

Appendix C

Traffic Impact Assessment

DOCUMENT STATUS CONTROL RECORD

**Application for Amendment of Plan under Section 12A of the
Town Planning Ordinance (Cap. 131) to Rezone the Application Site
from “Green Belt” to “Residential (Group C)1” for Proposed House Development
at Various Lots in D.D. 244 and Adjoining Government Land,
Nam Pin Wai, Sai Kung**

Traffic Impact Assessment Report

Originating Organisation : LLA Consultancy Limited Unit 610, 6/F, Island Place Tower, 510 King's Road, North Point, Hong Kong	Prepared by: SKL	<i>SKL</i>	Date: 17 October 2023
	Approved by: SLN	<i>SLN</i>	Date: 17 October 2023
	Revision No.: -		Date of Issue: 17 October 2023

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1 INTRODUCTION

1.1 Background

1.1.1 The applicants proposed to develop various lots in D.D. 244 and adjoining Government Land, Nam Pin Wai, Sai Kung, New Territories (hereinafter, referred to as "the Site") into a residential development.

1.1.2 The Site is currently zoned as "Green Belt" ("GB") on the Approved Ho Chung Outline Zoning Plan (OZP) No. S/SK-HC/11. It is the applicants' intention to request for rezoning of the Site to Residential (Group C)1 ("R(C)1") use which is intended for a house development. As the proposed uses is not under Column 1 and Column 2 uses, a Section 12A rezoning application is required for the proposal.

1.1.3 LLA Consultancy Limited was commissioned to carry out a traffic impact assessment study for the proposal to assess the potential traffic impact on its adjacent road network, in support of the planning application. This report presents the finding of the study.

1.2 Objectives

1.2.1 The objectives of the traffic impact assessment study are as follows:

- to review the existing traffic conditions in the surrounding road network;
- to estimate the potential traffic generation due to the proposed house development;
- to assess the future traffic situation in the surrounding road network;
- to appraise the potential traffic impact of the proposed house development; and
- to recommend the transport facilities provisions for the proposed house development.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 As shown in **Figure 2.1**, The Site is located near the junction of Hiram's Highway/Wo Mei Hung Min Road with a development site area of about 5,355m² (excluding access road). The key parameters of the proposed house development are summarized in **Table 2.1**.

Table 2.1 Proposed Development Schedule

Components	Content		
	Phase 1	Remaining Phase	Total
Development Site Area (About) (m ²)	4,020 m ²	1,335 m ²	5,355 m ²
Domestic Gross Floor Area (About) (GFA)	3,015 m ²	1,001 m ²	4,016 m ²
Domestic Plot Ratio (About)	0.75	0.75	0.75
No. of House(s)	13	4	17

3 EXISTING TRAFFIC SITUATION

3.1 Existing Traffic Conditions

- 3.1.1 Wo Mei Hung Min Road serves as a local road connecting to Hiram's Highway. It is a single two-lane road with various local accesses for the low density development nearby.
- 3.1.2 Hiram's Highway is a major road in the eastern part of New Territories connecting Sai Kung with Clear Water Bay Road. Currently, the section of Hiram's Highway between its roundabout with New Hiram's Highway and Nam Wai Road is a single two-lane carriageway. It carried an AADT of 24,460 vehicles in 2021.

3.2 Traffic Count Survey

- 3.2.1 In order to assess the existing traffic conditions, a traffic count survey was carried out at the following locations in the vicinity of the Site on a 12 January 2023 (Thursday) during 07:30 – 09:30 and 17:30 – 19:30 and 7 October 2023 (Saturday) for the weekend peak hour period from 12:00 to 19:00. The locations of the surveyed junctions are presented in **Figure 3.1**.
- Hiram's Highway/New Hiram's Highway/Nam Pin Wai Road
 - Hiram's Highway/Wo Mei Hung Min Road
- 3.2.2 The identified weekday AM, weekday PM and weekend peak hours were 07:30 – 08:30, 17:45 – 18:45 and 16:45 – 17:45, respectively and the surveyed traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

- 3.3.1 Based on the existing traffic flows, the performances of the key junctions during the peak hour were assessed. The results are summarized and presented in **Table 3.1** and the detailed junction capacity calculation sheets are attached in **Appendix A**.

Table 3.1 Existing Junction Performance

No.	Junction Location	Type/ Capacity Index ⁽¹⁾	Weekday AM Peak Hour	Weekday PM Peak Hour	Weekend Peak Hour
J1	Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road	Roundabout/ DFC	0.63	0.52	0.51
J2	Hiram's Highway/ Wo Mei Hung Min Road	Priority/DFC	0.07	0.04	0.08

Note: (1) DFC = Design Flow to Capacity ratio for priority junction and roundabout.

- 3.3.2 It can be seen from **Table 3.1** that the concerned junctions are operating satisfactorily during the weekday AM, weekday PM and weekend peak hours.

3.4 Existing Link Capacity Assessment

3.4.1 The Volume to Capacity (V/C) Ratios of Hiram's Highway and New Hiram's Highway were assessed and the results are presented in **Table 3.2**.

Table 3.2 Link Capacity Assessment

Direction	Bound	Capacity (pcu/hr) ⁽¹⁾	Traffic Flow (pcu/hr)			V/C Ratio		
			Weekday		Week-end	Weekday		Week-end
			AM	PM		AM	PM	
Hiram's Highway ⁽²⁾	NB	3,120	1,087	1,244	1,190	0.35	0.40	0.38
	SB	3,120	1,402	1,040	1,026	0.45	0.33	0.33
Hiram's Highway ⁽³⁾	EB	1,140	208	273	292	0.18	0.24	0.26
	WB	1,140	47	69	58	0.04	0.06	0.05
New Hiram's Highway ⁽⁴⁾	EB	3,120	1,225	874	877	0.39	0.28	0.28
	WB	3,120	997	1,245	1,216	0.32	0.40	0.39

Note: (1) Capacity refers to TPDM Vol.2 Ch. 2.4. The capacity for each bound of a 7.3m wide single-2-lane carriageway is 850 veh/hr. A factor of 1.2 (based on the traffic count survey result) is adopted to convert the capacity from veh/hr to pcu/hr.
(2) The section between Ho Chung Road and New Hiram's Highway.
(3) The section between New Hiram's Highway and Wo Mei Hung Min Road
(4) The section between Hiram's Highway and Clear Water Bay Road.

3.4.2 As shown in **Table 3.2**, the concerned road sections are operating with spare capacity during AM and PM hours.

3.5 Public Transport Services

3.5.1 At present, there are a few bus and minibus routes travelling along Hiram's Highway and the details of these routes are shown in **Table 3.3** and **Figure 3.3**.

Table 3.3 Existing Bus Routes

Mode	Route No.	Terminating Points	Frequency (min)
Bus	92	Sai Kung – Diamond Hill Station	12 – 25
	96R	Diamond Hill Station – Wong Shek Pier (Sat, Sun & PH only)	20 – 30
	292P	Sai Kung – Kwun Tong	1 trip per day
	792M	Tseung Kwan O Station – Sai Kung	15 – 25
GMB	1	Sai Kung – Kowloon Bay (Telford Gardens)	8 – 20
	1A	Sai Kung – Choi Hung (San Po Kong)	4
	1S	Sai Kung – Choi Hung (San Po Kong) (Overnight Services)	10 – 15
	12	Sai Kung – Po Lam	10 – 15
	101M	Sai Kung – Hang Hau Station (via Sai Kung North Public Transport Interchange)	3 – 30

4 FUTURE TRAFFIC SITUATION

4.1 Design Year

4.1.1 It is anticipated that the proposed house development will be operation by 2030. To consider 3 years after the planned completion of the proposed house development, a design year of 2033 will be adopted in this study.

4.2 Traffic Forecast

Annual Traffic Census (ATC) – Historical Data

4.2.1 In order to establish the traffic growth rate in the vicinity of the Site, reference was made to the 2016 to 2021 Annual Traffic Census Reports published by Transport Department, reporting on the annual average daily traffic (AADT) flows at the counting stations in the territory. The details of the counting stations in the study area and the corresponding counts are shown in **Table 4.1**.

Table 4.1 Annual Traffic Census Data

Stn. No.	Road Section			AADT ⁽¹⁾						Avg Growth %
	Road	From	To	2016	2017	2018	2019	2020	2021	
5017	Clear Water Bay Road	Anderson Road	Hiram's Highway	29,370	26,910 (-8.4%)	28,450 (5.7%)	28,980 (1.9%)	28,900 (-0.3%)	29,100 (0.7%)	-0.2%
5466	Clear Water Bay Road	Hang Hau Road	Hiram's Highway	18,770	18,650 (-0.6%)	18,950 (1.6%)	20,240 (6.8%)	19,110 (-5.6%)	20,020 (4.8%)	1.3%
6055	Hiram's Highway	Clear Water Bay Road	Po Tung Road	25,610	24,050 (-6.1%)	24,450 (1.7%)	24,280 (-0.7%)	23,360 (-3.8%)	24,460 (4.7%)	-0.9%
Total				73,750	69,610 (-5.6%)	71,850 (3.2%)	73,500 (2.3%)	71,370 (-2.9%)	73,580 (3.1%)	-0.8%

Note: (1) Figures in bracket indicated the % increase between two years.

4.2.2 **Table 4.1** shows that the AADT at the concerned ATC stations has an overall annual growth of negative 0.8% in between the years of 2016 and 2021.

Territorial Population and Employment Data Matrix (TPEDM – Projection Data)

4.2.3 Reference was also made to the 2019 – based TPEDM data published by the Planning Department. The population and employment data of year 2019 and 2031 are summarized in **Table 4.2**.

Table 4.2 Population and Employment Data in Southeast New Territories District

Year	2019	2026	2031
Population	68,900	65,800	59,750
Employment	27,250	27,750	28,100
Total	96,150	93,550	87,850
Average Growth %		-0.39% (2019 to 2026)	-1.25% (2026 to 2031)

4.2.4 As shown in **Table 4.2**, the average annual growth rates for both population and employment are negative. Based on the ATC historical data in **Table 4.1** and the TPEDM projection data in **Table 4.2**, a nominal growth rate of +1.0% will be adopted for the subsequent traffic forecasting.

4.3 Traffic Generation of the Proposed House Development

4.3.1 Reference was also made to the latest set of traffic generation and attraction rates documented in Chapter 3 “Transport Considerations of Town Plans” of the TPDM, for the estimation of the traffic generated by proposed house development. The traffic generation and attraction numbers were shown in **Table 4.3**.

Table 4.3 Traffic Generation of the Proposed House Development

Use	Unit / Content	Weekday AM Peak			Weekday PM Peak			Weekend Peak		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Adopted Trip Rates⁽¹⁾										
Residential – 240m ² ⁽²⁾	pcu/hr/flat	0.3012	0.2189	-	0.2235	0.3234	-	0.2235	0.3234	-
Traffic Generation/Attraction										
Proposed House Development	17 flats	6	4	10	4	6	10	4	6	10

Notes: Gen. – Generation; Att. - Attraction

(1) Mean trip rates from TPDM are adopted.

(2) The trip rates for PM peak hour are adopted for Weekend peak hour.

4.3.2 In view of the above, the proposed house development would generate two-way traffic flows of 10 pcu/hr in weekday AM peak hour, weekday PM peak hour and weekend peak hour, respectively. The traffic distribution is shown diagrammatically in **Figure 4.1**.

4.4 Planned/Committed Developments

4.4.1 To estimate the future traffic flows generated and attracted by the nearby planned/committed developments, updated information has been obtained from available information regarding the planned and approved developments in the vicinity of the proposed development site, the details of these developments are listed in **Table 4.4**.

Table 4.4 Planned/Committed Developments

Location	Use	Development Parameters
Various Lot in D.D. 210, Ho Chung	Residential	2,422 m ² GFA
Lot 1003 in D.D. 214, Ho Chung	Residential	5,344 m ² GFA
Lot 2189 in D.D. 244, Nam Pin Wai	Residential	8,320 m ² GFA
Various Lots in D.D. 244 and Adjoining Government Land, Ho Chung, Sai Kung	Residential	13,719 m ² GFA

4.4.2 Reference is made to Volume 1 of the TPDM published by the TD on the trip rates of the foregoing developments to estimate their traffic generation and attraction. The estimated traffic generation will be assumed to be travelling in the local road network in the same proportions as the existing traffic demands when traffic forecast is prepared in this Study.

4.5 Reference and Design Flows

4.5.1 The 2033 Reference Flows, i.e. the traffic flows in the vicinity without the proposed house development, were estimated based on the following equation.

$$2033 \text{ Reference Flows} = 2023 \text{ Existing Traffic Flows} \times (1 + 1.0\%)^{10} + \text{Traffic Flows Generated by the Planned/Committed Development}$$

4.5.2 The 2033 Design Flows, i.e. the traffic flows in the local road network with the traffic generated by the proposed house development, were estimated based on the following equation:

$$2033 \text{ Design Flows} = 2033 \text{ Reference Flows} + \text{Traffic Flows Generated by the Proposed House Development}$$

4.5.3 The 2033 Reference and Design Flows are shown in **Figure 4.2** and **Figure 4.3**, respectively.

4.6 Junction Capacity Assessment

4.6.1 Assessments of the junction performance were based on the reference and design flows for the year 2033. The results are summarized and presented in **Table 4.6** and detailed junction capacity calculation sheets are presented in **Appendix B**.

Table 4.6 Junction Capacity Assessment for Design Year 2033

Jun. No.	Junction	Type/ Capacity Index ⁽¹⁾	2033 Reference			2033 Design		
			AM	PM	Week-end	AM	PM	Week-end
J1	Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road	Roundabout / DFC	0.71	0.59	0.58	0.71	0.59	0.58
J2	Hiram's Highway/ Wo Mei Hung Min Road	Priority/DFC	0.10	0.05	0.10	0.11	0.06	0.11

Note: (1) DFC = Design Flow to Capacity ratio for priority junction and roundabout.

4.6.2 As shown in **Table 4.6**, all concerned junctions will operate with capacities in future scenarios. Therefore, the additional traffic generated by the proposed house development is not anticipated to induce significant traffic impact onto the adjacent junctions.

4.7 Link Capacity Assessment

4.7.1 The V/C Ratios of Hiram's Highway and New Hiram's Highway were assessed and the results are presented in **Table 4.7**.

Table 4.7 Year 2033 Link Capacity Assessments

Direction	Bound	Capacity (pcu/hr) ⁽¹⁾	Traffic Flow (pcu/hr)			V/C Ratio		
			Weekday		Week-end	Weekday		Week-end
			AM	PM		AM	PM	
2033 Reference Scenario								
Hiram's Highway ⁽²⁾	NB	3,120	1,205	1,375	1,316	0.39	0.44	0.42
	SB	3,120	1,555	1,155	1,140	0.50	0.37	0.37
Hiram's Highway ⁽³⁾	EB	1,140	236	308	329	0.21	0.27	0.29
	WB	1,140	60	80	68	0.05	0.07	0.06
New Hiram's Highway ⁽⁴⁾	EB	3,120	1,379	984	988	0.44	0.32	0.32
	WB	3,120	1,122	1,402	1,371	0.36	0.45	0.44
2033 Design Scenario								
Hiram's Highway ⁽²⁾	NB	3,120	1,206	1,375	1,316	0.39	0.44	0.42
	SB	3,120	1,555	1,156	1,141	0.50	0.37	0.37
Hiram's Highway ⁽³⁾	EB	1,140	240	314	335	0.21	0.28	0.29
	WB	1,140	61	80	68	0.05	0.07	0.06
New Hiram's Highway ⁽⁴⁾	EB	3,120	1,379	984	988	0.44	0.32	0.32
	WB	3,120	1,126	1,407	1,376	0.36	0.45	0.44

- Note:
- (1) Capacity refers to TPDM Vol.2 Ch. 2.4. The capacity for each bound of a 7.3m wide single-2-lane carriageway is 850 veh/hr. A factor of 1.2 (based on the traffic count survey result) is adopted to convert the capacity from veh/hr to pcu/hr.
 - (2) The section between Ho Chung Road and New Hiram's Highway.
 - (3) The section between New Hiram's Highway and Wo Mei Hung Min Road
 - (4) The section between Hiram's Highway and Clear Water Bay Road.

4.7.2 As shown in **Table 4.7**, all the concerned road sections will operate with capacity during AM and PM hours in both reference and design scenarios.

5 INTERNAL TRANSPORT FACILITIES

5.1 Access Arrangement

5.1.1 At present, there is no proper vehicular access to the Site. An access road will be formed connecting Wo Mei Hung Min Road and the access road to Villa Royale. The proposed vehicular access will be located along this access road. The access arrangement is presented in the master layout plan enclosed in **Appendix C**.

5.2 Internal Transport Facilities

5.2.1 The internal transport facilities to serve the proposed house development will be provided in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG). The required and the proposed provisions for the proposed house development are shown in **Table 5.1**.

Table 5.1 Proposed Parking Provisions

Type	HKPSG's Requirements						Required Provision	Proposed Provision
Proposed House Development (17 Houses)								
Car Parking Space	For Residents Parking Requirements = GPS x R1 x R2 x R3 where						23 – 39	34
	Unit Size	No. of Unit	GPS	R1	R2	R3		
	FS > 160 m ²	17	1 space per 4 – 7 units	7.0	1	1.3		
	For Visitors private residential developments with 75 units or less per block, the visitor car parking provision will be determined by TD on a case-by-case basis.							
TOTAL CAR PARKING						23 – 39	36 ⁽¹⁾	
Motorcycle Parking Space	1 space per 100 - 150 flats						1	1
Loading / Unloading Bay	1 bay per residential block						1	1

Note: (1) including 1 accessible car parking spaces for 1 – 50 total car parking spaces.

5.2.2 Based on **Table 5.1**, a total of total of 36 car parking spaces (34 for residents and 2 for visitors, including 0 disable car parking space), 1 loading/unloading bay will be provided to fulfil the requirements of the HKPSG. **Table 5.2** lists out the dimensions required for each type of spaces to follow and the master layout plan is enclosed in **Appendix C**.

Table 5.2 Summary of Overall Transport Facilities Provision

Facilities	Dimensions	Proposed Provision		
		Phase 1	Remaining Phase	Total
Car Parking Space	2.5m (W) x 5.0m (L) x 2.4m (H)	28	8	36
Motorcycle Park Space	1.0m (W) x 2.4m (L) x 2.4m (H)	1	0	1
Goods Vehicle Loading / Unloading Bay	HGV: 3.5m (W) x 11.0m (L) x 4.7m (H)	1	0	1

5.3 Swept path Analysis

- 5.3.1 To ensure smooth manoeuvring of the parking area, swept path analysis was conducted to demonstrate that adequate space is provided for the vehicles for manoeuvring and presented in **Figures SP-01 – SP-04**.

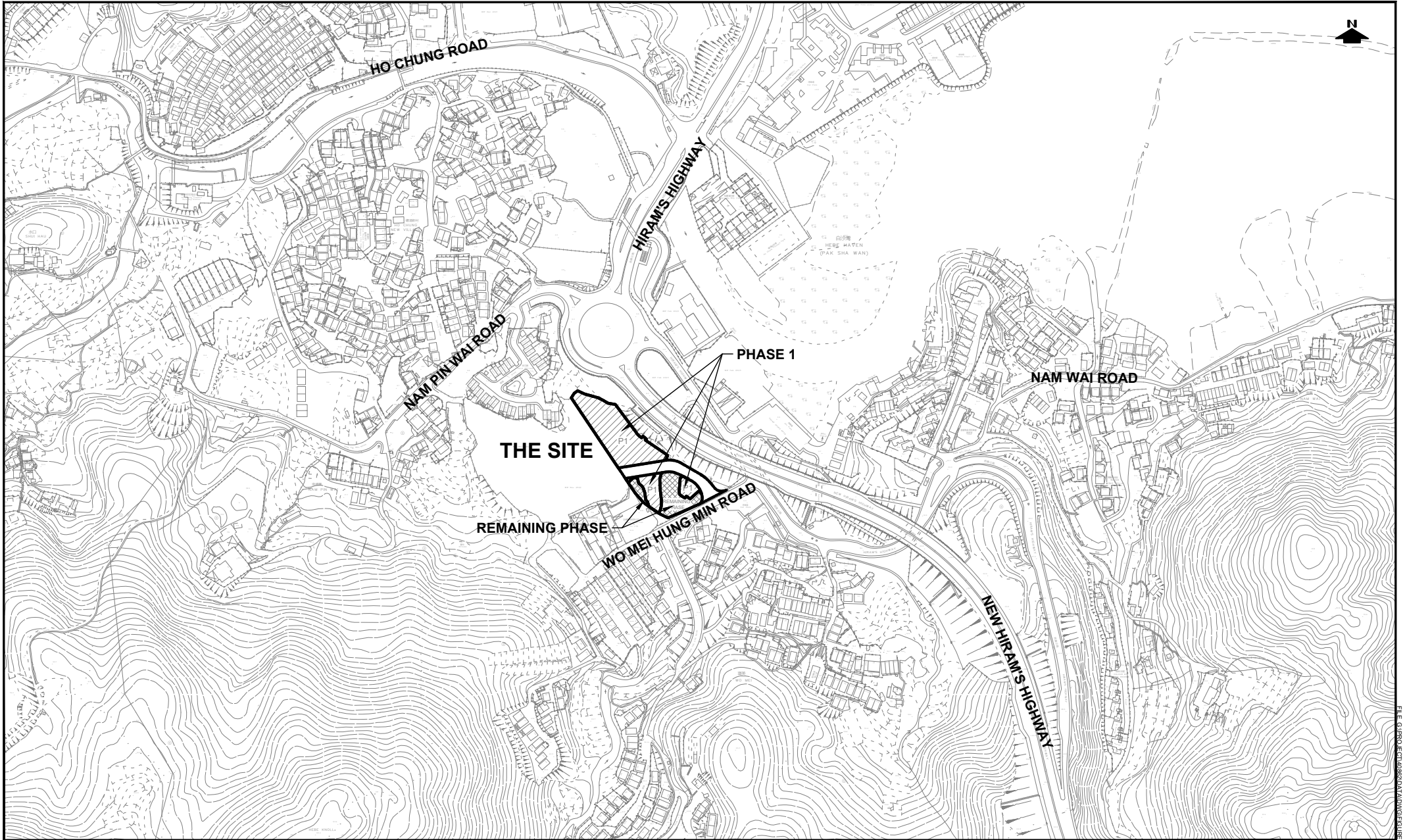
6 SUMMARY AND CONCLUSION

6.1 Summary

- 6.1.1 The applicant proposed to develop various lots in D.D. 244, Nam Pin Wai, Sai Kung, New Territories into a house development.
- 6.1.2 The Site is currently zoned as "Green Belt" ("GB") on the Approved Ho Chung Outline Zoning Plan (OZP) No. S/SK-HC/11. It is the applicant's intention to request for rezoning of the Site to Residential (Group C)1 ("R(C)1") use which is intended for a house development. As the proposed uses is not under Column 1 and Column 2 uses, a Section 12A rezoning application is required for the proposal.
- 6.1.3 Traffic count surveys were carried out on 12 January 2023 (Thursday) during 07:30 – 09:30 and 17:30 – 19:30 and 7 October 2023 (Saturday) for the weekend peak hour period from 12:00 to 19:00. The identified weekday AM, weekday PM and weekend peak hours were 07:30 – 08:30, 17:45 – 18:45 and 16:45 – 17:45, respectively. Junction capacity assessment based on the observed flows shows that all concerned junctions are performing satisfactorily during the weekday AM, weekday PM and weekend peak hours.
- 6.1.4 The proposed house development would generate two-way traffic flows of 10 pcu/hr in weekday AM peak hour, weekday PM peak hour and weekend peak hour, respectively. By assigning the additional development traffic to the 2033 Reference Flows, the 2033 Design Flows were obtained.
- 6.1.5 Junction and link capacity assessments were carried out at the key junctions and road links in the vicinity for the year 2033. The results have indicated that all junctions and road links will operate satisfactorily for both reference and design scenarios. Therefore, it is anticipated that the proposed house development will not induce significant traffic impact to the surrounding road network.
- 6.1.6 The internal transport facilities of the proposed house development will be provided in accordance with the recommendations in the HKPSG. The proposed house development will provide a total of 36 car parking spaces (34 for residents and 2 for visitors), 1 motorcycle parking space and 1 loading/unloading bay.

6.2 Conclusion

- 6.2.1 From the assessment results, it can be concluded that the proposed house development will not induce significant traffic impact on the surrounding road network and the development proposal is considered acceptable from traffic engineering point of view.



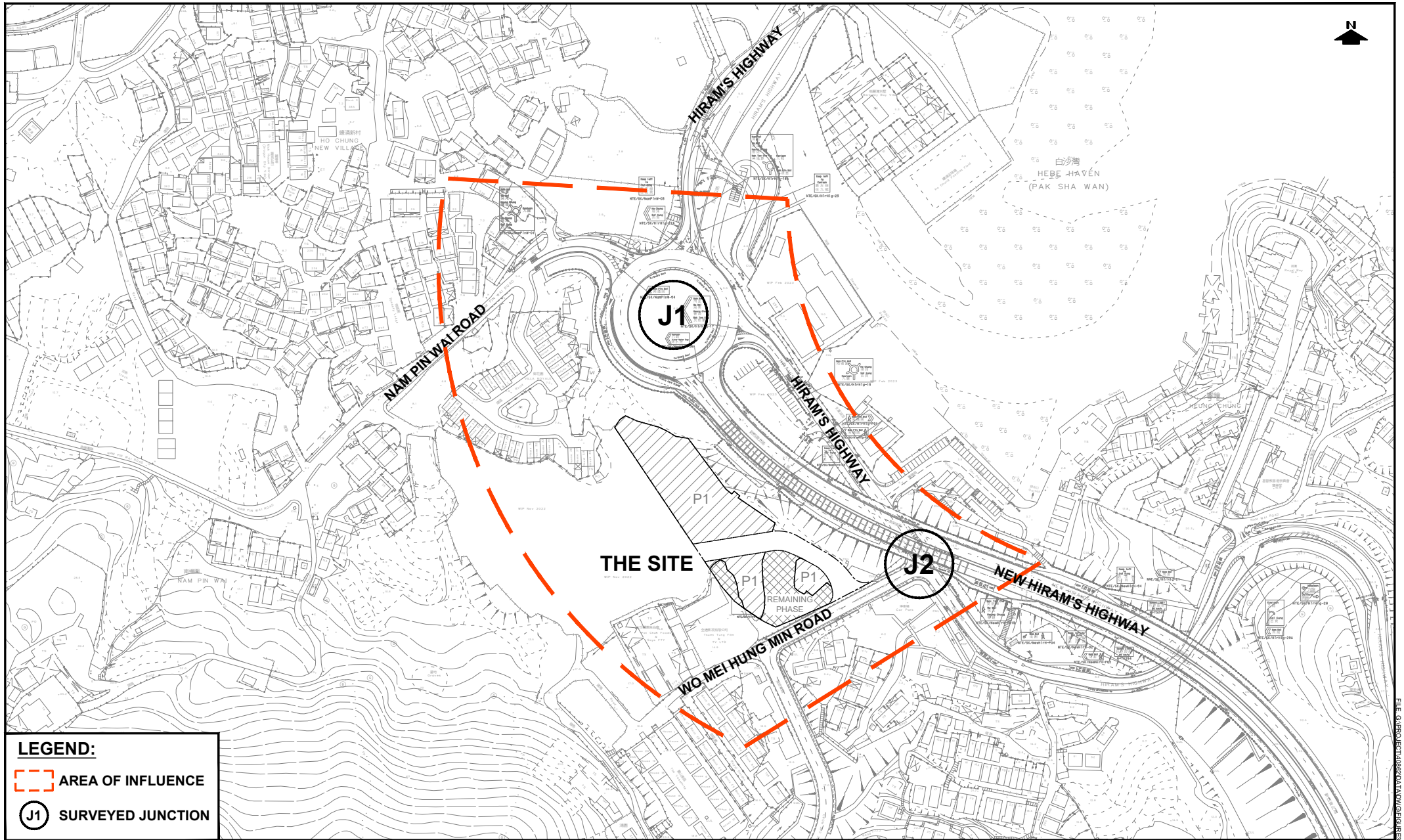
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DRAWING TITLE	LOCATION PLAN	
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DRAWING NO.	FIGURE 2.1	REV.	.
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LEGEND:

AREA OF INFLUENCE

SURVEYED JUNCTION

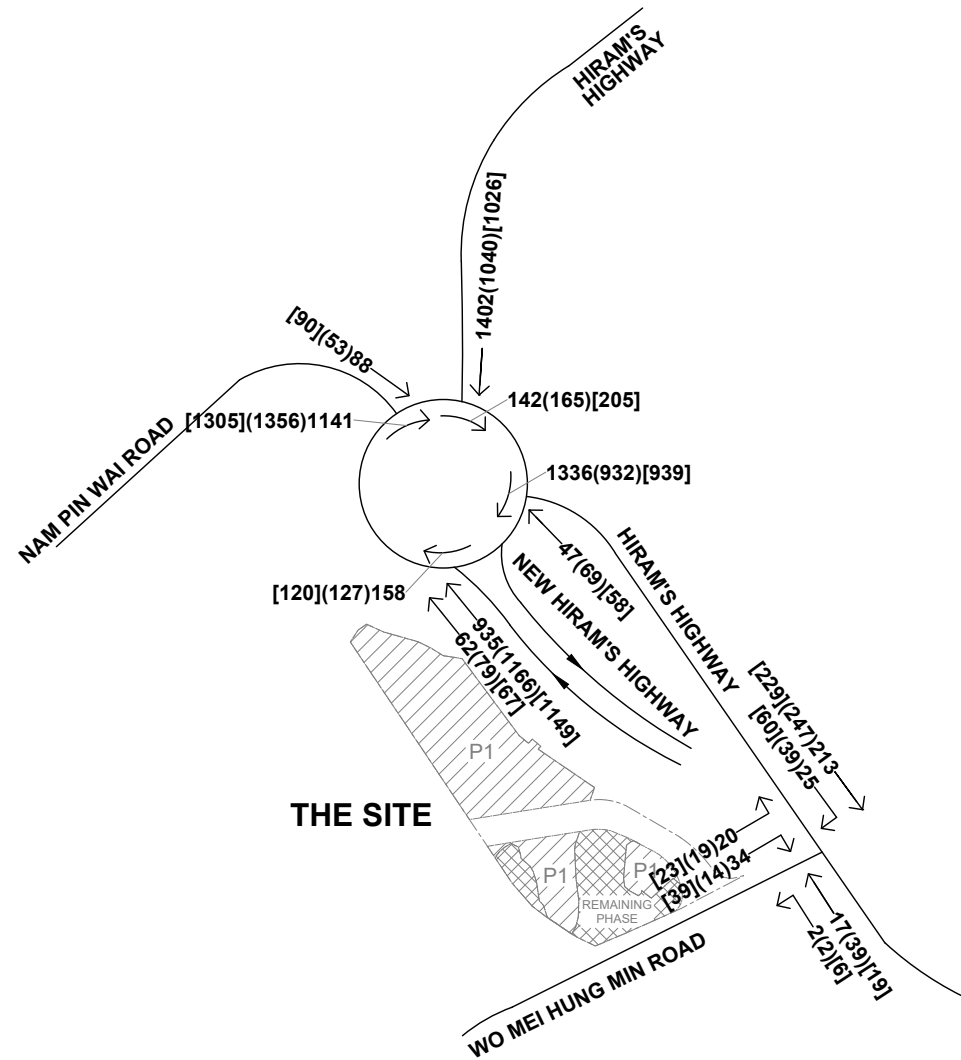
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DRAWING NO.	FIGURE 3.1	REV.	.
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LOCATION OF SURVEYED JUNCTIONS AND AREA OF INFLUENCE

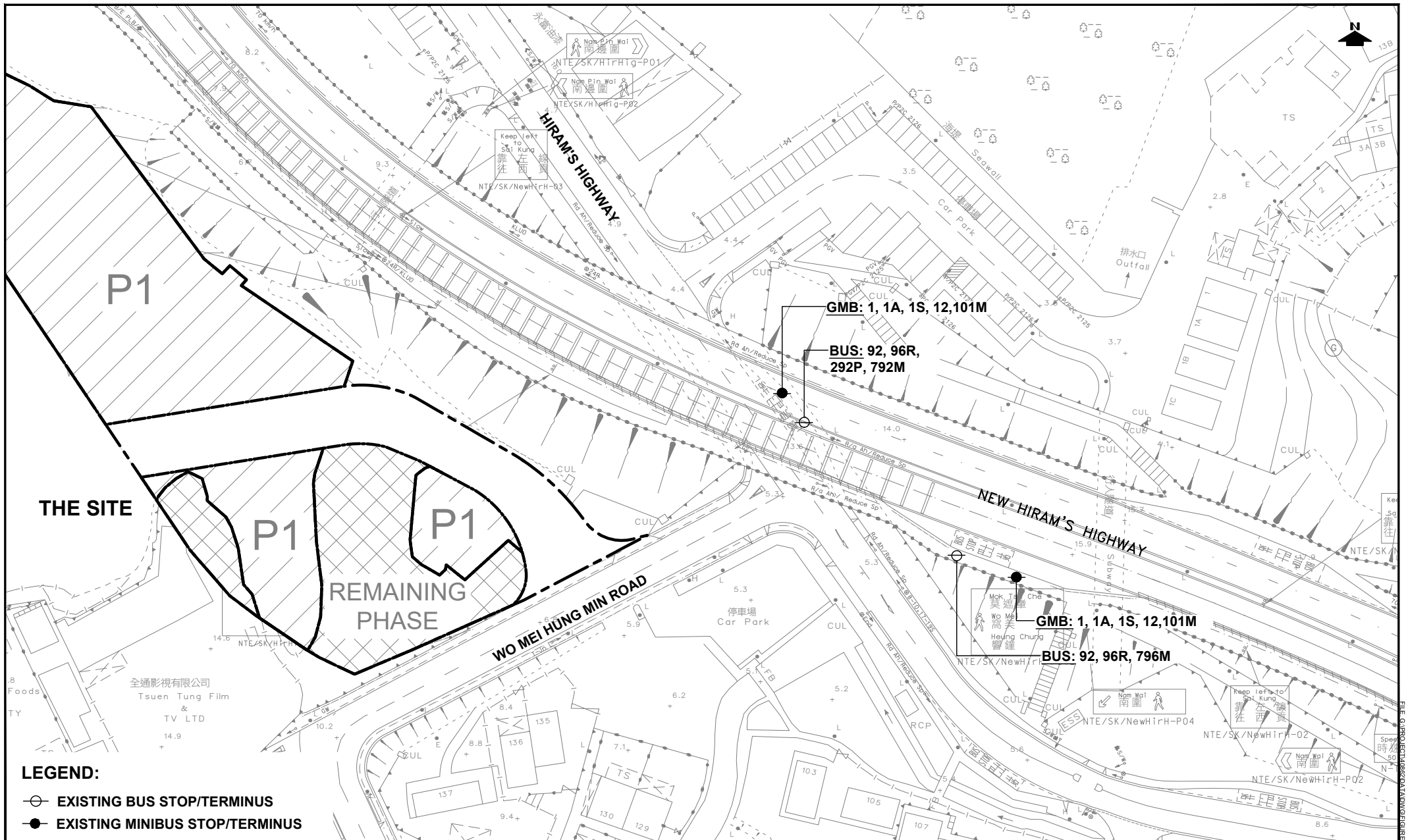
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LEGEND:
 312 (158) [616] ← WEEKEND PEAK PCU
 ↑ WEEKDAY PM PEAK PCU
 ↑ WEEKDAY AM PEAK PCU

NOTE:
 1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
 2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40862		PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP C)1" FOR PROPOSED HOUSE DEVELOPMENT AT VARIOUS LOTS IN D.D. 244 AND ADJOINING GOVERNMENT LAND, NAM PIN WAI, SAI KUNG		DRAWING NO. FIGURE 3.2	REV. A
DESIGNED SKL	DATE OCT 2023	DRAWING TITLE			
DRAWN CLL	SCALE N.T.S.	2023 OBSERVED TRAFFIC FLOWS			
CHECKED SLN					



LEGEND:

- EXISTING BUS STOP/TERMINUS
- EXISTING MINIBUS STOP/TERMINUS

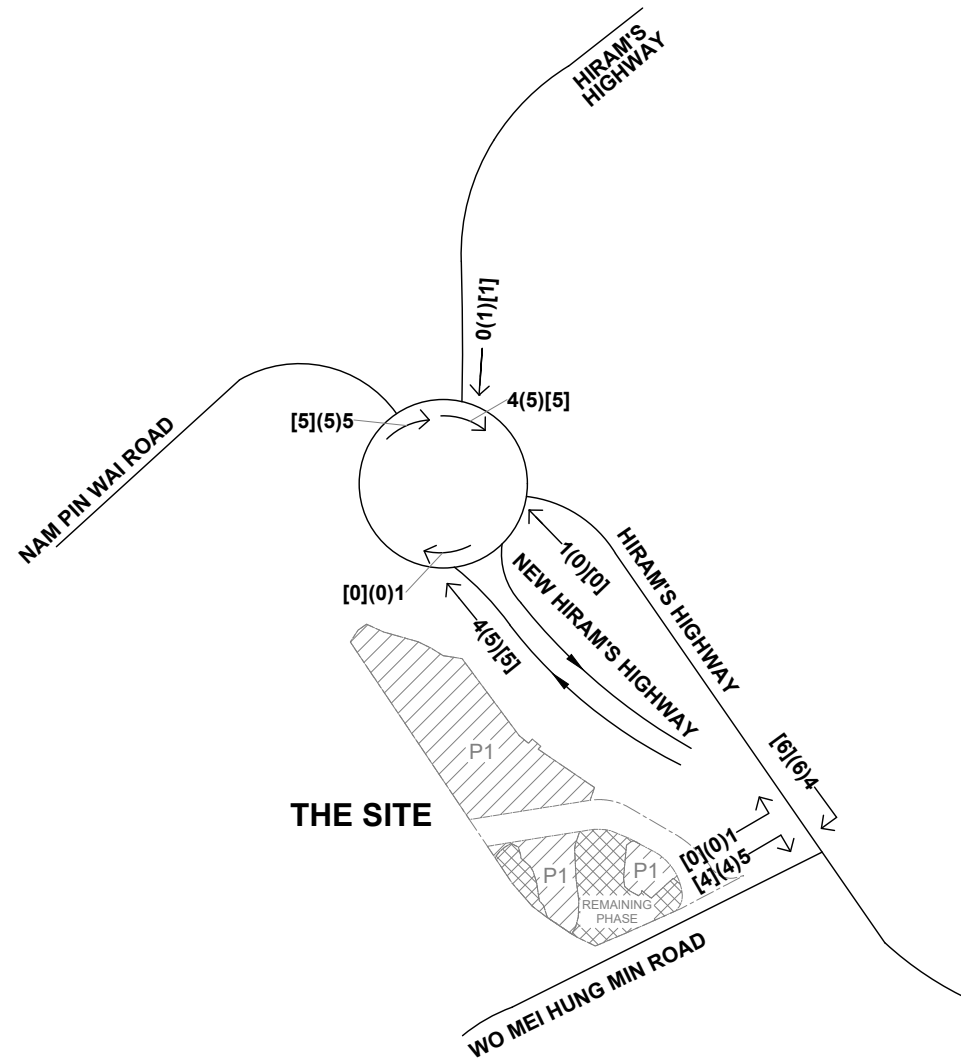
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DRAWING NO.	FIGURE 3.3
REV.	.

PUBLIC TRANSPORT FACILITIES

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LEGEND:

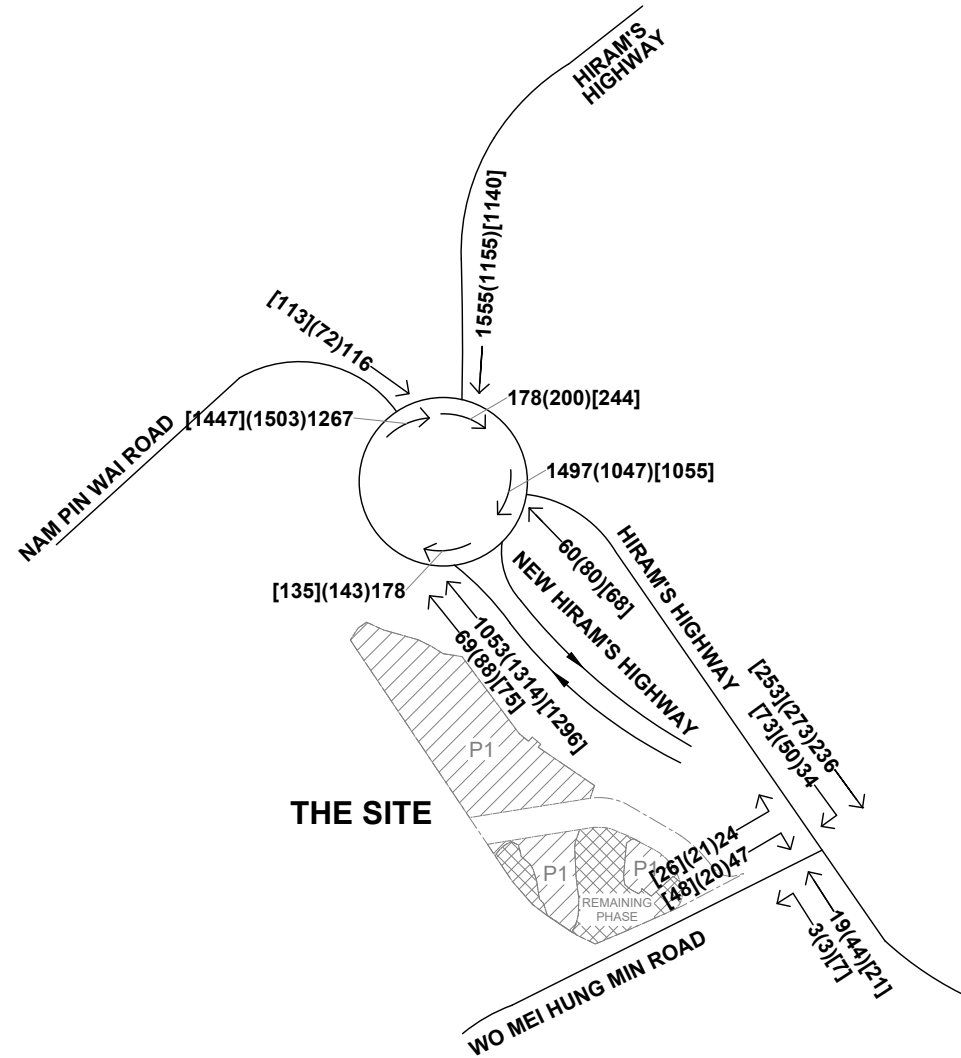
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- ↑ WEEKDAY PM PEAK PCU
- ↑ WEEKDAY AM PEAK PCU

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DRAWN CLL	SCALE N.T.S.		
CHECKED SLN			

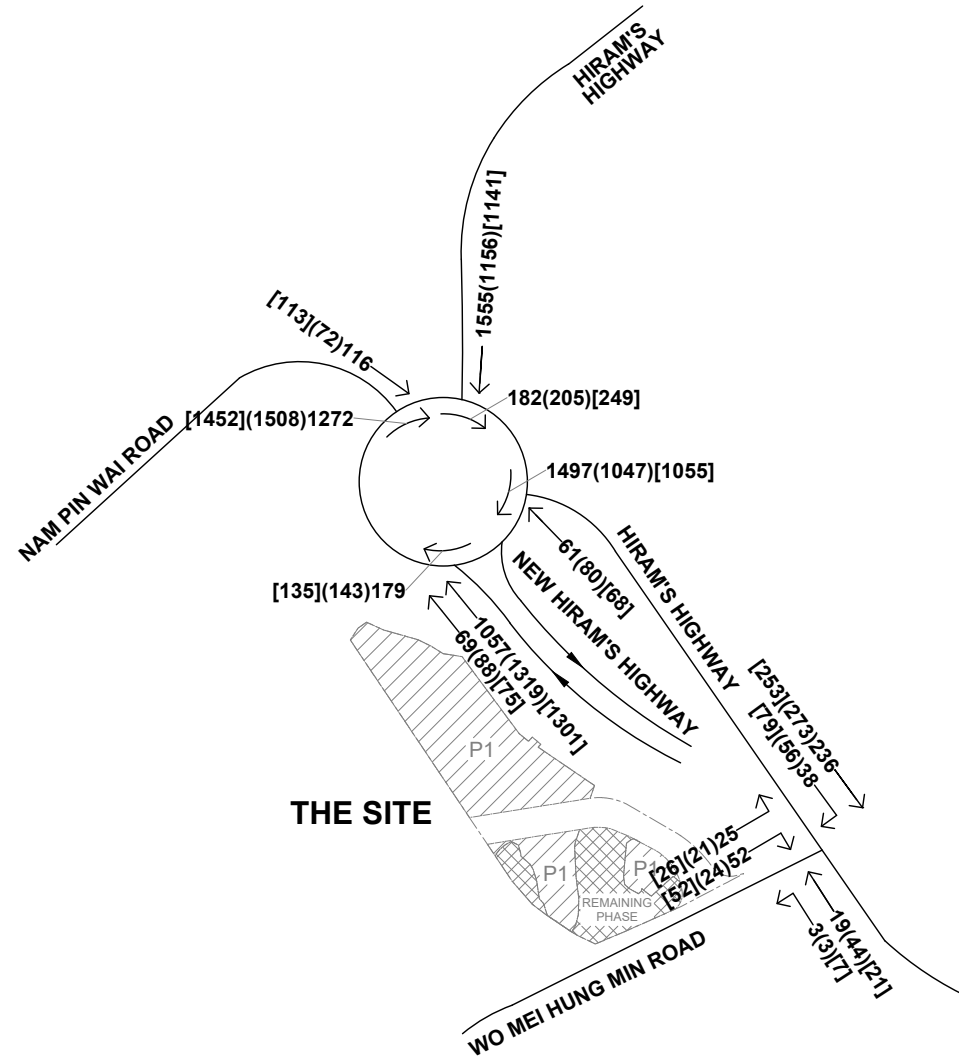
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LEGEND:
 312 (158) [616] ← WEEKEND PEAK PCU
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 ↑ WEEKDAY AM PEAK PCU

NOTE:
 1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
 2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40862		PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP C)1" FOR PROPOSED HOUSE DEVELOPMENT AT VARIOUS LOTS IN D.D. 244 AND ADJOINING GOVERNMENT LAND, NAM PIN WAI, SAI KUNG		DRAWING NO. FIGURE 4.2	REV. A
DESIGNED SKL	DATE OCT 2023	DRAWING TITLE			
DRAWN CLL	SCALE N.T.S.	2033 REFERENCE TRAFFIC FLOWS			
CHECKED SLN					



LEGEND:
 312 (158) [616] ← WEEKEND PEAK PCU
 ↑ WEEKDAY PM PEAK PCU
 ↑ WEEKDAY AM PEAK PCU

NOTE:
 1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR
 2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40862		PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP C)1" FOR PROPOSED HOUSE DEVELOPMENT AT VARIOUS LOTS IN D.D. 244 AND ADJOINING GOVERNMENT LAND, NAM PIN WAI, SAI KUNG		DRAWING NO. FIGURE 4.3	REV. A
DESIGNED SKL	DATE OCT 2023	DRAWING TITLE			
DRAWN CLL	SCALE N.T.S.	2033 DESIGN TRAFFIC FLOWS			
CHECKED SLN					



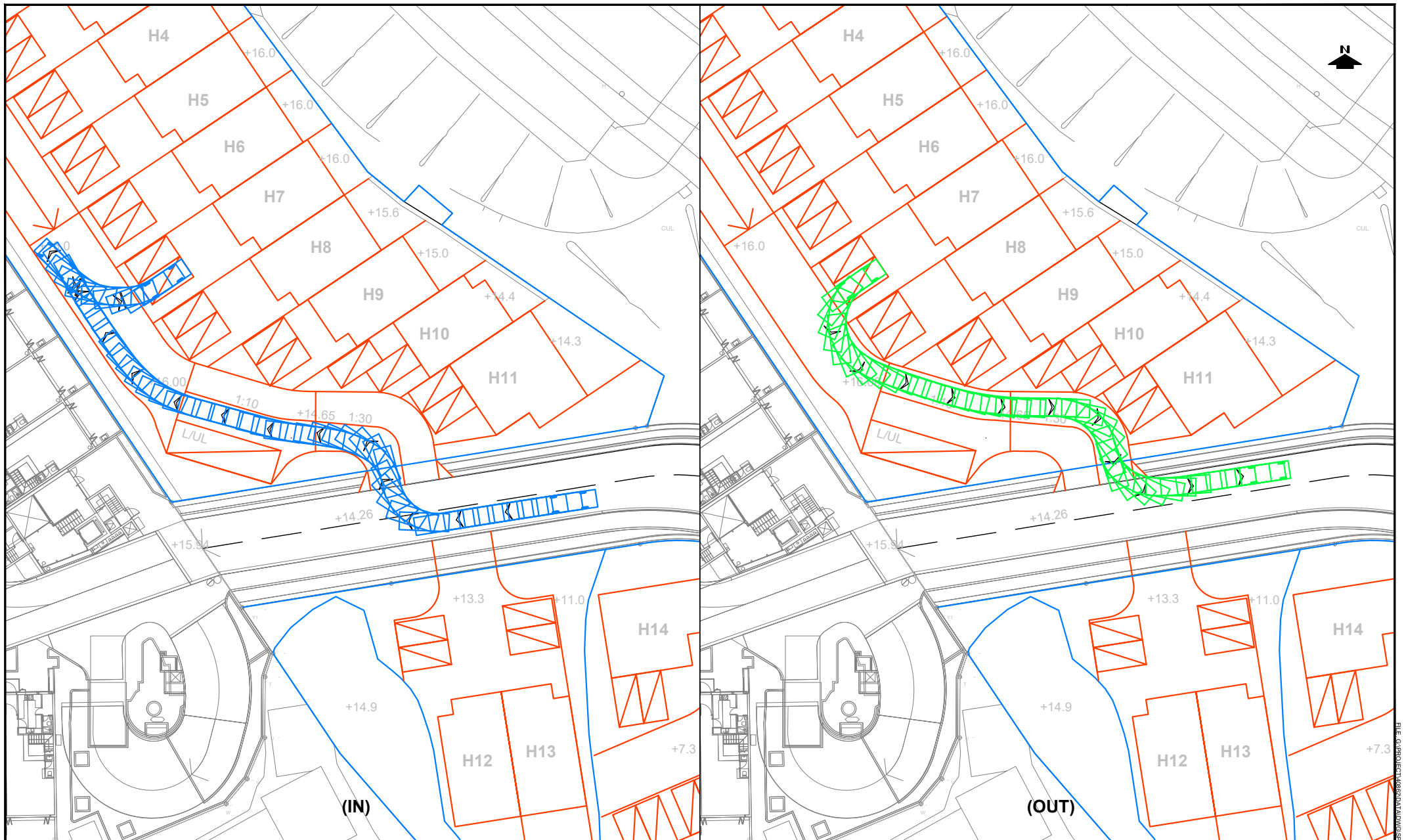
PROJECT NO.	40862	
DESIGNED	SKL	DATE OCT 2023
DRAWN	CLL	SCALE 1:800
CHECKED	SLN	

PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP C)1" FOR PROPOSED HOUSE DEVELOPMENT AT VARIOUS LOTS IN D.D. 244 AND ADJOINING GOVERNMENT LAND, NAM PIN WAI, SAI KUNG

DRAWING NO.	SP-01	REV.	.
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SWEPT PATH ANALYSIS - HGV

LLA 顧問有限公司
Consultancy Limited



PROJECT NO.	40862	
DESIGNED	SKL	DATE OCT 2023
DRAWN	CLL	SCALE 1:500
CHECKED	SLN	

PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP C)1" FOR PROPOSED HOUSE DEVELOPMENT AT VARIOUS LOTS IN D.D. 244 AND ADJOINING GOVERNMENT LAND, NAM PIN WAI, SAI KUNG

DRAWING NO.	SP-02	REV.	.
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SWEPT PATH ANALYSIS - PRIVATE CAR

LLA 顧問有限公司
Consultancy Limited



全通影視有限公司

Tsuen Tung Film

(IN)

全通影視有限公司

Tsuen Tung Film

(OUT)

PROJECT NO. **40862**

PROJECT TITLE **APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP C)1" FOR PROPOSED HOUSE DEVELOPMENT AT VARIOUS LOTS IN D.D. 244 AND ADJOINING GOVERNMENT LAND, NAM PIN WAI, SAI KUNG**

DRAWING NO. **SP-03**

REV. **.**

DESIGNED **SKL** DATE **OCT 2023**

DRAWING TITLE

DRAWN **CLL** SCALE

CHECKED **SLN** **1:500**

SWEPT PATH ANALYSIS - PRIVATE CAR

LLA 顧問有限公司
Consultancy Limited



PROJECT NO.	40862	
DESIGNED	SKL	DATE OCT 2023
DRAWN	CLL	SCALE 1:500
CHECKED	SLN	

PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" TO "RESIDENTIAL (GROUP C)1" FOR PROPOSED HOUSE DEVELOPMENT AT VARIOUS LOTS IN D.D. 244 AND ADJOINING GOVERNMENT LAND, NAM PIN WAI, SAI KUNG

DRAWING TITLE
SWEPT PATH ANALYSIS - PRIVATE CAR

DRAWING NO.	SP-04	REV.	.
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Appendix A
Junction Capacity Assessment
– Existing Scenario

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Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)" for Proposed House Development at Various Lots in D.D. 244 and Adjoining Government Land, Nam Pin Wai, Sai Kung

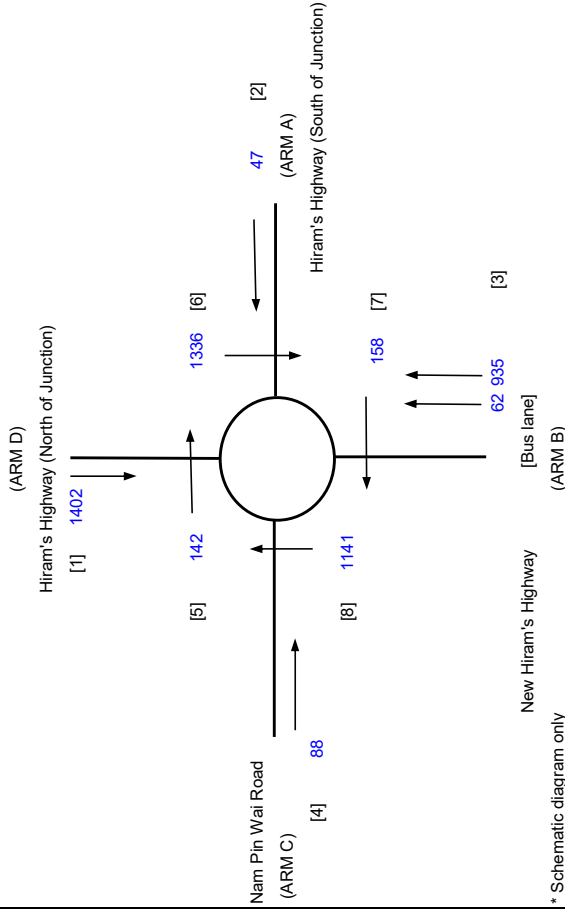
J1 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

ROUNDABOUT CALCULATION

PROJECT NO.: 40862
 FILENAME: J1_HH_NHH.xlsx
 REFERENCE NO.:
 PREPARED BY: SKL
 CHECKED BY: SLN
 REVIEWED BY: SLN

INITIALS

DATE
 Oct-23
 Oct-23
 Oct-23



ARM

INPUT PARAMETERS:

	A	B	C	D
V = Approach half width (m)	3.70	7.40	4.30	7.70
E = Entry width (m)	7.30	11.00	7.30	7.80
L = Effective length of flare (m)	11.00	1.00	20.00	1.00
R = Entry radius (m)	15.00	55.00	23.00	18.00
D = Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A = Entry angle (degree)	32.00	40.00	50.00	36.00
Q = Entry flow (pcuh)	47	935	88	1402
Qc = Circulating flow across entry (pcuh)	1336	158	1141	142

OUTPUT PARAMETERS:

S = Sharpness of flare = $1.6(E-V)/L$	0.52	5.76	0.24	0.16
K = $1-0.00347(A-30)-0.978(1/R-0.05)$	0.98	1.00	0.94	0.97
X2 = $V + ((E-V)/(1+2S))$	5.46	7.69	6.33	7.78
M = $EXP((D-60)/10)$	6.05	6.05	6.05	6.05
F = $303 * X2$	1654	2329	1917	2356
Td = $1+(0.5/(1+M))$	1.07	1.07	1.07	1.07
Fc = $0.21 * Td(1+0.2 * X2)$	0.47	0.57	0.51	0.57
Qe = $K(F * Fc * Qc)$	1002	2231	1252	2215

DFC = Design flow/Capacity = Q/Qe

Total In Sum = 2472 PCU

DFC of Critical Approach = 0.63

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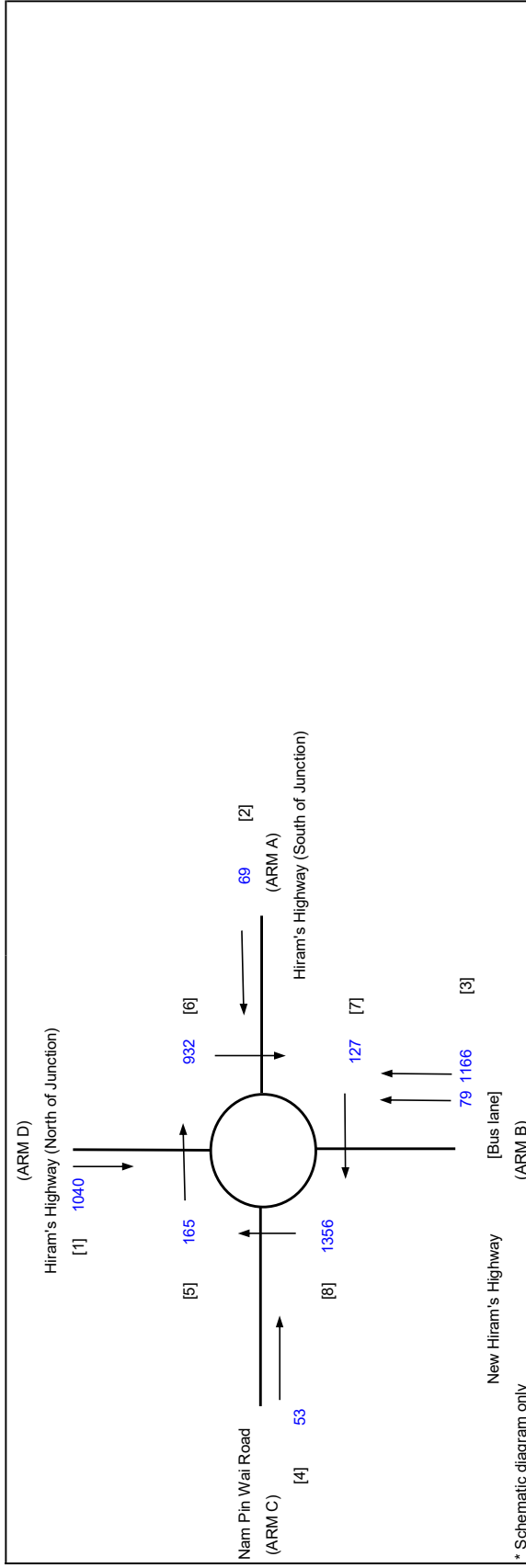
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)" for Proposed House Development at Various Lots in D.D. 244 and Adjoining Government Land, Nam Pin Wai, Sai Kung

J1 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

ROUNDABOUT CALCULATION

PROJECT NO.: 40862
 FILENAME : J1_HH_NHH.xlsx
 REFERENCE NO.:
 PREPARED BY: SKL
 CHECKED BY: SLN
 REVIEWED BY: SLN

INITIALS
 DATE
 SKL Oct-23
 SLN Oct-23
 SLN Oct-23



ARM	A	B	C	D
V = Approach half width (m)	3.70	7.40	4.30	7.70
E = Entry width (m)	7.30	11.00	7.30	7.80
L = Effective length of flare (m)	11.00	1.00	20.00	1.00
R = Entry radius (m)	15.00	55.00	23.00	18.00
D = Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A = Entry angle (degree)	32.00	40.00	50.00	36.00
Q = Entry flow (pcuh)	69	1166	53	1040
Qc = Circulating flow across entry (pcuh)	932	127	1356	165
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2 = V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M = EXP((D-60)/10)	6.05	6.05	6.05	6.05
F = 303*X2	1654	2329	1917	2356
Td = 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc = 0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe = K(F-Fc*Qc)	1187	2249	1149	2202
DFC = Design flow/Capacity = Q/Qe	0.06	0.52	0.05	0.47
Total In Sum =				2328 PCU
DFC of Critical Approach =				0.52

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Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)" for Proposed House Development at Various Lots in D.D. 244 and Adjoining Government Land, Nam Pin Wai, Sai Kung

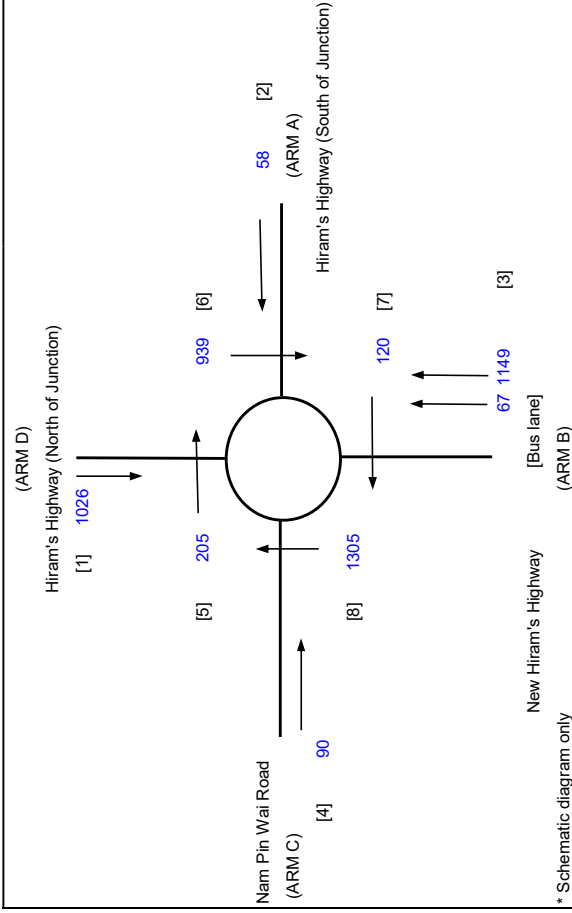
J1 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

ROUNDABOUT CALCULATION

2023 Existing Weekend

PROJECT NO.: 40862
 FILENAME : J1_HH_NHH.xlsx
 REFERENCE NO.:

INITIALS DATE
 SKL Oct-23
 SLN Oct-23
 SLN Oct-23



ARM	A	B	C	D
V = Approach half width (m)	3.70	7.40	4.30	7.70
E = Entry width (m)	7.30	11.00	7.30	7.80
L = Effective length of flare (m)	11.00	1.00	20.00	1.00
R = Entry radius (m)	15.00	55.00	23.00	18.00
D = Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A = Entry angle (degree)	32.00	40.00	50.00	36.00
Q = Entry flow (pcu/h)	58	1149	90	1026
Qc = Circulating flow across entry (pcu/h)	939	120	1305	205

OUTPUT PARAMETERS:	A	B	C	D
S = Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2 = V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M = EXP((D-60)/10)	6.05	6.05	6.05	6.05
F = 303*X2	1654	2329	1917	2356
Td = 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc = 0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe = K(F-Fc*Qc)	1184	2253	1173	2179

DFC = Design flow/Capacity = Q/Qe	0.05	0.51	0.08	0.47
Total In Sum =				2323 PCU
DFC of Critical Approach =				0.51

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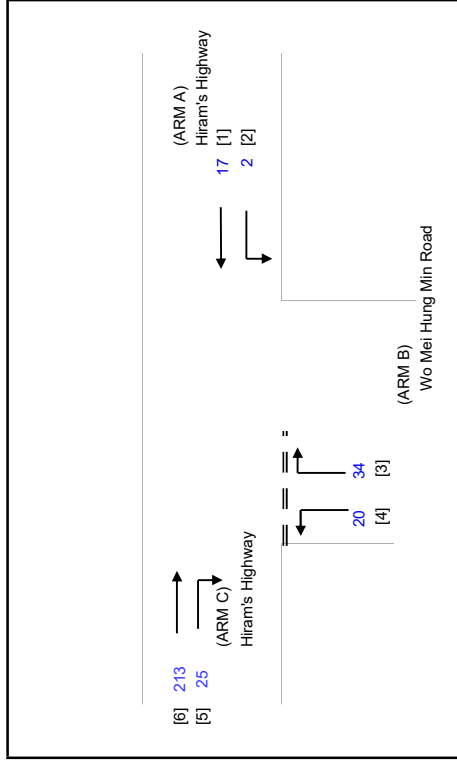
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)1" for Proposed House Development at Various Lots in D.D., 244 and Adjoining Government Land.

J2 Hiram's Highway/ Wo Mei Hung Min Road

PRIORITY JUNCTION CALCULATION

PROJECT NO.: 40862	PREPARED BY: SKL	INITIALS	DATE
FILENAME: J2_HH_WMH	CHECKED BY: SLN		Oct-23
REFERENCE NO.:	REVIEWED BY: SLN		Oct-23

2023 Existing AM



NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH
- W cr = CENTRAL RESERVE WIDTH
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
- V l b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
- V r b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
- V l b-c = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
- V r b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
- V l c-b = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM c-b
- V r c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)	
W = 7.3 (metres)	D = 0.8695
W cr = 0.0 (metres)	E = 0.9370
q a-b = 2 (pcu/hr)	F = 1.2585
q a-c = 17 (pcu/hr)	Y = 0.7482
MAJOR ROAD (ARM C)	
W c-b = 7.3 (metres)	F for (Ob-ac) = 0.3704
V r c-b = 50 (metres)	
q c-a = 213 (pcu/hr)	
q c-b = 25 (pcu/hr)	
MINOR ROAD (ARM B)	
W b-a = 3.7 (metres)	
W b-c = 3.7 (metres)	
V l b-a = 30 (metres)	
V r b-a = 50 (metres)	
V l b-c = 50 (metres)	
q b-a = 34 (pcu/hr)	
q b-c = 20 (pcu/hr)	

GEOMETRIC FACTORS :

D = 0.8695	Q b-a = 501
E = 0.9370	Q b-c = 694
F = 1.2585	Q b-c (O) = 682
Y = 0.7482	Q c-b = 931
	Q b-ac = 559
	TOTAL FLOW = 311 (PCU/HR)

THE CAPACITY OF MOVEMENT :

Q b-a = 501	DFC b-a = 0.0679
Q b-c = 694	DFC b-c = 0.0288
Q c-b = 931	DFC c-b = 0.0269
Q b-ac = 559	DFC b-c (share lane) = 0.0358

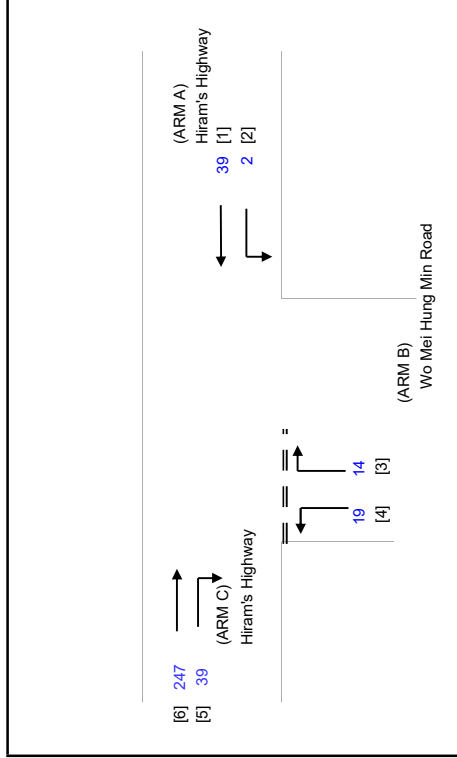
CRITICAL DFC = 0.07

COMPARISON OF DESIGN FLOW TO CAPACITY:

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Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)1" for Proposed House Development at Various Lots in D.D., 244 and Adjoining Government Land.

J2 Hiram's Highway/ Wo Mei Hung Min Road



NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH
- W cr = CENTRAL RESERVE WIDTH
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
- V l b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
- V r b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
- V l b-c = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
- V r b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
- V l c-b = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM c-b
- V r c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

PRIORITY JUNCTION CALCULATION

PROJECT NO.: 40862	PREPARED BY: SKL	INITIALS	DATE
FILENAME: J2_HH_WMH	CHECKED BY: SLN	SLN	Oct-23
REFERENCE NO.:	REVIEWED BY: SLN	SLN	Oct-23

2023 Existing PM

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 7.3 (metres)
W cr = 0.0 (metres)
q a-b = 2 (pcu/hr)
q a-c = 39 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 7.3 (metres)
V r c-b = 50 (metres)
q c-a = 247 (pcu/hr)
q c-b = 39 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 3.7 (metres)
W b-c = 3.7 (metres)
V l b-a = 30 (metres)
V r b-a = 50 (metres)
V l b-c = 50 (metres)
q b-a = 14 (pcu/hr)
q b-c = 19 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.8695
E = 0.9370
F = 1.2585
Y = 0.7482

F for (Ob-ac) = 0.5758

THE CAPACITY OF MOVEMENT :

Q b-a = 486
Q b-c = 688
Q c-b = 924
Q b-ac = 585

TOTAL FLOW = 360 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

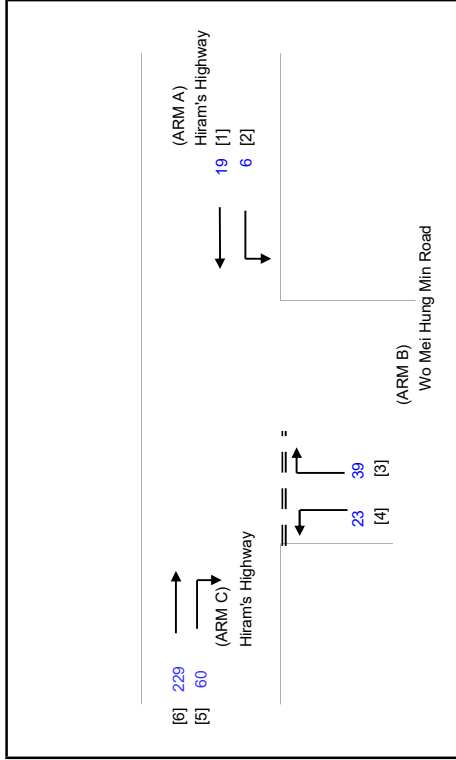
DFC b-a = 0.0288
DFC b-c = 0.0276
DFC c-b = 0.0422
DFC b-c (share lane) = 0.0325

CRITICAL DFC = 0.04

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Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)1" for Proposed House Development at Various Lots in D.D., 244 and Adjoining Government Land.

J2 Hiram's Highway/ Wo Mei Hung Min Road



NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH
- W cr = CENTRAL RESERVE WIDTH
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
- V l b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
- V r b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
- V l b-c = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
- V r b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
- D = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
- E = STREAM-SPECIFIC B-A
- F = STREAM-SPECIFIC B-C
- Y = STREAM-SPECIFIC C-B (1-0.0345W)

PRIORITY JUNCTION CALCULATION

2023 Existing Weekend

PROJECT NO.: 40862

DATE

FILENAME : J2_HH_WMH

Oct-23

REFERENCE NO.:

Oct-23

INITIALS

SKL

SLN

SLN

PREPARED BY:

CHECKED BY:

REVIEWED BY:

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 7.3 (metres)
 W cr = 0.0 (metres)
 q a-b = 6 (pcu/hr)
 q a-c = 19 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 7.3 (metres)
 V r c-b = 50 (metres)
 q c-a = 229 (pcu/hr)
 q c-b = 60 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 3.7 (metres)
 W b-c = 3.7 (metres)
 V l b-a = 30 (metres)
 V r b-a = 50 (metres)
 V l b-c = 39 (metres)
 V r b-c = 23 (metres)

GEOMETRIC FACTORS :

D = 0.8695
 E = 0.9370
 F = 1.2585
 Y = 0.7482

F for (Ob-ac) = 0.3710

THE CAPACITY OF MOVEMENT :

Q b-a = 486
 Q b-c = 693
 Q c-b = 929
 Q b-ac = 547

TOTAL FLOW = 376 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0802
 DFC b-c = 0.0332
 DFC c-b = 0.0646
 DFC b-c (share lane) = 0.0421

CRITICAL DFC = 0.08

Appendix B
Junction Capacity Assessment
– Reference & Design Scenarios

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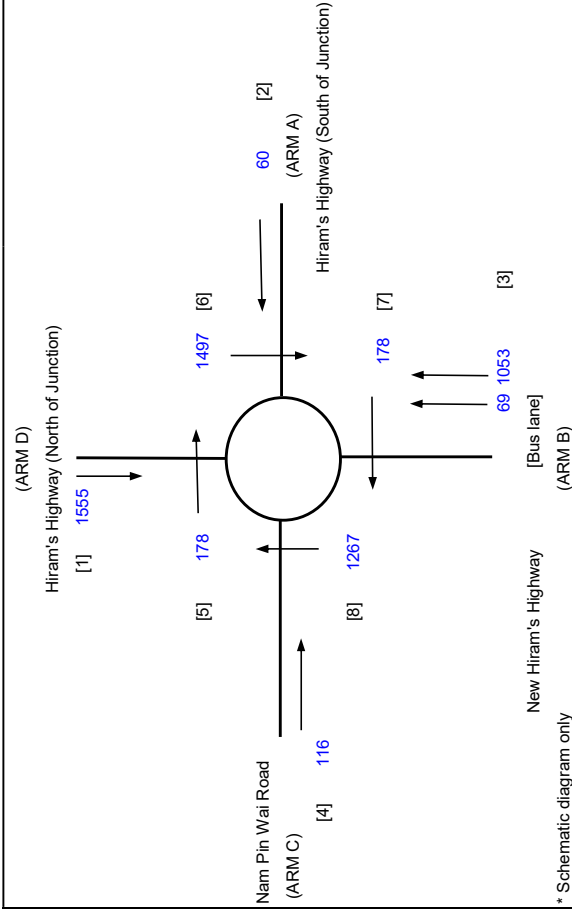
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J1 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

ROUNDABOUT CALCULATION

PROJECT NO.: 40862
 FILENAME : J1_HH_NHH.xlsx
 REFERENCE NO.:
 PREPARED BY: SKL
 CHECKED BY: SLN
 REVIEWED BY: SLN

INITIALS
 DATE
 SKL Oct-23
 SLN Oct-23
 SLN Oct-23



ARM	A	B	C	D
V = Approach half width (m)	3.70	7.40	4.30	7.70
E = Entry width (m)	7.30	11.00	7.30	7.80
L = Effective length of flare (m)	11.00	1.00	20.00	1.00
R = Entry radius (m)	15.00	55.00	23.00	18.00
D = Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A = Entry angle (degree)	32.00	40.00	50.00	36.00
Q = Entry flow (pcuh)	60	1053	116	1555
Qc = Circulating flow across entry (pcuh)	1497	178	1267	178
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2 = V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M = EXP((D-60)/10)	6.05	6.05	6.05	6.05
F = 303*X2	1654	2329	1917	2356
Td = 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc = 0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe = K(F-Fc*Qc)	928	2220	1191	2195
DFC = Design flow/Capacity = Q/Qe	0.06	0.47	0.10	0.71
Total In Sum =				2784 PCU
DFC of Critical Approach =				0.71

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Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)" for Proposed House Development at Various Lots in D.D. 244 and Adjoining Government Land, Nam Pin Wai, Sai Kung

J1 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

ROUNDABOUT CALCULATION

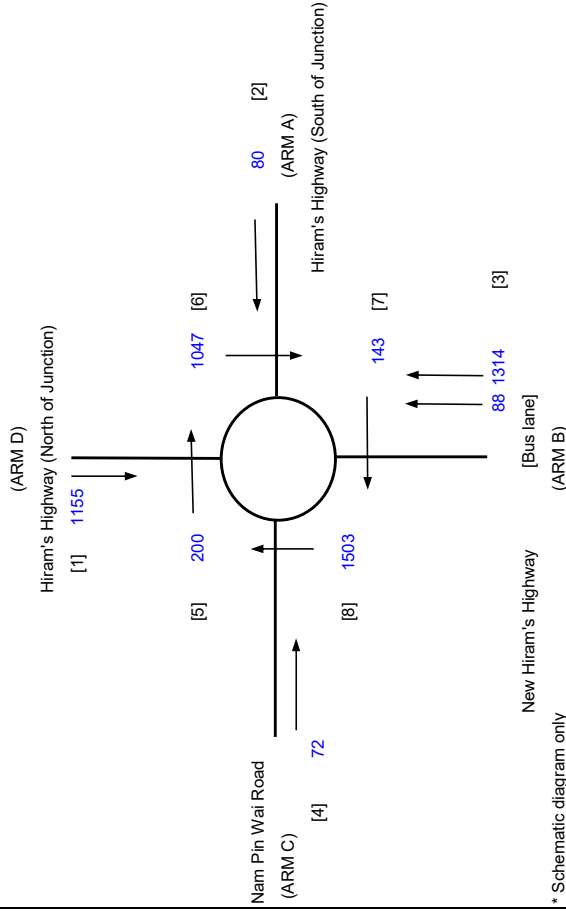
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 PREPARED BY:
 CHECKED BY:
 REVIEWED BY:

INITIALS

SKL
 SLN
 SLN

DATE

Oct-23
 Oct-23
 Oct-23



ARM

INPUT PARAMETERS:

	A	B	C	D
V = Approach half width (m)	3.70	7.40	4.30	7.70
E = Entry width (m)	7.30	11.00	7.30	7.80
L = Effective length of flare (m)	11.00	1.00	20.00	1.00
R = Entry radius (m)	15.00	55.00	23.00	18.00
D = Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A = Entry angle (degree)	32.00	40.00	50.00	36.00
Q = Entry flow (pcuh)	80	1314	72	1155
Qc = Circulating flow across entry (pcuh)	1047	143	1503	200

OUTPUT PARAMETERS:

S = Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2 = V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M = EXP((D-60)/10)	6.05	6.05	6.05	6.05
F = 303*X2	1654	2329	1917	2356
Td = 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc = 0.21*Td*(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe = K(F-Fc*Qc)	1134	2240	1079	2182

DFC = Design flow/Capacity = Q/Qe

Total In Sum = 2621 PCU

DFC of Critical Approach = 0.59

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)" for Proposed House Development at Various Lots in D.D. 244 and Adjoining Government Land, Nam Pin Wai, Sai Kung

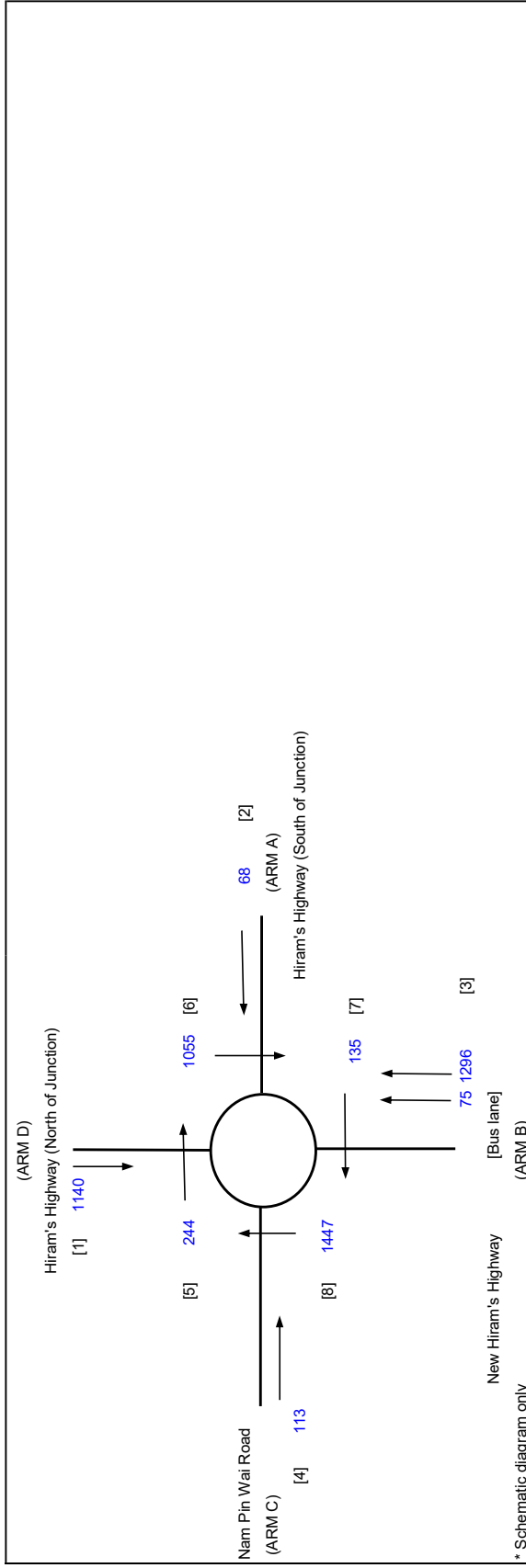
J1 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

ROUNDABOUT CALCULATION

2033 Reference Weekend

PROJECT NO.: 40862
 FILENAME: J1_HH_NHH.xlsx
 REFERENCE NO.:
 PREPARED BY: SKL
 CHECKED BY: SLN
 REVIEWED BY: SLN

INITIALS: SKL
 DATE: Oct-23
 SLN
 Oct-23
 SLN
 Oct-23



* Schematic diagram only

ARM	A	B	C	D
V = Approach half width (m)	3.70	7.40	4.30	7.70
E = Entry width (m)	7.30	11.00	7.30	7.80
L = Effective length of flare (m)	11.00	1.00	20.00	1.00
R = Entry radius (m)	15.00	55.00	23.00	18.00
D = Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A = Entry angle (degree)	32.00	40.00	50.00	36.00
Q = Entry flow (pcuh)	68	1296	113	1140
Qc = Circulating flow across entry (pcuh)	1055	135	1447	244
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2 = V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M = EXP((D-60)/10)	6.05	6.05	6.05	6.05
F = 303*X2	1654	2329	1917	2356
Td = 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc = 0.21*Td*(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe = K(F-Fc*Qc)	1131	2244	1106	2158
DFC = Design flow/Capacity = Q/Qe	0.06	0.58	0.10	0.53
Total In Sum =				2617 PCU
DFC of Critical Approach =				0.58

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)" for Proposed House Development at Various Lots in D.D. 244 and Adjoining Government Land, Nam Pin Wai, Sai Kung

J1 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

ROUNDABOUT CALCULATION

PROJECT NO.: 40862
 FILENAME : J1_HH_NHH.xlsx
 REFERENCE NO.:
 PREPARED BY:
 CHECKED BY:
 REVIEWED BY:

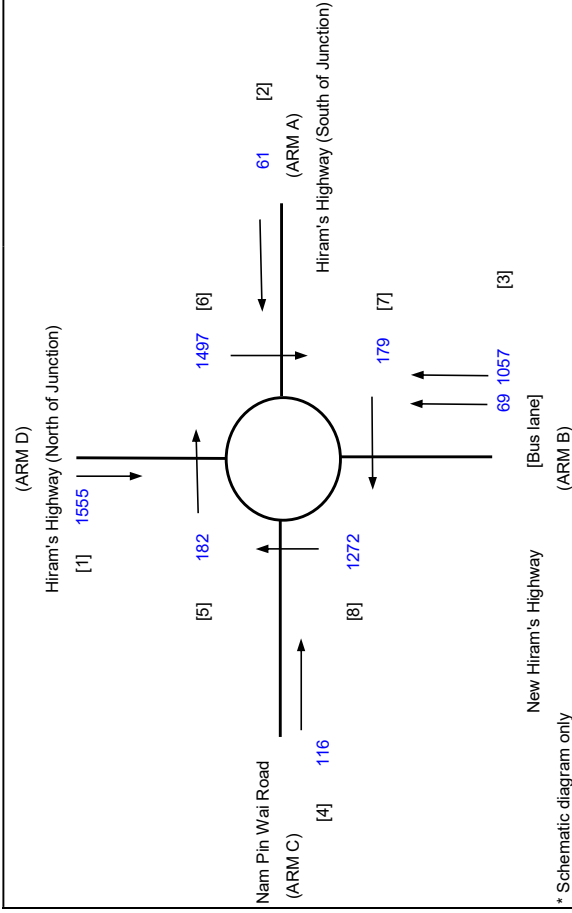
INITIALS

SKL
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 SLN

DATE

Oct-23
 Oct-23
 Oct-23

2033 Design AM



ARM

INPUT PARAMETERS:

	A	B	C	D
V = Approach half width (m)	3.70	7.40	4.30	7.70
E = Entry width (m)	7.30	11.00	7.30	7.80
L = Effective length of flare (m)	11.00	1.00	20.00	1.00
R = Entry radius (m)	15.00	55.00	23.00	18.00
D = Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A = Entry angle (degree)	32.00	40.00	50.00	36.00
Q = Entry flow (pcuh)	61	1057	116	1555
Qc = Circulating flow across entry (pcuh)	1497	179	1272	182

OUTPUT PARAMETERS:

S = Sharpness of flare = $1.6(E-V)/L$	0.52	5.76	0.24	0.16
K = $1-0.00347(A-30)-0.978(1/R-0.05)$	0.98	1.00	0.94	0.97
X2 = $V + ((E-V)/(1+2S))$	5.46	7.69	6.33	7.78
M = $EXP((D-60)/10)$	6.05	6.05	6.05	6.05
F = $303*X2$	1654	2329	1917	2356
Td = $1+(0.5/(1+M))$	1.07	1.07	1.07	1.07
Fc = $0.21*Td(1+0.2*X2)$	0.47	0.57	0.51	0.57
Qe = $K(F-Fc*Qc)$	928	2219	1189	2192

DFC = Design flow/Capacity = Q/Qe

Total In Sum = 2789 PCU

DFC of Critical Approach = 0.71

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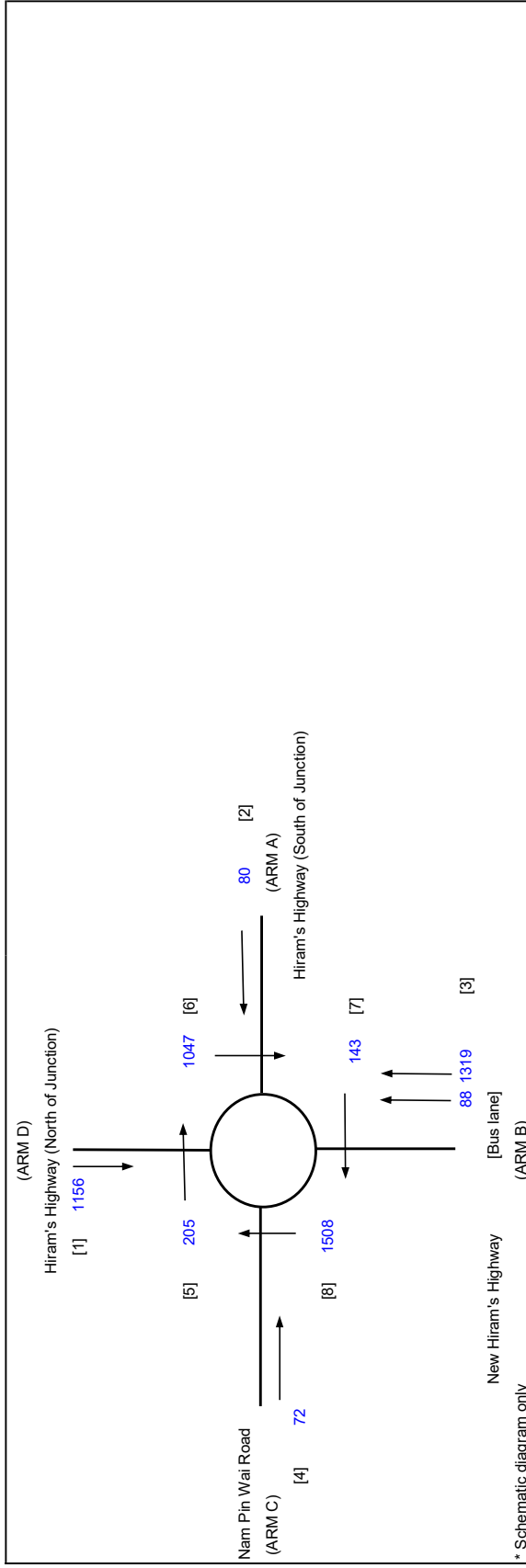
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)" for Proposed House Development at Various Lots in D.D. 244 and Adjoining Government Land, Nam Pin Wai, Sai Kung

J1 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

ROUNDABOUT CALCULATION

PROJECT NO.: 40862
 FILENAME : J1_HH_NHH.xlsx
 REFERENCE NO.:
 PREPARED BY: SKL
 CHECKED BY: SLN
 REVIEWED BY: SLN

INITIALS DATE
 SKL Oct-23
 SLN Oct-23
 SLN Oct-23



ARM	A	B	C	D
V = Approach half width (m)	3.70	7.40	4.30	7.70
E = Entry width (m)	7.30	11.00	7.30	7.80
L = Effective length of flare (m)	11.00	1.00	20.00	1.00
R = Entry radius (m)	15.00	55.00	23.00	18.00
D = Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A = Entry angle (degree)	32.00	40.00	50.00	36.00
Q = Entry flow (pcuh)	80	1319	72	1156
Qc = Circulating flow across entry (pcuh)	1047	143	1508	205
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2 = V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M = EXP((D-60)/10)	6.05	6.05	6.05	6.05
F = 303*X2	1654	2329	1917	2356
Td = 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc = 0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe = K(F-Fc*Qc)	1134	2240	1076	2179
Total In Sum = 2627 PCU				
DFC = Design flow/Capacity = Q/Qe	0.07	0.59	0.07	0.53
DFC of Critical Approach = 0.59				

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)" for Proposed House Development at Various Lots in D.D. 244 and Adjoining Government Land, Nam Pin Wai, Sai Kung

J1 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

ROUNDABOUT CALCULATION

2033 Design Weekend

PROJECT NO.: 40862
 FILENAME: J1_HH_NHH.xlsx
 REFERENCE NO.:
 PREPARED BY: SKL
 CHECKED BY: SLN
 REVIEWED BY: SLN

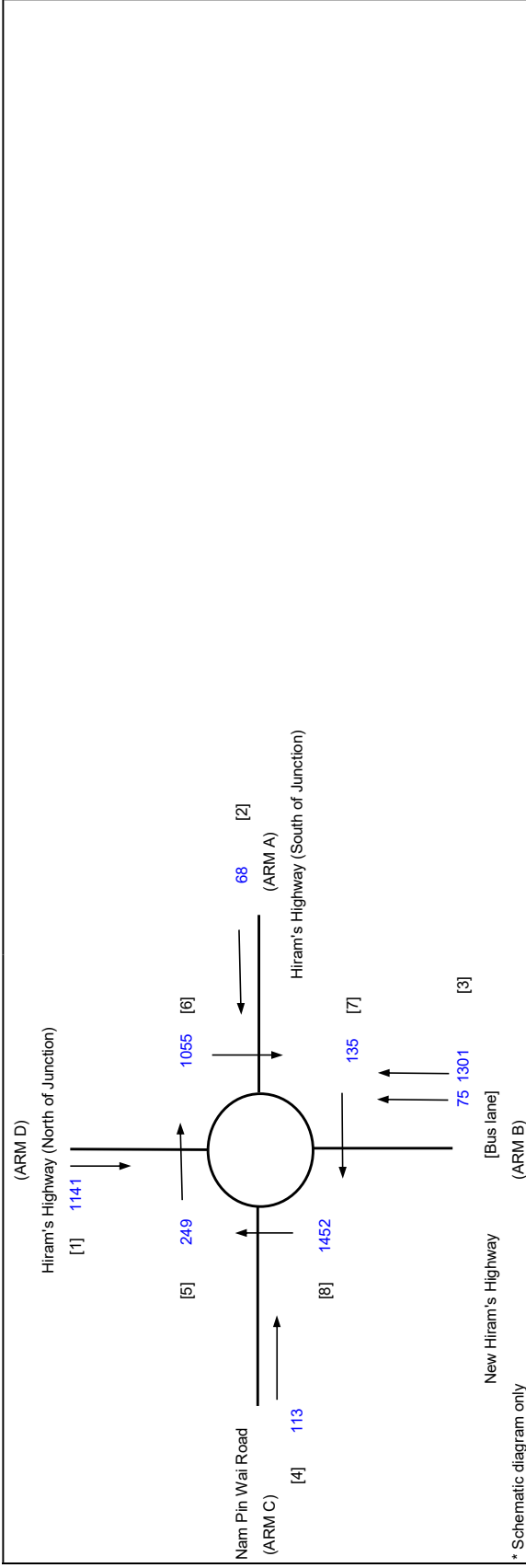
INITIALS

DATE

Oct-23

Oct-23

Oct-23

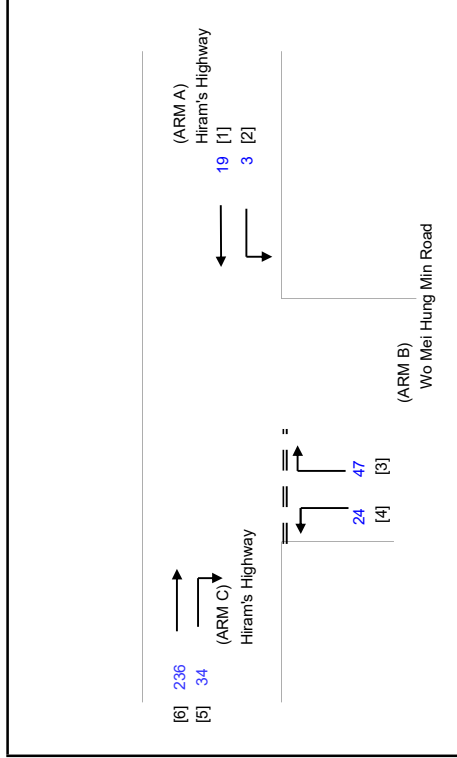


ARM	A	B	C	D
V = Approach half width (m)	3.70	7.40	4.30	7.70
E = Entry width (m)	7.30	11.00	7.30	7.80
L = Effective length of flare (m)	11.00	1.00	20.00	1.00
R = Entry radius (m)	15.00	55.00	23.00	18.00
D = Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A = Entry angle (degree)	32.00	40.00	50.00	36.00
Q = Entry flow (pcu/h)	68	1301	113	1141
Qc = Circulating flow across entry (pcu/h)	1055	135	1452	249
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.52	5.76	0.24	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.00	0.94	0.97
X2 = V + ((E-V)/(1+2S))	5.46	7.69	6.33	7.78
M = EXP((D-60)/10)	6.05	6.05	6.05	6.05
F = 303*X2	1654	2329	1917	2356
Td = 1+(0.5/(1+M))	1.07	1.07	1.07	1.07
Fc = 0.21*Td(1+0.2*X2)	0.47	0.57	0.51	0.57
Qe = K(F-Fc*Qc)	1131	2244	1103	2155
Total In Sum = 2623 PCU				
DFC = Design flow/Capacity = Q/Qe	0.06	0.58	0.10	0.53
DFC of Critical Approach = 0.58				

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)1" for Proposed House Development at Various Lots in D.D. 244 and Adjoining Government Land.

J2 Hiram's Highway/ Wo Mei Hung Min Road



NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH
- W cr = CENTRAL RESERVE WIDTH
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
- V l b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
- V r b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
- V l b-c = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
- V r b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

PRIORITY JUNCTION CALCULATION

PROJECT NO.: 40862	PREPARED BY: SKL	INITIALS	DATE
FILENAME: J2_HH_WMH	CHECKED BY: SLN		Oct-23
REFERENCE NO.:	REVIEWED BY: SLN		Oct-23

2033 Reference AM

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)	
W = 7.3 (metres)	
W cr = 0.0 (metres)	
q a-b = 3 (pcu/hr)	
q a-c = 19 (pcu/hr)	
MAJOR ROAD (ARM C)	
W c-b = 7.3 (metres)	
V r c-b = 50 (metres)	
q c-a = 236 (pcu/hr)	
q c-b = 34 (pcu/hr)	
MINOR ROAD (ARM B)	
W b-a = 3.7 (metres)	
W b-c = 3.7 (metres)	
V l b-a = 30 (metres)	
V r b-a = 50 (metres)	
V l b-c = 50 (metres)	
q b-a = 47 (pcu/hr)	
q b-c = 24 (pcu/hr)	

GEOMETRIC FACTORS :

D = 0.8695	
E = 0.9370	
F = 1.2585	
Y = 0.7482	
F for (Ob-ac) = 0.3380	

THE CAPACITY OF MOVEMENT :

Q b-a = 494	
Q b-c = 693	Q b-c (O) = 677
Q c-b = 930	
Q b-ac = 547	
TOTAL FLOW = 363	(PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0951	
DFC b-c = 0.0346	
DFC c-b = 0.0366	
DFC b-c (share lane) = 0.0439	

CRITICAL DFC = 0.10

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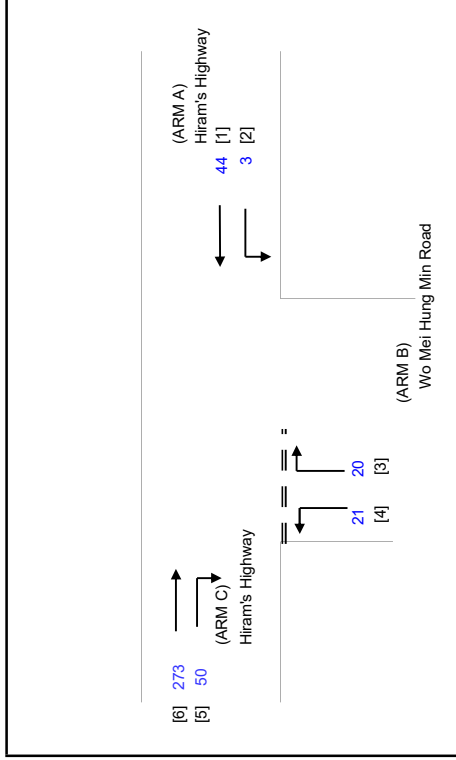
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)1" for Proposed House Development at Various Lots in D.D., 244 and Adjoining Government Land.

J2 Hiram's Highway/ Wo Mei Hung Min Road

PRIORITY JUNCTION CALCULATION

PROJECT NO.: 40862	PREPARED BY: SKL	INITIALS	DATE
FILENAME: J2_HH_WMH	CHECKED BY: SLN		Oct-23
REFERENCE NO.:	REVIEWED BY: SLN		Oct-23

2033 Reference PM



NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH
- W cr = CENTRAL RESERVE WIDTH
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
- V l b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
- V r b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
- V l b-c = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
- V r b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
- V l c-b = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM c-b
- V r c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 7.3 (metres)
 W cr = 0.0 (metres)
 q a-b = 3 (pcu/hr)
 q a-c = 44 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 7.3 (metres)
 V r c-b = 50 (metres)
 q c-a = 273 (pcu/hr)
 q c-b = 50 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 3.7 (metres)
 W b-c = 3.7 (metres)
 V l b-a = 30 (metres)
 V r b-a = 50 (metres)
 V r b-c = 50 (metres)
 q b-a = 20 (pcu/hr)
 q b-c = 21 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.8695
 E = 0.9370
 F = 1.2585
 Y = 0.7482

F for (Ob-ac) = 0.5122

THE CAPACITY OF MOVEMENT :

Q b-a = 477
 Q b-c = 687
 Q c-b = 921
 Q b-ac = 566

TOTAL FLOW = 411 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

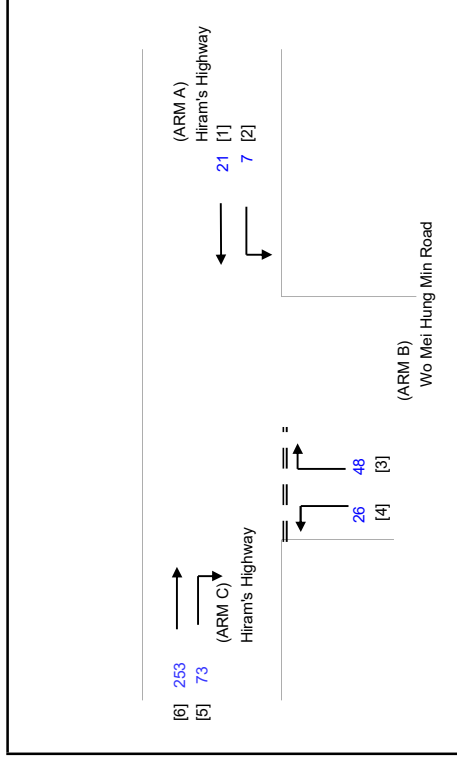
DFC b-a = 0.0419
 DFC b-c = 0.0306
 DFC c-b = 0.0543
 DFC b-c (share lane) = 0.0371

CRITICAL DFC = 0.05

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)1" for Proposed House Development at Various Lots in D.D., 244 and Adjoining Government Land.

J2 Hiram's Highway/ Wo Mei Hung Min Road



NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH
- W cr = CENTRAL RESERVE WIDTH
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
- V l b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
- V r b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
- V l b-c = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
- V r b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

PRIORITY JUNCTION CALCULATION

2033 Reference Weekend

PROJECT NO.: 40862	PREPARED BY: SKL	INITIALS	DATE
FILENAME: J2_HH_WMH	CHECKED BY: SLN	SLN	Oct-23
REFERENCE NO.:	REVIEWED BY: SLN	SLN	Oct-23

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 7.3 (metres)
 W cr = 0.0 (metres)
 q a-b = 7 (pcu/hr)
 q a-c = 21 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 7.3 (metres)
 V r c-b = 50 (metres)
 q c-a = 253 (pcu/hr)
 q c-b = 73 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 3.7 (metres)
 W b-c = 3.7 (metres)
 V l b-a = 30 (metres)
 V r b-a = 50 (metres)
 V l b-c = 48 (pcu/hr)
 q b-a = 26 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.8695
 E = 0.9370
 F = 1.2585
 Y = 0.7482
 F for (Ob-ac) = 0.3514

THE CAPACITY OF MOVEMENT :

Q b-a = 477
 Q b-c = 692
 Q c-b = 928
 Q b-ac = 535
 TOTAL FLOW = 428 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

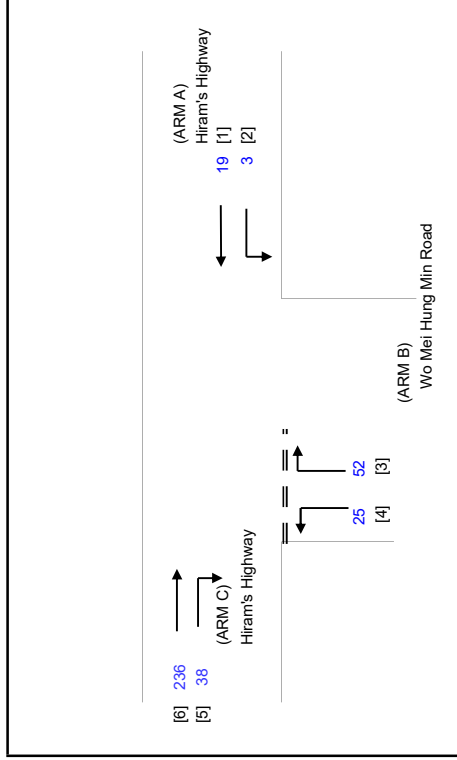
DFC b-a = 0.1006
 DFC b-c = 0.0376
 DFC c-b = 0.0787
 DFC b-c (share lane) = 0.0486

CRITICAL DFC = 0.10

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)1" for Proposed House Development at Various Lots in D.D., 244 and Adjoining Government Land.

J2 Hiram's Highway/ Wo Mei Hung Min Road



NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH
- W cr = CENTRAL RESERVE WIDTH
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
- V l b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
- V r b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
- V l b-c = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
- V r b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

PRIORITY JUNCTION CALCULATION

PROJECT NO.: 40862	PREPARED BY: SKL	INITIALS	DATE
FILENAME: J2_HH_WMH	CHECKED BY: SLN	SLN	Oct-23
REFERENCE NO.:	REVIEWED BY: SLN	SLN	Oct-23

2033 Design AM

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)	
W = 7.3 (metres)	
W cr = 0.0 (metres)	
q a-b = 3 (pcu/hr)	
q a-c = 19 (pcu/hr)	
MAJOR ROAD (ARM C)	
W c-b = 7.3 (metres)	
V r c-b = 50 (metres)	
q c-a = 236 (pcu/hr)	
q c-b = 38 (pcu/hr)	
MINOR ROAD (ARM B)	
W b-a = 3.7 (metres)	
W b-c = 3.7 (metres)	
V l b-a = 30 (metres)	
V r b-a = 50 (metres)	
V l b-c = 50 (metres)	
q b-a = 52 (pcu/hr)	
q b-c = 25 (pcu/hr)	

GEOMETRIC FACTORS :

D = 0.8695	
E = 0.9370	
F = 1.2585	
Y = 0.7482	
F for (Ob-ac) = 0.3247	

THE CAPACITY OF MOVEMENT :

Q b-a = 492	Q b-c (O) = 675	
Q b-c = 693		
Q c-b = 930		
Q b-ac = 543		
TOTAL FLOW = 373		(PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.1057	
DFC b-c = 0.0361	
DFC c-b = 0.0409	
DFC b-c (share lane) = 0.0460	

CRITICAL DFC = 0.11

LLA CONSULTANCY LIMITED

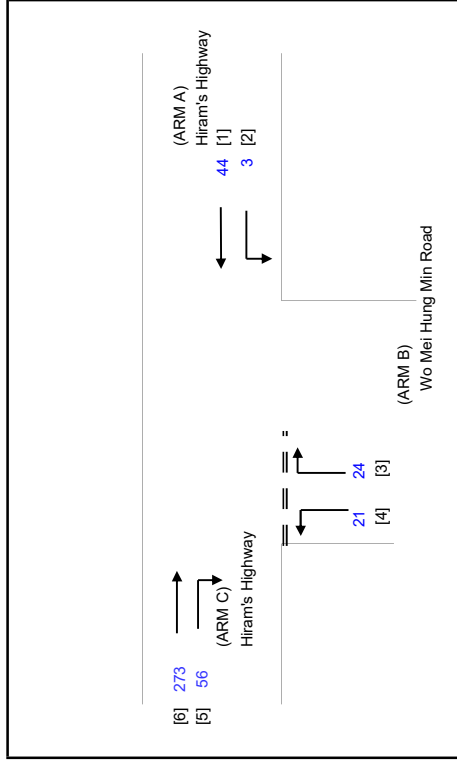
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)1" for Proposed House Development at Various Lots in D.D., 244 and Adjoining Government Land.

J2 Hiram's Highway/ Wo Mei Hung Min Road

PRIORITY JUNCTION CALCULATION

PROJECT NO.: 40862	PREPARED BY: SKL	INITIALS	DATE
FILENAME: J2_HH_WMH	CHECKED BY: SLN		Oct-23
REFERENCE NO.:	REVIEWED BY: SLN		Oct-23

2033 Design PM



NOTES : (GEOMETRIC INPUT DATA)

- W = MAJOR ROAD WIDTH
- W cr = CENTRAL RESERVE WIDTH
- W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
- W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
- W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
- V l b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
- V r b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
- V l b-c = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
- V r b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
- V l c-b = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM c-b
- V r c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
- D = STREAM-SPECIFIC B-A
- E = STREAM-SPECIFIC B-C
- F = STREAM-SPECIFIC C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)	
W = 7.3 (metres)	
W cr = 0.0 (metres)	
q a-b = 3 (pcu/hr)	
q a-c = 44 (pcu/hr)	
MAJOR ROAD (ARM C)	
W c-b = 7.3 (metres)	
V r c-b = 50 (metres)	
q c-a = 273 (pcu/hr)	
q c-b = 56 (pcu/hr)	
MINOR ROAD (ARM B)	
W b-a = 3.7 (metres)	
W b-c = 3.7 (metres)	
V l b-a = 30 (metres)	
V r b-a = 50 (metres)	
V l b-c = 50 (metres)	
q b-a = 24 (pcu/hr)	
q b-c = 21 (pcu/hr)	

GEOMETRIC FACTORS :

D = 0.8695	
E = 0.9370	
F = 1.2585	
Y = 0.7482	
F for (Ob-ac) = 0.4667	

THE CAPACITY OF MOVEMENT :

Q b-a = 475	
Q b-c = 687	Q b-c (O) = 678
Q c-b = 921	
Q b-ac = 555	
TOTAL FLOW = 421	(PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0505	
DFC b-c = 0.0306	
DFC c-b = 0.0608	
DFC b-c (share lane) = 0.0378	

CRITICAL DFC = 0.06

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" to "Residential (Group C)1" for Proposed House Development at Various Lots in D.D., 244 and Adjoining Government Land.

J2 Hiram's Highway/ Wo Mei Hung Min Road

PRIORITY JUNCTION CALCULATION

2033 Design Weekend

PROJECT NO.: 40862

PREPARED BY: SKL

DATE

INITIALS

FILENAME: J2_HH_WMH

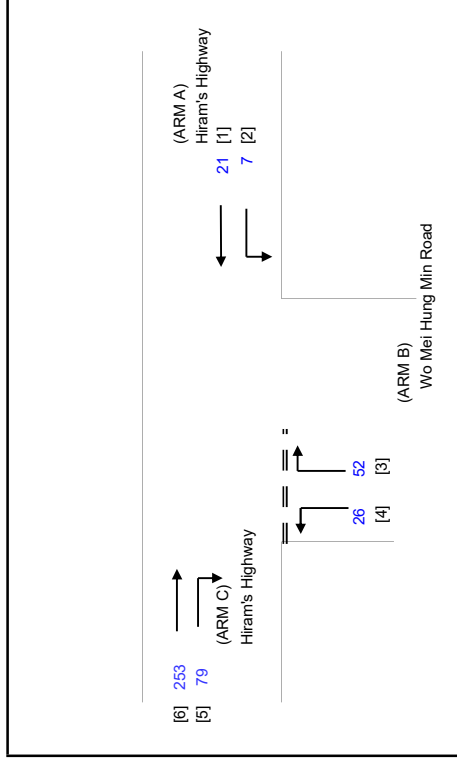
CHECKED BY: SLN

Oct-23

REFERENCE NO.:

REVIEWED BY: SLN

Oct-23



NOTES : (GEOMETRIC INPUT DATA)

W = MAJOR ROAD WIDTH
 W cr = CENTRAL RESERVE WIDTH
 W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
 W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
 W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
 V l b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
 V r b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
 V l b-c = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
 V r b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
 V l c-b = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM c-b
 V r c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
 D = STREAM-SPECIFIC B-A
 E = STREAM-SPECIFIC B-C
 F = STREAM-SPECIFIC C-B
 Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 7.3 (metres)
 W cr = 0.0 (metres)
 q a-b = 7 (pcu/hr)
 q a-c = 21 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 7.3 (metres)
 V r c-b = 50 (metres)
 q c-a = 253 (pcu/hr)
 q c-b = 79 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 3.7 (metres)
 W b-c = 3.7 (metres)
 V l b-a = 30 (metres)
 V r b-a = 50 (metres)
 V l b-c = 50 (metres)
 V r b-c = 52 (pcu/hr)
 q b-a = 52 (pcu/hr)
 q b-c = 26 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.8695
 E = 0.9370
 F = 1.2585
 Y = 0.7482

F for (Ob-ac) = 0.3333

THE CAPACITY OF MOVEMENT :

Q b-a = 475
 Q b-c = 692
 Q c-b = 928
 Q b-ac = 530

TOTAL FLOW = 438 (PCU/HR)

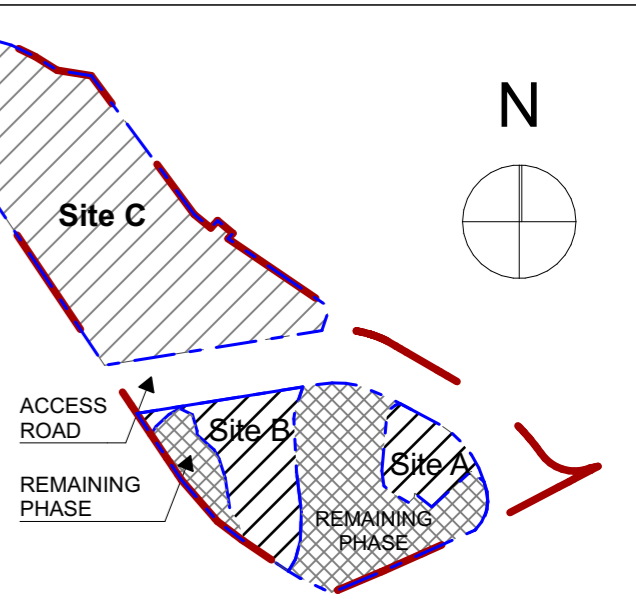
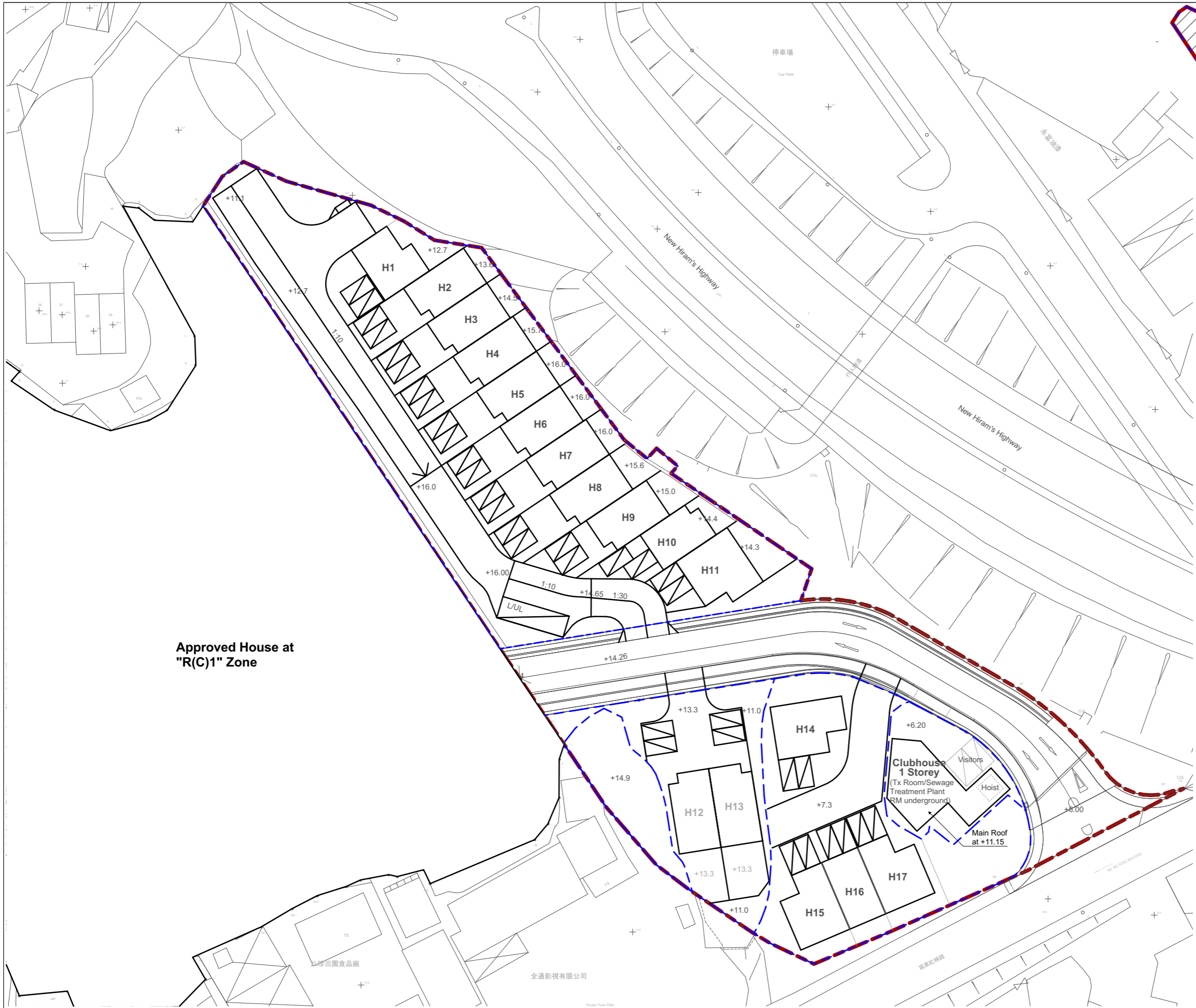
COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.1095
 DFC b-c = 0.0376
 DFC c-b = 0.0651
 DFC b-c (share lane) = 0.0490

CRITICAL DFC = 0.11

Appendix C

Master Layout Plan



- LEGEND**
- - - Application Site
 - - - Development Site
 - / / / Phase 1
 - X X X Remaining Phase

Approved House at
"R(C)1" Zone