ARUP

Appendix D

Revised 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" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak 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	SKL	Date: 21 October 2025
	Approved by: SLN		Date: 21 October 2025
	Revision No.: -		Date of Issue: 21 October 2025

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1 INTRODUCTION

1.1 Background

1.1.1 The Applicant intends to develop the Site into a residential development at various lots in D.D.210, Pak Wai, Sai Kung ("the Site").

1.1.2 The Site is currently zoned as "Green Belt" ("GB") and "Road" under the Draft Ho Chung Outline Zoning Plan (OZP) No. S/SK-HC/12. The Applicant proposes amendments to the Draft Ho Chung Outline Zoning Plan (OZP) No. S/SK-HC/12 by rezoning the Application Site from "Green Belt" ("GB") and area shown as "Road" to "Residential (Group C)5" ("R(C)5"), with a maximum plot ratio of 0.6 and maximum building heights (BH) of 4 storeys (excluding basements) to facilitate the proposed residential development.

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 development;
- to assess the future traffic situation in the surrounding road network;
- to appraise the potential traffic impact of the proposed development; and
- to recommend the transport facilities provisions for the proposed development.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 As shown in **Figure 2.1**, the Site is located near the J/O Hiram's Highway/Hing Keng Shek Road. The Site area is about 12,692 m^2.

2.2 Development Schedule

2.2.1 The Site will comprise of 4 residential towers with 120 residential units. The development parameters are summarized in **Table 2.1**.

Table 2.1 Proposed Development Schedule

Item	Parameter
Site Area	About 12,692 m^2
Plot Ratio	About 0.6
Total GFA	About 7,615.2 m^2
Domestic GFA	About 7,615.2 m^2
Number of Residential Blocks	4 blocks
Number of Residential Units	120 units
Estimated Residential Population	360

3 EXISTING TRAFFIC SITUATION

3.1 Existing Traffic Conditions

3.1.1 Hing Keng Shek Road serves as a local road connecting to Hiram's Highway. It is a single carriageway with few accesses for the low-density developments and villages 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. The section of Hiram's Highway between Clear Water Bay Road and Po Tung Road carried an AADT of 22,860 vehicles in 2023.

3.2 Existing Junction Capacity Assessment

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 13 October 2025 (Monday) during 07:30 – 09:30 and 17:30 – 19:30 and 11 October 2025 (Saturday) form 12:00 to 19:00. The locations of the surveyed junctions are presented in **Figure 3.1**.

- Hiram's Highway/Hing Keng Shek Road Roundabout
- Hiram's Highway/Ho Chung Road
- Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road

3.2.2 The identified weekday AM, weekday PM and weekend peak hours were 08:00 – 09:00, 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)	Junction Performance		
			Weekday AM Peak	Weekday PM Peak	Weekend Peak
J1	Hiram's Highway/Hing Keng Shek Road Roundabout	Roundabout /DFC	0.51	0.43	0.50
J2	Hiram's Highway/Ho Chung Road	Signalized/RC	106%	78%	97%
J3	Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road	Roundabout/ DFC	0.58	0.57	0.50

Note: (1) RC = Reserve Capacity; DFC = Design Flow to Capacity ratio

3.4 Existing Link Capacity Assessment

3.4.1 The Volume to Capacity (V/C) Ratios of 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		
			AM	PM	WN	AM	PM	WN
Hiram's Highway(2)	EB	1,020	761	1,005	974	0.75	0.99	0.95
	WB	1,020	1,031	785	1,008	1.01	0.77	0.99
Hiram's Highway(3)	NB	3,120	750	1,019	1,005	0.24	0.33	0.32
	SB	3,120	1,083	799	1,039	0.35	0.26	0.33
Hiram's Highway(4)	NB	3,120	786	1,121	1,066	0.25	0.36	0.34
	SB	3,120	1,177	850	1,065	0.38	0.27	0.34
Hiram's Highway(5)	NB	3,120	878	1,256	1,149	0.28	0.40	0.37
	SB	3,120	1,282	932	1,133	0.41	0.30	0.36
Hing Keng Shek Road	2-way	120	51	38	69	0.43	0.32	0.58

Notes: AM – Weekday AM Peak Hour; PM – Weekday PM Peak Hour; WN – Weekend Peak Hour
(1) Capacity refers to TPDM Vol.2 Ch. 2.4. 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 Hing Keng Shek Road and Pak Sha Wan Street.
(3) The section between access of Luk Cheung Road and Hing Keng Shek Road.
(4) The section between Ho Chung Road and Luk Mei Tsuen Road.
(5) The section between Nam Pin Wai Road and Ho Chung Road.

3.4.2 As shown in **Table 3.2**, the concerned road sections are operating with spare capacity during weekday AM, weekday PM and weekend peak hours, except the section of Hiram's Highway between Hing Keng Shek Road and Pak Sha Wan Street which is operating at its capacity.

3.5 Public Transport Services

3.5.1 At present, there are few franchised bus and green minibus routes travelling along Hiram's Highway and the details of these routes. The nearby bus stops of the Site are listed out in **Table 3.3** and shown in **Figure 3.3**, respectively.

Table 3.3 Existing Public Transport Services

Mode	Route No.	Terminating Points	Frequency (min)
Bus	92	Sai Kung – Diamond Hill Station	15 – 30
	96R(1)	Wong Shek Pier – Diamond Hill Station	25 – 30
	292P	Sai Kung – Kwun Tong (Yue Man Square)	07:30
	792M	Sai Kung – Tseung Kwan O Station	15 – 30
GMB	1	Sai Kung – Kowloon Bay (Telford Gardens)	8 – 20
	1A	Sai Kung – Diamond Hill (Choi Hung Road) Public Transport Interchange	4
	1S(2)	Sai Kung – Diamond Hill (Choi Hung Road) Public Transport Interchange	10 – 15
	2	Sai Kung – Ho Chung	15 – 30
	12	Sai Kung – Po Lam	10 – 15

Mode	Route No.	Terminating Points	Frequency (min)
	101M	Sai Kung – Hang Hau Station (via Sai Kung North Public Transport Interchange)	3 – 30

Note: (1) Service on Saturdays, Sundays and Holidays.
(2) Overnight Service.

3.5.2 An on-site observation was carried out to identify the occupancy of the franchised bus and green minibus services in the AM peak hour and the results are summarized in **Table 3.4**.

Table 3.4 Occupancy of Existing Franchised Bus and Green Minibus Services during AM Peak Hour

Route No.	Observed Vehicular Trips	Passenger Capacity (1)	Passengers on Bus upon Arrival	Total No. of passengers		Passengers on Bus upon Leave	Occupancy
				Boarding	Alighting		
		[a]	[b]	[c]	[d]	[e] = [b]+[c]-[d]	[f] = [e] / [a]
Sai Kung Bound							
Bus 92	3	360	80	0	4	76	21%
Bus 792M	3	360	50	0	0	50	14%
GMB 1	7	112	56	2	0	58	52%
GMB 1A	22	352	229	3	5	227	64%
GMB 2	3	48	23	0	0	23	48%
GMB 12	4	64	20	0	0	20	31%
GMB 101M	20	320	178	0	2	176	55%
Total	**62**	**1616**	**636**	**5**	**11**	**630**	**39%**
Kowloon Bound							
Bus 92	2	240	90	2	1	91	38%
Bus 792M	2	240	90	5	0	95	40%
GMB 1	4	64	64	0	0	64	100%
GMB 1A	23	368	361	2	0	363	99%
GMB 2	2	32	16	0	0	16	50%
GMB 12	2	32	32	0	0	32	100%
GMB 101M	17	272	272	0	0	272	100%
Total	**52**	**1248**	**925**	**9**	**1**	**933**	**75%**

Note: (1) Assume the capacity of each franchised bus and green minibus is 120 pax and 16 pax, respectively.

4 FUTURE TRAFFIC SITUATION

4.1 Design Year

4.1.1 The completion year of the proposed development is expected to be 2031. As a result, the design year of the traffic impact assessment should be three years after the completion year, i.e., 2034.

4.2 Traffic Forecast

ATC Historical Data

4.2.1 Reference was made to the 2019 to 2023 Annual Traffic Census Reports, published by the Transport Department, to determine the traffic growth. The traffic data recorded at the counting stations in the vicinity of the Development Site is shown in **Table 4.1**.

Table 4.1 Annual Traffic Census Data

Stn. No.	Road Section			AADT(1)					Average Growth%
	Road	From	To	2019	2020	2021	2022	2023	
5017	Clear Water Bay Rd	On Sau Rd	Hiram's Highway	28,980	28,900 (-0.3%)	29,100 (0.7%)	27,720 (-4.7%)	29,080 (4.9%)	0.1%
5466	Clear Water Bay Rd	Hang Hau Rd	Hiram's Highway	20,240	19,110 (-5.6%)	20,020 (4.8%)	19,140 (-4.4%)	19,160 (0.1%)	-1.4%
6055	Hiram's Highway	Clear Water Bay Rd	Po Tung Rd	24,280	23,360 (-3.8%)	24,460 (4.7%)	23,480 (-4%)	22,860 (-2.6%)	-1.5%
Total				**73,500**	**71,370 (-2.9%)**	**73,580 (3.1%)**	**70,340 (-4.4%)**	**71,100 (1.1%)**	**-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 2019 to 2023.

Territorial Population and Employment Data Matrix (TPEDM) Projection Data

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

Table 4.2 Population and Employment Data in Southeast New Territories (Other Area)

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 Annual Growth %		**-0.4% (2019 to 2026)**	**-1.2% (2026 to 2031)**

4.2.4 As shown in **Table 4.2**, the projected average annual growth rates of the population and employment total number under the TPEDM in Southeast New Territories (Other Area) are negative 0.4% and negative 1.2% between the years 2019 – 2026 and 2026 – 2031, respectively. Having considered the rates derived from ATC and TPEDM data, to be conservative, a nominal growth rate of +1.0% will be adopted for the subsequent traffic forecast.

4.3 Traffic Generation of the Proposed 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 the proposed development. The traffic generation and attraction numbers were shown in **Table 4.3**

Table 4.3 Development Traffic Generation

Proposed Use	Unit / Content	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Peak Hour (1)		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Mean Trip rates from TPDM										
Residential – 70m^2	pcu/hr/flat	0.0888	0.0515	-	0.0356	0.0480	-	0.0356	0.0480	-
Traffic Generation/Attraction										
Proposed Development	120 flats	11	7	18	5	6	11	5	6	11

Note: Gen. – Generation; Att. – Attraction.
(1) The trip rates for PM peak hour are adopted for the weekend peak hour.

4.3.2 In view of the above, the proposed development would generate two-way traffic flows of 18 pcu/hr in the weekday AM peak hour, 11 pcu/hr in the weekday PM peak hour and 11 pcu/hr in the weekend peak hour. The traffic distribution is shown diagrammatically in **Figure 4.1**.

4.4 Planned and Approved Developments

4.4.1 To estimate the future traffic flows generated and attracted by the nearby planned and approved 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 and Approved Developments

Ref.	Location	Use	Development Parameters
A	Various Lot in D.D. 210, Ho Chung	Residential	2,422 m^2 GFA (15 flats)
B	Lot 1003 in D.D. 214, Ho Chung	Residential	5,344 m^2 GFA (90 flats)
C	Lot 2189 in D.D. 244, Nam Pin Wai	Residential	8,320 m^2 GFA (139 flats)
D	Various Lots in D.D. 244 and Adjoining Government Land, Ho Chung, Sai Kung	Residential	13,719 m^2 GFA (58 flats)
E	Various Lots in D.D. 210 and 244 and Adjoining Government Land, Ho Chung, Sai Kung	Residential	2,393 m^2 GFA (8 flats)

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 total traffic generation and attraction by these adjacent planned/committed developments are summarized in **Table 4.5**.

Table 4.5 Traffic Generation of the Planned and Approved Developments

Use	Use / Content	AM Peak Hour			PM Peak Hour			Weekend Peak Hour (1)		
		Gen.	Att.	Total	Gen.	Att.	Total	Gen.	Att.	Total
Adopted TPDM Mean Trip Rates										
Residential – 60m^2	pcu/hr/flat	0.0718	0.0425	-	0.0286	0.0370	-	0.0286	0.0370	-
Residential – 180m^2	pcu/hr/flat	0.2772	0.1769	-	0.1635	0.2394	-	0.1635	0.2394	-
Residential – 240m^2	pcu/hr/flat	0.3012	0.2189	-	0.2235	0.3234	-	0.2235	0.3234	-
Residential – 300m^2	pcu/hr/flat	0.3252	0.2609	-	0.2835	0.4074	-	0.2835	0.4074	-
Traffic Generation										
Site A	15 flats	5	3	8	3	4	7	3	4	7
Site B	90 flats	7	4	11	3	4	7	3	4	7
Site C	139 flats	10	6	16	4	6	10	4	6	10
Site D	58 flats	18	13	31	13	19	32	13	19	32
Site E	8 flats	3	3	6	3	4	7	3	4	7
	Total	**43**	**29**	**72**	**26**	**37**	**63**	**26**	**37**	**63**

Note: Gen. – Generation; Att. – Attraction.
(1) The trip rates for PM peak hour are adopted for weekend peak hour.

4.4.3 As shown in **Table 4.5**, the planned/committed developments will generate a total two-way traffic of 72, 63 and 63 pcu/hr during weekday AM, weekday PM peak hour and weekend peak hour respectively. 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 2034 Reference Flows, i.e. the traffic flows in the vicinity without the proposed development, were estimated based on the following equation.

2034 Reference Flows = 2025 Existing Traffic Flows x (1 + 1.0%)[9]

4.5.2 The 2034 Design Flows, i.e. the traffic flows in the local road network with the traffic generated by the proposed residential development, were estimated based on the following equation:

2034 Design Flows = 2034 Reference Flows + Traffic Flows Generated by the Proposed Development

4.5.3 The 2034 Reference and Design Flows are shown in **Figures 4.2** and **4.3**, respectively.

4.6 Junction Capacity Assessment

4.6.1 Junction capacity analysis was carried out for the assessment year 2034. The assessment results are shown in **Table 4.6** and the detailed calculation sheets are attached in **Appendix B**.

Table 4.6 2034 Junction Capacity Assessments

No.	Junction Location	Type/ Index(1)	Reference			Design		
			AM	PM	WN	AM	PM	WN
J1	Hiram's Highway/Hing Keng Shek Road Roundabout	Roundabout /DFC	0.56	0.47	0.55	0.56	0.47	0.55
J2	Hiram's Highway/Ho Chung Road	Signalized /RC	86%	69%	80%	85%	67%	80%
J3	Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road	Roundabout/ DFC	0.65	0.63	0.56	0.65	0.64	0.56

Notes: AM – Weekday AM Peak Hour; PM – Weekday PM Peak Hour; WN – Weekend Peak Hour.
(1) RC = Reserved Capacity; DFC = Design Flow to Capacity Ratio.

4.6.2 As shown in **Table 4.6**, all the concerned junctions will perform with spare capacity for both the Reference and Design Scenarios in 2034. Therefore, the adjacent road network will be able to cope with the traffic generated by the proposed development.

4.7 Link Capacity Assessment

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

Table 4.7 Year 2034 Link Capacity Assessments

Direction	Bound	Capacity (pcu/hr) (1)	Traffic Flow (pcu/hr)			V/C Ratio		
			AM	PM	WN	AM	PM	WN
2034 Reference Scenario								
Hiram's Highway(2)(3)	EB	3,120	835	1,102	1,067	0.27	0.35	0.34
	WB	3,120	1,130	862	1,105	0.36	0.28	0.35
Hiram's Highway(4)	NB	3,120	823	1,116	1,101	0.26	0.36	0.35
	SB	3,120	1,186	877	1,139	0.38	0.28	0.37
Hiram's Highway(5)	NB	3,120	869	1,236	1,176	0.28	0.40	0.38
	SB	3,120	1,294	936	1,171	0.41	0.30	0.38
Hiram's Highway(6)	NB	3,120	987	1,331	1,253	0.32	0.43	0.40
	SB	3,120	1,412	1,028	1,248	0.45	0.33	0.40
Hing Keng Shek Road	2-way	120	56	41	75	0.47	0.34	0.63
2034 Design Scenario								
Hiram's Highway(2)(3)	EB	3,120 (3)	836	1,102	1,067	0.27	0.35	0.34
	WB	3,120 (3)	1,131	863	1,106	0.36	0.28	0.35

Direction	Bound	Capacity (pcu/hr) (1)	Traffic Flow (pcu/hr)			V/C Ratio		
			AM	PM	WN	AM	PM	WN
Hiram's Highway(4)	NB	3,120	829	1,121	1,106	0.27	0.36	0.35
	SB	3,120	1,196	882	1,144	0.38	0.28	0.37
Hiram's Highway(5)	NB	3,120	875	1,241	1,181	0.28	0.40	0.38
	SB	3,120	1,304	941	1,176	0.42	0.30	0.38
Hiram's Highway(6)	NB	3,120	993	1,336	1,258	0.32	0.43	0.40
	SB	3,120	1,422	1,033	1,253	0.46	0.33	0.40
Hing Keng Shek Road	2-way	960(7)	74	52	86	0.08	0.05	0.09

Notes: AM – Weekday AM Peak Hour; PM – Weekday PM Peak Hour; WN – Weekend Peak Hour
(1) Capacity refers to TPDM Vol.2 Ch. 2.4. 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 Hing Keng Shek Road and Pak Sha Wan Street.
(3) The section of Hiram's Highway will be widened to dual two-lane carriageway under Hiram's Highway Improvement Stage 2.
(4) The section between access of Luk Cheung Road and Hing Keng Shek Road.
(5) The section between Ho Chung Road and Luk Mei Tsuen Road.
(6) The section between Nam Pin Wai Road and Ho Chung Road.
(7) The section between proposed vehicular access and Hiram's Highway will be widened (discussed in **Section 5.1** below).

4.7.2 As shown in **Table 4.6**, all the concerned road sections will operate with capacity during weekday AM, weekday PM and weekend peak hours in both reference and design scenarios.

4.8 Review of Public Transport Facilities

4.8.1 Based on the tentative flat mix, the overall population of the proposed development is about 360. Reference has been made to the published "Travel Characteristics Survey (TCS) 2011 Final Report". According to the Report, the daily mechanized trip rate per population is 1.83 trips (two-way) and the morning peak hour accounted for about 12% of the daily trips for the two-way trips. It is assumed that 90% of the trips are in outbound direction in the AM peak hour. Based on the above and most of residents would use public transport services, the estimated public transport demand of the proposed development in outbound direction in AM peak hour is about 72 pax/hr (i.e. 360 x 1.83 x 0.12 x 0.9).

4.8.2 The public transport demand induced by the planned developments mentioned in **Section 4.4** is also considered. According to "Hong Kong Annual Digest of Statistics" published by the Census and Statistic Department, the average household size for the territory in year 2022 is 2.7, this figure is adopted for estimating the population of these developments. By following the methodology described in the aforesaid paragraph, the estimated public transport demand of the planned developments in outbound direction in AM peak hour is about 166 pax/hr (i.e. (15+90+139+58+8) x 2.7 x 1.83 x 0.12 x 0.9).

4.8.3 Based on the existing public transport vacancy (as estimated in **Table 3.3**) and the above projected demand, the existing bus/green minibus services will still operate with capacity after accommodating the future demand induced by the proposed development and the planned developments.

5 PROVISION OF TRANSPORT FACILITIES

5.1 Vehicular Access Arrangement

5.1.1 The vehicular access of the proposed development will be located at Hing Keng Shek Road. It is proposed to widen the existing section of Hing Keng Shek Road between the proposed vehicular access and Hiram's Highway to 6.0m for a 2-lane single carriageway. A 2.0m wide footpath will be also provided within the Site connecting the proposed development and Hiram's Highway and the footpath will also be opened for public use. The proposed traffic arrangement is shown in **Figure 5.1**. The project proponent will be responsible for implementing the improvement works and will undertake the management and maintenance responsibility for the footpath within the Site.

5.1.2 Swept path analysis is conducted to demonstrate the manoevruing of vehicles entering and leaving the Site via the proposed vehicular access and shown in **Figures 5.2 – 5.3**. To ensure sufficient sightline is provided for the proposed run-out, a sightline analysis is conducted and presented in **Figure 5.4**.

5.2 Internal Transport Facilities

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

Table 5.1 Proposed Car Parking and Loading/Unloading Facilities

<table>
<tr><th>Type</th><th colspan="6">HKPSG's Requirements</th><th>Required Provision</th><th>Proposed Provision</th></tr>
<tr><td colspan="9">Proposed Residential Development (120 flats)</td></tr>
<tr><td rowspan="5">Car Parking Space</td><td colspan="6"><u>For Residents</u>
Parking Requirements = GPS x R1 x R2 x R3 where</td><td rowspan="4">14 – 24

27 – 47</td><td rowspan="4">24

47</td></tr>
<tr><td>Unit Size</td><td>No. of Unit</td><td>GPS</td><td>R1</td><td>R2</td><td>R3</td></tr>
<tr><td>40 m^2 <FS ≤ 70 m^2</td><td>60</td><td rowspan="2">1 space per 4 – 7 units</td><td>1.2</td><td>1</td><td>1.3</td></tr>
<tr><td>70 m^2 < FS ≤ 100 m^2</td><td>60</td><td>2.4</td><td>1</td><td>1.3</td></tr>
<tr><td colspan="6"><u>For Visitors</u>
Visitor car parking for private residential developments with more than 75 units per block should be provided at 5 visitor spaces per block in addition to the requirements, or as determined by the Authority. For 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.</td><td>8</td><td>8</td></tr>
<tr><td colspan="6">TOTAL CAR PARKING</td><td>49 – 79</td><td>79</td></tr>
<tr><td>Motorcycle Parking Space</td><td colspan="6">1 space per 100 - 150 flats</td><td>1 – 2</td><td>2</td></tr>
<tr><td>Loading / Unloading Bay</td><td colspan="6">1 bay per residential block or as determined by the Authority.</td><td>4</td><td>4</td></tr>
</table>

5.2.2 **Table 5.2** lists out a summary of the numbers and the dimensions required for each type of spaces in the proposed development. The proposed car park layout plan is enclosed in **Appendix C**.

Table 5.2 Summary of Overall Transport Facilities Provision

Facilities	Dimensions	Proposed Provision
Car Parking Space	2.5m (W) x 5.0m (L) x 2.4 (H)	77
Disable Car Parking Space	3.5m (W) x 5.0m (L) x 2.4 (H)	2
Goods Vehicle Loading and Unloading Bay	3.5m (W) x 11.0m (L) x 4.7m(H)	4
Motorcycle Parking Space	1.0m (W) x 2.4m (L) x 2.4 (H)	2

5.3 Pedestrian Access Arrangement

5.3.1 At present, there is a cautionary crossing for pedestrians to walk across Hiram's Highway to reach the bus layby for Kowloon/TKO-bound buses. For the pedestrians to walk to the bus layby for Sai Kung-bound buses, it is proposed to improve the pedestrian connectivity by providing a cautionary crossing to walk across Hing Keng Shek Road as shown in **Figure 5.5**.

6 SUMMARY AND CONCLUSION

6.1 Summary

6.1.1 The Applicant intends to develop the Site into a residential development at various lots in D.D.210, Pak Wai, Sai Kung. The proposal will have about 120 residential units.

6.1.2 Traffic count surveys were carried out on 13 October 2025 (Monday) during 07:30 – 09:30 and 17:30 – 19:30 and 11 October 2025 (Saturday) from 12:00 to 19:00. The identified weekday AM, weekday PM and weekend peak hours were 08:00 – 09:00, 17:45 – 18:45 and 16:45 – 17:45, respectively. Junction and link capacity assessment based on the observed flows shows that all concerned junctions and road links are performing satisfactorily during weekday AM, weekday PM and weekend peak hours, except the section of Hiram's Highway between Hing Keng Shek Road and Pak Sha Wan Street which is operating at its capacity.

6.1.3 The proposed development would generate two-way traffic flows of 18 pcu/hr in the weekday AM peak hour, 11 pcu/hr in the weekday PM peak hour and 11 pcu/hr in the weekend peak hour. By assigning the additional development traffic to the 2034 Reference Flows, the 2034 Design Flows were obtained.

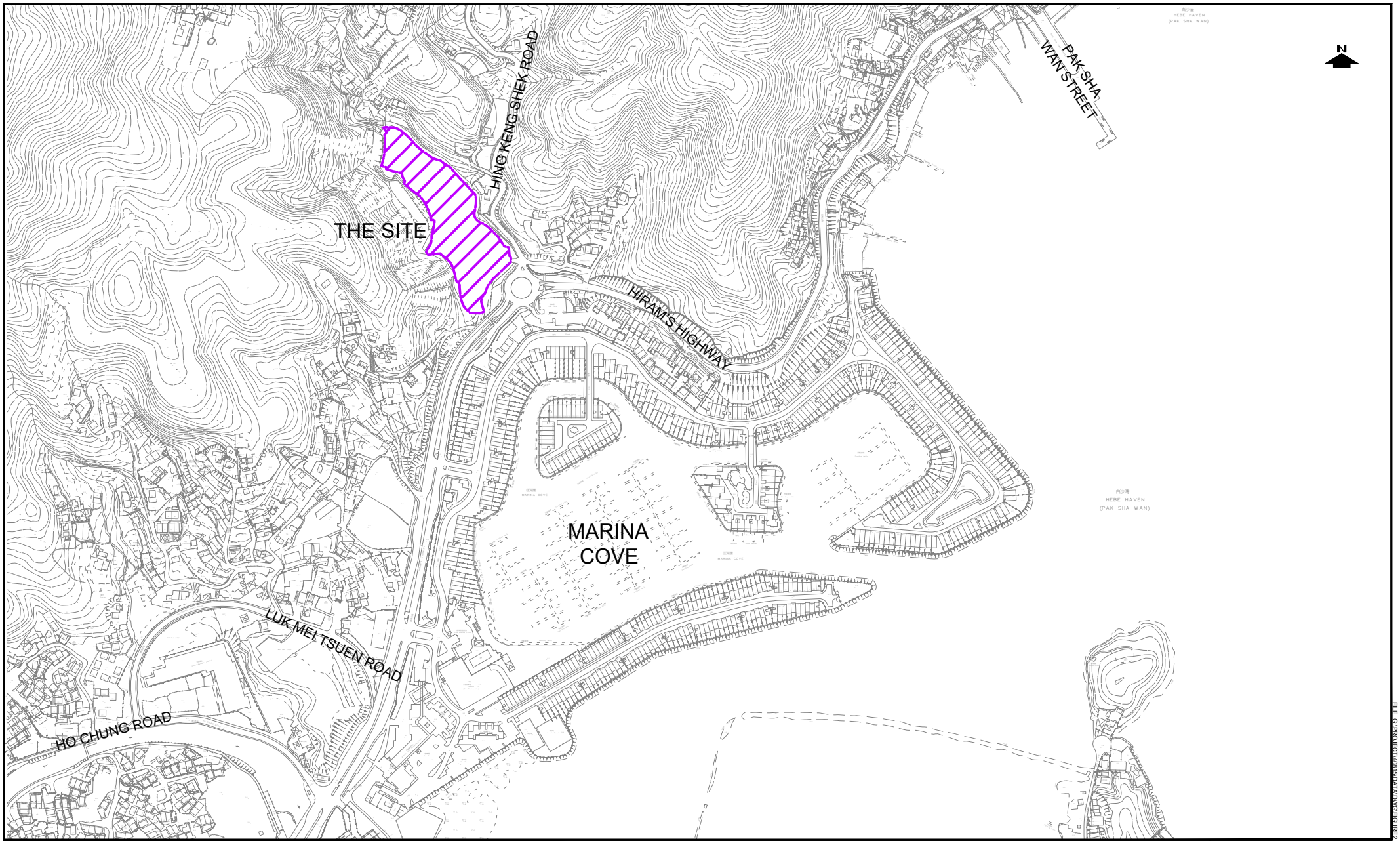
6.1.4 Junction and link capacity assessments were carried out for the key junctions and road links in the vicinity for the year 2034. The results indicated that all junctions and road links will operate satisfactorily for both reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce significant traffic impact to the surrounding road network.

6.1.5 The vehicular access of the proposed development will be located at Hing Keng Shek Road. It is proposed to widen the existing section of Hing Keng Shek Road between the proposed vehicular access and Hiram's Highway to 6.0m for a 2-lane single carriageway. A 2.0m wide footpath will be also provided within the Site connecting the proposed development and Hiram's Highway and the footpath will also be opened for public use. The project proponent will be responsible for implementing the improvement works and will undertake the management and maintenance responsibility for the footpath within the Site. In order to improve the pedestrian connectivity, the project proponent will also be responsible for the construction of a cautionary crossing to walk across Hing Keng Shek Road under the proposed development.

6.1.6 The internal transport facilities of the proposed development will be provided in accordance with the recommendations in the HKPSG. The proposed development will provide a total of 79 private car parking spaces (including 2 nos. of parking space for disabled users), 2 motorcycle parking spaces and 4 goods vehicle loading / unloading bays.

6.2 Conclusion

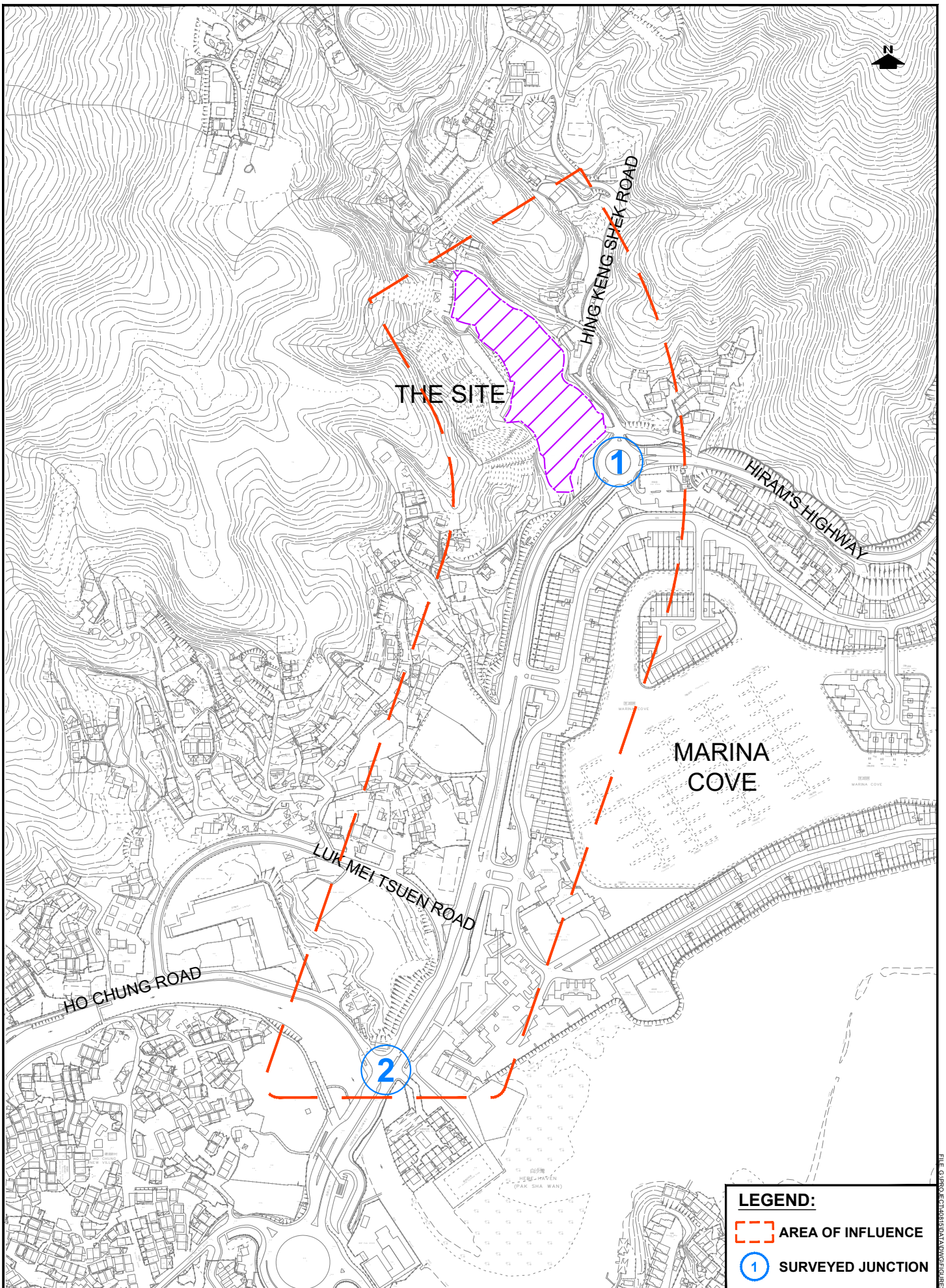
6.2.1 The findings of the traffic impact assessment impact assessment indicated that the road network in the vicinity of the Site would be able to cope with the proposed development and the project is considered acceptable in traffic viewpoint.



PROJECT NO. 40815	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" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 2.1	REV. B
DESIGNED SLN / DATE JUL 2025	DRAWING TITLE		
DRAWN CLL / SCALE 1:6000	LOCATION PLAN	LLA 顧問有限公司 Consultancy Limited	
CHECKED SLN			

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE2.1B.DWG PLOT SCALE : 1 = 1

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE2.1B.DWG PLOT SCALE : 1 = 1



PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
40815	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	FIGURE 3.1	B

DESIGNED	DATE	DRAWING TITLE	
SLN	JUL 2025	LOCATION OF SURVEYED JUNCTIONS	LLA 顧問有限公司 Consultancy Limited
DRAWN CLL	SCALE 1:5000		
CHECKED SLN			

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE3.1B.DWG PLOT SCALE : 1 = 1

LEGEND:

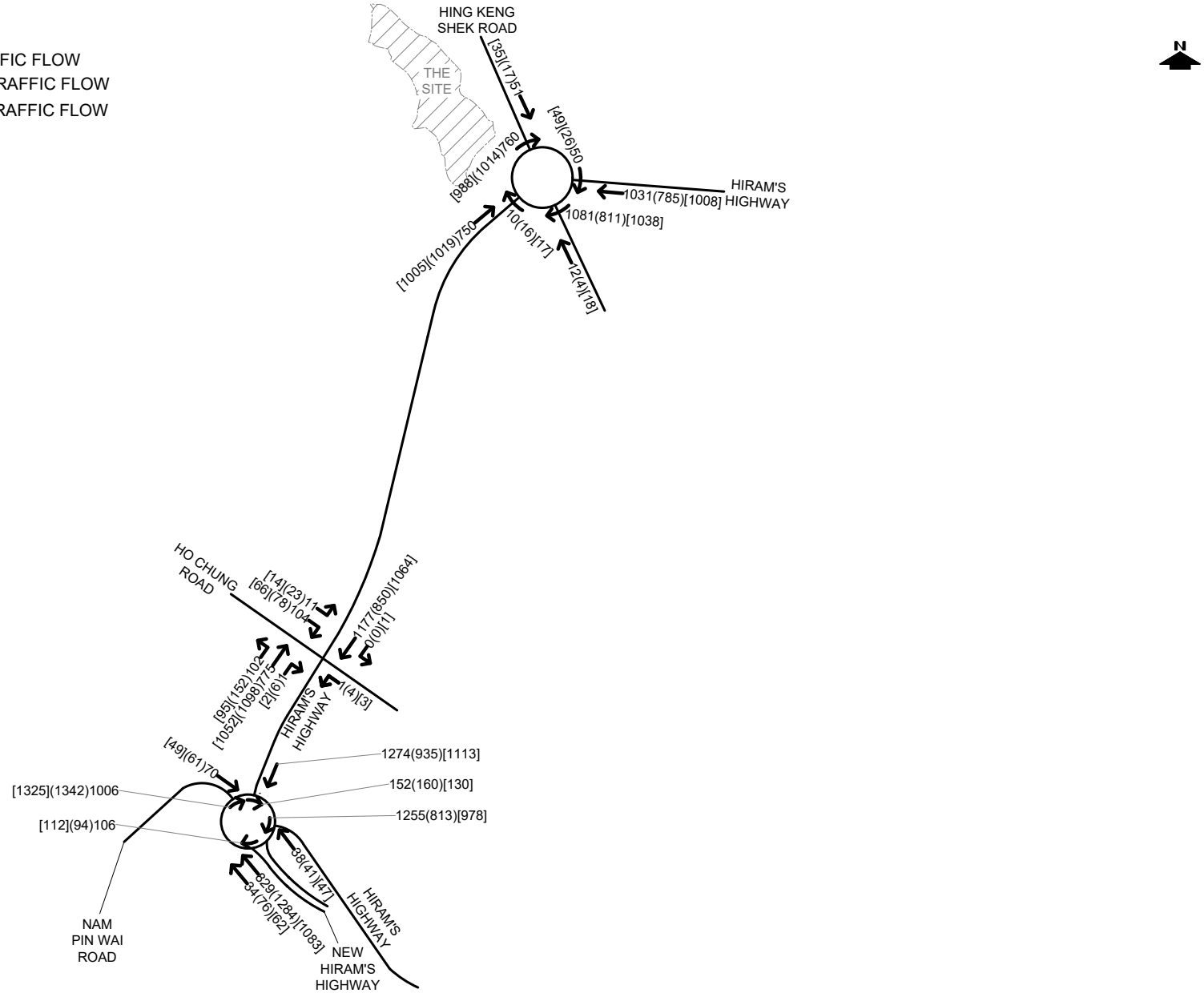
312(158)[361] ← WEEKEND PEAK HOUR TRAFFIC FLOW

WEEKDAY PM PEAK HOUR TRAFFIC FLOW

WEEKDAY AM PEAK HOUR TRAFFIC FLOW

NOTE:

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



PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
40815	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	FIGURE 3.2	D

DESIGNED	SLN	DATE	OCT 2025
DRAWN	CLL	SCALE	N.T.S.
CHECKED	SLN		

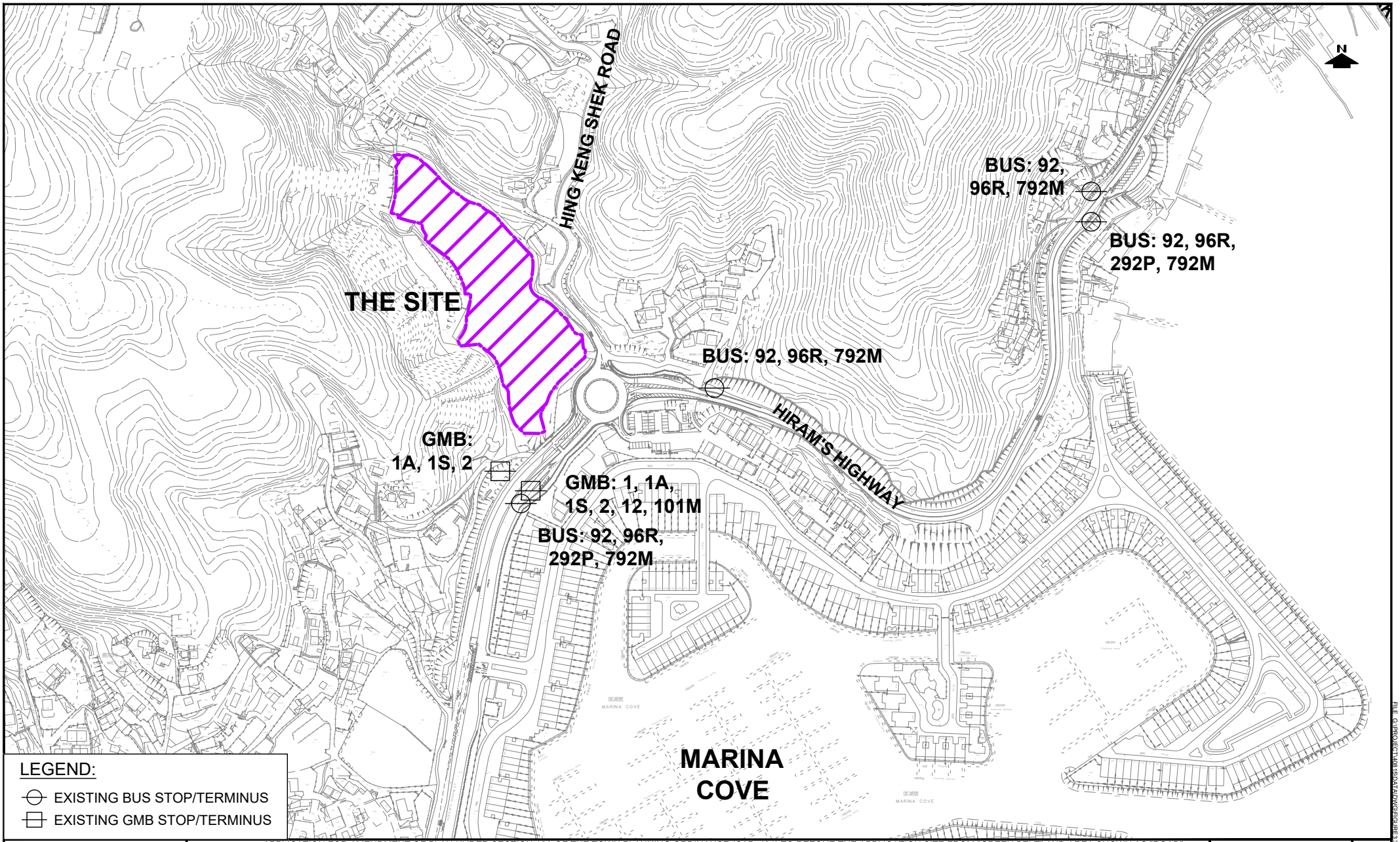
DRAWING TITLE

2025 EXISTING TRAFFIC FLOWS

LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE3.2D.DWG PLOT SCALE : 1 = 1

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE3.2D.DWG PLOT SCALE : 1 = 1



PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
40815	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	FIGURE 3.3	B

DESIGNED	DATE	DRAWING TITLE
SLN	JUL 2025	PUBLIC TRANSPORT FACILITIES IN THE VICINITY
DRAWN CLL	SCALE 1:4000	
CHECKED SLN		

LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE3.3B.DWG PLOT SCALE : 1 = 1

LEGEND:

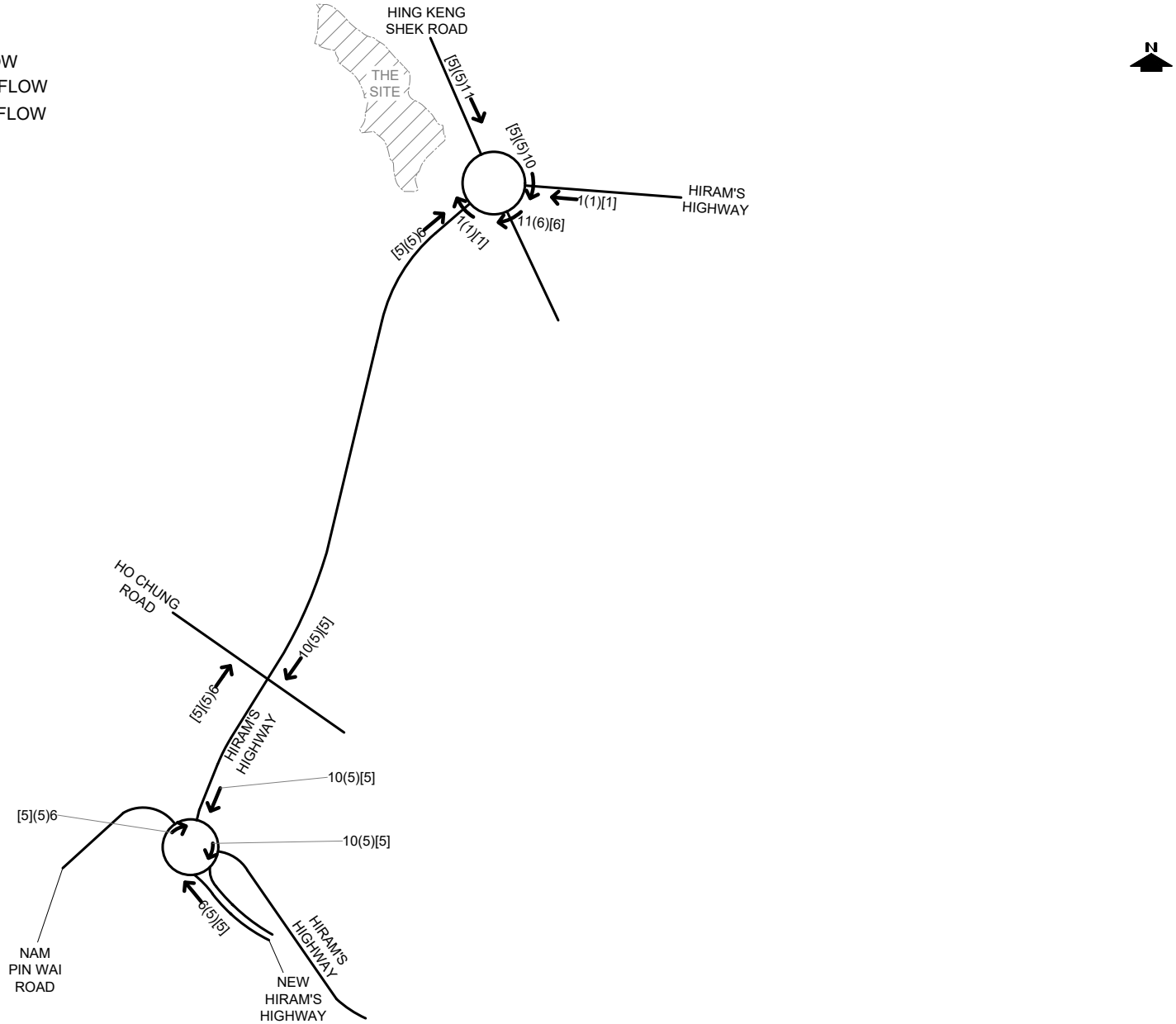
312(158)[361] ← WEEKEND PEAK HOUR TRAFFIC FLOW

↑ WEEKDAY PM PEAK HOUR TRAFFIC FLOW

↑ WEEKDAY AM PEAK HOUR TRAFFIC FLOW

NOTE:

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



PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
40815	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	FIGURE 4.1	E

DESIGNED	DATE	DRAWING TITLE
SLN	OCT 2025	DEVELOPMENT TRAFFIC FLOWS
DRAWN CLL	SCALE N.T.S.	
CHECKED SLN		

LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE4.1E.DWG PLOT SCALE : 1 = 1

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE4.1E.DWG PLOT SCALE : 1 = 1

LEGEND:

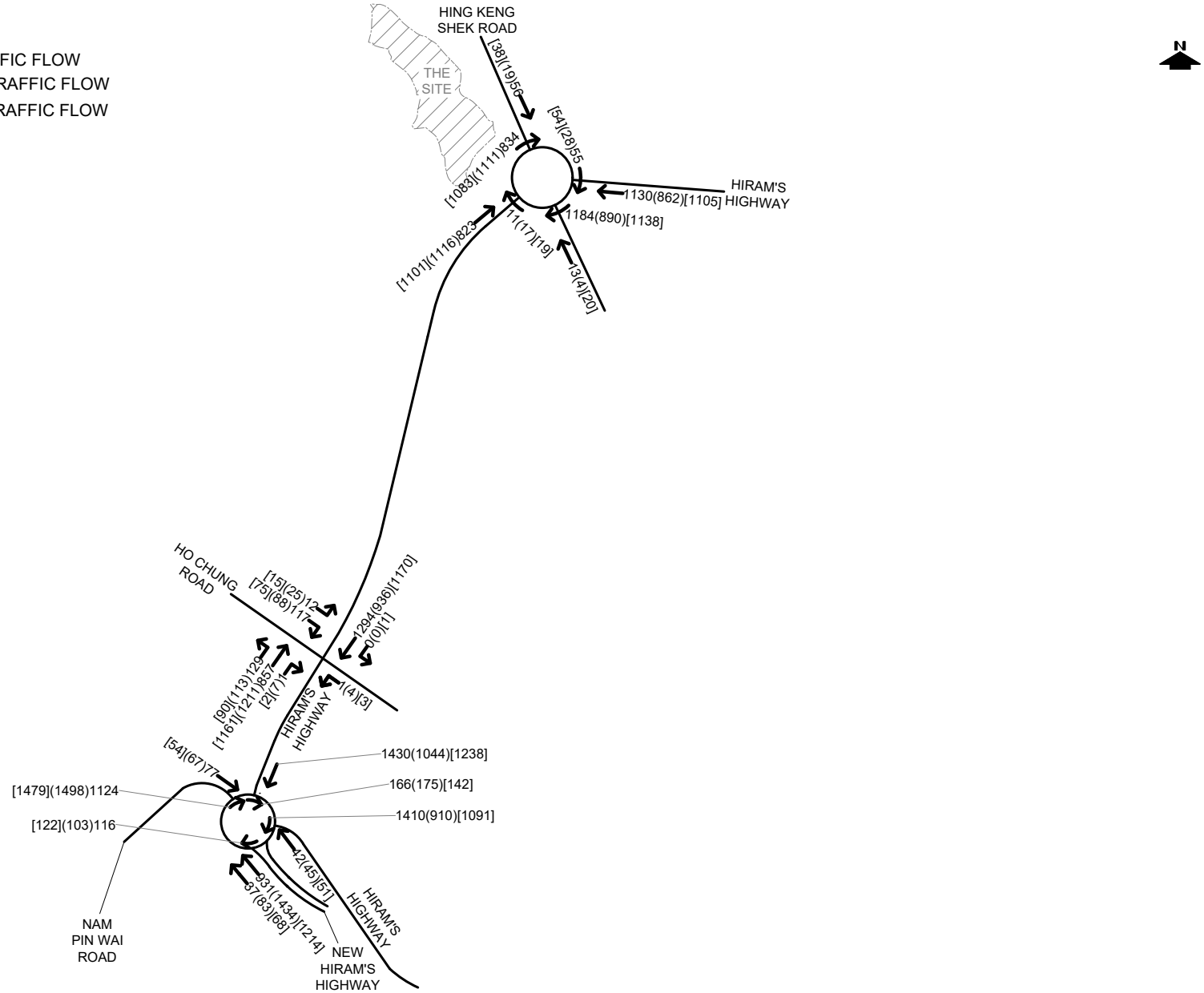
312(158)[361] ← WEEKEND PEAK HOUR TRAFFIC FLOW

↑ WEEKDAY PM PEAK HOUR TRAFFIC FLOW

↑ WEEKDAY AM PEAK HOUR TRAFFIC FLOW

NOTE:

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



PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
40815	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	FIGURE 4.2	E

DESIGNED	DATE	DRAWING TITLE
SLN	OCT 2025	2034 REFERENCE TRAFFIC FLOWS
DRAWN CLL	SCALE N.T.S.	
CHECKED SLN		

LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE4.2E.DWG PLOT SCALE : 1 = 1

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE4.2E.DWG PLOT SCALE : 1 = 1

LEGEND:

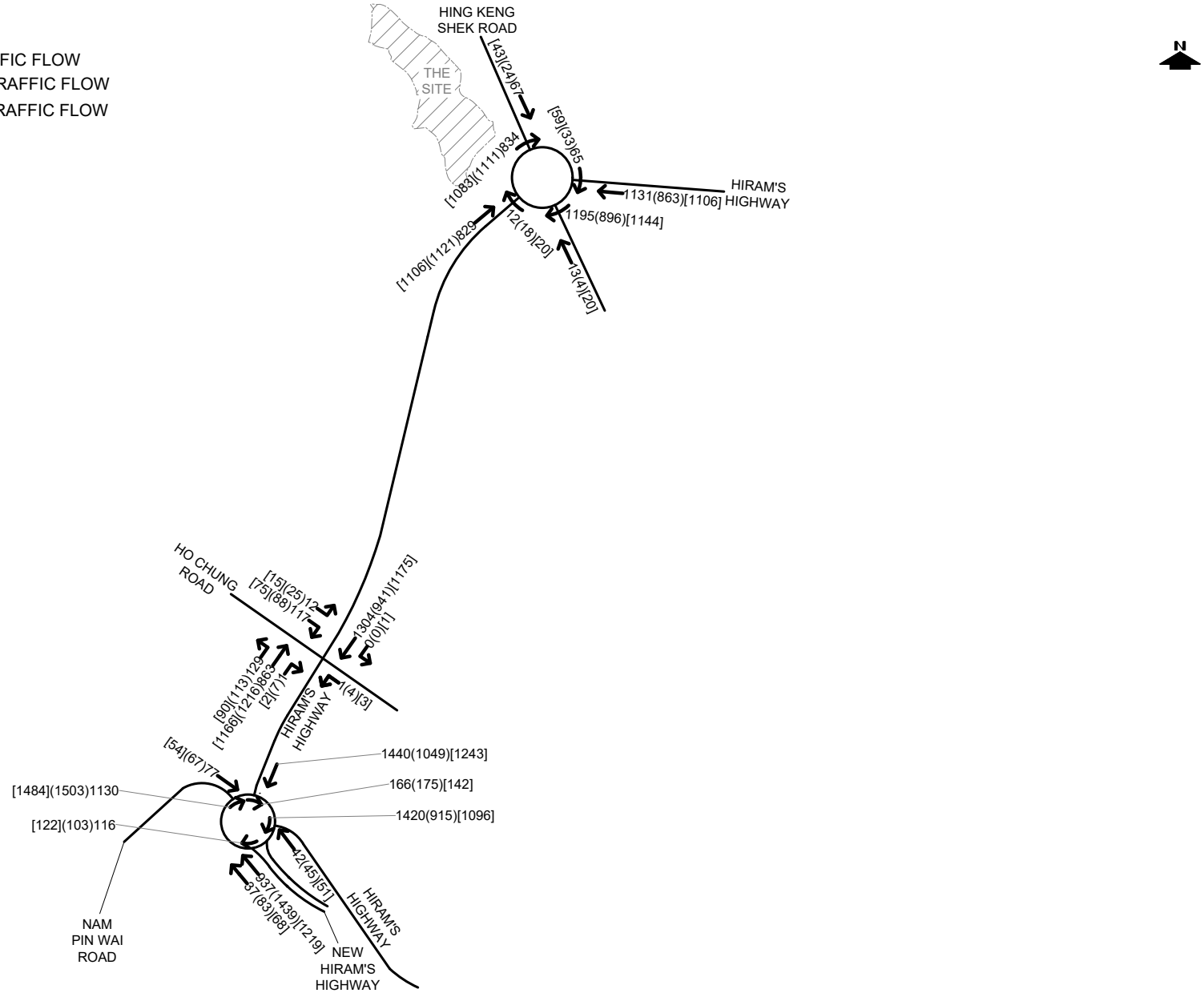
312(158)[361] ← WEEKEND PEAK HOUR TRAFFIC FLOW

WEEKDAY PM PEAK HOUR TRAFFIC FLOW

WEEKDAY AM PEAK HOUR TRAFFIC FLOW

NOTE:

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



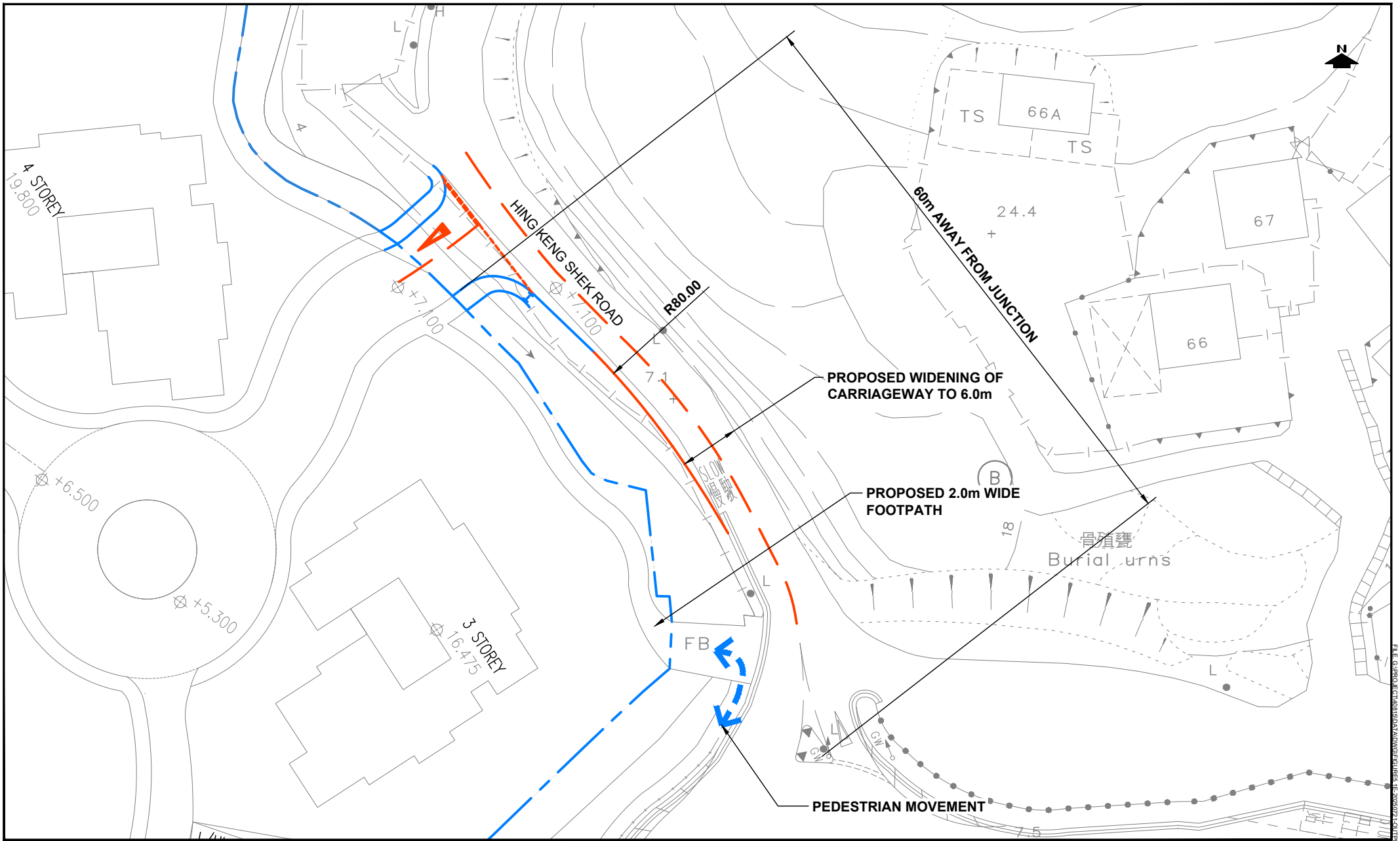
PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
40815	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	FIGURE 4.3	F

DESIGNED	DATE	DRAWING TITLE
SLN	OCT 2025	2034 DESIGN TRAFFIC FLOWS
DRAWN CLL	SCALE N.T.S.	
CHECKED SLN		

LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE4.3F.DWG PLOT SCALE : 1 = 1

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE4.3F.DWG PLOT SCALE : 1 = 1



PROJECT NO.	PROJECT TITLE	DRAWING NO.	REV.
40815	APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	FIGURE 5.1	E

DESIGNED	SLN	DATE	JUL 2025
DRAWN	CLL	SCALE	1:500
CHECKED	SLN		

DRAWING TITLE

PROPOSED TRAFFIC ARRANGEMENT

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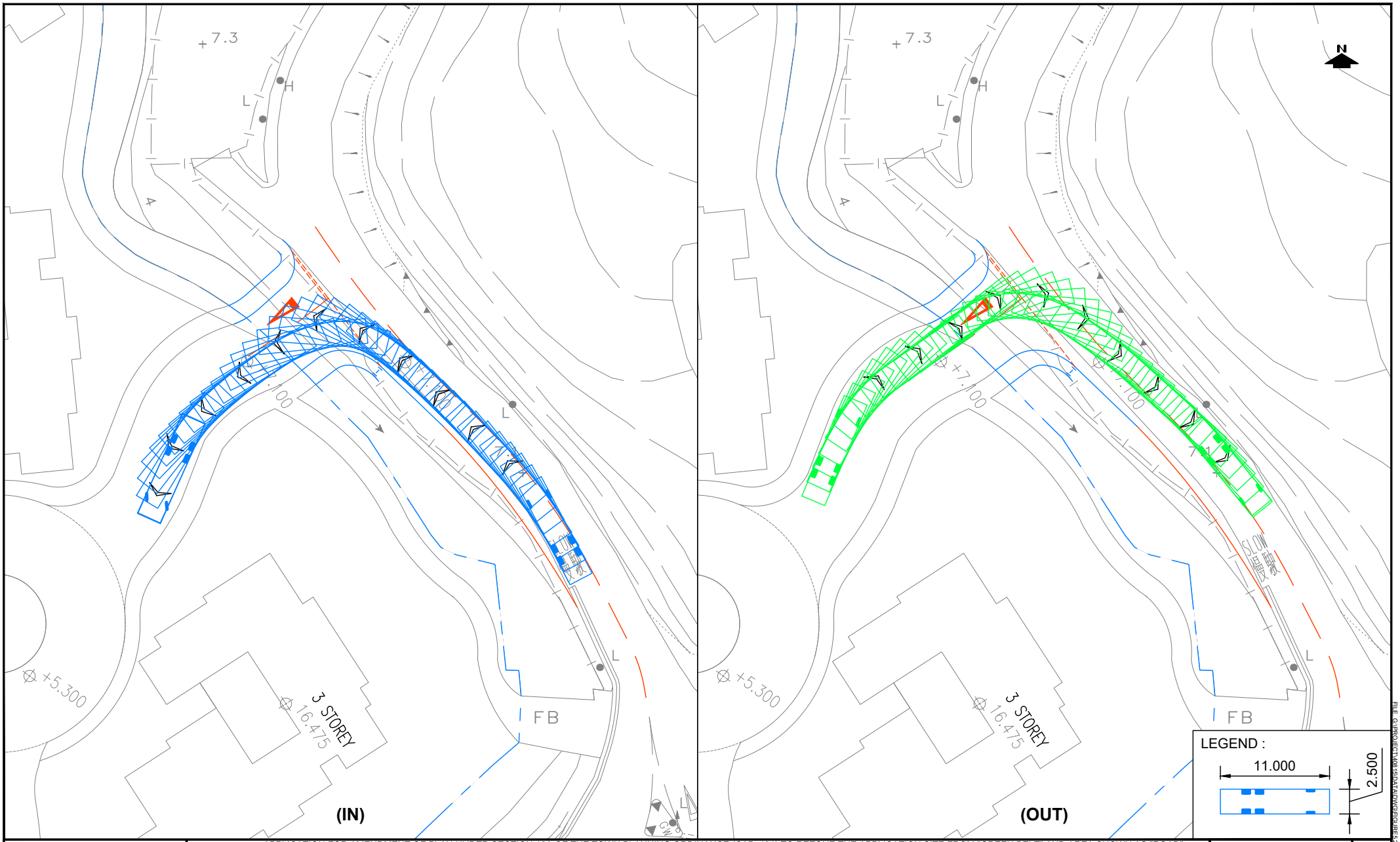
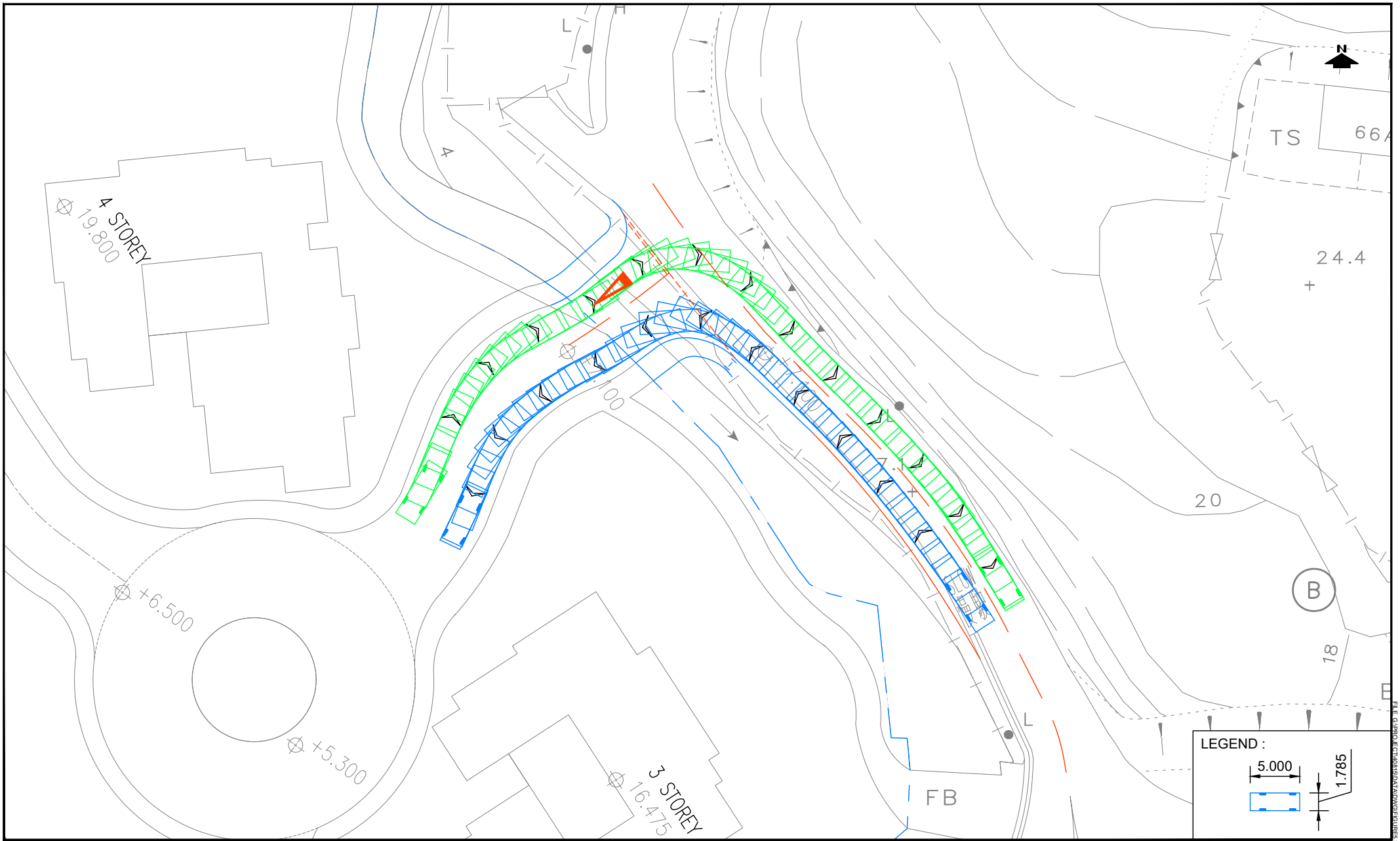
FILE. G:\PROJECT\40815\DATA\DWG\FIGURE5.1E-20250721-OUTPUT.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40815	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" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 5.2	REV. B
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE JUL 2025 / SCALE 1:500	DRAWING TITLE SWEPT PATH ANALYSIS - HGV	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE5.2B.DWG PLOT SCALE : 1 = 1

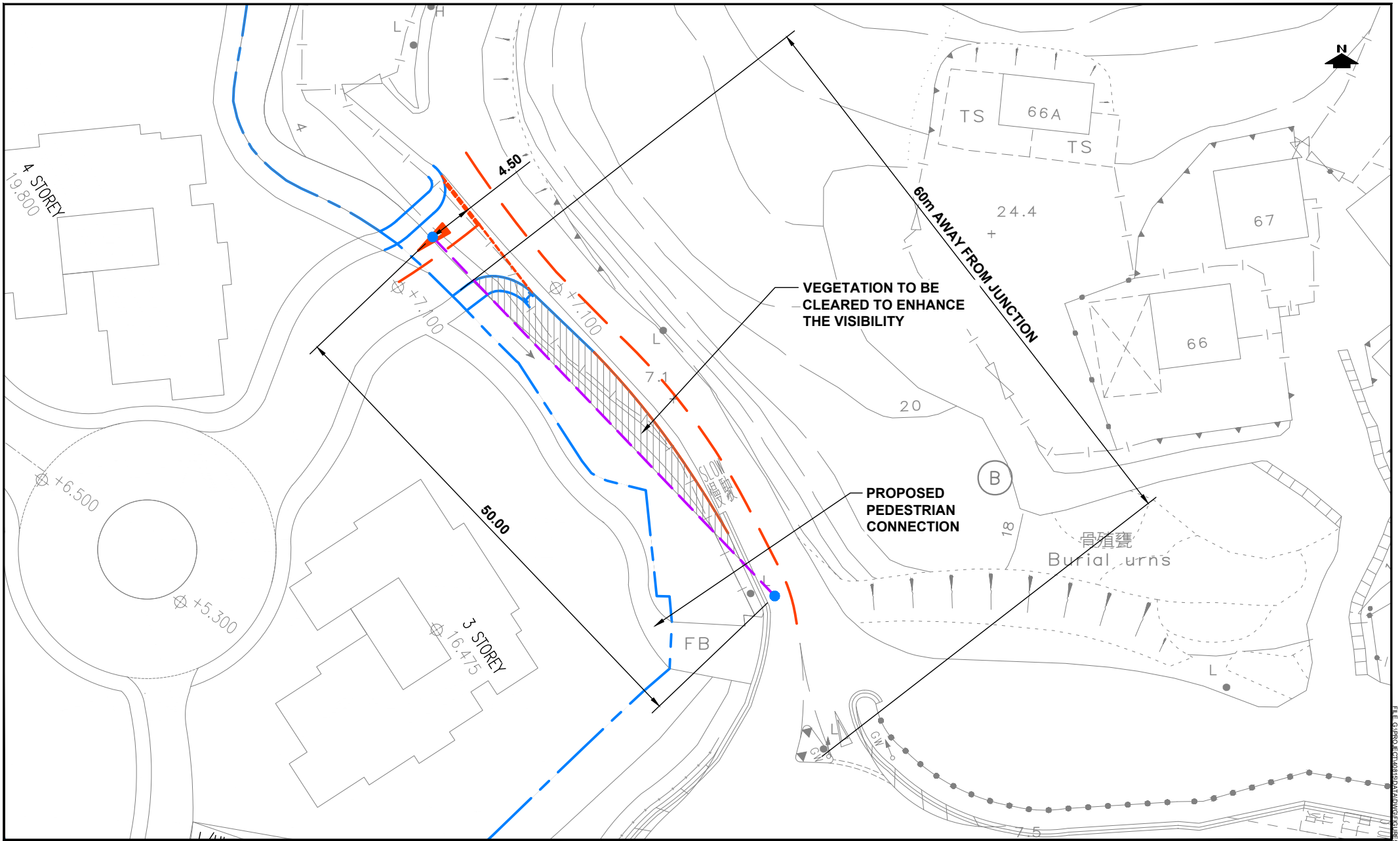
FILE: G:\PROJECT\40815\DATA\DWG\FIGURE5.2B.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40815	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" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 5.3	REV. C
DESIGNED SLN / DRAWN CLL / CHECKED SLN	DATE AUG 2025 / SCALE 1:500	DRAWING TITLE SWEPT PATH ANALYSIS - PRIVATE CARS TRAVEL SIMULTANEOUSLY	LLA 顧問有限公司 Consultancy Limited

FILE: G:\PROJECT\40815\DATA\DWG\FIGURE5.3C.DWG PLOT SCALE : 1 = 1

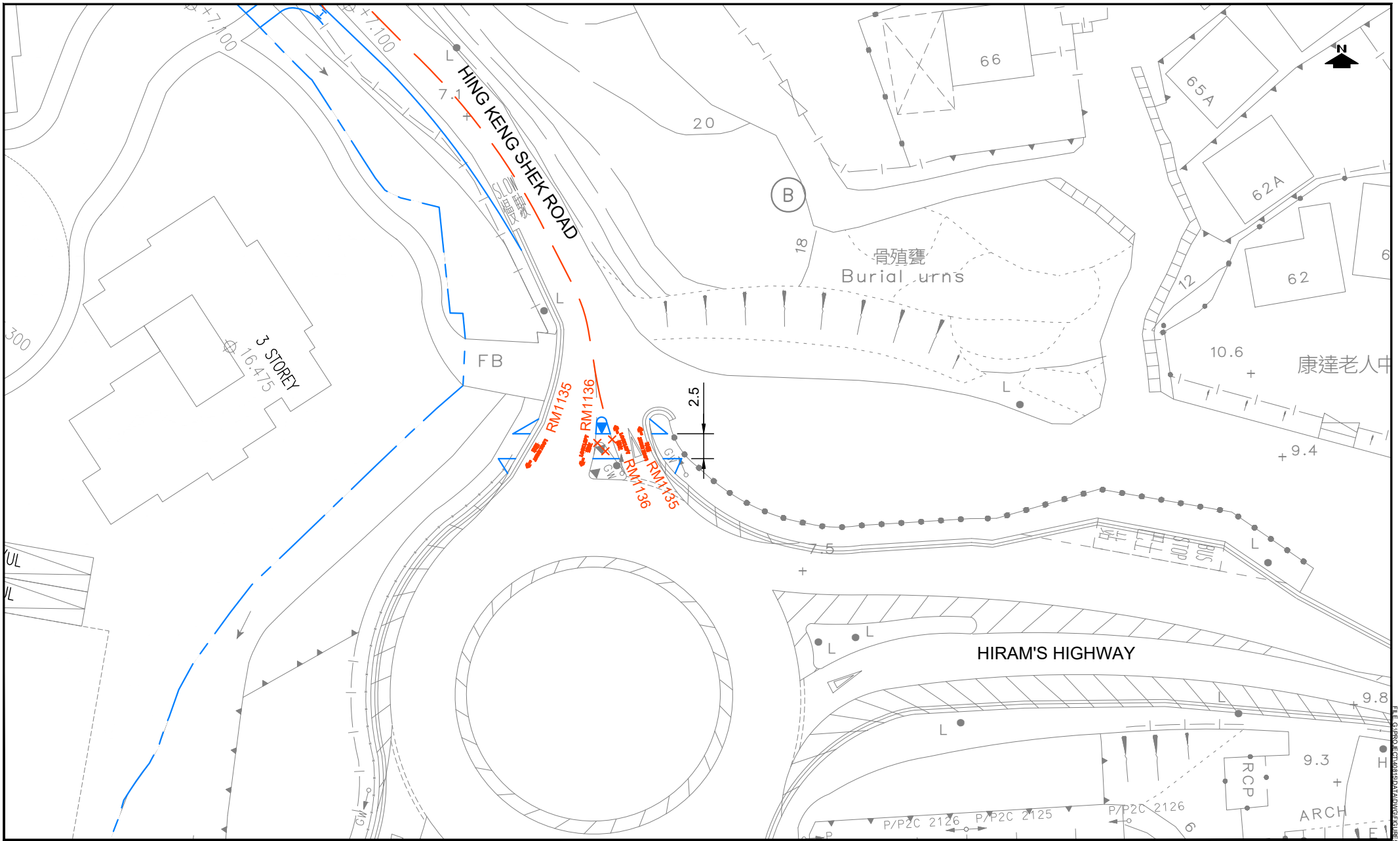
FILE: G:\PROJECT\40815\DATA\DWG\FIGURE5.3C.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40815	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" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 5.4	REV. -
DESIGNED SLN / DATE AUG 2025	DRAWING TITLE		
DRAWN CLL / SCALE 1:500	SIGHTLINE ANALYSIS OF PROPOSED VEHICULAR ACCESS	LLA 顧問有限公司 Consultancy Limited	
CHECKED SLN			

FILE. G:\PROJECT\40815\DATA\DWG\FIGURE5.4.DWG PLOT SCALE : 1 = 1

FILE. G:\PROJECT\40815\DATA\DWG\FIGURE5.4.DWG PLOT SCALE : 1 = 1



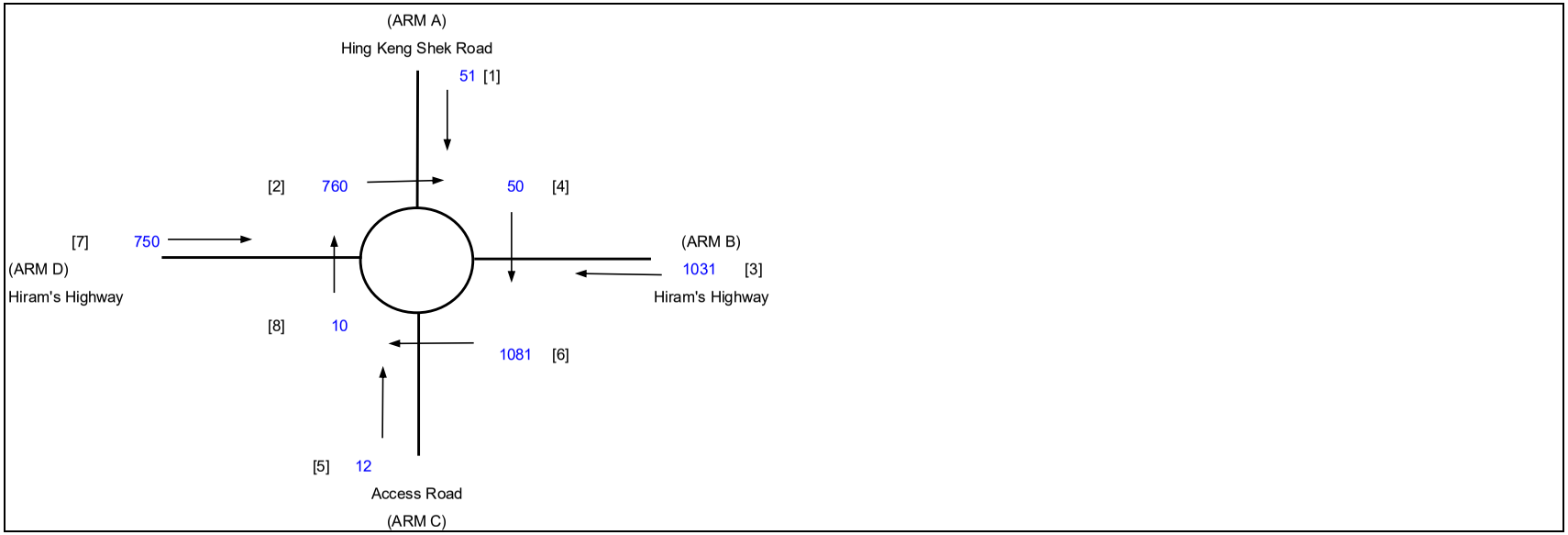
PROJECT NO. 40815	PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP. 131) TO REZONE THE APPLICATION SITE FROM "GREEN BELT" AND AREA SHOWN AS "ROAD" TO "RESIDENTIAL (GROUP C)5" FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 210 AND ADJOINING GOVERNMENT LAND, PAK WAI, SAI KUNG	DRAWING NO. FIGURE 5.5	REV. -
DESIGNED SLN / DATE OCT 2025	DRAWING TITLE		
DRAWN CLL / SCALE 1:500	PROPOSED CAUTIONARY CROSSING AT HING KENG SHEK ROAD	LLA 顧問有限公司 Consultancy Limited	
CHECKED SLN			

FILE. G:\PROJECT\40815\DATA\DWG\FIGURE5.5.DWG PLOT SCALE : 1 = 1

Appendix A

Junction Capacity Assessment – Existing Scenario

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

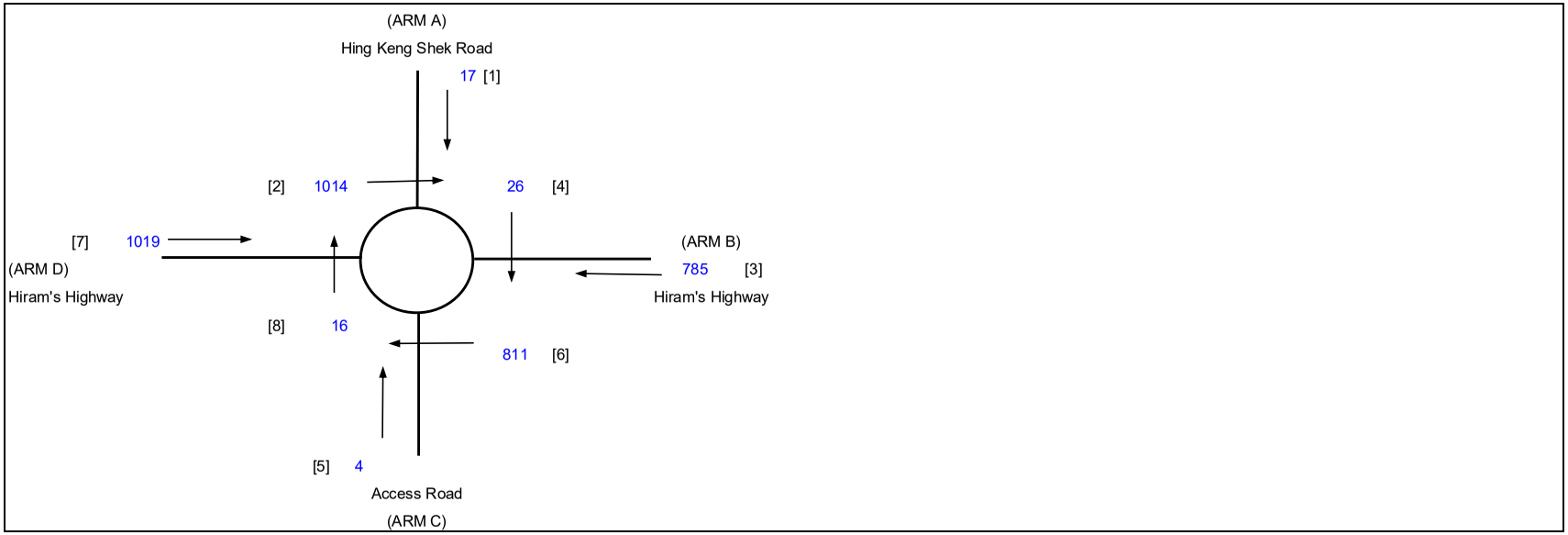


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	51	1031	12	750
Qc	=	Circulating flow across entry (pcu/h)	760	50	1081	10
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	737	2021	487	2380
DFC	=	Design flow/Capacity = Q/Qe	0.07	0.51	0.02	0.32

Total In Sum = 1844 PCU

DFC of Critical Approach = 0.51

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

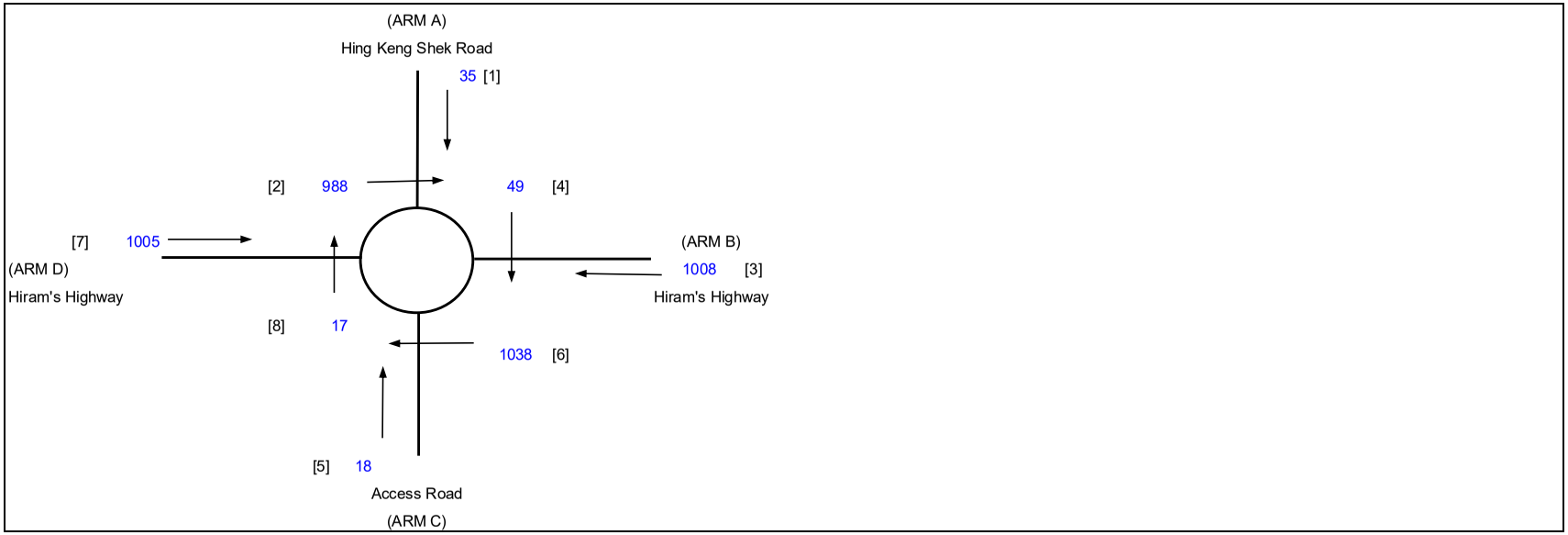


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	17	785	4	1019
Qc	=	Circulating flow across entry (pcu/h)	1014	26	811	16
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	605	2038	613	2376
DFC	=	Design flow/Capacity = Q/Qe	0.03	0.39	0.01	0.43

Total In Sum = 1825 PCU

DFC of Critical Approach = 0.43

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

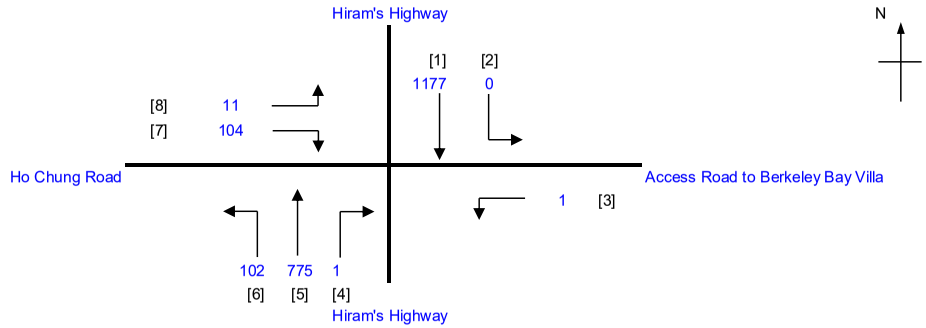


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	35	1008	18	1005
Qc	=	Circulating flow across entry (pcu/h)	988	49	1038	17
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	619	2022	507	2375
DFC	=	Design flow/Capacity = Q/Qe	0.06	0.50	0.04	0.42

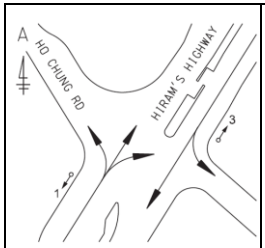
Total In Sum = 2066 PCU

DFC of Critical Approach = 0.50

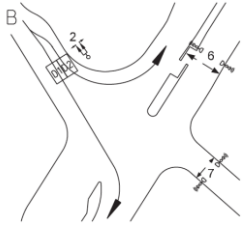
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing AM**	PROJECT NO.: 40815	Prepared By:	SKL	Oct-25
		FILENAME : J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
J2 Hiram's Highway/Ho Chung Road			Reviewed By:	SLN	Oct-25



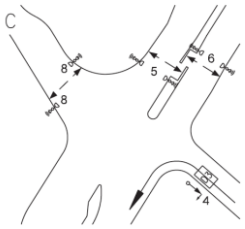
No. of stages per cycle		N =	3
Cycle time		C =	135 sec
Sum(y)		Y =	0.344
Loss time		L =	29 sec
Total Flow		=	2171 pcu
Co	= (1.5*L+5)/(1-Y)	=	73.9 sec
Cm	= L/(1-Y)	=	44.2 sec
Yult		=	0.683
R.C.ult	= (Yult-Y)/Y*100%	=	98.6 %
Cp	= 0.9*L/(0.9-Y)	=	46.9 sec
Ymax	= 1-L/C	=	0.785
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**106 %**



Stage 1 G= 90
Int = 5



Stage 2 G= 16
Int = 3



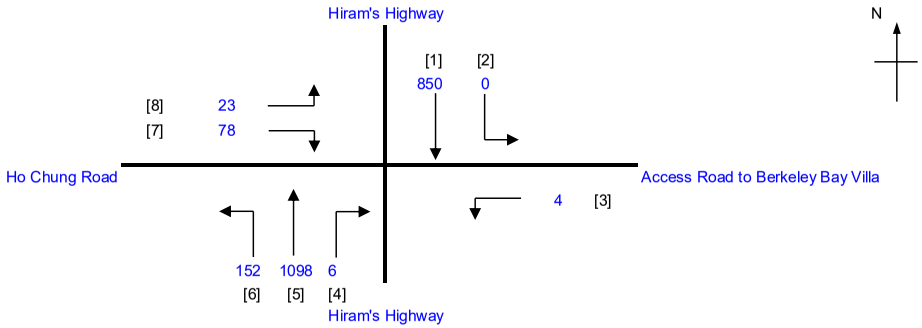
Stage 3 G= 19
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

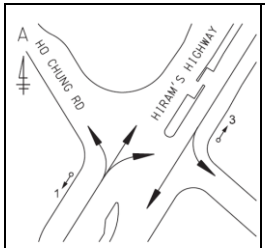
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	568		568	0.00	1935							1935	0.294	0.294		91	91	0.438	42	10
1	1	3.20	1				2075		609		609	0.00	2075							2075	0.293			91	91	0.438	42	10
5,6	1	3.50	1	12		N	1965	102	372		474	0.22	1914	18	119					2032	0.233			72	91	0.438	48	18
4,5	1	3.50	1	12	O	N	1965		403	1	404	0.00	1734							1734	0.233			72	91	0.438	42	19
7,8	2	3.50	1	12			2105	11		104	115	1.00	1871	12	424					2295	0.050	0.050	2	15	17	0.438	18	55
3	3	3.30	1	15		N	1945	1			1	1.00	1768							1768	0.001			0	19	0.438	0	612
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

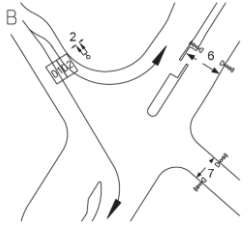
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing PM**	PROJECT NO.: 40815	Prepared By:	SKL	Oct-25
		FILENAME : J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
J2 Hiram's Highway/Ho Chung Road			Reviewed By:	SLN	Oct-25



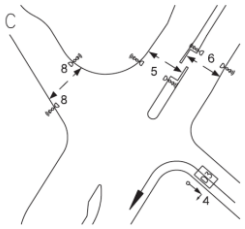
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.377
Loss time		L =	33 sec
Total Flow		=	2211 pcu
Co	= (1.5*L+5)/(1-Y)	=	87.5 sec
Cm	= L/(1-Y)	=	53.0 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	72.9 %
Cp	= 0.9*L/(0.9-Y)	=	56.8 sec
Ymax	= 1-L/C	=	0.746
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**78 %**



Stage 1 G= 85
Int = 5



Stage 2 G= 16
Int = 3



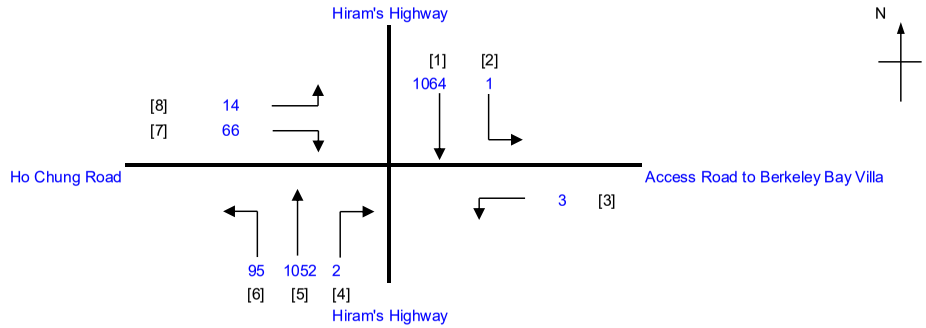
Stage 3 G= 19
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

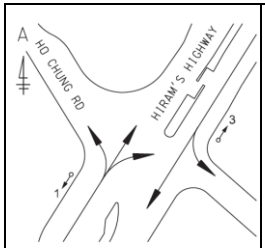
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	410		410	0.00	1935							1935	0.212			54	86	0.506	48	27
1	1	3.20	1				2075		440		440	0.00	2075							2075	0.212			55	86	0.506	54	27
5,6	1	3.50	1	12		N	1965	152	527		679	0.22	1912	18	126					2037	0.333	0.333		86	86	0.506	48	11
4,5	1	3.50	1	12	O	N	1965		571	6	577	0.01	1733							1733	0.333			86	86	0.506	42	12
7,8	2	3.50	1	12			2105	23		78	101	1.00	1871	12	424					2295	0.044	0.044	6	11	17	0.506	18	59
3	3	3.30	1	15		N	1945	4			4	1.00	1768							1768	0.002			1	19	0.506	0	268
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

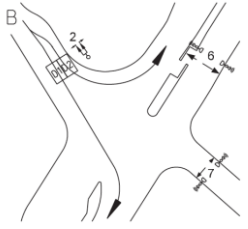
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing WN**	PROJECT NO.: 40815	Prepared By:	SKL	Oct-25
J2 Hiram's Highway/Ho Chung Road		FILENAME : J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
			Reviewed By:	SLN	Oct-25



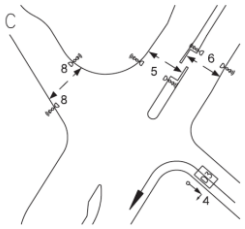
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.338
Loss time		L =	34 sec
Total Flow		=	2297 pcu
Co	= (1.5*L+5)/(1-Y)	=	84.6 sec
Cm	= L/(1-Y)	=	51.4 sec
Yult		=	0.645
R.C.ult	= (Yult-Y)/Y*100%	=	90.7 %
Cp	= 0.9*L/(0.9-Y)	=	54.5 sec
Ymax	= 1-L/C	=	0.738
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**97 %**



Stage 1 G= 85
Int = 5



Stage 2 G= 16
Int = 3



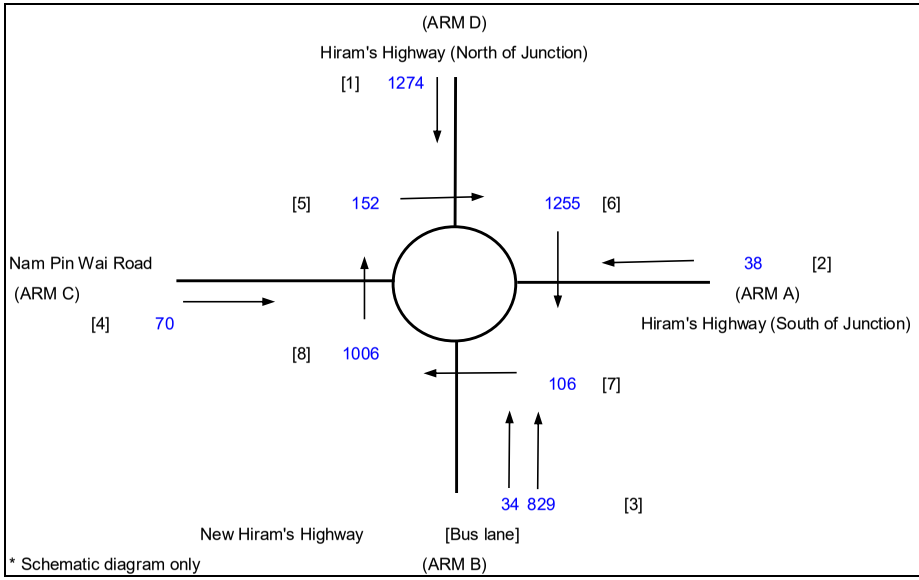
Stage 3 G= 19
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	1	513		514	0.00	1935							1935	0.266			75	86	0.458	42	15
1	1	3.20	1				2075		551		551	0.00	2075							2075	0.266			75	86	0.458	48	15
5,6	1	3.50	1	12		N	1965	95	528		623	0.15	1928	18	126					2054	0.303	0.303		86	86	0.458	42	11
4,5	1	3.50	1	12	O	N	1965		524	2	526	0.00	1734							1734	0.303			86	86	0.458	36	11
7,8	2	3.50	1	12			2105	14		66	80	1.00	1871	12	424					2295	0.035	0.035	7	10	17	0.458	12	60
3	3	3.30	1	15		N	1945	3			3	1.00	1768							1768	0.002			0	19	0.458	0	267
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



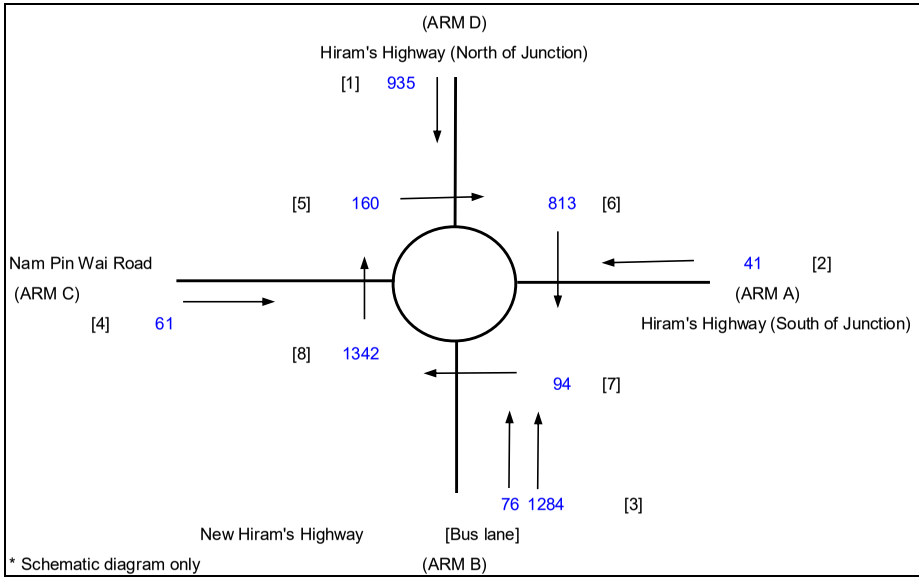
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
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)	38	829	70	1274
Qc	=	Circulating flow across entry (pcu/h)	1255	106	1006	152
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)	1039	2261	1316	2209
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.37	0.05	0.58

Total In Sum = 2211 PCU

DFC of Critical Approach = 0.58

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



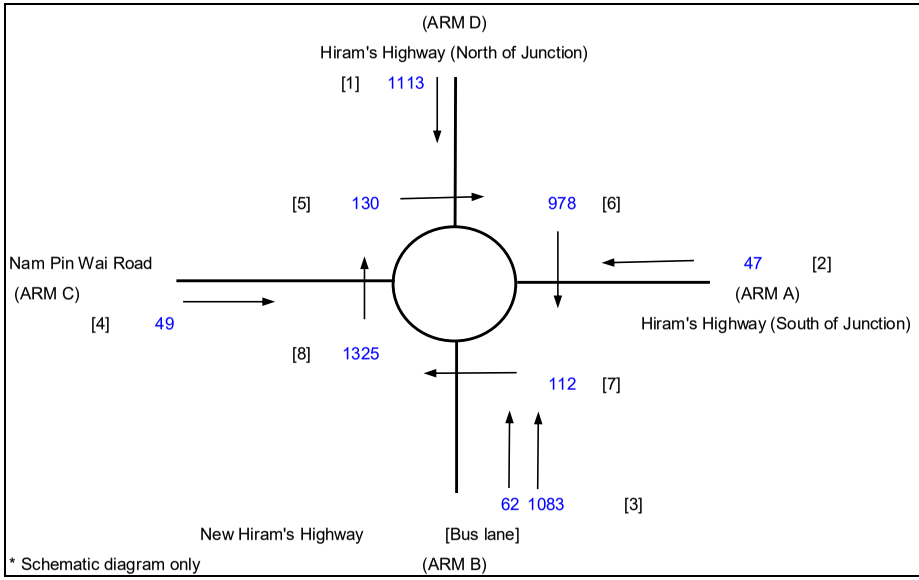
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
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)	41	1284	61	935
Qc	=	Circulating flow across entry (pcu/h)	813	94	1342	160
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)	1242	2268	1156	2205
DFC	=	Design flow/Capacity = Q/Qe	0.03	0.57	0.05	0.42

Total In Sum = 2321 PCU

DFC of Critical Approach = 0.57

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2025 Existing WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
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)	47	1083	49	1113
Qc	=	Circulating flow across entry (pcu/h)	978	112	1325	130
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)	1166	2257	1164	2221
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.48	0.04	0.50

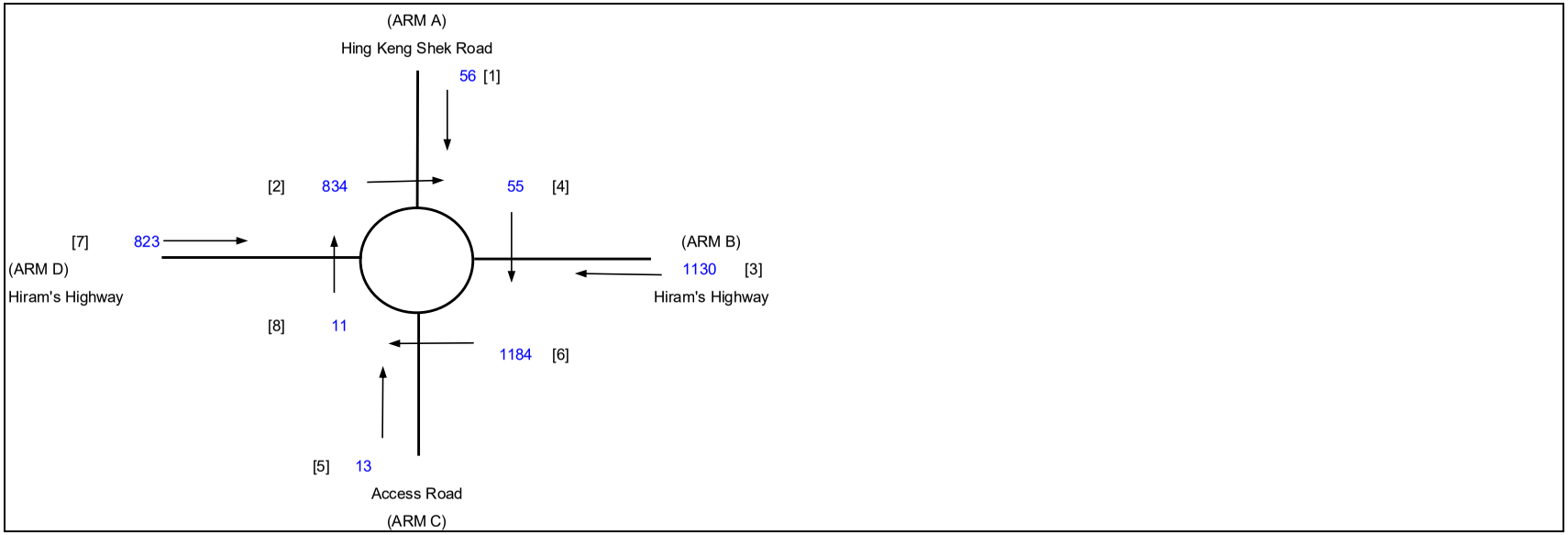
Total In Sum = 2292 PCU

DFC of Critical Approach = 0.50

Appendix B

Junction Capacity Assessment – Reference & Design Scenarios

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

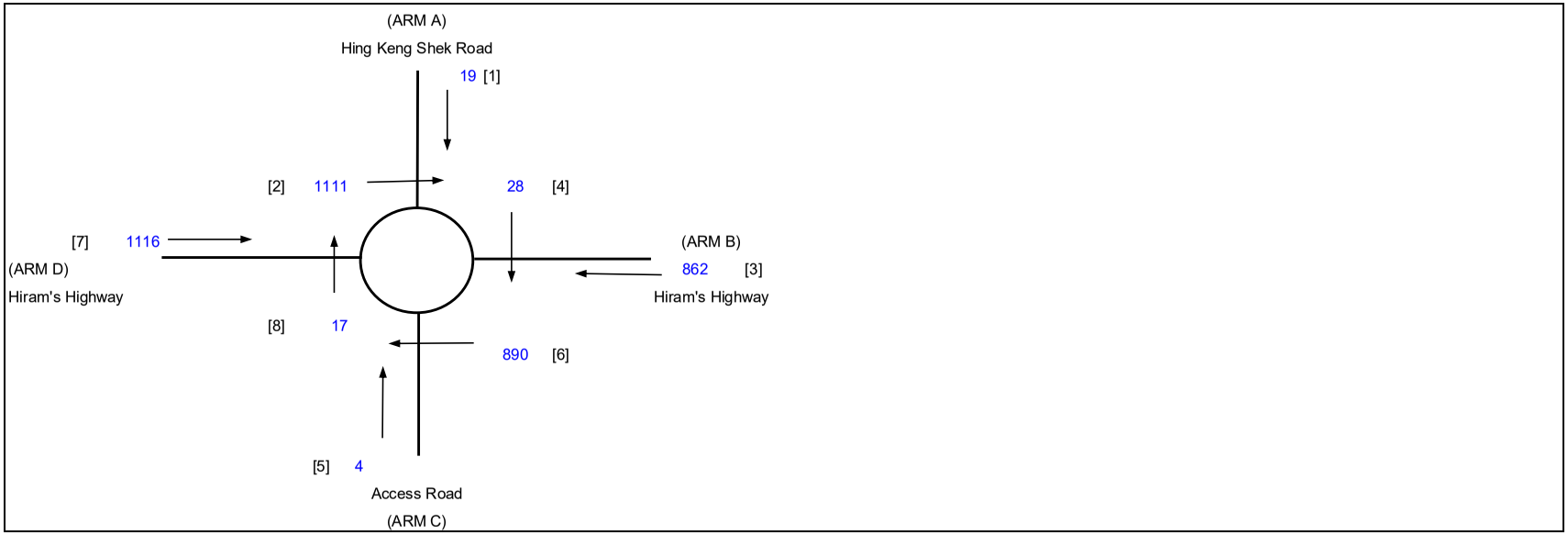


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	56	1130	13	823
Qc	=	Circulating flow across entry (pcu/h)	834	55	1184	11
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	699	2018	438	2379
DFC	=	Design flow/Capacity = Q/Qe	0.08	0.56	0.03	0.35

Total In Sum = 2022 PCU

DFC of Critical Approach = 0.56

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

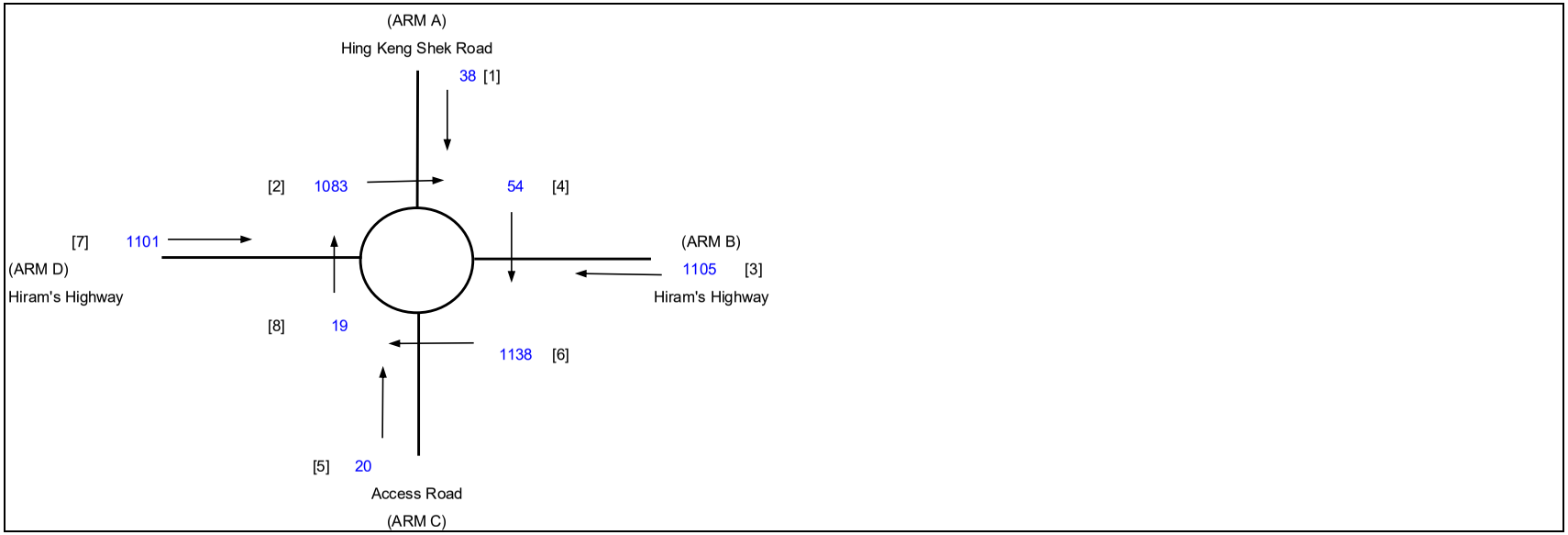


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	19	862	4	1116
Qc	=	Circulating flow across entry (pcu/h)	1111	28	890	17
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	555	2036	576	2375
DFC	=	Design flow/Capacity = Q/Qe	0.03	0.42	0.01	0.47

Total In Sum = 2001 PCU

DFC of Critical Approach = 0.47

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

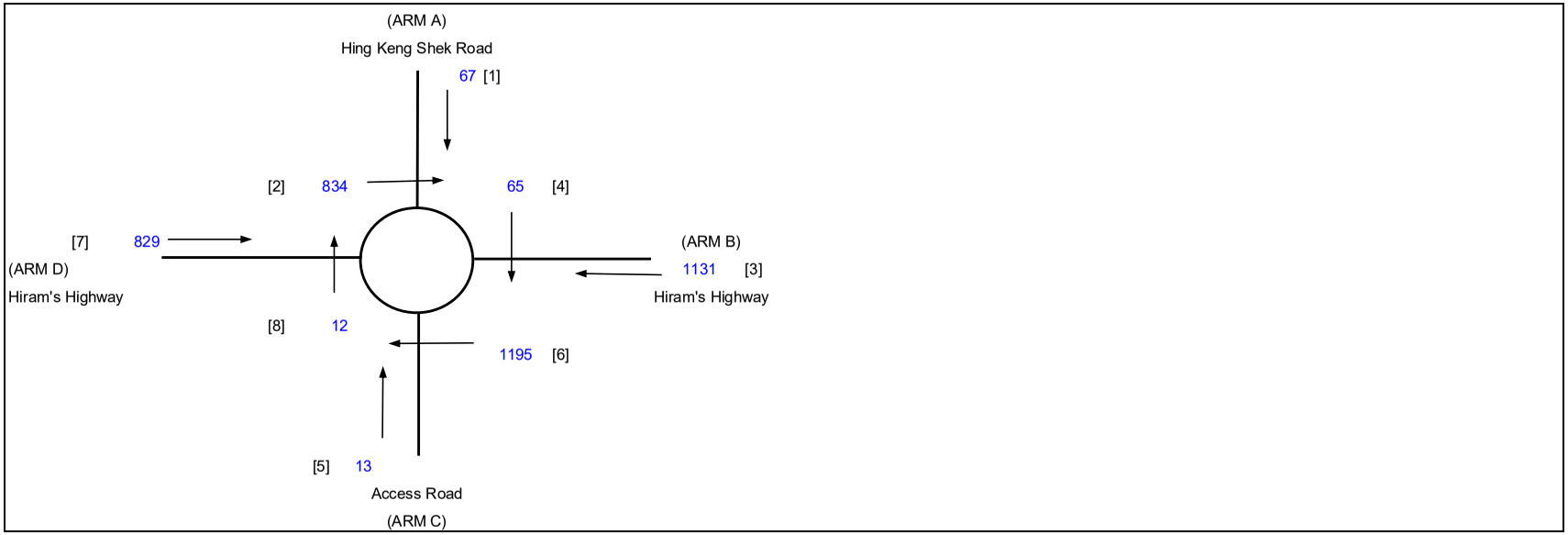


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	38	1105	20	1101
Qc	=	Circulating flow across entry (pcu/h)	1083	54	1138	19
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	570	2019	460	2373
DFC	=	Design flow/Capacity = Q/Qe	0.07	0.55	0.04	0.46

Total In Sum = 2264 PCU

DFC of Critical Approach = 0.55

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

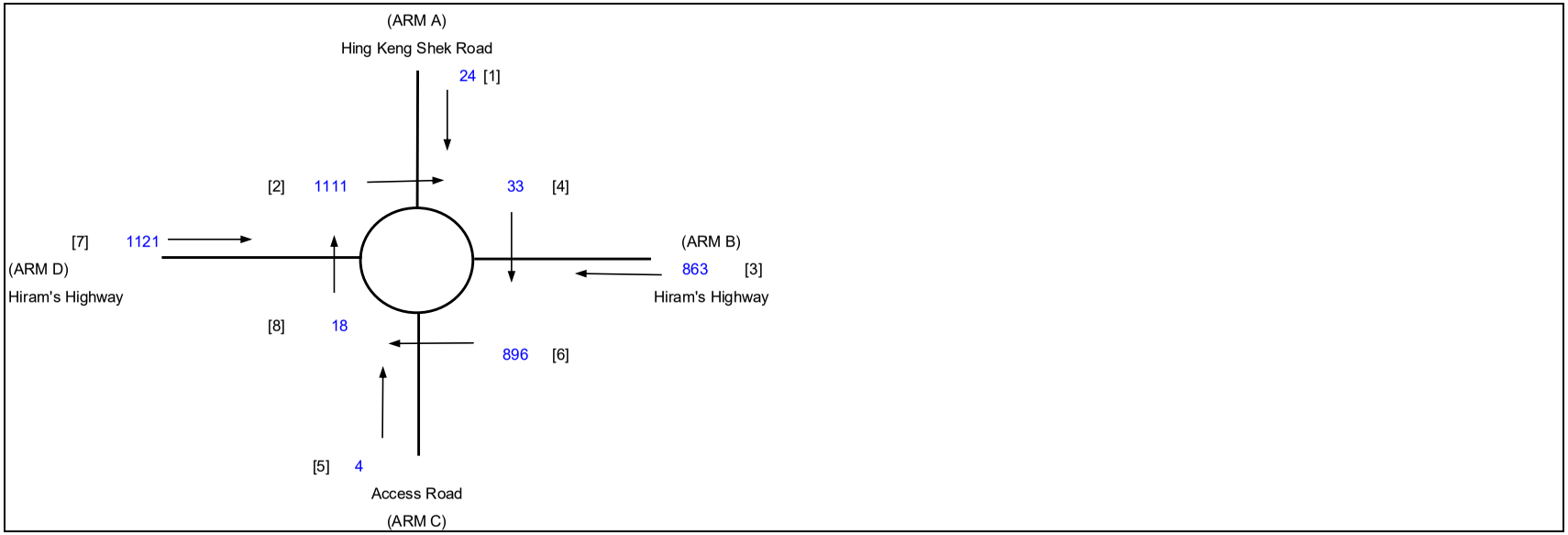


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	67	1131	13	829
Qc	=	Circulating flow across entry (pcu/h)	834	65	1195	12
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	699	2011	433	2379
DFC	=	Design flow/Capacity = Q/Qe	0.10	0.56	0.03	0.35

Total In Sum = 2040 PCU

DFC of Critical Approach = 0.56

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

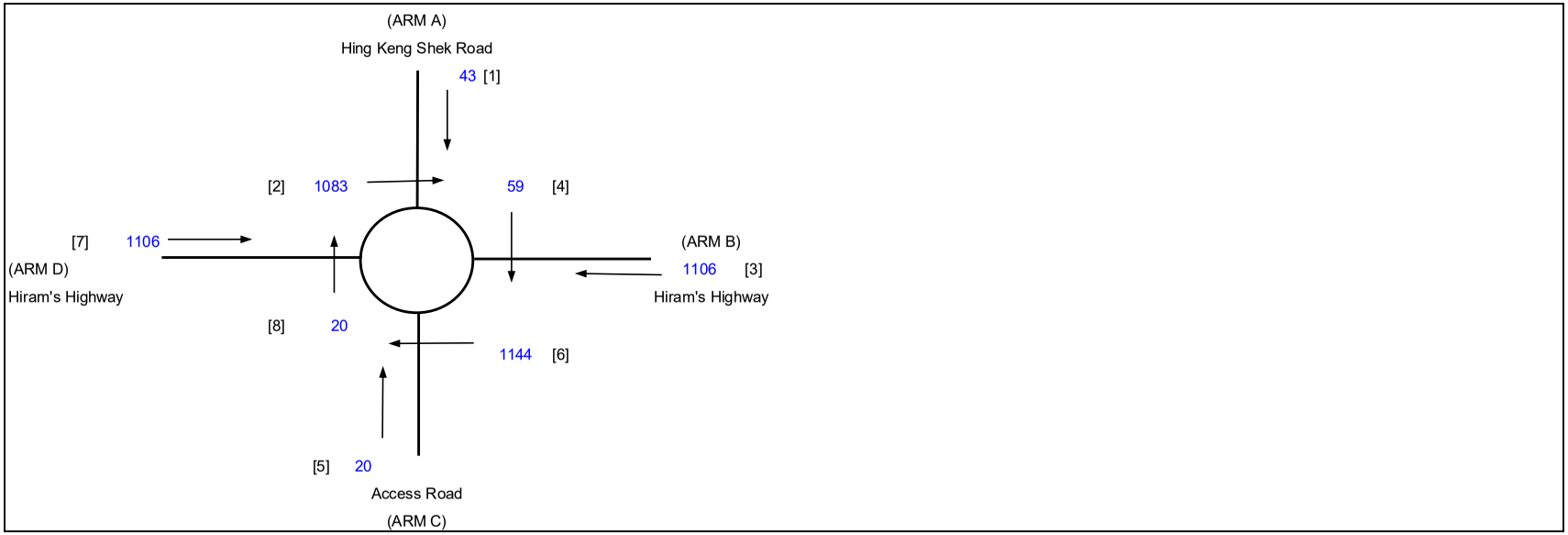


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	24	863	4	1121
Qc	=	Circulating flow across entry (pcu/h)	1111	33	896	18
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	555	2033	573	2374
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.42	0.01	0.47

Total In Sum = 2012 PCU

DFC of Critical Approach = 0.47

LLA CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J1_HH_HKSR.xlsx	CHECKED BY:	SLN	Oct-25
J1 Hiram's Highway/Hing Keng Shek Road Roundabout		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25

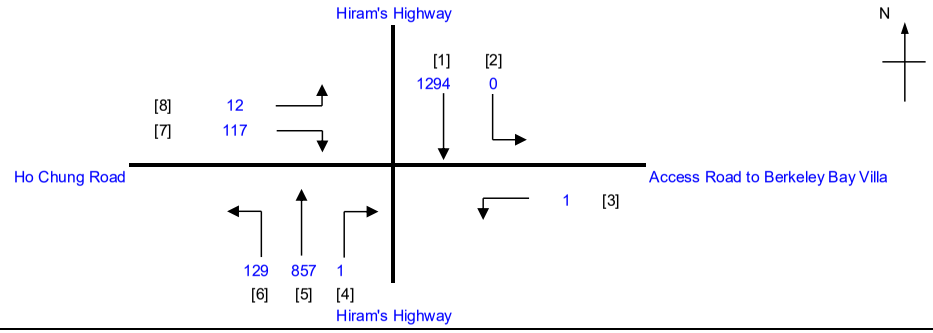


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	2.50	3.65	3.50	8.00
E	=	Entry width (m)	4.50	8.00	3.50	8.00
L	=	Effective length of flare (m)	9.00	50.00	1.00	1.00
R	=	Entry radius (m)	24.00	20.00	12.50	21.00
D	=	Inscribed circle diameter (m)	46.00	46.00	46.00	46.00
A	=	Entry angle (degree)	27.00	41.00	40.00	35.00
Q	=	Entry flow (pcu/h)	43	1106	20	1106
Qc	=	Circulating flow across entry (pcu/h)	1083	59	1144	20
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.36	0.14	0.00	0.00
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.02	0.96	0.94	0.98
X2	=	V + ((E-V)/(1+2S))	3.67	7.05	3.50	8.00
M	=	EXP((D-60)/10)	0.25	0.25	0.25	0.25
F	=	303*X2	1112	2137	1061	2424
Td	=	1+(0.5/(1+M))	1.40	1.40	1.40	1.40
Fc	=	0.21*Td(1+0.2*X2)	0.51	0.71	0.50	0.76
Qe	=	K(F-Fc*Qc) *	570	2015	457	2373
DFC	=	Design flow/Capacity = Q/Qe	0.08	0.55	0.04	0.47

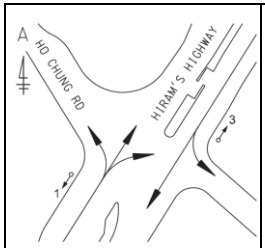
Total In Sum = 2275 PCU

DFC of Critical Approach = 0.55

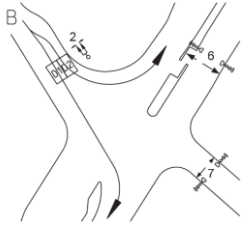
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference AM**	PROJECT NO.: 40815	Prepared By:	SKL	Oct-25
		FILENAME : J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
J2 Hiram's Highway/Ho Chung Road			Reviewed By:	SLN	Oct-25



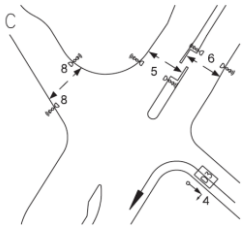
No. of stages per cycle		N =	3
Cycle time		C =	135 sec
Sum(y)		Y =	0.380
Loss time		L =	29 sec
Total Flow		=	2411 pcu
Co	= (1.5*L+5)/(1-Y)	=	78.2 sec
Cm	= L/(1-Y)	=	46.8 sec
Yult		=	0.683
R.C.ult	= (Yult-Y)/Y*100%	=	79.7 %
Cp	= 0.9*L/(0.9-Y)	=	50.2 sec
Ymax	= 1-L/C	=	0.785
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**86 %**



Stage 1 G= 89
Int = 5



Stage 2 G= 17
Int = 3



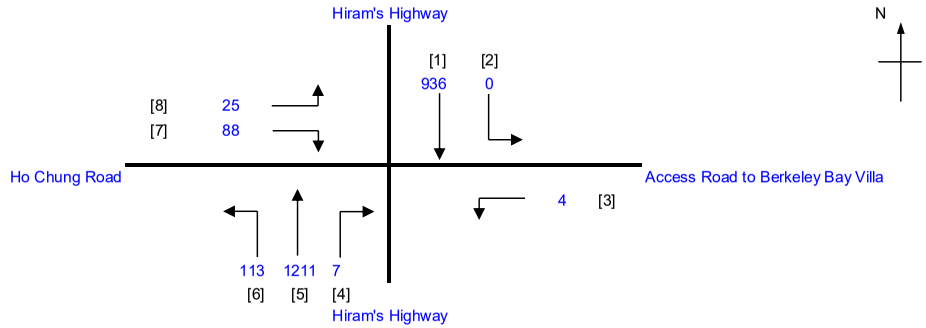
Stage 3 G= 19
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	21	12
P3	2		8	7	4	9	7
P4	3		8	7	4	10	7

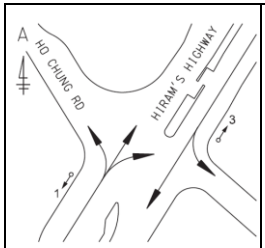
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	625		625	0.00	1935							1935	0.323	0.323		90	90	0.484	42	11
1	1	3.20	1				2075		669		669	0.00	2075							2075	0.322			90	90	0.484	48	11
5,6	1	3.50	1	12		N	1965	129	403		532	0.24	1907	18	120					2027	0.262			73	90	0.484	54	19
4,5	1	3.50	1	12	O	N	1965		454	1	455	0.00	1735							1735	0.262			73	90	0.484	42	19
7,8	2	3.50	1	12			2105	12		117	129	1.00	1871	12	400					2271	0.057	0.057	2	16	18	0.484	24	56
3	3	3.30	1	15		N	1945	1			1	1.00	1768							1768	0.001			0	19	0.484	0	795
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

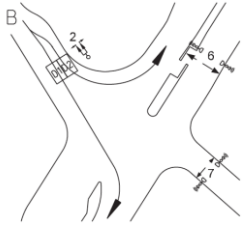
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference PM**	PROJECT NO.: 40815	Prepared By:	SKL	Oct-25
		FILENAME : J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
J2 Hiram's Highway/Ho Chung Road			Reviewed By:	SLN	Oct-25



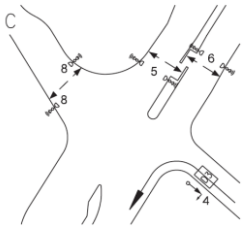
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.401
Loss time		L =	32 sec
Total Flow		=	2384 pcu
Co	= (1.5*L+5)/(1-Y)	=	88.5 sec
Cm	= L/(1-Y)	=	53.4 sec
Yult		=	0.660
R.C.ult	= (Yult-Y)/Y*100%	=	64.6 %
Cp	= 0.9*L/(0.9-Y)	=	57.7 sec
Ymax	= 1-L/C	=	0.754
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**69 %**



Stage 1 G= 85
Int = 5



Stage 2 G= 16
Int = 3



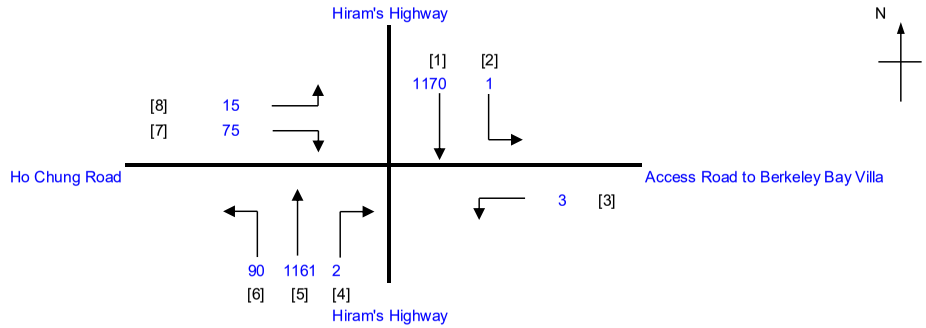
Stage 3 G= 19
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

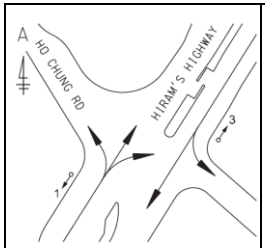
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	452		452	0.00	1935							1935	0.234			57	86	0.532	54	26
1	1	3.20	1				2075		484		484	0.00	2075							2075	0.233			57	86	0.532	54	26
5,6	1	3.50	1	12		N	1965	113	609		722	0.16	1927	18	126					2053	0.352	0.352		86	86	0.532	48	12
4,5	1	3.50	1	12	O	N	1965		602	7	609	0.01	1733							1733	0.352			86	86	0.532	42	12
7,8	2	3.50	1	12			2105	25		88	113	1.00	1871	12	424					2295	0.049	0.049	5	12	17	0.532	18	59
3	3	3.30	1	15		N	1945	4			4	1.00	1768							1768	0.002			1	19	0.532	0	303
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

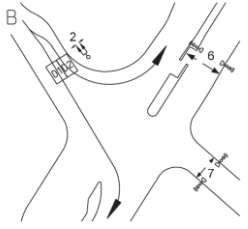
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference WN**	PROJECT NO.: 40815	Prepared By:	SKL	Oct-25
		FILENAME : J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
J2 Hiram's Highway/Ho Chung Road			Reviewed By:	SLN	Oct-25



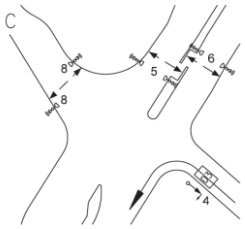
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.370
Loss time		L =	34 sec
Total Flow		=	2517 pcu
Co	= (1.5*L+5)/(1-Y)	=	88.8 sec
Cm	= L/(1-Y)	=	53.9 sec
Yult		=	0.645
R.C.ult	= (Yult-Y)/Y*100%	=	74.5 %
Cp	= 0.9*L/(0.9-Y)	=	57.7 sec
Ymax	= 1-L/C	=	0.738
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**80 %**



Stage 1 G= 85
Int = 5



Stage 2 G= 16
Int = 3



Stage 3 G= 19
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	1	564		565	0.00	1935							1935	0.292			76	86	0.501	48	16
1	1	3.20	1				2075		606		606	0.00	2075							2075	0.292			76	86	0.501	54	16
5,6	1	3.50	1	12		N	1965	90	590		680	0.13	1933	18	126					2059	0.330			86	86	0.501	48	11
4,5	1	3.50	1	12	O	N	1965		571	2	573	0.00	1734							1734	0.330	0.330		86	86	0.501	42	12
7,8	2	3.50	1	12			2105	15		75	90	1.00	1871	12	424					2295	0.039	0.039	7	10	17	0.501	18	61
3	3	3.30	1	15		N	1945	3			3	1.00	1768							1768	0.002			0	19	0.501	0	329
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

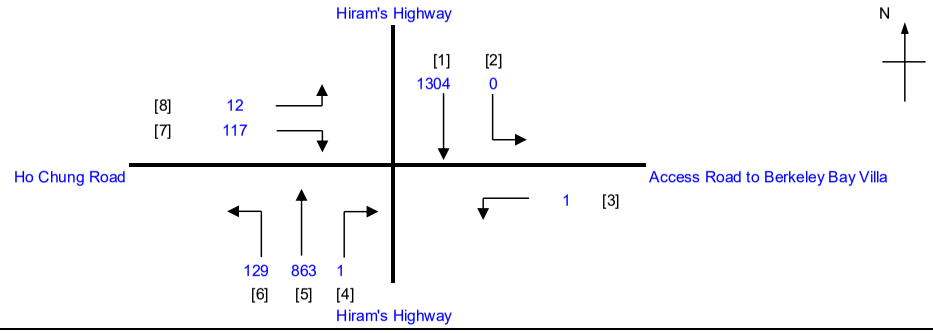
TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

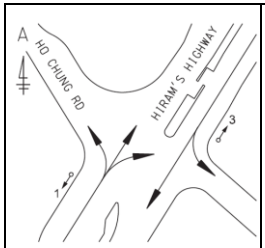
J2 Hiram's Highway/Ho Chung Road

2034 Design AM

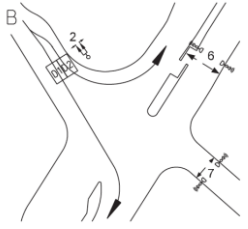
			INITIALS	DATE
PROJECT NO.:	40815	Prepared By:	SKL	Oct-25
FILENAME :	J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
		Reviewed By:	SLN	Oct-25



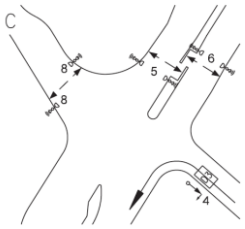
No. of stages per cycle		N =	3
Cycle time		C =	135 sec
Sum(y)		Y =	0.382
Loss time		L =	29 sec
Total Flow		=	2427 pcu
Co	= (1.5*L+5)/(1-Y)	=	78.5 sec
Cm	= L/(1-Y)	=	46.9 sec
Yult		=	0.683
R.C.ult	= (Yult-Y)/Y*100%	=	78.6 %
Cp	= 0.9*L/(0.9-Y)	=	50.4 sec
Ymax	= 1-L/C	=	0.785
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**85 %**



Stage 1 G= 89
Int = 5



Stage 2 G= 17
Int = 3



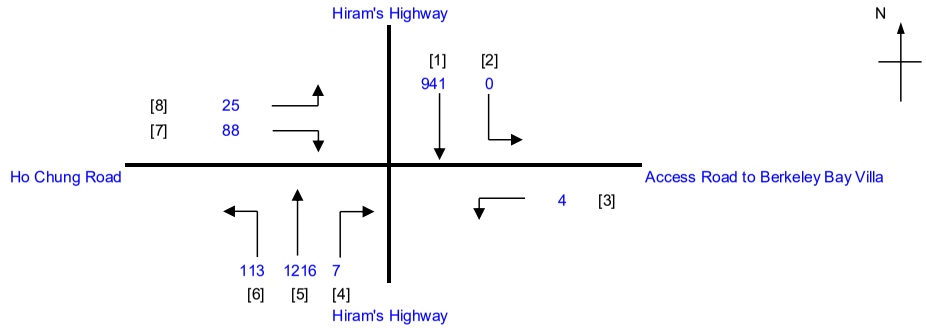
Stage 3 G= 19
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	21	12
P3	2		8	7	4	9	7
P4	3		8	7	4	10	7

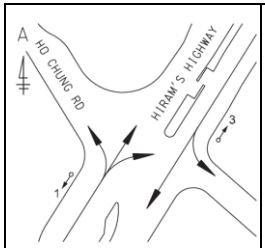
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	629		629	0.00	1935							1935	0.325			90	90	0.487	42	11
1	1	3.20	1				2075		675		675	0.00	2075							2075	0.325	0.325		90	90	0.487	48	11
5,6	1	3.50	1	12		N	1965	129	406		535	0.24	1908	18	120					2028	0.264			73	90	0.487	54	19
4,5	1	3.50	1	12	O	N	1965		457	1	458	0.00	1735							1735	0.264			73	90	0.487	42	19
7,8	2	3.50	1	12			2105	12		117	129	1.00	1871	12	400					2271	0.057	0.057	2	16	18	0.487	24	56
3	3	3.30	1	15		N	1945	1			1	1.00	1768							1768	0.001			0	19	0.487	0	808
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

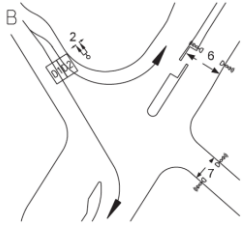
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design PM**	PROJECT NO.: 40815	Prepared By:	SKL	Oct-25
		FILENAME : J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
J2 Hiram's Highway/Ho Chung Road			Reviewed By:	SLN	Oct-25



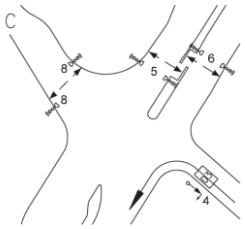
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.403
Loss time		L =	33 sec
Total Flow		=	2394 pcu
Co	= (1.5*L+5)/(1-Y)	=	91.2 sec
Cm	= L/(1-Y)	=	55.2 sec
Yult		=	0.653
R.C.ult	= (Yult-Y)/Y*100%	=	62.1 %
Cp	= 0.9*L/(0.9-Y)	=	59.7 sec
Ymax	= 1-L/C	=	0.746
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**67 %**



Stage 1 G= 84
Int = 5



Stage 2 G= 17
Int = 3



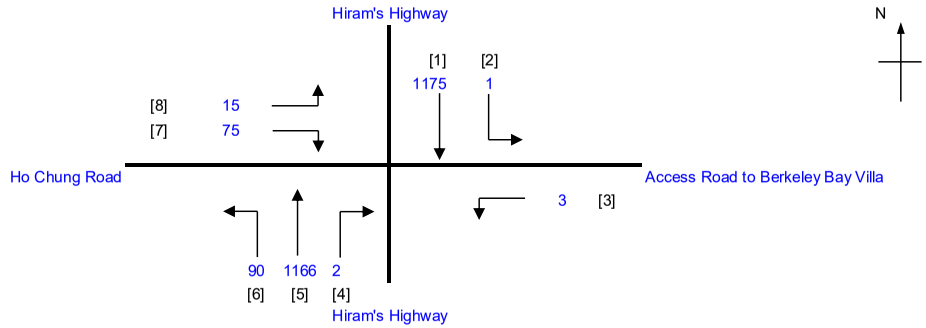
Stage 3 G= 19
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	21	12
P3	2		8	7	4	9	7
P4	3		8	7	4	10	7

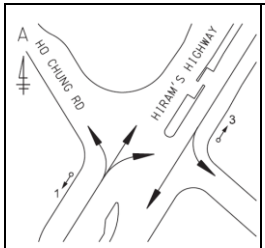
Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	0	454		454	0.00	1935							1935	0.235			57	85	0.540	54	27
1	1	3.20	1				2075		487		487	0.00	2075							2075	0.235			57	85	0.540	54	27
5,6	1	3.50	1	12		N	1965	113	612		725	0.16	1927	18	127					2055	0.353	0.353		85	85	0.540	54	12
4,5	1	3.50	1	12	O	N	1965		604	7	611	0.01	1733							1733	0.353			85	85	0.540	42	13
7,8	2	3.50	1	12			2105	25		88	113	1.00	1871	12	400					2271	0.050	0.050	6	12	18	0.540	18	60
3	3	3.30	1	15		N	1945	4			4	1.00	1768							1768	0.002			1	19	0.540	0	314
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

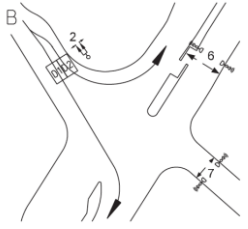
LLA CONSULTANCY LIMITED	**TRAFFIC SIGNAL CALCULATION**			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design WN**	PROJECT NO.: 40815	Prepared By:	SKL	Oct-25
		FILENAME : J2_HH_HCR.xlsx	Checked By:	SLN	Oct-25
J2 Hiram's Highway/Ho Chung Road			Reviewed By:	SLN	Oct-25



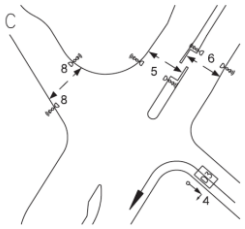
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.371
Loss time		L =	34 sec
Total Flow		=	2527 pcu
Co	= (1.5*L+5)/(1-Y)	=	89.0 sec
Cm	= L/(1-Y)	=	54.1 sec
Yult		=	0.645
R.C.ult	= (Yult-Y)/Y*100%	=	73.9 %
Cp	= 0.9*L/(0.9-Y)	=	57.8 sec
Ymax	= 1-L/C	=	0.738
R.C.(C)	**= (0.9*Ymax-Y)/Y*100%**	**=**	**79 %**



Stage 1 G= 85
Int = 5



Stage 2 G= 16
Int = 3



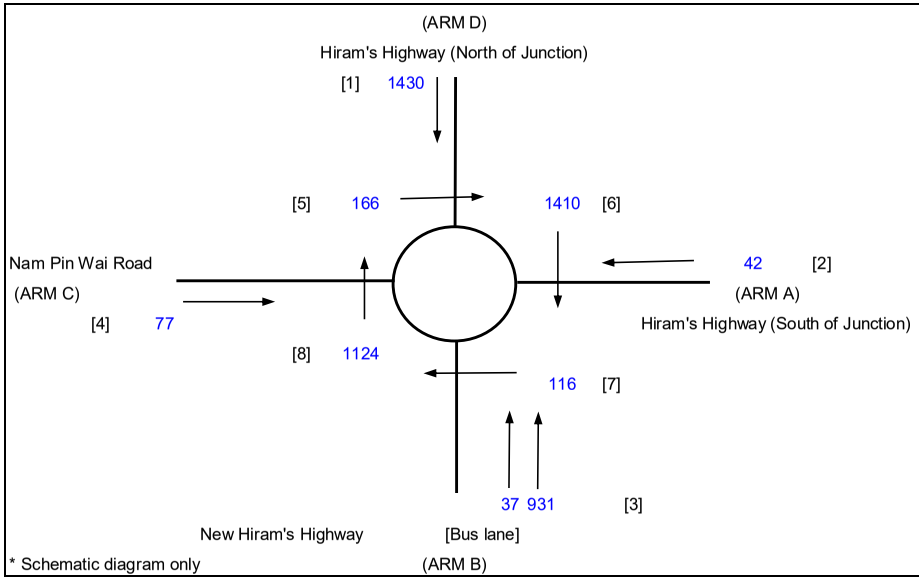
Stage 3 G= 19
Int = 2

Pedestrian Phase	Stage		Green Time Required SG	FG	Delay	Green Time Provided SG	FG
P1	3		10	8	0	13	8
P2	2,3		13	12	8	20	12
P3	2		8	7	4	8	7
P4	3		8	7	4	10	7

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																							8					
1,2	1	3.20	1	15		N	1935	1	566		567	0.00	1935							1935	0.293			76	86	0.502	48	16
1	1	3.20	1				2075		609		609	0.00	2075							2075	0.293			76	86	0.502	54	16
5,6	1	3.50	1	12		N	1965	90	593		683	0.13	1933	18	126					2059	0.332	0.332		86	86	0.502	48	11
4,5	1	3.50	1	12	O	N	1965		573	2	575	0.00	1734							1734	0.332			86	86	0.502	42	12
7,8	2	3.50	1	12			2105	15		75	90	1.00	1871	12	424					2295	0.039	0.039	7	10	17	0.502	18	61
3	3	3.30	1	15		N	1945	3			3	1.00	1768							1768	0.002			0	19	0.502	0	332
PED	3																						19					

NOTE : O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



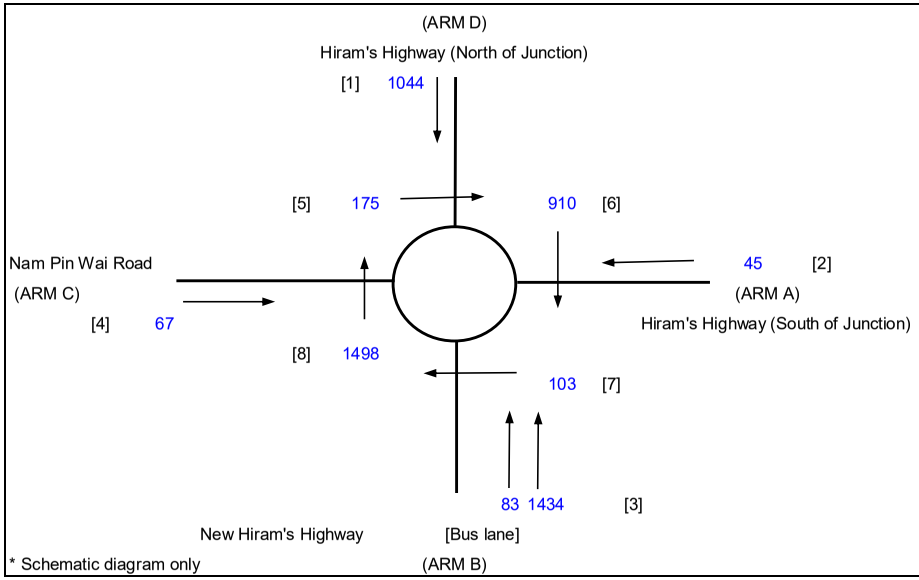
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
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)	42	931	77	1430
Qc	=	Circulating flow across entry (pcu/h)	1410	116	1124	166
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)	968	2255	1260	2201
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.41	0.06	0.65

Total In Sum = 2480 PCU

DFC of Critical Approach = 0.65

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



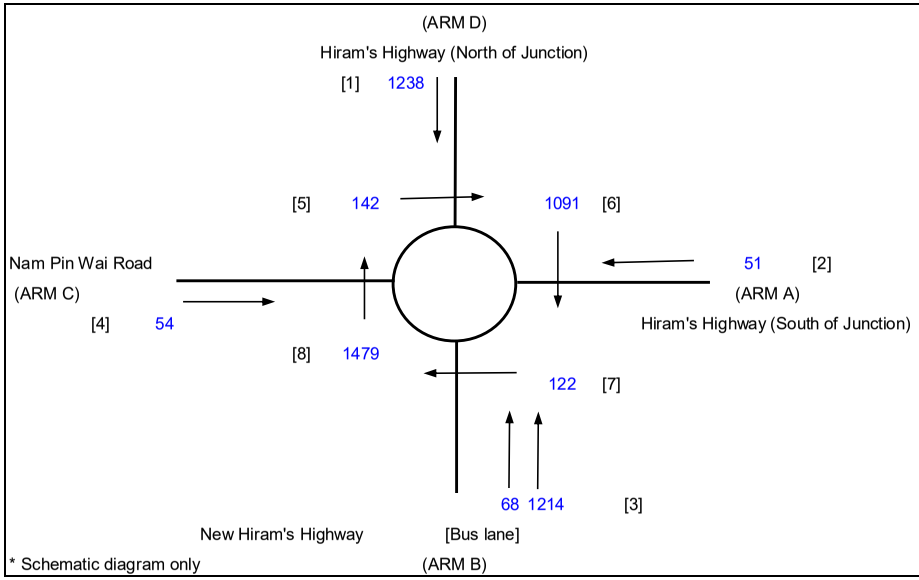
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
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)	45	1434	67	1044
Qc	=	Circulating flow across entry (pcu/h)	910	103	1498	175
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)	1197	2262	1081	2196
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.63	0.06	0.48

Total In Sum = 2590 PCU

DFC of Critical Approach = 0.63

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Reference WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



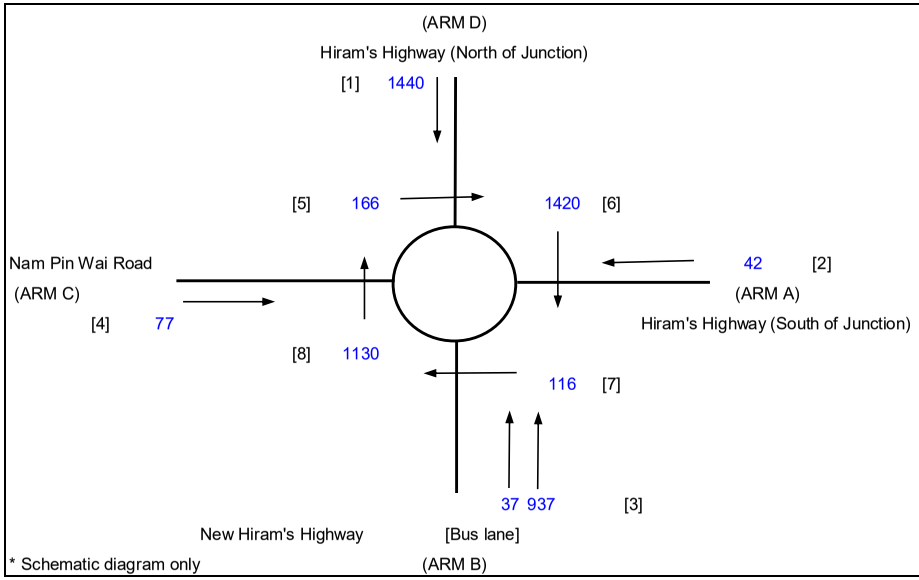
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
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)	51	1214	54	1238
Qc	=	Circulating flow across entry (pcu/h)	1091	122	1479	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)	1114	2252	1090	2215
DFC	=	Design flow/Capacity = Q/Qe	0.05	0.54	0.05	0.56

Total In Sum = 2557 PCU

DFC of Critical Approach = 0.56

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design AM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



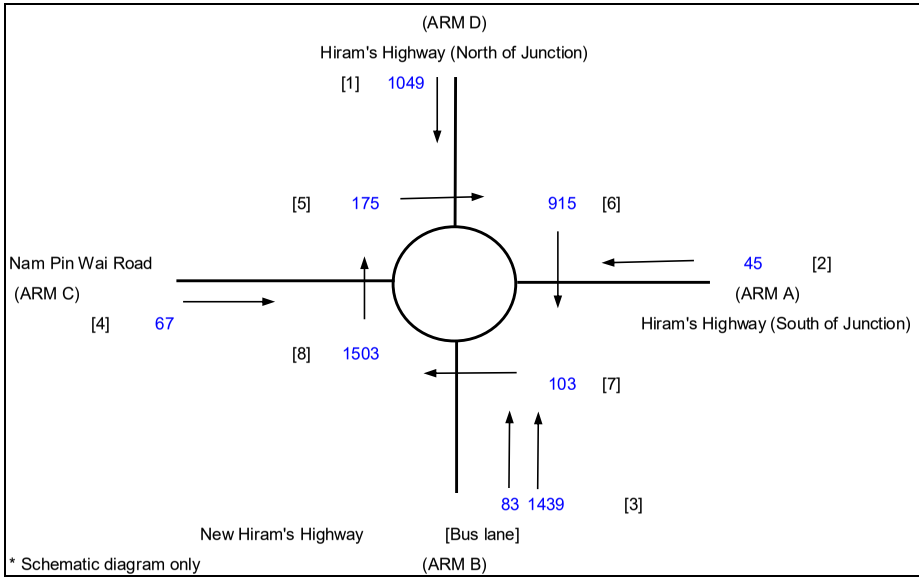
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
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)	42	937	77	1440
Qc	=	Circulating flow across entry (pcu/h)	1420	116	1130	166
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)	963	2255	1257	2201
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.42	0.06	0.65

Total In Sum = 2496 PCU

DFC of Critical Approach = 0.65

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design PM**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



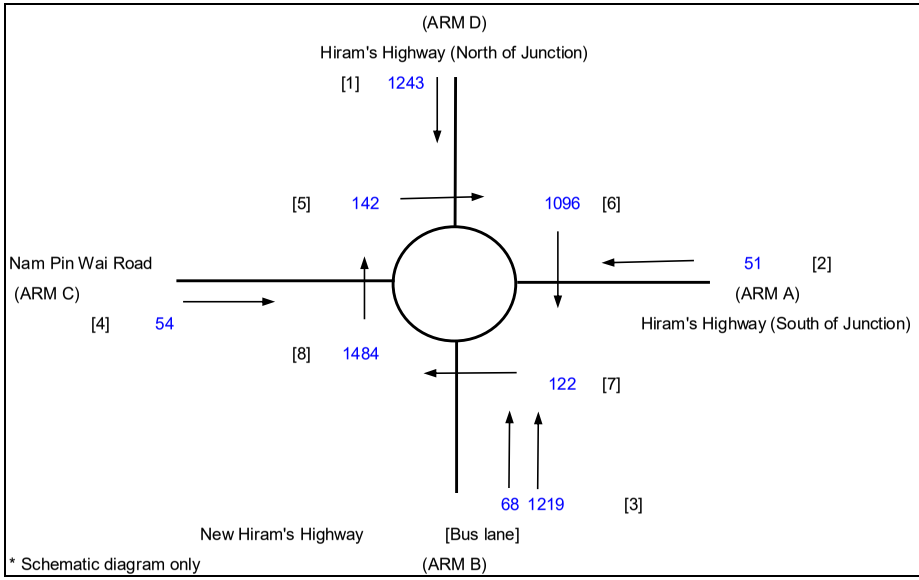
* Schematic diagram only

ARM			A	B	C	D
INPUT PARAMETERS:						
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)	45	1439	67	1049
Qc	=	Circulating flow across entry (pcu/h)	915	103	1503	175
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)	1195	2262	1079	2196
DFC	=	Design flow/Capacity = Q/Qe	0.04	0.64	0.06	0.48

Total In Sum = 2600 PCU

DFC of Critical Approach = 0.64

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area Shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung	**2034 Design WN**	PROJECT NO.: 40815	PREPARED BY:	SKL	Oct-25
		FILENAME : J3_HH_NHH.xlsx	CHECKED BY:	SLN	Oct-25
J3 Hiram's Highway/ New Hiram's Highway/ Nam Pin Wai Road		REFERENCE NO.:	REVIEWED BY:	SLN	Oct-25



* Schematic diagram only

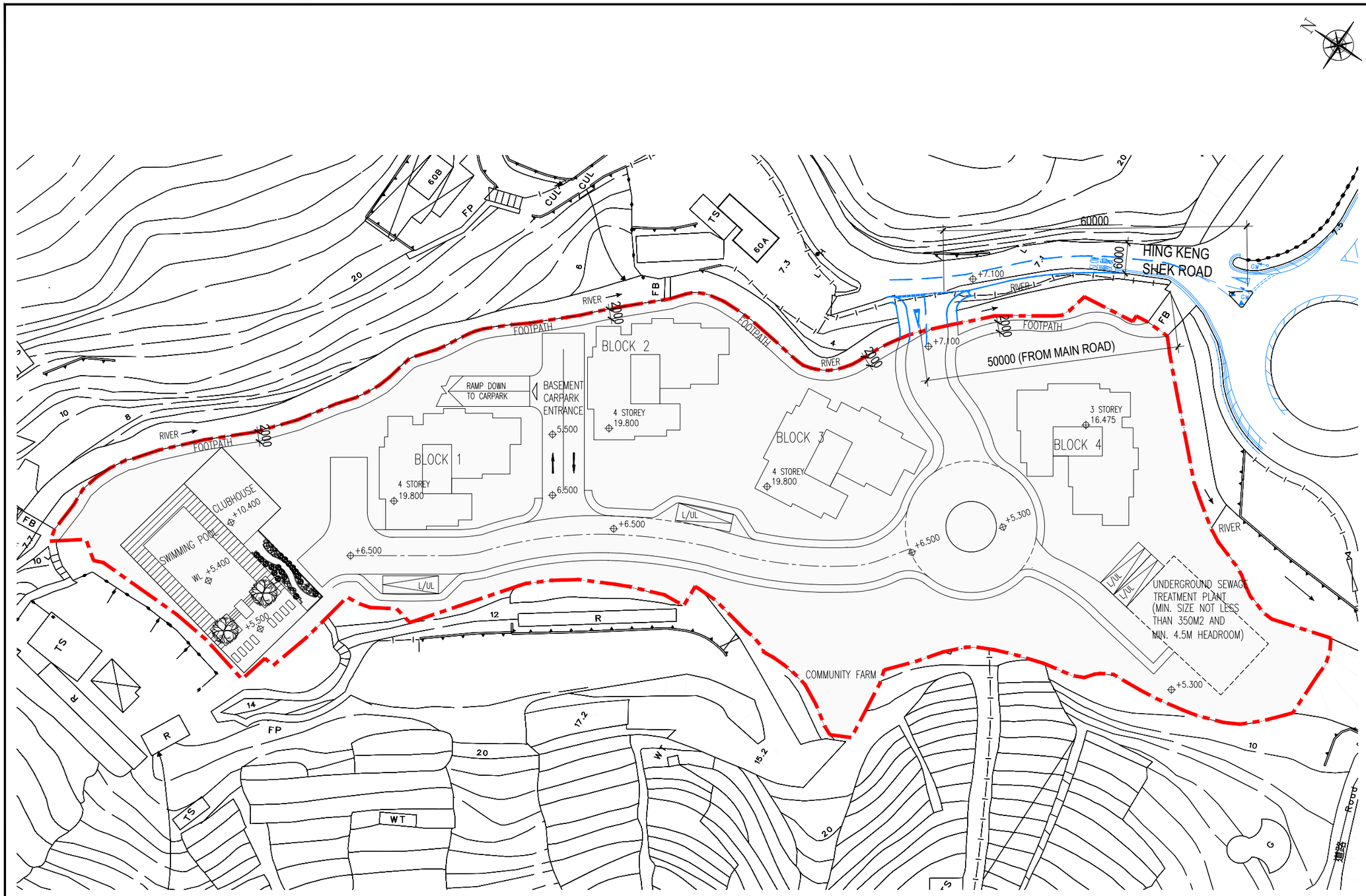
ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	3.70	7.40	4.30	7.70
E	=	Entry width (m)	7.30	11.00	7.30	7.80
L	=	Effective length of flare (m)	11.00	1.00	20.00	1.00
R	=	Entry radius (m)	15.00	55.00	23.00	18.00
D	=	Inscribed circle diameter (m)	78.00	78.00	78.00	78.00
A	=	Entry angle (degree)	32.00	40.00	50.00	36.00
Q	=	Entry flow (pcu/h)	51	1219	54	1243
Qc	=	Circulating flow across entry (pcu/h)	1096	122	1484	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)	1112	2252	1088	2215
DFC	=	Design flow/Capacity = Q/Qe	0.05	0.54	0.05	0.56

Total In Sum = 2567 PCU

DFC of Critical Approach = 0.56

Appendix C

Proposed Layout Plan



Rev.	Date	Amendment	Purpose

K & W Architects Ltd.
關黃建築師有限公司

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Client

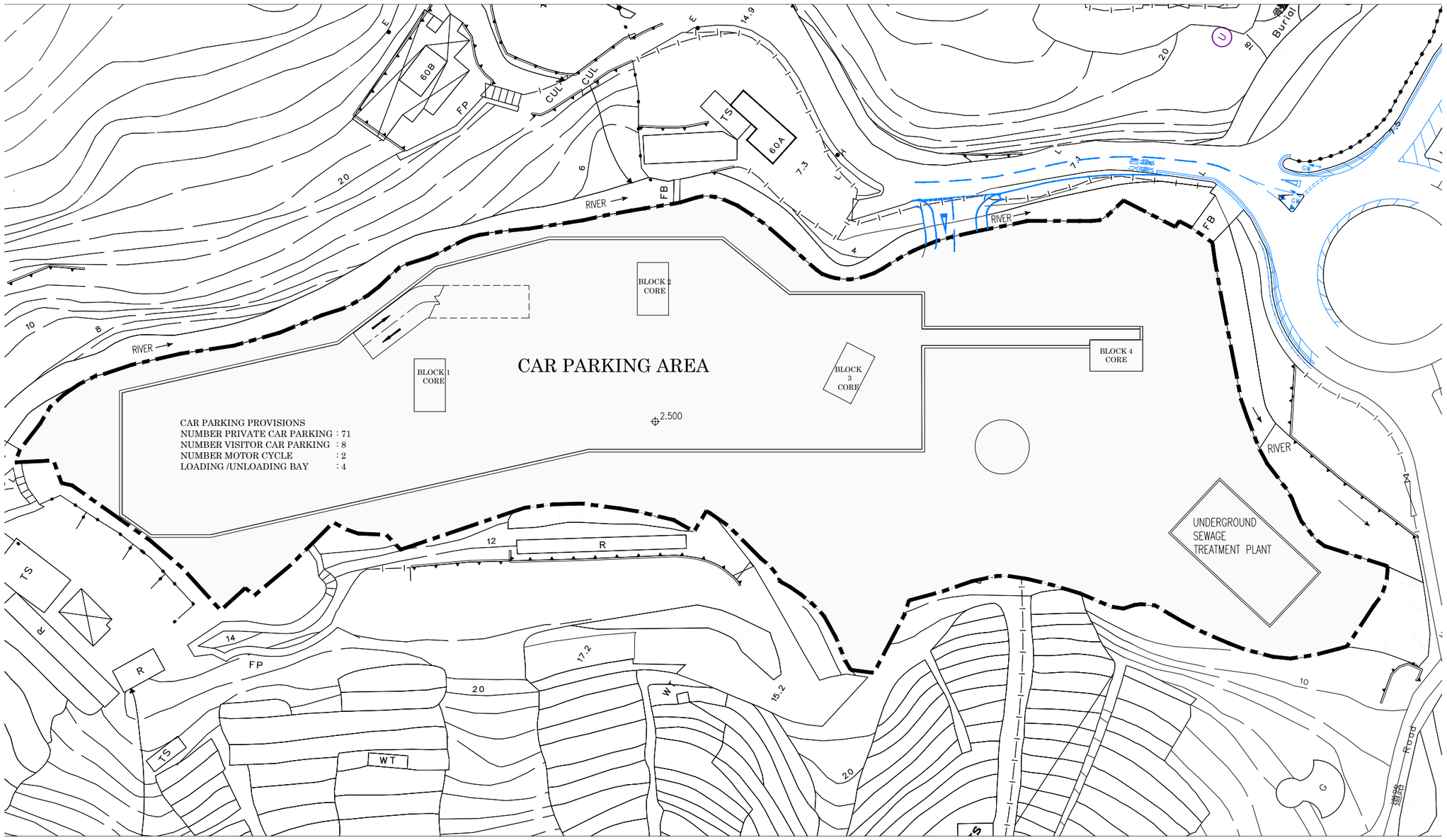
Project

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Drawing Title

MASTER LAYOUT PLAN

Job No.	Drawing No.	Revision No.
D1186	MLP-01	N
Scale	Date	CAD Ref.
1:800	09/06/2025	
Drawn	Checked	Approved
SF	SF	



Rev.	Date	Amendment	Purpose

K & W Architects Ltd.
關黃建築師有限公司

K&W

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Client

Project

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap. 131) to Rezone the Application Site from "Green Belt" and Area shown as "Road" to "Residential (Group C)5" for Proposed Residential Development at Various Lots in D.D. 210 and Adjoining Government Land, Pak Wai, Sai Kung

Drawing Title

BASEMENT PLAN

Job No.	Drawing No.	Revision No.
D1186	FL-02	L
Scale	Date	CAD Ref.
1:500	23/08/2023	
Drawn	Checked	Approved
PC	PC	