Appendix 9: Traffic Impact Assessment

21/01/2025

Reference number CHK50800610

TO AMEND THE NOTES OF THE "COMPREHENSIVE DEVELOPMENT TO INCLUDE WETLAND RESTORATION AREA" ZONE FOR A PROPOSED COMPREHENSIVE DEVELOPMENT AT WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

TRAFFIC IMPACT ASSESSMENT

SYSTRA MVA

IDENTIFICATION TABLE	
Client/Project owner	Profit Point Enterprises Limited
Project	To Amend the Notes of the "Comprehensive Development to include Wetland Restoration Area" Zone for a Proposed Comprehensive Development at Wo Shang Wai, Yuen Long, Lots 77 and 50 S.A in DD101
Study	Traffic Impact Assessment
Type of document	final Report_v2
Date	21/01/2025
File name	final rpt_WSW 12A TIA_v2_20250121.docx
Reference number	CHK50800610

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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 (Comprehensive Development to include wetland restoration area) on the Mai Po & Fairview Park OZP (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 1 March 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 12A of the Town Planning Ordinance, to rezone the Application Site on the draft Mai Po and Fairview Park Outline Zoning Plan ("OZP") No. S/YL-MP/7. The rezoning application aims to increase the plot ratio ("PR") from 0.4 (i.e. maximum permissible PR on the OZP) to 1.30 (with 1.28 domestic plot ratio), with a maximum building height ("BH") adjusted to not more than 10-storeys and not exceeding +42mPD by amending the Notes of the current "Other Specified Uses (Comprehensive Development to include Wetland Restoration Area)" ("OU(CDWRA)") zone. It is the Applicant's intention to increase the development intensity and revise the layout and form of the housing developments in the Application Site. This traffic impact assessment is to investigate the potential traffic impact on the adjacent local road network and transport facilities by this upzoning proposal. Upon pre-submission of the TIA report, comments were received from Transport Department (TD) and this revised TIA report was prepared to reflect the latest development programme and to address TD's comments.

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 be increased from 789 in the approved scheme in Section 16 application to 3,571, with provision of a 3,800 m^2 100-bed Residential Care Homes for the Elderly (RCHE). The current scheme will provide 3,571 units with average house size of 74.5 m^2.

2.1.2 The domestic GFA, flat mix, plot ratio will be changed, compared with those in the previous approved S16 application. **Table 2.1** summarises the changes in flat mix 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	265,847 m^2	+182,884 m^2
Domestic Plot Ratio	0.4	1.28	+0.88
No. of Units	789 Units	3,571 Units	+2,782 Units
Average House Size	105.1 m^2	74.5 m^2	-30.6 m^2
Non-domestic Plot Ratio	-	0.02	+0.02
Non-domestic GFA	-	3,800 m^2	+3,800 m^2

2.1.3 As indicated in **Table 2.1**, the current proposed MLP has an increase of 2,782 units with the change of both domestic and plot ratio, and leading to a decrease of average house size, with the provision of a RCHE.

2.1.4 It is anticipated that the proposed development will be completed by year 2031.

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

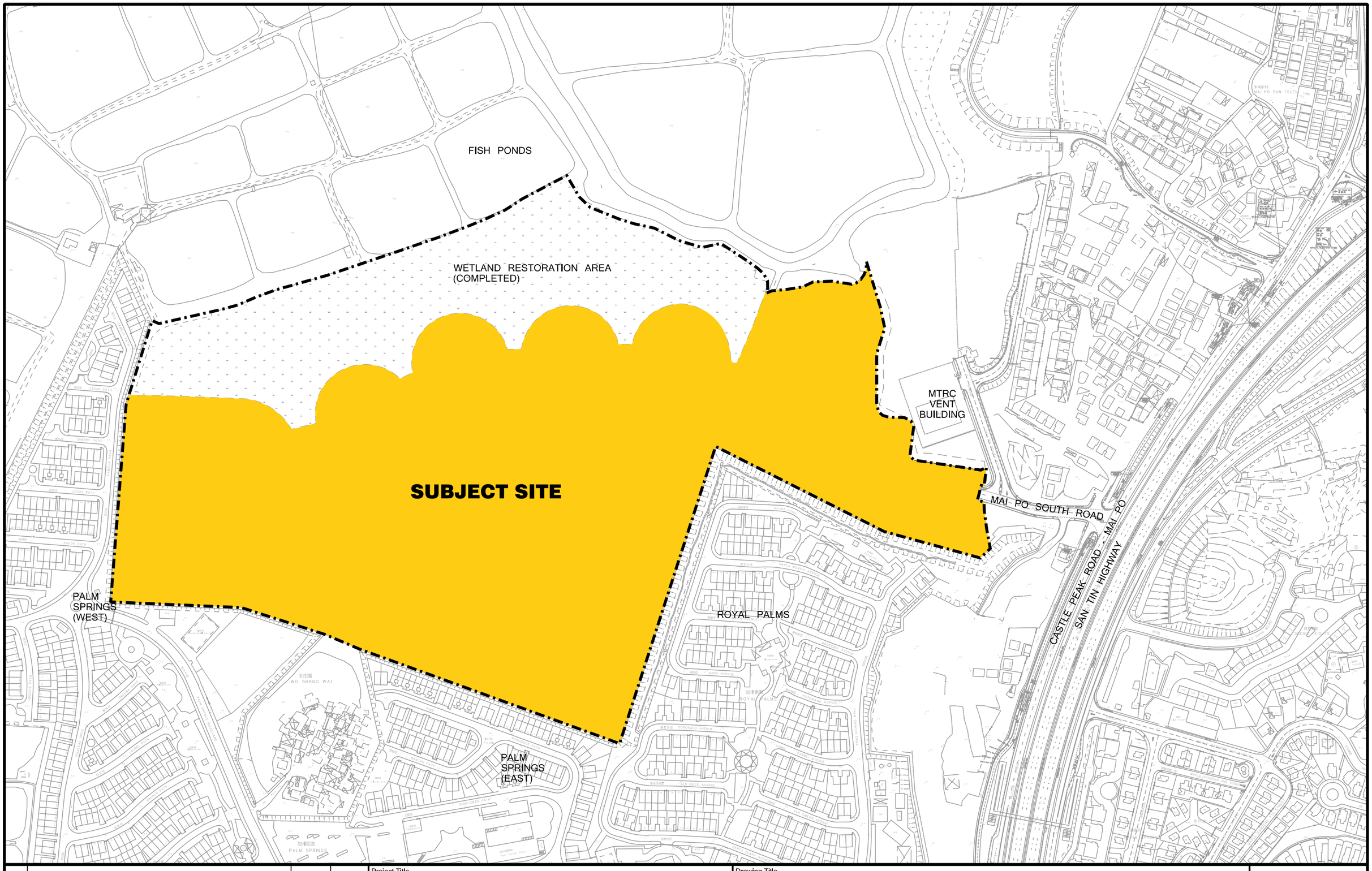
Internal Transport Facilities	Previous Approved MLP (Application no. A/YL-MP/344) – 789 Units		Current Proposed MLP – 3,571 Units (128 houses included) with RCHE		
	Proposed Requirement	Proposed Provision	Parameters	Proposed Requirement under HKPSG	Proposed Provision
Residential Parking Provision					
Residential Carparking Space	2 spaces per house(1)	1,578	128 Houses	2 spaces per house(2)	256
	-		1,291 units	1 space per 3.03 units for 40<FS≤70	428
			2,096 units	1 space per 1.52 units for 70<FS≤100	1,386
			56 units	1 space per 0.89 units for 100<FS≤130	64
	Sub -total	1,578		Sub-total	2,134
Visitor Parking Space	5 spaces(1)	5	47 blocks	5 spaces per block with more than 75 units	235
Accessible Parking Space	6 accessible car parking space for car parking space in lot above 450 by Building Authority	6	2,113 private car parking spaces	6 accessible car parking space for car parking space in lot above 450 by Building Authority	27
Motorcycle Parking Space	37 spaces(1)	37	2,113 spaces	1 per 10 car parking spaces(4)	212
Loading/unloading Bay	1 bay per 800 units(3)	1	47 blocks	1 bay per each housing block(4)	47
Bicycle Parking Spaces	-	-	1,291 units	1 space per 7.5 flats (unit size < 70m²)(4)	173
RCHE Parking Provision(5)					
Ancillary Private Car Parking Space	-	-	100-bed	-	1
Loading Bay for LGV	-	-	100-bed	-	1
Taxi/Private Car Pick-Up/drop-off Space	-	-	100-bed	-	1

Remarks: (1) Requirement included in the approved land exchange application.
(2) Assume 2 parking spaces per house.
(3) Requirement adopted in previous approved S.16 application.
(4) According to latest comments from Transport Department.
(5) No relevant requirement in HKPSG, provided with nominal provision for operation only.

2.3.2 Since some of the units of the proposed development is smaller than 70m^2 in flat size, there will be provision of the bicycle parking spaces.

2.3.3 The actual carparking provisions may be subject to agreement by the authority.

2.3.4 The allocation of related parking provision will be studied and 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.



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
A	MINOR AMENDMENT	CFC	21JAN25

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

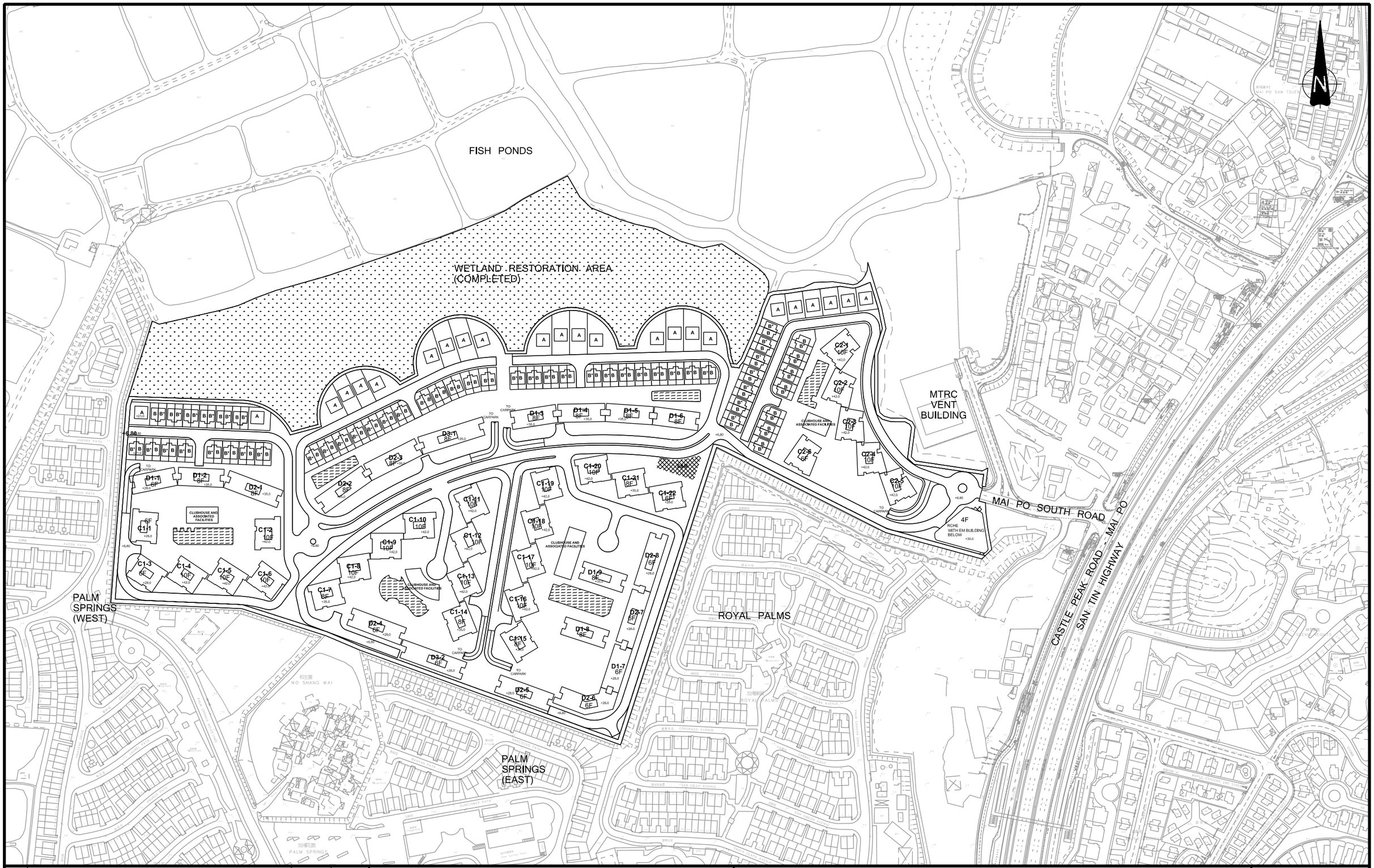
SITE LOCATION

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	N.T.S.	JUN 2024	**2.1**	A

SYSTRA MVA

CHK50800610/TIA/F21-A.DGN/KCM/21JAN25

Original Size : A3



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A	MLP UPDATED	CFC	21JAN25
Rev.	Description	Checked	Date

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

PROPOSED MASTER LAYOUT PLAN

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:3000(A3)	JUL 2024	2.2	A

SYSTRA MVA

CHK50800610/TIA/F22-A.DGN/KCM/21JAN25

Original Size : A3

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 9 local junctions and 5 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 3.12**.

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
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	Shek Wu Wai Road	Single 2-lane carriageway	3.2

Remark: (1) Refer to **Drawing 3.2** for junction reference.
(2) Junctions will be upgraded by San Tin Technopole project.

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 The observed peak hour traffic flows are shown in **Drawing 3.13**.

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 in order 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	0.77	0.67
C	Castle Peak Road – Mai Po/ San Tam Road	0.13	0.08
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

Remarks: (1) Refer to **Drawing 3.2** for junction reference.
(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) (3)	2024 Traffic Flow			
					Traffic Flow (pcu/hr)		V/C (4)	
					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	175	210	0.19	0.23
		SB	700(2)	910	190	155	0.21	0.17
L4	Castle Peak Road – Tam Mi	NB	700(2)	910	420	390	0.46	0.43
		SB	700(2)	910	470	345	0.52	0.38
L5	Shek Wu Wai Road	NB	700(2)	910	340	305	0.37	0.34
		SB	700(2)	910	365	290	0.40	0.32

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) PCU factor of 1.3 adopted
(4) 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 3.14** 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	**1624**	**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	**1426**	**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	**1559**	**1187**	**76%**
	Bus	76K	6	540	47	9%

Sheung Shui / San Tin	GMB	75	10	172	139	81%
		76	6	96	92	96%
		78	4	76	33	43%
	PLB	17	40	667	535	80%
			Total	**1551**	**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 3.15**, 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

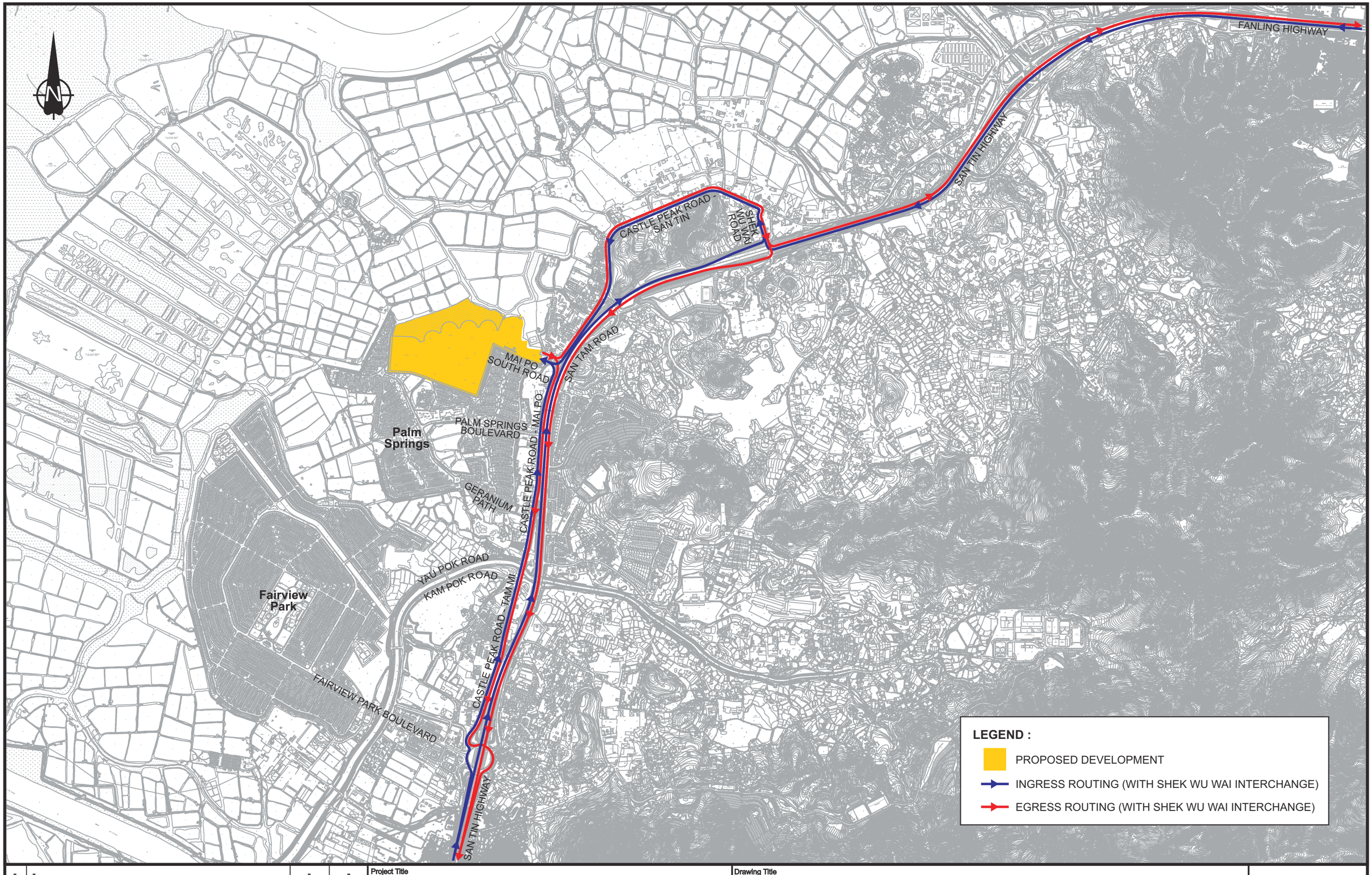
Remarks: (1) Refer to **Drawing 3.15** for locations and operational performance of identified footpaths
(2) Effective width for footpath = Actual width – 1.0m dead width (0.5m dead width on one side of footpath)
(3) Peak flow rate = Peak hourly flow ÷ 60 ÷ effective width
(4) Refer to TPDM Vol.6 Chapter 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 3.15** for locations and operational performance of identified queuing area
(2) Average Queuing Space = Queuing Area ÷ (Maximum Queue)
(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.



Rev.	Description	Checked	Date
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-	-	-	-
A	MINOR AMENDMENT	CFC	24DEC24

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

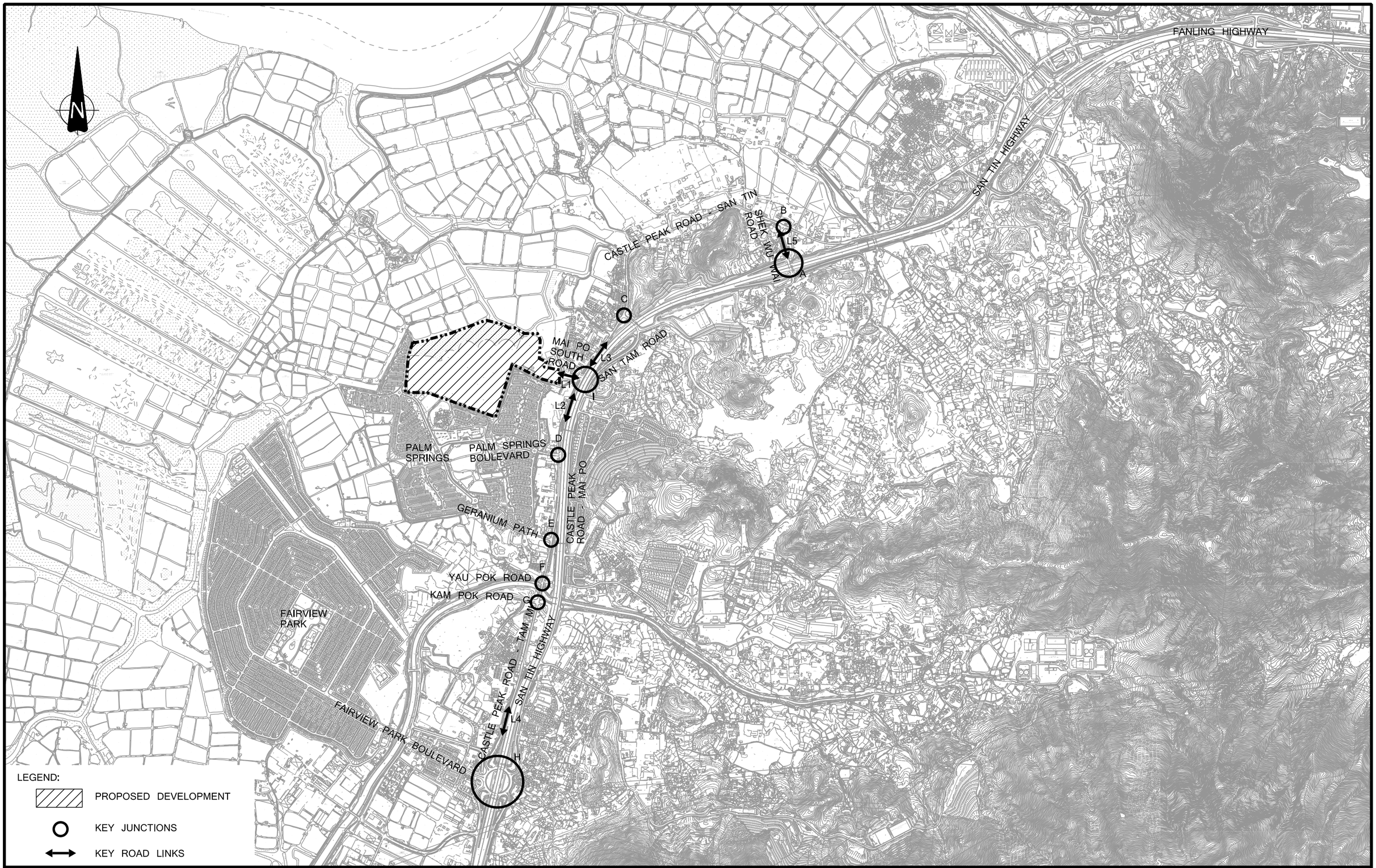
MAJOR INGRESS AND EGRESS ROUTE

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	JUN 2024	3.1	A

SYSTRA MVA

CHK50800610/TIA/F31-A.CDR/LLH/24DEC24

Original Size : A3



Rev.	Description	Checked	Date
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A	TD COMMENT INCORPORATED	CFC	02JAN25

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

KEY JUNCTIONS AND ROAD LINKS

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	N.T.S.	JUN 2024	3.2	A

SYSTRA MVA

CHK50800610/TIA/F32-A.DGN/LHO/02JAN25

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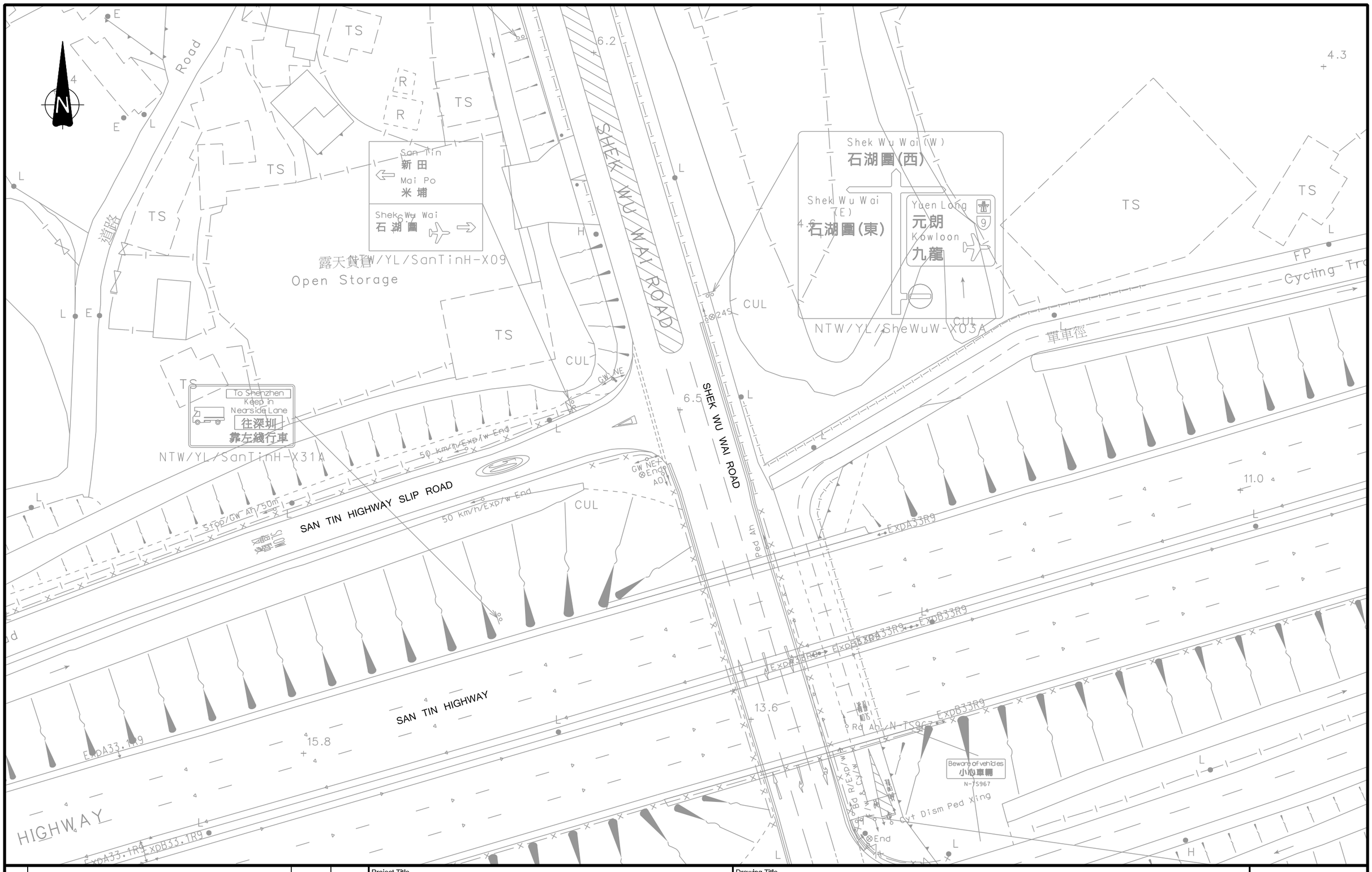

Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

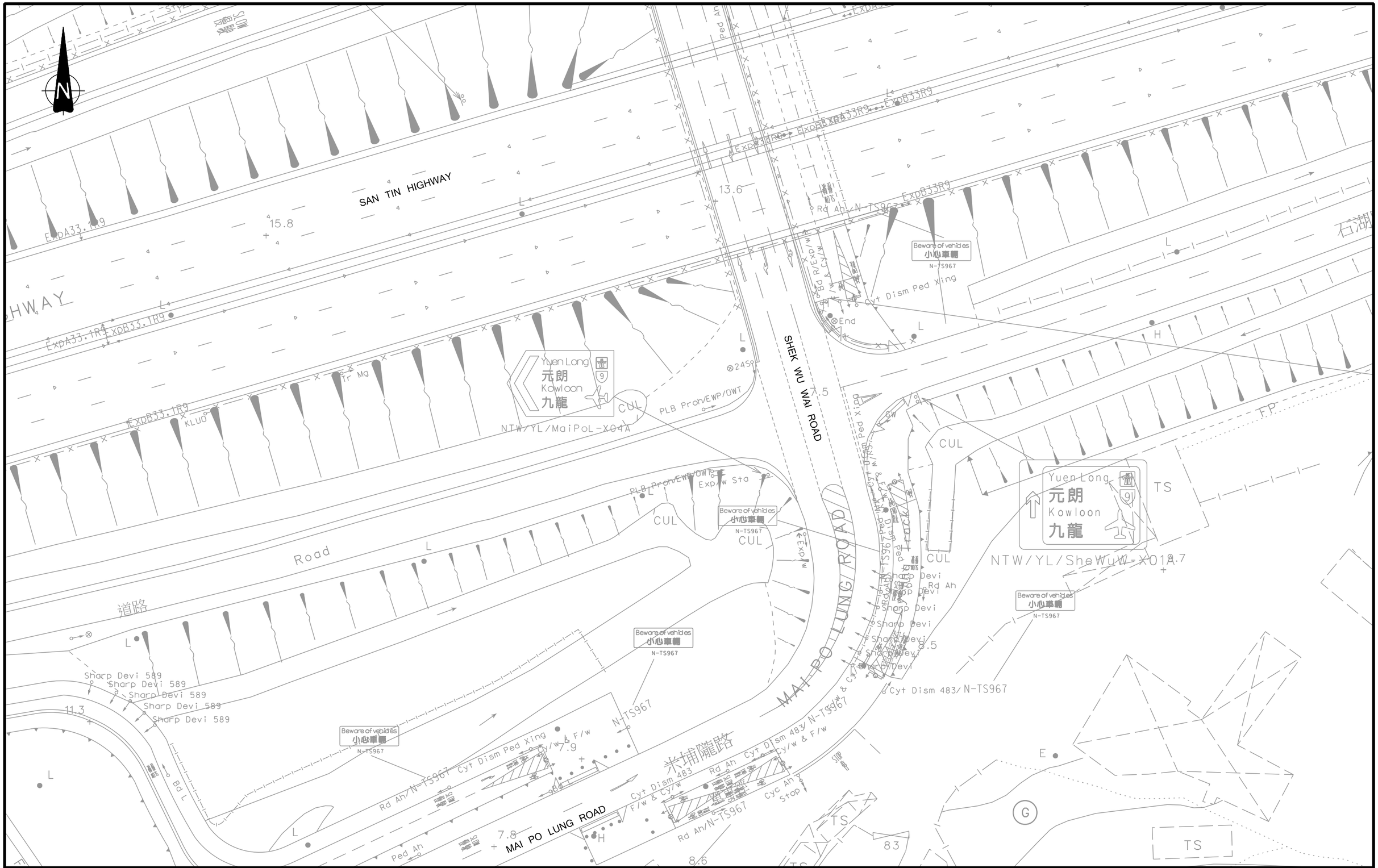
EXISTING JUNCTION LAYOUT OF SHEK WU WAI ROAD / SAN TIN HIGHWAY SLIP ROAD (A1)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:500(A3)	DED 2024	**3.3**	-

SYSTRA MVA

CHK50800610/TIA/F33.DGN/LHO/31DEC24

Original Size : A3



Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

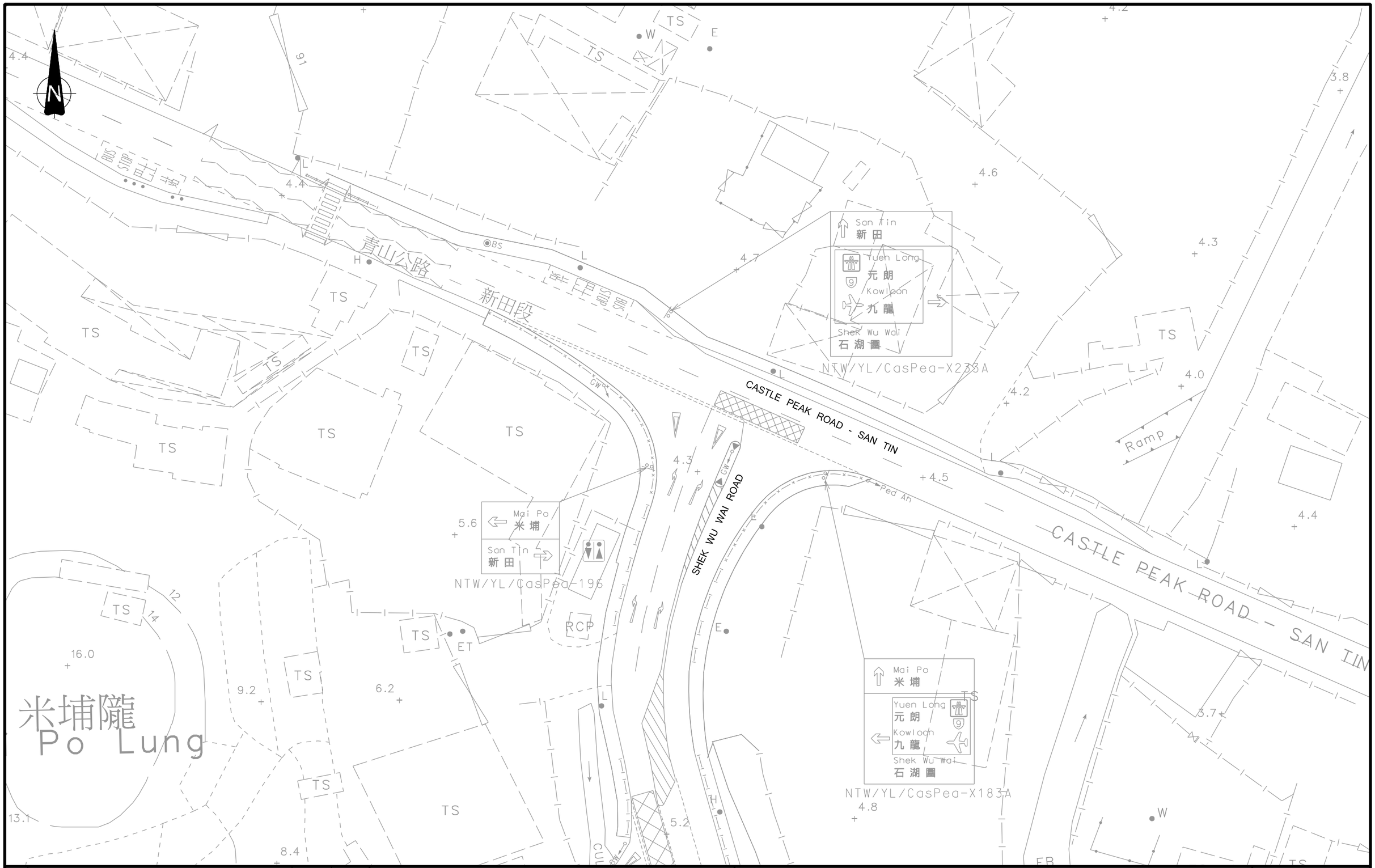
EXISTING JUNCTION LAYOUT OF SHEK WU WAI ROAD / MAI PO LUNG ROAD (A2)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:500(A3)	DEC 2024	**3.4**	-

SYSTRA MVA

CHK50800610/TIA/F34.DGN/LHO/03JAN25

Original Size : A3



Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

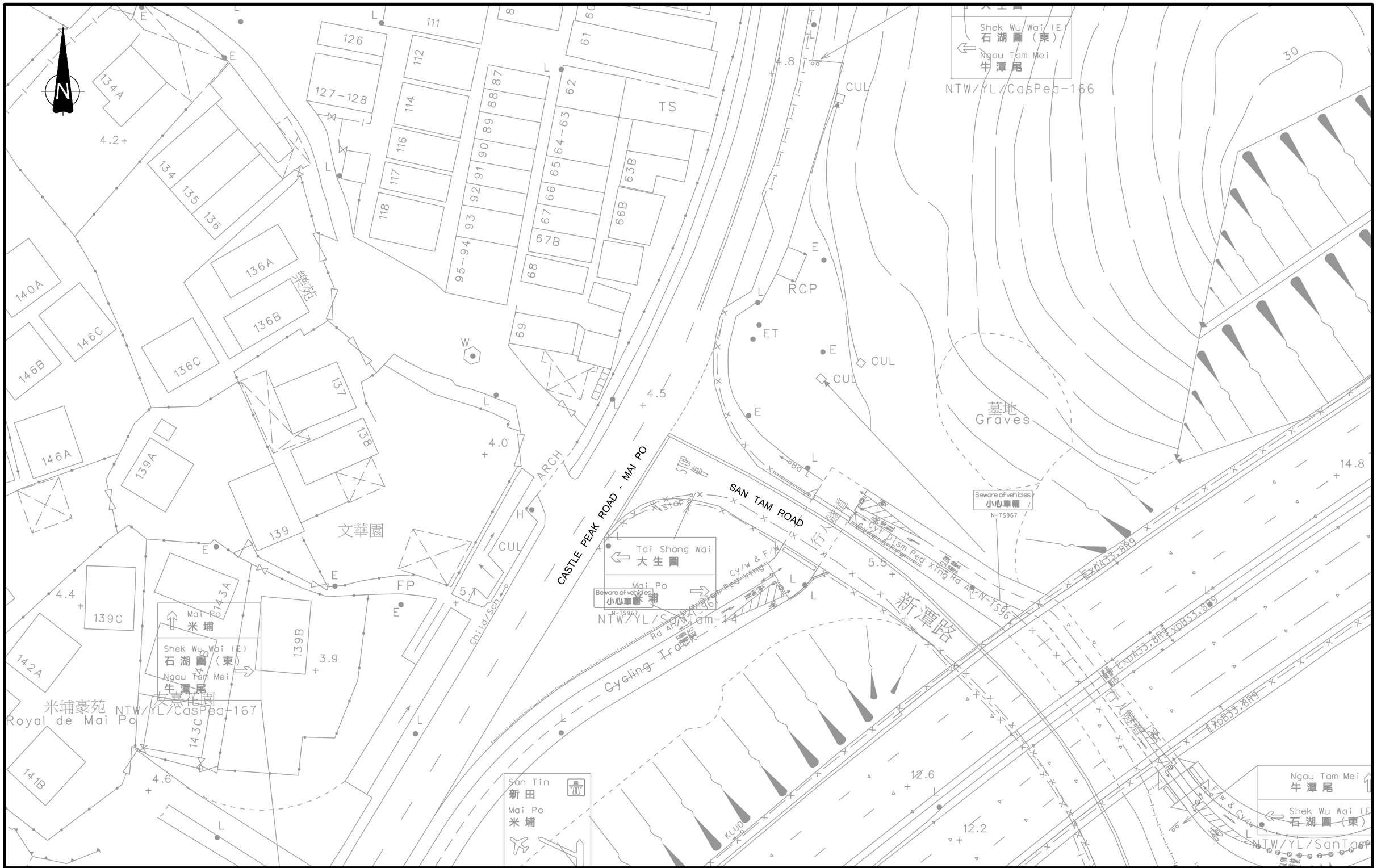
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD-SAN TIN / SHEK WU WAI ROAD (B)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:500(A3)	DEC 2024	3.5	-

SYSTRA MVA

CHK50800610/TIA/F35.DGN/LHO/02JAN25

Original Size : A3



Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

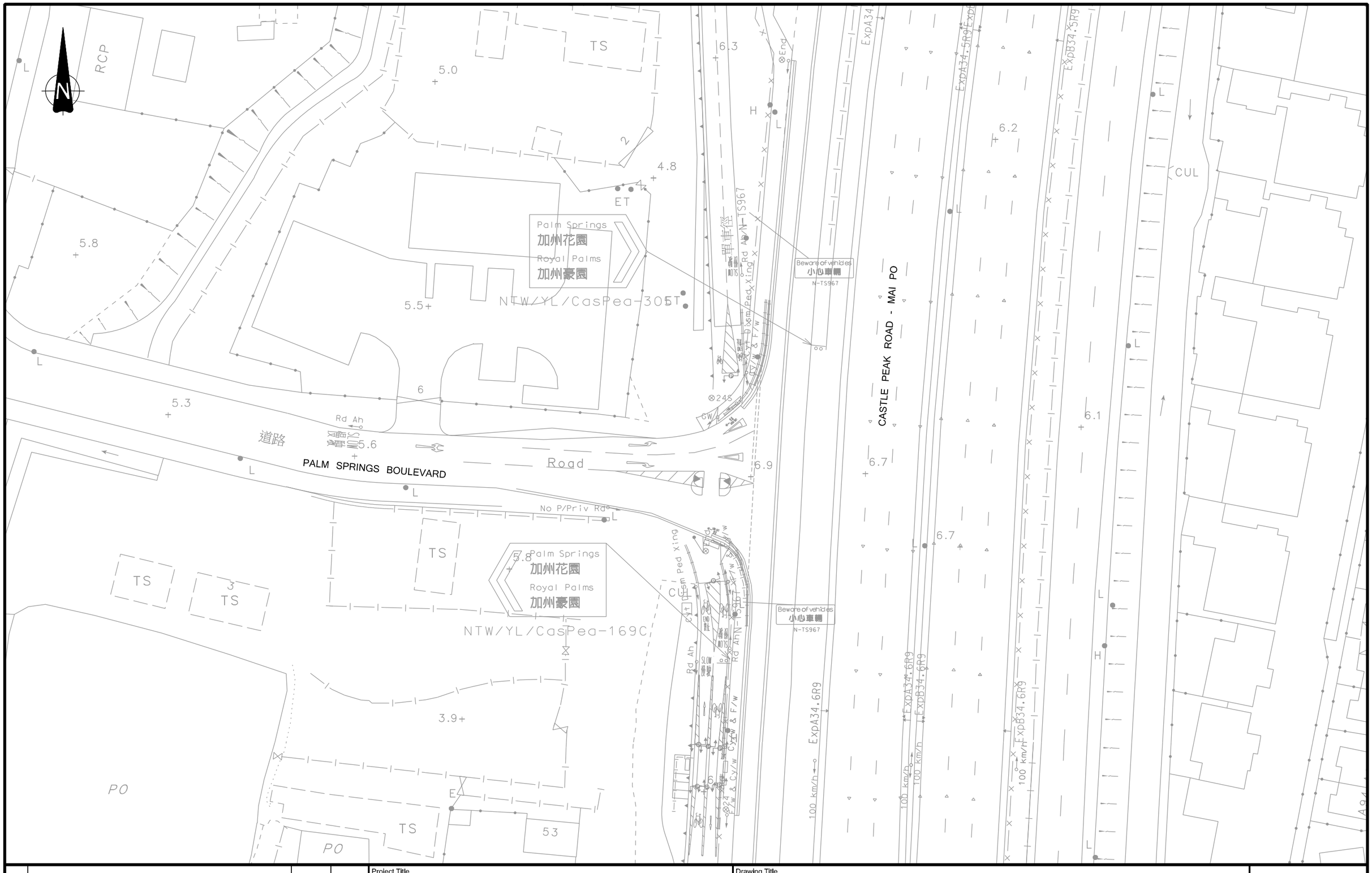
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - MAI PO / SAN TAM ROAD (C)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:500(A3)	JUN 2024	**3.6**	-

SYSTRA MVA

CHK50800610/TIA/F36.DGN/LHO/02JAN25

Original Size : A3



Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

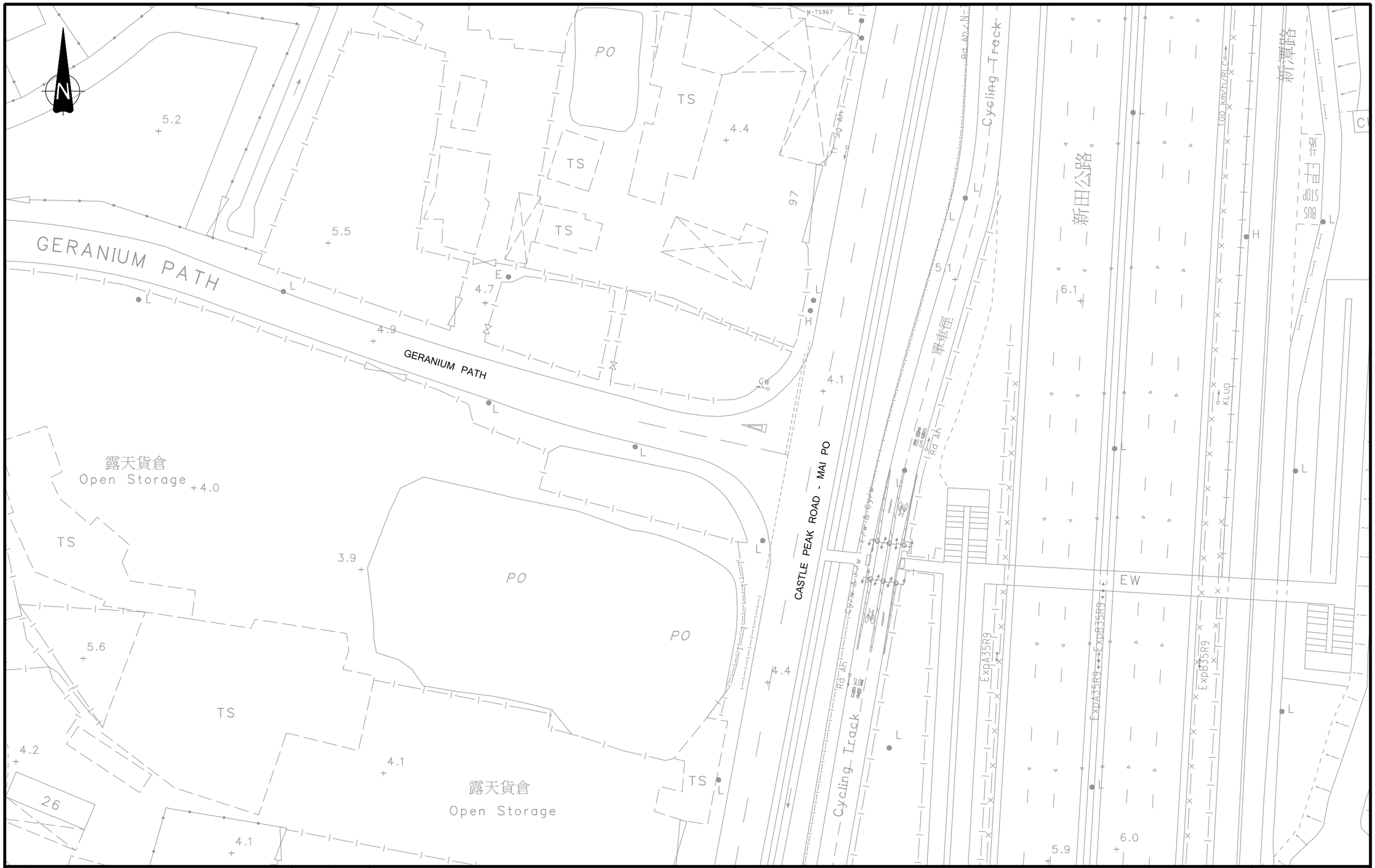
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - MAI PO / PALM SPRINGS BOULEVARD (D)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:500(A3)	JUN 2024	**3.7**	-

SYSTRA MVA

CHK50800610/TIA/F37.DGN/LHO/02JAN25

Original Size : A3



Rev.	Description	Checked	Date
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-	-	-	-
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

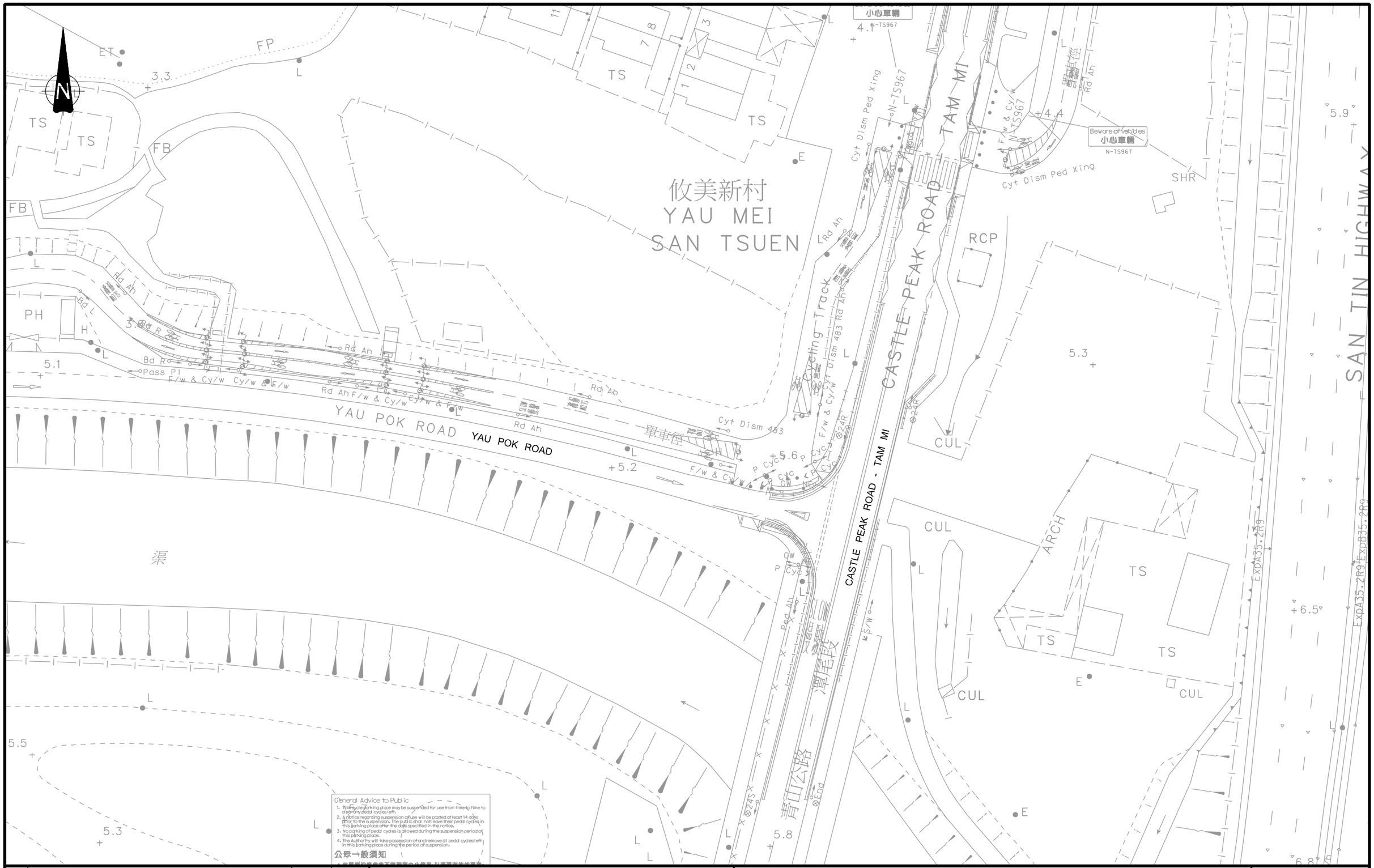
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - MAI PO / GERANIUM PATH (E)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:500(A3)	JUN 2024	3.8	-

SYSTRA MVA

CHK50800610/TIA/F38.DGN/LHO/02JAN25

Original Size : A3



Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

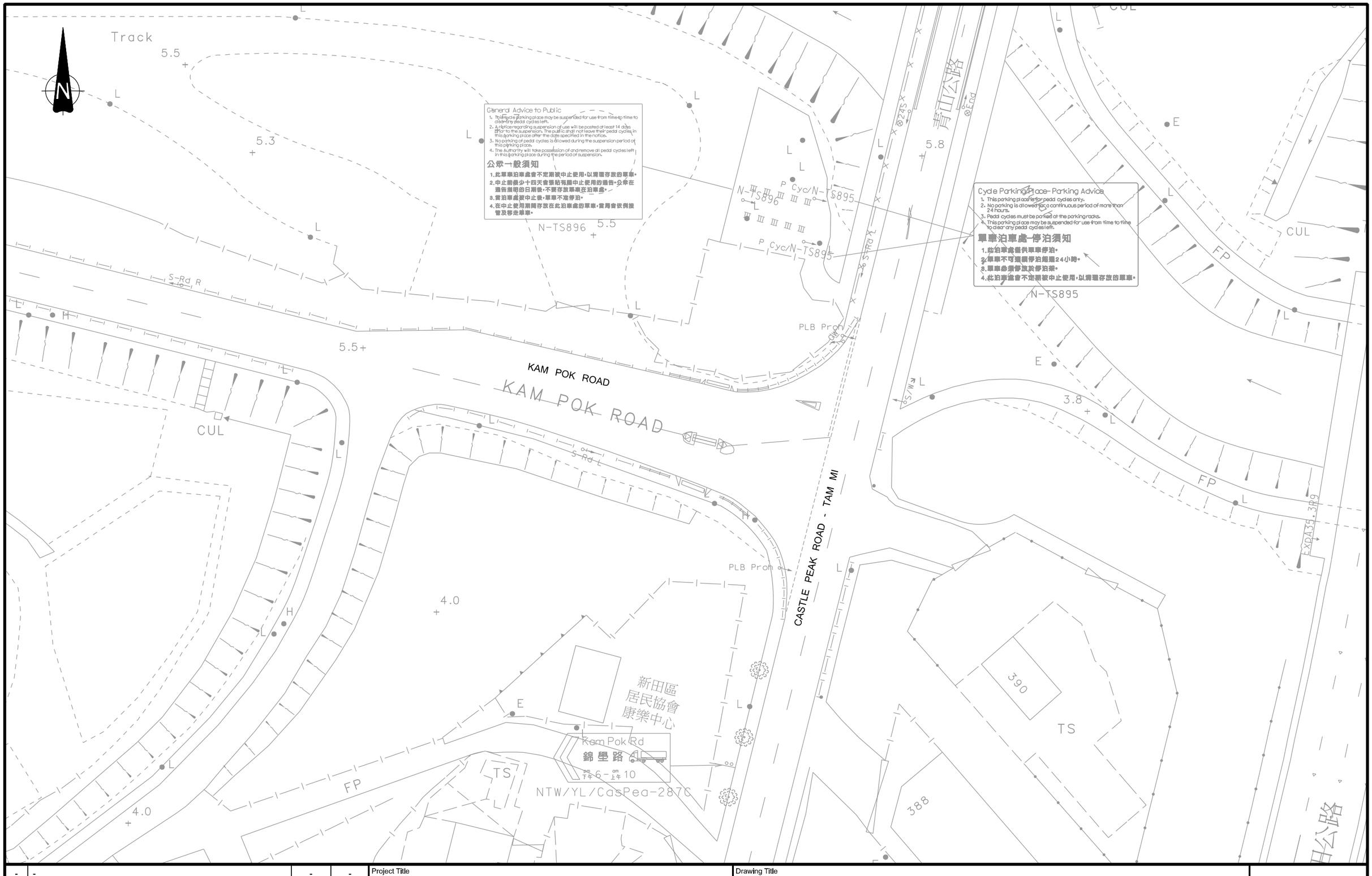
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - TAM MI / YAU POK ROAD (F)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:500(A3)	JUN 2024	**3.9**	-

SYSTRA MVA

CHK50800610/TIA/F39.DGN/LHO/02JAN25

Original Size : A3



Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

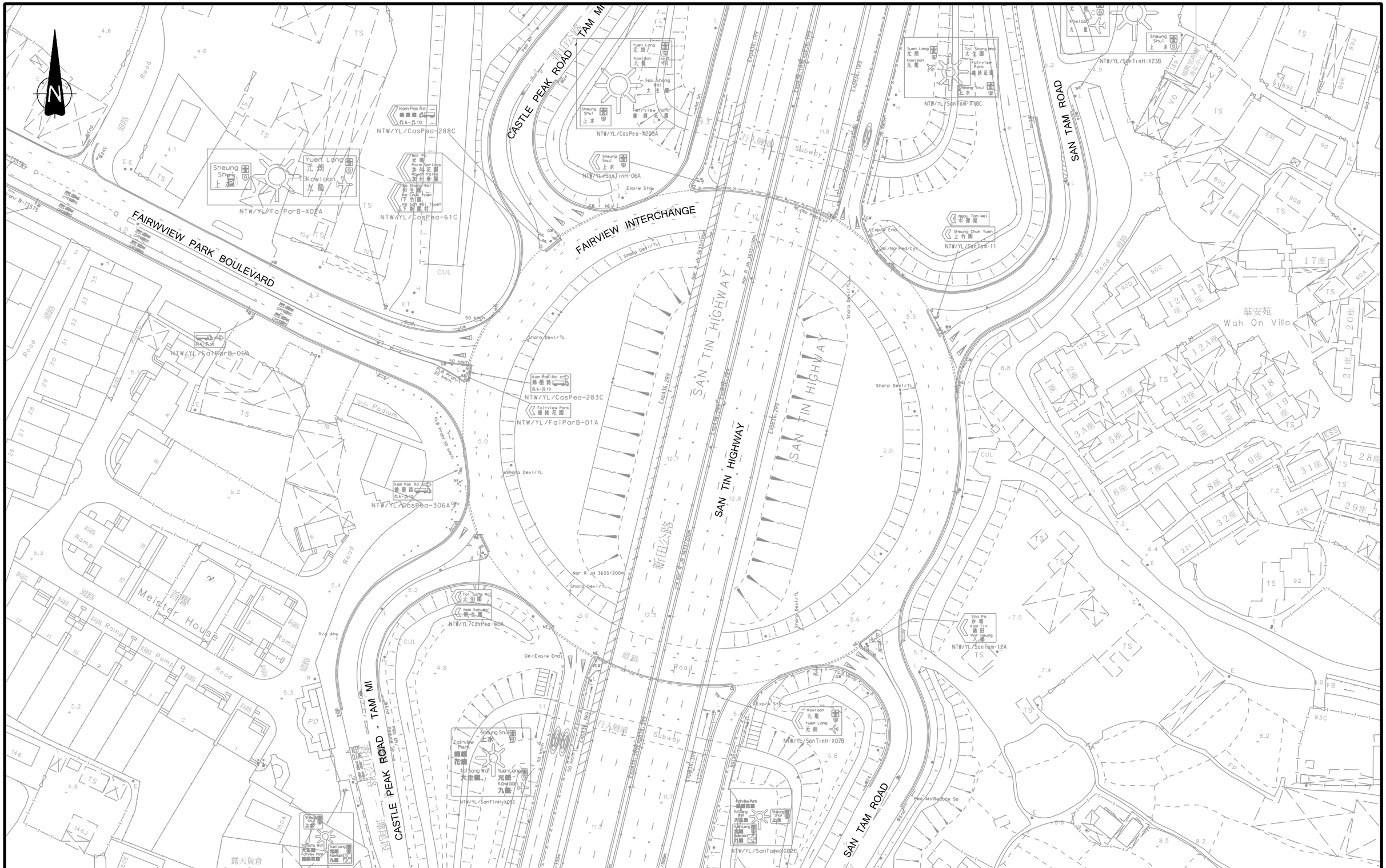
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - TAM MI / KAM POK ROAD (G)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:500(A3)	JUN 2024	3.10	-

SYSTRA MVA

CHK50800610/TIA/F310.DGN/LHO/02JAN25

Original Size : A3



Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

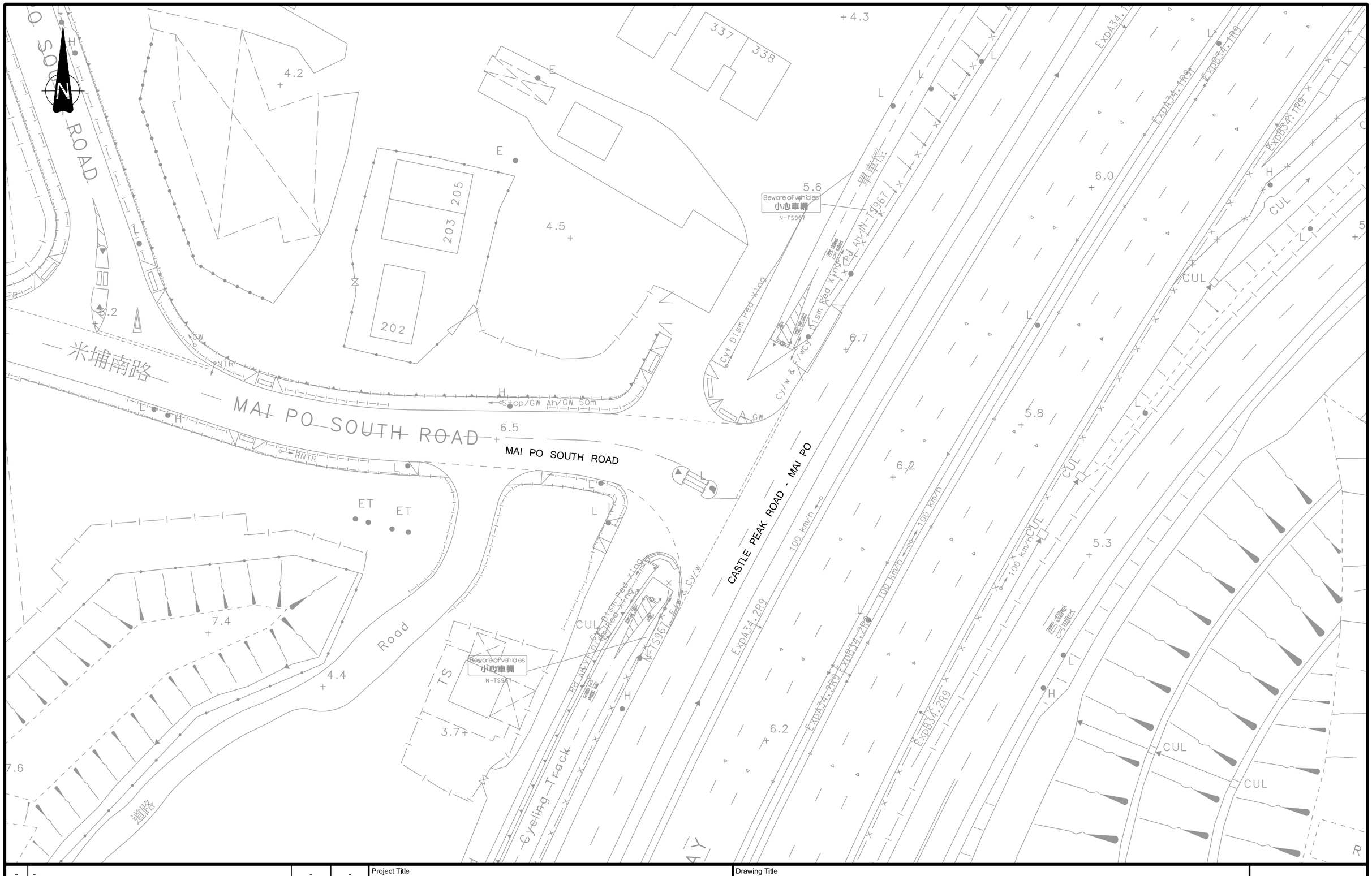
EXISTING JUNCTION LAYOUT OF FAIRVIEW PARK INTERCHANGE (H)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:1000(A3)	JUN 2024	3.11	-

SYSTRA MVA

CHK50800610/TIA/F311.DGN/LHO/02JAN25

Original Size : A3



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Rev.	Description	Checked	Date

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

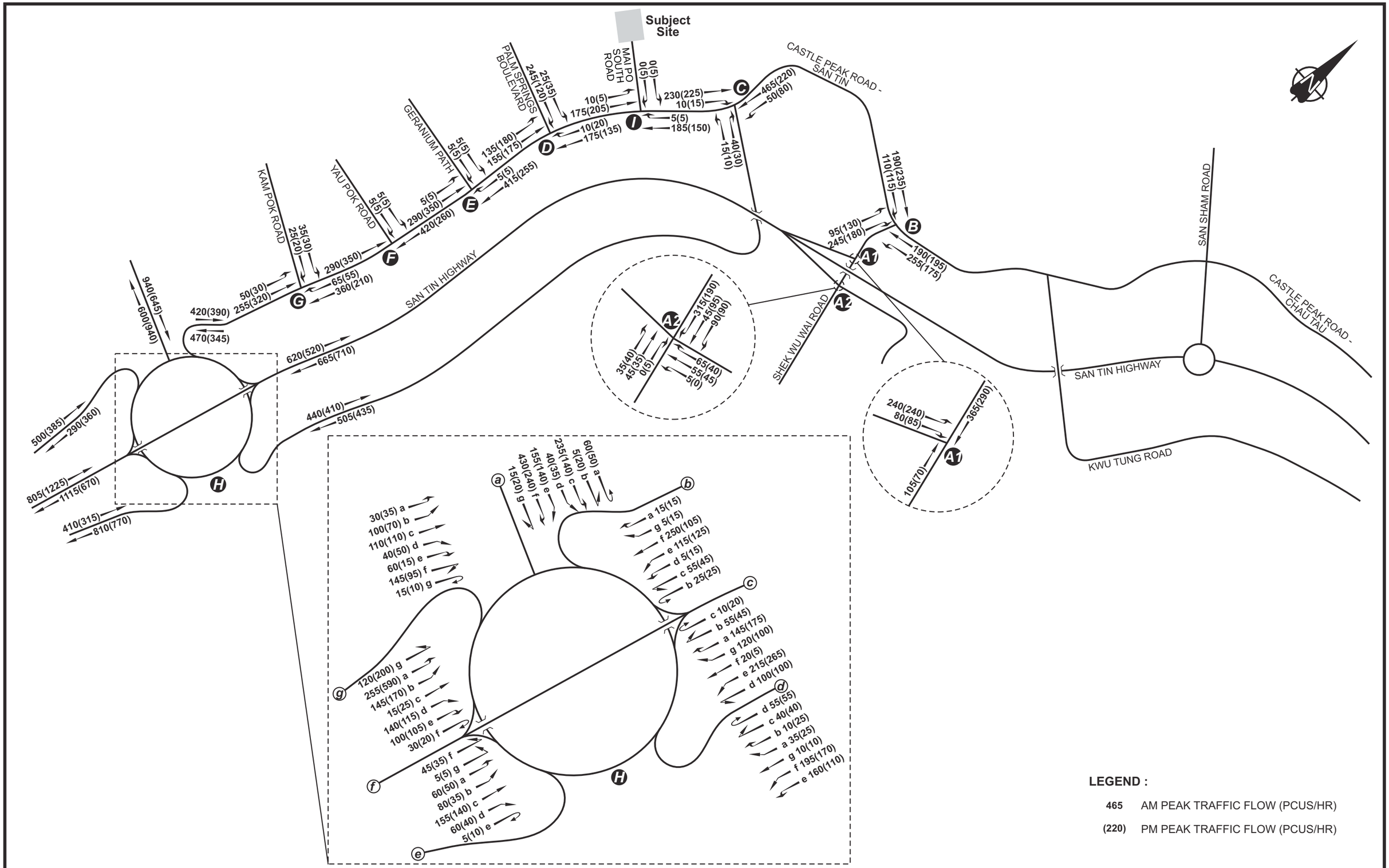
EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - MAI PO / MAI PO SOUTH ROAD (I)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:500(A3)	JUN 2024	3.12	-

SYSTRA MVA

CHK50800610/TIA/F312.DGN/LHO/03JAN25

Original Size : A3



LEGEND :

465 AM PEAK TRAFFIC FLOW (PCUS/HR)

(220) PM PEAK TRAFFIC FLOW (PCUS/HR)

Rev.	Description	Checked	Date
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-	-	-	-
-	-	-	-
A	TD COMMENT INCORPORATED AND MINOR AMENDMENT	CFC	31DEC24

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

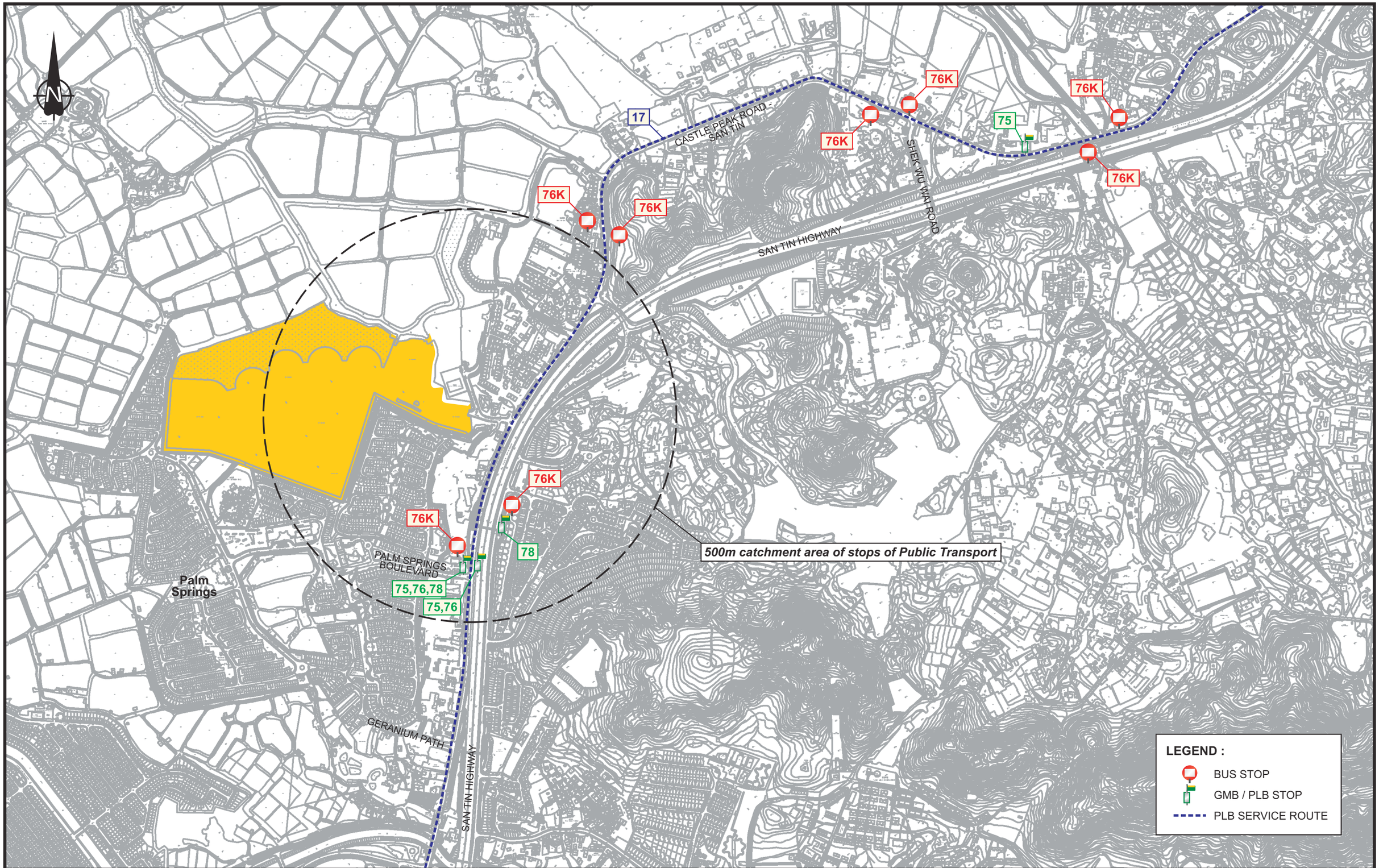
2024 OBSERVED TRAFFIC FLOWS

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	DEC 2024	3.13	A

SYSTRA MVA

CHK50800610/TIA/F313-A.CDR/LLH/31DEC24

Original Size : A3



Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

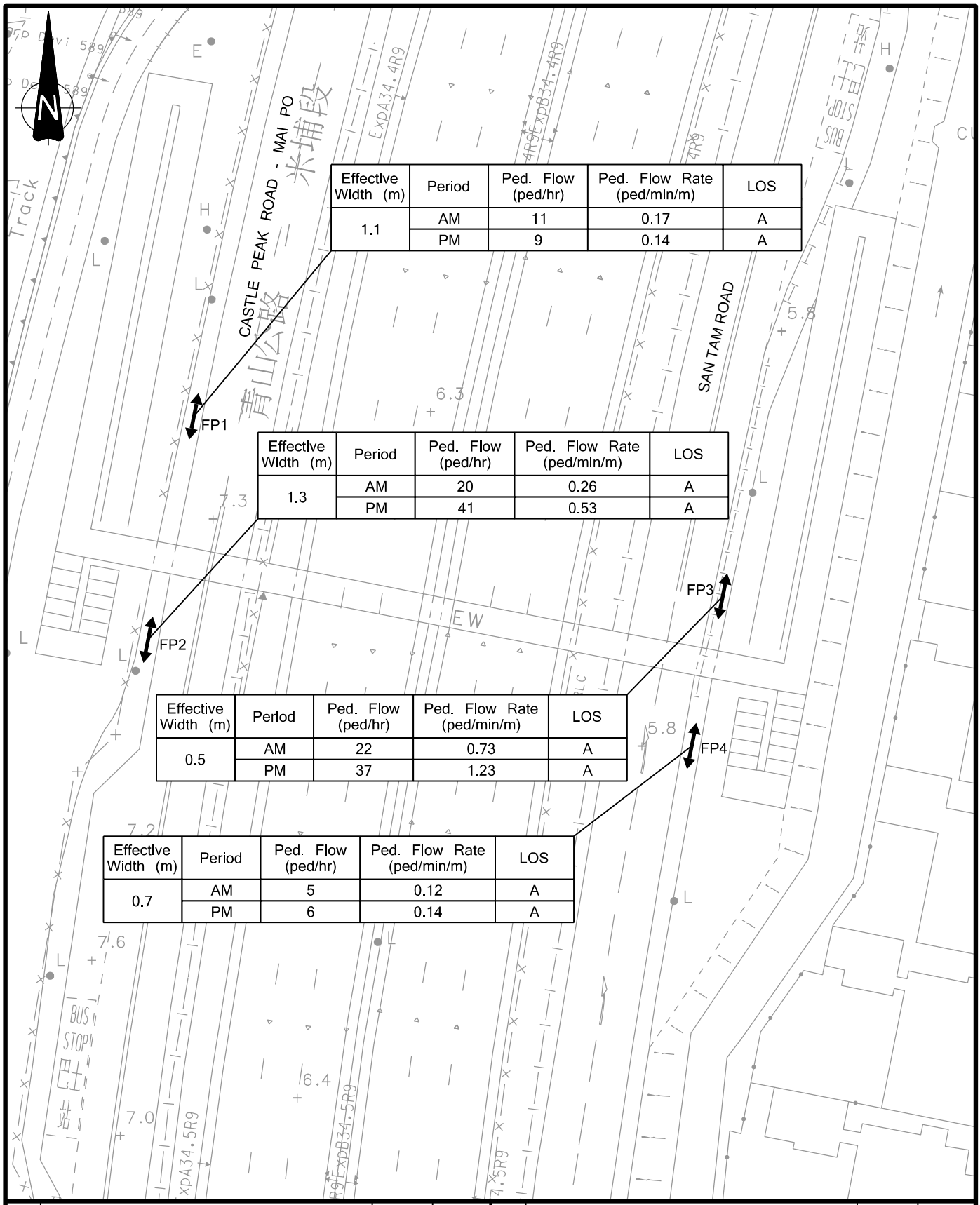
CURRENT PROVISION OF PUBLIC TRANSPORT SERVICES

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	DEC 2024	3.14	-

SYSTRA MVA

CHK50800610/TIA/F314.CDR/LLH/24DEC24

Original Size : A3



Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
1.1	AM	11	0.17	A
	PM	9	0.14	A

Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
1.3	AM	20	0.26	A
	PM	41	0.53	A

Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
0.5	AM	22	0.73	A
	PM	37	1.23	A

Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
0.7	AM	5	0.12	A
	PM	6	0.14	A

Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

YEAR 2024 OBSERVED PEAK HOUR PEDESTRIAN FLOWS

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	N.T.S.(A4)	DEC 2024	3.15	-

CHK50800610/TIA/F315.DGN/LHO/03JAN25

Original Size : A4

4. TRAFFIC FORECAST

4.1 Design Year

4.1.1 The tentative operation year of the proposed development is by 2031. Hence, the design year of 2034, three years upon operation, has been adopted for traffic forecast and assessment purposes.

4.2 Reference Traffic Forecast

Historical Traffic Growth Trend

4.2.1 In order to produce the traffic forecast for the strategic highway and other local road links at the design year of 2034, background traffic growth rates are to be determined. Reference has been made to the historic traffic flow data in the Annual Traffic Census (ATC) report to derive the appropriate background traffic forecast for various road links in this Study. To establish the background traffic growth rates, five ATC traffic count stations within the study area are referenced. The annual average daily traffic counts at the identified stations over a period between Year 2018 and Year 2023 are summarised in **Table 4.1** below.

Table 4.1 ATC Traffic Counts between 2018 and 2023

Road	Section	Stn No.	Average Annual Daily Traffic (A.A.D.T.)						Growth Rate (p.a.)
			2018	2019	2020	2021	2022	2023	18/23
Local Road Links									
San Tin Highway, Castle Peak Road & San Tam Road	Kam Tin Road ↔ Fairview Park Boulevard	5016	86,230	90,860	81,870	86,620	82,820	88,760	+0.58%
Castle Peak Rd - Tam Mi, Mai Po & San Tin	Fairview Park Boulevard ↔ Lok Ma Chau Rd	5257	11,980	11,910	11,420*	11,880*	11,520*	10,740	-2.16%
San Tam Rd	Castle Peak Rd - Mai Po ↔ Fairview Park Boulevard RA	5297	8,540	7,530	7,220*	7,510*	7,280*	10,960	+5.12%
San Tam Rd	Fairview Park Boulevard RA ↔ End	5505	12,700*	13,330	13,420	13,960*	13,540*	13,860*	+1.76%
		Total	**119,450**	**123,630**	**113,930**	**119,970**	**115,160**	**124,320**	**+0.80%**

Remark: *AADT estimated by Growth Factor

4.2.2 As indicated in **Table 4.1**, it is noted that over the past six years (i.e., 2018 to 2023), the average annual traffic growth pattern in the area shows a slightly ascending trends at the local road links.

Future Local Planning Data

4.2.3 For the local road links, apart from the historical traffic data, 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 4.1,** are referenced to derive the annual growth rates as summarised in **Table 4.2**.

Table 4.2 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%**

4.2.4 As shown in **Table 4.2**, 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.

Adopted Traffic Growth Rate for Local Road Links

4.2.5 Taking account of the historical traffic pattern and the future local population projection planning data, a conservative estimation of +1.0% per annum is adopted for the background traffic growth of the local road links from Year 2024 to Year 2034.

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 4.3**.

Table 4.3 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

Remark: (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” and “Main Phase” would be considered in the assessment of Year 2034. The related development schedules and estimated traffic generations are summarized in below **Table 4.4**. The estimated traffic flows of STT under Year 2034 are shown in **Drawing 4.2**.

Table 4.4 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 and Main Phase)	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 25,805 units (Average house/flat size of about 50 m^2)	1,605[4]	1,099[4]	766[4]	1,035[4]
	Private Housing	Approximate 12,200 units (Average house/flat size of about 60 m^2)	876[5]	519[5]	349[5]	451[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 m^2, 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 m^2, 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. As the NTM development proposal is still in the conceptual stage without detailed land use planning and development parameters, it will not be considered in this TIA Study.

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 2034. 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 4.5** and the locations of these developments are indicated in **Drawing 4.3**.

Table 4.5 Other Planned/Committed Developments

Ref.[1]	Developments Location; Application No.	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
1	Residential Development R(D) at Kam Pok Road (to the west of Chuk Yuen Tsuen), A/YL-MP/205	71 units (average flat size of about 186 m^2)	20	13	12	17
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), 14S.B. RP (Part), 45 and 1740S.A. RP in D.D.107 and adjoining government land to the south of Wing Kei Tsuen, Yuen Long, A/YL-NSW/241	37,171 m^2 GFA	85	90	115	132
6	Castle Peak Road – Tam Mei, Y/YL-NSW/3	Hotel 700 beds	94	102	91	109
		Retail 38,300 m^2	88	94	119	137
7	Various Lots in D.D. 103 and D.D. 115, Tung Shing Lei, Nam Sang Wai, Yuen Long, YL-NSW/293	2,811 units (average flat size of about 50 m^2)	202	119	80	104
		Eating place / Shop & Services (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	10[2]	10[2]	10[2]	10[2]

Ref.[1]	Developments Location; Application No.	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
		142 Beds				
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
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]

Remark: (1) Refer to **Drawing 4.3** for development locations.
(2) Assume Nominal Trips of 10 pcu/hr.
(3) Trips generation from project's TIA report.

4.2.11 Based on the above, the year 2034 reference traffic flows, as shown in **Drawing 4.4** are produced according to the following:

Local Road Links: = Year 2024 Observed Flows x $(1 + 1.0\%)^{10}$
+ Other Planned/Committed Development Trip Generation

4.3 Development Traffic Generations

Trip Generation of Proposed Scheme

4.3.1 The proposed development will provide 3,571 units with an average flat size of approximately 74.5 m^2, with provision of a 3,800 m^2 100-bed RCHE. The trip generations of the proposed development are estimated in accordance with the relevant trip rates as tabulated in the Transport Planning Design Manual (TPDM). **Table 4.6** summarises the trip generations of the proposed development.

Table 4.6 Estimated Trip Generation of Proposed Development

	Trip Generations			
	AM Peak		PM Peak	
	Gen	Att	Gen	Att
Residential Trips				
Trip Rates (pcu/units/hr) (1)	0.0965	0.0556	0.0388	0.0530
No. of Residential Unit	3,571			
Residential Trips (pcu/hr)	345	199	139	190
RCHE Trips(2)				
Residential Trips (pcu/hr)	5	5	5	5
Induced Mechanized Trips(3)				
Induced Mechanized Trips (pcu/hr)	14	14	14	14
Enhancement of Public Transport(4)				
Enhancement of Public Transport (pcu/hr)	2.5	0	0	2.5
Total (pcu/hr):	367	218	158	212

Remark: (1) Trip Rates deduced from interpolation of TPDM for private housing: high-density R(A) with average flat sizes of 70 m^2 and 80 m^2
(2) Assume Nominal Trip Generation of 10 pcu/hr (2-way).
(3) By referring to **Para 4.3.6**.
(4) By referring to **Table 4.9** and **Para 4.3.10**.

4.3.2 As indicated in **Table 4.6**, the proposed development would generate a two-way total of 582 pcu/hr and 370 pcu/hr (including induced mechanized trips and enhanced public transport trips) during the weekday morning and evening peak hour periods respectively. The development trip distributions are shown in **Drawing 4.5**.

Public Transport Trips

4.3.3 With reference to TD's Travel Characteristics Survey (TCS) 2011, 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 and public transport modal share, with the assumptions of 90% inbound/outbound trips during AM and PM peak hours respectively. Based on the above assumptions, the public transport demands for the proposed development are estimated in **Table 4.7**.

Table 4.7 Estimated Trip Generation of Approved Development

Index	Parameter	Formula	Result
(a)	Proposed No. of Units	-	3,571
(b)	Average Domestic Household Size (1)	-	2.8
(c)	Estimated Total Population	(a)*(b)	9,999
(d)	Average Daily Mechanised Trips per Person (2)	-	1.61
(e)	Peak Hour Percentage of Daily Total (3)	-	12%
(f)	Assumed Percentage of Major Outbound Trips in Peak Hour	-	90%
(g)	Estimated Peak Hour Trips by Proposed Development	(c)*(d)*(e)*(f)	1,739
(h)	Major Public Transport Modal Share (4)	-	49%
(i)	Estimated Peak Hour Public Transport Demand	(g)*(h)	853
(j)	Estimated Passenger using Railway and SPB	(i)*47.4%(5)	404
(k)	No. of induced coach (veh/hr)	(j)/60(6)	7
(l)	Estimated Passenger using Franchised Bus	(i)*52.6%(7)	449
(m)	- Yuen Long Bound Demand [AM Peak (PM peak)]	65% (68%)	292(305)
(n)	- San Tin/Sheung Shui Bound Demand [AM Peak (PM peak)]	35% (32%)	157(144)
(o)	No. of Additional Bus Required during Peak Hour(8) - Yuen Long Bound Demand [AM Peak (PM peak)] - San Tin/Sheung Shui Bound Demand [AM Peak (PM peak)]		1 (1) 0 (0)

Remarks: (1) For Yuen Long District in 2023 Period from Census and Statistics Department website

(2) Exclude NHB and EB trips, calculated with reference to Table E.2 and Table A.2 in TCS 2011.

(3) Peak hour percentage to daily total, with reference to Para. 3.3.7 in TCS 2011.

(4) Refer to the previous in-house traffic survey of Royal Palms and assumption of no. of passengers of shuttle bus (coach) and private car/taxi. The result of passenger using coach is found to be 49%. Therefore, it is assumed that the public transport modal share of 49% could be reasonably applied to the subject site due to the similar location and characteristic of the development.

(5) Exclude LRT, tram, ferry, consider MTR trip and SPB trips with reference to Table 3.6 in TCS 2011.

(6) Assumed passenger using Railway and SPB would be served by coach between the subject site and future San Tin Station of Northern Link, while 60 pax/coach adopted as coach capacity.

(7) Exclude LRT, tram, ferry, consider Franchised Bus trip and PLB trips with reference to Table 3.6 in TCS 2011.

(8) Referring to **Table 4.9**.

4.3.4 From **Table 4.7**, it is estimated that there will be one-way of approx. 853 pax/hr of public transport demand generated from the proposed residential development during the peak hour.

4.3.5 With reference to HBW trips of Table 3.6 in TCS 2011, the transport mode of PT passengers of Railway and SPB is 47.4%, and the passengers of Franchised Bus and GMB is 52.6%, respectively. Therefore, the induced PT demand will be distributed accordingly, i.e. 404 pax are assumed using shuttle bus to the nearest railway station (future San Tin Station of Northern Link), and the remaining 449 pax are assumed using Franchised Bus, which being adopted in the assessment.

4.3.6 The Railway and SPB demand are proposed to be served by coach (i.e. 60 pax/veh), which is equivalent to 14 pcu/hr, running between the subject development and the nearest railway station (future San Tin Station of Northern Link).

4.3.7 The estimated overall public transport demands at Year 2034 are summarized in **Table 4.8**.

Table 4.8 Estimated Year 2034 Public Transport Demands

Peak Hour	Bound	Average Peak Hour Service Capacity (pax)	Estimated Year 2034 Occupancy (pax)(1)	Additional Passenger Demands (pax)(2)	Overall Passenger Demands (pax)	Occupancy Rate (%)
AM Peak	Yuen Long	812	532	292	824	101%
	San Tin/Sheung Shui	713	409	157	566	79%
PM Peak	Yuen Long	780	656	144	800	103%
	San Tin/Sheung Shui	776	468	305	773	100%

Remarks: (1) +1.0% annual growth rate is applied to the average observed peak hour PT trips to estimate Year 2034 demand;
(2) Refer to **Table 4.7** and **Para 4.3.5**.

4.3.8 From **Table 4.8**, it can be shown that the demand for public transport service for PM peak periods of Yuen Long bound would be over capacity in Year 2034 upon occupation of the proposed residential development.

4.3.9 It is proposed to enhance the nearby public transport service by increasing the frequency of KMB 76K during PM peak. The estimated overall public transport demands at Year 2034 with proposed PT service enhancement are summarized in **Table 4.9**.

Table 4.9 Estimated Year 2034 Public Transport Demands – With Service Enhancement

Peak Hour	Bound	Average Peak Hour Service Capacity (pax)	Enhanced Peak Hour Service Capacity (pax)(1)	Estimated Year 2034 Occupancy (pax)(2)	Additional Passenger Demands (pax)(3)	Overall Passenger Demands (pax)	Occupancy Rate (%)
AM Peak	Yuen Long	812	902 (812+90)	532	292	824	91%
	San Tin/Sheung Shui	713	713	409	157	566	79%
PM Peak	Yuen Long	780	870 (780+90)	656	144	800	92%
	San Tin/Sheung Shui	776	776	468	305	773	100%

Remarks: (1) The bus capacity is assumed to be 90 passengers;
(2) +1.0% annual growth rate is applied to the average observed peak hour PT trips to estimate Year 2034 demand;
(2) Refer to **Table 4.7** and **Para 4.3.5**.

4.3.10 From **Table 4.9**, it is demonstrated that with the service enhancement (with 1 additional bus for Yuen Long bound at both AM and PM peak periods, which is equivalent to 2.5 pcu/hr), the public transport would operate within capacity in Year 2034.

4.3.11 The detailed arrangement of public transport service enhancement such as frequency improvement of the existing services and shuttle bus service 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

4.3.12 In the approved scheme, the development will provide 789 houses with an average flat size of approximately 105.1 m^2. The trip generations of the approved development are summarised in **Table 4.10**.

Table 4.10 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

Remark: (1) Trip Rates extracted from TPDM for private housing: low-density R(B) with average flat sizes of 100m^2

4.3.13 The net difference of the trip generation between the approved and proposed schemes is summarised in **Table 4.11**. As shown in **Table 4.11**, the trip generation of the current proposed scheme would be larger in both AM and PM peak periods, compared with the previous approved scheme.

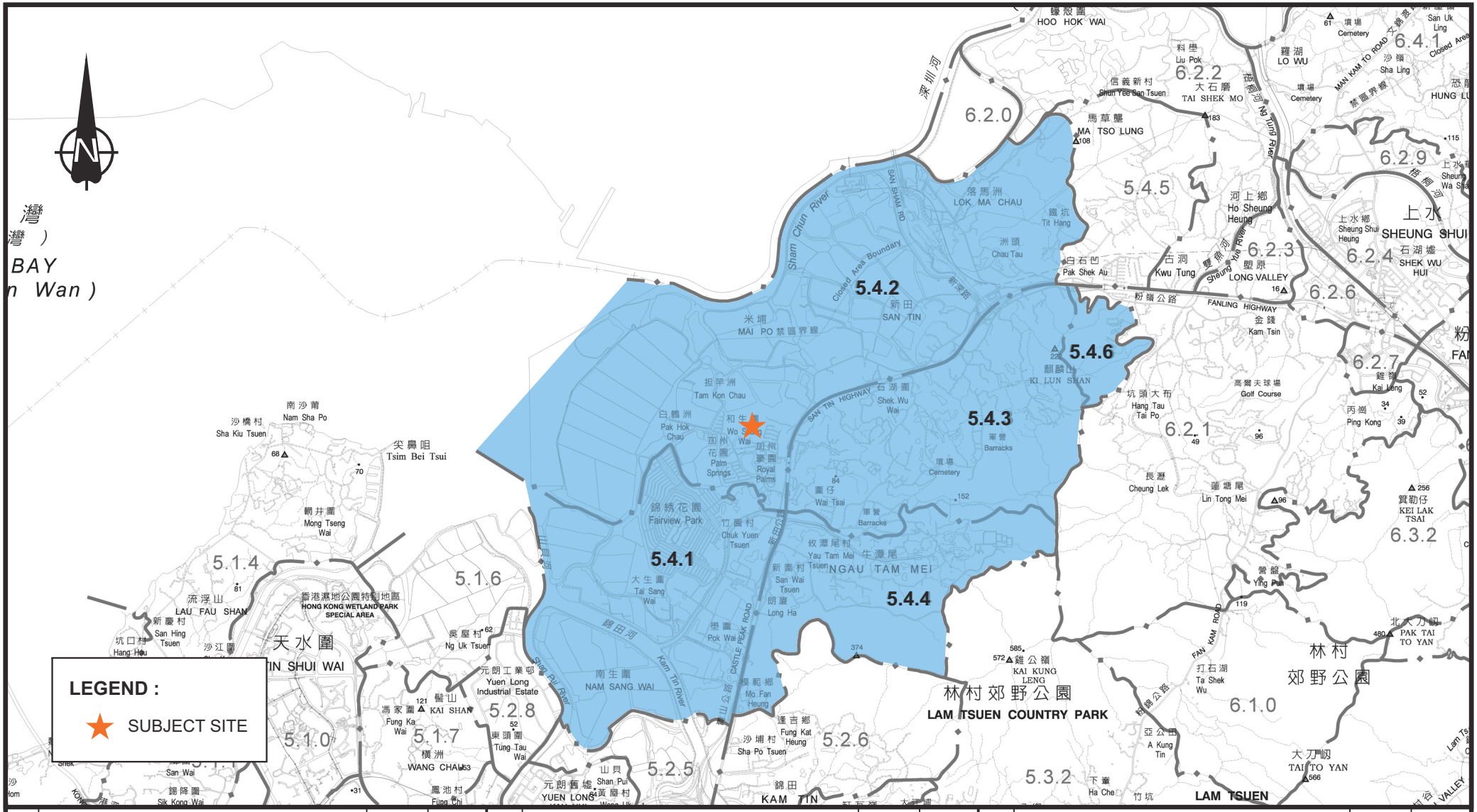
Table 4.11 Net Difference of Trip Generations between the Approved and Proposed Schemes

	Trip Generations (pcu/hr)			
	AM Peak		PM Peak	
	Gen	Att	Gen	Att
Approved Scheme [A]	155	88	75	104
Proposed Scheme [B]	367	218	158	212
Trip Difference [B] – [A]	+212	+130	+83	+108

4.4 Traffic Forecast Data

4.4.1 Based on the above, the year 2034 design flows, as shown in **Drawing 4.6** are produced according to the following.

Year 2034 Design Case = Year 2034 Reference Case + Proposed Development Trip Generation, induced shuttle bus trips and the additional public transport trips



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Rev.	Description	Checked	Date	Rev.	Description	Checked	Date	Rev.	Description	Checked	Date

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

TERTIARY PLANNING UNIT (TPU) BOUNDARIES

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	DEC 2024	4.1	-

SYSTRA MVA

CHK50800610/TIA/F41-A.CDR/LLH/24DEC24

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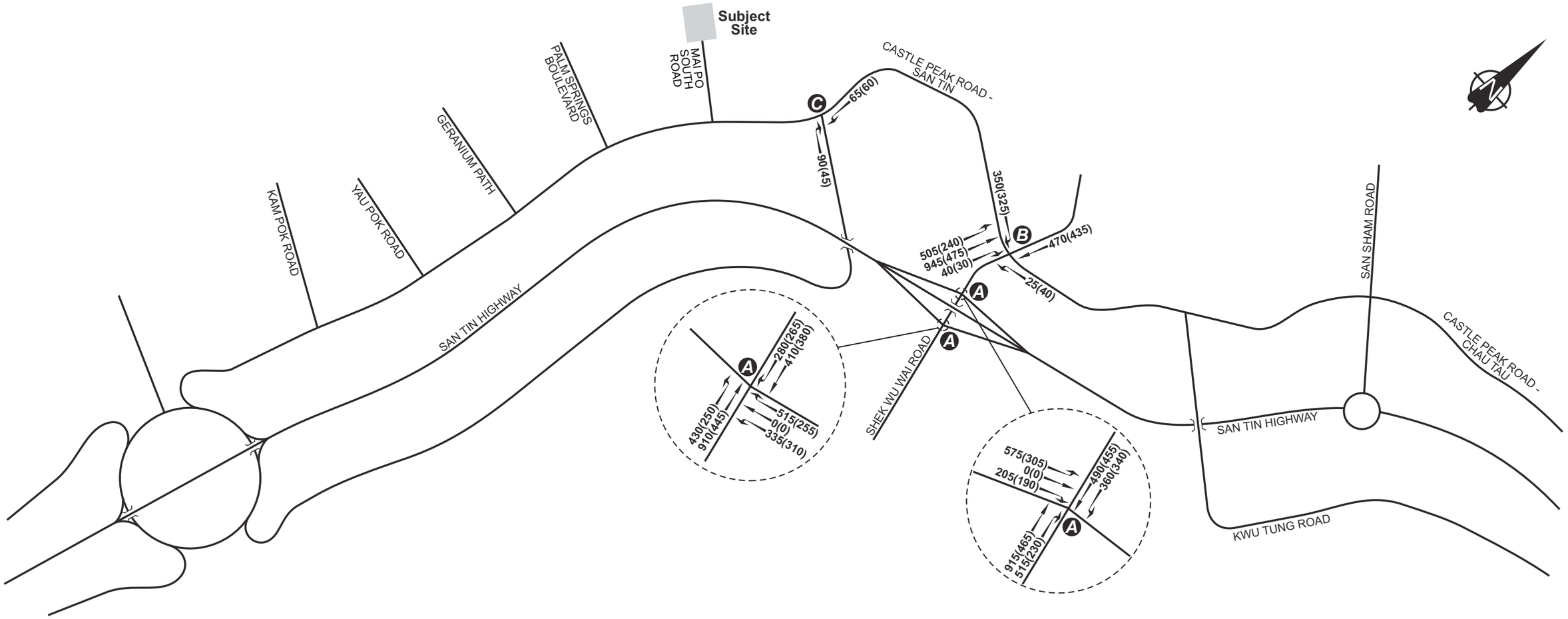

LEGEND :

65 AM PEAK TRAFFIC FLOW (PCUS/HR)

(60) PM PEAK TRAFFIC FLOW (PCUS/HR)

Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

ESTIMATED TRAFFIC FLOWS OF SAN TIN TECHNOPOLE (STT)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	DEC 2024	**4.2**	-

SYSTRA MVA

CHK50800610/TIA/F42.CDR/LLH/31DEC24

Original Size : A3

LOCAL PLANNED / COMMITTEND DEVELOPMENTS:

1. RESIDENTIAL DEVELOPMENT R(D) AT KAM POK ROAD (TO THE WEST OF CHUK YUEN TSUEN), A/YL-MP/205.
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), 14S.B. RP (PART), 45 AND 1740 S.A. RP IN D.D. 107 AND ADJOINING GOVERNMENT LAND TO THE SOUTH OF POK WAI AND WING KEI TSUEN, YUEN LONG, A/YL-NSW/241.
6. CASTLE PEAK ROAD - TAM MEI; COMMERCIAL, Y/YL-NSW/3.
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 GOVERMENT 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. SAN TIN TECHNOPOLE.

N

SAN TIN HIGHWAY
CASTLE PEAK ROAD - MAI PO
SAN TAM ROAD
NGAU TAM MEI ROAD
CHUN SHIN ROAD
CHUK YAU ROAD
SAN TIN HIGHWAY
CASTLE PEAK ROAD - TAM MI
SAN TIN HIGHWAY
SAN TAM ROAD
FAIRVIEW PARK BOULEVARD
KAM POK ROAD
KAM TIN ROAD
APPLICATION SITE

LEGEND:

APPLICATION SITE

PLANNED / COMMITTED DEVELOPMENT

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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

LOCAL PLANNED AND COMMITTED DEVELOPMENTS

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	N.T.S.(A3)	JUN 2024	**4.3**	-

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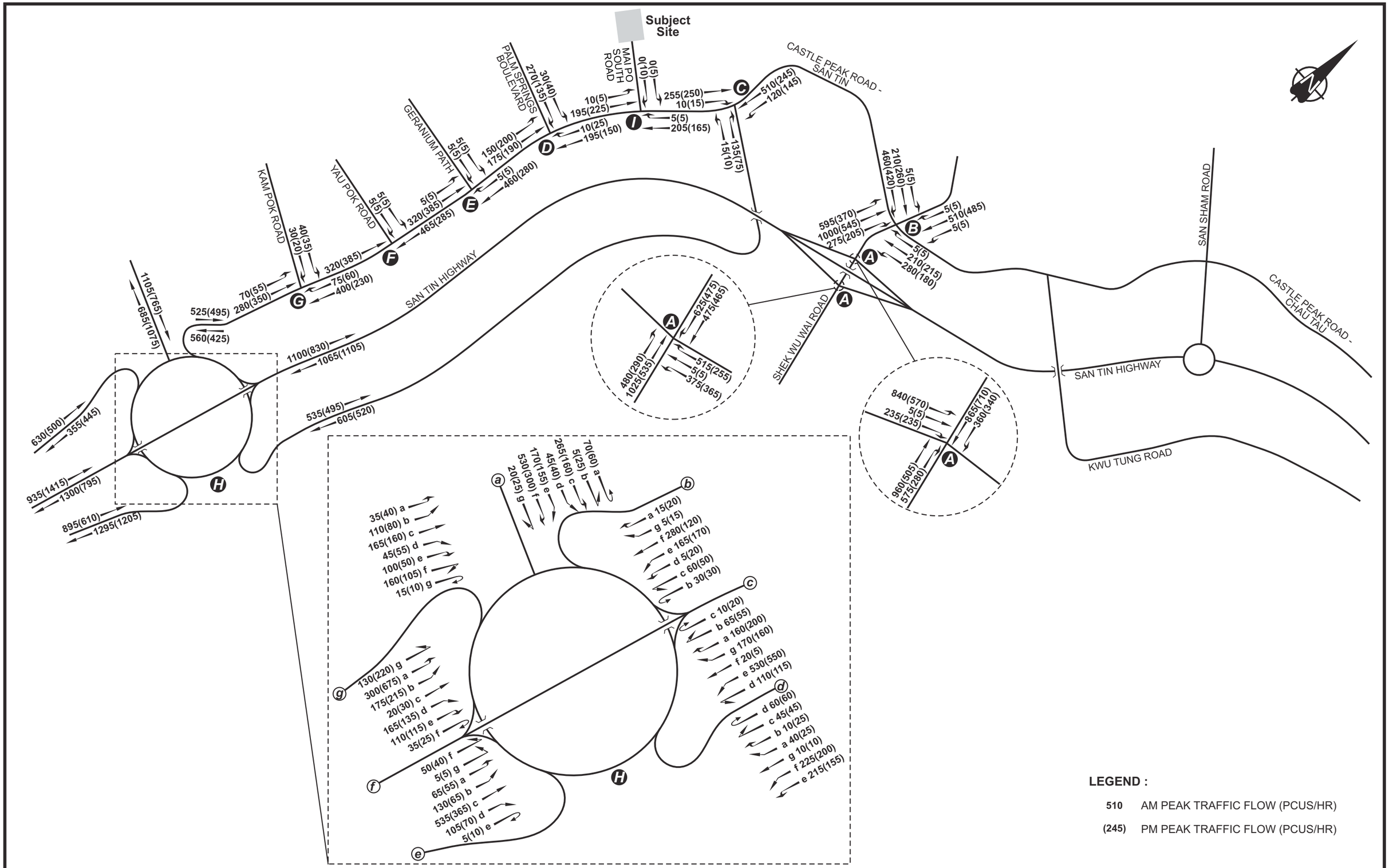

LEGEND :

510 AM PEAK TRAFFIC FLOW (PCUS/HR)

(245) PM PEAK TRAFFIC FLOW (PCUS/HR)

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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

2034 REFERENCE TRAFFIC FLOWS

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	DEC 2024	4.4	-

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CHK50800610/TIA/F44.CDR/LLH/31DEC24

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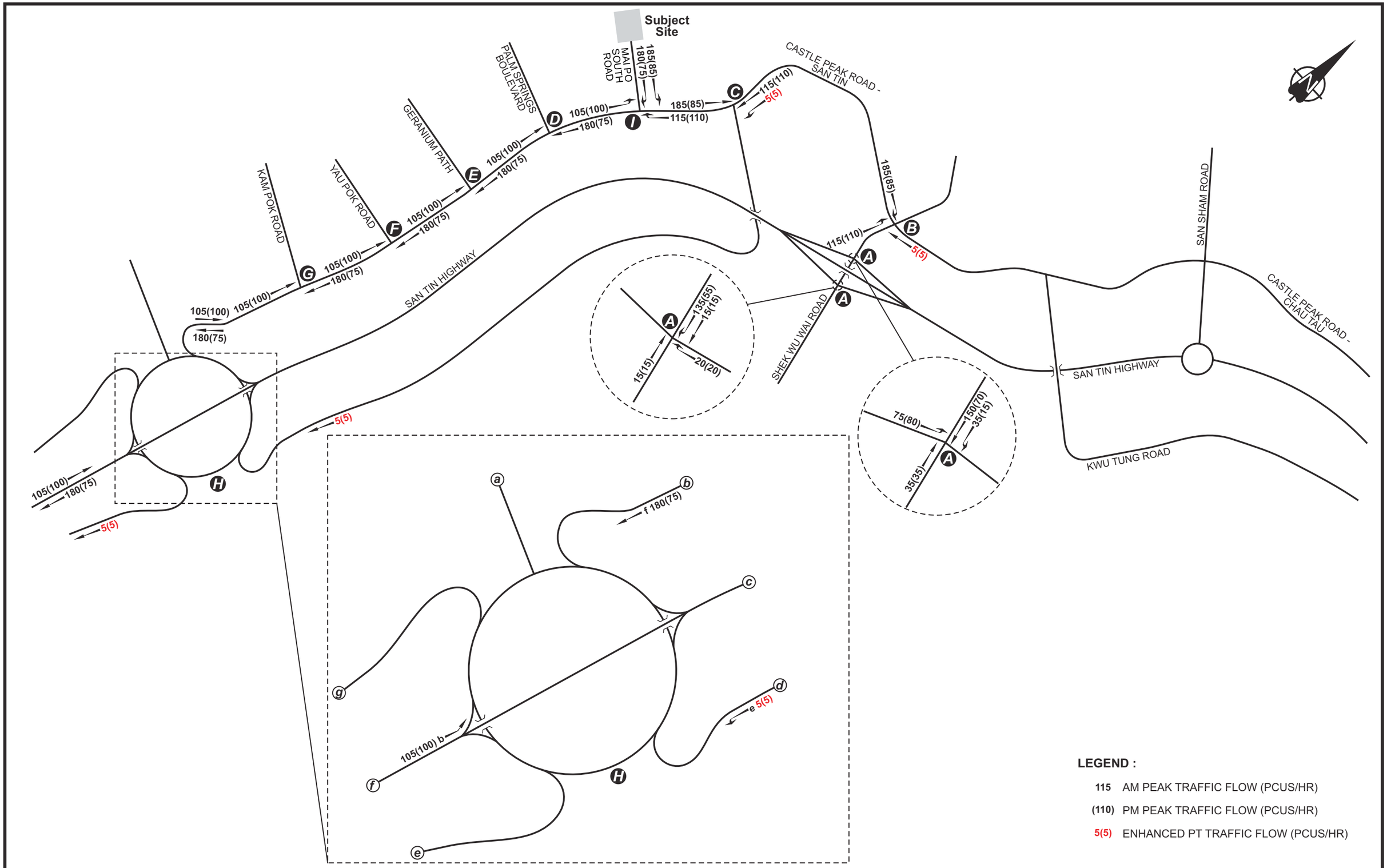

LEGEND :

115	AM PEAK TRAFFIC FLOW (PCUS/HR)
(110)	PM PEAK TRAFFIC FLOW (PCUS/HR)
5(5)	ENHANCED PT TRAFFIC FLOW (PCUS/HR)

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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

DEVELOPMENT TRAFFIC FLOWS

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	JAN 2025	4.5	-

SYSTRA MVA

CHK50800610/TIA/F45.CDR/LLH/16JAN25

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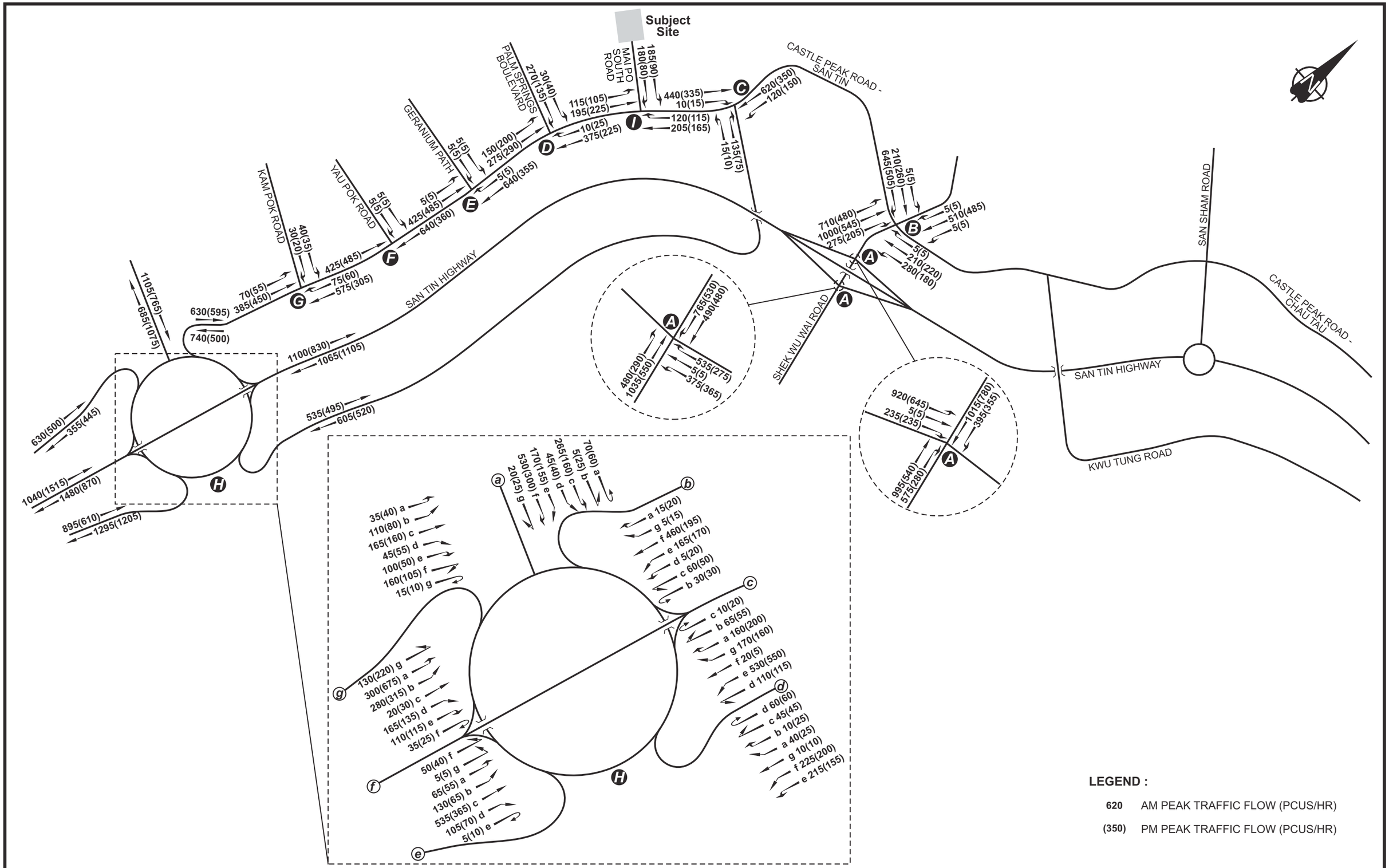

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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

2034 DESIGN TRAFFIC FLOWS

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	JAN 2025	4.6	-

SYSTRA MVA

CHK50800610/TIA/F46.CDR/LLH/16JAN25

Original Size : A3

5. TRAFFIC IMPACT ASSESSMENT

5.1 Year 2034 Junction Operational Performance

5.1.1 To investigate the traffic impact of the proposed development on the surrounding road network at the design year 2034, 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 2034 reference and design cases. The assessment results for the year 2034 reference and design cases are summarised in **Table 5.1**. The junction calculation sheets are attached in **Annex A**.

Table 5.1 Year 2034 Junction Operational Performance

Ref.(1)	Junction	RC/RFC (2)			
		2034 Reference Case		2034 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
A	Shek Wu Wai Road / San Tin Highway Slip Road(3)	56%	>100%	46%	>100%
B	Shek Wu Wai Road / Road D3 / Road L11 / Road L12(4)	34%	83%	21%	70%
C	Castle Peak Road – Mai Po/San Tam Road	0.39	0.19	0.45	0.21
D	Castle Peak Road – Mai Po/Palm Springs Boulevard	0.63	0.36	0.71	0.39
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	0.03	0.03	0.03	0.03
G	Castle Peak Road – Tam Mi/Kam Pok Road	0.14	0.11	0.16	0.12
H	Fairview Park Interchange	1.05	0.86	1.16	0.90
I	Castle Peak Road – Mai Po/Mai Po South Road	0.01	0.03	0.68	0.31

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.
(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 peak 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 2034, 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), 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 San Tam Road and the slip road from San Tin Highway 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.

Table 5.2 Year 2034 Junction Operational Performance (With Improvement)

Ref.	Junction	RC/RFC [2]			
		2034 Reference Case		2034 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
H	Fairview Park Interchange [1]	0.77	0.71	0.83	0.77

Remarks: (1) Refer to **Drawing 5.3** for junction reference.
(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 2034.

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

Table 5.3 Year 2034 Road Links Performance

Ref.[1]	Road Link	Directions	Design Capacity (veh/hr)	Design Capacity (pcu/hr)[4]	2034 Reference Case				2034 Design Case			
					Traffic Flow (pcu/hr)		V/C [5]		Traffic Flow (pcu/hr)		V/C [5]	
					AM	PM	AM	PM	AM	PM	AM	PM
L1	Mai Po South Road	EB	700[2]	910	0	15	0.00	0.02	365	170	0.40	0.19
		WB	700[2]	910	15	10	0.02	0.01	235	220	0.26	0.24
L2	Castle Peak Road – Mai Po	NB	700[2]	910	205	230	0.23	0.25	310	330	0.34	0.36
		SB	700[2]	910	205	175	0.23	0.19	385	245	0.42	0.27
L3	Castle Peak Road – Mai Po	NB	700[2]	910	195	230	0.21	0.25	380	315	0.42	0.35
		SB	700[2]	910	210	170	0.23	0.19	325	280	0.36	0.31
L4	Castle Peak Road – Tam Mi	NB	700[2]	910	525	495	0.58	0.54	630	595	0.69	0.65
		SB	700[2]	910	560	425	0.62	0.47	740	500	0.81	0.55
L5	Shek Wu Wai Road	NB	4,200[3]	5,460	870	575	0.16	0.11	985	685	0.18	0.13
		SB	4,200[3]	5,460	740	600	0.14	0.11	925	685	0.17	0.13

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 dual 3-lane single carriageway for PD will be taken as 4200 veh/hr for one-way direction
(4) PCU factor of 1.3 adopted
(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 2034 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 2034 Pedestrian Flow and Queuing Space Assessment

5.2.1 The reference and design scenarios of pedestrian assessment in Year 2034 are then assessed by applying the adopted annual growth rate of +1.0% onto the Year 2024 peak hour pedestrian flows for year 2024 to 2034, and the consideration of the induced pedestrian trips for franchised bus demand of **Table 4.7**.

5.2.2 The peak hour pedestrian flows in Year 2034 under both reference and design scenarios are shown in **Drawing 5.4** and **5.5**, and the results of the operational performance of identified footpaths and concerned queuing area of bus stops are summarized in **Table 5.4** and **5.5.**

Table 5.4 2034 Level-Of-Service Assessment

Ref. (1)	Actual Width (m)	Effective Width (m) (2)	2034 Reference Peak Hourly Flow (ped/hr) (3)		2034 Reference Peak Flow Rate (ped/min/m) (4)		LOS (5)		2034 Design Peak Hourly Flow (ped/hr)(6)		2034 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	461	459	6.98	6.95	A	A
Fp2	2.3	1.3	22	45	0.28	0.58	A	A	179	350	2.29	4.49	A	A
Fp3	1.5	0.5	24	41	0.80	1.37	A	A	316	185	10.53	6.17	A	A
Fp4	1.7	0.7	6	7	0.14	0.17	A	A	6	7	0.14	0.17	A	A

Note: (1) Refer to **Drawing 5.4** and **Drawing 5.5** 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.

(6) Design pedestrian flow = Reference pedestrian flow + induced pedestrian trips for franchised bus demand

Table 5.5 2034 Queuing Area Level-Of-Service Assessment for Bus Stops

Ref.	Queuing Area (m^2)	2034 Reference				2034 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	295	87 (i.e. 295/60x17.5)	0.1	F
Palm Springs Bus Stop – Sheung Shui Bound (NB)	20.3	3	2 (i.e. 3/60x25)	10.2	A	160	67 (i.e. 160/60x25)	0.3	D

Note: (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.
(4) Design pedestrian flow = Reference pedestrian flow + induced passenger demand for franchised bus

5.2.3 As shown in **Table 5.4** and **5.5**, 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 2034 design scenario.

5.2.4 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 m^2/p). The queuing area assessment under both 2034 reference and design scenarios are shown in **Table 5.6**, and the propose widening scheme is illustrated in **Drawing 5.6**.

Table 5.6 2034 Queuing Area Level-Of-Service Assessment for Bus Stops (With Widening)

Ref.	Queuing Area (m^2)	2034 Reference				2034 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)	51.6 (5.8+45.8)	3	2 (i.e. 3/60x25)	25.8	A	295	86 (i.e. 295/60x17.5)	0.6	C
Palm Springs Bus Stop – Sheung Shui Bound (NB)	40.2 (20.3+19.9)	3	2 (i.e. 3/60x25)	20	A	160	67 (i.e. 160/60x25)	0.6	C

Note: (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.

(4) Design pedestrian flow = Reference pedestrian flow + induced passenger demand for franchised bus

5.2.5 **Table 5.6** indicates that with the widening scheme, the LOS of the identified queuing area at bus stops would be operating within capacity in Year 2034.

5.3 Sensitivity Assessment

Assessment 1: Existing Junction Layout for Junction A and Junction B in Design Year 2034

5.3.1 Upon TD's comments on pre-submission of the TIA report, 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 required to be 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 2034 reference and design cases based on existing junction layouts of Junctions A and B are summarised in **Table 5.7**. The junction calculation sheets are attached in **Annex D**.

Table 5.7 Year 2034 Junction Operational Performance for Junction A and B

Ref. (1)	Junction	RC/RFC (2) in Sensitivity Test			
		2034 Reference Case		2034 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
A1	Shek Wu Wai Road/ San Tin Highway Slip Road	0.43	0.42	0.52	0.51
A2	Shek Wu Wai Road/ Mai Po Lung Road	0.53	0.32	0.75	0.41
B	Castle Peak Road – San Tin/ Shek Wu Wai Road	0.88	0.76	1.15	0.94

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

5.3.2 The assessment results in **Table 5.7** indicated that the Junction A1 and A2 would operate with ample capacity in year 2034, based on the existing junction layout, except for Junction B, which would be operated over capacity.

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 C, which will be constructed subject to further review of San Tin Technopole's project, is illustrated in **Drawing 5.7**.

Table 5.8 Year 2034 Junction Operational Performance for Junction B (With Improvement)

Ref. (1)	Junction	RC/RFC (2) in Sensitivity Test			
		2034 Reference Case		2034 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
B	Castle Peak Road – San Tin/ Shek Wu Wai Road	0.41	0.36	0.48	0.44

Remarks: (1) Refer to **Drawing 5.7** for junction reference.
(2) RC = reserve capacity, RFC = ratio of flow to capacity.

5.3.4 **Table 5.8** indicates that with the junction improvement schemes, Junction B would be operating within capacity in Year 2034. 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: Adjacent Potential Planning Applications

5.3.5 Upon TD's comments on pre-submission of the TIA report, due to the similar population intake year of the residential developments, apart from STT, traffic generations of a number of potential planning applications would be included in the assessment as a sensitivity test in Year 2034. The development schedules of these potential developments and estimated traffic generations are summarized in **Table 5.9** and the locations of these developments are indicated in **Drawing 5.8**.

Table 5.9 Planned/Committed Developments in Sensitivity Test

Ref.(1)	Developments Location; Application No.	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
1	Residential Development R(D) at Kam Pok Road (to the west of Chuk Yuen Tsuen), A/YL-MP/205	71 units (average flat size of about 186 m^2)	20	13	12	17
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(3)	10(3)	10(3)	10(3)
4	Sha Po Public Housing Development, N/A	16,300 units	1,385	1,155	850	1,020
5(2)	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(4)	291(4)	196(4)	253(4)
		Retail (3,950m^2)	10(4)	10(4)	13(4)	15(4)
		GIC Facilities (2 nos.)	10(4)	10(4)	10(4)	10(4)
		Kindergarten (8 Classrooms)	25(4)	25(4)	1(4)	1(4)
6(2)	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(4)	133(4)	90(4)	116(4)
		Retail (3,900 m^2)	9(4)	10(4)	13(4)	14(4)
		1 School	7(4)	30(4)	1(4)	1(4)
		Kindergarten (8 Classrooms)	25(4)	25(4)	1(4)	1(4)
		Relocated Soy Sauce Factory (13,700 m^2)	0(4)	4(4)	10(4)	2(4)

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	2,811 units (average flat size of about 50 m^2)	202	119	80	104
		Eating place / Shop & Services (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[3]	10[3]	10[3]	10[3]
		Special Child Care Centre	10[3]	10[3]	10[3]	10[3]
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[3]	10[3]	10[3]	10[3]
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[3]	10[3]	10[3]	10[3]
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[2]	Lots 3211 RP, 3212 RP, 3213 RP, 3214 S.A, 3214 S.B, 3215, 3216, 3217, 3218 RP, 3250 S.B ss.23 RP and 3250 S.B ss.33 RP in D.D. 104 and Adjoining Government Land, Yau Pok Road, Mai Po, Yuen Long, Y/YL-MP/7	1,228 units (Average Flat Size 43 m^2)	89[4]	53[4]	36[4]	46[4]
		Retail (831m^2)	2[4]	2[4]	3[4]	3[4]
		Kindergarten (6 Classrooms)	32[4]	32[4]	1[4]	1[4]
		Public Transport	15[4]	15[4]	15[4]	15[4]
15[2]		1,249 units	90[4]	54[4]	36[4]	47[4]

Ref.(1)	Developments Location; Application No.	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
	Lots 3054 S.A ss.1, 3156 S.A, 3200 RP (Part), 3200 S.A RP, 3201 RP (Part), 3202 (Part), 3203 RP, 3204 RP and 3205 RP in D.D. 104 and Adjoining Government Land, Yau Pok Road, Mai Po, Yuen Long, Y/YL-MP/8	(Average Flat Size 44 m^2)				
		Public Transport	15(4)	15(4)	15(4)	15(4)
16	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
17	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(3)	10(3)	10(3)	10(3)
18	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(4)	27(4)	21(4)	27(4)

Remark: (1) Refer to **Drawing 5.8** for development locations.
(2) Planning Application subject to TD's comment.
(3) Assume Nominal Trips of 10 pcu/hr.
(4) Trips generation from project's TIA report.

5.3.6 The traffic flows of the above potential development are further included into the Year 2034 Design Case and the traffic flows for reference and design cases under Year 2034 Sensitivity Test are shown in **Drawing 5.9** and **5.10**.

Year 2034 Junction Operational Performance under Sensitivity Test (with Potential Planning Applications)

5.3.7 Similarly, to investigate the traffic impact of the proposed development on the surrounding road network at the design year 2034, 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 2034 reference and design cases in Sensitivity Test. The assessment results for the year 2034 sensitivity test are summarised in **Table 5.9**. The junction calculation sheets are attached in **Annex D**.

Table 5.10 Year 2034 Junction Operational Performance in Sensitivity Test

Ref.(1)	Junction	RC/RFC (2) in Sensitivity Test			
		2034 Reference Case		2034 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
A	Shek Wu Wai Road / San Tin Highway Slip Road(3)	56%	>100%	46%	>100%
B	Shek Wu Wai Road / Road D3 / Road L11 / Road L12(4)	34%	80%	21%	68%
C	Castle Peak Road – Mai Po/San Tam Road	0.40	0.19	0.46	0.21
D	Castle Peak Road – Mai Po/Palm Springs Boulevard	0.65	0.36	0.73	0.39
E	Castle Peak Road – Mai Po/Geranium Path	0.02	0.02	0.03	0.02
F	Castle Peak Road – Tam Mi/Yau Pok Road	0.03	0.03	0.03	0.03
G	Castle Peak Road – Tam Mi/Kam Pok Road	0.28	0.21	0.32	0.23
H	Fairview Park Interchange (with improvement) (5)	0.78	0.69	0.83	0.75
I	Castle Peak Road – Mai Po/Mai Po South Road	0.01	0.03	0.69	0.32

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.
(4) Refer to **Drawing 5.2** for junction reference.
(5) Refer to **Drawing 5.11** for junction reference.

5.3.8 For Junction H, with reference to the proposed junction improvement layout in the planning application of Y/YL-MP/7, further improvement works are proposed, as illustrated in **Drawing 5.11**. It is proposed to further widen the entry lanes at Fairview Park Boulevard and provide an additional exclusive left-turn lane is proposed at the slip road from San Tin Highway southbound to San Tam Road northbound.

5.3.9 The assessment results in **Table 5.10** indicated that the majority of identified key junctions would operate with ample capacity in year 2034 under sensitivity test, except for Junction H. Since the junction is already over capacity in the reference scenario with the potential planned developments, it would expect that further junction improvement would be required in later stage.

5.3.10 The road link performance for identified road links was conducted as summarised in **Table 5.11.**

Table 5.11 Year 2034 Road Links Performance in Sensitivity Test

Ref.[1]	Road Link	Directions	Design Capacity (veh/hr)	Design Capacity (pcu/hr)[4]	2034 Reference Case				2034 Design Case			
					Traffic Flow (pcu/hr)		V/C [5]		Traffic Flow (pcu/hr)		V/C [5]	
					AM	PM	AM	PM	AM	PM	AM	PM
L1	Mai Po South Road	EB	700[2]	910	0	15	0.00	0.02	365	170	0.40	0.19
		WB	700[2]	910	15	10	0.02	0.01	235	220	0.26	0.24
L2	Castle Peak Road – Mai Po	NB	700[2]	910	235	240	0.26	0.26	340	340	0.37	0.37
		SB	700[2]	910	235	195	0.26	0.21	415	265	0.46	0.29
L3	Castle Peak Road – Mai Po	NB	700[2]	910	225	240	0.25	0.26	410	325	0.45	0.36
		SB	700[2]	910	240	190	0.26	0.21	355	300	0.39	0.33
L4	Castle Peak Road – Tam Mi	NB	700[2]	910	640	585	0.70	0.64	745	685	0.82	0.75
		SB	700[2]	910	595	450	0.65	0.49	775	525	0.85	0.58
L5	Shek Wu Wai Road	NB	4,200[3]	5,460	870	575	0.16	0.11	985	685	0.18	0.13
		SB	4,200[3]	5,460	740	600	0.14	0.11	925	685	0.17	0.13

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 dual 3-lane single carriageway for PD will be taken as 4200 veh/hr for one-way direction
(4) PCU factor of 1.3 adopted
(5) V/C = volume to capacity ratio

5.3.11 The assessment results in **Table 5.11** indicate that all identified key road links would operate with ample capacity in year 2034 sensitivity test.

5.3.12 Therefore, it is anticipated that all identified key junctions and road links would operate with ample capacity in year 2034 sensitivity test.

Rev.	Description	Checked	Date
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-	-	-	-
-	-	-	-
-	-	-	-

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

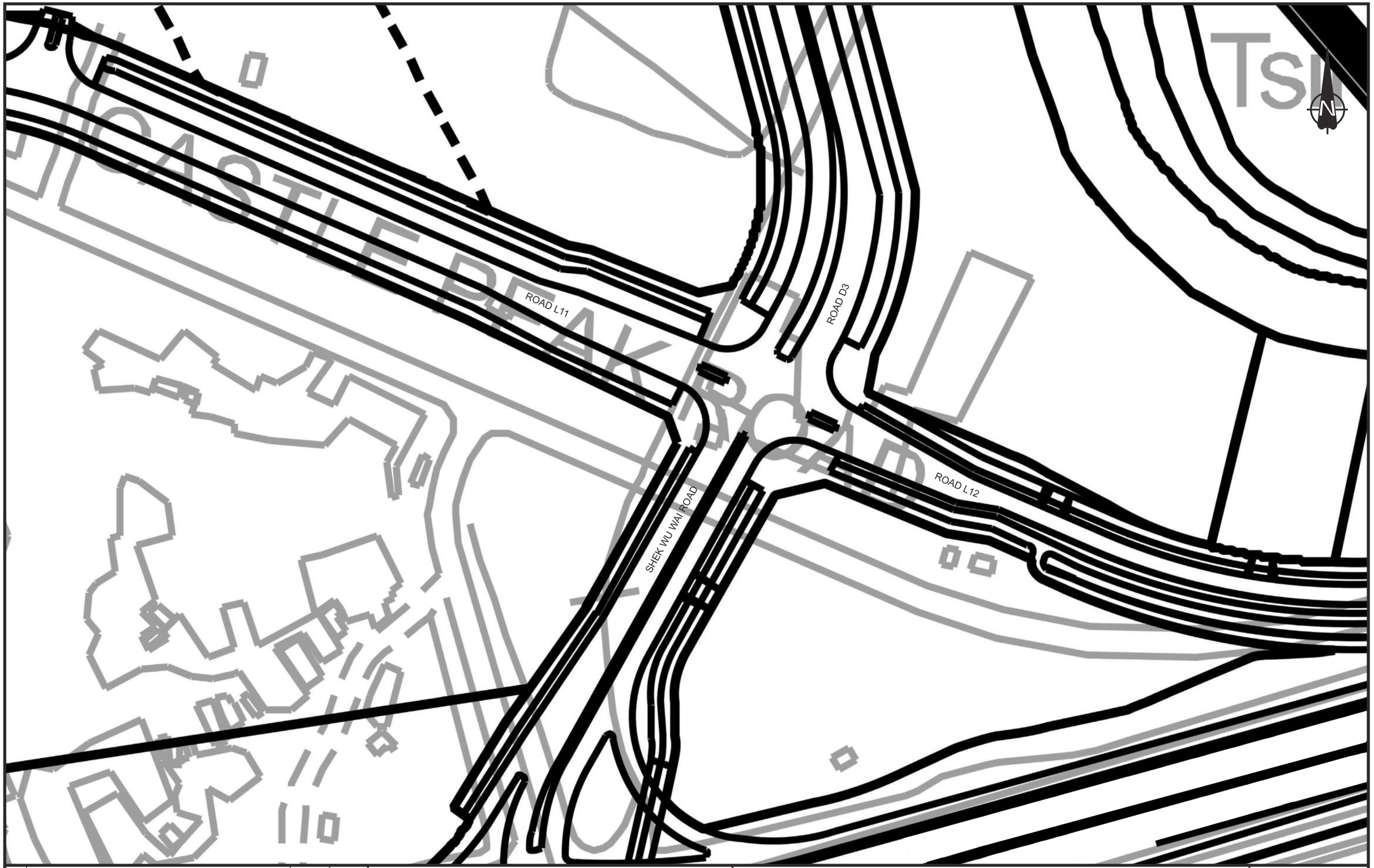
PLANNED JUNCTION IMPROVEMENT LAYOUT OF SHEK WU WAI ROAD / SAN TIN HIGHWAY SLIP ROAD (A)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	DEC 2024	5.1	-

SYSTRA MVA

CHK50800610/TIA/F51.CDR/LLH/24DEC24

Original Size : A3



Rev.	Description	Checked	Date
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-	-	-	-
-	-	-	-

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

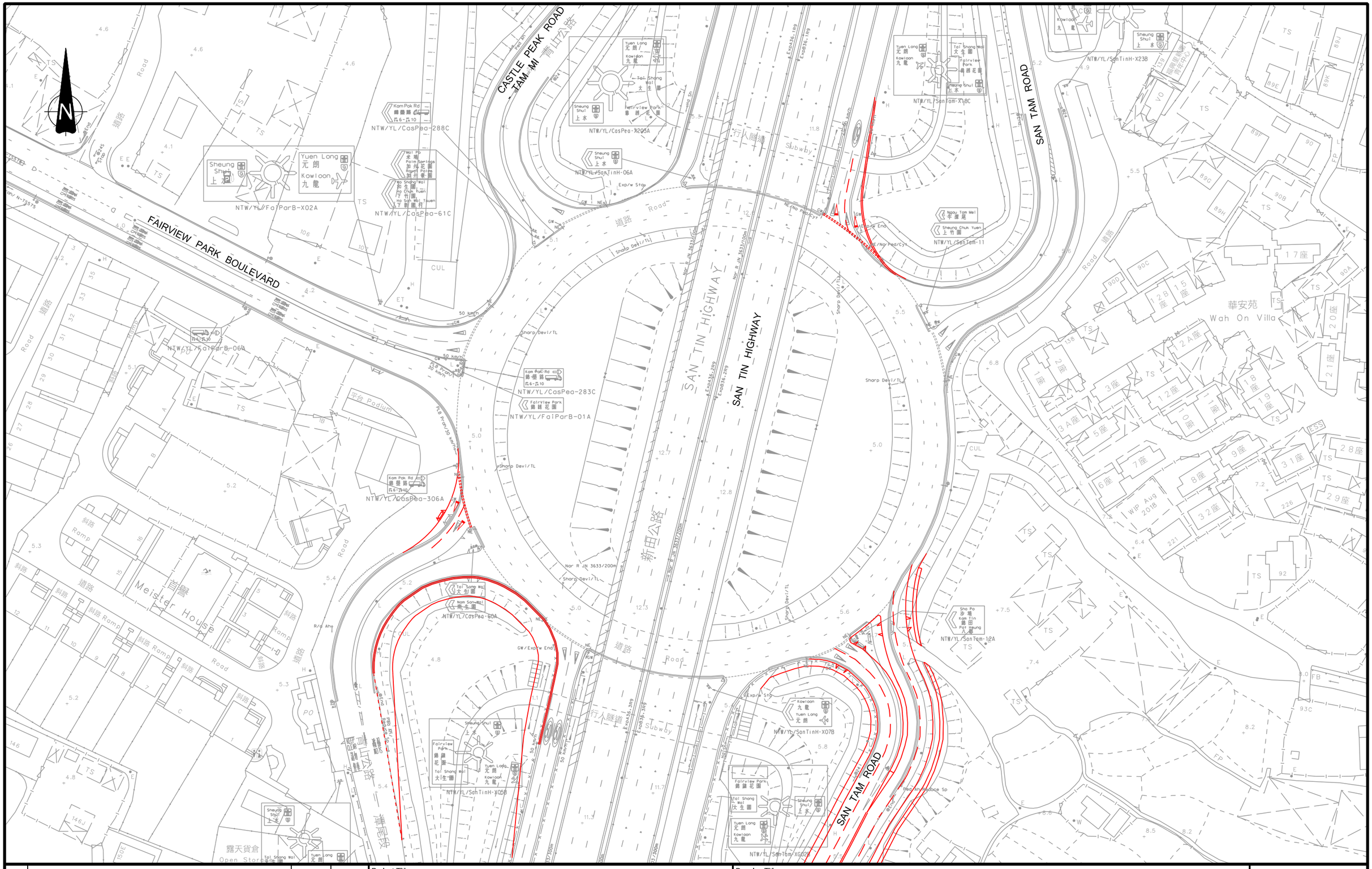
PLANNED JUNCTION IMPROVEMENT LAYOUT OF SHEK WU WAI ROAD / ROAD D3 / ROAD L11 / ROAD L12 (B)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	DEC 2024	5.2	-

SYSTRA MVA

CHK50800610/TIA/F52.CDR/LLH/24DEC24

Original Size : A3



Rev.	Description	Checked	Date
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-	-	-	-
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

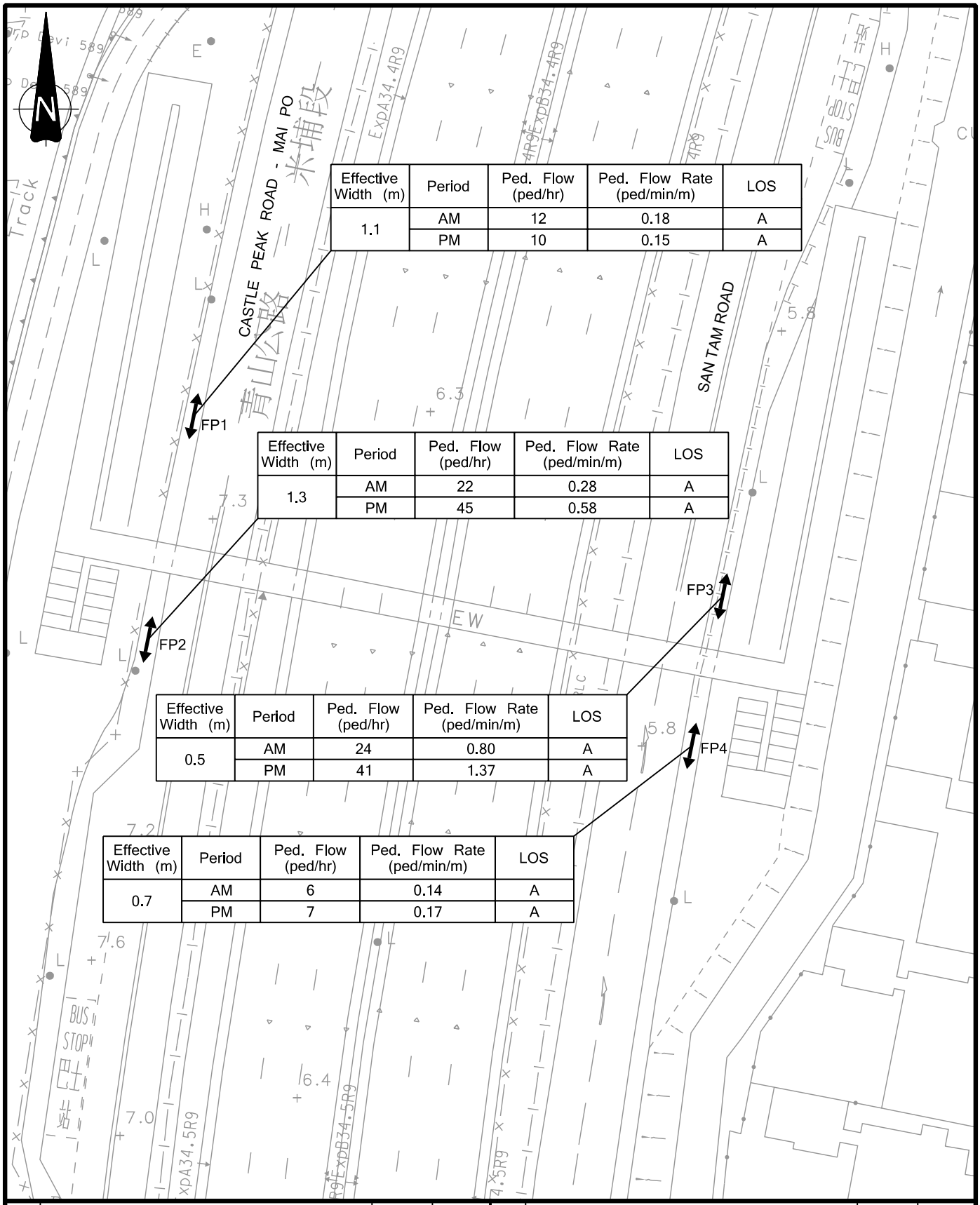
PLANNED JUNCTION IMPROVEMENT LAYOUT OF FAIRVIEW PARK INTERCHANGE (H)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:1000(A3)	JUN 2024	**5.3**	-

SYSTRA MVA

CHK50800610/TIA/F53.DGN/LHO/31DEC24

Original Size : A3



Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
1.1	AM	12	0.18	A
	PM	10	0.15	A

Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
1.3	AM	22	0.28	A
	PM	45	0.58	A

Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
0.5	AM	24	0.80	A
	PM	41	1.37	A

Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
0.7	AM	6	0.14	A
	PM	7	0.17	A

Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

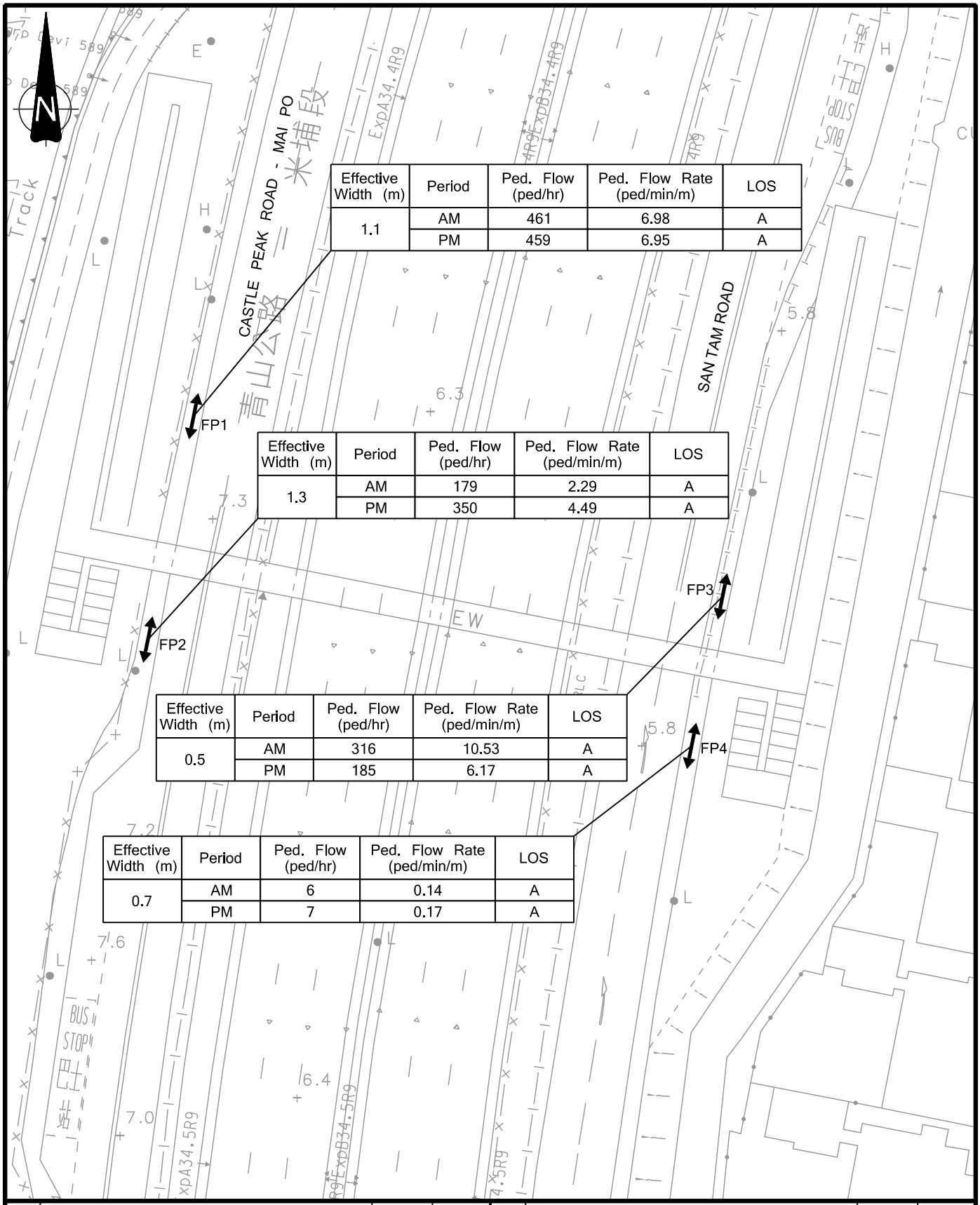
YEAR 2034 REFERENCE PEAK HOUR PEDESTRIAN FLOWS

SYSTRA MVA

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	N.T.S.(A4)	DEC 2024	**5.4**	-

CHK50800610/TIA/F54.DGN/LHO/02JAN25

Original Size : A4



Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
1.1	AM	461	6.98	A
	PM	459	6.95	A

Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
1.3	AM	179	2.29	A
	PM	350	4.49	A

Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
0.5	AM	316	10.53	A
	PM	185	6.17	A

Effective Width (m)	Period	Ped. Flow (ped/hr)	Ped. Flow Rate (ped/min/m)	LOS
0.7	AM	6	0.14	A
	PM	7	0.17	A

Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
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-	-	-	-	-	-	-	-

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

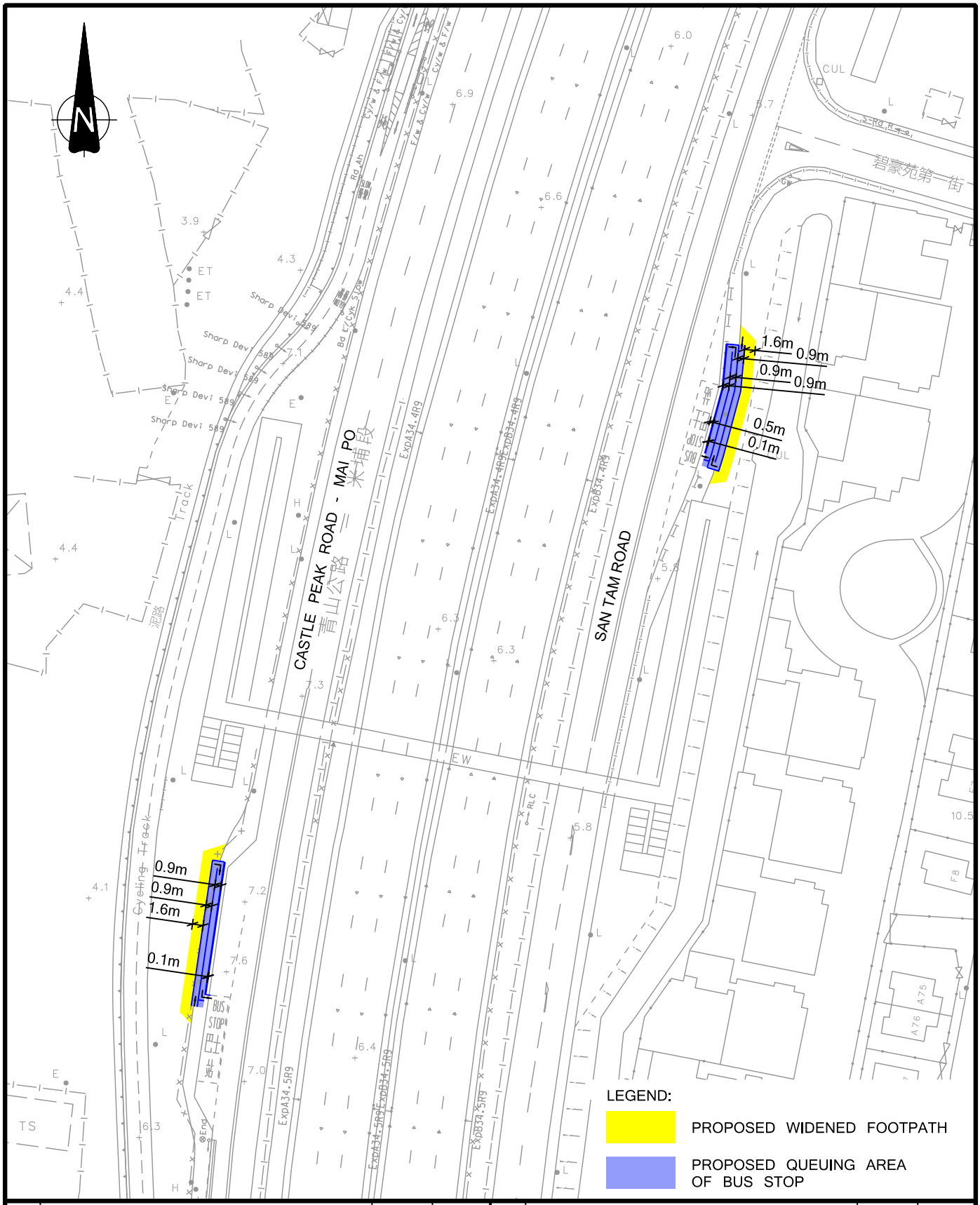
Drawing Title

YEAR 2034 DESIGN PEAK HOUR PEDESTRIAN FLOWS

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	N.T.S.(A4)	JAN 2025	5.5	-

CHK50800610/TIA/F55.DGN/KCM/21JAN25

Original Size : A4



Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
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-	-	-	-	-	-	-	

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

PROPOSED WIDENING OF BUS STOPS

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:800(A4)	JAN 2025	**5.6**	-

CHK50800610/TIA/F56.DGN/KCM/21JAN25

Original Size : A4

青山公路 新田段

CASTLE PEAK ROAD - SAN TIN

SHEK WU WAI ROAD

Mai Po 米埔
San Tin 新田
NTW/YL/CasPea-196

San Tin 新田
Yuen Long 元朗
Kowloon 九龍
Shek Wu Wai 石湖圖
NTW/YL/CasPea-X233A

Mai Po 米埔
Yuen Long 元朗
Kowloon 九龍
Shek Wu Wai 石湖圖
NTW/YL/CasPea-X183A

Ramp

Ped An

Po Lung

PROPOSED CONVERSION TO MINI ROUNDABOUT JUNCTION

Rev.	Description	Checked	Date
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-	-	-	-
-	-	-	-
-	-	-	-

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT
WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

INDICATIVE JUNCTION IMPROVEMENT LAYOUT OF CASTLE PEAK ROAD - SAN TIN / SHEK WU WAI ROAD

Designed	Checked	Scale	Date	Drawing No.	Rev.
LTY	CFC	1:500(A3)	DEC 2024	**5.7**	-

SYSTRA MVA

CHK50800610/TIA/F57.DGN/LHO/02JAN25

Original Size : A3

LOCAL PLANNED / COMMITTEND DEVELOPMENTS:

1. RESIDENTIAL DEVELOPMENT R(D) AT KAM POK ROAD (TO THE WEST OF CHUK YUEN TSUEN), A/YL-MP/205.
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 GOVERMENT 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 3211 RP, 3212 RP, 3213 RP, 3214 S.A, 3214 S.B, 3215, 3216, 3217, 3218 RP, Ó250 S.B SS.23 RP AND 3250 S.B SS.33 RP IN D.D. 104 AND ADJOINING GOVERNMENT LAND, YAU POK ROAD, MAI PO, YUEN LONG, Y/YL-MP/7.
15. LOTS 3054 S.A SS.1, 3156 S.A, 3200 RP (PART), 3200 S.A RP, 3201 RP (PART), 3202 (PART), 3203 RP, 3204 RP AND 3205 RP IN D.D. 104 AND ADJOINING GOVERNMENT LAND, YAU POK ROAD, MAI PO, YUEN LONG, Y/YL-MP/8.
16. LOT 1071 IN D.D. 103, HA KO PO TSUEN, KAM TIN, YUEN LONG, A/YL-KTN/964.
17. 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.
18. 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.
19. SAN TIN TECHNOPOLE.

N

SAN TIN HIGHWAY
CASTLE PEAK ROAD - MAI PO
SAN TAM ROAD
NGAU TAM MEI ROAD
CHUN SHIN ROAD
CHUK YAU ROAD
SAN TIN HIGHWAY
CASTLE PEAK ROAD - TAM MI
SAN TIN HIGHWAY
SAN TAM ROAD
FAIRVIEW PARK BOULEVARD
KAM POK ROAD
KAM TIN ROAD

APPLICATION SITE

LEGEND:

APPLICATION SITE

PLANNED / COMMITTED DEVELOPMENT

Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

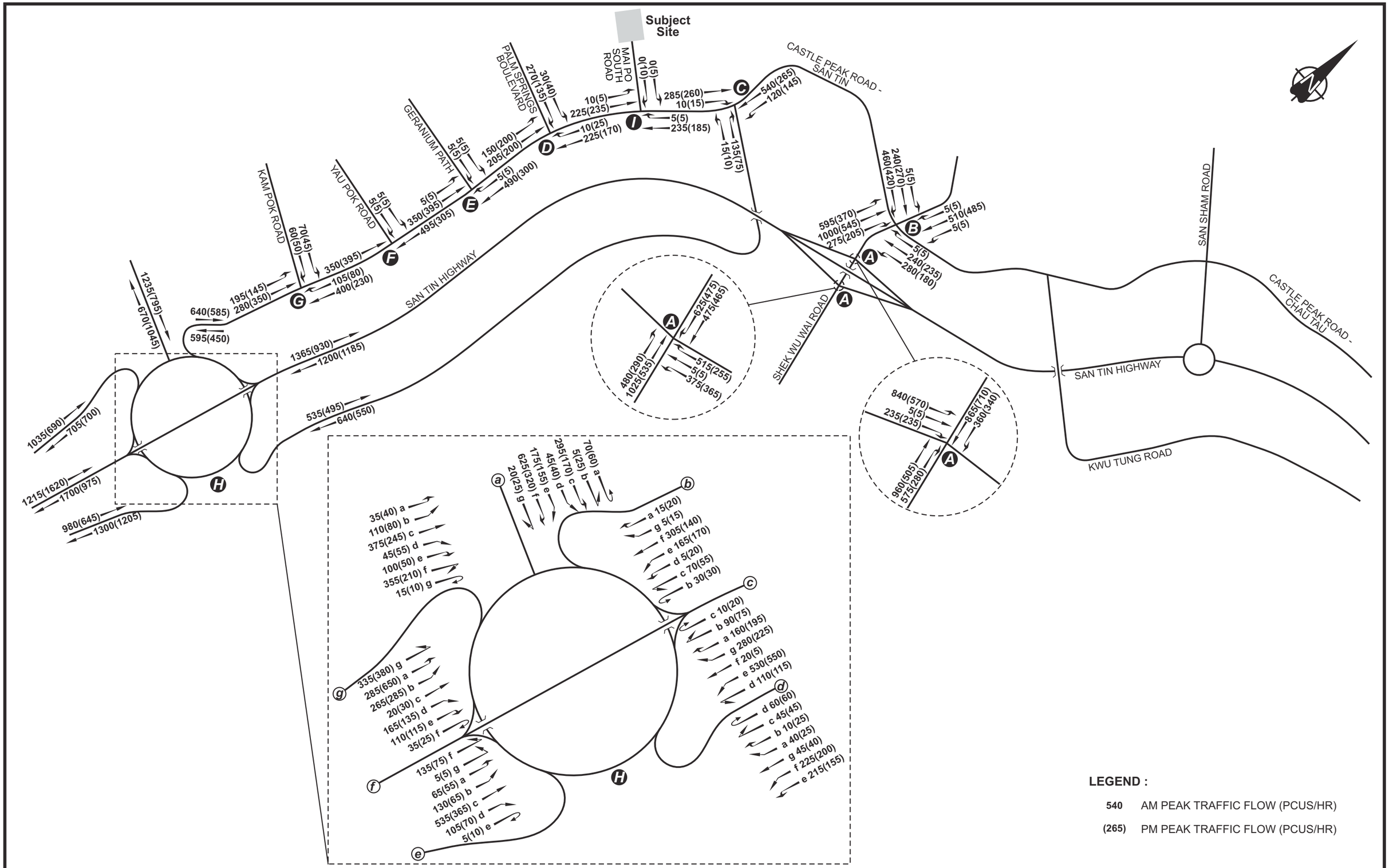
LOCAL PLANNED AND COMMITTED DEVELOPMENTS (SENSITIVITY TEST)

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	N.T.S.	JUN 2024	**5.8**	-

SYSTRA MVA

CHK50800610/TIA/F58.DGN/LHO/03JAN25

Original Size : A3



Rev.	Description	Checked	Date
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Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT
AT WO SHANG WAI, YUEN LONG,
LOTS 77 AND 50 S.A. IN DD101

Drawing Title

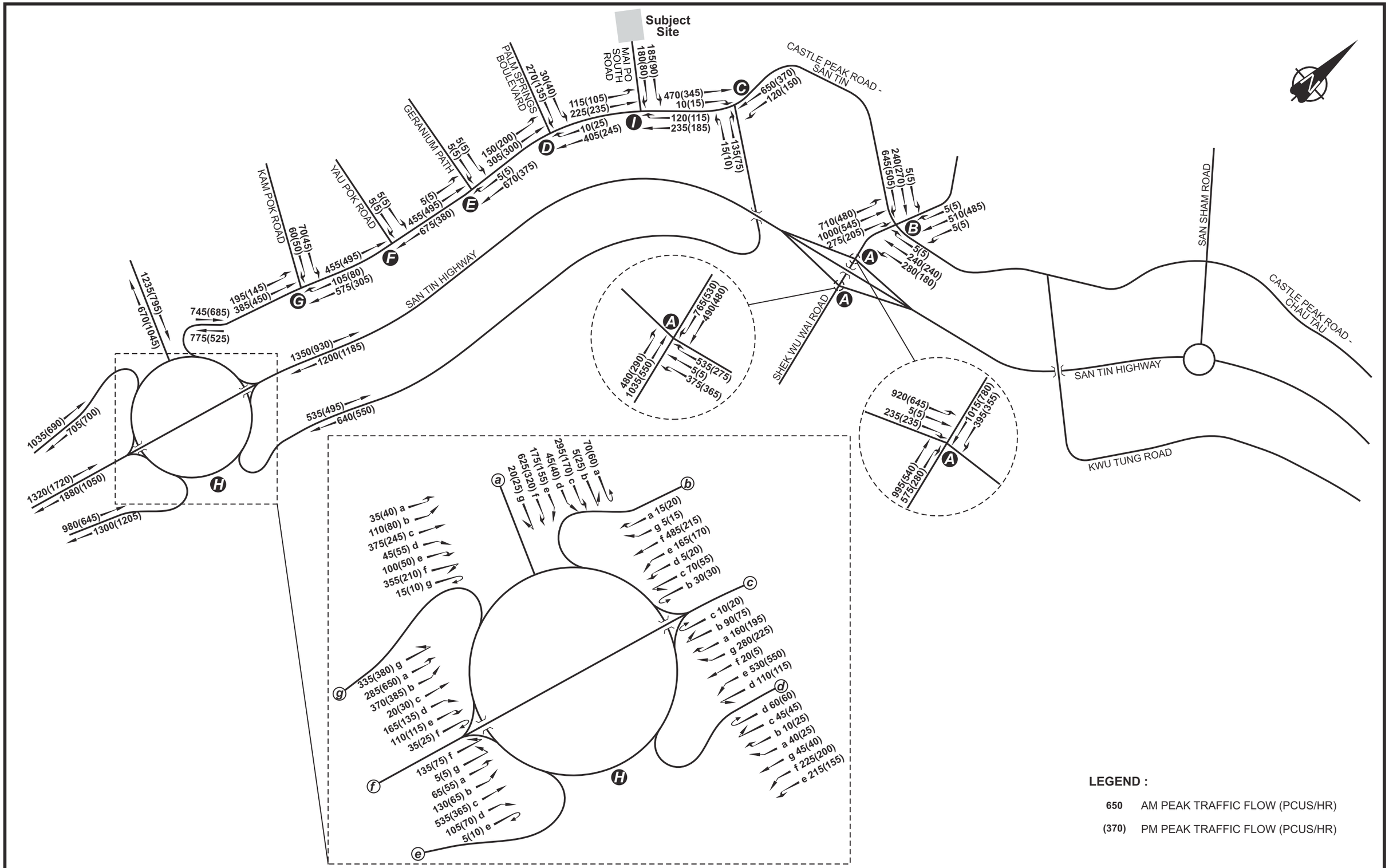
2034 REFERENCE TRAFFIC FLOWS IN SENSITIVITY TEST

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	DEC 2024	5.9	-

SYSTRA MVA

CHK50800610/TIA/F59.CDR/LLH/31DEC24

Original Size : A3



LEGEND :

650 AM PEAK TRAFFIC FLOW (PCUS/HR)

(370) PM PEAK TRAFFIC FLOW (PCUS/HR)

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title: PROPOSED COMPREHENSIVE DEVELOPMENT AT WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A. IN DD101

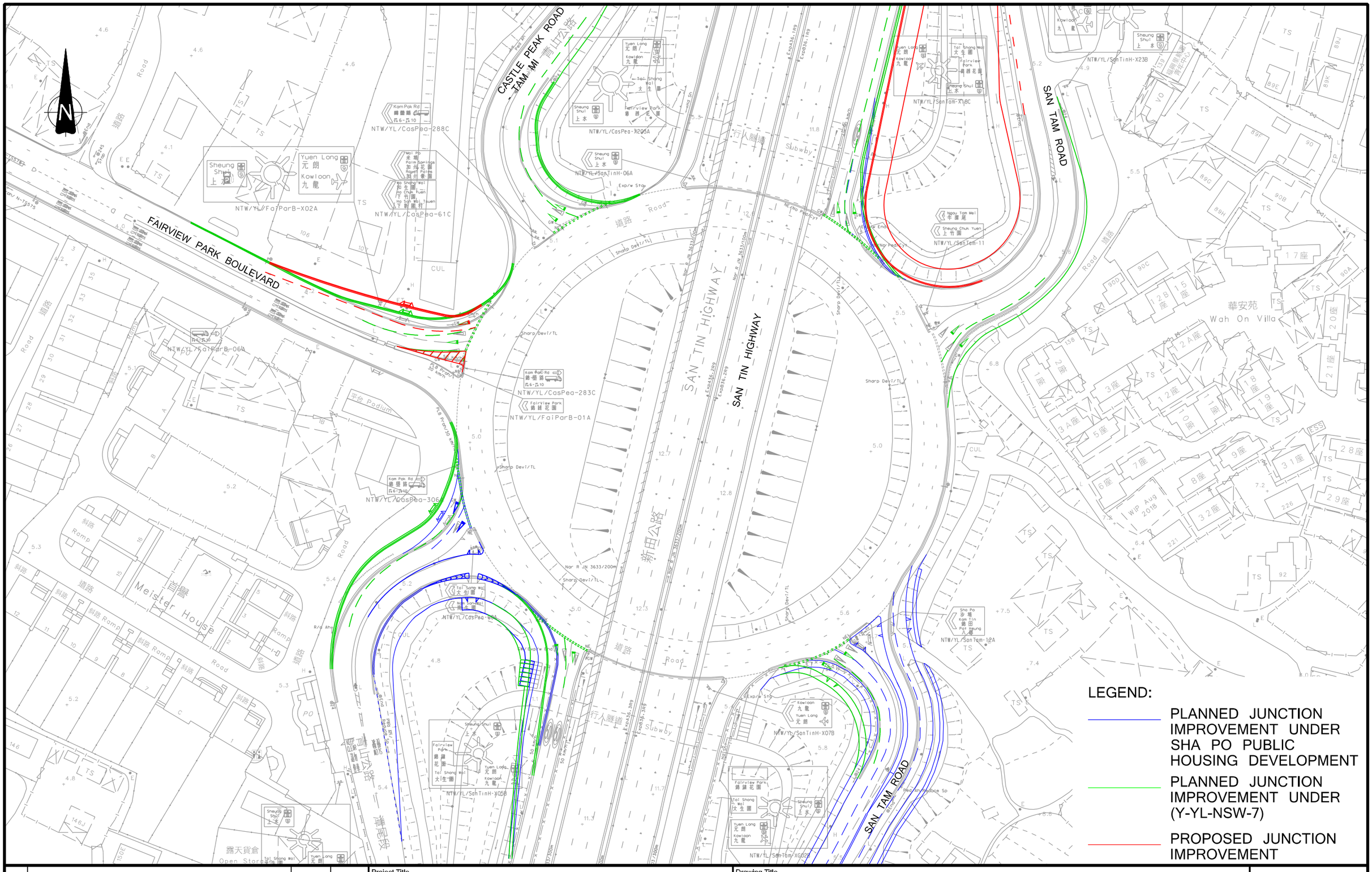
Drawing Title: **2034 DESIGN TRAFFIC FLOWS IN SENSITIVITY TEST**

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	NTS	DEC 2024	5.10	-

SYSTRA MVA

CHK50800610/TIA/F510.CDR/LLH/31DEC24

Original Size : A3



Rev.	Description	Checked	Date
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-	-	-	-

Project Title

PROPOSED COMPREHENSIVE DEVELOPMENT AT WO SHANG WAI, YUEN LONG, LOTS 77 AND 50 S.A IN DD101

Drawing Title

PLANNED JUNCTION IMPROVEMENT LAYOUT OF FAIRVIEW PARK INTERCHANGE (H) IN SENSITIVITY TEST

Designed	Checked	Scale	Date	Drawing No.	Rev.
MYC	CFC	1:1000(A3)	DEC 2024	5.11	-

SYSTRA MVA

CHK50800610/TIA/F511.DGN/LHO/03JAN25

Original Size : A3

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 1 March 2024 for a proposed house development with 789 houses. A planning application is made under section 12A of the Town Planning Ordinance, to rezone the Application Site on the draft Mai Po and Fairview Park Outline Zoning Plan ("OZP") No. S/YL-MP/8. The rezoning application aims to increase the plot ratio ("PR") from 0.4 (i.e. maximum permissible PR on the OZP) to 1.30 (with 1.28 domestic plot ratio), with a maximum building height ("BH") adjusted to not more than 10-storeys and not exceeding +42mPD by amending the Notes of the current "Other Specified Uses (Comprehensive Development to include Wetland Restoration Area)" ("OU(CDWRA)") zone. It is the Applicant's intention to increase the development intensity and revise the layout and form of the housing developments in the Application Site.

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 and TD's further comment.

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 2031. Thus, the design year of 2034 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 suggests that with appropriate bus service enhancements, 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 2034 traffic flows and the upgrade 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 2034.

6.1.9 Operational performance of pedestrian flows and queuing space assessment have been assessed based on the anticipated year 2034 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 2034.

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, two sensitivity tests are also included in the assessment. In conservative hypothetical approach, with certain junction improvements, the assessed junctions and road links would be operated within capacity in Year 2034.

6.2 Conclusion

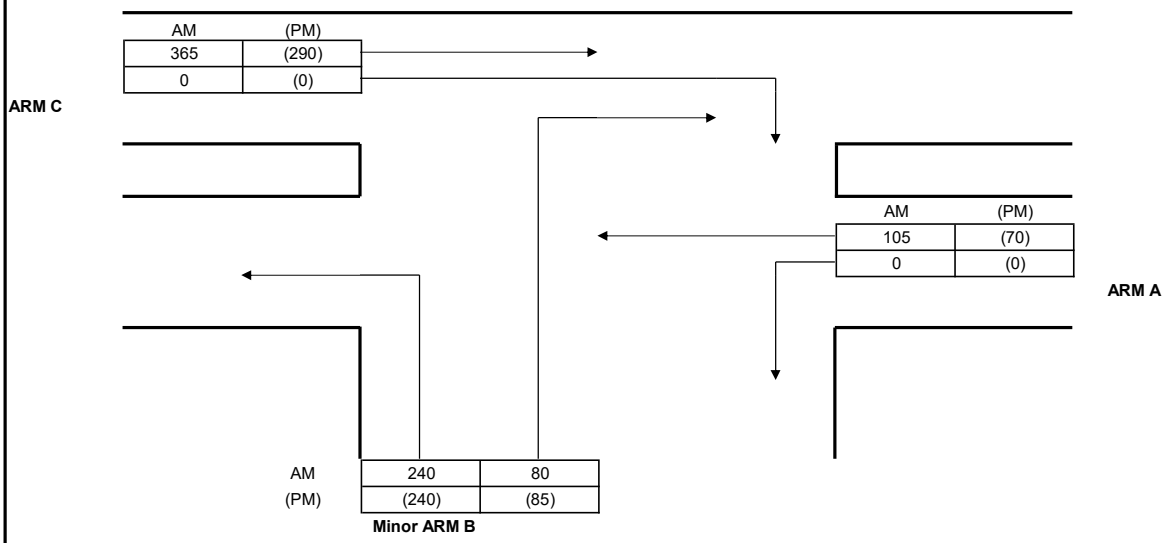
6.2.1 In conclusion, the traffic impact assessment has demonstrated that the traffic generated by the proposed development can be absorbed by the nearby road network. Hence, it can be concluded that the proposed development is considered acceptable in traffic terms.

ANNEX A –
DETAIL OF JUNCTION CALCULATION SHEETS

Calculation Spreadsheets
for
2024 Observed Scenario

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Shek Wu Wai Road / San Tin Highway Slip Road (A1)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	Rev.:	-
ARM A:	Shek Wu Wai Road				
ARM B:	San Tin Highway Slip Road				
ARM C:	Shek Wu Wai Road				



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
	Vl(b-a)	20		E	1.31
	Vr(b-c)	20		F	0.59
	Vr(c-b)			Y	0.75

ANALYSIS				
			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		365	290
	q(c-b)		0	0
	q(a-b)		0	0
	q(a-c)		105	70
	q(b-a)		80	85
	q(b-c)		240	240
	f		0.75	0.74
		Factor		
CAPACITIES	Q(b-a)	1	646	673
	Q(b-c)	1	937	949
	Q(c-b)	1	420	425
	Q(b-ac)	1	842	857
RFC's	b-a		0.124	0.126
	b-c		0.256	0.253
	c-b		0.000	0.000
	b-ac		0.380	0.379
Worst RFC			**0.380**	**0.379**

Where Vl 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(Vl(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)

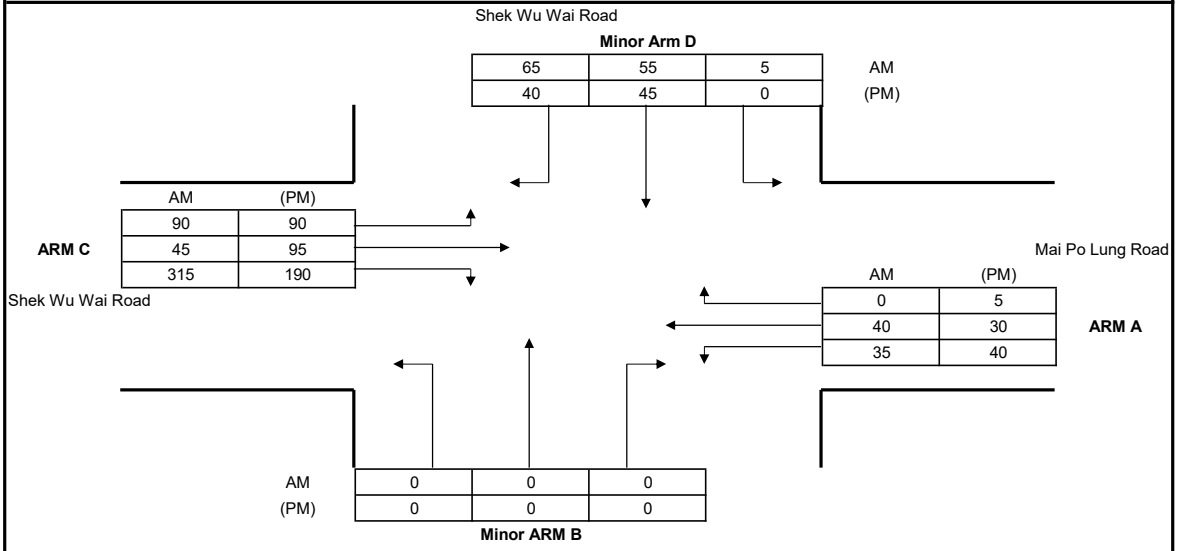
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Shek Wu Wai Road / Mai Po Lung Road (A2)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	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				



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
	Vl(b-a)	0	Vl(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 AM PEAK	Arm B (PM) PEAK		Arm D AM PEAK	Arm D (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 Vl 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(Vl(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

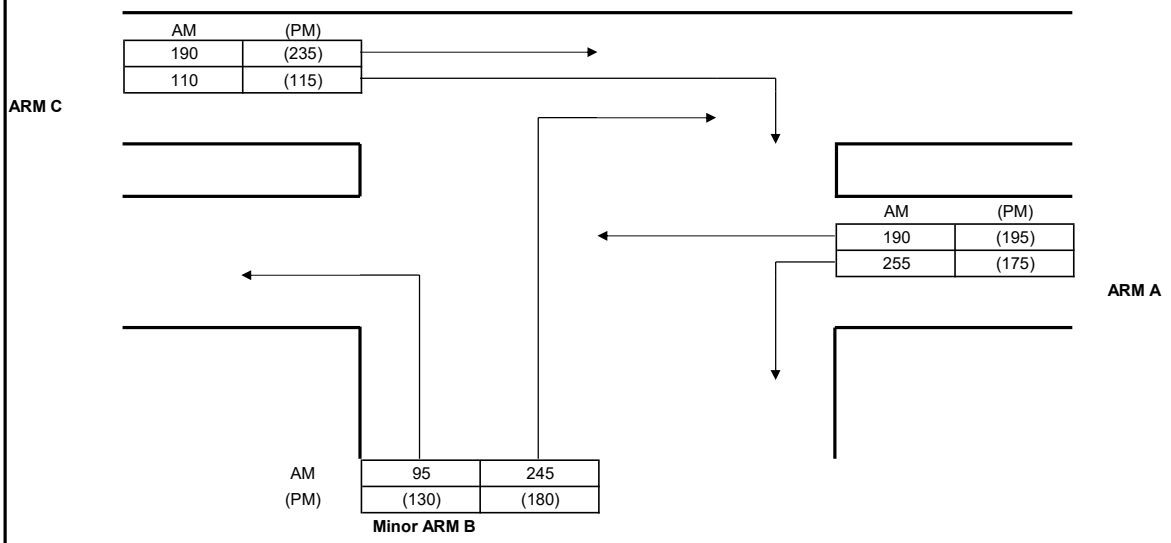
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road San Tin / Shek Wu Wai Road (B)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	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	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)	3.60
Visibilities	Vr(b-a)	30	Calculated	D	0.85
	Vl(b-a)	30		E	0.92
	Vr(b-c)	40		F	0.91
	Vr(c-b)	30		Y	0.78

ANALYSIS				
			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		190	235
	q(c-b)		110	115
	q(a-b)		255	175
	q(a-c)		190	195
	q(b-a)		245	180
	q(b-c)		95	130
	f		0.28	0.42
		Factor		
CAPACITIES	Q(b-a)	1	396	394
	Q(b-c)	1	612	619
	Q(c-b)	1	567	586
	Q(b-ac)	1	440	465
RFC's	b-a		0.619	0.457
	b-c		0.155	0.210
	c-b		0.194	0.196
	b-ac		0.773	0.667
Worst RFC			**0.773**	**0.667**

Where Vl 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(Vl(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)

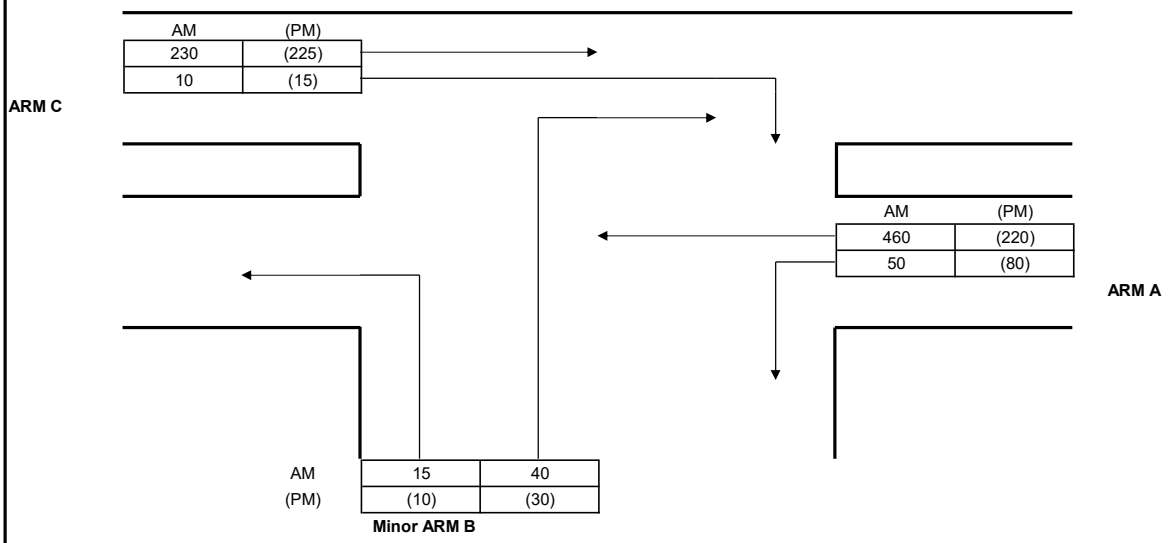
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / San Tam Road (C)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	San Tam Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY					
Major road width	W	8.30	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
	Vl(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.71

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		230	225
	q(c-b)		10	15
	q(a-b)		50	80
	q(a-c)		460	220
	q(b-a)		40	30
	q(b-c)		15	10
	f		0.27	0.25
		Factor		
CAPACITIES	Q(b-a)	1	394	444
	Q(b-c)	1	557	610
	Q(c-b)	1	598	651
	Q(b-ac)	1	428	476
RFC's	b-a		0.102	0.068
	b-c		0.027	0.016
	c-b		0.017	0.023
	b-ac		0.129	0.084
Worst RFC			**0.129**	**0.084**

Where Vl 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(Vl(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)

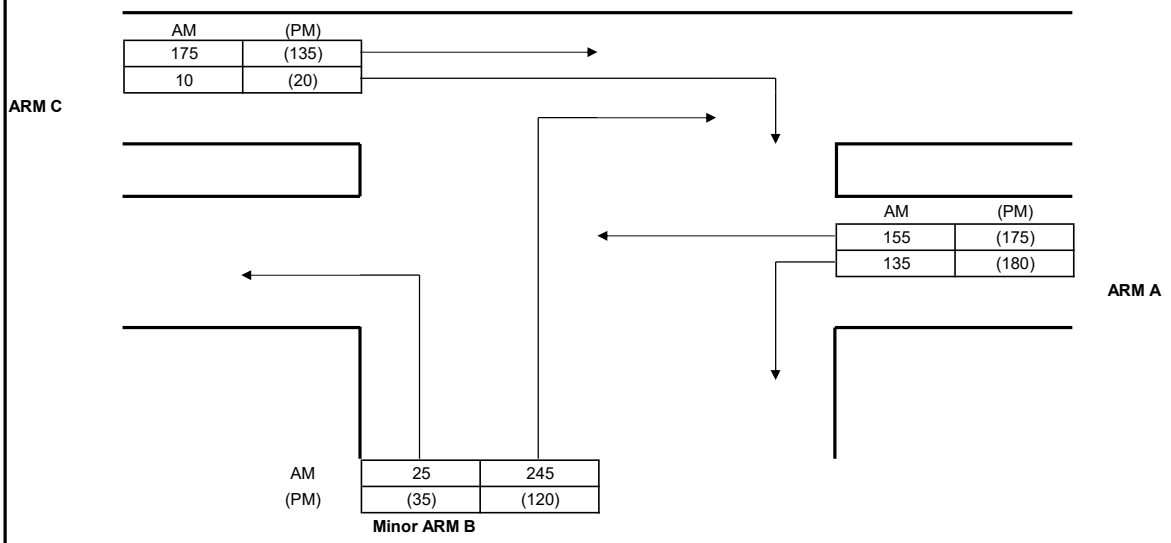
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Palm Springs Boulevard (D)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	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
	Vl(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)		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
		Factor		
CAPACITIES	Q(b-a)	1	471	465
	Q(b-c)	1	653	643
	Q(c-b)	1	574	558
	Q(b-ac)	1	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 Vl 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(Vl(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)

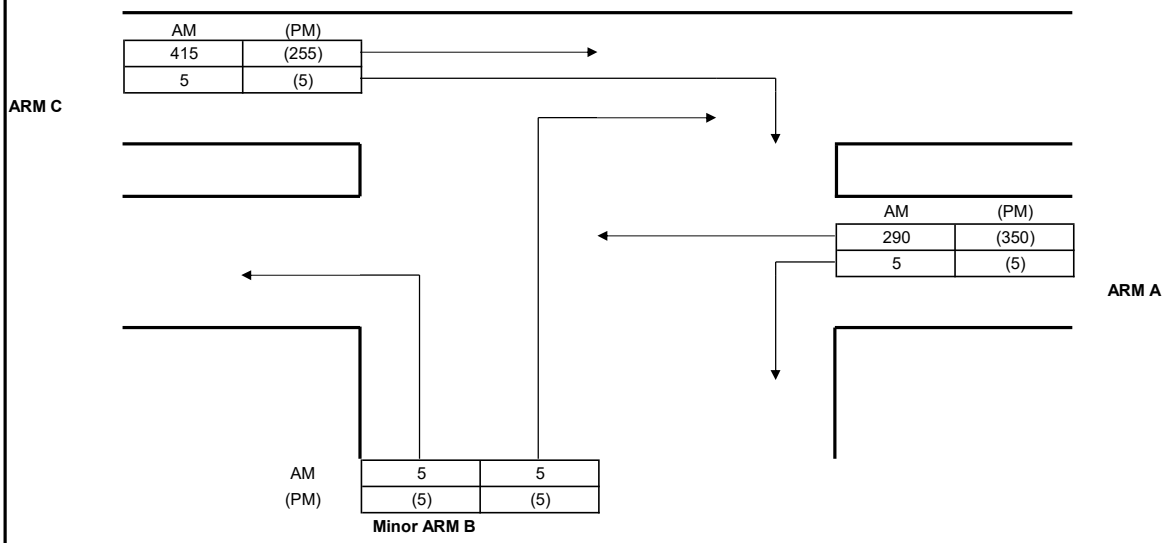
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Geranium Path (E)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Geranium Path				
ARM C:	Castle Peak Road - Mai Po				



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
	Vl(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)		415	255
	q(c-b)		5	5
	q(a-b)		5	5
	q(a-c)		290	350
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
		Factor		
CAPACITIES	Q(b-a)	1	386	395
	Q(b-c)	1	584	570
	Q(c-b)	1	619	603
	Q(b-ac)	1	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 Vl 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(Vl(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)

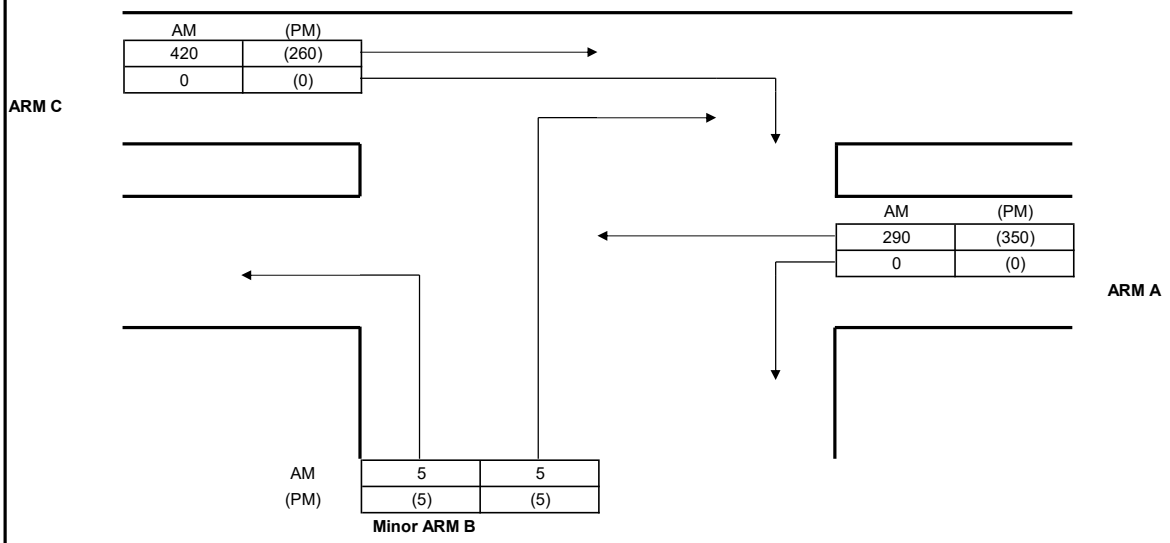
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Yau Pok Road (F)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Yau Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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
		Factor		
CAPACITIES	Q(b-a)	1	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 Vl 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(Vl(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)

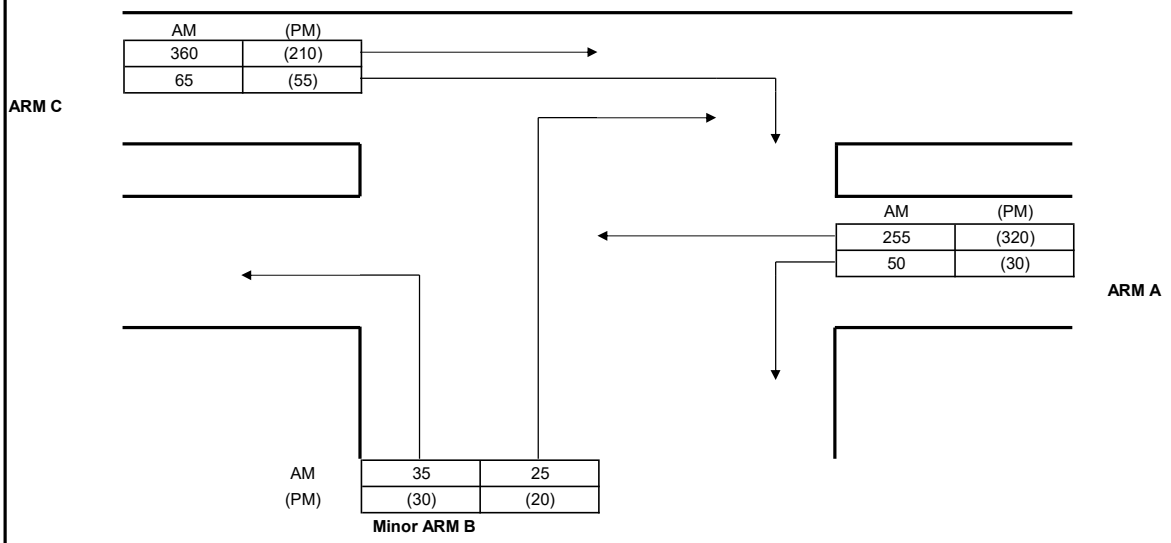
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Kam Pok Road (G)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Kam Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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)		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
		Factor		
CAPACITIES	Q(b-a)	1	398	410
	Q(b-c)	1	618	604
	Q(c-b)	1	610	599
	Q(b-ac)	1	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 Vl 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(Vl(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

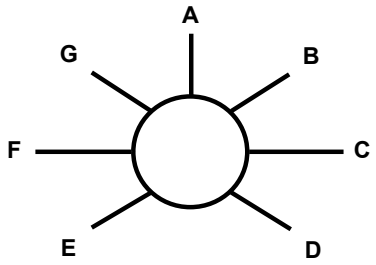
Capacity of combined streams
- in accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Fairview Park Interchange (H)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	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	60	5	235	40	155	430	15	1395	940	600
B	15	25	55	5	115	250	5	1915	470	420
C	145	55	10	100	215	20	120	1765	665	620
D	35	10	40	55	160	195	10	1990	505	440
E	60	80	155	60	5	45	5	1685	410	810
F	255	145	15	140	100	30	120	980	805	1115
G	30	100	110	40	60	145	15	1495	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	940
B	15	25	45	15	125	105	15	1475	345	390
C	175	45	20	100	265	5	100	1300	710	520
D	25	25	40	55	110	170	10	1600	435	410
E	50	35	140	40	10	35	5	1265	315	770
F	590	170	25	115	105	20	200	910	1225	670
G	35	70	110	50	15	95	10	1775	385	360

CALCULATIONS

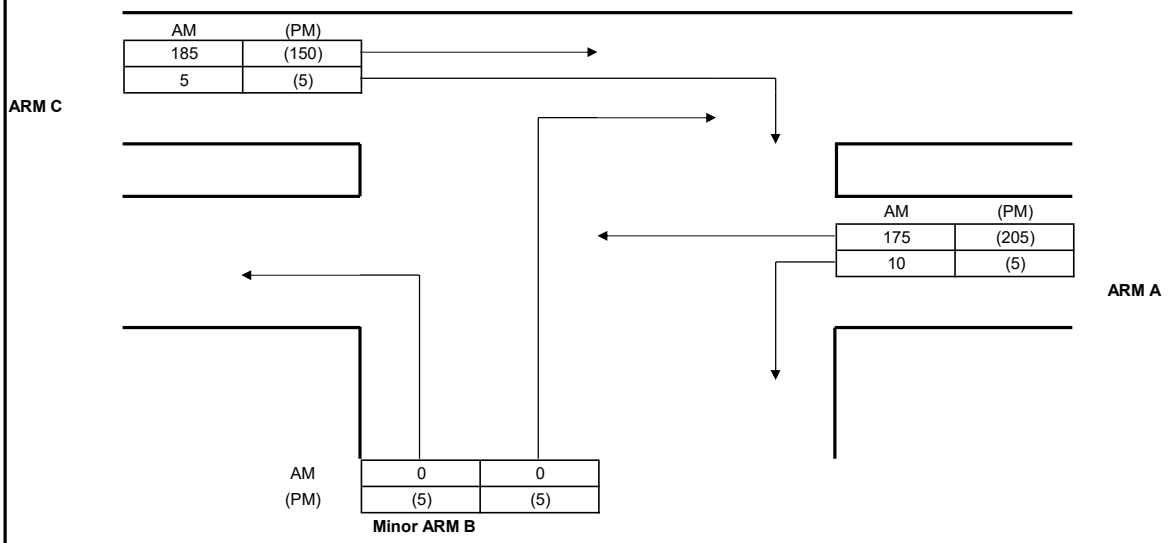
ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1904	2006	0.49	0.32
B	0.98	7.92	3640.95	2400	1.00	0.54	1337	1571	0.35	0.22
C	1.01	6.82	3640.95	2065	1.00	0.50	1197	1429	0.56	0.50
D	1.02	7.87	3640.95	2385	1.00	0.54	1332	1546	0.38	0.28
E	0.98	7.19	3640.95	2180	1.00	0.51	1294	1505	0.32	0.21
F	0.98	8.13	3640.95	2464	1.00	0.55	1875	1913	0.43	0.64
G	1.00	5.91	3640.95	1790	1.00	0.46	1110	981	0.45	0.39
								Crtical Arm:	**C**	**F**
								RFC:	**0.56**	**0.64**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Mai Po South Road (I)			Ref. No.:	2024O
Scheme:	Observe			Ref. No.:	
Year:	2024	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Mai Po South Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY

Major road width	W	8.40	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)	4.20
Visibilities	Vr(b-a)	50	Calculated	D	0.91
	Vl(b-a)	30		E	0.99
	Vr(b-c)	50		F	0.99
	Vr(c-b)	50		Y	0.71

ANALYSIS

		Factor	AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		185	150
	q(c-b)		5	5
	q(a-b)		10	5
	q(a-c)		175	205
	q(b-a)		0	5
	q(b-c)		0	5
	f		0.00	0.50
CAPACITIES	Q(b-a)	1	502	500
	Q(b-c)	1	689	681
	Q(c-b)	1	687	681
	Q(b-ac)	1	502	577
RFC's	b-a		0.000	0.010
	b-c		0.000	0.007
	c-b		0.007	0.007
	b-ac		0.000	0.017
Worst RFC			**0.007**	**0.017**

Where Vl 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(Vl(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:	Jan-25	Checked by:	CFC

Calculation Spreadsheets
for
2034 Reference Scenario

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50800610 **MVA HONG KONG LIMITED**

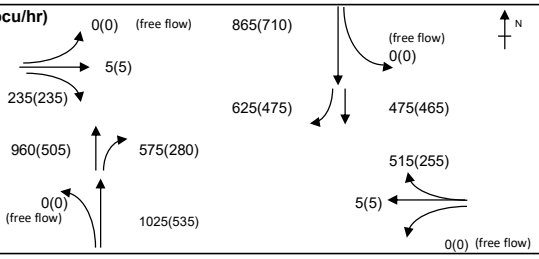
Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A) Design Year: 2034

Description: Reference Designed By: KCC Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
San Tin Highway	→	A	1	3.650		12.5		96%	96%	1775	1775	118	0.066	0.066	118	0.066	0.066
Slip Road (EB)	→	A	1	3.650		10				1845	1845	122	0.066		122	0.066	
San Tin Highway	↑	B	1,2	3.900		10				1865	1865	265	0.142		132	0.071	
Slip Road (WB)	↑	B	1,2	3.900		12.5		98%	96%	1795	1800	255	0.142		128	0.071	
Shek Wu Wai	↓	D	4	3.500						1965	1965	372	0.189		316	0.161	
Road (SB)	↓	D	4	3.500		15		72%	54%	1965	2000	372	0.189		322	0.161	0.161
	→	D	4	3.500		12.5				1880	1880	356	0.189	0.189	302	0.161	
Shek Wu Wai	↑	C	2,3	3.500						1965	1965	510	0.260		260	0.132	
Road (NB)	↑	C	2,3	3.500		15		16%	11%	2070	2080	537	0.259		276	0.133	0.133
	→	C	2,3	3.500		12.5				1880	1880	488	0.260	0.260	249	0.132	
Shek Wu Wai	↓	F	4	3.500						2105	2105	295	0.140		242	0.115	
Road (SB)	↓	F	4	3.500						2105	2105	295	0.140		242	0.115	
	↓	F	4	3.500						1965	1965	275	0.140		226	0.115	
Shek Wu Wai	↑	E	3	3.500						1965	1965	326	0.166		170	0.087	
Road (NB)	↑	E	3	3.500						2105	2105	350	0.166		183	0.087	
	↑	E	3	3.500						2105	2105	349	0.166		182	0.086	

Notes:

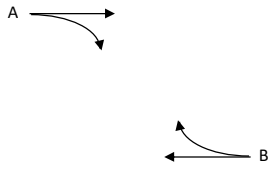
Flow: (pcu/hr)



Group	B,E,D	A,C,D	Group	B,E,D	A,C,D
y	0.498	0.515	y	0.319	0.360
L (sec)	16	13	L (sec)	16	13
C (sec)	120	120	C (sec)	120	120
y pract.	0.780	0.803	y pract.	0.780	0.803
R.C. (%)	57%	56%	R.C. (%)	144%	123%

Stage / Phase Diagrams

1.



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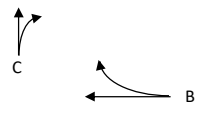

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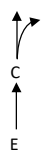

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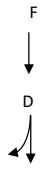


5.

I/G= 5		I/G= 6		I/G=		I/G= 5	
I/G= 5		I/G= 6		I/G=		I/G= 5	

I/G=	
I/G=	

Date: JAN, 2025

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

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50800610 **MVA HONG KONG LIMITED**

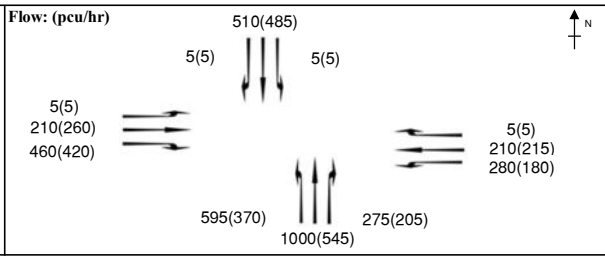
Junction: Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B) Design Year: 2034

Description: Reference Designed By: MYC Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Road L11																	
EB		A	1	3.700	15			2%	2%	1980	1980	215	0.109		235	0.119	0.119
		A	1	3.650		12		100%	87%	1885	1915	230	0.122	0.122	227	0.119	
		A	1	3.650		12				1885	1885	230	0.122		223	0.118	
Shek Wu Wai Road																	
NB		B	2	3.650	15					1800	1800	427	0.237		257	0.143	
		B	2	3.350	15			35%	39%	2020	2010	479	0.237		287	0.143	
		B	2	3.350						2090	2090	496	0.237	0.237	299	0.143	0.143
		B	2	3.650		12		59%	74%	1975	1940	468	0.237		277	0.143	
Road D3																	
SB		D	4	3.000	15			4%	4%	1905	1905	123	0.065		117	0.061	
		D	4	3.000						2055	2055	132	0.064		126	0.061	
		D	4	3.000						2055	2055	133	0.065	0.065	126	0.061	
		D	4	3.000		12		4%	4%	2045	2045	132	0.065		126	0.062	0.062
Road L12																	
WB		C	3	4.000		12		2%	2%	2150	2150	215	0.100		214	0.100	
		C	3	4.000	18			100%	97%	1860	1865	280	0.151	0.151	186	0.100	0.100

Notes:

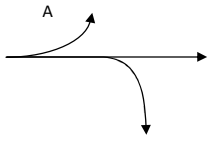
Flow: (pcu/hr)



Group		A,B,C,D	Group		A,B,C,D
y		0.575	y		0.423
L (sec)		17	L (sec)		17
C (sec)		120	C (sec)		120
y pract.		0.773	y pract.		0.773
R.C. (%)		34%	R.C. (%)		83%

Stage / Phase Diagrams

1.



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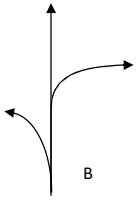

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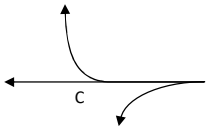

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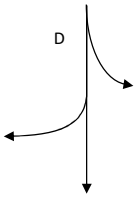


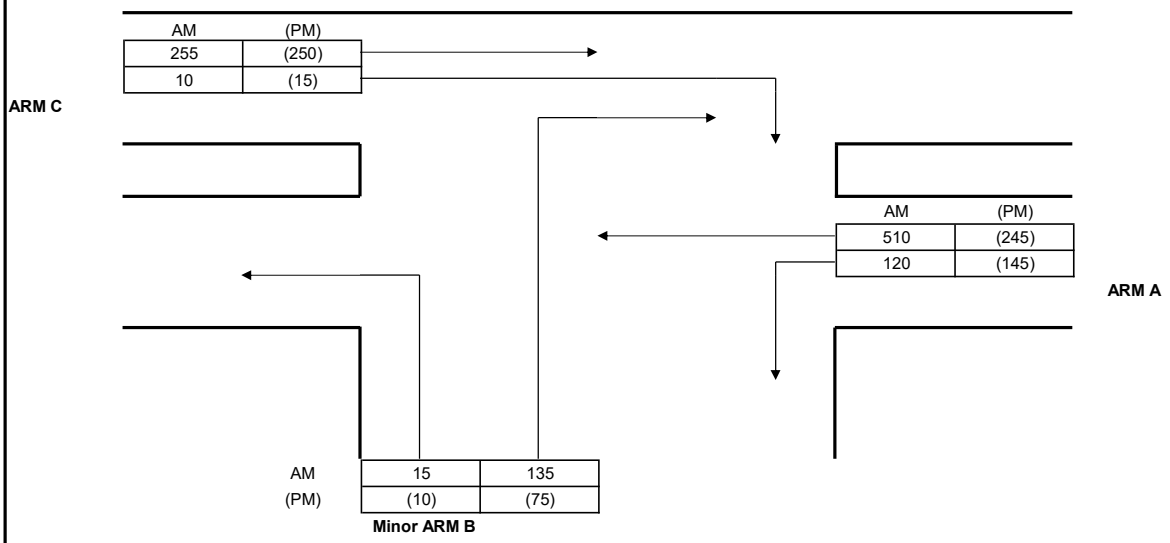
5.

I/G= 5		I/G= 5		I/G= 5		I/G= 6		I/G=			
I/G= 5		I/G= 5		I/G= 5		I/G= 6		I/G=			

Date: JAN, 2025 **Junction:** Shek Wu Wai Road / Road D3 / Road L B

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / San Tam Road (C)			Ref. No.:	2034R
Scheme:	Reference			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	San Tam Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY					
Major road width	W	8.30	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
	Vl(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.71

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		255	250
	q(c-b)		10	15
	q(a-b)		120	145
	q(a-c)		510	245
	q(b-a)		135	75
	q(b-c)		15	10
	f		0.10	0.12
		Factor		
CAPACITIES	Q(b-a)	1	373	429
	Q(b-c)	1	539	598
	Q(c-b)	1	568	629
	Q(b-ac)	1	385	444
RFC's	b-a		0.362	0.175
	b-c		0.028	0.017
	c-b		0.018	0.024
	b-ac		0.390	0.191
Worst RFC			**0.390**	**0.191**

Where Vl 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(Vl(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)

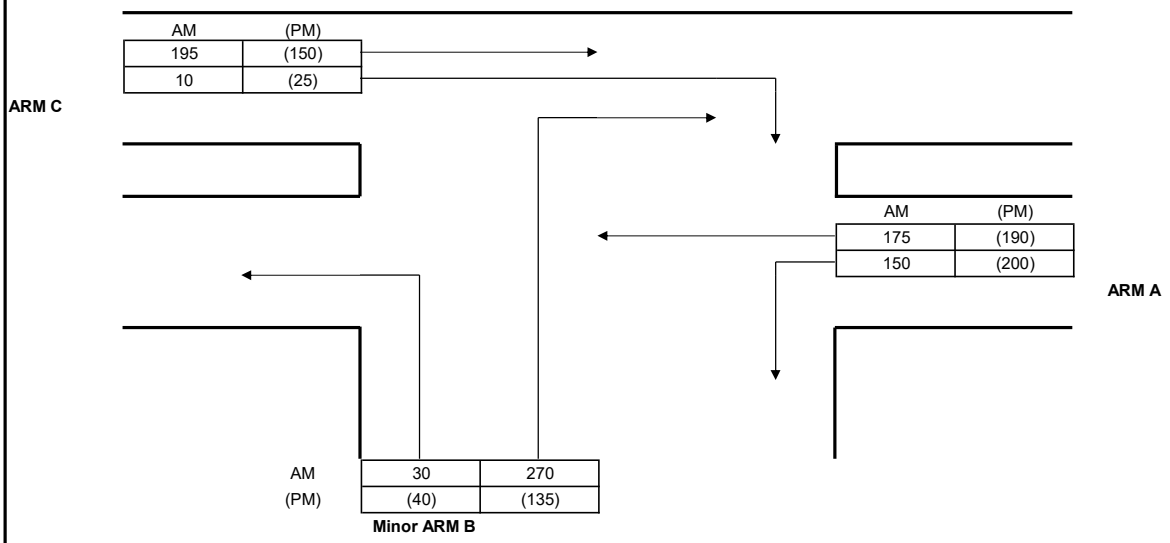
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Palm Springs Boulevard (D)			Ref. No.:	2034R
Scheme:	Reference			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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
	Vl(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)		195	150
	q(c-b)		10	25
	q(a-b)		150	200
	q(a-c)		175	190
	q(b-a)		270	135
	q(b-c)		30	40
	f		0.10	0.23
		Factor		
CAPACITIES	Q(b-a)	1	462	455
	Q(b-c)	1	646	637
	Q(c-b)	1	565	550
	Q(b-ac)	1	475	487
RFC's	b-a		0.584	0.297
	b-c		0.046	0.063
	c-b		0.018	0.045
	b-ac		0.632	0.359
Worst RFC			**0.632**	**0.359**

Where Vl 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(Vl(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)

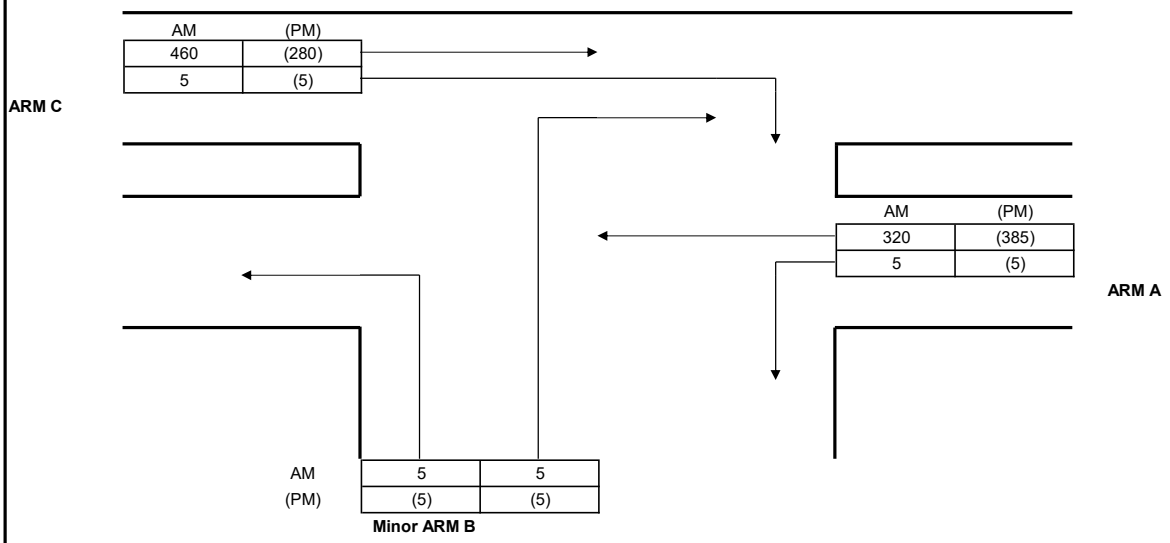
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Geranium Path (E)			Ref. No.:	2034R
Scheme:	Reference			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Geranium Path				
ARM C:	Castle Peak Road - Mai Po				



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
	Vl(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	280
	q(c-b)		5	5
	q(a-b)		5	5
	q(a-c)		320	385
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
		Factor		
CAPACITIES	Q(b-a)	1	372	383
	Q(b-c)	1	577	561
	Q(c-b)	1	611	594
	Q(b-ac)	1	453	456
RFC's	b-a		0.013	0.013
	b-c		0.009	0.009
	c-b		0.008	0.008
	b-ac		0.022	0.022
Worst RFC			**0.022**	**0.022**

Where Vl 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(Vl(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)

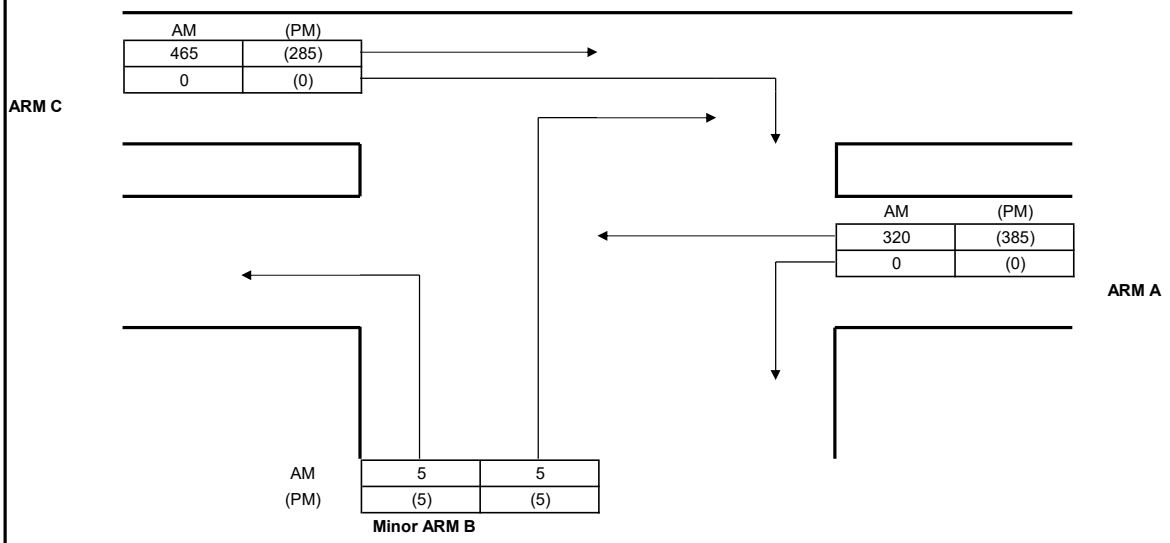
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Yau Pok Road (F)			Ref. No.:	2034R
Scheme:	Reference			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Yau Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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	285
	q(c-b)		0	0
	q(a-b)		0	0
	q(a-c)		320	385
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
		Factor		
CAPACITIES	Q(b-a)	1	319	328
	Q(b-c)	1	495	481
	Q(c-b)	1	384	373
	Q(b-ac)	1	388	390
RFC's	b-a		0.016	0.015
	b-c		0.010	0.010
	c-b		0.000	0.000
	b-ac		0.026	0.026
Worst RFC			**0.026**	**0.026**

Where Vl 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(Vl(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)

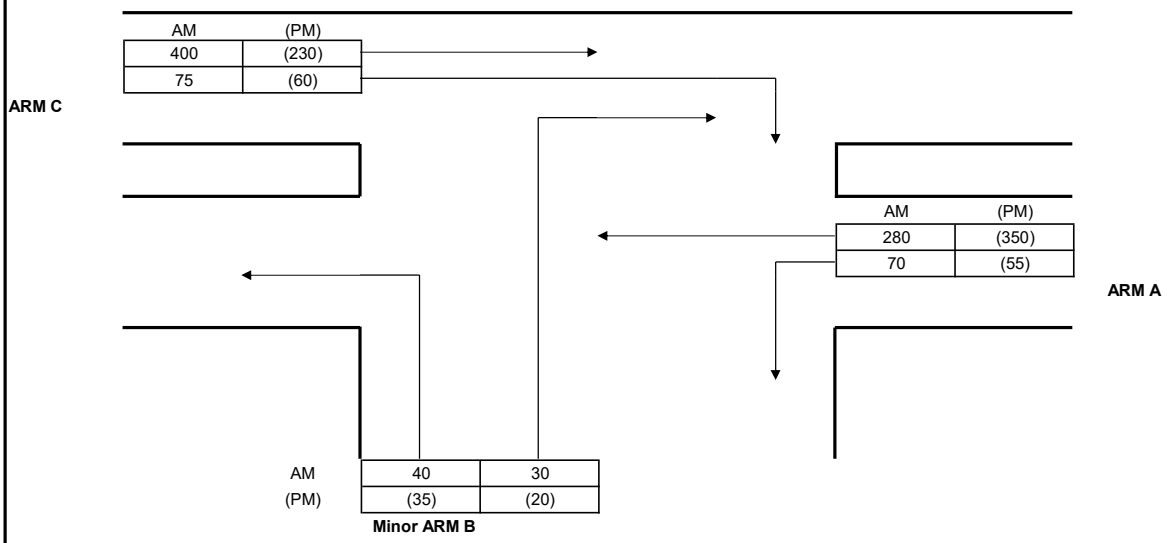
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Kam Pok Road (G)			Ref. No.:	2034R
Scheme:	Reference			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Kam Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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)		400	230
	q(c-b)		75	60
	q(a-b)		70	55
	q(a-c)		280	350
	q(b-a)		30	20
	q(b-c)		40	35
	f		0.57	0.64
		Factor		
CAPACITIES	Q(b-a)	1	381	396
	Q(b-c)	1	610	593
	Q(c-b)	1	599	585
	Q(b-ac)	1	485	503
RFC's	b-a		0.079	0.051
	b-c		0.066	0.059
	c-b		0.125	0.103
	b-ac		0.144	0.109
Worst RFC			**0.144**	**0.109**

Where Vl 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(Vl(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

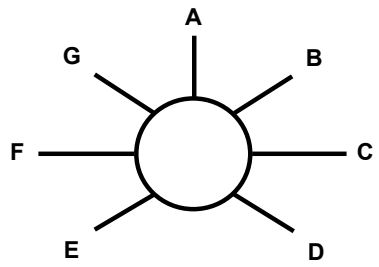
Capacity of combined streams
- in accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Fairview Park Interchange (H)			Ref. No.:	2034R
Scheme:	Reference			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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	70	5	265	45	170	530	20	2095	1105	685
B	15	30	60	5	165	280	5	2675	560	525
C	160	65	10	110	530	20	170	2135	1065	1100
D	40	10	45	60	215	225	10	2665	605	535
E	65	130	535	105	5	50	5	1975	895	1295
F	300	175	20	165	110	35	130	1570	935	1300
G	35	110	165	45	100	160	15	2150	630	355

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	60	25	160	40	155	300	25	1725	765	1075
B	20	30	50	20	170	120	15	1995	425	495
C	200	55	20	115	550	5	160	1590	1105	830
D	25	25	45	60	155	200	10	2200	520	495
E	55	65	365	70	10	40	5	1515	610	1205
F	675	215	30	135	115	25	220	1330	1415	795
G	40	80	160	55	50	105	10	2300	500	445

CALCULATIONS

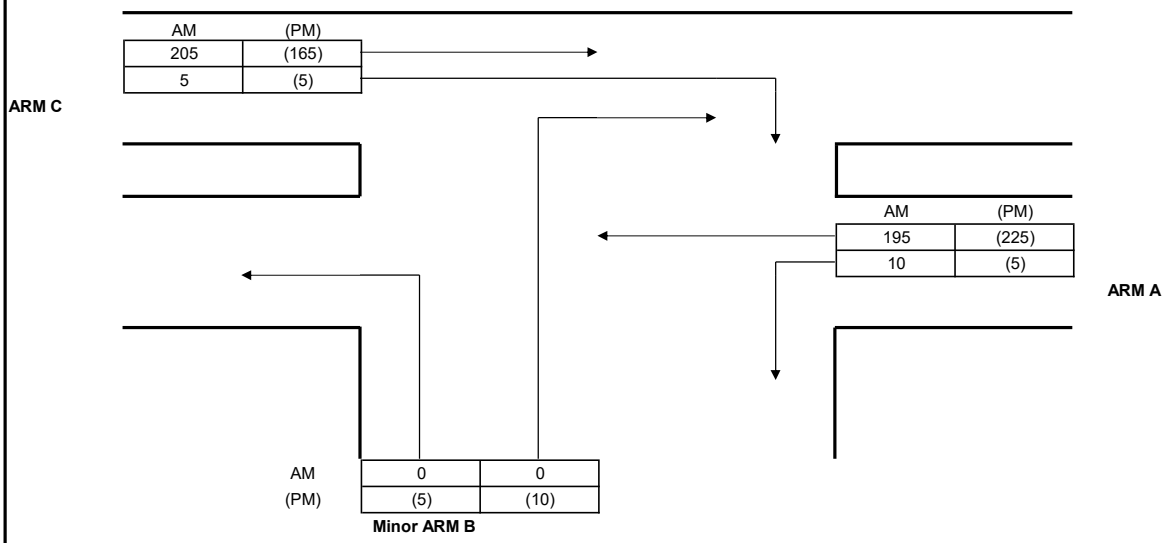
ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1495	1711	0.74	0.45
B	0.98	7.92	3640.95	2400	1.00	0.54	931	1294	0.60	0.33
C	1.01	6.82	3640.95	2065	1.00	0.50	1012	1284	1.05	0.86
D	1.02	7.87	3640.95	2385	1.00	0.54	961	1216	0.63	0.43
E	0.98	7.19	3640.95	2180	1.00	0.51	1148	1380	0.78	0.44
F	0.98	8.13	3640.95	2464	1.00	0.55	1558	1687	0.60	0.84
G	1.00	5.91	3640.95	1790	1.00	0.46	808	739	0.78	0.68
								Crtical Arm:	**C**	**C**
								RFC:	**1.05**	**0.86**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Mai Po South Road (I)			Ref. No.:	2034R
Scheme:	Reference			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Mai Po South Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY					
Major road width	W	8.40	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)	4.20
Visibilities	Vr(b-a)	50	Calculated	D	0.91
	Vl(b-a)	30		E	0.99
	Vr(b-c)	50		F	0.99
	Vr(c-b)	50		Y	0.71

ANALYSIS				
			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		205	165
	q(c-b)		5	5
	q(a-b)		10	5
	q(a-c)		195	225
	q(b-a)		0	10
	q(b-c)		0	5
	f		0.00	0.33
		Factor		
CAPACITIES	Q(b-a)	1	494	493
	Q(b-c)	1	683	676
	Q(c-b)	1	682	676
	Q(b-ac)	1	494	542
RFC's	b-a		0.000	0.020
	b-c		0.000	0.007
	c-b		0.007	0.007
	b-ac		0.000	0.028
Worst RFC			**0.007**	**0.028**

Where Vl 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(Vl(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:	Jan-25	Checked by:	CFC

Calculation Spreadsheets
for
2034 Design Scenario

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50800610 **MVA HONG KONG LIMITED**

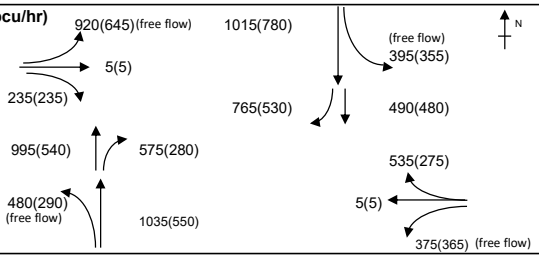
Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A) Design Year: 2034

Description: Design Designed By: KCC Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
San Tin Highway		A	1	3.650		12.5		96%	96%	1775	1775	118	0.066	0.066	118	0.066	0.066
Slip Road (EB)		A	1	3.650		10				1845	1845	122	0.066		122	0.066	
San Tin Highway		B	1,2	3.900		10				1865	1865	275	0.147		143	0.077	
Slip Road (WB)		B	1,2	3.900		12.5		98%	96%	1795	1795	265	0.148		137	0.076	
Shek Wu Wai		D	4	3.500						1965	1965	426	0.217		340	0.173	
Road (SB)		D	4	3.500		15		85%	59%	1940	1985	421	0.217		344	0.173	
		D	4	3.500		12.5				1880	1880	408	0.217	0.217	326	0.173	0.173
Shek Wu Wai		C	2,3	3.500						1965	1965	521	0.265		271	0.138	
Road (NB)		C	2,3	3.500		15		14%	7%	2075	2090	551	0.266	0.266	289	0.138	
		C	2,3	3.500		12.5				1880	1880	498	0.265		260	0.138	0.138
Shek Wu Wai		F	4	3.500						2105	2105	346	0.164		266	0.126	
Road (SB)		F	4	3.500						2105	2105	346	0.164		266	0.126	
		F	4	3.500						1965	1965	323	0.164		248	0.126	
Shek Wu Wai		E	3	3.500						1965	1965	329	0.167		175	0.089	
Road (NB)		E	3	3.500						2105	2105	353	0.168		188	0.089	
		E	3	3.500						2105	2105	353	0.168		187	0.089	

Notes:

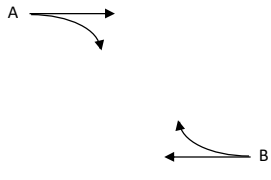
Flow: (pcu/hr)



Group	B,E,D	A,C,D	Group	B,E,D	A,C,D
y	0.532	0.549	y	0.339	0.378
L (sec)	16	13	L (sec)	16	13
C (sec)	120	120	C (sec)	120	120
y pract.	0.780	0.803	y pract.	0.780	0.803
R.C. (%)	47%	46%	R.C. (%)	130%	112%

Stage / Phase Diagrams

1.



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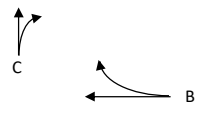

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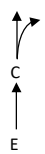

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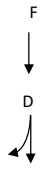


5.

I/G= 5		I/G= 6		I/G=		I/G= 5	
I/G= 5		I/G= 6		I/G=		I/G= 5	

I/G=	
I/G=	

Date: JAN, 2025

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

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50800610 **MVA HONG KONG LIMITED**

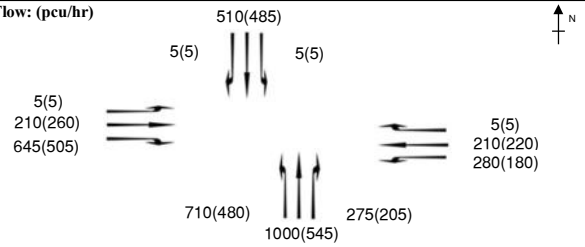
Junction: Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B) Design Year: 2034

Description: Design Designed By: MYC Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Road L11																	
EB		A	1	3.700	15			2%	2%	1980	1980	215	0.109		265	0.134	
		A	1	3.650		12		100%	100%	1885	1885	322	0.171		252	0.134	
		A	1	3.650		12				1885	1885	323	0.171	0.171	253	0.134	0.134
Shek Wu Wai Road																	
NB		B	2	3.650	15					1800	1800	454	0.252		283	0.157	
		B	2	3.350	15			51%	64%	1990	1965	502	0.252		310	0.158	0.158
		B	2	3.350						2090	2090	528	0.253	0.253	329	0.157	
		B	2	3.650		12		55%	67%	1985	1955	501	0.252		308	0.158	
Road D3																	
SB		D	4	3.000	15			4%	4%	1905	1905	123	0.065		117	0.061	
		D	4	3.000						2055	2055	132	0.064		126	0.061	
		D	4	3.000						2055	2055	133	0.065	0.065	126	0.061	
		D	4	3.000		12		4%	4%	2045	2045	132	0.065		126	0.062	0.062
Road L12																	
WB		C	3	4.000		12		2%	2%	2150	2150	215	0.100		217	0.101	0.101
		C	3	4.000	18			100%	96%	1860	1865	280	0.151	0.151	188	0.101	

Notes:

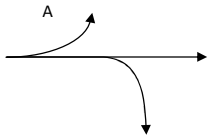
Flow: (pcu/hr)



Group		A,B,C,D	Group		A,B,C,D
y		0.639	y		0.455
L (sec)		17	L (sec)		17
C (sec)		120	C (sec)		120
y pract.		0.773	y pract.		0.773
R.C. (%)		21%	R.C. (%)		70%

Stage / Phase Diagrams

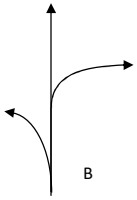
1.



Castle Peak Road San Tin

Shek Wu Wai Road

2.



Castle Peak Road San Tin

Shek Wu Wai Road

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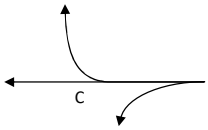
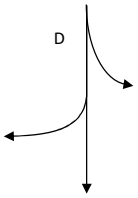


Castle Peak Road San Tin

Shek Wu Wai Road

4.



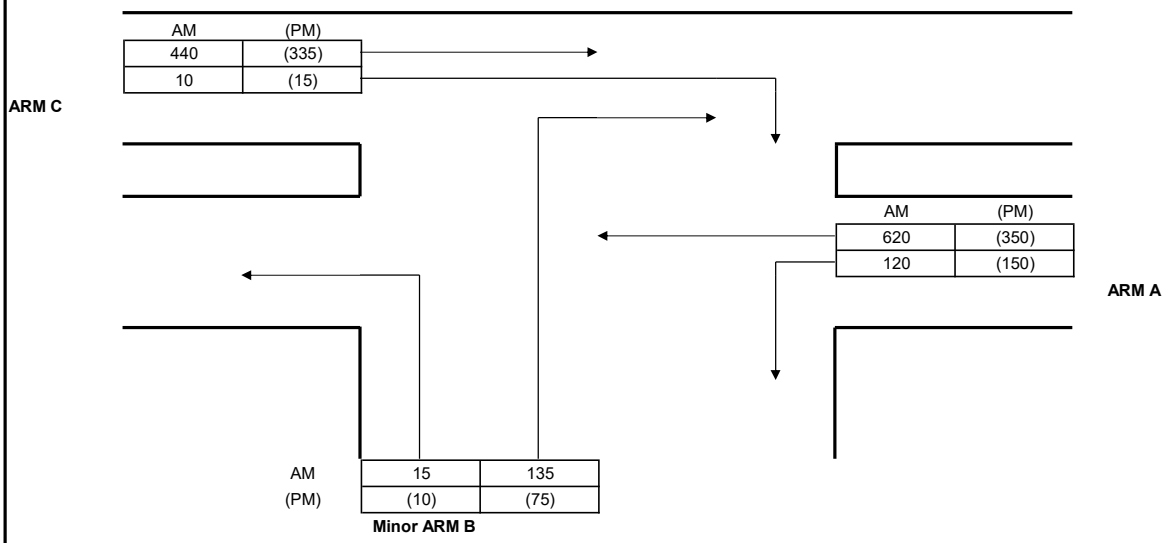
5.

I/G= 5		I/G= 5		I/G= 5		I/G= 6	I/G=
I/G= 5		I/G= 5		I/G= 5		I/G= 6	I/G=

Date: JAN, 2025 **Junction:** Shek Wu Wai Road / Road D3 / Road L B

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / San Tam Road (C)			Ref. No.:	2034D
Scheme:	Design			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	San Tam Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY					
Major road width	W	8.30	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
	Vl(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.71

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		440	335
	q(c-b)		10	15
	q(a-b)		120	150
	q(a-c)		620	350
	q(b-a)		135	75
	q(b-c)		15	10
	f		0.10	0.12
		Factor		
CAPACITIES	Q(b-a)	1	323	393
	Q(b-c)	1	513	573
	Q(c-b)	1	540	601
	Q(b-ac)	1	335	408
RFC's	b-a		0.418	0.191
	b-c		0.029	0.017
	c-b		0.019	0.025
	b-ac		0.448	0.208
Worst RFC			**0.448**	**0.208**

Where Vl 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(Vl(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)

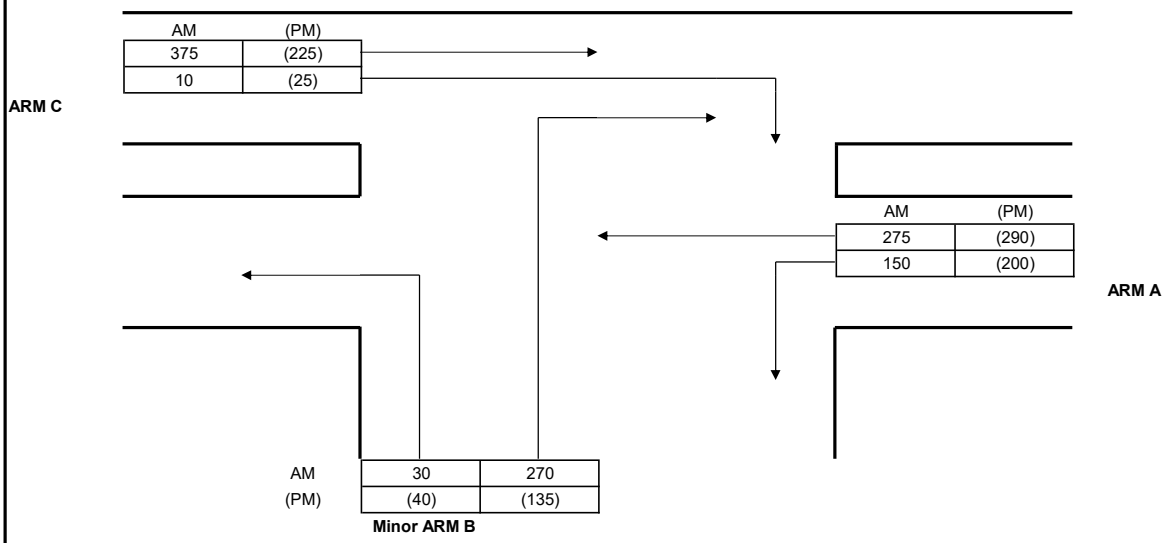
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Palm Springs Boulevard (D)			Ref. No.:	2034D
Scheme:	Design			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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
	Vl(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)		375	225
	q(c-b)		10	25
	q(a-b)		150	200
	q(a-c)		275	290
	q(b-a)		270	135
	q(b-c)		30	40
	f		0.10	0.23
		Factor		
CAPACITIES	Q(b-a)	1	410	419
	Q(b-c)	1	620	610
	Q(c-b)	1	542	526
	Q(b-ac)	1	424	452
RFC's	b-a		0.659	0.322
	b-c		0.048	0.066
	c-b		0.018	0.048
	b-ac		0.708	0.387
Worst RFC			**0.708**	**0.387**

Where Vl 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(Vl(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)

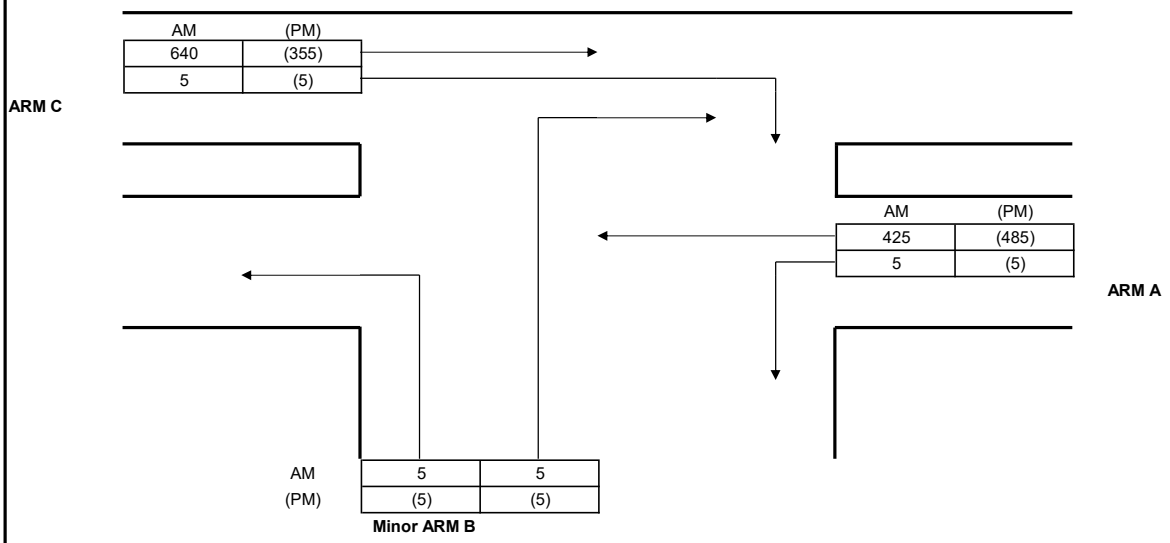
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Geranium Path (E)			Ref. No.:	2034D
Scheme:	Design			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Geranium Path				
ARM C:	Castle Peak Road - Mai Po				



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
	Vl(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)		640	355
	q(c-b)		5	5
	q(a-b)		5	5
	q(a-c)		425	485
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
		Factor		
CAPACITIES	Q(b-a)	1	323	350
	Q(b-c)	1	552	537
	Q(c-b)	1	584	569
	Q(b-ac)	1	407	424
RFC's	b-a		0.015	0.014
	b-c		0.009	0.009
	c-b		0.009	0.009
	b-ac		0.025	0.024
Worst RFC			**0.025**	**0.024**

Where Vl 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(Vl(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)

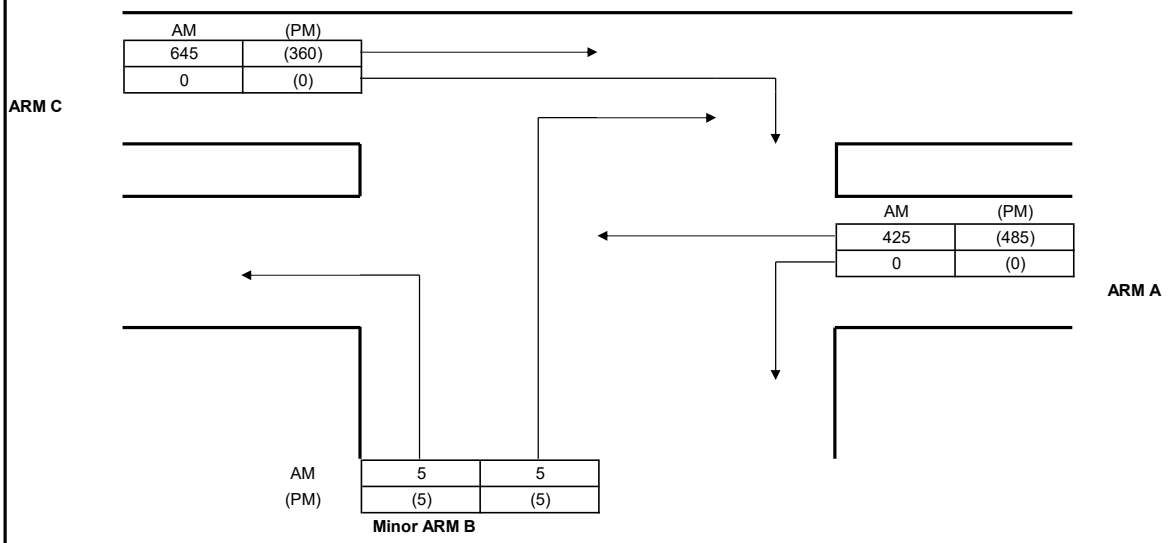
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Yau Pok Road (F)			Ref. No.:	2034D
Scheme:	Design			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Yau Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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)		645	360
	q(c-b)		0	0
	q(a-b)		0	0
	q(a-c)		425	485
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
		Factor		
CAPACITIES	Q(b-a)	1	275	299
	Q(b-c)	1	472	459
	Q(c-b)	1	366	356
	Q(b-ac)	1	348	362
RFC's	b-a		0.018	0.017
	b-c		0.011	0.011
	c-b		0.000	0.000
	b-ac		0.029	0.028
Worst RFC			**0.029**	**0.028**

Where Vl 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(Vl(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)

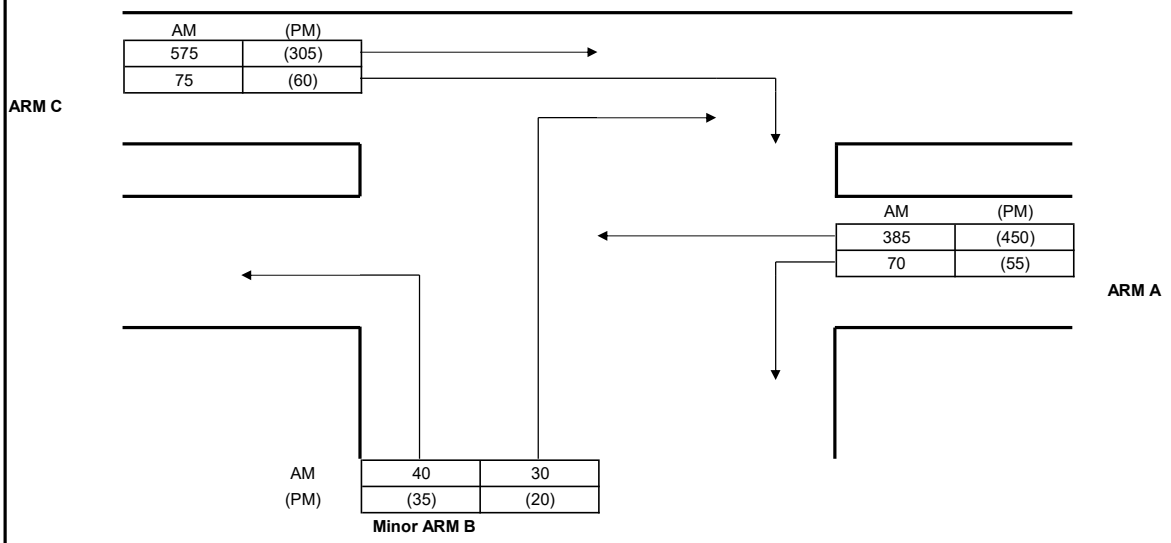
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Kam Pok Road (G)			Ref. No.:	2034D
Scheme:	Design			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Kam Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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)		575	305
	q(c-b)		75	60
	q(a-b)		70	55
	q(a-c)		385	450
	q(b-a)		30	20
	q(b-c)		40	35
	f		0.57	0.64
		Factor		
CAPACITIES	Q(b-a)	1	330	361
	Q(b-c)	1	583	568
	Q(c-b)	1	572	559
	Q(b-ac)	1	439	470
RFC's	b-a		0.091	0.055
	b-c		0.069	0.062
	c-b		0.131	0.107
	b-ac		0.159	0.117
Worst RFC			**0.159**	**0.117**

Where Vl 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(Vl(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

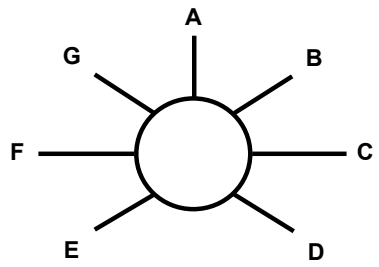
Capacity of combined streams
- in accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Fairview Park Interchange (H)			Ref. No.:	2034D
Scheme:	Design			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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	70	5	265	45	170	530	20	2200	1105	685
B	15	30	60	5	165	460	5	2675	740	630
C	160	65	10	110	530	20	170	2315	1065	1100
D	40	10	45	60	215	225	10	2845	605	535
E	65	130	535	105	5	50	5	2155	895	1295
F	300	280	20	165	110	35	130	1570	1040	1480
G	35	110	165	45	100	160	15	2255	630	355

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	60	25	160	40	155	300	25	1825	765	1075
B	20	30	50	20	170	195	15	1995	500	595
C	200	55	20	115	550	5	160	1665	1105	830
D	25	25	45	60	155	200	10	2275	520	495
E	55	65	365	70	10	40	5	1590	610	1205
F	675	315	30	135	115	25	220	1330	1515	870
G	40	80	160	55	50	105	10	2400	500	445

CALCULATIONS

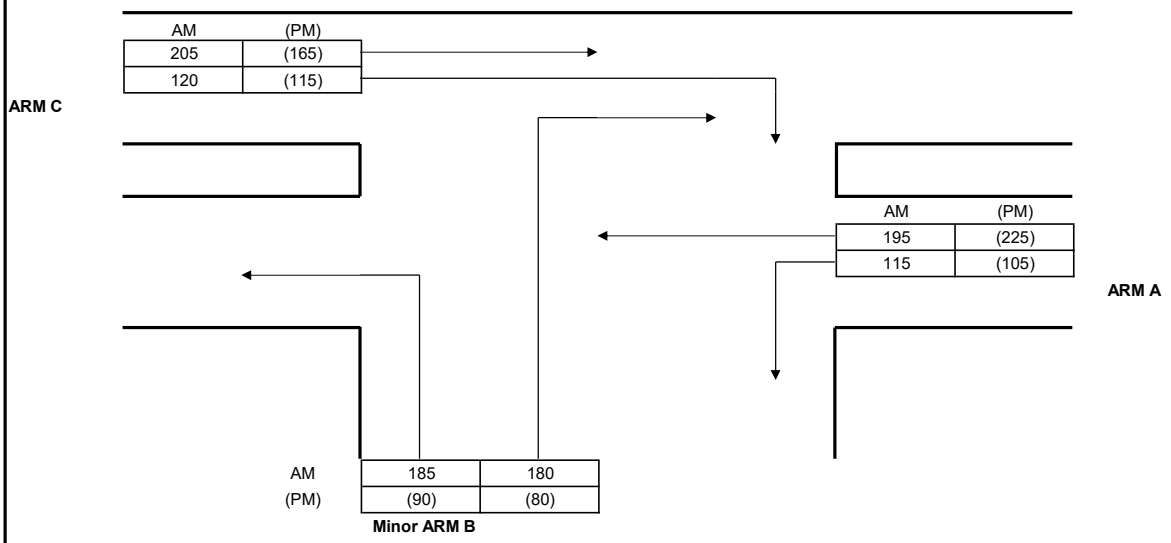
ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1433	1652	0.77	0.46
B	0.98	7.92	3640.95	2400	1.00	0.54	931	1294	0.79	0.39
C	1.01	6.82	3640.95	2065	1.00	0.50	922	1247	1.16	0.89
D	1.02	7.87	3640.95	2385	1.00	0.54	862	1175	0.70	0.44
E	0.98	7.19	3640.95	2180	1.00	0.51	1057	1342	0.85	0.45
F	0.98	8.13	3640.95	2464	1.00	0.55	1558	1687	0.67	0.90
G	1.00	5.91	3640.95	1790	1.00	0.46	760	693	0.83	0.72
								Crtical Arm:	**C**	**F**
								RFC:	**1.16**	**0.90**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Mai Po South Road (I)			Ref. No.:	2034D
Scheme:	Design			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Mai Po South Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY					
Major road width	W	8.40	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)	4.20
Visibilities	Vr(b-a)	50	Calculated	D	0.91
	Vl(b-a)	30		E	0.99
	Vr(b-c)	50		F	0.99
	Vr(c-b)	50		Y	0.71

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		205	165
	q(c-b)		120	115
	q(a-b)		115	105
	q(a-c)		195	225
	q(b-a)		180	80
	q(b-c)		185	90
	f		0.51	0.53
		Factor		
CAPACITIES	Q(b-a)	1	446	447
	Q(b-c)	1	673	666
	Q(c-b)	1	655	650
	Q(b-ac)	1	538	541
RFC's	b-a		0.404	0.179
	b-c		0.275	0.135
	c-b		0.183	0.177
	b-ac		0.678	0.314
Worst RFC			**0.678**	**0.314**

Where Vl 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(Vl(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

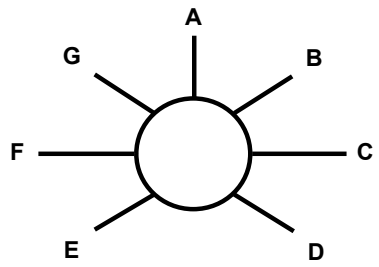
Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Calculation Spreadsheets for 2034 Reference Scenario (With Improvement)

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Fairview Park Interchange (H)			Ref. No.:	2034R
Scheme:	Reference (Under Improvement)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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	10.00	30	23	142	30	0.24
D	6.75	8.50	10	20	142	25	0.28
E	6.75	8.50	5	20	142	35	0.56
F	6.50	9.00	15	25	142	40	0.27
G	5.50	8.00	25	22	142	30	0.16

AM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	70	5	265	45	170	530	20	2095	1105	685
B	15	30	60	5	165	280	5	2675	560	525
C	160	65	10	110	530	20	170	2135	1065	1100
D	40	10	45	60	215	225	10	2665	605	535
E	65	130	535	105	5	50	5	1975	895	1295
F	300	175	20	165	110	35	0	1570	805	1300
G	35	110	165	45	100	160	15	2150	630	225

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	60	25	160	40	155	300	25	1725	765	1075
B	20	30	50	20	170	120	15	1995	425	495
C	200	55	20	115	550	5	160	1590	1105	830
D	25	25	45	60	155	200	10	2200	520	495
E	55	65	365	70	10	40	5	1515	610	1205
F	675	215	30	135	115	25	0	1330	1195	795
G	40	80	160	55	50	105	10	2300	500	225

CALCULATIONS

ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1495	1711	0.74	0.45
B	0.98	7.92	3640.95	2400	1.00	0.54	931	1294	0.60	0.33
C	1.01	8.54	3640.95	2588	1.00	0.57	1382	1694	0.77	0.65
D	1.02	7.87	3640.95	2385	1.00	0.54	961	1216	0.63	0.43
E	0.98	7.58	3640.95	2295	1.00	0.53	1230	1469	0.73	0.42
F	0.98	8.13	3640.95	2464	1.00	0.55	1558	1687	0.52	0.71
G	1.00	7.39	3640.95	2240	1.00	0.52	1126	1048	0.56	0.48
								Crtical Arm:	**C**	**F**
								RFC:	**0.77**	**0.71**
									AM	**PM**

- In accordance with TPDM V2.4

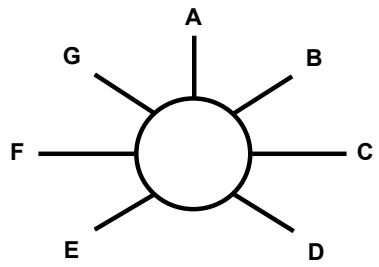
Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Calculation Spreadsheets
for
2034 Design Scenario
(With Improvement)

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Fairview Park Interchange (H)			Ref. No.:	2034D
Scheme:	Design (Under Improvement)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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	10.00	30	23	142	30	0.24
D	6.75	8.50	10	20	142	25	0.28
E	6.75	8.50	5	20	142	35	0.56
F	6.50	9.00	15	25	142	40	0.27
G	5.50	8.00	25	22	142	30	0.16

AM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	70	5	265	45	170	530	20	2200	1105	685
B	15	30	60	5	165	460	5	2675	740	630
C	160	65	10	110	530	20	170	2315	1065	1100
D	40	10	45	60	215	225	10	2845	605	535
E	65	130	535	105	5	50	5	2155	895	1295
F	300	280	20	165	110	35	0	1570	910	1480
G	35	110	165	45	100	160	15	2255	630	225

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	60	25	160	40	155	300	25	1825	765	1075
B	20	30	50	20	170	195	15	1995	500	595
C	200	55	20	115	550	5	160	1665	1105	830
D	25	25	45	60	155	200	10	2275	520	495
E	55	65	365	70	10	40	5	1590	610	1205
F	675	315	30	135	115	25	0	1330	1295	870
G	40	80	160	55	50	105	10	2400	500	225

CALCULATIONS

ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1433	1652	0.77	0.46
B	0.98	7.92	3640.95	2400	1.00	0.54	931	1294	0.79	0.39
C	1.01	8.54	3640.95	2588	1.00	0.57	1279	1651	0.83	0.67
D	1.02	7.87	3640.95	2385	1.00	0.54	862	1175	0.70	0.44
E	0.98	7.58	3640.95	2295	1.00	0.53	1137	1430	0.79	0.43
F	0.98	8.13	3640.95	2464	1.00	0.55	1558	1687	0.58	0.77
G	1.00	7.39	3640.95	2240	1.00	0.52	1071	995	0.59	0.50
								Crtical Arm:	**C**	**F**
								RFC:	**0.83**	**0.77**
									AM	**PM**

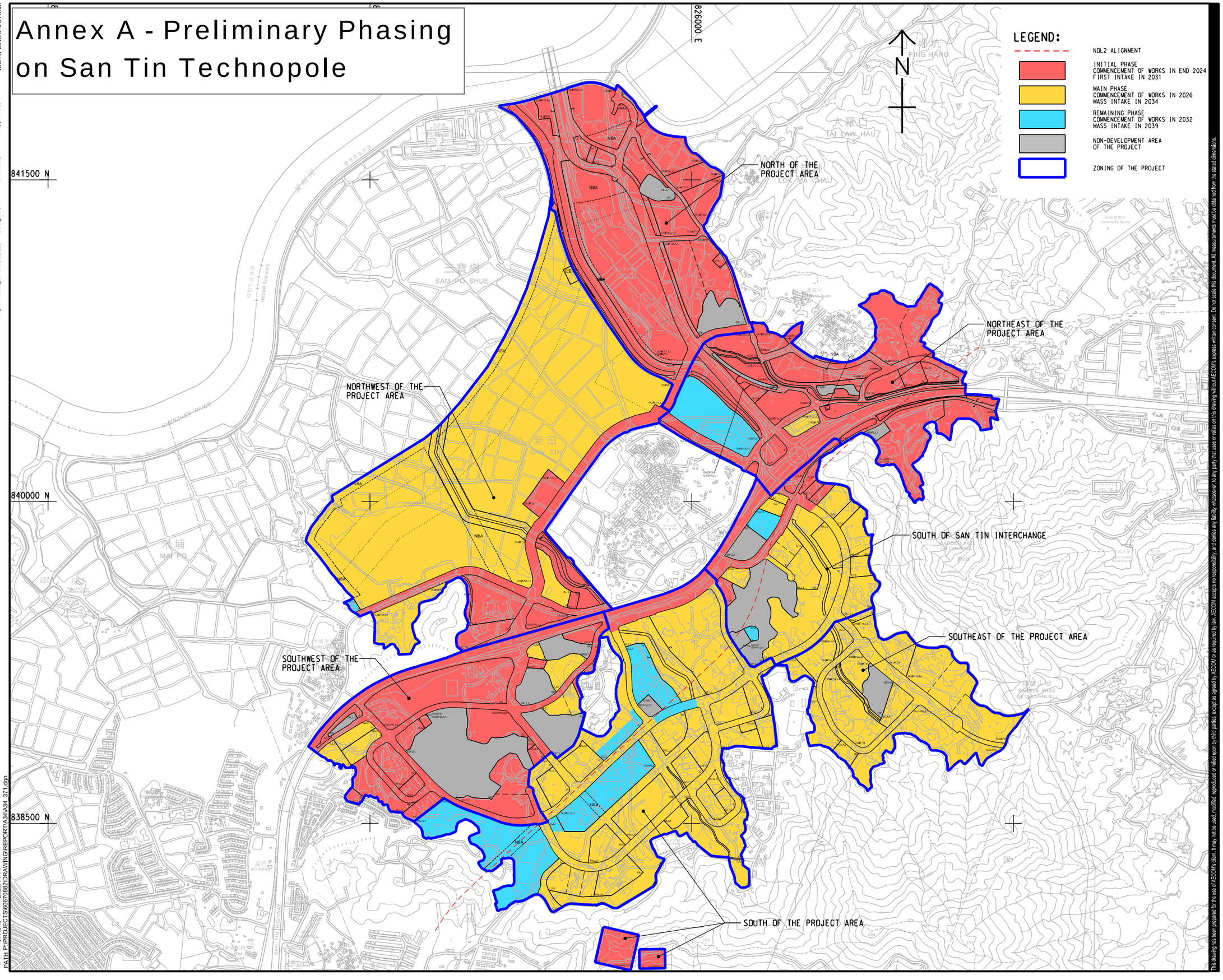
- In accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

ANNEX B –

PRELIMINARY PHASING ON SAN TIN TECHNOPOLE

Annex A - Preliminary Phasing on San Tin Technopole



ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

Plot File by: RenS
PATH: P:\PROJECTS\60670882\DRAWING\REPORT\A34\A34_371.dgn
2023/11/14

AECOM

PROJECT
項目

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

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

規劃署
Planning Department

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核

STATUS
階段

SCALE 比例
A3 1 : 16000

DIMENSION UNIT 尺寸單位
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

ANNEX C –

SAN TIN TECHNOPOLE –

OUTLINE ZONING PLAN

Annex B - San Tin Technopole Outline Zoning Plan

823500E 842500N 837500N

深圳市
SHENZHEN SHI

SHENZHEN RIVER 深圳河 Closed Area Boundary 禁區界線

落馬洲河套地區
Lok Ma Chau Loop

行人天橋（有待詳細設計）
FOOTBRIDGE (SUBJECT TO DETAILED DESIGN)

落馬洲站 LOK MA CHAU STATION
鐵路總站及公共車輛總站
RAILWAY TERMINUS AND PUBLIC TRANSPORT TERMINUS

LOK MA CHAU ROAD 落馬洲路
ROAD L14 道路
ROAD L15 道路
ROAD L16 道路
ROAD L17 道路
ROAD L18 道路
ROAD L19 道路
ROAD L27 道路
ROAD L28 道路
ROAD D1 道路
ROAD D2 道路
ROAD D3 道路
ROAD D4 道路
ROAD L1 道路
ROAD L2 道路
ROAD L3 道路
ROAD L4 道路
ROAD L5 道路
ROAD L6 道路
ROAD L7 道路
ROAD L8 道路
ROAD L9 道路
ROAD L10 道路
ROAD L11 道路
ROAD L12 道路
ROAD L13 道路

創新及科技 INNOVATION AND TECHNOLOGY
混合用途 MIXED USE
物流、貯物和工場（1） LOGISTICS, STORAGE AND WORKSHOP (1)
物流、貯物和工場（2） LOGISTICS, STORAGE AND WORKSHOP (2)
鐵路 RAILWAY
鐵路系統相關設施 RAILWAY ASSOCIATED FACILITIES
綠色燃料站 GREEN FUEL STATION
污水處理廠 SEWAGE TREATMENT WORKS
再造水處理廠 WATER RECLAMATION PLANT
淨水設施及廚餘預處理設施 EFFLUENT POLISHING PLANT AND FOOD WASTE PRE-TREATMENT FACILITIES
垃圾轉運站及資源回收設施 REFUSE TRANSFER STATION AND RESOURCE RECOVERY FACILITIES
通風大樓 VENTILATION BUILDING
文化和社區用途及配套用途和設施 CULTURAL AND COMMUNITY USES WITH SUPPORTING USES AND FACILITIES

新田東主排水道（有待詳細設計）
SAN TIN EASTERN MAIN DRAINAGE CHANNEL (SUBJECT TO DETAILED DESIGN)
新田西主排水道（有待詳細設計）
SAN TIN WESTERN MAIN DRAINAGE CHANNEL (SUBJECT TO DETAILED DESIGN)
擬議北環線主線（有待詳細設計）
PROPOSED NORTHERN LINK MAIN LINE (SUBJECT TO DETAILED DESIGN)
擬議新田站（有待詳細設計）
PROPOSED SAN TIN STATION (SUBJECT TO DETAILED DESIGN)
擬議牛潭尾站（有待詳細設計）
PROPOSED NGAU TAM MEI STATION (SUBJECT TO DETAILED DESIGN)
過路廊（有待詳細設計）
ROAD CROSSING (SUBJECT TO DETAILED DESIGN)
路口（有待詳細設計）
ROAD JUNCTION (SUBJECT TO DETAILED DESIGN)
園境平台（有待詳細設計）
LANDSCAPED DECK (SUBJECT TO DETAILED DESIGN)

Junction B
Junction A

SAN TIN HIGHWAY 新田公路
CASTLE PEAK ROAD - SAN TIN 青田公路 – 新田段
CASTLE PEAK ROAD - MAI PO 青田公路 – 米埔段
CASTLE PEAK ROAD - TAM MI 青田公路 – 潭尾段
SAN TSUEN TSUEN ROAD 新村路
SHEK WU WAI ROAD 石湖墟路
KWU TUNG ROAD 古洞路
FANLING HIGHWAY 粉嶺公路
CASTLE PEAK ROAD - CHAU TAU 青田公路 – 洲頭段
MASS TRANSIT RAILWAY (EAST RAIL EXTENSION) - SHEUNG SHUI TO LOK MA CHAU SPUR LINE 鐵路（東鐵支線）– 上水至落馬洲支線
NGAU TAM MEI ROAD 牛潭尾路
CHUK YAU ROAD 竹洲路

深圳河 SHENZHEN RIVER
大羅口 TAI LAW HAU
坪坑 PING HANG
馬草壟 MA TSO LUNG
牛角山 HORN HILL (NGAU KOK SHAN)
鰂鉤坑 Tse Koo Hang
鐵坑 Tit Hang
落馬洲 Lok Ma Chau
三寶樹 SAM PO SHUE
新田 SAN TIN
米埔 MAI PO
潭尾 NGAU TAM MEI
潘屋村 Poon Uk Tsuen
洲頭 Chau Tau
白石凹 Pak Shek Au
古洞路 Kwu Tung Road
歐意花園 Europa Garden
麒麟山 HADDEN HILL (KI LUN SHAN)
麒麟山坳 SADDLE PASS (KI LUN SHAN AU)
東鎮圍 Tung Chun Wai
仁壽圍 Yan Sau Wai
安龍村 On Loong Tsuen
太平村 Wing Ping Tsuen
蕃田 Fan Tin
新龍村 San Loong Tsuen
青龍村 Ching Loong Tsuen
練板村 Lin Barn Tsuen
米埔新村 Mai Po San Tsuen
米埔老圍 Mai Po Lo Wai
米埔鷺鳥林 MAI PO EGRETRY
和生圍 Wo Shang Wai
碧荔苑 Maple Gardens
如洲豪園 Royal Palms
嘉威庭豪園 Casa Paradizo
攸潭美新村 Yau Mei San Tsuen
圍仔村 Wai Tsai Tsuen
竹園村 Chuk Yuen Tsuen
幸福花園 Bang Fook Gardens
上竹園 Sheung Chuk Yuen
攸潭美村 Yau Tam Mei Tsuen
新田軍營 San Tin Barracks
潭尾軍營 Tam Mei Barracks
牛潭尾淨水廠 Ngau Tam Mei Water Treatment Works

這是１９９０年９月１４日在憲報公布的牛潭尾中期發展審批地區圖編號ＩＤＰＡ／ＹＬ－ＮＴＭ／１沒有涵蓋的範圍，但已包括在１９９１年７月１２日在憲報公布的牛潭尾發展審批地區草圖編號ＤＰＡ／ＹＬ－ＮＴＭ／１的規劃區內。
AREA NOT FALLING WITHIN THE BOUNDARIES OF THE NGAU TAM MEI INTERIM DEVELOPMENT PERMISSION AREA PLAN No. IDPA/YL-NTM/1 PUBLISHED IN THE GAZETTE ON 14.9.1990 BUT INCLUDED IN THE PLANNING SCHEME AREA ON THE DRAFT NGAU TAM MEI DEVELOPMENT PERMISSION AREA PLAN No. DPA/YL-NTM/1 PUBLISHED IN THE GAZETTE ON 12.7.1991.

這是１９９０年９月１４日在憲報公布的牛潭尾中期發展審批地區圖編號ＩＤＰＡ／ＹＬ－ＮＴＭ／１沒有涵蓋的範圍，但已包括在２０００年９月２９日在憲報公布的牛潭尾分區計劃大綱草圖編號 Ｓ／ＹＬ－ＮＴＭ／４ 的規劃區內。
AREA NOT FALLING WITHIN THE BOUNDARIES OF THE NGAU TAM MEI INTERIM DEVELOPMENT PERMISSION AREA PLAN No. IDPA/YL-NTM/1 PUBLISHED IN THE GAZETTE ON 14.9.1990 BUT INCLUDED IN THE PLANNING SCHEME AREA ON THE DRAFT NGAU TAM MEI OUTLINE ZONING PLAN No. S/YL-NTM/4 PUBLISHED IN THE GAZETTE ON 29.9.2000.

圖例
NOTATION

ZONES 地帶

RESIDENTIAL (GROUP A)	R(A)	住宅（甲類）
VILLAGE TYPE DEVELOPMENT	V	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政府、機構或社區
OPEN SPACE	O	休憩用地
OTHER SPECIFIED USES	OU	其他指定用途
OTHER SPECIFIED USES (AMENITY AREA)	OU(A)	其他指定用途（美化市容地帶）
GREEN BELT	GB	綠化地帶
CONSERVATION AREA	CA	自然保育區

COMMUNICATIONS 交通

RAILWAY AND STATION	鐵路及車站
RAILWAY AND STATION (UNDERGROUND)	鐵路及車站（地下）
RAILWAY AND STATION (ELEVATED)	鐵路及車站（高架）
MAJOR ROAD AND JUNCTION	主要道路及路口
ELEVATED ROAD	高架道路

MISCELLANEOUS 其他

BOUNDARY OF PLANNING SCHEME	規劃範圍界線
PLANNING AREA NUMBER	規劃區編號
BUILDING HEIGHT CONTROL ZONE BOUNDARY	建築物高度管制區界線
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)	最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)	最高建築物高度（樓層數目）
NON-BUILDING AREA	非建築用地

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	大約面積及百分率 APPROXIMATE AREA & % 公頃 HECTARES	% 百分率	用途
RESIDENTIAL (GROUP A)	44.78	4.46	住宅（甲類）
VILLAGE TYPE DEVELOPMENT	78.48	7.82	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	56.52	5.63	政府、機構或社區
OPEN SPACE	55.88	5.57	休憩用地
OTHER SPECIFIED USES	284.63	28.35	其他指定用途
OTHER SPECIFIED USES (AMENITY AREA)	28.61	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	13.88	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

夾附的《註釋》屬這份圖則的一部分，
THE ATTACHED NOTES ALSO FORM PART OF THIS PLAN

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

C K YIP 葉子季
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 1:7 500 比例尺
米 METRES 200 0 200 400 600 800 1 000 METRES 米

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

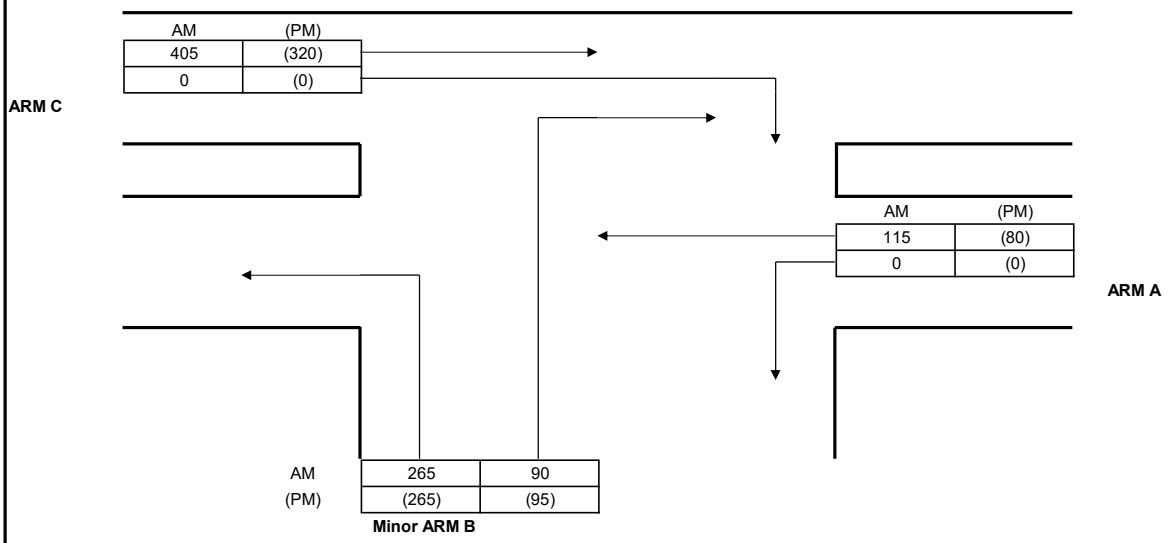
圖則編號 PLAN No. S/STT/1

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

Calculation Spreadsheets for 2034 Reference & Design Scenario (Sensitivity Test 1)

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Shek Wu Wai Road / San Tin Highway Slip Road (A1)			Ref. No.:	2034R
Scheme:	Reference (Sensitivity Test 1)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Shek Wu Wai Road				
ARM B:	San Tin Highway Slip Road				
ARM C:	Shek Wu Wai Road				



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
	Vl(b-a)	20		E	1.31
	Vr(b-c)	20		F	0.59
	Vr(c-b)			Y	0.75

ANALYSIS				
			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		405	320
	q(c-b)		0	0
	q(a-b)		0	0
	q(a-c)		115	80
	q(b-a)		90	95
	q(b-c)		265	265
	f		0.75	0.74
		Factor		
CAPACITIES	Q(b-a)	1	634	663
	Q(b-c)	1	933	946
	Q(c-b)	1	418	424
	Q(b-ac)	1	833	850
RFC's	b-a		0.142	0.143
	b-c		0.284	0.280
	c-b		0.000	0.000
	b-ac		0.426	0.424
Worst RFC			**0.426**	**0.424**

Where Vl 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(Vl(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)

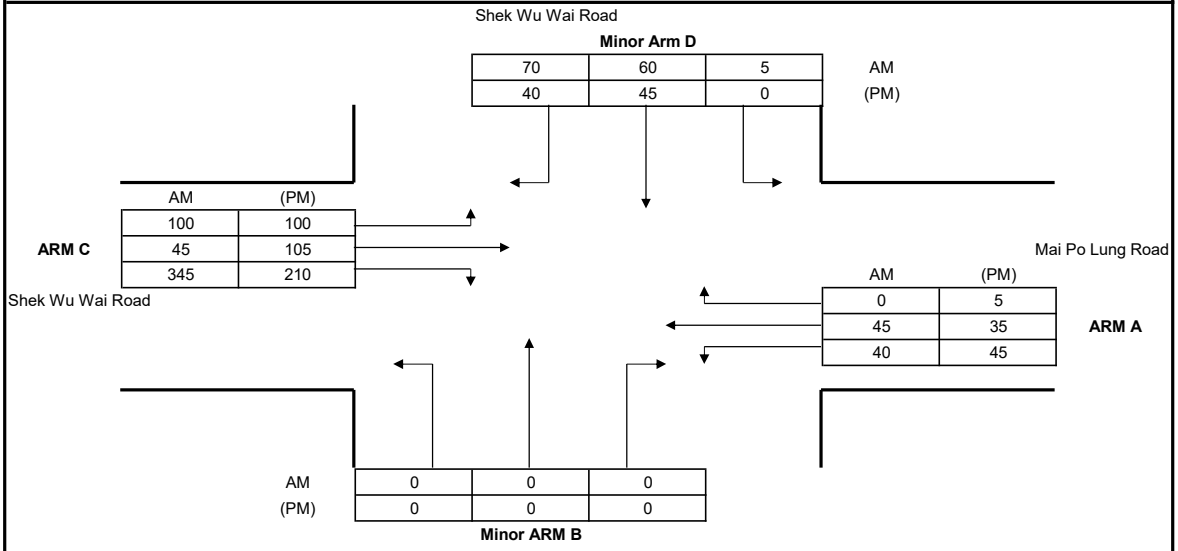
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Shek Wu Wai Road / Mai Po Lung Road (A2)			Ref. No.:	2034R
Scheme:	Reference (Sensitivity Test 1)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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				



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
	Vl(b-a)	0	Vl(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
TRAFFIC FLOWS	q(c-a)	50	105	q(a-c) 45	35
	q(c-b)	345	210	q(a-d) 0	5
	q(a-b)	40	45	q(c-d) 100	100
	q(a-c)	115	75	q(c-a) 45	105
	q(b-a)	0	0	q(d-c) 130	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)	252	277	Q(d-c) 596	582
	Q(b-c)	419	424	Q(d-a) 772	757
	Q(c-b)	648	656	Q(a-d) 632	619
	Q(b-ac)	252	277	Q(d-ca) 601	582
	Q(c-a)	842	1224	Q(a-c) 1800	1785
RFC's	b-a	0.000	0.000	d-c 0.218	0.146
	b-c	0.000	0.000	d-a 0.006	0.000
	c-b	0.532	0.320	a-d 0.000	0.008
	b-ac	0.000	0.000	d-ca 0.224	0.146
	c-a	0.059	0.086	a-c 0.025	0.020

	AM	**(PM)**
Worst RFC	**0.532**	**0.320**

Where Vl 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(Vl(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

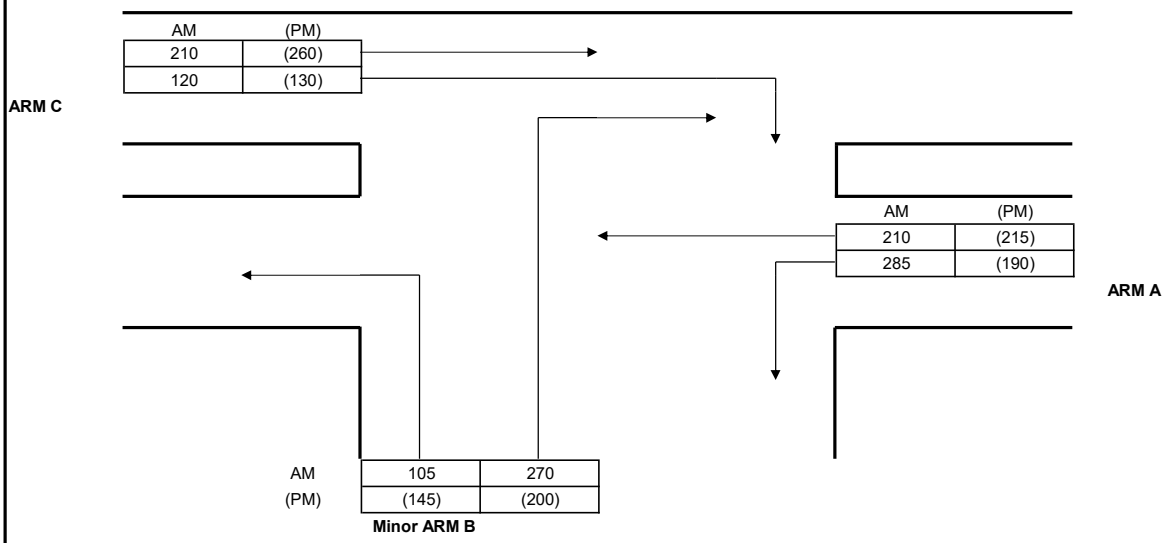
- in accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

'roject\000 - WSW 12A\20241224 WSW_12A_Calculation_Sensitivity_STT\Junction Calculation\[J01_2_P-Shek_Wu_Wai_Road-Mai_Po_Lung_Road.xlsm]2034R

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road San Tin / Shek Wu Wai Road (B)			Ref. No.:	2034R
Scheme:	Reference (Sensitivity Test 1)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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	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)	3.60
Visibilities	Vr(b-a)	30	Calculated	D	0.85
	Vl(b-a)	30		E	0.92
	Vr(b-c)	40		F	0.91
	Vr(c-b)	30		Y	0.78

ANALYSIS				
			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		210	260
	q(c-b)		120	130
	q(a-b)		285	190
	q(a-c)		210	215
	q(b-a)		270	200
	q(b-c)		105	145
	f		0.28	0.42
		Factor		
CAPACITIES	Q(b-a)	1	382	379
	Q(b-c)	1	604	612
	Q(c-b)	1	554	577
	Q(b-ac)	1	426	452
RFC's	b-a		0.707	0.528
	b-c		0.174	0.237
	c-b		0.217	0.225
	b-ac		0.880	0.763
Worst RFC			**0.880**	**0.763**

Where Vl 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(Vl(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)

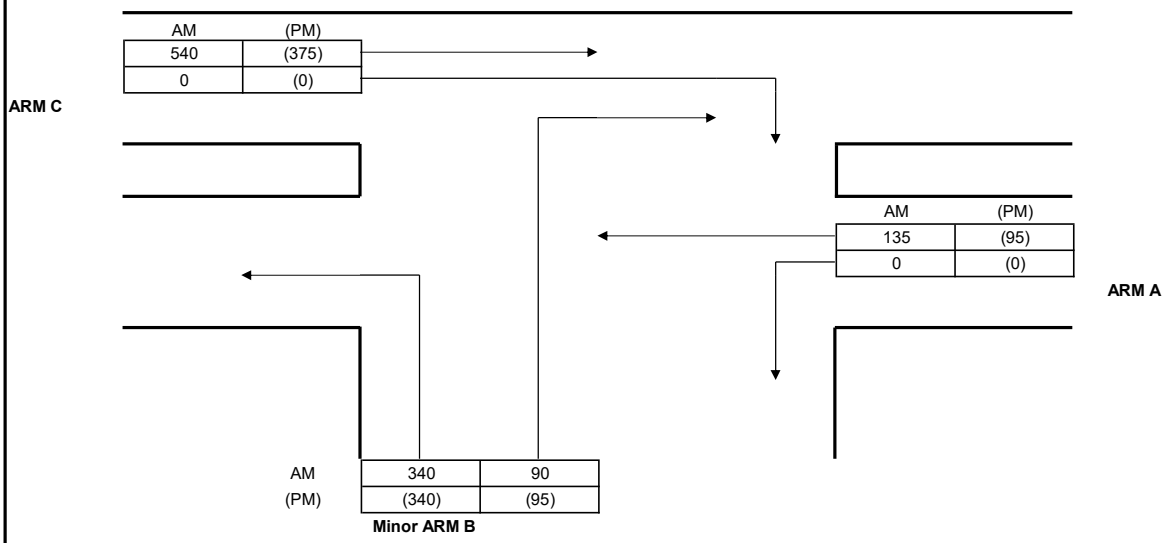
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Shek Wu Wai Road / San Tin Highway Slip Road (A1)			Ref. No.:	2034D
Scheme:	Design (Sensitivity Test 1)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Shek Wu Wai Road				
ARM B:	San Tin Highway Slip Road				
ARM C:	Shek Wu Wai Road				



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
	Vl(b-a)	20		E	1.31
	Vr(b-c)	20		F	0.59
	Vr(c-b)			Y	0.75

ANALYSIS				
			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		540	375
	q(c-b)		0	0
	q(a-b)		0	0
	q(a-c)		135	95
	q(b-a)		90	95
	q(b-c)		340	340
	f		0.79	0.78
		Factor		
CAPACITIES	Q(b-a)	1	599	647
	Q(b-c)	1	926	940
	Q(c-b)	1	415	421
	Q(b-ac)	1	831	856
RFC's	b-a		0.150	0.147
	b-c		0.367	0.362
	c-b		0.000	0.000
	b-ac		0.517	0.508
Worst RFC			**0.517**	**0.508**

Where Vl 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(Vl(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)

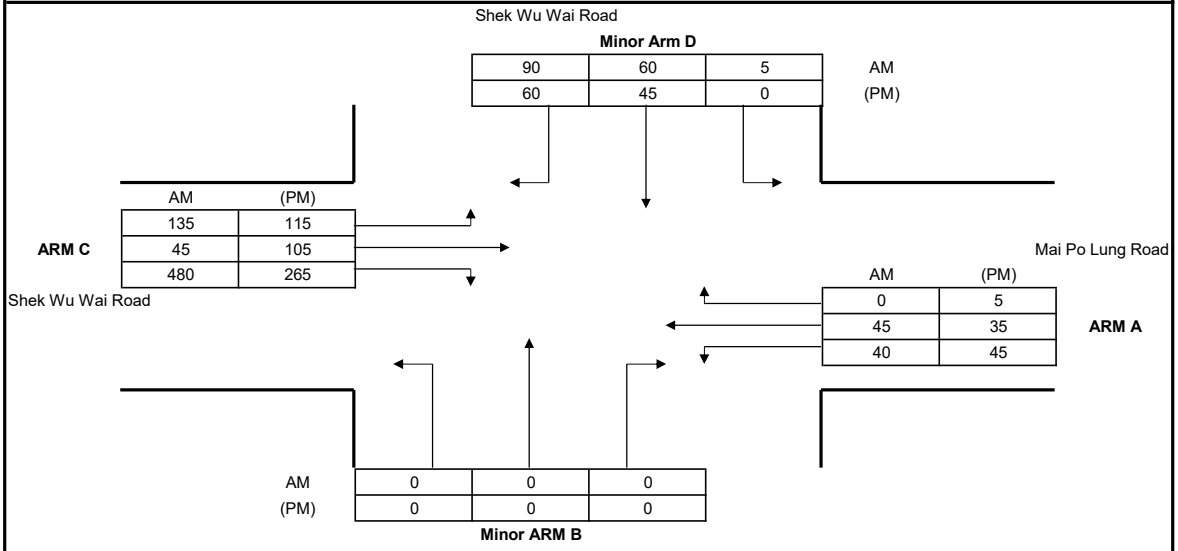
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Shek Wu Wai Road / Mai Po Lung Road (A2)			Ref. No.:	2034D
Scheme:	Design (Sensitivity Test 1)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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				



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
	Vl(b-a)	0	Vl(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 AM PEAK	Arm B (PM) PEAK		Arm D AM PEAK	Arm D (PM) PEAK
TRAFFIC FLOWS	q(c-a)	50	105	q(a-c)	45	35
	q(c-b)	480	265	q(a-d)	0	5
	q(a-b)	40	45	q(c-d)	135	115
	q(a-c)	135	95	q(c-a)	45	105
	q(b-a)	0	0	q(d-c)	150	105
	q(b-c)	0	0	q(d-a)	5	0
	f	0.00	0.00	f	0.03	0.00
CAPACITIES	Q(b-a)	226	265	Q(d-c)	593	581
	Q(b-c)	416	421	Q(d-a)	769	756
	Q(c-b)	644	652	Q(a-d)	625	616
	Q(b-ac)	226	265	Q(d-ca)	598	581
	Q(c-a)	458	1068	Q(a-c)	1800	1785
RFC's	b-a	0.000	0.000	d-c	0.253	0.181
	b-c	0.000	0.000	d-a	0.007	0.000
	c-b	0.745	0.406	a-d	0.000	0.008
	b-ac	0.000	0.000	d-ca	0.259	0.181
	c-a	0.109	0.098	a-c	0.025	0.020

	AM	(PM)
Worst RFC	**0.745**	**0.406**

Where Vl 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(Vl(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

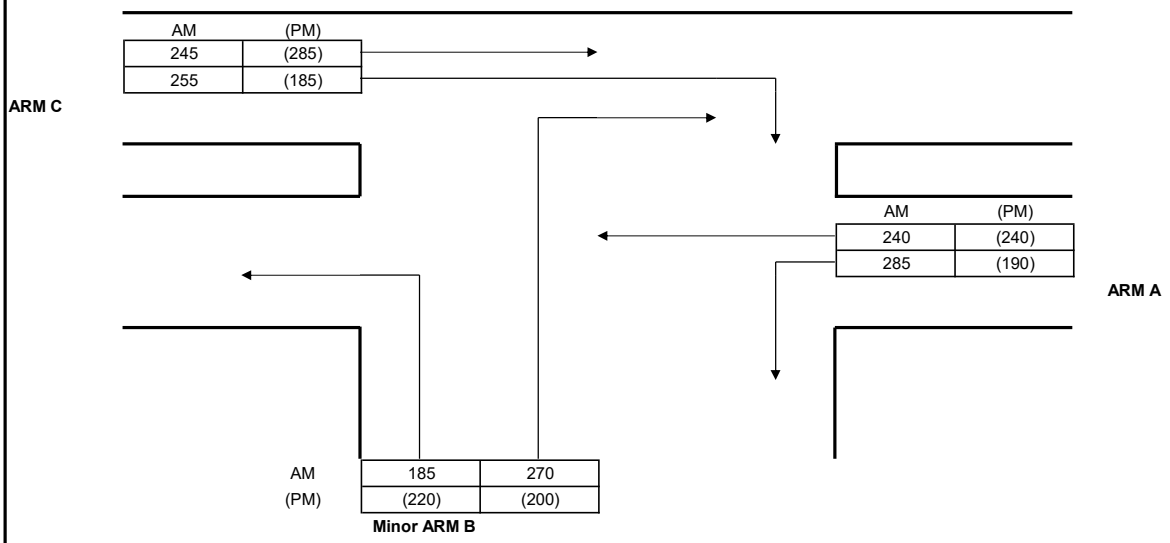
Capacity of combined streams
- in accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

'roject\000 - WSW 12A\20241224 WSW_12A_Calculation_Sensitivity_STT\Junction Calculation\[J01_2_P-Shek_Wu_Wai_Road-Mai_Po_Lung_Road.xlsm]2034D

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road San Tin / Shek Wu Wai Road (B)			Ref. No.:	2034D
Scheme:	Design (Sensitivity Test 1)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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	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)	3.60
Visibilities	Vr(b-a)	30	Calculated	D	0.85
	Vl(b-a)	30		E	0.92
	Vr(b-c)	40		F	0.91
	Vr(c-b)	30		Y	0.78

ANALYSIS				
			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		245	285
	q(c-b)		255	185
	q(a-b)		285	190
	q(a-c)		240	240
	q(b-a)		270	200
	q(b-c)		185	220
	f		0.41	0.52
		Factor		
CAPACITIES	Q(b-a)	1	323	350
	Q(b-c)	1	596	606
	Q(c-b)	1	546	570
	Q(b-ac)	1	397	449
RFC's	b-a		0.836	0.571
	b-c		0.310	0.363
	c-b		0.467	0.325
	b-ac		1.146	0.935
Worst RFC			**1.146**	**0.935**

Where Vl 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(Vl(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:	Jan-25	Checked by:	CFC

Calculation Spreadsheets for 2034 Reference & Design Scenario (Sensitivity Test 1) (With Improvement)

Roundabout Capacity Calculation

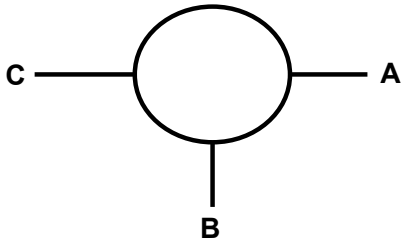
Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road San Tin / Shek Wu Wai Road (B)			Ref. No.:	2034R
Scheme:	Reference (Under Improvement in Sensitivity Test 1)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-

AM PM

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	5	285	210	130	500
B	270	5	105	220	380
C	210	120	5	280	335

PM FLOWS

from \ to	A	B	C	Circ	Entry
A	5	190	215	140	410
B	200	5	145	225	350
C	260	130	5	210	395

CALCULATIONS

ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	0.97	4.45	0.02	1347	1.49	0.59	1226	1221	0.41	0.34
B	1.10	4.41	0.02	1335	1.49	0.59	1331	1328	0.29	0.26
C	1.01	3.94	0.02	1194	1.49	0.56	1048	1088	0.32	0.36

Crtical Arm:	**A**	**C**
RFC:	**0.41**	**0.36**
	AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Roundabout Capacity Calculation

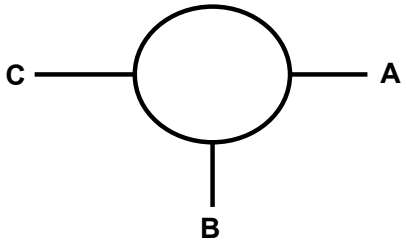
Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road San Tin / Shek Wu Wai Road (B)			Ref. No.:	2034D
Scheme:	Design (Under Improvement Sensitivity in Test 1)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-

AM PM

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	5	285	240	265	530
B	270	5	185	250	460
C	245	255	5	280	505

PM FLOWS

from \ to	A	B	C	Circ	Entry
A	5	190	240	195	435
B	200	5	220	250	425
C	285	185	5	210	475

CALCULATIONS

ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	0.97	4.45	0.02	1347	1.49	0.59	1149	1189	0.46	0.37
B	1.10	4.41	0.02	1335	1.49	0.59	1311	1311	0.35	0.32
C	1.01	3.94	0.02	1194	1.49	0.56	1048	1088	0.48	0.44

Crtical Arm:	**C**	**C**
RFC:	**0.48**	**0.44**
	AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Calculation Spreadsheets for 2034 Reference & Design Scenario (Sensitivity Test 2) (With Improvement)

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50800610 **MVA HONG KONG LIMITED**

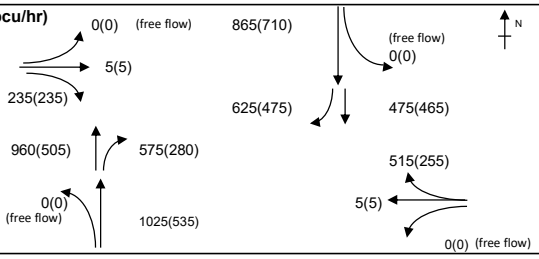
Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A) Design Year: 2034

Description: Reference (Sensitivity Test 2) Designed By: KCC Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
San Tin Highway		A	1	3.650		12.5		96%	96%	1775	1775	118	0.066	0.066	118	0.066	0.066
Slip Road (EB)		A	1	3.650		10				1845	1845	122	0.066		122	0.066	
San Tin Highway		B	1,2	3.900		10				1865	1865	265	0.142		132	0.071	
Slip Road (WB)		B	1,2	3.900		12.5		98%	96%	1795	1800	255	0.142		128	0.071	
Shek Wu Wai		D	4	3.500						1965	1965	372	0.189		316	0.161	
Road (SB)		D	4	3.500		15		72%	54%	1965	2000	372	0.189		322	0.161	0.161
		D	4	3.500		12.5				1880	1880	356	0.189	0.189	302	0.161	
Shek Wu Wai		C	2,3	3.500						1965	1965	510	0.260		260	0.132	
Road (NB)		C	2,3	3.500		15		16%	11%	2070	2080	537	0.259		276	0.133	0.133
		C	2,3	3.500		12.5				1880	1880	488	0.260	0.260	249	0.132	
Shek Wu Wai		F	4	3.500						2105	2105	295	0.140		242	0.115	
Road (SB)		F	4	3.500						2105	2105	295	0.140		242	0.115	
		F	4	3.500						1965	1965	275	0.140		226	0.115	
Shek Wu Wai		E	3	3.500						1965	1965	326	0.166		170	0.087	
Road (NB)		E	3	3.500						2105	2105	350	0.166		183	0.087	
		E	3	3.500						2105	2105	349	0.166		182	0.086	

Notes:

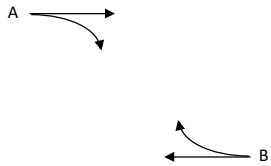
Flow: (pcu/hr)



Group	B,E,D	A,C,D	Group	B,E,D	A,C,D
y	0.498	0.515	y	0.319	0.360
L (sec)	16	13	L (sec)	16	13
C (sec)	120	120	C (sec)	120	120
y pract.	0.780	0.803	y pract.	0.780	0.803
R.C. (%)	57%	56%	R.C. (%)	144%	123%

Stage / Phase Diagrams

1.



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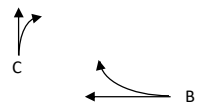

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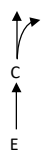

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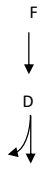


5.

I/G= 5		I/G= 6		I/G=		I/G= 5	I/G=
I/G= 5		I/G= 6		I/G=		I/G= 5	I/G=

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

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50800610 **MVA HONG KONG LIMITED**

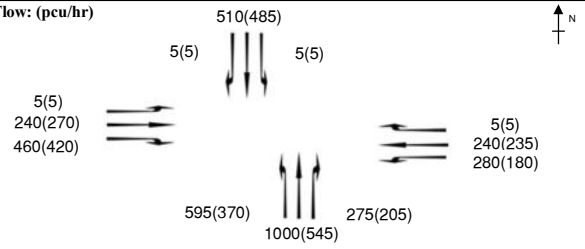
Junction: Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B) Design Year: 2034

Description: Reference (Sensitivity Test 2) Designed By: MYC Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Road L11																	
EB		A	1	3.700	15			2%	2%	1980	1980	243	0.123	0.123	238	0.120	
		A	1	3.650		12		99%	84%	1885	1920	231	0.123		231	0.120	0.120
		A	1	3.650		12				1885	1885	231	0.123		226	0.120	
Shek Wu Wai Road																	
NB		B	2	3.650	15					1800	1800	427	0.237		257	0.143	
		B	2	3.350	15			35%	39%	2020	2010	479	0.237		287	0.143	
		B	2	3.350						2090	2090	496	0.237	0.237	299	0.143	0.143
		B	2	3.650		12		59%	74%	1975	1940	468	0.237		277	0.143	
Road D3																	
SB		D	4	3.000	15			4%	4%	1905	1905	123	0.065		117	0.061	
		D	4	3.000						2055	2055	132	0.064		126	0.061	
		D	4	3.000						2055	2055	133	0.065	0.065	126	0.061	
		D	4	3.000		12		4%	4%	2045	2045	132	0.065		126	0.062	0.062
Road L12																	
WB		C	3	4.000		12		2%	2%	2150	2150	245	0.114		225	0.105	0.105
		C	3	4.000	18			100%	92%	1860	1870	280	0.151	0.151	195	0.104	

Notes:

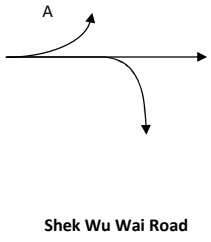
Flow: (pcu/hr)



Group		A,B,C,D	Group		A,B,C,D
y		0.575	y		0.430
L (sec)		17	L (sec)		17
C (sec)		120	C (sec)		120
y pract.		0.773	y pract.		0.773
R.C. (%)		34%	R.C. (%)		80%

Stage / Phase Diagrams

1.



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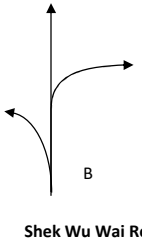

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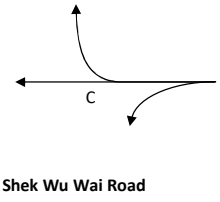

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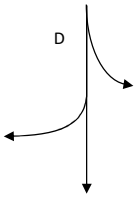


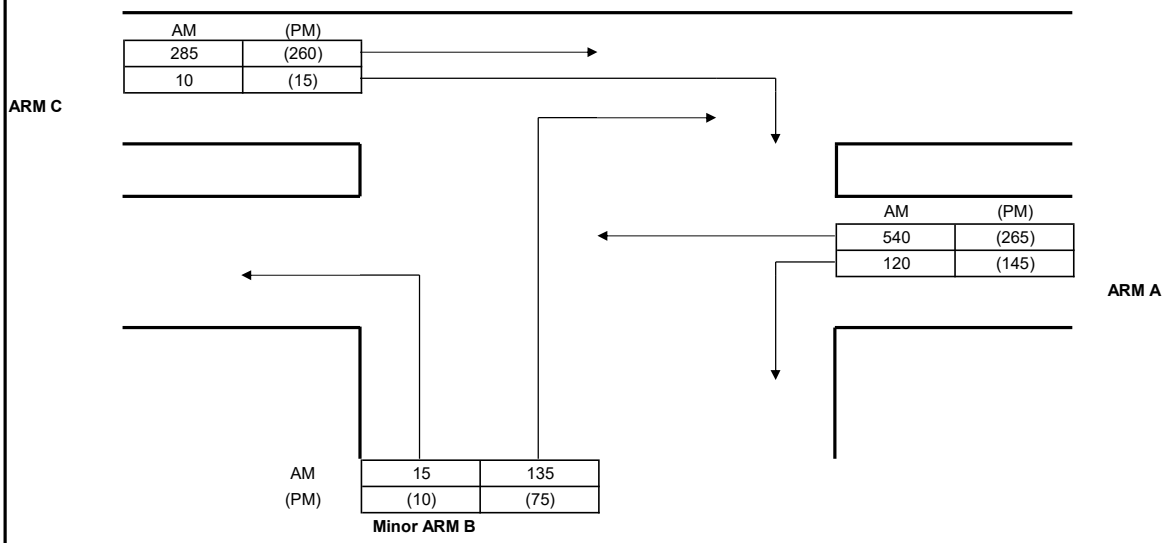
5.

I/G= 5		I/G= 5		I/G= 5		I/G= 6	I/G=
I/G= 5		I/G= 5		I/G= 5		I/G= 6	I/G=

Date: JAN, 2025 **Junction:** Shek Wu Wai Road / Road D3 / Road L B

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / San Tam Road (C)			Ref. No.:	2034R
Scheme:	Reference (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	San Tam Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY					
Major road width	W	8.30	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
	Vl(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.71

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		285	260
	q(c-b)		10	15
	q(a-b)		120	145
	q(a-c)		540	265
	q(b-a)		135	75
	q(b-c)		15	10
	f		0.10	0.12
		Factor		
CAPACITIES	Q(b-a)	1	362	423
	Q(b-c)	1	532	593
	Q(c-b)	1	560	624
	Q(b-ac)	1	374	438
RFC's	b-a		0.373	0.177
	b-c		0.028	0.017
	c-b		0.018	0.024
	b-ac		0.401	0.194
Worst RFC			**0.401**	**0.194**

Where Vl 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(Vl(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)

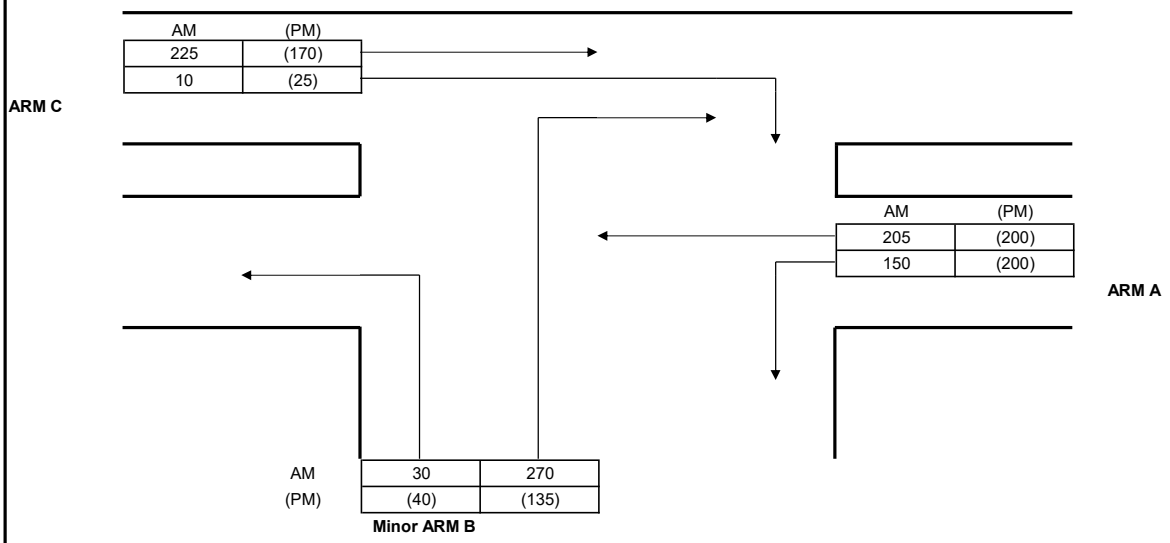
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Palm Springs Boulevard (D)			Ref. No.:	2034R
Scheme:	Reference (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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
	Vl(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)		225	170
	q(c-b)		10	25
	q(a-b)		150	200
	q(a-c)		205	200
	q(b-a)		270	135
	q(b-c)		30	40
	f		0.10	0.23
		Factor		
CAPACITIES	Q(b-a)	1	450	450
	Q(b-c)	1	638	634
	Q(c-b)	1	558	548
	Q(b-ac)	1	464	482
RFC's	b-a		0.600	0.300
	b-c		0.047	0.063
	c-b		0.018	0.046
	b-ac		0.647	0.363
Worst RFC			**0.647**	**0.363**

Where Vl 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(Vl(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)

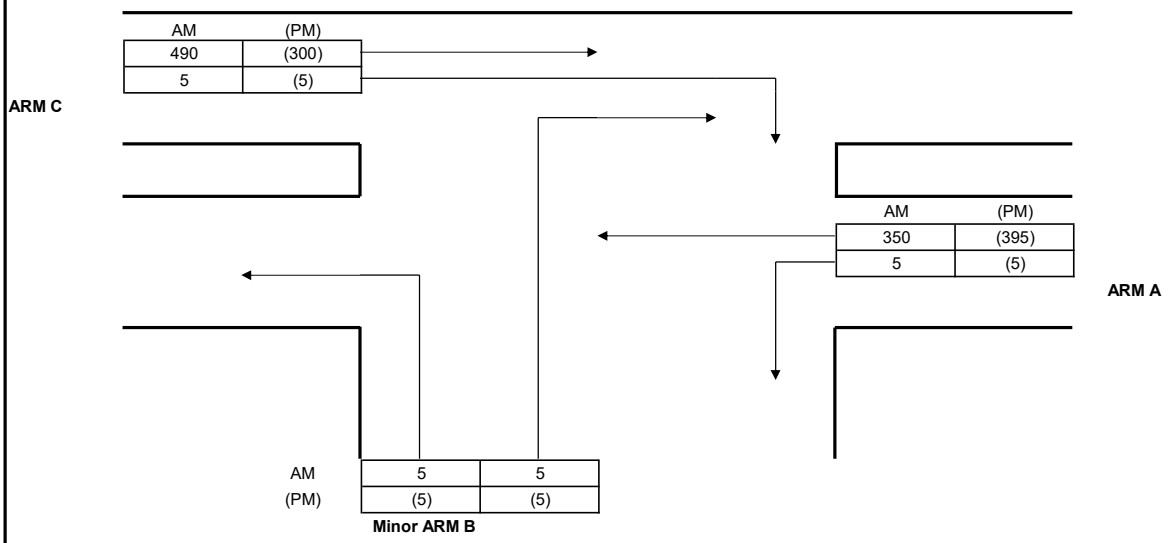
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Geranium Path (E)			Ref. No.:	2034R
Scheme:	Reference (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Geranium Path				
ARM C:	Castle Peak Road - Mai Po				



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
	Vl(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)		490	300
	q(c-b)		5	5
	q(a-b)		5	5
	q(a-c)		350	395
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
		Factor		
CAPACITIES	Q(b-a)	1	361	378
	Q(b-c)	1	570	559
	Q(c-b)	1	603	592
	Q(b-ac)	1	442	451
RFC's	b-a		0.014	0.013
	b-c		0.009	0.009
	c-b		0.008	0.008
	b-ac		0.023	0.022
Worst RFC			**0.023**	**0.022**

Where Vl 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(Vl(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)

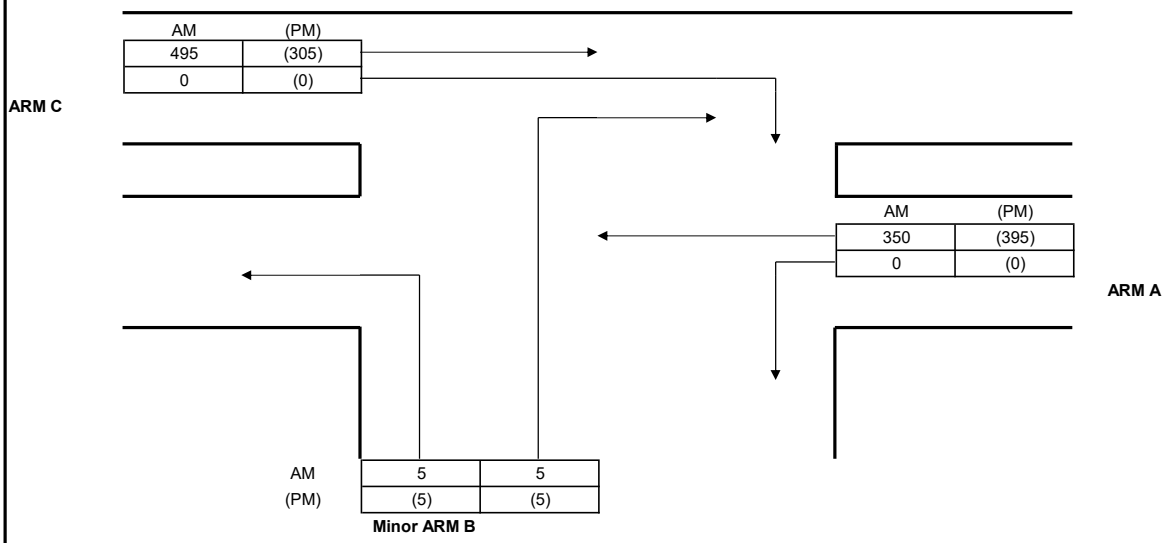
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Yau Pok Road (F)			Ref. No.:	2034R
Scheme:	Reference (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Yau Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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	305
	q(c-b)		0	0
	q(a-b)		0	0
	q(a-c)		350	395
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
		Factor		
CAPACITIES	Q(b-a)	1	309	324
	Q(b-c)	1	488	479
	Q(c-b)	1	379	371
	Q(b-ac)	1	379	386
RFC's	b-a		0.016	0.015
	b-c		0.010	0.010
	c-b		0.000	0.000
	b-ac		0.026	0.026
Worst RFC			**0.026**	**0.026**

Where Vl 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(Vl(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)

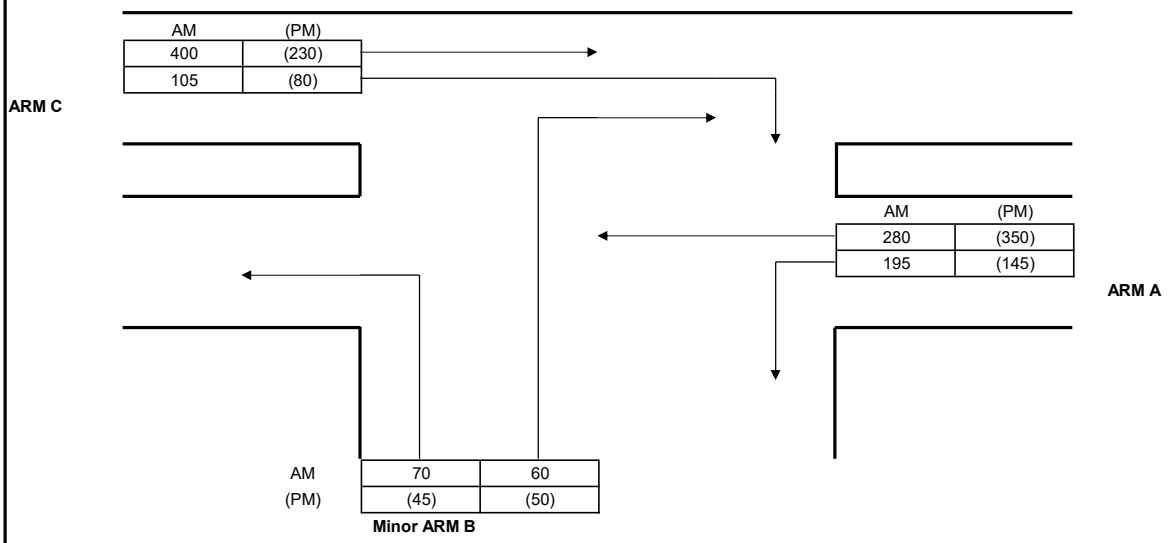
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Kam Pok Road (G)			Ref. No.:	2034R
Scheme:	Reference (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Kam Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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)		400	230
	q(c-b)		105	80
	q(a-b)		195	145
	q(a-c)		280	350
	q(b-a)		60	50
	q(b-c)		70	45
	f		0.54	0.47
		Factor		
CAPACITIES	Q(b-a)	1	359	381
	Q(b-c)	1	597	584
	Q(c-b)	1	567	562
	Q(b-ac)	1	457	456
RFC's	b-a		0.167	0.131
	b-c		0.117	0.077
	c-b		0.185	0.142
	b-ac		0.284	0.208
Worst RFC			**0.284**	**0.208**

Where Vl 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(Vl(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

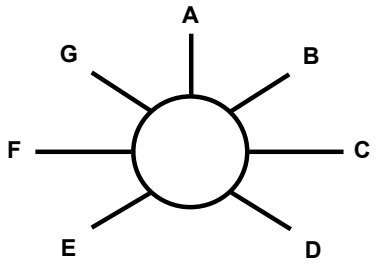
Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Fairview Park Interchange (H)			Ref. No.:	2034R
Scheme:	Reference (Under Improvement in Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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	14.00	32	25	142	35	0.35
B	5.50	13.00	30	22	142	35	0.40
C	5.50	11.20	60	23	142	30	0.15
D	6.75	11.70	13	25	142	25	0.61
E	6.75	11.70	27	22	142	35	0.29
F	6.50	11.00	15	27	142	40	0.48
G	5.50	10.60	25	22	142	30	0.33

AM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	70	5	295	45	175	625	20	2615	1235	670
B	15	30	70	5	165	305	5	3210	595	640
C	160	90	10	0	530	20	280	2455	1090	1350
D	40	10	45	60	215	225	45	3120	640	425
E	65	130	535	105	5	135	5	2460	980	1300
F	285	265	20	165	110	35	0	1740	880	1700
G	35	110	375	45	100	355	15	2250	1035	370

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	60	25	170	40	155	320	25	2005	795	1045
B	20	30	55	20	170	140	15	2215	450	585
C	195	75	20	0	550	5	225	1735	1070	930
D	25	25	45	60	155	200	40	2425	550	380
E	55	65	365	70	10	75	5	1770	645	1205
F	650	285	30	135	115	25	0	1440	1240	975
G	40	80	245	55	50	210	10	2360	690	320

CALCULATIONS

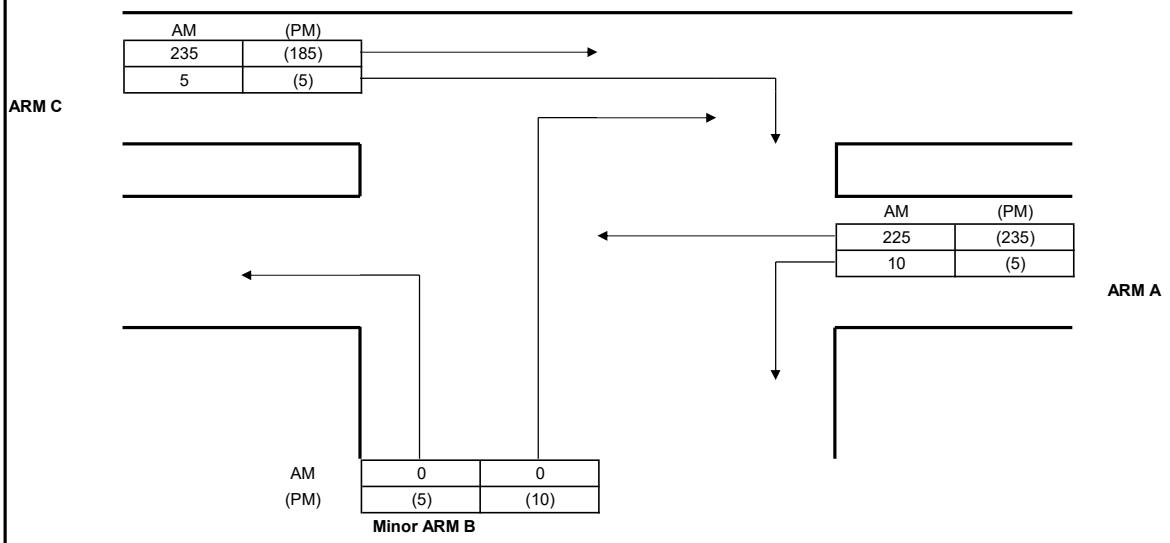
ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	0.99	11.12	3640.95	3369	1.00	0.68	1586	1996	0.78	0.40
B	0.99	9.67	3640.95	2929	1.00	0.62	939	1544	0.63	0.29
C	1.01	9.87	3640.95	2991	1.00	0.62	1467	1919	0.74	0.56
D	1.03	8.98	3640.95	2721	1.00	0.59	913	1332	0.70	0.41
E	0.99	9.87	3640.95	2991	1.00	0.62	1435	1861	0.68	0.35
F	0.98	8.80	3640.95	2665	1.00	0.58	1620	1790	0.54	0.69
G	1.00	8.59	3640.95	2601	1.00	0.57	1323	1260	0.78	0.55
								Crtical Arm:	**A**	**F**
								RFC:	**0.78**	**0.69**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Mai Po South Road (I)			Ref. No.:	2034R
Scheme:	Reference (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Mai Po South Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY					
Major road width	W	8.40	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)	4.20
Visibilities	Vr(b-a)	50	Calculated	D	0.91
	Vl(b-a)	30		E	0.99
	Vr(b-c)	50		F	0.99
	Vr(c-b)	50		Y	0.71

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		235	185
	q(c-b)		5	5
	q(a-b)		10	5
	q(a-c)		225	235
	q(b-a)		0	10
	q(b-c)		0	5
	f		0.00	0.33
		Factor		
CAPACITIES	Q(b-a)	1	483	488
	Q(b-c)	1	676	674
	Q(c-b)	1	674	673
	Q(b-ac)	1	483	537
RFC's	b-a		0.000	0.020
	b-c		0.000	0.007
	c-b		0.007	0.007
	b-ac		0.000	0.028
Worst RFC			**0.007**	**0.028**

Where Vl 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(Vl(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:	Jan-25	Checked by:	CFC

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50800610 **MVA HONG KONG LIMITED**

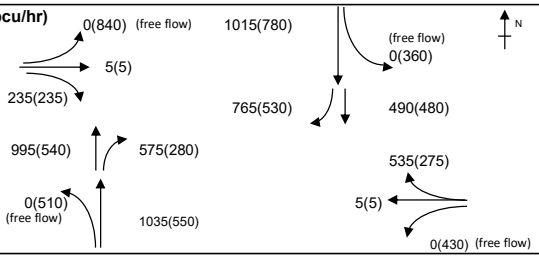
Junction: Shek Wu Wai Road / San Tin Highway Slip Road (A) Design Year: 2034

Description: Design (Sensitivity Test 2) Designed By: KCC Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
San Tin Highway		A	1	3.650		12.5		96%	96%	1775	1775	118	0.066	0.066	118	0.066	0.066
Slip Road (EB)		A	1	3.650		10				1845	1845	122	0.066		122	0.066	
San Tin Highway		B	1,2	3.900		10				1865	1865	275	0.147		143	0.077	
Slip Road (WB)		B	1,2	3.900		12.5		98%	96%	1795	1795	265	0.148		137	0.076	
Shek Wu Wai		D	4	3.500						1965	1965	426	0.217		340	0.173	
Road (SB)		D	4	3.500		15		85%	59%	1940	1985	421	0.217		344	0.173	
		D	4	3.500		12.5				1880	1880	408	0.217	0.217	326	0.173	0.173
Shek Wu Wai		C	2,3	3.500						1965	1965	521	0.265		271	0.138	
Road (NB)		C	2,3	3.500		15		14%	7%	2075	2090	551	0.266	0.266	289	0.138	
		C	2,3	3.500		12.5				1880	1880	498	0.265		260	0.138	0.138
Shek Wu Wai		F	4	3.500						2105	2105	346	0.164		266	0.126	
Road (SB)		F	4	3.500						2105	2105	346	0.164		266	0.126	
		F	4	3.500						1965	1965	323	0.164		248	0.126	
Shek Wu Wai		E	3	3.500						1965	1965	329	0.167		175	0.089	
Road (NB)		E	3	3.500						2105	2105	353	0.168		188	0.089	
		E	3	3.500						2105	2105	353	0.168		187	0.089	

Notes:

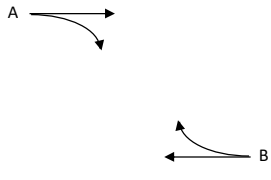
Flow: (pcu/hr)



Group	B,E,D	A,C,D	Group	B,E,D	A,C,D
y	0.532	0.549	y	0.339	0.378
L (sec)	16	13	L (sec)	16	13
C (sec)	120	120	C (sec)	120	120
y pract.	0.780	0.803	y pract.	0.780	0.803
R.C. (%)	47%	46%	R.C. (%)	130%	112%

Stage / Phase Diagrams

1.



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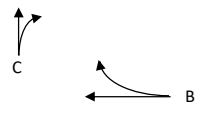

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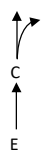

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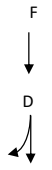


5.

I/G= 5		I/G= 6		I/G=		I/G= 5	
I/G= 5		I/G= 6		I/G=		I/G= 5	

I/G=	
I/G=	

Date: JAN, 2025

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

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50800610 **MVA HONG KONG LIMITED**

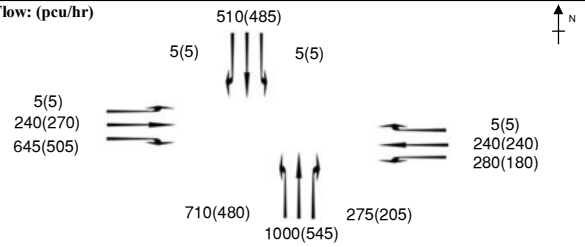
Junction: Shek Wu Wai Road / Road D3 / Road L11 / Road L12 (B) Design Year: 2034

Description: Design (Sensitivity Test 2) Designed By: MYC Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Road L11																	
EB		A	1	3.700	15			2%	2%	1980	1980	245	0.124		268	0.135	
		A	1	3.650		12		100%	97%	1885	1890	322	0.171		257	0.136	0.136
		A	1	3.650		12				1885	1885	323	0.171	0.171	255	0.135	
Shek Wu Wai Road																	
NB		B	2	3.650	15					1800	1800	454	0.252		283	0.157	
		B	2	3.350	15			51%	64%	1990	1965	502	0.252		310	0.158	0.158
		B	2	3.350						2090	2090	528	0.253	0.253	329	0.157	
		B	2	3.650		12		55%	67%	1985	1955	501	0.252		308	0.158	
Road D3																	
SB		D	4	3.000	15			4%	4%	1905	1905	123	0.065		117	0.061	
		D	4	3.000						2055	2055	132	0.064		126	0.061	
		D	4	3.000						2055	2055	133	0.065	0.065	126	0.061	
		D	4	3.000		12		4%	4%	2045	2045	132	0.065		126	0.062	0.062
Road L12																	
WB		C	3	4.000		12		2%	2%	2150	2150	245	0.114		227	0.106	
		C	3	4.000	18			100%	91%	1860	1875	280	0.151	0.151	198	0.106	0.106

Notes:

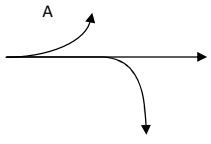
Flow: (pcu/hr)



Group		A,B,C,D	Group		A,B,C,D
y		0.639	y		0.461
L (sec)		17	L (sec)		17
C (sec)		120	C (sec)		120
y pract.		0.773	y pract.		0.773
R.C. (%)		21%	R.C. (%)		68%

Stage / Phase Diagrams

1.



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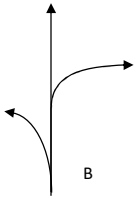

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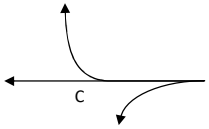

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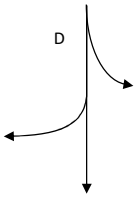


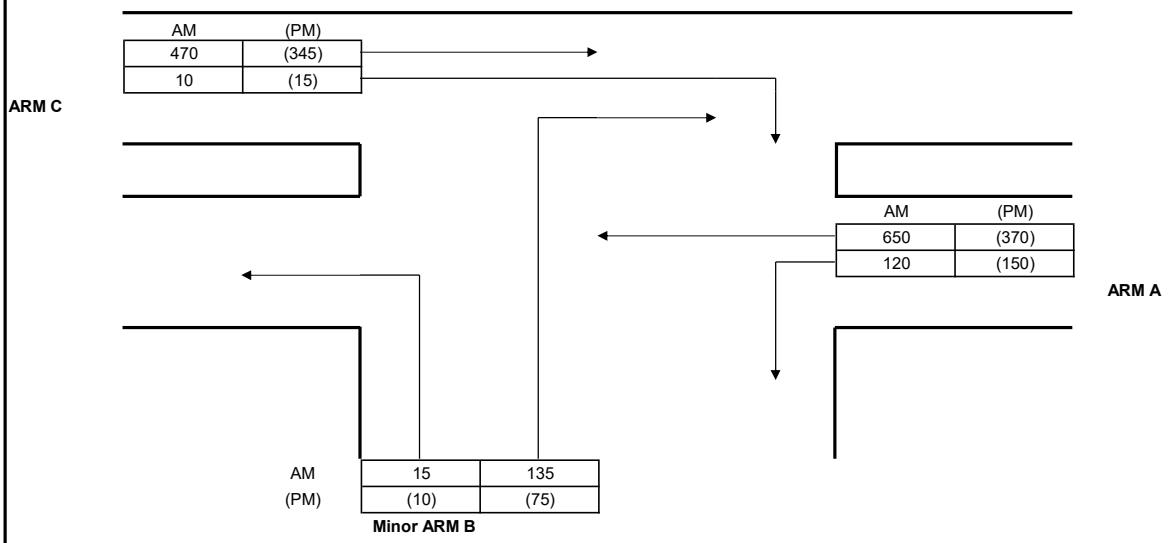
5.

I/G= 5		I/G= 5		I/G= 5		I/G= 6		I/G=			
I/G= 5		I/G= 5		I/G= 5		I/G= 6		I/G=			

Date: JAN, 2025 **Junction:** Shek Wu Wai Road / Road D3 / Road L B

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / San Tam Road (C)			Ref. No.:	2034D
Scheme:	Design (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	San Tam Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY					
Major road width	W	8.30	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
	Vl(b-a)	70		E	0.90
	Vr(b-c)	50		F	0.98
	Vr(c-b)	50		Y	0.71

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		470	345
	q(c-b)		10	15
	q(a-b)		120	150
	q(a-c)		650	370
	q(b-a)		135	75
	q(b-c)		15	10
	f		0.10	0.12
		Factor		
CAPACITIES	Q(b-a)	1	312	387
	Q(b-c)	1	506	568
	Q(c-b)	1	532	596
	Q(b-ac)	1	324	402
RFC's	b-a		0.433	0.194
	b-c		0.030	0.018
	c-b		0.019	0.025
	b-ac		0.463	0.211
Worst RFC			**0.463**	**0.211**

Where Vl 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(Vl(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)

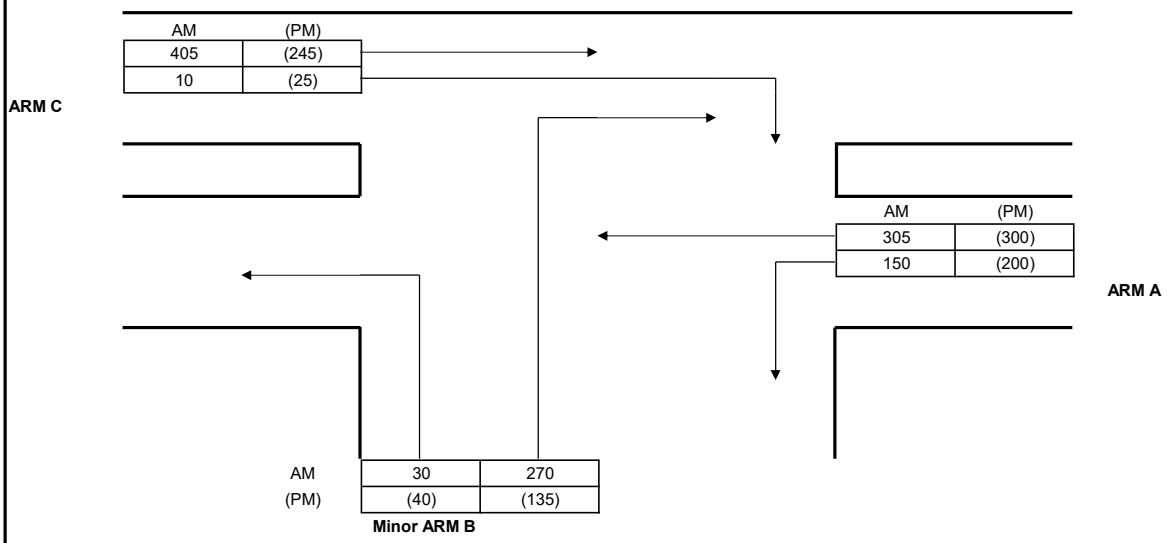
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Palm Springs Boulevard (D)			Ref. No.:	2034D
Scheme:	Design (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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
	Vl(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)		405	245
	q(c-b)		10	25
	q(a-b)		150	200
	q(a-c)		305	300
	q(b-a)		270	135
	q(b-c)		30	40
	f		0.10	0.23
		Factor		
CAPACITIES	Q(b-a)	1	398	414
	Q(b-c)	1	612	608
	Q(c-b)	1	534	524
	Q(b-ac)	1	412	446
RFC's	b-a		0.678	0.326
	b-c		0.049	0.066
	c-b		0.019	0.048
	b-ac		0.728	0.392
Worst RFC			**0.728**	**0.392**

Where Vl 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(Vl(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)

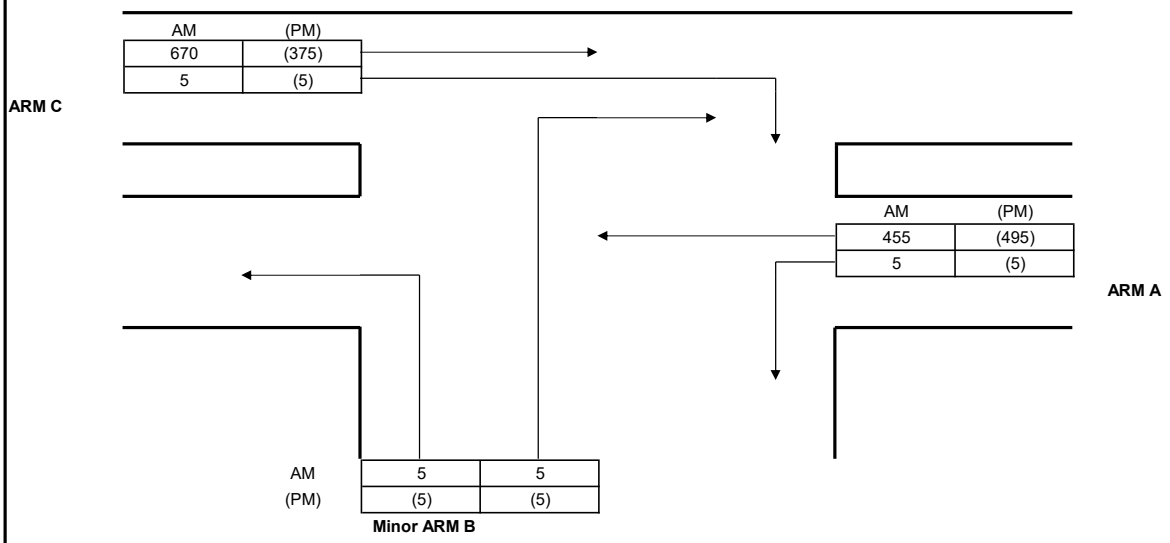
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Geranium Path (E)			Ref. No.:	2034D
Scheme:	Design (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Geranium Path				
ARM C:	Castle Peak Road - Mai Po				



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
	Vl(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)		670	375
	q(c-b)		5	5
	q(a-b)		5	5
	q(a-c)		455	495
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
		Factor		
CAPACITIES	Q(b-a)	1	312	345
	Q(b-c)	1	544	535
	Q(c-b)	1	576	566
	Q(b-ac)	1	397	419
RFC's	b-a		0.016	0.014
	b-c		0.009	0.009
	c-b		0.009	0.009
	b-ac		0.025	0.024
Worst RFC			**0.025**	**0.024**

Where Vl 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(Vl(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)

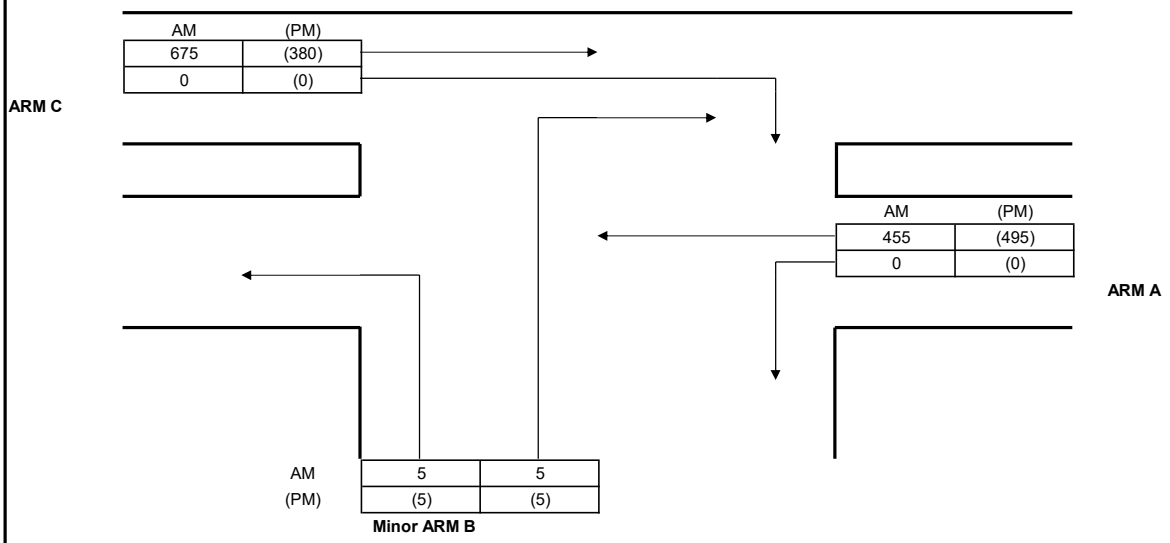
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Yau Pok Road (F)			Ref. No.:	2034D
Scheme:	Design (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Yau Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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)		675	380
	q(c-b)		0	0
	q(a-b)		0	0
	q(a-c)		455	495
	q(b-a)		5	5
	q(b-c)		5	5
	f		0.50	0.50
		Factor		
CAPACITIES	Q(b-a)	1	266	294
	Q(b-c)	1	466	457
	Q(c-b)	1	361	355
	Q(b-ac)	1	339	358
RFC's	b-a		0.019	0.017
	b-c		0.011	0.011
	c-b		0.000	0.000
	b-ac		0.029	0.028
Worst RFC			**0.029**	**0.028**

Where Vl 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(Vl(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

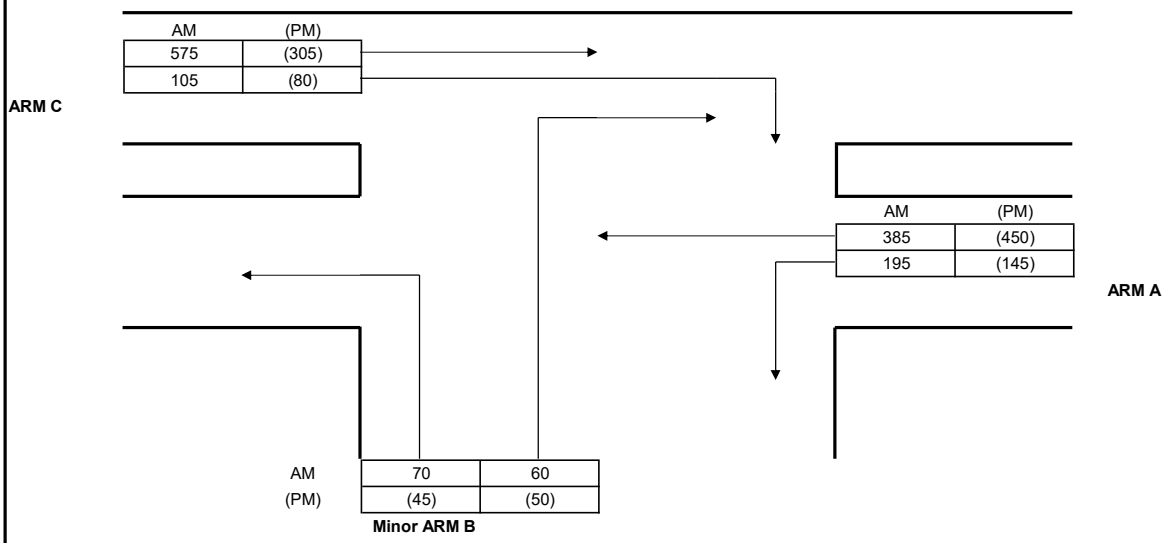
Capacity of combined streams
- in accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

'SW 12A\20241224 WSW_12A_Calculation_Sensitivity_MP7&8,NSW8&9\Junction Calculation\[J06_P-Castle_Peak_Road_Tam_Mi-Yau_Pok_Road.xlsm]2034D

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Tam Mi / Kam Pok Road (G)			Ref. No.:	2034D
Scheme:	Design (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Tam Mi				
ARM B:	Kam Pok Road				
ARM C:	Castle Peak Road - Tam Mi				



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
	Vl(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)		575	305
	q(c-b)		105	80
	q(a-b)		195	145
	q(a-c)		385	450
	q(b-a)		60	50
	q(b-c)		70	45
	f		0.54	0.47
		Factor		
CAPACITIES	Q(b-a)	1	308	346
	Q(b-c)	1	570	559
	Q(c-b)	1	540	536
	Q(b-ac)	1	410	422
RFC's	b-a		0.195	0.145
	b-c		0.123	0.081
	c-b		0.194	0.149
	b-ac		0.317	0.225
Worst RFC			**0.317**	**0.225**

Where Vl 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(Vl(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

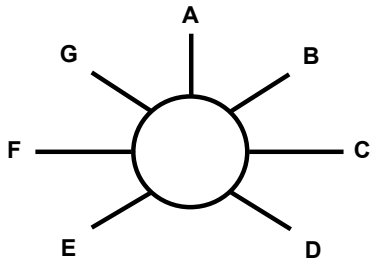
Capacity of combined streams
- in accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Fairview Park Interchange (H)			Ref. No.:	2034D
Scheme:	Design (Under Improvement in Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	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	14.00	32	25	142	35	0.35
B	5.50	13.00	30	22	142	35	0.40
C	5.50	11.20	60	23	142	30	0.15
D	6.75	11.70	13	25	142	25	0.61
E	6.75	11.70	27	22	142	35	0.29
F	6.50	11.00	15	27	142	40	0.48
G	5.50	10.60	25	22	142	30	0.33

AM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	70	5	295	45	175	625	20	2720	1235	670
B	15	30	70	5	165	485	5	3210	775	745
C	160	90	10	0	530	20	280	2635	1090	1350
D	40	10	45	60	215	225	45	3300	640	425
E	65	130	535	105	5	135	5	2640	980	1300
F	285	370	20	165	110	35	0	1740	985	1880
G	35	110	375	45	100	355	15	2355	1035	370

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	60	25	170	40	155	320	25	2105	795	1045
B	20	30	55	20	170	215	15	2215	525	685
C	195	75	20	0	550	5	225	1810	1070	930
D	25	25	45	60	155	200	40	2500	550	380
E	55	65	365	70	10	75	5	1845	645	1205
F	650	385	30	135	115	25	0	1440	1340	1050
G	40	80	245	55	50	210	10	2460	690	320

CALCULATIONS

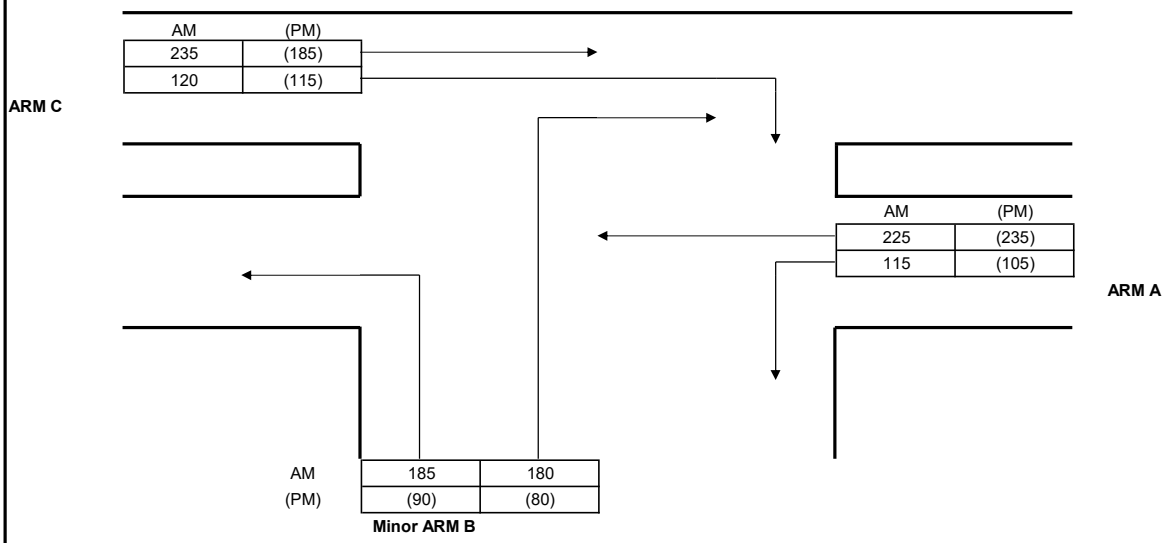
ARM	K	X_2	M	F	t_D	f_c	Q_E AM	Q_E PM	RFC AM	RFC PM
A	0.99	11.12	3640.95	3369	1.00	0.68	1516	1929	0.81	0.41
B	0.99	9.67	3640.95	2929	1.00	0.62	939	1544	0.83	0.34
C	1.01	9.87	3640.95	2991	1.00	0.62	1354	1872	0.81	0.57
D	1.03	8.98	3640.95	2721	1.00	0.59	805	1287	0.80	0.43
E	0.99	9.87	3640.95	2991	1.00	0.62	1324	1814	0.74	0.36
F	0.98	8.80	3640.95	2665	1.00	0.58	1620	1790	0.61	0.75
G	1.00	8.59	3640.95	2601	1.00	0.57	1263	1203	0.82	0.57
								Crtical Arm:	**B**	**F**
								RFC:	**0.83**	**0.75**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	MYC	Date:	Jan-25	Checked by:	CFC

Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Wo Shang Wai, Mai Po, Yuen Long, Lots 77 and 50 S.A in DD101				
Junction:	Castle Peak Road Mai Po / Mai Po South Road (I)			Ref. No.:	2034D
Scheme:	Design (Sensitivity Test 2)			Ref. No.:	
Year:	2034	Job No.:	CHK50800610	Rev.:	-
ARM A:	Castle Peak Road - Mai Po				
ARM B:	Mai Po South Road				
ARM C:	Castle Peak Road - Mai Po				



GEOMETRY					
Major road width	W	8.40	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)	4.20
Visibilities	Vr(b-a)	50	Calculated	D	0.91
	Vl(b-a)	30		E	0.99
	Vr(b-c)	50		F	0.99
	Vr(c-b)	50		Y	0.71

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		235	185
	q(c-b)		120	115
	q(a-b)		115	105
	q(a-c)		225	235
	q(b-a)		180	80
	q(b-c)		185	90
	f		0.51	0.53
		Factor		
CAPACITIES	Q(b-a)	1	434	442
	Q(b-c)	1	665	664
	Q(c-b)	1	648	648
	Q(b-ac)	1	527	537
RFC's	b-a		0.415	0.181
	b-c		0.278	0.136
	c-b		0.185	0.177
	b-ac		0.693	0.317
Worst RFC			**0.693**	**0.317**

Where Vl 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(Vl(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:	Jan-25	Checked by:	CFC