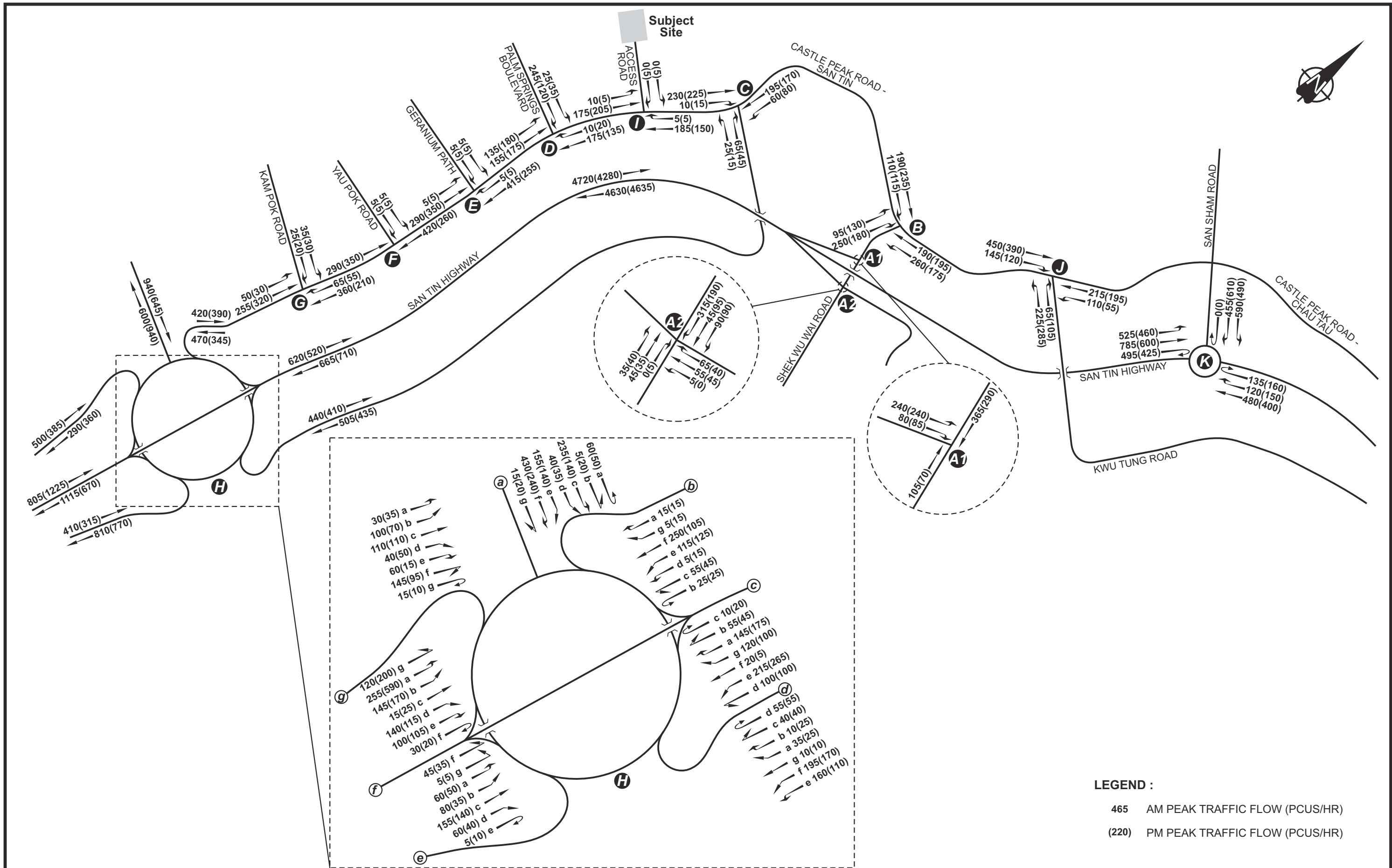


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Rev.	Description	Checked	Date

Project Title
PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101, WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title											
EXISTING JUNCTION LAYOUT OF SAN TIN INTERCHANGE (K)											
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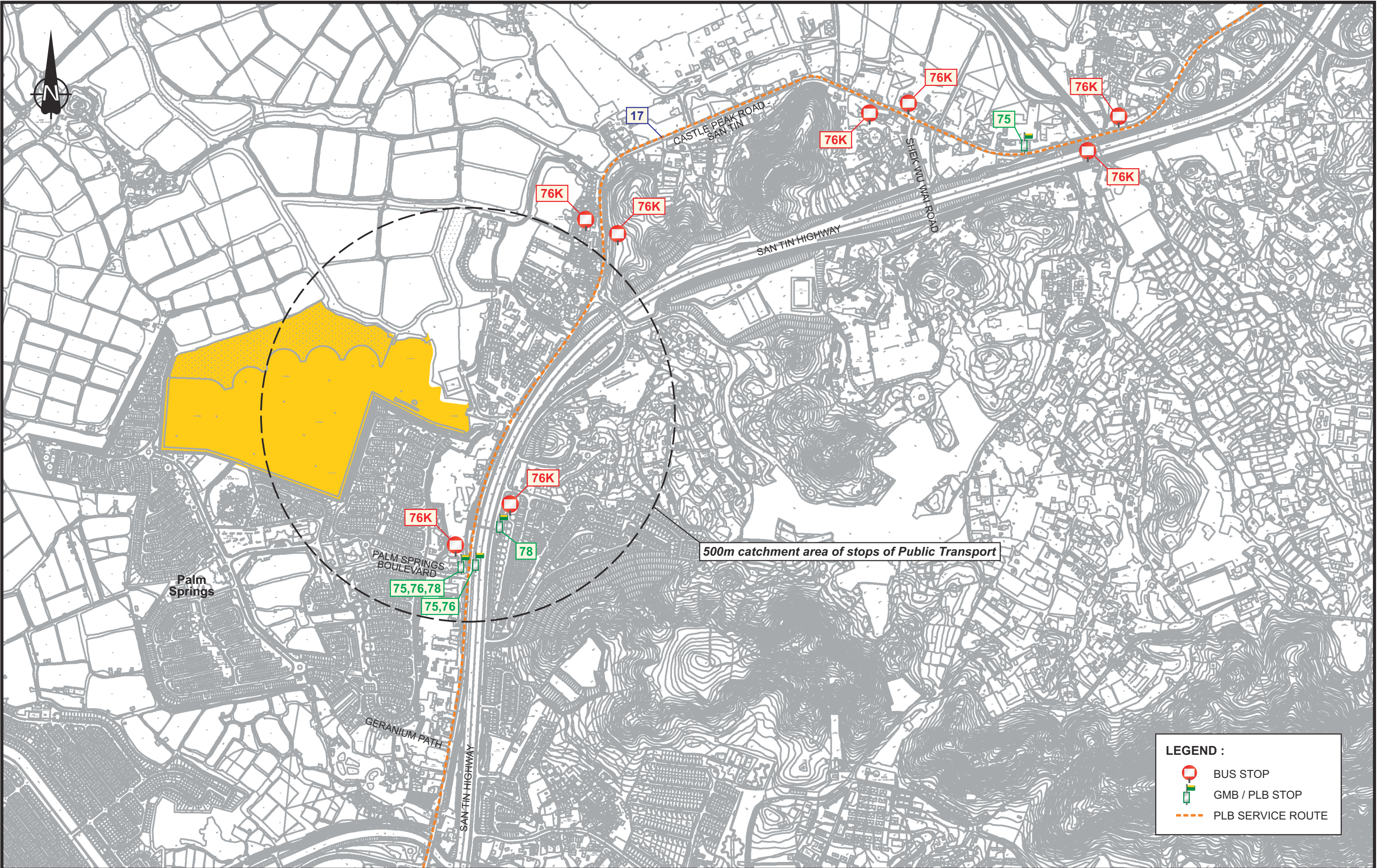


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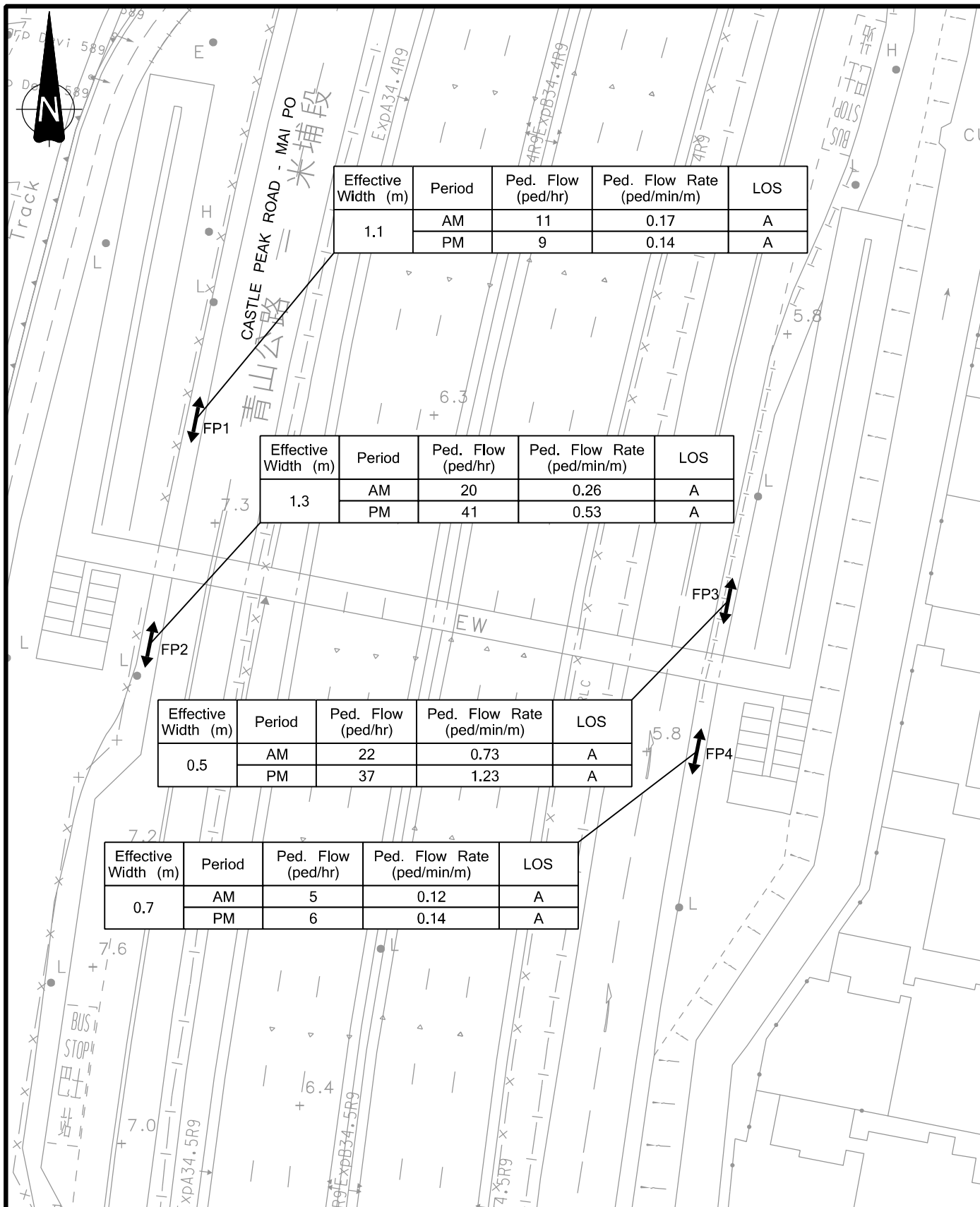
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PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOTS 50 S.A. AND 77 IN D.D.101, WO SHANG WAI, MAI PO, YUEN LONG

Drawing Title											
2024 OBSERVED TRAFFIC FLOWS											
Designed	MYC	Checked	CFC	Scale	NTS	Date	MAY 2025	Drawing No.	3.15	Rev.	A





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Rev.	Description	Checked	Date								



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Project Title				PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOT 50 S.A. AND 77 IN D.D. 101, WO SHANG WAI, MAI PO, YUEN LONG					
Drawing Title									
YEAR 2024 OBSERVED PEAK HOUR PEDESTRIAN FLOWS									
Designed	MYC	Checked	CFC	Scale	N.T.S.(A4)	Date	MAY 2025	Drawing No.	3.17
								Rev.	-

4. TRAFFIC FORECAST

4.1 Design Year

- 4.1.1 The tentative operation year of the proposed development is by 2028. Hence, the design year of 2031, three years upon operation, has been adopted for traffic forecast and assessment purposes.

4.2 Reference Traffic Forecast

Planning Application of Y/YL-MP/10

- 4.2.1 In order to produce the traffic forecast for the strategic highway and other local road links at the design year of 2031, reference has been made to the 2-tier model from nearby approved planning application, Y/YL-MP/10 for proposed development in various lots and adjacent Government Land in DD 104, Yuen Long, N.T.. Subject to review of the traffic flow in Year 2031 and the accounted planned development in the TIA report of Y/YL-MP/10, further adjustment has been made to produce the 2031 Reference traffic flow for the study purpose.

Toll Plans Changes for Tai Lam Tunnel

- 4.2.2 The Government has taken over the Tai Lam Tunnel and implement new tolls on 31 May 2025. Based on the Legislative Council paper regarding the tolling scenarios for Tai Lam Tunnel upon Government's Takeover, the V/C ratio of Tai Lam Tunnel would be changed. With the review of BDTM flow of Tolo Highway and the major junctions along, adjustment on traffic flow is also included into the traffic forecast to reflect the situation accordingly.

Effect of Northern Link (NOL) and Northern Metropolis (NM) Highway

- 4.2.3 The proposed NOL Main Line would be a railway of about 10.7 kilometres connecting the Kam Sheung Road Station and the planned Kwu Tung Station, with three intermediate stations at San Tin, Ngau Tam Mei and Au Tau. Construction of the NOL Main Line is expected to commence in 2025 for completion in 2034.
- 4.2.4 The proposed NM Highway is a major east-west corridor linking the development nodes (including Ngau Tam Mei, San Tin Technopole, Kwu Tung North/Fanling North and New Territories North (NTN) New Town) in the Northern Metropolis with a total length of approximately 23 kilometers. The NM Highway will enhance accessibility to the new development areas and further enhance cross-boundary road connections. Upon commissioning of the NM Highway, it can alleviate traffic pressure on existing roads. The commissioning of San Tin section is targeted in or before Year 2036.
- 4.2.5 The impact of NOL has been considered in the 2-tier model from nearby approved planning application, Y/YL-MP/10. Although the impact of NM Highway has not been reflected in the traffic forecast, the commissioning of both NM Highway would be expected to share the burden of road traffic and help to improve the road junction and road link performance. The population intake programme of the proposed development will take into account the commissioning programme of NOL and the capacity of road network to ensure that the proposed development would not cause any significant traffic impact to the road network.

San Tin Technopole

- 4.2.6 The large-scale development of San Tin Technopole (STT) will be constructed and intake by different phases, as illustrated in **Annex B** and **Annex C**. The summary will be as shown in **Table 4.1**.

Table 4.1 Phasing of San Tin Technopole

Phases ⁽¹⁾	Proposed Commencement of Works	Proposed Intake Year
Initial Phase	Year 2024	Year 2031
Main Phase	Year 2026	Year 2034
Remaining Phase	Year 2032	Year 2039

Remarks: (1) Source from EIA study of First Phase Development of the New Territories North – San Tin / Lok Ma Chau Development Node - Investigation.

- 4.2.7 The development trips in “Initial Phase” would be considered in the assessment of Year 2031. The related development schedules and estimated traffic generations are summarized in below **Table 4.2**.

Table 4.2 Development Trips of San Tin Technopole Adopted in Assessment

Ref. ⁽¹⁾	Development Schedule	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
San Tin Technopole (Initial Phase)	Information and Technology (I&T) Section	(64,000 Employment)	1137 ⁽²⁾	1636 ⁽²⁾	1050 ⁽²⁾	785 ⁽²⁾
	Logistics & Storage and Workshop	(Approximate 380,000m ²)	351 ⁽³⁾	526 ⁽³⁾	512 ⁽³⁾	398 ⁽³⁾
	Public Housing	Approximate 6,695 units (Average house/flat size of about 50 m ²)	416 ⁽⁴⁾	285 ⁽⁴⁾	199 ⁽⁴⁾	268 ⁽⁴⁾
	Private Housing	Approximate 5,150 units (Average house/flat size of about 60 m ²)	214 ⁽⁵⁾	73 ⁽⁵⁾	81 ⁽⁵⁾	142 ⁽⁵⁾

Remark:

- (1) Source from EIA study of First Phase Development of the New Territories North – San Tin / Lok Ma Chau Development Node - Investigation.
(2) Based on 120,000 I&T employment in TPB Land Use Proposal; average daily mechanised home-based work trips per employed person of 1.41 trips, peak hour percentage to daily total trips of 12%, distribution of boardings by transport mode (LRT, tram and ferry excluded) in TCS 2011 (87.4% of PT trips and 12.6% of PC/Taxi trips); and assumed capacity of franchised bus, PLB, shuttle bus and PC.
(3) Based on site area measurement, plot ratio of 2/ 5 in RODP, and traffic generation and attraction rates for industrial building in TPDM.
(4) Based on site area measurement, plot ratio of 6.5 in RODP, assumed average flat size of 50 m², consideration of new flat units about 50,000-54,000 in TPB land use proposal, and traffic generation and attraction rates for subsidised housing: HOS/PSPS in TPDM.
(5) Based on site area measurement, plot ratio of 6 in RODP, assumed average flat size of 60 m², consideration of new flat units about 50,000 - 54,000 in TPB land use proposal, and traffic generation and attraction rates for private housing: high-density/R(a) in TPDM.

Development Proposal of Ngau Tam Mei

- 4.2.8 The Government has recently disclosed the broad development proposal of Ngau Tam Mei (NTM) under Legislative Council Paper (No. CB(1)1487/2024(04). It is proposed to reserve land in NTM for use of post-secondary education institutions (self-sustained UniTown) with integrated residential neighbourhood. The first population intake is expected to take place gradually from Year 2034 onwards to tally with the commissioning of NOL Main Line.
- 4.2.9 According to the broad land use concept plan, NTM is expected to be served by the new Northern Metropolis (NM) Highway, while direct road connections/interchange are proposed to San Tin Highway and STT. Besides, upon NOL opening by Year 2034, MTR Ngau Tam Mei Station is expected to attract and shift some of the existing road traffic into railway, it is

anticipated that the traffic conditions along San Tam Road and the existing Fairview Park Boulevard Interchange will be largely improved. With reviewed of the traffic flow of 2-tier model of Y/YL-MP/10, it has already been considered in the traffic forecast.

Other Planned/Committed Developments

4.2.10 Apart from San Tin Technopole, there are also a number of other planned/committed developments located in the vicinity that are expected to be completed by year 2031. The Proposed temporary light public housing development (in various lots in D.D. 104 and adjoining government land, Yau Pok Road, Yuen Long) is excluded in the assessment due to its anticipated completion year (2024/2025), and the proposed 5-year operation period. The development schedules of these developments and estimated traffic generations are summarized in **Table 4.3** and the locations of these developments are indicated in **Drawing 4.1**.

Table 4.3 Other Planned/Committed Developments

Ref. ⁽¹⁾	Developments Location; Application No.	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
1	Lots 3152, 3153 RP, 3156 S.B and 4805 in D.D. 104 and Adjoining Government Land (GL), Kam Pok Road, Mai Po, Yuen Long, Y/YL-MP/10	2,322 units (average flat size of about 42.4 m ²)	167 ⁽³⁾	99 ⁽³⁾	67 ⁽³⁾	86 ⁽³⁾
		Public Transport	28 ⁽³⁾	28 ⁽³⁾	28 ⁽³⁾	28 ⁽³⁾
		Retail (2,363 m ²)	6 ⁽³⁾	6 ⁽³⁾	8 ⁽³⁾	9 ⁽³⁾
		Kindergarten (6 Classrooms)	47 ⁽³⁾	47 ⁽³⁾	2 ⁽³⁾	2 ⁽³⁾
		Neighbourhood Elderly Centre (NEC)	10 ⁽³⁾	10 ⁽³⁾	10 ⁽³⁾	10 ⁽³⁾
2	Proposed House development in various lots in D.D. 104 and adjoining government land, Mai Po, Yuen Long, A/YL-MP/287	65 units (average flat size of about 116 m ²)	15	8	7	10
3	Various Lots in D.D. 104 and adjoining Government Land, Wing Kei Tsuen, Nam Sang Wai, Yuen Long, Y/YL-NSW/7	1,997 units (average flat size of about 49 m ²)	143	85	57	74
		Retail (900 m ²)	2	2	3	3
		Kindergarten / Child Care Centre (2,200 m ²)	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾
4	Sha Po Public Housing Development, N/A	16,300 units	1,385	1,155	850	1,020
5	Lots 8 RP (Part), 8 S.A RP, 12, 13, 14 S.B ss.2, 14 S.B RP, 14 S.C RP, 16, 17, 31 S.B RP, 33 RP, 36 RP, 45, 55 S.A and 1740 S.A RP in D.D.107 and Adjoining Government Land, West of Castle Peak Road – Tam Mi, Yuen Long, Y/YL-NSW/8	6,825 units (Average Flat Size 37.5 m ²)	491 ⁽³⁾	291 ⁽³⁾	196 ⁽³⁾	253 ⁽³⁾
		Retail (3,950m ²)	10 ⁽³⁾	10 ⁽³⁾	13 ⁽³⁾	15 ⁽³⁾
		GIC Facilities (2 nos.)	10 ⁽³⁾	10 ⁽³⁾	10 ⁽³⁾	10 ⁽³⁾
		Kindergarten (8 Classrooms)	25 ⁽³⁾	25 ⁽³⁾	1 ⁽³⁾	1 ⁽³⁾
6	Lots 1910 RP (Part) and 1743 S.C RP (Part) in D.D. 107 and Adjoining Government Land, West of Castle Peak Road – Tam Mi, Yuen Long, Y/YL-NSW/9	3,115 units (Average Flat Size 37.2 m ²)	224 ⁽³⁾	133 ⁽³⁾	90 ⁽³⁾	116 ⁽³⁾
		Retail (3,900 m ²)	9 ⁽³⁾	10 ⁽³⁾	13 ⁽³⁾	14 ⁽³⁾
		1 School	7 ⁽³⁾	30 ⁽³⁾	1 ⁽³⁾	1 ⁽³⁾
		Kindergarten (8 Classrooms)	25 ⁽³⁾	25 ⁽³⁾	1 ⁽³⁾	1 ⁽³⁾
		Relocated Soy Sauce Factory (13,700 m ²)	0 ⁽³⁾	4 ⁽³⁾	10 ⁽³⁾	2 ⁽³⁾

Ref. ⁽¹⁾	Developments Location; Application No.	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
7	Various Lots in D.D. 103 and D.D. 115, Tung Shing Lei, Nam Sang Wai, Yuen Long, YL-NSW/293	3,556 units (assumed average flat size of about 44 m ²)	255	151	102	132
		9 Houses (assumed average house size of 120 m ²)	2	1	1	1
		Retail (5,358 m ²)	12	13	17	19
8	Ho Chau Road, Yuen Long, New Territories (near Tung Shing Lei) (Various lots in D.D. 115 and adjoining Government land), LSPS/002	Private Housing 1,261 units (average flat size of about 40 m ²)	91	54	37	47
		Public Housing 1,868 units (average flat size of about 50 m ²)	117	80	56	75
		Retail 3,045 m ²	7	8	10	11
9	Lots 592 S.C ss.1 S.A, 592 S.C ss.4 and 1252 S.C in D.D. 115, Nam Sang Wai, Yuen Long, A/YL-NSW/274	1,518 units (average flat size of About 46 m ²)	109	65	43	56
		Retail / Commercial (1,800 m ²)	4	4	6	6
		Wellness Centre	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾
		Special Child Care Centre	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾
10	Lot 4823 in D.D. 104, Ngau Tam Mei, Yuen Long, Y/YL-NTM/9	5,400 m ² GFA Elderly Care Home 142 Beds	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾
11	Various Lots in D.D. 107 and Adjoining Government Land, Cheung Chun San Tsuen, Kam Tin, Yuen Long, A/YL-KTN/604	3,891 units (average flat size of about 46 m ²)	279	165	111	144
		Eating Place/Shop and Services (5,500 m ²)	13	13	17	20
		Social Welfare Facility (788 m ²)	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾
12	Phase 2 Development of Lots 1783 (Part), 1784 RP, 1788 RP, 1789 RP, 1790 RP (Part), 1791 RP, 1795 (Part), 1796 (Part), 1797 (Part), 1836 (Part), 1927 S.A and 1927 RP (Part) in D.D. 107 and Adjoining Government Land, Kam Tin, Yuen Long, A/YL-KTN/663	1,154 units (average flat size of about 43 m ²)	83	49	33	43
13	Lot 2206 in D.D. 109, Kam Tai Road, Kam Tin, Yuen Long, A/YL-KTN/791	330 units (average house/flat size of about 39 m ²)	24	14	9	12
14	Lots 3054 S.A RP (Part), 3200 RP (Part), 3200 S.A RP, 3201 RP (Part), 3202 (Part), 3203 RP, 3204 RP, 3205 RP, 3156 RP, 3211 RP, 3212 RP, 3213 RP, 3214 S.A, 3 214 S.B, 3215, 3216, 3217, 3218 RP (Part), 3250 S.B ss.23 RP (Part), 3250 S.B ss.33 RP (Part) in D.D. 104, and Adjoining Government Land, Yuen Long, Y/YL-MP/3	106 Houses (average house size of about 163 m ²)	30	19	18	26
		Retail 607 m ²	2	2	2	3
15	Lot 1071 in D.D. 103, Ha Ko Po Tsuen, Kam Tin, Yuen Long, A/YL-KTN/964	615 units (average flat size of about 38 m ²)	45	27	18	23
		Retail 1,165 m ²	3	3	4	5

Ref. ⁽¹⁾	Developments Location; Application No.	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
16	Lots 870 S.A, 870 RP, 877 RP, 878 S.A, 878 S.B, 878 S.C, 878 S.D, 878 S.E, 878 S.F, 878 RP and 892 in D.D. 115 and Adjoining Government Land, Tung Shing Lei, Nam Sang Wai, Yuen Long, A/YL-NSW/303	90 units (senior hostel, average flat size of about 66 m ²)	7	4	3	4
		5,400 m ² residential care home for the elderly 127 Beds	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾	10 ⁽²⁾
17	Lots 879, 880 S.A ss.1, 880 S.B ss.1, 881 to 885, 889 RP (Part), 891 (Part), 1318, 1326 and 1344 in D.D. 115 and Adjoining Government Land, Au Tau, Nam Sang Wai, Yuen Long, A/YL-NSW/292	9,178.9 m ² residential care home for the elderly 530 Beds	23 ⁽³⁾	27 ⁽³⁾	21 ⁽³⁾	27 ⁽³⁾
18	Proposed Comprehensive Development Scheme to include Wetland Restoration Proposal and Proposed Filling of Ponds/Land and Excavation of Land in "OU(CDWRA)" Zone at Various Lots in D.D. 104, North of Kam Pok Road East, Pok Wai, Yuen Long, New Territories, A/YL-NSW/314	90 units (average flat size of about 227 m ²)	28 ⁽³⁾	21 ⁽³⁾	21 ⁽³⁾	31 ⁽³⁾

Remarks: (1) Refer to **Drawing 4.2** for development locations;
(2) Assume Nominal Trips of 10 pcu/hr; and,
(3) Trips generation from project's TIA report.

4.2.11 Based on the above, the year 2031 reference traffic flows, as shown in **Drawing 4.2** are produced according to the following:

Year 2031 reference traffic flows: Review of Year 2034 Reference Traffic Flows from Y/YL-MP/10 + Adjustment of Growth Rate and other Planned/Committed Development Trip Generation

4.3 Development Traffic Generations

Trip Generation of Proposed Scheme

4.3.1 The proposed development will provide 649 units and the related trip generations of the residential units are estimated in accordance with the relevant trip rates as tabulated in the Transport Planning Design Manual (TPDM). **Table 4.4** summarises the trip rates of the proposed development.

Table 4.4 Estimated Trip Rates of Proposed Development

	Trip Generations			
	AM Peak		PM Peak	
	Gen	Att	Gen	Att
Residential Trip Rate (pcu/hr/flat)				
R(A), Average flat size = 70m ² per unit, Mean rate, for 36 units	0.1117	0.0729	0.0454	0.0551
R(B), Average flat size = 100m ² per unit, Mean rate, for 315 units	0.2228	0.146	0.1383	0.1499
R(B), Average flat size = 120m ² per unit, Mean rate, for 122 units	0.2595	0.1808	0.1773	0.1842
R(B), Average flat size = 140m ² per unit, Mean rate, for 48 units	0.3021	0.2234	0.2258	0.2226
R(C), Average flat size = 180m ² per unit, Mean rate, for 104 units	0.3276	0.2407	0.2233	0.3097
R(C), Average flat size = 300m ² per unit, Mean rate, for 24 units	0.3896	0.3423	0.3598	0.497

4.3.2 The resulting trip generations of the proposed development are summarized in **Table 4.5**.

Table 4.5 Estimated Trip Generation of Proposed Development

	Trip Generations			
	AM Peak		PM Peak	
	Gen	Att	Gen	Att
Residential Trips⁽¹⁾				
36 units with an average flat size of 70m ²	4	3	2	2
315 units with an average flat size of 100m ²	70	46	44	47
122 units with an average flat size of 120m ²	32	22	22	22
48 units with an average flat size of 140m ²	15	11	11	11
104 units with an average flat size of 180m ²	34	25	23	32
24 units with an average flat size of 300m ²	9	8	9	12
Total (pcu/hr):	164	115	111	126

Remarks: (1) By referring to **Table 4.4**.

4.3.3 As indicated in **Table 4.5**, the proposed development would generate a two-way total of 279 pcu/hr and 237 pcu/hr during the weekday morning and evening peak hour periods respectively. The development trip distributions are shown in **Drawing 4.3**.

Public Transport Trips

4.3.4 The public transport demands for the Rezoning Site was estimated with reference to the average daily mechanised trips, the peak hour factor of mechanised trips with reference to TD's Travel Characteristics Survey (TCS) 2011. The public transport modal share from the modal split assumption from 2021 Population Census of Yuen Long District is also shown in **Table 4.6**. Based on the above assumptions, the public transport demands for the proposed development are estimated in **Table 4.7**.

Table 4.6 Modal Split Assumption based on 2021 Population Census of Yuen Long District

Transport Mode ⁽¹⁾	Modal Split	
Rail/LRT	48.3%	Public Transport mode = 81.7%
Shuttle Bus	4.1%	
Bus	25.8%	
PLB	3.5%	
PV/Taxi	11%	
Walk	7.3%	
Total	100%	

Remarks: (1) For Transport Mode, "Ferry" and "Others" are excluded.

Table 4.7 Estimated Trip Generation of Approved Development

Index	Parameter	Formula	Result
(a)	Proposed No. of Units	-	649
(b)	Average Domestic Household Size ⁽¹⁾	-	2.8
(c)	Estimated Total Population	(a)*(b)	1,817
(d)	Average Daily Mechanised Trips per Person ⁽²⁾	-	1.83
(e)	Peak Hour Percentage of Daily Total ⁽³⁾	-	12%
(f)	Assumed Percentage of Major Outbound Trips in Peak Hour	-	100%
(g)	Estimated Peak Hour Trips by Proposed Development	(c)*(d)*(e)*(f)	399
(h)	Major Public Transport Modal Share ⁽⁴⁾	-	81.7%
(i)	Estimated Peak Hour Public Transport Demand	(g)*(h)	326
(j)	Estimated Passenger using Franchised Bus	(i)*100%	326
(k)	- Yuen Long Bound Demand [AM Peak (PM peak)]	65% (68%)	212(222)
(l)	- San Tin/Sheung Shui Bound Demand [AM Peak (PM peak)]	35% (32%)	114(104)

Remarks: (1) Agreed by Planning Department;
(2) With reference to Table E.2 in TCS 2011;
(3) Peak hour percentage to daily total, with reference to Para. 3.3.7 in TCS 2011; and,
(4) Refer to Table 4.6.

4.3.5 From **Table 4.7**, it is estimated that there will be one-way of approx. 326 pax/hr of public transport demand generated from the proposed residential development during the peak hour. It is assumed that the induces 100% of the induced PT trips would adopt Franchised Bus in the assessment, in conservative approach.

4.3.6 The estimated overall public transport demands at Year 2031 are summarized in **Table 4.8**.

Table 4.8 Estimated Year 2031 Public Transport Demands

Peak Hour	Bound	Average Peak Hour Service Capacity (pax)	Estimated Year 2031 Occupancy (pax) ⁽¹⁾	Additional Passenger Demands (pax) ⁽²⁾	Overall Passenger Demands (pax)	Occupancy Rate (%)
AM Peak	Yuen Long	812	517	212	729	90%
	San Tin/Sheung Shui	713	397	114	511	72%
PM Peak	Yuen Long	780	637	104	741	95%
	San Tin/Sheung Shui	776	455	222	677	87%

Remarks: (1) +1.0% annual growth rate is applied to the average observed peak hour PT trips to estimate Year 2031 demand; and,
(2) Refer to **Table 4.7**.

4.3.7 From **Table 4.8**, it can be shown that the demand for public transport service for Yuen Long bound at AM peak and San Tin/Sheung Shui bound at PM peak would increase upon occupation of the proposed residential development. The detailed arrangement of public transport service enhancement such as frequency improvement of the existing services will be subject to actual

passenger demand and further review with the corresponding public transport operators and government departments, if necessary.

Trip Generation of Approved Scheme

- 4.3.8 In the approved scheme, the development will provide 789 houses with an average flat size of approximately 105.1 m². The trip generations of the approved development are summarised in **Table 4.9**.

Table 4.9 Estimated Trip Generation of Approved Development

	Trip Generations			
	AM Peak		PM Peak	
	Gen	Att	Gen	Att
Trip Rates (pcu/units/hr) ⁽¹⁾	0.1961	0.1116	0.0955	0.1321
No. of House Unit	789			
Trips (pcu/hr)	155	88	75	104

Remarks: (1) Trip Rates extracted from TPDM for private housing: low-density R(B) with average flat sizes of 100m².

- 4.3.9 The net difference of the trip generation between the approved and proposed schemes is summarised in **Table 4.10**. As shown in **Table 4.10**, the trip generation of the current proposed scheme would be larger in both AM and PM peak periods, compared with the previous approved scheme.

Table 4.10 Net Difference of Trip Generations between the Approved and Proposed Schemes

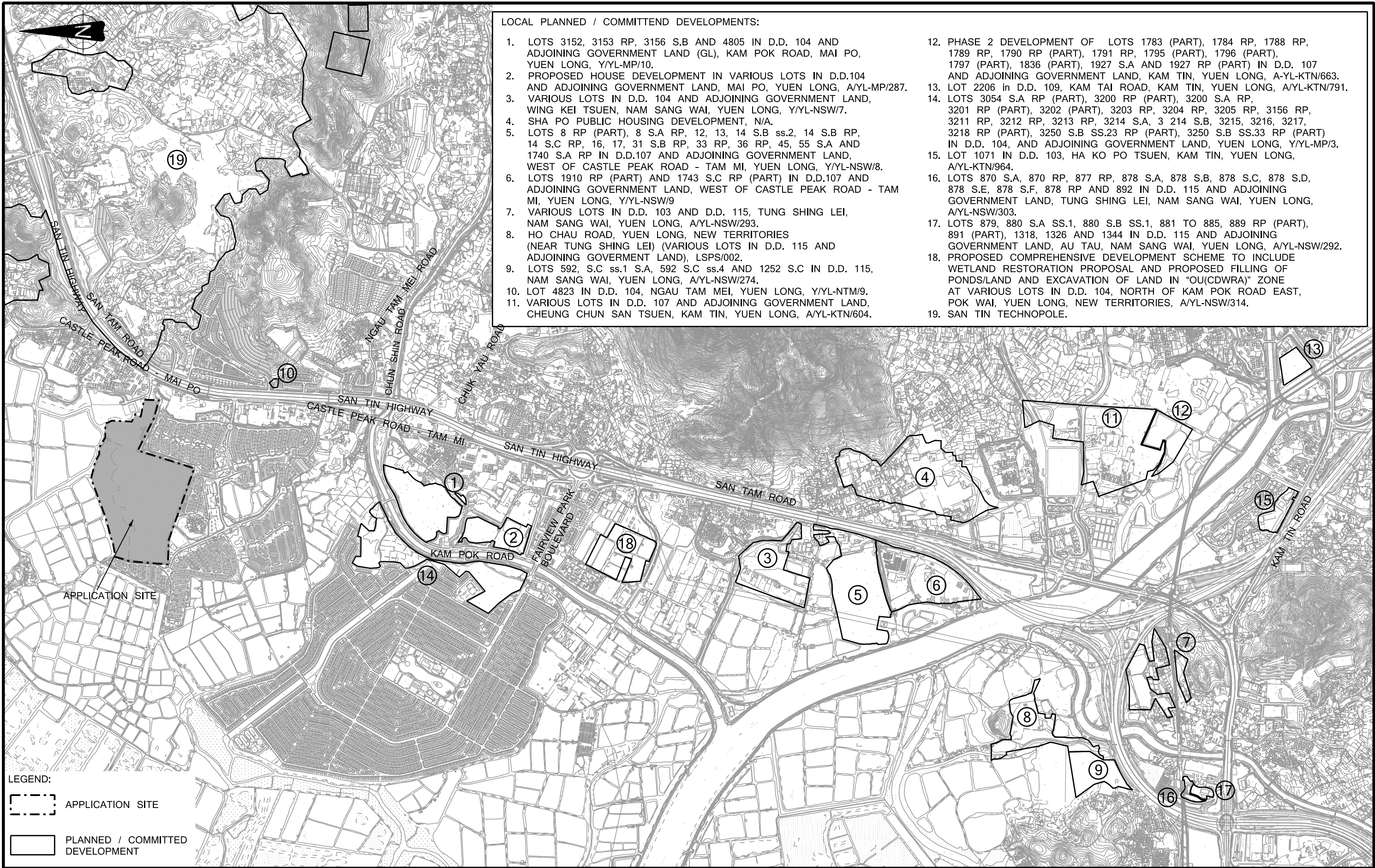
	Trip Generations (pcu/hr)			
	AM Peak		PM Peak	
	Gen	Att	Gen	Att
Approved Scheme [A]	155	88	75	104
Proposed Scheme [B]	164	115	111	126
Trip Difference [B] – [A]	+9	+27	+36	+22

4.4 Traffic Forecast Data

- 4.4.1 Based on the above, the year 2031 design flows, as shown in **Drawing 4.4** are produced according to the following.

Year 2031 Design Case = Year 2031 Reference Case + Proposed Development Trip Generation

FILENAME: E:\OneDrive - SysTraGroup\hlocalch50873110\la\F41.dgn
PRINTED BY: jho1
DATE: 15 Jul 2025
TIME: 11:38:00



LOCAL PLANNED / COMMITTEND DEVELOPMENTS:

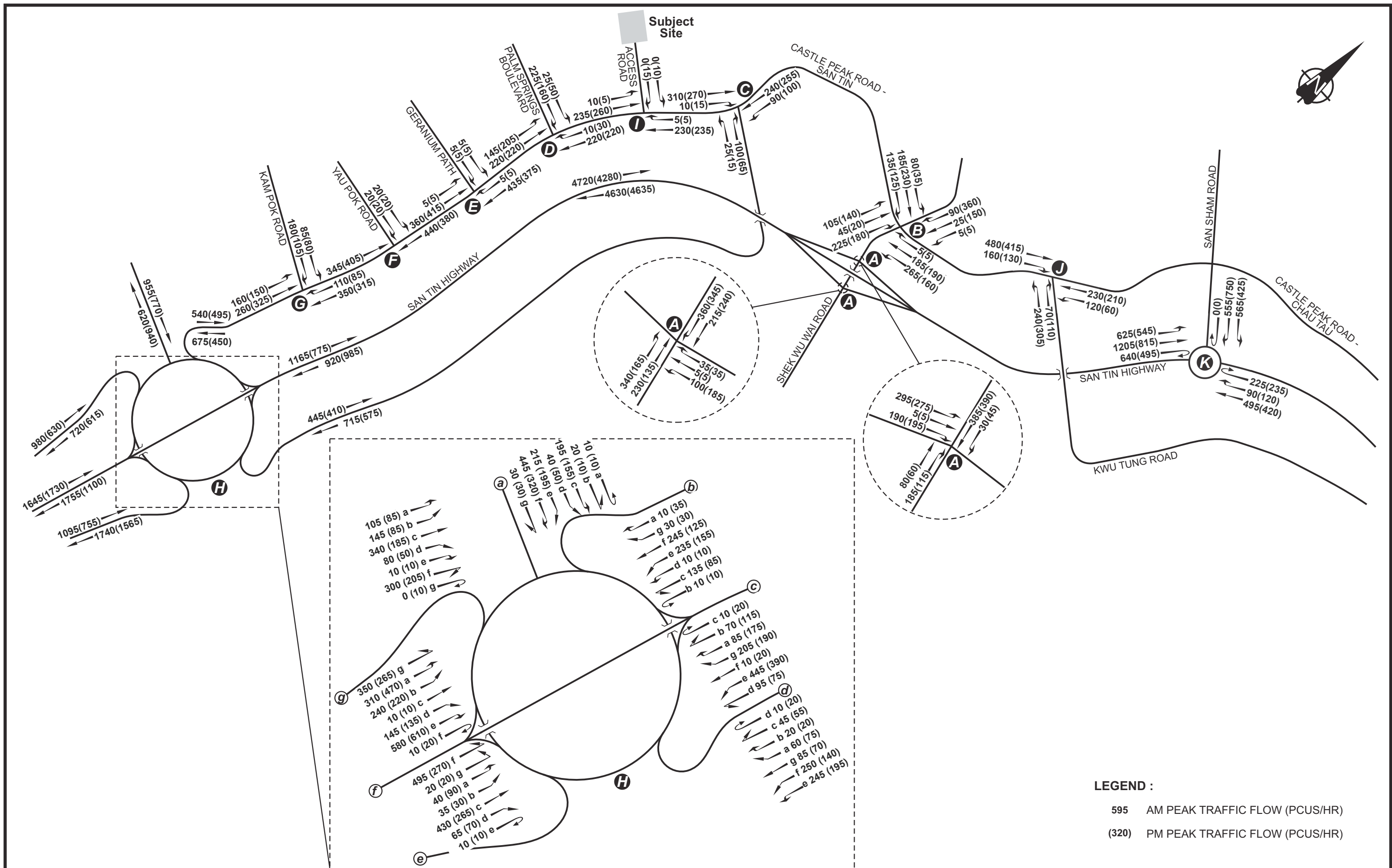
1. LOTS 3152, 3153 RP, 3156 S.B AND 4805 IN D.D. 104 AND ADJOINING GOVERNMENT LAND (GL), KAM POK ROAD, MAI PO, YUEN LONG, Y/YL-MP/10.
2. PROPOSED HOUSE DEVELOPMENT IN VARIOUS LOTS IN D.D.104 AND ADJOINING GOVERNMENT LAND, MAI PO, YUEN LONG, A/YL-MP/287.
3. VARIOUS LOTS IN D.D. 104 AND ADJOINING GOVERNMENT LAND, WING KEI TSUEN, NAM SANG WAI, YUEN LONG, Y/YL-NSW/7.
4. SHA PO PUBLIC HOUSING DEVELOPMENT, N/A.
5. LOTS 8 RP (PART), 8 S.A RP, 12, 13, 14 S.B ss.2, 14 S.B RP, 14 S.C RP, 16, 17, 31 S.B RP, 33 RP, 36 RP, 45, 55 S.A AND 1740 S.A RP IN D.D.107 AND ADJOINING GOVERNMENT LAND, WEST OF CASTLE PEAK ROAD - TAM MI, YUEN LONG, Y/YL-NSW/8.
6. LOTS 1910 RP (PART) AND 1743 S.C RP (PART) IN D.D.107 AND ADJOINING GOVERNMENT LAND, WEST OF CASTLE PEAK ROAD - TAM MI, YUEN LONG, Y/YL-NSW/9
7. VARIOUS LOTS IN D.D. 103 AND D.D. 115, TUNG SHING LEI, NAM SANG WAI, YUEN LONG, A/YL-NSW/293.
8. HO CHAU ROAD, YUEN LONG, NEW TERRITORIES (NEAR TUNG SHING LEI) (VARIOUS LOTS IN D.D. 115 AND ADJOINING GOVERNMENT LAND), LSPS/002.
9. LOTS 592, S.C ss.1 S.A, 592 S.C ss.4 AND 1252 S.C IN D.D. 115, NAM SANG WAI, YUEN LONG, A/YL-NSW/274.
10. LOT 4823 IN D.D. 104, NGAU TAM MEI, YUEN LONG, Y/YL-NTM/9.
11. VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, CHEUNG CHUN SAN TSUEN, KAM TIN, YUEN LONG, A/YL-KTN/604.
12. PHASE 2 DEVELOPMENT OF LOTS 1783 (PART), 1784 RP, 1788 RP, 1789 RP, 1790 RP (PART), 1791 RP, 1795 (PART), 1796 (PART), 1797 (PART), 1836 (PART), 1927 S.A AND 1927 RP (PART) IN D.D. 107 AND ADJOINING GOVERNMENT LAND, KAM TIN, YUEN LONG, A-YL-KTN/663.
13. LOT 2206 in D.D. 109, KAM TAI ROAD, KAM TIN, YUEN LONG, A/YL-KTN/791.
14. LOTS 3054 S.A RP (PART), 3200 RP (PART), 3200 S.A RP, 3201 RP (PART), 3202 (PART), 3203 RP, 3204 RP, 3205 RP, 3156 RP, 3211 RP, 3212 RP, 3213 RP, 3214 S.A, 3 214 S.B, 3215, 3216, 3217, 3218 RP (PART), 3250 S.B SS.23 RP (PART), 3250 S.B SS.33 RP (PART) IN D.D. 104, AND ADJOINING GOVERNMENT LAND, YUEN LONG, Y/YL-MP/3.
15. LOT 1071 IN D.D. 103, HA KO PO TSUEN, KAM TIN, YUEN LONG, A/YL-KTN/964.
16. LOTS 870 S.A, 870 RP, 877 RP, 878 S.A, 878 S.B, 878 S.C, 878 S.D, 878 S.E, 878 S.F, 878 RP AND 892 IN D.D. 115 AND ADJOINING GOVERNMENT LAND, TUNG SHING LEI, NAM SANG WAI, YUEN LONG, A/YL-NSW/303.
17. LOTS 879, 880 S.A SS.1, 880 S.B SS.1, 881 TO 885, 889 RP (PART), 891 (PART), 1318, 1326 AND 1344 IN D.D. 115 AND ADJOINING GOVERNMENT LAND, AU TAU, NAM SANG WAI, YUEN LONG, A/YL-NSW/292.
18. PROPOSED COMPREHENSIVE DEVELOPMENT SCHEME TO INCLUDE WETLAND RESTORATION PROPOSAL AND PROPOSED FILLING OF PONDS/LAND AND EXCAVATION OF LAND IN "OU(CDWRA)" ZONE AT VARIOUS LOTS IN D.D. 104, NORTH OF KAM POK ROAD EAST, POK WAI, YUEN LONG, NEW TERRITORIES, A/YL-NSW/314.
19. SAN TIN TECHNOPOLE.

LEGEND:

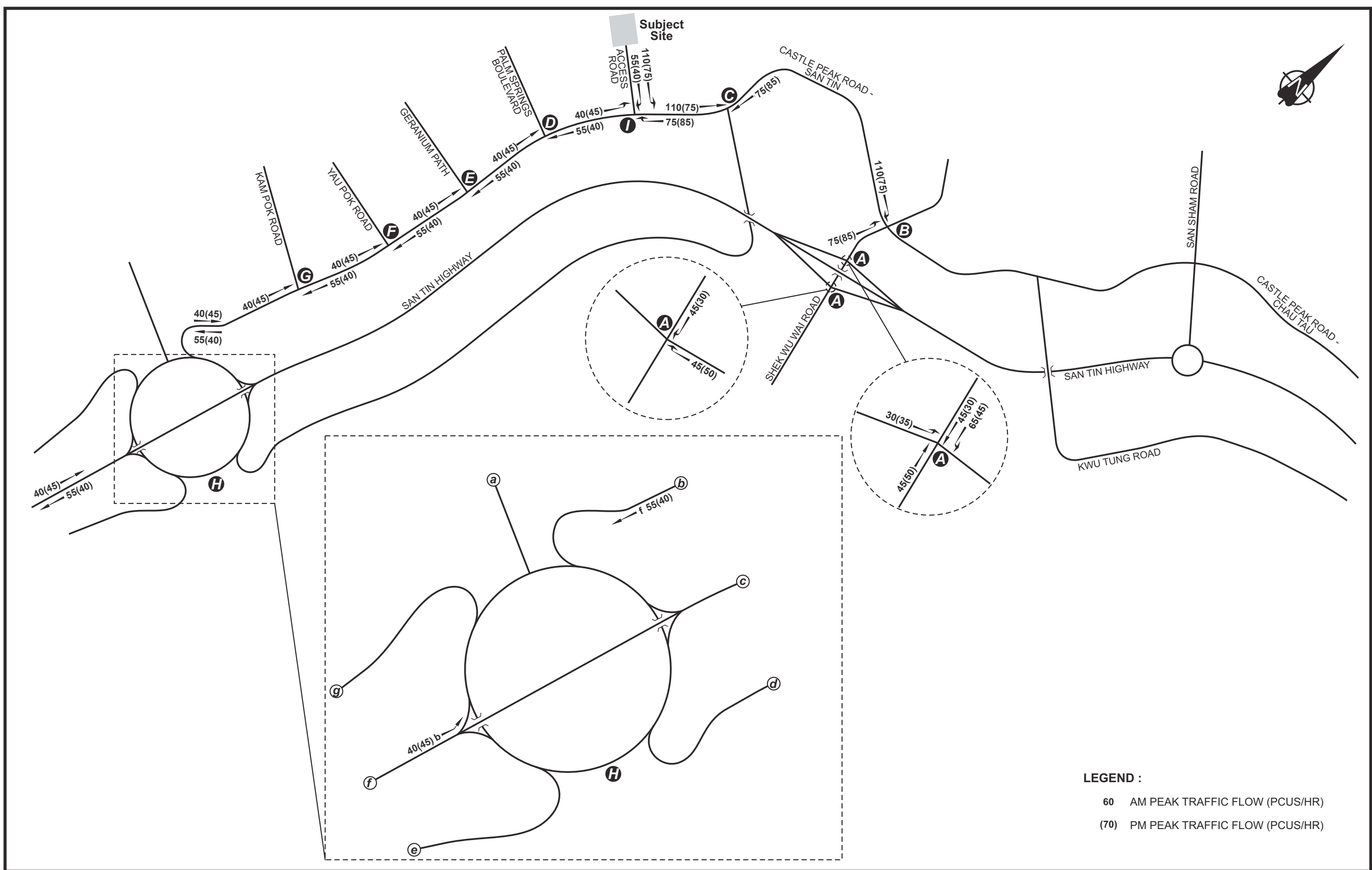
APPLICATION SITE

PLANNED / COMMITTED DEVELOPMENT

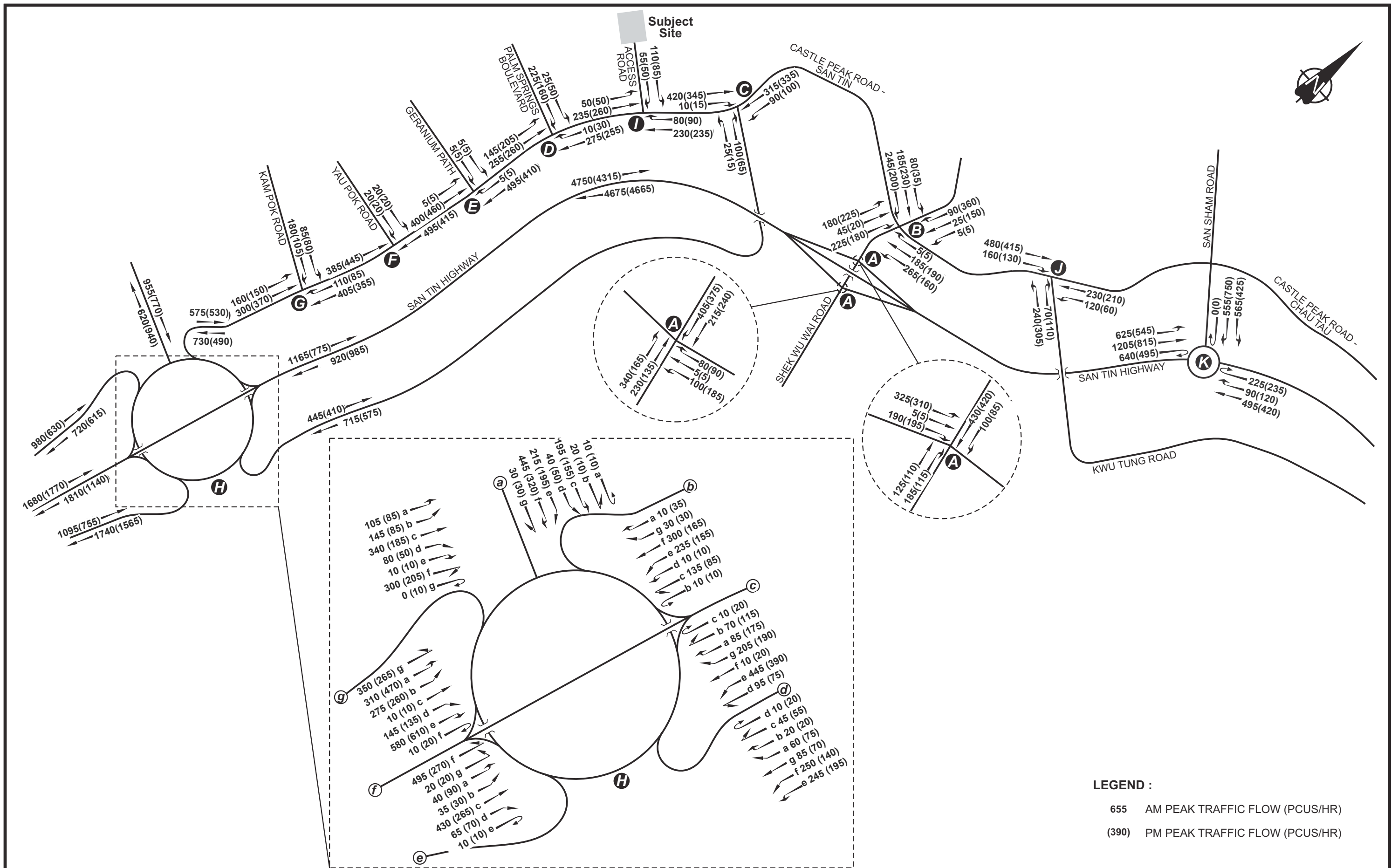
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-	-	-	-								
-	-	-	-								
-	-	-	-								
Rev.	Description	Checked	Date								
					Designed MYC	Checked CFC	Scale N.T.S.(A3)	Date MAY 2025	Drawing No. 4.1	Rev. -	



-	-	-	-	Project Title PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOTS 50 S.A. AND 77 IN D.D.101, WO SHANG WAI, MAI PO, YUEN LONG	Drawing Title 2031 REFERENCE TRAFFIC FLOWS						
-	-	-	-								
-	-	-	-								
A	TD COMMENTS INCORPORATED	CFC	24OCT25								
Rev.	Description	Checked	Date		Designed MYC	Checked CFC	Scale NTS	Date JUL 2025	Drawing No. 4.2	Rev. A	



-	-	-	-	Project Title PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOTS 50 S.A. AND 77 IN D.D.101, WO SHANG WAI, MAI PO, YUEN LONG	Drawing Title DEVELOPMENT TRAFFIC FLOWS					
-	-	-	-							
-	-	-	-							
A	TD COMMENTS INCORPORATED	CFC	24OCT25							
Rev.	Description	Checked	Date		Designed MYC	Checked CFC	Scale NTS	Date JUL 2025	Drawing No. 4.3	Rev. A



-	-	-	-	Project Title PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOTS 50 S.A. AND 77 IN D.D.101, WO SHANG WAI, MAI PO, YUEN LONG	Drawing Title 2031 DESIGN TRAFFIC FLOWS											
-	-	-	-													
-	-	-	-													
A	TD COMMENTS INCORPORATED	CFC	24OCT25													
Rev.	Description	Checked	Date		Designed	MYC	Checked	CFC	Scale	NTS	Date	JUL 2025	Drawing No.	4.4	Rev.	A

5. TRAFFIC IMPACT ASSESSMENT

5.1 Year 2031 Junction Operational Performance

5.1.1 To investigate the traffic impact of the proposed development on the surrounding road network at the design year 2031, operational performance of the identified key local junctions has been assessed based on the planned junction layouts (for junction A and B) and existing layout for both 2031 reference and design cases. The assessment results for the year 2031 reference and design cases are summarised in **Table 5.1**. The junction calculation sheets are attached in **Annex A**.

Table 5.1 Year 2031 Junction Operational Performance

Ref. ⁽¹⁾	Junction	RC/RFC ⁽²⁾			
		2031 Reference Case		2031 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
A	Shek Wu Wai Road / San Tin Highway Slip Road ⁽³⁾	>100%	>100%	>100%	>100%
B	Shek Wu Wai Road / Road D3 / Road L11 / Road L12 ⁽⁴⁾	>100%	60%	>100%	60%
C	Castle Peak Road – Mai Po/San Tam Road	0.30	0.18	0.32	0.19
D	Castle Peak Road – Mai Po/Palm Springs Boulevard	0.54	0.45	0.56	0.46
E	Castle Peak Road – Mai Po/Geranium Path	0.02	0.02	0.02	0.02
F	Castle Peak Road – Tam Mi/Yau Pok Road	0.10	0.11	0.11	0.11
G	Castle Peak Road – Tam Mi/Kam Pok Road	0.62	0.42	0.65	0.43
H	Fairview Park Interchange	1.25	1.03	1.28	1.06
I	Castle Peak Road – Mai Po/Mai Po South Road	0.01	0.05	0.31	0.26
J	Castle Peak Road – San Tin/Kwun Tung Road	0.58	0.77	0.58	0.77
K	San Tin Interchange	0.69	0.52	0.69	0.52

Remarks: (1) Refer to **Drawing 3.2** for junction reference;
(2) RC = reserve capacity, RFC = ratio of flow to capacity;
(3) Refer to **Drawing 5.1** for junction reference; and,
(4) Refer to **Drawing 5.2** for junction reference.

5.1.2 The anticipated trip generations of the current proposed scheme would be larger in both AM and PM peak periods, compared with the previous approved scheme. The assessment results in **Table 5.1** indicated that the majority of identified key junctions would operate with ample capacity in year 2031, except for Junction H, which will be operated over capacity.

5.1.3 For Junction H, with reference to the Preliminary Technical Review on Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study under Agreement No. CE 10/2020 (CE) and the planning application Y/YL-MP/10, there will be a planned junction improvement scheme for Fairview Park Interchange, as illustrated in **Drawing 5.3**. It is proposed to widen the entry lanes at Fairview Park Boulevard, Castle-Peak Road – Tam Mi, San Tam Road and the slip road from San Tin Highway northbound and southbound. In addition, an additional exclusive left-turn lane is proposed at San Tin Highway northbound for the traffic to Castle Peak Road – Tam Mi southbound. Nonetheless, should there be any delay whatsoever such that the abovementioned junction improvement works at Junction H are not in place, the applicant would take up the responsibility to carry out the related junction improvement works instead.

Table 5.2 Year 2031 Junction Operational Performance (With Improvement)

Ref.	Junction	RC/RFC ⁽²⁾			
		2031 Reference Case		2031 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
H	Fairview Park Interchange ⁽¹⁾	0.71	0.76	0.72	0.78

Remarks: (1) Refer to **Drawing 5.3** for junction reference; and,
(2) RC = reserve capacity, RFC = ratio of flow to capacity.

5.1.4 **Table 5.2** indicates that with the junction improvement schemes, Junction H will be operating within capacity in Year 2031.

5.1.5 The road link performance for identified road links was conducted as summarised in **Table 5.3**.

Table 5.3 Year 2031 Road Links Performance

Ref. ⁽¹⁾	Road Link	Directions	Design Capacity (veh/hr)	Design Capacity (pcu/hr) ⁽⁵⁾	2031 Reference Case				2031 Design Case			
					Traffic Flow (pcu/hr)		V/C ⁽⁶⁾		Traffic Flow (pcu/hr)		V/C ⁽⁶⁾	
					AM	PM	AM	PM	AM	PM	AM	PM
L1	Mai Po South Road	EB	700 ⁽²⁾	910	0	25	0.00	0.03	165	135	0.18	0.15
		WB	700 ⁽²⁾	910	15	10	0.02	0.01	130	140	0.14	0.15
L2	Castle Peak Road – Mai Po	NB	700 ⁽²⁾	910	245	265	0.27	0.29	285	310	0.31	0.34
		SB	700 ⁽²⁾	910	230	250	0.25	0.27	285	285	0.31	0.31
L3	Castle Peak Road – Mai Po	NB	700 ⁽²⁾	910	320	285	0.35	0.31	430	360	0.47	0.40
		SB	700 ⁽²⁾	910	265	270	0.29	0.30	340	350	0.37	0.38
L4	Castle Peak Road – Tam Mi	NB	700 ⁽²⁾	910	540	490	0.59	0.54	575	530	0.63	0.58
		SB	700 ⁽²⁾	910	675	450	0.74	0.49	730	490	0.80	0.54
L5	San Tin Highway	NB	4700 ⁽³⁾	6,100	4,720	4,280	0.77	0.70	4,750	4,315	0.78	0.71
		SB	4700 ⁽³⁾	6,100	4,630	4,635	0.76	0.76	4,675	4,665	0.77	0.76

Remarks: (1) Refer to **Drawing 3.2** for key road links;
(2) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 2-lane single carriageway will be taken as 1400 veh/hr for two-way traffic, which implies 700 veh/hr for one-way direction;
(3) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 3-lane dual expressway will be taken as 4700 veh/hr for one-way direction;
(4) PCU factor of 1.3 adopted; and,
(5) V/C = volume to capacity ratio.

5.1.6 The assessment results in **Table 5.3** indicate that all identified key road links would operate with ample capacity in year 2031 upon completion of the proposed development.

5.1.7 Therefore, it is anticipated that the proposed development would not cause any significant traffic impact to the road network.

5.2 Year 2031 Pedestrian Flow and Queuing Space Assessment

5.2.1 For the growth rate of pedestrian flow, references have been made to the latest “Projections of Population Distribution 2023-2031” as published by PlanD’s Working Group on Population Distribution Projections in March 2024. The available projected population for the local Tertiary Planning Unit (TPU) in the vicinity, as shown in **Drawing 5.4**, are referenced to derive the annual growth rates as summarised in **Table 5.4**.

Table 5.4 Projected Populations of Selected Tertiary Planning Units

Tertiary Planning Unit (TPU)	Projected Population		Growth Rate (p.a.)
	2021	2027	21/27
541	19,100	19,900	+0.7%
542	12,500	11,700	-1.1%
543 & 546	3,300	5,000	+7.2%
544	3,500	3,200	-1.5%
Total	38,400	39,800	+0.6%

5.2.2 As shown in **Table 5.4**, the projected population planning data suggest that the annual growth rate between Year 2021 and Year 2027 is +0.6% when considering the local TPUs. In conservative approach, +1.0% per annum is adopted for the background pedestrian growth of the local pedestrian flow from Year 2024 to Year 2031, and the consideration of the induced pedestrian trips for franchised bus demand of **Table 4.7**.

5.2.3 The peak hour pedestrian flows in Year 2031 under both reference and design scenarios are shown in **Drawing 5.5** and **5.6**, and the results of the operational performance of identified footpaths and concerned queuing area of bus stops are summarized in **Table 5.5** and **5.6**.

Table 5.5 2031 Level-Of-Service Assessment

Ref. (1)	Actual Width (m)	Effective Width (m) (2)	2031 Reference Peak Hourly Flow (ped/hr) (3)		2031 Reference Peak Flow Rate (ped/min/m) (4)		LOS (5)		2031 Design Peak Hourly Flow (ped/hr) (6)		2031 Design Peak Flow Rate (ped/min/m) (4)		LOS (5)	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Fp1	2.1	1.1	12	10	0.18	0.15	A	A	338	336	5.12	5.09	A	A
Fp2	2.3	1.3	21	44	0.27	0.56	A	A	135	266	1.73	3.41	A	A
Fp3	1.5	0.5	24	40	0.80	1.33	A	A	236	144	7.87	4.80	A	A
Fp4	1.7	0.7	5	6	0.12	0.14	A	A	5	6	0.12	0.14	A	A

Remarks:

- (1) Refer to **Drawing 5.5** and **Drawing 5.6** for locations and operational performance of identified footpaths;
- (2) Effective width for footpath = Actual width – 1.0m dead width (0.5m dead width on one side of footpath);
- (3) Reference pedestrian flow = Year 2024 peak hour pedestrian flows*(1+adopted growth rate of 1.0%)^10;
- (4) Peak flow rate = Peak hourly flow ÷ 60 ÷ effective width;
- (5) Refer to TPDM Vol.6 Chapter 10 Chapter 10.5.2; and,
- (6) Design pedestrian flow = Reference pedestrian flow + induced pedestrian trips for franchised bus demand.

Table 5.6 2031 Queuing Area Level-Of-Service Assessment for Bus Stops

Ref.	Queuing Area (m ²)	2031 Reference				2031 Design			
		Passenger Flow at Bus Stop (pax/hr) ⁽¹⁾	Maximum Queue at Queuing Area (pax)	Avg. Queuing Space (m ² /p) ⁽²⁾	LOS ⁽³⁾	Passenger Flow at Bus Stop (pax/hr) ⁽⁴⁾	Maximum Queue at Queuing Area (pax)	Avg. Queuing Space (m ² /p)	LOS ⁽³⁾
Maple Garden Bus Stop – Yuen Long Bound (SB)	5.8	3	2 (i.e. 3/60x25)	2.9	A	215	90 (i.e. 215/60x25)	0.06	F
Palm Springs Bus Stop – Sheung Shui Bound (NB)	20.3	3	2 (i.e. 3/60x25)	10.2	A	117	49 (i.e. 117/60x25)	0.41	D

Remarks: (1) Reference pedestrian flow = Year 2024 peak hour passenger flows*(1+adopted growth rate of 1.0%)¹⁰;
(2) Average Queuing Space = Queuing Area ÷ (Maximum Queue);
(3) Refer to HCM2000, EXHIBIT 11-9; and,
(4) Design pedestrian flow = Reference pedestrian flow + induced pedestrian trips for franchised bus demand.

5.2.4 As shown in **Table 5.5** and **5.6**, the results indicate that the identified footpaths are operating with adequate spare capacities to cater for the future demand during the peak hours under reference and design scenarios. However, the LOS of queuing area at bus stop would be operated with LOS D and F under the Year 2031 design scenario.

5.2.5 Therefore, it is proposed to widen the queuing area at both concerned bus stops to allow the LOS queuing area to reach LOS C, (i.e. the average pedestrian space = 0.6 m²/p). The queuing area assessment under both 2031 reference and design scenarios are shown in **Table 5.7**, and the propose widening scheme is illustrated in **Drawing 5.7**. The proposed widening works would be undertaken by the applicant.

Table 5.7 2031 Queuing Area Level-Of-Service Assessment for Bus Stops (With Widening)

Ref.	Queuing Area (m ²)	2031 Reference				2031 Design			
		Passenger Flow at Bus Stop (pax/hr) ⁽¹⁾	Maximum Queue at Queuing Area (pax)	Avg. Queuing Space (m ² /p) ⁽²⁾	LOS ⁽³⁾	Passenger Flow at Bus Stop (pax/hr) ⁽⁴⁾	Maximum Queue at Queuing Area (pax)	Avg. Queuing Space (m ² /p)	LOS ⁽³⁾
Maple Garden Bus Stop – Yuen Long Bound (SB)	54.0 (5.8+48.2)	3	2 (i.e. 3/60x25)	27.0	A	215	90 (i.e. 215/60x25)	0.6	C
Palm Springs Bus Stop – Sheung Shui Bound (NB)	29.4 (20.3+9.1)	3	2 (i.e. 3/60x25)	14.7	A	117	49 (i.e. 117/60x25)	0.6	C

Remarks: (1) Reference pedestrian flow = Year 2024 peak hour passenger flows*(1+adopted growth rate of 1.0%)¹⁰;
(2) Average Queuing Space = Queuing Area ÷ (Maximum Queue);
(3) Refer to HCM2000, EXHIBIT 11-9; and,
(4) Design pedestrian flow = Reference pedestrian flow + induced pedestrian trips for franchised bus demand.

5.2.6 **Table 5.7** indicates that with the widening scheme, the LOS of the identified queuing area at bus stops would be operating within capacity in Year 2031.

5.3 Sensitivity Assessment

Assessment 1: Existing Junction Layout for Junction A and Junction B in Design Year 2031

5.3.1 The layout of Junction A (Shek Wu Wai Road / San Tin Highway Slip Road) and Junction B (Shek Wu Wai Road / Road D3 / Road L11 / Road L12) has assumed to be modified as per the proposed road network under San Tin Technopole. In case there is delay on the proposed road work under San Tin Technopole, the junction operational performance for Junction A and Junction B based on the existing junction layout under Design scenario is also assessed. However, as the junction improvement works are mostly to accommodate the development of STT, therefore the STT related traffic trips would also be excluded in the sensitivity assessment. The assessment results for the year 2031 reference and design cases based on existing junction layouts of Junctions A and B are summarised in **Table 5.8**. The junction calculation sheets are attached in **Annex D**.

Table 5.8 Year 2031 Junction Operational Performance for Junction A and B

Ref. ⁽¹⁾	Junction	RC/RFC ⁽²⁾ in Sensitivity Test			
		2031 Reference Case		2031 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
A1	Shek Wu Wai Road/ San Tin Highway Slip Road	0.41	0.40	0.44	0.44
A2	Shek Wu Wai Road/ Mai Po Lung Road	0.52	0.31	0.59	0.35
B	Castle Peak Road – San Tin/ Shek Wu Wai Road	0.87	0.72	1.00	0.82

Remarks: (1) Refer to **Drawing 3.2** for junction reference; and,
(2) RC = reserve capacity, RFC = ratio of flow to capacity.

5.3.2 The assessment results in **Table 5.8** indicated that the Junction A1 and A2 would operate with ample capacity in year 2031, based on the existing junction layout, except for Junction B, which would be operated with RFC 1.0.

5.3.3 For Junction B, the existing priority junction is proposed to be upgraded into a roundabout junction with cautionary crossings proposed to the east of the junction. The proposed improved layout of Junction B, which will be constructed subject to further review of San Tin Technopole's project, is illustrated in **Drawing 5.8**. Nonetheless, should there be any delay on the proposed road works under San Tin Technopole, the applicant would take up the responsibility to carry out the related junction improvement works at Junction B.

Table 5.9 Year 2031 Junction Operational Performance for Junction B (With Improvement)

Ref. ⁽¹⁾	Junction	RC/RFC ⁽²⁾ in Sensitivity Test			
		2031 Reference Case		2031 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
B	Castle Peak Road – San Tin/ Shek Wu Wai Road	0.45	0.37	0.50	0.44

Remarks: (1) Refer to **Drawing 5.8** for junction reference; and,
(2) RC = reserve capacity, RFC = ratio of flow to capacity.

5.3.4 **Table 5.9** indicates that with the junction improvement schemes, Junction B would be operating within capacity in Year 2031. Nevertheless, the junction improvement scheme for Junction B would be assessed based on a hypothetical approach in the sensitivity test, as the proposed road works related to STT should be in place.

Assessment 2: Full intake of San Tin Technopole (STT) in Design Year 2039

5.3.5 Upon TD's comments on previous submission of the TIA report, the scenario for full population intake of San Tin Technopole is considered and included in the assessment as a sensitivity test in Year 2039, according to the anticipated programme of STT. For the traffic growth rate between 2034 and 2039, the Hong Kong Population Projections 2022 – 2046, published by Census and Statistics Department, has been referenced and the figures are shown in **Table 5.10**.

Table 5.10 Hong Kong Population Projections between 2034 and 2039

	2034	2039	Annual Growth Rate (2034 - 2039)
Hong Kong Population (in thousands)	7,945.1	8,115.3	+0.43%

5.3.6 As shown in **Table 5.10**, Hong Kong population shows a positive growth trend with rate of +0.43% per annum from 2034 to 2039, which is adopted as the traffic growth rate of all road sections from Year 2034 to Year 2039.

5.3.7 The related development schedules and estimated traffic generations for the full intake of STT are summarized in below **Table 5.11**.

Table 5.11 Estimated Development Trips of San Tin Technopole in Year 2039

Ref. ⁽¹⁾	Development Schedule	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
San Tin Technopole	Information and Technology (I&T) Section	(120,000 Employment)	2,139 ⁽²⁾	3,080 ⁽²⁾	1,976 ⁽²⁾	1,477 ⁽²⁾
	Logistics & Storage and Workshop	(Approximate 758,000 m ²)	702 ⁽³⁾	1,051 ⁽³⁾	1,023 ⁽³⁾	795 ⁽³⁾
	Public Housing	Approximate 37,800 units (Average house/flat size of about 50 m ²)	1,997 ⁽⁴⁾	1,236 ⁽⁴⁾	988 ⁽⁴⁾	1,389 ⁽⁴⁾
	Private Housing	Approximate 16,200 units (Average house/flat size of about 60 m ²)	1,551 ⁽⁵⁾	730 ⁽⁵⁾	664 ⁽⁵⁾	944 ⁽⁵⁾
	Mixed Use	(Approximate 482,500 m ²)	1,108 ⁽⁶⁾	1,175 ⁽⁶⁾	1,496 ⁽⁶⁾	1,719 ⁽⁶⁾

Remark:

(1) Source from EIA study of First Phase Development of the New Territories North – San Tin / Lok Ma Chau Development Node - Investigation.

(2) Based on 120,000 I&T employment in TPB Land Use Proposal; average daily mechanised home-based work trips per employed person of 1.41 trips, peak hour percentage to daily total trips of 12%, distribution of boardings by transport mode (LRT, tram and ferry excluded) in TCS 2011 (87.4% of PT trips and 12.6% of PC/Taxi trips); and assumed capacity of franchised bus, PLB, shuttle bus and PC.

(3) Based on site area measurement, plot ratio of 2/ 5 in RODP, and traffic generation and attraction rates for industrial building in TPDM.

(4) Based on site area measurement, plot ratio of 6.5 in RODP, assumed average flat size of 50 m², consideration of new flat units about 50,000-54,000 in TPB land use proposal, and traffic generation and attraction rates for subsidised housing: HOS/PSPS in TPDM.

(5) Based on site area measurement, plot ratio of 6 in RODP, assumed average flat size of 60 m², consideration of new flat units about 50,000 - 54,000 in TPB land use proposal, and traffic generation and attraction rates for private housing: high-density/R(A) in TPDM.

(6) Based on site area and non-domestic plot ratio of 2.5/4 from OZP, and traffic generation and attraction rates for retail in TPDM.

5.3.8 With the consideration of traffic growth, traffic generation of the STT and the planned development in **Table 4.3**, the year 2039 reference traffic flow, as shown in **Drawing 5.9** are produced according to the following:

Year 2039 Reference Flow: = Year 2034 Reference Traffic Flows*(1+0.43%)^5 + STT traffic + other Planned/Committed Development Trip Generation

5.3.9 Similarly, the year 2039 design traffic flow, as shown in **Drawing 5.10** are produced according to the following:

Year 2039 Design Flow: = Year 2039 Reference Traffic Flows+ STT traffic + Proposed Development Trip Generation

5.3.10 To investigate the traffic impact of the proposed development on the surrounding road network at the design year 2039, operational performance of the identified key local junctions has been assessed based on the planned junction layouts (for junction A and B) and existing layout for both 2039 reference and design cases in Sensitivity Test. The assessment results for the year 2039 sensitivity test are summarised in **Table 5.12**. The junction calculation sheets are attached in **Annex D**.

Table 5.12 Year 2039 Junction Operational Performance in Sensitivity Test 2

Ref. ⁽¹⁾	Junction	RC/RFC ⁽²⁾			
		2039 Reference Case		2039 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
A	Shek Wu Wai Road / San Tin Highway Slip Road ⁽³⁾	>100%	>100%	>100%	>100%
B	Shek Wu Wai Road / Road D3 / Road L11 / Road L12 ⁽⁴⁾	>100%	60%	>100%	60%
C	Castle Peak Road – Mai Po/San Tam Road	0.30	0.18	0.32	0.19
D	Castle Peak Road – Mai Po/Palm Springs Boulevard	0.54	0.45	0.56	0.46
E	Castle Peak Road – Mai Po/Geranium Path	0.02	0.02	0.02	0.02
F	Castle Peak Road – Tam Mi/Yau Pok Road	0.10	0.11	0.11	0.11
G	Castle Peak Road – Tam Mi/Kam Pok Road	0.62	0.42	0.65	0.43
H	Fairview Park Interchange (with improvement) ⁽⁵⁾	1.25	1.03	1.28	1.06
I	Castle Peak Road – Mai Po/Mai Po South Road	0.01	0.05	0.31	0.26
J	Castle Peak Road – San Tin/Kwun Tung Road	0.58	0.77	0.58	0.77
K	San Tin Interchange	0.69	0.52	0.69	0.52

Remarks: (1) Refer to **Drawing 3.2** for junction reference;
(2) RC = reserve capacity, RFC = ratio of flow to capacity;
(3) Refer to **Drawing 5.1** for junction reference; and,
(4) Refer to **Drawing 5.2** for junction reference.
(5) Refer to **Drawing 5.3** for junction reference.

5.3.11 The assessment results in **Table 5.12** indicated that all identified key junctions would operate with ample capacity in year 2039 under sensitivity test.

5.3.12 The road link performance for identified road links was conducted as summarised in **Table 5.13**.

Table 5.13 Year 2039 Road Links Performance in Sensitivity Test 2

Ref. ⁽¹⁾	Road Link	Directions	Design Capacity (veh/hr)	Design Capacity (pcu/hr) ⁽⁵⁾	2039 Reference Case				2039 Design Case			
					Traffic Flow (pcu/hr)		V/C ⁽⁶⁾		Traffic Flow (pcu/hr)		V/C ⁽⁶⁾	
					AM	PM	AM	PM	AM	PM	AM	PM
L1	Mai Po South Road	EB	700 ⁽²⁾	910	0	25	0.00	0.03	165	140	0.18	0.15
		WB	700 ⁽²⁾	910	15	10	0.02	0.01	130	140	0.14	0.15
L2	Castle Peak Road – Mai Po	NB	700 ⁽²⁾	910	255	280	0.28	0.31	295	325	0.32	0.36
		SB	700 ⁽²⁾	910	240	260	0.26	0.29	295	300	0.32	0.33
L3	Castle Peak Road – Mai Po	NB	700 ⁽²⁾	910	335	295	0.37	0.32	440	370	0.48	0.41
		SB	700 ⁽²⁾	910	275	280	0.30	0.31	355	365	0.39	0.40
L4	Castle Peak Road – Tam Mi	NB	700 ⁽²⁾	910	560	515	0.62	0.57	600	560	0.66	0.62
		SB	700 ⁽²⁾	910	705	475	0.77	0.52	760	510	0.84	0.56
L5	San Tin Highway	NB	4,700 ⁽³⁾	6,100	6,990	5,940	1.14	0.97	7,020	5,975	1.15	0.98
		SB	4,700 ⁽³⁾	6,100	5,955	5,950	0.97	0.97	6,000	5,980	0.98	0.98

Remarks: (1) Refer to **Drawing 3.2** for key road links.

(2) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 2-lane single carriageway will be taken as 1400 veh/hr for two-way traffic, which implies 700 veh/hr for one-way direction

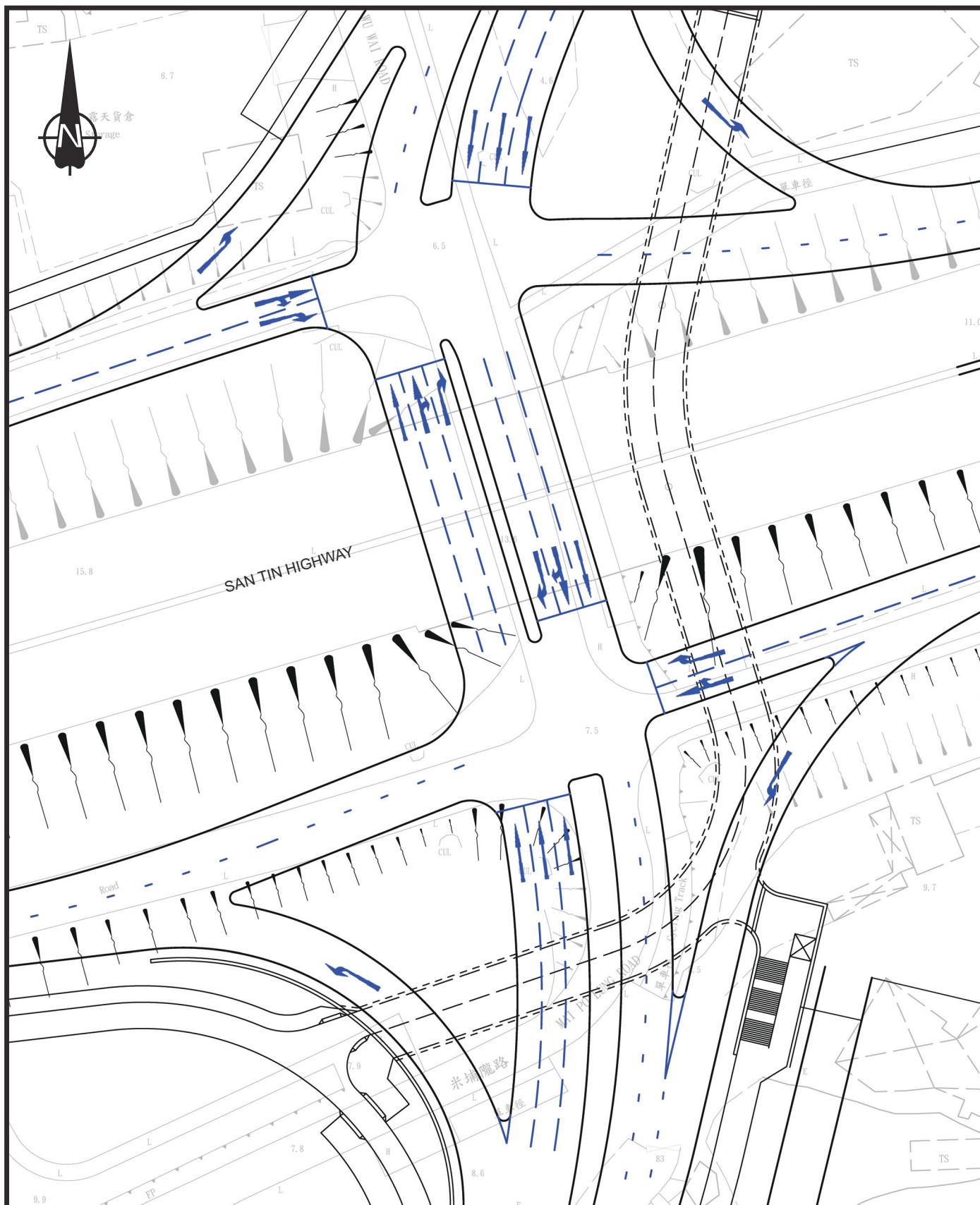
(3) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 3-lane dual expressway will be taken as 4700 veh/hr for one-way direction

(4) PCU factor of 1.3 adopted

(5) V/C = volume to capacity ratio

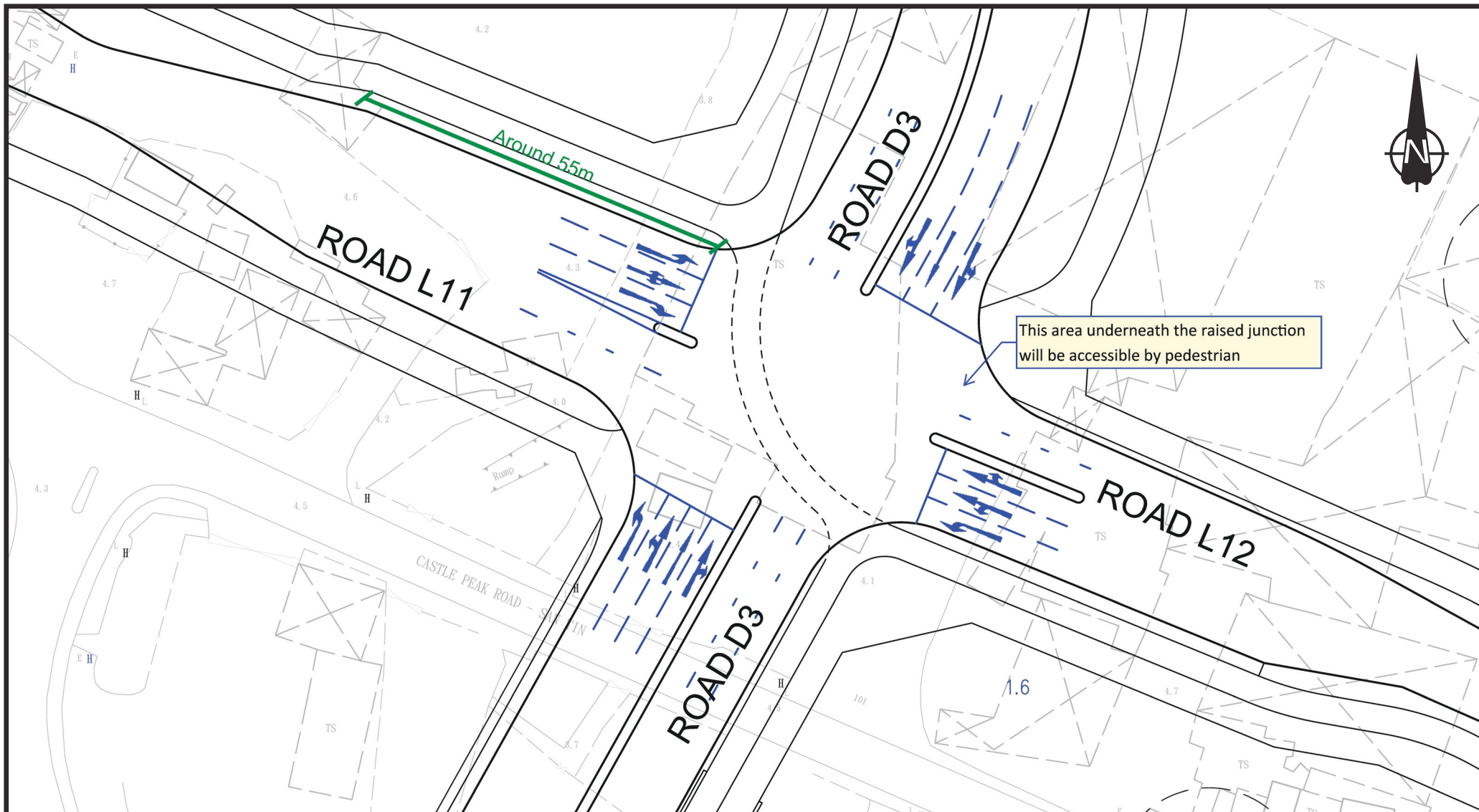
5.3.13 The assessment results in **Table 5.13** indicate that L1 to L4 would operate with ample capacity in year 2039 sensitivity test 2. For L5 (San Tin Highway), it would result in a V/C ratio between 1.0 and 1.2. Since the contribution of additional traffic flow of the subject site to the performance of road links is minimal, and the traffic burden would be shared by the future road infrastructure of NM Highway, the link flow of the concerned road sections should be lowered and the link flow performance would be improved.

5.3.14 Therefore, it is anticipated that all the identified junctions would be operated within capacity and road links would operate with ample capacity with expected future road infrastructure in year 2039 sensitivity test 2.



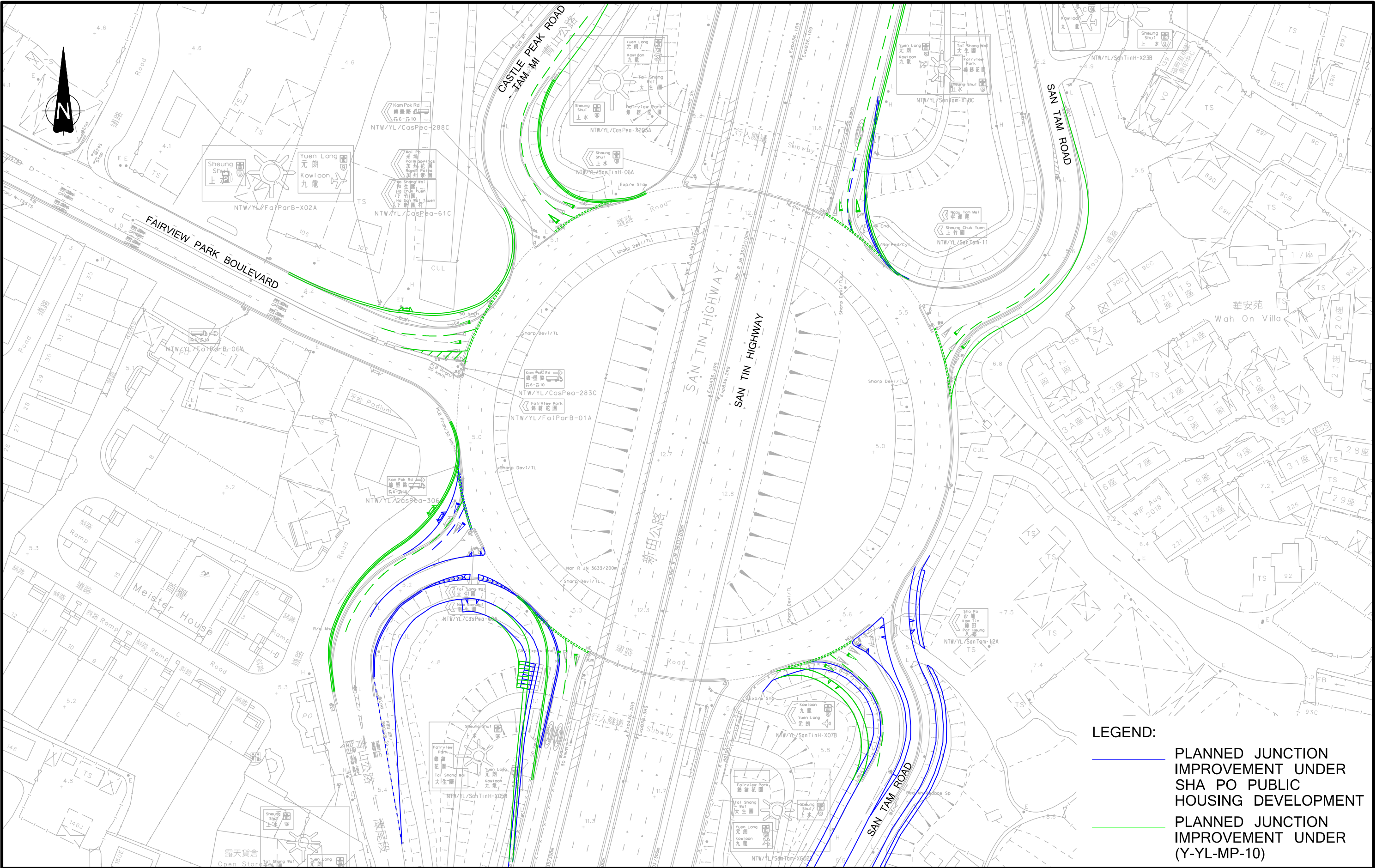
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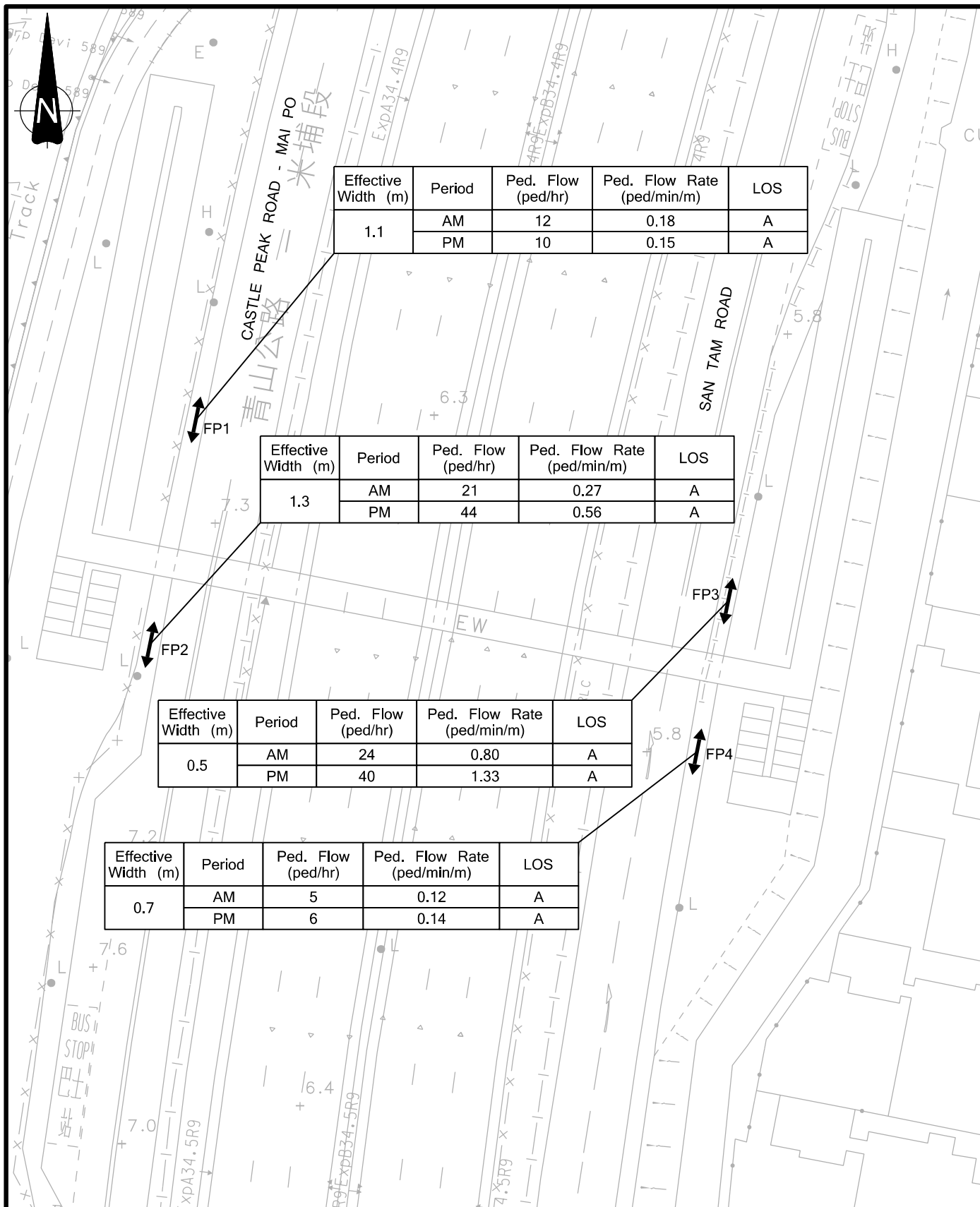
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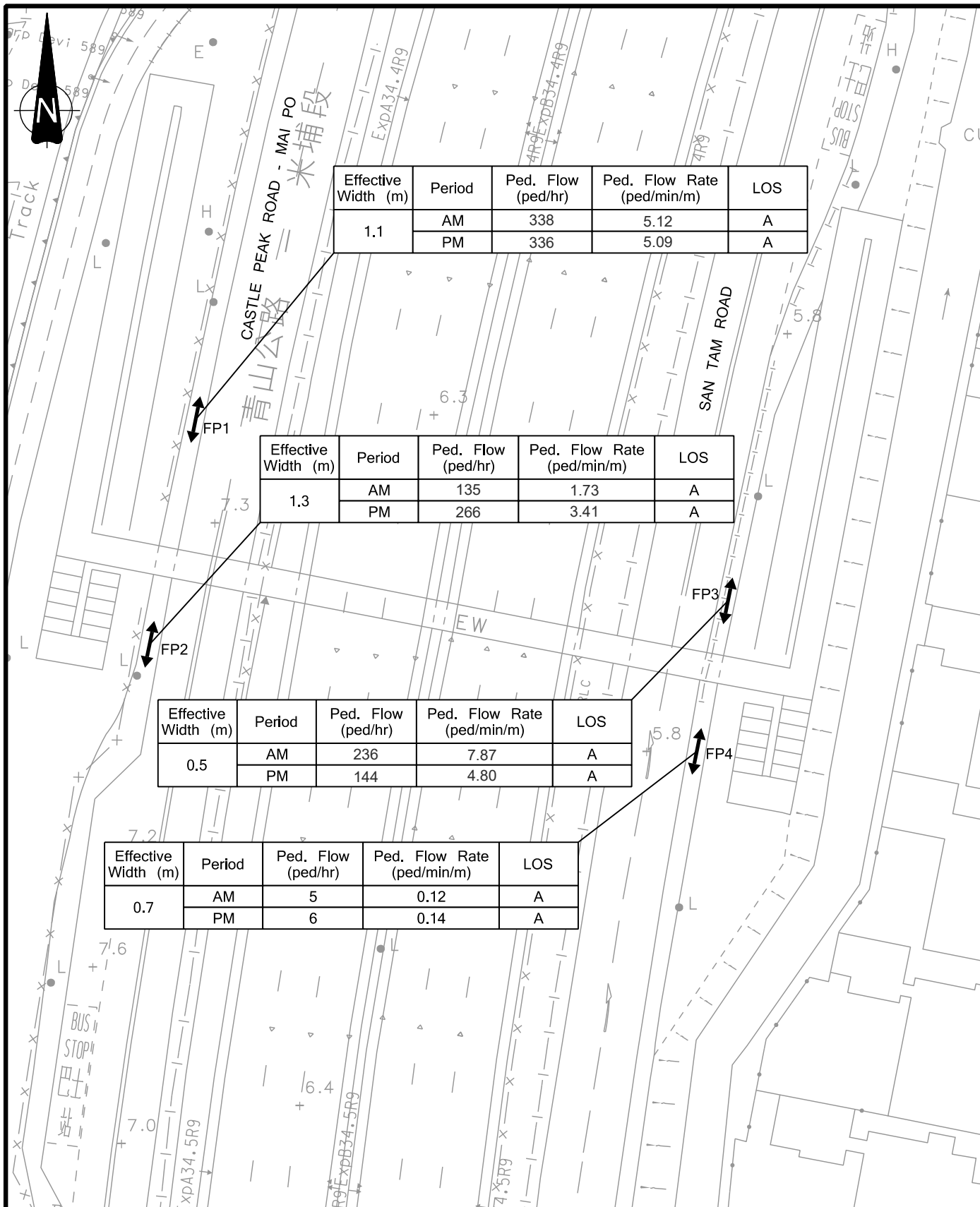
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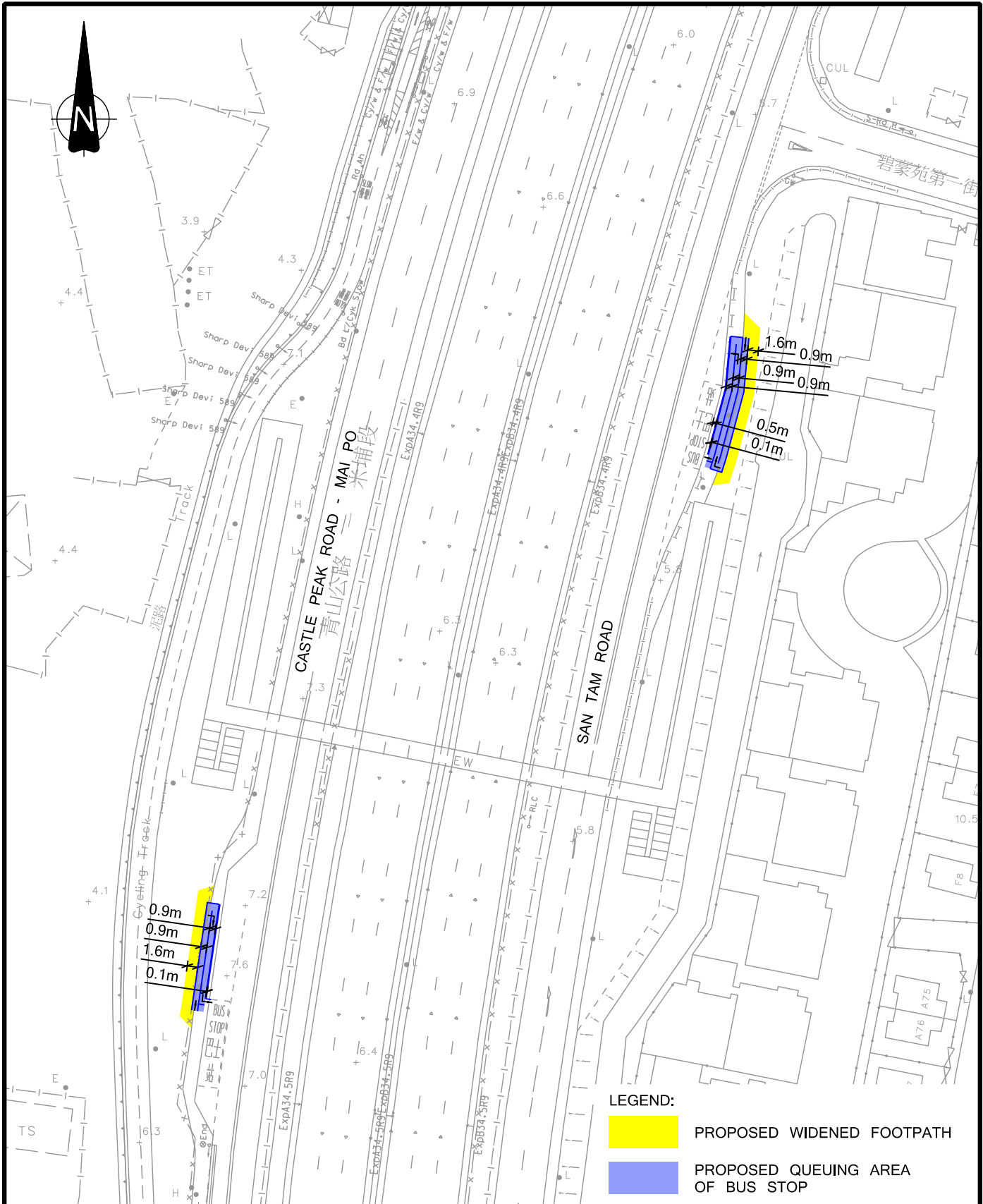


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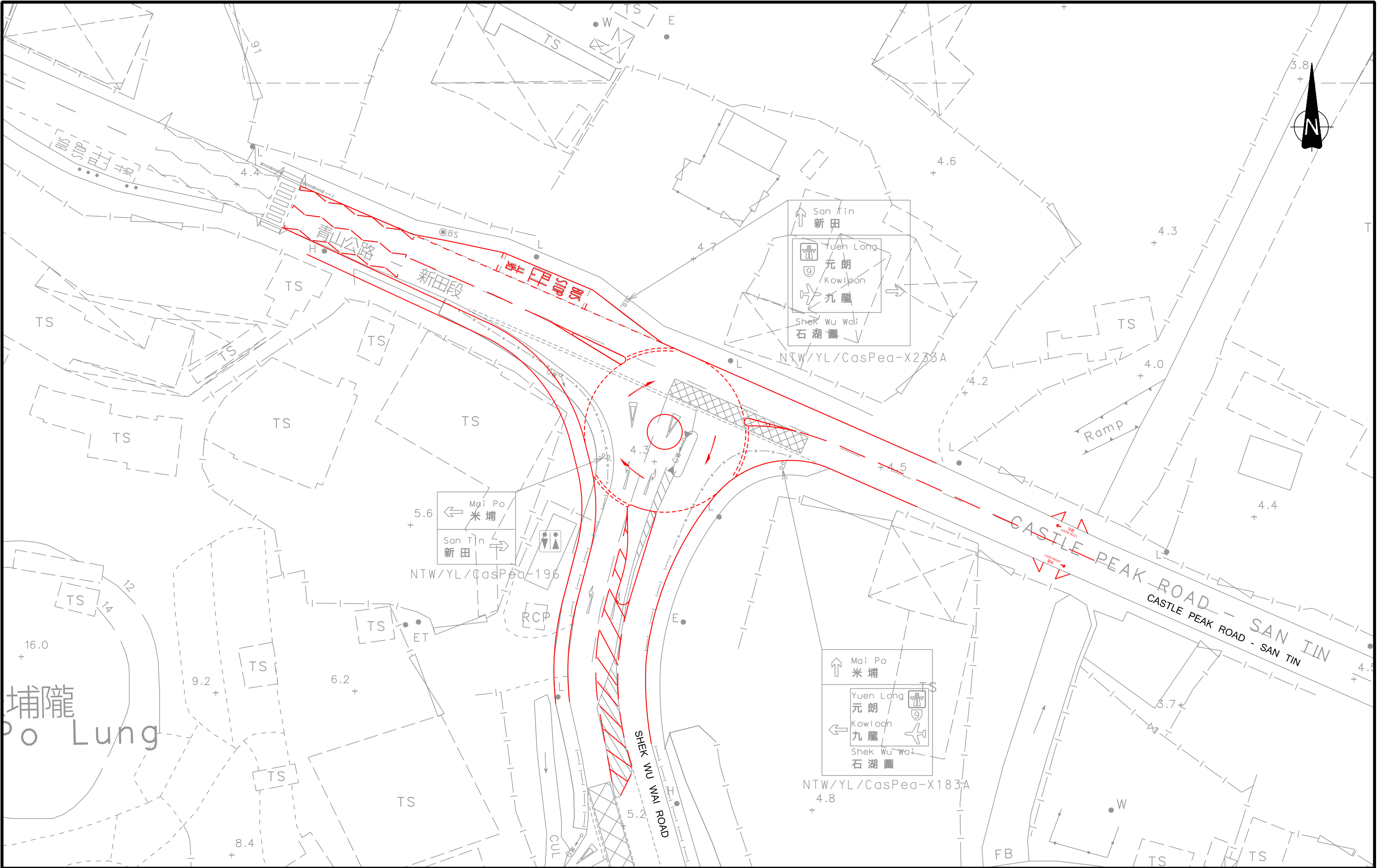
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PROPOSED QUEUING AREA
OF BUS STOP

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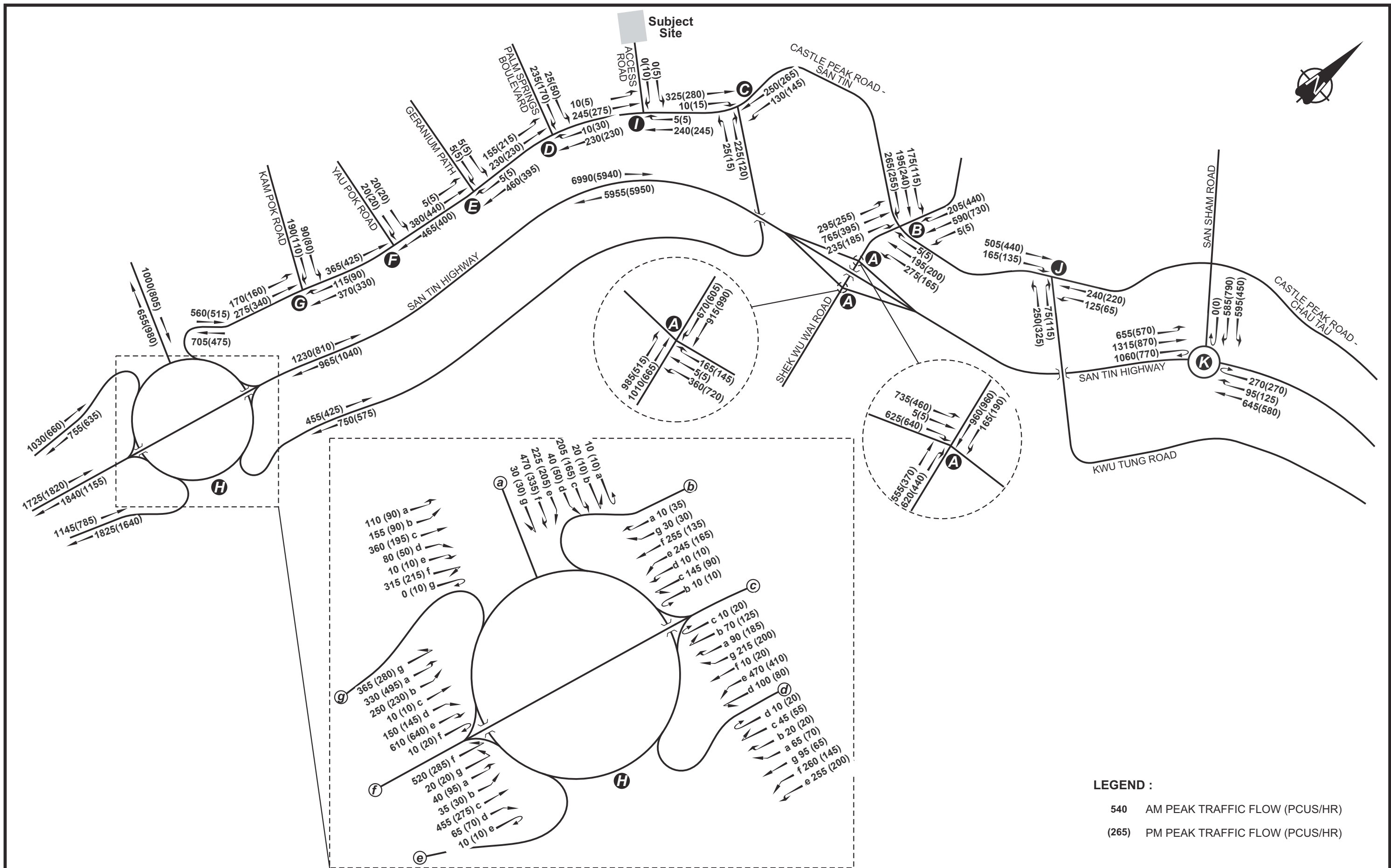
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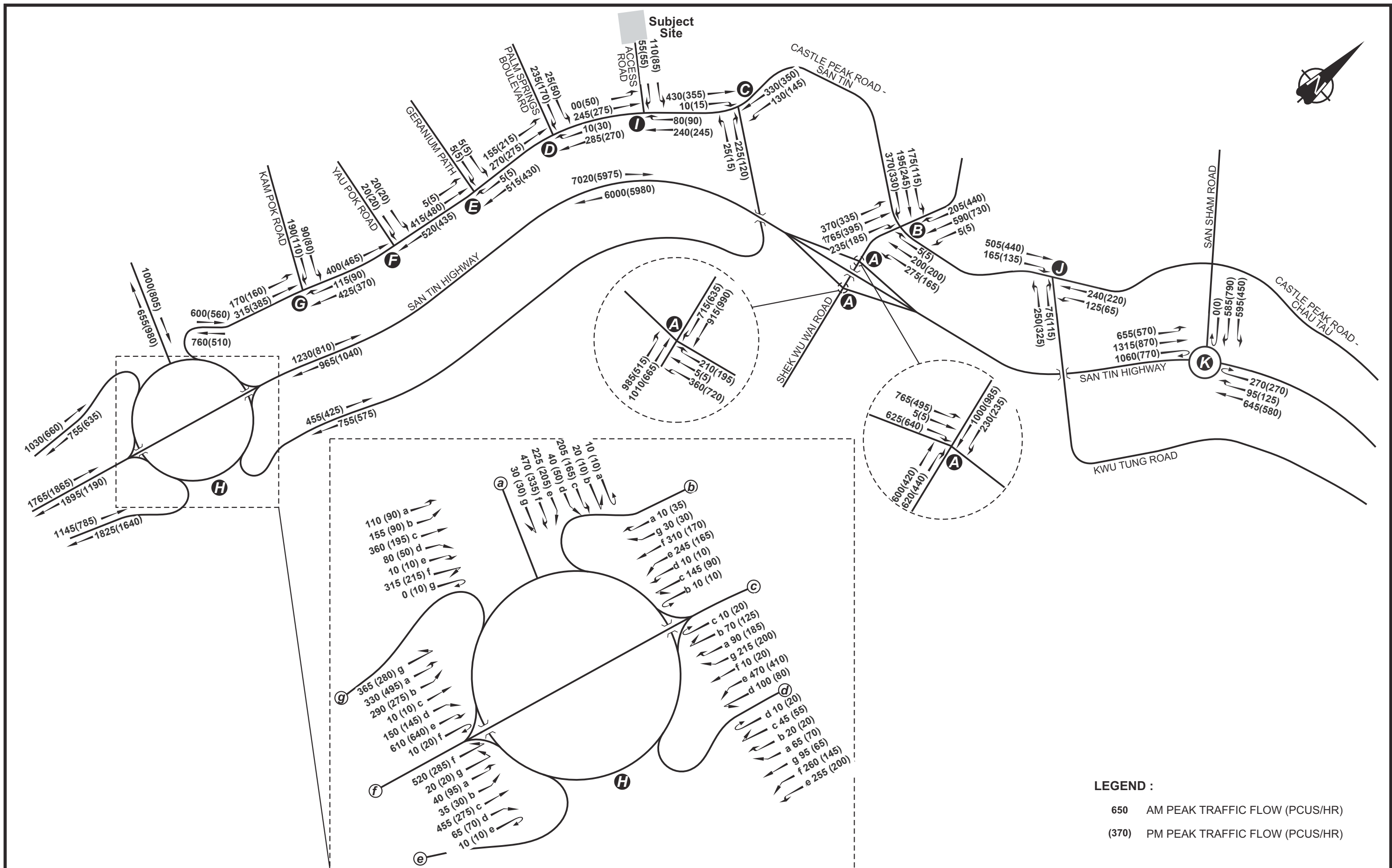
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WO SHANG WAI, MAI PO, YUEN LONG

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Designed	LTY	Checked	CFC	Scale	1:500(A3)
Date	MAY 2025	Drawing No.	5.8	Rev.	-





-	-	-	-	Project Title PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOTS 50 S.A. AND 77 IN D.D.101, WO SHANG WAI, MAI PO, YUEN LONG	Drawing Title 2039 REFERENCE TRAFFIC FLOWS IN SENSITIVITY TEST						SYSTRAMVA
-	-	-	-								
-	-	-	-								
-	-	-	-								
Rev.	Description	Checked	Date								



-	-	-	-	Project Title PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT AT LOTS 50 S.A. AND 77 IN D.D.101, WO SHANG WAI, MAI PO, YUEN LONG	Drawing Title 2039 DESIGN TRAFFIC FLOWS IN SENSITIVITY TEST											
-	-	-	-													
-	-	-	-													
-	-	-	-													
Rev.	Description	Checked	Date		Designed	MYC	Checked	CFC	Scale	NTS	Date	DEC 2024	Drawing No.	5.10	Rev.	-

6. CONCLUSION

6.1 Summary

- 6.1.1 The previous Section 16 Planning Application (Application no. A/YL-MP/344) was approved with conditions with domestic plot ratio of 0.4 on 16 February 2024 for a proposed house development with 789 houses. A planning application is made under section 16 of the Town Planning Ordinance, to propose amendments to the previously approved scheme under application No. A/YL-MP/344, which was approved for a comprehensive residential development, including a Wetland Restoration Area (WRA), with filling and excavation of land. The application site falls within an area zoned as “Other Specified Uses” annotated “Comprehensive Development to include Wetland Restoration Area” (“OU(CDWRA)”) on the approved Mai Po and Fairview Park Outline Zoning Plan (OZP) No. S/YL-MP/8. The proposed amendment relates to the approved layout of the residential portion, with no change to the plot ratio and gross floor area. Majority of the basement car parking spaces are relocated to ground level for cost-effectiveness and ease of implementation. No change is proposed to the already completed WRA.
- 6.1.2 Same to the previous approved scheme, the development vehicular access is off the local access road, Mai Po South Road connecting to Castle Peak Road - Mai Po.
- 6.1.3 The provision of the internal transport facilities in the current proposed MLP is determined in accordance with the latest updated HKPSG requirements.
- 6.1.4 Traffic surveys have been conducted to establish the current traffic condition, the public transport utilization and footpath condition in the vicinity of the subject site.
- 6.1.5 The tentative operation year of proposed development is 2028. Thus, the design year of 2031 is adopted for traffic forecast and assessment purposes.
- 6.1.6 Subject to the project of San Tin Technopole, the proposed road network will be upgraded to provide better linkage and strengthen future connectivity for developments located at the North and South of the San Tin Highway.
- 6.1.7 Public transport service capacity has also been assessed upon the completion of the proposed development. The assessment results suggest that the public transport service capacity in the vicinity could serve the additional passenger demands. The public transport service enhancement and shuttle bus service provision will be subject to further review in later stage, if necessary.
- 6.1.8 Operational performance of the identified local junctions and road link capacity have been assessed based on the anticipated year 2031 traffic flows and the upgraded road junctions of San Tin Technopole project. The anticipated trip generation of the current proposed scheme would be larger in both AM and PM peak periods, compared with the previous approved scheme. The assessment results as shown in **Table 5.1** revealed that the majority of key junctions will operate with ample capacity upon completion of the proposed development. With the planned junction improvement at Fairview Park Interchange (Junction H), the results indicate that all the identified junctions and road links would be operated within capacity in Year 2031.

- 6.1.9 Operational performance of pedestrian flows and queuing space assessment have been assessed based on the anticipated year 2031 pedestrian flows, subject to the induced pedestrian trips for additional franchised bus demand. With the proposed widening of existing queuing area at concerned bus stops, the LOS of the identified road link and queuing area at bus stops would be operating within capacity in Year 2031.
- 6.1.10 Therefore, it is anticipated that the proposed development would not cause any significant traffic impact to the road network.
- 6.1.11 Subject to TD comment, sensitivity tests are also included in the assessment. In conservative hypothetical approach, with certain proposed junction improvements, all the identified junctions would be operated within capacity and road links would operate with ample capacity with expected future road infrastructure in Year 2031 and Year 2039.

6.2 Conclusion

- 6.2.1 In conclusion, the traffic impact assessment has demonstrated that the traffic generated by the proposed development can be absorbed by the nearby road network. Hence, it can be concluded that the proposed development is considered acceptable in traffic terms.

ANNEX A – DETAIL OF JUNCTION CALCULATION SHEETS

Calculation Spreadsheets
for
2024 Observed Scenario

Priority Junction Capacity Calculation

Job Title:

Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long

Junction:

Shek Wu Wai Road / San Tin Highway Slip Road (A1)

Scheme:

Observe

Year:

2024

Job No.:

CHK50873110

Ref. No.:

2024O

Rev.:

-

ARM A:

Shek Wu Wai Road

ARM B:

San Tin Highway Slip Road

ARM C:

Shek Wu Wai Road

AM

(PM)

365

(290)

0

(0)

ARM C

AM

(PM)

105

(70)

0

(0)

ARM A

AM

(PM)

240

(240)

80

(85)

Minor ARM B

GEOMETRY

Major road width

W

7.20

Lane widths

w(b-a)

8.30

Central Reserve width

Wcr

0.00

w(b-c)

8.30

2 Lane Minor Arm (Y/N)

N

w(c-b)

0.00

Visibilities

Vr(b-a)

20

Calculated

D

1.21

VI(b-a)

20

E

1.31

Vr(b-c)

20

F

0.59

Vr(c-b)

Y

0.75

ANALYSIS

TRAFFIC FLOWS

q(c-a)

q(c-b)

q(a-b)

q(a-c)

q(b-a)

q(b-c)

f

Factor

1

1

1

1

CAPACITIES

Q(b-a)

Q(b-c)

Q(c-b)

Q(b-ac)

646

937

420

842

673

949

425

857

RFC's

b-a

b-c

c-b

b-ac

0.124

0.256

0.000

0.380

0.126

0.253

0.000

0.379

Worst RFC

0.380

0.379

Where VI and Vr are visibility distances to the left or right of the respective streams

D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))

E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))

F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))

Y = 1-0.0345W

f = proportion of minor traffic turning left

Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)

Capacity of combined streams

- in accordance with TPDM V2.4

T.P.D.M.V.2.4

Appendix 1

Calculated by:

MYC

Date:

Jun-25

Checked by:

CFC

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long																																											
Junction: Shek Wu Wai Road / Mai Po Lung Road (A2)								Ref. No.: 2024O																																			
Scheme: Observe								Ref. No.:																																			
Year: 2024				Job No.: CHK50873110				Rev.: -																																			
ARM A: Mai Po Lung Road																																											
ARM B: San Tin Highway Slip Road																																											
ARM C: Shek Wu Wai Road																																											
ARM D: Shek Wu Wai Road																																											
Shek Wu Wai Road Minor Arm D <table><tr><td>65</td><td>55</td><td>5</td></tr><tr><td>40</td><td>45</td><td>0</td></tr></table> AM (PM) ARM C <table><tr><td>AM (PM)</td><td></td></tr><tr><td>90 90</td><td></td></tr><tr><td>45 95</td><td></td></tr><tr><td>315 190</td><td></td></tr></table> Shek Wu Wai Road ARM A <table><tr><td>AM (PM)</td><td></td></tr><tr><td>0 5</td><td></td></tr><tr><td>40 30</td><td></td></tr><tr><td>35 40</td><td></td></tr></table> Mai Po Lung Road Minor ARM B <table><tr><td>AM (PM)</td><td></td><td></td><td></td></tr><tr><td>0 0 0</td><td></td><td></td><td></td></tr><tr><td>0 0 0</td><td></td><td></td><td></td></tr></table>										65	55	5	40	45	0	AM (PM)		90 90		45 95		315 190		AM (PM)		0 5		40 30		35 40		AM (PM)				0 0 0				0 0 0			
65	55	5																																									
40	45	0																																									
AM (PM)																																											
90 90																																											
45 95																																											
315 190																																											
AM (PM)																																											
0 5																																											
40 30																																											
35 40																																											
AM (PM)																																											
0 0 0																																											
0 0 0																																											
GEOMETRY																																											
				ARM B			ARM D																																				
Major road width	W	10.30	Lane widths	w(b-a)	0.00	w(b-a)	5.40																																				
Central Reserve width	Wcr	0.00		w(b-c)	0.00	w(b-c)	5.40																																				
				w(c-b)	3.50	w(c-b)	3.30																																				
Visibilities	Vr(b-a)	0	Vr(d-c)	30	D	0.53	D	0.99																																			
	VI(b-a)	0	VI(d-c)	30	E	0.59	E	1.06																																			
	Vr(b-c)	0	Vr(d-a)	25	F	0.91	F	0.89																																			
	Vr(c-b)	40	Vr(a-d)	30	Y	0.64	Y	0.64																																			
				Arm B			Arm D																																				
ANALYSIS		AM PEAK (PM) PEAK		AM PEAK (PM) PEAK		AM PEAK (PM) PEAK		AM PEAK (PM) PEAK																																			
TRAFFIC FLOWS	q(c-a)	50	95	q(a-c)	40	30																																					
	q(c-b)	315	190	q(a-d)	0	5																																					
	q(a-b)	35	40	q(c-d)	90	90																																					
	q(a-c)	105	70	q(c-a)	45	95																																					
	q(b-a)	0	0	q(d-c)	120	85																																					
	q(b-c)	0	0	q(d-a)	5	0																																					
	f	0.00	0.00	f	0.04	0.00																																					
CAPACITIES	Q(b-a)	259	282	Q(d-c)	598	586																																					
	Q(b-c)	420	425	Q(d-a)	773	761																																					
	Q(c-b)	652	658	Q(a-d)	634	624																																					
	Q(b-ac)	259	282	Q(d-ca)	604	586																																					
	Q(c-a)	930	1280	Q(a-c)	1800	1786																																					
RFC's	b-a	0.000	0.000	d-c	0.201	0.145																																					
	b-c	0.000	0.000	d-a	0.006	0.000																																					
	c-b	0.483	0.289	a-d	0.000	0.008																																					
	b-ac	0.000	0.000	d-ca	0.207	0.145																																					
	c-a	0.054	0.074	a-c	0.022	0.017																																					
			AM (PM)																																								
Worst RFC			0.483 0.289																																								
Where VI and Vr are visibility distances to the left or right of the respective streams																																											
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))																																											
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))																																											
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))																																											
Y = 1-0.0345W																																											
f = proportion of minor traffic turning left																																											
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)																																											
Capacity of combined streams																																											
- in accordance with TPDM V2.4																																											
Calculated by: MYC				Date: Jun-25		Checked by:		CFC																																			

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long					
Junction: Castle Peak Road Mai Po / San Tam Road (C)		Ref. No.:	2024O		
Scheme: Observe		Ref. No.:			
Year: 2024	Job No.:	CHK50873110	Rev.: -		
ARM A: Castle Peak Road - Mai Po					
ARM B: San Tam Road					
ARM C: Castle Peak Road - Mai Po					
AM (PM) 230 (225) 10 (15) AM (PM) 195 (170) 60 (80) AM (PM) 25 (15) 65 (45) Minor ARM B					
GEOMETRY					
Major road width	W	7.40	Lane widths	w(b-a)	3.20
Central Reserve width	Wcr	0.00		w(b-c)	3.20
2 Lane Minor Arm (Y/N)		N		w(c-b)	4.10
Visibilities	Vr(b-a)	50	Calculated	D	0.85
	VI(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.74
ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		230	225	
	q(c-b)		10	15	
	q(a-b)		60	80	
	q(a-c)		195	170	
	q(b-a)		65	45	
	q(b-c)		25	15	
	f	Factor	0.28	0.25	
CAPACITIES	Q(b-a)	1	448	451	
	Q(b-c)	1	615	619	
	Q(c-b)	1	660	661	
	Q(b-ac)	1	485	484	
RFC's	b-a		0.145	0.100	
	b-c		0.041	0.024	
	c-b		0.015	0.023	
	b-ac		0.186	0.124	
Worst RFC			0.186	0.124	
Where VI and Vr are visibility distances to the left or right of the respective streams D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150)) E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120)) F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120)) Y = 1-0.0345W f = proportion of minor traffic turning left Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams - in accordance with TPDM V2.4					
Calculated by: MYC		Date: Oct-25	Checked by: CFC	T.P.D.M.V.2.4 Appendix 1	

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long																							
Junction: Castle Peak Road Mai Po / Palm Springs Boulevard (D)				Ref. No.: 2024O																			
Scheme: Observe				Ref. No.:																			
Year: 2024		Job No.: CHK50873110		Rev.: -																			
ARM A: Castle Peak Road - Mai Po																							
ARM B: Palm Springs Boulevard																							
ARM C: Castle Peak Road - Mai Po																							
ARM C <table><tr><td>AM</td><td>(PM)</td></tr><tr><td>175</td><td>(135)</td></tr><tr><td>10</td><td>(20)</td></tr></table> <table><tr><td>AM</td><td>(PM)</td></tr><tr><td>155</td><td>(175)</td></tr><tr><td>135</td><td>(180)</td></tr></table> ARM A <table><tr><td>AM</td><td>(PM)</td></tr><tr><td>25</td><td>245</td></tr><tr><td>(35)</td><td>(120)</td></tr></table> Minor ARM B						AM	(PM)	175	(135)	10	(20)	AM	(PM)	155	(175)	135	(180)	AM	(PM)	25	245	(35)	(120)
AM	(PM)																						
175	(135)																						
10	(20)																						
AM	(PM)																						
155	(175)																						
135	(180)																						
AM	(PM)																						
25	245																						
(35)	(120)																						
GEOMETRY																							
Major road width		W	7.00	Lane widths																			
Central Reserve width		Wcr	0.00	w(b-a) 4.00																			
2 Lane Minor Arm (Y/N)			N	w(b-c) 4.00																			
Visibilities		Vr(b-a)	30	w(c-b) 3.00																			
		VI(b-a)	30	Calculated																			
		Vr(b-c)	30	D 0.88																			
		Vr(c-b)	30	E 0.95																			
				F 0.86																			
				Y 0.76																			
ANALYSIS																							
			AM PEAK		(PM) PEAK																		
TRAFFIC FLOWS		q(c-a)	175	135																			
		q(c-b)	10	20																			
		q(a-b)	135	180																			
		q(a-c)	155	175																			
		q(b-a)	245	120																			
		q(b-c)	25	35																			
		f	0.09	0.23																			
CAPACITIES		Q(b-a)	471	465																			
		Q(b-c)	653	643																			
		Q(c-b)	574	558																			
		Q(b-ac)	483	496																			
RFC's		b-a	0.520	0.258																			
		b-c	0.038	0.054																			
		c-b	0.017	0.036																			
		b-ac	0.559	0.313																			
Worst RFC			0.559	0.313																			
Where VI and Vr are visibility distances to the left or right of the respective streams D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150)) E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120)) F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120)) Y = 1-0.0345W f = proportion of minor traffic turning left Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams - in accordance with TPDM V2.4																							
Calculated by: MYC		Date: Jun-25		Checked by: CFC																			

Job Title:	Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long					
Junction:	Castle Peak Road Mai Po / Geranium Path (E)				Ref. No.:	2024O
Scheme:	Observe				Ref. No.:	
Year:	2024	Job No.:	CHK50873110		Rev.:	-
ARM A: Castle Peak Road - Mai Po						
ARM B: Geranium Path						
ARM C: Castle Peak Road - Mai Po						
The diagram illustrates the traffic flow at the intersection of Castle Peak Road, Geranium Path, and Minor ARM B. The flows are as follows: - **ARM C (Left side):** AM: 415 PM: (255) Turning left from Geranium Path: 5 Turning right from Geranium Path: (5) - **Minor ARM B (Bottom center):** AM: 5 PM: (5) (from both directions) - **ARM A (Right side):** AM: 290 PM: (350) Turning left from Geranium Path: 5 Turning right from Geranium Path: (5)						
GEOMETRY						
Major road width	W	7.00	Lane widths	w(b-a)	3.00	
Central Reserve width	Wcr	0.00		w(b-c)	3.00	
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.60	
Visibilities	Vr(b-a)	50	Calculated	D	0.82	
	VI(b-a)	30		E	0.88	
	Vr(b-c)	50		F	0.93	
	Vr(c-b)	50		Y	0.76	
ANALYSIS						
TRAFFIC FLOWS	q(c-a)	Factor 1 1 1 1	AM PEAK		(PM) PEAK	
	q(c-b)		415	255		
	q(a-b)		5	5		
	q(a-c)		5	5		
	q(b-a)		290	350		
	q(b-c)		5	5		
	f		5	5		
CAPACITIES	Q(b-a)	0.50	0.50			
	Q(b-c)	386	395			
	Q(c-b)	584	570			
	Q(b-ac)	619	603			
		465	467			
RFC's	b-a	0.013	0.013			
	b-c	0.009	0.009			
	c-b	0.008	0.008			
	b-ac	0.022	0.021			
Worst RFC		0.022	0.021			
Where VI and Vr are visibility distances to the left or right of the respective streams D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150)) E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120)) F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120)) Y = 1-0.0345W f = proportion of minor traffic turning left Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) T.P.D.M.V.2.4 Appendix 1 Capacity of combined streams - in accordance with TPDM V2.4						
Calculated by:	MYC	Date:	Jun-25	Checked by:	CFC	

Job Title:		Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long				
Junction:		Castle Peak Road Tam Mi / Yau Pok Road (F)		Ref. No.:	2024O	
Scheme:		Observe		Ref. No.:		
Year:	2024	Job No.:	CHK50873110		Rev.:	-
ARM A:		Castle Peak Road - Tam Mi				
ARM B:		Yau Pok Road				
ARM C:		Castle Peak Road - Tam Mi				
ARM C AM (PM) 420 (260) 0 (0) 5 (5) 5 (5) Minor ARM B AM (PM) 290 (350) 0 (0) ARM A						
GEOMETRY						
Major road width	W	6.50	Lane widths	w(b-a)	1.88	
Central Reserve width	Wcr	0.00		w(b-c)	1.88	
2 Lane Minor Arm (Y/N)		N		w(c-b)	0.00	
Visibilities	Vr(b-a)	16	Calculated	D	0.70	
	VI(b-a)	31		E	0.76	
	Vr(b-c)	16		F	0.59	
	Vr(c-b)	0		Y	0.78	
ANALYSIS						
			AM PEAK		(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		420	260		
	q(c-b)		0	0		
	q(a-b)		0	0		
	q(a-c)		290	350		
	q(b-a)		5	5		
	q(b-c)		5	5		
	f		0.50	0.50		
CAPACITIES	Q(b-a)	Factor	330	338		
	Q(b-c)	1	501	488		
	Q(c-b)	1	389	379		
	Q(b-ac)	1	398	400		
RFC's	b-a		0.015	0.015		
	b-c		0.010	0.010		
	c-b		0.000	0.000		
	b-ac		0.025	0.025		
Worst RFC			0.025	0.025		
Where VI and Vr are visibility distances to the left or right of the respective streams D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150)) E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120)) F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120)) Y = 1-0.0345W f = proportion of minor traffic turning left Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams - in accordance with TPDM V2.4						
Calculated by:		MYC	Date:	Jun-25	Checked by:	CFC

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long																																																																																																								
Junction: Castle Peak Road Tam Mi / Kam Pok Road (G)		Ref. No.: 2024O																																																																																																						
Scheme: Observe		Ref. No.:																																																																																																						
Year: 2024	Job No.: CHK50873110	Rev.: -																																																																																																						
ARM A: Castle Peak Road - Tam Mi																																																																																																								
ARM B: Kam Pok Road																																																																																																								
ARM C: Castle Peak Road - Tam Mi																																																																																																								
ARM C AM (PM) 360 (210) 65 (55) AM (PM) 255 (320) 50 (30) AM (PM) 35 (30) 25 (20) Minor ARM B <tr><td colspan="3">GEOMETRY</td></tr> <tr><td>Major road width</td><td>W</td><td>7.00</td></tr> <tr><td>Central Reserve width</td><td>Wcr</td><td>0.00</td></tr> <tr><td>2 Lane Minor Arm (Y/N)</td><td></td><td>N</td></tr> <tr><td>Visibilities</td><td>Vr(b-a)</td><td>50</td></tr> <tr><td></td><td>VI(b-a)</td><td>35</td></tr> <tr><td></td><td>Vr(b-c)</td><td>50</td></tr> <tr><td></td><td>Vr(c-b)</td><td>50</td></tr> <tr><td></td><td>Calculated</td><td>D</td></tr> <tr><td></td><td></td><td>E</td></tr> <tr><td></td><td></td><td>F</td></tr> <tr><td></td><td></td><td>Y</td></tr> <tr><td colspan="3">ANALYSIS</td></tr> <tr><td colspan="2">TRAFFIC FLOWS</td><td>AM PEAK (PM) PEAK</td></tr> <tr><td colspan="2">q(c-a)</td><td>360 210</td></tr> <tr><td colspan="2">q(c-b)</td><td>65 55</td></tr> <tr><td colspan="2">q(a-b)</td><td>50 30</td></tr> <tr><td colspan="2">q(a-c)</td><td>255 320</td></tr> <tr><td colspan="2">q(b-a)</td><td>25 20</td></tr> <tr><td colspan="2">q(b-c)</td><td>35 30</td></tr> <tr><td colspan="2">f</td><td>0.58 0.60</td></tr> <tr><td colspan="2">CAPACITIES</td><td></td></tr> <tr><td colspan="2">Q(b-a)</td><td>398 410</td></tr> <tr><td colspan="2">Q(b-c)</td><td>618 604</td></tr> <tr><td colspan="2">Q(c-b)</td><td>610 599</td></tr> <tr><td colspan="2">Q(b-ac)</td><td>502 508</td></tr> <tr><td colspan="2">RFC's</td><td></td></tr> <tr><td colspan="2">b-a</td><td>0.063 0.049</td></tr> <tr><td colspan="2">b-c</td><td>0.057 0.050</td></tr> <tr><td colspan="2">c-b</td><td>0.107 0.092</td></tr> <tr><td colspan="2">b-ac</td><td>0.120 0.098</td></tr> <tr><td colspan="2">Worst RFC</td><td>0.120 0.098</td></tr> <tr><td colspan="3">Where VI and Vr are visibility distances to the left or right of the respective streams D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150)) E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120)) F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120)) Y = 1-0.0345W f = proportion of minor traffic turning left Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams - in accordance with TPDM V2.4</td></tr> <tr><td>Calculated by: MYC</td><td>Date: Jun-25</td><td>Checked by: CFC</td></tr>			GEOMETRY			Major road width	W	7.00	Central Reserve width	Wcr	0.00	2 Lane Minor Arm (Y/N)		N	Visibilities	Vr(b-a)	50		VI(b-a)	35		Vr(b-c)	50		Vr(c-b)	50		Calculated	D			E			F			Y	ANALYSIS			TRAFFIC FLOWS		AM PEAK (PM) PEAK	q(c-a)		360 210	q(c-b)		65 55	q(a-b)		50 30	q(a-c)		255 320	q(b-a)		25 20	q(b-c)		35 30	f		0.58 0.60	CAPACITIES			Q(b-a)		398 410	Q(b-c)		618 604	Q(c-b)		610 599	Q(b-ac)		502 508	RFC's			b-a		0.063 0.049	b-c		0.057 0.050	c-b		0.107 0.092	b-ac		0.120 0.098	Worst RFC		0.120 0.098	Where VI and Vr are visibility distances to the left or right of the respective streams D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150)) E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120)) F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120)) Y = 1-0.0345W f = proportion of minor traffic turning left Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams - in accordance with TPDM V2.4			Calculated by: MYC	Date: Jun-25	Checked by: CFC
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Calculated by: MYC	Date: Jun-25	Checked by: CFC																																																																																																						

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long										
Junction: Fairview Park Interchange (H)								Ref. No.: 2024O		
Scheme: Observe								Ref. No.:		
Year: 2024				Job No.: CHK50873110				Rev.: -		
AM		PM								
ARM A:		Fairview Park Boulevard								
ARM B:		Castle Peak Rd E								
ARM C:		NTCR E								
ARM D:		San Tam Rd E								
ARM E:		San Tam Rd W								
ARM F:		NTCR W								
ARM G:		Castle Peak Rd W								
A B C D E F G										
GEOMETRY										
ARM	v	e	L	r	D	Phi	S			
A	7.00	11.00	14	22	142	35	0.46			
B	5.50	10.50	15	20	142	35	0.53			
C	5.50	8.50	7.5	23	142	30	0.64			
D	6.75	8.50	10	20	142	25	0.28			
E	6.00	8.00	9.5	20	142	35	0.34			
F	6.50	9.00	15	25	142	40	0.27			
G	5.50	6.00	7	22	142	30	0.11			
AM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	60	5	235	40	155	430	15	1395	940	605
B	15	25	55	5	115	255	5	1915	475	420
C	145	55	10	100	220	20	120	1770	670	620
D	35	10	40	55	160	200	10	2000	510	440
E	60	80	155	60	5	45	5	1695	410	815
F	260	145	15	140	100	30	120	980	810	1125
G	30	100	110	40	60	145	15	1500	500	290
PM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	50	20	140	35	140	240	20	1220	645	945
B	15	25	45	15	125	110	15	1475	350	390
C	180	45	20	105	265	5	105	1305	725	520
D	25	25	40	55	110	170	10	1615	435	415
E	50	35	140	40	10	35	5	1280	315	770
F	590	170	25	115	105	20	200	920	1225	675
G	35	70	110	50	15	95	10	1780	385	365
CALCULATIONS										
ARM	K	X ₂	M	F	t _D	f _c	Q _E		RFC	
							AM	PM	AM	PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1904	2006	0.49	0.32
B	0.98	7.92	3640.95	2400	1.00	0.54	1337	1571	0.36	0.22
C	1.01	6.82	3640.95	2065	1.00	0.50	1194	1427	0.56	0.51
D	1.02	7.87	3640.95	2385	1.00	0.54	1326	1538	0.38	0.28
E	0.98	7.19	3640.95	2180	1.00	0.51	1289	1498	0.32	0.21
F	0.98	8.13	3640.95	2464	1.00	0.55	1875	1907	0.43	0.64
G	1.00	5.91	3640.95	1790	1.00	0.46	1107	979	0.45	0.39
Critical Arm:									C	F
RFC:									0.56	0.64
									AM	PM
- In accordance with TPDM V2.4										
Calculated by: MYC				Date: Jun-25			Checked by: CFC			

Priority Junction Capacity Calculation

Job Title:

Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long

Junction:

Castle Peak Road Mai Po / Mai Po South Road (I)

Scheme:

Observe

Year:

2024

Job No.:

CHK50873110

Ref. No.:

2024O

Ref. No.:

Rev.:

-

ARM A:

Castle Peak Road - Mai Po

ARM B:

Mai Po South Road

ARM C:

Castle Peak Road - Mai Po

AM

(PM)

185

(150)

5

(5)

0

0

(5)

(5)

Minor ARM B

ARM C

AM

(PM)

175

(205)

10

(5)

ARM A

GEOMETRY

Major road width

W

6.90

Lane widths

w(b-a)

3.60

Central Reserve width

Wcr

0.00

w(b-c)

3.60

2 Lane Minor Arm (Y/N)

N

w(c-b)

3.30

Visibilities

Vr(b-a)

50

Calculated

D

0.87

VI(b-a)

30

E

0.93

Vr(b-c)

50

F

0.91

Vr(c-b)

50

Y

0.76

ANALYSIS

TRAFFIC FLOWS

q(c-a)

q(c-b)

q(a-b)

q(a-c)

q(b-a)

q(b-c)

f

Q(b-a)

Q(b-c)

Q(c-b)

Q(b-ac)

b-a

b-c

c-b

b-ac

Factor

1

1

1

1

0.000

0.000

0.008

0.000

Worst RFC

0.008

AM PEAK

(PM) PEAK

185

150

5

5

10

5

175

205

0

5

0

5

0.00

0.50

470

469

648

641

629

622

470

542

0.011

0.008

0.008

0.008

0.018

0.018

0.008

0.018

Where VI and Vr are visibility distances to the left or right of the respective streams

D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))

E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))

F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))

Y = 1-0.0345W

f = proportion of minor traffic turning left

Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)

Capacity of combined streams

- in accordance with TPDM V2.4

T.P.D.M.V.2.4

Appendix 1

Calculated by:

MYC

Date:

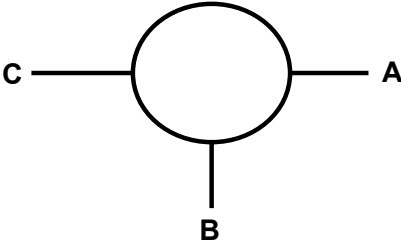
Oct-25

Checked by:

CFC

Job Title:		Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long				
Junction:		Castle Peak Road San Tin / Kwu Tung Road (J)		Ref. No.:	2024O	
Scheme:		Observe		Ref. No.:		
Year:		2024	Job No.:	CHK50873110	Rev.:	-
ARM A:		Castle Peak Road - San Tin				
ARM B:		Kwu Tung Road				
ARM C:		Castle Peak Road - San Tin				
ARM C AM (PM) 450 (390) 145 (120) 225 (285) 65 (105) Minor ARM B AM (PM) 215 (195) 110 (55) ARM A						
GEOMETRY						
Major road width		W	8.00	Lane widths	w(b-a)	3.60
Central Reserve width		Wcr	0.00		w(b-c)	3.60
2 Lane Minor Arm (Y/N)			N		w(c-b)	3.30
Visibilities		Vr(b-a)	40	Calculated	D	0.86
		VI(b-a)	40		E	0.92
		Vr(b-c)	35		F	0.89
		Vr(c-b)	35		Y	0.72
ANALYSIS						
			AM PEAK		(PM) PEAK	
TRAFFIC FLOWS		q(c-a)		450	390	
		q(c-b)		145	120	
		q(a-b)		110	55	
		q(a-c)		215	195	
		q(b-a)		65	105	
		q(b-c)		225	285	
		f		0.78	0.73	
CAPACITIES		Q(b-a)	Factor 1 1 1 1	371	397	
		Q(b-c)		622	632	
		Q(c-b)		589	607	
		Q(b-ac)		540	545	
RFC's		b-a		0.175	0.264	
		b-c		0.362	0.451	
		c-b		0.246	0.198	
		b-ac		0.537	0.716	
Worst RFC				0.537	0.716	
Where VI and Vr are visibility distances to the left or right of the respective streams D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150)) E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120)) F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120)) Y = 1-0.0345W f = proportion of minor traffic turning left Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams - in accordance with TPDM V2.4 T.P.D.M.V.2.4 Appendix 1						
Calculated by:		LTY	Date:	Jun-25	Checked by:	CFC

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long										
Junction: San Tin Interchange (K)							Ref. No.: 2024O			
Scheme: Observe							Ref. No.:			
Year: 2024				Job No.: CHK50873110			Rev.: -			
AM PM ARM A: San Tin Highway Slip Road ARM B: San Sham Road ARM C: Fanling Highway Slip Road										
GEOMETRY										
ARM	v	e	L	r	D	Phi	S			
A	7.70	14.40	75	30	103	40	0.14			
B	8.80	11.70	75	30	103	40	0.06			
C	8.80	12.00	40	100	103	30	0.13			
AM FLOWS										
from \ to	A	B	C				Circ	Entry		
A	495	525	785				255	1805		
B	455	0	0				1415	455		
C	480	120	135				950	735		
PM FLOWS										
from \ to	A	B	C				Circ	Entry		
A	425	460	600				310	1485		
B	610	0	0				1185	610		
C	400	150	160				1035	710		
CALCULATIONS										
ARM	K	X ₂	M	F	t _D	f _c	Q _E		RFC	
							AM	PM	AM	PM
A	0.98	12.91	73.70	3912	1.01	0.76	3650	3609	0.49	0.41
B	0.98	11.38	73.70	3448	1.01	0.69	2423	2579	0.19	0.24
C	1.04	11.35	73.70	3438	1.01	0.69	2891	2830	0.25	0.25
							Critical Arm:		A	A
							RFC:		0.49	0.41
									AM	PM
- In accordance with TPDM V2.4										
Calculated by: MYC				Date: Jun-25			Checked by: CFC			

Calculation Spreadsheets
for
2031 Reference Scenario

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50873110

MVA HONG KONG LIMITED

Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A)

Design Year: 2031

Description: Reference

Designed By: MYC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
San Tin highway Slip Road (EB)	→	A	1,2	3.650		12.5		95%	95%	1780	1780	96	0.054		98	0.055	
	↘	A	1,2	3.650		10				1845	1845	99	0.054		102	0.055	0.055
San Tin highway Slip Road (WB)	←	B	1	3.900		10				1865	1865	20	0.011		20	0.011	
	↙	B	1	3.900		12.5		75%	75%	1840	1840	20	0.011		20	0.011	
Shek Wu Wai Road (SB)	↓	C	2,3	3.500						1965	1965	196	0.100	0.100	198	0.101	
	↘	C	2,3	3.500		15		90%	79%	1930	1950	192	0.099		197	0.101	
	↙	C	2,3	3.500		12.5				1880	1880	187	0.099		190	0.101	
Shek Wu Wai Road (NB)	↑	D	4	3.500						1965	1965	80	0.041		60	0.031	0.031
	↘	D	4	3.500		15		100%	100%	1915	1915	93	0.049		58	0.030	
	↙	D	4	3.500		12.5				1880	1880	92	0.049	0.049	57	0.030	
Shek Wu Wai Road (SB)	↓	E	3	3.500						2105	2105	131	0.062		133	0.063	0.063
	↘	E	3	3.500						2105	2105	131	0.062		133	0.063	
	↙	E	3	3.500						1965	1965	123	0.063		124	0.063	
Shek Wu Wai Road (NB)	↑	F	4	3.500						1965	1965	73	0.037		43	0.022	
	↘	F	4	3.500						2105	2105	79	0.038		46	0.022	
	↙	F	4	3.500						2105	2105	78	0.037		46	0.022	

Notes:	Flow: (pcu/hr)	Group	A,E,D	B,C,D	Group	B,C,D	A,E,D
		y	0.165	0.149	y	0.132	0.149
		L (sec)	14	22	L (sec)	22	14
		C (sec)	90	90	C (sec)	90	90
		y pract.	0.760	0.680	y pract.	0.680	0.760
		R.C. (%)	359%	357%	R.C. (%)	417%	410%

Stage / Phase Diagrams				
1.	2.	3.	4.	5.
I/G= 5	I/G= 6	I/G=	I/G= 8	I/G=
I/G= 5	I/G=	I/G= 7	I/G= 5	I/G=

Date: OCT, 2025 Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A) (A)

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50873110

MVA HONG KONG LIMITED

Junction: Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B)

Design Year: 2031

Description: Reference

Designed By: MYC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Road L11 EB	↔	A	1	4.000	15					1830	1830	80	0.044		35	0.019	
	↕	A	1	4.000	17.5	20		0% / 0%	0% / 0%	2155	2155	185	0.086	0.086	230	0.107	0.107
	↔	A	1	4.000		17.5				1985	1985	135	0.068		125	0.063	
Road D2 NB	↕	B	2	3.200	15					1760	1760	50	0.028		67	0.038	
	↕	B	2	3.200	17.5			100%	100%	1910	1910	55	0.029		73	0.038	
	↕	B	2	3.200						2075	2075	45	0.022		20	0.010	
	↕	B	2	3.200		12.5		100%	100%	1855	1855	225	0.121	0.121	180	0.097	0.097
Road L11 WB	↔	C	3	3.300	12.5					1735	1735	136	0.078		104	0.060	
	↕	C	3	3.300	15			85%	47%	1920	1990	151	0.079	0.079	120	0.060	
	↔	C	3	3.300		20		0%	0%	2085	2085	163	0.078		126	0.060	0.060
Road D3 SB	↕	D	4	4.000	12.5			0%	0%	2015	2015	12	0.006		72	0.036	
	↕	D	4	4.000						2155	2155	13	0.006		78	0.036	
	↕	D	4	4.000		20		100%	100%	2005	2005	90	0.045	0.045	360	0.180	0.180

Notes:			Group		A,B,C,D	Group		A,B,C,D
			y		0.331	y		0.444
			L (sec)		22	L (sec)		22
			C (sec)		105	C (sec)		105
			y pract.		0.711	y pract.		0.711
			R.C. (%)		115%	R.C. (%)		60%

Stage / Phase Diagrams														
1.			2.			3.			4.			5.		
A			B			C			D					
I/G= 6			I/G= 6			I/G= 7			I/G= 7			I/G=		
I/G= 6			I/G= 6			I/G= 7			I/G= 7			I/G=		

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / San Tam Road (C)		Ref. No.:	2031R
Scheme: Reference		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.:	-
ARM A: Castle Peak Road - Mai Po			
ARM B: San Tam Road			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
310	(270)
10	(15)

ARM A

AM	(PM)
240	(255)
90	(100)

AM
(PM)

25	110
(15)	(65)

Minor ARM B

GEOMETRY					
Major road width	W	7.40	Lane widths	w(b-a)	3.20
Central Reserve width	Wcr	0.00		w(b-c)	3.20
2 Lane Minor Arm (Y/N)		N		w(c-b)	4.10
Visibilities	Vr(b-a)	50	Calculated	D	0.85
	VI(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.74

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		310	270
	q(c-b)		10	15
	q(a-b)		90	100
	q(a-c)		240	255
	q(b-a)		110	65
	q(b-c)		25	15
	f		0.19	0.19
CAPACITIES	Q(b-a)	Factor	423	423
	Q(b-c)	1	601	597
	Q(c-b)	1	640	634
	Q(b-ac)	1	448	447
RFC's	b-a		0.260	0.154
	b-c		0.042	0.025
	c-b		0.016	0.024
	b-ac		0.301	0.179
Worst RFC			0.301	0.179

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / Palm Springs Boulevard (D)		Ref. No.:	2031R
Scheme: Reference		Ref. No.:	
Year: 2031	Job No.:	CHK50873110	Rev.: -
ARM A: Castle Peak Road - Mai Po			
ARM B: Palm Springs Boulevard			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
220	(220)
10	(30)

ARM A

AM	(PM)
220	(220)
145	(205)

AM
(PM)

25	225
(50)	(160)

Minor ARM B

GEOMETRY			
Major road width	W	7.00	Lane widths
Central Reserve width	Wcr	0.00	w(b-a)
2 Lane Minor Arm (Y/N)		N	w(b-c)
Visibilities	Vr(b-a)	30	w(c-b)
	VI(b-a)	30	Calculated
	Vr(b-c)	30	D
	Vr(c-b)	30	E
			F
			Y

ANALYSIS		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	220	220
	q(c-b)	10	30
	q(a-b)	145	205
	q(a-c)	220	220
	q(b-a)	225	160
	q(b-c)	25	50
	f	0.10	0.24
CAPACITIES	Q(b-a)	448	435
	Q(b-c)	634	628
	Q(c-b)	556	542
	Q(b-ac)	462	470
RFC's	b-a	0.502	0.368
	b-c	0.039	0.080
	c-b	0.018	0.055
	b-ac	0.541	0.447
Worst RFC		0.541	0.447

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / Geranium Path (E)		Ref. No.:	2031R
Scheme: Reference		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.:	-
ARM A: Castle Peak Road - Mai Po			
ARM B: Geranium Path			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
435	(375)
5	(5)

ARM A

AM	(PM)
360	(415)
5	(5)

Minor ARM B

AM	(PM)
5	(5)
(5)	(5)

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	3.00
Central Reserve width	Wcr	0.00		w(b-c)	3.00
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.60
Visibilities	Vr(b-a)	50	Calculated	D	0.82
	VI(b-a)	30		E	0.88
	Vr(b-c)	50		F	0.93
	Vr(c-b)	50		Y	0.76

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		435	375
	q(c-b)		5	5
	q(a-b)		5	5
	q(a-c)		360	415
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
CAPACITIES	Q(b-a)	Factor	367	363
	Q(b-c)	1	567	554
	Q(c-b)	1	601	587
	Q(b-ac)	1	446	439
RFC's	b-a		0.014	0.014
	b-c		0.009	0.009
	c-b		0.008	0.009
	b-ac		0.022	0.023
Worst RFC			0.022	0.023

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Tam Mi / Yau Pok Road (F)		Ref. No.:	2031R
Scheme: Reference		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.:	-
ARM A: Castle Peak Road - Tam Mi			
ARM B: Yau Pok Road			
ARM C: Castle Peak Road - Tam Mi			

ARM C

AM	(PM)
440	(380)
0	(0)

ARM A

AM	(PM)
345	(405)
0	(0)

AM
(PM)

20	20
(20)	(20)

Minor ARM B

GEOMETRY			
Major road width	W	6.50	Lane widths
Central Reserve width	W _{cr}	0.00	w(b-a)
2 Lane Minor Arm (Y/N)		N	w(b-c)
Visibilities	V _r (b-a)	16	w(c-b)
	V _l (b-a)	31	Calculated
	V _r (b-c)	16	D
	V _r (c-b)	0	E
			F
			Y

ANALYSIS		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	440	380
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	345	405
	q(b-a)	20	20
	q(b-c)	20	20
	f	0.50	0.50
CAPACITIES	Q(b-a)	317	312
	Q(b-c)	489	477
	Q(c-b)	379	370
	Q(b-ac)	385	377
RFC's	b-a	0.063	0.064
	b-c	0.041	0.042
	c-b	0.000	0.000
	b-ac	0.104	0.106
Worst RFC		0.104	0.106

Where V_l and V_r are visibility distances to the left or right of the respective streams

D = (1+0.094(w(b-a)-3.65))(1+0.0009(V_r(b-a)-120))(1+0.0006(V_l(b-a)-150))

E = (1+0.094(w(b-c)-3.65))(1+0.0009(V_r(b-c)-120))

F = (1+0.094(w(c-b)-3.65))(1+0.0009(V_r(c-b)-120))

Y = 1-0.0345W

f = proportion of minor traffic turning left

Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)

T.P.D.M.V.2.4

Appendix 1

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Tam Mi / Kam Pok Road (G)		Ref. No.: 2031R	
Scheme: Reference		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Tam Mi			
ARM B: Kam Pok Road			
ARM C: Castle Peak Road - Tam Mi			

ARM C

AM	(PM)
350	(315)
110	(85)

ARM A

AM	(PM)
260	(325)
160	(150)

AM
(PM)

85	180
(80)	(105)

Minor ARM B

GEOMETRY			
Major road width	W	7.00	Lane widths
Central Reserve width	W _{cr}	0.00	w(b-a)
2 Lane Minor Arm (Y/N)		N	w(b-c)
Visibilities	V _r (b-a)	50	w(c-b)
	V _l (b-a)	35	Calculated
	V _r (b-c)	50	D
	V _r (c-b)	50	E
			F
			Y

ANALYSIS		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	350	315
	q(c-b)	110	85
	q(a-b)	160	150
	q(a-c)	260	325
	q(b-a)	180	105
	q(b-c)	85	80
	f	0.32	0.43
CAPACITIES	Q(b-a)	373	372
	Q(b-c)	606	590
	Q(c-b)	581	567
	Q(b-ac)	425	443
RFC's	b-a	0.483	0.282
	b-c	0.140	0.136
	c-b	0.189	0.150
	b-ac	0.624	0.418
Worst RFC		0.624	0.418

Where V_l and V_r are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(V_r(b-a)-120))(1+0.0006(V_l(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(V_r(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(V_r(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

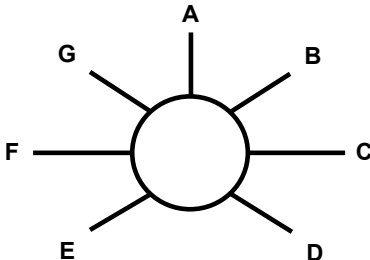
Calculated by: MYC

Date: Oct-25

Checked by: CFC

J07_P-Castle_Peak_Road_Tam_Mi-Kam_Pok_Road.xlsm \ 2031R

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long										
Junction: Fairview Park Interchange (H)								Ref. No.: 2031R		
Scheme: Reference								Ref. No.:		
Year: 2031				Job No.: CHK50873110				Rev.: -		
AM										
PM										
ARM A: Fairview Park Boulevard										
ARM B: Castle Peak Rd E										
ARM C: NTCR E										
ARM D: San Tam Rd E										
ARM E: San Tam Rd W										
ARM F: NTCR W										
ARM G: Castle Peak Rd W										
GEOMETRY										
ARM	v	e	L	r	D	Phi	S			
A	7.00	11.00	14	22	142	35	0.46			
B	5.50	10.50	15	20	142	35	0.53			
C	5.50	8.50	7.5	23	142	30	0.64			
D	6.75	8.50	10	20	142	25	0.28			
E	6.00	8.00	9.5	20	142	35	0.34			
F	6.50	9.00	15	25	142	40	0.27			
G	5.50	6.00	7	22	142	30	0.11			
AM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	195	40	215	445	30	2565	955	620
B	10	10	135	10	235	245	30	2980	675	540
C	85	70	10	95	445	10	205	2490	920	1165
D	60	20	45	10	245	250	85	2965	715	445
E	40	35	430	65	10	495	20	1940	1095	1740
F	310	240	10	145	580	10	350	1280	1645	1755
G	105	145	340	80	10	300	0	2205	980	720
PM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	155	50	195	320	30	2155	770	940
B	35	10	85	10	155	125	30	2435	450	490
C	175	115	20	75	390	20	190	2110	985	775
D	75	20	55	20	195	140	70	2685	575	410
E	90	30	265	70	10	270	20	1695	755	1565
F	470	220	10	135	610	20	265	1350	1730	1100
G	85	85	185	50	10	205	10	2465	630	615
CALCULATIONS										
ARM	K	X ₂	M	F	t _D	f _c	Q _E		RFC	
							AM	PM	AM	PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1220	1460	0.78	0.53
B	0.98	7.92	3640.95	2400	1.00	0.54	769	1059	0.88	0.42
C	1.01	6.82	3640.95	2065	1.00	0.50	835	1024	1.10	0.96
D	1.02	7.87	3640.95	2385	1.00	0.54	796	950	0.90	0.61
E	0.98	7.19	3640.95	2180	1.00	0.51	1166	1289	0.94	0.59
F	0.98	8.13	3640.95	2464	1.00	0.55	1714	1676	0.96	1.03
G	1.00	5.91	3640.95	1790	1.00	0.46	783	663	1.25	0.95
Critical Arm:									G	F
RFC:									1.25	1.03
									AM	PM
- In accordance with TPDM V2.4										
Calculated by: MYC				Date: Oct-25			Checked by: CFC			

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long		Ref. No.: 2031R
Junction: Castle Peak Road Mai Po / Mai Po South Road (I)		Ref. No.:
Scheme: Reference		Rev.: -
Year: 2031	Job No.: CHK50873110	
ARM A: Castle Peak Road - Mai Po		
ARM B: Mai Po South Road		
ARM C: Castle Peak Road - Mai Po		

ARM C

AM	(PM)
230	(235)
5	(5)

ARM A

AM	(PM)
235	(260)
10	(5)

AM
(PM)

0	0
(10)	(15)

Minor ARM B

GEOMETRY					
Major road width	W	6.90	Lane widths	w(b-a)	3.60
Central Reserve width	Wcr	0.00		w(b-c)	3.60
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.30
Visibilities	Vr(b-a)	50	Calculated	D	0.87
	VI(b-a)	30		E	0.93
	Vr(b-c)	50		F	0.91
	Vr(c-b)	50		Y	0.76

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		230	235
	q(c-b)		5	5
	q(a-b)		10	5
	q(a-c)		235	260
	q(b-a)		0	15
	q(b-c)		0	10
	f		0.00	0.40
CAPACITIES	Q(b-a)	Factor 1	449	443
	Q(b-c)	1	633	627
	Q(c-b)	1	614	608
	Q(b-ac)	1	449	502
RFC's	b-a		0.000	0.034
	b-c		0.000	0.016
	c-b		0.008	0.008
	b-ac		0.000	0.050
Worst RFC			0.008	0.050

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road San Tin / Kwu Tung Road (J)		Ref. No.:	2031R
Scheme: Reference		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.:	-
ARM A: Castle Peak Road - San Tin			
ARM B: Kwu Tung Road			
ARM C: Castle Peak Road - San Tin			

ARM C

AM	(PM)
480	(415)
160	(130)

ARM A

AM	(PM)
230	(210)
120	(60)

Minor ARM B

AM	(PM)
240	70
(305)	(110)

GEOMETRY			
Major road width	W	8.00	Lane widths
Central Reserve width	Wcr	0.00	w(b-a)
2 Lane Minor Arm (Y/N)		N	w(b-c)
Visibilities	Vr(b-a)	40	w(c-b)
	VI(b-a)	40	Calculated
	Vr(b-c)	35	D
	Vr(c-b)	35	E
			F
			Y

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	480	415
	q(c-b)	160	130
	q(a-b)	120	60
	q(a-c)	230	210
	q(b-a)	70	110
	q(b-c)	240	305
	f	0.77	0.73
CAPACITIES	Q(b-a)	357	386
	Q(b-c)	618	628
	Q(c-b)	583	602
	Q(b-ac)	530	539
RFC's	b-a	0.196	0.285
	b-c	0.388	0.486
	c-b	0.274	0.216
	b-ac	0.585	0.770
Worst RFC		0.585	0.770

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

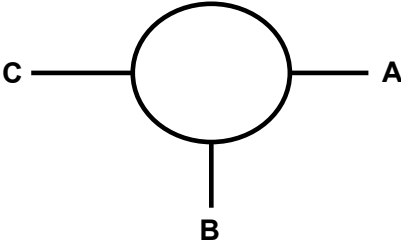
Calculated by: LTY

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long											
Junction: San Tin Interchange (K)							Ref. No.: 2031R				
Scheme: Reference							Ref. No.:				
Year: 2031				Job No.: CHK50873110			Rev.: -				
AM PM ARM A: San Tin Highway Slip Road ARM B: San Sham Road ARM C: Fanling Highway Slip Road											
GEOMETRY											
ARM	v	e	L	r	D	Phi	S				
A	7.70	14.40	75	30	103	40	0.14				
B	8.80	11.70	75	30	103	40	0.06				
C	8.80	12.00	40	100	103	30	0.13				
AM FLOWS											
from \ to	A	B	C					Circ	Entry		
A	640	625	1205					315	2470		
B	555	0	0					2070	555		
C	495	90	225					1195	810		
PM FLOWS											
from \ to	A	B	C					Circ	Entry		
A	495	545	815					355	1855		
B	750	0	0					1545	750		
C	420	120	235					1245	775		
CALCULATIONS											
ARM	K	X ₂	M	F	t _D	f _c	Q _E		RFC		
							AM	PM	AM	PM	
A	0.98	12.91	73.70	3912	1.01	0.76	3606	3576	0.69	0.52	
B	0.98	11.38	73.70	3448	1.01	0.69	1978	2335	0.28	0.32	
C	1.04	11.35	73.70	3438	1.01	0.69	2715	2679	0.30	0.29	
									Critical Arm:	A	A
									RFC:	0.69	0.52
										AM	PM
- In accordance with TPDM V2.4											
Calculated by: MYC				Date: Oct-25			Checked by: CFC				

Calculation Spreadsheets
for
2031 Design Scenario

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50873110

MVA HONG KONG LIMITED

Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A)

Design Year: 2031

Description: Design

Designed By: MYC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
San Tin highway Slip Road (EB)	→	A	1,2	3.650		12.5		95%	95%	1780	1780	96	0.054		98	0.055	
	↘	A	1,2	3.650		10				1845	1845	99	0.054		102	0.055	
San Tin highway Slip Road (WB)	←	B	1	3.900		10				1865	1865	43	0.023		48	0.026	
	↙	B	1	3.900		12.5		88%	89%	1815	1810	42	0.023	0.023	47	0.026	0.026
Shek Wu Wai Road (SB)	↓	C	2,3	3.500						1965	1965	211	0.107		209	0.106	
	↘	C	2,3	3.500		15		98%	85%	1915	1940	207	0.108	0.108	206	0.106	
	↙	C	2,3	3.500		12.5				1880	1880	202	0.107		200	0.106	0.106
Shek Wu Wai Road (NB)	↑	D	4	3.500						1965	1965	105	0.053		76	0.039	0.039
	↘	D	4	3.500		15		81%	56%	1950	1995	104	0.053		77	0.039	
	↙	D	4	3.500		12.5				1880	1880	101	0.054	0.054	72	0.038	
Shek Wu Wai Road (SB)	↓	E	3	3.500						2105	2105	147	0.070		143	0.068	
	↘	E	3	3.500						2105	2105	146	0.069		143	0.068	
	↙	E	3	3.500						1965	1965	137	0.070		134	0.068	
Shek Wu Wai Road (NB)	↑	F	4	3.500						1965	1965	73	0.037		43	0.022	
	↘	F	4	3.500						2105	2105	79	0.038		46	0.022	
	↙	F	4	3.500						2105	2105	78	0.037		46	0.022	

Notes:	Flow: (pcu/hr)	Group	A,E,D	B,C,D	Group	A,E,D	B,C,D
		y	0.177	0.185	y	0.162	0.171
		L (sec)	14	16	L (sec)	14	16
		C (sec)	90	90	C (sec)	90	90
		y pract.	0.760	0.740	y pract.	0.760	0.740
		R.C. (%)	328%	300%	R.C. (%)	369%	333%

Stage / Phase Diagrams							
1.	2.	3.	4.	5.			
I/G= 5	I/G= 6	I/G=	I/G= 8	I/G=			
I/G= 5	I/G= 6	I/G=	I/G= 8	I/G=			

Date: OCT, 2025 Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A) (A)

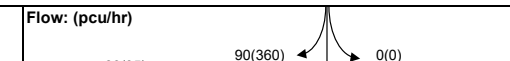
TRAFFIC SIGNALS CALCULATION

Job No.: CHK50873110

MVA HONG KONG LIMITED

Junction: Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B)Design Year: 2031Description: DesignDesigned By: KCCChecked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Road L11 EB	→	A	1	4.000	15					1830	1830	80	0.044		35	0.019	
	↔	A	1	4.000	17.5	20		0% / 17%	0% / 0%	2130	2155	222	0.104		230	0.107	0.107
	↓	A	1	4.000		17.5				1985	1985	208	0.105	0.105	200	0.101	
Road D2 NB	↑	B	2	3.200	15					1760	1760	86	0.049		108	0.061	
	↔	B	2	3.200	17.5			100%	100%	1910	1910	94	0.049		117	0.061	
	↓	B	2	3.200						2075	2075	45	0.022		20	0.010	
	↔	B	2	3.200		12.5		100%	100%	1855	1855	225	0.121	0.121	180	0.097	0.097
Road L11 WB	←	C	3	3.300	12.5					1735	1735	136	0.078		104	0.060	
	↔	C	3	3.300	15			85%	47%	1920	1990	151	0.079	0.079	120	0.060	
	→	C	3	3.300		20		0%	0%	2085	2085	163	0.078		126	0.060	0.060
Road D3 SB	↑	D	4	4.000	12.5			0%	0%	2015	2015	12	0.006		72	0.036	
	↔	D	4	4.000						2155	2155	13	0.006		78	0.036	
	↓	D	4	4.000		20		100%	100%	2005	2005	90	0.045	0.045	360	0.180	0.180

Notes:	Flow: (pcu/hr) 	Group		A,B,C,D	Group		A,B,C,D
		y		0.350	y		0.444
		L (sec)		22	L (sec)		22
		C (sec)		105	C (sec)		105
		y pract.		0.711	y pract.		0.711
		R.C. (%)		103%	R.C. (%)		60%

Stage / Phase Diagrams											
1.			2.			3.			4.		
I/G= 6			I/G= 6			I/G= 7			I/G= 7		
I/G= 6			I/G= 6			I/G= 7			I/G= 7		

Date: OCT, 2025 Junction: Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B) (B)

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / San Tam Road (C)		Ref. No.:	2031D
Scheme: Design		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.:	-
ARM A: Castle Peak Road - Mai Po			
ARM B: San Tam Road			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
420	(345)
10	(15)

ARM A

AM	(PM)
315	(335)
90	(100)

Minor ARM B

AM	25	110
(PM)	(15)	(65)

GEOMETRY					
Major road width	W	7.40	Lane widths	w(b-a)	3.20
Central Reserve width	Wcr	0.00		w(b-c)	3.20
2 Lane Minor Arm (Y/N)		N		w(c-b)	4.10
Visibilities	Vr(b-a)	50	Calculated	D	0.85
	VI(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.74

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		420	345	
	q(c-b)		10	15	
	q(a-b)		90	100	
	q(a-c)		315	335	
	q(b-a)		110	65	
	q(b-c)		25	15	
	f		0.19	0.19	
CAPACITIES	Q(b-a)	Factor: 1	390	394	
	Q(b-c)	1	583	577	
	Q(c-b)	1	620	612	
	Q(b-ac)	1	416	419	
RFC's	b-a		0.282	0.165	
	b-c		0.043	0.026	
	c-b		0.016	0.025	
	b-ac		0.325	0.191	
Worst RFC			0.325	0.191	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / Palm Springs Boulevard (D)		Ref. No.: 2031D	
Scheme: Design		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Mai Po			
ARM B: Palm Springs Boulevard			
ARM C: Castle Peak Road - Mai Po			

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	4.00
Central Reserve width	Wcr	0.00		w(b-c)	4.00
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.00
Visibilities	Vr(b-a)	30	Calculated	D	0.88
	VI(b-a)	30		E	0.95
	Vr(b-c)	30		F	0.86
	Vr(c-b)	30		Y	0.76

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	275	255
	q(c-b)	10	30
	q(a-b)	145	205
	q(a-c)	255	260
	q(b-a)	225	160
	q(b-c)	25	50
	f	0.10	0.24
CAPACITIES	Q(b-a)	431	420
	Q(b-c)	625	618
	Q(c-b)	548	532
	Q(b-ac)	445	455
RFC's	b-a	0.522	0.381
	b-c	0.040	0.081
	c-b	0.018	0.056
	b-ac	0.562	0.462
Worst RFC		0.562	0.462

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long		Ref. No.: 2031D
Junction: Castle Peak Road Mai Po / Geranium Path (E)		Ref. No.:
Scheme: Design		Rev.: -
Year: 2031	Job No.: CHK50873110	
ARM A: Castle Peak Road - Mai Po		
ARM B: Geranium Path		
ARM C: Castle Peak Road - Mai Po		

ARM C

AM	(PM)
495	(410)
5	(5)

ARM A

AM	(PM)
400	(460)
5	(5)

Minor ARM B

AM	(PM)
5	(5)
5	(5)

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	3.00
Central Reserve width	Wcr	0.00		w(b-c)	3.00
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.60
Visibilities	Vr(b-a)	50	Calculated	D	0.82
	VI(b-a)	30		E	0.88
	Vr(b-c)	50		F	0.93
	Vr(c-b)	50		Y	0.76

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		495	410	
	q(c-b)		5	5	
	q(a-b)		5	5	
	q(a-c)		400	460	
	q(b-a)		5	5	
	q(b-c)		5	5	
	f		0.50	0.50	
CAPACITIES	Q(b-a)	Factor	349	348	
	Q(b-c)	1	558	543	
	Q(c-b)	1	591	575	
	Q(b-ac)	1	429	424	
RFC's	b-a		0.014	0.014	
	b-c		0.009	0.009	
	c-b		0.008	0.009	
	b-ac		0.023	0.024	
	Worst RFC		0.023	0.024	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

J05_P-Castle_Peak_Road_Mai_Po-Geranium_Path.xlsm \ 2031D

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Tam Mi / Yau Pok Road (F)		Ref. No.:	2031D
Scheme: Design		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.:	-
ARM A: Castle Peak Road - Tam Mi			
ARM B: Yau Pok Road			
ARM C: Castle Peak Road - Tam Mi			

ARM C

AM	(PM)
495	(415)
0	(0)

ARM A

AM	(PM)
385	(445)
0	(0)

Minor ARM B

AM	(PM)
20	20
(20)	(20)

GEOMETRY					
Major road width	W	6.50	Lane widths	w(b-a)	1.88
Central Reserve width	Wcr	0.00		w(b-c)	1.88
2 Lane Minor Arm (Y/N)		N		w(c-b)	0.00
Visibilities	Vr(b-a)	16	Calculated	D	0.70
	VI(b-a)	31		E	0.76
	Vr(b-c)	16		F	0.59
	Vr(c-b)	0		Y	0.78

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		495	415	
	q(c-b)		0	0	
	q(a-b)		0	0	
	q(a-c)		385	445	
	q(b-a)		20	20	
	q(b-c)		20	20	
	f		0.50	0.50	
CAPACITIES	Q(b-a)	Factor	302	300	
	Q(b-c)	1	481	468	
	Q(c-b)	1	373	363	
	Q(b-ac)	1	371	366	
RFC's	b-a		0.066	0.067	
	b-c		0.042	0.043	
	c-b		0.000	0.000	
	b-ac		0.108	0.109	
	Worst RFC		0.108	0.109	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Tam Mi / Kam Pok Road (G)		Ref. No.:	2031D
Scheme: Design		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.:	-
ARM A: Castle Peak Road - Tam Mi			
ARM B: Kam Pok Road			
ARM C: Castle Peak Road - Tam Mi			

ARM C

AM	(PM)
405	(355)
110	(85)

ARM A

AM	(PM)
300	(370)
160	(150)

Minor ARM B

AM	(PM)
85	180
(80)	(105)

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	3.50
Central Reserve width	Wcr	0.00		w(b-c)	3.50
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.50
Visibilities	Vr(b-a)	50	Calculated	D	0.86
	VI(b-a)	35		E	0.92
	Vr(b-c)	50		F	0.92
	Vr(c-b)	50		Y	0.76

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		405	355	
	q(c-b)		110	85	
	q(a-b)		160	150	
	q(a-c)		300	370	
	q(b-a)		180	105	
	q(b-c)		85	80	
	f		0.32	0.43	
CAPACITIES	Q(b-a)	Factor	355	355	
	Q(b-c)	1	596	579	
	Q(c-b)	1	571	556	
	Q(b-ac)	1	408	426	
RFC's	b-a		0.507	0.296	
	b-c		0.143	0.138	
	c-b		0.193	0.153	
	b-ac		0.650	0.434	
Worst RFC			0.650	0.434	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

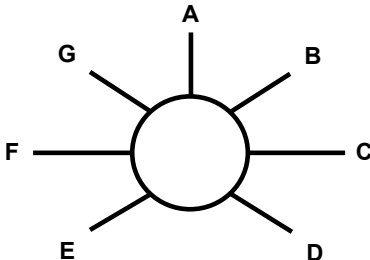
Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long										
Junction: Fairview Park Interchange (H)								Ref. No.: 2031D		
Scheme: Design								Ref. No.:		
Year: 2031				Job No.: CHK50873110				Rev.: -		
AM										
PM										
ARM A: Fairview Park Boulevard										
ARM B: Castle Peak Rd E										
ARM C: NTCR E										
ARM D: San Tam Rd E										
ARM E: San Tam Rd W										
ARM F: NTCR W										
ARM G: Castle Peak Rd W										
GEOMETRY										
ARM	v	e	L	r	D	Phi	S			
A	7.00	11.00	14	22	142	35	0.46			
B	5.50	10.50	15	20	142	35	0.53			
C	5.50	8.50	7.5	23	142	30	0.64			
D	6.75	8.50	10	20	142	25	0.28			
E	6.00	8.00	9.5	20	142	35	0.34			
F	6.50	9.00	15	25	142	40	0.27			
G	5.50	6.00	7	22	142	30	0.11			
AM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	195	40	215	445	30	2600	955	620
B	10	10	135	10	235	300	30	2980	730	575
C	85	70	10	95	445	10	205	2545	920	1165
D	60	20	45	10	245	250	85	3020	715	445
E	40	35	430	65	10	495	20	1995	1095	1740
F	310	275	10	145	580	10	350	1280	1680	1810
G	105	145	340	80	10	300	0	2240	980	720
PM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	155	50	195	320	30	2195	770	940
B	35	10	85	10	155	165	30	2435	490	530
C	175	115	20	75	390	20	190	2150	985	775
D	75	20	55	20	195	140	70	2725	575	410
E	90	30	265	70	10	270	20	1735	755	1565
F	470	260	10	135	610	20	265	1350	1770	1140
G	85	85	185	50	10	205	10	2505	630	615
CALCULATIONS										
ARM	K	X ₂	M	F	t _D	f _c	Q _E		RFC	
							AM	PM	AM	PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1200	1436	0.80	0.54
B	0.98	7.92	3640.95	2400	1.00	0.54	769	1059	0.95	0.46
C	1.01	6.82	3640.95	2065	1.00	0.50	807	1004	1.14	0.98
D	1.02	7.87	3640.95	2385	1.00	0.54	765	928	0.93	0.62
E	0.98	7.19	3640.95	2180	1.00	0.51	1138	1269	0.96	0.60
F	0.98	8.13	3640.95	2464	1.00	0.55	1714	1676	0.98	1.06
G	1.00	5.91	3640.95	1790	1.00	0.46	767	645	1.28	0.98
Critical Arm:									G	F
RFC:									1.28	1.06
									AM	PM
- In accordance with TPDM V2.4										
Calculated by: MYC				Date: Oct-25			Checked by: CFC			

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long		Ref. No.: 2031D
Junction: Castle Peak Road Mai Po / Mai Po South Road (I)		Ref. No.:
Scheme: Design		Rev.: -
Year: 2031	Job No.: CHK50873110	
ARM A: Castle Peak Road - Mai Po		
ARM B: Mai Po South Road		
ARM C: Castle Peak Road - Mai Po		

ARM C

AM	(PM)
230	(235)
80	(90)

ARM A

AM	(PM)
235	(260)
50	(50)

AM
(PM)

110	55
(85)	(50)

Minor ARM B

GEOMETRY					
Major road width	W	6.90	Lane widths	w(b-a)	3.60
Central Reserve width	Wcr	0.00		w(b-c)	3.60
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.30
Visibilities	Vr(b-a)	50	Calculated	D	0.87
	VI(b-a)	30		E	0.93
	Vr(b-c)	50		F	0.91
	Vr(c-b)	50		Y	0.76

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		230	235
	q(c-b)		80	90
	q(a-b)		50	50
	q(a-c)		235	260
	q(b-a)		55	50
	q(b-c)		110	85
	f		0.67	0.63
CAPACITIES	Q(b-a)	Factor 1	419	409
	Q(b-c)	1	629	622
	Q(c-b)	1	603	597
	Q(b-ac)	1	539	522
RFC's	b-a		0.131	0.122
	b-c		0.175	0.137
	c-b		0.133	0.151
	b-ac		0.306	0.259
Worst RFC			0.306	0.259

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road San Tin / Kwu Tung Road (J)		Ref. No.:	2031D
Scheme: Design		Ref. No.:	
Year: 2031	Job No.:	CHK50873110	Rev.: -
ARM A: Castle Peak Road - San Tin			
ARM B: Kwu Tung Road			
ARM C: Castle Peak Road - San Tin			

ARM C

AM	(PM)
480	(415)
160	(130)

ARM A

AM	(PM)
230	(210)
120	(60)

AM	240	70
(PM)	(305)	(110)

Minor ARM B

GEOMETRY					
Major road width	W	8.00	Lane widths	w(b-a)	3.60
Central Reserve width	Wcr	0.00		w(b-c)	3.60
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.30
Visibilities	Vr(b-a)	40	Calculated	D	0.86
	VI(b-a)	40		E	0.92
	Vr(b-c)	35		F	0.89
	Vr(c-b)	35		Y	0.72

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		480	415
	q(c-b)		160	130
	q(a-b)		120	60
	q(a-c)		230	210
	q(b-a)		70	110
	q(b-c)		240	305
	f		0.77	0.73
CAPACITIES	Q(b-a)	Factor	357	386
	Q(b-c)	1	618	628
	Q(c-b)	1	583	602
	Q(b-ac)	1	530	539
RFC's	b-a		0.196	0.285
	b-c		0.388	0.486
	c-b		0.274	0.216
	b-ac		0.585	0.770
Worst RFC			0.585	0.770

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

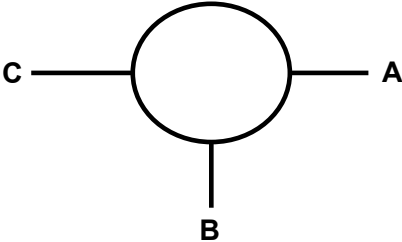
Calculated by: LTY

Date: Oct-25

Checked by: CFC

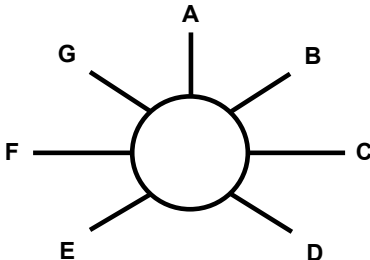
J10_P-Castle_Peak_Road_San_Tin-Kwu_Tung_Road.xlsm \ 2031D

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long											
Junction: San Tin Interchange (K)							Ref. No.: 2031D				
Scheme: Design							Ref. No.:				
Year: 2031				Job No.: CHK50873110			Rev.: -				
AM PM ARM A: San Tin Highway Slip Road ARM B: San Sham Road ARM C: Fanling Highway Slip Road											
GEOMETRY											
ARM	v	e	L	r	D	Phi	S				
A	7.70	14.40	75	30	103	40	0.14				
B	8.80	11.70	75	30	103	40	0.06				
C	8.80	12.00	40	100	103	30	0.13				
AM FLOWS											
from \ to	A	B	C					Circ	Entry		
A	640	625	1205					315	2470		
B	555	0	0					2070	555		
C	495	90	225					1195	810		
PM FLOWS											
from \ to	A	B	C					Circ	Entry		
A	495	545	815					355	1855		
B	750	0	0					1545	750		
C	420	120	235					1245	775		
CALCULATIONS											
ARM	K	X ₂	M	F	t _D	f _c	Q _E		RFC		
							AM	PM	AM	PM	
A	0.98	12.91	73.70	3912	1.01	0.76	3606	3576	0.69	0.52	
B	0.98	11.38	73.70	3448	1.01	0.69	1978	2335	0.28	0.32	
C	1.04	11.35	73.70	3438	1.01	0.69	2715	2679	0.30	0.29	
									Critical Arm:	A	A
									RFC:	0.69	0.52
										AM	PM
- In accordance with TPDM V2.4											
Calculated by: MYC				Date: Oct-25			Checked by: CFC				

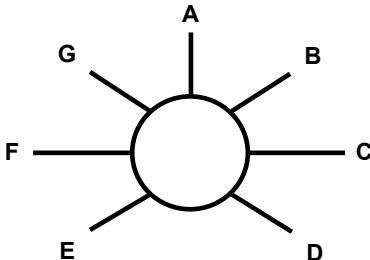
Calculation Spreadsheets
for
2031 Reference Scenario
(With Improvement)

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long										
Junction: Fairview Park Interchange (H)								Ref. No.: 2031R		
Scheme: Reference (Under Improvement 2)								Ref. No.:		
Year: 2031				Job No.: CHK50873110				Rev.: -		
AM										
PM										
ARM A: Fairview Park Boulevard										
ARM B: Castle Peak Rd E										
ARM C: NTCR E										
ARM D: San Tam Rd E										
ARM E: San Tam Rd W										
ARM F: NTCR W										
ARM G: Castle Peak Rd W										
GEOMETRY										
ARM	v	e	L	r	D	Phi	S			
A	7.00	11.80	20	25	140	35	0.38			
B	7.30	12.00	36	30	140	25	0.21			
C	7.30	13.00	13	45	140	30	0.70			
D	7.30	11.00	23	25	140	35	0.26			
E	7.30	12.00	27	25	140	45	0.28			
F	6.00	12.50	20	25	140	40	0.52			
G	6.50	11.20	22	25	140	35	0.34			
AM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	195	40	215	445	30	2565	955	620
B	10	10	135	10	235	245	30	2980	675	540
C	85	70	10	95	445	10	205	2490	920	1165
D	60	20	45	10	245	250	85	2965	715	445
E	40	35	430	65	10	495	20	1940	1095	1740
F	310	240	10	145	580	10	0	1280	1295	1755
G	105	145	340	80	10	300	0	2205	980	370
PM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	155	50	195	320	30	2155	770	940
B	35	10	85	10	155	125	30	2435	450	490
C	175	115	20	75	390	20	190	2110	985	775
D	75	20	55	20	195	140	70	2685	575	410
E	90	30	265	70	10	270	20	1695	755	1565
F	470	220	10	135	610	20	0	1350	1465	1100
G	85	85	185	50	10	205	10	2465	630	350
CALCULATIONS										
ARM	K	X ₂	M	F	t _D	f _c	Q _E		RFC	
							AM	PM	AM	PM
A	0.99	9.71	2980.96	2944	1.00	0.62	1348	1599	0.71	0.48
B	1.03	10.62	2980.96	3216	1.00	0.66	1304	1674	0.52	0.27
C	1.03	9.67	2980.96	2931	1.00	0.62	1434	1674	0.64	0.59
D	0.99	9.74	2980.96	2952	1.00	0.62	1107	1279	0.65	0.45
E	0.96	10.32	2980.96	3127	1.00	0.64	1799	1950	0.61	0.39
F	0.98	9.19	2980.96	2783	1.00	0.60	1970	1930	0.66	0.76
G	0.99	9.29	2980.96	2815	1.00	0.60	1480	1325	0.66	0.48
Critical Arm:									A	F
RFC:									0.71	0.76
									AM	PM
- In accordance with TPDM V2.4										
Calculated by: MYC				Date: Oct-25			Checked by: CFC			

Calculation Spreadsheets
for
2031 Design Scenario
(With Improvement)

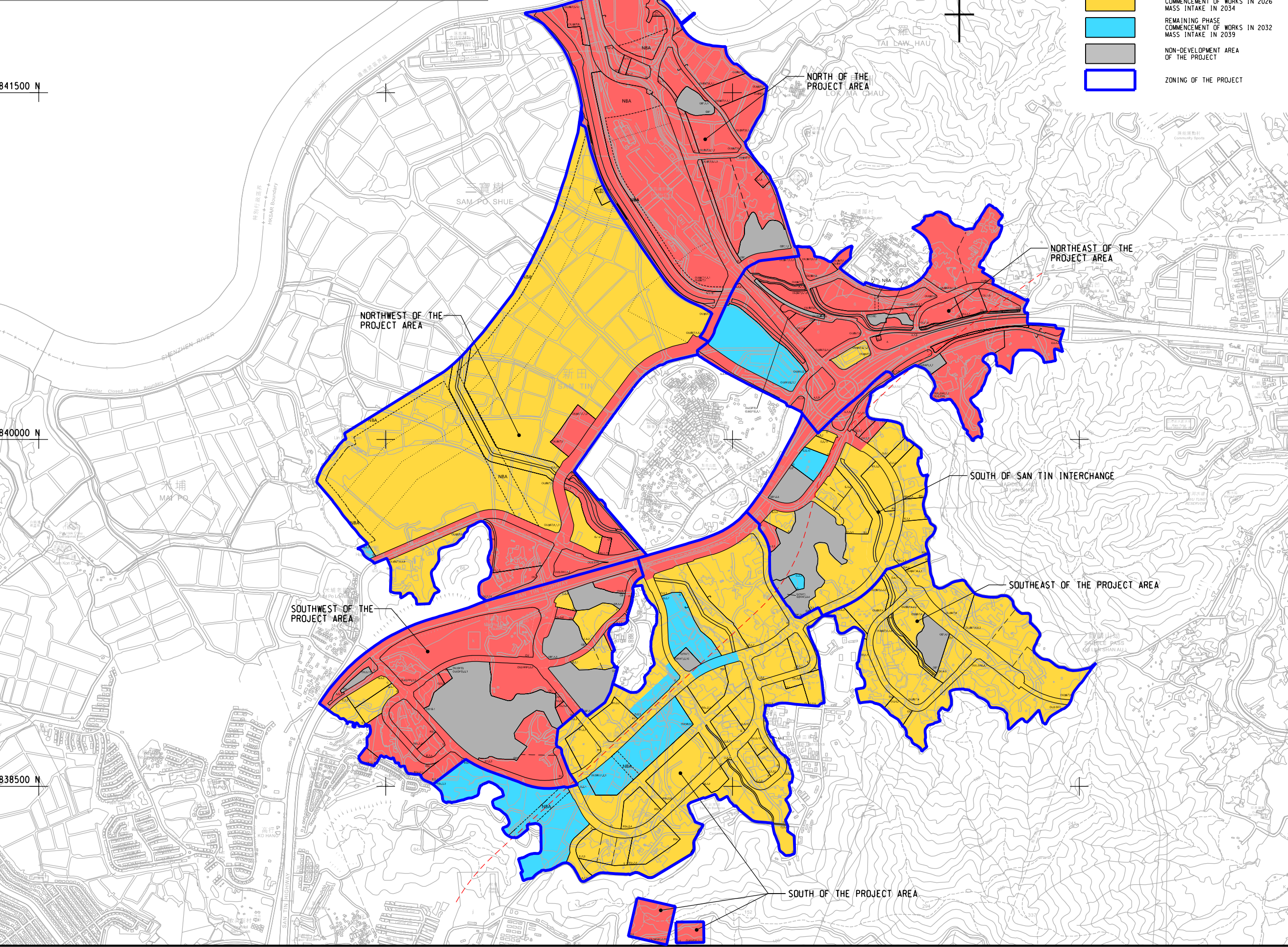
Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long										
Junction: Fairview Park Interchange (H)								Ref. No.: 2031D		
Scheme: Design (Under Improvement 2)								Ref. No.:		
Year: 2031				Job No.: CHK50873110				Rev.: -		
AM		PM								
ARM A:		Fairview Park Boulevard								
ARM B:		Castle Peak Rd E								
ARM C:		NTCR E								
ARM D:		San Tam Rd E								
ARM E:		San Tam Rd W								
ARM F:		NTCR W								
ARM G:		Castle Peak Rd W								
										
GEOMETRY										
ARM	v	e	L	r	D	Phi	S			
A	7.00	11.80	20	25	140	35	0.38			
B	7.30	12.00	36	30	140	25	0.21			
C	7.30	13.00	13	45	140	30	0.70			
D	7.30	11.00	23	25	140	35	0.26			
E	7.30	12.00	27	25	140	45	0.28			
F	6.00	12.50	20	25	140	40	0.52			
G	6.50	11.20	22	25	140	35	0.34			
AM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	195	40	215	445	30	2600	955	620
B	10	10	135	10	235	300	30	2980	730	575
C	85	70	10	95	445	10	205	2545	920	1165
D	60	20	45	10	245	250	85	3020	715	445
E	40	35	430	65	10	495	20	1995	1095	1740
F	310	275	10	145	580	10	0	1280	1330	1810
G	105	145	340	80	10	300	0	2240	980	370
PM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	155	50	195	320	30	2195	770	940
B	35	10	85	10	155	165	30	2435	490	530
C	175	115	20	75	390	20	190	2150	985	775
D	75	20	55	20	195	140	70	2725	575	410
E	90	30	265	70	10	270	20	1735	755	1565
F	470	260	10	135	610	20	0	1350	1505	1140
G	85	85	185	50	10	205	10	2505	630	350
CALCULATIONS								Q _E	RFC	
ARM	K	X ₂	M	F	t _D	f _c	AM	PM	AM	PM
A	0.99	9.71	2980.96	2944	1.00	0.62	1326	1575	0.72	0.49
B	1.03	10.62	2980.96	3216	1.00	0.66	1304	1674	0.56	0.29
C	1.03	9.67	2980.96	2931	1.00	0.62	1399	1649	0.66	0.60
D	0.99	9.74	2980.96	2952	1.00	0.62	1074	1255	0.67	0.46
E	0.96	10.32	2980.96	3127	1.00	0.64	1765	1925	0.62	0.39
F	0.98	9.19	2980.96	2783	1.00	0.60	1970	1930	0.68	0.78
G	0.99	9.29	2980.96	2815	1.00	0.60	1459	1302	0.67	0.48
								Critical Arm:	A	F
								RFC:	0.72	0.78
									AM	PM
- In accordance with TPDM V2.4										
Calculated by: MYC				Date: Oct-25			Checked by: CFC			

ANNEX B – PRELIMINARY PHASING ON SAN TIN TECHNOPOLE

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:
Plot File by: RenS
2023/11/14
PATH P:\PROJECTS\60670882\DRAWING\REPORT\A34\A34_371.dgn

Annex A - Preliminary Phasing on San Tin Technopole



LEGEND:

- NOL2 ALIGNMENT
- INITIAL PHASE
COMMENCEMENT OF WORKS IN END 2024
FIRST INTAKE IN 2031
- MAIN PHASE
COMMENCEMENT OF WORKS IN 2026
MASS INTAKE IN 2034
- REMAINING PHASE
COMMENCEMENT OF WORKS IN 2032
MASS INTAKE IN 2039
- NON-DEVELOPMENT AREA
OF THE PROJECT
- ZONING OF THE PROJECT

AECOM

PROJECT
項目
FIRST PHASE DEVELOPMENT OF
THE NEW TERRITORIES NORTH –
SAN TIN / LOK MA CHAU
DEVELOPMENT NODE –
INVESTIGATION

CLIENT
業主
CEDD 土木工程拓展署
Civil Engineering and
Development Department
規劃署
Planning Department

CONSULTANT
土庫顧問公司
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SUB-CONSULTANTS
分列土庫顧問公司

ISSUE/REVISION			
修訂			
I/R	DATE	DESCRIPTION	CHK.
修訂	日期	內容描述	校核
STATUS			
階段			
SCALE		DIMENSION UNIT	
比例		尺寸單位	
A3 1 : 16000		METRES	
KEY PLAN			
索引圖			

PROJECT NO.
項目編號
60670882

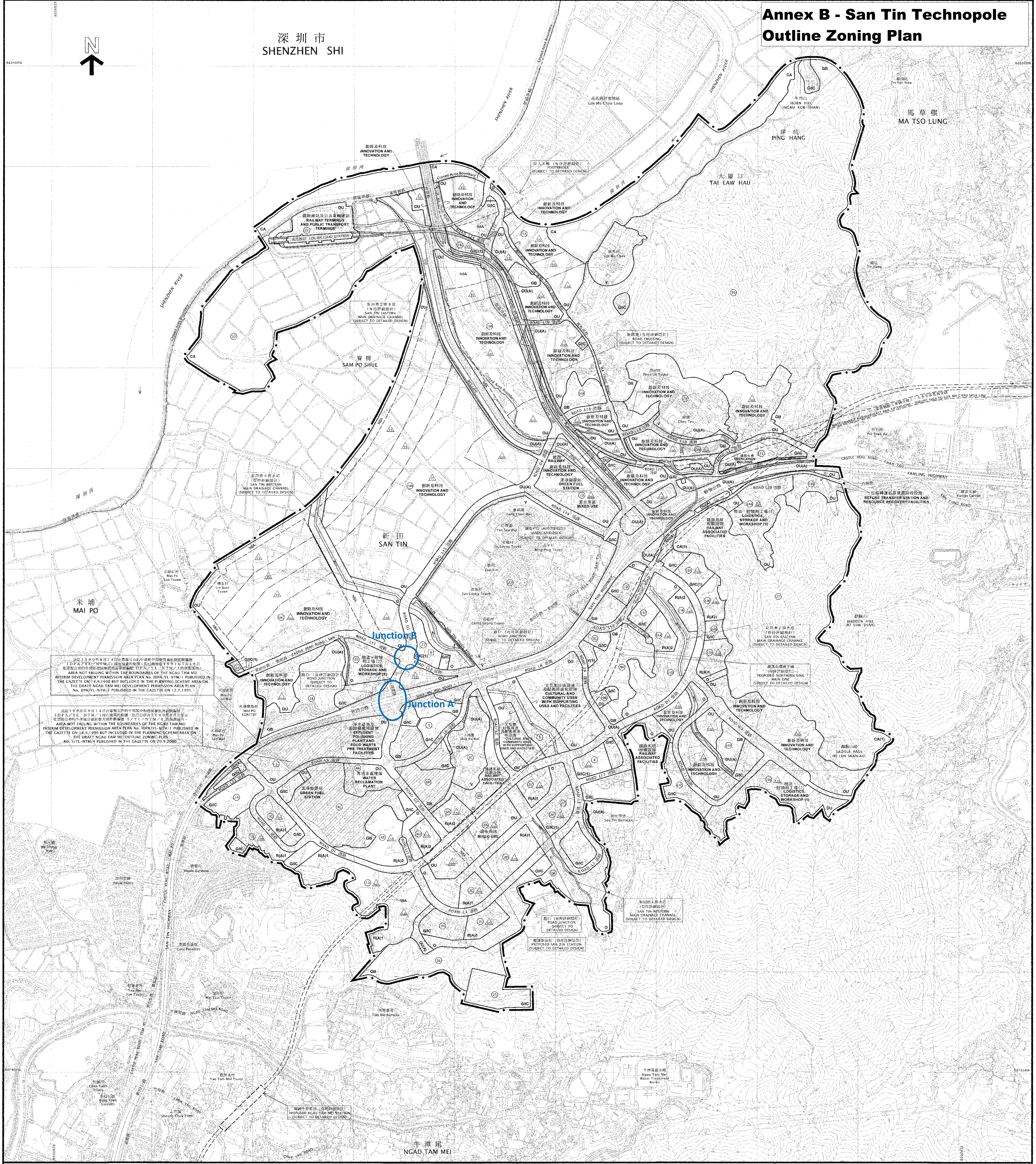
AGREEMENT NO.
協議編號
CE 20/2021

SHEET TITLE
圖紙名稱
PRELIMINARY CONSTRUCTION AND
POPULATION INTAKE SCHEDULE

SHEET NUMBER
圖紙編號
60670882/A34/APPENDIX 2.1

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ANNEX C – SAN TIN TECHNOPOLE – OUTLINE ZONING PLAN



Annex B - San Tin Technopole
Outline Zoning Plan

圖例
NOTATION

ZONES

RESIDENTIAL (GROUP A) R(A)

VILLAGE TYPE DEVELOPMENT V

GOVERNMENT, INSTITUTION OR COMMUNITY GIC

OPEN SPACE O

OTHER SPECIFIED USES OU

OTHER SPECIFIED USES (AMENITY AREA) OU(A)

GREEN BELT GB

CONSERVATION AREA CA

地帶

住宅 (甲類)

鄉村式發展

政府、機構或社區

休憩用地

其他指定用途 (美化市容地帶)

綠化地帶

自然保育區

COMMUNICATIONS

RAILWAY AND STATION

RAILWAY AND STATION (UNDERGROUND)

RAILWAY AND STATION (ELEVATED)

MAJOR ROAD AND JUNCTION

ELEVATED ROAD

MISCELLANEOUS

BOUNDARY OF PLANNING SCHEME

PLANNING AREA NUMBER

BUILDING HEIGHT CONTROL ZONE BOUNDARY

MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)

MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)

NON-BUILDING AREA

交通

鐵路及車站

鐵路及車站 (地下)

鐵路及車站 (高架)

主要道路及路口

高架道路

其他

規劃範圍界線

規劃區編號

建築物高度管制區界線

最高樓宇高度 (在主水平基準上若干米)

最高樓宇高度 (樓層數目)

非建築用地

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	土地面積及百分比 APPROXIMATE AREA & %		用途
	公頃 HECTARES	百分比 %	
RESIDENTIAL (GROUP A)	44.78	4.46	住宅 (甲類)
VILLAGE TYPE DEVELOPMENT	76.48	7.82	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	56.52	5.63	政府、機構或社區
OPEN SPACE	56.68	5.57	休憩用地
OTHER SPECIFIED USES	284.63	28.35	其他指定用途
OTHER SPECIFIED USES (AMENITY AREA)	26.61	2.85	其他指定用途 (美化市容地帶)
GREEN BELT	207.29	20.65	綠化地帶
CONSERVATION AREA	139.36	13.86	自然保育區
MAJOR ROAD ETC.	108.45	10.79	主要道路等
TOTAL PLANNING SCHEME AREA	1004.00	100.00	規劃範圍總面積

2024年3月8日 按照城市規劃條例第5條展示的
草案
DRAFT PLAN EXHIBITED UNDER SECTION 5 OF THE TOWN
PLANNING ORDINANCE ON 8 MARCH 2024

C. K. Yip 葉子學
SECRETARY 城市規劃委員會秘書
TOWN PLANNING BOARD

香港城市規劃委員會依據城市規劃條例擬備的新田科技城分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
SAN TIN TECHNOPOLE - OUTLINE ZONING PLAN

SCALE 1:7500 比例尺

2024年3月8日 按照城市規劃條例第5條展示的
草案
DRAFT PLAN EXHIBITED UNDER SECTION 5 OF THE TOWN
PLANNING ORDINANCE ON 8 MARCH 2024

規劃署遵照城市規劃委員會指示擬備
PREPARED BY THE PLANNING DEPARTMENT UNDER
THE DIRECTION OF THE TOWN PLANNING BOARD

圖則編號
PLAN No. S/STT/1

ANNEX D – DETAIL OF JUNCTION CALCULATION SHEETS (SENSITIVITY TEST)

Calculation Spreadsheets
for 2031
Reference & Design Scenario
(Sensitivity Test 1)

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long		Ref. No.: 2031R	
Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A1)		Ref. No.:	
Scheme: Reference (Sensitivity Test 1)		Rev.: -	
Year: 2031	Job No.: CHK50873110		
ARM A: Shek Wu Wai Road			
ARM B: San Tin Highway Slip Road			
ARM C: Shek Wu Wai Road			

ARM C

AM	(PM)
395	(310)
0	(0)

ARM A

AM	(PM)
110	(75)
0	(0)

AM
(PM)

255	85
(255)	(90)

Minor ARM B

GEOMETRY			
Major road width	W	7.20	Lane widths
Central Reserve width	W _{cr}	0.00	w(b-a)
2 Lane Minor Arm (Y/N)		N	w(b-c)
Visibilities	V _r (b-a)	20	w(c-b)
	V _l (b-a)	20	Calculated
	V _r (b-c)	20	D
	V _r (c-b)		E
			F
			Y

ANALYSIS		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	395	310
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	110	75
	q(b-a)	85	90
	q(b-c)	255	255
	f	0.75	0.74
CAPACITIES	Q(b-a)	638	667
	Q(b-c)	935	947
	Q(c-b)	419	425
	Q(b-ac)	837	854
RFC's	b-a	0.133	0.135
	b-c	0.273	0.269
	c-b	0.000	0.000
	b-ac	0.406	0.404
Worst RFC		0.406	0.404

Where V_l and V_r are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(V_r(b-a)-120))(1+0.0006(V_l(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(V_r(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(V_r(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long		Ref. No.: 2031R	
Junction: Shek Wu Wai Road / Mai Po Lung Road (A2)		Ref. No.:	
Scheme: Reference (Sensitivity Test 1)		Rev.: -	
Year: 2031	Job No.: CHK50873110		
ARM A: Mai Po Lung Road			
ARM B: San Tin Highway Slip Road			
ARM C: Shek Wu Wai Road			
ARM D: Shek Wu Wai Road			

GEOMETRY		ARM B		ARM D	
Major road width	W	10.30	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	0.00
				w(c-b)	3.50
Visibilities	Vr(b-a)	0	Vr(d-c)	30	D
	VI(b-a)	0	VI(d-c)	30	E
	Vr(b-c)	0	Vr(d-a)	25	F
	Vr(c-b)	40	Vr(a-d)	30	Y
				0.53	D
				0.59	E
				0.91	F
				0.64	Y
				0.99	D
				1.06	E
				0.89	F
				0.64	Y

ANALYSIS		ARM B		ARM D	
		AM PEAK	(PM) PEAK	AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	50	105	q(a-c)	40
	q(c-b)	335	205	q(a-d)	5
	q(a-b)	40	45	q(c-d)	100
	q(a-c)	115	80	q(c-a)	100
	q(b-a)	0	0	q(d-c)	85
	q(b-c)	0	0	q(d-a)	5
	f	0.00	0.00	f	0.06
CAPACITIES	Q(b-a)	254	277	Q(d-c)	583
	Q(b-c)	419	423	Q(d-a)	759
	Q(c-b)	648	655	Q(a-d)	620
	Q(b-ac)	254	277	Q(d-ca)	590
	Q(c-a)	869	1237	Q(a-c)	1785
RFC's	b-a	0.000	0.000	d-c	0.146
	b-c	0.000	0.000	d-a	0.007
	c-b	0.517	0.313	a-d	0.008
	b-ac	0.000	0.000	d-ca	0.152
	c-a	0.058	0.085	a-c	0.022

Worst RFC		AM	(PM)
		0.517	0.313

Where VI and Vr are visibility distances to the left or right of the respective streams
 $D = (1 + 0.094(w(b-a) - 3.65))(1 + 0.0009(Vr(b-a) - 120))(1 + 0.0006(VI(b-a) - 150))$
 $E = (1 + 0.094(w(b-c) - 3.65))(1 + 0.0009(Vr(b-c) - 120))$
 $F = (1 + 0.094(w(c-b) - 3.65))(1 + 0.0009(Vr(c-b) - 120))$
 $Y = 1 - 0.0345W$
 $f = \text{proportion of minor traffic turning left}$
 $Q(b-ac) = Q(b-c) * Q(b-a) / ((1-f) * Q(b-c) + f * Q(b-a))$
Capacity of combined streams
- in accordance with TPDM V2.4

T.P.D.M.V.2.4
Appendix 1

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long		Ref. No.: 2031R	
Junction: Castle Peak Road San Tin / Shek Wu Wai Road (B)		Ref. No.:	
Scheme: Reference (Sensitivity Test 1)		Rev.: -	
Year: 2031	Job No.: CHK50873110		
ARM A: Castle Peak Road - San Tin			
ARM B: Shek Wu Wai Road			
ARM C: Castle Peak Road - San Tin			

ARM C

AM	(PM)
265	(280)
120	(125)

ARM A

AM	(PM)
280	(245)
275	(185)

AM
(PM)

105	265
(140)	(195)

Minor ARM B

GEOMETRY					
Major road width	W	6.50	Lane widths	w(b-a)	4.20
Central Reserve width	Wcr	0.00		w(b-c)	4.20
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.60
Visibilities	Vr(b-a)	30	Calculated	D	0.90
	VI(b-a)	30		E	0.98
	Vr(b-c)	40		F	0.91
	Vr(c-b)	30		Y	0.78

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		265	280
	q(c-b)		120	125
	q(a-b)		275	185
	q(a-c)		280	245
	q(b-a)		265	195
	q(b-c)		105	140
	f		0.28	0.42
CAPACITIES	Q(b-a)	Factor 1	378	392
	Q(b-c)	1	620	639
	Q(c-b)	1	538	570
	Q(b-ac)	1	425	468
RFC's	b-a		0.701	0.497
	b-c		0.169	0.219
	c-b		0.223	0.219
	b-ac		0.871	0.716
Worst RFC			0.871	0.716

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A1)		Ref. No.:	2031D
Scheme: Design (Sensitivity Test 1)		Ref. No.:	
Year: 2031	Job No.:	CHK50873110	Rev.: -
ARM A: Shek Wu Wai Road			
ARM B: San Tin Highway Slip Road			
ARM C: Shek Wu Wai Road			

ARM C

AM	(PM)
435	(340)
0	(0)

ARM A

AM	(PM)
110	(75)
0	(0)

AM
(PM)

285	85
(290)	(90)

Minor ARM B

GEOMETRY					
Major road width	W	7.20	Lane widths	w(b-a)	8.30
Central Reserve width	W _{cr}	0.00		w(b-c)	8.30
2 Lane Minor Arm (Y/N)		N		w(c-b)	0.00
Visibilities	V _r (b-a)	20	Calculated	D	1.21
	V _l (b-a)	20		E	1.31
	V _r (b-c)	20		F	0.59
	V _r (c-b)			Y	0.75

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		435	340
	q(c-b)		0	0
	q(a-b)		0	0
	q(a-c)		110	75
	q(b-a)		85	90
	q(b-c)		285	290
	f		0.77	0.76
CAPACITIES	Q(b-a)	Factor	629	661
	Q(b-c)	1	935	947
	Q(c-b)	1	419	425
	Q(b-ac)	1	841	859
RFC's	b-a		0.135	0.136
	b-c		0.305	0.306
	c-b		0.000	0.000
	b-ac		0.440	0.442
Worst RFC			0.440	0.442

Where V_l and V_r are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(V_r(b-a)-120))(1+0.0006(V_l(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(V_r(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(V_r(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Capacity of combined streams

- in accordance with TPDM V2.4

Calculated by:	MYC	Date:	Oct-25	Checked by:	CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Shek Wu Wai Road / Mai Po Lung Road (A2)		Ref. No.: 2031D	
Scheme: Design (Sensitivity Test 1)		Ref. No.:	
Year: 2031	Job No.: CHK50873110	Rev.: -	
ARM A: Mai Po Lung Road			
ARM B: San Tin Highway Slip Road			
ARM C: Shek Wu Wai Road			
ARM D: Shek Wu Wai Road			

ARM C		ARM D		ARM A		ARM B	
AM	PM	AM	PM	AM	PM	AM	PM
95	100	65	40	0	5	0	0
45	100	60	45	50	40	0	0
380	230	5	5	40	45	0	0

GEOMETRY				ARM B		ARM D		
Major road width	W	10.30	Lane widths	w(b-a)	0.00	w(b-a)	5.40	
Central Reserve width	Wcr	0.00		w(b-c)	0.00	w(b-c)	5.40	
				w(c-b)	3.50	w(c-b)	3.30	
Visibilities	Vr(b-a)	0	Vr(d-c)	30	D	0.53	D	0.99
	VI(b-a)	0	VI(d-c)	30	E	0.59	E	1.06
	Vr(b-c)	0	Vr(d-a)	25	F	0.91	F	0.89
	Vr(c-b)	40	Vr(a-d)	30	Y	0.64	Y	0.64

ANALYSIS		Arm B		Arm D	
	AM PEAK	(PM) PEAK		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	50	105	q(a-c)	40
	q(c-b)	380	230	q(a-d)	5
	q(a-b)	40	45	q(c-d)	100
	q(a-c)	115	80	q(c-a)	100
	q(b-a)	0	0	q(d-c)	85
	q(b-c)	0	0	q(d-a)	5
	f	0.00	0.00	f	0.04
CAPACITIES	Q(b-a)	246	273	Q(d-c)	583
	Q(b-c)	419	423	Q(d-a)	759
	Q(c-b)	648	655	Q(a-d)	620
	Q(b-ac)	246	273	Q(d-ca)	590
	Q(c-a)	744	1168	Q(a-c)	1785
RFC's	b-a	0.000	0.000	d-c	0.146
	b-c	0.000	0.000	d-a	0.007
	c-b	0.586	0.351	a-d	0.008
	b-ac	0.000	0.000	d-ca	0.152
	c-a	0.067	0.090	a-c	0.022

Worst RFC		AM	(PM)
		0.586	0.351

Where VI and Vr are visibility distances to the left or right of the respective streams
 $D = (1 + 0.094(w(b-a) - 3.65))(1 + 0.0009(Vr(b-a) - 120))(1 + 0.0006(VI(b-a) - 150))$
 $E = (1 + 0.094(w(b-c) - 3.65))(1 + 0.0009(Vr(b-c) - 120))$
 $F = (1 + 0.094(w(c-b) - 3.65))(1 + 0.0009(Vr(c-b) - 120))$
 $Y = 1 - 0.0345W$
 $f = \text{proportion of minor traffic turning left}$
 $Q(b-ac) = Q(b-c) * Q(b-a) / ((1-f) * Q(b-c) + f * Q(b-a))$
Capacity of combined streams
- in accordance with TPDM V2.4

T.P.D.M.V.2.4
Appendix 1

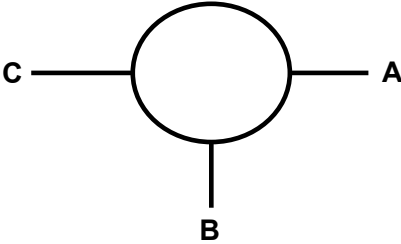
Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

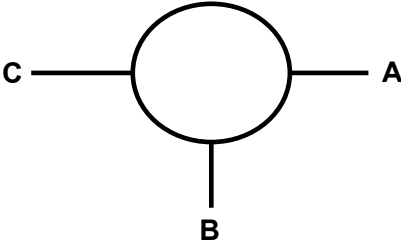
Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road San Tin / Shek Wu Wai Road (B)		Ref. No.:	2031D
Scheme: Design (Sensitivity Test 1)		Ref. No.:	
Year: 2031	Job No.:	CHK50873110	Rev.: -
ARM A: Castle Peak Road - San Tin			
ARM B: Shek Wu Wai Road			
ARM C: Castle Peak Road - San Tin			
GEOMETRY			
Major road width	W	6.50	Lane widths
Central Reserve width	Wcr	0.00	w(b-a)
2 Lane Minor Arm (Y/N)		N	w(b-c)
Visibilities	Vr(b-a)	30	w(c-b)
	VI(b-a)	30	Calculated
	Vr(b-c)	40	D
	Vr(c-b)	30	E
			F
			Y
ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	330	325
	q(c-b)	160	155
	q(a-b)	275	185
	q(a-c)	325	295
	q(b-a)	265	195
	q(b-c)	135	175
	f	0.34	0.47
CAPACITIES	Q(b-a)	342	361
	Q(b-c)	608	626
	Q(c-b)	526	557
	Q(b-ac)	401	451
RFC's	b-a	0.775	0.540
	b-c	0.222	0.280
	c-b	0.304	0.278
	b-ac	0.998	0.820
Worst RFC		0.998	0.820
Where VI and Vr are visibility distances to the left or right of the respective streams $D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$ $E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$ $F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$ $Y = 1-0.0345W$ f = proportion of minor traffic turning left $Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams - in accordance with TPDM V2.4			
Calculated by:	MYC	Date:	Oct-25
Checked by:	CFC		

Calculation Spreadsheets
for 2031
Reference & Design Scenario
(Sensitivity Test 1)
(With Improvement)

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long											
Junction: Castle Peak Road San Tin / Shek Wu Wai Road (B)								Ref. No.: 2031R			
Scheme: Reference (Under Improvement in Sensitivity Test 1)								Ref. No.:			
Year: 2031				Job No.: CHK50873110				Rev.: -			
AM ARM A: Castle Peak Road-San Tin ARM B: Shek Wu Wai Road ARM C: Castle Peak Road-San Tin											
GEOMETRY											
ARM	v	e	L	r	D	Phi	S				
A	3.50	5.90	5	14	23	34	0.77				
B	4.00	4.50	7	25	23	3	0.11				
C	3.50	4.00	12	10	23	13	0.07				
AM FLOWS											
from \ to	A	B	C					Circ	Entry		
A	0	275	280					120	555		
B	265	0	105					280	370		
C	265	120	0					265	385		
PM FLOWS											
from \ to	A	B	C					Circ	Entry		
A	0	185	245					125	430		
B	195	0	140					245	335		
C	280	125	0					195	405		
CALCULATIONS											
ARM	K	X ₂	M	F	t _D	f _c	Q _E AM PM		RFC AM PM		
A	0.97	4.45	0.02	1347	1.49	0.59	1232 1229		0.45 0.35		
B	1.10	4.41	0.02	1335	1.49	0.59	1292 1315		0.29 0.25		
C	1.01	3.94	0.02	1194	1.49	0.56	1057 1096		0.36 0.37		
								Critical Arm:		A	C
								RFC:		0.45	0.37
										AM	PM
- In accordance with TPDM V2.4											
Calculated by: MYC				Date: Oct-25				Checked by: CFC			

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long										
Junction: Castle Peak Road San Tin / Shek Wu Wai Road (B)							Ref. No.: 2031D			
Scheme: Design (Under Improvement Sensitivity in Test 1)							Ref. No.:			
Year: 2031				Job No.: CHK50873110			Rev.: -			
AM ARM A: Castle Peak Road-San Tin ARM B: Shek Wu Wai Road ARM C: Castle Peak Road-San Tin										
GEOMETRY										
ARM	v	e	L	r	D	Phi	S			
A	3.50	5.90	5	14	23	34	0.77			
B	4.00	4.50	7	25	23	3	0.11			
C	3.50	4.00	12	10	23	13	0.07			
AM FLOWS										
from \ to	A	B	C				Circ	Entry		
A	0	275	325				160	600		
B	265	0	135				325	400		
C	330	160	0				265	490		
PM FLOWS										
from \ to	A	B	C				Circ	Entry		
A	0	185	295				155	480		
B	195	0	175				295	370		
C	325	155	0				195	480		
CALCULATIONS										
ARM	K	X ₂	M	F	t _D	f _c	Q _E AM PM		RFC AM PM	
A	0.97	4.45	0.02	1347	1.49	0.59	1209 1212		0.50 0.40	
B	1.10	4.41	0.02	1335	1.49	0.59	1263 1282		0.32 0.29	
C	1.01	3.94	0.02	1194	1.49	0.56	1057 1096		0.46 0.44	
Critical Arm: A C										
RFC: 0.50 0.44										
AM PM										
- In accordance with TPDM V2.4										
Calculated by: MYC				Date: Oct-25			Checked by: CFC			

Calculation Spreadsheets
for 2031
Reference & Design Scenario
(Sensitivity Test 1)

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50873110**

MVA HONG KONG LIMITED

Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A)

Design Year: 2039

Description: Reference

Designed By: MYC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
San Tin highway Slip Road (EB)	→	A	1,2	3.650		12.5		98%	98%	1770	1770	309	0.175	0.175	316	0.179	0.179
	↘	A	1,2	3.650		10				1845	1845	321	0.174		329	0.178	
San Tin highway Slip Road (WB)	←	B	1	3.900		10		94%	93%	1865	1865	86	0.046		76	0.041	
	↙	B	1	3.900		12.5				1800	1805	84	0.047		74	0.041	
Shek Wu Wai Road (SB)	↓	C	2,3	3.500						1965	1965	529	0.269		530	0.270	
	↕	C	2,3	3.500		15		30%	18%	2045	2070	550	0.269		558	0.270	
	↘	C	2,3	3.500		12.5				1880	1880	506	0.269		507	0.270	
Shek Wu Wai Road (NB)	↑	D	4	3.500				60%	65%	1965	1965	396	0.202		273	0.139	
	↕	D	4	3.500		15				1985	1975	400	0.202		275	0.139	
	↙	D	4	3.500		12.5				1880	1880	379	0.202	0.202	262	0.139	0.139
Shek Wu Wai Road (SB)	↓	E	3	3.500						2105	2105	327	0.155		327	0.155	
	↕	E	3	3.500						2105	2105	328	0.156	0.156	328	0.156	0.156
	↘	E	3	3.500						1965	1965	305	0.155		305	0.155	
Shek Wu Wai Road (NB)	↑	F	4	3.500						1965	1965	321	0.163		212	0.108	
	↕	F	4	3.500						2105	2105	345	0.164		226	0.107	
	↙	F	4	3.500						2105	2105	344	0.163		227	0.108	

- In accordance with TPDM V4 - Road Traffic Signals

Formual of Total lost time per cycle

$$L = \sum (I - 1)$$

AM peak

Group:

A,E,D

L

$$= (6-1)+(8-1)+(5-1) = 14$$

PM peak

Group:

A,E,D

L

$$= (7-1)+(5-1)+(5-1) = 14$$

Notes:	Flow: (pcu/hr)		Group	B,C,D	A,E,D	Group	B,C,D	A,E,D
			y	0.517	0.532	y	0.450	0.474
			L (sec)	16	14	L (sec)	16	14
			C (sec)	90	90	C (sec)	90	90
			y pract.	0.740	0.760	y pract.	0.740	0.760
			R.C. (%)	43%	43%	R.C. (%)	64%	60%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
I/G= 5	I/G=	I/G= 7	I/G= 5	I/G=
I/G= 5	I/G=	I/G= 7	I/G= 5	I/G=
Date: <u>OCT, 2025</u>				Junction: <u>Shek Wu Wai Road / San Tin Highway Slip Road (A)</u> (A)

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50873110**

MVA HONG KONG LIMITED

Junction: Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B)

Design Year: 2039

Description: Reference

Designed By: MYC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Road L11 EB	→	A	1	4.000	15					1830	1830	175	0.096		115	0.063	
	↔	A	1	4.000	17.5	20		0% / 18%	0% / 7%	2125	2145	238	0.112	0.112	257	0.120	
Road D2 NB	→	A	1	4.000		17.5				1985	1985	222	0.112		238	0.120	0.120
	↔	B	2	3.200	15					1760	1760	292	0.166	0.166	190	0.108	
	↔	B	2	3.200	17.5			1%	30%	2075	2025	343	0.165		219	0.108	0.108
	↔	B	2	3.200		12.5		74%	92%	2075	2075	344	0.166		224	0.108	
Road L11 WB	←	C	3	3.300	12.5					1735	1735	144	0.083	0.083	110	0.063	
	↔	C	3	3.300	15			82%	43%	1925	2000	159	0.083		128	0.064	0.064
	←	C	3	3.300		20		3%	4%	2080	2080	172	0.083		132	0.063	
Road D3 SB	→	D	4	4.000	12.5			2%	1%	2010	2010	259	0.129		355	0.177	
	↔	D	4	4.000						2155	2155	278	0.129		380	0.176	
	↔	D	4	4.000		20		78%	100%	2035	2005	263	0.129	0.129	440	0.219	0.219
- In accordance with TPDM V4 - Road Traffic Signals Formual of Total lost time per cycle $L = \sum (I - 1)$ AM peak Group: A,B,C,D $L = (6-1)+(6-1)+(7-1)+(7-1) = 22$ PM peak Group: A,B,C,D $L = (6-1)+(6-1)+(7-1)+(7-1) = 22$																	

Notes:	Flow: (pcu/hr)	Group	A,B,C,D	Group	A,B,C,D
		y L (sec) C (sec) y pract. R.C. (%)	0.490 22 105 0.711 45%	y L (sec) C (sec) y pract. R.C. (%)	0.511 22 105 0.711 39%

Stage / Phase Diagrams																			
1.				2.				3.				4.				5.			
																			
I/G= 6				I/G= 6				I/G= 7				I/G= 7				I/G=			
I/G= 6				I/G= 6				I/G= 7				I/G= 7				I/G=			
Date: OCT, 2025												Junction: (B) Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B)							

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / San Tam Road (C)		Ref. No.: 2039R	
Scheme: Reference		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Mai Po			
ARM B: San Tam Road			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
325	(280)
10	(15)

ARM A

AM	(PM)
250	(265)
130	(145)

Minor ARM B

AM	(PM)
25	(15)
225	(120)

GEOMETRY					
Major road width	W	7.40	Lane widths	w(b-a)	3.20
Central Reserve width	Wcr	0.00		w(b-c)	3.20
2 Lane Minor Arm (Y/N)		N		w(c-b)	4.10
Visibilities	Vr(b-a)	50	Calculated	D	0.85
	VI(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.74

ANALYSIS		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	325	280
	q(c-b)	10	15
	q(a-b)	130	145
	q(a-c)	250	265
	q(b-a)	225	120
	q(b-c)	25	15
	f	0.10	0.11
	CAPACITIES	Q(b-a)	415
Q(b-c)		595	590
Q(c-b)		627	619
Q(b-ac)		428	429
RFC's	b-a	0.542	0.289
	b-c	0.042	0.025
	c-b	0.016	0.024
	b-ac	0.584	0.315
Worst RFC		0.584	0.315

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / Palm Springs Boulevard (D)		Ref. No.: 2039R	
Scheme: Reference		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Mai Po			
ARM B: Palm Springs Boulevard			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
230	(230)
10	(30)

ARM A

AM	(PM)
230	(230)
155	(215)

Minor ARM B

AM	(PM)
25	235
(50)	(170)

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	4.00
Central Reserve width	Wcr	0.00		w(b-c)	4.00
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.00
Visibilities	Vr(b-a)	30	Calculated	D	0.88
	VI(b-a)	30		E	0.95
	Vr(b-c)	30		F	0.86
	Vr(c-b)	30		Y	0.76

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	230	230
	q(c-b)	10	30
	q(a-b)	155	215
	q(a-c)	230	230
	q(b-a)	235	170
	q(b-c)	25	50
	f	0.10	0.23
	CAPACITIES	Q(b-a)	443
Q(b-c)		631	625
Q(c-b)		551	537
Q(b-ac)		456	463
RFC's		b-a	0.530
	b-c	0.040	0.080
	c-b	0.018	0.056
	b-ac	0.570	0.475
	Worst RFC	0.570	0.475

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / Geranium Path (E)		Ref. No.: 2039R	
Scheme: Reference		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Mai Po			
ARM B: Geranium Path			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
460	(395)
5	(5)

ARM A

AM	(PM)
380	(440)
5	(5)

Minor ARM B

AM	(PM)
5	(5)
5	(5)

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	3.00
Central Reserve width	Wcr	0.00		w(b-c)	3.00
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.60
Visibilities	Vr(b-a)	50	Calculated	D	0.82
	VI(b-a)	30		E	0.88
	Vr(b-c)	50		F	0.93
	Vr(c-b)	50		Y	0.76

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	460	395
	q(c-b)	5	5
	q(a-b)	5	5
	q(a-c)	380	440
	q(b-a)	5	5
	q(b-c)	5	5
	f	0.50	0.50
CAPACITIES	Q(b-a)	359	355
	Q(b-c)	563	548
	Q(c-b)	596	580
	Q(b-ac)	438	431
RFC's	b-a	0.014	0.014
	b-c	0.009	0.009
	c-b	0.008	0.009
	b-ac	0.023	0.023
Worst RFC		0.023	0.023

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Tam Mi / Yau Pok Road (F)		Ref. No.: 2039R	
Scheme: Reference		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Tam Mi			
ARM B: Yau Pok Road			
ARM C: Castle Peak Road - Tam Mi			

ARM C

AM	(PM)
465	(400)
0	(0)

ARM A

AM	(PM)
365	(425)
0	(0)

Minor ARM B

AM	(PM)
20	(20)
(20)	(20)

GEOMETRY					
Major road width	W	6.50	Lane widths	w(b-a)	1.88
Central Reserve width	Wcr	0.00		w(b-c)	1.88
2 Lane Minor Arm (Y/N)		N		w(c-b)	0.00
Visibilities	Vr(b-a)	16	Calculated	D	0.70
	VI(b-a)	31		E	0.76
	Vr(b-c)	16		F	0.59
	Vr(c-b)	0		Y	0.78

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	465	400
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	365	425
	q(b-a)	20	20
	q(b-c)	20	20
	f	0.50	0.50
	CAPACITIES	Q(b-a)	310
Q(b-c)		485	472
Q(c-b)		376	366
Q(b-ac)		378	371
RFC's		b-a	0.065
	b-c	0.041	0.042
	c-b	0.000	0.000
	b-ac	0.106	0.108
	Worst RFC	0.106	0.108

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Tam Mi / Kam Pok Road (G)		Ref. No.: 2039R	
Scheme: Reference		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Tam Mi			
ARM B: Kam Pok Road			
ARM C: Castle Peak Road - Tam Mi			

ARM C

AM	(PM)
370	(330)
115	(90)

ARM A

AM	(PM)
275	(340)
170	(160)

Minor ARM B

AM	(PM)
90	(80)
190	(110)

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	3.50
Central Reserve width	Wcr	0.00		w(b-c)	3.50
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.50
Visibilities	Vr(b-a)	50	Calculated	D	0.86
	VI(b-a)	35		E	0.92
	Vr(b-c)	50		F	0.92
	Vr(c-b)	50		Y	0.76

ANALYSIS		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	370	330
	q(c-b)	115	90
	q(a-b)	170	160
	q(a-c)	275	340
	q(b-a)	190	110
	q(b-c)	90	80
	f	0.32	0.42
	CAPACITIES	Q(b-a)	364
Q(b-c)		601	585
Q(c-b)		575	561
Q(b-ac)		417	433
RFC's		b-a	0.522
	b-c	0.150	0.137
	c-b	0.200	0.160
	b-ac	0.671	0.439
	Worst RFC	0.671	0.439

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

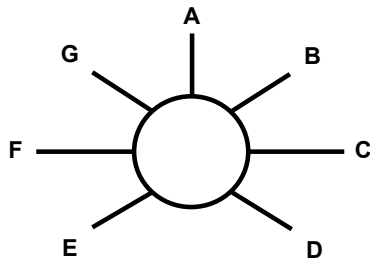
Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long											
Junction: Fairview Park Interchange (H)								Ref. No.: 2039R			
Scheme: Reference (Under Improvement 2)								Ref. No.:			
Year: 2039				Job No.: CHK50873110				Rev.: -			
AM		PM									
ARM A:		Fairview Park Boulevard									
ARM B:		Castle Peak Rd E									
ARM C:		NTCR E									
ARM D:		San Tam Rd E									
ARM E:		San Tam Rd W									
ARM F:		NTCR W									
ARM G:		Castle Peak Rd W									
											
GEOMETRY											
ARM	v	e	L	r	D	Phi	S				
A	7.00	11.80	20	25	140	35	0.38				
B	7.30	12.00	36	30	140	25	0.21				
C	7.30	13.00	13	45	140	30	0.70				
D	7.30	11.00	23	25	140	35	0.26				
E	7.30	12.00	27	25	140	45	0.28				
F	6.00	12.50	20	25	140	40	0.52				
G	6.50	11.20	22	25	140	35	0.34				
AM FLOWS											
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit	
A	10	20	205	40	225	470	30	2680	1000	655	
B	10	10	145	10	245	255	30	3120	705	560	
C	90	70	10	100	470	10	215	2595	965	1230	
D	65	20	45	10	255	260	95	3105	750	455	
E	40	35	455	65	10	520	20	2030	1145	1825	
F	330	250	10	150	610	10	0	1335	1360	1840	
G	110	155	360	80	10	315	0	2305	1030	390	
PM FLOWS											
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit	
A	10	10	165	50	205	335	30	2250	805	980	
B	35	10	90	10	165	135	30	2540	475	515	
C	185	125	20	80	410	20	200	2205	1040	810	
D	70	20	55	20	200	145	65	2820	575	425	
E	95	30	275	70	10	285	20	1755	785	1640	
F	495	230	10	145	640	20	0	1385	1540	1155	
G	90	90	195	50	10	215	10	2570	660	355	
CALCULATIONS								Q _E	RFC		
ARM	K	X ₂	M	F	t _D	f _c	AM	PM	AM	PM	
A	0.99	9.71	2980.96	2944	1.00	0.62	1277	1541	0.78	0.52	
B	1.03	10.62	2980.96	3216	1.00	0.66	1209	1602	0.58	0.30	
C	1.03	9.67	2980.96	2931	1.00	0.62	1367	1614	0.71	0.64	
D	0.99	9.74	2980.96	2952	1.00	0.62	1021	1196	0.73	0.48	
E	0.96	10.32	2980.96	3127	1.00	0.64	1743	1913	0.66	0.41	
F	0.98	9.19	2980.96	2783	1.00	0.60	1938	1909	0.70	0.81	
G	0.99	9.29	2980.96	2815	1.00	0.60	1421	1263	0.72	0.52	
								Critical Arm:	A	F	
								RFC:	0.78	0.81	
- In accordance with TPDM V2.4									AM	PM	
Calculated by: MYC				Date: Oct-25			Checked by: CFC				

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / Mai Po South Road (I)		Ref. No.: 2039R	
Scheme: Reference		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Mai Po			
ARM B: Mai Po South Road			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
240	(245)
5	(5)

ARM A

AM	(PM)
245	(275)
10	(5)

Minor ARM B

AM	(PM)
0	0
(10)	(15)

GEOMETRY					
Major road width	W	6.90	Lane widths	w(b-a)	3.60
Central Reserve width	Wcr	0.00		w(b-c)	3.60
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.30
Visibilities	Vr(b-a)	50	Calculated	D	0.87
	VI(b-a)	30		E	0.93
	Vr(b-c)	50		F	0.91
	Vr(c-b)	50		Y	0.76

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	240	245
	q(c-b)	5	5
	q(a-b)	10	5
	q(a-c)	245	275
	q(b-a)	0	15
	q(b-c)	0	10
	f	0.00	0.40
	CAPACITIES	Q(b-a)	445
Q(b-c)		630	623
Q(c-b)		611	605
Q(b-ac)		445	496
RFC's	b-a	0.000	0.034
	b-c	0.000	0.016
	c-b	0.008	0.008
	b-ac	0.000	0.050
Worst RFC		0.008	0.050

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road San Tin / Kwu Tung Road (J)		Ref. No.: 2039R	
Scheme: Reference		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - San Tin			
ARM B: Kwu Tung Road			
ARM C: Castle Peak Road - San Tin			

ARM C

AM	(PM)
505	(440)
165	(135)

ARM A

AM	(PM)
240	(220)
125	(65)

Minor ARM B

AM	(PM)
250	75
(325)	(115)

GEOMETRY					
Major road width	W	8.00	Lane widths	w(b-a)	3.60
Central Reserve width	Wcr	0.00		w(b-c)	3.60
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.30
Visibilities	Vr(b-a)	40	Calculated	D	0.86
	VI(b-a)	40		E	0.92
	Vr(b-c)	35		F	0.89
	Vr(c-b)	35		Y	0.72

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	505	440
	q(c-b)	165	135
	q(a-b)	125	65
	q(a-c)	240	220
	q(b-a)	75	115
	q(b-c)	250	325
	f	0.77	0.74
	CAPACITIES	Q(b-a)	349
Q(b-c)		615	625
Q(c-b)		579	598
Q(b-ac)		523	534
RFC's		b-a	0.215
	b-c	0.407	0.520
	c-b	0.285	0.226
	b-ac	0.621	0.824
	Worst RFC	0.621	0.824

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1 + 0.094(w(b-a) - 3.65))(1 + 0.0009(Vr(b-a) - 120))(1 + 0.0006(VI(b-a) - 150))$

$E = (1 + 0.094(w(b-c) - 3.65))(1 + 0.0009(Vr(b-c) - 120))$

$F = (1 + 0.094(w(c-b) - 3.65))(1 + 0.0009(Vr(c-b) - 120))$

$Y = 1 - 0.0345W$

f = proportion of minor traffic turning left

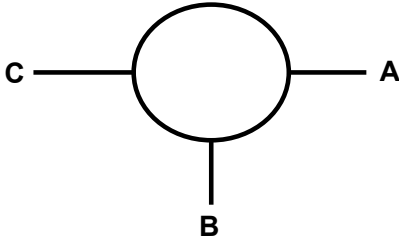
$Q(b-ac) = Q(b-c) * Q(b-a) / ((1-f) * Q(b-c) + f * Q(b-a))$

T.P.D.M.V.2.4
Appendix 1

Capacity of combined streams
- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long											
Junction: San Tin Interchange (K)								Ref. No.: 2039R			
Scheme: Reference								Ref. No.:			
Year: 2039				Job No.: CHK50873110				Rev.: -			
AM PM ARM A: San Tin Highway Slip Road ARM B: San Sham Road ARM C: Fanling Highway Slip Road											
GEOMETRY											
ARM	v	e	L	r	D	Phi	S				
A	7.70	14.40	75	30	103	40	0.14				
B	8.80	11.70	75	30	103	40	0.06				
C	8.80	12.00	40	100	103	30	0.13				
AM FLOWS											
from \ to	A	B	C					Circ	Entry		
A	1060	655	1315					365	3030		
B	585	0	0					2645	585		
C	645	95	270					1645	1010		
PM FLOWS											
from \ to	A	B	C					Circ	Entry		
A	770	570	870					395	2210		
B	790	0	0					1910	790		
C	580	125	270					1560	975		
CALCULATIONS											
ARM	K	X ₂	M	F	t _D	f _c	Q _E		RFC		
							AM	PM	AM	PM	
A	0.98	12.91	73.70	3912	1.01	0.76	3569	3546	0.85	0.62	
B	0.98	11.38	73.70	3448	1.01	0.69	1587	2086	0.37	0.38	
C	1.04	11.35	73.70	3438	1.01	0.69	2391	2452	0.42	0.40	
								Critical Arm:		A	A
								RFC:		0.85	0.62
										AM	PM
- In accordance with TPDM V2.4											
Calculated by: MYC				Date: Oct-25				Checked by: CFC			

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50873110**

MVA HONG KONG LIMITED

Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A)

Design Year: 2039

Description: Design

Designed By: MYC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
San Tin highway Slip Road (EB)	→	A	1,2	3.650		12.5		98%	98%	1770	1770	309	0.175		316	0.179	
	↘	A	1,2	3.650		10				1845	1845	321	0.174		329	0.178	
San Tin highway Slip Road (WB)	←	B	1	3.900		10				1865	1865	109	0.058		102	0.055	0.055
	↙	B	1	3.900		12.5		95%	95%	1800	1800	106	0.059	0.059	98	0.054	
Shek Wu Wai Road (SB)	↓	C	2,3	3.500						1965	1965	545	0.277		541	0.275	0.275
	↕	C	2,3	3.500		15		34%	21%	2035	2060	564	0.277		567	0.275	
	↘	C	2,3	3.500		12.5				1880	1880	521	0.277		517	0.275	
Shek Wu Wai Road (NB)	↑	D	4	3.500						1965	1965	410	0.209		289	0.147	
	↕	D	4	3.500		15		54%	55%	1995	1995	417	0.209		294	0.147	0.147
	↙	D	4	3.500		12.5				1880	1880	393	0.209	0.209	277	0.147	
Shek Wu Wai Road (SB)	↓	E	3	3.500						2105	2105	341	0.162		336	0.160	
	↕	E	3	3.500						2105	2105	341	0.162		336	0.160	
	↘	E	3	3.500						1965	1965	318	0.162		313	0.159	
Shek Wu Wai Road (NB)	↑	F	4	3.500						1965	1965	321	0.163		212	0.108	
	↕	F	4	3.500						2105	2105	345	0.164		226	0.107	
	↙	F	4	3.500						2105	2105	344	0.163		227	0.108	

- In accordance with TPDM V4 - Road Traffic Signals

Formual of Total lost time per cycle

$$L = \sum (I - 1)$$

AM peak

Group:

B,C,D

L

$$= (6-1)+(8-1)+(5-1) = 16$$

PM peak

Group:

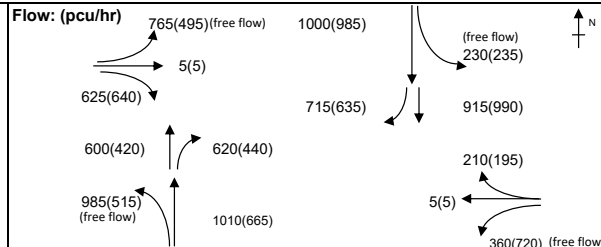
B,C,D

L

$$= (7-1)+(5-1)+(5-1) = 16$$

Notes:

Flow: (pcu/hr)



Group	A,E,D	B,C,D	Group	A,E,D	B,C,D
y	0.546	0.545	y	0.486	0.477
L (sec)	14	16	L (sec)	14	16
C (sec)	90	90	C (sec)	90	90
y pract.	0.760	0.740	y pract.	0.760	0.740
R.C. (%)	39%	36%	R.C. (%)	57%	55%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
I/G= 5	I/G= 6	I/G=	I/G= 8	I/G=
I/G= 5	I/G= 6	I/G=	I/G= 8	I/G=

Date: OCT, 2025

Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A) (A)

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50873110**

MVA HONG KONG LIMITED

Junction: Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B)

Design Year: 2039

Description: Design

Designed By: MYC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Road L11 EB	↗	A	1	4.000	15					1830	1830	175	0.096		115	0.063	
	↘	A	1	4.000	17.5	20		0% / 33%	0% / 19%	2105	2125	291	0.138	0.138	295	0.139	0.139
	↔	A	1	4.000		17.5				1985	1985	274	0.138		275	0.139	
Road D2 NB	↗	B	2	3.200	15					1760	1760	309	0.176		209	0.119	
	↘	B	2	3.200	17.5			17%	53%	2045	1985	360	0.176	0.176	236	0.119	0.119
	↔	B	2	3.200						2075	2075	365	0.176		246	0.119	
	↔	B	2	3.200		12.5		70%	83%	1915	1890	336	0.175		224	0.119	
Road L11 WB	↗	C	3	3.300	12.5					1735	1735	144	0.083	0.083	110	0.063	
	↘	C	3	3.300	15			82%	43%	1925	2000	159	0.083		128	0.064	0.064
	↔	C	3	3.300		20		3%	4%	2080	2080	172	0.083		132	0.063	
Road D3 SB	↗	D	4	4.000	12.5			2%	1%	2010	2010	259	0.129		355	0.177	
	↘	D	4	4.000						2155	2155	278	0.129		380	0.176	
	↔	D	4	4.000		20		78%	100%	2035	2005	263	0.129	0.129	440	0.219	0.219
- In accordance with TPDM V4 - Road Traffic Signals Formual of Total lost time per cycle $L = \sum (I - 1)$ AM peak Group: A,B,C,D $L = (6-1)+(6-1)+(7-1)+(7-1) = 22$ PM peak Group: A,B,C,D $L = (6-1)+(6-1)+(7-1)+(7-1) = 22$																	

Notes:	Flow: (pcu/hr)	Group		A,B,C,D	Group		A,B,C,D
				A,B,C,D			A,B,C,D
		y		0.527	y		0.541
		L (sec)		22	L (sec)		22
		C (sec)		105	C (sec)		105
		y pract.		0.711	y pract.		0.711
		R.C. (%)		35%	R.C. (%)		31%

Stage / Phase Diagrams							
1.		2.		3.		4.	
I/G= 6		I/G= 6		I/G= 7		I/G= 7	
I/G= 6		I/G= 6		I/G= 7		I/G= 7	
Date: <u>OCT, 2025</u>						Junction: <u>Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B)</u> (B)	

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / San Tam Road (C)		Ref. No.: 2039D	
Scheme: Design		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Mai Po			
ARM B: San Tam Road			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
430	(355)
10	(15)

ARM A

AM	(PM)
330	(350)
130	(145)

Minor ARM B

AM		
	25	225
(PM)	(15)	(120)

GEOMETRY					
Major road width	W	7.40	Lane widths	w(b-a)	3.20
Central Reserve width	Wcr	0.00		w(b-c)	3.20
2 Lane Minor Arm (Y/N)		N		w(c-b)	4.10
Visibilities	Vr(b-a)	50	Calculated	D	0.85
	VI(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.74

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		430	355
	q(c-b)		10	15
	q(a-b)		130	145
	q(a-c)		330	350
	q(b-a)		225	120
	q(b-c)		25	15
	f		0.10	0.11
	CAPACITIES	Q(b-a)	Factor 1	381
Q(b-c)		1	576	569
Q(c-b)		1	606	597
Q(b-ac)		1	394	400
RFC's		b-a		0.591
	b-c		0.043	0.026
	c-b		0.017	0.025
	b-ac		0.635	0.338
Worst RFC			0.635	0.338

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / Palm Springs Boulevard (D)		Ref. No.: 2039D	
Scheme: Design		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Mai Po			
ARM B: Palm Springs Boulevard			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
285	(270)
10	(30)

ARM A

AM	(PM)
270	(275)
155	(215)

Minor ARM B

AM	(PM)
25	(50)
235	(170)

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	4.00
Central Reserve width	Wcr	0.00		w(b-c)	4.00
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.00
Visibilities	Vr(b-a)	30	Calculated	D	0.88
	VI(b-a)	30		E	0.95
	Vr(b-c)	30		F	0.86
	Vr(c-b)	30		Y	0.76

ANALYSIS		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	285	270
	q(c-b)	10	30
	q(a-b)	155	215
	q(a-c)	270	275
	q(b-a)	235	170
	q(b-c)	25	50
	f	0.10	0.23
CAPACITIES	Q(b-a)	425	413
	Q(b-c)	620	613
	Q(c-b)	542	526
	Q(b-ac)	439	446
RFC's	b-a	0.553	0.412
	b-c	0.040	0.082
	c-b	0.018	0.057
	b-ac	0.592	0.493
Worst RFC		0.592	0.493

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / Geranium Path (E)		Ref. No.: 2039D	
Scheme: Design		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Mai Po			
ARM B: Geranium Path			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
515	(430)
5	(5)

ARM A

AM	(PM)
415	(480)
5	(5)

Minor ARM B

AM	(PM)
5	(5)
5	(5)

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	3.00
Central Reserve width	Wcr	0.00		w(b-c)	3.00
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.60
Visibilities	Vr(b-a)	50	Calculated	D	0.82
	VI(b-a)	30		E	0.88
	Vr(b-c)	50		F	0.93
	Vr(c-b)	50		Y	0.76

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	515	430
	q(c-b)	5	5
	q(a-b)	5	5
	q(a-c)	415	480
	q(b-a)	5	5
	q(b-c)	5	5
	f	0.50	0.50
	CAPACITIES	Q(b-a)	343
Q(b-c)		554	538
Q(c-b)		587	570
Q(b-ac)		424	418
RFC's		b-a	0.015
	b-c	0.009	0.009
	c-b	0.009	0.009
	b-ac	0.024	0.024
	Worst RFC	0.024	0.024

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Tam Mi / Yau Pok Road (F)		Ref. No.: 2039D	
Scheme: Design		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Tam Mi			
ARM B: Yau Pok Road			
ARM C: Castle Peak Road - Tam Mi			

ARM C

AM	(PM)
520	(435)
0	(0)

ARM A

AM	(PM)
400	(465)
0	(0)

Minor ARM B

AM	(PM)
20	20
(20)	(20)

GEOMETRY					
Major road width	W	6.50	Lane widths	w(b-a)	1.88
Central Reserve width	Wcr	0.00		w(b-c)	1.88
2 Lane Minor Arm (Y/N)		N		w(c-b)	0.00
Visibilities	Vr(b-a)	16	Calculated	D	0.70
	VI(b-a)	31		E	0.76
	Vr(b-c)	16		F	0.59
	Vr(c-b)	0		Y	0.78

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	520	435
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	400	465
	q(b-a)	20	20
	q(b-c)	20	20
	f	0.50	0.50
	CAPACITIES	Q(b-a)	296
Q(b-c)		478	464
Q(c-b)		370	360
Q(b-ac)		365	360
RFC's		b-a	0.068
	b-c	0.042	0.043
	c-b	0.000	0.000
	b-ac	0.110	0.111
	Worst RFC	0.110	0.111

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Tam Mi / Kam Pok Road (G)		Ref. No.: 2039D	
Scheme: Design		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Tam Mi			
ARM B: Kam Pok Road			
ARM C: Castle Peak Road - Tam Mi			

ARM C

AM	(PM)
425	(370)
115	(90)

ARM A

AM	(PM)
315	(385)
170	(160)

Minor ARM B

AM		
	90	190
(PM)	(80)	(110)

GEOMETRY					
Major road width	W	7.00	Lane widths	w(b-a)	3.50
Central Reserve width	Wcr	0.00		w(b-c)	3.50
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.50
Visibilities	Vr(b-a)	50	Calculated	D	0.86
	VI(b-a)	35		E	0.92
	Vr(b-c)	50		F	0.92
	Vr(c-b)	50		Y	0.76

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	425	370
	q(c-b)	115	90
	q(a-b)	170	160
	q(a-c)	315	385
	q(b-a)	190	110
	q(b-c)	90	80
	f	0.32	0.42
	CAPACITIES	Q(b-a)	346
Q(b-c)		591	574
Q(c-b)		565	549
Q(b-ac)		399	416
RFC's		b-a	0.549
	b-c	0.152	0.139
	c-b	0.204	0.164
	b-ac	0.702	0.457
	Worst RFC	0.702	0.457

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

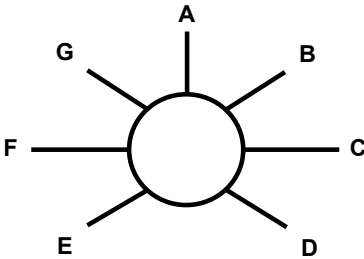
Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long										
Junction: Fairview Park Interchange (H)								Ref. No.: 2039D		
Scheme: Design (Under Improvement 2)								Ref. No.:		
Year: 2039				Job No.: CHK50873110				Rev.: -		
AM ARM A: Fairview Park Boulevard ARM B: Castle Peak Rd E ARM C: NTCR E ARM D: San Tam Rd E ARM E: San Tam Rd W ARM F: NTCR W ARM G: Castle Peak Rd W										
GEOMETRY										
ARM	v	e	L	r	D	Phi	S			
A	7.00	11.80	20	25	140	35	0.38			
B	7.30	12.00	36	30	140	25	0.21			
C	7.30	13.00	13	45	140	30	0.70			
D	7.30	11.00	23	25	140	35	0.26			
E	7.30	12.00	27	25	140	45	0.28			
F	6.00	12.50	20	25	140	40	0.52			
G	6.50	11.20	22	25	140	35	0.34			
AM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	205	40	225	470	30	2720	1000	655
B	10	10	145	10	245	310	30	3120	760	600
C	90	70	10	100	470	10	215	2650	965	1230
D	65	20	45	10	255	260	95	3160	750	455
E	40	35	455	65	10	520	20	2085	1145	1825
F	330	290	10	150	610	10	0	1335	1400	1895
G	110	155	360	80	10	315	0	2345	1030	390
PM FLOWS										
from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	165	50	205	335	30	2295	805	980
B	35	10	90	10	165	170	30	2540	510	560
C	185	125	20	80	410	20	200	2240	1040	810
D	70	20	55	20	200	145	65	2855	575	425
E	95	30	275	70	10	285	20	1790	785	1640
F	495	275	10	145	640	20	0	1385	1585	1190
G	90	90	195	50	10	215	10	2615	660	355
CALCULATIONS								Q _E	RFC	
ARM	K	X ₂	M	F	t _D	f _c	AM	PM	AM	PM
A	0.99	9.71	2980.96	2944	1.00	0.62	1253	1513	0.80	0.53
B	1.03	10.62	2980.96	3216	1.00	0.66	1209	1602	0.63	0.32
C	1.03	9.67	2980.96	2931	1.00	0.62	1333	1592	0.72	0.65
D	0.99	9.74	2980.96	2952	1.00	0.62	988	1175	0.76	0.49
E	0.96	10.32	2980.96	3127	1.00	0.64	1709	1891	0.67	0.42
F	0.98	9.19	2980.96	2783	1.00	0.60	1938	1909	0.72	0.83
G	0.99	9.29	2980.96	2815	1.00	0.60	1397	1236	0.74	0.53
								Critical Arm:	A	F
								RFC:	0.80	0.83
									AM	PM
- In accordance with TPDM V2.4										
Calculated by: MYC				Date: Oct-25			Checked by: CFC			

Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road Mai Po / Mai Po South Road (I)		Ref. No.: 2039D	
Scheme: Design		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - Mai Po			
ARM B: Mai Po South Road			
ARM C: Castle Peak Road - Mai Po			

ARM C

AM	(PM)
240	(245)
80	(90)

ARM A

AM	(PM)
245	(275)
50	(50)

Minor ARM B

AM	(PM)
110	55
(85)	(55)

GEOMETRY					
Major road width	W	6.90	Lane widths	w(b-a)	3.60
Central Reserve width	Wcr	0.00		w(b-c)	3.60
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.30
Visibilities	Vr(b-a)	50	Calculated	D	0.87
	VI(b-a)	30		E	0.93
	Vr(b-c)	50		F	0.91
	Vr(c-b)	50		Y	0.76

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		240	245
	q(c-b)		80	90
	q(a-b)		50	50
	q(a-c)		245	275
	q(b-a)		55	55
	q(b-c)		110	85
	f		0.67	0.61
	CAPACITIES	Q(b-a)	Factor	415
Q(b-c)		1	626	619
Q(c-b)		1	601	593
Q(b-ac)		1	536	512
RFC's		b-a		0.133
	b-c		0.176	0.137
	c-b		0.133	0.152
	b-ac		0.308	0.273
	Worst RFC		0.308	0.273

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1 + 0.094(w(b-a) - 3.65))(1 + 0.0009(Vr(b-a) - 120))(1 + 0.0006(VI(b-a) - 150))$

$E = (1 + 0.094(w(b-c) - 3.65))(1 + 0.0009(Vr(b-c) - 120))$

$F = (1 + 0.094(w(c-b) - 3.65))(1 + 0.0009(Vr(c-b) - 120))$

$Y = 1 - 0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c) * Q(b-a) / (1 - f) * Q(b-c) + f * Q(b-a)$

T.P.D.M.V.2.4
Appendix 1

Capacity of combined streams
- in accordance with TPDM V2.4

Calculated by: MYC	Date: Oct-25	Checked by: CFC
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Priority Junction Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long			
Junction: Castle Peak Road San Tin / Kwu Tung Road (J)		Ref. No.: 2039D	
Scheme: Design		Ref. No.:	
Year: 2039	Job No.: CHK50873110	Rev.: -	
ARM A: Castle Peak Road - San Tin			
ARM B: Kwu Tung Road			
ARM C: Castle Peak Road - San Tin			

ARM C

AM	(PM)
505	(440)
165	(135)

ARM A

AM	(PM)
240	(220)
125	(65)

Minor ARM B

AM	(PM)
250	75
(325)	(115)

GEOMETRY					
Major road width	W	8.00	Lane widths	w(b-a)	3.60
Central Reserve width	Wcr	0.00		w(b-c)	3.60
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.30
Visibilities	Vr(b-a)	40	Calculated	D	0.86
	VI(b-a)	40		E	0.92
	Vr(b-c)	35		F	0.89
	Vr(c-b)	35		Y	0.72

ANALYSIS			
		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	505	440
	q(c-b)	165	135
	q(a-b)	125	65
	q(a-c)	240	220
	q(b-a)	75	115
	q(b-c)	250	325
	f	0.77	0.74
	CAPACITIES	Q(b-a)	349
Q(b-c)		615	625
Q(c-b)		579	598
Q(b-ac)		523	534
RFC's		b-a	0.215
	b-c	0.407	0.520
	c-b	0.285	0.226
	b-ac	0.621	0.824
	Worst RFC	0.621	0.824

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

Y = 1-0.0345W

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

T.P.D.M.V.2.4

Appendix 1

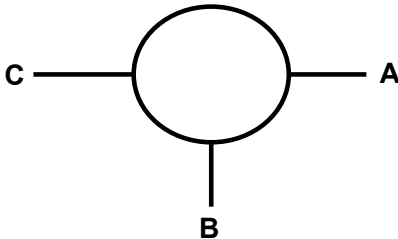
Calculated by: MYC

Date: Oct-25

Checked by: CFC

Capacity of combined streams
- in accordance with TPDM V2.4

Roundabout Capacity Calculation

Job Title: Proposed Comprehensive Residential Development at Lots 50 S.A. and 77 in D.D.101, Wo Shang Wai, Mai Po, Yuen Long											
Junction: San Tin Interchange (K)							Ref. No.: 2039D				
Scheme: Design							Ref. No.:				
Year: 2039				Job No.: CHK50873110			Rev.: -				
AM PM ARM A: San Tin Highway Slip Road ARM B: San Sham Road ARM C: Fanling Highway Slip Road											
GEOMETRY											
ARM	v	e	L	r	D	Phi	S				
A	7.70	14.40	75	30	103	40	0.14				
B	8.80	11.70	75	30	103	40	0.06				
C	8.80	12.00	40	100	103	30	0.13				
AM FLOWS											
from \ to	A	B	C				Circ	Entry			
A	1060	655	1315				365	3030			
B	585	0	0				2645	585			
C	645	95	270				1645	1010			
PM FLOWS											
from \ to	A	B	C				Circ	Entry			
A	770	570	870				395	2210			
B	790	0	0				1910	790			
C	580	125	270				1560	975			
CALCULATIONS											
ARM	K	X ₂	M	F	t _D	f _c	Q _E AM PM		RFC AM PM		
A	0.98	12.91	73.70	3912	1.01	0.76	3569 3546		0.85 0.62		
B	0.98	11.38	73.70	3448	1.01	0.69	1587 2086		0.37 0.38		
C	1.04	11.35	73.70	3438	1.01	0.69	2391 2452		0.42 0.40		
							Critical Arm:		A	A	
							RFC:		0.85	0.62	
									AM	PM	
- In accordance with TPDM V2.4											
Calculated by: MYC				Date: Oct-25			Checked by: CFC				