PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE DEVELOPMENT SCHEME TO INCLUDE WETLAND RESTORATION PROPOSAL AND PROPOSED FILLING OF PONDS/LAND AND EXCAVATION OF LAND IN "OU(CDWRA)" ZONE AT VARIOUS LOTS IN D.D. 104, NORTH OF KAM POK ROAD EAST, POK WAI, YUEN LONG, NEW TERRITORIES UPDATED TRAFFIC IMPACT ASSESSMENT





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1. INTRODUCTION

1.1 Background

- 1.1.1 The proposed residential development is situated at Various lots in D.D.104, North of Kam Pok Road East, Pok Wai, Yuen Long, New Territories as indicated in **Drawing 1.1**.
- 1.1.2 The Application Site is currently zoned as "Other Specified Uses" annotated "Comprehensive Development to include Wetland Restoration Area" on the Approved Nam Sang Wai Outline Zoning Plan No.: S/YL-NSW/8 (the "OZP"). In addition, the southern part of the application site falls within the boundary of Wetland Buffer Area in accordance with the Town Planning Board Guideline 12C "Application for Developments within Deep Bay Area under Section 16 of the Town Planning Ordinance" ("TPB PG-No. 12C").
- 1.1.3 MVA Hong Kong Limited has been commissioned by the Applicant as a traffic consultant to carry out a Traffic Impact Assessment (TIA) in support of the present Section 16 application for a proposed comprehensive development scheme to include wetland restoration proposal. This TIA study is to investigate the potential traffic impact of the proposed development scheme on the local road system.

1.2 Study Objectives

- 1.2.1 The objective of this TIA is to assess the potential traffic impact due to the proposed development on the area with a view to supporting this planning application. The following tasks were carried out and included in this report:
 - Present the proposed development schedule and its internal transport provisions;
 - Review the current traffic conditions in the vicinity;
 - Estimate the traffic generation/attraction of the proposed development;
 - Produce traffic forecasts for the local road network at the adopted design year;
 - Investigate the traffic impact on the local road network upon operation of the proposed development; and
 - Suggest any traffic improvement measures, if considered necessary, to alleviate the potential traffic problem.

1.3 Report Structure

Updated Traffic Impact Assessment

- 1.3.1 Following this introductory chapter, there are five further chapters;
 - Chapter 2 Proposed Development, introduces the proposed development scheme;
 - Chapter 3 Existing Traffic Context, reviews the current traffic condition in the vicinity;
 - Chapter 4 Traffic Forecasting, describes the traffic forecasting methodology;
 - Chapter 5 Traffic Impact Assessment, describes the assessments conducted;
 - Chapter 6 Conclusions, summarizes and concludes the study findings.



2. PROPOSED DEVELOPMENT (UPDATED)

2.1 Proposed Development Schedule

2.1.1 The proposed scheme comprises a total of 90 units (i.e. 65 blocks of 2- to 4-storey on top of 1-level communal basement carpark and 25 houses of 3-storey including carport) with a total domestic GFA, approximately 20,430m² (round-up figure). The main development parameters of the proposed scheme are summarized in **Table 2.1**.

Table 2.1 Development Parameters

Type of Unit (1)	Average Flat Size (sqm)	No. of Units	GFA (sqm) ⁽²⁾
A-UPPER	229	6	1,374
A-LOWER	246	6	1,476
С	196	25	4,900
В	334	24	8,016
D	184	2	368
E	159	27	4,293
	Total	90	about 20,430
Application Site	Average Flat Size (sqm)	No. of Units	GFA (sqm)
Northeast part (3)	about 293	65	about 15,530
Southwest part (4)	196	25	about 4,900
	Total	90	about 20,430

Note:

2.2 Vehicular Access Arrangement

- 2.2.1 Due to the limitation of the Application Site and in order to minimize the potential impact on the wetland restoration area, the whole development is proposed to divide into two parts, as presented in **Drawing 2.1**, it is therefore proposed to provide two vehicular accesses in this proposed development. The main vehicular access point (about 7.3m wide) of the proposed development is proposed at Kam Pok Road East. The second vehicular access point with around 7.3m wide of single two-lane carriageway and 2m wide of footpath is proposed at the Application Site. The location of these two proposed two vehicular access points are illustrated in **Drawing 2.1**.
- 2.2.2 Swept path analysis of private vehicles, 11m long vehicles and fire engines at these two on-site vehicular accesses are attached in **Appendix B.**

2.3 Internal Transport Facility

2.3.1 The parking and loading/unloading provisions for the proposed comprehensive development are proposed in accordance with the Hong Kong Planning Standards and Guidelines "HKPSG" (August 2021 Edition). **Table 2.2** provides the breakdown of the calculations of the proposed provisions.

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⁽¹⁾ Refer to Drawing 2.1 for the location of different type of unit.

⁽²⁾ Round-up figures.

⁽³⁾ Northeast part of the Application Site includes unit of A-UPPER, A-LOWER, B, D, and E.

⁽⁴⁾ Southwest part of the Application Site includes unit of C.



Table 2.2 Proposed Internal Transport Facility

	Internal Transport		HKPSG Red	quirement
Development Schedule	Facilities	Use	Min.	Max.
Residential		Private Housing		
- Total GFA: ~20,430m ² - Actual Plot Ratio: 0.4 (1)	Private Car	(i) Residential Units flat size between 130 −160m² ⁽²⁾	28	49
- Total No. of Units: 90 (i) Flat size between	Parking Spaces (5)	(ii) Residential Units flat size over 160m ^{2 (3)}	82	144
130 – 160m²: 27		Sub-total	110	193
nos.		Required Accessible car parking spaces (4)	2	3
160m²: 63 nos.	Motorcycle Parking Spaces (6)	Total	1	1
	Loading/ Unloading Bay (7)	Total	3	3
house for every 1 flat	Bicycle Parking (8)	Total	4	4

Notes:

- (1) For Domestic Plot Ratio (PR) between 0 1, adjustment ratio of 1.3 would be applied for calculating the required private car parking spaces.
- (2) For flat size between $130 160 \text{ m}^2$, 1 private car parking space would be provided for every 0.56 0.98 units.
- (3) For flat size over 160m², 1 private car parking space would be provided for every 0.44 0.77units.

 The standard for the developments of flat size greater than 160m² is a minimum requirement. Request for provision beyond the standard will be considered by Transport Department on a case-by-case basis.
- (4) For total 1 50 nos. of car parking spaces in lot, 1 accessible car parking space is required. For total 51 – 150 nos. of car parking spaces in lot, 2 accessible car parking spaces are required. For total 151 – 250 nos. of car parking spaces in lot, 3 accessible car parking spaces are required
- (5) Please be advised that there is no specific requirement in provision of visitor parking for houses, thus no visitor parking is proposed, or as determined by the Authority.
- (6) In the case of private housing, the calculation shall be based on 1 motorcycle parking space per 100-150 flats excluding non-residential elements.
- (7) Please be advised that there is no specific requirement in provision of loading / unloading bay for houses, thus 3 no. of loading / unloading bay is proposed, or as determined by the Authority.
- (8) For residential developments outside a 2km radius of rail station, 1 bicycle parking space for every 30 flats with flat size smaller than 70m².
- 2.3.2 The parking and loading/unloading provisions for the proposed comprehensive development are summarised in **Table 2.3**. Swept path analysis of private cars, 11m long vehicles and refuse collection vehicles on GF and Basement of the Application Site are attached in **Appendix B**, demonstrating sufficient space for maneuvering of long vehicles.

Table 2.3 Proposed Parking Provision

Internal Transport Facilities	Proposed Provision
Private Car Parking Spaces	193
Visitor Parking Spaces	10 (1)
Motorcycle Parking Spaces	20 ⁽²⁾
Loading/ Unloading Bay for heavy goods vehicle	3
Bicycle Parking	14 ⁽³⁾

Notes:

- (1) Based on HKSPG requirement for house type, no provision is required for the provision of parking for visitor parking. As requested by TD, additional 10 visitor parking spaces are proposed.
- (2) As requested by TD, additional 19 motorcycle parking spaces are proposed (up to a ratio of 10% of number of private car parking space).
- (3) As requested by TD, additional 10 bicycle parking spaces are proposed.

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3. EXISTING TRAFFIC CONTEXT (UPDATED)

3.1 Surrounding Road Network

- 3.1.1 As indicated in **Drawing 1.1**, the site is located north of Kam Pok Road East. The development traffic from San Tin Highway would access the site via Castle Peak Road Tam Mi Section and Kam Pok Road East. The proposed ingress and egress routes of the Application Site are illustrated in **Drawing 3.1**.
- 3.1.2 Kam Pok Road East is a standard single-two lane carriageway of 10m wide with a 2m wide footpath along its two sides. It mainly serves the local area (both for the Application Site and its surrounding developments).
- 3.1.3 Castle Peak Road Tam Mi Section is also a standard single-two lane carriageway of 6.75m wide with a 2m wide footpath to the western side of the Application Site. It is a local access road.

3.2 Current Junction Operational Performance

3.2.1 A total of three local junctions, as indicated in **Drawing 3.2**, have been identified for assessment purpose in this study. These three identified junctions are listed in **Table 3.1**, and their existing layouts are shown in **Drawings 3.3** to **3.5**.

Table 3.1 Identified Local Key Junctions

Ref. ⁽¹⁾	Junction	Туре	Drawing No.
J1	Fairview Park Boulevard Roundabout	Roundabout	3.3
J2	Castle Peak Road – Tam Mi / Kam Pok Road East	Signal	3.4
J3	Kam Pok Road East / Kam Pok Road	Priority	3.5

Remark: (1) Refer to **Drawing 3.2** for junction reference.

Traffic Surveys

- 3.2.2 A series of manual classified traffic surveys were conducted at the three identified junctions to establish the current traffic condition in the vicinity. The surveys were carried out during the morning and evening peak hour periods on a typical weekday in early-December 2022. According to the HKSAR government's announcement regarding adjustments of social distancing measures on 21 March 2022 and 14 April 2022, all catering and scheduled premises have been allowed to re-open based on the first and second stages of relaxation in social distancing measures since 21 April 2022 and 19 May 2022. Social and economic activities have resumed in an orderly manner, and the daily lives of citizens have largely returned to normalcy. Therefore, it is considered that the traffic survey in early-December 2022 could reflect the normal traffic condition and was not underestimated due to pandemic.
- 3.2.3 The results of the survey results have indicated that the morning and evening peak hours occur during 08:00 09:00 and 17:30 18:30 respectively. The observed weekday peak hour traffic flows are shown in **Drawing 3.6.**
- 3.2.4 Junction capacity assessments of the identified junctions were conducted with respect to the observed traffic flows in order to evaluate their current operational performance during the

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weekday peak hours and the results are summarised in **Table 3.2**. The detailed calculation sheet is provided in **Appendix A**.

Table 3.2 Current Junction Operational Performance

Ref. ⁽¹⁾	l. matica	RC/RFC (2)		
Ket. 1-7	Junction	AM Peak PM Peak		
J1	Fairview Park Boulevard Roundabout	0.58	0.56	
J2	Castle Peak Road – Tam Mi / Kam Pok Road East	+23%	+48%	
J3	Kam Pok Road East / Kam Pok Road	0.36	0.23	

Remarks: (1) Refer to **Drawing 3.2** for junction reference.

3.2.5 The results of the junction operational performance as indicated in **Table 3.2** have demonstrated that all identified junctions are currently operating with ample capacity during the typical weekday morning and evening peak hours.

3.3 Road Link Assessment

3.3.1 Apart from junction capacity assessments, road link assessments for the identified road links were also carried out as illustrated in **Drawing 3.2**. Performance of these road links were assessed in terms of traffic volume/capacity (V/C) ratio and the results are presented in **Table 3.3** below.

Table 3.3 Road Link Assessment in Year 2022

			Link	Adopted		Year 2022						
Ref. ⁽¹⁾	Road Link	Direction	Link Capacity ⁽²⁾ (veh/hr)	Link		AM		PM				
Kei.	Noau Link	Direction		Capacity (veh/hr)	Flows (pcu/hr)	Flows (veh/hr)	V/C ratio	Flows (pcu/hr)	Flows (veh/hr)	V/C ratio		
1.1	Castle Peak	NB	850	765 ⁽³⁾	500	313	0.41	385	262	0.34		
LT	Road – Tam Mi	SB	850	765 ⁽³⁾	320	192	0.25	315	183	0.24		
	Kam Pok Road	EB	1100	990(3)	250	120	0.12	185	102	0.10		
L2	East	WB	1100	990 ⁽³⁾	250	142	0.14	215	119	0.12		
L3	Kam Dak Baad	EB	1100	990(3)	135	66	0.07	110	62	0.06		
LS	Kam Pok Road	WB	1100	990 ⁽³⁾	170	96	0.10	145	81	0.08		
L4	Fairview Park	EB	2600	2600	845	735	0.28	625	526	0.20		
L4	Boulevard	WB	2600	2600	640	521	0.20	810	737	0.28		

Remark: (1) Refer to **Drawing 3.2** for the location of road section.

3.3.2 As shown in the above table, results of road link assessment have indicated that all the identified road links are currently operating with sufficient capacity (i.e. V/C ratio ≤0.85) during the typical weekday morning and evening peak hours.

⁽²⁾ RC = reserved capacity, RFC = ratio of flow to capacity.

⁽²⁾ Refer to TPDM Vol. 2 Ch. 2.4 for the link capacity.

⁽³⁾ Since the surveyed proportion of heavy vehicles exceeded 15%, 10% reduction in link capacity has been adopted.



3.4 Existing Public Transport Services

3.4.1 Three franchised bus routes and four GMB routes are operating along Castle Peak Road to/from Yuen Long City Centre. Details of these franchised bus and GMB services are listed in **Table 3.4** and illustrated in **Drawing 3.7**.

Table 3.4 Existing Public Transport Services

Route	Destination – Origin	Peak Frequency (minutes)					
Franchised Bu							
76K	Long Ping Estate – Ching Ho Estate	20 – 30					
976	Lok Ma Chau (San Tin) → Sai Wan Ho	3 trips in Morning Peak					
976	Sai Wan Ho → Lok Ma Chau (San Tin)	3 trips in Evening Peak					
976A	Lok Ma Chau (San Tin) – Siu Sai Wan (Island Resort)	1 trip in Morning Peak					
976A	Siu Sai Wan (Island Resort) – Lok Ma Chau (San Tin)	1 trip in Evening Peak					
Green Mini-Bu	Green Mini-Bus						
36	Yuen Long (Fook Hong Street) – Tai Sang Wai Rural Office	10 – 15					
37	Yuen Long (Fook Hong Street) – Yau Tam Mei Village Office	12 – 15					
38	Yuen Long (Fook Hong Street) – Yau Tam Mei West	10 – 15					
75	Yuen Long (Fook Hong Street) – Lok Ma Chau Spur Line Public Transport Interchange	7-9					

Public Transport Utilisation

3.4.2 A traffic survey was conducted on a typical weekday in September 2023 to identify the peak hour public transport utilization at the existing bus and GMB stops near the Application Site at Fairview Park Boulevard, Castle Peak Road – Tam Mi, and San Tam Road. The survey results are summarized in **Table 3.5**.



Table 3.5 Observed Peak Hour Public Transport Utilisation

-	Table 5.5 Observed Peak Hour Public Transport Offisation								
Bound	Mode	Route No.	Observed No. of Vehicles	Total Service Capacity (pax) ⁽¹⁾	Observed Occupancy (pax)	Occupancy Rate (%)			
	AM Peak (07:30 – 09:30)								
		37	13	217	103	47%			
	GMB	38	12	198	100	51%			
Northbound		75	7	115	60	52%			
Northbound	Bus	76K	5	450	176	39%			
			Total	980	439	45%			
		36	9	171	77	45%			
	GMB	37	12	198	142	72%			
		38	12	198	171	86%			
Southbound	Bus	76K	5	450	140	31%			
		976	1	90	23	25%			
	Total			1,107	552	50%			
		PM Peak	(17:00 – 19:00)					
		37	14	233	158	68%			
	GMB	38	15	249	174	70%			
Northbound		75	3	51	37	73%			
Northboand	Bus	76K	5	450	284	63%			
			Total	983	653	66%			
		36	8	152	81	53%			
	GMB	37	14	233	148	64%			
Southbound		38	12	198	107	54%			
Southboand	Bus	76K	4	360	99	28%			
			Total	943	435	46%			

Remark: (1) Based on TD's comment, in estimating the PT trips provided by each bus, 120 pax/bus with 75% occupancy rate should be adopted as the calculation basis, which equals to 90 pax/bus.

- 3.4.3 From **Table 3.5**, all the occupancy rate of existing public transport near the Application Site are below 100%, indicating that the demand for existing public transport service is within capacity during AM and PM peak periods.
- 3.4.4 Based on the number of boarding and alighting passengers from the survey, it is noted that the directional split of local residents in the vicinity is about 10% towards north and 90% towards south in AM peak periods, while 20% towards north and 80% towards south in PM peak periods.

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4. TRAFFIC FORECAST (UPDATED)

4.1 Design Year

4.1.1 The tentative operation year of the proposed development is by 2025. Hence, the design year 2028, three years upon operation, has been adopted for traffic forecast and assessment purposes.

4.2 Reference Traffic Forecast

4.2.1 To estimate the 2028 traffic flows in the local road network, an appropriate growth factor has identified for the area in the first instance.

Traffic Growth

4.2.2 Annual Traffic Census (ATC) traffic count stations are available in the vicinity of the Application Site. Due to the social event in year 2019 and the COVID-19 pandemic situation from years 2020 to 2021, the traffic counts reported in the latest ATC report over the years between 2013 and 2018 have been referenced and the figures are shown in **Table 4.1**.

Table 4.1 ATC Traffic Counts between 2013 and 2018

Road (Section)	From	То	Stn No.	Average Annual Daily Traffic (A.A.D.T.)						Growth Rate (p.a.)
				2013	2014	2015	2016	2017	2018	13/18
San Tin Highway, Castle Peak Road & San Tam Road	Kam Tin Road	Fairview Park Boulevard	5016	90,610	88,800	86,180	92,230	90,650	86,230	-0.99%
Castle Peak Road – Yuen Long	Yuen Long On Lok Road	Kam Tin Road	5019	34,530	36,490	34,380	31,990	30,040	29,300	-3.23%
Castle Peak Road – Tam Mi, Mai Po & San Tin	Fairview Park Boulevard	Lok Ma Chau Road	5257	12,620	10,600	10,510*	10,940*	10,770*	11,980	-1.04%
San Tam Road	Castle Peak Road - Mai Po	Fairview Park Boulevard Roundabout	5297	8,220	6,200	6,140*	6,400*	6,300*	8,540	+0.77%
San Tam Road	Fairview Park Boulevard RA	End	5505	9,030*	11,990	12,090	12,590*	12,390*	12,700*	+7.06%
San Tin Highway	Fairview Park Boulevard	Lok Ma Chau Rd	5508	68,040*	72,580	85,910	90,760*	90,110*	92,980*	+6.44%
San Sham Road	San Tin Interchange	End of San Sham Road	5496	35,980*	30,750	27,750	28,900*	28,450*	29,150*	-4.12%
	Total	259,030	257,410	262,960	273,810	268,710	270,880	+0.90%		

Remark: *AADT estimated by Growth Factor

- 4.2.3 As shown in **Table 4.1**, it is noted that over the past 6 years (i.e., 2013 to 2018), the average annual traffic growth pattern shows a growth rate of +0.90% per annum.
- 4.2.4 Apart from ATC traffic count, reference has been made to the Projection of Population Distribution by Tertiary Planning Unit from 2022-2025 published by the Planning Department as presented in **Table 4.2**.

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Table 4.2 Average Annual Growth Rate of Projection of Population Distribution by Tertiary Planning Unit 2022-2025

Tertiary Planning	Projection of Po	pulation by Terti	Growth Rate (p.a.)		
Unit	2022	2023	2024	2025	22/25
525	1,500	1,500	1,500	1,600	2.17%
526	12,600	12,500	12,500	12,400	-0.53%
541	18,900	18,600	18,500	18,200	-1.25%
542	13,900	13,800	13,900	14,100	0.48%
543 & 546	4,300	4,200	4,800	5,000	5.16%
544	3,000	3,000	3,000	3,000	0.00%
548	4,000	3,900	3,900	3,900	-0.84%
Total	58,200	57,500	58,100	58,200	0.00%

Remark: (1) Projection of Population by Tertiary Planning Unit are taken from Table 15 of "Projection of Population Distribution 2021-2029" published by Planning Department.

- 4.2.5 As shown in **Table 4.2**, Projection of Population by Tertiary Planning Unit shows there will be no changes in population from year 2022 to year 2025.
- 4.2.6 Based on the information given by Annual Traffic Census (ATC) traffic count historical data and Projection of Population by Tertiary Planning Unit as shown in **Tables 4.1** to **4.2**, in order to provide a conservative assessment, the growth rate +1.0% per annum is being adopted to cover the growth in traffic from year 2022 to design year 2028.

Adjacent Planned/Committed Developments

4.2.7 A number of other planned/committed developments have been identified in the vicinity of the Application Site expected to be completed by year 2028. The development schedules of these developments are outlined in **Table 4.3** and the location of these developments are shown in **Drawing 4.1**.

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Table 4.3 Planned/Committed Developments

			Estimated Trip Generations (pcu/hr)					
Ref. (1)	Committed/Approved Developments	Parameters	AM	Peak	PM I	Peak		
			Gen	Att	Gen	Att		
1	Sha Po North Development	82,430 m ² GFA	106	61	44	58		
2	Residential Development R(D) at Kam Pok Road (to the west of Chuk Yuen Tsuen)	13,183 m² GFA	20	13	12	17		
3	Lots 43 S.A RP, 50 S.A and 50 RP in D.D.101, Wo Shang Wai, Mai Po, Yuen Long, New Territories	82,963 m ² GFA	155	88	75	104		
4	Residential Development next to Shek Wu Wai San Tsuen	45,197 m² GFA	81	54	52	60		
5	Residential Development at the Junction of San Tam Road and Maple Gardens 1 st Street	4,249 m ² GFA	5	4	4	5		
6	Residential Development at Kam Pok Road near Fairview Park	55,510 m ² GFA	57	51	67	73		
7	Comprehensive Development and Wetland Protection near Yau Mei San Tsuen	16,200 m ² GFA	27	14	13	18		
8	Lots 8 RP (Part), 14S.B. RP (Part), 45 and 1740S.A. RP in D.D.107 and adjoining government land to the south of Wing Kei Tsuen, Yuen Long	37,171 m ² GFA	85	90	115	132		
9	Lot 1743 S.C. RP (Part) in D.D.107 to the South of Wing Kei Tsuen, Yuen Long	Retail: 38,300 m ² GFA Hotel: 700 Rooms	181	195	209	245		
10	Residential development in D.D.104 and adjoining government land, Mai Po, Yuen Long	7,540 m ² GFA	15	9	9	11		
11	Lots 594, 595 (Part), 600 (Part), 1288 S.B RP (Part), 1289 S.B RP (Part) and 1292 S.B RP (Part) in D.D. 115, Nam Sang Wai, Yuen Long	57 blocks	16	10	9	14		
		1,518 units	109	65	43	56		
4.2	Lots 592 S.C ss.1 S.A, 592 S.C	Commercial (1800m² GFA)	4	4	6	6		
12	ss.4 and 1252 S.C in D.D. 115, Nam Sang Wai, Yuen Long	Wellness Centre	10(2)	10(2)	10 ⁽²⁾	10(2)		
		Special Child Care Centre	10 ⁽²⁾	10(2)	10(2)	10(2)		

Remark: (1) Refer to **Drawing 4.1** for development locations.

(2) Assume nominal trips of 10 pcu/hr.



4.3 Development Traffic Generations

Trip Generation of Proposed Scheme

4.3.1 The proposed development comprises a total of 90 units and their trip generations of the proposed development are estimated in accordance with the relevant trip rates as tabulated in the Transport Planning Design Manual (TPDM). **Table 4.4** summarizes the trip rates of the proposed development.

Table 4.4 Estimated Trip Rates of Proposed Development

	Trip Rates (pcu/hr/flat)						
Private Housing	AM	Peak	PM Peak				
	Gen	Att	Gen	Att			
R(C), Average flat size = 240m ²							
per units, Mean rate, for 65 houses	0.2042	0.2189	0.2235	0.3234			
with an average flat size 239m ²	0.3012						
(Northeast part of Application Site)							
R(C), Average flat size = 240m ²							
per units, Mean rate, for 25 houses	0.3012	0.2189	0.2235	0.3234			
with an average flat size 196m ²	0.3012	0.2189	0.2233	0.3234			
(Southwest part of Application Site)							

^{*} Trip rates extracted from TPDM.

4.3.2 The resulting trips generated and attracted by the proposed development are given in Table **4.5**.

Table 4.5 Estimated Trip Generation and Attraction of Proposed Development

	Trip Generations (pcu/hr)						
	AM	Peak	PM I	'eak			
	Generation	Attraction	Generation	Attraction			
65 houses with an average flat size 239m² (Northeast part of Application Site)	20	15	15	22			
25 houses with an average flat size 196m² (Southwest part of Application Site)	8	6	6	9			
Total (2-way)	4	9	52				

- 4.3.3 As indicated in **Table 4.5**, the proposed development would generate a two-way total of 49 pcu/hr and 52 pcu/hr during the weekday morning and evening peak hour periods respectively.
- 4.3.4 Based on the above, the year 2028 reference traffic flows and year 2028 design flows are produced according to the following:

Year 2028 Reference Case = Observed Traffic Flows x Adopted Grow Factor (i.e. +1.0%) + Other Planned or Committed Development Trip Generation

Year 2028 Design Case = 2028 Reference Case + Proposed Trip Generation due to

Application Site



4.3.5	The traffic flows Drawing 4.2 and	under year Drawing 4.3	2028 reference respectively.	case and	year 20	028 des	sign case	are shown	in
tland Rest	lication for Proposed toration Proposal and CDWRA)" Zone at Var	Proposed Filling	g of Ponds/Land and	d Excavation	of	СНК	50709210		



5. TRAFFIC IMPACT ASSESSMENT (UPDATED)

5.1 Year 2028 Junction Operational Performance

5.1.1 To assess the traffic impact of the proposed development on the surrounding road network at the design year 2028, operational performances of the identified key local junctions J1 and J2 were reviewed based on the existing junction layouts for both reference and design scenarios. As mentioned in **Section 2.2**, the access road with around 7.3m wide of single two-lane carriageway and 2m wide of footpath is proposed to connect the second vehicular access at the southwest of the Application Site to Kam Pok Road East, the junction layout of junction J3 is proposed to be modified slightly as shown in **Drawing 5.1**. The results of the assessment for the year 2028 reference and design scenarios are summarized in **Table 5.1**. The detailed calculation sheet is in **Appendix A**.

Table 5.1 Year 2028 Junction Operational Performance

		RC/RFC (2)					
Ref. ⁽¹⁾	Junction	Reference	Scenario	Design Scenario			
Kei.	Junction	AM	PM	AM	PM		
		Peak	Peak	Peak	Peak		
J1	Fairview Park Boulevard Roundabout	0.77	0.77	0.78	0.79		
J2	Castle Peak Road – Tam Mi / Kam Pok Road	+6%	+11%	0%	+7%		
	East	ŦU%	T11 70	0%	T / 70		
J3	Kam Pok Road East / Kam Pok Road	0.39	0.24	0.39	0.24		

Remarks: (1) Refer to **Drawing 3.2** for junction reference.

- 5.1.2 The results of the above assessment have indicated that the identified key junction J1 and J3 would operate with ample capacity but junction J2 would operate at capacity in year 2028 with the proposed development at the Application Site.
- 5.1.3 In order to cater for the future traffic demand, junction improvement schemes are proposed for junction J2 illustrated in **Section 5.2**.

5.2 Proposed Traffic Improvement Scheme

Proposed Junction Improvement of Kam Pok Road / Castle Peak Road – Tam Mi (J2)

5.2.1 Modification of cycle time of the signal junction is proposed to be increased from 94 and 90 seconds to 120 seconds during AM and PM peak period respectively, while the existing method-of-control for the signal junction is maintained. The junction performance of junction J2 under the proposed improvement scheme is summarized in the below **Table 5.2**. The detailed calculation sheet is in **Appendix A**.

Table 5.2 Junction Performances in year 2028 with Proposed Traffic Improvement Scheme

			Year 2028 R.C. ⁽¹⁾ / DFC ⁽²⁾				
Ref	Junction	Method of Control	Design Scenario (without junction Improvement)		Design Scenario (with junction Improvement)		
			AM Peak	PM Peak	AM Peak	PM Peak	
J2	Castle Peak Road – Tam Mi / Kam Pok Road East	Signal	0%	+7%	+16%	+29%	

⁽²⁾ RC = reserved capacity, RFC = ratio of flow to capacity.



5.3 Year 2028 Road Link Assessment

5.3.1 Road link assessments were also conducted for the identified road links to assess the traffic impact of the proposed development on the surrounding road network at the design year 2028 under reference and design scenarios. The results are presented in **Tables 5.3** to **5.4** below.

Table 5.3 Road Link Assessment in Year 2028 under Reference Scenario

Link Adopted						Year 2028 Reference Scenario					
Ref. ⁽¹⁾	Road Link Dire	Direction	Link Capacity ⁽²⁾	Link	AM			PM			
Nei.		Direction	(veh/hr)	(anacity	Flows (pcu/hr)	Flows (veh/hr)	V/C ratio	Flows (pcu/hr)	Flows (veh/hr)	V/C ratio	
11	Castle Peak	NB	850	765 ⁽³⁾	605	379	0.50	505	344	0.45	
LI	Road – Tam Mi	SB	850	765 ⁽³⁾	425	255	0.33	450	261	0.34	
L2	Kam Pok Road	EB	1100	990 ⁽³⁾	265	127	0.13	200	110	0.11	
LZ	East	WB	1100	990 ⁽³⁾	265	150	0.15	225	124	0.13	
L3	Kam Pok Road	EB	1100	990 ⁽³⁾	140	68	0.07	120	67	0.07	
LS	Kam Pok Roau	WB	1100	990 ⁽³⁾	180	102	0.10	155	87	0.09	
L4	Fairview Park	EB	2600	2600	935	814	0.31	685	576	0.22	
L4	Boulevard	WB	2600	2600	680	553	0.21	860	782	0.30	

Remark: (1) Refer to **Drawing 3.2** for the location of road section.

Table 5.4 Road Link Assessment in Year 2028 under Design Scenario

Link Adopted Year 2028 Reference							rence Scer	ence Scenario			
Ref. ⁽¹⁾	Road Link	Road Link Direction	Capacity ⁽²⁾	Link	AM			PM			
Kei.	Kodu Lilik	Direction	(veh/hr)	Capacity (veh/hr)	Flows (pcu/hr)	Flows (veh/hr)	V/C ratio	Flows (pcu/hr)	Flows (veh/hr)	V/C ratio	
1.4	Castle Peak	NB	850	765 ⁽³⁾	633	396	0.52	526	358	0.47	
L1	Road – Tam Mi	SB	850	765 ⁽³⁾	446	268	0.35	481	279	0.36	
L2	Kam Pok Road	EB	1100	990 ⁽³⁾	293	140	0.14	221	122	0.12	
	East	WB	1100	990 ⁽³⁾	286	162	0.16	256	141	0.14	
L3	Kam Pok Road	EB	1100	990 ⁽³⁾	140	68	0.07	120	67	0.07	
LS	Kam Pok Road	WB	1100	990 ⁽³⁾	180	102	0.10	155	87	0.09	
1.4	Fairview Park	EB	2600	2600	935	814	0.31	685	576	0.22	
L4	Boulevard	WB	2600	2600	680	553	0.21	860	782	0.30	

Remark: (1) Refer to **Drawing 3.2** for the location of road section.

5.3.2 As shown in **Tables 5.3** to **5.4**, results of road link assessment have indicated that all the identified road links are expected to operate with sufficient capacity (i.e. V/C ratio ≤0.85) in year 2028 under reference and design scenarios.

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Pok Wai, Yuen Long, New Territories

⁽²⁾ Refer to TPDM Vol. 2 Ch. 2.4 for the link capacity.

⁽³⁾ Since the surveyed proportion of heavy vehicles exceeded 15%, 10% reduction in link capacity has been adopted.

⁽²⁾ Refer to TPDM Vol. 2 Ch. 2.4 for the link capacity.

⁽³⁾ Since the surveyed proportion of heavy vehicles exceeded 15%, 10% reduction in link capacity has been adopted.



5.4 Public Transport Service Assessment

Public Transport Trips

5.4.1 With reference to TD's Travel Characteristics Survey (TCS) 2011, the public transport demands for the Rezoning Site was estimated with reference to the average daily mechanised trips, the peak hour factor of mechanised trips, public transport modal share, with the assumptions of 90% inbound/outbound trips during AM and PM peak hours respectively. Based on the above assumptions, the public transport demands for the proposed development are estimated in **Table 5.5**.

Table 5.5 Estimated Public Transport Demands for Proposed Development

Index	Parameter	Formula	Result
(a)	Proposed No. of Units	-	90
(b)	Average Domestic Household Size (1)	-	2.7
(c)	Estimated Total Population	(a)*(b)	243
(d)	Average Daily Mechanised Trips per Person (2)	-	1.83
(e)	Peak Hour Percentage of Daily Total (3)	-	12%
(f)	Assumed Percentage of Major Outbound Trips in	-	90%
	Peak Hour		
(g)	Estimated Peak Hour Trips by Proposed Development	(c)*(d)*(e)*(f)	49
(h)	Major Public Transport Modal Share (4)	-	44%
(i)	Estimated Peak Hour Public Transport Demand	(g)*(h)	22
(j)	Northbound Demand	10% (20%)	2(4)
(k)	Southbound Demand	90% (80%)	20(18)

Remarks:

- (1) Period of 10/2023 12/2023 from Census and Statistics Department website.
- (2) With reference to Table A.2 in TCS 2011.
- (3) Peak hour percentage to daily total, with reference to Para. 3.3.7 in TCS 2011.
- (4) With reference to the main transport mode to place of work for Tertiary Planning Unit 541 as extracted from the 2021 Population Census. The major public transport modal share include MTR (~26%), bus (~14%), public light bus (~3%), and LTR (~1%).
- (5) Refer to Section 3.4.4.
- 5.4.2 From **Table 5.5**, it is estimated that there will be one-way of approx. 22 pax/hr of public transport demand generated from the proposed development during the peak hour.
- 5.4.3 The estimated overall public transport demands at Year 2028 are summarized in Table 5.6.

Table 5.6 Estimated Year 2028 Public Transport Demands

Peak Hour	Bound	Average Peak Hour Service Capacity (pax)	Estimated Year 2031 Occupancy (pax) ⁽¹⁾	Additional Passenger Demands (pax) ⁽²⁾	Overall Passenger Demands (pax)	Occupancy Rate (%)
	Northbound	490	231	2	233	48%
AM Peak	Southbound	553	291	20	311	56%
	Northbound	491	343	4	347	71%
PM Peak	Southbound	471	229	18	247	52%

Remarks: (1) +1.0% annual growth rate is applied to the average observed peak hour PT trips to estimate Year 2028 demand; (2) Refer to Table 5.5.

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Pok Wai, Yuen Long, New Territories

Updated Traffic Impact Assessment



5.4.4	From Table 5.6 , it can be shown that the demand for public transport service for Northbound
	and Southbound during AM and PM peak hours would increase upon occupation of the
	proposed development. The detailed arrangement of public transport service enhancement
	such as frequency improvement of the existing services will be subject to actual passenger
	demand and further review with the corresponding public transport operators and
	government departments, if necessary.



6. CONCLUSION (UPDATED)

6.1 Summary

- 6.1.1 The proposed comprehensive development to include wetland restoration proposal is situated at various lots in D.D.104, North of Kam Pok Road East, Pok Wai, Yuen Long, New Territories.
- 6.1.2 The Application Site is currently zoned as "Other Specified Uses" annotated "Comprehensive Development to include Wetland Restoration Area" on the Approved Nam Sang Wai Outline Zoning Plan No.: S/YL-NSW/8 (the "OZP"). In addition, the southern part of Application Site falls within the boundary of Wetland Buffer Area in accordance with the Town Planning Board Guideline 12C "Application for Developments within Deep Bay Area under Section 16 of the Town Planning Ordinance" ("TPB PG-No. 12C").
- 6.1.3 The provision of the internal transport facilities in the proposed development at the Application Site is proposed in accordance with Hong Kong Planning Standards and Guidelines (HKPSG).
- 6.1.4 Two vehicular access points are proposed. Each serves one partial of development within the Application Site. The primary vehicular access of the Application Site is on Kam Pok Road East whilst the secondary one is proposed near the junction of Kam Pok Road East and Kam Pok Road at the southwest of the Application Site with 7.3m wide of single two-lane carriageway and 2m wide of footpath.
- 6.1.5 Traffic surveys were conducted to establish the current traffic condition in the vicinity of the Application Site. The results of the junction capacity assessments and road link assessments have revealed that all the identified local junctions and road links are currently operating with ample capacity.
- 6.1.6 The tentative operation year of proposed development is 2025. Thus, the design year of 2028 is being adopted for traffic forecast and assessment purposes.
- 6.1.7 Operational performances of the identified local junctions and identified road links were assessed based on the anticipated year 2028 traffic flows.
- 6.1.8 Operational assessment was carried out for each identified junction in year 2028. Fairview Park Boulevard Roundabout (J1) and the junction of Kam Pok Road East / Kam Pok Road (J3) would operate with capacity. The results of the assessment have indicated that only the junction of Kam Pok Road / Castle Peak Road Tam Mi (J2) would operate at its capacity. To cater for the future traffic demand, cycle time of the signal junction is proposed to be increased. As such, the junction performance of J2 under the proposed improvement scheme will then operate with ample capacity.
- 6.1.9 Road link assessments were conducted in year 2028. All the identified road links are expected to operate with sufficient capacity (i.e. V/C ratio ≤0.85) in year 2028 under reference and design scenarios.
- 6.1.10 Public transport service capacity has also been assessed upon the completion of the proposed development. The results of this updated assessment have demonstrated that the public transport service capacity in the vicinity could also serve the additional passenger demands. The public transport service enhancement will be subject to further review, if necessary.

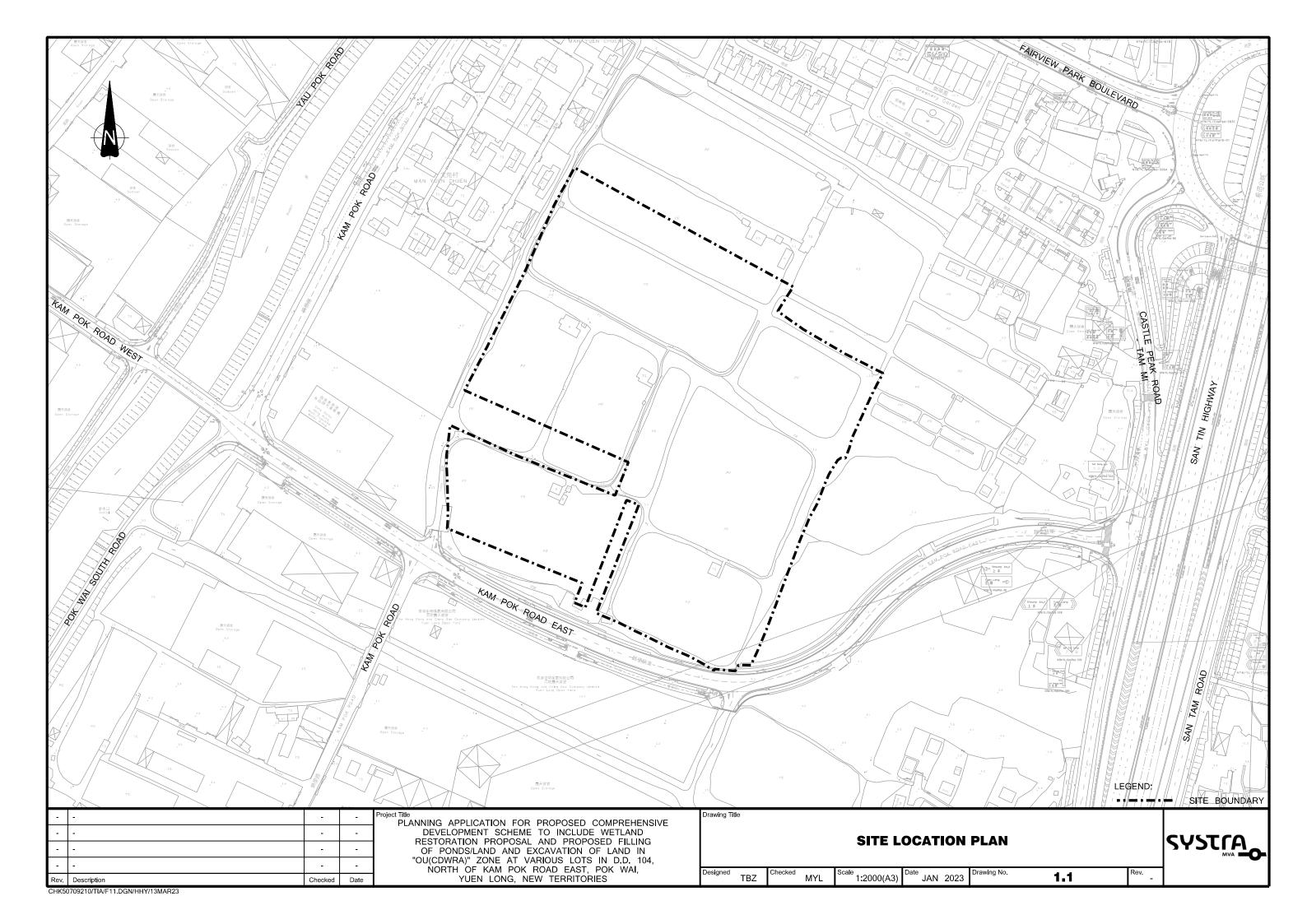
Planning Application for Proposed Comprehensive Development Scheme to include
Wetland Restoration Proposal and Proposed Filling of Ponds/Land and Excavation of
Land in "OU(CDWRA)" Zone at Various Lots in D.D. 104, North of Kam Pok Road East,
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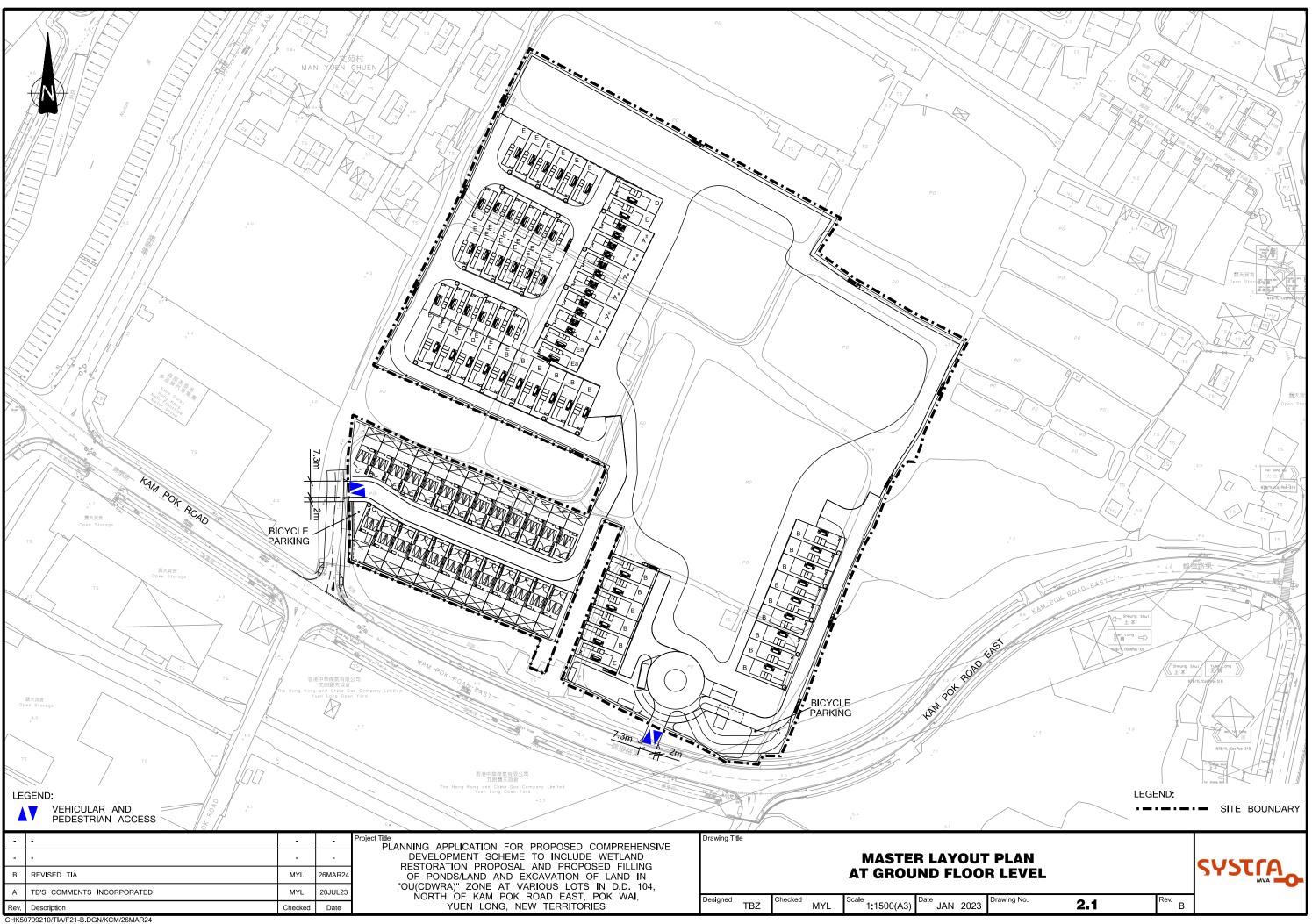


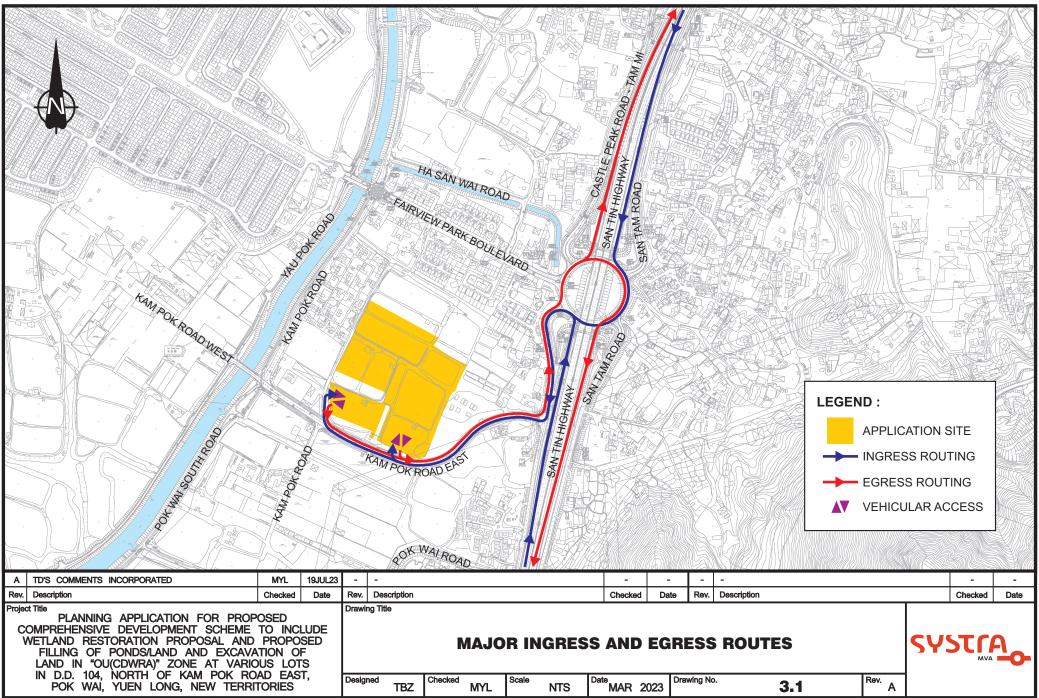
6.2 Conclusion

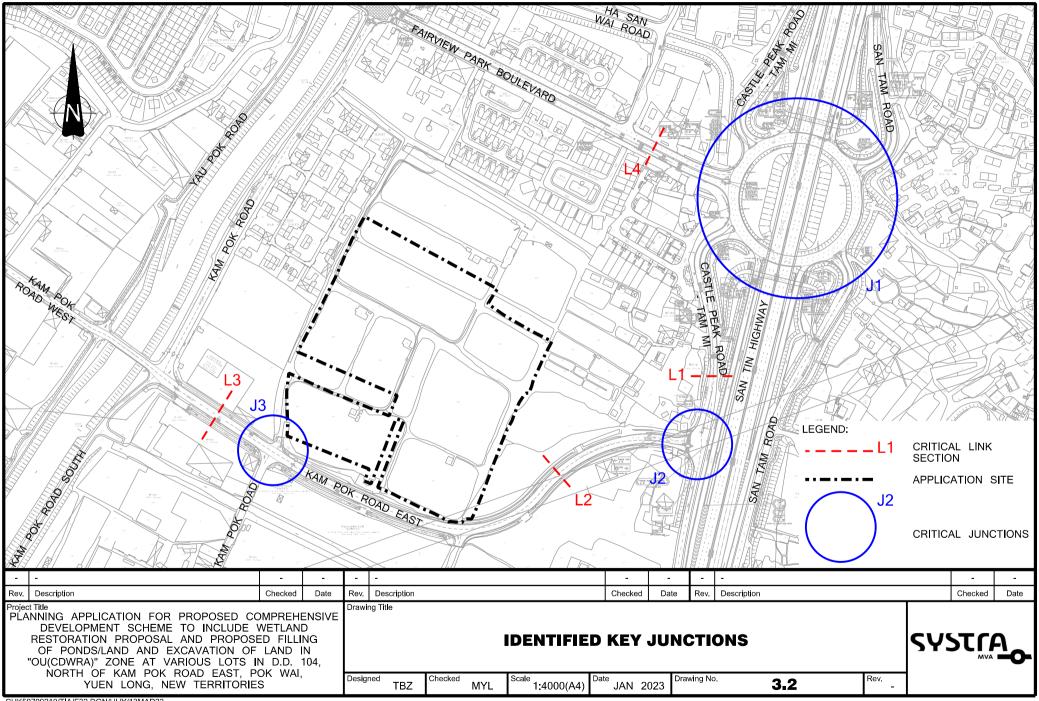
To conclude, the results of this updated traffic impact assessment have demonstrated that the traffic generated by the proposed development can still be absorbed by the nearby road network and the traffic impact to be caused by the proposed development will be insignificant. Hence it can be concluded that the proposed comprehensive development scheme to include wetland restoration proposal is still acceptable in traffic planning term.

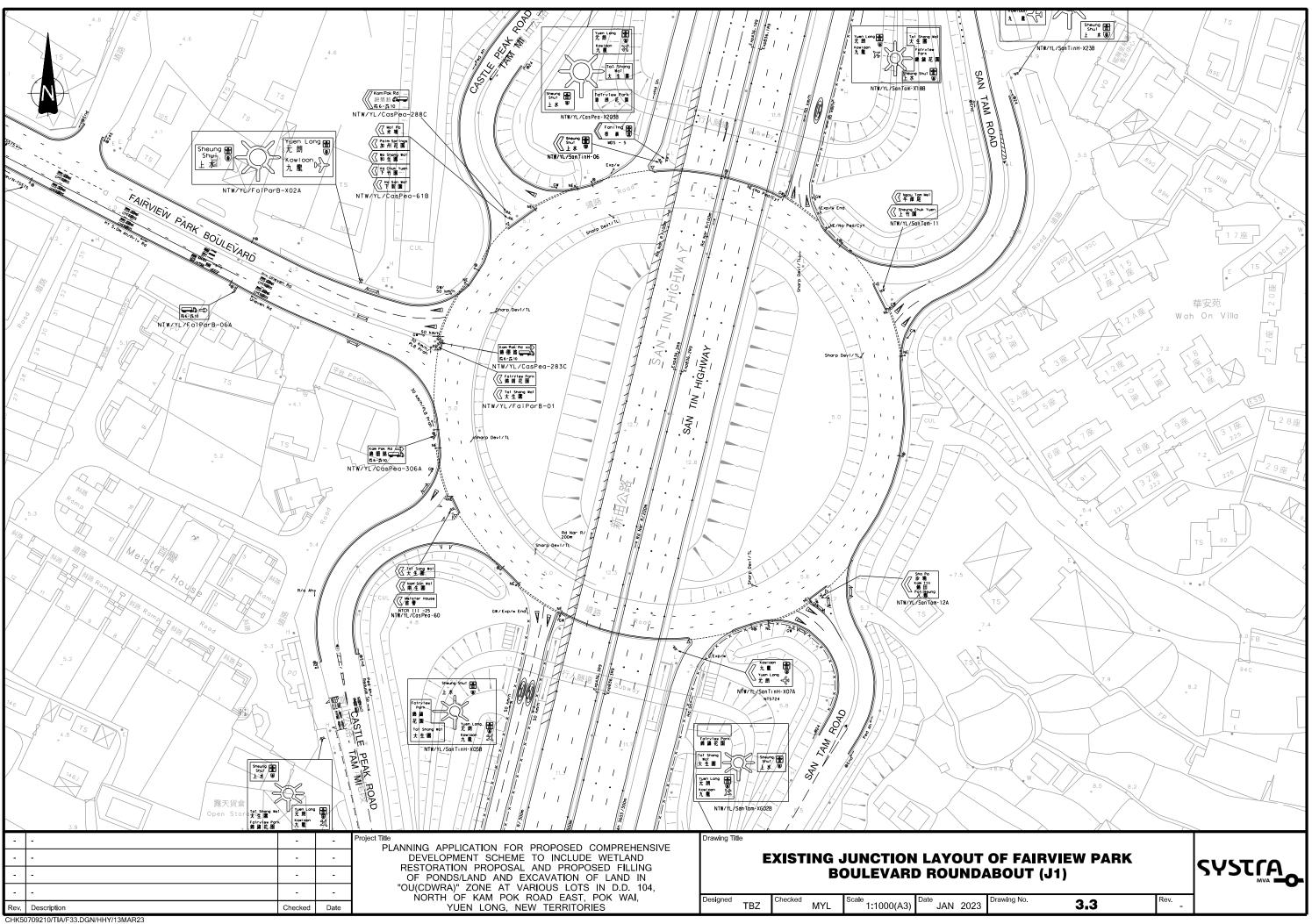
DRAWINGS

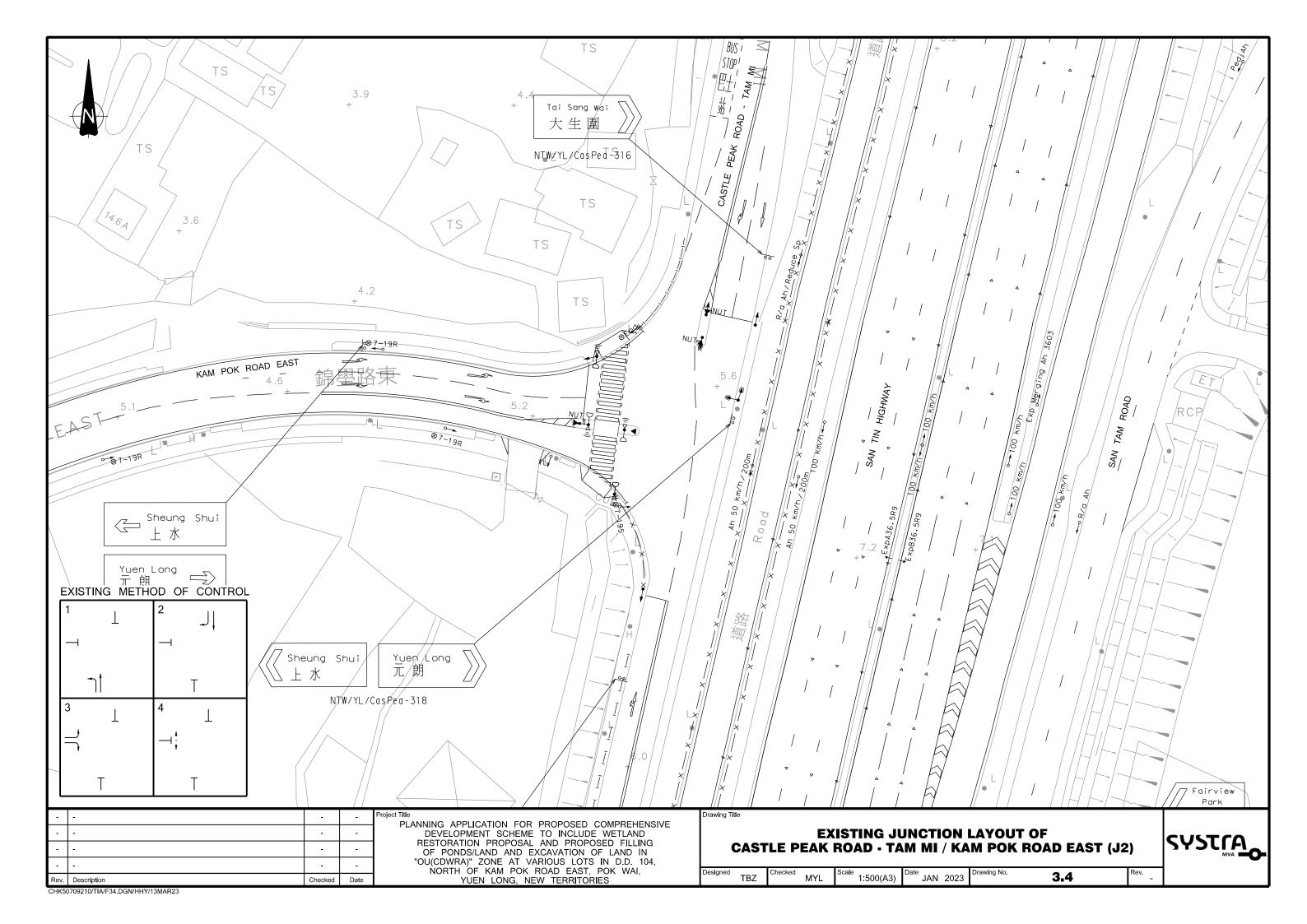


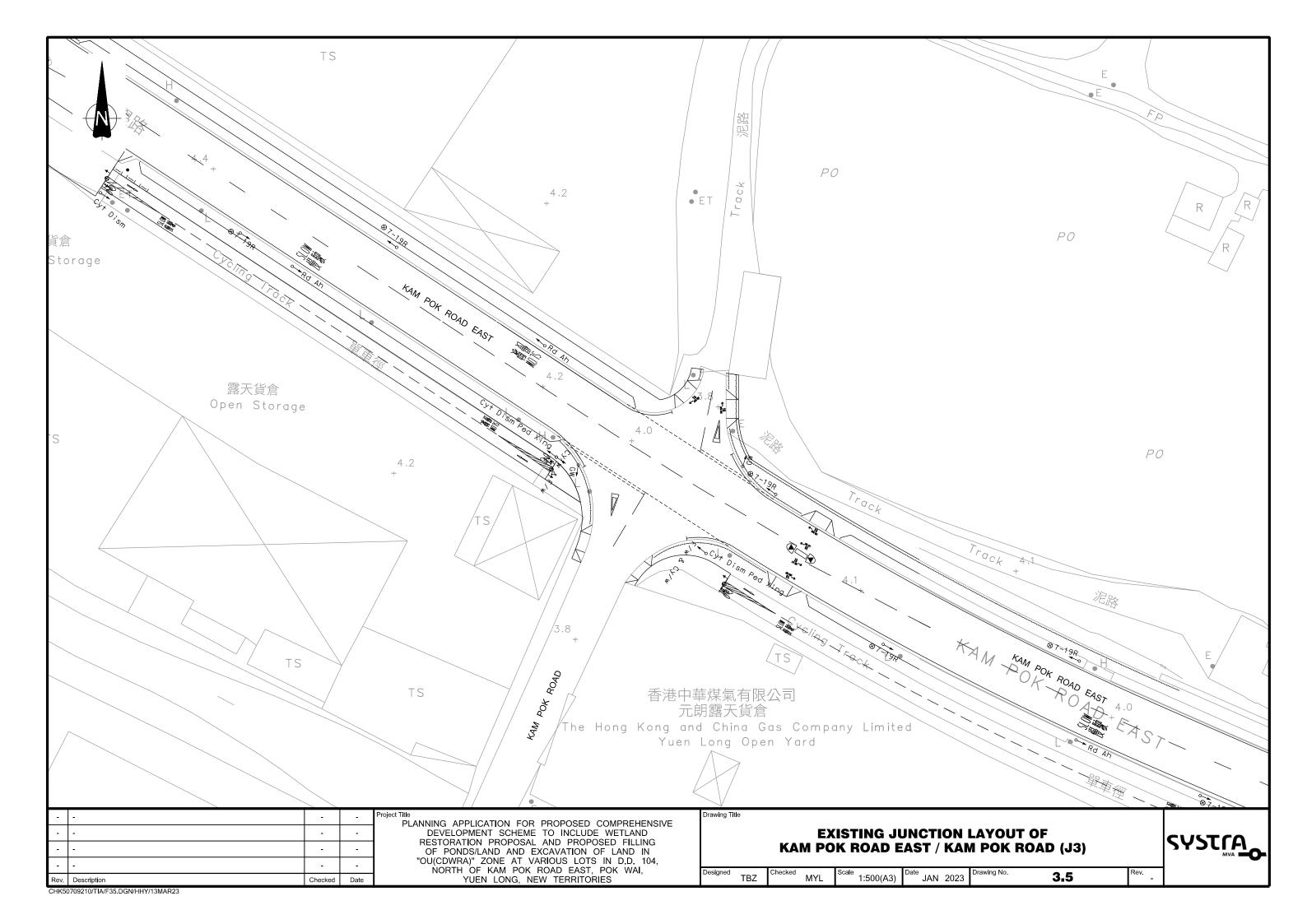


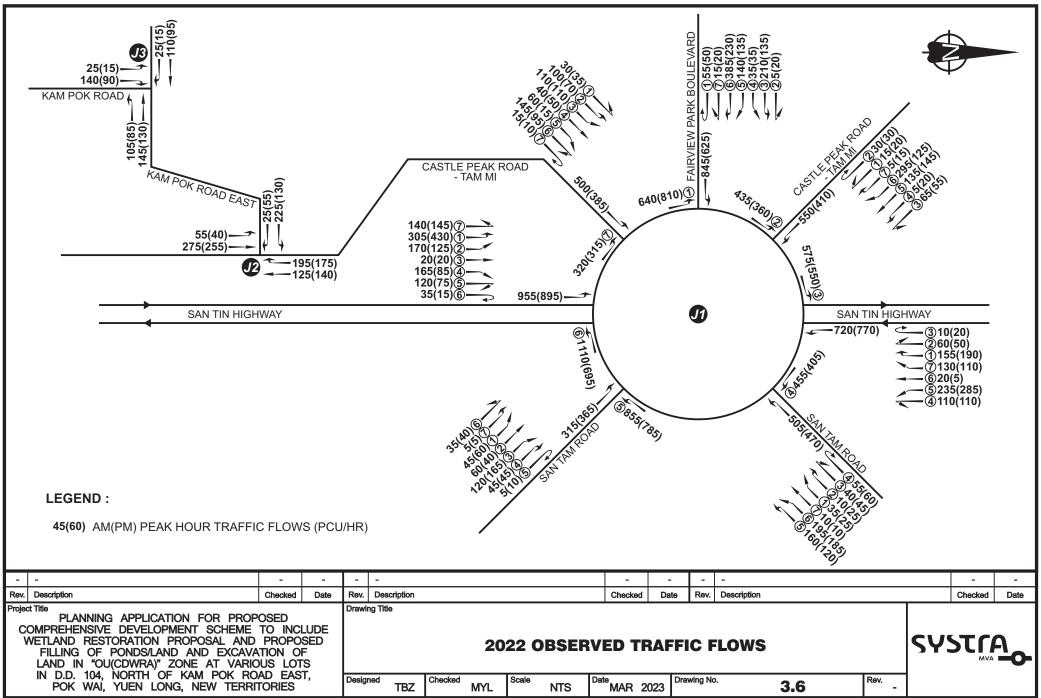


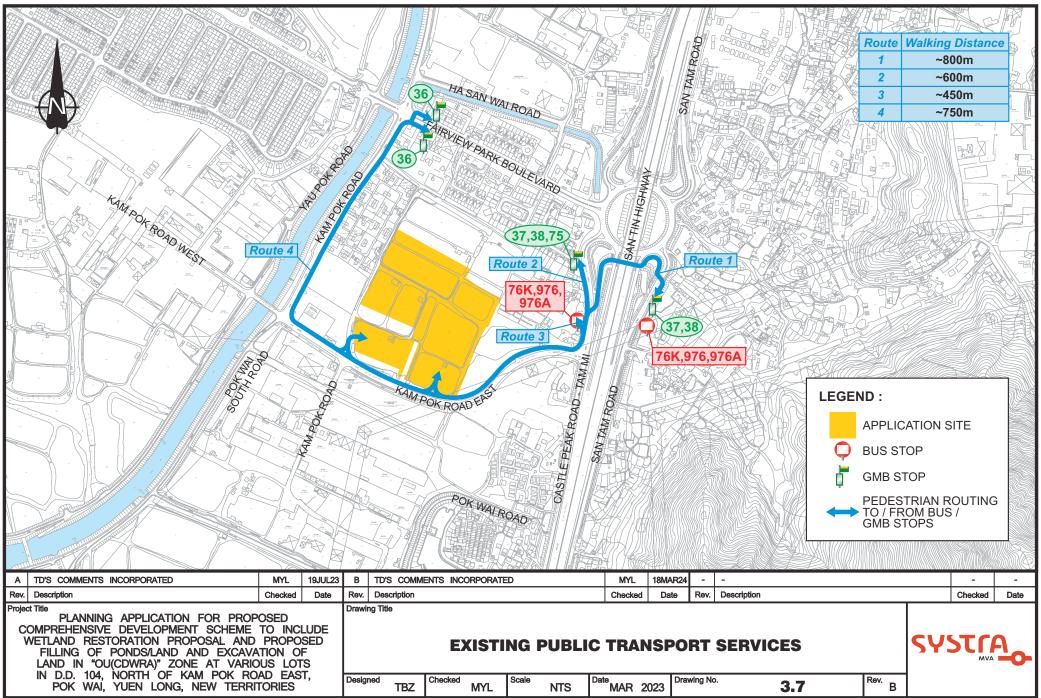


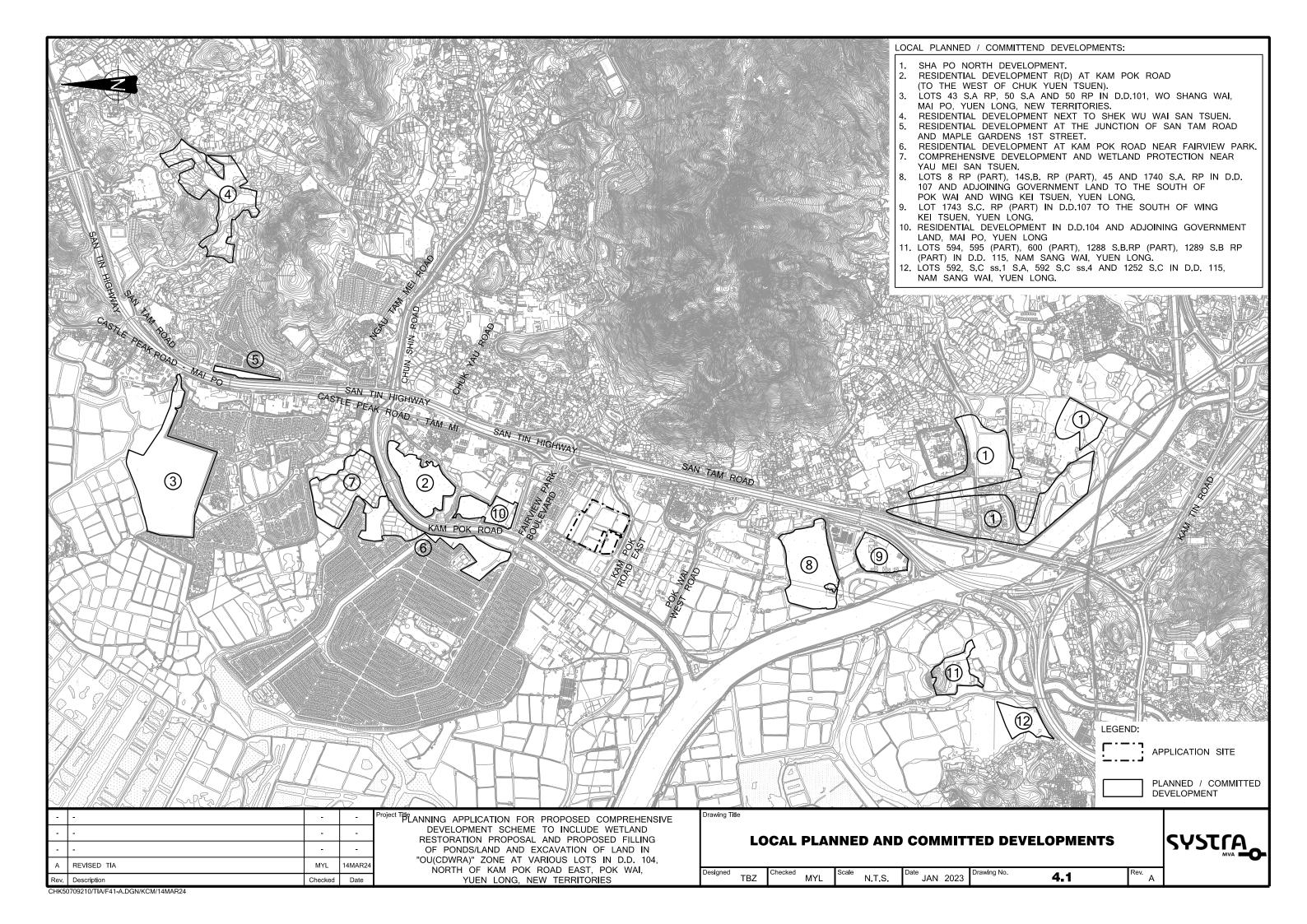


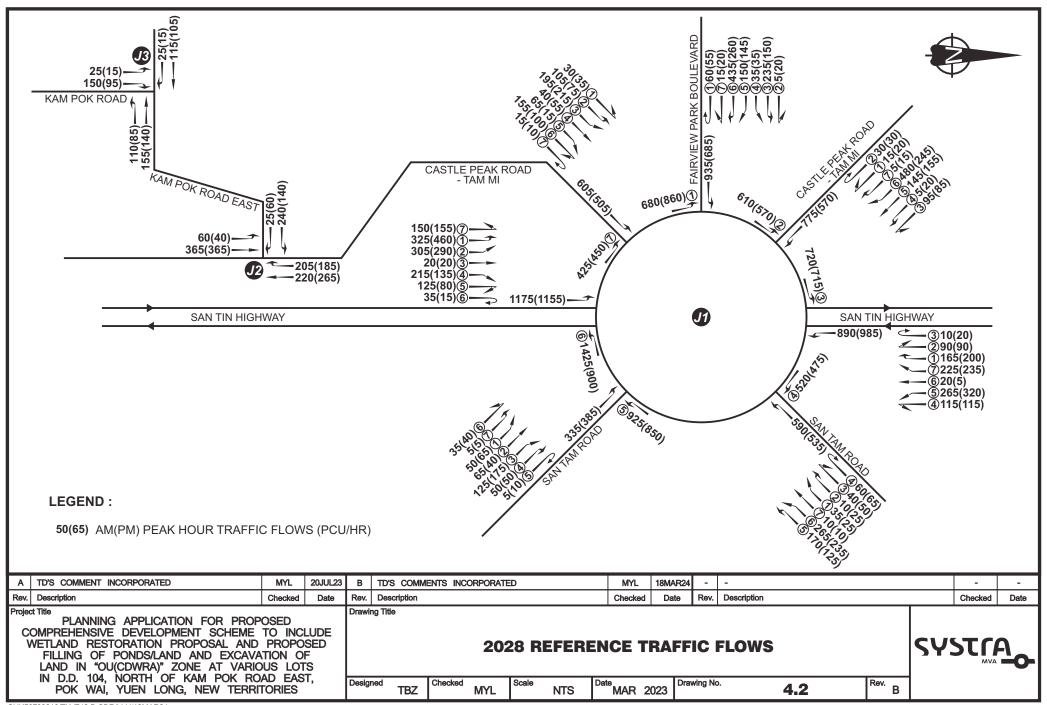


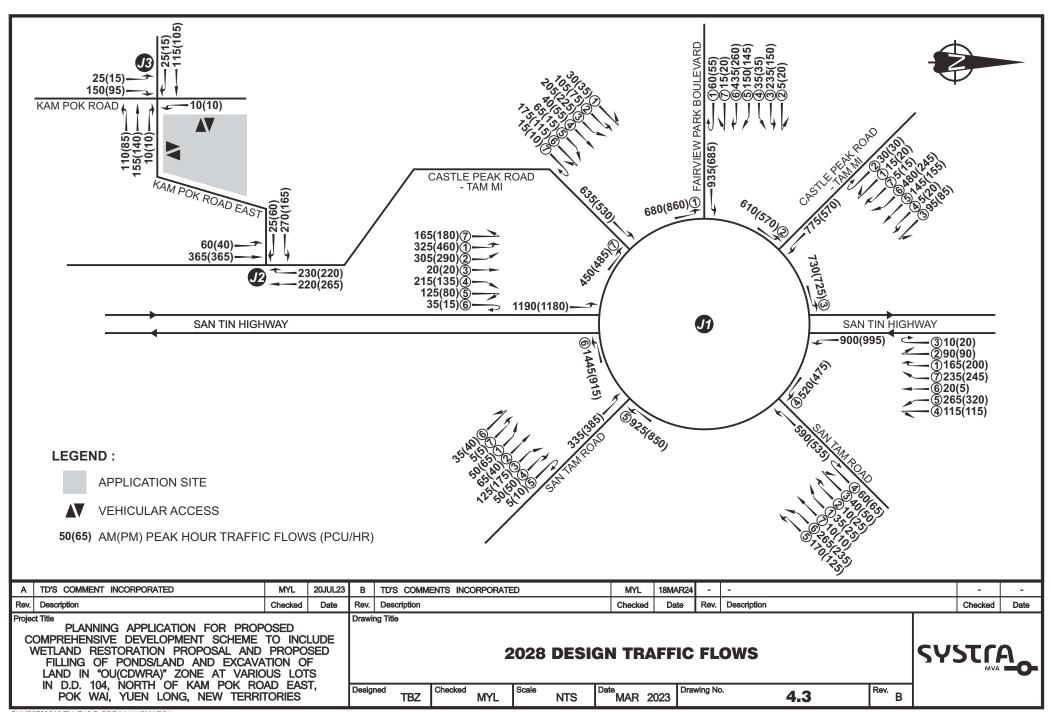


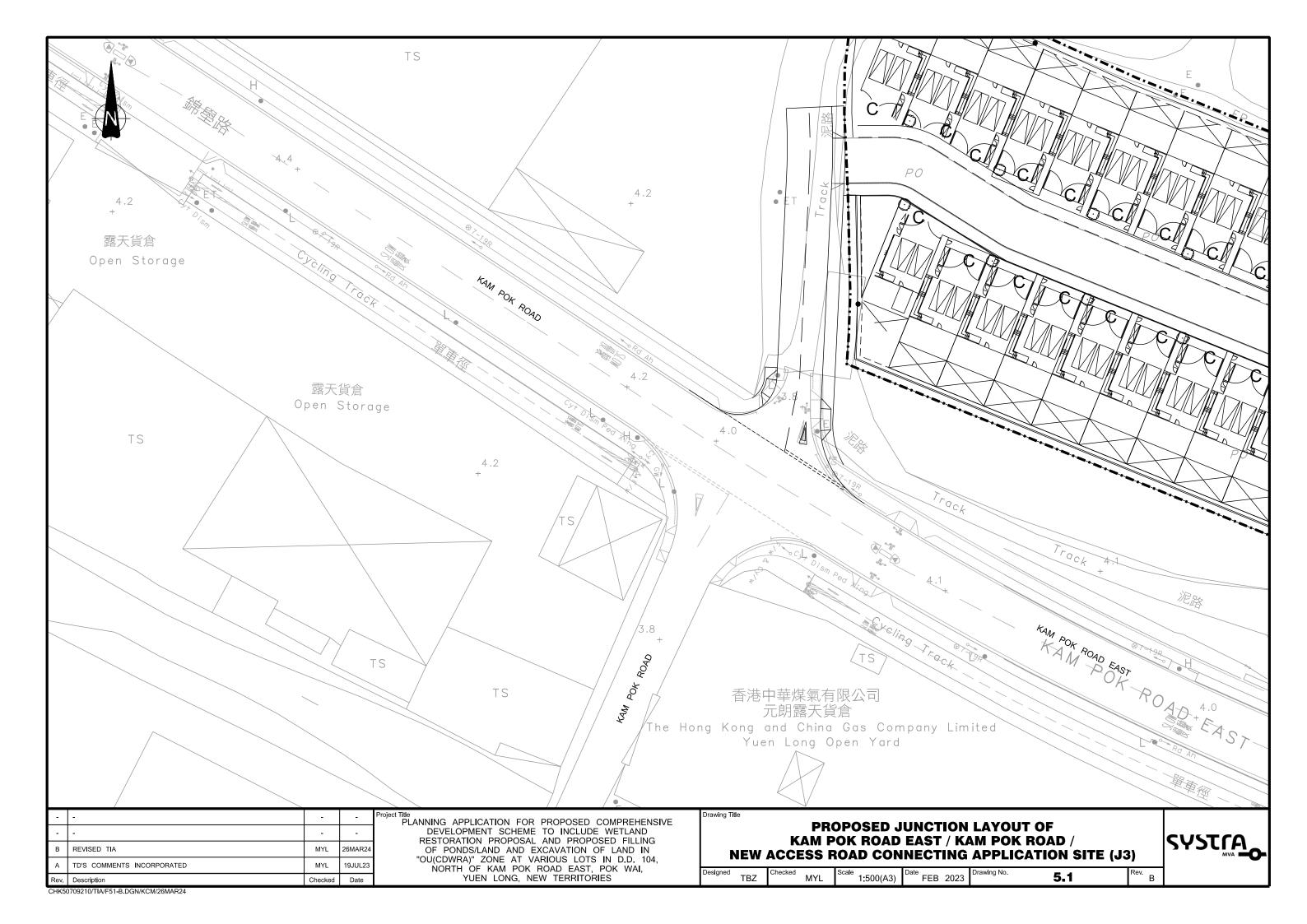












Appendix A Detail Calculation Sheet of Junction Assessment

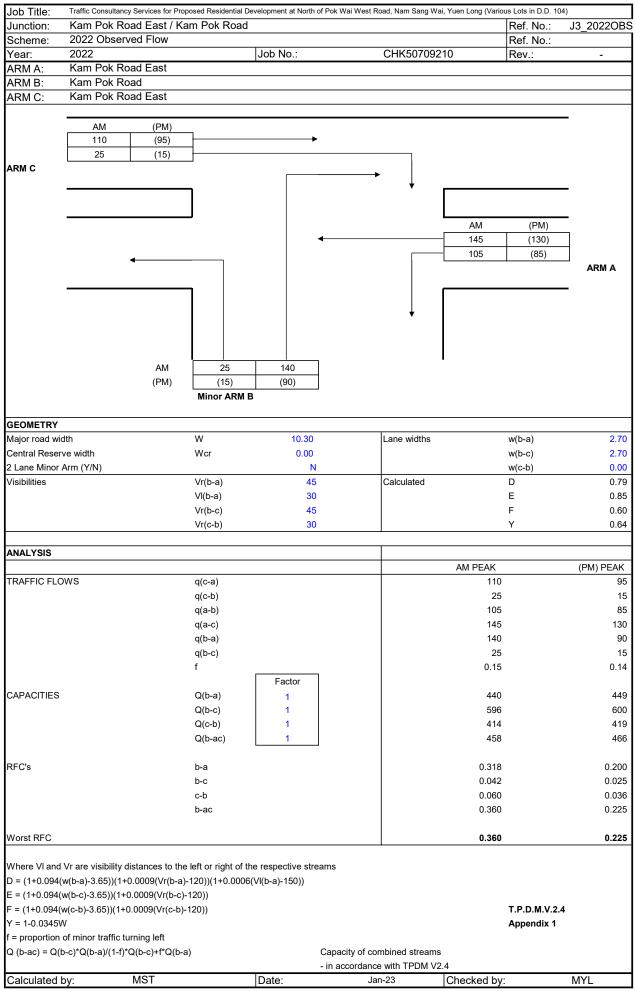
Simplified Roundabout Capacity Calculation

Job Title:	Traffic Consul	tancy Services	or Proposed Resi	dential Devel	opment at North	of Pok Wai Wo	est Road, Nam S	Sang Wai, Yuen Lo	ng (Various Lo	ts in D.D. 104)		
Junction:								Ref. No.: J1 2022Obs				
Scheme:	2022 Observed Flows						Ref. No.:					
Year:	2022			Job No.:			CHK50709210		_			
AM	PM							Rev.:				
ARM A:	Fairview Par	rk Boulevard						Α				
ARM B:		Road(Tam N	(i) (N)				G	I	В			
ARM C:			Road (San Tin	Highway)	(N)		Ŭ \		_			
ARM D:	San Tam Ro			8 37			\rightarrow					
ARM E:	San Tam Ro						F	-/	с			
ARM F:		` /	Road (San Tin	Highway)	(S)							
ARM G:		Road(Tam M	,	0 37	· /							
			, ()				E		D			
GEOMETR	RY											
ARM	v	e	L	r	D	Phi	S					
A	7.00	11.00	14	22	142	35	0.46					
В	5.50	9.00	10	20	142	35	0.56					
C	6.40	8.50	7.5	23	142	30	0.45					
D	6.50	8.50	10	20	142	25	0.32					
E	6.00	8.00	9.5	20	142	35	0.34					
F	6.00	8.50	6.5	25	142	40	0.62					
G	5.00	6.00	7	22	142	30	0.23					
AM FLOW	1											
from \ to	A	В	C	D	Е	F	G	Circ	Entry			
A	55	5	210	35	140	385	15	1415	845	ı		
В	15	30	65	5	135	295	5	1825	550			
С	155	60	10	110	235	20	130	1800	720			
D	35	10	40	55	160	195	10	2065	505			
Е	45	60	120	45	5	35	5	1715	315			
F	305	170	20	165	120	35	140	920	955			
G	30	100	110	40	60	145	15	1555	500			
PM FLOWS	Š							1				
from \ to	A	В	C	D	E	F	G	Circ	Entry			
A	50	20	135	35	135	230	20	1160	625	ı		
В	20	30	55	20	145	125	15	1425	410			
С	190	50	20	110	285	5	110	1285	770			
D	25	25	45	60	120	185	10	1650	470			
Е	60	40	165	45	10	40	5	1335	365			
F	430	125	20	85	75	15	145	1005	895			
G	35	70	110	50	15	95	10	1585	385			
CALCULA'	TIONS							$Q_{\rm E}$	RFC			
ARM	K	X_2	M	F	t_{D}	f_c	AM	PM	AM	PM		
A	0.99	9.09	3640.95	2754	1.00	0.59	1892	2041	0.45	0.31		
В	0.98	7.15	3640.95	2167	1.00	0.51	1214	1414	0.45	0.29		
С	1.01	7.51	3640.95	2275	1.00	0.53	1338	1610	0.54	0.48		
D	1.02	7.72	3640.95	2339	1.00	0.53	1257	1483	0.40	0.32		
Е	0.98	7.19	3640.95	2180	1.00	0.51	1279	1470	0.25	0.25		
F	0.98	7.12	3640.95	2158	1.00	0.51	1647	1605	0.58	0.56		
G	1.00	5.69	3640.95	1723	1.00	0.45	1029	1016	0.49	0.38		
								Crtical Arm:	F	F		
								RFC:	0.58	0.56		
- In accordance with TPDM V2.4									AM	PM		
Calculated b	y:	MST		Date:	Jan-23		Checked b	y:	MYL			
	O:\tbz\[507092-Sigcal-J1.xlsm]J1 2022Obs											

TRAFFIC SIGNALS CALCULATION

MVA HONG KONG LIMITED Job No.: CHK50417310 Design Year: ___2022 Castle Peak Road - Tam Mi / Kam Pok Road East (J2) Junction: 2022 Observed Flows Designed By: MST Checked By: MYL Description: ____ **Revised Saturation** Radius (m) Pro. Turning (%) AM Peak PM Peak Gradient (%) Flow (pcu/hr) Phase Stage Width Right Flow Flow Left Approach AM ΡМ AM PM y Value Critical y y Value Critical y (pcu/hr) (pcu/hr) Castle Peak Rd 17% 14% 0.152 0.152 Α 3.500 20 1940 1945 330 0.170 0.170 295 NB 0.129 0.116 Castle Peak Rd В 3.300 15 1515 1515 195 0.129 175 0.116 SB 3.400 1565 1565 125 0.080 140 0.089 Kam Pok Rd East 0.121 0.070 С 3 3.500 27.5 1865 1865 225 0.121 130 0.070 12.5 ΕB 3.500 1880 1880 25 0.013 55 0.029 Pedestrian Crossing MIN GREEN + FLASH = 13 12 25 Dp Notes: Flow: (pcu/hr) Group A,B,C,Dp Group A,B,C,Dp Site factor has been adopted 0.337 0.419 у У 195(175) 125(140) L (sec) 40 L (sec) 40 225(130) C (sec) 94 C (sec) 90 275(255) 55(40) y pract. 0.517 y pract. 0.500 25(55) R.C. (%) 23% R.C. (%) 48% Stage / Phase Diagrams 1. 2. 5. 3. 4. I/G= 2 I/G= 6 I/G= 5 I/G= I/G= 5 25 I/G= 6 I/G= 2 I/G= 5 I/G= 5 25 I/G= Junction: (J2) JAN, 2023 Castle Peak Road - Tam Mi / Kam Pok Road East (J2)

Simplified Priority Junction Capacity Calculation



Simplified Roundabout Capacity Calculation

					pment at North	of Pok Wai Wes	t Road, Nam Sa	ang Wai, Yuen Long		
Junction:	Fairview Park Roundabout (J1)							Ref. No.: J1_2028Ref		
Scheme:		erence Flo	OW					Ref. No.:		
Year:	2022			Job No.:		CHK507	09210	Rev.:		
AM	PM									
ARM A:	Fairview Par	k Boulevard						Ą		
ARM B:	Castle Peak	Road(Tam M	i) (N)				G		В	
ARM C:			Road (San Tin	Highway) ((N)		`	$\backslash \bot /$		
ARM D:	San Tam Ro							7 \		
ARM E:	San Tam Ro						F	一()	—— с	
ARM F:			Road (San Tin	Highway) ((S)					
ARM G:	Castle Peak	Road(Tam M	i) (S)				_ ′		`_	
CP 01 (PPP							E		D	
GEOMETR	1		T		D	DI.:	C			
ARM	7.00	11.00	L	r	D	Phi	S 0.46			
A	7.00	11.00	14	22 20	142 142	35 35	0.46			
B C	5.50 6.40	9.00 8.50	10 7.5	20	142 142	35 30	0.56 0.45			
D	6.50	8.50	10	20	142	25	0.43			
E	6.00	8.00	9.5	20	142	35	0.32			
F	6.00	8.50	9.5 6.5	25 25	142	40	0.54			
G	5.00	6.00	7	22	142	30	0.02			
AM FLOW	1	3.00	•		1-72		0.20			
from \ to	A	В	С	D	Е	F	G	Circ	Entry	
A	60	5	235	35	150	435	15	1760	935	•
В	15	30	95	5	145	480	5	2085	775	
C	165	90	10	115	265	20	225	2140	890	
D	35	10	40	60	170	265	10	2510	590	
E	50	65	125	50	5	35	5	2175	335	
F	325	305	20	215	125	35	150	1085	1175	
G	30	105	195	40	65	155	15	1835	605	
PM FLOWS	Š							•		
from \setminus to	A	В	С	D	E	F	G	Circ	Entry	_
A	55	20	150	35	145	260	20	1565	685	
В	20	30	85	20	155	245	15	1680	570	
C	200	90	20	115	320	5	235	1535	985	
D	25	25	50	65	125	235	10	2045	535	
E	65	40	175	50	10	40	5	1730	385	
F	460	290	20	135	80	15	155	1215	1155	
G	35	75	215	55	15	100	10	1920	505	
CALCULA	1	37		-		C	1	Q _E	RFC	P
ARM	K	X ₂	M	F 2754	t _D	f _c	AM	PM	AM	PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1690	1804	0.55	0.38
В	0.98	7.15	3640.95	2167	1.00	0.51	1083	1287	0.72	0.44
C	1.01	7.51	3640.95	2275	1.00	0.53	1158	1478	0.77	0.67
D	1.02	7.72	3640.95	2339	1.00	0.53	1015	1268	0.58	0.42
E	0.98	7.19 7.12	3640.95	2180	1.00	0.51	1047	1271 1501	0.32	0.30
F G	0.98 1.00	7.12 5.69	3640.95 3640.95	2158 1723	1.00 1.00	0.51 0.45	1565 903	865	0.75 0.67	0.77 0.58
u	1.00	5.08	JU 4 U.8J	1723	1.00	0.40	1 303	Crtical Arm:	0.67 C	0.56 F
								RFC:	0.77	0.77
- In accorda	nce with TPD	M V2 4						MrC;	0.77 AM	0.77 PM
in accorda	will II D	111 1 4.T							ATA TATE	I IVI

TRAFFIC SIGNALS CALCULATION **MVA HONG KONG LIMITED** CHK50417310 Job No.: Castle Peak Road - Tam Mi / Kam Pok Road East (J2) Design Year: ___2028_ Description: ____ 2028 Reference Flow Designed By: MST Checked By: MYL Revised Saturation Flow (pcu/hr) Radius (m) Pro. Turning (%) AM Peak PM Peak 8 Gradient Phase Stage Width Flow (pcu/hr) Flow Left Critical y Approach ΑM ΑM y Value Critical y y Value (pcu/hr) (m) 4 Castle Peak Rd 3.500 14% 10% 1945 1950 425 0.219 0.219 405 0.208 0.208 NB Castle Peak Rd В 2 3.300 15 1515 1515 205 0.135 185 0.122 SB В 2 3.400 1565 1565 220 0.141 0.141 265 0.169 0.169 3 0.075 Kam Pok Rd East С 3.500 27.5 1865 1865 240 0.129 0.129 140 0.075 EΒ С 3 3.500 12.5 1880 1880 25 0.013 60 0.032 Pedestrian Crossing MIN GREEN + FLASH = 13 12 25 Notes: Flow: (pcu/hr) A,B,C,Dp Group A,B,C,DpGroup * Site factor has been adopted 0.488 0.452 У У 205(185) 4 220(265) 40 L (sec) 40 L (sec) 240(140) C (sec) 94 C (sec) 90 365(365) 60(40) y pract. y pract. 0.517 0.500 25(60) R.C. (%) 6% R.C. (%) 11% Stage / Phase Diagrams 2. 3. 5. 1. 4. Dp I/G= 2 I/G= 6 I/G= 5 I/G= 5 25 I/G= I/G= 2 I/G= 6 I/G= 5 I/G= 5 25 I/G=

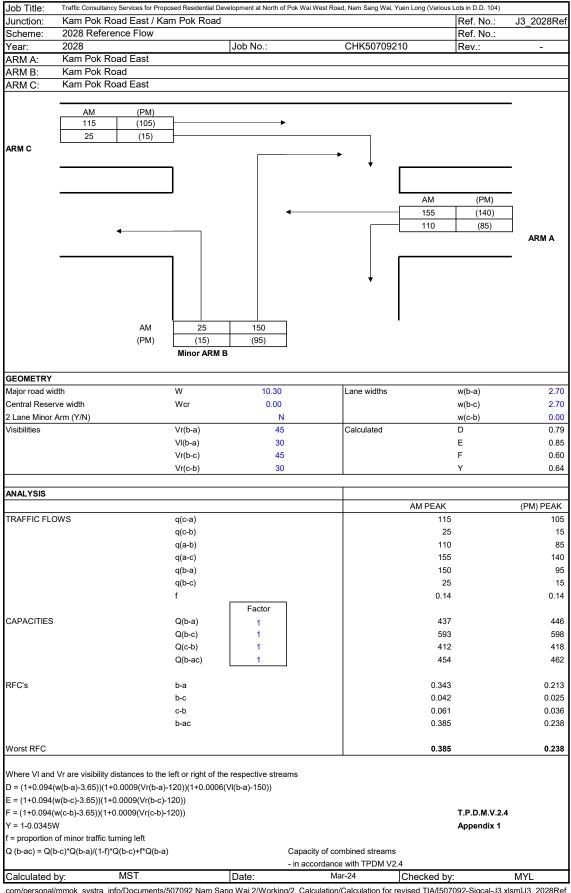
Junction:

Castle Peak Road - Tam Mi / Kam Pok Road East (J2)

MAR. 2024

(J2)

Simplified Priority Junction Capacity Calculation



Simplified Roundabout Capacity Calculation

Job Title:					opment at North	of Pok Wai West	t Road, Nam Sa	ang Wai, Yuen Long		
Junction:	Fairview Park Roundabout (J			1)				Ref. No.: J1_2028Des		
Scheme:	2028 Design Flow							Ref. No.:		
Year:	2022			Job No.:		CHK507	09210	Rev.:	-	
AM	PM									
ARM A:	Fairview Par	rk Boulevard						Α		
ARM B:	Castle Peak	Road(Tam M	(i) (N)				G		В	
ARM C:	New Territo	ries Circular l	Road (San Tir	n Highway) (N)			$\setminus \perp$,		
ARM D:	San Tam Ro	ad (N)						Y Y		
ARM E:	San Tam Ro	oad (S)					F	-()-	с	
ARM F:	New Territo	ries Circular l	Road (San Tir	n Highway) ((S)			】 】		
ARM G:	Castle Peak	Road(Tam M	(i) (S)					/ _ \		
							E		D	
GEOMETI	RY									
ARM	V	e	L	r	D	Phi	S	_		
A	7.00	11.00	14	22	142	35	0.46			
В	5.50	9.00	10	20	142	35	0.56			
C	6.40	8.50	7.5	23	142	30	0.45			
D	6.50	8.50	10	20	142	25	0.32			
E	6.00	8.00	9.5	20	142	35	0.34			
F	6.00	8.50	6.5	25	142	40	0.62			
G	5.00	6.00	7	22	142	30	0.23			
AM FLOW	ī		~		_	-		1 ~		
from \ to	A	В	C 22.5	D	E 150	F	G	Circ	Entry	-
A	60	5	235	35	150	435	15	1790	935	
В	15	30	95	5	145	480	5	2115	775	
C	165 35	90	10	115	265	20	235	2160	900	
D		10	40	60	170	265	10	2540	590	
Е	50	65	125	50	5	35	5	2205	335	
F G	325 30	305 105	20 205	215 40	125 65	35 175	165 15	1095 1835	1190 635	
PM FLOW	Į.	103	203	40	03	173	13	1000	033	
from \ to	A	В	С	D	Е	F	G	Circ	Entry	
A	55	20	150	35	145	260	20	1590	685	•
В	20	30	85	20	155	245	15	1705	570	
C	200	90	20	115	320	5	245	1550	995	
D	25	25	50	65	125	235	10	2070	535	
E	65	40	175	50	10	40	5	1755	385	
F	460	290	20	135	80	15	180	1225	1180	
G	35	75	225	55	15	115	10	1920	530	
CALCULA	ı							$Q_{\rm E}$	RFC	
ARM	K	X_2	M	F	$t_{\rm D}$	f_c	AM	PM	AM	PM
A	0.99	9.09	3640.95	2754	1.00	0.59	1673	1790	0.56	0.38
В	0.98	7.15	3640.95	2167	1.00	0.51	1068	1274	0.73	0.45
C	1.01	7.51	3640.95	2275	1.00	0.53	1147	1470	0.78	0.68
D	1.02	7.72	3640.95	2339	1.00	0.53	999	1254	0.59	0.43
Е	0.98	7.19	3640.95	2180	1.00	0.51	1032	1259	0.32	0.31
F	0.98	7.12	3640.95	2158	1.00	0.51	1560	1496	0.76	0.79
G	1.00	5.69	3640.95	1723	1.00	0.45	903	865	0.70	0.61
								Crtical Arm:	C	F
								RFC:	0.78	0.79
	ince with TPL								AM	PM
Calculated b	y:	MST		Date:	Mar-24		Checked by	y:	MYL	

TRAFFIC SIGNALS CALCULATION **MVA HONG KONG LIMITED** CHK50417310 Job No.: Castle Peak Road - Tam Mi / Kam Pok Road East (J2) Design Year: ___2028_ Description: 2028 Design Flow Designed By: MST Checked By: MYL Revised Saturation Flow (pcu/hr) Radius (m) Pro. Turning (%) AM Peak PM Peak 8 Gradient Phase Stage Width Flow (pcu/hr) Flow (pcu/hr) Left Critical y Approach ΑM ΑM y Value Critical y y Value (m) 4 Castle Peak Rd 3.500 14% 10% 1945 1950 425 0.219 0.219 405 0.208 0.208 NB Castle Peak Rd В 2 3.300 15 1515 1515 230 0.152 0.152 220 0.145 SB В 2 3.400 1565 1565 220 0.141 265 0.169 0.169 3 0.088 Kam Pok Rd East С 3.500 27.5 1865 1865 270 0.145 0.145 165 0.088 EΒ С 3 3.500 12.5 1880 1880 25 0.013 60 0.032 Pedestrian Crossing MIN GREEN + FLASH = 13 12 25 Notes: Flow: (pcu/hr) A,B,C,Dp Group A,B,C,DpGroup * Site factor has been adopted 0.515 0.465 У У 230(220) 4 220(265) 40 L (sec) 40 L (sec) 270(165) C (sec) 94 C (sec) 90 365(365) 60(40) y pract. y pract. 0.517 0.500 25(60) R.C. (%) 0% R.C. (%) 7% Stage / Phase Diagrams 2. 3. 5. 1. 4. I/G= 2 I/G= 6 I/G= 5 I/G= 5 25 I/G=

I/G= 5

MAR. 2024

25

I/G= Junction:

Castle Peak Road - Tam Mi / Kam Pok Road East (J2)

(J2)

I/G= 5

I/G= 2

I/G= 6

TRAFFIC SIGNALS CALCULATION **MVA HONG KONG LIMITED** CHK50417310 Job No.: Design Year: ___2028_ Castle Peak Road - Tam Mi / Kam Pok Road East (J2) Description: ____ 2028 Design Flow (with improvement) Designed By: MST Checked By: MYL Revised Saturation Flow (pcu/hr) Radius (m) Pro. Turning (%) AM Peak PM Peak 8 Gradient Phase Stage Width Flow (pcu/hr) Flow Left Critical y Approach ΑM y Value Critical y y Value (pcu/hr) (m) Castle Peak Rd 3.500 14% 10% 1945 0.219 0.219 0.208 0.208 NB Castle Peak Rd В 2 3.300 15 1515 1515 230 0.152 0.152 220 0.145 SB В 2 3.400 1565 1565 220 0.141 265 0.169 0.169 3 0.088 Kam Pok Rd East С 3.500 27.5 1865 1865 270 0.145 0.145 165 0.088 EΒ С 3.500 12.5 1880 1880 25 0.013 60 0.032 Pedestrian Crossing MIN GREEN + FLASH = 13 25 Notes: Flow: (pcu/hr) Group A,B,C,DpGroup A,B,C,Dp * Site factor has been adopted 0.515 0.465 У У 230(220) 4 220(265) 40 L (sec) 40 L (sec) 270(165) C (sec) 120 C (sec) 120 365(365) 60(40) y pract. y pract. 0.600 0.600 25(60) R.C. (%) 16% R.C. (%) 29% Stage / Phase Diagrams 2. 3. 5. 1. 4.

I/G= 5

I/G= 5

MAR. 2024

25

25

I/G=

I/G= Junction:

Castle Peak Road - Tam Mi / Kam Pok Road East (J2)

(J2)

I/G= 5

I/G= 5

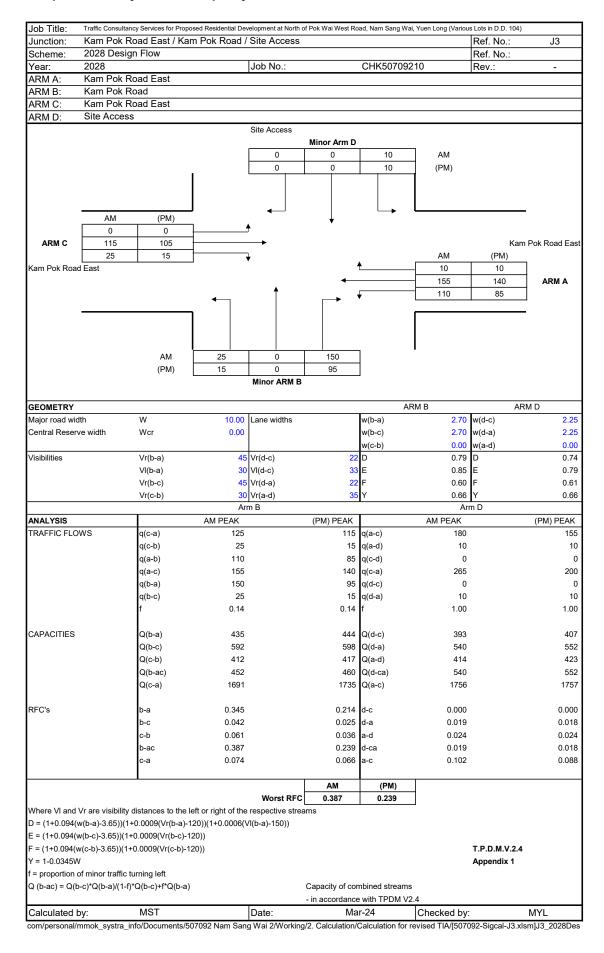
I/G= 2

I/G= 2

I/G= 6

I/G= 6

Simplified Priority Junction Capacity Calculation



Appendix B Swept Path Analysis of Long Vehicle

