Appendix 7

Traffic Impact Assessment

Reference number CHK50868310/PTC/L2500853/sys

22/07/2025

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D. 104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

TRAFFIC IMPACT ASSESSMENT

SYSTRA MVA

CONTENTS

TABLES

DRAWINGS

1. INTRODUCTION

1.1 Background

1.1.1 The application site comprises lot No. 4822 in D.D. 104 and adjoining government Land, east Kam Pok Road, Mai Po, Yuen Long, as indicated in **Drawing 1.1**. It falls within an area zoned as "Residential (Group D)" on the Approved Mai Po and Fairview Park Outline Zoning Plan No. S/YL-MP/8.

1.1.2 The application site is the subject of a previous approved Section 16 planning application (No. A/YL-MP/287) for a residential development of 65 houses (Approved Scheme). The Applicant proposes to increase its domestic plot ratio from 0.2 to 1.5. Under the current scheme, the proposed development will provide 5 medium-rise residential blocks with total 1,303 units, a 6-classroom kindergarten and a Neighbourhood Elderly Centre ("NEC").

1.1.3 MVA Hong Kong Limited has been commissioned by the Applicant to carry out a traffic impact assessment to assess the traffic impact for the proposed residential development to support this rezoning application.

1.2 Study Objective

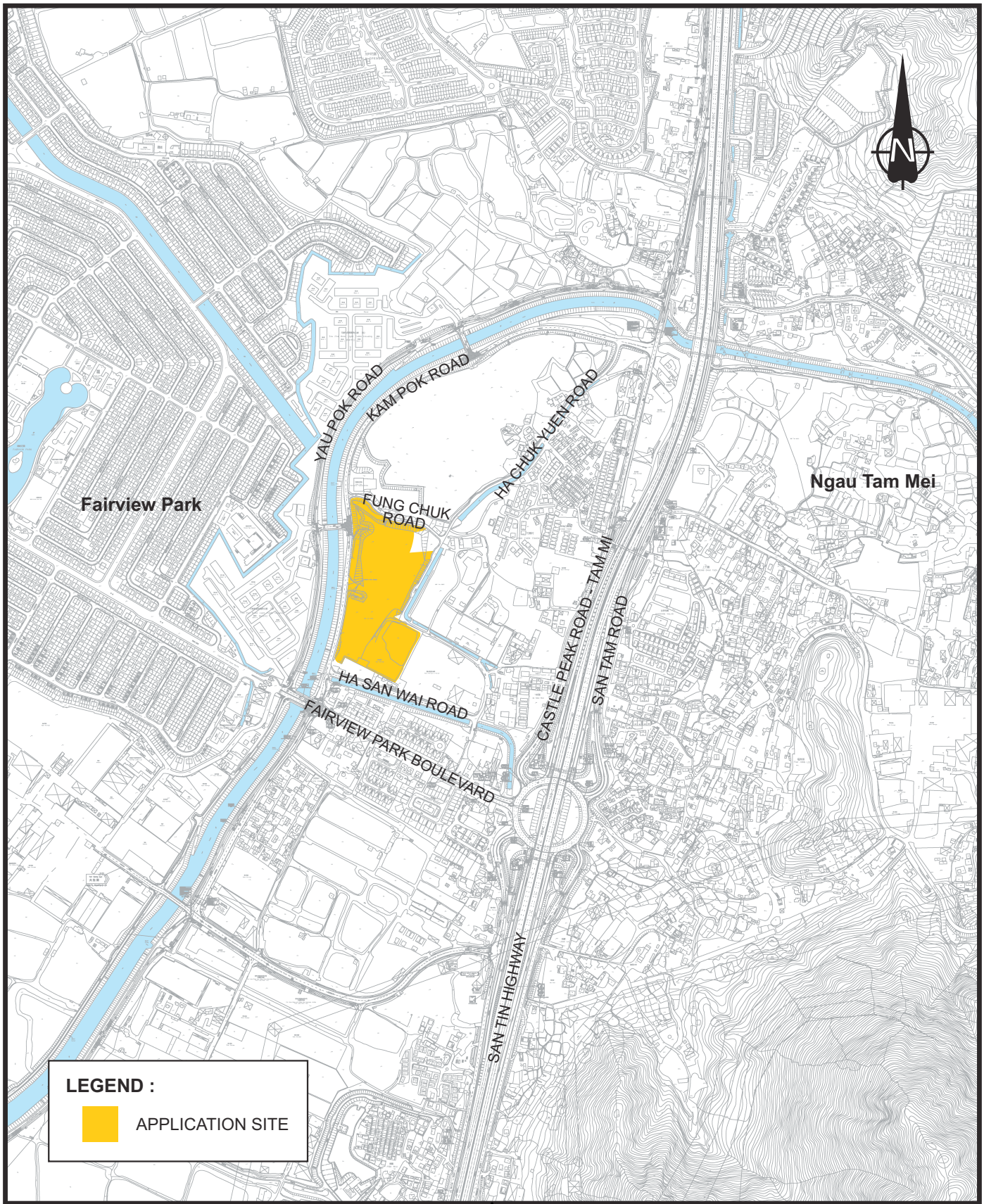
1.2.1 The objectives of this study are summarised as follows:

- review the current traffic condition and circulation pattern in the adjacent local road network;
- review the proposed development schedule;
- produce future traffic forecasts on the adjacent local road network with considerations of the planned developments in the vicinity; and
- investigate the traffic impact on the adjacent local road network with operation of the proposed development at Design Year, including the cumulative traffic impact induced by the proposed/potential residential developments in the locality.

1.3 Report Structure

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

- **Chapter 2** – Proposed Development, presents the development parameters and the internal transport provisions of the proposed scheme;
- **Chapter 3** – Traffic Context, describes the current traffic condition in the vicinity;
- **Chapter 4** – Traffic Forecasting, describes the methodology of traffic forecasting exercise and presents the results;
- **Chapter 5** – Traffic Impact Assessment, presents the assessment findings of the anticipated traffic condition upon occupation of the proposed development, and suggests, if necessary, improvement measures to alleviate the foreseeable traffic problem;
- **Chapter 6** –Conclusion, summarises the study findings and presents the conclusion accordingly.



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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

SITE LOCATION

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2. PROPOSED DEVELOPMENT

2.1 Site Location

2.1.1 As indicated in **Drawing 1.1**, the application site is bounded by Kam Pok Road to its west, Fung Chuk Road to its north, Ha Chuk Yuen Road to its east and Ha San Wai Road to its south.

2.2 Development Parameters

2.2.1 The application site has a total land area of about 37,870m^2. It will be developed into a medium-rise residential development of about 1,303 units with an average flat size of about 43.6m^2. Comparison on the key development parameters between the approved and proposed schemes are summarized in **Table 2.1**. The proposed scheme is anticipated to complete in year 2031. The Master Layout Plan (MLP) is illustrated in **Drawing 2.1** respectively.

Table 2.1 Key Development Parameters

Item	Approved Scheme (A/YL-MP/287)	Proposed Scheme
Domestic Plot Ratio	0.2	1.5
Domestic GFA	7,540.4m^2	56,805m^2
No. of Unit	65 house	1,303 flats
Average flat Size (GFA)	about 116 m^2	about 43.6 m^2
Kindergarten	-	a 6-classroom kindergarten
GIC	-	a NEC

2.3 Vehicular Access Arrangement

2.3.1 The vehicular access arrangements in the current proposed scheme basically follow the approved scheme and those under the present government lease of the application site. Two vehicular accesses are proposed for the proposed development. The vehicular access at Kam Pok Road is the main access for residential use. Whilst, the second vehicular access at Ha Chuk Yuen Road is reserved for the proposed kindergarten and NEC. The location of these two proposed vehicular accesses are illustrated in **Drawing No. 2.1**.

2.4 Internal Transport Facility

2.4.1 The proposed development would be provided with internal transport facilities in accordance with the latest Hong Kong Planning Standards and Guidelines (HKPSG). The proposed provisions are summarised in **Table 2.2**.

Table 2.2 Proposed Internal Transport Facility Provisions

Item	High-end of HKPSG Requirements					Parameters	Provision (nos.)
Residential *Development*							
Private Car	GPS(1)	R1(1)		R2(1)	R3(1)		
	1 space per 4 units	FS ≤ 40m^2	0.5	1	1.1	407 units	56
		40m^2<FS≤70m^2	1.2			896 units	296
Visitor Parking	5 spaces for each block with more than 75 units					5 blocks	25
						Total	377 (2)
Motorcycle Parking	1 space per 100 units					1,303 units	14
HGV Loading/ Unloading Bays	1 bay per residential block					5 blocks	5
Bicycle Parking Space	1 space for every 15 flats with flat size smaller than 70 sqm(3)					1,303 units	87
Kindergarten							
Private Car	1 space per 4 classrooms					6 classrooms	2
Lay-by for taxis and Private Car	1 for every 5 classrooms					6 classrooms	2
Lay-by for school buses	5 lay-bys of size 3m x 7m for mini-bus/nanny van					-	5 lay-bys of size 3m x 7m

Remarks:

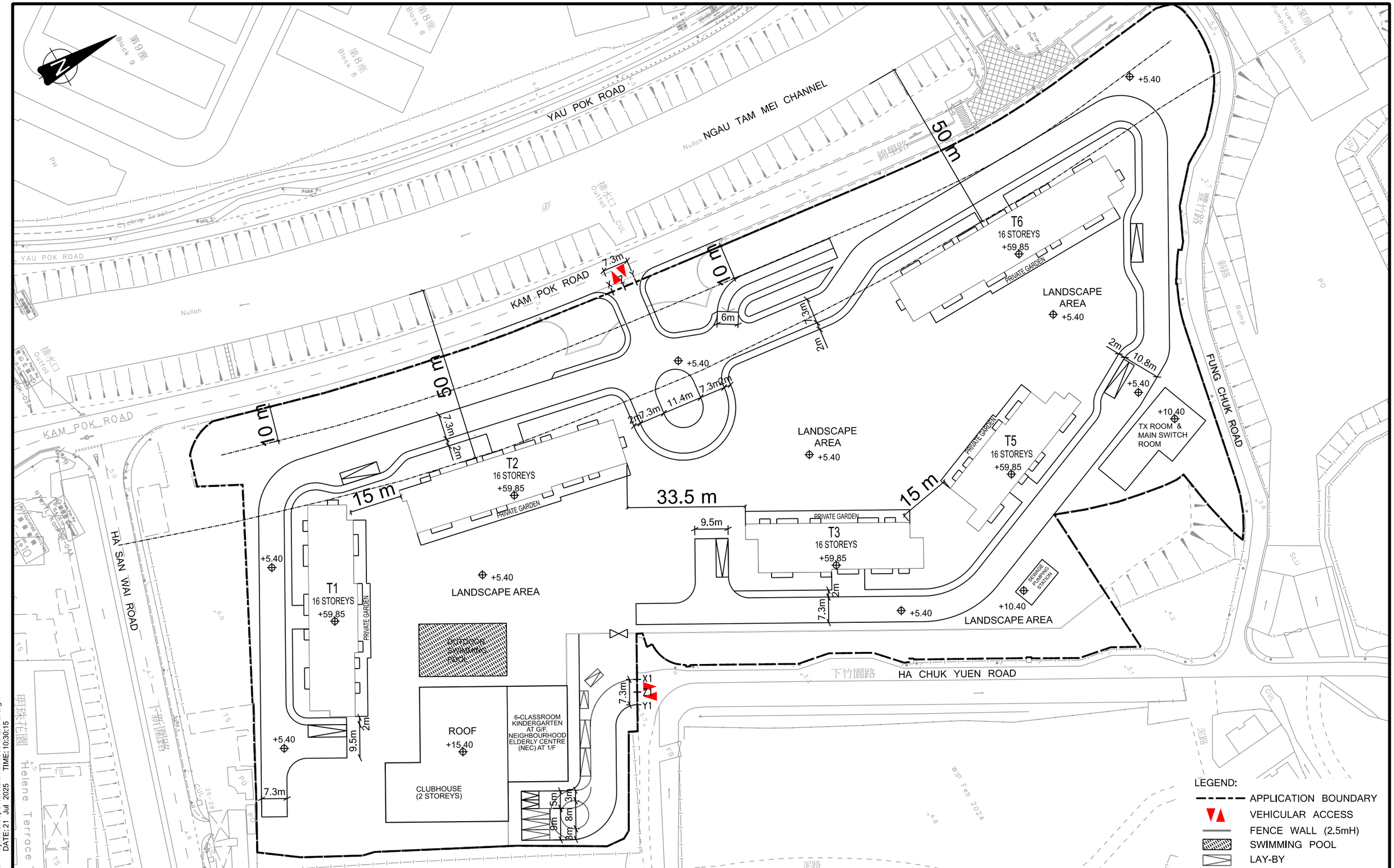
(1) Parking Requirement = GPS x R1 x R2 x R3, where GPS = 1 car space per 4 flats, R1=1.2 for flat size 40m^2<FS≤70m^2, R2=1 for the site outside a 500-radius of rail station, R3=1.1 for domestic plot ratio 1<PR≤2.

(2) Minimum 5 accessible parking spaces will be reserved for persons with disabilities with reference to HKPSG (at least 1 space for visitor parking).

(3) For development within a 0.5km-2km radius of a rail station.

2.4.2 The proposed NEC would mainly serve local residents. Nil parking provision is proposed for NEC with reference to the recently agreed rezoning application (No. Y/YL-MP/10) nearby.

2.4.3 For residential carpark, the car parking would be located in the basement, whilst the loading/unloading bays would be located on the ground floor level along 7.3m wide internal driveway. For kindergarten carpark, it would be located at the southeastern end of the site on ground floor level.



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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D. 104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

MASTER LAYOUT PLAN

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3. TRAFFIC CONTEXT

3.1 Surrounding Road Network

3.1.1 The development traffic from San Tin Highway would access the site via Castle Peak Road – Tam Mi Section and Kam Pok Road. The major ingress and egress routes of the application site are illustrated in **Drawing 3.1**.

3.1.2 Kam Pok Road is a standard single-two lane carriageway of 7.3m wide with a 2m wide footpath along its eastern side. It mainly serves the local developments in the vicinity.

3.1.3 Ha Chuk Yuen Road and Fung Chuk Road are single track access roads. Vehicles exceeding 7m in length are prohibited from accessing these roads.

3.1.4 Fairview Park Boulevard is a dual 2-lane carriageway. It connects the traffic from San Tin Highway to the local developments including Fairview Park.

3.2 Existing Traffic Condition

3.2.1 A total of six local junctions and three road links have been identified with reference to the major ingress and egress routes of the proposed development for assessment purpose. The key local junctions are listed in **Table 3.1**, whilst their locations are indicated in **Drawing 3.2**.

Table 3.1 Identified Local Key Junctions and Road Links

Ref.(1)	Junction	Type	Drawing No.
Junction			
J1	Fairview Park Interchange	Roundabout	3.3
J2	Fairview Park Boulevard / Kam Pok Road	Signal	3.4
J3	Kam Pok Road / Vehicular Bridge (South)	Signal	3.5
J4	Kam Pok Road / Vehicular Bridge (North)	Signal	3.6
J5	Kam Pok Road / Ha Chuk Yuen Road	Priority	3.7
J6	Castle Peak Road / Kam Pok Road	Priority	3.7
Road Link			
L1	Castle Peak Road – Tam Mi	Single-2	3.2
L2	Fairview Park Boulevard	Dual-2	3.2
L3	Kam Pok Road	Single 2	3.2

Remark: (1) Locations refer to **Drawing 3.2**.

Traffic Surveys

3.2.2 A manual classified traffic survey was conducted at the identified junctions and road links to establish the current traffic condition in the vicinity of the site. The survey was carried out during 07:30-09:30 and 17:00-19:00 in the morning and evening peak hour periods on a typical weekday in April 2025.

3.2.3 The results of the survey have indicated that the morning and evening peak hours occur during 08:00 – 09:00 and 17:45 – 18:45 respectively. The observed weekday peak hour traffic flows are shown in **Drawing 3.8.**

Junction Operational Performance

3.2.4 Junction capacity assessments have been conducted to evaluate the current operational performance of the identified junctions. The assessment results are summarised in **Table 3.2**.

Table 3.2 Current Junction Operational Performance

Ref. (1)	Junction	Type	RC/RFC (2)	
			AM Peak	PM Peak
J1	Fairview Park Interchange	Roundabout	0.56	0.55
J2	Fairview Park Boulevard / Kam Pok Road	Signal	85%	69%
J3	Kam Pok Road / Vehicular Bridge (South)	Signal	>100%	>100%
J4	Kam Pok Road / Vehicular Bridge (North)	Signal	>100%	>100%
J5	Kam Pok Road / Ha Chuk Yuen Road	Priority	0.05	0.05
J6	Castle Peak Road / Kam Pok Road	Priority	0.13	0.12

Remarks: (1) Refer to **Drawing 3.2** for junction locations.
(2) RC = reserved capacity for signal junction, RFC = ratio-of-flow to capacity for roundabout/priority junction.

3.2.5 The assessment results in **Table 3.2** indicated that all the identified key junctions are currently operating within capacities during peak hours.

Road Link Operational Performance

3.2.6 Besides, road link assessments have also been conducted to evaluate the current operational performance of the identified links. The Volume to Capacity (V/C) ratios of each identified road links have been evaluated and the results are summarised in **Table 3.3**.

Table 3.3 Current Road Link Operational Performance

Ref.(1)	Road Link	Dir	Link Capacity (pcu/hr)	Observed Flows (pcu/hr)		V/C Ratio	
				AM	PM	AM	PM
L1	Castle Peak Road – Tam Mi	Two-way	2,125(2)	895	695	0.42	0.33
L2	Fairview Park Boulevard	EB	2,600(3)	870	675	0.33	0.26
		WB	2,600(3)	575	865	0.22	0.33
L3	Kam Pok Road	Two-way	1,800(4)	145	135	0.08	0.08

Remarks: (1) Refer to **Drawing 3.2**.
(2) Road capacity for single 2-lane rural road, with consideration of roadside activities.
(3) Road capacity for dual-2 lane local distributor.
(4) Road capacity for single-2 lane local distributor.

3.2.7 The assessment results in **Table 3.3** indicated that all the identified sections are currently operating within capacities.

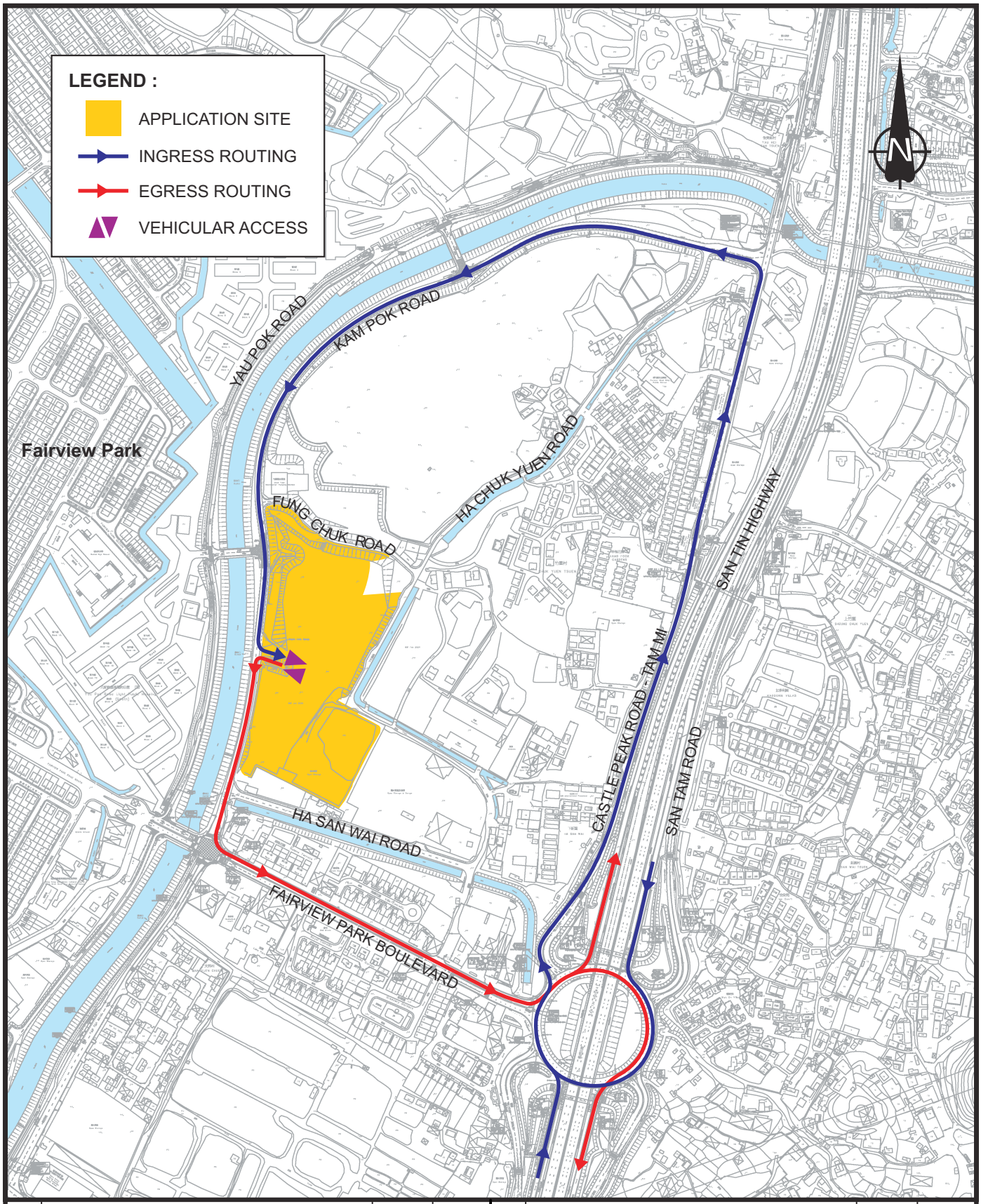
3.3 Existing Public Transport Services

3.3.1 Franchised bus and minibus are the major public transport services in the vicinity of the site. The nearby public transport facilities of the site are indicated in **Drawing 3.9**, whilst the details and servicing schedules are summarised in **Table 3.4**.

Table 3.4 Existing Public Transport Services

Route	Origin/Destination	Frequency (min.)	Remark
Franchised Bus			
76[(1)]	Yau Pok Road Public Housing (South) Terminus <–> Sheung Shui Station (Choi Yuen Road)	30	Circular Route
76K	Ching Ho Estate <–> Long Ping Estate	20-30	-
268[(1)]	Yau Pok Road Public Housing (South) Terminus <–> Pat Heung Road	30-35	
976	Lok Ma Chau (San Tin) <–> Sai Wan Ho	-	Monday to Friday (except public holidays); From Lok Ma Chau (San Tin): 06:25, 07:15, 07:45 From Sai Wan Ho: 18:10, 18:40, 19:10
976A	Lok Ma Chau (San Tin) <–> Siu Sai Wan (Island Resort)	-	Monday to Friday (except public holidays); From Lok Ma Chau (San Tin): 06:55 From Siu Sai Wan (Island Resort): 17:30
Green Minibus			
36	Yuen Long (Fook Hong St) <–> Tai Sang Wai	15-20	-
36A[(1)]	Yuen Long (Fook Hong Street) <–> Yau Pok Road Light Public Housing	20	Evening Departures (omits Kik Yeung Road);
37	Yuen Long (Fook Hong St) <–> Yau Tam Mei	15-20	-
38	Yuen Long (Fook Hong St) <–> Tai Sang Wai (W)	15-20	-
75	Yuen Long (Fook Hong Street) <–> Lok Ma Chau Spur Line Public Transport Interchange	15-30	-
76	Yuen Long (Fook Hong Street) <–> Siu Hum Tsuen	15-20	-

Remark: (1) The routes were introduced for temporary Light Public Housing at Yau Pok Road.



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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

MAJOR INGRESS AND EGRESS ROUTES

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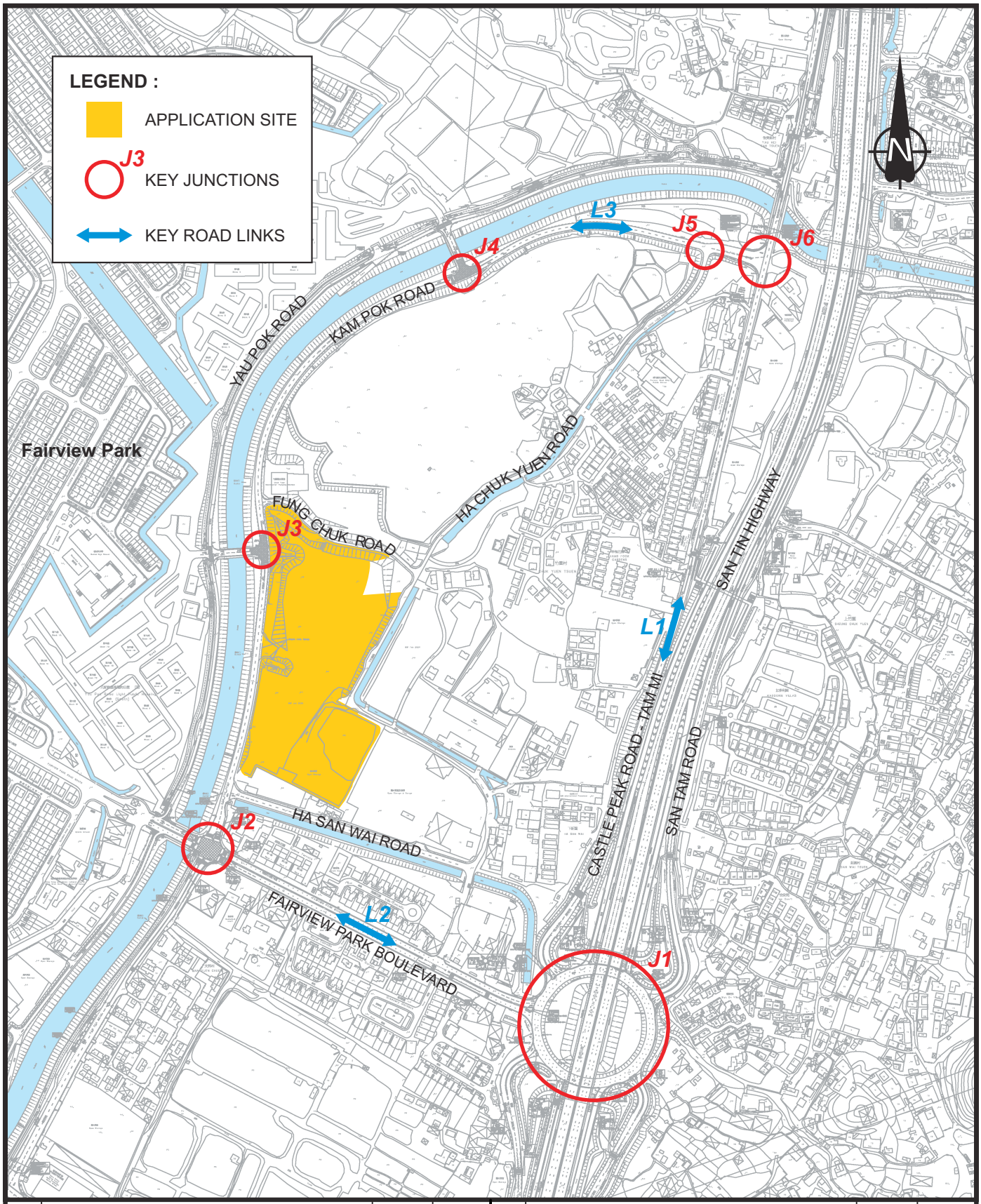

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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

IDENTIFIED KEY JUNCTIONS AND ROAD LINKS

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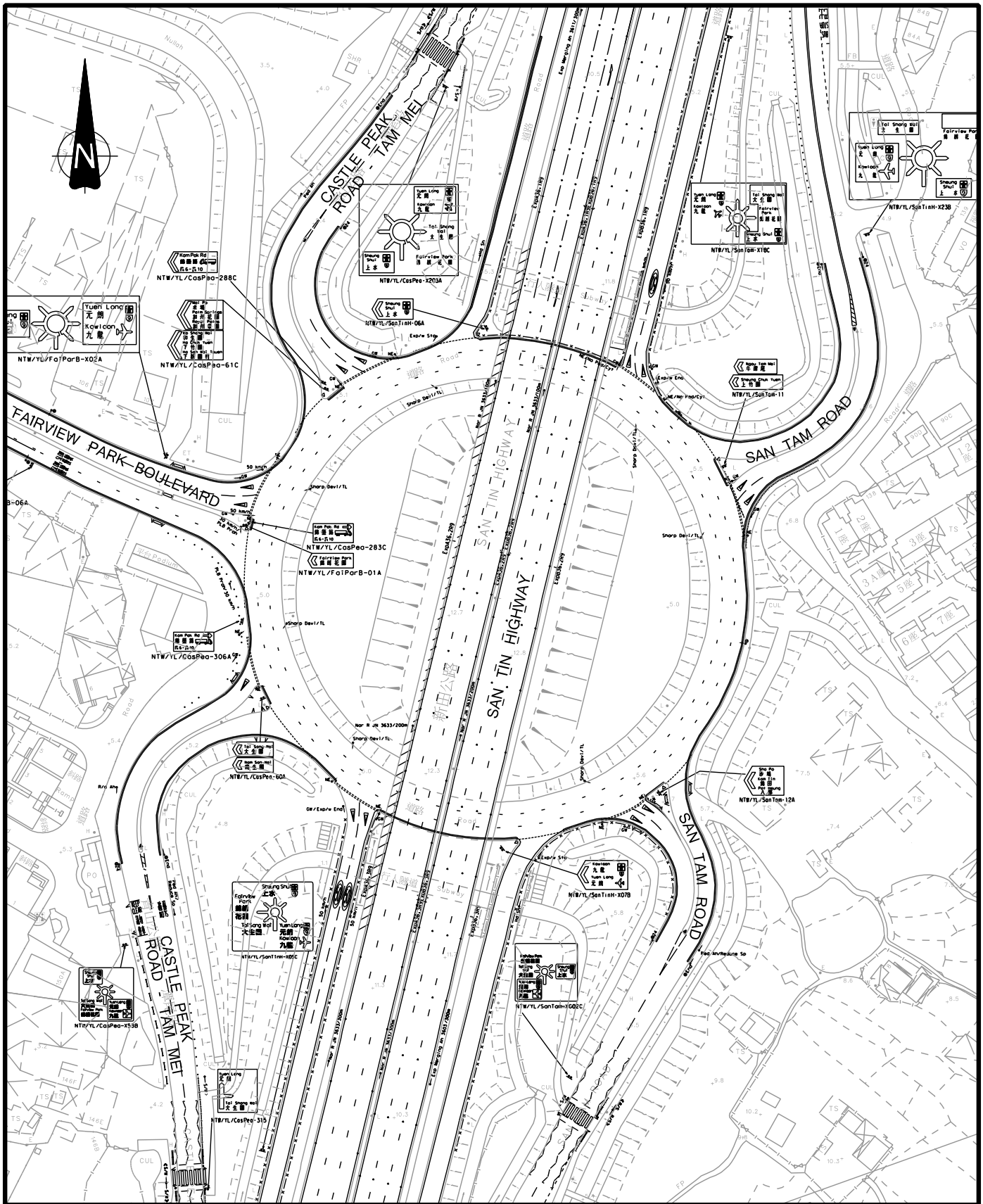

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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D. 104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

EXISTING JUNCTION LAYOUT OF FAIRVIEW PARK INTERCHANGE (J1)

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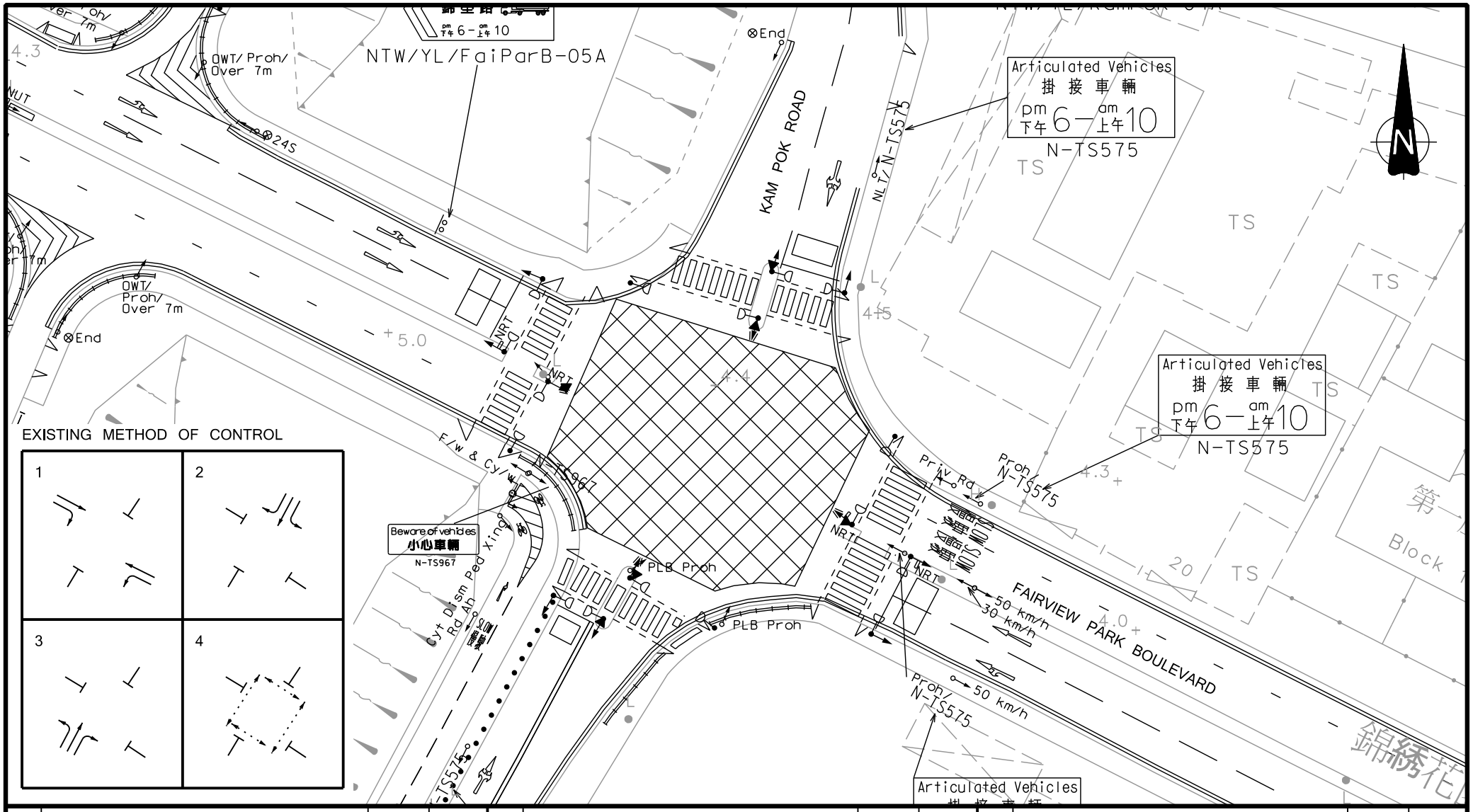

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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT
AT LOT NO. 4822 IN D.D. 104 AND
ADJOINING GOVERNMENT LAND,
EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

EXISTING JUNCTION LAYOUT OF KAM POK ROAD / FAIRVIEW PARK BOULEVARD (J2)

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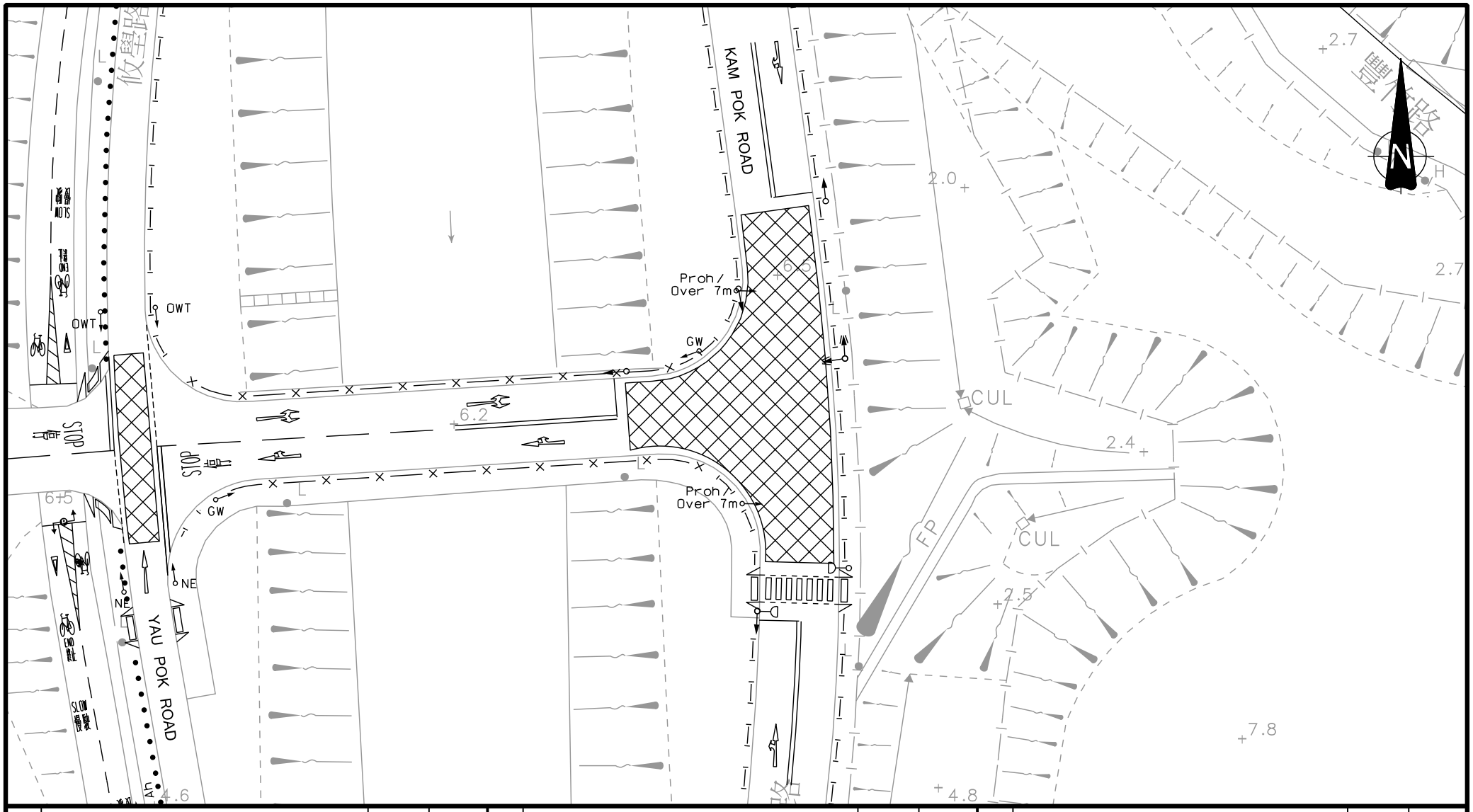

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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT
AT LOT NO. 4822 IN D.D. 104 AND ADJOINING
GOVERNMENT LAND, EAST OF KAM POK ROAD,
MAI PO, YUEN LONG

Drawing Title

EXISTING JUNCTION LAYOUT OF KAM POK ROAD / VEHICULAR BRIDGE - SOUTH (J3)

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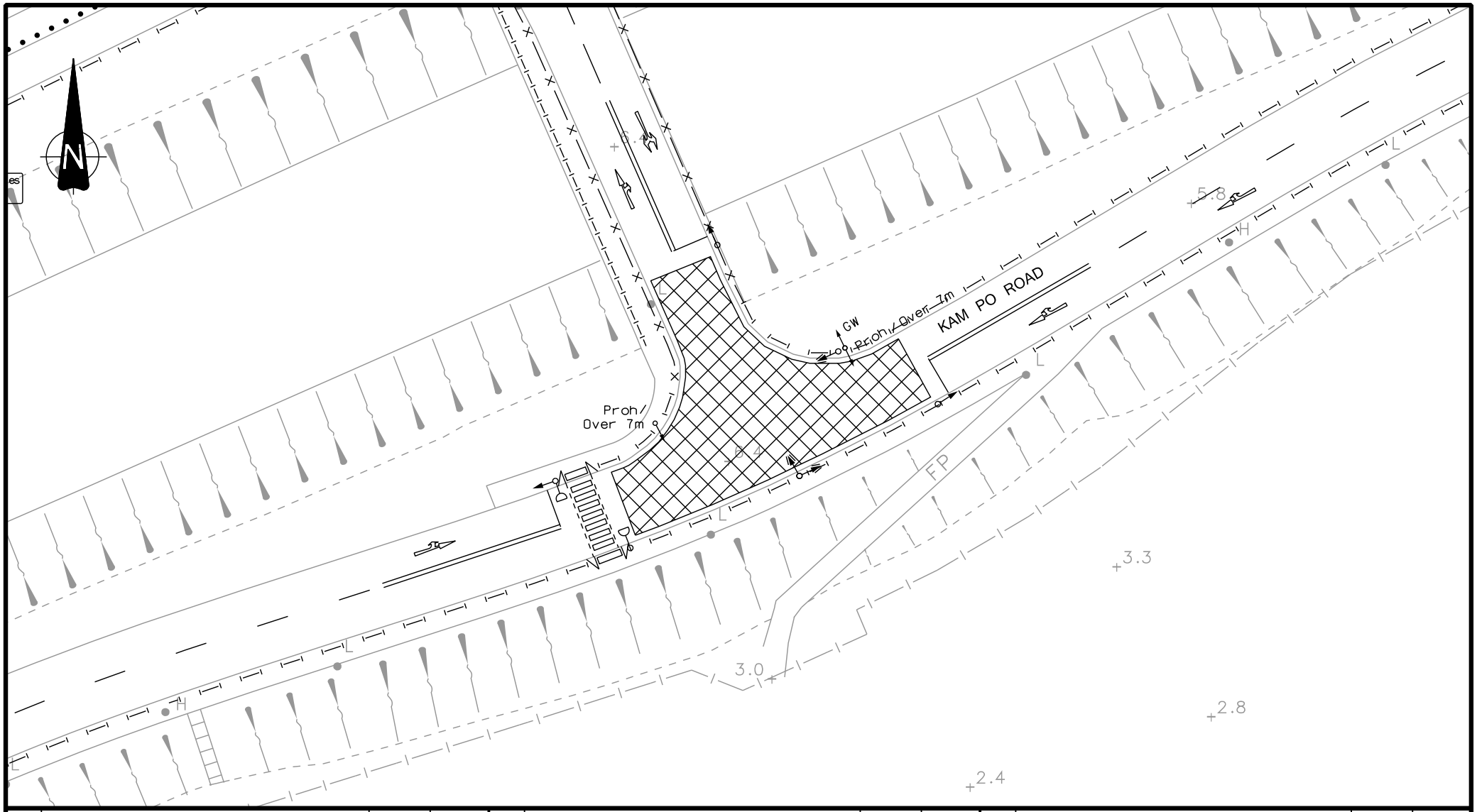

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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT
LOT NO. 4822 IN D.D. 104 AND
ADJOINING GOVERNMENT LAND,
EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

EXISTING JUNCTION LAYOUT OF KAM PO ROAD / VEHICULAR BRDIGE - NORTH (J4)

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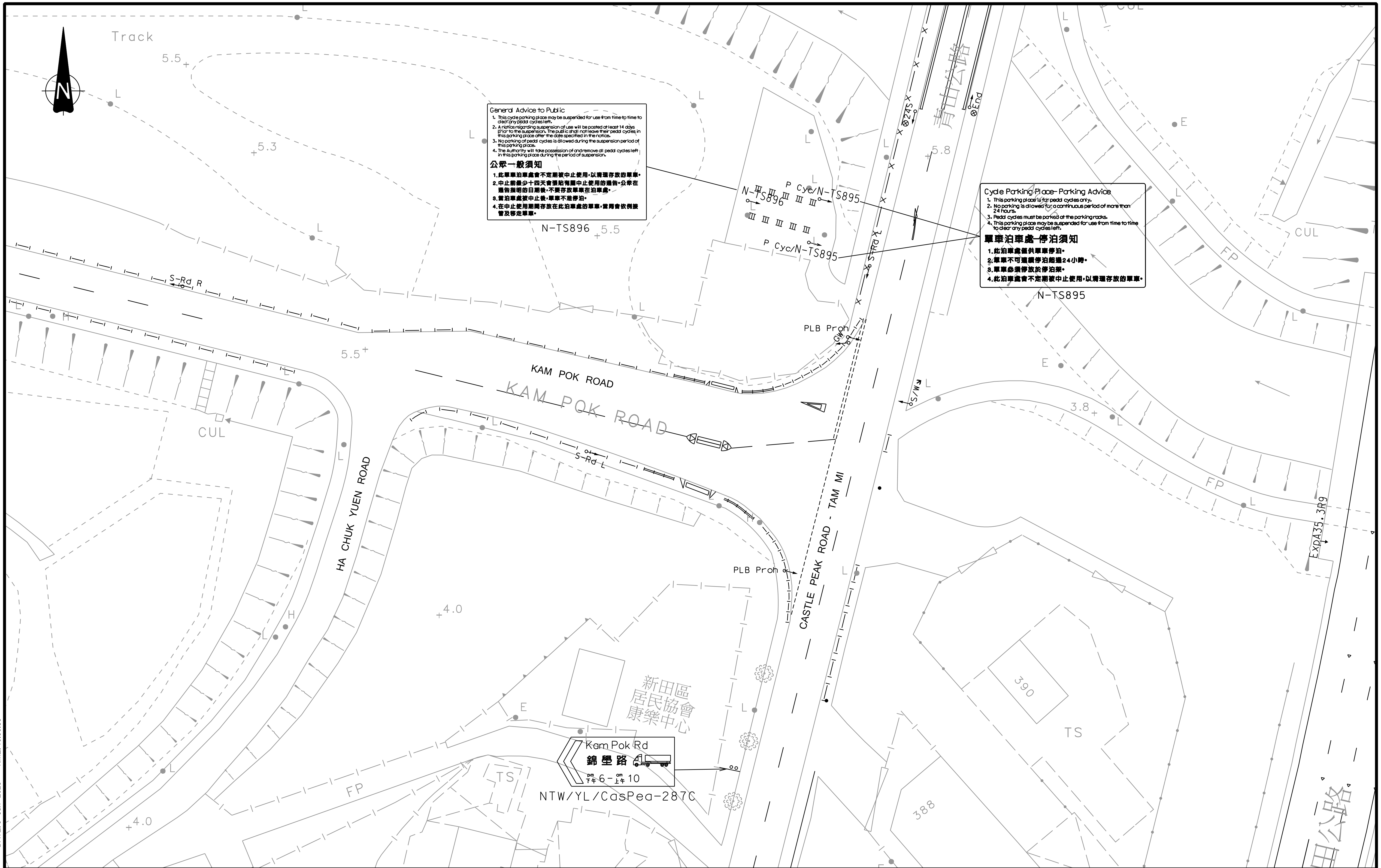

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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT
LOT NO. 4822 IN D.D. 104 AND ADJOINING GOVERNMENT LAND,
EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

EXISTING JUNCTION LAYOUT OF
KAM POK ROAD / HA CHUK YUEN ROAD (J5)
AND KAM POK ROAD / CASTLE PEAK ROAD - TAM MI (J6)

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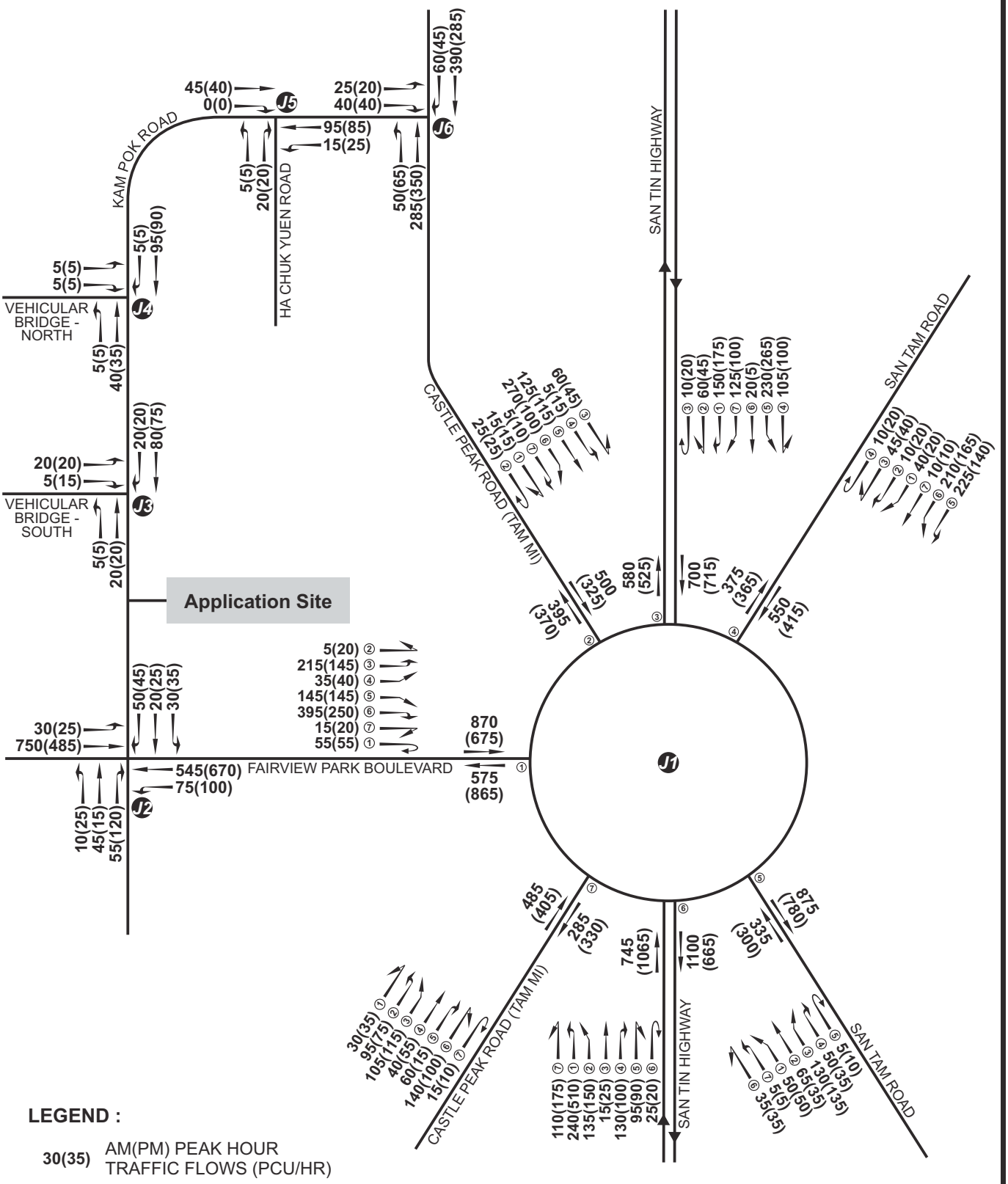

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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

YEAR 2025 OBSERVED TRAFFIC FLOWS

SYSTRA MVA

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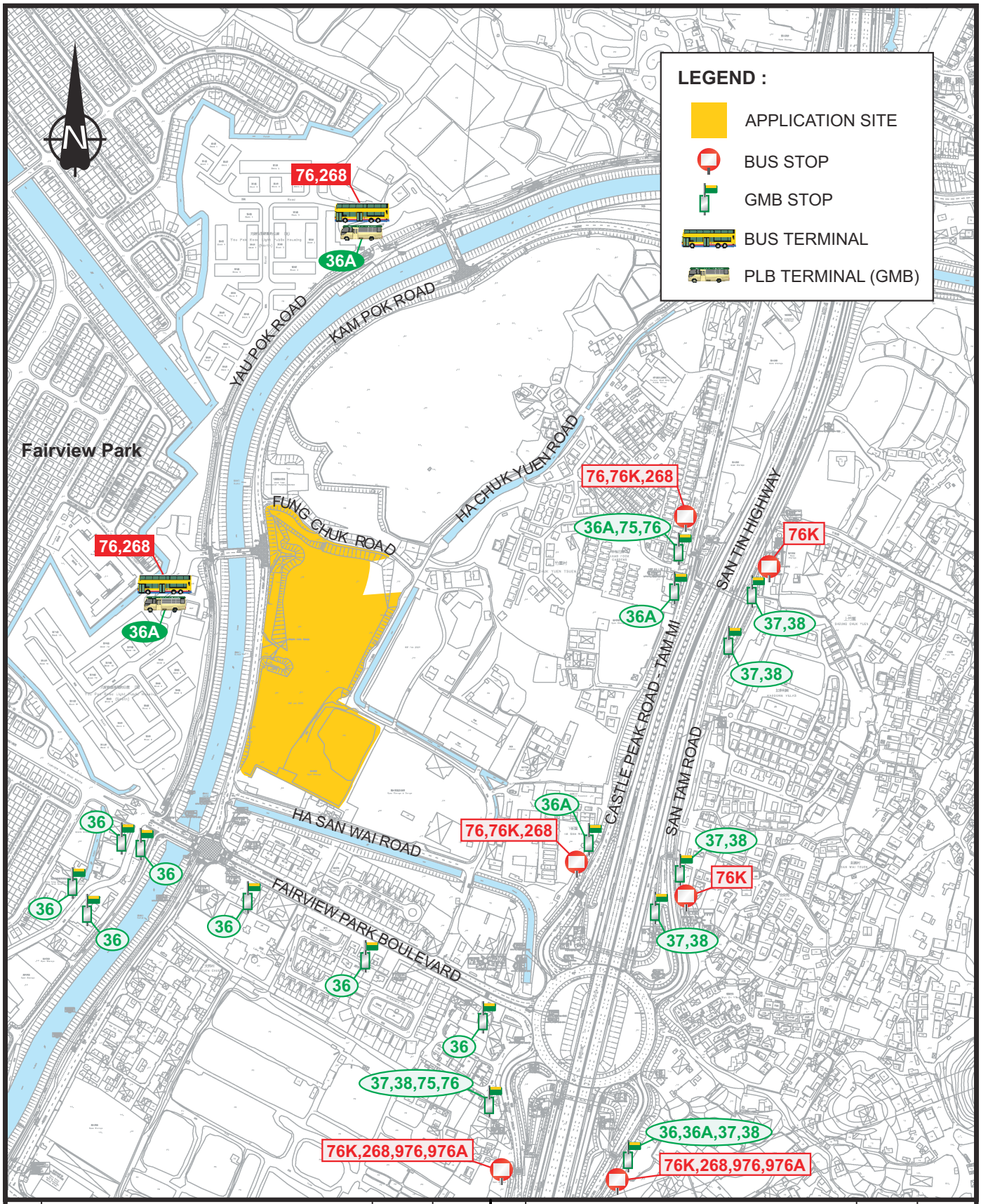

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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

EXISTING PUBLIC TRANSPORT SERVICES

Designed	Checked	Scale	Date	Drawing No.	Rev.
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4. TRAFFIC FORECASTING

4.1 Design Year

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

4.2 Traffic forecast

Adjacent Planned/Committed Developments

4.2.1 According to the latest available information from public domain, there are planned developments located in the vicinity of the site that are expected to be completed by year 2034. The estimated trips of these committed developments are listed in **Table 4.1.**

Table 4.1 Estimated Trip Generations of Planned/Committed Developments

Ref. (1)	Planned/Committed Developments	Key Development Parameters
1	Tung Shing Lei Development (A/YL-NSW/274)	• 1,518 residential units (average flat size = about 46 m^2)
2	Sha Po North Phase 2 Residential Development (A/YL-KTN/663)	• 1,154 residential units (average flat size = about 42.57m^2)
3	Residential Development at west of Castle Peak Road - Tam Mi, Yuen Long (Y/YL-NSW/9)	• 3,115 residential units • 2900m^2 retail GFA • 1 primary school, 1 kindergarten • Soy Factory
4	Kam Tin South Priority Sites Development	• 9,060 units of public housing (average flat size = about 50 m^2) • 2,200 units of private housing (average flat size = about 70 m^2)
5	Residential Development at west of Castle Peak Road - Tam Mi, Yuen Long (Y/YL-NSW/8)	• 6,825 residential units • 3950m^2 retail GFA • 2 GIC facilities and 1 kindergarten
6	Tung Shing Lei Land Sharing Pilot Scheme Development	• 1,261 units of private housing (average flat size = about 40 m^2) • 1,868 units of public housing (average flat size = about 50 m^2)
7	Sha Po North Comprehensive Residential Development (A/YL-KTN/604)	• 3,891 residential units (average flat size = about 49 m^2) • 5,500 m^2 retail GFA
8	Sha Po Public Housing Development	• 16,300 Flats • 20,668 m^2 retail GFA • 5 Kindergarten and 1 Primary School • 38,384 m^2 Welfare Facilities • 19,267 m^2 GIC
9	Kam Tin North Residential Development (A/YL-KTN/791)	• 330 flats and 87 houses (average flat/house size = about 38.73 m^2)
10	Residential Development at Sha Po South (A/YL-KTN/964)	• 615 residential units (average flat size = about 38 m^2)
11	Development at Wing Kei Tsuen, Nam Sang Wai, Yuen Long (Y/YL-NSW/7)	• 1,997 residential units • (average flat size = 48.9 m^2)
12	Residential Development at Tung Shing Lei, Nam Sang Wai, Yuen Long (A/YL-NSW/293)	• 3,566 Flats • 9 Houses • 5,358 Non Domestic GFA
13	Comprehensive Development Scheme at north of Kam Pok Road East, Pok Wai, Yuen Long (A/YL-NSW/314)	• 90 residential units

Ref. (1)	Planned/Committed Developments	Key Development Parameters
14	Ngau Tam Mei Area New Development Area(1)	• Population: 9,600 – 10,800 • No. of Flats: 3,600 – 3,900
15	Social Welfare Facilities at Siu Sheung Road, Nam Sang Wai, Yuen Long (A/YL-NSW/303)	• 127 beds for Residential Care Home for the Elderly • 100 beds for senior hostel
16	Social Welfare Facilities at Siu Sheung Road, Nam Sang Wai, Yuen Long (A/YL-NSW/292)	• 9,180 m^2 GFA
17	Residential Care Homes for the Elderly at 81 San Tam Road, Ngau Tam Mei, Yuen Long (Y/YL-NTM/9)	• 142 beds (5,400 m^2 GFA)
18	Residential Development at Wo Shang Wai, Mai Po, Yuen Long (A/YL-MP/344)	• 789 houses
19	Residential Development at Yau Pok Road, Yuen Long (Y/YL-MP/3)(2)	• 106 houses
22	Proposed Residential Development at Kam Pok Road, Yuen Long (Y/YL-MP/10)	• 2,322 residential units (average flat size = about 42.4 m^2) • 2,363m^2 retail GFA • 1 kindergarten and 1 NEC

Remarks:

(1) The Ngau Tam Mei New Development Area anticipates a new population of about 32,000 to 36,000, accommodated within about 12,000 to 13,000 new residential units. According to LegCo paper No. CB(1) 1487/2024(04), it is noted that the first population intake will take place gradually from 2034 to tie in with the commissioning of the NOL Main Line. Therefore, it is assumed that 30% of the Comprehensive Residential Neighbourhood in close vicinity of the planned Ngau Tam Mei Station, will be in place in year 2034.

(2) The site is currently occupied by the existing temporary Light Public Housing at Yau Pok Road. The surveyed trip generations of Light Public Housing were separately excluded from the traffic forecast.

Proposed Development Flows

4.2.2 The proposed development will provide 1,303 units with an average flat size of about 43.6m^2. In order to estimate the trips of the proposed development, reference has been made to the trip rates in Transport Planning Design Manual (TPDM) published by the Transport Department (TD). **Table 4.2** summarises the estimated trip generations of the proposed scheme against the approved scheme.

Table 4.2 Estimated Trip Generation of Proposed Development

			AM Peak		PM Peak	
			Gen	Attr	Gen	Attr
Approved Scheme	House Development (65 houses) (1)		15	9	9	11
Proposed Scheme	Residential	Trip Rates (pcu/hr/flat)(2)	0.0718	0.0425	0.0286	0.037
		No. of Units	1,303			
		Proposed Development (pcu/hr)	94	55	37	48
	Kindergarten (pcu/hr) (3)		25	25	5	5
	Neighbourhood Elderly Centre (pcu/hr) (3)		10	10	10	10
	Shuttle bus Service(4)		22	22	22	22
Total			151	112	74	85
Difference (Proposed Scheme – Approved Scheme)			+136	+103	+65	+74

Remarks: (1) Trip generation extracted from the TIA report for the approved scheme.

(2) Mean value of trip rates for private housing with average flat size of 60 m^2 in TPDM is adopted.

(3) Nominal Trips.

(4) Shuttle bus service is proposed to serve the proposed development. Details of the shuttle bus trips refers to **Section 4.2.4**.

4.2.3 Compared to the approved scheme, the proposed scheme would generate an additional two-way trips of 239 pcu/hr and 139 pcu/hr during the morning and evening peak hour periods respectively as indicated in **Table 4.2.**

Trips of Proposed Shuttle Bus Service

4.2.4 The application site will be located about 1 km radius of future Ngau Tam Mei Station upon completion of Northern Link (NOL) project in year 2034. To meet the public transport demand arising from the proposed development, it is proposed to provide a circular shuttle bus route travelling between the application site and the future public transport interchange near Ngau Tam Mei Station.

4.2.5 With reference to Travel Characteristics Survey 2011 (TCS 2011) published by TD, the public transport demand of the proposed development during peak hour has been derived as shown in **Table 4.3.**

Table 4.3 Anticipated Transport Demand of Proposed development

Location	Estimated Population(1) [i]	Average daily mechanized trips per person(2) [ii]	Peak hour factor(3) [iii]	Major Public Transport Modal Share [iv] (4)	Peak hour transport demand (pax/hr) =[i] x [ii] x [iii] x [iv]
Proposed Development (1,303 units)	3,519	1.83	12%	82%	634

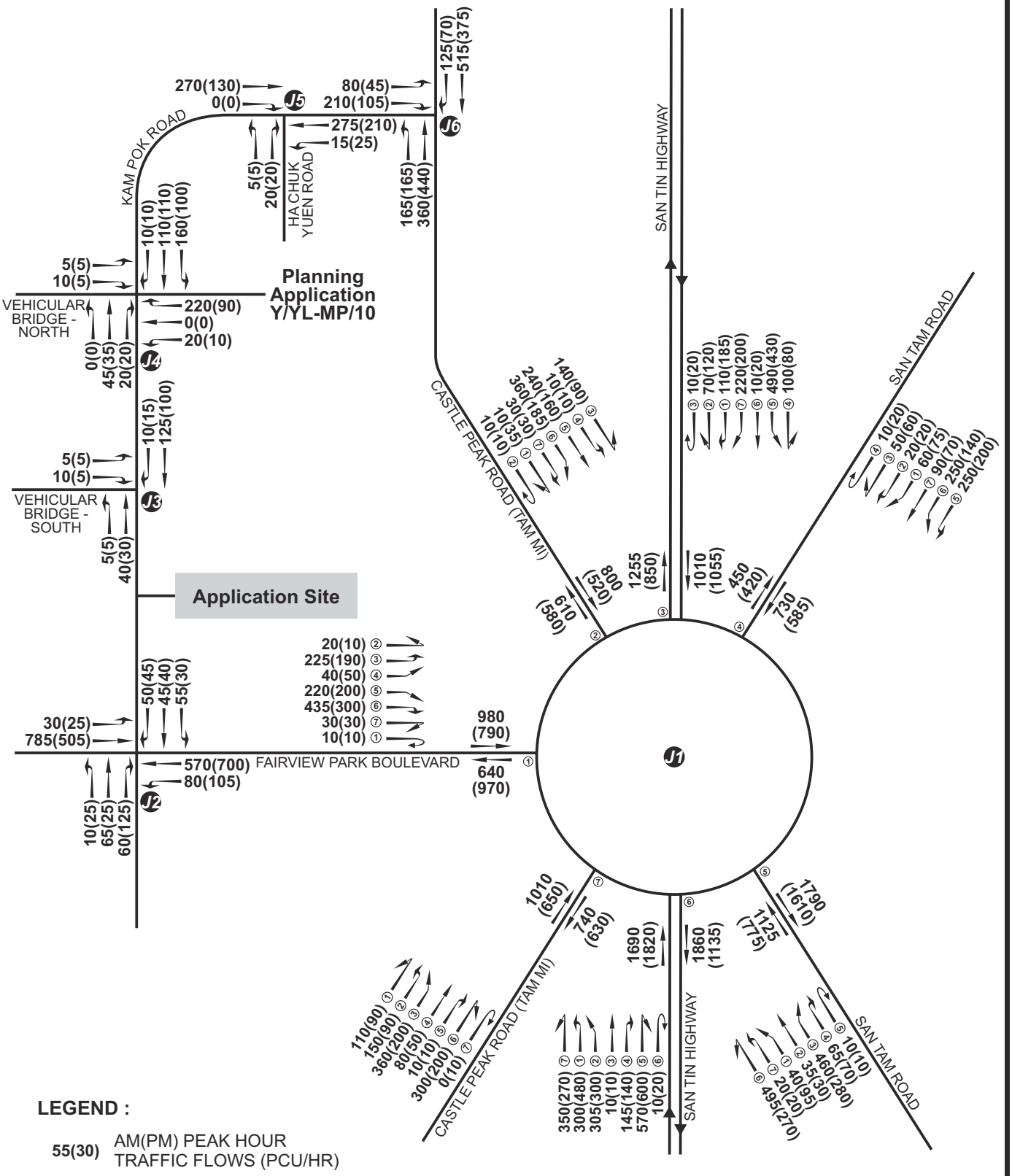
Remarks: (1) Adopting the average domestic household size of 2.7.
(2) Average daily mechanised trips per person as extracted from TCS 2011.
(3) Weekday morning peak hour factor for all merchandised trips of 20% as a conservative approach (with reference to TCS 2011) and peak direction split of 60% assumed (i.e. 1-way Peak hour factor = 20% x 60% = 12%).
(4) With reference to TCS 2011 Appendix Table A.3 for all transport modes excluding private car and taxi.

4.2.6 Based on the calculation in **Table 4.3**, it is anticipated that the public transport demand of the proposed development is 634 pax/hr during peak hour. By adopting the occupancy of 60 persons/coach, the proposed shuttle bus frequency is about 11 coach/hour (i.e. at approximate 5-minute headway) during peak hours. The proposed additional shuttle bus trips was included in the traffic forecast. The arrangement of the shuttle bus service is subject to the future application to TD and the future bus route plan in the area.

Year 2034 Traffic Forecast

4.2.7 The traffic forecast on critical links for design year 2034 has been reviewed with reference to the traffic forecasts in the TIA under the recently approved planning application Y/YL-MP/10. The adjacent planned developments as listed in **Table 4.1** and the approved scheme of the application site have also been considered in the traffic forecast. The 2034 reference traffic flows (with approved scheme) are shown in **Drawing 4.1**.

4.2.8 The net increase of the development trips due to proposed scheme as derived in **Table 4.2** are superimposed onto the year 2034 reference traffic flows, to produce the anticipated year 2034 design traffic flows. The net increase in the development flows between the approved and proposed schemes are presented in **Drawing 4.2** whilst the year 2034 design traffic flows (with proposed scheme) are shown in **Drawing 4.3**.



LEGEND :

55(30) AM(PM) PEAK HOUR TRAFFIC FLOWS (PCU/HR)

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

Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

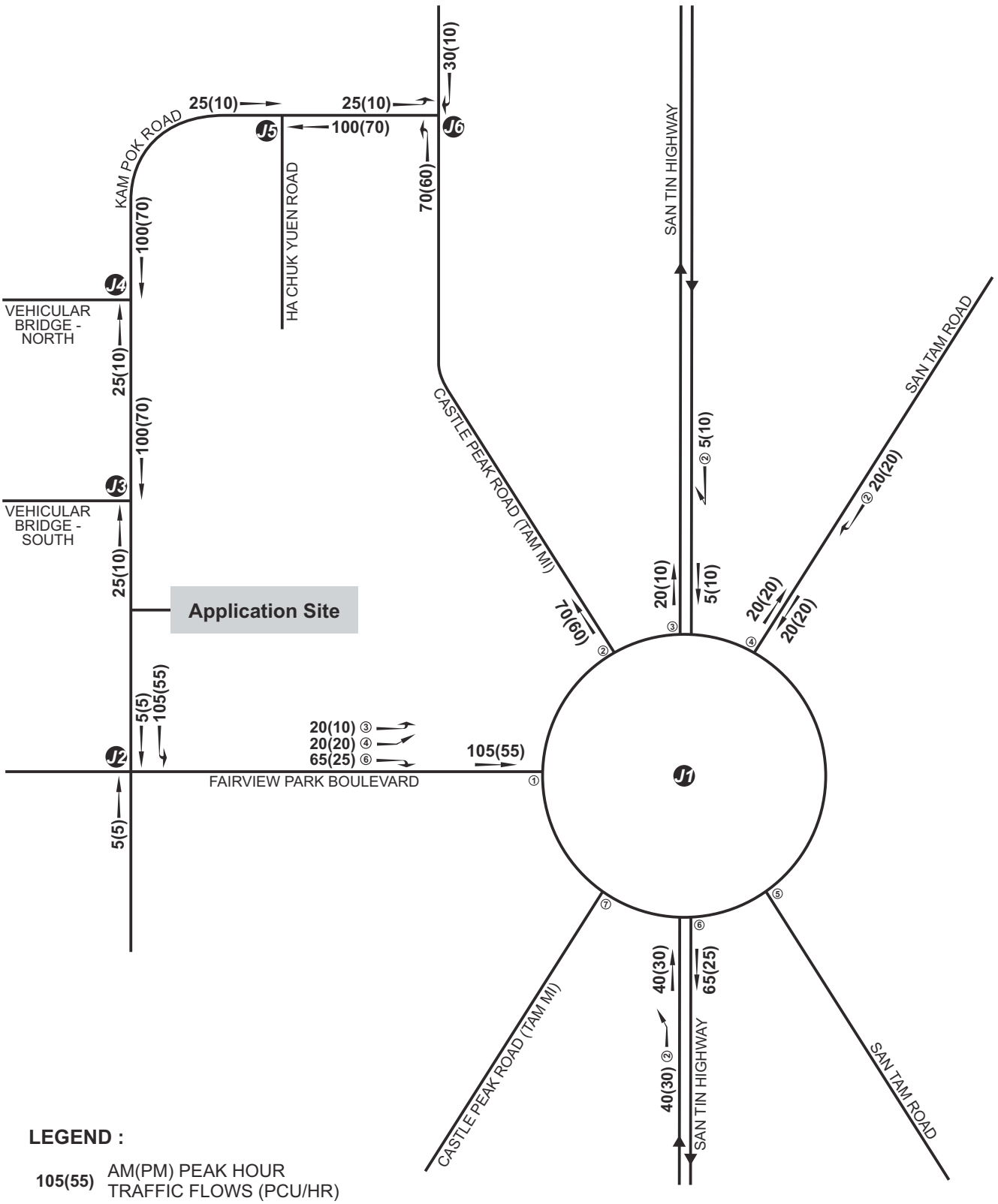
YEAR 2034 REFERENCE TRAFFIC FLOWS

SYSTRA MVA

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	NTS	JUL 2025	4.1	-

CHK50868310/TIA/F41.CDR/LLH/18JUL25

Original Size : A4



LEGEND :

105(55) AM(PM) PEAK HOUR TRAFFIC FLOWS (PCU/HR)

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

Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

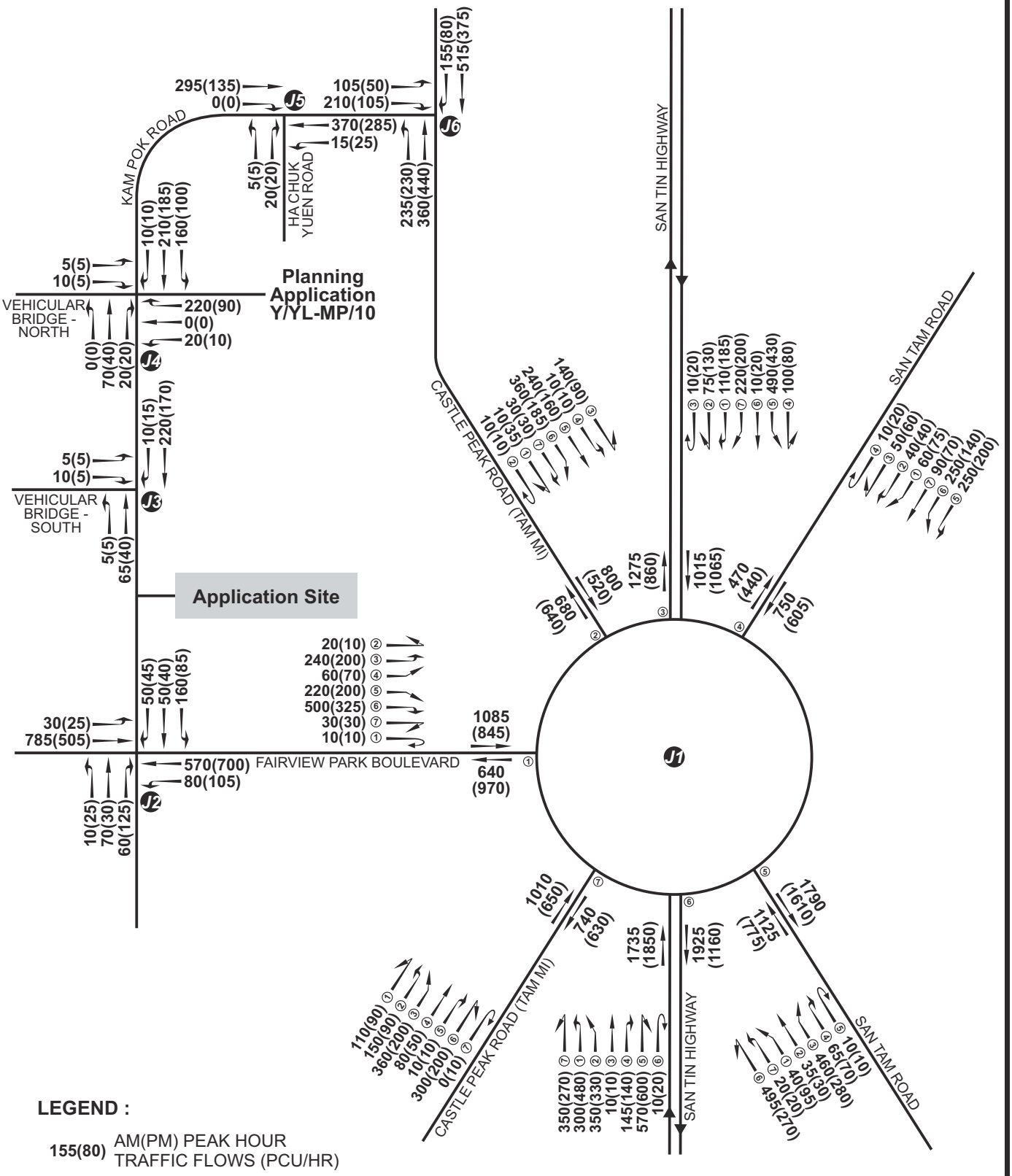
DEVELOPMENT TRAFFIC FLOWS (NET INCREASE)

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	NTS	JUL 2025	4.2	-

SYSTRA MVA

CHK50868310/TIA/F42.CDR/LLH/18JUL25

Original Size : A4



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

Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

YEAR 2034 DESIGN TRAFFIC FLOWS

SYSTRA MVA

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	NTS	JUL 2025	4.3	-

CHK50868310/TIA/F43.CDR/LLH/18JUL25

Original Size : A4

5. TRAFFIC IMPACT ASSESSMENT

5.1 Traffic Impact Assessment

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 and critical links have been assessed for both reference and design scenarios.

Planned Improvement at Fairview Park Interchange (J1)

5.1.2 According to RNTPC Paper No. 10/22 dated 9 December 2022 for the CEDD's project "Agreement No. CE 10/2020 (CE)- Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study", an improvement works has been planned to Fairview Park Interchange (J1) as illustrated in **Drawing 5.1**. Under the improvement scheme, the southern arm of San Tam Road and the approach arms of Castle Peak Road – Tam Mi (northbound) and San Tin Highway Slip Road (southbound) would be widened. An additional exclusive left-turn lane at San Tin Highway Slip Road (northbound) would also be provided.

5.1.3 Besides, further improvement to this planned junction (J1) has been proposed under the recently agreed rezoning application no. Y/YL-MP/10 as illustrated in **Drawing 5.1**. This improvement works is expected to be completed prior to its commissioning (i.e. before the year 2034). Thus, this planned improvement layout has been adopted in the assessment.

Planned Improvements at junction Kam Pok Road/Vehicular Bridge (North) (J4) and junction Castle Peak Road/Kam Pok Road (J6)

5.1.4 Apart from junction J1, two additional junction improvements for Kam Pok Road/Vehicular Bridge (North) (J4) and Castle Peak Road/Kam Pok Road (J6) have also been proposed under the agreed rezoning application no. Y/YL-MP/10.

5.1.5 For junction Kam Pok Road/Vehicular Bridge (North) (J4), the existing 3-arm signal-controlled junction is planned to be converted to 4-arm junction, and an additional exclusive left-turn lane would be provided at the approach arm of Kam Pok Road westbound. The planned junction improvement layout is illustrated in **Drawing 5.2**. For junction Castle Peak Road/Kam Pok Road (J6), separate turning would be allowed at the approach arm of Yau Pok Road as illustrated in **Drawing 5.3**. These planned junction improvement works have been adopted in the assessment.

Junction Operational Performance

5.1.6 Based on the existing/planned layouts, the junction assessment results for the 2034 reference and design scenarios are summarized in **Table 5.1**. The junction calculation sheets are attached in **Appendix A**.

Table 5.1 Junction Operational Performance at Year 2034

Ref (2)	Junction	Junction Type	2034 RC/RFC(1)			
			Reference (with approved Scheme)		Design (with Proposed Scheme)	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Fairview Park Interchange(3)	Roundabout	0.77	0.82	0.88	0.84
J2	Fairview Park Boulevard / Kam Pok Road	Signal	61%	60%	39%	47%
J3	Kam Pok Road / Vehicular Bridge (South)	Signal	>100%	>100%	>100%	>100%
J4	Kam Pok Road / Vehicular Bridge (North)(4)	Signal	>100%	>100%	>100%	>100%
J5	Kam Pok Road / Ha Chuk Yuen Road	Priority	0.06	0.06	0.06	0.06
J6	Castle Peak Road / Kam Pok Road(5)	Priority	0.57	0.27	0.60	0.27

Remarks: (1) RC = reserve capacity, RFC = ratio of flow to capacity.
(2) Locations refer to **Drawing 3.2**.
(3) Based on the planned junction layout as illustrated in **Drawing 5.1**.
(4) Based on the planned junction layout as illustrated in **Drawing 5.2**.
(5) Based on the planned junction layout as illustrated in **Drawing 5.3**.

5.1.7 The results of the assessment as shown in **Table 5.1** indicated that all identified key junctions would operate within capacities under reference case (with approved scheme) and design case (with proposed scheme), except the Fairview Park Interchange (J1)

Road Link Performance

5.1.8 Apart from junction capacity assessment, the road link operation performance was also undertaken for both reference and design scenarios. Based on the existing road layouts with traffic forecast, the results of the assessment are summarized in **Tables 5.2**.

Table 5.2 Year 2034 Road Link Operational Performance for Reference Case and Design Case

Ref. (1)	Road Link	Dir	Link Capacity (pcu/hr)	Reference Case (with Approved Scheme)				Design Case (with Current Scheme)			
				Traffic Flows (pcu/hr)		V/C Ratio		Traffic Flows (pcu/hr)		V/C Ratio	
				AM	PM	AM	PM	AM	PM	AM	PM
L1	Castle Peak Road – Tam Mi	2-way	2,125(2)	1,410	1,100	0.66	0.52	1,480	1,160	0.70	0.55
L2	Fairview Park Boulevard	EB	2,600(3)	980	790	0.38	0.30	1,085	845	0.42	0.33
		WB	2,600(3)	640	970	0.25	0.37	640	970	0.25	0.37
L3	Kam Pok Road	2-way	1,800(4)	550	350	0.31	0.19	675	430	0.38	0.24

Remarks: (1) Refer to **Drawing 3.2**.
(2) Road capacity for single 2-lane rural road, with consideration of roadside activities.
(3) Road capacity for dual-2 lane local distributor.
(4) Road capacity for single-2 lane local distributor.

5.1.9 The results of the assessment as shown in **Table 5.2** indicated that all identified road links would operate within capacities under reference case (with approved scheme) and design case (with current scheme).

Proposed Junction Improvement for Fairview Park Interchange (J1)

5.1.10 To resolve the foreseeable traffic problem, a local junction improvement measure has been proposed for the planned junction Fairview Park Interchange (J1). It is proposed to widen the approach arm of Fairview Park Boulevard to enhance the junction capacity. Details of junction improvement scheme are shown in **Drawing 5.4**.

5.1.11 The operational performance of the junction Fairview Park Interchange (J1) was re-assessed based on the proposed improvement scheme. The result is summarized in **Table 5.3.**

Table 5.3 Year 2034 Junction Operational Performance with Proposed Improvement Scheme

Ref.	Junction	Type	2034 Design Case	
			Ratio of flow to capacity	
			AM Peak	PM Peak
J1	Fairview Park Interchange (1)	Roundabout	0.81	0.84

Remarks: (1) Based on the proposed junction improvement works on **Drawing 5.4**.

5.1.12 The results of the junction assessment as shown in **Table 5.3** indicated that the junction Fairview Park Interchange (J1) could be alleviated with the proposed improvement scheme at the design year 2034.

5.2 Sensitivity Test 1

5.2.1 It is noted that the rezoning applications under nos. Y/YL-MP/7, Y/YL-MP/8 and Y/YL-MP/9 in close vicinity to the site are currently under processing for increasing their development densities. Thus, a sensitivity test was conducted to assess the traffic impact by assuming these potential residential developments will be completed before the design year 2034.

5.2.2 The development schedules and estimated trip generations of these planning applications are summarized in **Table 5.4** and the locations of these potential developments are indicated in **Drawing 5.5**. The estimated trip generations were included in the traffic forecast for Sensitivity Test 1. The year 2034 design traffic flows under Sensitivity Test 1 is shown in **Drawing 5.6**.

Table 5.4 Estimated Trip Generations of Potential Residential Developments

Ref. (1)	Planning Application	Current Zoning	Proposed Domestic Plot Ratio	No. of Units.	Trip Generations (pcu/hr) (2)			
					AM Peak		PM Peak	
					GEN	ATTR	GEN	ATTR
A	Y/YL-MP/9(3a)	OU(CDWRA)	1.28	3,571	349	211	156	207
B	Y/YL-MP/7 & MP/8(3b)	REC & R(C)	about 1.2	2,477	246	174	109	131

Remarks: (1) Locations refer to **Drawing 5.5**.
(2) Trip Generations extracted from the latest submitted TIA report of the planning application.
(3) The sites are the subjects of the following previous approved planning applications. Trip generations of the previous approved applications were excluded separately from the traffic forecast.
(a) Previous Approved Application Y/YL-MP/344.
(b) Previous Approved Application Y/YL-MP/3.

5.2.3 It is noted that improvement works to the planned junction Fairview Park Interchange (J1) has been proposed under the submitted rezoning application no. Y/YL-MP/9. Details of the improvement works is illustrated in **Drawing 5.7**.

Junction Operational Performance for Sensitivity Test 1

5.2.4 Based on the existing/planned layouts, the results of the junction assessment for the design case under Sensitivity Test 1 are summarized in **Table 5.5**. The junction calculation sheets are attached in **Appendix A**.

Table 5.5 Junction Operational Performance at Year 2034 under Sensitivity Test 1

Ref[2]	Junction	2034 RC/RFC[1]	
		Design Case under Sensitivity Test 1	
		AM Peak	PM Peak
J1	Fairview Park Interchange [3]	0.94	0.87
J2	Fairview Park Boulevard / Kam Pok Road	21%	38%
J3	Kam Pok Road / Vehicular Bridge (South)	58%	>100%
J4	Kam Pok Road / Vehicular Bridge (North) [4]	45%	>100%
J5	Kam Pok Road / Ha Chuk Yuen Road	0.07	0.06
J6	Castle Peak Road / Kam Pok Road[5]	0.86	0.43

Remarks:
(1) RC = reserve capacity, RFC = ratio of flow to capacity.
(2) Locations refer to **Drawing 3.2**.
(3) Based on the junction layout proposed under planning application Y/YL-MP/9 as illustrated in **Drawing 5.7**.
(4) Based on the planned junction layout as illustrated in **Drawing 5.2**.
(5) Based on the planned junction layout as illustrated in **Drawing 5.3**.

5.2.5 The results of the assessment as shown in **Table 5.5** indicated that all identified key junctions would operate within capacities under the design case in Sensitivity Test 1.

Road Link Performance for Sensitivity Test 1

5.2.6 Apart from junction capacity assessment, the road link operation performance was also undertaken for both reference and design scenarios. Based on the existing road layouts with traffic forecast, the results of the assessment are summarized in **Table 5.6**.

Table 5.6 Year 2034 Road Link Operational Performance for Design Case under Sensitivity Test 1

Ref. (1)	Road Link	Dir	Link Capacity (pcu/hr)	Design Case under Sensitivity Test 1			
				Traffic Flows (pcu/hr)		V/C Ratio	
				AM	PM	AM	PM
L1	Castle Peak Road – Tam Mi	2-way	2,125[2]	1,660	1,300	0.78	0.61
L2	Fairview Park Boulevard	EB	2,600[3]	1,200	875	0.46	0.34
		WB	2,600[3]	640	970	0.25	0.37
L3	Kam Pok Road	2-way	1,800[4]	915	580	0.51	0.32

Remarks: (1) Refer to **Drawing 3.2**.
(2) Road capacity for single 2-lane rural road, with consideration of roadside activities.
(3) Road capacity for dual-2 lane local distributor.
(4) Road capacity for single-2 lane local distributor.

5.2.7 The assessment results in **Table 5.6** indicated that all identified road links would operate within capacities under the design case in Sensitivity Test 1.

5.3 Sensitivity Test 2

5.3.1 The domestic plot ratio of the subject R(D) site is proposed to increase from 0.2 to 1.5. In support of the application, an additional sensitivity test was conducted by further assuming that the two adjacent sites in the remaining portions of the R(D) zone will also increase their domestic plot ratios to 1.5.

5.3.2 In addition, a potential site at Yau Pok Road near Yau Mei San Tsuen for increasing its domestic plot ratio to 1.5 is also identified. This potential site was also included in this sensitivity test 2.

5.3.3 The assumed development schedules and estimated trip generations of the potential sites are summarized in **Table 5.7** whilst their locations are indicated in **Drawing 5.5**. The estimated trip generations were included in the traffic forecast for Sensitivity Test 2. The year 2034 design traffic flows under Sensitivity Test 2 is shown in **Drawing 5.8**.

Table 5.7 Estimated Trip Generations of Potential Developments

Ref. (1)	Potential Development	Current Zoning	Site Area (sqm)	Proposed Domestic Plot Ratio	No. of Units.	Trip Generations (pcu/hr)			
						AM Peak		PM Peak	
						GEN	ATTR	GEN	ATTR
C	Development at Yau Pok Road near Yau Mei San Tsuen	OU (CDWPA) (2)	81,000(2)	1.5	1,320	95	57	38	49
D	Development at north of Ha San Wai Road(3)	R(D)	2,716	1.5	97(2)	7	5	3	4
E	Development at south of Ha San Wai Road	R(D)	898	1.5	32(2)	3	2	1	2

Remarks: (1) Locations refer to **Drawing 5.5**.
(2) Comprehensive Development and Wetland Protection Area (CDWPA) including net site area of 43,000 sqm for residential development part and 38,000 sqm for wetland restoration area.
(2) Average flat size of 42.2m^2 is adopted, similar to the proposed scheme.
(3) The site is currently occupied by the temporary carpark. The surveyed trip generations of the existing temporary carpark were excluded separately from the traffic forecast.

Junction Operational Performance for Sensitivity Test 2

5.3.4 Based on the existing/planned layouts, the results of the junction assessment under year 2034 design scenarios are summarized in **Table 5.8**. The junction calculation sheets are attached in **Appendix A**.

Table 5.8 Junction Operational Performance at Year 2034 under Sensitivity Test 2

Ref[1]	Junction	2034 RC/RFC[1]	
		Design Case under Sensitivity Test 2	
		AM Peak	PM Peak
J1	Fairview Park Interchange [3]	0.95	0.89
J2	Fairview Park Boulevard / Kam Pok Road	24%	39%
J3	Kam Pok Road / Vehicular Bridge (South)	57%	>100%
J4	Kam Pok Road / Vehicular Bridge (North) [4]	44%	>100%
J5	Kam Pok Road / Ha Chuk Yuen Road	0.07	0.06
J6	Castle Peak Road / Kam Pok Road[5]	0.91	0.45

Remarks:
(1) RC = reserve capacity, RFC = ratio of flow to capacity.
(2) Locations refer to **Drawing 3.2**.
(3) Based on the junction layout proposed under planning application Y/YL-MP/9 as illustrated in **Drawing 5.7**.
(4) Based on the planned junction layout as illustrated in **Drawing 5.2**.
(5) Based on the planned junction layout as illustrated in **Drawing 5.3**.

5.3.5 The results of the assessment as shown in **Table 5.8** indicated that all identified key junctions would operate within capacities under the design case in Sensitivity Test 2.

Road Link Performance for Sensitivity Test 2

5.3.6 Apart from junction capacity assessment, the road link operation performance has also undertaken for both reference and design scenarios. Based on the existing/planned layouts with traffic forecast, the results of the assessment are summarized in **Table 5.9**.

Table 5.9 Year 2034 Road Link Operational Performance for Design Case under Sensitivity Test 2

Ref. (1)	Road Link	Dir	Link Capacity (pcu/hr)	Design Case under Sensitivity Test 2			
				Traffic Flows (pcu/hr)		V/C Ratio	
				AM	PM	AM	PM
L1	Castle Peak Road – Tam Mi	2-way	2,125[2]	1,760	1,365	0.83	0.64
L2	Fairview Park Boulevard	EB	2,600[3]	1,190	875	0.46	0.34
		WB	2,600[3]	640	970	0.25	0.37
L3	Kam Pok Road	2-way	1,800[4]	910	585	0.51	0.33

Remarks: (1) Refer to **Drawing 3.2**.
(2) Road capacity for single 2-lane rural road, with consideration of roadside activities.
(3) Road capacity for dual-2 lane local distributor.
(4) Road capacity for single-2 lane local distributor.

5.3.7 The results of the assessment as shown in **Table 5.9** indicated that all identified road links would operate within capacities under the design case in Sensitivity Test 2.

5.4 Pedestrian Assessment

5.4.1 The footpaths at Kam Pok Road and Fairview Park Boulevard would be the main pedestrian route to/from the application site. Based on a pedestrian head count survey on a typical weekday in April 2025, the observed two-way pedestrian flows at the footpath of Kam Pok Road (its section near Fairview Park Boulevard) and the footpath of Fairview Park Boulevard (its section near Fairview Park Interchange) during the critical AM peak hour are 75 ped/hr and 45 ped/hr respectively, which are minimal.

5.4.2 The proposed development will provide 1,303 units with about 3,519 population. There is a planned residential development at Kam Pok Road (agreed rezoning application no. Y/YL-MP/10) to the north of the application site. Two other application sites under rezoning applications nos. Y/YL-MP/7 & Y/YL-MP/8 are also located in the close proximity to the site. The estimated pedestrian trips of the proposed development together with these planned/potential developments are summarised in **Table 5.10**.

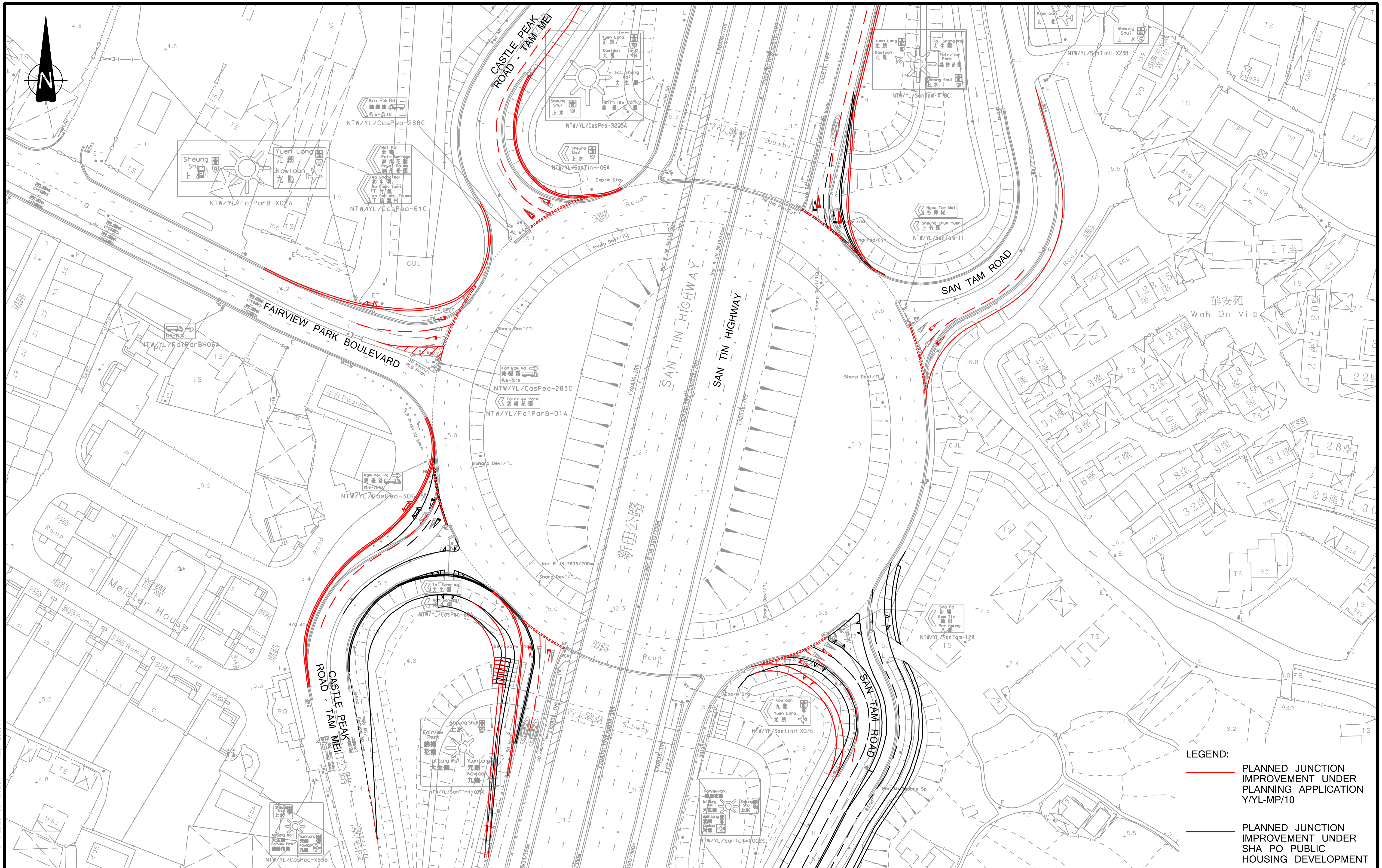
Table 5.10 Estimated Pedestrian Trips during Peak Hours

Development	No. of Units	Estimated Population [A]	Estimated Pedestrian Trips during peak hours (ped/hr) [A x 1.83(1) x 12%(2)]
Proposed Development	1,303	3,519	773
Planned Residential Development at Kam Pok Road with Transport Layby (Approved planning application Y/YL-MP/10)	2,322	6,270(3)	1,377
Residential Development at Yau Pok Road with Transport Laybys under planning applications Y/YL-MP/7 & Y/YL-MP/8	2,477	6,688(3)	1,469
Total	6,102	16,477	3,619

Remark:
(1) Average daily mechanised trips per person of 1.83 as extracted from TCS 2011.
(2) Weekday morning peak hour factor for all merchandised trips of 20% as a conservative approach (with reference to TCS 2011) and peak direction split of 60% assumed (i.e. 1-way Peak hour factor = 20% x 60% = 12%).
(3) Information extracted from the planning applications.

5.4.3 As discussed in **Section 4.2.5**, the estimated major public transport modal share is about 82%. The public transport demand of the proposed development would be served by the proposed shuttle bus service, whilst the public transport demands of the planned/potential developments would be served by the future bus services in their proposed Transport Layby within their sites. It is thus anticipated that the pedestrian trips generated from the sites to the nearby footpaths are minimal during peak hours.

5.4.4 By assuming that the remaining 18% of the pedestrian trips would all be loaded onto the two concerned footpaths for a worst-case scenario, the pedestrian trips of all future developments on the concerned footpaths would be about 651 ped/hr (i.e. 3,619 x 18% = 651) during peak hours. The 1.7m wide footpaths at Kam Pok Road, which can serve at a capacity of 3,366 ped/hr based on satisfactory LOS C at flow rate of 33 ped/min/m, and the 2m wide footpath at Fairview Park Boulevard, which can serve at a capacity of 3,960 based on satisfactory LOS C at flow rate of 33 ped/min/m, should have sufficient capacities to cater for the future pedestrian demands in the area.



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

Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D. 104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

PLANNED JUNCTION IMPROVEMENT LAYOUT OF FAIRVIEW PARK INTERCHANGE (J1)

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	1:1000(A3)	JUN 2025	5.1	-

Original Size : A3

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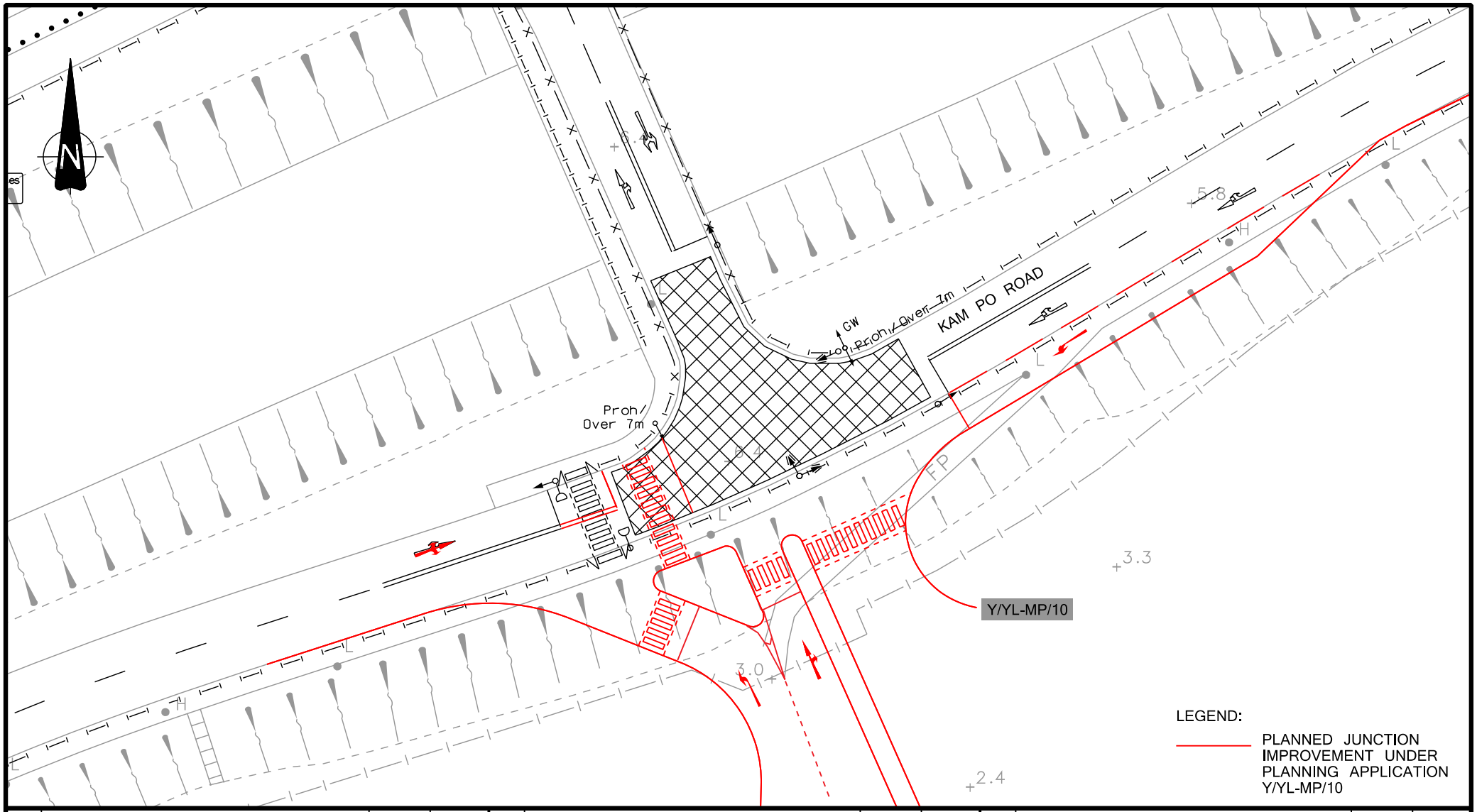

Rev.	Description	Checked	Date
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Rev.	Description	Checked	Date
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Rev.	Description	Checked	Date
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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT
LOT NO. 4822 IN D.D. 104 AND
ADJOINING GOVERNMENT LAND,
EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

PLANNED JUNCTION IMPROVEMENT LAYOUT OF KAM POK ROAD / VEHICULAR BRDIGE - NORTH / VEHICULAR ACCESS (J4)

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	1:500(A4)	JUN 2025	**5.2**	-

SYSTRA MVA

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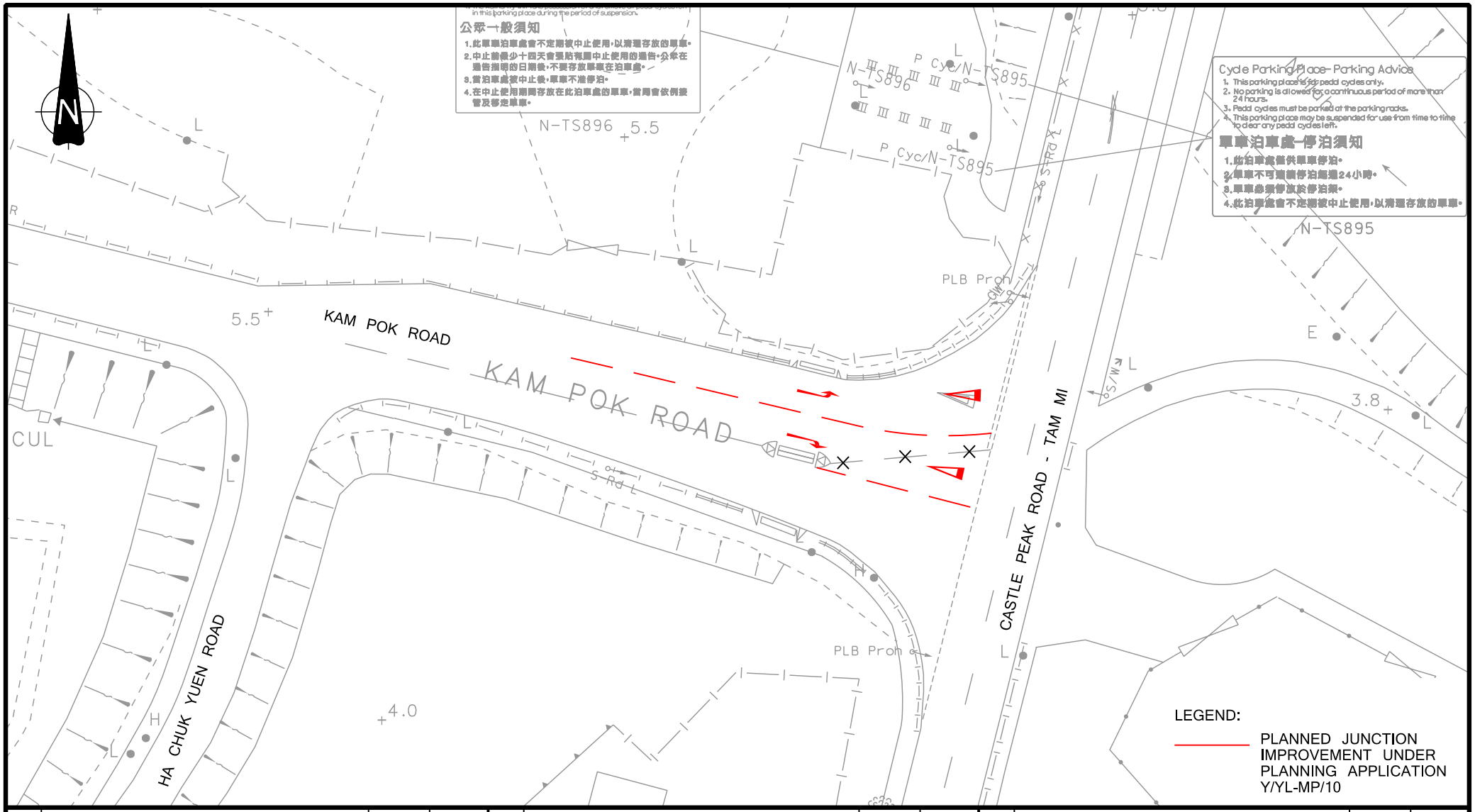

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Rev.	Description	Checked	Date
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Rev.	Description	Checked	Date
-	-	-	-

Project Title

PROPOSED RESIDENTIAL DEVELOPMENT
AT LOT NO. 4882 IN D.D. 104 AND
ADJOINING GOVERNMENT LAND,
EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

PLANNED JUNCTION IMRPOVEMENT LAYOUT OF KAM POK ROAD / CASTLE PEAK ROAD - TAM MI (J6)

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	1:500(A4)	JUN 2025	5.3	-

SYSTRA MVA

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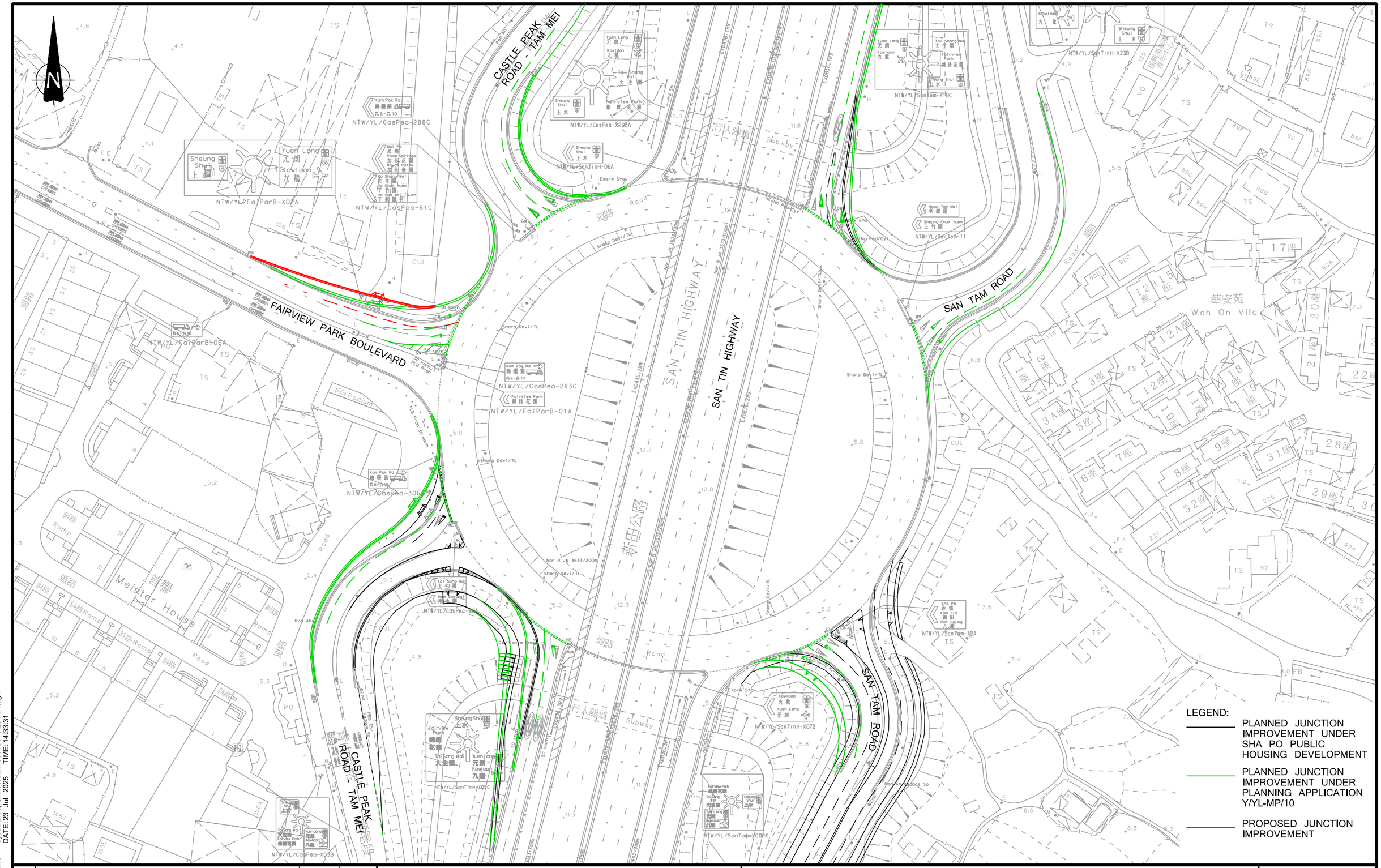

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PRINTED BY: lho1 DATE: 23 Jul 2025 TIME: 14:33:31

Rev.	Description	Checked	Date
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Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D. 104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

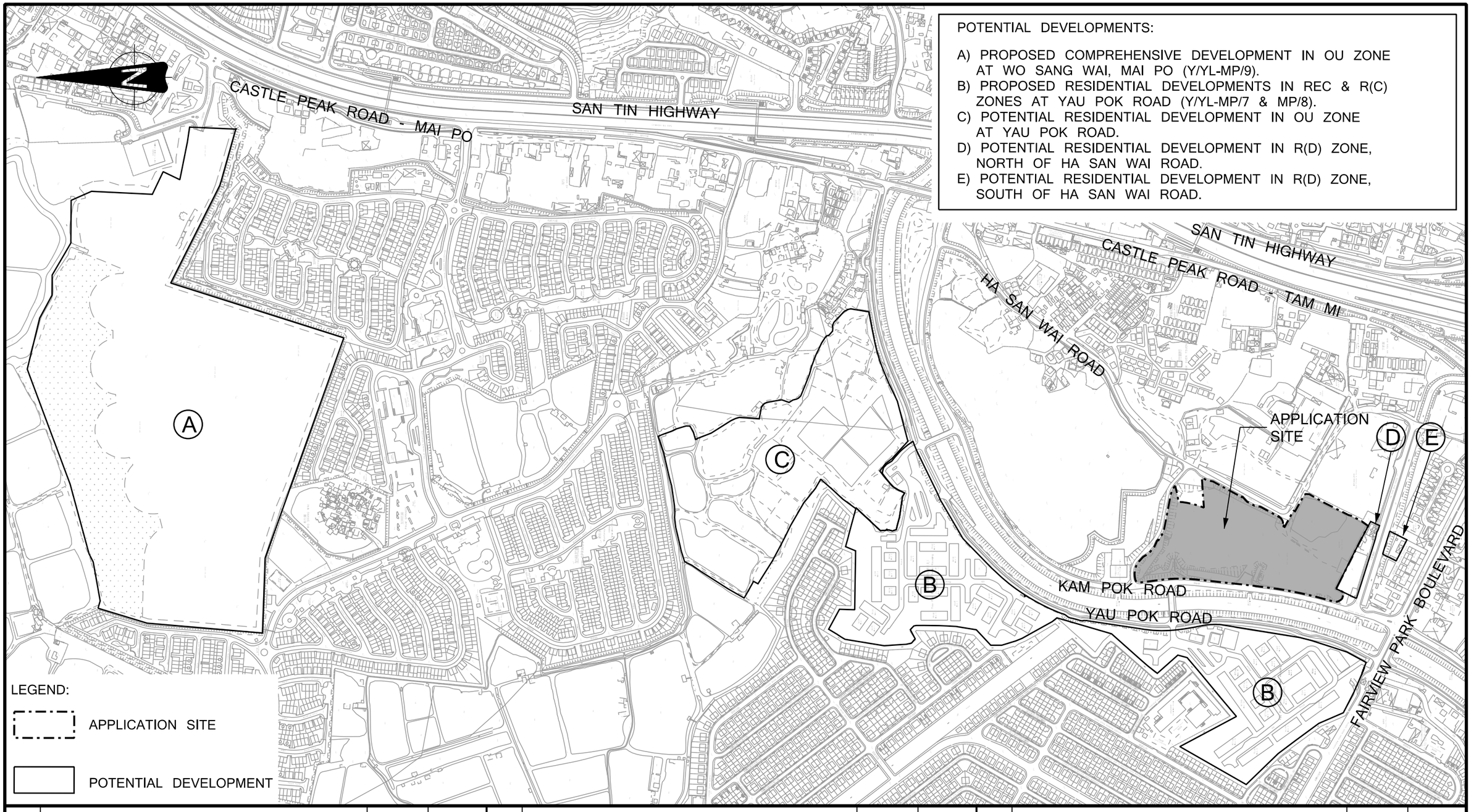
Drawing Title

PROPOSED JUNCTION IMPROVEMENT LAYOUT OF FAIRVIEW PARK INTERCHANGE (J1)

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	1:1000(A3)	JUN 2025	5.4	-

SYSTRA MVA

Original Size : A3



POTENTIAL DEVELOPMENTS:

A) PROPOSED COMPREHENSIVE DEVELOPMENT IN OU ZONE AT WO SANG WAI, MAI PO (Y/YL-MP/9).
B) PROPOSED RESIDENTIAL DEVELOPMENTS IN REC & R(C) ZONES AT YAU POK ROAD (Y/YL-MP/7 & MP/8).
C) POTENTIAL RESIDENTIAL DEVELOPMENT IN OU ZONE AT YAU POK ROAD.
D) POTENTIAL RESIDENTIAL DEVELOPMENT IN R(D) ZONE, NORTH OF HA SAN WAI ROAD.
E) POTENTIAL RESIDENTIAL DEVELOPMENT IN R(D) ZONE, SOUTH OF HA SAN WAI ROAD.

LEGEND:

APPLICATION SITE

POTENTIAL DEVELOPMENT

Rev.	Description	Checked	Date
-	-	-	-

Rev.	Description	Checked	Date
-	-	-	-

Rev.	Description	Checked	Date
-	-	-	-

Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT
LOT NO. 4822 IN D.D. 104 AND
ADJOINING GOVERNMENT LAND,
EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

LOCATIONS OF POTENTIAL DEVELOPMENTS

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	N.T.S.(A4)	JUN 2025	**5.5**	-

SYSTRA MVA

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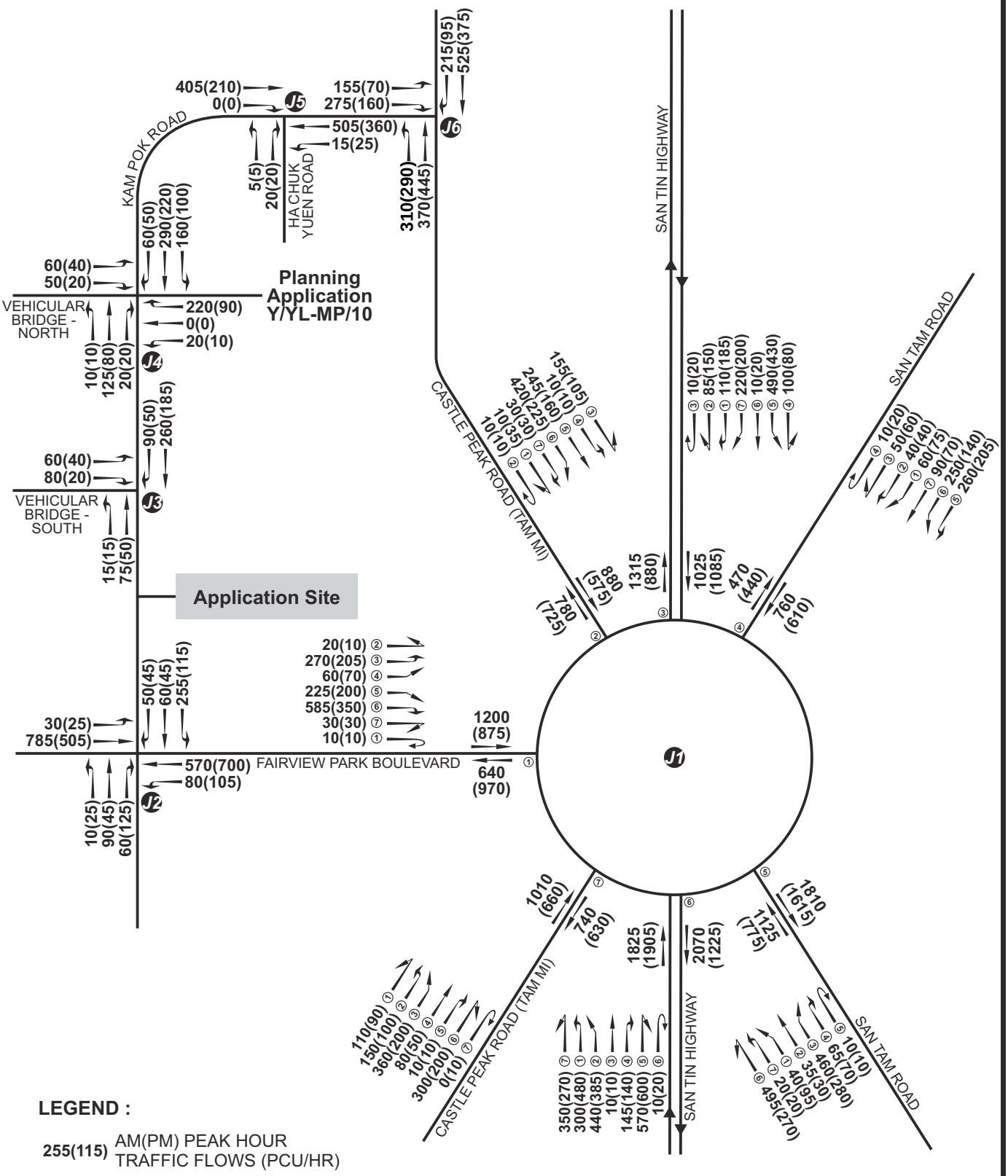


LEGEND :

255(115) AM(PM) PEAK HOUR TRAFFIC FLOWS (PCU/HR)

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

Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

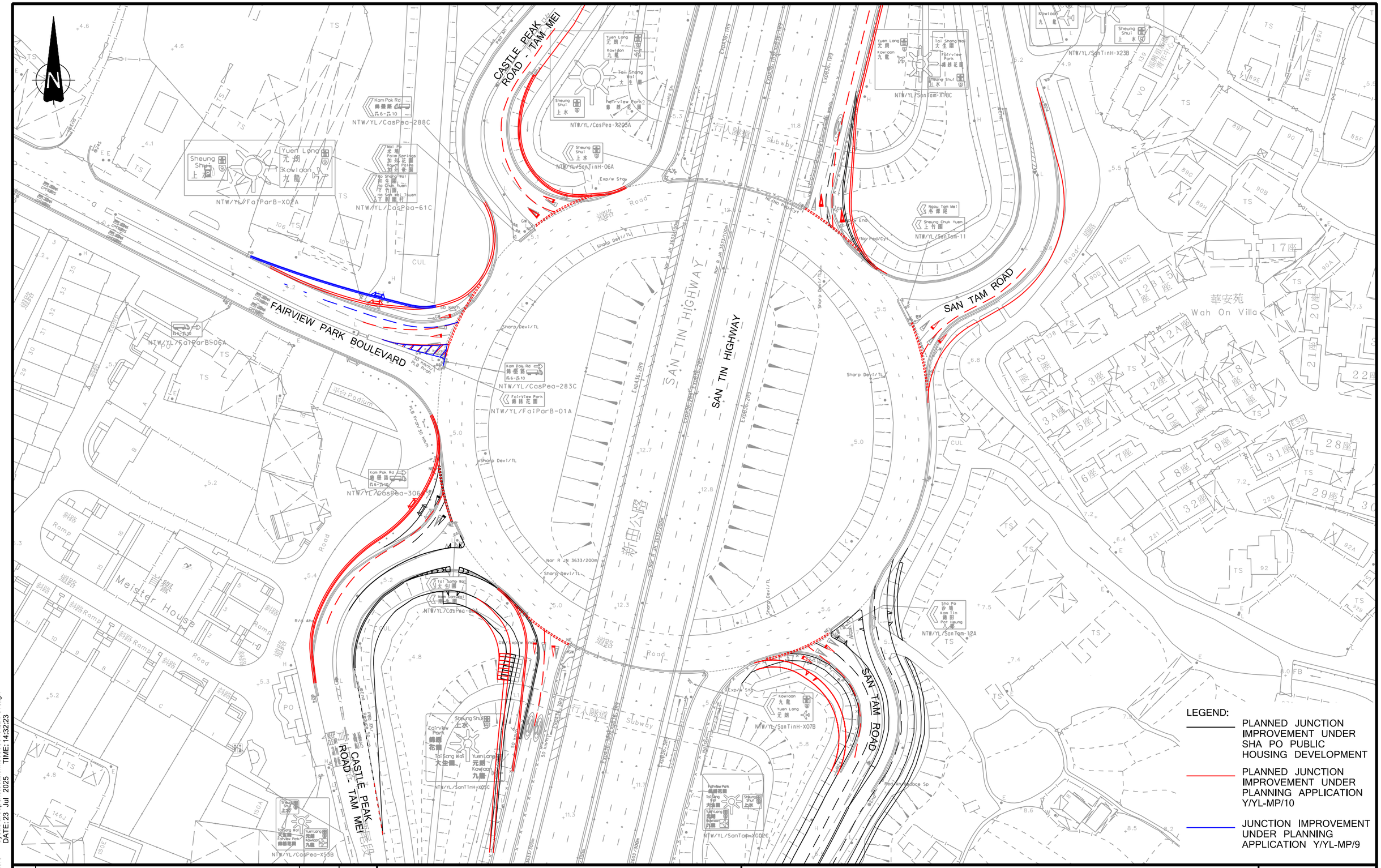
YEAR 2034 DESIGN TRAFFIC FLOWS (SENSITIVITY TEST 1)

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	NTS	JUL 2025	5.6	-

SYSTRA MVA

CHK50868310/TIA/F56.CDR/LLH/18JUL25

Original Size : A4



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

Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT
LOT NO. 4822 IN D.D. 104 AND ADJOINING GOVERNMENT LAND,
EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

JUNCTION IMPROVEMENT LAYOUT OF FAIRVIEW PARK INTERCHANGE (J1) UNDER PLANNING APPLICATION Y/YL-MP/9

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	1:1000(A3)	JUN 2025	5.7	-

SYSTRA MVA

Original Size : A3

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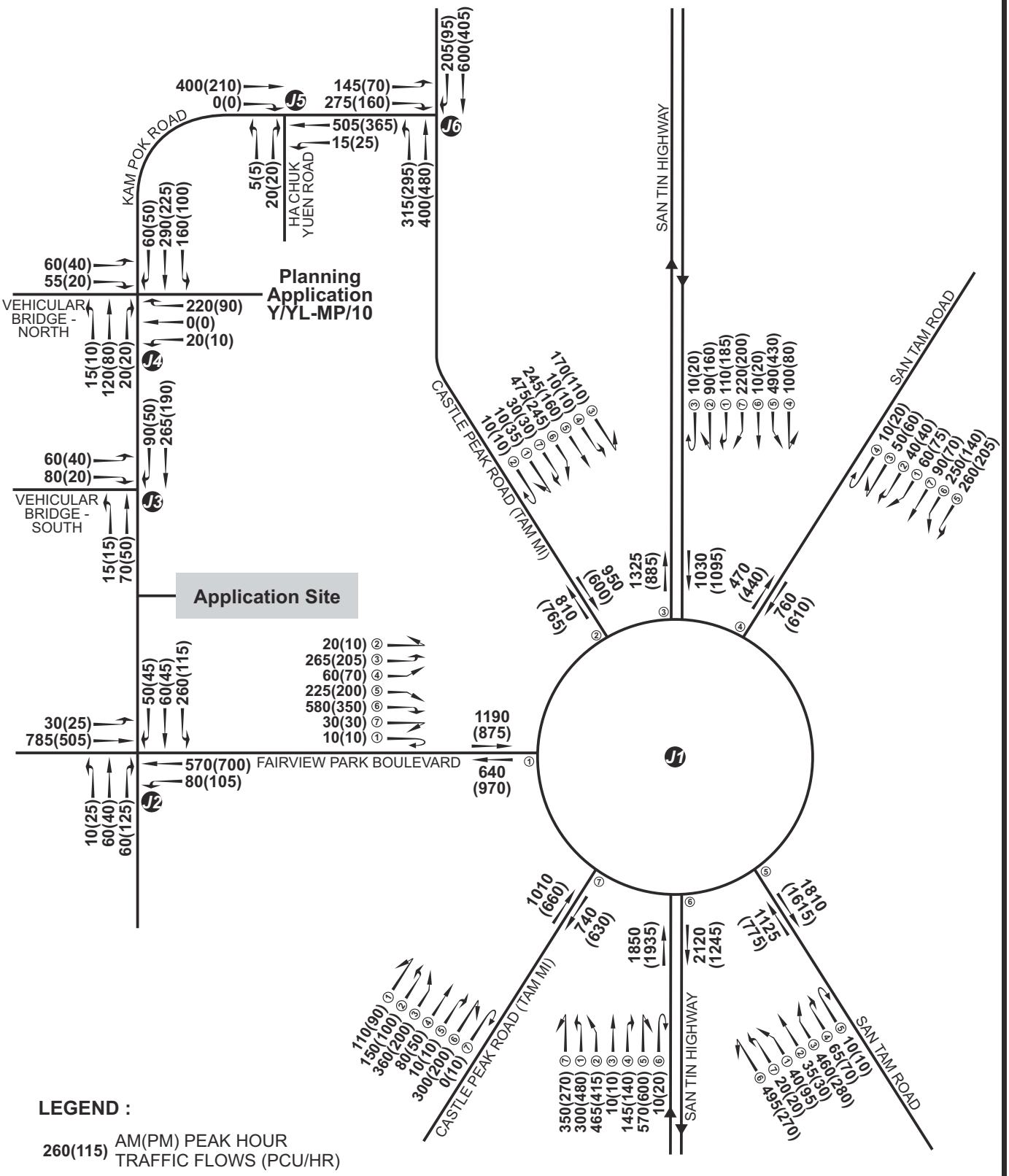

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-	-	-	-	-	-	-	-
Rev.	Description	Checked	Date	Rev.	Description	Checked	Date

Project Title

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT NO. 4822 IN D.D.104 AND ADJOINING GOVERNMENT LAND, EAST OF KAM POK ROAD, MAI PO, YUEN LONG

Drawing Title

YEAR 2034 DESIGN TRAFFIC FLOWS (SENSITIVITY TEST 2)

SYSTRA MVA

Designed	Checked	Scale	Date	Drawing No.	Rev.
HZF	PTC	NTS	JUL 2025	5.8	-

CHK50868310/TIA/F58.CDR/LLH/18JUL25

Original Size : A4

6. SUMMARY & CONCLUSION

6.1 Summary

6.1.1 The application site comprises lot No. 4822 in D.D. 104 and adjoining government Land, east Kam Pok Road, Mai Po, Yuen Long, as indicated in **Drawing 1.1**. The Applicant proposes to increase its domestic plot ratio from 0.2 to 1.5. Under the current scheme, the proposed development will provide 5 medium-rise residential blocks of total 1,303 units, one 6-classroom kindergarten and one Neighbourhood Elderly Centre.

6.1.2 The main development vehicular access will be located at Kam Pok Road. The internal transport facilities provisions will be provided in accordance with the relevant guidelines stipulated in the latest HKPSG.

6.1.3 Traffic surveys have been conducted to establish the current traffic condition in the vicinity of the site. The results of the junction and link capacity assessments have revealed that all the identified local junctions and road links are currently operating within capacities during peak hours.

6.1.4 The tentative operation year of proposed development is 2031. Thus, the design year of 2034 is adopted for traffic forecast and assessment purposes.

6.1.5 Operational performance of all identified local junctions and road links have been assessed based on the anticipated year 2034 traffic flows and the existing/planned layouts. The results of the assessment as shown in **Table 5.1** and **Table 5.2** revealed that all identified key junctions and road links will operate within capacities except the planned junction Fairview Park Interchange (J1).

6.1.6 To resolve the foreseeable traffic problem, a local junction improvement measure has been proposed for the planned junction Fairview Park Interchange (J1). According to the results of the junction assessment as shown in **Table 5.3**, the junction Fairview Park Interchange (J1) can operate within capacity under the proposed improvement scheme at the design year 2034.

6.1.7 It is noted that some rezoning applications in the vicinity of the application site have been submitted for increasing their development densities. A sensitivity test (i.e. Sensitivity Test 1) has conducted to assess the traffic impact by assuming that these potential residential developments will be completed before the design year 2034. The results of the junction and link assessment under Sensitivity Test 1 revealed that all identified key junctions and road links will operate within capacities, with implementation of proposed junction improvement works at Fairview Park Interchange (J1).

6.1.8 The domestic plot ratio of the subject R(D) site is proposed to increase from 0.2 to 1.5. In support of the application, an additional sensitivity test has been conducted by further assuming that the three adjacent potential sites will also increase their domestic plot ratios to 1.5. The results of the junction and link assessment under Sensitivity Test 2 have revealed that all identified key junctions and road links will operate within capacities, with implementation of junction improvement works at Fairview Park Interchange (J1).

6.2 Conclusion

6.2.1 In conclusion, the results of the traffic impact assessment have demonstrated that the development traffic generation by the subject site can be absorbed by the nearby road network (with implementation of junction improvement works at Fairview Park Interchange J1) and would not cause any adverse traffic impact. Hence it can be concluded that the proposed development is considered acceptable in traffic engineering perspective.

Appendix A

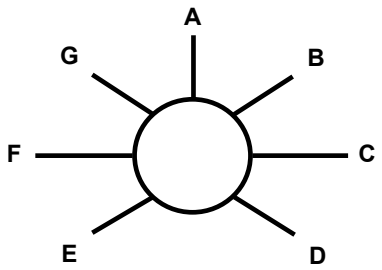
Junction Calculation Sheets

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long				
Junction:	Fairview Park Interchange (J1)			Ref. No.:	
Scheme:	Observed Case				
Year:	2025	Job No.:	CHK50868310	Rev.:	-

AM PM

ARM A: Fairview Park Boulevard
ARM B: Castle Peak Road - Tam Mi (N)
ARM C: San Tin Highway Slip Road (N)
ARM D: San Tam Road (N)
ARM E: San Tam Road (S)
ARM F: San Tin Highway Slip Road (S)
ARM G: Castle Peak Road - Tam Mi (S)



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	55	5	215	35	145	395	15	1265	865	580
B	15	25	60	5	125	270	5	1735	505	395
C	150	60	10	105	230	20	125	1660	700	580
D	40	10	45	10	225	210	10	1985	550	375
E	50	65	130	50	5	35	5	1650	340	885
F	240	135	15	130	95	25	110	895	750	1095
G	30	95	105	40	60	140	15	1360	485	285

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	55	20	145	40	145	250	20	1140	675	860
B	15	25	45	15	115	100	10	1445	325	370
C	175	45	20	100	265	5	100	1245	710	525
D	20	20	40	20	140	165	10	1590	415	365
E	50	35	135	35	10	35	5	1225	305	780
F	510	150	25	100	90	20	175	855	1070	675
G	35	75	115	55	15	100	10	1595	405	330

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	1980	2053	0.44	0.33
B	0.98	7.92	3640.95	2400	1.00	0.54	1433	1587	0.35	0.20
C	1.01	6.82	3640.95	2065	1.00	0.50	1249	1456	0.56	0.49
D	1.02	7.87	3640.95	2385	1.00	0.54	1335	1552	0.41	0.27
E	0.98	7.19	3640.95	2180	1.00	0.51	1312	1526	0.26	0.20
F	0.98	8.13	3640.95	2464	1.00	0.55	1921	1942	0.39	0.55
G	1.00	5.91	3640.95	1790	1.00	0.46	1172	1064	0.41	0.38
								Crtical Arm:	**C**	**F**
								RFC:	**0.56**	**0.55**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	HZF	Date:	Jul-25	Checked by:	PTC

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

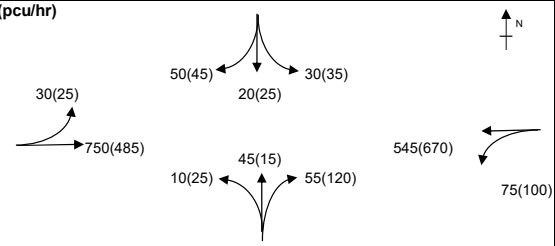
Junction: Kam Pok Road / Fairview Park Boulevard (J2) Design Year: 2034

Description: Year 2025 Observed Traffic Flows Designed By: HZF Checked By: PTC

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
Fairview Park Boulevard EB	→	A	1	3.4	15			8%	10%	1940	1935	389	0.201	0.201	254	0.131	
		A	1	3.4						1955	1955	391	0.200		256	0.131	
Fairview Park Boulevard WB	←	A	1	3.5	17			24%	26%	1925	1920	307	0.159		381	0.198	0.198
		A	1	3.5						1965	1965	313	0.159		389	0.198	
Kam Pok Road SB		B	2	5.5	18	18		30% / 50%	33% / 43%	2030	2035	100	0.049	0.049	105	0.052	0.052
Kam Pok Road NB		C	3	3.8	13	20		9% / 50%	16% / 75%	1905	1855	110	0.058	0.058	160	0.086	0.086
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			10	+	9	=	19			*			*

Notes:

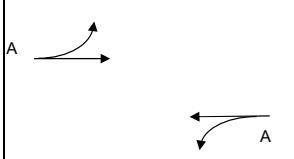
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.308	y		0.336
L (sec)		44	L (sec)		44
C (sec)		120	C (sec)		120
y pract.		0.570	y pract.		0.570
R.C. (%)		85%	R.C. (%)		69%

Stage / Phase Diagrams

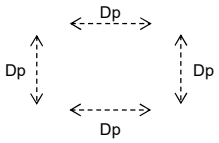
1.



2.

3.

4.



5.

I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	
I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	

Date: Jul, 2025 **Junction:** 2 J2

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

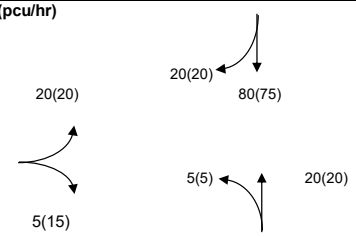
Junction: Kam Pok Road / Vehicular Bridge – South (J3) Design Year: 2034

Description: Year 2025 Observed Traffic Flows Designed By: HZF Checked By: PTC

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
Vehicular Bridge (EB)		A	1	3.600	10	10		80% / 20%	57% / 43%	1715	1715	25	0.015	0.015	35	0.020	0.020
Kam Pok Rd (SB)		B	2	3.600		10		20%	21%	1915	1915	100	0.052	0.052	95	0.050	0.050
Kam Pok Rd (NB)		C	3	3.600	10			20%	20%	1915	1915	25	0.013		25	0.013	
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			7	+	7	=	14			*			*

Notes:

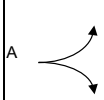
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.067	y		0.070
L (sec)		32	L (sec)		32
C (sec)		60	C (sec)		60
y pract.		0.420	y pract.		0.420
R.C. (%)		529%	R.C. (%)		500%

Stage / Phase Diagrams

1.



2.

3.

4.

5.

I/G= 2		I/G= 5		I/G= 5	5	I/G= 3	14	I/G=	
I/G= 2		I/G= 5		I/G= 5	5	I/G= 3	14	I/G=	

Date: Jul, 2025 **Junction:** 3 J3

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

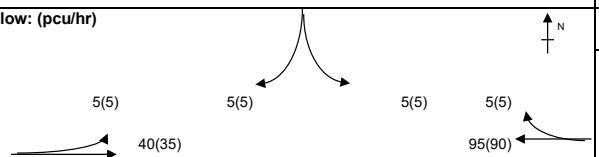
Junction: Kam Pok Road / Vehicular Bridge – North (J4) Design Year: 2034

Description: Year 2025 Observed Traffic Flows Designed By: HZF Checked By: PTC

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
Kam Pok Road WB		C	1	3.650		12		5%	5%	1970	1965	100	0.051	0.051	95	0.048	0.048
Kam Pok Road EB		B	3	3.650	10			11%	13%	1950	1945	45	0.023	0.023	40	0.021	0.021
Vehicular Bridge SB		A	2	3.650	10	12		50% / 50%	50% / 50%	1740	1740	10	0.006		10	0.006	
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			7	+	7	=	14			*			*

Notes:

Flow: (pcu/hr)

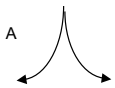


Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.074	y		0.069
L (sec)		34	L (sec)		34
C (sec)		60	C (sec)		60
y pract.		0.390	y pract.		0.390
R.C. (%)		428%	R.C. (%)		466%

Stage / Phase Diagrams

1.

2.



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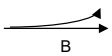


4.

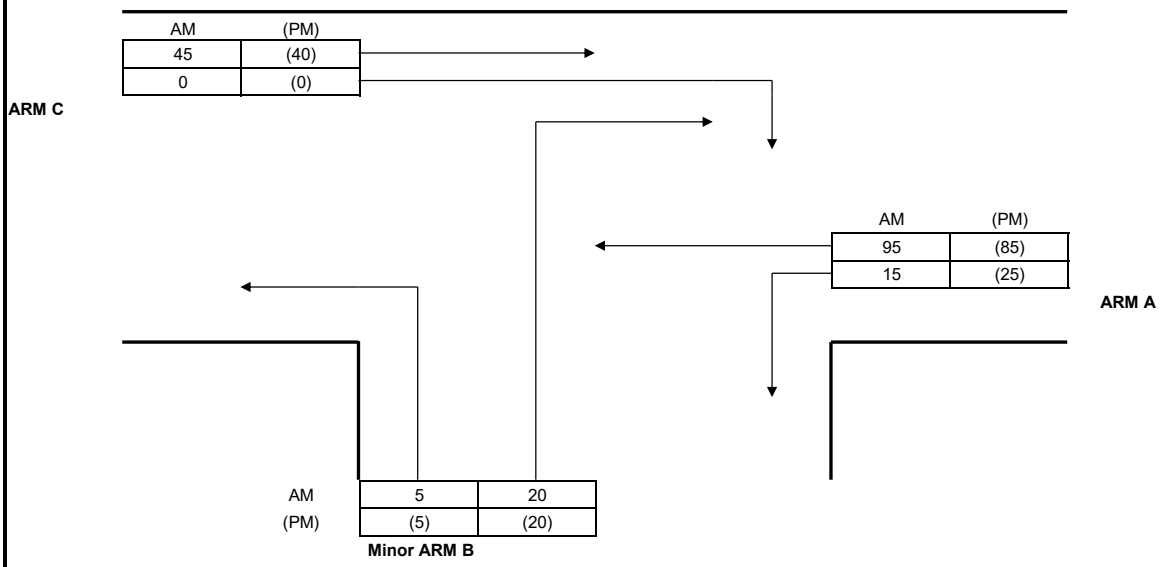
5.

I/G= 2		I/G= 5	5	I/G= 5		I/G= 5	14	I/G=	
I/G= 2		I/G= 5	5	I/G= 5		I/G= 5	14	I/G=	

Date: Jul, 2025 **Junction:** 4 J4

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Kam Pok Road / Ha Chuk Yuen Road (J5)			Ref. No.:
Scheme:	Observed Case			
Year:	2025	Job No.:	CHK50868310	Rev.:
ARM A:	Kam Pok Road WB			
ARM B:	Ha Chuk Yuen Road			
ARM C:	Kam Pok Road EB			



GEOMETRY

Major road width	W	9.30	Lane widths	w(b-a)	2.05
Central Reserve width	Wcr	0.00		w(b-c)	2.05
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.50
Visibilities	Vr(b-a)	50	Calculated	D	0.75
	Vl(b-a)	50		E	0.80
	Vr(b-c)	50		F	0.92
	Vr(c-b)	50		Y	0.68

ANALYSIS

		Factor	AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		45	40
	q(c-b)		0	0
	q(a-b)		15	25
	q(a-c)		95	85
	q(b-a)		20	20
	q(b-c)		5	5
	f		0.20	0.20
CAPACITIES	Q(b-a)	1	445	447
	Q(b-c)	1	573	574
	Q(c-b)	1	663	663
	Q(b-ac)	1	466	468
RFC's	b-a		0.045	0.045
	b-c		0.009	0.009
	c-b		0.000	0.000
	b-ac		0.054	0.053
Worst RFC			**0.054**	**0.053**

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)

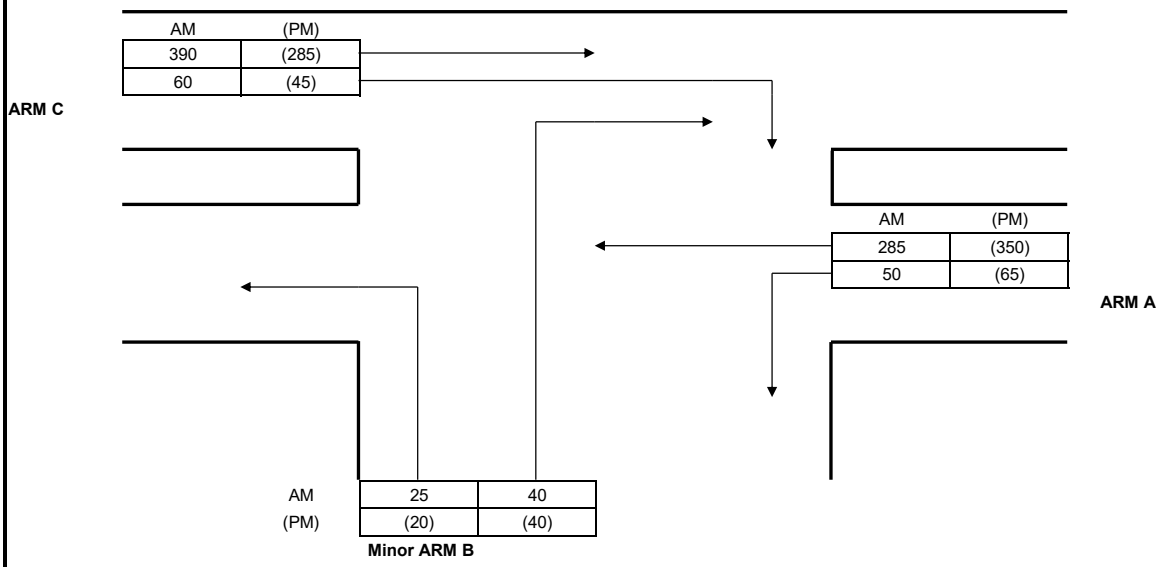
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	HZF	Date:	Jul, 2025	Checked by:	PTC

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Kam Pok Road / Castle Peak Road – Tam Mi (J6)			Ref. No.:
Scheme:	Observed Case			
Year:	2025	Job No.:	CHK50868310	Rev.:
ARM A:	Castle Peak Road - Tam Mi NB			
ARM B:	Kam Pok Road EB			
ARM C:	Castle Peak Road - Tam Mi SB			



GEOMETRY					
Major road width	W	6.90	Lane widths	w(b-a)	4.50
Central Reserve width	Wcr	0.00		w(b-c)	4.50
2 Lane Minor Arm (Y/N)		N		w(c-b)	2.05
Visibilities	Vr(b-a)	53	Calculated	D	0.97
	Vl(b-a)	70		E	1.03
	Vr(b-c)	70		F	0.78
	Vr(c-b)	30		Y	0.76

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		390	285
	q(c-b)		60	45
	q(a-b)		50	65
	q(a-c)		285	350
	q(b-a)		40	40
	q(b-c)		25	20
	f		0.38	0.33
		Factor		
CAPACITIES	Q(b-a)	1	435	440
	Q(b-c)	1	681	661
	Q(c-b)	1	509	492
	Q(b-ac)	1	505	495
RFC's	b-a		0.092	0.091
	b-c		0.037	0.030
	c-b		0.118	0.091
	b-ac		0.129	0.121
Worst RFC			**0.129**	**0.121**

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

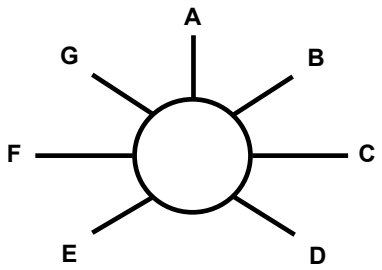
Calculated by:	HZF	Date:	Jul, 2025	Checked by:	PTC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long				
Junction:	Fairview Park Interchange (J1)			Ref. No.:	
Scheme:	Reference Case (with Planned Junction Layout)				
Year:	2034	Job No.:	CHK50868310	Rev.:	-

AM PM

ARM A: Fairview Park Boulevard
ARM B: Castle Peak Road - Tam Mi (N)
ARM C: San Tin Highway Slip Road (N)
ARM D: San Tam Road (N)
ARM E: San Tam Road (S)
ARM F: San Tin Highway Slip Road (S)
ARM G: Castle Peak Road - Tam Mi (S)



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	7.00	11.80	20	25	140	35	0.38
B	7.30	12.00	36	30	140	25	0.21
C	7.30	13.00	13	45	140	30	0.70
D	7.30	11.00	23	25	140	35	0.26
E	7.30	12.00	27	25	140	45	0.28
F	6.00	12.50	20	25	140	40	0.52
G	6.50	11.20	22	25	140	35	0.34

AM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	225	40	220	435	30	2680	980	640
B	10	10	140	10	240	360	30	3050	800	610
C	110	70	10	100	490	10	220	2595	1010	1255
D	60	20	50	10	250	250	90	3155	730	450
E	40	35	460	65	10	495	20	2095	1125	1790
F	300	305	10	145	570	10	Free Flow	1360	1340	1860
G	110	150	360	80	10	300	0	2310	1010	390

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	190	50	200	300	30	2270	790	970
B	35	10	90	10	160	185	30	2480	520	580
C	185	120	20	80	430	20	200	2150	1055	850
D	75	20	60	20	200	140	70	2785	585	420
E	95	30	280	70	10	270	20	1760	775	1610
F	480	300	10	140	600	20	Free Flow	1400	1550	1135
G	90	90	200	50	10	200	10	2590	650	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	9.71	2980.96	2944	1.00	0.62	1277	1529	0.77	0.52
B	1.03	10.62	2980.96	3216	1.00	0.66	1257	1643	0.64	0.32
C	1.03	9.67	2980.96	2931	1.00	0.62	1367	1649	0.74	0.64
D	0.99	9.74	2980.96	2952	1.00	0.62	991	1218	0.74	0.48
E	0.96	10.32	2980.96	3127	1.00	0.64	1703	1910	0.66	0.41
F	0.98	9.19	2980.96	2783	1.00	0.60	1924	1901	0.70	0.82
G	0.99	9.29	2980.96	2815	1.00	0.60	1418	1251	0.71	0.52
								Crtical Arm:	**A**	**F**
								RFC:	**0.77**	**0.82**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	HZF	Date:	Jul-25	Checked by:	PTC

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

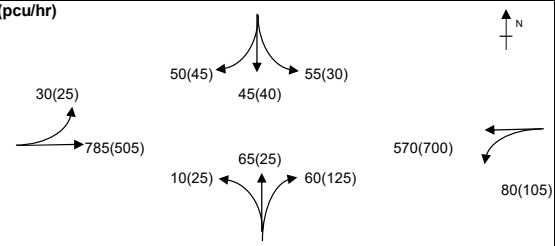
Junction: Kam Pok Road / Fairview Park Boulevard (J2) Design Year: 2034

Description: Year 2034 Reference Traffic Flows Designed By: HZF Checked By: PTC

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
Fairview Park Boulevard EB		A	1	3.4	15			7%	9%	1940	1935	406	0.209	0.209	264	0.136	
		A	1	3.4						1955	1955	409	0.209		266	0.136	
Fairview Park Boulevard WB		A	1	3.5	17			25%	26%	1925	1920	321	0.167		398	0.207	0.207
		A	1	3.5						1965	1965	329	0.167		407	0.207	
Kam Pok Road SB		B	2	5.5	18	18		37% / 33%	26% / 39%	2045	2055	150	0.073	0.073	115	0.056	0.056
Kam Pok Road NB		C	3	3.8	13	20		7% / 44%	14% / 71%	1915	1865	135	0.070	0.070	175	0.094	0.094
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			10	+	9	=	19			*			*

Notes:

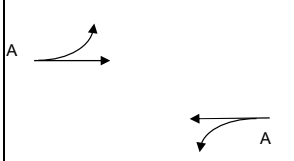
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.353	y		0.357
L (sec)		44	L (sec)		44
C (sec)		120	C (sec)		120
y pract.		0.570	y pract.		0.570
R.C. (%)		61%	R.C. (%)		60%

Stage / Phase Diagrams

1.



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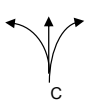

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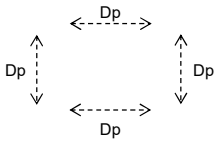


5.

I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	
I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	

Date: Jul, 2025 **Junction:** 2 J2

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

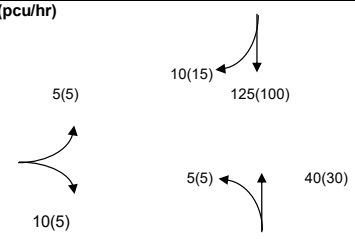
Junction: Kam Pok Road / Vehicular Bridge – South (J3) Design Year: 2034

Description: Year 2034 Reference Traffic Flows Designed By: HZF Checked By: PTC

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
Vehicular Bridge (EB)		A	1	3.600	10	10		33% / 67%	50% / 50%	1715	1715	15	0.009		10	0.006	
Kam Pok Rd (SB)		B	2	3.600		10		7%	13%	1955	1935	135	0.069	0.069	115	0.059	0.059
Kam Pok Rd (NB)		C	3	3.600	10			11%	14%	1945	1935	45	0.023	0.023	35	0.018	0.018
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			7	+	7	=	14			*			*

Notes:

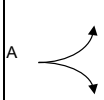
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.092	y		0.078
L (sec)		32	L (sec)		32
C (sec)		60	C (sec)		60
y pract.		0.420	y pract.		0.420
R.C. (%)		356%	R.C. (%)		442%

Stage / Phase Diagrams

1.



2.

3.

4.

5.

I/G= 2	5	I/G= 5		I/G= 5		I/G= 3	14	I/G=	
I/G= 2	5	I/G= 5		I/G= 5		I/G= 3	14	I/G=	

Date: Jul, 2025 **Junction:** 3 J3

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

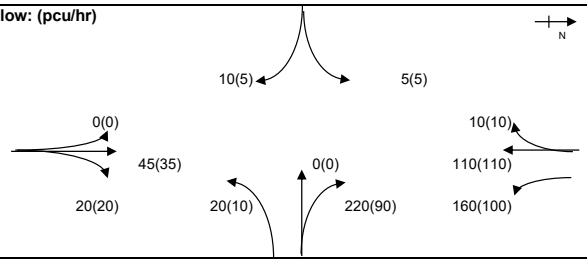
Junction: Kam Pok Road / Vehicular Bridge – North / Vehicular Access (J4) Design Year: 2034

Description: Year 2034 Reference Traffic Flows (with Planned Junction Layout) Designed By: HZF Checked By: PTC

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
Vehicular Bridge SB		A	1	3.500	10	12		33% / 67%	50% / 50%	1735	1725	15	0.009		10	0.006	
Kam Pok Road EB		D	2	3.650	10	12		0% / 31%	0% / 36%	1905	1895	65	0.034	0.034	55	0.029	0.029
R(D) Site Access		C	3	5.500	20					2015	2015	20	0.010		10	0.005	
		C	3	4.000		12		100%	100%	1790	1790	220	0.123	0.123	90	0.050	0.050
Kam Pok Road WB		B	4	3.650	15					1800	1800	160	0.089	0.089	100	0.056	
		B	4	3.650		12		8%	8%	1960	1960	120	0.061		120	0.061	0.061
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =			10	+	10	=	20						
		Fp	1	MIN GREEN + FLASH =			11	+	10	=	21						
		Gp	1,2,4	MIN GREEN + FLASH =			5	+	5	=	10						

Notes:

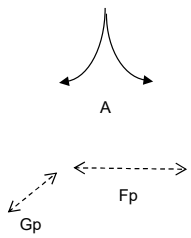
Flow: (pcu/hr)



Group	Fp,D,C,B	A,D,C,B	Group	Fp,D,C,B	A,D,C,B
y	0.246	0.246	y	0.141	0.141
L (sec)	18	31	L (sec)	18	31
C (sec)	90	90	C (sec)	90	90
y pract.	0.720	0.590	y pract.	0.720	0.590
R.C. (%)	193%	140%	R.C. (%)	412%	320%

Stage / Phase Diagrams

1.



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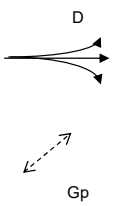

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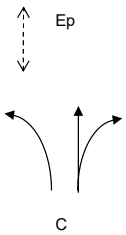

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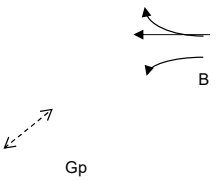


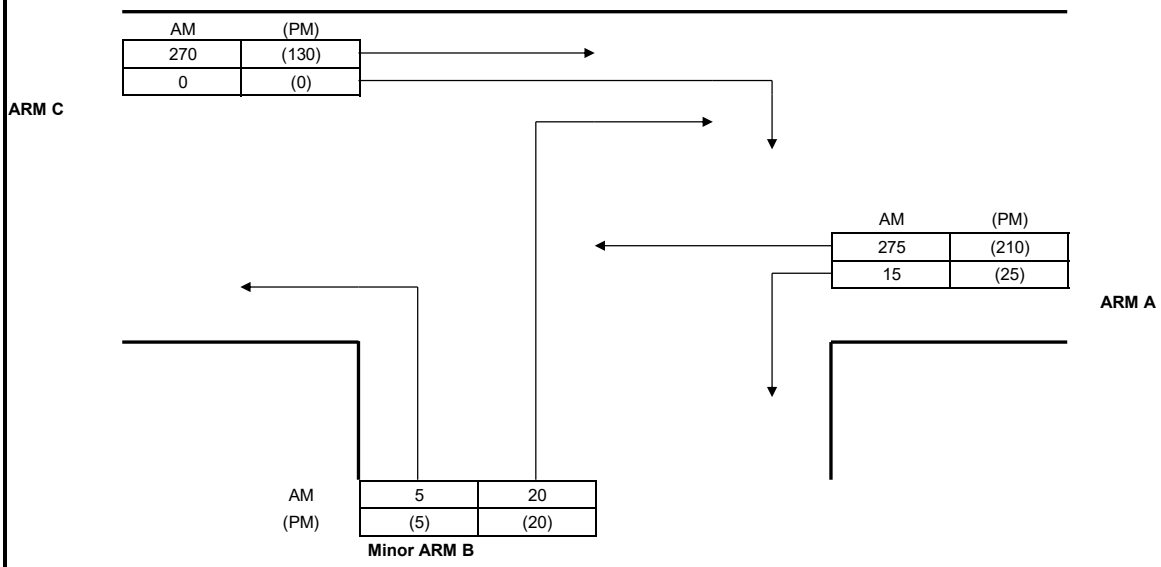
5.

I/G= 7	5	I/G= 12		I/G= 5		I/G= 5		I/G=	
I/G= 7	5	I/G= 12		I/G= 5		I/G= 5		I/G=	

Date: Jul, 2025 **Junction:** 4 J4

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Kam Pok Road / Ha Chuk Yuen Road (J5)			Ref. No.:
Scheme:	Reference Case			
Year:	2034	Job No.:	CHK50868310	Rev.:
ARM A:	Kam Pok Road WB			
ARM B:	Ha Chuk Yuen Road			
ARM C:	Kam Pok Road EB			



GEOMETRY					
Major road width	W	9.30	Lane widths	w(b-a)	2.05
Central Reserve width	Wcr	0.00		w(b-c)	2.05
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.50
Visibilities	Vr(b-a)	50	Calculated	D	0.75
	Vl(b-a)	50		E	0.80
	Vr(b-c)	50		F	0.92
	Vr(c-b)	50		Y	0.68

ANALYSIS				
			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		270	130
	q(c-b)		0	0
	q(a-b)		15	25
	q(a-c)		275	210
	q(b-a)		20	20
	q(b-c)		5	5
	f		0.20	0.20
		Factor		
CAPACITIES	Q(b-a)	1	386	413
	Q(b-c)	1	538	550
	Q(c-b)	1	622	635
	Q(b-ac)	1	409	434
RFC's	b-a		0.052	0.048
	b-c		0.009	0.009
	c-b		0.000	0.000
	b-ac		0.061	0.058
Worst RFC			**0.061**	**0.058**

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)

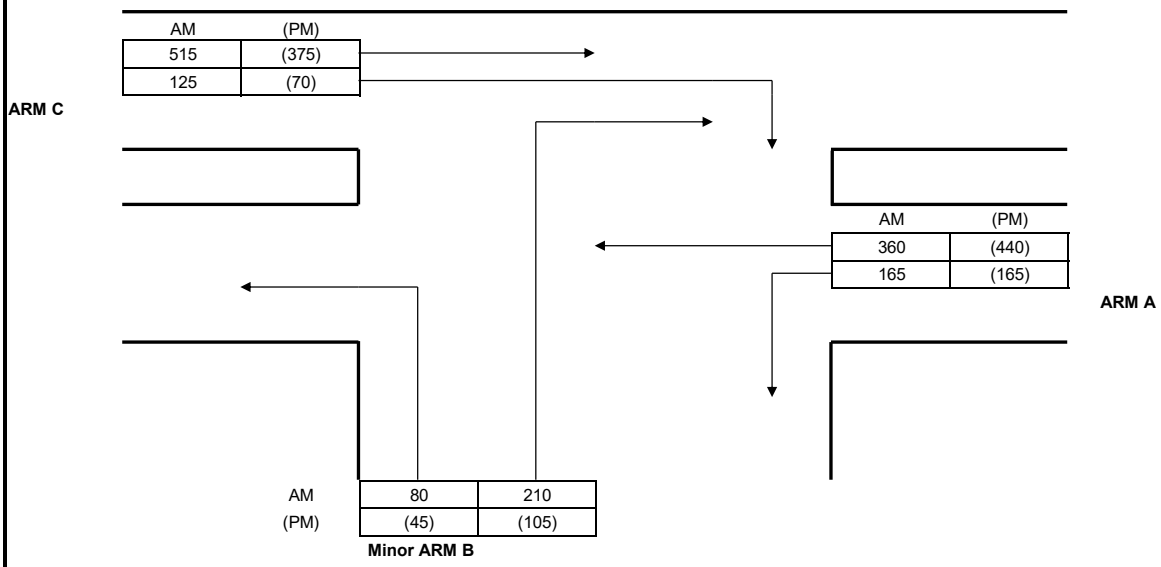
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	HZF	Date:	Jul, 2025	Checked by:	PTC

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Kam Pok Road / Castle Peak Road – Tam Mi (J6)			Ref. No.:
Scheme:	Reference Case (with Planned Junction Layout)			
Year:	2034	Job No.:	CHK50868310	Rev.:
ARM A:	Castle Peak Road - Tam Mi NB			
ARM B:	Kam Pok Road EB			
ARM C:	Castle Peak Road - Tam Mi SB			



GEOMETRY					
Major road width	W	6.90	Lane widths	w(b-a)	4.30
Central Reserve width	Wcr	1.50		w(b-c)	4.30
2 Lane Minor Arm (Y/N)		Y		w(c-b)	2.05
Visibilities	Vr(b-a)	53	Calculated	D	0.95
	Vl(b-a)	70		E	1.01
	Vr(b-c)	70		F	0.78
	Vr(c-b)	30		Y	0.76

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		515	375
	q(c-b)		125	70
	q(a-b)		165	165
	q(a-c)		360	440
	q(b-a)		210	105
	q(b-c)		80	45
	f		0.28	0.30
		Factor		
CAPACITIES	Q(b-a)	1	371	394
	Q(b-c)	1	635	613
	Q(c-b)	1	468	451
	Q(b-ac)	1	419	441
RFC's	b-a		0.566	0.266
	b-c		0.126	0.073
	c-b		0.267	0.155
	b-ac		0.000	0.000
Worst RFC			**0.566**	**0.266**

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

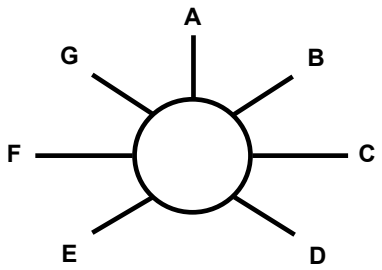
Calculated by:	HZF	Date:	Jul, 2025	Checked by:	PTC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long		
Junction:	Fairview Park Interchange (J1)		Ref. No.:
Scheme:	Design Case (with Planned Junction Layout)		
Year:	2034	Job No.: CHK50868310	Rev.: -

AM PM

ARM A: Fairview Park Boulevard
ARM B: Castle Peak Road - Tam Mi (N)
ARM C: San Tin Highway Slip Road (N)
ARM D: San Tam Road (N)
ARM E: San Tam Road (S)
ARM F: San Tin Highway Slip Road (S)
ARM G: Castle Peak Road - Tam Mi (S)



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	7.00	11.80	20	25	140	35	0.38
B	7.30	12.00	36	30	140	25	0.21
C	7.30	13.00	13	45	140	30	0.70
D	7.30	11.00	23	25	140	35	0.26
E	7.30	12.00	27	25	140	45	0.28
F	6.00	12.50	20	25	140	40	0.52
G	6.50	11.20	22	25	140	35	0.34

AM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	245	60	220	500	30	2750	1085	640
B	10	10	140	10	240	360	30	3155	800	680
C	110	75	10	100	490	10	220	2680	1015	1275
D	60	40	50	10	250	250	90	3225	750	470
E	40	35	460	65	10	495	20	2185	1125	1790
F	300	350	10	145	570	10	Free Flow	1385	1385	1925
G	110	150	360	80	10	300	0	2380	1010	390

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	200	70	200	325	30	2330	845	970
B	35	10	90	10	160	185	30	2535	520	640
C	185	130	20	80	430	20	200	2195	1065	860
D	75	40	60	20	200	140	70	2820	605	440
E	95	30	280	70	10	270	20	1815	775	1610
F	480	330	10	140	600	20	Free Flow	1430	1580	1160
G	90	90	200	50	10	200	10	2650	650	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	9.71	2980.96	2944	1.00	0.62	1234	1492	0.88	0.57
B	1.03	10.62	2980.96	3216	1.00	0.66	1185	1606	0.67	0.32
C	1.03	9.67	2980.96	2931	1.00	0.62	1314	1621	0.77	0.66
D	0.99	9.74	2980.96	2952	1.00	0.62	948	1196	0.79	0.51
E	0.96	10.32	2980.96	3127	1.00	0.64	1648	1876	0.68	0.41
F	0.98	9.19	2980.96	2783	1.00	0.60	1909	1883	0.73	0.84
G	0.99	9.29	2980.96	2815	1.00	0.60	1376	1215	0.73	0.53
								Crtical Arm:	**A**	**F**
								RFC:	**0.88**	**0.84**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	HZF	Date:	Jul-25	Checked by:	PTC

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

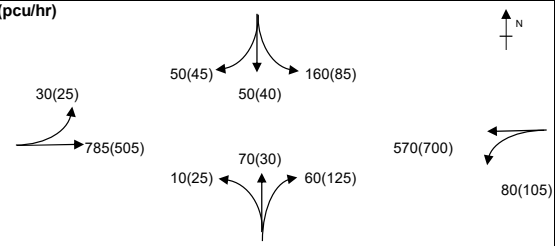
Junction: Kam Pok Road / Fairview Park Boulevard (J2) Design Year: 2034

Description: Year 2034 Design Traffic Flows Designed By: HZF Checked By: PTC

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
Fairview Park Boulevard EB		A	1	3.4	15			7%	9%	1940	1935	406	0.209	0.209	264	0.136	
		A	1	3.4						1955	1955	409	0.209		266	0.136	
Fairview Park Boulevard WB		A	1	3.5	17			25%	26%	1925	1920	321	0.167		398	0.207	0.207
		A	1	3.5						1965	1965	329	0.167		407	0.207	
Kam Pok Road SB		B	2	5.5	18	18		62% / 19%	50% / 26%	2030	2035	260	0.128	0.128	170	0.084	0.084
Kam Pok Road NB		C	3	3.8	13	20		7% / 43%	14% / 69%	1920	1870	140	0.073	0.073	180	0.096	0.096
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			10	+	9	=	19			*			*

Notes:

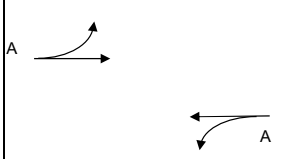
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.410	y		0.387
L (sec)		44	L (sec)		44
C (sec)		120	C (sec)		120
y pract.		0.570	y pract.		0.570
R.C. (%)		39%	R.C. (%)		47%

Stage / Phase Diagrams

1.



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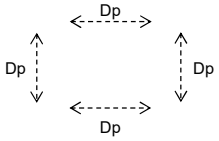
3.

4.



5.

I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	
I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	

Date: Jul, 2025 **Junction:** 2 J2

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

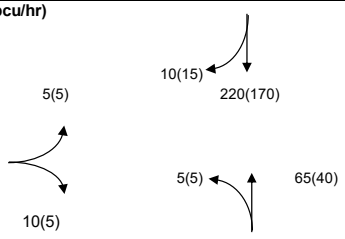
Junction: Kam Pok Road / Vehicular Bridge – South (J3) Design Year: 2034

Description: Year 2034 Design Traffic Flows Designed By: HZF Checked By: PTC

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
Vehicular Bridge (EB)		A	1	3.600	10	10		33% / 67%	50% / 50%	1715	1715	15	0.009		10	0.006	
Kam Pok Rd (SB)		B	2	3.600		10		4%	8%	1960	1950	230	0.117	0.117	185	0.095	0.095
Kam Pok Rd (NB)		C	3	3.600	10			7%	11%	1955	1945	70	0.036	0.036	45	0.023	
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			7	+	7	=	14			*			*

Notes:

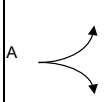
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.153	y		0.095
L (sec)		32	L (sec)		38
C (sec)		60	C (sec)		60
y pract.		0.420	y pract.		0.330
R.C. (%)		174%	R.C. (%)		248%

Stage / Phase Diagrams

1.



2.

3.

4.

5.

I/G= 2	5	I/G= 5		I/G= 5		I/G= 3	14	I/G=	
I/G= 2	5	I/G= 5		I/G= 5	5	I/G= 3	14	I/G=	

Date: Jul, 2025 **Junction:** 3 J3

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

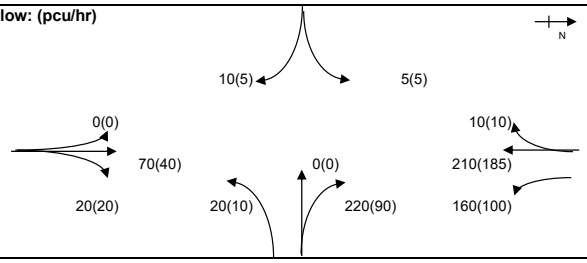
Junction: Kam Pok Road / Vehicular Bridge – North / Vehicular Access (J4) Design Year: 2034

Description: Year 2034 Design Traffic Flows (with Planned Junction Layout) Designed By: HZF Checked By: PTC

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
Vehicular Bridge SB		A	1	3.500	10	12		33% / 67%	50% / 50%	1735	1725	15	0.009		10	0.006	
Kam Pok Road EB		D	2	3.650	10	12		0% / 22%	0% / 33%	1925	1900	90	0.047	0.047	60	0.032	0.032
R(D) Site Access		C	3	5.500	20					2015	2015	20	0.010		10	0.005	
		C	3	4.000		12		100%	100%	1790	1790	220	0.123	0.123	90	0.050	0.050
Kam Pok Road WB		B	4	3.650	15					1800	1800	160	0.089		100	0.056	
		B	4	3.650		12		5%	5%	1970	1965	220	0.112	0.112	195	0.099	0.099
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =			10	+	10	=	20						
		Fp	1	MIN GREEN + FLASH =			11	+	10	=	21						
		Gp	1,2,4	MIN GREEN + FLASH =			5	+	5	=	10						

Notes:

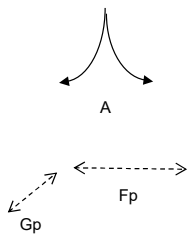
Flow: (pcu/hr)



Group	Fp,D,C,B	A,D,C,B	Group	Fp,D,C,B	A,D,C,B
y	0.281	0.281	y	0.181	0.181
L (sec)	18	31	L (sec)	18	31
C (sec)	90	90	C (sec)	90	90
y pract.	0.720	0.590	y pract.	0.720	0.590
R.C. (%)	156%	110%	R.C. (%)	298%	226%

Stage / Phase Diagrams

1.



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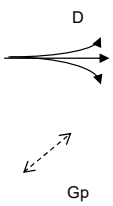

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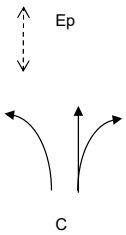

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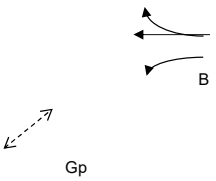


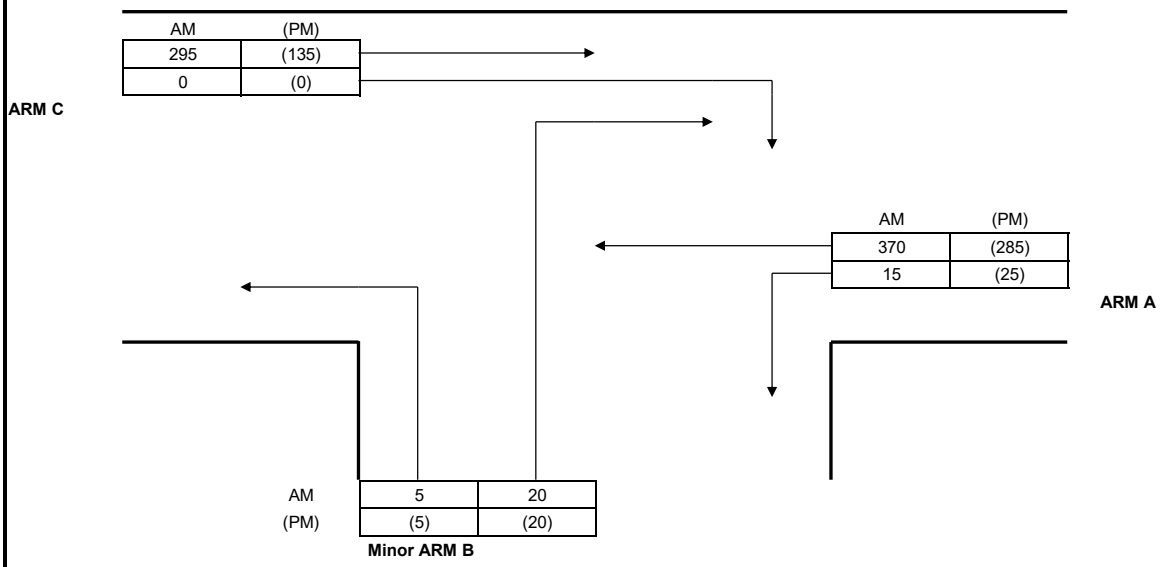
5.

I/G= 7	5	I/G= 12		I/G= 5		I/G= 5		I/G=	
I/G= 7	5	I/G= 12		I/G= 5		I/G= 5		I/G=	

Date: Jul, 2025 **Junction:** 4 J4

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Kam Pok Road / Ha Chuk Yuen Road (J5)			Ref. No.:
Scheme:	Design Case			
Year:	2034	Job No.:	CHK50868310	Rev.:
ARM A:	Kam Pok Road WB			
ARM B:	Ha Chuk Yuen Road			
ARM C:	Kam Pok Road EB			



GEOMETRY

Major road width	W	9.30	Lane widths	w(b-a)	2.05
Central Reserve width	Wcr	0.00		w(b-c)	2.05
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.50
Visibilities	Vr(b-a)	50	Calculated	D	0.75
	Vl(b-a)	50		E	0.80
	Vr(b-c)	50		F	0.92
	Vr(c-b)	50		Y	0.68

ANALYSIS

		Factor	AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		295	135
	q(c-b)		0	0
	q(a-b)		15	25
	q(a-c)		370	285
	q(b-a)		20	20
	q(b-c)		5	5
	f		0.20	0.20
CAPACITIES	Q(b-a)	1	365	399
	Q(b-c)	1	519	535
	Q(c-b)	1	600	617
	Q(b-ac)	1	388	420
RFC's	b-a		0.055	0.050
	b-c		0.010	0.009
	c-b		0.000	0.000
	b-ac		0.064	0.060
Worst RFC			**0.064**	**0.060**

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)

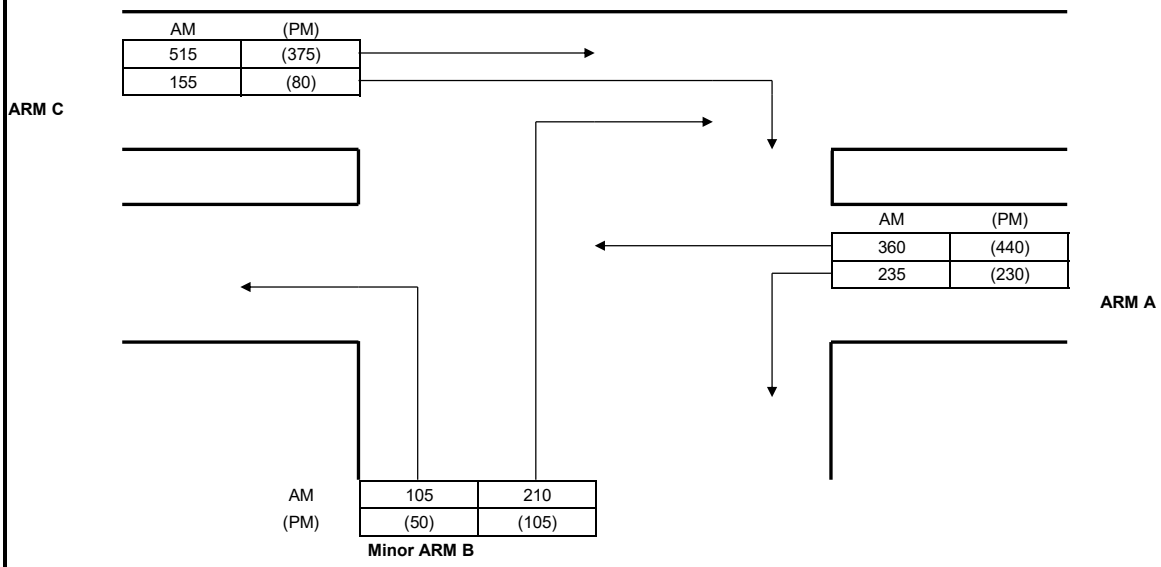
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	HZF	Date:	Jul, 2025	Checked by:	PTC

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Kam Pok Road / Castle Peak Road – Tam Mi (J6)			Ref. No.:
Scheme:	Design Case (with Planned Junction Layout)			
Year:	2034	Job No.:	CHK50868310	Rev.:
ARM A:	Castle Peak Road - Tam Mi NB			
ARM B:	Kam Pok Road EB			
ARM C:	Castle Peak Road - Tam Mi SB			



GEOMETRY					
Major road width	W	6.90	Lane widths	w(b-a)	4.30
Central Reserve width	Wcr	1.50		w(b-c)	4.30
2 Lane Minor Arm (Y/N)		Y		w(c-b)	2.05
Visibilities	Vr(b-a)	53	Calculated	D	0.95
	Vl(b-a)	70		E	1.01
	Vr(b-c)	70		F	0.78
	Vr(c-b)	30		Y	0.76

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		515	375
	q(c-b)		155	80
	q(a-b)		235	230
	q(a-c)		360	440
	q(b-a)		210	105
	q(b-c)		105	50
	f		0.33	0.32
		Factor		
CAPACITIES	Q(b-a)	1	352	383
	Q(b-c)	1	628	606
	Q(c-b)	1	453	437
	Q(b-ac)	1	412	434
RFC's	b-a		0.597	0.274
	b-c		0.167	0.083
	c-b		0.342	0.183
	b-ac		0.000	0.000
Worst RFC			**0.597**	**0.274**

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

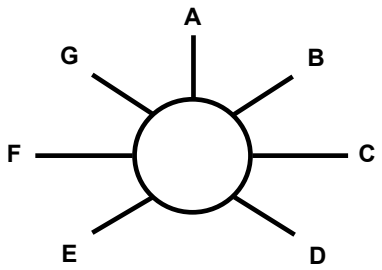
Calculated by:	HZF	Date:	Jul, 2025	Checked by:	PTC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long		
Junction:	Fairview Park Interchange (J1)		Ref. No.:
Scheme:	Design Case (with Junction Improvement Layout)		
Year:	2034	Job No.: CHK50868310	Rev.: -

AM PM

ARM A: Fairview Park Boulevard
ARM B: Castle Peak Road - Tam Mi (N)
ARM C: San Tin Highway Slip Road (N)
ARM D: San Tam Road (N)
ARM E: San Tam Road (S)
ARM F: San Tin Highway Slip Road (S)
ARM G: Castle Peak Road - Tam Mi (S)



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	7.00	11.80	32	25	140	35	0.24
B	7.30	12.00	36	30	140	25	0.21
C	7.30	13.00	13	45	140	30	0.70
D	7.30	11.00	23	25	140	35	0.26
E	7.30	12.00	27	25	140	45	0.28
F	6.00	12.50	20	25	140	40	0.52
G	6.50	11.20	22	25	140	35	0.34

AM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	245	60	220	500	30	2750	1085	640
B	10	10	140	10	240	360	30	3155	800	680
C	110	75	10	100	490	10	220	2680	1015	1275
D	60	40	50	10	250	250	90	3225	750	470
E	40	35	460	65	10	495	20	2185	1125	1790
F	300	350	10	145	570	10	Free Flow	1385	1385	1925
G	110	150	360	80	10	300	0	2380	1010	390

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	200	70	200	325	30	2330	845	970
B	35	10	90	10	160	185	30	2535	520	640
C	185	130	20	80	430	20	200	2195	1065	860
D	75	40	60	20	200	140	70	2820	605	440
E	95	30	280	70	10	270	20	1815	775	1610
F	480	330	10	140	600	20	Free Flow	1430	1580	1160
G	90	90	200	50	10	200	10	2650	650	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	10.24	2980.96	3104	1.00	0.64	1333	1600	0.81	0.53
B	1.03	10.62	2980.96	3216	1.00	0.66	1185	1606	0.67	0.32
C	1.03	9.67	2980.96	2931	1.00	0.62	1314	1621	0.77	0.66
D	0.99	9.74	2980.96	2952	1.00	0.62	948	1196	0.79	0.51
E	0.96	10.32	2980.96	3127	1.00	0.64	1648	1876	0.68	0.41
F	0.98	9.19	2980.96	2783	1.00	0.60	1909	1883	0.73	0.84
G	0.99	9.29	2980.96	2815	1.00	0.60	1376	1215	0.73	0.53
								Crtical Arm:	**A**	**F**
								RFC:	**0.81**	**0.84**
									AM	**PM**

- In accordance with TPDM V2.4

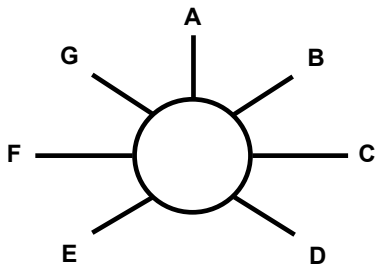
Calculated by:	HZF	Date:	Jul-25	Checked by:	PTC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Fairview Park Interchange (J1)		Ref. No.:	
Scheme:	Design Case under Sensitivity Test 1 (with Junction Improvement Layout)			
Year:	2034	Job No.:	CHK50868310	Rev.: -

AM PM

ARM A: Fairview Park Boulevard
ARM B: Castle Peak Road - Tam Mi (N)
ARM C: San Tin Highway Slip Road (N)
ARM D: San Tam Road (N)
ARM E: San Tam Road (S)
ARM F: San Tin Highway Slip Road (S)
ARM G: Castle Peak Road - Tam Mi (S)



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	7.00	11.80	32	25	140	35	0.24
B	7.30	12.00	36	30	140	25	0.21
C	7.30	13.00	13	45	140	30	0.70
D	7.30	11.00	23	25	140	35	0.26
E	7.30	12.00	27	25	140	45	0.28
F	6.00	12.50	20	25	140	40	0.52
G	6.50	11.20	22	25	140	35	0.34

AM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	270	60	225	585	30	2830	1200	640
B	10	10	155	10	245	420	30	3270	880	760
C	110	85	10	100	490	10	220	2835	1025	1315
D	60	20	50	10	250	250	70	3390	710	470
E	40	35	460	65	10	495	20	2300	1125	1800
F	300	440	10	145	570	10	Free Flow	1355	1475	2070
G	110	150	360	80	10	300	0	2460	1010	370

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	205	70	200	350	30	2415	875	970
B	35	10	105	10	160	225	30	2565	575	725
C	185	150	20	80	430	20	200	2260	1085	880
D	75	40	60	20	205	140	70	2905	610	440
E	95	30	280	70	10	270	20	1900	775	1615
F	480	385	10	140	600	20	Free Flow	1450	1635	1225
G	90	100	200	50	10	200	10	2725	660	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	10.24	2980.96	3104	1.00	0.64	1282	1546	0.94	0.57
B	1.03	10.62	2980.96	3216	1.00	0.66	1107	1585	0.79	0.36
C	1.03	9.67	2980.96	2931	1.00	0.62	1215	1579	0.84	0.69
D	0.99	9.74	2980.96	2952	1.00	0.62	846	1144	0.84	0.53
E	0.96	10.32	2980.96	3127	1.00	0.64	1577	1823	0.71	0.43
F	0.98	9.19	2980.96	2783	1.00	0.60	1927	1872	0.77	0.87
G	0.99	9.29	2980.96	2815	1.00	0.60	1328	1170	0.76	0.56
								Crtical Arm:	**A**	**F**
								RFC:	**0.94**	**0.87**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	HZF	Date:	Jul-25	Checked by:	PTC

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

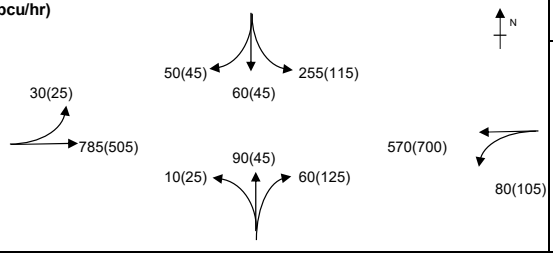
Junction: Kam Pok Road / Fairview Park Boulevard (J2) Design Year: 2034

Description: Year 2034 Design Traffic Flows (Sensitivity Test 1) Designed By: HZF Checked By: PTC

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
Fairview Park Boulevard EB		A	1	3.4	15			7%	9%	1940	1935	406	0.209	0.209	264	0.136	
		A	1	3.4						1955	1955	409	0.209		266	0.136	
Fairview Park Boulevard WB		A	1	3.5	17			25%	26%	1925	1920	321	0.167		398	0.207	0.207
		A	1	3.5						1965	1965	329	0.167		407	0.207	
Kam Pok Road SB		B	2	5.5	18	18		70% / 14%	56% / 22%	2025	2035	365	0.180	0.180	205	0.101	0.101
Kam Pok Road NB		C	3	3.8	13	20		6% / 38%	13% / 64%	1925	1875	160	0.083	0.083	195	0.104	0.104
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			10	+	9	=	19			*			*

Notes:

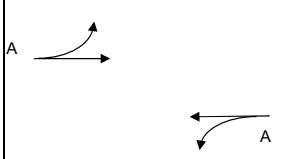
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.473	y		0.412
L (sec)		44	L (sec)		44
C (sec)		120	C (sec)		120
y pract.		0.570	y pract.		0.570
R.C. (%)		21%	R.C. (%)		38%

Stage / Phase Diagrams

1.



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3.

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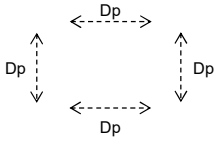


5.

I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	
I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	

Date: Jul, 2025 **Junction:** 2 J2

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

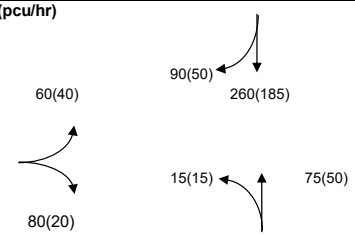
Junction: Kam Pok Road / Vehicular Bridge – South (J3) Design Year: 2034

Description: Year 2034 Design Traffic Flows (Sensitivity Test 1) Designed By: HZF Checked By: PTC

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
Vehicular Bridge (EB)		A	1	3.600	10	10		43% / 57%	67% / 33%	1715	1715	140	0.082	0.082	60	0.035	0.035
Kam Pok Rd (SB)		B	2	3.600		10		26%	21%	1900	1915	350	0.184	0.184	235	0.123	0.123
Kam Pok Rd (NB)		C	3	3.600	10			17%	23%	1925	1910	90	0.047		65	0.034	0.034
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			7	+	7	=	14			*			*

Notes:

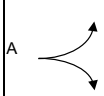
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.266	y		0.192
L (sec)		32	L (sec)		26
C (sec)		60	C (sec)		60
y pract.		0.420	y pract.		0.510
R.C. (%)		58%	R.C. (%)		166%

Stage / Phase Diagrams

1.



2.

3.

4.

5.

I/G= 2		I/G= 5		I/G= 5	5	I/G= 3	14	I/G=	
I/G= 2		I/G= 5		I/G= 5		I/G= 3	14	I/G=	

Date: Jul, 2025 **Junction:** 3 J3

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

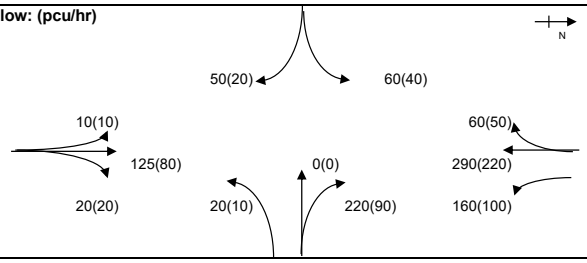
Junction: Kam Pok Road / Vehicular Bridge – North / Vehicular Access (J4) Design Year: 2034

Description: Year 2034 Design Traffic Flows (Sensitivity Test 1) (with Planned Junction Layout) Designed By: HZF Checked By: PTC

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
Vehicular Bridge SB		A	1	3.500	10	12		55% / 45%	67% / 33%	1725	1720	110	0.064	0.064	60	0.035	0.035
Kam Pok Road EB		D	2	3.650	10	12		6% / 13%	9% / 18%	1930	1910	155	0.080	0.080	110	0.058	0.058
R(D) Site Access		C	3	5.500	20					2015	2015	20	0.010		10	0.005	
		C	3	4.000		12		100%	100%	1790	1790	220	0.123	0.123	90	0.050	0.050
Kam Pok Road WB		B	4	3.650	15					1800	1800	160	0.089		100	0.056	
		B	4	3.650		12		17%	19%	1940	1935	350	0.180	0.180	270	0.140	0.140
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =			10	+	10	=	20						
		Fp	1	MIN GREEN + FLASH =			11	+	10	=	21						
		Gp	1,2,4	MIN GREEN + FLASH =			5	+	5	=	10						

Notes:

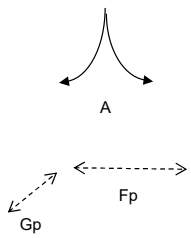
Flow: (pcu/hr)



Group	Fp,D,C,B	A,D,C,B	Group	Fp,D,C,B	A,D,C,B
y	0.384	0.447	y	0.247	0.282
L (sec)	18	25	L (sec)	18	25
C (sec)	90	90	C (sec)	90	90
y pract.	0.720	0.650	y pract.	0.720	0.650
R.C. (%)	88%	45%	R.C. (%)	191%	130%

Stage / Phase Diagrams

1.



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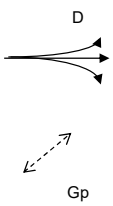

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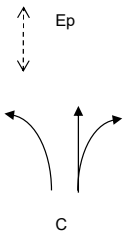

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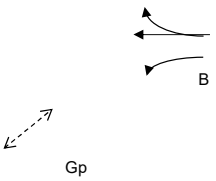


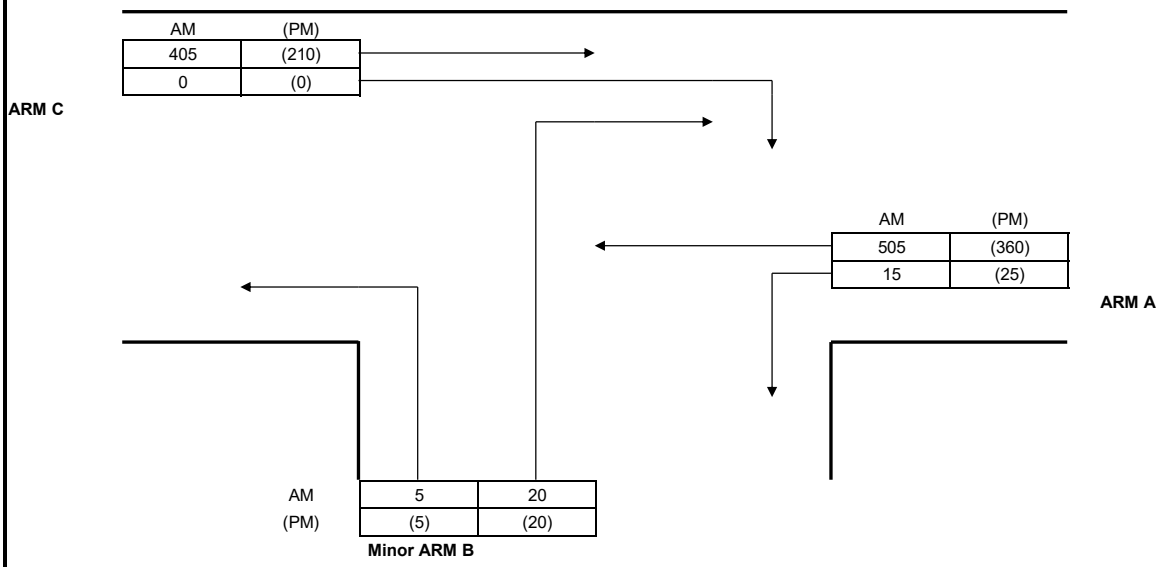
5.

I/G= 7		I/G= 12		I/G= 5		I/G= 5	I/G=
I/G= 7		I/G= 12		I/G= 5		I/G= 5	I/G=

Date: Jul, 2025 **Junction:** 4 J4

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long				
Junction:	Kam Pok Road / Ha Chuk Yuen Road (J5)			Ref. No.:	
Scheme:	Design Case under Sensitivity Test 1				
Year:	2034	Job No.:	CHK50868310	Rev.:	
ARM A:	Kam Pok Road WB				
ARM B:	Ha Chuk Yuen Road				
ARM C:	Kam Pok Road EB				



GEOMETRY

Major road width	W	9.30	Lane widths	w(b-a)	2.05
Central Reserve width	Wcr	0.00		w(b-c)	2.05
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.50
Visibilities	Vr(b-a)	50	Calculated	D	0.75
	Vl(b-a)	50		E	0.80
	Vr(b-c)	50		F	0.92
	Vr(c-b)	50		Y	0.68

ANALYSIS

		Factor	AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		405	210
	q(c-b)		0	0
	q(a-b)		15	25
	q(a-c)		505	360
	q(b-a)		20	20
	q(b-c)		5	5
	f		0.20	0.20
CAPACITIES	Q(b-a)	1	328	376
	Q(b-c)	1	493	520
	Q(c-b)	1	569	600
	Q(b-ac)	1	351	398
RFC's	b-a		0.061	0.053
	b-c		0.010	0.010
	c-b		0.000	0.000
	b-ac		0.071	0.063
Worst RFC			**0.071**	**0.063**

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)

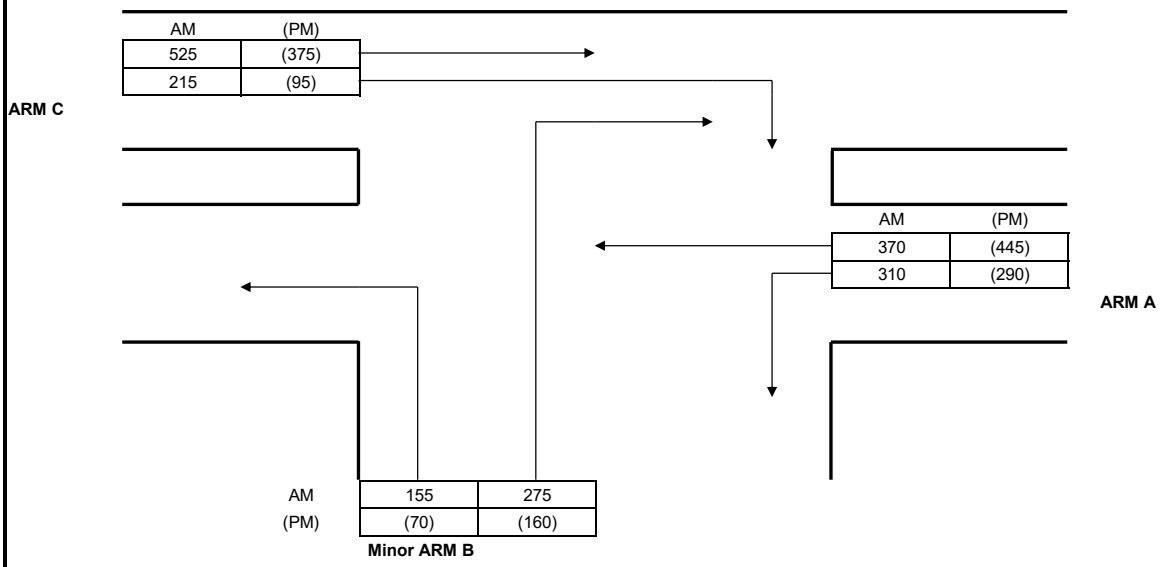
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	HZF	Date:	Jul, 2025	Checked by:	PTC

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Kam Pok Road / Castle Peak Road – Tam Mi (J6)			Ref. No.:
Scheme:	Design Case under Sensitivity Test 1 (with Planned Junction Layout)			
Year:	2034	Job No.:	CHK50868310	Rev.:
ARM A:	Castle Peak Road - Tam Mi NB			
ARM B:	Kam Pok Road EB			
ARM C:	Castle Peak Road - Tam Mi SB			



GEOMETRY					
Major road width	W	6.90	Lane widths	w(b-a)	4.30
Central Reserve width	Wcr	1.50		w(b-c)	4.30
2 Lane Minor Arm (Y/N)		Y		w(c-b)	2.05
Visibilities	Vr(b-a)	53	Calculated	D	0.95
	Vl(b-a)	70		E	1.01
	Vr(b-c)	70		F	0.78
	Vr(c-b)	30		Y	0.76

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		525	375
	q(c-b)		215	95
	q(a-b)		310	290
	q(a-c)		370	445
	q(b-a)		275	160
	q(b-c)		155	70
	f		0.36	0.30
		Factor		
CAPACITIES	Q(b-a)	1	318	370
	Q(b-c)	1	616	598
	Q(c-b)	1	434	423
	Q(b-ac)	1	385	418
RFC's	b-a		0.865	0.432
	b-c		0.252	0.117
	c-b		0.495	0.225
	b-ac		0.000	0.000
Worst RFC			**0.865**	**0.432**

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

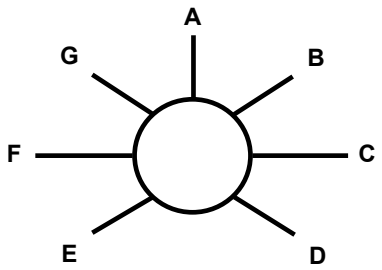
Calculated by:	HZF	Date:	Jul, 2025	Checked by:	PTC

Roundabout Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Fairview Park Interchange (J1)		Ref. No.:	
Scheme:	Design Case under Sensitivity Test 2 (with Junction Improvement Layout)			
Year:	2034	Job No.:	CHK50868310	Rev.: -

AM PM

ARM A: Fairview Park Boulevard
ARM B: Castle Peak Road - Tam Mi (N)
ARM C: San Tin Highway Slip Road (N)
ARM D: San Tam Road (N)
ARM E: San Tam Road (S)
ARM F: San Tin Highway Slip Road (S)
ARM G: Castle Peak Road - Tam Mi (S)



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	7.00	11.80	32	25	140	35	0.24
B	7.30	12.00	36	30	140	25	0.21
C	7.30	13.00	13	45	140	30	0.70
D	7.30	11.00	23	25	140	35	0.26
E	7.30	12.00	27	25	140	45	0.28
F	6.00	12.50	20	25	140	40	0.52
G	6.50	11.20	22	25	140	35	0.34

AM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	20	265	60	225	580	30	2880	1190	640
B	10	10	170	10	245	475	30	3260	950	810
C	110	90	10	100	490	10	220	2885	1030	1325
D	60	40	50	10	260	250	90	3445	760	470
E	40	35	460	65	10	495	20	2395	1125	1810
F	300	465	10	145	570	10	Free Flow	1400	1500	2120
G	110	150	360	80	10	300	0	2510	1010	390

PM FLOWS

from \ to	A	B	C	D	E	F	G	Circ	Entry	Exit
A	10	10	205	70	200	350	30	2455	875	970
B	35	10	110	10	160	245	30	2565	600	765
C	185	160	20	80	430	20	200	2280	1095	885
D	75	40	60	20	205	140	70	2935	610	440
E	95	30	280	70	10	270	20	1930	775	1615
F	480	415	10	140	600	20	Free Flow	1460	1665	1245
G	90	100	200	50	10	200	10	2765	660	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	10.24	2980.96	3104	1.00	0.64	1250	1520	0.95	0.58
B	1.03	10.62	2980.96	3216	1.00	0.66	1114	1585	0.85	0.38
C	1.03	9.67	2980.96	2931	1.00	0.62	1184	1567	0.87	0.70
D	0.99	9.74	2980.96	2952	1.00	0.62	812	1126	0.94	0.54
E	0.96	10.32	2980.96	3127	1.00	0.64	1518	1805	0.74	0.43
F	0.98	9.19	2980.96	2783	1.00	0.60	1901	1866	0.79	0.89
G	0.99	9.29	2980.96	2815	1.00	0.60	1299	1147	0.78	0.58
								Crtical Arm:	**A**	**F**
								RFC:	**0.95**	**0.89**
									AM	**PM**

- In accordance with TPDM V2.4

Calculated by:	HZF	Date:	Jul-25	Checked by:	PTC

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

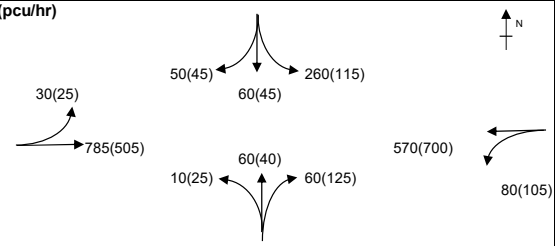
Junction: Kam Pok Road / Fairview Park Boulevard (J2) Design Year: 2034

Description: Year 2034 Design Traffic Flows (Sensitivity Test 2) Designed By: HZF Checked By: PTC

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
Fairview Park Boulevard EB	→	A	1	3.4	15			7%	9%	1940	1935	406	0.209	0.209	264	0.136	
		A	1	3.4						1955	1955	409	0.209		266	0.136	
Fairview Park Boulevard WB	←	A	1	3.5	17			25%	26%	1925	1920	321	0.167		398	0.207	0.207
		A	1	3.5						1965	1965	329	0.167		407	0.207	
Kam Pok Road SB		B	2	5.5	18	18		70% / 14%	56% / 22%	2025	2035	370	0.183	0.183	205	0.101	0.101
Kam Pok Road NB		C	3	3.8	13	20		8% / 46%	13% / 66%	1910	1875	130	0.068	0.068	190	0.101	0.101
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			10	+	9	=	19			*			*

Notes:

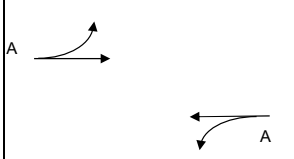
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.460	y		0.409
L (sec)		44	L (sec)		44
C (sec)		120	C (sec)		120
y pract.		0.570	y pract.		0.570
R.C. (%)		24%	R.C. (%)		39%

Stage / Phase Diagrams

1.



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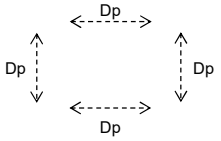
3.

4.



5.

I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	
I/G= 3		I/G= 7		I/G= 7		I/G= 11	19	I/G=	

Date: Jul, 2025 **Junction:** 2 J2

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

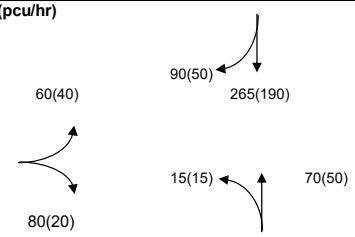
Junction: Kam Pok Road / Vehicular Bridge – South (J3) Design Year: 2034

Description: Year 2034 Design Traffic Flows (Sensitivity Test 2) Designed By: HZF Checked By: PTC

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
Vehicular Bridge (EB)		A	1	3.600	10	10		43% / 57%	67% / 33%	1715	1715	140	0.082	0.082	60	0.035	0.035
Kam Pok Rd (SB)		B	2	3.600		10		25%	21%	1905	1915	355	0.186	0.186	240	0.125	0.125
Kam Pok Rd (NB)		C	3	3.600	10			18%	23%	1925	1910	85	0.044		65	0.034	
Pedestrian Crossing		Dp	4	MIN GREEN + FLASH =			7	+	7	=	14			*			*

Notes:

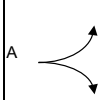
Flow: (pcu/hr)



Group		A,B,C,Dp	Group		A,B,C,Dp
y		0.268	y		0.160
L (sec)		32	L (sec)		32
C (sec)		60	C (sec)		60
y pract.		0.420	y pract.		0.420
R.C. (%)		57%	R.C. (%)		162%

Stage / Phase Diagrams

1.



2.

3.

4.

5.

I/G= 2		I/G= 5		I/G= 5	5	I/G= 3	14	I/G=	
I/G= 2		I/G= 5		I/G= 5	5	I/G= 3	14	I/G=	

Date: Jul, 2025 **Junction:** 3 J3

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50868310 **MVA HONG KONG LIMITED**

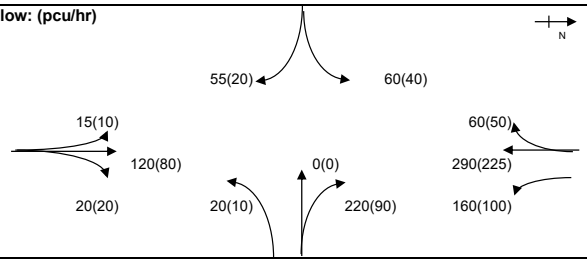
Junction: Kam Pok Road / Vehicular Bridge – North / Vehicular Access (J4) Design Year: 2034

Description: Year 2034 Design Traffic Flows (Sensitivity Test 2) (with Planned Junction Layout) Designed By: HZF Checked By: PTC

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
Vehicular Bridge SB		A	1	3.500	10	12		52% / 48%	67% / 33%	1725	1720	115	0.067	0.067	60	0.035	0.035
Kam Pok Road EB		D	2	3.650	10	12		10% / 13%	9% / 18%	1920	1910	155	0.081	0.081	110	0.058	0.058
R(D) Site Access		C	3	5.500	20					2015	2015	20	0.010		10	0.005	
		C	3	4.000		12		100%	100%	1790	1790	220	0.123	0.123	90	0.050	0.050
Kam Pok Road WB		B	4	3.650	15					1800	1800	160	0.089		100	0.056	
		B	4	3.650		12		17%	18%	1940	1935	350	0.180	0.180	275	0.142	0.142
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =			10	+	10	=	20						
		Fp	1	MIN GREEN + FLASH =			11	+	10	=	21						
		Gp	1,2,4	MIN GREEN + FLASH =			5	+	5	=	10						

Notes:

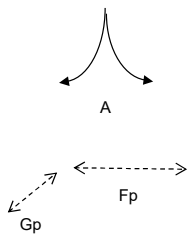
Flow: (pcu/hr)



Group	Fp,D,C,B	A,D,C,B	Group	Fp,D,C,B	A,D,C,B
y	0.384	0.451	y	0.250	0.285
L (sec)	18	25	L (sec)	18	25
C (sec)	90	90	C (sec)	90	90
y pract.	0.720	0.650	y pract.	0.720	0.650
R.C. (%)	87%	44%	R.C. (%)	188%	128%

Stage / Phase Diagrams

1.



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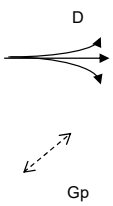

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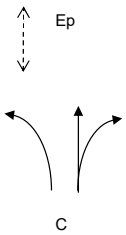

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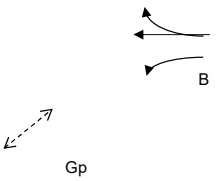


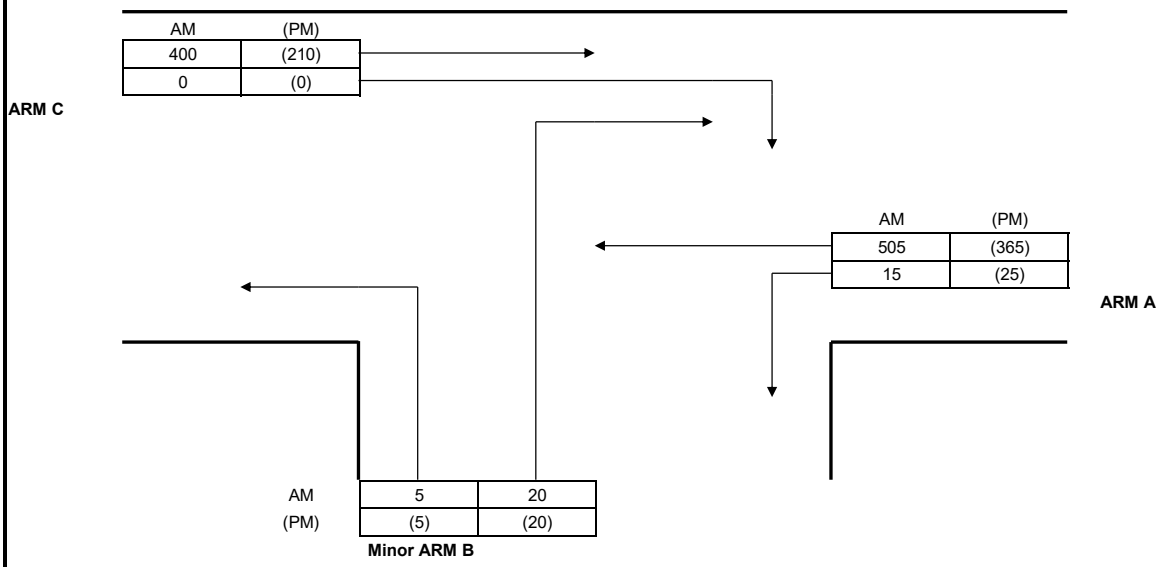
5.

I/G= 7		I/G= 12		I/G= 5		I/G= 5	I/G=
I/G= 7		I/G= 12		I/G= 5		I/G= 5	I/G=

Date: Jul, 2025 **Junction:** 4 J4

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Kam Pok Road / Ha Chuk Yuen Road (J5)			Ref. No.:
Scheme:	Design Case under Sensitivity Test 2			
Year:	2034	Job No.:	CHK50868310	Rev.:
ARM A:	Kam Pok Road WB			
ARM B:	Ha Chuk Yuen Road			
ARM C:	Kam Pok Road EB			



GEOMETRY

Major road width	W	9.30	Lane widths	w(b-a)	2.05
Central Reserve width	Wcr	0.00		w(b-c)	2.05
2 Lane Minor Arm (Y/N)		N		w(c-b)	3.50
Visibilities	Vr(b-a)	50	Calculated	D	0.75
	Vl(b-a)	50		E	0.80
	Vr(b-c)	50		F	0.92
	Vr(c-b)	50		Y	0.68

ANALYSIS

		Factor	AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		400	210
	q(c-b)		0	0
	q(a-b)		15	25
	q(a-c)		505	365
	q(b-a)		20	20
	q(b-c)		5	5
	f		0.20	0.20
CAPACITIES	Q(b-a)	1	328	375
	Q(b-c)	1	493	519
	Q(c-b)	1	569	599
	Q(b-ac)	1	351	397
RFC's	b-a		0.061	0.053
	b-c		0.010	0.010
	c-b		0.000	0.000
	b-ac		0.071	0.063
Worst RFC			**0.071**	**0.063**

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)

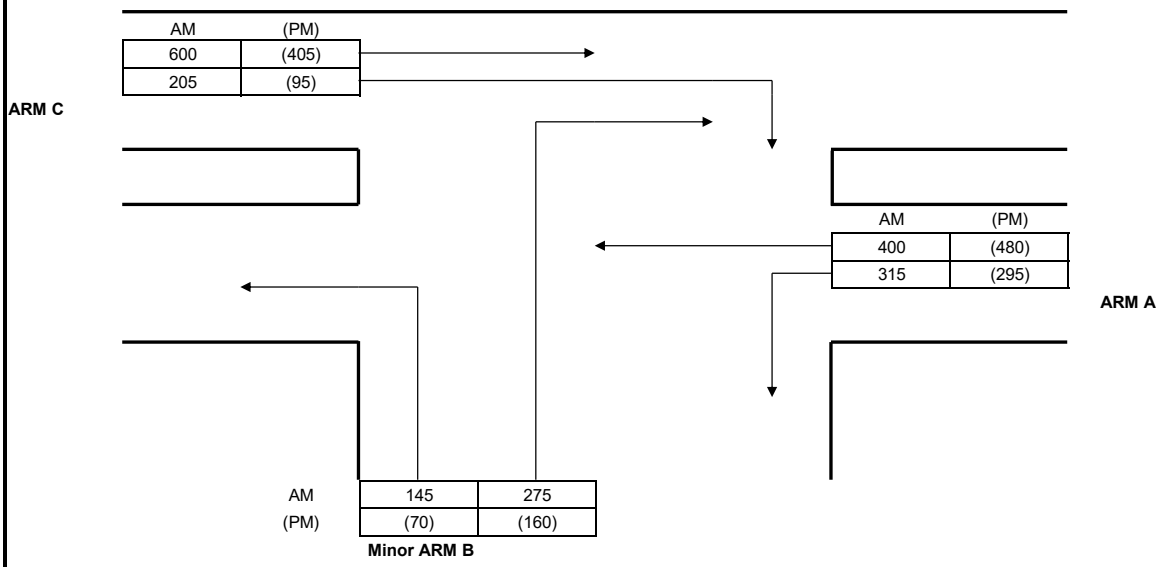
T.P.D.M.V.2.4
Appendix 1

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

Calculated by:	HZF	Date:	Jul, 2025	Checked by:	PTC

Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Residential Development at Lot No. 4822 in D.D. 104 and Adjoining Government Land, East of Kam Pok Road, Mai Po, Yuen Long			
Junction:	Kam Pok Road / Castle Peak Road – Tam Mi (J6)			Ref. No.:
Scheme:	Design Case under Sensitivity Test 2 (with Planned Junction Layout)			
Year:	2034	Job No.:	CHK50868310	Rev.:
ARM A:	Castle Peak Road - Tam Mi NB			
ARM B:	Kam Pok Road EB			
ARM C:	Castle Peak Road - Tam Mi SB			



GEOMETRY					
Major road width	W	6.90	Lane widths	w(b-a)	4.30
Central Reserve width	Wcr	1.50		w(b-c)	4.30
2 Lane Minor Arm (Y/N)		Y		w(c-b)	2.05
Visibilities	Vr(b-a)	53	Calculated	D	0.95
	Vl(b-a)	70		E	1.01
	Vr(b-c)	70		F	0.78
	Vr(c-b)	30		Y	0.76

ANALYSIS			AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)		600	405
	q(c-b)		205	95
	q(a-b)		315	295
	q(a-c)		400	480
	q(b-a)		275	160
	q(b-c)		145	70
	f		0.35	0.30
		Factor		
CAPACITIES	Q(b-a)	1	301	355
	Q(b-c)	1	608	587
	Q(c-b)	1	427	414
	Q(b-ac)	1	364	404
RFC's	b-a		0.914	0.451
	b-c		0.238	0.119
	c-b		0.480	0.229
	b-ac		0.000	0.000
Worst RFC			**0.914**	**0.451**

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:	HZF	Date:	Jul, 2025	Checked by:	PTC