# **Appendix B**

Revised Traffic Impact Assessment

Reference number CHK50791710/PTC/L2500791/sys

22/05/2025

# SECTION 16 PLANNING APPLICATION FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 221 AND ADJOINING GOVERNMENT LAND, SHA HA, SAI KUNG

**TRAFFIC IMPACT ASSESSMENT** 







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S16 Planning Application for Proposed Residential Development at various lots in D.D. 221 and adjoining<br/>government land, Sha Ha, Sai KungCHK50791710Traffic Impact Assessment22/05/2025



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#### 1. INTRODUCTION

#### 1.1 Background

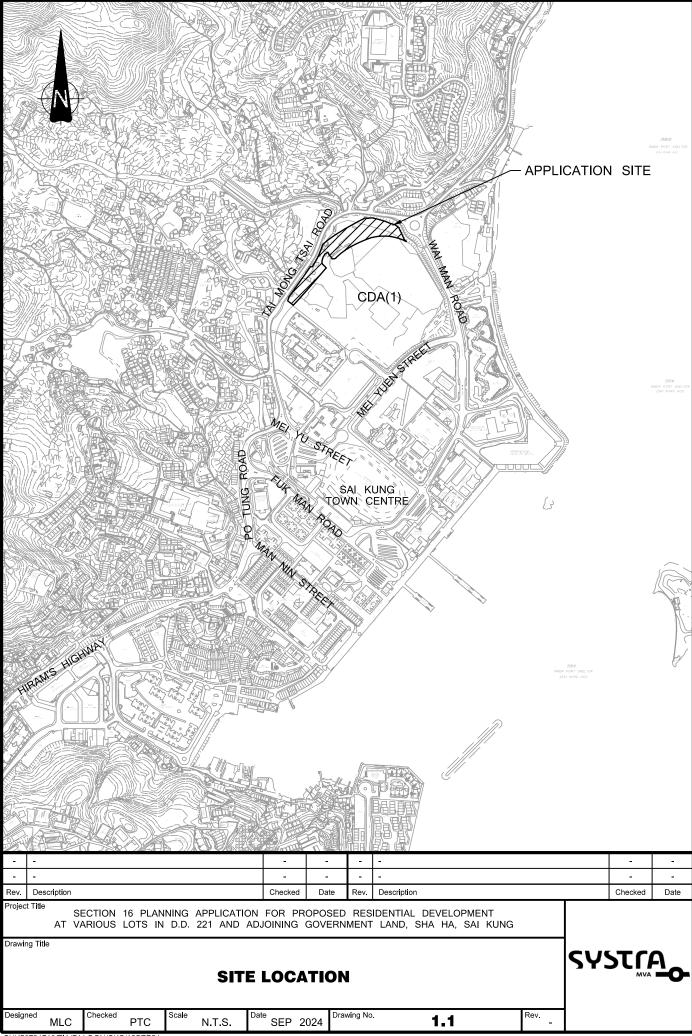
- 1.1.1 The application site is at various lots in DD221 and adjoining Government land, Sai Kung, as shown in Drawing 1.1. It is currently in an area shown as "Road" in the approved Sai Kung Town Outline Zoning Plan (OZP) S/SK-SKT/6.
- 1.1.2 The applicant intends to develop the site into a residential development with a view to better utilizing the "leftover" land resources between the CDA(1) zone and Tai Mong Tsai Road taking into account the ongoing Hiram's Highway Improvement Stage 2. This Traffic Impact Assessment (TIA) study is to review the potential traffic impact on the adjacent local road network by the proposed residential development to support the Section 16 Application.

#### 1.2 Study Objective

- 1.2.1 The objectives of this study are summarised as follows:
  - 0 review the current traffic condition and circulation pattern in the adjacent local road network;
  - 0 review the proposed development schedule;
  - produce future traffic forecasts on the adjacent local road network with considerations 0 of the planned developments in the vicinity;
  - 0 investigate the traffic impact on the adjacent local road network with operation of the proposed development at Design Year.

#### 1.3 **Report Structure**

- 1.3.1 Following this introductory chapter, there are six further chapters:
  - Ο **Chapter 2** – Proposed Development, presents the development parameters and the transport provisions of the proposed scheme;
  - 0 Chapter 3 – Traffic Context, describes the current traffic condition and future traffic planning in the vicinity;
  - 0 Chapter 4 – Traffic Forecasts, describes the methodology of traffic forecasting exercise and presents the results;
  - Ο 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;
  - 0 **Chapter 6** – Public Transport Service Assessment, presents the assessment results on the utilisation of the public transport upon occupation of the proposed development, and suggests, if necessary, improvement measures to alleviate the foreseeable problem;
  - 0 **Chapter 7** – Pedestrian Impact Assessment, describes the pedestrian forecasting methodology and presents the results;
  - 0 Chapter 8 – Conclusion, summarises the study findings and presents the conclusion accordingly.



CHK50791710/TIA/F11.DGN/CKC/12SEP24



## 2. PROPOSED DEVELOPMENT

### 2.1 Site Location

2.1.1 The application site is located in Sha Ha. It is bounded by Tai Mong Tsai Road to the north, existing residential developments to the west and planned CDA(1) site to the south.

### 2.2 Development Parameters

2.2.1 The subject site is proposed to be developed into a residential development. The proposed development parameters are summarised in **Table 2.1**. It is anticipated to be completed in year 2032. The Master Layout Plan (MLP) and basement plan are illustrated in **Drawing 2.1** and **Drawing 2.2** respectively.

Table 2.1 Propose	ed Development Parameters
	Parameter
Plot Ratio	about 1.5
Domestic GFA	about 11,421m <sup>2</sup>
No. of Blocks	3
No. of Units	about 280
Average Flat size	approx. 40.79m <sup>2</sup>
Anticipated Population	about 756 <sup>(1)</sup>

 Table 2.1
 Proposed Development Parameters

Remark : (1) Adopting the average domestic household size of 2.7 in the District Council Constituency Area Q01 Sai Kung Central in 2021 Population Census.

### 2.3 Vehicular Access Arrangement

- 2.3.1 The vehicular access for the proposed development is Tai Mong Tsai Road, which is the only road abutting the site. A left-in/left-out arrangement is proposed for the vehicular access to minimize the traffic impact to Tai Mong Tsai Road. The indicative design of the vehicular access is illustrated in **Drawing No. 2.3**. The design and construction of vehicular access and the associated pedestrian crossing will be undertaken by the applicant at his own cost.
- 2.3.2 Swept path analysis for 11m long HGV has been conducted at the proposed vehicular access and the result is shown in **Appendix A**. The result demonstrated that sufficient manoeuvring space has been provided for 11m HGV turning into and out from the vehicular access.
- 2.3.3 Besides, sightline analysis has also been conducted at the proposed vehicular access and the result is shown in **Appendix A**. The result revealed that adequate sightline distance have been provided for the proposed vehicular access.

### 2.4 Provision of Public Pedestrian Walkway

2.4.1 It is noted that a 6m wide public pedestrian walkway will be provided by others to connect Tai Mong Tsai Road and Mei Fuk Street for public use according to the approved planning application of nearby CDA(1) site (Application No. A/SK-SKT/28). As part of the planned pedestrian walkway will fall within boundary of the application site, a 6m wide public pedestrian walkway will be reserved on the west of the application site. The proposed 6m public pedestrian walkway within the site is indicated in the **Drawing 2.1**.



#### 2.5 **Internal Transport Facility**

2.5.1 The proposed residential development would be provided with internal transport facilities in accordance with the latest Hong Kong Planning Standards and Guidelines (HKPSG). In addition, public parking spaces are proposed to increase the parking space supply to the community. Taking into consideration of the basement extent, 10 nos. public parking spaces for private car are proposed. The proposed provisions are summarised in Table 2.2.

ltem	High	end of HKPSG Re		Parameters	Provision (nos.)					
Residential Development										
Private Car	GPS <sup>(1)</sup>	R1 <sup>(1)</sup>		R2 <sup>(1)</sup>	R3 <sup>(1)</sup>					
	1 space per	$FS \le 40m^2$	0.5	4	1.1	160 units	22			
	4 units	40m² <fs≤70m²< td=""><td>1.2</td><td>1</td><td>120 units</td><td>40</td></fs≤70m²<>	1.2	1		120 units	40			
Visitor Parking	Parking 4 spaces for each block with 61-75 units <sup>(2)</sup>						8			
5 spaces for each block with more than 75 units						1 block	5			
	Total	75 <sup>(3)</sup>								
Motorcycle Parking	2 1 space per 100 units						3			
HGV Loading/Unloading Bays	1 bay per resi	dential block	3 blocks	3						
Public Parking Space	25									
Private Car -							10			

Table 2.2 **Proposed Internal Transport Facility Provisions** 

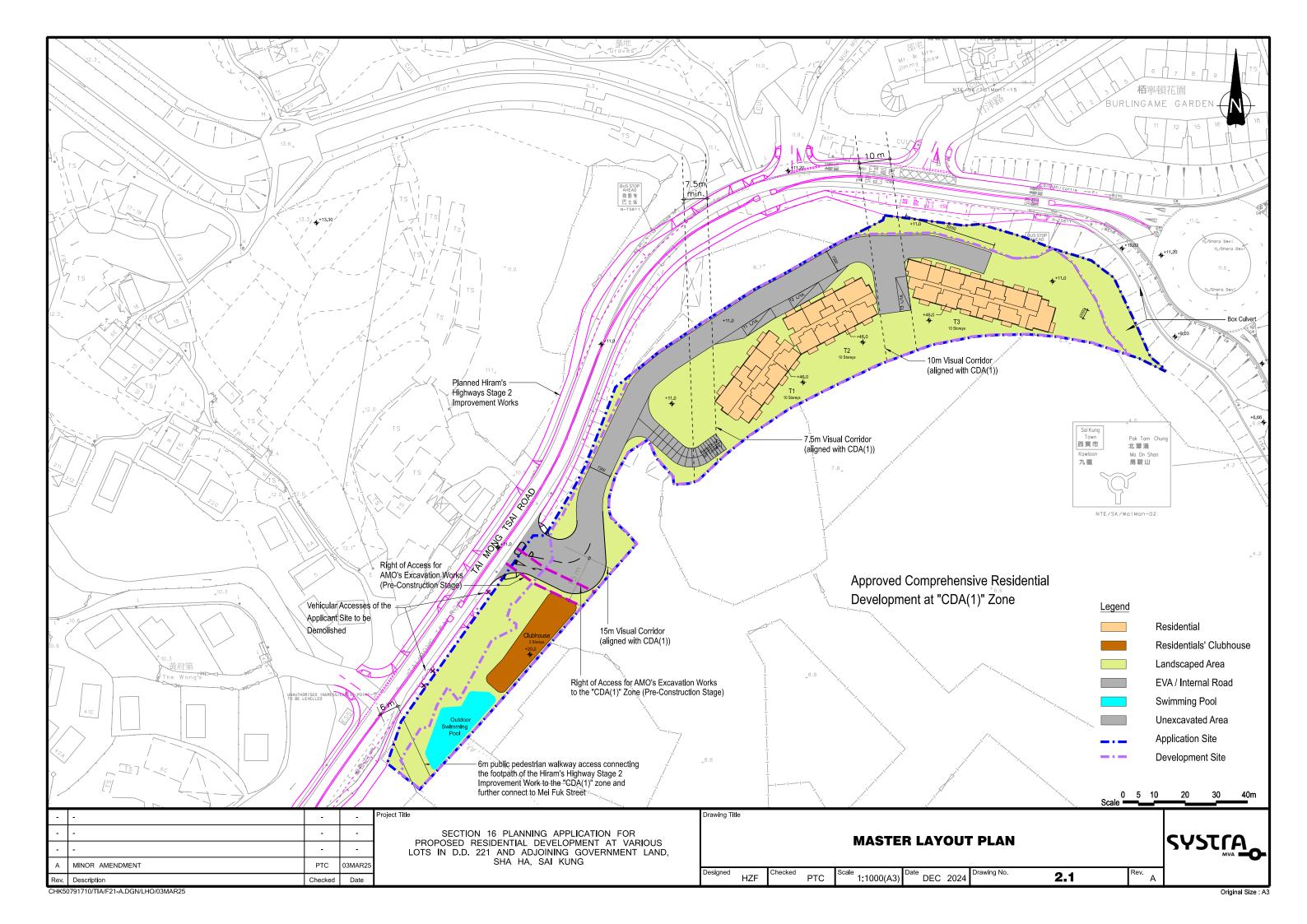
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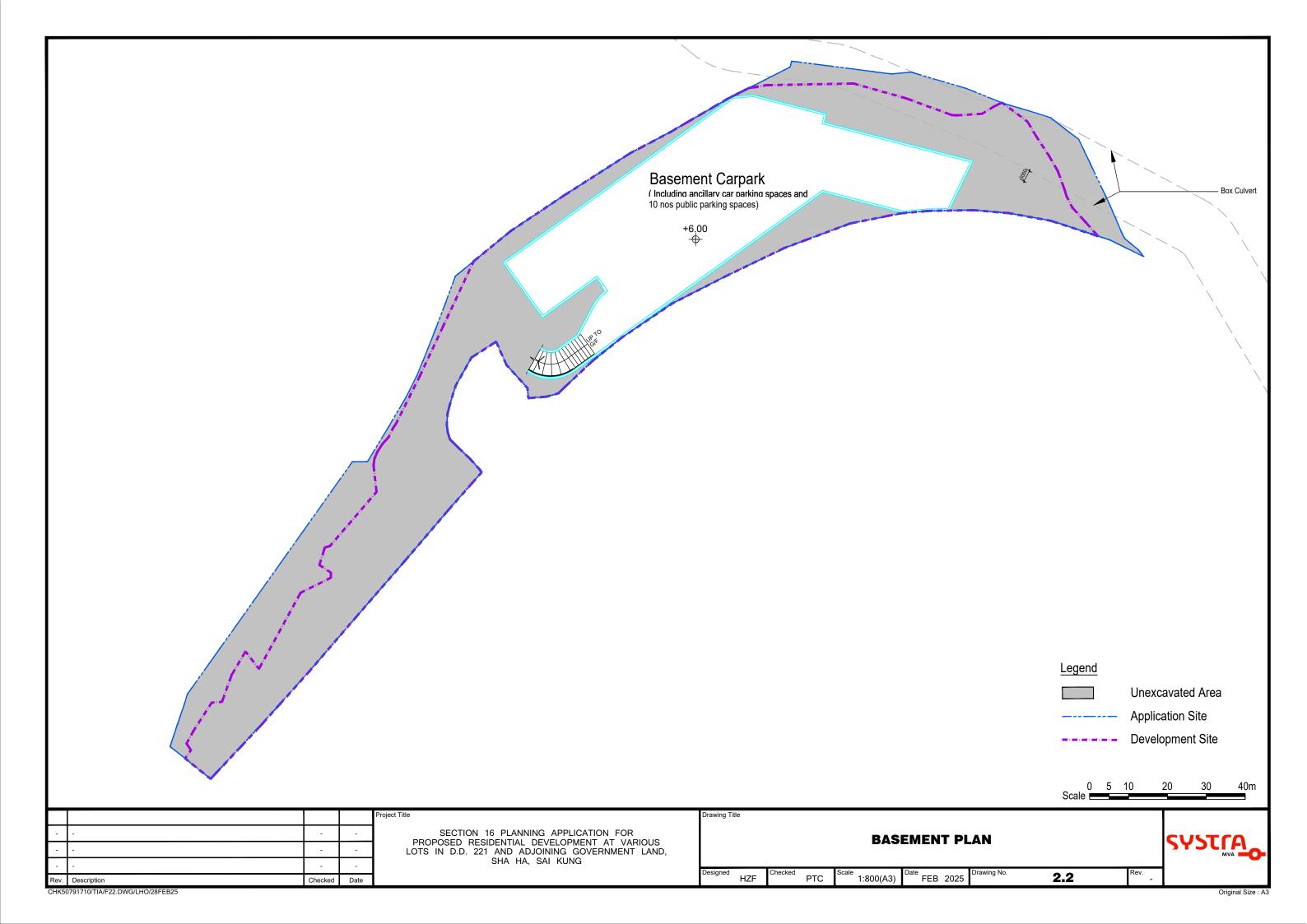
(1) Parking Requirement = GPS x R1 x R2 x R3, where GPS = 1 car space per 4 flats, R1=1.2 for flat size 40m<sup>2</sup><FS≤70m<sup>2</sup>, R2=1 for the site outside a 500-radius of rail station, R3=1.1 for domestic plot ratio 1<PR≤2.

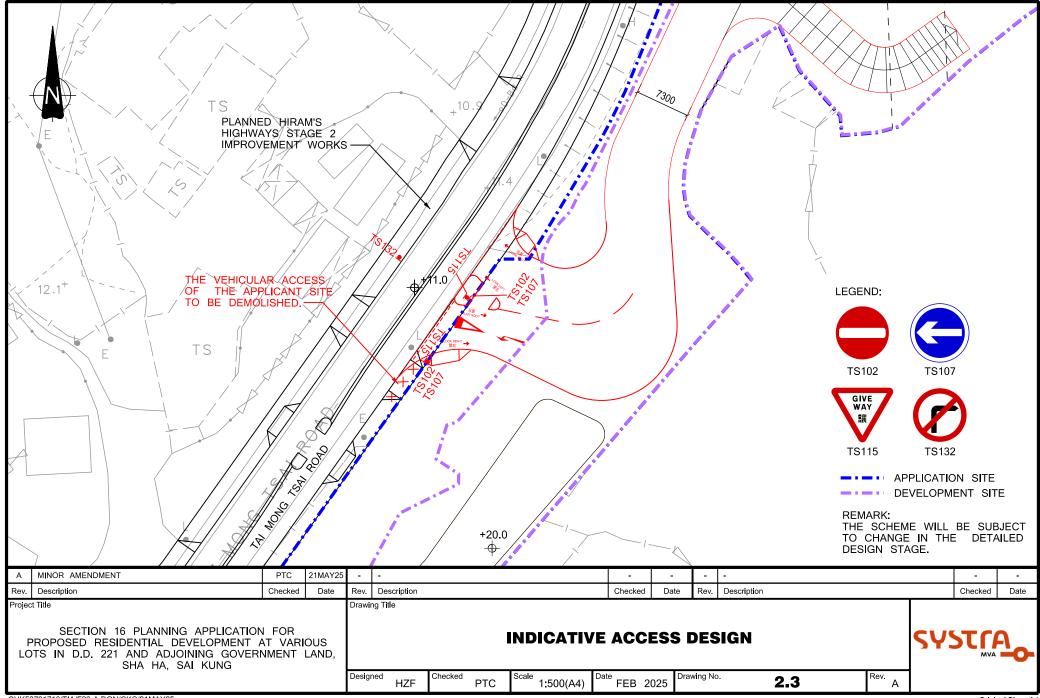
(2) With reference to the other similar residential developments.

(3) Including 2 disabled spaces for total 51-150 parking spaces, with reference to Regulation 72 of the Building (Planning) Regulations.

2.5.2 Both the ancillary carpark and public parking spaces would be located in the basement, whilst the loading/unloading bays would be located on the ground floor level along the 7.3m wide internal driveway.









## 3. TRAFFIC CONTEXT

### 3.1 Road Network

#### Existing Road Network

- 3.1.1 Sha Ha area is mainly served by Tai Mong Tsai Road, a rural road which functions as local distributor running in north-south direction. It connects Po Tung Road to Hiram's Highway and to Clear Water Bay Road further on the south and Sai Sha Road on the north.
- 3.1.2 Hiram's Highway is a strategic road linking up Sai Kung to East Kowloon and Tseung Kwan O. The existing Hiram's Highway between Marina Cove to Sai Kung Town is generally a single 2lane carriageway.

#### Planned Road Network

- 3.1.3 Improvement works to Hiram's Highway has been planned by Highways Department (HyD), with the objectives to relieve existing traffic congestion and enhance the resilience to unexpected incidents. The works has been divided into 2 stages. Stage 1 works included the road widening of Hiram's Highway between Clear Water Bay Road and Marina Cove, which has been completed in 2021.
- 3.1.4 The Stage 2 works includes widening of the road section between Marina Cove to Sai Kung Town, which covered Hiram's Highway, Po Tung Road and a section of Tai Mong Tsai Road abutting the application site. According to the HyD's press releases dated 29 September 2023, the design and construction of the works is scheduled to commence in the Q2 2024 and will take about 84 months to complete. As such, it is anticipated that the improvement works would be completed by 2032. **Drawing No. 3.1** shows the extent of the planned Stage 2 improvement works.

### 3.2 Existing Traffic Condition

3.2.1 A total of nine local junctions and six 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**.

Ref. (1)	Junction/Road Link	Туре	Drawing No.
Junction			
А	Tai Mong Tsai Road/Wai Man Road	Roundabout	3.3
В	Tai Mong Tsai Road/Mei Yu Street/Po Tung Road	Priority	3.4
С	Po Tung Road/Fuk Man Road	Roundabout	3.5
D	Po Tung Road/Man Nin Street	Priority	3.6
Е	Pedestrian Crossing near Yau Ma Po Street	Signal	3.7
F	Po Tung Road/Yau Ma Po Street	Priority	3.8
G	Hiram's Highway/Chui Tong Road	Priority	3.8
Н	Hiram's Highway/Po Lo Che Road /Hong Kin Road	Signal	3.9
I	Tai Mong Tsai Road /Sai Sha Road	Roundabout	3.10

 Table 3.1
 Identified Key Local Junctions and Road Links

22/05/2025



Ref. (1)	Junction/Road Link	Туре	Drawing No.
Road	Link		
S1	Tai Mong Tsai Road (section between Wai Man Road and Sha Ha Path)	Single-2	3.2
S2	Tai Mong Tsai Road (section between Sha Kok Mei Road and Sha Kok Mei Village (North)	Single-2	3.2
S3	Fuk Man Road (section between Po Tung Road and Chan Man Street)	Single-2	3.2
S4	Po Tung Road (section between Fuk Man Road and Man Nin Street)	Single-2	3.2
S5	Hiram's Highway (section between Hong Kin Road and Po Lo Che Path)	Single-2	3.2
S6	Sai Sha Road (section near its roundabout with Tai Mong Tsai Road)	Single-2	3.2

Remark: (1) Locations refer to Drawing 3.2.

- 3.2.2 In order to establish the current traffic condition in the area, traffic surveys in form of manual classified count were conducted at the identified key local junctions. Since Sai Kung is not only a residential area, but also is a popular recreational place during the weekends, the traffic surveys were not only conducted during the typical weekday morning and evening peak hours, but also the weekend peak period.
- 3.2.3 The traffic surveys were arranged and conducted on a typical weekday in April 2024 during morning peak hours between 07:30-09:30 and the evening peak hours between 17:00-19:00 and a typical weekend in April 2024 (Saturday) during the hours of 12:00-19:00.
- 3.2.4 The observed traffic data indicates that the weekday morning and evening peak hours occurred from 07:45 to 08:45 and 17:30 to 18:30 respectively while the weekend peak hour occurred from 13:45 to 14:45. The observed peak hour traffic flows are shown in **Drawing 3.11**.

#### **Junction Operational Performance**

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

D.f			Reserve Capacity / Ratio to Flow Capacity						
Ref.	Junction	Туре	Wee	Maakanal					
			AM Peak	PM Peak	Weekend Peak				
А	Tai Mong Tsai Road/Wai Man Road	Roundabout	0.62	0.48	0.53				
В	Tai Mong Tsai Road/Mei Yu Street/Po Tung Road	Priority	0.03	0.05	0.07				
С	Po Tung Road/Fuk Man Road	Roundabout	1.14	1.02	1.29				
D	Po Tung Road/Man Nin Street	Priority	0.65	0.91	1.34				
E	Pedestrian Crossing near Yau Ma Po Street	Signal	37%	41%	32%				
F	Po Tung Road/Yau Ma Po Street	Priority	0.21	0.22	0.13				
G	Hiram's Highway/Chui Tong Road	Priority	0.19	0.30	0.37				
Н	Hiram's Highway/Po Lo Che Road /Hong Kin Road	Signal	45%	43%	44%				
I	Tai Mong Tsai Road /Sai Sha Road	Roundabout	0.32	0.33	0.30				
Remark:	Remark: (1) Locations refer to <b>Drawing 3.2</b> .								

Table 3.2Current Junction Operational Performance

S16 Planning Application for Proposed Residential Development at various lots in D.D. 221 and adjoining government land, Sha Ha, Sai Kung

3.2.6 The assessment results indicated that all the identified key junctions are currently operating with capacity, except the roundabout of Po Tung Road/Fuk Man Road (C) and the priority junction of Po Tung Road/Man Nin Street (D).

### **Road Link Operational Performance**

3.2.7 Traffic surveys have also been conducted to establish the current traffic flows at the identified road links as indicated in **Drawing 3.2**. The Volume to Capacity (V/C) ratio of each identified road links have been evaluated and the results are summarised in **Table 3.3**.

			Observed Flows		Observed Flows			Design				
Ref.	Road Link	Dir	(pcu/hr)		(Veh/hr)			Capacity	V/C Ratio			
(-)			AM	PM	WE	AM	PM	WE	(Veh/hr) <sup>(2)</sup>	AM	PM	WE
S1	Tai Mong	NB	500	630	655	442	571	592	850	0.52	0.67	0.70
21	Tsai Road	SB	685	535	590	621	494	527	850	0.73	0.58	0.62
52	Tai Mong	NB	435	585	585	402	548	539	850	0.47	0.64	0.63
	Tsai Road	SB	605	470	505	549	441	450	850	0.65	0.52	0.53
S3	Fuk Man Road	WB	455	495	615	400	400	530	850	0.47	0.47	0.62
35		EB	485	420	555	408	345	470	850	0.48	0.41	0.55
S4	Po Tung	NB	750	900	960	667	811	851	850	0.78	0.95	1.00
54	Road	SB	945	835	980	844	753	876	850	0.99	0.89	1.03
сг	Hiram's	NB	810	970	935	720	886	822	850	0.85	1.04	0.97
S5	Highway	SB	1065	860	975	955	774	876	850	1.12	0.91	1.03
S6	Sai Sha	NB	500	615	505	448	580	457	850	0.53	0.68	0.54
30	Road	SB	565	410	440	520	391	393	850	0.61	0.46	0.46

Table 3.3Current Road Link Operational Performance
--

Remarks:

(1) Refer to Drawing 3.2.

(2) Design capacity of 850 veh/hr for each bound of single 2-lane carriageway, as extracted from TPDM Volume 2 Chapter 2.4.

3.2.8 The assessment results in **Table 3.3** indicated that all the identified sections are currently operating within capacity, except the road link of Po Tung Road (S4) and a section of Hiram's Highway near Hong Kin Road (S5).

## 3.3 Existing Public Transport Services

3.3.1 Franchised bus and minibus are the major public transport services in Sai Kung. The nearby public transport facilities of the site are indicated in **Drawing 3.12**, whilst the details and servicing schedules are summarised in **Table 3.4**.

22/05/2025



Route	Origin/Destination	Frequency (min.)	Remark					
Franchised Bus								
92	Diamond Hill Railway Station <-> Sai Kung	10 - 30	-					
92R	Sai Kung → Tsim Sha Tsui Star Ferry	From Tsim Sha Tsui Star Ferry: 60 From Sai Kung: 20-30	Saturday, Sunday and Public Holiday only					
94	Wong Shek Pier <-> Sai Kung	20 - 40	-					
96R	Diamond Hill Railway Station <> Wong Shek Pier	18 - 30	Saturday, Sunday and Public Holiday only					
99	Heng On Bus Terminus <-> Sai Kung	15 – 30	-					
99R	University Railway Station Bus Terminus <-> Sai Kung North Bus Terminus	60	Public Holiday only					
292P	Sai Kung → Kwun Tong	 (for ref. one trip at 7:30a.m only)	Weekday Morning Peak Hour only					
299X	Shatin Central Bus Terminus <-> Sai Kung	15 – 20	-					
792M	Tseung Kwan O Station <-> Sai Kung	15 –30	-					
Green Mi	nibus	·	·					
1	Kowloon Bay (Telford Gardens) <-> Sai Kung	8 – 20	-					
1A <sup>(1)</sup>	Diamond Hill (Choi Hung Road) Public Transport Interchange < Sai Kung	4	-					
15	Diamond Hill (Choi Hung Road) Public Transport Interchange < Sai Kung	10 – 15	Overnight Service only					
7	Hoi Ha <-> Sai Kung	20 - 30	-					
9	Lady Maclehose Holiday Village <-> Sai Kung	30	-					
12	Po Lam <-> Sai Kung	10 - 15	-					
101M <sup>(2)</sup>	Hang Hau Station <-> Sai Kung	3 – 30	-					
Red Minil	ous							
-	Causeway Bay <-> Sai Kung	Non-scheduled	-					
-	Kwun Tong <> Sai Kung	Non-scheduled	-					
-	Mong Kok <-> Sai Kung	Non-scheduled	-					

#### Table 3.4 **Existing Public Transport Services**

Remarks:

(1) Apart from regular services, short-working journeys from Sai Kung North Public Transport Interchange will be operated daily from 5:30 am and 9:00 am at a frequency of 20 minutes.

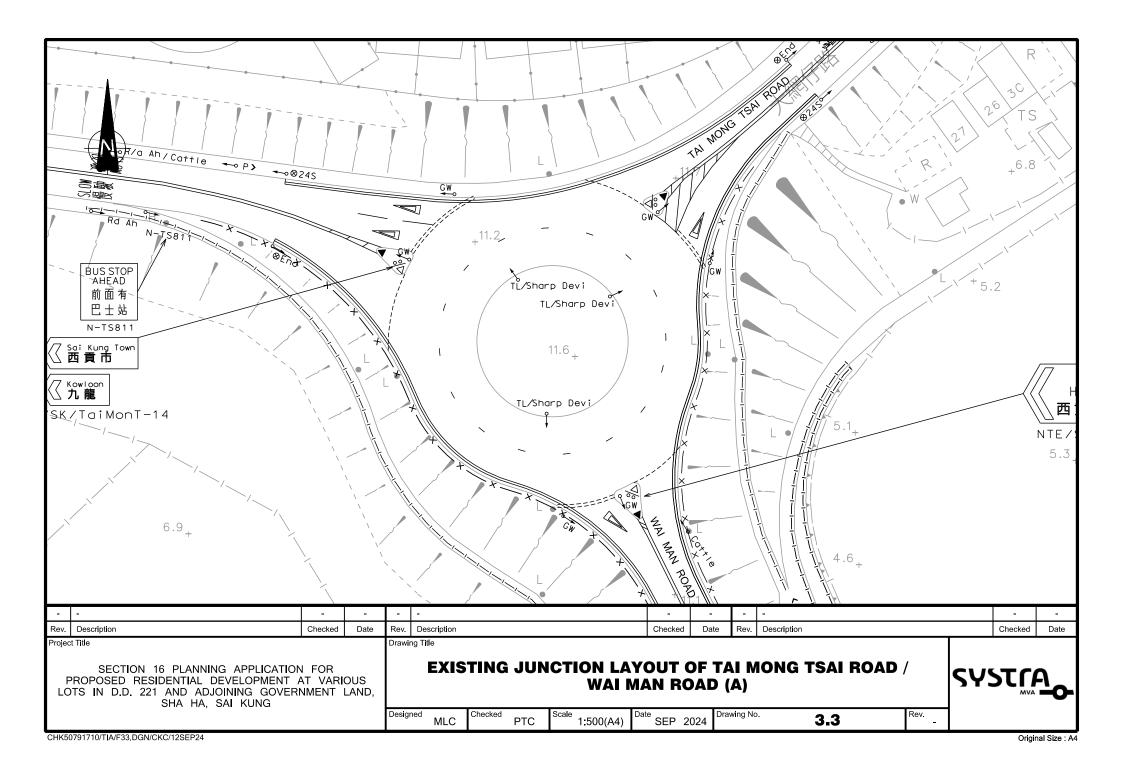
Apart from regular services, special trips (between Sai Kung and Hang Hau Station (via Sai Kung North Public (2) Transport Interchange)) are operated from 7:00 am to 9:30 am between Mondays and Fridays (except public holidays) and from 4:00 pm to 6:30pm daily at a frequency of 10 minutes.

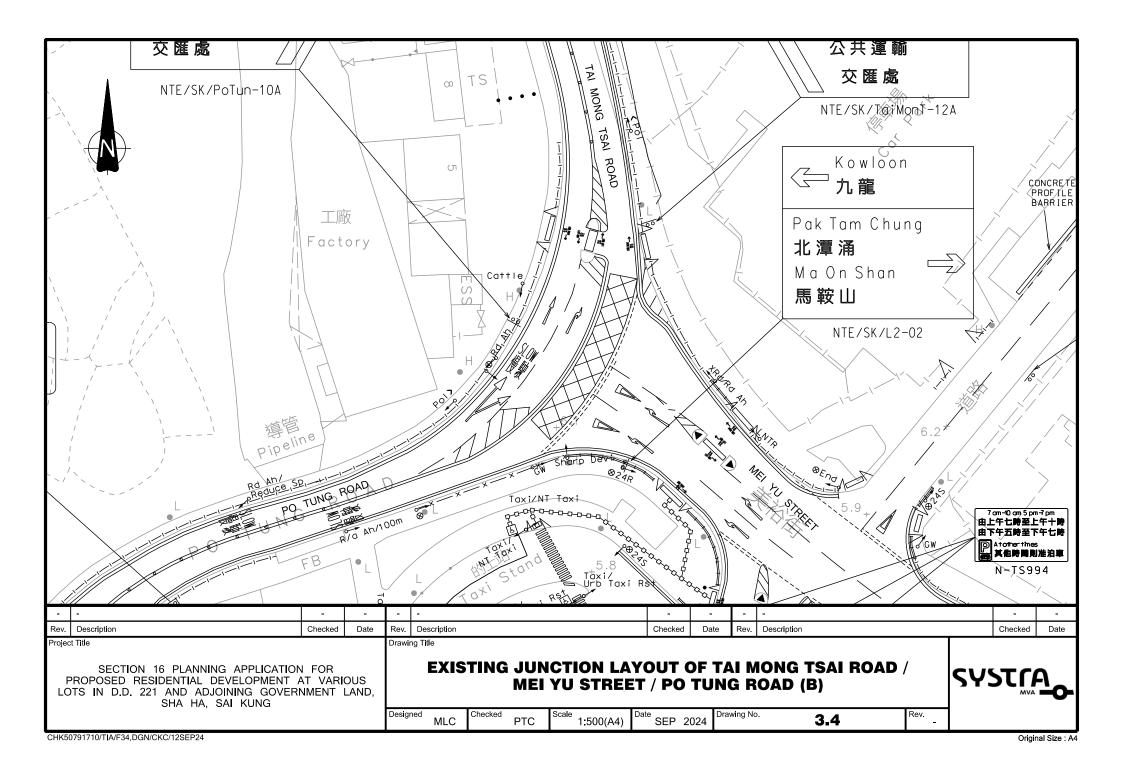


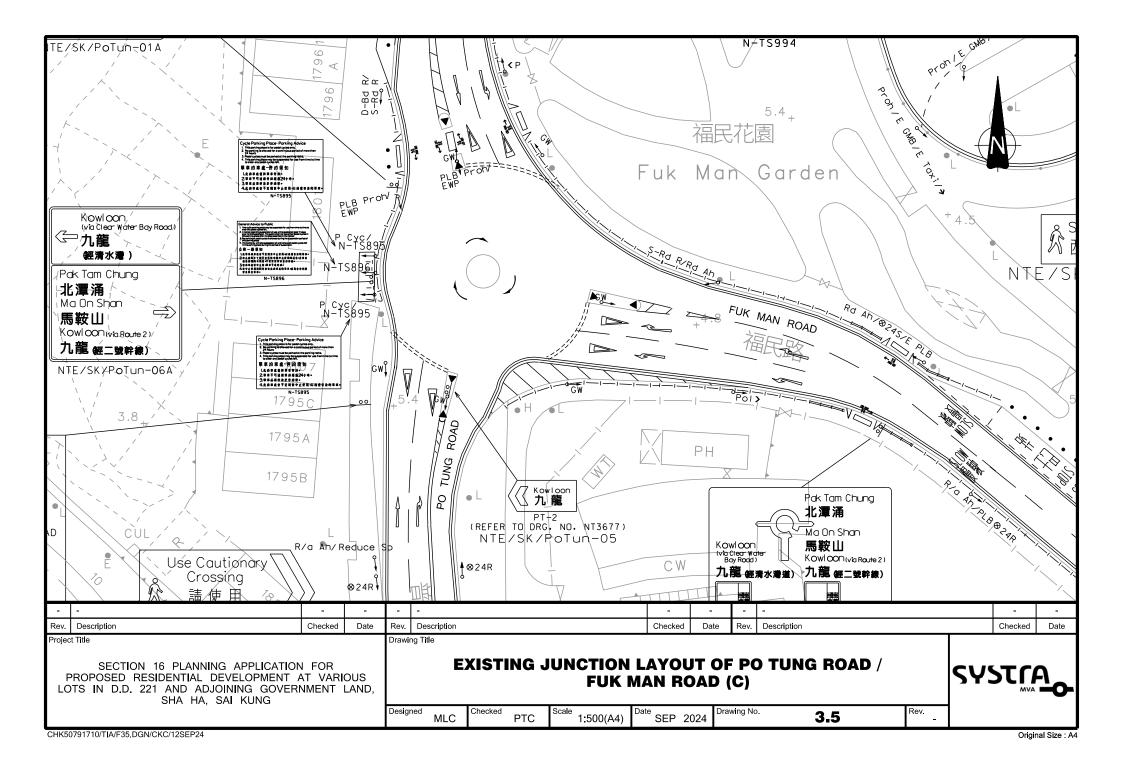
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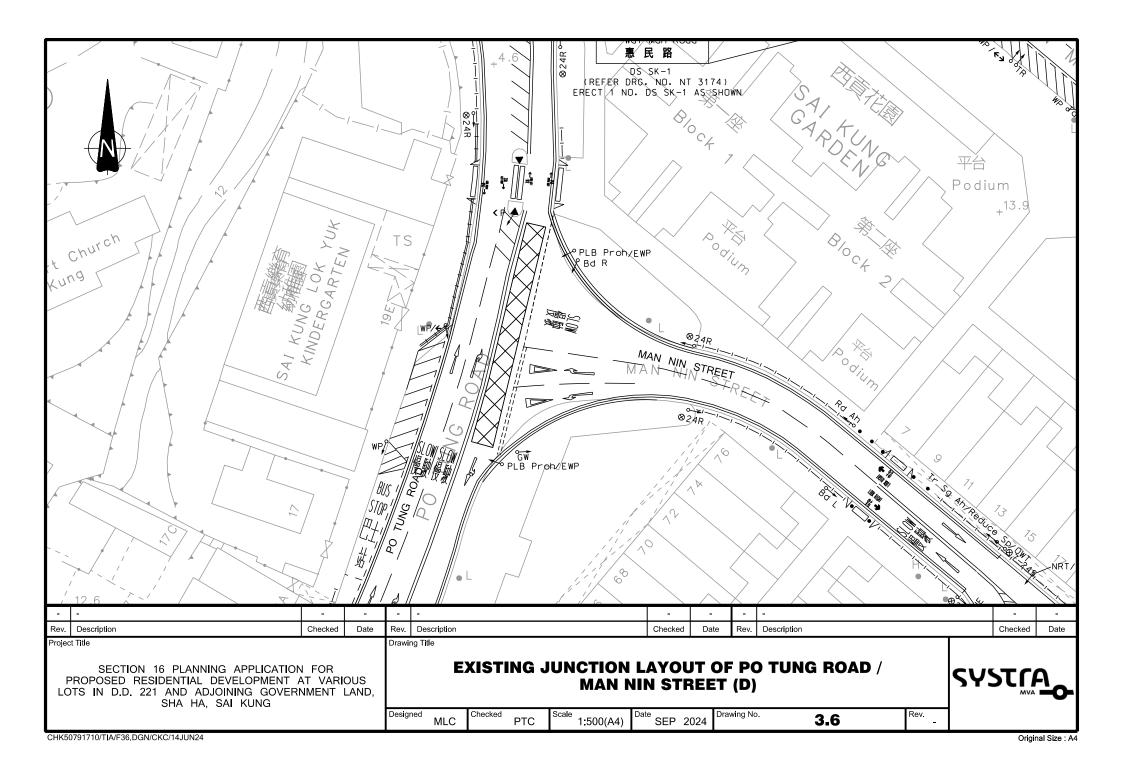
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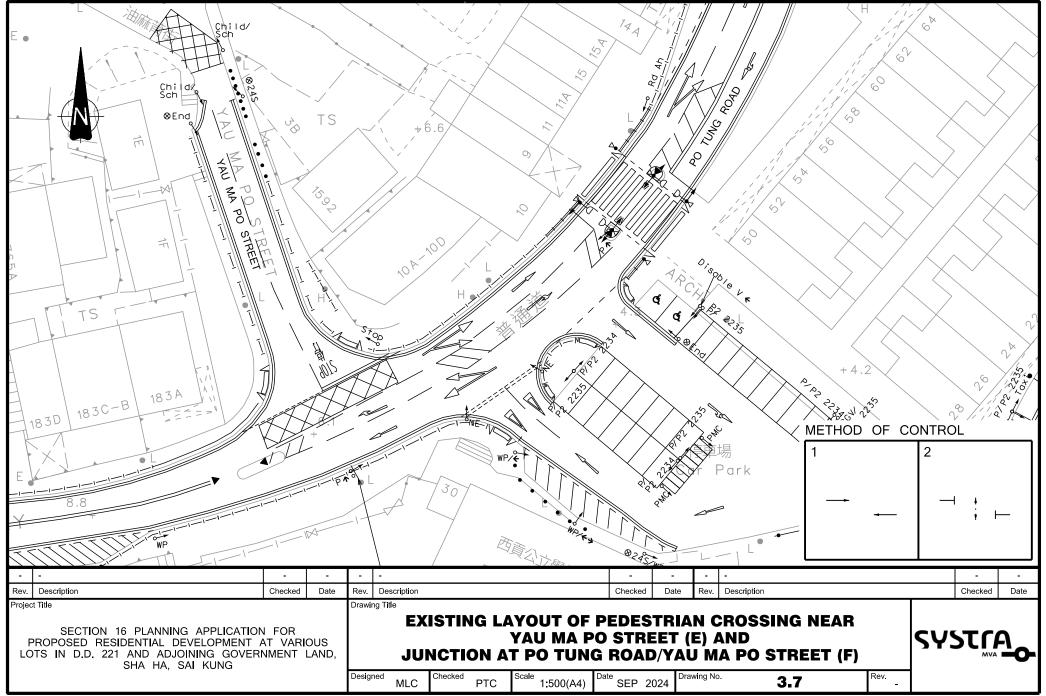
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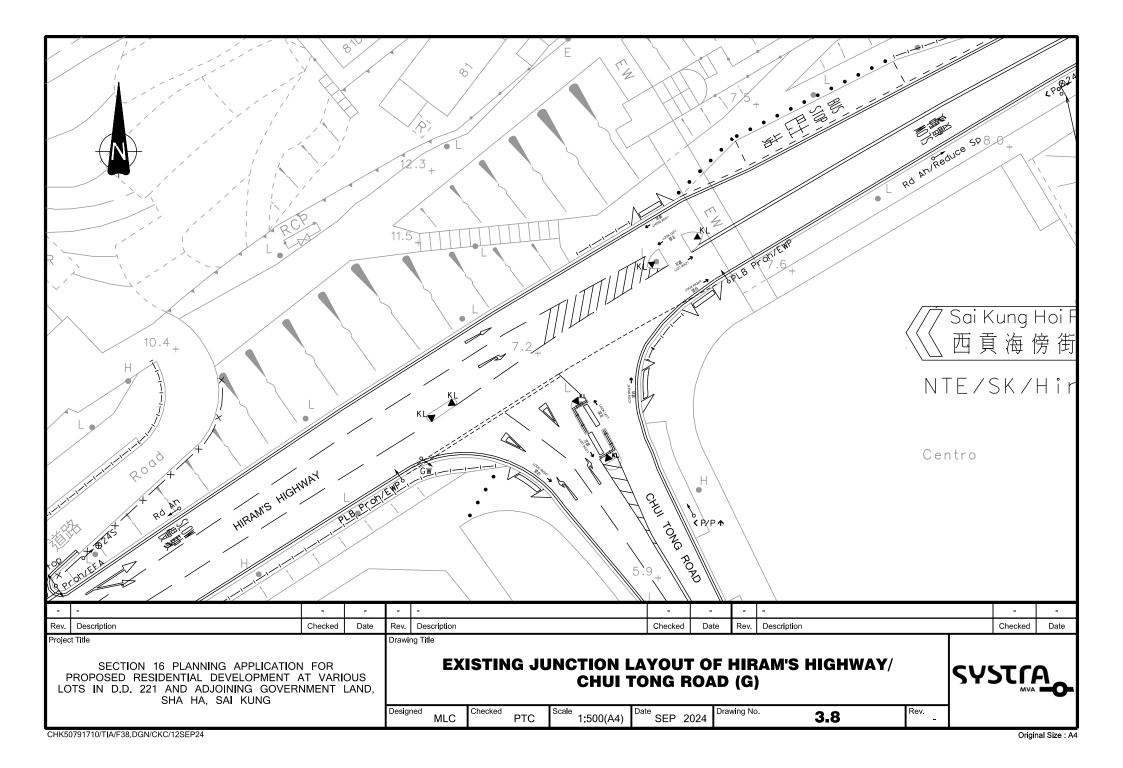


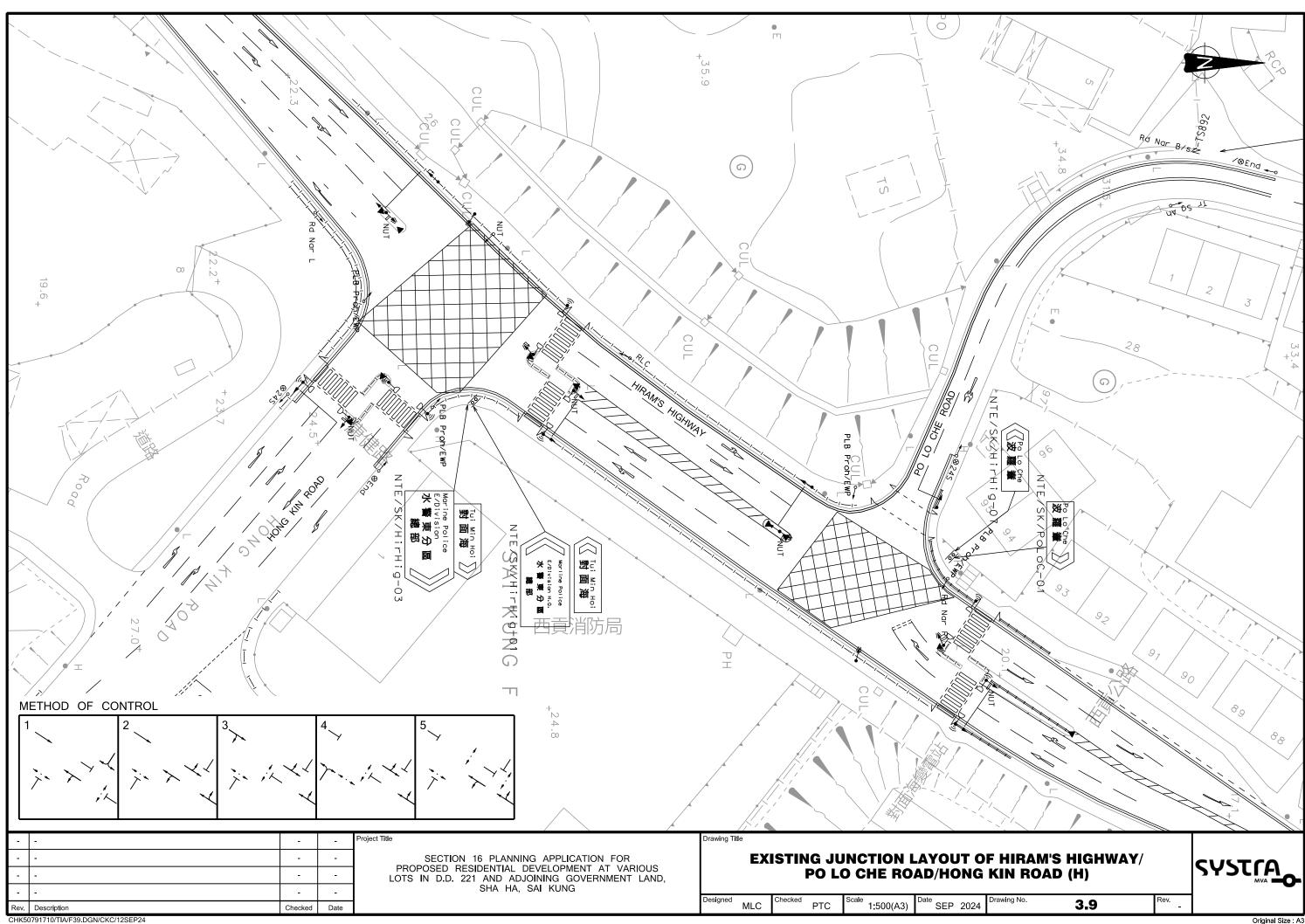




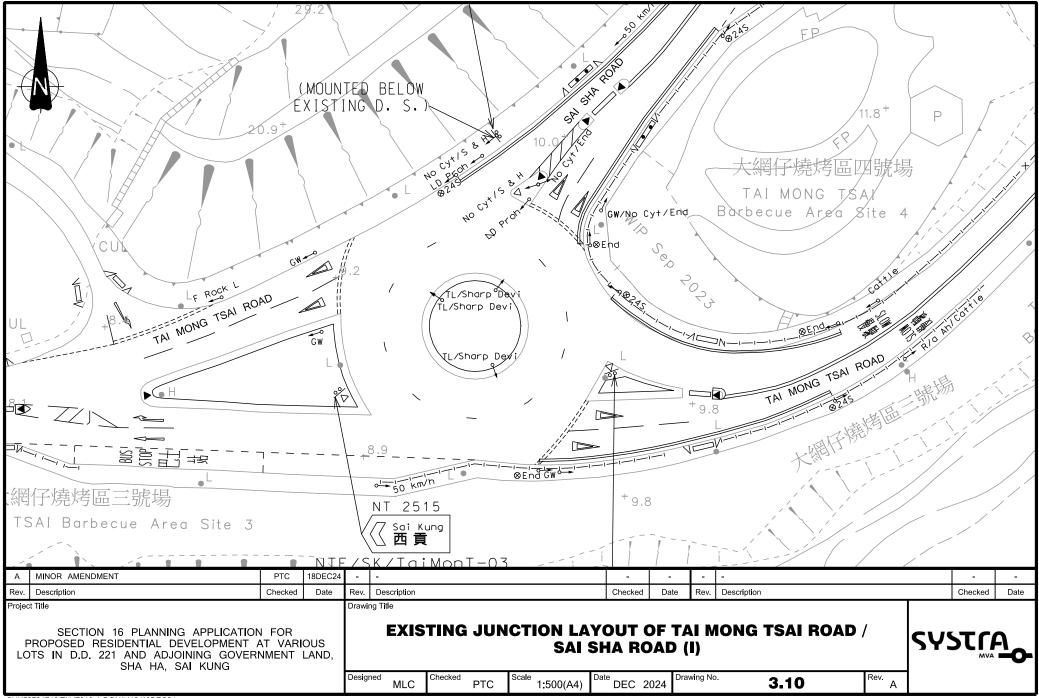


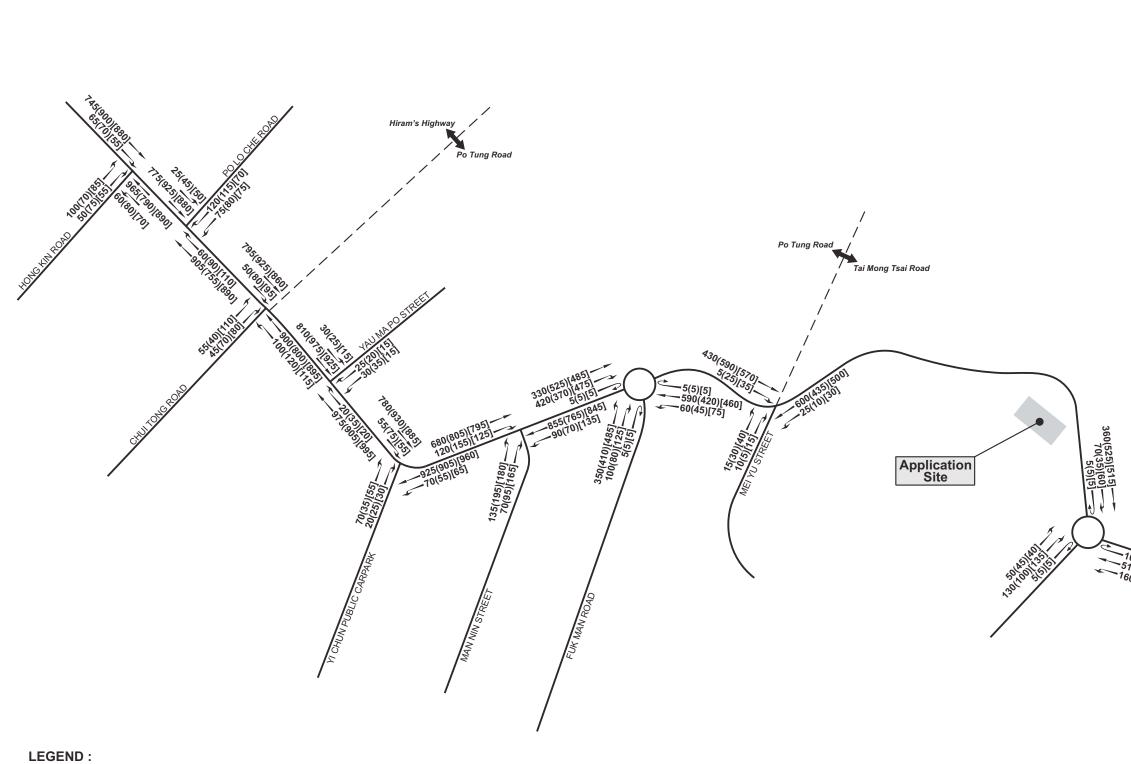












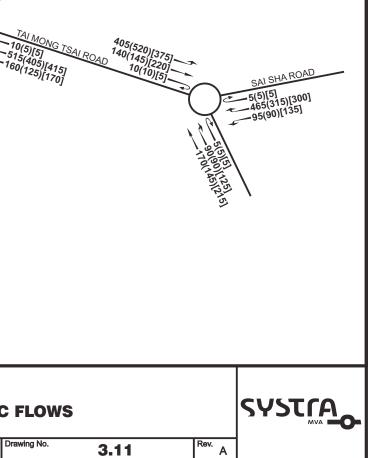
600 WEEKDAY AM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

(435) WEEKDAY PM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

[500] WEEKEND PEAK HOUR TRAFFIC FLOWS (PCU/HR)

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#### 4. **TRAFFIC FORECASTING**

#### 4.1 **Design Year**

4.1.1 The tentative completion year of the proposed development is year 2032. Hence, the design year of 2035 three years upon operation of the proposed development, has been adopted for traffic forecast and assessment purposes.

#### 4.2 **Forecast Assumptions**

#### Traffic Growth Rate from 2024 to 2035

4.2.1 As Hiram's Highway would still be the only major road to serve the area (with or without the improvement works), the current general traffic circulation pattern in the vicinity at the design year of 2035 is expected to be very similar to the current situation. Therefore, the simple growth rate method is adopted for the traffic forecasting exercise.

#### **Historical Trend**

4.2.2 Annual Traffic Census (ATC) traffic count stations are available in the vicinity of the development. The annual traffic counts in the latest Annual Traffic Census (ATC) report published by Transport Department (TD) over a period between Year 2019 and Year 2023 are summarised in Table 4.1.

Station no.	Road	А	nnual Aver	age Daily T	raffic (AAD	т)	Annual Growth Rate
		2019	2020	2021	2022	2023	2019/2023
5258	Po Tung Road & Tai Mong Tsai Road	31,970	30,760*	32,210*	30,800*	28400	-2.92%
6055	Hiram's Highway	24,280*	23,360*	24,460*	23,480	22860	-1.50%
	Total	56,250	54,120	56,670	54,280	51,260	-2.30%

#### Table 4.1 ATC Traffic Counts between Year 2019 to Year 2023

Note: (\*) AADT estimated by growth factor.

4.2.3 As shown in Table 4.1, the average annual traffic growth rates are -2.3% per annum over the past 5 years.

### **Planning Data**

4.2.4 Besides, reference has been made to the latest available 2019-Based Territorial Population and Employment Data Matrices (TPEDM) published by Planning Department for determination of traffic growth rate. The average annual growth rates in terms of population and employment from year 2019 to 2031 in Southeast New Territories (Other Area) are illustrated in Table 4.2. The relevant zone plan in TPEDM is indicated in Drawing 4.1



# Table 4.22019-based TPEDM Population and Employment Growths in Southeast New<br/>Territories (Other Area)

Zone <sup>(1)</sup>	Popul	lation	Annual Growth Rate (p.a.)	Emplo	oyment	Annual Growth Rate (p.a.)		
	2019	2031	2019/2031	2019	2031	2019/2031		
Southeast New Territories (Other Area)	68,900	59,750	-1.18%	27,250	28,100	+0.26%		

Remark: (1) Refer to Drawing 4.1.

- 4.2.5 The TPEDM population data indicates that the annual population and employment growth rate in Southeast New Territories (Other Area) is -1.18% p.a. and +0.26% p.a. respectively.
- 4.2.6 Having reviewed the historical growth trend and planning data, a traffic growth rate of +0.26% p.a. was adopted for producing the traffic forecast from Year 2024 up to Year 2035.

#### Adjacent Planned/Committed Development

4.2.7 According to the latest available information from public domain, there is a planned residential development in CDA(1) zone adjacent to the Applicant site that are expected to be completed by year 2035. The estimated trip generations of this planned development is listed in Table 4.3. which would be considered in the traffic forecast.

 Table 4.3
 Estimated Trip Generations of Planned and Committed Developments

	N		Week	day		Wee	kend
	No. of Units	AM	Peak	PM I	Peak	Pe	ak
	Units	GEN	ATT	GEN	ATT	GEN	ATT
Proposed Residential Development in CDA(1) zone <sup>(1)</sup>	972	192	109	94	129	108	134

Note: (1) As extracted from the approved TIA report for the Section 16 planning application No. A/SK-SKT/28).

### 4.3 Development Trips

- 4.3.1 The proposed residential development will provide 280 units with average flat size of about 40.8m<sup>2</sup>. The development trips for residential portion was estimated with reference to the trip rates in Transport Planning Design Manual (TPDM) published by TD.
- 4.3.2 Besides, 10 nos. public parking spaces for private car will be provided within the site. To estimate the trips of proposed public parking spaces, a trip generation survey was conducted at the existing nearby Public Vehicle Park (i.e. Kau Sai Chau Public Golf Course) on the same survey period as described in **Section 3.2**. The observed trip rates of surveyed PVP during the peak hours are computed and summarized in **Table 4.4**.

### Table 4.4 Observed Trip Rates of Existing PVP at Kau Sai Chau Public Golf Course

		Weekday							
	No. of Space	AM	Peak	PM	Peak	Weekend Peak			
		GEN	ATT	GEN	ATT	GEN	ATT		
Observed Trips (pcu/hr)	283	4	8	5	15	39	40		
Trip Rates (pcu/hr/space)		0.0141	0.0283	0.0177	0.0530	0.138	0.142		

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4.3.3 Based on above, the estimated development trips during the weekday morning and evening and weekend peak hours are summarised in **Table 4.5**.

				Weeke	nd Peak		
	Parameter	AM	Peak	PM	Peak	weekei	па реак
		GEN	ATT	GEN	ATT	GEN	ATT
Residential							
Trip Rates (pcu/hr/unit) <sup>(1)</sup>	-	0.0718	0.0425	0.0286	0.037	0.0258 <sup>(2)</sup>	0.0393 <sup>(2)</sup>
Trips (pcu/hr)	280 units	20	12	8	10	7	11
PVP							
Trip Rates (pcu/hr/space)	÷	0.0141	0.0283	0.0177	0.0530	0.138	0.142
Trips (pcu/hr)	10	1	1	1	1	2	2
Total		21	13	9	11	9	13

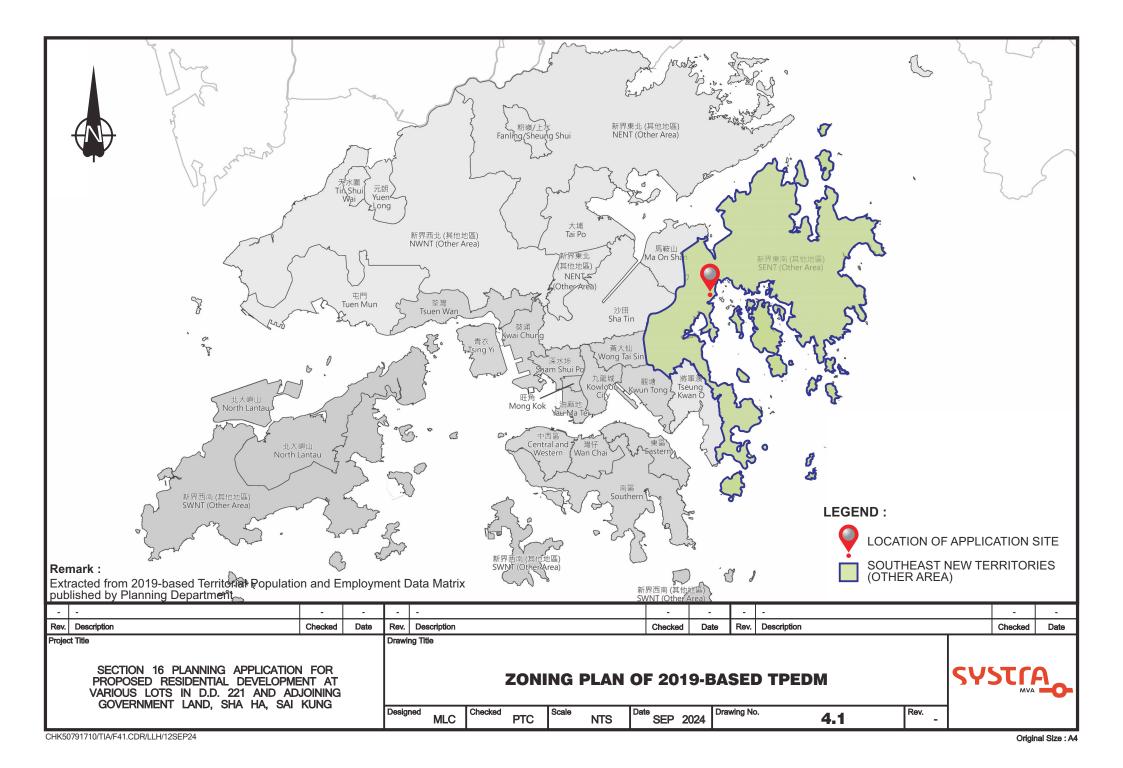
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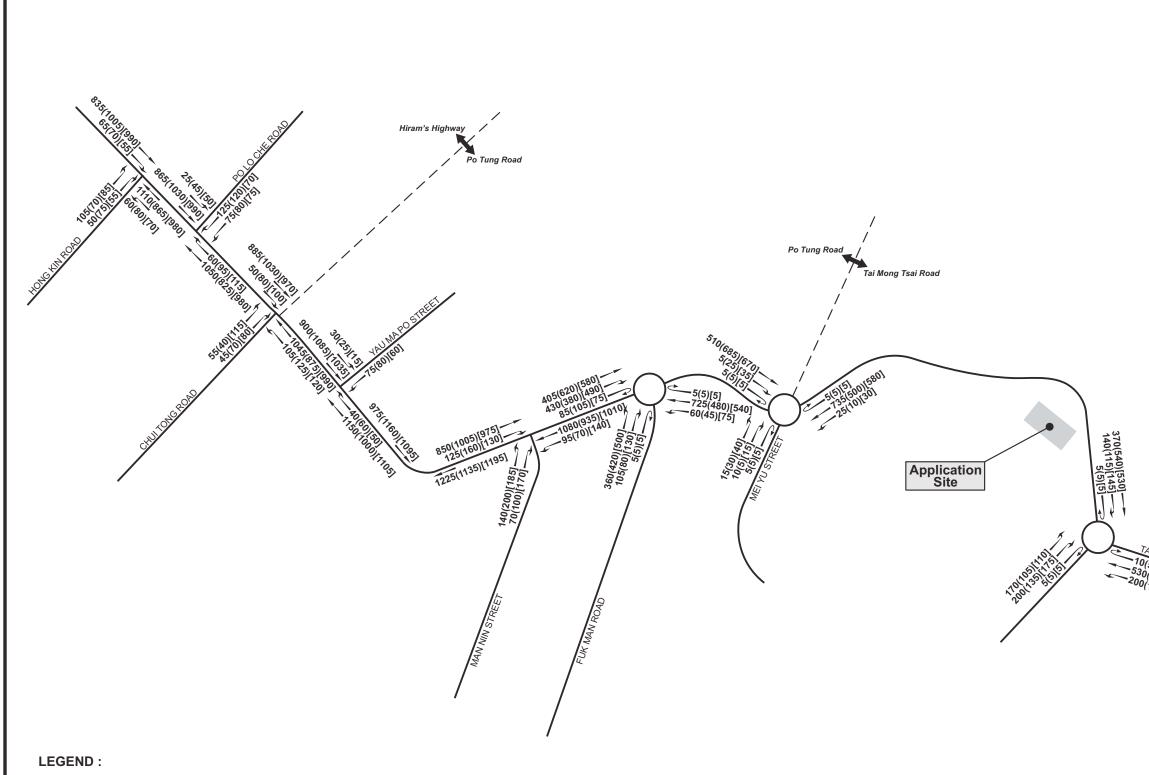
(1) Mean value of trip rates for private housing with average flat size of 60 m<sup>2</sup> in TPDM is adopted for weekday peak scenarios.

(2) Ratios of weekday PM trips to weekend trips were applied. The ratios were derived with reference to the trip generation survey at the similar residential development in the vicinity (i.e. The Mediterranean) in April 2024.

4.3.4 As indicated in **Table 4.5**, the proposed development would generate the two-way trips total of 34, 20 and 22 pcu/hr during the weekday morning, evening and weekend peak hours respectively.

- 4.3.5 According to the above, the anticipated 2035 peak hour reference traffic flows are obtained by applying the adopted growth rates to the 2024 traffic flows and superimposing the estimated trip generations of the planned development. The 2035 reference peak-hour traffic flows are shown in **Drawing 4.2**.
- 4.3.6 The estimated development trips summarised in **Table 4.5** would be superimposed onto the year 2035 reference peak hour traffic flows to produce the anticipated year2035 design peak hour traffic flows (with proposed development), as shown in **Drawing 4.3**.





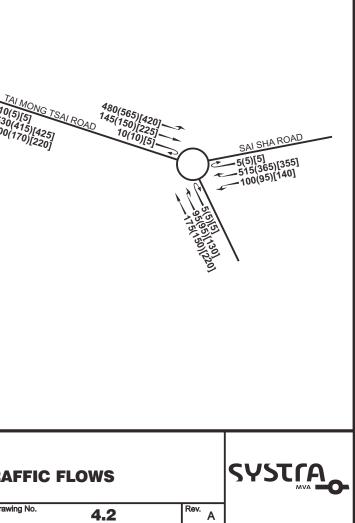
735 WEEKDAY AM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

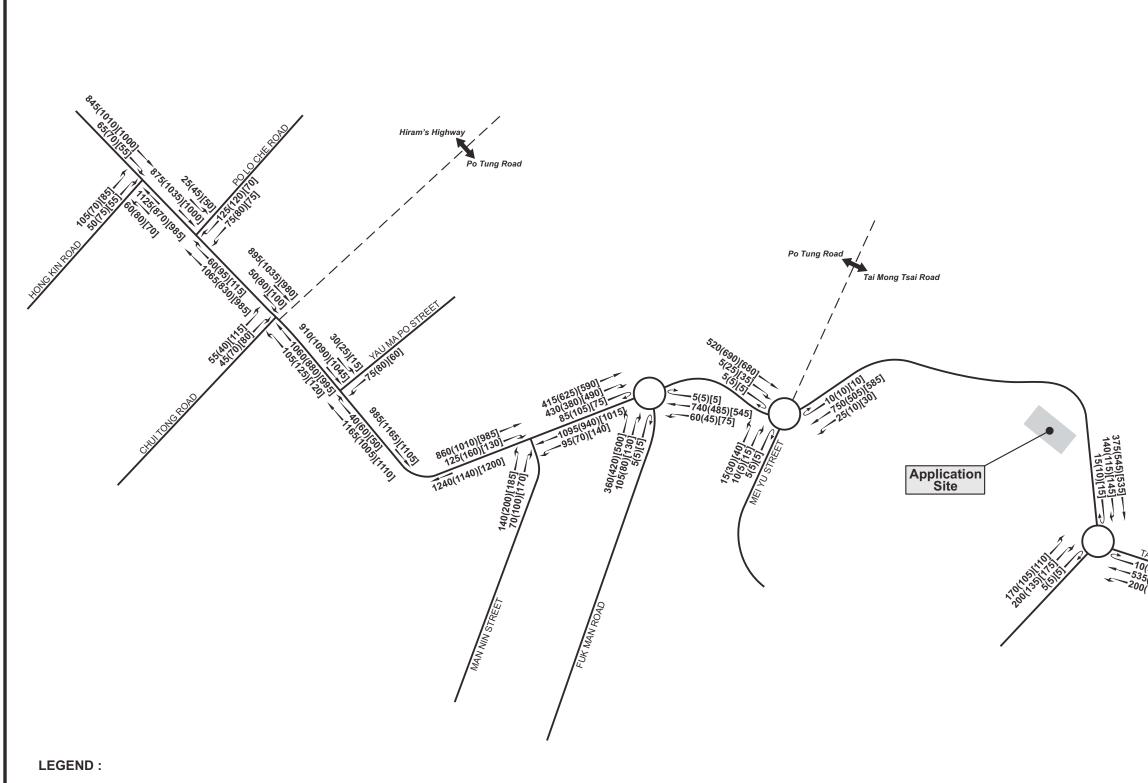
(500) WEEKDAY PM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

[580] WEEKEND PEAK HOUR TRAFFIC FLOWS (PCU/HR)

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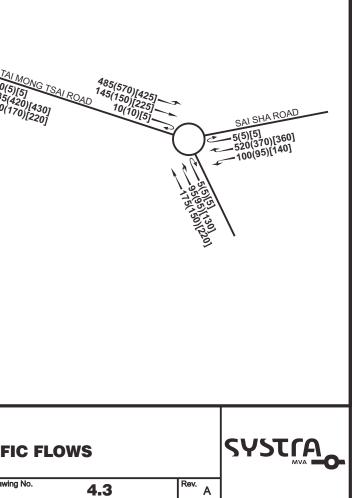
750 WEEKDAY AM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

(505) WEEKDAY PM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

[585] WEEKEND PEAK HOUR TRAFFIC FLOWS (PCU/HR)

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#### 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 2035, operational performance of the identified key local junctions and critical links have been assessed for both reference and design scenarios.

#### Planned Hiram's Highway Improvement Stage 2

5.1.2 As mentioned in **Section 3.1**, the planned improvement works to Hiram's Highway has been gazetted and is anticipated to be completed by 2032. The planned road and junction improvements works under the project were adopted in the assessment. The possible planned junction layouts, which has been adopted in the assessment, are summarized in Table 5.1 and illustrated in Drawing Nos. 5.1 – 5.6.

Ref. <sup>(1)</sup>	Junction	Туре	Drawing No.						
В	B Tai Mong Tsai Road/Mei Yu Street/Po Tung Road Roundabout								
С	C Po Tung Road/Fuk Man Road Roundabout								
D	D Po Tung Road/Man Nin Street Signal								
Е	Pedestrian Crossing near Yau Ma Po Street	Signal	5.4						
F	Po Tung Road/Yau Ma Po Street	Priority	5.4						
G	Hiram's Highway/Chui Tong Road	Signal	5.5						
H         Hiram's Highway/Po Lo Che Road /Hong Kin Road         Signal         5.6									
Remark: (1) Locations refer to Drawing 3.2.									

Table 5.1 **Identified Key Local Junctions** 

### **Junction Operational Performance**

Based on the existing/planned layouts, the junction assessment results for the 2035 reference 5.1.3 and design scenarios are summarized in Table 5.2. The junction calculation sheets are attached in Appendix B.

Table 5.2 **Junction Operational Performance at Year 2035** 

		Туре		Reserve	Capacity / R	atio to F	low Capa	city		
Ref.			Re	eference	Case	Design Case				
(1)	Junction		Wee	kday	Weekend	Wee	kday	Weekend		
			AM	PM	Peak	AM	PM	Peak		
			Peak	Peak	I Cuk	Peak	Peak	T CUK		
Α	Tai Mong Tsai Road/ Wai Man Road	Roundabout	0.69	0.55	0.61	0.70	0.55	0.62		
в	Tai Mong Tsai Road/Mei Yu Street/Po Tung Road <sup>(2)</sup>	Roundabout	0.57	0.49	0.49	0.59	0.49	0.49		
С	Po Tung Road/Fuk Man Road <sup>(2)</sup>	Roundabout	0.42	0.37	0.44	0.43	0.37	0.44		
D	Po Tung Road/Man Nin Street <sup>(2)</sup>	Signal	51%	43%	29%	50%	42%	28%		
Е	Pedestrian Crossing near Yau Ma Po Street <sup>(2)</sup>	Signal	>100%	>100%	>100%	>100%	>100%	>100%		
F	Po Tung Road/Yau Ma Po Street <sup>(2)</sup>	Priority	0.15	0.18	0.13	0.15	0.18	0.13		
G	Hiram's Highway/Chui Tong Road <sup>(2)</sup>	Signal	80%	91%	51%	78%	91%	50%		
н	Hiram's Highway/Po Lo Che Road/ Hong Kin Road <sup>(2)</sup>	Signal	86%	>100%	>100%	84%	>100%	>100%		
I	Tai Mong Tsai Road /Sai Sha Road	Roundabout	0.35	0.36	0.33	0.36	0.36	0.33		

Remarks: (1) Locations refer to Drawing 3.2.

(2) Based on the possible planned junction layout under Hiram's Highway Improvement Stage 2.

5.1.4 The assessment results in **Table 5.2** indicate that all identified key junctions would operate within their capacity under the reference (without the proposed development) and design cases (with the proposed development).

### Road Link Performance

5.1.5 Apart from junction capacity assessment, the road link operation performance was 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 **Tables 5.3** and **5.4**.

<b>Ref.</b> (1)	Road Link	Dir	Reference Traffic Flows (pcu/hr)			Reference Traffic Flows (Veh/hr)			Design Capacity	V/C Ratio		
			AM	РМ	WE	AM	РМ	WE	(Veh/hr) (2)	АМ	PM	WE
S1	Tai Mong Tsai Road	NB	580	680	710	520	620	645	850	0.61	0.73	0.76
		SB	740	590	650	675	550	585	850	0.79	0.65	0.69
S2	Tai Mong Tsai Road	NB	515	680	685	480	645	635	850	0.56	0.76	0.75
		SB	740	530	585	685	505	530	850	0.81	0.59	0.62
S3	Fuk Man Road	WB	470	505	635	410	410	545	850	0.48	0.48	0.64
35		EB	495	430	570	420	355	485	850	0.49	0.42	0.57
S4	Po Tung Road	NB	920	1105	1145	810	990	1010	2,600	0.31	0.38	0.39
		SB	1175	1005	1150	1045	900	1020	2,600	0.40	0.35	0.39
S5	Hiram's Highway	NB	900	1075	1045	810	990	930	2,600	0.31	0.38	0.36
		SB	1215	935	1065	1100	845	970	2,600	0.42	0.33	0.37
S6	Sai Sha Road	NB	580	665	555	530	625	510	850	0.62	0.74	0.60
		SB	620	465	500	575	445	450	850	0.68	0.52	0.53

 Table 5.3
 Year 2035 Road Link Operational Performance for Reference Case

Remarks:

(1) Refer to Drawing 3.2.

(2) Design capacity of 850 veh/hr for each bound of single 2-lane carriageway and 2,600 veh/hr for each bound of dual 2 lane carriageway, as extracted from TPDM Volume 2 Chapter 2.4.

Table 5.4	Year 2035 Road Link Operational Performance for Design Case Scenario
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<b>Ref.</b> (1)	Road Link	Dir	Design Traffic Flows (pcu/hr)			Design Traffic Flows (Veh/hr)			Design Capacity	V/C Ratio		
			AM	PM	WE	AM	PM	WE	(Veh/hr) (2)	AM	PM	WE
S1	Tai Mong Tsai Road	NB	585	685	715	525	620	650	850	0.62	0.73	0.76
		SB	745	595	655	680	555	590	850	0.80	0.65	0.69
S2	Tai Mong Tsai Road	NB	530	690	695	495	655	650	850	0.58	0.77	0.76
		SB	755	535	590	695	510	535	850	0.82	0.60	0.63
S3	Fuk Man Road	WB	470	505	635	410	410	545	850	0.48	0.48	0.64
		EB	495	430	570	420	355	485	850	0.49	0.42	0.57
S4	Po Tung Road	NB	930	1110	1155	820	1000	1020	2,600	0.32	0.38	0.39
		SB	1190	1010	1155	1060	905	1030	2,600	0.41	0.35	0.40
S5	Hiram's Highway	NB	910	1080	1055	815	1000	935	2,600	0.31	0.38	0.36
		SB	1230	940	1070	1115	850	975	2,600	0.43	0.33	0.38
S6	Sai Sha Road	NB	585	670	560	535	630	515	850	0.63	0.74	0.61
		SB	625	470	505	580	445	455	850	0.68	0.52	0.54

Remarks:

(1) Refer to Drawing 3.2.

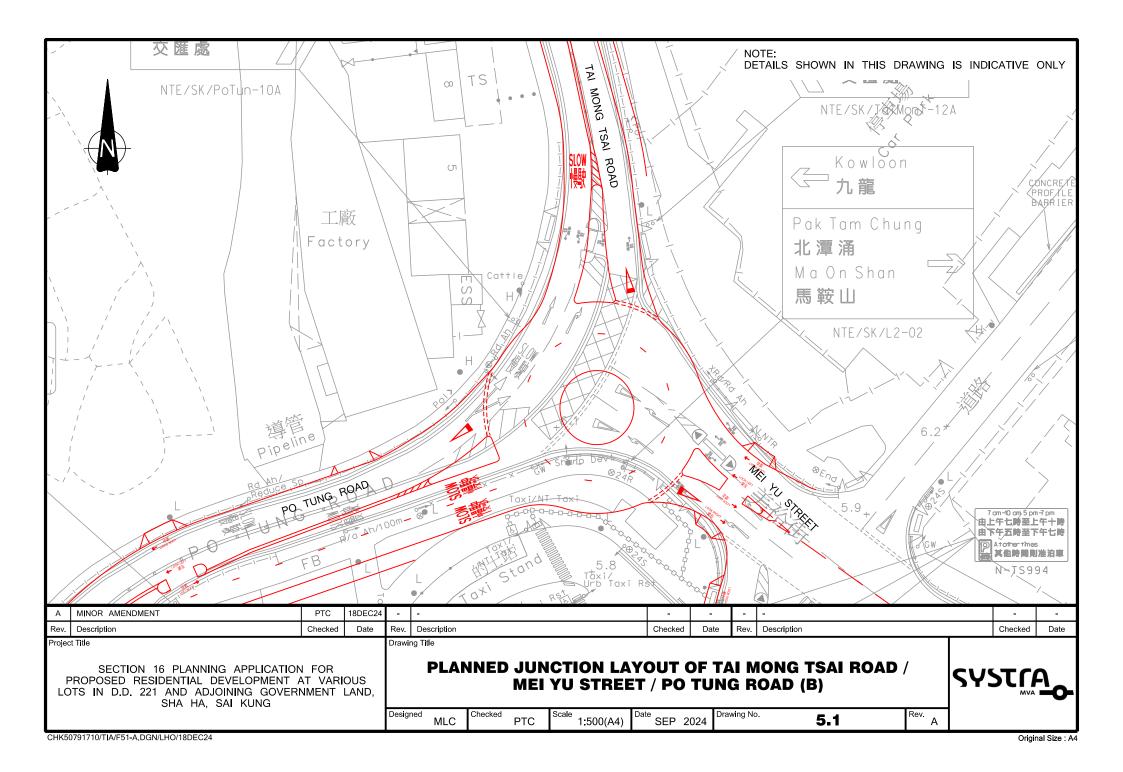
(2) Design capacity of 850 veh/hr for each bound of single 2-lane carriageway and 2,600 veh/hr for each bound of dual 2 lane carriageway, as extracted from TPDM Volume 2 Chapter 2.4.

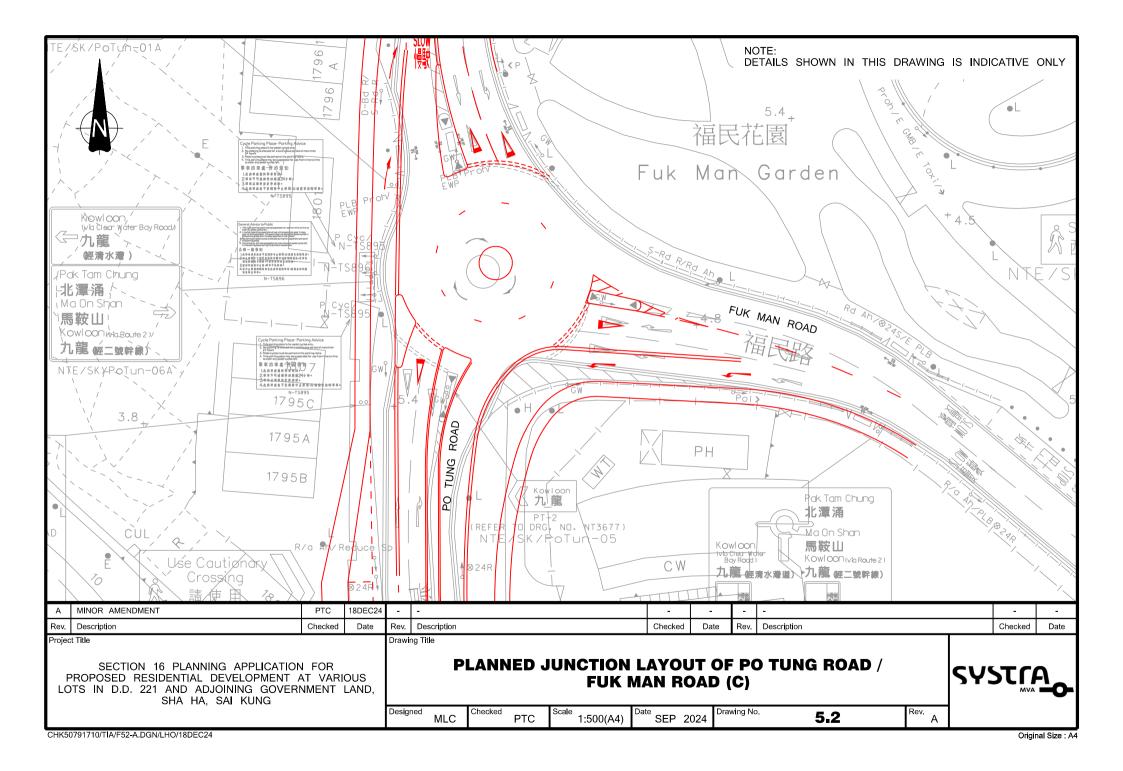
S16 Planning Application for Proposed Residential Development at various lots in D.D. 221 and adjoining government land, Sha Ha, Sai Kung

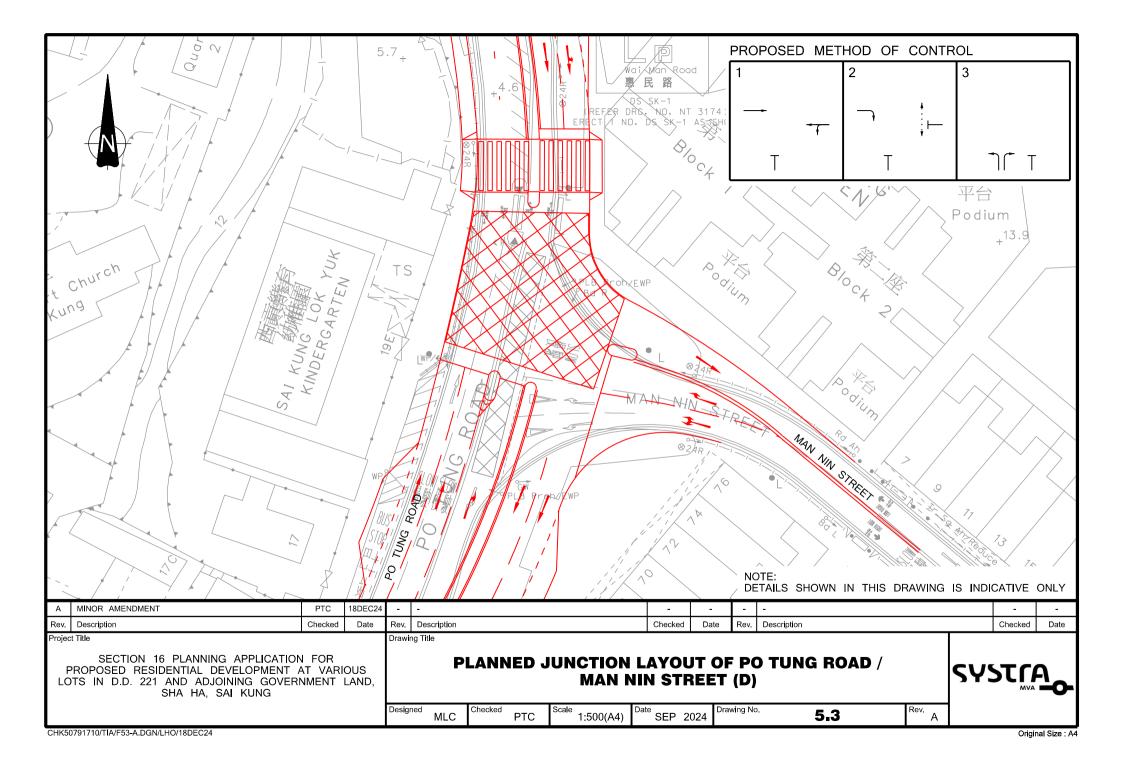
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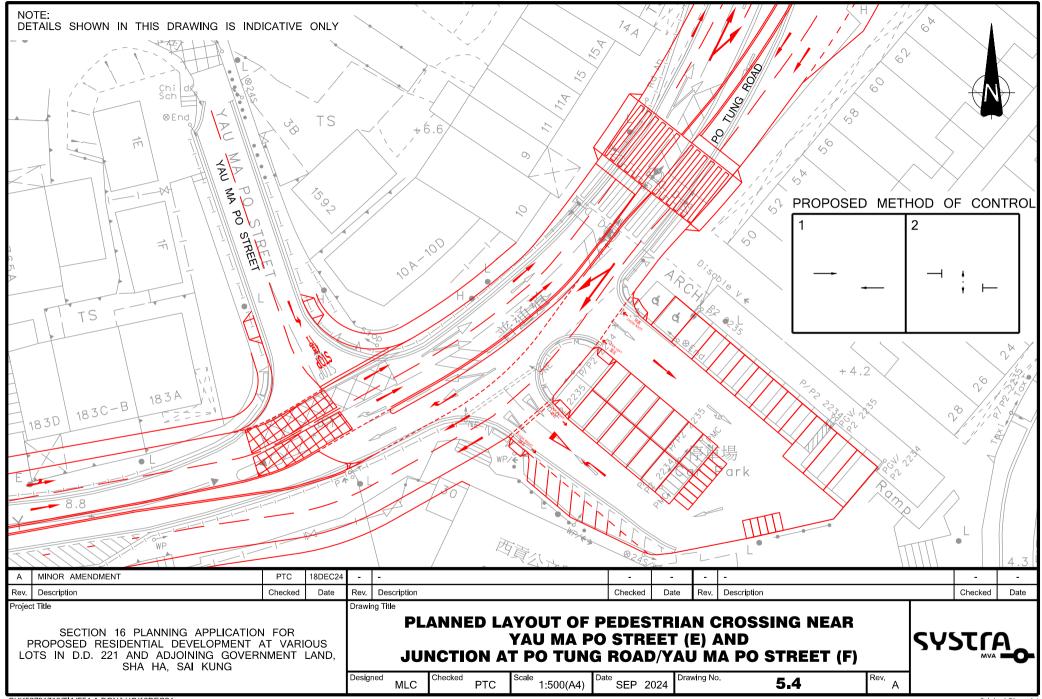


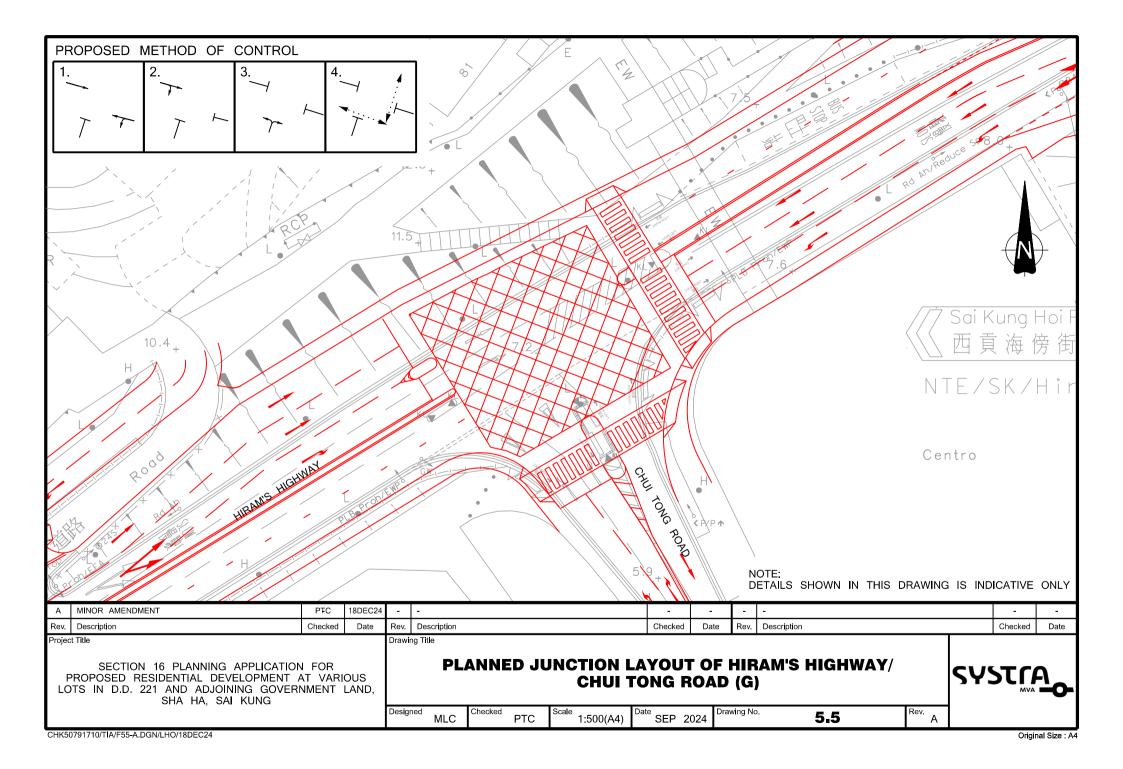
5.1.6 The assessment results in **Table 5.3** and **Table 5.4** indicated that all identified road links would operate within their capacity under the reference (without the proposed development) and design cases (with the proposed development).

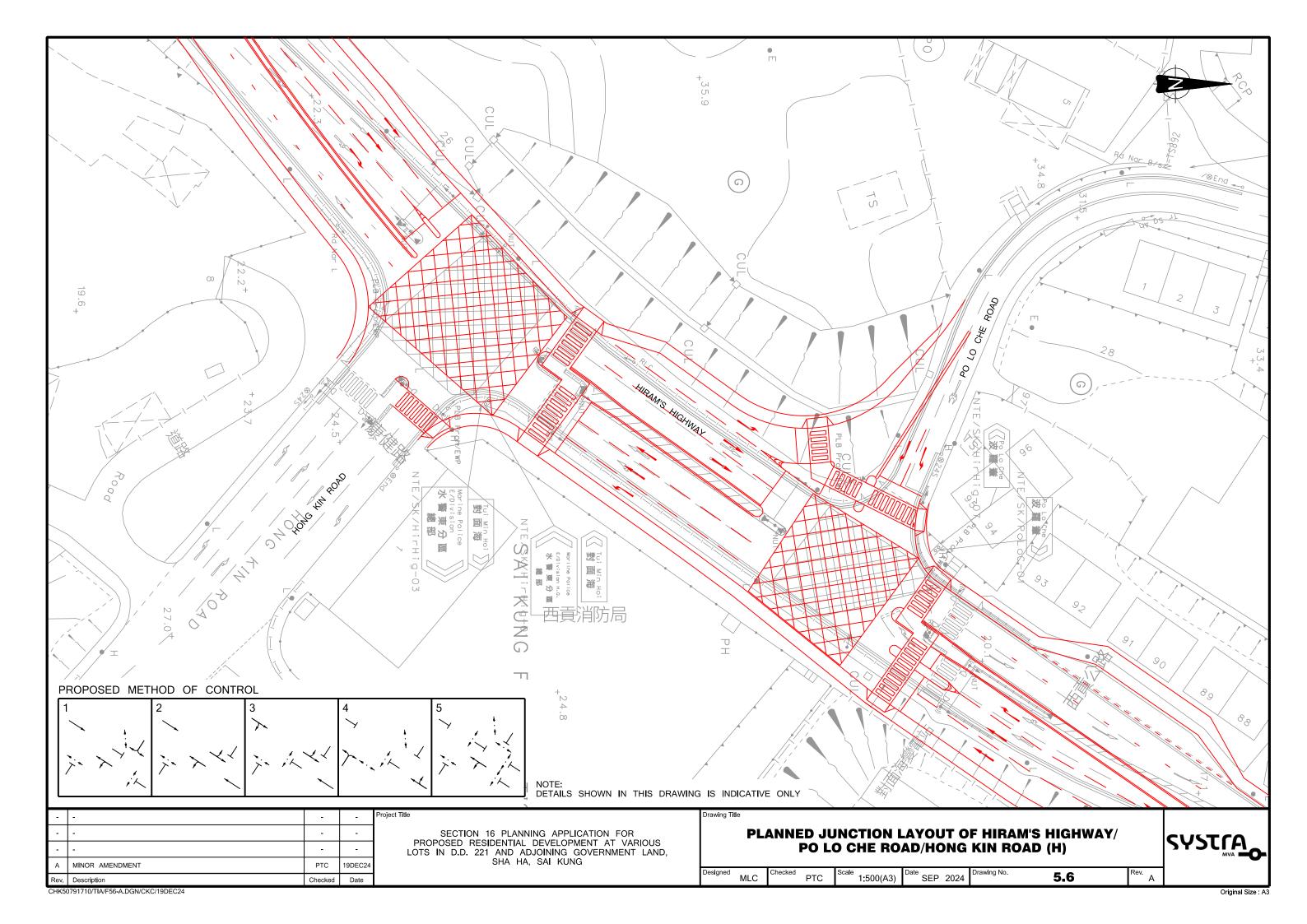














### 6. PUBLIC TRANSPORT SERVICE ASSESSMENT

### 6.1 Existing Public Transport Services

- 6.1.1 Since the Application Site would be developed as a residential development, it is anticipated that most of the public transport trip generations would be the outbound trips to work and school during weekday morning peak period. As such, the weekday AM peak will be considered as peak scenario to be adopted in the assessment.
- 6.1.2 As mentioned in **Section 3**, franchised bus and minibus are the major public transport modes in Sai Kung, which serve as feeder routes to MTR stations. The existing public transport services during weekday peak hour is shown in **Drawing 6.1**.
- 6.1.3 In order to establish the current public transport demand, a public transport survey was conducted at bus/GMB bus stops in Sai Kung Town Center and the peak loading points on a typical weekday from 07:00 to 09:00 during the morning peak period in April 2024. Analysis of the survey results suggested that the peak passenger demand of PT services in the morning peak hour was occurred during 08:00 to 09:00. The corresponding peak hour results are summarised in **Table 6.1**.

Route No.	ute No. Destinations		Bus Capacity (pax/hr) <sup>(1)</sup>	Average Peak Hourly Occupancy	Observed Passenger Pattern of PT Demand
Franchised B	uses				
92	Diamond Hill Railway Station	4	480	56%	15%
99	Heng On Bus Terminus	4	480	33%	16%
292P	Kwun Tong	0	0	0%	0%
299X	Shatin Central Bus Terminus	3 360		60%	50%
792M	Tseung Kwan O Station	3 360		48%	19%
	Total	14	1680	-	100%
Minibus					
GMB 1	Kowloon Bay (Telford Gardens)	4	76	95%	8%
GMB 1A	Diamond Hill Railway Station	21	399	91%	37%
GMB 12	Po Lam	5	95	51%	5%
GMB 101M	Hang Hau Station	24	456	88%	39%
RMB	Mongkok	5	95	48%	3%
RMB	Kwun Tong	8	152	45%	8%
	Total	67	1273	-	100%

 Table 6.1
 Observed Public Transport Demand (Outbound) during AM Peak Hour

Note : (1) The passenger capacities of bus and minibus are assumed 120 pax/hr and 19 pax/hr during peak hours.

# 6.1.4 The assessment results in **Table 6.1** indicates that local public transport services in Sai Kung area (outbound) are operating with capacities during the weekday morning peak hour.



6.1.5 Besides, the distribution of passenger trips among bus and minibus in Sai Kung Town Center was also identified in the PT survey. Based on the observed total number of boarding and alighting passengers at the bus/minibus stops in Sai Kung Town Center, 18% was bus passengers and 82% was minibus passengers.

### 6.2 Future Public Transport Demand

6.2.1 With reference to Travel Characteristics Survey 2011 (TCS 2011) published by Transport Department (TD), the pedestrian trips of the proposed development in morning peak hour has been derived in **Table 6.2**.

Location	Estimated Population <sup>(1)</sup> [i]	Average daily mechanized trips per person <sup>(2)</sup> [ii]	Peak hour factor <sup>(3)</sup> [iii]	Peak hour transport demand (pax/hr) =[i] x [ii] x [iii]
Proposed Development (280 units)	756	1.83	12%	166

Table 6.2	Anticipated Transport Demand of Proposed development

Notes: (1) Refer to Table 2.1.

(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%).

6.2.2 Based on the calculation in **Table 6.2**, it is anticipated that the pedestrian trips of the proposed development is 166 nos. during the morning peak hour.

**Review on Transport Modal Splits** 

6.2.3 To identify the transport mode shares in local area, Population Census 2021 published by Census and Statistics Department has also been reviewed. The extracted transport modal splits for Large Tertiary Planning Unit Group - Sai Kung Area are analysed in **Table 6.3**.

Main Mode of Transport to Place of Work	Modal Split
Mass Transit Railway	19.4%
Franchised Bus	9.1%
On foot only	12.8%
Public light bus <sup>(4)</sup>	39.8%
Private car / Passenger van	15.6%
Company bus / van	1.3%
Mass Transit Railway (Light Rail)	0%
Taxi	0.6%
Residential coach service	0.1%
Ferry/ Vessel	0%
Others <sup>(5)</sup>	1.3%
Total	100%

Table 6.3Transport Modal Splits of Local Area

Note : (1) Data of Large Tertiary Planning Unit Group Nos. 821 and 826 - 828 under "Working Population with Fixed Place of Work in Hong Kong by Year, Main Mode of Transport to Place of Work and Large Subunit Group" in Population Census 2021.

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6.2.4 With reference to the transport modal splits in **Table 6.3** and the existing available transport modes in Sai Kung Town Centre, it is assumed that the modal splits for PT mode and non-PT (i.e. private car and taxi) are 83.8% and 16.2% respectively. The PT mode was further split to bus and minibus mode based on the surveyed distribution of passenger trips among bus and minibus in Sai Kung area. The estimated pedestrian trips of proposed development in weekday are summarized in **Table 6.4**.

Transport Mode		Modal Split	Pedestrian Trips for (ped/hr)			
PT (83.8%) <sup>(1)</sup>	Bus	15.1% <sup>(2)</sup>	25			
PT (83.8%) <sup>,-,</sup>	Minibus	68.7% <sup>(2)</sup>	114			
Non-PT (includir	ng Taxi/Private Car)	16.2%(1)	27			
	Total	100%	166			

 Table 6.4
 Estimated Pedestrian Trips of Proposed Development during peak hours in Weekday

Remarks:

- (1) Based on the Population Census 2021.
- (2) Based on the surveyed distribution of passenger trips among bus and minibus in Sai Kung Town Centre. 82% was minibus passengers and 18% was bus passengers.
- 6.2.5 As shown in **Table 6.4**, it is estimated that 139 nos. pedestrian from the proposed development would rely on the road-based public transport services.
- 6.2.6 It is noted that there is a planned residential development in CDA(1) zone adjacent to the Application Site. According to TIA report of its planning application, the planned development will provide 972 units with 2,615 population. Based on above same methodology, the estimated PT trips of the planned development would be 481 nos. (including 394 nos. for minibus passenger and 87 nos. for bus passenger), which would be considered in the traffic forecast.

#### Capacity Assessment on Public Transport Services

6.2.7 Based on the observed passenger pattern of PT demand in Sai Kung area in **Table 6.1**, the PT demand of the proposed development and planned development were split to the existing bus and minibus services. The anticipated bus and minibus demands during peak hours are shown in **Table 6.5**.



		Bus	Referen (Without the Develor	e Proposed	Design Case (with the Proposed Development)				
Route No.	Destinations	Capacity (pax/hr) <sup>(1)</sup> [B]	demand Average		PT Demand of Proposed Development (pax/hr) [F]	Anticipated PT demand (With Proposed Development) [G] = [E] + [F]	Anticipated Average Peak Hourly Occupancy <sup>(3)</sup> [G]/ [B]		
Franchised	d Buses								
92	Diamond Hill Railway Station	480	282	59%	4	286	60%		
99	Heng On Bus Terminus	480	172	36%	4	176	37%		
292P <sup>(2)</sup>	Kwun Tong	-	-	-	-	-	-		
299X	Shatin Central Bus Terminus	360	260	72%	13	273	76%		
792M Tseung Kwan O Station		360	190	53%	5	195	54%		
	Total	1680	904	-	26	930	-		
MiniBus			·		·	·			
GMB 1	Kowloon Bay (Telford Gardens)	76	104	137%	9	113	149%		
GMB 1A	Diamond Hill Railway Station	399	509	128%	42	551	138%		
GMB 12	Po Lam	95	68	72%	6	74	78%		
GMB 101M	Hang Hau Station	456	555	122%	44	599	131%		
RMB	Mongkok	95	58	61%	3	61	64%		
RMB	Kwun Tong	152	100	66%	9	109	72%		
	Total	1273	1394	-	113	1507	-		

#### Table 6.5 Future Public Transport Demand (Outbound) during AM Peak Hour

Notes : (1) The passenger capacities of bus and minibus are assumed 120 pax/hr and 19 pax/hr during peak hours. (2) No trip was observed during the identified peak hour in the survey.

(3) According to the Guidelines on Bus Service Improvement and Reduction published by TD, TD may consider frequency improvement if the average occupancy of bus route reaches 75% during peak hour to enhance the service level.

According to **Table 6.5**, it is anticipated that the existing services of GMB routes No. 1, 1A and 101M would be overcapacities upon population intakes in the vicinity of Sha Ha Area. Taking into consideration that the bus and GMB services in Sai Kung area are both served as feeders to MTR Stations, the GMB passenger is assumed to be shifted to use the bus service as alternative transport service when the GMBs are full. The anticipated bus and minibus demands during peak hours are re-distributed and shown in **Table 6.6**.



	Bus Capacity (pax/hr) [B]	Anticipated PT demand (With Proposed Development) [H]	Anticipated Average Peak Hourly Occupancy <sup>(3)</sup> [H]/ [B]
Bus			
KMB 92 (to Diamond Hill)	480	475 <sup>(1)</sup>	99%
CTB 792M (to TKO Station)	480	338 <sup>(2)</sup>	70%
GMB			
GMB 1 (to Kowloon Bay)	76	76 <sup>(1)</sup>	100%
GMB 1A (to Diamond Hill)	399	399 <sup>(1)</sup>	100%
GMB 101M (Hang Hau Station)	456	456 <sup>(2)</sup>	100%

Table 6.6 Future Public Transport Demand (Outbound) during AIVI Peak Hour	Table 6.6	Future Public Transport Demand (Outbound) during AM Peak Hour
---	-----------	---

Remarks: (1) Refer to Column G in Table 6.5. 189 nos. passengers of GMB Route Nos. 1 and 1A are assumed to be shifted to use the KMB's bus route no. 92 when the GMBs are full.

(2) Refer to Column G in Table 6.5. 143 nos. passengers of GMB Route No. 101M is assumed to be shifted to use the CTB's bus route no. 792M when the GMB is full.

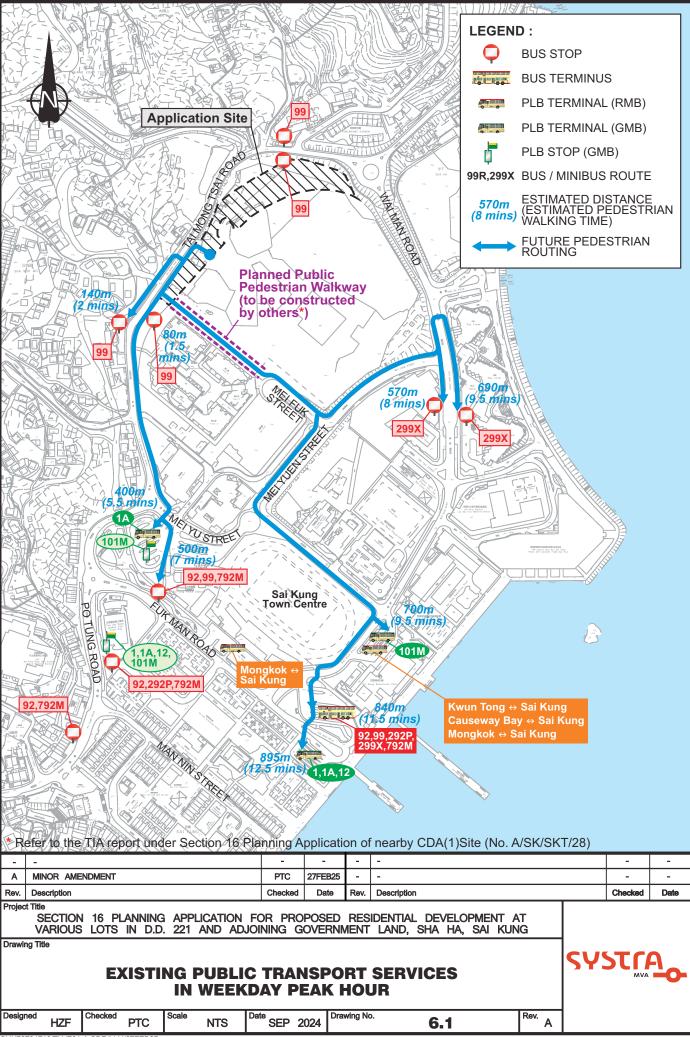
6.2.8 Based on the assessment result in Table 6.5 and Table 6.6, enhancement of the existing PT services would be required under both reference and design cases (i.e. with and without the proposed development) to meet the passenger demand arising from the population intakes in the vicinity of Sha Ha area. The suggested enhancement of PT services for TD's future planning are discussed in the following paragraphs.

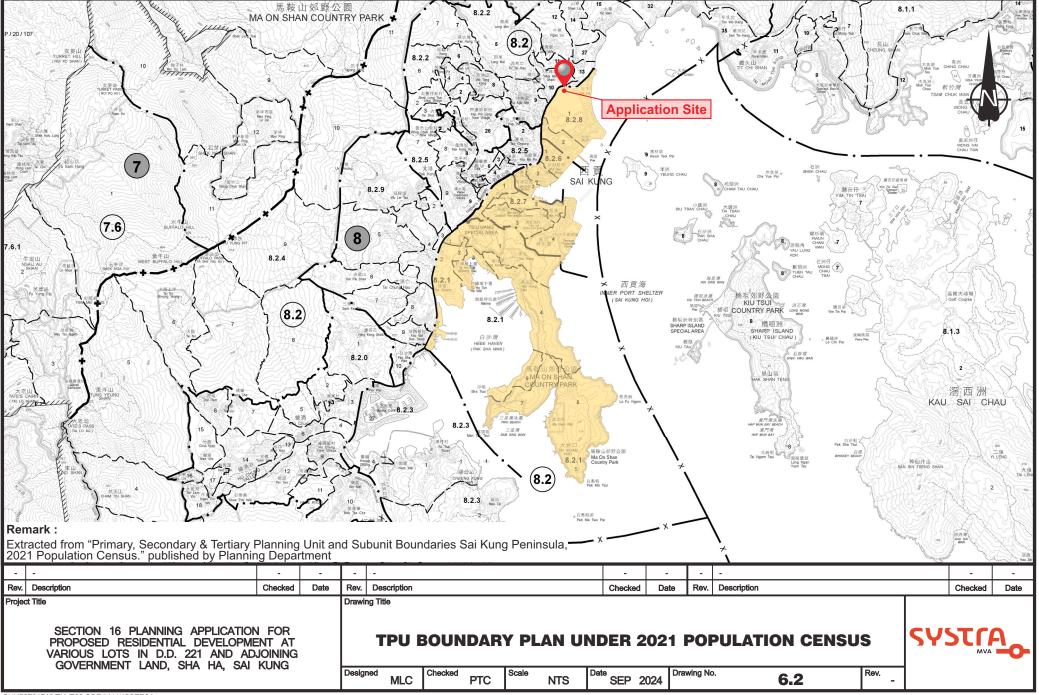
#### Frequency Improvement of Existing Bus Route 299x

6.2.9 Based on Table 6.5, it is suggested to increase additional 1 trip for bus route 299x (Shatin bound) during AM peak hour period to enhance the service level. Actual service enhancement is subject to the Transport Department's review at a later stage and actual passenger demand.

#### Frequency Improvement of Existing Bus Route KMB 92

6.2.10 Based on Table 6.6, it is suggested to increase additional 2 trips for bus route KMB 92 (Diamond Hill bound) during AM peak hour period to meet the passenger demand arising from the population intakes in the vicinity of Sha Ha area. Actual service enhancement is subject to the Transport Department's review at a later stage and actual passenger demand.







### 7. PEDESTRIAN IMPACT ASSESSMENT

### 7.1 Existing Pedestrian Connections

- 7.1.1 At present, footpaths and crossings are provided in the vicinity of the site along Tai Mong Tsai Road, Mei Yuen Street and Wai Man Road to facilitate pedestrians to/from the nearby bus/minibus stops.
- 7.1.2 In order to establish the current pedestrian demand in the area, pedestrian head count survey was conducted at the key sections of footpaths along the anticipated access routes of the sites during the morning peak 07:00-09:00 and evening peak 17:00-19:00 on a typical weekday in February 2025. The locations of the surveyed sections are shown in **Drawing No. 7.1**.
- 7.1.3 The survey result indicated that the observed peak-hour pedestrian demand occurred during 07:10 to 08:10 and 17:10 to 18:10 in the morning and evening peak periods respectively. With the observed pedestrian flows, the key footpaths were assessed under the 'Level of Service (LOS)' approach in accordance with TPDM. The results of the Level of Service (LOS) assessment for existing footpaths are summarized in **Table 7.1**.

Ref	Section	Existing Footpath Width		Two-way Observed Flows (pph)		Flow (ppn	Rate n/m)	Level of Service <sup>(3)</sup>	
(-)		(m)	(m)	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
А	Tai Mong Tsai Road (Eastern Footpath)	2.3	1.3	60	135	0.8	1.7	А	А
В	Mei Fuk Street (Northern Footpath)	2.5	1.5	15	10	0.2	0.1	А	А
С	Mei Yuen Street (Western Footpath)	3.1	2.1	15	10	0.1	0.1	А	А
D	Wai Man Road (Northern Footpath)	3	2	90	85	0.8	0.7	А	А

 Table 7.1
 LOS Assessments of Existing Footpaths

Remarks: (1) Location refer to Drawing No. 7.1.

- (2) Effective width = Existing Width 1m Dead width (i.e. 0.5m clearance for each side of kerb/tree pit/railing)
- (3) Details of Pedestrian Walkway LOS refer to TPDM. Volume 6 Chapter 10 Section 10.4.2. The definitions of different level of LOS on footpaths extracted from TPDM is shown in **Appendix C**.
- 7.1.4 As shown in **Table 7.1**, all existing footpaths are operating within capacity (i.e. LOS C or better).

### 7.2 Future Pedestrian Connections

- 7.2.1 As mentioned in **Section 2.4**, a 6m wide footpath will be provided by others to connect Tai Mong Tsai Road and Mei Fuk Street for public use according to the approved planning application of nearby CDA(1) site (Application No. A/SK-SKT/28). This would facilitate residents of the proposed development to/from the bus/minibus termini near Sai Kung Pier.
- 7.2.2 Besides, as mentioned in **Section 3.1**, the planned improvement works to Hiram's Highway is anticipated to be completed by 2032 before the completion of the proposed development. The planned road works at Tai Mong Tsai Road was adopted in the assessment.



### 7.3 Year 2035 Pedestrian Forecast

7.3.1 In order to investigate the impact induced by the proposed development to the surrounding pedestrian network, year 2035 (i.e. three years upon completion of the proposed development) has been adopted for the pedestrian assessment.

### Pedestrian Growth

7.3.2 Same as traffic forecast as discussed in **Section 4.2**, the traffic growth rate of +0.26% will be adopted for the pedestrian forecast.

Pedestrian Trips of the Proposed Development and Adjacent Planned Development

7.3.3 As discussed in **Section 6.2**, the pedestrian trips of the proposed development and adjacent planned development during peak hours are 166 pax/hr and 574 pax/hr respectively.

	No. of Units	Estimated Pedestrian Trips during peak hours <sup>(1)</sup> (pax/hr)
Proposed Development	280	166
Planned residential development in CDA(1) zone (Application No. A/SK-SKT/28)	972	574

**Anticipated Pedestrian Trips during Peak Hours** 

Remark: (1) Details refer to Section 6.2.

Table 7.2

- 7.3.4 According to the above, the anticipated 2035 pedestrian forecast are obtained by applying the adopted growth rates to the observed pedestrian flows and superimposing the anticipated pedestrian trips of the proposed development and the adjacent planned development.
- 7.3.5 The anticipated 2035 pedestrian forecast with the LOS assessment result at the critical footpaths are shown in **Table 7.3**.

Ref	Section	Footpath Width	Effective Width <sup>(2)</sup>	Two Obse Flows	rved	Flow (ppn	Rate n/m)		el of ice <sup>(3)</sup>
		(m)	(m)	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
А	Planned Tai Mong Tsai Road (Eastern Footpath)	2	1	175	265	2.9	4.4	А	A
В	Mei Fuk Street (Northern Footpath)	2.5	1.5	600	585	6.7	6.5	А	А
С	Mei Yuen Street (Western Footpath)	3.1	2.1	590	570	4.7	4.5	А	А
D	Wai Man Road (Northern Footpath)	3	2	220	210	1.8	1.8	А	А

 Table 7.3
 LOS Assessments of Footpaths in Design Year 2035

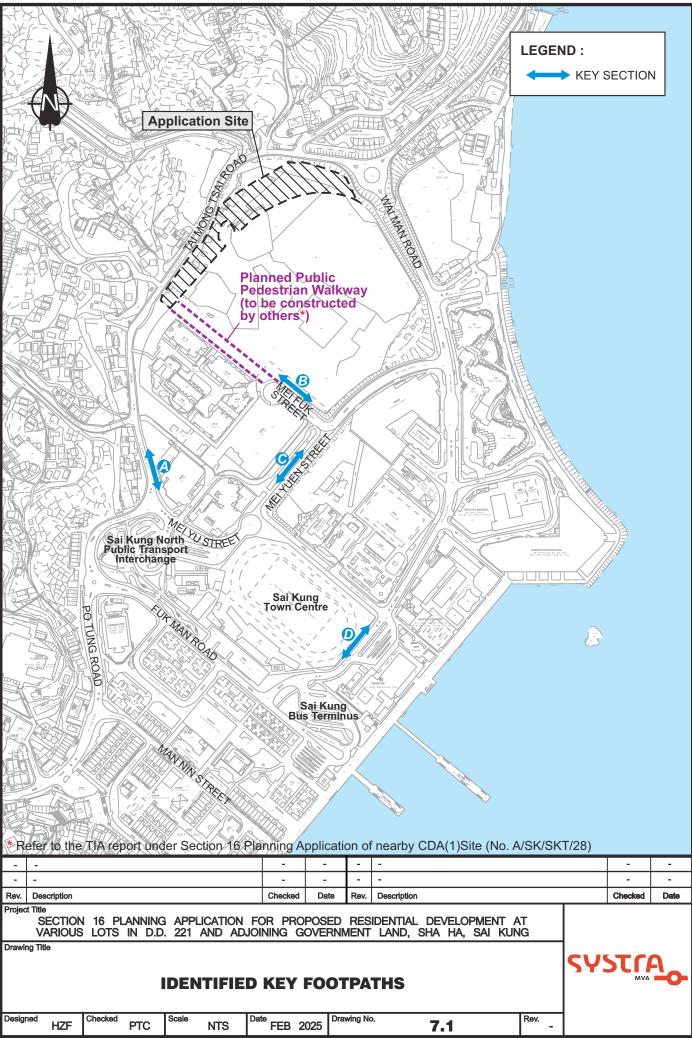
Remarks: (1) Location refer to Drawing No. 7.1.

(2) Effective width = Footpath Width - 1m Dead width (i.e. 0.5m clearance for each side of kerb/tree pit/railing)

(3) Details of Pedestrian Walkway LOS refer to T.P.D.M. Volume 6 Chapter 10 Section 10.4.2. The definitions of different level of LOS on footpaths is extracted from TPDM is shown in **Appendix C**.

7.3.6 The assessment results in **Table 7.3** indicated that all the critical footpaths will still be operating within capacity (i.e. LOS C or better) during peak hours upon completion of the proposed development.

22/05/2025



CHK50791710/TIA/F71.CDR/LLH/28FEB25



### 8. SUMMARY & CONCLUSION

### 8.1 Summary

- 8.1.1 The application site is at various lots in DD221 and adjoining Government land, Sai Kung. It is currently in an area shown as "Road" in the approved Sai Kung Town Outline Zoning Plan (OZP) S/SK-SKT/6. The applicant intends to develop the site into a residential development with a view to better utilizing the "leftover" land resources between the CDA(1) zone and the planned Tai Mong Tsai Road.
- 8.1.2 The applicant intends to develop the site into a residential development with about 280 units. The tentative completion year of the development is year 2032.
- 8.1.3 The development vehicular access will be located at Tai Mong Tsai Road. The internal transport facilities provisions will be provided in accordance with the relevant guidelines stipulated in the latest HKPSG. Also, 10 nos. public parking space for private car have been included in the proposed MLP in order to increase the parking space supply to the community.
- 8.1.4 Traffic surveys have been conducted to establish the current traffic condition in the vicinity of the subject site. The junction and link capacity assessments revealed that all the identified local junctions and road links are currently operating with ample capacity except the roundabout of Po Tung Road/Fuk Man Road (C), the priority junction of Po Tung Road/Man Nin Street (D), a section of Po Tung Road (S4) and a section of Hiram's Highway near Hong Kin Road (S5).
- 8.1.5 Improvement works to Hiram's Highway has been planned by Highways Department (HyD), with the objectives to relieve existing traffic congestion and enhance the resilience to unexpected incidents. The works is divided into 2 stages. Stage 1 works included the road widening of Hiram's Highway between Clear Water Bay Road and Marina Cove, which has been completed in 2021. The Stage 2 works includes widening of the road section between Marina Cove to Sai Kung Town, which included Hiram's Highway, Po Tung Road and a section of Tai Mong Tsai road abutting the application site. According to the HyD's press releases dated 29 September 2023, the design and construction of the works is scheduled to commence in the Q2 2024 and will take about 84 months to complete. As such, it is anticipated that the improvement works would be completed by 2032. This planned improvement works was adopted for assessment.
- 8.1.6 Operational performance of the identified local junctions and road links have been assessed based on the anticipated year 2035 traffic flows and the existing/planned layouts. The assessment results as shown in **Table 5.1** and **Table 5.2** revealed that all identified key junctions and road links will operate with ample capacity.
- 8.1.7 Public transport service assessments have been conducted with full occupation of the proposed development. To meet the passenger demand arising from the population intake in the vicinity of Sha Ha area, enhancement of the existing PT services are suggested for Transport Department's planning. Actual service enhancement is subject to the Transport Department's review at a later stage and actual passenger demand.
- 8.1.8 Performance of the identified critical footpaths has also been assessed and the results revealed that all the identified sections will still be operating with satisfactory performance upon completion of the proposed development.



### 8.2 Conclusion

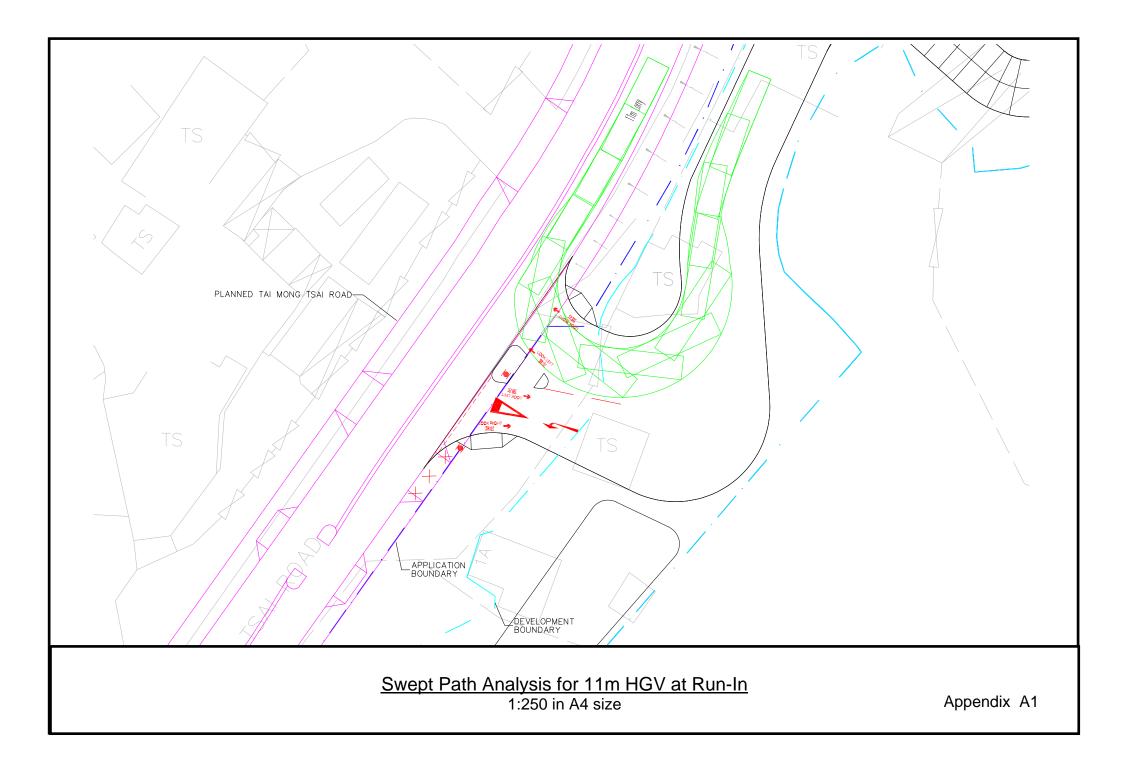
8.2.1 In conclusion, the traffic impact assessment has demonstrated that the development traffic generation by the subject site can be absorbed by the nearby road network and would not cause any adverse traffic impact. Hence it can be concluded that the proposed development is considered acceptable in traffic terms.

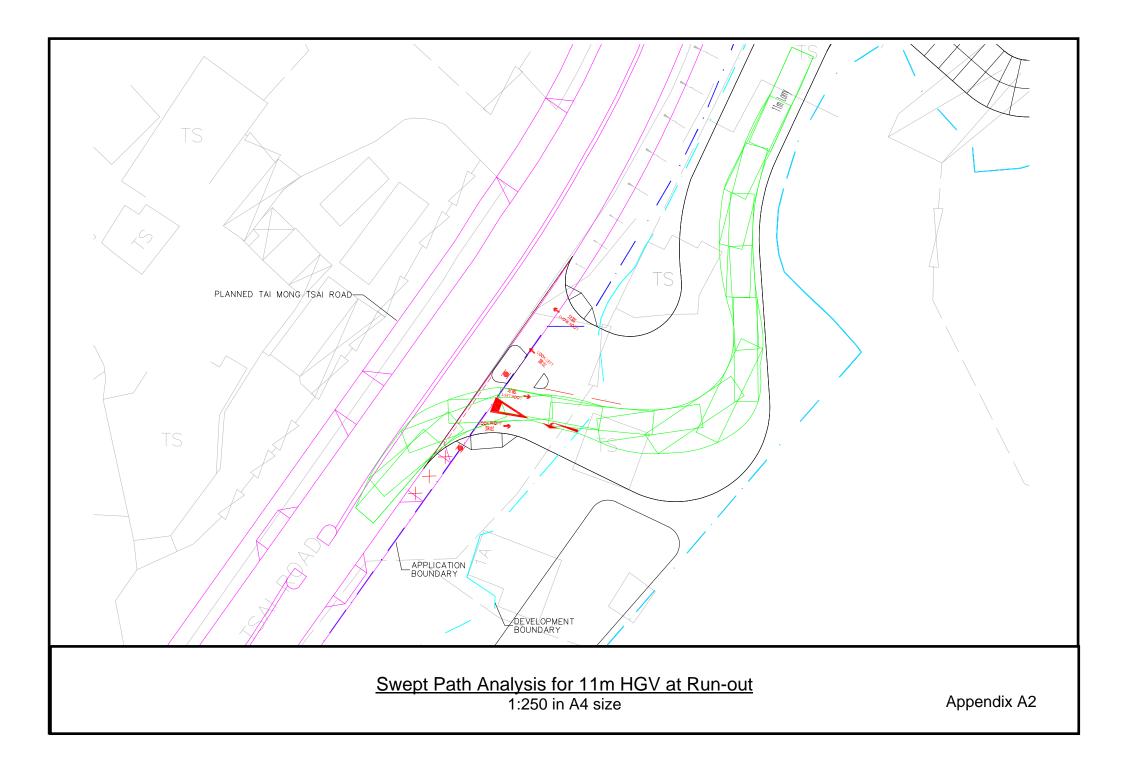


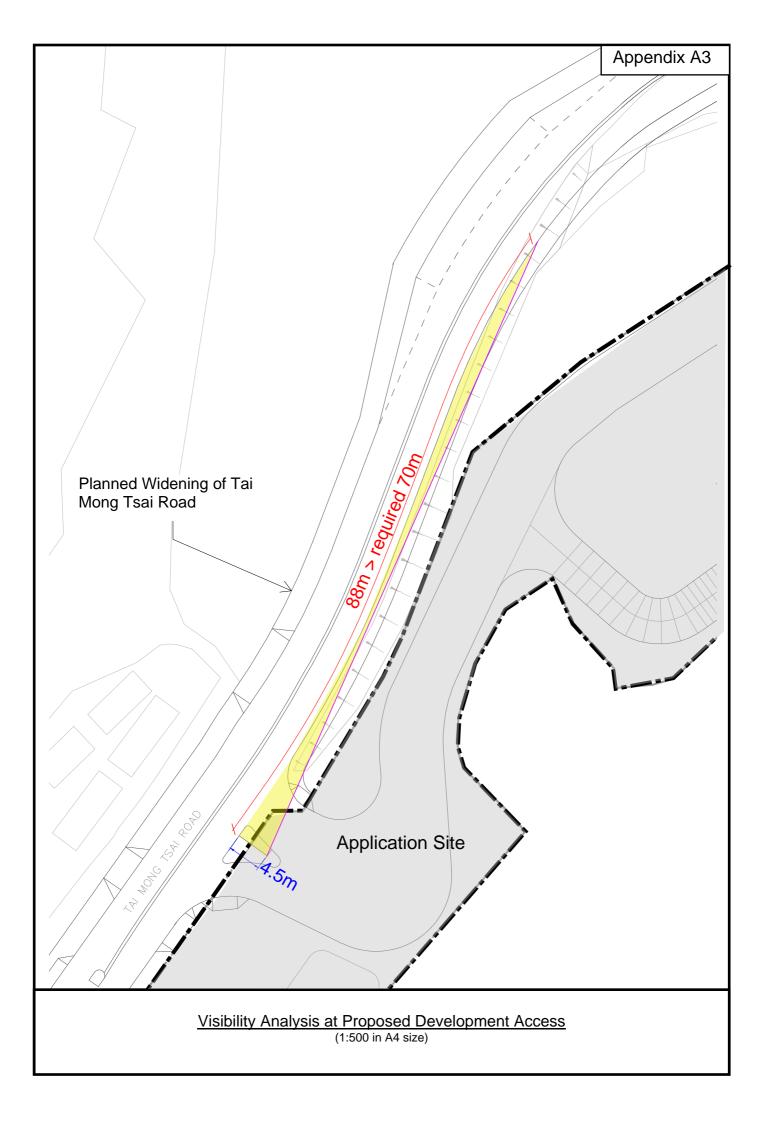
Appendix A

## Swept Path Analysis and Sightline at

# **Proposed Vehicular Access**









## Appendix B

## **Junction Calculation Sheets**

## Simplified Roundabout Capacity Calculation

Job Title:					own As 'Road'	, Various			Adjoining Gover	nment La	nd, Sha H	a, Sai Kung
Junction:			l/Wai Man F	Koad					: A (Obs)			
Scheme:	Year 2024	Observed	1 Flow	1				Ref. No				
Year:	2024			Job No.: C	HK50791710	)		Rev.:				
AM	PM											
ARM A:	Tai Mong Ts		Southern									
ARM B:	Tai Mong Ts	ai Road	Northern									
ARM C:	Wai Man Ro	ad						$\sim$				
								/				
							Α ——		)— В			
								$\sim$				
GEOMETF	RY							С				
ARM	V	e	L	r	D	Phi	S					
А	3.00	7.50	15	50	42	30	0.48					
В	3.20	4.80	7	30	42	60	0.37					
С	3.60	5.00	7	30	42	50	0.32					
AM FLOW	1		~				1	~	-			
from \ to	A	B	C					Circ	Entry			
A	5	360	70					145	435			
В	515	10	160					80	685			
С	50	130	5					530	185			
PM FLOW	1	р	C					Cim	Enter			
from \ to A	A 5	B 525	C 35					Circ 110	Entry 565			
В	405	5	125					45	535			
С	45	100	5					415	150			
WEEKENI	1						I	i				
from \ to	A	В	C					Circ	Entry			
А	5	515	60					145	580			
В	415	5	170					70	590			
С	40	135	5					425	180			
	TIONS						0	) De		RFC		
CALCULA ARM	K K	$X_2$	М	F	t_	$f_c$	AM	2e PM	WEEKEND	AM	PM	WEEKEND
		5.30		F 1605	t <sub>D</sub> 1.43				1560		0.36	
A B	1.03 0.91		0.17			0.62	1560 1100	1582	1560	0.28 0.62	0.36	0.37
в С		4.12	0.17	1250	1.43	0.55	993	1117				0.53
С	0.95	4.45	0.17	1349	1.43	0.57	993	1055	1049	0.19	0.14	0.17
									Crtical Arm:	В	В	В
_									RFC:	0.62	0.48	0.53
	ince with TPD	M V2 Ch4		-			-			AM	PM	WEEKEND
Calculated b	by:			Date:	Dec-24		Checked by:					

### Simplified Priority Junction Capacity Calculation

Job Title: Junction:	-		et/Tai Mong Ts				.,	Ref. No.:	d, Sha Ha, Sai Kung B (Obs)
Scheme:	Year 2024 Ob							Ref. No.:	2 (000)
Year:	2024			Job No.: CHK5079	1710			Rev.:	
ARM A:	Po Tung Roa	d (Northern							
ARM B:	Mei Yu Stree								
ARM C:	Po Tung Roa	ad (Southern	)						
	AM	(PM)	[WEEKEND]						
CA	430	590	570	>					
СВ	5	25	35						
ARM C									
			ר			+			-
			J			AM	(DM)		-
					Г	600	(PM) 435	[WEEKEND] 500	AC
				←		25	10	30	AB
		4				20	10		ARM A
			ו ר			1			•
					*				
		AM	15	10					
		(PM)	30	5		ARM B			
		[WEEKEND]	40	15					
			BC	BA					
GEOMETRY									
Major road widt			W	9.00	L	ane widths		w(b-a)	3.
Central Reserv			Wcr	0.00				w(b-c)	3.
2 Lane Minor A	Arm (Y/N)			Y				w(c-b)	3.
Visibilities			Vr(b-a)	140	C	alculated		D	0.
			VI(b-a) Vr(b-c)	90 150				E F	1. 0.'
			Vr(c-b)	55				Y	0.
			VI(C-D)					1	0.
ANALYSIS									
							AM PEAK	(PM) PEAK	[WEEKEND] PEA
TRAFFIC FLO	WS		q(c-a)				430	590	570
			q(c-b)				5	25	35
			q(a-b)				25	10	30
			q(a-c)				600	435	500
			q(b-a)				10	5	15
			q(b-c)				15	30	40
			f	·			0.60	0.86	0.73
			<b>e</b> "	Factor					
CAPACITIES			Q(b-a)	1			386	395	378
			Q(b-c)	1			591	634 607	615
			Q(c-b)	1			564 487	607 582	587
			Q(b-ac)	1			487	583	525
RFC's			b-a				0.026	0.013	0.040
			b-a b-c				0.026	0.013	0.040
			c-b				0.025	0.047	0.060
			b-ac				0.009	0.000	0.000
							5.000	5.000	0.000
							0.026	0.047	0.065
Vorst RFC				respective streams					
	Vr are visibility di w(b-a)-3.65))(1+0		-						
Where VI and V D = (1+0.094(w		.0009(Vr(b-a)-	120))(1+0.0006(\						
Where VI and V D = (1+0.094(w E = (1+0.094(w	w(b-a)-3.65))(1+0	.0009(Vr(b-a)- .0009(Vr(b-c)-1	120))(1+0.0006(\ 20))						
Where VI and V D = (1+0.094(w E = (1+0.094(w	w(b-a)-3.65))(1+0 w(b-c)-3.65))(1+0 w(c-b)-3.65))(1+0	.0009(Vr(b-a)- .0009(Vr(b-c)-1	120))(1+0.0006(\ 20))						
Vhere VI and V D = (1+0.094(w E = (1+0.094(w F = (1+0.094(w Y = 1-0.0345W	w(b-a)-3.65))(1+0 w(b-c)-3.65))(1+0 w(c-b)-3.65))(1+0	.0009(Vr(b-a)- .0009(Vr(b-c)-1 .0009(Vr(c-b)-1	120))(1+0.0006(\ 20))						
Vhere VI and V = (1+0.094(w = (1+0.094(w f = (1+0.094(w f = 1-0.0345W = proportion o	w(b-a)-3.65))(1+0 w(b-c)-3.65))(1+0 w(c-b)-3.65))(1+0 V	.0009(Vr(b-a)- .0009(Vr(b-c)-1 .0009(Vr(c-b)-1 ning left	120))(1+0.0006(\ 20)) 20))	/I(b-a)-150))	acity of comb	ined streams			

## Simplified Roundabout Capacity Calculation

Job Title:	Proposed R	esidential D	evelopment	In Area Show	n As 'Road	', Various L	ots In D.D. 2	221 And A	djoining Govern	ment Lan	d, Sha H	a, Sai Kung
	Tai Mong			Road					: C (Obs)			
	Year 2024	Observed	Flow					Ref. No.	:			
Year:	2024			Job No.: C	HK507917	10		Rev.:				
AM	PM											
ARM A:	Po Tung Roa	nd	SB					в				
ARM B:	Po Tung Roa	nd	NB					ĭ				
	Fuk Man Ro											
	8							$\frown$				
								(	) c			
								$\sim$				
GEOMETR	1		Ŧ		5	DI .	G	Α				
ARM	V	e	L	r	D	Phi	S	-				
Α	7.00	7.50	1	20	28	35	0.80					
В	3.50	9.00	43	40	28	35	0.20					
С	3.50	8.50	35	10	28	40	0.23					
AM FLOWS	 s											
from \ to	A	В	С					Circ	Entry			
A	5	330	420					110	755			
В	590	5	60					430	655			
C	350	100	5					600	455			
C	330	100	5					000	455			
PM FLOWS												
from \ to	A	В	С					Circ	Entry			
A	5	525	370					90	900			
В	420	5	45					380	470			
C	410	80	5					430	495			
C	410	00	5					450	495			
WEEKEND	1	D	~						E. (			
from \ to		B	C 475					Circ	Entry			
A	5	485	475					135	965			
В	460	5	75					485	540			
С	485	125	5					470	615			
CALCULAT	1						1	$Q_{\rm E}$		RFC		
ARM	K	$X_2$	М	F	t <sub>D</sub>	f <sub>c</sub>	AM	PM	WEEKEND	AM	PM	WEEKEND
А	0.98	7.19	0.04	2179	1.48	0.76	2060	2074	2041	0.37	0.43	0.47
В	1.01	7.40	0.04	2243	1.48	0.77	572	584	559 #	1.14	0.81	0.97
С	0.92	6.93	0.04	2100	1.48	0.74	451	485	477 #	1.01	1.02	1.29
Remark: (#) Si	ite factors have	e been applied	to reflect the o	bserved long tra	ffic queues on	Po Tung	1		Crtical Arm:	В	С	С
	und and Fuk M			0		0			RFC:	1.14	1.02	1.29
'- In accorda	nce with TPL	OM V2 Ch4								AM	PM	WEEKEND
Calculated by				Date:	Dec-24		Checked by:					
	` ر						Oy.					

### Simplified Priority Junction Capacity Calculation

Junction:	FIODOSCU KESI		oment In Area S	hown As 'Road', Vario	ous Lots In D.D. 221 A	nd Adjoining G	overnment Land	d, Sha Ha, Sai Kung
Junction.	Po Tung Road	l/Man Nin Str	eet				Ref. No.:	D (Obs)
Scheme:	Year 2024 Ob	served Flow		-			Ref. No.:	
Year:	2024			Job No.: CHK50791	710		Rev.:	
ARM A:	Po Tung Roa							
ARM B:	Man Nin Stre							
ARM C:	Po Tung Roa	ad (Southern	)					
								-
CA	AM	(PM)	[WEEKEND]	1				
CB	680 120	805 155	795 125	<b>→</b>				
ARM C	120	155	125					
					→ ↓			
			1		•			-
			•		AM	(PM)	[WEEKEND]	-
					855	765	845	AC
		•			90	70	135	AB
								ARM A
			n					-
					<b>↓</b>			
		AM	135	70		I		
		(PM)	195	95	ARM B			
		[WEEKEND]	180	165				
			BC	BA				
GEOMETRY								
Major road wic	dth		W	7.50	Lane widths		w(b-a)	3.
Central Reserv	ve width		Wcr	0.00			w(b-c)	3.
2 Lane Minor A	Arm (Y/N)			n			w(c-b)	3.
Visibilities			Vr(b-a)	30	Calculated		D	0.
			VI(b-a)	40			E	0.
			Vr(b-c)	30			F	0.9
			Vr(c-b)	100			Y	0.1
ANALYSIS								
						AM PEAK	(PM) PEAK	[WEEKEND] PEA
TRAFFIC FLO	DWS		q(c-a)			AM PEAK 680	(PM) PEAK 805	[WEEKEND] PEA 795
TRAFFIC FLO	ows		q(c-a) q(c-b)				, ,	
TRAFFIC FLO	DWS					680	805	795
TRAFFIC FLO	DWS		q(c-b)			680 120	805 155	795 125
TRAFFIC FLO	DWS		q(c-b) q(a-b) q(a-c) q(b-a)			680 120 90 855 70	805 155 70 765 95	795 125 135 845 165
TRAFFIC FLO	DWS		q(c-b) q(a-b) q(a-c) q(b-a) q(b-c)			680 120 90 855 70 135	805 155 70 765 95 195	795 125 135 845 165 180
TRAFFIC FLO	ows		q(c-b) q(a-b) q(a-c) q(b-a)			680 120 90 855 70	805 155 70 765 95	795 125 135 845 165
			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f	Factor		680 120 90 855 70 135 0.66	805 155 70 765 95 195 0.67	795 125 135 845 165 180 0.52
			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f	1		680 120 90 855 70 135 0.66 193	805 155 70 765 95 195 0.67 186	795 125 135 845 165 180 0.52 173
			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-a)	1 1		680 120 90 855 70 135 0.66 193 422	805 155 70 765 95 195 0.67 186 426	795 125 135 845 165 180 0.52 173 352
			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(b-c)	1 1 1		680 120 90 855 70 135 0.66 193 422 452	805 155 70 765 95 195 0.67 186 426 479	795 125 135 845 165 180 0.52 173 352 443
			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-a)	1 1		680 120 90 855 70 135 0.66 193 422	805 155 70 765 95 195 0.67 186 426	795 125 135 845 165 180 0.52 173 352
CAPACITIES			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(b-c)	1 1 1		680 120 90 855 70 135 0.66 193 422 452	805 155 70 765 95 195 0.67 186 426 479	795 125 135 845 165 180 0.52 173 352 443
CAPACITIES			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(b-c) Q(c-b) Q(b-ac)	1 1 1		680 120 90 855 70 135 0.66 193 422 452 314	805 155 70 765 95 195 0.67 186 426 479 319	795 125 135 845 165 180 0.52 173 352 443 257
CAPACITIES			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(c-b) Q(b-ac) b-a	1 1 1		680 120 90 855 70 135 0.66 193 422 452 314 0.36	805 155 70 765 95 195 0.67 186 426 479 319 0.51	795 125 135 845 165 180 0.52 173 352 443 257 0.95
CAPACITIES			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(b-c) Q(c-b) Q(b-ac) b-a b-c	1 1 1		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51
CAPACITIES			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(c-b) Q(b-ac) b-a b-c c-b	1 1 1		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28
CAPACITIES RFC's			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(c-b) Q(b-ac) b-a b-c c-b	1 1 1		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28
CAPACITIES RFC's Worst RFC			q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac	1 1 1		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27 0.65	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32 0.91	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28 1.34
	Vr are visibility di		q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac	1 1 1 2 respective streams		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27 0.65	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32 0.91	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28 1.34
CAPACITIES RFC's Worst RFC Where VI and D = (1+0.094(t	Vr are visibility di w(b-a)-3.65))(1+(	0.0009(Vr(b-a)-1	q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the 20))(1+0.0006(N	1 1 1 2 respective streams		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27 0.65	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32 0.91	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28 1.34
CAPACITIES RFC's Worst RFC Where VI and D = (1+0.094(v E = (1+0.094(v	Vr are visibility di w(b-a)-3.65))(1+( w(b-c)-3.65))(1+(	0.0009(Vr(b-a)-1 0.0009(Vr(b-c)-1	q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the (20))(1+0.0006(N 20))	1 1 1 2 respective streams		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27 0.65	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32 0.91	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28 1.34
CAPACITIES RFC's Where VI and D = (1+0.094(v E = (1+0.094(v F = (1+0.094(v	Vr are visibility di w(b-a)-3.65))(1+0 w(b-c)-3.65))(1+0 w(c-b)-3.65))(1+0	0.0009(Vr(b-a)-1 0.0009(Vr(b-c)-1	q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the (20))(1+0.0006(N 20))	1 1 1 2 respective streams		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27 0.65	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32 0.91	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28 1.34
CAPACITIES RFC's Where VI and D = (1+0.094(v E = (1+0.094(v F = (1+0.094(v Y = 1-0.0345W	Vr are visibility di w(b-a)-3.65))(1+0 w(b-c)-3.65))(1+0 w(c-b)-3.65))(1+0 N	0.0009(Vr(b-a)- 0.0009(Vr(b-c)-1 0.0009(Vr(c-b)-1	q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the (20))(1+0.0006(N 20))	1 1 1 2 respective streams		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27 0.65	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32 0.91	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28 1.34
CAPACITIES RFC's Where VI and D = (1+0.094)( E = (1+0.094)( F = (1+0.094)( Y = 1-0.0345W F = proportion of the second	Vr are visibility di (w(b-a)-3.65))(1+0 (w(b-c)-3.65))(1+0 (c-b)-3.65))(1+0 V of minor traffic tu	0.0009(Vr(b-a)- 0.0009(Vr(b-c)-1 0.0009(Vr(c-b)-1 rning left	q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the (20))(1+0.0006(N 20))	1 1 1 v respective streams /I(b-a)-150))		680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27 0.65	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32 0.91	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28 1.34
CAPACITIES RFC's Where VI and D = (1+0.094)( E = (1+0.094)( F = (1+0.094)( Y = 1-0.0345W F = proportion of the second	Vr are visibility di w(b-a)-3.65))(1+0 w(b-c)-3.65))(1+0 w(c-b)-3.65))(1+0 N	0.0009(Vr(b-a)- 0.0009(Vr(b-c)-1 0.0009(Vr(c-b)-1 rning left	q(c-b) q(a-b) q(a-c) q(b-a) q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the (20))(1+0.0006(N 20))	1 1 1 s respective streams /I(b-a)-150))	ty of combined streams ordance with TPDM V2	680 120 90 855 70 135 0.66 193 422 452 314 0.36 0.32 0.27 0.65 <b>0.65</b>	805 155 70 765 95 195 0.67 186 426 479 319 0.51 0.46 0.32 0.91	795 125 135 845 165 180 0.52 173 352 443 257 0.95 0.51 0.28 1.34

TRAFFIC S	IGNA	ALS C	CALC	ULATI	ON						Job No.	: <u>CHK5</u>	<u>07917</u> 10	Ν	IVA HON	G KONG	
Junction:	Pedest	rian Cro	ssing ne	ar Yau Ma	Po Stree	et (JE)									Design Yea	r: <u>2024</u>	
Description:	Year 20	24 Obse	erved Tr	affic Flow							Designed	By: MLC			Checked By	: <u>PTC</u>	
	nts				Radiu	s (m)	(%)	Pro. Tu	ırning (%)	Revised S Flow (	Saturation pcu/hr)		AM Peak			PM Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	АМ	РМ	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway	<b>→</b>	А	1	3.500						1965	1965	800	0.407		960	0.489	0.489
(NB) Hiram's Highway (SB)	←	В	1	3.500						1965	1965	990	0.504	0.504	960	0.489	
Pedestrian Crossir	ng	Ср	2	MIN GRE	EN + FLA	ASH =	6	+	5	=	11						
Pedestrian Crossir	ng	Ср	2	MIN GRE	EN + FLA	ASH =	6	÷	5	=	11			*			·
Pedestrian Crossir	ng	Ср	2	MIN GRE	EN + FLA	ISH =	6	÷	5	=	11						
Pedestrian Crossir	ng	Ср	2	MIN GRE		ASH =	6	÷	5	-		Group	ACo		Group	ACo	
	ng	Ср	2			\SH =	6	÷	5	æ	11 +	Group	А.Ср 0.407	В.Ср 0.504	Group	A.Cp 0.489	А.Ср 0.489
	ng	Ср	2			ASH =	6	+	5	-		-			-		
	ng	Ср	2		u/hr)	ASH =	6	+	5	990(960) ◄	++ N	у	0.407	0.504	у	0.489	0.489
	ng	Ср	2		u/hr)		6	+	5		++ N	y L (sec)	0.407 20	0.504 20	y L (sec)	0.489 20	0.489 20
Notes:		Ср	2		u/hr)		6	÷	5		++ N	y L (sec) C (sec)	0.407 20 85	0.504 20 85	y L (sec) C (sec)	0.489 20 85	0.489 20 85
		Cp	2		u/hr)		6	+			++ N	y L (sec) C (sec) y pract.	0.407 20 85 0.688	0.504 20 85 0.688	y L (sec) C (sec) y pract.	0.489 20 85 0.688	0.489 20 85 0.688
Notes: Stage / Phase Dia		Ср		Flow: (pc	u/hr)		6				++ N	y L (sec) C (sec) y pract. R.C. (%)	0.407 20 85 0.688	0.504 20 85 0.688	y L (sec) C (sec) y pract. R.C. (%)	0.489 20 85 0.688	0.489 20 85 0.688
Notes: Stage / Phase Dia 1.		Ср	2 B	Flow: (pc	u/hr)						++ N	y L (sec) C (sec) y pract. R.C. (%)	0.407 20 85 0.688	0.504 20 85 0.688	y L (sec) C (sec) y pract. R.C. (%)	0.489 20 85 0.688	0.489 20 85 0.688
Notes: Stage / Phase Dia 1. A		Ср	— в	Flow: (pc	u/hr)	800(960)		3.			+ N	y L (sec) C (sec) y pract. R.C. (%)	0.407 20 85 0.688	0.504 20 85 0.688 37%	y L (sec) C (sec) y pract. R.C. (%)	0.489 20 85 0.688	0.489 20 85 0.688
Notes: Stage / Phase Dia 1.		Ср		2.	u/hr)	800(960)					++ N	y L (sec) C (sec) y pract. R.C. (%) 4.	0.407 20 85 0.688	0.504 20 85 0.688	y L (sec) C (sec) y pract. R.C. (%) 5.	0.489 20 85 0.688	0.489 20 85 0.688

### TRAFFIC SIGNALS CALCULATION

### Job No.: CHK50791710

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				ULATI							Job No.:	: <u>CHK5</u>				G KONG	
Junction:	Pedest	rian Cro	ssing ne	ar Yau Ma	Po Stree	et (JE)		-							Design Yea	r: <u>2024</u>	
Description:	Year 20	)24 Obse	erved Tra	affic Flow							Designed I	By: MLC			Checked By	: LLW	
	nts				Radiu	s (m)	t (%)	Pro. Tu	rning (%)		Saturation pcu/hr)		WE			WE	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	WE	WE	WE	WE	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway		А	1	3.500						1965	1965	920	0.468		920	0.468	
(NB) Hiram's Highway (SB)	-	В	1	3.500						1965	1965	1025	0.522	0.522	1025	0.522	0.522
Pedestrian Cross	ing	Ср	2	MIN GRE	EN + FLA	ASH =	6	+	5	=	11						
Pedestrian Cross	ing	Ср	2	MIN GRE	EN + FLA	ASH =	6	÷	5	-	11			·			
Pedestrian Cross	ing	Ср	2	MIN GRE	EN + FL4	ASH =	6	÷	5	÷	11			•			
	ing	Ср		MIN GRE		ASH =	6	+	5	=	11 +	Group	A,Cp	B.Cp	Group	A.Cp	• B,Cp
	ing	Ср				ASH =	6	+	5	-		у	0.468	B,Cp 0.522	у	0.468	В.Ср 0.522
	ing	Ср			:u/hr)			+	5		++ N	y L (sec)	0.468 20	B,Cp 0.522 20	y L (sec)	0.468 20	в,Ср 0.522 20
	ing	Ср			:u/hr)	ASH = 920(920)		+	5	= 1025(1025 <b>f</b>	++ N	y L (sec) C (sec)	0.468 20 85	в.ср 0.522 20 85	y L (sec) C (sec)	0.468 20 85	в,Ср 0.522 20 85
	ing	Ср			:u/hr)			÷	5		++ N	y L (sec)	0.468 20	B,Cp 0.522 20	y L (sec)	0.468 20	в,Ср 0.522 20 85
Notes:		Ср		Flow: (pc	:u/hr)			+	5		++ N	y L (sec) C (sec) y pract. R.C. (%)	0.468 20 85 0.688	в.ср 0.522 20 85 0.688	y L (sec) C (sec) y pract. R.C. (%)	0.468 20 85 0.688	в.Ср 0.522 20 85 0.688
Notes: Stage / Phase Di		Ср			:u/hr)			+			++ N	y L (sec) C (sec) y pract.	0.468 20 85 0.688	в.ср 0.522 20 85 0.688	y L (sec) C (sec) y pract.	0.468 20 85 0.688	в.Ср 0.522 20 85 0.688
Votes: Stage / Phase Di		Ср		Flow: (pc	:u/hr)	920(920)					++ N	y L (sec) C (sec) y pract. R.C. (%)	0.468 20 85 0.688	в.ср 0.522 20 85 0.688	y L (sec) C (sec) y pract. R.C. (%)	0.468 20 85 0.688	в.Ср 0.522 20 85 0.688
Notes: Stage / Phase Di 1.		Cp		Flow: (pc	:u/hr)	920(920)	<u> </u>				++ N	y L (sec) C (sec) y pract. R.C. (%)	0.468 20 85 0.688	в.ср 0.522 20 85 0.688	y L (sec) C (sec) y pract. R.C. (%)	0.468 20 85 0.688	в.ср 0.522 20 85 0.688
Notes: Stage / Phase Di 1. A		Ср	— в	Flow: (pc	:u/hr)	920(920) / Cp v	<u> </u>	3.			++ N	y L (sec) C (sec) y pract. R.C. (%) 4.	0.468 20 85 0.688	в.ср 0.522 20 85 0.688 32%	y L (sec) C (sec) y pract. R.C. (%)	0.468 20 85 0.688	в,Ср 0.522 20 85 0.688
Notes: Stage / Phase Di 1.		Cp		Flow: (pc	:u/hr)	920(920)	<u> </u>				++ N	y L (sec) C (sec) y pract. R.C. (%) 4.	0.468 20 85 0.688	в.ср 0.522 20 85 0.688	y L (sec) C (sec) y pract. R.C. (%) 5.	0.468 20 85 0.688	в.Ср 0.522 20 85 0.688

### Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Resi	idential Develop	oment In Area S	hown As 'Road',	Various Lots I	n D.D. 221 An	d Adjoining G	overnment Land	d, Sha Ha, Sai Kung
Junction:	Po Tung Roa	d/Yau Ma Po S	treet					Ref. No.:	F (Obs)
Scheme:	Year 2024 Ob	oserved Flow						Ref. No.:	
Year:	2024			Job No.: CHK50	0791710			Rev.:	
ARM A:	Po Tung Ro	ad (NB)							
ARM B:	Yau Ma Po								
ARM C:	Po Tung Ro								
	FU TUING NU	au (3D)							
	AM	(PM)	[WEEKEND]	7					
CA	975	905	995	<b>→</b>					
СВ	20	35	20						
ARM C									
Po Tung Road	l (SB)		_		•	↓ _			_
			]			ſ			-
			•			AM	(PM)	[WEEKEND]	-
					Г	810	975	925	AC
						30	25	15	AB
		•				30	25	15	
									ARM A
			<b>,</b>						Po Tung Road (NB)
					Ţ				
					•				
		AM	30	25		•			
		(PM)	35	20		ARM B			
			15	15	,	Yau Ma Po Stre			
		[WEEKEND]		11	1	rau wa Po Sire	et		
			BC	BA					
GEOMETRY									
Major road wic			W	7.50	L	ane widths		w(b-a)	2.75
Central Reserv	ve width		Wcr	0.00				w(b-c)	2.75
2 Lane Minor A	Arm (Y/N)			n				w(c-b)	2.50
Visibilities			Vr(b-a)	25	C	Calculated		D	0.78
			VI(b-a)	45				E	0.84
			Vr(b-c)	25				F	0.86
			Vr(c-b)	80				Y	0.74
			11(0 0)					•	0
ANALYSIS									
ANAL 1515									
							AM PEAK	(PM) PEAK	[WEEKEND] PEAK
TRAFFIC FLO	)WS		q(c-a)				975	905	995
			q(c-b)				20	35	20
			q(a-b)				30	25	15
			q(a-c)				810	975	925
			q(b-a)				25	20	15
			q(b-c)				30	35	15
			f				0.55	0.64	0.50
			-	Factor					
CAPACITIES			Q(b-a)				182	152	156
CALACITIES				1					
			Q(b-c)	1			423	388	403
			Q(c-b)	1			446	409	422
			Q(b-ac)	1			267	251	227
RFC's			b-a				0.137	0.132	0.096
			b-c				0.071	0.090	0.037
			c-b				0.045	0.086	0.047
			b-ac				0.206	0.219	0.132
			2 40				0.200	5.213	0.102
							0.01	0.00	0.40
			-	e respective stream	IS		0.21	0.22	0.13
	w(b-a)-3.65))(1+			vi(b-a)-150))					
E = (1+0.094)	w(b-c)-3.65))(1+0	0.0009(Vr(b-c)-1	20))						
F = (1+0.094)	w(c-b)-3.65))(1+0	0.0009(Vr(c-b)-1	20))						
Y = 1-0.0345W	v								
f = proportion of	of minor traffic tu	rning left							
	p-c)*Q(b-a)/(1-f)*	-		С	apacity of com	bined streams			
(, <del>,</del> ,	,	(,, u)				with TPDM V2 (	Ch4		
Calculated	by:			Date:	Dec-		Checked by		
Calculated b	Uy.			Dale.	Dec-	24	UNEUKEU DY		

### Simplified Priority Junction Capacity Calculation

Junction:	-	-		iowin'ny Koau , Vallou	us Lots In D.D. 221 At	a rajoning O	1	-
	Hiram's High	-	g Koad				Ref. No.:	G (Obs)
Scheme:	Year 2024 Ob	served Flow		L-1 N CHE507017	10		Ref. No.:	
Year:	2024			Job No.: CHK507917	10		Rev.:	
ARM A:	Hiram's High							
ARM B:	Chui Tong R							
ARM C:	Hiram's High	iway (WB)						
	0.14							-
CA	AM 795	(PM) 925	[WEEKEND] 860	1				
CB	50	80	95	<b></b>				
ARM C		80	35					
Hiram's Highwa	av (WB)				<b>→</b>			
in an o ringinite	ay (112)		1		•			-
			,		AM	(PM)	[WEEKEND]	-
					900	800	895	AC
					100	120	115	АВ
		4						ARM A
								Hiram's Highway (
			1					
				+	,			
		AM	55	45				
		(PM)	40	70	ARM B			
		[WEEKEND]	110	80	Chui Tong Roa	d		
				BA	-			
GEOMETRY								
Major road widt	lth		W	9.00	Lane widths		w(b-a)	4.
Central Reserv	ve width		Wcr	0.00			w(b-c)	4.
2 Lane Minor A	Arm (Y/N)			У			w(c-b)	4.
Visibilities			Vr(b-a)	80	Calculated		D	0.
			VI(b-a)	100			E	1.
			Vr(b-c)	80			F	1.
			Vr(c-b)	150			Υ	0.
ANALYSIS								
						AM PEAK	(PM) PEAK	[WEEKEND] PEA
TRAFFIC FLO	ws		q(c-a)			795	925	860
			q(c-b)			50	80	95
			q(a-b)			100	120	115
			q(a-c)			900	800	895
							70	
			q(b-a)			45		80
			q(b-c)			55	40	110
							40 0.36	
			q(b-c) f	Factor		55 0.55	0.36	110 0.58
CAPACITIES			q(b-c) f Q(b-a)	1		55 0.55 239	0.36 231	110 0.58 214
CAPACITIES			q(b-c) f Q(b-a) Q(b-c)	1 1		55 0.55 239 483	0.36 231 490	110 0.58 214 459
CAPACITIES			q(b-c) f Q(b-a) Q(b-c) Q(c-b)	1 1 1		55 0.55 239 483 548	0.36 231 490 570	110 0.58 214 459 545
CAPACITIES			q(b-c) f Q(b-a) Q(b-c)	1 1		55 0.55 239 483	0.36 231 490	110 0.58 214 459
			q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac)	1 1 1		55 0.55 239 483 548 337	0.36 231 490 570 291	110 0.58 214 459 545 322
			q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a	1 1 1		55 0.55 239 483 548 337 0.188	0.36 231 490 570 291 0.303	110 0.58 214 459 545 322 0.374
			q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c	1 1 1		55 0.55 239 483 548 337 0.188 0.114	0.36 231 490 570 291 0.303 0.082	110 0.58 214 459 545 322 0.374 0.240
			q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b	1 1 1		55 0.55 239 483 548 337 0.188 0.114 0.091	0.36 231 490 570 291 0.303 0.082 0.140	110 0.58 214 459 545 322 0.374 0.240 0.174
			q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c	1 1 1		55 0.55 239 483 548 337 0.188 0.114	0.36 231 490 570 291 0.303 0.082	110 0.58 214 459 545 322 0.374 0.240
RFC's			q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b	1 1 1		55 0.55 239 483 548 337 0.188 0.114 0.091 0.000	0.36 231 490 570 291 0.303 0.082 0.140 0.000	110 0.58 214 459 545 322 0.374 0.240 0.174 0.000
RFC's			q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b	1 1 1		55 0.55 239 483 548 337 0.188 0.114 0.091	0.36 231 490 570 291 0.303 0.082 0.140	110 0.58 214 459 545 322 0.374 0.240 0.174
RFC's Worst RFC	Vr gro visikiliku di	istances to the l	q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac	1 1 1		55 0.55 239 483 548 337 0.188 0.114 0.091 0.000	0.36 231 490 570 291 0.303 0.082 0.140 0.000	110 0.58 214 459 545 322 0.374 0.240 0.174 0.000
			q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac	1 1 1 1 respective streams		55 0.55 239 483 548 337 0.188 0.114 0.091 0.000	0.36 231 490 570 291 0.303 0.082 0.140 0.000	110 0.58 214 459 545 322 0.374 0.240 0.174 0.000
RFC's Worst RFC Where VI and N D = (1+0.094(w	v(b-a)-3.65))(1+0	0.0009(Vr(b-a)-1	q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the 20))(1+0.0006(V	1 1 1 1 respective streams		55 0.55 239 483 548 337 0.188 0.114 0.091 0.000	0.36 231 490 570 291 0.303 0.082 0.140 0.000	110 0.58 214 459 545 322 0.374 0.240 0.174 0.000
RFC's Worst RFC Where VI and N D = (1+0.094(w E = (1+0.094(w	v(b-a)-3.65))(1+0 v(b-c)-3.65))(1+0	0.0009(Vr(b-a)-1 0.0009(Vr(b-c)-1	q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the 20))(1+0.0006(V 20))	1 1 1 1 respective streams		55 0.55 239 483 548 337 0.188 0.114 0.091 0.000	0.36 231 490 570 291 0.303 0.082 0.140 0.000	110 0.58 214 459 545 322 0.374 0.240 0.174 0.000
RFC's Worst RFC Where VI and N D = (1+0.094(w F = (1+0.094(w F = (1+0.094(w	v(b-a)-3.65))(1+0 v(b-c)-3.65))(1+0 v(c-b)-3.65))(1+0	0.0009(Vr(b-a)-1 0.0009(Vr(b-c)-1	q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the 20))(1+0.0006(V 20))	1 1 1 1 respective streams		55 0.55 239 483 548 337 0.188 0.114 0.091 0.000	0.36 231 490 570 291 0.303 0.082 0.140 0.000	110 0.58 214 459 545 322 0.374 0.240 0.174 0.000
RFC's Where VI and N D = (1+0.094(w E = (1+0.094(w F = (1+0.094(w Y = 1-0.0345W	v(b-a)-3.65))(1+0 v(b-c)-3.65))(1+0 v(c-b)-3.65))(1+0 v	).0009(Vr(b-a)-1 ).0009(Vr(b-c)-1 ).0009(Vr(c-b)-1	q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the 20))(1+0.0006(V 20))	1 1 1 1 respective streams		55 0.55 239 483 548 337 0.188 0.114 0.091 0.000	0.36 231 490 570 291 0.303 0.082 0.140 0.000	110 0.58 214 459 545 322 0.374 0.240 0.174 0.000
RFC's Worst RFC Where VI and N D = (1+0.094(w F = (1+0.094(w F = (1+0.094(w C = 1-0.0345W F = proportion o	v(b-a)-3.65))(1+0 v(b-c)-3.65))(1+0 v(c-b)-3.65))(1+0 v(c-b)-3.65))(1+0 of minor traffic tur	0.0009(Vr(b-a)-1 0.0009(Vr(b-c)-1 0.0009(Vr(c-b)-1 rning left	q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the 20))(1+0.0006(V 20))	1 1 1 1 respective streams /l(b-a)-150))		55 0.55 239 483 548 337 0.188 0.114 0.091 0.000	0.36 231 490 570 291 0.303 0.082 0.140 0.000	110 0.58 214 459 545 322 0.374 0.240 0.174 0.000
RFC's Worst RFC Where VI and N D = (1+0.094(w F = (1+0.094(w F = (1+0.094(w C = 1-0.0345W F = proportion o	v(b-a)-3.65))(1+0 v(b-c)-3.65))(1+0 v(c-b)-3.65))(1+0 v	0.0009(Vr(b-a)-1 0.0009(Vr(b-c)-1 0.0009(Vr(c-b)-1 rning left	q(b-c) f Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac eft or right of the 20))(1+0.0006(V 20))	1 1 1 1 respective streams /l(b-a)-150))	y of combined streams prdance with TPDM V2	55 0.55 239 483 548 337 0.188 0.114 0.091 0.000 <b>0.19</b>	0.36 231 490 570 291 0.303 0.082 0.140 0.000	110 0.58 214 459 545 322 0.374 0.240 0.174 0.000

#### TRAFFIC SIGNALS CALCULATION

#### Job No.: <u>CHK507917</u>10

#### MVA HONG KONG LIMITED

Junction:	Hiram's	s Highw	ay/Hong I	Kin Road (	(JH)			_							Design Yea	r: <u>2024</u>	
Description:	Year 20	024 Obs	erved Tra	affic Flow				-			Designed I	By: MLC			Checked By	: <u>PTC</u>	
	ıts				Radi	us (m)	(%)	Pro. Tu	rning (%)		Saturation (pcu/hr)		AM Peak			PM Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	АМ	РМ	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway NB	, ↓ ↓	C D	1,2,3 1,2,3	3.500 3.500		20				1965 1960	1965 1960	745 65	0.379 0.033		900 70	0.458 0.036	0.458
Hiram's Highway SB	<b>↓</b>	A A	1,2,5 1,2,5	3.500 3.500	20			13%	20%	1750 * 2105	1740 2105	466 559	0.266 0.266		394 476	0.226 0.226	
Hong Kin Road WB	*]  *	G G	4 4	4.000 4.000	15	20				1830 2005	1830 2005	100 50	0.055 0.025		70 75	0.038 0.037	0.038
Hiram's Highway NB	_ →	E E	2,3,4 2,3,4	3.500 3.500	10			6%	9%	1945 1895 *	1940 1895	405 395	0.208 0.208		491 479	0.253 0.253	
Hiram's Highway SB	€	F F	2,3,4,5 2,3,4,5	3.500 3.500		20				1965 1745	1965 1745	905 60	0.461 0.034	0.461	755 90	0.384 0.052	
Po Lo Che Road EB	<u>+</u> +	В	1	3.000	15	20		38% / 62%	41% / 59%	1765	1765	195	0.110	0.110	195	0.110	
Pedestrian Crossi	ng	Hp Mp Kp Jp	4 3,4 5	MIN GREE MIN GREE MIN GREE MIN GREE	EN + FL EN + FL EN + FL	.ASH = .ASH = .ASH =	5 5 5 5 5	+ + + +	7 6 6 6		12 11 11 11 11						·
Notes:				Flow: (pc	u/hr)			25(45)		1	× N	Group	C,G,Lp	B,F	Group	C,Mp,Lp	C,G,Lp
*Site Factor of 0.9 merging lane at th			0		745(900)	)		<u>ب</u>	120(115)		75(80)	У	0.434	0.571	У	0.458	0.496
				÷			965(790)		775(925)		60(90)	L (sec)	27	8	L (sec)	32	27
				65(70)			60(80)	<u> </u>		905(755		C (sec)	100 0.657	100 0.828	C (sec) y pract.	128 0.675	128 0.710
				100(70)	$\checkmark$	50(75)						y pract. R.C. (%)	51%	45%	R.C. (%)	47%	43%
Stage / Phase Dia 1. C «> Hp		B		2.	<b>•</b>	E A	F	3.		Е ^	F	4.	Kp Mp	F	5.	Lp A	↓ ↓ F
I/G= 5			I/G= 5					I/G=			I/G=			I/G=			
			I/G=					I/G=	_		I/G=	-		I/G=		11	

### TRAFFIC SIGNALS CALCULATION

#### Job No.: <u>CHK507917</u>10

#### MVA HONG KONG LIMITED

											000 NO		0/9//		Desire Ver		
Junction:				Kin Road	(JH)			-							Design Yea		
Description:	Year 20	024 Obs	erved Ira	affic Flow			1	-			Designed I	By: MLC			Checked By	: <u>PTC</u>	
	nts				Radi	us (m)	t (%)	Pro. Tu	rning (%)		Saturation pcu/hr)		WE Peak			WE Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	WE Peak	WE Peak	WE Peak	WE Peak	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway NB	_ <b>↓</b>	C D	1,2,3 1,2,3	3.500 3.500		20				1965 1960	1965 1960	880 55	0.448 0.028	0.448	880 55	0.448 0.028	0.448
Hiram's Highway SB	≁ →	A A	1,2,5 1,2,5	3.500 3.500	20			16%	16%	1745 * 2105	1745 2105	435 525	0.249 0.249		435 525	0.249 0.249	
Hong Kin Road WB	*]  *	G G	4 4	4.000 4.000	15	20				1830 2005	1830 2005	85 55	0.046 0.027	0.046	85 55	0.046 0.027	0.046
Hiram's Highway NB	_ <b>4</b> _→	E	2,3,4 2,3,4	3.500 3.500	10			11%	11%	1935 1895 *	1935 1895	470 460	0.243 0.243		470 460	0.243 0.243	
Hiram's Highway SB	† ſ*	F F	2,3,4,5 2,3,4,5	3.500 3.500		20				1965 1745	1965 1745	890 110	0.453 0.063		890 110	0.453 0.063	
Po Lo Che Road EB	₊ҍ	в	1	3.000	15	20		52% / 48%	52% / 48%	1760	1760	145	0.082		145	0.082	
Pedestrian Crossi	ng	Hp Mp Kp Jp	4 3,4 5 1	MIN GREI MIN GREI MIN GREI MIN GREI MIN GREI	EN + FL EN + FL EN + FL EN + FL	ASH = ASH = ASH =	5 5 5 5	+ + + +	7 6 6 6		12 11 11 11 11			•	2		
*Site Factor of 0.9				u				50(50)		X	XN	Group y	C,Mp,Lp	C,G,Lp 0.494	Group y	C,Mp,Lp	C,G,Lp 0.494
merging lane at th	ie exit ar	m		<b>~</b>	380(880)				70(70)	* *	75(75)	L (sec)	32	27	L (sec)	32	27
				★ 55(55)			890(890)	_	880(880)		110(110)	C (sec)	128	128	C (sec)	128	128
				85(85)	_	55(55)	70(70)			890(890)		y pract.	0.675	0.710	y pract.	0.675	0.710
					$\mathbf{Y}$							R.C. (%)	51%	44%	R.C. (%)	51%	44%
Stage / Phase Dia 1.	agrams			2.				3.				4.			5.		
1.		B	◆>	2.	←		F	-		E ↑ ↓ Kp	F	4.	Е	F	5. ↓ ↓ ↓	A	Lp F
<> ↓ Hp	A		•	Hp					ΠÞ			G			ΠP		
<> Hp V/G= 2 V/G= 2	Ā		V  /G=	Hp				/G=  /G=			1/G=	= 5		I/G= I/G=		<u>11</u> 11	

## Simplified Roundabout Capacity Calculation

Job Title:					own As 'Road	, Various			Adjoining Gover	nment La	nd, Sha H	a, Sai Kung
Junction:			d/Sai Sha Ro	bad					: I (obs)			
Scheme:	Year 2024	Observed	d Flow					Ref. No.	:			
Year:	2024			Job No.: C	HK5079171	)		Rev.:				
AM	PM							~				
ARM A:	Tai Mong Ts		(West)					C				
ARM B:	Tai Mong Ts	sai Road	(East)									
ARM C:	Sai Sha Road	d										
								(				
							Α		) в			
GEOMETI	RY											
ARM	v	e	L	r	D	Phi	S					
А	3.4	8.2	36	100	35	35	0.21	_				
В	3.4	8.1	15	100	35	20	0.50					
С	4.2	7.7	13	10	35	35	0.43					
AM FLOW	 vs											
from \ to	A	В	С					Circ	Entry			
А	10	405	140					100	555			
В	465	5	95					155	565			
С	170	90	5					480	265			
								_				
PM FLOW	1	-	~						_			
from \ to	A 10	B	C					Circ	Entry			
A	10	520	145					100	675			
В	315	5	90					380	410			
С	145	90	5					685	240			
WEEKENI from \ to	A	В	С					Circ	Entry			
A	5	375	220					135	600			
B	300	5	135					230	440			
C	215	125	5					310	345			
C	215	125	5					510	545			
CALCULA								Q <sub>E</sub>		RFC		
ARM	K	X <sub>2</sub>	М	F	t <sub>D</sub>	$f_c$	AM	PM	WEEKEND	AM	PM	WEEKEND
А	1.02	6.76	0.08	2050	1.46	0.72	2020	2020	1995	0.27	0.33	0.30
В	1.07	5.75	0.08	1741	1.46	0.66	1760	1601	1707	0.32	0.26	0.26
С	0.93	6.08	0.08	1842	1.46	0.68	1415	1285	1523	0.19	0.19	0.23
									Crtical Arm:	B	A	A
									RFC:	0.32	0.33	0.30
	ance with TPD	M V2 Ch4		-	5 44		<i>a</i> , , ,,			AM	PM	WEEKEND
Calculated b	oy:			Date:	Dec-24		Checked by:					

## Simplified Roundabout Capacity Calculation

Job Title:					wn As 'Roa	d', Various	Lots In D.D		Adjoining Gove	rnment La	nd, Sha H	Ia, Sai Kung
Junction:			l/Wai Man I	Koad					.: A (Ref)			
Scheme:	Year 2035	Referenc	e Flow		111/202012	10		Ref. No	.:			
Year:	2035			Job No.: C	HK507917	10		Rev.:				
AM	PM											
ARM A:	Tai Mong Ts		Southern									
ARM B:	Tai Mong Ts		Northern									
ARM C:	Wai Man Ro	ad						$\frown$				
							Α	(	) в			
								$\searrow$				
GEOMETF	RY							C				
ARM	v	e	L	r	D	Phi	S					
Α	3.00	7.50	15	50	42	30	0.48					
В	3.20	4.80	7	30	42	60	0.37					
С	3.60	5.00	7	30	42	50	0.32					
AM FLOW	1		~						<b>T</b> .			
from \ to	A	B	C					Circ	Entry			
А	5	370	140					215	515			
В	530	10	200					150	740			
С	170	200	5					545	375			
PM FLOW	1		c.									
from \ to	A	B	C					Circ	Entry			
A	5	540	115					145	660			
В	415	5	170					125	590			
С	105	135	5					425	245			
WEEKENI	) FLOWS											
from \ to	Α	В	С					Circ	Entry			
А	5	530	145					185	680			
В	425	5	220					155	650			
C	110	175	5					435	290			
										DEC		
CALCULA				-		0		Q <sub>E</sub>	·····	RFC		
ARM	K	AD2	М	F	t <sub>D</sub>	f <sub>c</sub>	AM	PM	WEEKEND	AM	PM	WEEKEND
A	1.03	5.30	0.17	1605	1.43	0.62	1515	1560	1534	0.34	0.42	0.44
В	0.91	4.12	0.17	1250	1.43	0.55	1065	1077	1062	0.69	0.55	0.61
С	0.95	4.45	0.17	1349	1.43	0.57	985	1049	1044	0.38	0.23	0.28
									Crtical Arm:	В	В	В
									RFC:	0.69	0.55	0.61
In accorda	nce with TPD	M V2 Ch4							M C.	AM	PM	WEEKENI
	ance with ITD	11 V 2 UN4		Date:			Checked by:			PAIVE	I IVI	WEEKENI

Job Title:						d', Various			djoining Gove	rnment La	und, Sha H	Ia, Sai Kung
Junction:				u Mong Tsa	i Road			Ref. No.:	B (Ref)			
Scheme:	Year 2035	Reference	Flow					Ref. No.:				
Year:	2035			Job No.: C	HK507917	/10	-	Rev.:				
AM	PM											
ARM A:	Tai Mong Ts	sai Road (N)										
ARM B:	Mei Yu Stree	et										
ARM C:	Po Tung Roa	ad (S)						$\sim$				
							c — (		) /	4		
								$\checkmark$				
GEOMETI	1		T		D	DL:	c	в				
ARM	V	e	L	r	D	Phi	S					
A	3.65	4.50	12	35	28	30	0.11					
В	4.00	4.00	1	12	28	40	0.00					
С	5.00	5.00	1	45	28	45	0.00					
AM FLOW	VS											
from \ to	A	В	С					Circ	Entry			
Α	5	25	735					15				
В	10	5	15					745	30			
С	510	5	5					20	520			
-		-	-									
PM FLOW	/S						I					
from \ to	А	В	С					Circ	Entry			
А	5	10	500					35	515			
В	5	5	30					510	40			
С	685	25	5					15	715			
WEEKENI												
from \ to	A	В	С				I	Circ	Entry			
A	5	30	580					45	· · · · ·			
В	15	5	40					590				
C	670	35	5					25				
-	570	55	5					23	/10			
CALCULA	TIONS						Q	Е		RFC		
ARM	K	$X_2$	М	F	t <sub>D</sub>	$f_c$	AM	PM	WEEKEND	AM	PM	WEEKEND
А	1.02	4.34	0.04	1316	1.48	0.58	1335	1323	1317	0.57	0.39	0.47
В	0.93	4.00	0.04	1212	1.48	0.56	742	864	822	0.04	0.05	0.07
С	0.98	5.00	0.04	1515	1.48	0.62	1465	1468	1462	0.35	0.49	0.49
-												0.10
									Crtical Arm:	Α	С	С
									RFC:	0.57	0.49	0.49
	ance with TPD	M V2 Ch4					•			AM	PM	WEEKEND
Calculated b	by:			Date:	Dec-24		Checked by:					

Job Title:					wn As 'Road	', Various L	ots In D.D. 2		djoining Govern	ment Lan	d, Sha H	a, Sai Kung
Junction:			d/Fuk Man	Road					: C (Ref)			
Scheme:	Year 2035	Referenc	e Flow	-				Ref. No.	.:			
Year:	2035			Job No.: C	CHK507917	/10		Rev.:				
AM	PM											
	Po Tung Roa		Southern					В				
ARM B:	Po Tung Roa		Northern									
ARM C:	Fuk Man Ro	ad										
								$\boldsymbol{\mathcal{A}}$				
								(	)— c			
								$\sim$				
GEOMETH	ν							I				
ARM	v	e	L	r	D	Phi	S	~				
А	4.50	4.50	1	10	26	15	0.00	-				
В	7.00	8.50	5	40	26	45	0.48					
C	3.50	6.00	12	10	26	30	0.33					
C	5.50	0.00	12	10	20	50	0.00					
AM FLOW	'S											
from \ to	А	В	С					Circ	Entry			
А	85	0	430					115	515			
В	725	5	60					520	790			
С	0	105	5					815	110			
PM FLOW		_	_					1	_			
from \ to	A	B	C					Circ	Entry			
Α	105	0	380					90	485			
В	480	5	45					490	530			
С	0	80	5					590	85			
WEEKENI	O FLOWS							·				
from \ to		В	С					Circ	Entry			
А	75	0	490					140	565			
В	540	5	75					570	620			
С	0	130	5					620	135			
CALCULA	TIONS							$Q_{\rm E}$		RFC		
ARM	K	$X_2$	М	F	t <sub>D</sub>	$f_c$	AM	PM	WEEKEND	AM	PM	WEEKEND
A	1.00	4.50	0.03	1364	1.48	0.59	1299	1314	1285	0.40	0.37	0.44
В	0.97	7.77	0.03	2353	1.48	0.80	1886	1909	1847	0.42	0.28	0.34
C	0.95	5.00	0.03	1515	1.48	0.62	958	1091	1073	0.12	0.08	0.13
-												0.10
									Crtical Arm:	В	Α	Α
									RFC:	0.42	0.37	0.44
	ince with TPD	M V2 Ch4		-			1			AM	PM	WEEKEND
Calculated b	oy:			Date:	Dec-24		Checked by	:				

#### Job No.: <u>CHK507917</u>10

Junction:	Po Tun	ng Road/	Man Ni	n Street ( J	ID)										Design Yea	r:2035	
Description:		eference			,			_			Designed I	By: MLC			Checked By		
•			<u> </u>							Payload 6	Saturation	·			-		
1	ents				Radi	us (m)	nt (%)	Pro. Tu	rning (%)		pcu/hr)		AM Peak	1		PM Peak	1
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	АМ	РМ	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Po Tung Road NB	$\rightarrow$	A A	1	3.400 3.400						1955 2095	1955 2095	410 440	0.210 0.210		485 520	0.248 0.248	0.248
1	_+	В	2	3.400		15				1905	1905	125	0.066		160	0.084	
Po Tung Road SB	<b>↓</b>	C C	1 1	3.400 3.400	15			17%	15%	1925 2095	1925 2095	562 613	0.292 0.293	0.293	482 523	0.250 0.250	
Man Nin Street WB	≁۲►	D	3	3.800	15	20		67% / 33%	67% / 33%	1900 *	1900 *	210	0.111	0.111	300	0.158	0.158
Pedestrian Cross	ing	Ep	2	MIN GRE	EN + FL	ASH =	13	+	7	=	20			*			·
Pedestrian Cross	ing	Ep	2	MIN GRE	EN + FL	ASH =	13	÷	7	-	20						•
Pedestrian Cross	ing	Ep	2	MIN GRE	EN + FL	ASH =	13	÷	7	=	20						
Pedestrian Cross	ing	Ер	2	MIN GRE	EN + FL	ASH =	13	÷	7	-	20			·			
Notes:				MIN GRE		ASH =	13	•	7	=	20	Group	C,B,D	• C,Ep ,D	Group	C,Ep ,D	A.Ep ,D
Notes: *Additional satura due to the additio	ation flow	of 80 pc	su/hr			ASH =	13	+	7	-		Group y	C,B,D 0.469	Γ	Group y	C.Ep.D 0.408	I
Notes: *Additional sature due to the additio 3600s / 90s per	ation flow	of 80 pc	su/hr			ASH =	13	+	7	-				C,Ep ,D			A,Ep ,D
Notes: *Additional sature due to the additio 3600s / 90s per	ation flow	of 80 pc	su/hr		su/hr)	ASH =	5)			= 1080(935)		у	0.469	С,Ер,D 0.403	у	0.408	A,Ep ,D 0.406
Notes: *Additional sature due to the additio (3600s / 90s per	ation flow	of 80 pc	su/hr	Flow: (pc	su/hr)	850(100			7		++ N	y L (sec)	0.469 13	C,Ep,D 0.403 29	y L (sec)	0.408 29	A,Ep,D 0.406 32
Notes: *Additional sature due to the additio (3600s / 90s per o pcu/cycle)	ation flow nal pocke cycle * rei	of 80 pc	su/hr	Flow: (pc	:u/hr)	850(100	5)			1080(935)	++ N	y L (sec) C (sec)	0.469 13 90	C.Ep.D 0.403 29 90	y L (sec) C (sec)	0.408 29 90	A,Ep,D 0.406 32 90
Notes: *Additional sature due to the additio (3600s / 90s per o pcu/cycle) Stage / Phase Di	ation flow nal pocke cycle * rei	of 80 pc	su/hr	Flow: (pc	:u/hr)	850(100	5)		▶70(100)	1080(935)	++ N	y L (sec) C (sec) y pract. R.C. (%)	0.469 13 90 0.770	C.Ep.D 0.403 29 90 0.610	y L (sec) C (sec) y pract. R.C. (%)	0.408 29 90 0.610	A,Ep,D 0.406 32 90 0.580
Notes: *Additional sature due to the additio (3600s / 90s per o pcu/cycle)	ation flow nal pocke cycle * rei	of 80 pc	su/hr	Flow: (pc	:u/hr)	850(100	5)	3.	▶70(100)	1080(935)	++ N	y L (sec) C (sec) y pract.	0.469 13 90 0.770	C.Ep.D 0.403 29 90 0.610	y L (sec) C (sec) y pract.	0.408 29 90 0.610	A,Ep,D 0.406 32 90 0.580
Notes: *Additional satura due to the additio (3600s / 90s per o pcu/cycle) Stage / Phase Di	ation flow nal pocke cycle * rei	of 80 pc	ed	Flow: (pc	:u/hr)	850(100	5) 140(200)	3.	▶70(100)	1080(935)	++ N	y L (sec) C (sec) y pract. R.C. (%)	0.469 13 90 0.770	C.Ep.D 0.403 29 90 0.610	y L (sec) C (sec) y pract. R.C. (%)	0.408 29 90 0.610	A,Ep,D 0.406 32 90 0.580
Notes: *Additional satura due to the additio (3600s / 90s per o pcu/cycle) Stage / Phase Di 1.	ation flow nal pocke cycle * rei	of 80 pc	su/hr	Flow: (pc	su/hr)	850(100	5) 140(200)	3.	▶70(100)	1080(935)	++ N	y L (sec) C (sec) y pract. R.C. (%)	0.469 13 90 0.770	C.Ep.D 0.403 29 90 0.610	y L (sec) C (sec) y pract. R.C. (%)	0.408 29 90 0.610	A,Ep,D 0.406 32 90 0.580
Notes: *Additional satura due to the additio (3600s / 90s per o pcu/cycle) Stage / Phase Di 1.	ation flow nal pocke cycle * rei	of 80 pc	ed	Flow: (pc	su/hr)	850(100	5) 140(200)	р страна стр Страна страна стран	▶70(100)	1080(935)	++ N	y L (sec) C (sec) y pract. R.C. (%)	0.469 13 90 0.770	C.Ep.D 0.403 29 90 0.610	y L (sec) C (sec) y pract. R.C. (%)	0.408 29 90 0.610	A,Ep,D 0.406 32 90 0.580
Notes: *Additional satura due to the additio (3600s / 90s per o pcu/cycle) Stage / Phase Di 1.	ation flow nal pocke cycle * rei	of 80 pc	ed	Flow: (pc	su/hr)	850(100	5) 140(200)	р страна стр Страна страна стран	•70(100)	1080(935)	++ N	y L (sec) C (sec) y pract. R.C. (%)	0.469 13 90 0.770	C.Ep.D 0.403 29 90 0.610	y L (sec) C (sec) y pract. R.C. (%)	0.408 29 90 0.610	A,Ep,D 0.406 32 90 0.580

#### Job No.: <u>CHK507917</u>10

Junction:	Po Tun	na Road/	Man Ni	n Street ( J	וסו										Design Year	2035	
Description:		eference			0)			_			Designed I	By: MLC			Checked By		
Description.	2000 1							-			-						
	ents				Radi	us (m)	t (%)	Pro. Tu	rning (%)		Saturation pcu/hr)		WE			WE	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	WE	WE	WE	WE	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Po Tung Road NB	$\rightarrow$	A A	1 1	3.400 3.400						1955 2095	1955 2095	471 504	0.241 0.241		471 504	0.241 0.241	
	-	В	2	3.500		15				1915	1915	130	0.068		130	0.068	
Po Tung Road SB	<b>₩</b>	C C	1 1	3.400 3.400	15			26%	26%	1905 2095	1905 2095	548 602	0.288 0.287	0.288	548 602	0.288 0.287	0.288
Man Nin Street WB	*↑*	D	3	3.800	15	20		52% / 48%	52% / 48%	1905 *	1905 *	355	0.186	0.186	355	0.186	0.186
Pedestrian Crossi	ng	Ep	2	MIN GRE	EN + FL	ASH =	13	+	7	=	20			*			٠
Notes:				Flow: (pc	u/hr)						+ <b>•</b>	Group	A,Ep,D	C,Ep,D	Group	A,Ep,D	
*Additional satura due to the addition											N	y	0.427	0.474	y	0.427	C,Ep,D
(3600s / 90s per c pcu/cycle)			eu											00	1 ()		C,Ep,D
, <b>,</b> ,												L (sec)	32	29	L (sec)	32	
					$\rightarrow$	975(975)				1010(1010)	<b>V</b>	L (sec) C (sec)	32 90	29 90	L (sec) C (sec)	32 90	0.474
					×		185(185)		▶170(170)	1010(1010) 140(140)		. ,					0.474 29
					130(130)		185(185)					C (sec)	90	90	C (sec)	90	0.474 29 90
Stage / Phase Dia	agrams				×		185(185)		▶170(170)			C (sec) y pract. R.C. (%)	90 0.580	90 0.610	C (sec) y pract. R.C. (%)	90 0.580	0.474 29 90 0.610
<u>Stage / Phase Di</u> 1. 	agrams			2.	×		185(185)	3.	▶170(170)			C (sec) y pract.	90 0.580	90 0.610	C (sec) y pract.	90 0.580	0.474 29 90 0.610
	agrams		— c		×			3.	▶170(170)			C (sec) y pract. R.C. (%)	90 0.580	90 0.610	C (sec) y pract. R.C. (%)	90 0.580	0.474 29 90 0.610
1.	agrams ◄		c		130(130)			Бр З.	▶170(170)			C (sec) y pract. R.C. (%)	90 0.580	90 0.610	C (sec) y pract. R.C. (%)	90 0.580	0.474 29 90 0.610
1. A	agrams +			2.	130(130)	4		Бр 3.	▶170(170)			C (sec) y pract. R.C. (%)	90 0.580	90 0.610 29%	C (sec) y pract. R.C. (%)	90 0.580	0.474 29 90 0.610
1.	agrams •		— C	2.	130(130)			Бр З.	•170(170)			C (sec) y pract. R.C. (%)	90 0.580	90 0.610	C (sec) y pract. R.C. (%)	90 0.580	0.474 29 90 0.610

Junction:	Pedest	rian Cro	ssing ne	ar Yau Ma	Po Stree	et (JE)									Design Year	r: <u>2035</u>	
Description:	Year 20	35 Refe	rence T	raffic Flow							Designed	By: MLC			Checked By	: PTC	
	nts				Radiu	ıs (m)	(%):	Pro. Tu	rning (%)	Revised S Flow (p	Saturation pcu/hr)		AM Peak			PM Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	АМ	РМ	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway (NB)	$\rightarrow$	A A	1 1	3.400 3.400						1955 2095	1955 2095	471 504	0.241 0.241		560 600	0.286 0.286	0.286
Hiram's Highway (SB)	Ļ	B	1 1	3.400 3.400						1955 2095	1955 2095	591 634	0.302 0.303	0.303	548 587	0.280 0.280	
Pedestrian Crossi	ng	Ср	2	MIN GRE	EN + FL4	ASH =	13	+	7	-	20						
	ng	Ср	2			ASH =	13	÷	7	-							
	ng	Ср	2	MIN GRE		ASH =	13	+	7	-	20	Group	АСр	B,Cp	Group	B,Cp	A.Cp
	ng	Ср	2			ASH =	13	+	7	-		у	0.241	B,Cp 0.303	у	0.280	0.286
	ng	Ср	2		u/hr)			÷	7		++ N	y L (sec)	0.241 26	в.Ср 0.303 26	y L (sec)	0.280 26	0.286 26
	ng	Cp	2		u/hr)	ASH = 975(1160		+	7	= 1225(1135)	++ N	y L (sec) C (sec)	0.241 26 90	в.ср 0.303 26 90	y L (sec) C (sec)	0.280 26 90	0.286 26 90
	ng	Ср	2		u/hr)			+	7		++ N	y L (sec) C (sec) y pract.	0.241 26 90 0.640	в.ср 0.303 26 90 0.640	y L (sec) C (sec) y pract.	0.280 26 90 0.640	0.286 26 90 0.640
lotes:		Ср	2		u/hr)			+	7		++ N	y L (sec) C (sec)	0.241 26 90	в.ср 0.303 26 90	y L (sec) C (sec)	0.280 26 90	0.286 26 90 0.640
Notes: Stage / Phase Dia		Ср	2		u/hr)			+			++ N	y L (sec) C (sec) y pract.	0.241 26 90 0.640	в.ср 0.303 26 90 0.640	y L (sec) C (sec) y pract.	0.280 26 90 0.640	0.286 26 90 0.640
Pedestrian Crossi Notes: Stage / Phase Dia 1. A		Ср	2	Flow: (pc	u/hr)						++ N	y L (sec) C (sec) y pract. R.C. (%)	0.241 26 90 0.640	в.ср 0.303 26 90 0.640	y L (sec) C (sec) y pract. R.C. (%)	0.280 26 90 0.640	0.286 26 90 0.640
Votes: Stage / Phase Dia 1. A		Ср	B	Flow: (pc	u/hr)	975(1160		3.			+ • N	y L (sec) C (sec) y pract. R.C. (%)	0.241 26 90 0.640	в.ср 0.303 26 90 0.640 111%	y L (sec) C (sec) y pract. R.C. (%)	0.280 26 90 0.640	0.286 26
lotes: Stage / Phase Dia 1. ►		Ср		Flow: (pc	u/hr)	975(1160					++ N	y L (sec) C (sec) y pract. R.C. (%)	0.241 26 90 0.640	в.ср 0.303 26 90 0.640	y L (sec) C (sec) y pract. R.C. (%)	0.280 26 90 0.640	0.286 26 90 0.640

TRAFFIC SIGNALS CALC	ULATION					Job No.:	CHK50	<u>)7917</u> 10	Ν	IVA HON	g kong	LIMITED
Junction: Pedestrian Crossing ne	ear Yau Ma Po Street ( JE)									Design Yea	r: <u>2035</u>	
Description: Year 2035 Reference T	raffic Flow					Designed I	By: MLC			Checked By	r: <u>PTC</u>	
tt	Radius (m)	(%)	Pro. Tur	ning (%)	Revised S Flow (p			WE			WE	
Approach W Approach S S	Width t 변 (m) 그 값	Gradient (%)	WE	WE	WE	WE	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
$\begin{array}{cccc} \text{Hiram's Highway} & \longrightarrow & A & 1 \\ (\text{NB}) & \longrightarrow & A & 1 \end{array}$	3.400 3.400				1955 2095	1955 2095	529 566	0.271 0.270		529 566	0.271 0.270	
Hiram's Highway ← B 1 (SB) ← B 1	3.400 3.400				1955 2095	1955 2095	577 618	0.295 0.295	0.295	577 618	0.295 0.295	0.295
Pedestrian Crossing Cp 2	MIN GREEN + FLASH =	13	·	7	-	20			·			·
Notes:	Flow: (pcu/hr)					→N	Group	A,Cp	B,Cp	Group	A,Cp	B,Cp
							У	0.271	0.295	У	0.271	0.295
							L (sec)	26	26	L (sec)	26	26
	→ 1095(109	15)			1195(1195)	•	C (sec)	90 0.640	90 0.640	C (sec)	90 0.640	90 0.640
							y pract. R.C. (%)	0.640 137%	0.640 117%	y pract. R.C. (%)	0.640 137%	0.640 117%
Stage / Phase Diagrams			1				I		1			
1. A B	2.		3.				4.			5.		
I/G= 3	4 20		I/G=			I/G=			I/G=			
I/G= 3 I/G=	4 20		I/G=			I/G= Date			I/G= Junct	ion:		
						Dale	: DEC, 2024			n Crossing near Ya	au Ma Po Street	E

#### Job No.: <u>CH</u>K50791710

## Simplified Priority Junction Capacity Calculation

Job Title:	Proposed Resi	dential Develop	oment In Area S	hown As 'Road', V	arious Lots	In D.D. 221 Au	nd Adjoining G	overnment Land	l, Sha Ha, Sai Kung
Junction:	Po Tung Road	d/Yau Ma Po S	Street					Ref. No.:	F (Ref)
Scheme:	Year 2035 Re	eferene Flow						Ref. No.:	
Year:	2035			Job No.: CHK50	791710			Rev.:	
ARM A:	Po Tung Ro	ad (NB)							
ARM B:	Yau Ma Po S								
ARM C:	Po Tung Ro								
ALINE C.	10 Tung Ho	ad (OD)							
~	AM	(PM)	[WEEKEND]	1					
CA	1150	1000	1105	► ►					
СВ	40	60	50						
ARM C									
Po Tung Road	(SB)		•			¥			
									_
			-			AM	(PM)	[WEEKEND]	-
					]	900	1085	1035	AC
						30	25	15	AB
		•				00	20	10	ARM A
			ו ו <b>ו</b>						Po Tung Road (NB)
					Ļ				
					•				
		AM	75	0					
		(PM)	80	0		ARM B			
		[WEEKEND]				Yau Ma Po Stre	oot		
			60	0			et .		
			BC	BA					
GEOMETRY									
Major road wid			W	11.00		Lane widths		w(b-a)	0.00
Central Reserv	ve width		Wcr	1.50				w(b-c)	3.50
2 Lane Minor /	Arm (Y/N)			n				w(c-b)	3.30
Visibilities			Vr(b-a)	0		Calculated		D	0.53
			VI(b-a)	0				E	0.91
			Vr(b-c)	35				F	0.89
			Vr(c-b)	35				Y	0.62
			VI(0 D)	00					0.02
ANALYSIS									
ANAL 1515									
							AM PEAK	(PM) PEAK	[WEEKEND] PEAK
TRAFFIC FLO	ws		q(c-a)				1150	1000	1105
			q(c-b)				40	60	50
			q(a-b)				30	25	15
			q(a-c)				900	1085	1035
			q(b-a)				0	0	0
			q(b-c)				75	80	60
			f				1.00	1.00	1.00
				Factor					
			O(b, c)				140	100	100
CAPACITIES			Q(b-a)	1			142	128	128
			Q(b-c)	1			491	453	464
			Q(c-b)	1			478	441	454
			Q(b-ac)	1			491	453	464
RFC's			b-a				0.000	0.000	0.000
			b-c				0.153	0.177	0.129
			c-b				0.084	0.136	0.110
			b-ac				0.153	0.177	0.129
			5 40				0.100	0.177	0.123
Worst RFC							0.15	0.18	0.13
Where VI and	Vr are visibility d	istances to the I	eft or right of the	respective streams	6				
D = (1+0.094)	w(b-a)-3.65))(1+0	0.0009(Vr(b-a)-1	120))(1+0.0006(	√I(b-a)-150))					
E = (1+0.094(v	w(b-c)-3.65))(1+0	0.0009(Vr(b-c)-1	20))						
	v(c-b)-3.65))(1+0								
Y = 1-0.0345W			.,,						
	, of minor traffic tu	rning loft							
		-		~	popitri of	binod atra			
ປ (ມ-ac) = Q(b	o-c)*Q(b-a)/(1-f)*	Q(D-C)+1"Q(D-A)				bined streams	<u>.</u>		
						with TPDM V2			
Calculated b	ov:			Date:	Dec	-24	Checked by	:	

Junction:	Hiram's	Highwa	v / Chui	Tong Roa	d (JG)										Design Yea	r:2035	
escription:	2035 R				- ( )			_			Designed	By: MLC			Checked By		
					Radiu	us (m)	(%	Pro. Tu	rning (%)	Revised S Flow (j	Saturation		AM Peak			PM Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical
Hiram's Highway NB	$\rightarrow$ $\rightarrow$ $\uparrow$	A A E	1,2 1,2 2	4.300 4.300 4.300		15				2045 2185 1985	2045 2185 1985	428 457 50	0.209 0.209 0.025	0.025	498 532 80	0.244 0.243 0.040	0.040
Hiram's Highway (SB)	₣ ↓ ↓	B B B	1 1 1	3.300 3.300 3.300	20					1810 2085 2085	1810 2085 2085	105 523 522	0.058 0.251 0.250	0.251	125 438 437	0.069 0.210 0.210	0.210
Chui Tong Road	*₽*	С	3	3.300	15	22.5		55% / 45%	o 36% / 64%	1850 *	1860 *	100	0.054	0.054	110	0.059	0.059
Pedestrian Crossi	ng	Fp Hp	4	MIN GRE			10 11	+ +	8 10	=	18 21			·			
lotes:				Flow: (pc	u/hr)						-						
Additional satura	ion flow	of 60 pc	u/hr is								ŹN	Group	B,E,C,Fp 0.330	B,E,C,Hp 0.330	Group	A,C,Hp 0.303	В,Е,С,Нр 0.310
added due to poch 20s per cycle * re												y L (sec)	31	41	y L (sec)	36	41
						885(1030	))			1045(875)	•	C (sec)	120	120	C (sec)	120	120
					50(80)		55(40)		▶45(70)	105(125)	¥	y pract.	0.668	0.593	y pract.	0.630	0.593
					30(80)			Ý				R.C. (%)	102%	80%	R.C. (%)	108%	91%
	igrams			2.				3.				4.			5.		
	igrams			2.				3.				4.		<u>^</u>	5.		
1.	igrams_			2.	A			3.				4.		*	5.		
Stage / Phase Di 1. A	igrams			2.				3.				4.		Нр	5.		
1.	ngrams ↓ ¥		в	2.				3.	•				50	Hp	5.		
1.	igrams ↓ ↓		B		A E			3.	•	c	I/G=	<	Fp 21	Hp	5.		

Junction:	Hiram's	Highwa	v / Chui	Tong Roa	d (JG)										Design Yea	r: 2035	
escription:	2035 R				u ( 0 u )			-			Designed I	By: MLC			Checked By		
			Tramo				_	-		Revised S	-						
	Movements				Radiu	ıs (m)	Gradient (%)	Pro. Tu	irning (%)	Flow (	pcu/hr)		WE			WE	
Approach	Move	Phase	Stage	Width (m)	Left	Right	Grad	WE	WE	WE	WE	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical
Hiram's Highway NB	$\rightarrow$ $\rightarrow$ $\neg$	A A E	1,2 1,2 2	4.300 4.300 4.300		15				2045 2185 1985	2045 2185 1985	469 501 100	0.229 0.229 0.050	0.050	469 501 100	0.229 0.229 0.050	0.050
Hiram's Highway (SB)	₽ ₽ ₽	B B B	1 1 1	3.300 3.300 3.300	20					1810 2085 2085	1810 2085 2085	120 495 495	0.066 0.237 0.237	0.237	120 495 495	0.066 0.237 0.237	0.237
Chui Tong Road	* *	С	3	3.300	15	22.5		59% / 41%	59% / 41%	1845	1845	195	0.106	0.106	195	0.106	0.106
Pedestrian Crossi	ng	Fp Нр	4 4	MIN GRE MIN GRE			10 11	+ +	8 10	= =	18 21			·			
lotes:				Flow: (pc	u/hr)						Ź N	Group	B,E,C,Fp	B,E,C,Hp	Group	B,E,C,Fp	B,E,C,H
Additional satura											ΧN	y	0.393	0.393	y	0.393	0.393
dded due to poch 20s per cycle * re												L (sec)	31	41	L (sec)	31	41
						970(970)				990(990)	•	C (sec)	120	120	C (sec)	120	120
					◄ 100(100)		115(115)		▶80(80)	120(120)	¥	y pract.	0.668	0.593	y pract.	0.668	0.593
					,			\/				R.C. (%)	70%	E10/	R.C. (%)	70%	51%
								γ				11.0. (70)	70%	51%	11.0. (70)		
	agrams			2.				<u> </u>				4.	70%	51%	5.		
	agrams_			2.				<u> </u>					70%	 ∧			
Stage / Phase Dia 1. A	agrams			2.	A			<u>ү</u> 3.					70%				<u> </u>
1.	agrams			2.				З.					70%				
1.	agrams ← ¥		в	2.				<u>у</u> 3.	•			4.		Нр			
1.	agrams + +		B					ў 3. ИG=5	•	¢ c	VG=	4.		Нр			

#### Job No.: <u>CHK507917</u>10

Junction:	Hiram's	Highwa	ay/Hong	Kin Road (	JH)			_							Design Yea	r: <u>2035</u>	
Description:	2035 R	eference	e Traffic	Flow				-			Designed	By: MLC			Checked By	: <u>PTC</u>	
	ents				Radiu	ıs (m)	ıt (%)	Pro. Tu	ning (%)		Saturation pcu/hr)		AM Peak			PM Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	АМ	РМ	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway NB		C C O	1,2,3 1,2,3 3	3.400 3.400 4.000		18				1955 2095 1990	1955 2095 1990	403 432 65	0.206 0.206 0.033		485 520 70	0.248 0.248 0.035	
Hiram's Highway SB	↓ ↓	A A A	1,2,5 1,2,5 1,2,5	3.300 3.300 3.300	15					1770 2085 2085	1770 2085 2085	60 555 555	0.034 0.266 0.266		80 433 432	0.045 0.208 0.207	
Hong Kin Road WB	*] Γ*	G G	4 4	3.700 3.700	20	18				1845 1960	1845 1960	105 50	0.057 0.026		70 75	0.038 0.038	
Hiram's Highway NB	↓ ↓ L	E E E	2,3 2,3 2,3	3.400 3.400 3.400	20					1820 2095 2095	1820 2095 2095	20 365 365	0.011 0.174 0.174	0.174	35 243 242	0.019 0.116 0.116	0.116
Hiram's Highway SB	↓ ↓ ↓	F F P	2,3,4 2,3,4 4	3.400 3.400 3.500		18				1955 2095 1945	1955 2095 1945	507 543 60	0.259 0.259 0.031	0.031	398 427 95	0.204 0.204 0.049	0.049
Po Lo Che Road EB	₄₊	В	1	3.000	10	15		38% / 63%	40% / 60%	1745 *	1740 *	200	0.115	0.115	200	0.115	0.115
		Mp Kp Lp Jp Np	4 3,4 5 1,5 5	MIN GREE MIN GREE MIN GREE MIN GREE	EN + FL/ EN + FL/ EN + FL/	ASH = ASH = ASH =	5 5 5 9	+ + + +	6 8 7 10 5	= = =	11 13 12 15 14						·
Notes:				Flow: (pcu	ı∕hr)			20(35)			×++	Group	B,E,G,Lp	B,E,P,Np	Group	B,F,Np	B,E,P,Np
Additional saturat added due to poc					335(1005	5)		<b>▲</b>	75(80)	•∕∕•	125(120)	у	0.346	0.320	у	0.319	0.280
100s per cycle * r				$\square$		,	1110(865)		730(485)		60(95)	L (sec)	27	34	L (sec)	20	34
				65(70)			-	~			Ą	C (sec)	100	100	C (sec)	100	100
				105(70)	<b>~</b> /	50(75)	60(80)			1050(825)	$\leftarrow$	y pract.	0.657	0.594	y pract.	0.720	0.594
					γ	(-)						R.C. (%)	90%	86%	R.C. (%)	126%	112%
Stage / Phase Di	agrams							-					-				
1.			Y	2.		F	*	3.		F		4.			5.		<>
			/	c	<b>→</b>	_	$\rightarrow$	-						P		∱ Lp	^ Lp ↓
c		*	в							^			Kn 🗥 🔺			•	. 10
C →	A	- :	в <b>*</b> ; Јр У	Нр <Э	*	A	- +	FH ≪	p ≽	^^ ↓ Кр	← F	G	Kp <sup>+</sup> - ◀ Mp >	F	Hp ←>	A	<sup>ql</sup> →
	A			<>	*	A	- +		p ≫	^ ↓ кр	F  //G=  //G=	= 5	- ×/		<>	A 14 14	dt ∧

#### Job No.: <u>CHK507917</u>10

$\begin{array}{c c c c c c c c c c c c c c c c c c c $					ULAII							JOD NO.		<u>17917</u> 10		AVA HON		
Approach         generation         Reduction         generation         Vec         Vec         Vec         Vec         Processing         Processing         Processing         Processing         Vec         Vec         Processing	lunction:	Hiram's	s Highwa	ay/Hong	Kin Road (	(JH)			_							Design Yea	r: <u>2035</u>	
Approach         S         Production (n)         C         Production (n)         Vic         Vic<	Description:	2035 R	eference	e Traffic	Flow				-			Designed	By: MLC			Checked By	r: <u>PTC</u>	
Hamis Highway       C       1.2.3       2.400       1.2.4       2.400       1.2.5       2.400       1.2.5       2.400       1.2.5       2.400       1.2.5       2.400       1.2.5       2.400       1.2.5       2.400       1.2.5       2.400       1.2.5       2.2.6       4.700       0.2.65       4.700       0.2.65       4.700       0.2.64       4.700       0.2.65       0.2.65       0.2.65       0.2.65       0.2.65       0.2.66       6.700       6.700       6.700       6.700       6.700       6.700       6.700       6.700       6.700       6.		ents				Radiu	s (m)	t (%)	Pro. Tu	rning (%)				WE			WE	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Approach	Moveme	Phase	Stage		Left	Right	Gradien	WE	WE	WE	WE		y Value	Critical y		y Value	Critical y
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			С	1,2,3	3.400		18				2095	2095	512	0.244		512	0.244	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		⊾↓ ↓	А	1,2,5	3.300	15					2085	2085	490	0.235		490	0.235	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $						20	18											
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			Е	2,3	3.400	20					2095	2095	288	0.137	0.137	288	0.137	0.137
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		↓ ↓ ↓	F	2,3,4	3.400		18				2095	2095	507	0.242	0.059	507	0.242	0.059
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		4	В	1	3.000	10	15		52% / 48%	52% / 48%	1735 *	1735 *	145	0.084	0.084	145	0.084	0.084
Additional saturation flow of 36 pcu/hr is added due to pocket provided (3600s / 100s per cycle * release 1 pcu/cycle )ABPBBPEBPEBPEBPEPEPEPEPEPEPEPEPEPEPEPEPEPEPEPEPPEPPEPPEPPEPPEPPEPPEPPPEPPP </th <th>'edestrian Crossi</th> <th>ng</th> <th>Mp Kp Lp Jp</th> <th>4 3,4 5 1,5</th> <th>MIN GREE MIN GREE MIN GREE MIN GREE</th> <th>EN + FLA EN + FLA EN + FLA EN + FLA</th> <th>ASH = ASH = ASH = ASH =</th> <th>5 5 5 5</th> <th>+ + + +</th> <th>6 8 7 10</th> <th>= = =</th> <th>11 13 12 15</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	'edestrian Crossi	ng	Mp Kp Lp Jp	4 3,4 5 1,5	MIN GREE MIN GREE MIN GREE MIN GREE	EN + FLA EN + FLA EN + FLA EN + FLA	ASH = ASH = ASH = ASH =	5 5 5 5	+ + + +	6 8 7 10	= = =	11 13 12 15						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	lotes:				Flow: (pc	u/hr)			25(25)			N	Group	B,F,Np	B,E,P,Np	Group	B,F,Np	B,E,P,Np
$\begin{array}{c c c c c c c c c c c c c c c c c c c $						000/000)			33(33) ▲	75/75)	•∕∕•		у	0.326	0.280	у	0.326	0.280
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	00s per cycle * re	elease 1	pcu/cyc	le)	$\sum$	330(330)		090/090\	$\rightarrow$				L (sec)	20	34	L (sec)	20	34
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					55(55)			4	-	010(010)			C (sec)	100	100	C (sec)	100	100
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					85(85)	* /*	55(55)	70(70)			980(980)	$\leftarrow$	y pract.	0.720	0.594	y pract.	0.720	0.594
$1.$ $C \longrightarrow A \land Jp$ $Hp$ $C \longrightarrow A \land Jp$ $Hp$ $C \longrightarrow F$ $Hp$ $C \rightarrow F$ $Hp$ $F$ $Hp$ $C \rightarrow F$ $Hp$ $F$ $Hp$ $F$ $Hp$ $F$ $Hp$ $F$ $Hp$ $F$					()	Y	()						R.C. (%)	121%	112%	R.C. (%)	121%	112%
$C \longrightarrow A \xrightarrow{hp} C \longrightarrow E \xrightarrow{F} P \xrightarrow{hp} F \xrightarrow{hp} \xrightarrow{hp} F \xrightarrow{hp}$		agrams							I						•	1		•
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1.			Y	2.		_		3.		-		4.			5.		<>
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	c		~	в	c —	<b>→</b>	Ē	,	-	C O				Kn A	Р		∱ Lp ↓	∱ Lp ↓
U/G= 3 U/G= 5 U/G= 0 14	Нр <>	A	:	ql ¦ ↓			A	- +	I		∲ Кр	← F		мр∜	F	Hp <>	A	dr ∧ —
Date: Junction: DEC, 2024 Hiram's Highway/Hong Kin Road	11 U = 0			_ / //G= (	, I				//G=	I			e:		Junct	ion:		H

Job Title:					own As 'Road'	, Various			Adjoining Gover	nment La	nd, Sha H	a, Sai Kung
Junction:			l/Sai Sha R	oad					.: I (Ref)			
Scheme:	Year 2035	Referenc	e Flows	1				Ref. No.	.:			
Year:	2035 Ref			Job No.: C	HK50791710	)		Rev.:				
AM	PM							•				
ARM A:	Tai Mong Ts		(West)					C				
ARM B:	Tai Mong Ts	ai Road	(East)									
ARM C:	Sai Sha Road	1										
							Α	(	)в			
GEOMETI	RY											
ARM	v	e	L	r	D	Phi	S					
А	3.4	8.2	36	100	35	35	0.21	_				
В	3.4	8.1	15	100	35	20	0.50					
С	4.2	7.7	13	10	35	35	0.43					
AM FLOW	1	Р	C						P			
from \ to	A 10	B	C					Circ	Entry			
A	10	480	145					105	635			
В	515	5	100					160	620			
С	175	95	5					530	275			
PM FLOW	1											
from \ to	А	В	С					Circ	Entry			
А	10	565	150					105	725			
В	365	5	95					390	465			
С	150	95	5					745	250			
WEEKENI	D FLOWS											
from \ to	А	В	С					Circ	Entry			
А	5	420	225					140	650			
В	355	5	140					235	500			
С	220	130	5					365	355			
CALCHI 4	TIONS						c			RFC		
CALCULA ARM		v	М	F	t	f		Q <sub>E</sub> PM	WEEKEND	AM	PM	WEEVEND
	K	X <sub>2</sub>			t <sub>D</sub>	f <sub>c</sub>	AM 2017					WEEKEND
A	1.02	6.76	0.08	2050	1.46	0.72	2017	2017	1991	0.31	0.36	0.33
В	1.07	5.75	0.08	1741	1.46	0.66	1756	1593	1703	0.35	0.29	0.29
С	0.93	6.08	0.08	1842	1.46	0.68	1384	1247	1488	0.20	0.20	0.24
									Crtical Arm:	В	A	А
									RFC:	0.35	0.36	0.33
- In accorda	ance with TPD	M V2 Ch4								AM	PM	WEEKEND
Calculated b				Date:	Dec-24		Checked by:					

Job Title:					wn As 'Road', Va	rious Lots	In D.D. 221			t Land, Sł	na Ha, Sai	Kung
Junction:			d/Wai Man R	load					.: A (Des)			
cheme:	Year 2035	Design F	Flow					Ref. No	.:			
ear:	2035			Job No.: C	CHK50791710			Rev.:				
AM JRM A: JRM B: JRM C:	PM Tai Mong Ta Tai Mong Ta Wai Man Ro	sai Road	Southern Northern				Α	$\int$	<b>}</b> ₿			
EOMETI ARM A	<b>RY</b> v 3.00	е 7.50	L 15	r 50	D 42	Phi 30	S 0.48	-				
B C	3.20 3.60	4.80 5.00	7 7	30 30	42 42	60 50	0.37 0.32					
M FLOW		р	G					Cim	E.t.			
from \ to	A 15	B 375	C 140					Circ 215	Entry 530			
B	535	10	200					160	530 745			
C	170	200	5					560	375			
PM FLOW from \ to A B	/S A 10 420	B 545 5	C 115 170					Circ 145 130	Entry 670 595			
С	105	135	5					435	245			
VEEKENI	D FLOWS											
from \ to	А	В	С					Circ	Entry			
А	15	535	145					185	695			
B C	430 110	5 175	220 5					165 450	655 290			
CALCULA	TIONS							Q <sub>E</sub>		RFC		
ARM	К	X2	М	F	t <sub>D</sub>	$f_c$	AM	PM	WEEKEND	AM	PM	WEEKEND
А	1.03	5.30	0.17	1605	1.43	0.62	1515	1560	1534	0.35	0.43	0.45
B C	0.91 0.95	4.12 4.45	0.17 0.17	1250 1349	1.43 1.43	0.55 0.57	1060 977	1075 1044	1057 1036	0.70 0.38	0.55 0.23	0.62 0.28
									Crtical Arm:	В	В	В
									RFC:	ь 0.70	в 0.55	ь 0.62
In accorda	unce with TPD	M V2 Ch4								AM	PM	WEEKENI
alculated b				Date:	Dec-24		Checked by	<i>'</i> :				

Job Title:	Proposed R	Residential D	evelopment	In Area Sho	wn As 'Road	', Various I	Lots In D.D.	221 And Ad	ljoining Goverr	ment Land	l, Sha Ha, S	ai Kung
Junction:		oad/Mei Yu							B (Des)			
Scheme:	Year 2035	5 Design Flo	ow					Ref. No.:				
lear:	2035			Job No.: O	CHK507917	10		Rev.:				
AM	PM											
ARM A:	Tai Mong T	sai Road (N)										
ARM B:	Mei Yu Stre	et										
ARM C:	Po Tung Ro	ad (S)						$\sim$				
	Ū.							$\left( \right)$				
							с —	(		4		
							•	$\mathbf{X}$				
								$\sim$				
GEOMETR	RY							В				
ARM	v	e	L	r	D	Phi	S	_				
А	3.65	4.50	12	35	28	30	0.11					
В	4.00	4.00	1	12	28	40	0.00					
С	5	5	1	45	28	45	0.00					
M FLOW	1	_	_					1				
from \ to	A	B	C					Circ	Entry			
A	8	25	750					15	783.29487			
В	10	5	15					763.29487				
С	520	5	5					23.294874	530			
PM FLOW	1							I				
from \ to	A	B	C					Circ	Entry			
A	10	10	505					35	525			
В	5	5	30					520	40			
С	690	25	5					20	720			
VEEKEND								I				
from \ to	A	В	С					Circ	Entry			
A	10	30	585					45	625			
В	15	5	40					600	60			
C	680	35	5					30	720			
-	500	20	5					20	. 20			
CALCULA	TIONS							Q <sub>E</sub>		RFC		
ARM	K	$X_2$	М	F	t <sub>D</sub>	$f_c$	AM	PM	WEEKEND	AM	PM	WEEKEND
А	1.02	4.34	0.04	1316	1.48	0.58	1335	1323	1317	0.59	0.40	0.47
В	0.93	4.00	0.04	1212	1.48	0.56	732	859	817	0.04	0.05	0.07
C	0.98	5.00	0.04	1515	1.48	0.62	1463	1465	1459	0.36	0.49	0.49
~		2.00	-101				1.00	1.00				0.43
							1					
							1					
									Crtical Arm:	Α	С	С
									RFC:	0.59	0.49	0.49
In accorda	nce with TPD	0M V2 Ch4								AM	PM	WEEKEND
alculated b	ov:			Date:	Dec-24		Checked by	/:				

					Lots In DD	221 And A	djoining Gov		Land, Sha Ha, S	ai Kung		
			1/Wai Man R	load					: C (Des)			
	Year 2035	Design F	low					Ref. No.	:			
	2035			CHK5055	7510			Rev.:				
AM												
	Po Tung Roa		Southern					В				
	Po Tung Roa		Northern									
ARM C:	Fuk Man Roa	ad							<b>`</b>			
								1				
								(	) c			
								$\top$				
GEOMETR	Y							I A				
ARM	v	e	L	r	D	Phi	S	-				
А	4.50	4.50	1	10	26	15	0.00					
В	7.00	8.50	5	40	26	45	0.48					
С	3.50	6.00	12	10	26	30	0.33					
AM FLOWS	5											
from \ to	А	В	С					Circ	Entry			
А	85	0	430					115	515			
В	740	5	60					520	805			
С	0	105	5					830	110			
FLOWS								1				
from \ to	А	В	С					Circ	Entry			
А	105	0	380					90	485			
В	485	5	45					490	535			
С	0	80	5					595	85			
WEEKEND from \ to		В	С					Circ	Entry			
A	A 75	<u>В</u> 0	490					140	565			
В	545	5	75					570	625			
C	0	130	5					625	135			
0	0	100	0					020	100			
CALCULAT	TIONS							$Q_{\rm E}$		RFC		
ARM	K	$\mathbf{X}_2$	М	F	t <sub>D</sub>	$f_c$	AM	QE 0	WEEKEND	AM	0	WEEKEND
A	1.00	4.50	0.03	1364	1.48	0.59	1299	1314	1285	0.40	0.37	0.44
В	0.97	7.77	0.03	2353	1.48	0.80	1886	1909	1847	0.43	0.28	0.34
C	0.95	5.00	0.03	1515	1.48	0.62	949	1088	1070	0.12	0.08	0.13
									, i			
									Crtical Arm:	в	A	А
									RFC:	0.43	0.37	0.44
In accordan	ce with TPD	M V2 Ch4								AM	0	WEEKEND
in accortain				Date:	Dec-24		Checked by:					

Junction:																	
	Po Tun	g Road/	Man Ni	n Street ( J	ID)			-							Design Yea	r: <u>2035</u>	
escription:	2035 De	esign Tr	affic Flo	w				-			Designed	By: MLC			Checked By	: PTC	
	nts				Radi	us (m)	(%)	Pro. Tu	rning (%)		Saturation pcu/hr)		AM Peak			PM Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	АМ	РМ	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critica
Po Tung Road NB		A A B	1 1 2	3.400 3.400 3.400		15	I		<u> </u>	1955 2095 1905	1955 2095 1905	415 445 125	0.212 0.212 0.066		488 522 160	0.250 0.249 0.084	0.25
Po Tung Road SB	<b>₩</b>	C C	1 1	3.400 3.400	15			17%	14%	1925 2095	1925 2095	570 620	0.296 0.296	0.296	484 526	0.251 0.251	
Man Nin Street WB	⁴ๅ►	D	3	3.800	15	20		67% / 33%	67% / 33%	1900 *	1900 *	210	0.111	0.111	300	0.158	0.15
edestrian Crossin	ng	Ep	2	MIN GRE	EN + FL	ASH =	13	÷	7	=	20						*
	ng	Ep	2	MIN GRE		ASH =	13	+	7	-		Group	CBD		Group	GEND	I
otes:	ion flow	of 80 pc	su/hr			ASH =	13	+	7	-	20	Group	С,В.D	C,Ep,D	Group	C.Ep.D	A,Ep
otes: dditional saturat e to the additior 500s / 90s per c	ion flow	of 80 pc	su/hr			ASH =	13	+	7	-		у	0.472	C,Ep,D 0.407	y	0.409	A,Ep 0.40
otes: dditional saturat e to the additior 500s / 90s per c	ion flow	of 80 pc	su/hr		u/hr)			+			+	y L (sec)	0.472 13	C,Ep,D 0.407 29	y L (sec)	0.409 29	A,Ep 0.44 32
tes: dditional saturat e to the additior 300s / 90s per c	ion flow	of 80 pc	su/hr	Flow: (pc	:u/hr)	860(101)				1095(940)◀	++ N	y L (sec) C (sec)	0.472 13 90	C.Ep.D 0.407 29 90	y L (sec) C (sec)	0.409 29 90	A.Ep 0.44 32 90
otes: additional saturat ue to the additior 6005 / 90s per c	ion flow	of 80 pc	su/hr	Flow: (pc	u/hr)	860(101)	0)				+ N	y L (sec) C (sec) y pract.	0.472 13 90 0.770	C.Ep.D 0.407 29 90 0.610	y L (sec) C (sec) y pract.	0.409 29	A,Ep 0.44 32 90 0.54
otes: udditional saturat ue to the additior 600s / 90s per c uu/cycle)	ion flow al pocke ycle * rel	of 80 pc	su/hr	Flow: (pc	:u/hr)	860(101)	0)			1095(940)◀	+ N	y L (sec) C (sec)	0.472 13 90	C.Ep.D 0.407 29 90	y L (sec) C (sec)	0.409 29 90 0.610	A,Ep 0.40 32 90 0.58
otes: Additional saturat ue to the additior 3600s / 90s per c su/cycle) tage / Phase Dia	ion flow al pocke ycle * rel	of 80 pc	su/hr	Flow: (pc	:u/hr)	860(1010	<sup>D)</sup> 140(200)	3	►70(100)	1095(940)◀	+ N	y L (sec) C (sec) y pract.	0.472 13 90 0.770	C.Ep.D 0.407 29 90 0.610	y L (sec) C (sec) y pract.	0.409 29 90 0.610	A,Ep 0.40 32 90 0.58
edestrian Crossii lotes: Additional saturat ue to the addition 6600s / 90s per c cu/cycle) tage / Phase Dia I. A	ion flow al pocke ycle * rel	of 80 pcd t provid ease 2	su/hr	Flow: (pc	:u/hr)	860(1010	0)	Ep 3.	►70(100)	1095(940)◀	+ N	y L (sec) C (sec) y pract. R.C. (%)	0.472 13 90 0.770	C.Ep.D 0.407 29 90 0.610	y L (sec) C (sec) y pract. R.C. (%)	0.409 29 90 0.610	A,Ep 0.40 32 90 0.58
otes: Additional saturat ue to the additior 600s / 90s per c su/cycle) tage / Phase Dia	ion flow al pocke ycle * rel	of 80 pcd t provid ease 2	eu/hr ed C	Flow: (pc	:u/hr)	860(1010	D) 140(200)	страния и стран	►70(100)	1095(940)◀		y L (sec) C (sec) y pract. R.C. (%)	0.472 13 90 0.770	C.Ep.D 0.407 29 90 0.610 50%	y L (sec) C (sec) y pract. R.C. (%)	0.409 29 90 0.610	A.Ep 0.4( 32 90 0.58 429
otes: wtditional saturat te to the additior 600s / 90s per c cu/cycle) tage / Phase Dia	ion flow al pocke ycle * rel	of 80 pcd t provid ease 2	ed	Flow: (pc	:u/hr)	860(1010	D) 140(200)	Ep 3.	►70(100)	1095(940)◀	+ N	y L (sec) C (sec) y pract. R.C. (%) 4.	0.472 13 90 0.770	C.Ep.D 0.407 29 90 0.610	y L (sec) C (sec) y pract. R.C. (%) 5.	0.409 29 90 0.610	A,Er 0.4 32 90 0.5

Junction:																	
	Po Tun	g Road/	Man Ni	n Street ( J	JD)			_							Design Yea	r: <u>2035</u>	
escription:	2035 De	esign Tr	affic Flo	w				-			Designed	By: MLC			Checked By	: <u>PTC</u>	
	nts				Radi	us (m)	(%)	Pro. Tu	rning (%)		Saturation pcu/hr)		WE			WE	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	WE	WE	WE	WE	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical
Po Tung Road NB	$\rightarrow$	A A B	1 1 2	3.400 3.400 3.400	I	15				1955 2095 1905	1955 2095 1905	475 510 130	0.243 0.243 0.068		475 510 130	0.243 0.243 0.068	I
Po Tung Road SB	<b>↓</b>	C C	1 1	3.400 3.400	15			25%	25%	1905 2095	1905 2095	550 605	0.289 0.289	0.289	550 605	0.289 0.289	0.289
Man Nin Street WB	* <b>†</b> *	D	3	3.800	15	20		52% / 48%	52% / 48%	1905 *	1905 *	355	0.186	0.186	355	0.186	0.186
edestrian Crossir	ng	Ep	2	MIN GRE	EN + FL	ASH =	13	+	7	=	20						*
Pedestrian Crossir Notes: Additional saturat	ion flow	of 80 pc	u/hr	MIN GRE		ASH =	13	+	7	-	20	Group	A,Ep,D	C,Ep,D	Group	A.Ep.D	C,Ep,I
lotes: Additional saturat ue to the addition 3600s / 90s per c	ion flow	of 80 pc	u/hr			ASH =	13	+	7	-		Group y L (sec)	А.Ер.D 0.430 32		Group y L (sec)	A.Ep.D 0.430 32	
otes: Additional saturat ue to the addition 6005 / 90s per c	ion flow	of 80 pc	u/hr		su/hr)	ASH = 985(985)		+			++ N	у	0.430	с,Ер,D 0.475	у	0.430	С,Ер, 0.47
otes: Additional saturat ue to the addition 6005 / 90s per c	ion flow	of 80 pc	u/hr	Flow: (pc	su/hr)	985(985)				= 1015(1015 <b>7</b> 140(140)	+ N	y L (sec) C (sec)	0.430 32	C,Ep,D 0.475 29	y L (sec) C (sec)	0.430 32	с,ер, 0.47 29
otes: Additional saturat ue to the addition 6005 / 90s per c	ion flow	of 80 pc	u/hr	Flow: (pc	su/hr)	985(985)	)			1015(1015 <b>)</b> *	+ N	y L (sec)	0.430 32 90	C.Ep.D 0.475 29 90	y L (sec)	0.430 32 90	с,Ер, 0.47 29 90
iotes: Additional saturat ue to the addition 3600s / 90s per c cu/cycle) tage / Phase Dia	ion flow al pocke ycle * rel	of 80 pc	u/hr	Flow: (pc	su/hr)	985(985)	)		▶170(170)	1015(1015 <b>)</b> *	+ N	y L (sec) C (sec) y pract. R.C. (%)	0.430 32 90 0.580	C.Ep.D 0.475 29 90 0.610	y L (sec) C (sec) y pract. R.C. (%)	0.430 32 90 0.580	с,Ер. 0.47 29 90 0.61
lotes: Additional saturat	ion flow al pocke ycle * rel	of 80 pc	u/hr	Flow: (pc	su/hr)	985(985)	)	а. Ер З.	▶170(170)	1015(1015 <b>)</b> *	+ N	y L (sec) C (sec) y pract.	0.430 32 90 0.580	C.Ep.D 0.475 29 90 0.610	y L (sec) C (sec) y pract.	0.430 32 90 0.580	с,Ер, 0.47 29 90 0.61
iotes: Additional saturat ue to the addition 3600s / 90s per c cu/cycle) tage / Phase Dia	ion flow al pocke ycle * rel	of 80 pc	su/hr ed	Flow: (pc	su/hr)	985(985)	) 185(185)	а. Ер З.	►170(170)	1015(1015 <b>)</b> *	+ N	y L (sec) C (sec) y pract. R.C. (%) 4.	0.430 32 90 0.580	C.Ep.D 0.475 29 90 0.610	y L (sec) C (sec) y pract. R.C. (%)	0.430 32 90 0.580	с,Ер 0.47 29 90 0.61

unction:	Pedestr	ian Cros	ssing ne	ar Yau Ma	Po Stree	et (JE)		-							Design Yea	r: <u>2035</u>	
escription:	2035 De	esign Tra	affic Flov	N							Designed	By: MLC			Checked By	: <u>PTC</u>	
	ents				Radiu	ıs (m)	t (%)	Pro. Tu	rning (%)	Revised S Flow (			AM Peak			PM Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	АМ	РМ	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical
Hiram's Highway (NB)	$\rightarrow$	A A	1 1	3.400 3.400						1955 2095	1955 2095	475 510	0.243 0.243	I	562 603	0.287 0.288	0.288
Hiram's Highway (SB)	÷ ÷	B	1	3.400 3.400						1955 2095	1955 2095	599 641	0.306 0.306	0.306	550 590	0.281 0.282	
Pedestrian Crossi	ng	Ср	2	MIN GRE	EN + FL/	ASH =	13	+	7	=	20						
	ng	Ср	2	MIN GRE		ASH =	13	+	7	-		Group	A.Cp	B.Cp	Group	В.Ср	
	ng	Ср	2			ASH =	13	+	7	-	20	Group	А,Ср 0.243	В.Ср 0.306	Group	в,Ср 0.282	A,Cp
	ng	Ср	2			ASH =	13	+	7	-		Group y L (sec)			Group y L (sec)		A,Cp
	ng	Ср	2		u/hr)	ASH = 985(1165		+	7	= 1240(1140)	+ N N	у	0.243	0.306	У	0.282	А,Ср 0.288
	ng	Cp	2		u/hr)			+	7		+ N N	y L (sec)	0.243 26	0.306 26	y L (sec)	0.282 26	А.Ср 0.288 26 90
	ng	Ср	2		u/hr)			+	7		+ N N	y L (sec) C (sec)	0.243 26 90	0.306 26 90	y L (sec) C (sec)	0.282 26 90	A,Cp 0.288 26 90 0.640
lotes: Stage / Phase Dia		Cp	2	Flow: (pc	u/hr)						+ N N	y L (sec) C (sec) y pract. R.C. (%)	0.243 26 90 0.640	0.306 26 90 0.640	y L (sec) C (sec) y pract. R.C. (%)	0.282 26 90 0.640	A,Cp 0.288 26 90 0.640
Notes: Stage / Phase Dia		Ср	2		u/hr)	985(1165		+			+ N N	y L (sec) C (sec) y pract.	0.243 26 90 0.640	0.306 26 90 0.640	y L (sec) C (sec) y pract.	0.282 26 90 0.640	A,Cp 0.288 26 90 0.640
Pedestrian Crossi Notes: Stage / Phase Dia 1. A			2 B	Flow: (pc	u/hr)						+ N N	y L (sec) C (sec) y pract. R.C. (%)	0.243 26 90 0.640	0.306 26 90 0.640	y L (sec) C (sec) y pract. R.C. (%)	0.282 26 90 0.640	A,Cp 0.288 26 90 0.640
Notes: Stage / Phase Dia 1.				Flow: (pc	u/hr)	985(1165					+ N N	y L (sec) C (sec) y pract. R.C. (%)	0.243 26 90 0.640	0.306 26 90 0.640	y L (sec) C (sec) y pract. R.C. (%)	0.282 26 90 0.640	A.Cp 0.288 26
lotes: itage / Phase Dia 1.				Flow: (pc	u/hr)	985(1165					+ N N	y L (sec) C (sec) y pract. R.C. (%)	0.243 26 90 0.640	0.306 26 90 0.640	y L (sec) C (sec) y pract. R.C. (%)	0.282 26 90 0.640	A,Cp 0.288 26 90 0.640

Junction:	Pedest	rian Cro	ssing ne	ar Yau Ma	Po Stree	et (JE)									Design Yea	r: <u>2035</u>	
escription:	2035 De	esign Tr	affic Flov	w				_			Designed I	By: MLC			Checked By	: PTC	
·					Radiu	is (m)		Pro. Tu	rning (%)	Revised S	Saturation		WE Peak		-	WE Peak	
	Movements						Gradient (%)		<b>3</b> ()-)	Flow (	pcu/hr)						
Approach	Mow	Phase	Stage	Width (m)	Left	Right	Grac	WE Peak	WE Peak	WE Peak	WE Peak	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway (NB)	$\rightarrow$	A A	1 1	3.400 3.400						1955 2095	1955 2095	533 572	0.273 0.273		533 572	0.273 0.273	
Hiram's Highway (SB)	Ļ	B	1 1	3.400 3.400						1955 2095	1955 2095	579 621	0.296 0.296	0.296	579 621	0.296 0.296	0.296
Pedestrian Crossi	ng	Ср	2	MIN GRE	EN + FLA	ASH =	13	÷	7	-	20						·
	ng	Ср	2	MIN GRE		ASH =	13	+	7	-		Group	A,Cp	B.Cp	Group	A.Cp	B,Cp
	ng	Ср	2			ASH =	13	÷	7	=	20	Group y	A,Cp 0.273	Γ	Group y	А.Ср 0.273	I
Pedestrian Cross	ng	Ср	2			ASH =	13	+	7	-		-		В,Ср			В,Ср
	ng	Ср	2		cu/hr)	ASH =		+	7	= 1200(1200)	++ N	у	0.273	в,Ср 0.296	у	0.273	В,Ср 0.296
	ng	Ср	2		cu/hr)			+	7		++ N	y L (sec)	0.273 28	в.ср 0.296 26	y L (sec)	0.273 28	в.Ср 0.296 26 90
Notes:		Ср	2		cu/hr)			+	7		++ N	y L (sec) C (sec)	0.273 28 90	в.ср 0.296 26 90	y L (sec) C (sec)	0.273 28 90	в,Ср 0.296 26 90 0.640
Votes: Stage / Phase Di		Ср	2	Flow: (pc	cu/hr)						++ N	y L (sec) C (sec) y pract. R.C. (%)	0.273 28 90 0.620	в.Ср 0.296 26 90 0.640	y L (sec) C (sec) y pract. R.C. (%)	0.273 28 90 0.620	в,Ср 0.296 26 90 0.640
		Cp	2		cu/hr)			+			++ N	y L (sec) C (sec) y pract.	0.273 28 90 0.620	в.Ср 0.296 26 90 0.640	y L (sec) C (sec) y pract.	0.273 28 90 0.620	в,ср 0.296 26 90 0.640
Notes: Stage / Phase Di 1.		Ср		Flow: (pc	cu/hr)	1105(110					++ N	y L (sec) C (sec) y pract. R.C. (%) 4.	0.273 28 90 0.620	в.Ср 0.296 26 90 0.640	y L (sec) C (sec) y pract. R.C. (%)	0.273 28 90 0.620	в,ср 0.296 26 90

### Simplified Priority Junction Capacity Calculation

	Proposed Reside	ntial Develop	ment In Area Sho	own As 'Road', Variou	s Lots In D.D. 221 And A	Adjoining Gove	rnment Land, Sh	na Ha, Sai Kung
Junction:	Po Tung Road/						Ref. No.:	F (Des)
Scheme:	Year 2035 Desi	ign Flow					Ref. No.:	
Year:	2035			Job No.: CHK50791	710		Rev.:	
ARM A:	Po Tung Road	d (SB)						
ARM B:	Yau Ma Po St	treet						
ARM C:	Po Tung Road	d (NB)						
								-
	AM	(PM)	[WEEKEND]	1				
CA	1165	1005	1110					
СВ	40	60	50	 I				
ARM C					<b>→</b>			
Po Tung Road	d (NB)		-		+			-
			J					-
					AM	(PM)	[WEEKEND]	7
					910	1090	1045	AC
	•	l			30	25	15	AB
			n					Po Tung Road (SB)
					↓ I			
		A.M.	75		I			
		AM	75 80	0	ARM B			
	n	(PM) WEEKEND]			Yau Ma Po Stre			
	Ľ	WEEKENDJ	60 BC	0	rau wa Po Sire	el		
GEOMETRY			ВС	BA				
Major road wi			W	11.00	Lane widths		w(b-a)	0.0
Central Reser			Wcr	1.50			w(b-c)	3.5
2 Lane Minor				n			w(c-b)	3.3
Visibilities	· /		Vr(b-a)	0	Calculated		D	0.5
			VI(b-a)	0			E	0.9
			Vr(b-c)	35			F	0.8
			Vr(c-b)	35			Y	0.6
ANALYSIS								
						AM PEAK	(PM) PEAK	[WEEKEND] PEAK
TRAFFIC FLC	OWS		q(c-a)			1165	1005	1110
			q(c-b)			40	60	50
			q(a-b)			30	25	15
			q(a-c)			910	1090	1045
			q(b-a)			0	0	0
			q(b-c)			75	80	60
								4 00
			f			1.00	1.00	1.00
				Factor				
CAPACITIES	;		Q(b-a)	1		139	127	126
CAPACITIES	;		Q(b-a) Q(b-c)	1 1		139 489	127 452	126 462
CAPACITIES			Q(b-a) Q(b-c) Q(c-b)	1 1 1		139 489 476	127 452 440	126 462 452
CAPACITIES	i		Q(b-a) Q(b-c)	1 1		139 489	127 452	126 462
			Q(b-a) Q(b-c) Q(c-b) Q(b-ac)	1 1 1		139 489 476 489	127 452 440 452	126 462 452 462
			Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a	1 1 1		139 489 476 489 0.000	127 452 440 452 0.000	126 462 452 462 0.000
			Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c	1 1 1		139 489 476 489 0.000 0.153	127 452 440 452 0.000 0.177	126 462 452 462 0.000 0.130
			Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b	1 1 1		139 489 476 489 0.000 0.153 0.084	127 452 440 452 0.000 0.177 0.136	126 462 452 462 0.000 0.130 0.111
			Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c	1 1 1		139 489 476 489 0.000 0.153	127 452 440 452 0.000 0.177	126 462 452 462 0.000 0.130
RFC's			Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b	1 1 1		139 489 476 489 0.000 0.153 0.084	127 452 440 452 0.000 0.177 0.136	126 462 452 462 0.000 0.130 0.111
RFC's Worst RFC			Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac	1 1 1		139 489 476 489 0.000 0.153 0.084 0.153	127 452 440 452 0.000 0.177 0.136 0.177	126 462 452 462 0.000 0.130 0.111 0.130
	d Vr are visibility dist		Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac	1 1 1 1 respective streams		139 489 476 489 0.000 0.153 0.084 0.153	127 452 440 452 0.000 0.177 0.136 0.177	126 462 452 462 0.000 0.130 0.111 0.130
RFC's Worst RFC Where VI and D = (1+0.094)	d Vr are visibility dist (w(b-a)-3.65))(1+0.0	0009(Vr(b-a)-	Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac	1 1 1 1 respective streams		139 489 476 489 0.000 0.153 0.084 0.153	127 452 440 452 0.000 0.177 0.136 0.177	126 462 452 462 0.000 0.130 0.111 0.130
RFC's Worst RFC Where VI and D = (1+0.094)	d Vr are visibility dist	0009(Vr(b-a)-	Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac	1 1 1 1 respective streams		139 489 476 489 0.000 0.153 0.084 0.153	127 452 440 452 0.000 0.177 0.136 0.177	126 462 452 462 0.000 0.130 0.111 0.130
RFC's Worst RFC Where VI and D = (1+0.094) E = (1+0.094)	d Vr are visibility dist (w(b-a)-3.65))(1+0.0	0009(Vr(b-a)- 0009(Vr(b-c)-	Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac left or right of the 120))(1+0.0006(V 120))	1 1 1 1 respective streams		139 489 476 489 0.000 0.153 0.084 0.153	127 452 440 452 0.000 0.177 0.136 0.177	126 462 452 462 0.000 0.130 0.111 0.130
RFC's Worst RFC Where VI and D = (1+0.094) E = (1+0.094)	d Vr are visibility dist (w(b-a)-3.65))(1+0.0 (w(b-c)-3.65))(1+0.0 (w(c-b)-3.65))(1+0.0	0009(Vr(b-a)- 0009(Vr(b-c)-	Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac left or right of the 120))(1+0.0006(V 120))	1 1 1 1 respective streams		139 489 476 489 0.000 0.153 0.084 0.153	127 452 440 452 0.000 0.177 0.136 0.177	126 462 452 462 0.000 0.130 0.111 0.130
RFC's Worst RFC Where VI and D = (1+0.094) E = (1+0.094) F = (1+0.094) Y = 1-0.0345	d Vr are visibility dist (w(b-a)-3.65))(1+0.0 (w(b-c)-3.65))(1+0.0 (w(c-b)-3.65))(1+0.0	0009(Vr(b-a)- 0009(Vr(b-c)- 0009(Vr(c-b)-1	Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac left or right of the 120))(1+0.0006(V 120))	1 1 1 1 respective streams		139 489 476 489 0.000 0.153 0.084 0.153	127 452 440 452 0.000 0.177 0.136 0.177	126 462 452 462 0.000 0.130 0.111 0.130
RFC's Worst RFC Where VI and D = (1+0.094( F = (1+0.094( Y = 1-0.0345) f = proportion	d Vr are visibility dist (w(b-a)-3.65))(1+0.0 (w(b-c)-3.65))(1+0.0 (w(c-b)-3.65))(1+0.0 W	0009(Vr(b-a)- 0009(Vr(b-c)- 0009(Vr(c-b)-1 ning left	Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac left or right of the 120))(1+0.0006(V 120)) 20))	1 1 1 1 respective streams //(b-a)-150))	city of combined streams	139 489 476 489 0.000 0.153 0.084 0.153	127 452 440 452 0.000 0.177 0.136 0.177	126 462 452 462 0.000 0.130 0.111 0.130
RFC's Worst RFC D = (1+0.094) E = (1+0.094) F = (1+0.094) Y = 1-0.0345 f = proportion	d Vr are visibility dist (w(b-a)-3.65))(1+0.0 (w(b-c)-3.65))(1+0.0 (w(c-b)-3.65))(1+0.0 W of minor traffic turn (b-c)*Q(b-a)/(1-f)*Q(	0009(Vr(b-a)- 0009(Vr(b-c)- 0009(Vr(c-b)-1 ning left	Q(b-a) Q(b-c) Q(c-b) Q(b-ac) b-a b-c c-b b-ac left or right of the 120))(1+0.0006(V 120)) 20))	1 1 1 1 respective streams //((b-a)-150))	city of combined streams cordance with TPDM V2	139 489 476 489 0.000 0.153 0.084 0.153 <b>0.15</b>	127 452 440 452 0.000 0.177 0.136 0.177 <b>0.18</b>	126 462 452 462 0.000 0.130 0.111 0.130

TRAFFIC S	IGNA	LS C	CALC	ULATI	ON						Job No.	: <u>CHK50</u>	07917 <u>1</u> 0	I	IVA HON	G KONG	LIMITE
Junction:	Hiram's	Highwa	ay / Chui	Tong Roa	d ( JG)			_							Design Yea	r: <u>2035</u>	
Description:	2035 De	esign Tr	affic Flov	N				_			Designed	By: MLC			Checked By	: <u>PTC</u>	
	nts				Radi	us (m)	t (%)	Pro. Tu	rning (%)		Saturation pcu/hr)		AM Peak			PM Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	АМ	РМ	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway NB		A A E	1,2 1,2 2	4.300 4.300 4.300		15				2045 2185 1985	2045 2185 1985	433 462 50	0.212 0.211 0.025		500 535 80	0.244 0.245 0.040	0.040
Hiram's Highway (SB)	₣ ↓ ↓	B B B	1 1 1	3.300 3.300 3.300	20					1810 2085 2085	1810 2085 2085	105 530 530	0.058 0.254 0.254	0.254	125 440 440	0.069 0.211 0.211	0.211
Chui Tong Road	*†*	С	3	3.300	15	22.5		55% / 45%	36% / 64%	1850 *	1860 *	100	0.054	0.054	110	0.059	0.059
Pedestrian Crossir	ng	Fp Hp	4	MIN GRE			10 11	+ +	8 10	=	18 21						
		·															
Notes:				Flow: (pc	:u/hr)						, ₹ N	Group	B,E,C,Fp	B,E,C,Hp	Group	A,C,Hp	B,E,C,H
Additional saturat added due to pock											/	у	0.333	0.308	у	0.304	0.310
20s per cycle * re	lease 2	pcu/cycl	e)									L (sec)	31	47	L (sec)	36	41
					$ \rightarrow$	895(103				1060(880)	$\checkmark$	C (sec)	120	120	C (sec)	120	120
					50(80)		55(40)		►45(70)	105(125)		y pract.	0.668	0.548	y pract.	0.630	0.593
Stage / Phase Dia	aramo							γ				R.C. (%)	100%	78%	R.C. (%)	107%	91%
1.	grams			2.				3.				4.		^ 	5.		
A	4		— в		A E				*					Нр			
	•									۲ c		<	Fp	>			
I/G= 3 I/G= 3			I/G= 5 I/G= 5			5		I/G= 5 I/G= 5			I/G=		21 21	I/G=	∎		
vu= 3			#G= t	,				//G= 5			Date		21	Junct	ion: ighway / Chui Ton		G

TRAFFIC S	IGNA	LS C	CALC	ULATI	ON						Job No.	: <u>CHK5</u>	<u>)7917</u> 10	N	IVA HON	G KONG	LIMITE
Junction:	Hiram's	Highwa	ay / Chui	Tong Roa	d ( JG)			_							Design Yea	r: <u>2035</u>	
Description:	2035 De	esign Tr	affic Flov	N				-			Designed	By: MLC			Checked By	: <u>PTC</u>	
	nts				Radi	us (m)	t (%)	Pro. Tu	rning (%)		Saturation pcu/hr)		WE			WE	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	WE	WE	WE	WE	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway NB	† <sub> </sub> +	A A E	1,2 1,2 2	4.300 4.300 4.300		15				2045 2185 1985	2045 2185 1985	474 506 100	0.232 0.232 0.050	0.050	474 506 100	0.232 0.232 0.050	0.050
Hiram's Highway (SB)	↓ ↓	B B B	1 1 1	3.300 3.300 3.300	20					1810 2085 2085	1810 2085 2085	120 498 497	0.066 0.239 0.238	0.239	120 498 497	0.066 0.239 0.238	0.239
Chui Tong Road	*†*	С	3	3.300	15	22.5		59% / 41%	59% / 41%	1845 *	1845 *	195	0.106	0.106	195	0.106	0.106
Pedestrian Crossir	ng	Fp Hp	4	MIN GRE MIN GRE			10 11	+ +	8 10	=	18 21			·			*
Notes:				Flow: (pc	:u/hr)						₹ N	Group	B,E,C,Fp	B,E,C,Hp	Group	B,E,C,Fp	B,E,C,H
Additional saturat											/*	у	0.395	0.395	у	0.395	0.395
20s per cycle * re	lease 2	pcu/cyc	e)									L (sec)	31	41	L (sec)	31	41
					$ \rightarrow$	980(980)				995(995)	$\overline{}$	C (sec)	120	120	C (sec)	120	120
					100(100)		115(115)		▶80(80)	120(120)		y pract.	0.668	0.593	y pract.	0.668	0.593
Stage / Phase Dia	arams							Ŷ				R.C. (%)	69%	50%	R.C. (%)	69%	50%
1.	<u>.</u>			2.				3.				4.		^	5.		
A	*		— в						*	c		¢	Fp	Hp Ƴ			
I/G= 3 I/G= 3			I/G= 5 I/G= 5	5				I/G= 5				= 10 = 10	21 21	I/G=			
			1,0-0	·				//d= 5			Date			Junct	ion: ighway / Chui Ton		G

Junction:	Hiram's	Highwa	ay/Hong	Kin Road	( JH)										Design Year	2035	
Description:	2035 De	esign Tr	affic Flov	N							Designed	By: MLC			Checked By:	PTC	
	ents				Radiu	ıs (m)	it (%)	Pro. Tu	rning (%)		Saturation pcu/hr)		AM Peak			PM Peak	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	АМ	РМ	АМ	РМ	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical
Hiram's Highway NB		C C O	1,2,3 1,2,3 3	3.400 3.400 4.000		18			·	1955 2095 1990	1955 2095 1990	408 437 65	0.209 0.209 0.033		488 522 70	0.250 0.249 0.035	
Hiram's Highway SB	<b>↓</b>	A A A	1,2,5 1,2,5 1,2,5	3.300 3.300 3.300	15					1770 2085 2085	1770 2085 2085	60 563 562	0.034 0.270 0.270		80 435 435	0.045 0.209 0.209	
Hong Kin Road WB	¶  ↑	G G	4 4	3.700 3.700	20	18				1845 1960	1845 1960	105 50	0.057 0.026		70 75	0.038 0.038	
Hiram's Highway NB	↓ ↓ ↓	E E E	2,3 2,3 2,3	3.400 3.400 3.400	20					1820 2095 2095	1820 2095 2095	20 373 372	0.011 0.178 0.178	0.178	35 245 245	0.019 0.117 0.117	0.117
Hiram's Highway SB	↓ ↓ ↓	F F P	2,3,4 2,3,4 4	3.400 3.400 3.500		18				1955 2095 1945	1955 2095 1945	514 551 60	0.263 0.263 0.031	0.031	401 429 95	0.205 0.205 0.049	0.049
Po Lo Che Road EB	₄ᡰ₅	В	1	3.000	10	15		38% / 63%	40% / 60%	1745 *	1740 *	200	0.115	0.115	200	0.115	0.115
Pedestrian Crossir	ng	Hp Mp Kp Jp Np	1,2,3,5 4 3,4 5 1,5 5	MIN GREE MIN GREE MIN GREE MIN GREE MIN GREE	EN + FL EN + FL EN + FL EN + FL	ASH = ASH = ASH = ASH =	5 5 5 5 9	+ + + +	7 6 8 7 10 5	= = = =	12 11 13 12 15 14						×
Notes:				Flow: (pc	u/hr)			20(35)			N ▲++	Group	B,E,G,Lp	B,E,P,Np	Group	B,F,Np	B,E,P,N
Additional saturatio added due to pock 100s per cycle * re	et provic	led (360	00s /	65(70) 105(70)	845(1010	)) 50(75)	1125(870) 60(80)	⊥	75(80) 745(490)	1065(830)	125(120) 60(95)	y L (sec) C (sec) y pract.	0.350 27 100 0.657	0.324 34 100 0.594	y L (sec) C (sec) y pract.	0.320 20 100 0.720	0.281 34 100 0.594
					Y							R.C. (%)	88%	84%	R.C. (%)	125%	112%
Stage / Phase Dia 1.	grams		λ	2.				3.				4.			5.		Np <
c		~	B	c	<b>→</b>	Е 	4	F	c o		<b>↓</b> F		Kp _ ▲	P		∱ Lp v	∱ I ↓
Hp <>	A		dl¦∾	Нр <}	>	A	- •	+ 	lp >	√ кр	•	G	Mp <sup>¥</sup> >	F	Нр <>	A	- 🐇
I/G= 3 I/G= 3			I/G= 5					I/G=			I/G= I/G=			I/G=		14 14	
			1.0-0					1.0-	1		Date			Junct			Э

TRAFFIC S	IGNA	LS	CALC	ULATI	ON						Job No.	: <u>CHK5</u>	0791710	Ν	IVA HON	g kong	LIMITE
Junction:	Hiram's	Highwa	ay/Hong	Kin Road	( JH)										Design Year	r: <u>2035</u>	
Description:	2035 De	esign Tr	affic Flov	N							Designed	By: MLC			Checked By	: <u>PTC</u>	
	nts				Radiu	us (m)	(%)	Pro. Tu	rning (%)		Saturation pcu/hr)		WE			WE	
Approach	Movements	Phase	Stage	Width (m)	Left	Right	Gradient (%)	WE	WE	WE	WE	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Hiram's Highway NB		с с о	1,2,3 1,2,3 3	3.400 3.400 4.000		18				1955 2095 1990	1955 2095 1990	483 517 55	0.247 0.247 0.028		483 517 55	0.247 0.247 0.028	
Hiram's Highway SB	↓ ↓ ↓	A A A	1,2,5 1,2,5 1,2,5	3.300 3.300 3.300	15					1770 2085 2085	1770 2085 2085	70 493 492	0.040 0.236 0.236		70 493 492	0.040 0.236 0.236	
Hong Kin Road WB	¶  ↑	G G	4 4	3.700 3.700	20	18				1845 1960	1845 1960	85 55	0.046 0.028		85 55	0.046 0.028	
Hiram's Highway NB	+ † †	E E E	2,3 2,3 2,3	3.400 3.400 3.400	20					1820 2095 2095	1820 2095 2095	35 290 290	0.019 0.138 0.138	0.138	35 290 290	0.019 0.138 0.138	0.138
Hiram's Highway SB	↓ ↓ ↓	F F P	2,3,4 2,3,4 4	3.400 3.400 3.500		18				1955 2095 1945	1955 2095 1945	475 510 115	0.243 0.243 0.059	0.059	475 510 115	0.243 0.243 0.059	0.059
Po Lo Che Road EB	•!•	в	1	3.000	10	15		52% / 48%	52% / 48%	1735 *	1735 *	145	0.084	0.084	145	0.084	0.084
		Mp Kp Lp Jp Np	4 3,4 5 1,5 5	MIN GRE MIN GRE MIN GRE MIN GRE MIN GRE	EN + FL EN + FL EN + FL	ASH = ASH = ASH =	5 5 5 9	+ + + +	6 8 7 10 5	= = = =	11 13 12 15 14						•
Notes:				Flow: (pc	u/hr)			35(35)			N <b>↓</b>	Group	B,F,Np	B,E,P,Np	Group	B,F,Np	B,E,P,Np
Additional saturation added due to pock 100s per cycle * re	et provid	led (360	00s /	$\rightarrow$	1000(100	00)			75(75)	•/~	70(70)	У	0.327	0.281	У	0.327	0.281
	10000	poulojo	,	55(55)			985(985)	~ .	580(580)		115(115)	L (sec) C (sec)	20 100	34 100	L (sec) C (sec)	20 100	34 100
				85(85)	< ∕	55(55)	70(70)			985(985)		y pract.	0.720	0.594	y pract.	0.720	0.594
					Y							R.C. (%)	120%	111%	R.C. (%)	120%	111%
Stage / Phase Dia 1.	igrams			2.				3.				4.			5.		N
			$\bigwedge$			E	٠		C	E,							> <≯
c →		~	в	c —	<b>→</b>	_	-→	-	0		_		Кр^л ▲	Р		∱ Lp ↓	∱ 4 ↓ 1
Hp <>	A		dr ¦	Нр <	>	A	- +	F	Hp >	^ -' Kp	<b>▲</b> F	G	Mp >	F	Hp <>	A	- *
I/G= 3			I/G= 5					I/G=			I/G=			I/G=		14	
I/G= 3			I/G= 5	5				I/G=			I/G= Date			I/G=		14	H

Job Title:					hown As 'Road'	, Various	Lots In D.D.		Adjoining Gover	nment La	nd, Sha H	a, Sai Kung
Junction:	tion: Tai Mong Tsai Road/Sai Sha Road Ref. No.:											
Scheme:	Year 2035		lows					Ref. No	:			
Year:	2035 desig	gn		Job No.:	CHK50791710			Rev.:				
AM	PM							~				
ARM A:	Tai Mong Ts	sai Road	(West)					C				
ARM B:	Tai Mong Ts		(East)									
ARM C:	Sai Sha Roa	d										
							Α		) в			
GEOMETH	RY											
ARM	v	e	L	r	D	Phi	S	-				
А	3.4	8.2	36	100	35	35	0.21					
В	3.4	8.1	15	100	35	20	0.50					
С	4.2	7.7	13	10	35	35	0.43					
AM FLOW	/s											
from \ to	А	В	С					Circ	Entry			
А	10	485	145		· · · · · · · · · · · · · · · · · · ·			105	640			
В	520	5	100					160	625			
С	175	95	5					535	275			
PM FLOW from \ to	∕S   A	В	С					Circ	Entry			
А	10	570	150					105	730			
В	370	5	95					390	470			
C	150	95	5					750	250			
WEEKENI	1							ļ				
from \ to	A	В	C					Circ	Entry			
A	5	425	225					140	655			
B C	360 220	5 130	140 5					235 370	505 355			
C	220	150	5					570	555			
CALCULA	 ATIONS						(	Q <sub>E</sub>		RFC		
ARM	Κ	$X_2$	М	F	t <sub>D</sub>	$f_c$	AM	PM	WEEKEND	AM	PM	WEEKEND
А	1.02	6.76	0.08	2050	1.46	0.72	2017	2017	1991	0.32	0.36	0.33
В	1.07	5.75	0.08	1741	1.46	0.66	1756	1593	1703	0.36	0.29	0.30
С	0.93	6.08	0.08	1842	1.46	0.68	1380	1244	1485	0.20	0.20	0.24
										T		
									Crtical Arm:	В	Α	A
									RFC:	0.36	0.36	0.33
	ince with TPD	M V2 Ch4		_			~ ·			AM	PM	WEEKEND
Calculated b	oy:			Date:	Dec-24		Checked by:	:				



# Appendix C

# **Description of Level-of-Service (LOS)**

# on Footpaths



## Appendix C - Description of Level-of-Service (LOS) for Footpaths

LOS	Flow Rate (ped/min/m)	Description
А	≤ 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
В	16 - 23	Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
С	23 - 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional stream. Where reverse direction or crossing movement exist, minor conflicts will occur, and speed and volume will be somewhat lower.
D	33 - 49	Freedom to select individual walking speeds and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflicts is high and its avoidance requires changes of speeds and position. The LOS provides reasonable fluid flow; however considerable friction and interactions between pedestrians are likely to occur.
E	49 - 75	Virtually, all pedestrians would have their normal walking speeds restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulties. Design volumes approach the limit of walking capacity with resulting stoppages and interruptions to flow.
F	> 75	Walking speeds are severely restricted. Forward progress is made only by shuffling. There are frequent and unavoidable conflicts with other pedestrians. Cross- and reverse-movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristics of queued pedestrians than of moving pedestrian streams.

Source from Transport Planning & Design Manual. Volume 6 Chapter 10 Section 10.4.2.