

Appendix F

Traffic Impact Assessment

**Proposed Temporary Public Vehicle Park
(Excluding Container Vehicle) For a Period of 3 Years at
Various Lots in DD 244, Ho Chung, Sai Kung**

**Traffic Impact Assessment
Final Report
August 2026**

Prepared by: CKM Asia Limited

**Proposed Temporary Public Vehicle Park (Excluding Container Vehicle)
For a Period of 3 Years at Various Lots in DD 244, Ho Chung, Sai Kung**

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**Proposed Temporary Public Vehicle Park (Excluding Container Vehicle)
For a Period of 3 Years at Various Lots in DD 244, Ho Chung, Sai Kung**

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**Proposed Temporary Public Vehicle Park (Excluding Container Vehicle)
For a Period of 3 Years at Various Lots in DD 244, Ho Chung, Sai Kung**

FIGURES

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1.0 INTRODUCTION

Background

- 1.1 The Application Site comprises of various lots in Demarcation District ("D.D.") 244, Ho Chung in Sai Kung. Its location is shown in **Figure 1.1**.
- 1.2 CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned by the Applicant to prepare a traffic assessment in connection with the S16 application for a temporary public vehicle park (excluding container vehicle) with 100 car parking spaces for a period of 3 years (the "Proposed Development"). Access to the Proposed Development is via its existing vehicular access, which is provided at the northbound service road of Hiram's Highway.
- 1.3 This report describes the traffic assessment undertaken for the Proposed Development.

Structure of the Report

- 1.4 The report is structured as follows:
 - Chapter One - Gives the background of the project;
 - Chapter Two - Describes the existing situation;
 - Chapter Three - Presents the Proposed Development;
 - Chapter Four - Describes the traffic impact analysis; and
 - Chapter Five - Gives the overall conclusion.

2.0 THE EXISTING SITUATION

The Subject Site

- 2.1 The subject site is at present unoccupied, and it fronts onto Hiram's Highway to the east and Nam Pin Wai Road to the south.

The Road Network

- 2.2 Hiram's Highway is classified as a rural road, which is of dual carriageway 2-lane standard. It connects with Clear Water Bay Road at its southern end and Po Tung Road to the north.
- 2.3 Nam Pin Wai Road, Ho Chung Road and Luk Mei Tsuen Road are classified as feeder roads. These are of single carriageway 2-lane standard, and they connect with Hiram's Highway.

Manual Classified Traffic Counts

- 2.4 To quantify the traffic flows in the vicinity of the subject site, manual classified counts were conducted on Monday, 27th April 2026 and Thursday, 25th June 2026 during the AM and PM peak periods at the following junctions:
- J1: Hiram's Highway / New Hiram's Highway / Nam Pin Wai Road;
 - J2: Hiram's Highway / Access Road to Haven of Hope Ho Chung Day Activity Centre cum Hostel;
 - J3: Hiram's Highway / Ho Chung Road; and
 - J4: Hiram's Highway / Luk Mei Tsuen Road.
- 2.5 The locations of these junctions are shown in **Figure 2.1** and the layouts are shown in **Figures 2.2 – 2.5** respectively.
- 2.6 From the traffic survey conducted, the AM and PM peak hours are found between 0745 – 0845 hours and 1700 – 1800 hours respectively.

Existing Junction Performance

- 2.7 The existing operating performance of the surveyed junctions is calculated based on the existing traffic flows, and the analysis was undertaken using the method found in the Transport Planning and Design Manual ("TPDM"). The results are summarised in **Table 2.1**, and detailed calculations are presented in the **Appendix A**.

TABLE 2.1 EXISTING JUNCTION PERFORMANCE

Ref	Junction	Type of Junction (Parameter)	AM Peak	PM Peak
J1	Hiram's Highway / New Hiram's Highway / Nam Pin Wai Road	RA (DFC)	0.61	0.59
J2	Hiram's Highway / Access Road to Haven of Hope Ho Chung Day Activity Centre cum Hostel	Priority (DFC)	0.02	0.02
J3	Hiram's Highway / Ho Chung Road	Signal (RC)	>100%	>100%
J4	Hiram's Highway / Luk Mei Tsuen Road	Priority (DFC)	0.07	0.05

Note: RA – roundabout DFC - design flow/capacity ratio RC – reserve capacity

- 2.8 **Table 2.1** shows that the junctions operate with capacities.

Public Transport Services

- 2.9 At present, 5 franchised bus and 6 green minibus ("GMB") routes operate in the vicinity of the Proposed Development. Details of public transport services are presented in **Table 2.2**.

TABLE 2.2 EXISTING PUBLIC TRANSPORT SERVICES OPERATING IN THE VICINITY OF THE PROPOSED DEVELOPMENT

Route	Routing	Headway (minutes)
KMB 92	Sai Kung – Diamond Hill Station	15 – 30
KMB 92R ⁽¹⁾	Sai Kung – Star Ferry	30 - 60
KMB 96R ⁽¹⁾	Wong Shek Pier – Diamond Hill Station	20 – 35
KMB 292P ⁽²⁾	Sai Kung → Kwun Tong	AM Peak
CTB 792M	Sai Kung – Tseung Kwan O Station	15 – 30
GMB 1	Sai Kung – Kowloon Bay	8 – 20
GMB 1A	Sai Kung – Choi Hung Road PTI	4
	Sai Kung North PTI → Choi Hung Road PTI	AM Peak
	Pak Shan Wan → Choi Hung Road PTI	
	Fui Yiu Lane → Choi Hung Road PTI ⁽⁴⁾	
GMB 1S ⁽⁴⁾	Sai Kung – Choi Hung Road PTI	10 – 15
GMB 2	Sai Kung – Ho Chung	15 – 30
	Sai Kung (Yi Chun Street) – Kai Ham (Circular)	30
GMB 12	Sai Kung – Po Lam Station	10 – 15
GMB 101M	Sai Kung – Hang Hau Station	3 – 30
	Pak Sha Wan – Hang Hau Station	AM Peak
	Lakeside Garden – Hang Hau Station	
	Po Lo Che – Hang Hau Station	
	Marina Cove – Hang Hau Station	

Note: KMB – Kowloon Motor Bus CTB – Citybus GMB – Green Minibus

- ⁽¹⁾ Saturday, Sunday and Public Holiday only
⁽²⁾ Monday to Friday (except Public Holiday)
⁽³⁾ Monday to Saturday (except Public Holiday)
⁽⁴⁾ Overnight

3.0 THE PROPOSED DEVELOPMENT

The Proposed Development

- 3.1 The Proposed Development provides 100 car parking spaces, and the layout plan is shown in **Figure 3.1**.
- 3.2 The entry gate is provided some 20m from the run-in, and this is to ensure that no vehicles will tailback to the northbound service road of Hiram's Highway.

Swept Path Analysis

- 3.3 The CAD-based swept path analysis programme, **AUTODESK VEHICLE TRACKING**, was used to check the ease of manoeuvring of vehicles within the Proposed Development, and vehicles are found to have no manoeuvring problems. The swept path analysis drawings are found in **Appendix B**.

4.0 TRAFFIC ANALYSIS

Design Year

- 4.1 The Proposed Development is expected to commence in 2026 and operate for 3 years, ie, until 2029. Hence, the design year adopted for traffic analysis is 2029.

Traffic Forecasting

- 4.2 Year 2029 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to existing traffic flows; (ii) estimated traffic growth rate from 2026 to 2029; (iii) expected traffic generation by the planned / committed developments in the vicinity; and, (iv) the expected traffic generation by the Proposed Development.

Estimated Traffic Growth Rate from 2026 to 2029

- 4.3 Reference is made to the: (i) the annual average daily traffic (AADT) of core stations located in the vicinity of the subject site obtained from the Annual Traffic Census (ATC) published by Transport Department; (ii) the projection of population and employment data in Sai Kung obtained from the latest Territorial Population and Employment Data Matrix (TPEDM) published by Planning Department.
- 4.4 The above information is presented in **Tables 4.1 and 4.2** respectively.

TABLE 4.1 HISTORIC TRAFFIC INFORMATION FROM ATC

Station	6055	5017	5466	Overall
Road	Hiram's Highway	Clear Water Bay Rd	Clear Water Bay Rd	–
From	Clear Water Bay Rd	On Sau Rd	Hang Hau Rd	–
To	Po Tung Road	Hiram's Highway	Hiram's Highway	–
2017	24,050	26,910	18,650*	69,610
2018	24,450	28,450	18,950*	71,850
2019	24,280*	28,980	20,240	73,500
2020	23,360*	28,900	19,110	71,370
2021	24,460*	29,100	20,020*	73,580
2022	23,480	27,720	19,140*	70,340
2023	22,860	29,080	19,160	71,100
2024	22,470	25,300	19,640	67,410
Average Annual Growth (2017-2024)	-1.40%	-1.94%	0.60%	-1.06%

Note: * AADT estimated by Growth Factor

- 4.5 **Table 4.1** shows that the annual growth rate obtained from ATC is negative, i.e. – 1.06%.

TABLE 4.2 TPEDM DATA FOR SAI KUNG

District	Item	Year		Average Annual Growth
		2026	2031	
Sai Kung	Population	489,050	527,150	+ 0.44%
	Employment	111,550	116,200	+ 1.22%
	Total	600,600	643,350	+ 0.58%

- 4.6 **Table 4.2** shows that the annual growth rate obtained from TPEDM between years 2026 – 2031 is 0.58%. To err on the high side, an annual average traffic growth of 1% per annum is adopted for year 2026 – 2029.

Planned/ Committed Developments in the Vicinity

- 4.7 Planned/ committed developments found in the vicinity have been incorporated in the forecast. The planned / committed developments are listed in **Table 4.3**.

TABLE 4.3 THE PLANNED / COMMITTED DEVELOPMENTS IN THE VICINITY OF THE PROPOSED DEVELOPMENT

Ref.	Location	Development Parameters (Approx.)
A	Various Lots in D.D. 210 and Adjoining Government Land, Ho Chung ⁽¹⁾	15 private residential houses
B	Lot 1003 in D.D. 214, Ho Chung	90 private residential flats
C	Lot 2189 in D.D. 244, Nam Pin Wai	139 private residential flats
D	Various Lots in D.D. 210 and 244 and Adjoining Government Land, Ho Chung ⁽²⁾	8 private residential houses
E	Various Lots in D.D. 214 and 244 and Adjoining Government Land, Ho Chung ⁽³⁾	26 private residential houses
F	Various Lots and Adjoining Government Land in D.D. 247, Ho Chung ⁽⁴⁾	1 temporary film studio

Note: ⁽¹⁾ Approved Planning Application A/SK-HC/316
⁽²⁾ Approved Planning Application Y/SK-HC/6
⁽³⁾ Approved Planning Application A/SK-HC/124-2
⁽⁴⁾ Approved Planning Application A/SK-HC/278

Traffic Generation of the Proposed Development

- 4.8 The TPDM has no trip rates for temporary car park, hence, the traffic generation is calculated based on the trip rates derived from the traffic generation survey conducted at a temporary car park at Ma Wo Road, Tai Po. Similar to the Proposed Development, this car park is located in the New Territories and in a residential area.
- 4.9 Based on the survey results, the traffic generation of the Proposed Development, is estimated, and are presented in **Table 4.4**.

TABLE 4.4 CALCULATED TRAFFIC GENERATION FOR PROPOSED DEVELOPMENT

Items		AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
Skye Parking, Ma Wo Road, Tai Po (246 spaces)	Traffic Generation ⁽¹⁾	16	15	10	30
	Derived Trip Rate ⁽²⁾	0.0650	0.0610	0.0407	0.1220
Proposed Development (100 spaces)	Traffic Generation ⁽¹⁾	7	7	5	13
		14 (2-way)		18 (2-way)	

Note: ⁽¹⁾ traffic generation in pcu/hr
⁽²⁾ trip rate in pcu/space/hr

- 4.10 **Table 4.4** shows that the Proposed Development is expected to generate 14 and 18 pcu (2-way) in AM and PM peak hours respectively.

Year 2029 Peak Hour Traffic Flows

4.11 Year 2029 peak hour traffic flows for the following cases are derived:

Year 2029 Without the Proposed Development [A] = Existing Traffic Flow + estimated traffic growth between 2026 and 2029 + estimated traffic generation of the planned / committed developments

Year 2029 With the Proposed Development [B] = [A] + Traffic generated by the Proposed Development

4.12 Year 2029 peak hour traffic flows for the above two cases are shown in **Figures 4.1 and 4.2** respectively.

Year 2029 Junction Capacity Analysis

4.13 Year 2029 junction capacity analysis for the case without and with the Proposed Development are summarised in **Table 4.5**, and detailed calculations are found in the **Appendix A**.

TABLE 4.5 2029 JUNCTION PERFORMANCE

Ref	Junction	Type of Junction (Parameter)	Without Proposed Development		With Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Hiram's Highway / New Hiram's Highway / Nam Pin Wai Road	RA (DFC)	0.65	0.62	0.66	0.63
J2	Hiram's Highway / Access Road to Haven of Hope Ho Chung Day Activity Centre cum Hostel	Priority (DFC)	0.02	0.02	0.02	0.02
J3	Hiram's Highway / Ho Chung Road	Signal (RC)	89%	89%	87%	88%
J4	Hiram's Highway / Luk Mei Tsuen Road	Priority (DFC)	0.09	0.07	0.09	0.07

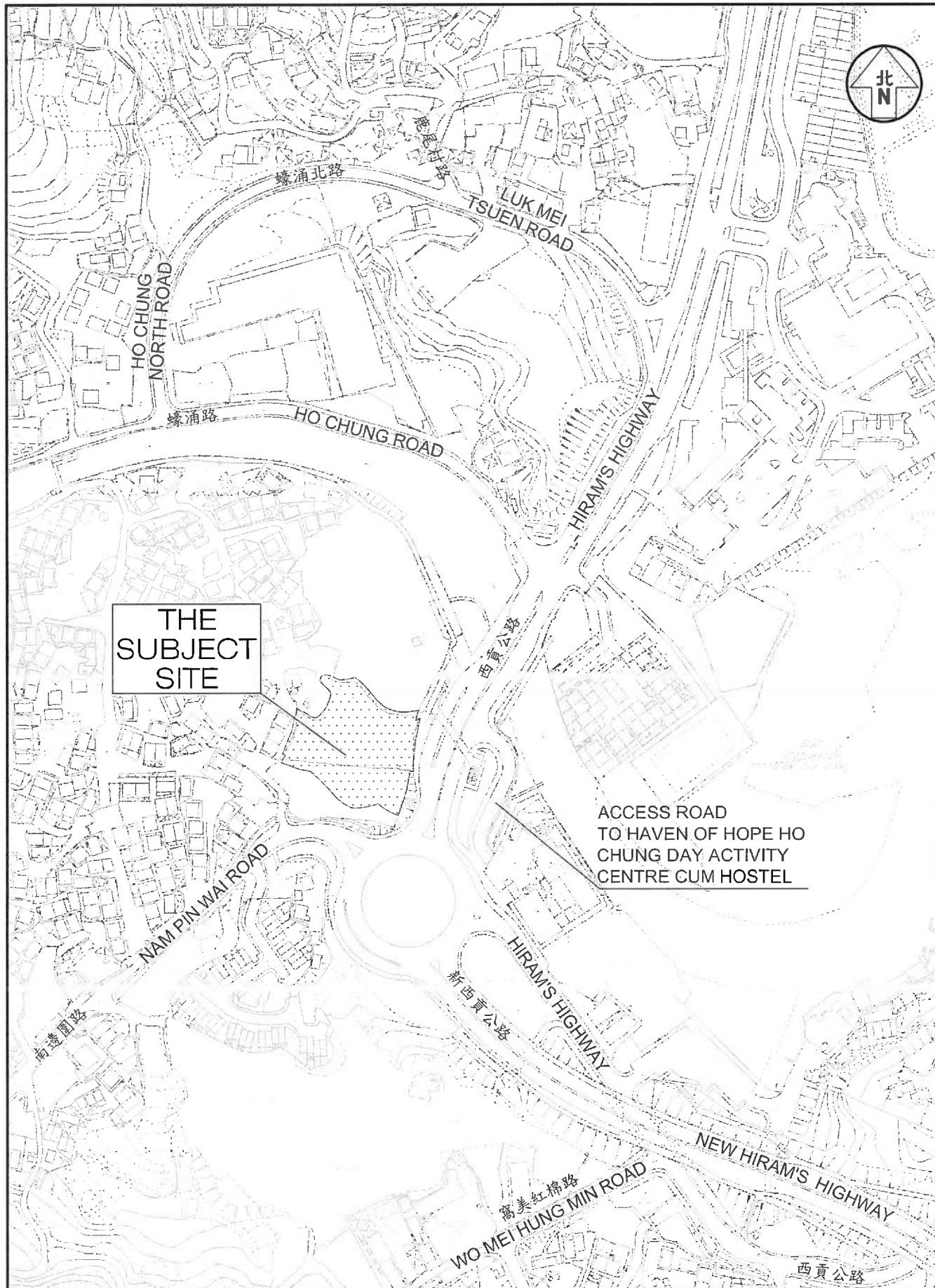
Note: RA – roundabout DFC - design flow/capacity ratio RC – reserve capacity

4.14 The results in **Table 4.5** indicate that the junctions analysed will operate with sufficient capacities in 2029, and the Proposed Development has no adverse traffic impact.

5.0 SUMMARY

- 5.1 The Proposed Development comprises of various lots in D.D. 244, Ho Chung in Sai Kung. Access to the Proposed Development is via its existing vehicular access provided at the northbound service road of Hiram's Highway.
- 5.2 The Proposed Development provides 100 car parking spaces and this is a temporary use for a period of 3 years.
- 5.3 Year 2029 peak hour traffic flows produced for the traffic analysis are derived based on (i) existing traffic flows; (ii) adopted traffic growth; (iii) traffic generated by other developments in the vicinity; and (iv) expected traffic generation by the Proposed Development.
- 5.4 A comparison is made of the performance of the junctions assessed for the cases without and with the Proposed Development. The traffic analysis concluded that the junctions analysed will operate with sufficient capacities in 2029, and the Proposed Development has no adverse traffic impact.

Figures



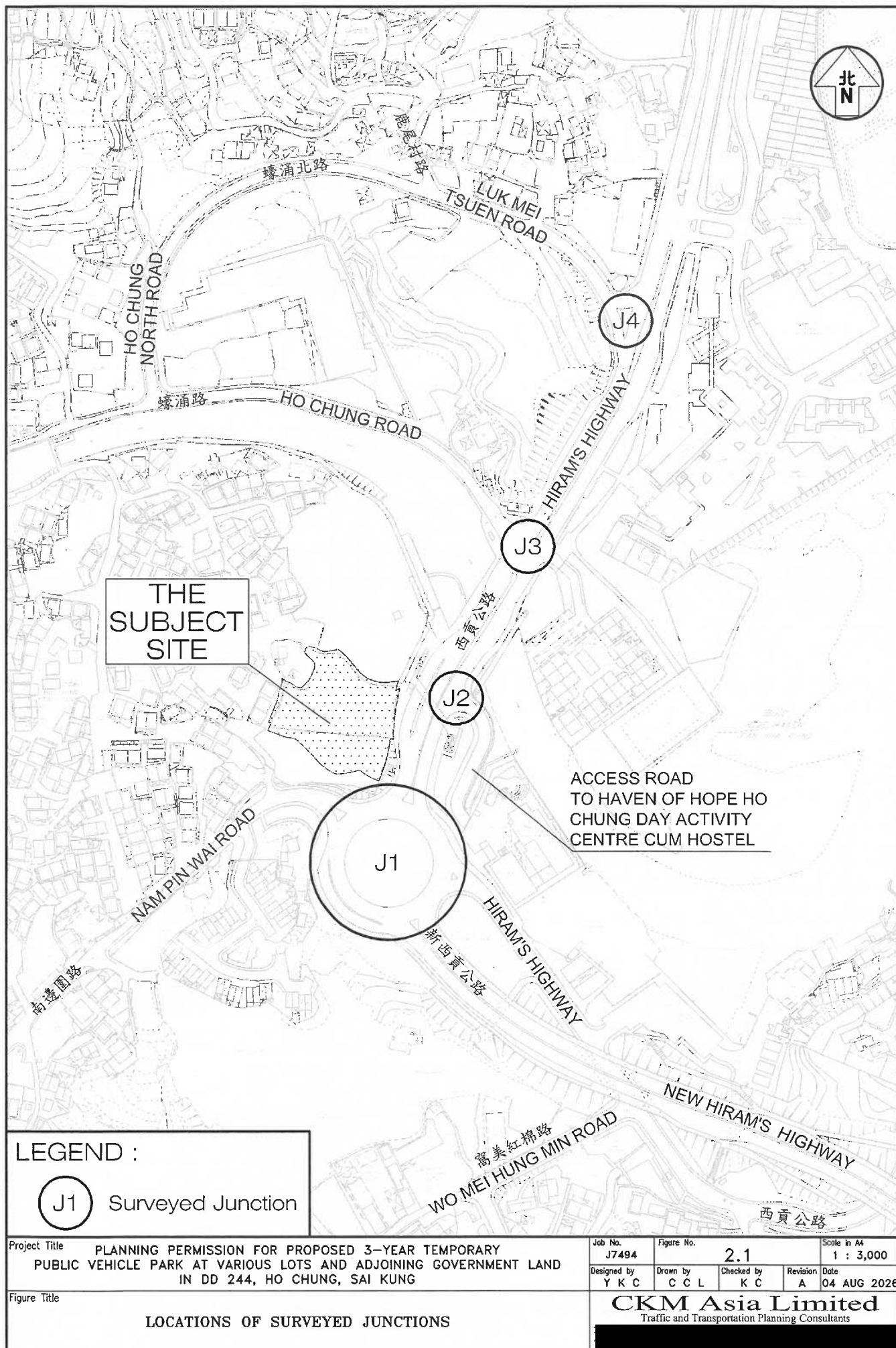
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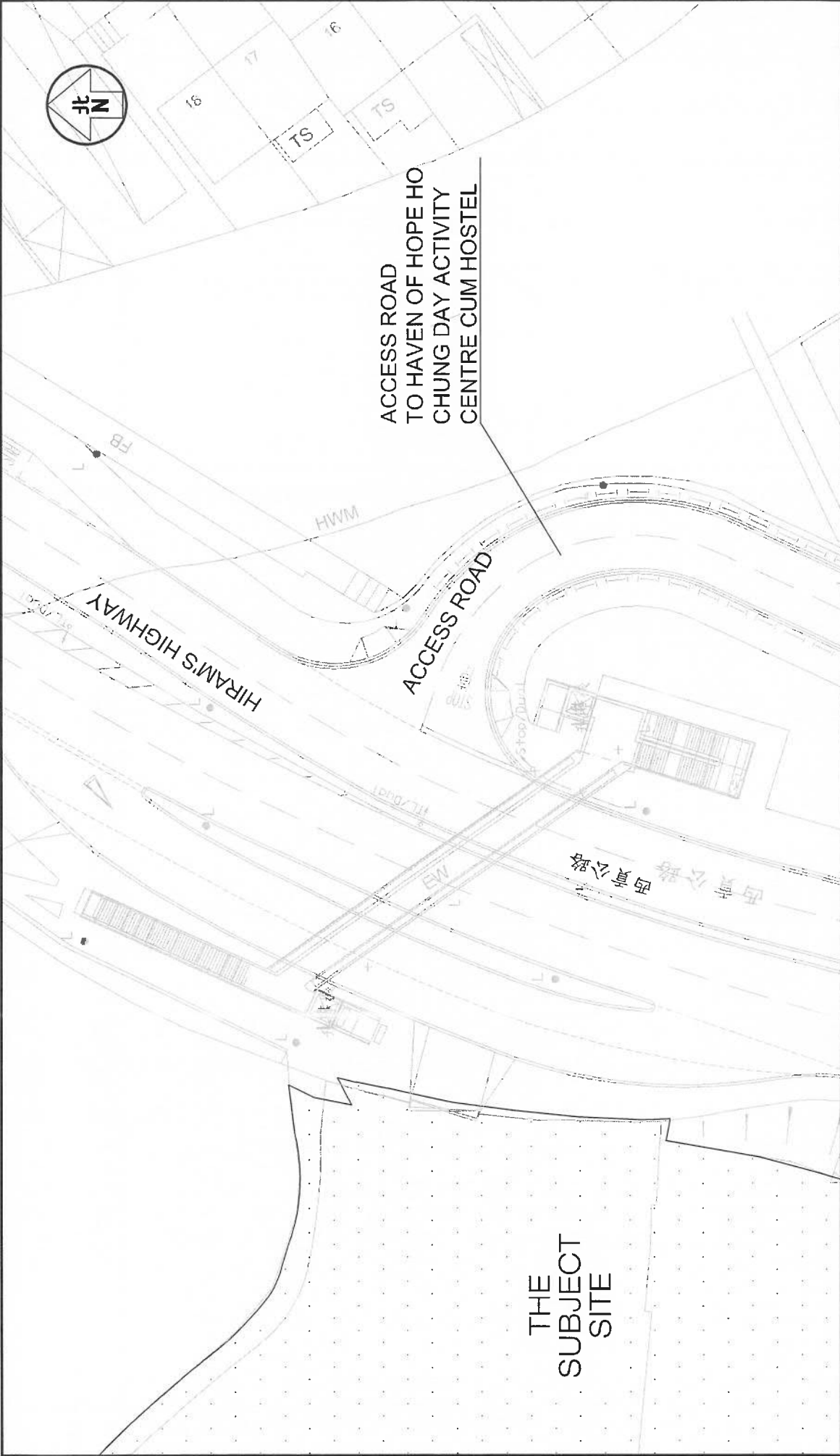
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LOCATION OF THE SITE

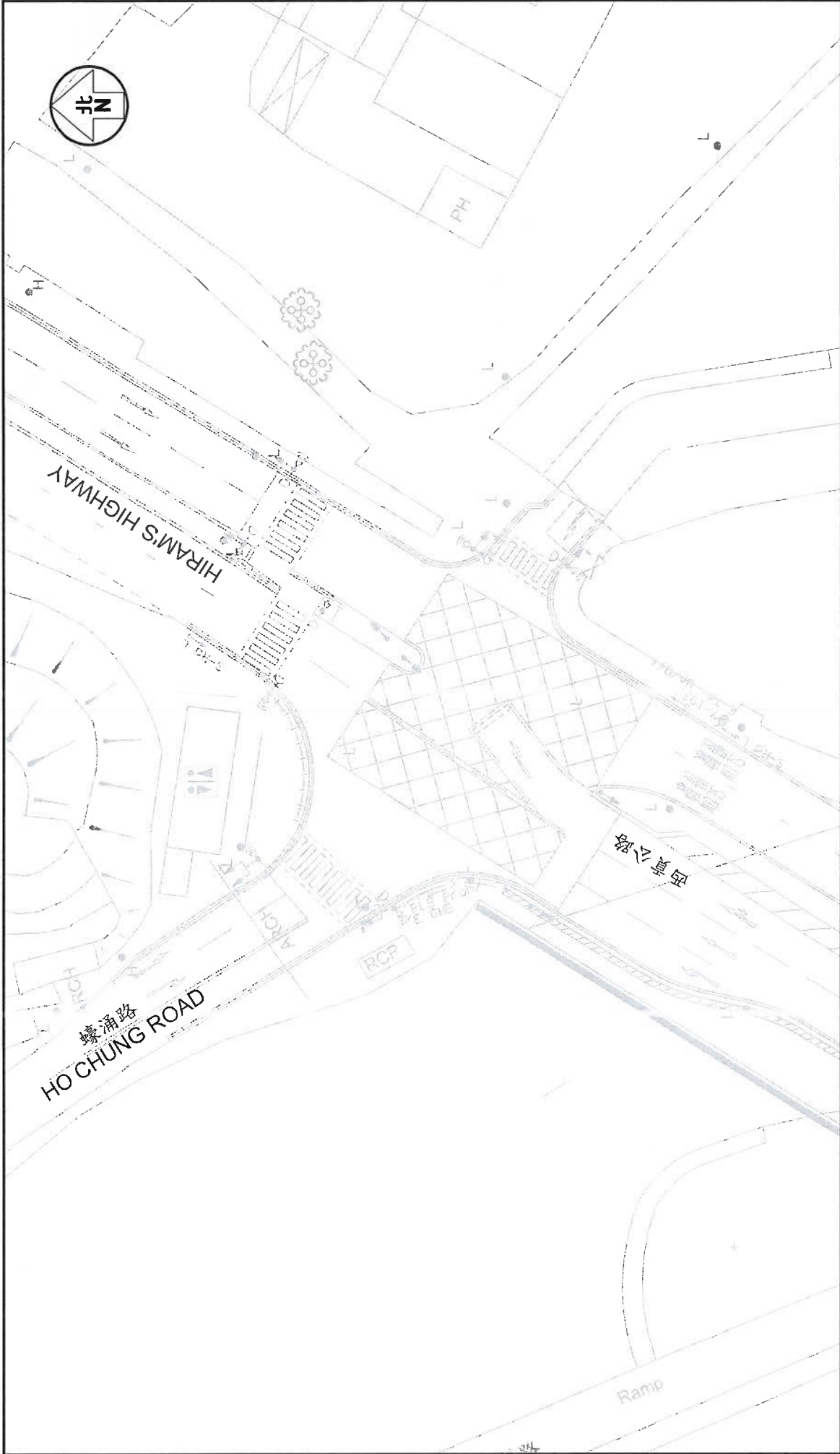
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	Revision A	Date 04 AUG 2026

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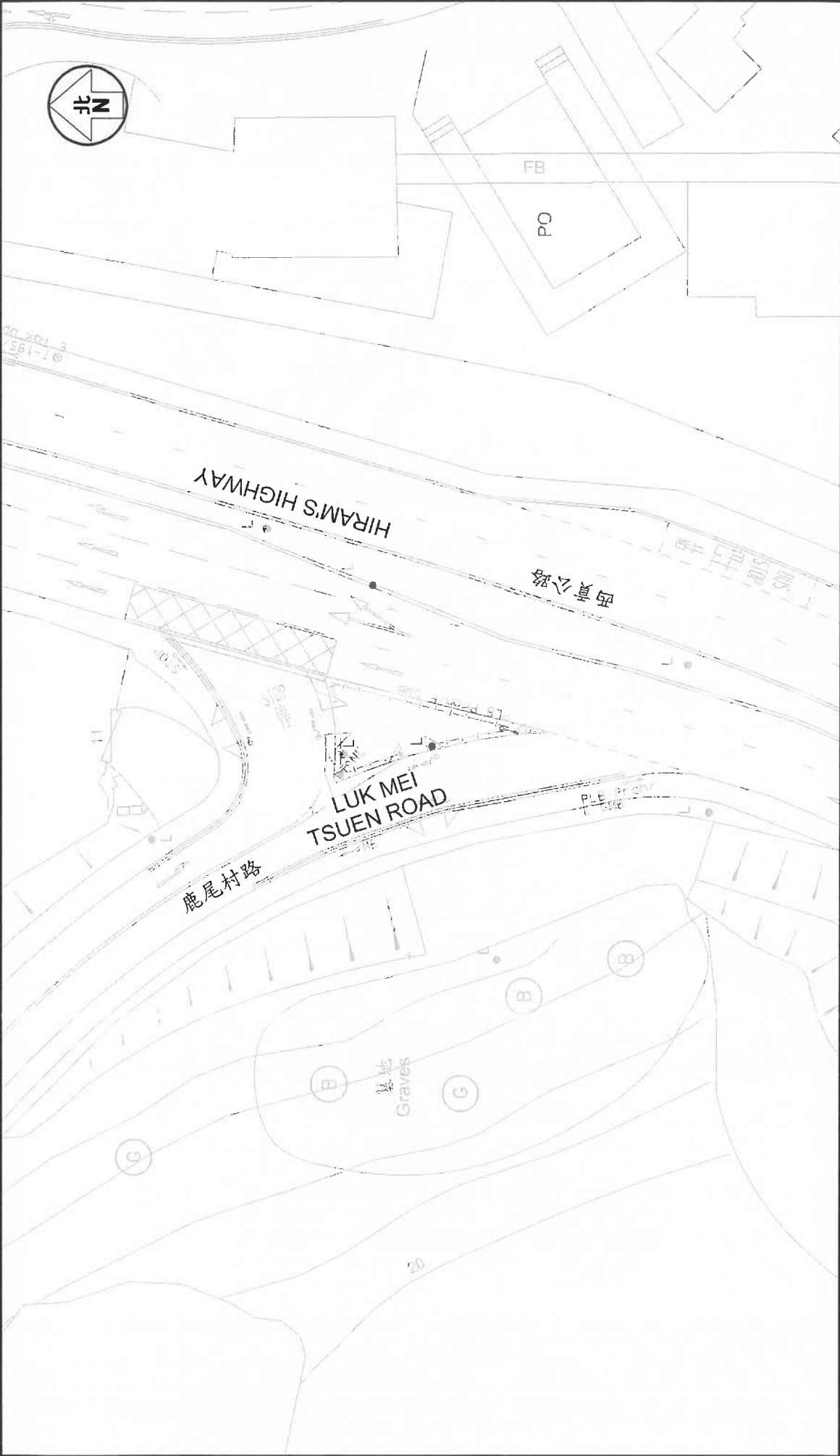




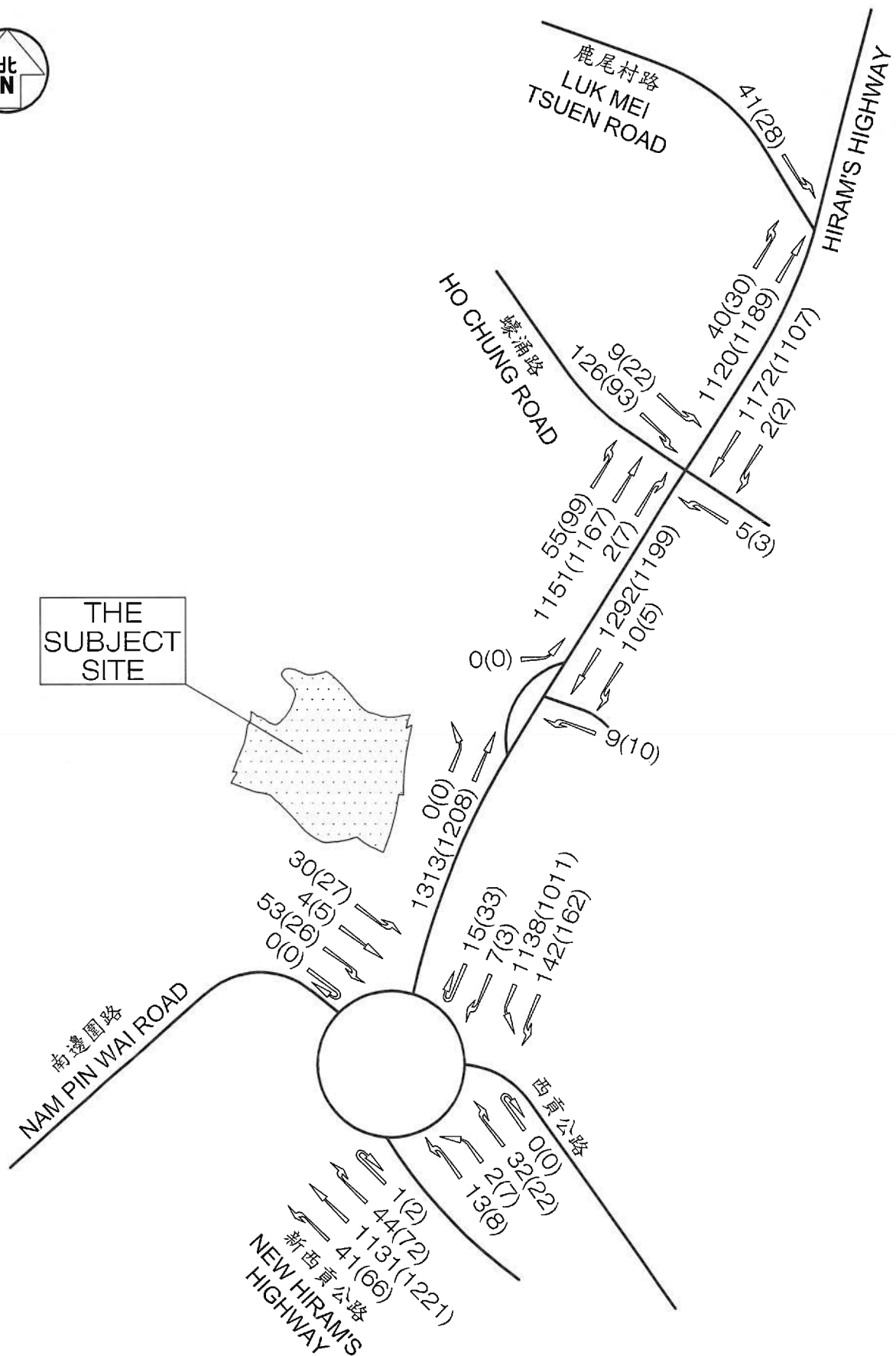
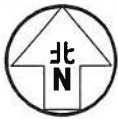
Project Title	PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG				Figure No.	2.3	Revision	A	CKM Asia Limited Traffic and Transportation Planning Consultants	
Figure Title	LAYOUT OF HIRAM'S HIGHWAY / ACCESS ROAD TO HAVEN OF HOPE HO CHUNG DAY ACTIVITY CENTRE CUM HOSTEL				Designed by	Y K C	Drawn by	C C L	Checked by	K C
					Scale in A4	1 : 500	Date	04 AUG 2026		



Project Title	PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG										Figure No.		Revision		CKM Asia Limited			
											J7494		2.4		A		Traffic and Transportation Planning Consultants	
													Designed by	Drawn by	Checked by			
Figure Title											Y K C		C C L		K C			
													Scale in A4		Date			
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LAYOUT OF HIRAM'S HIGHWAY / HO CHUNG ROAD																		

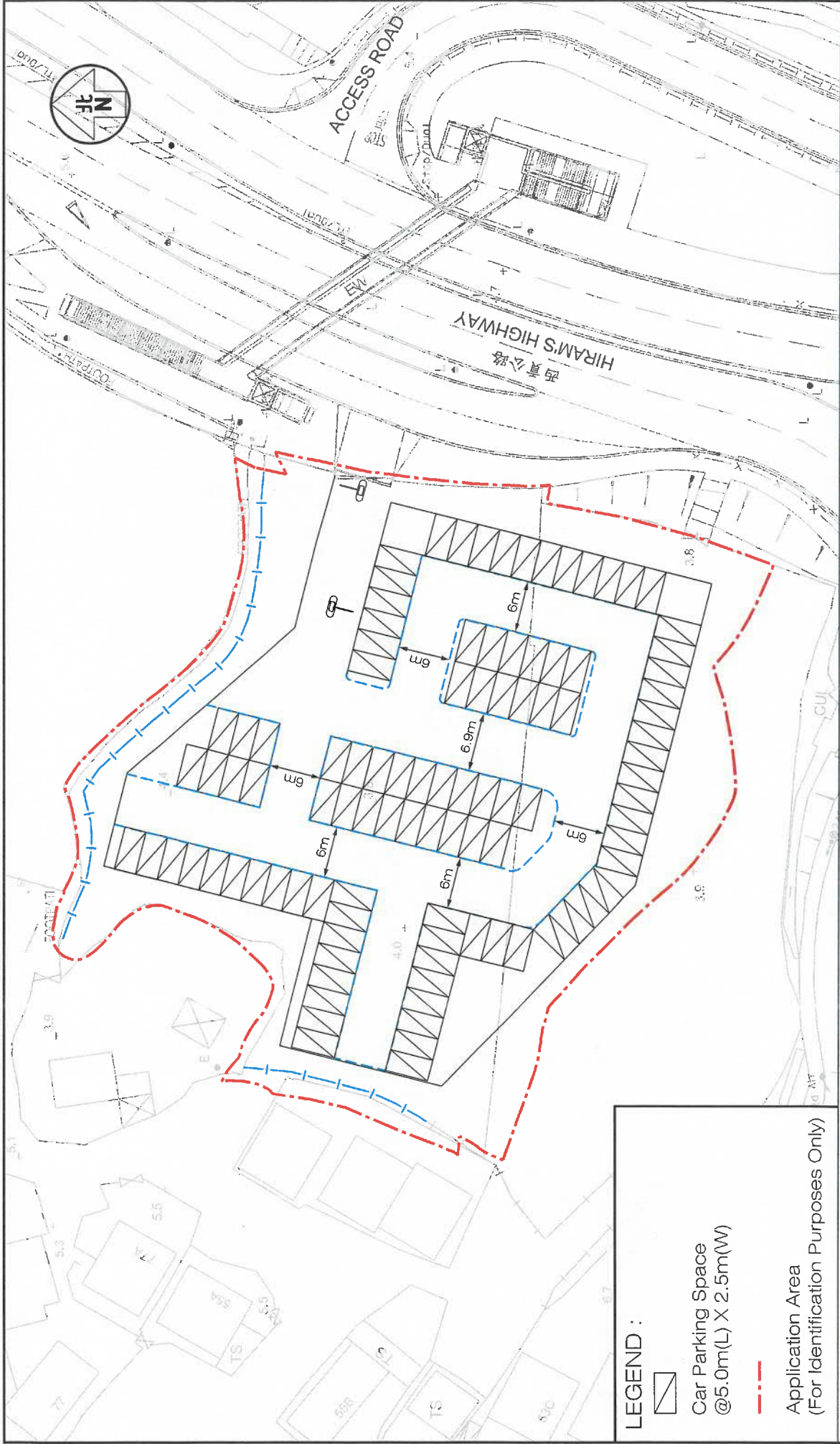


Project Title	PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG										Figure No.		Revision		CKM Asia Limited Traffic and Transportation Planning Consultants			
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											Designed by		Y K C				Drawn by	
Figure Title	LAYOUT OF HIRAM'S HIGHWAY / LUK MEI TSUEN ROAD										Scale in A4		1 : 500		Date		04 AUG 2026	



Project Title	PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG	Job No.	Figure No.		Scale in A4	
		J7494	2.6		N.T.S.	
Figure Title	EXISTING PEAK HOUR FLOWS	Designed by	Drawn by	Checked by	Revision	Date
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		CKM Asia Limited				
		Traffic and Transportation Planning Consultants				

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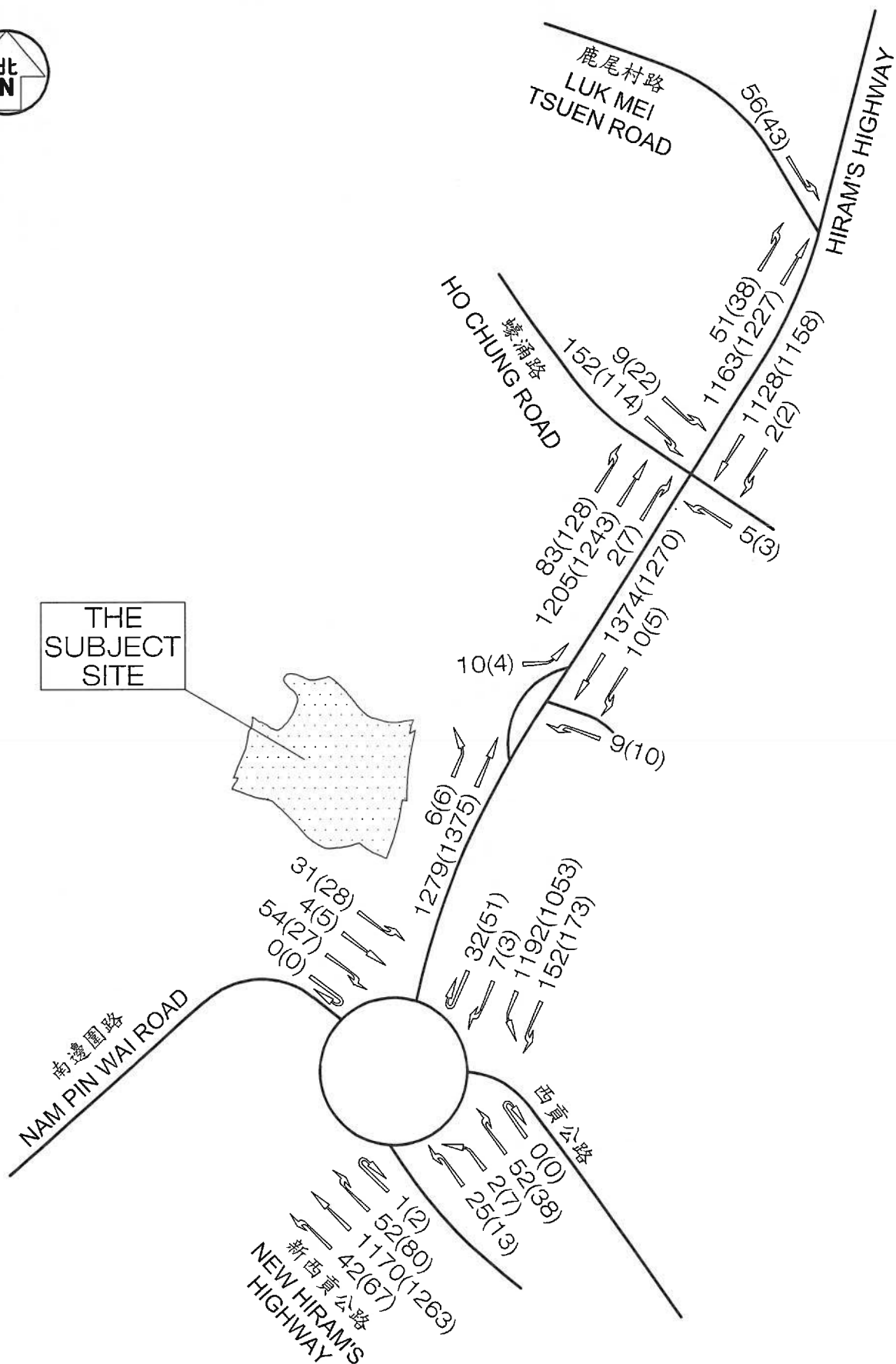
LEGEND :

 Car Parking Space
@5.0m(L) X 2.5m(W)

 Application Area
(For Identification Purposes Only)

Project Title	PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG				Figure No.	3.1	Revision	A
	J7494				Designed by	Y K C	Drawn by	C C L
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Figure Title		LAYOUT PLAN OF PROPOSED DEVELOPMENT			Scale in A4	1 : 600	Date	04 AUG 2026

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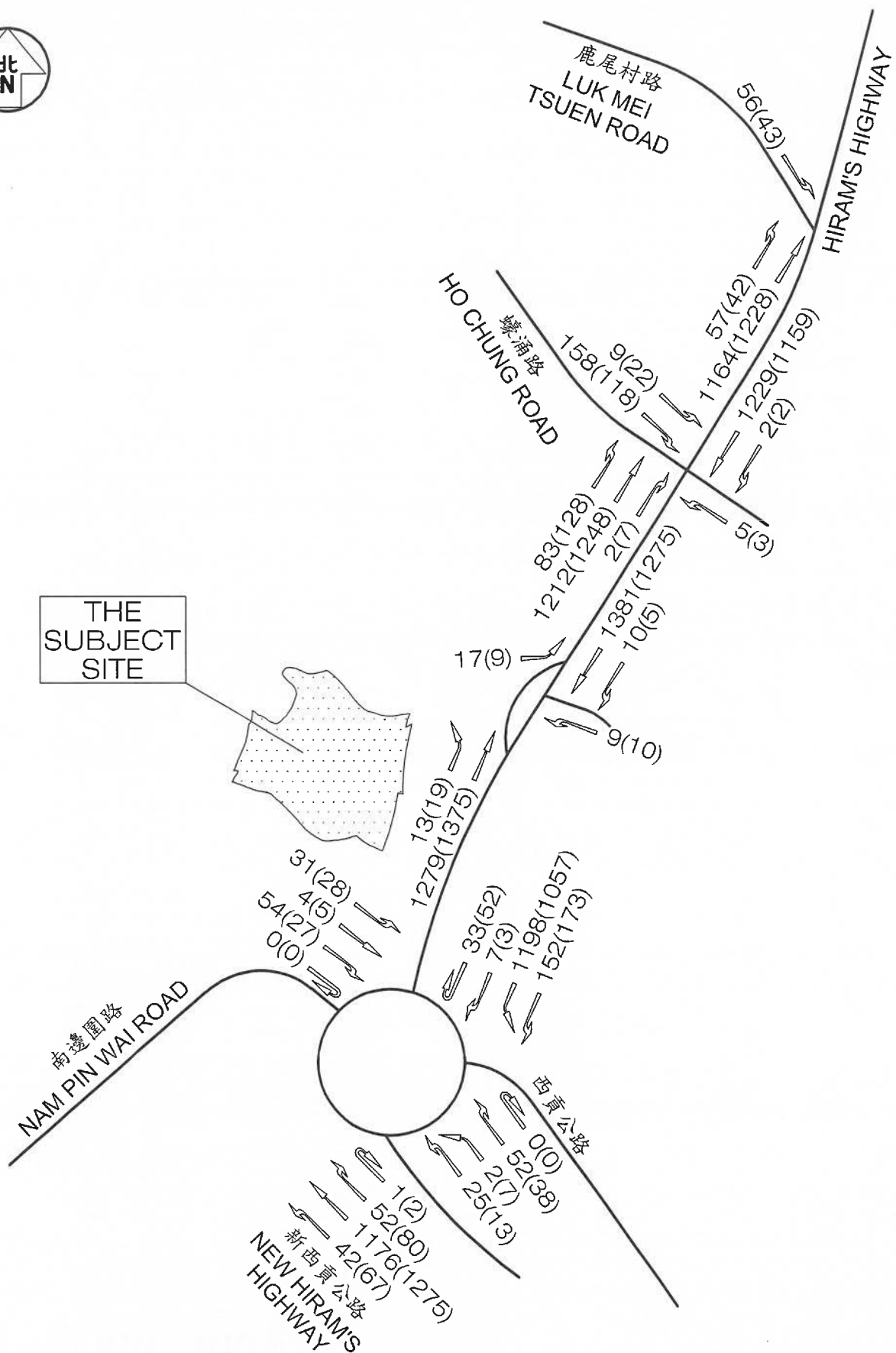
Project Title PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG

Figure Title

2029 TRAFFIC FLOWS WITHOUT PROPOSED DEVELOPMENT

Job No. J7494	Figure No. 4.1	Scale in A4 N.T.S.
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Revision A	Date 04 AUG 2026	

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PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND
IN DD 244, HO CHUNG, SAI KUNG

Figure Title

2029 TRAFFIC FLOWS WITH
PROPOSED DEVELOPMENT

Job No. J7494	Figure No. 4.2	Scale in A4 N.T.S.
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Revision A	Date 04 AUG 2026	

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Appendix A – Junction Capacity Analysis

Roundabout Analysis

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

R1A / P.1-1

Scenario existing condition

Design Year 2026

Job Number J7494

Date 4 August 2026

AM Peak

Arm	To A	To B	To C	To D	Total	q _c
From A	15	142	1138	7	1301	102
From B	32	0	13	2	46	1214
From C	1131	44	1	41	1217	56
From D	30	4	53	0	87	1223
Total	1208	190	1204	50	2652	

PM Peak

Arm	To A	To B	To C	To D	Total	q _c
From A	33	162	1011	3	1209	105
From B	22	0	8	7	37	1075
From C	1221	72	2	66	1361	65
From D	27	5	26	0	58	1350
Total	1303	239	1047	75	2664	

Legend

Arm	Road (in clockwise order)
A	Hiram's Highway (SB)
B	Hiram's Highway (NB)
C	New Hiram's Highway (NB)
D	Nam Pin Wai Road (EB)

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.5	7.5	18.8	1.0	80	41	0.0
From B	5.5	3.5	15.0	20.0	80	47	0.2
From C	9.0	7.0	18.8	10.0	80	48	0.3
From D	7.5	4.5	21.3	28.5	80	46	0.2

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	$= 1 - 0.00347(\emptyset - 30) - 0.978[(1/r) - 0.05]$
F	$= 303x_2$
f_c	$= 0.210t_D(1 + 0.2x_2)$
t_D	$= 1 + 0.5/(1 + M)$
M	$= \exp[(D - 60)/10]$
x_2	$= v + (e - v)/(1 + 2S)$
S	$= 1.6(e - v)/L$

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x_2	M	t_D	K	F	f_c	Q_E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	7.500	7.389	1.060	0.959	2272.500	0.556	2124	2123	1301	1209	0.613	0.569
From B	5.015	7.389	1.060	0.925	1519.591	0.446	905	962	46	37	0.051	0.038
From C	8.220	7.389	1.060	0.934	2490.512	0.588	2297	2292	1217	1361	0.530	0.594
From D	6.744	7.389	1.060	0.947	2043.461	0.523	1331	1267	87	58	0.066	0.046

Roundabout Analysis

Location Hiram's Highway / New Hiram's Highway / Nam Pin Wai Road R1A / P.1-2
 Scenario without proposed development
 Design Year 2029 Job Number J7494 Date 4 August 2026

AM Peak

Arm	To A	To B	To C	To D	Total	q _c
From A	32	152	1192	7	1383	111
From B	52	0	25	2	78	1286
From C	1170	52	1	42	1265	93
From D	31	4	54	0	89	1307
Total	1285	208	1272	51	2816	

PM Peak

Arm	To A	To B	To C	To D	Total	q _c
From A	51	173	1053	3	1280	114
From B	38	0	13	7	58	1136
From C	1263	80	2	67	1412	99
From D	28	5	27	0	60	1434
Total	1381	258	1095	76	2810	

Legend

Arm	Road (in clockwise order)
A	Hiram's Highway (SB)
B	Hiram's Highway (NB)
C	New Hiram's Highway (NB)
D	Nam Pin Wai Road (EB)

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.5	7.5	18.8	1.0	80	41	0.0
From B	5.5	3.5	15.0	20.0	80	47	0.2
From C	9.0	7.0	18.8	10.0	80	48	0.3
From D	7.5	4.5	21.3	28.5	80	46	0.2

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	$= 1 - 0.00347(\emptyset - 30) - 0.978[(1/r) - 0.05]$
F	$= 303x_2$
f_c	$= 0.210t_D(1 + 0.2x_2)$
t_D	$= 1 + 0.5/(1 + M)$
M	$= \exp[(D - 60)/10]$
x_2	$= v + (e - v)/(1 + 2S)$
S	$= 1.6(e - v)/L$

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	Q_E						Entry Flow		RFC			
	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.500	7.389	1.060	0.959	2272.500	0.556	2119	2118	1383	1280	0.653	0.604
From B	5.015	7.389	1.060	0.925	1519.591	0.446	875	937	78	58	0.090	0.061
From C	8.220	7.389	1.060	0.934	2490.512	0.588	2276	2273	1265	1412	0.556	0.621
From D	6.744	7.389	1.060	0.947	2043.461	0.523	1289	1226	89	60	0.069	0.049

Roundabout Analysis

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

R1A / P.1-3

Scenario with proposed development

Design Year 2029

Job Number J7494

Date 4 August 2026

AM Peak

Arm	To A	To B	To C	To D	Total	Q _c
From A	33	152	1198	7	1390	111
From B	52	0	25	2	78	1293
From C	1176	52	1	42	1271	94
From D	31	4	54	0	89	1314
Total	1292	208	1278	51	2829	

PM Peak

Arm	To A	To B	To C	To D	Total	Q _c
From A	52	173	1057	3	1285	114
From B	38	0	13	7	58	1141
From C	1275	80	2	67	1424	100
From D	28	5	27	0	60	1447
Total	1394	258	1099	76	2827	

Legend

Arm	Road (in clockwise order)
A	Hiram's Highway (SB)
B	Hiram's Highway (NB)
C	New Hiram's Highway (NB)
D	Nam Pin Wai Road (EB)

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.5	7.5	18.8	1.0	80	41	0.0
From B	5.5	3.5	15.0	20.0	80	47	0.2
From C	9.0	7.0	18.8	10.0	80	48	0.3
From D	7.5	4.5	21.3	28.5	80	46	0.2

Predictive Equation $Q_E = K(F - f_c Q_c)$

Q _E	Entry Capacity
Q _c	Circulating Flow across the Entry
K	$= 1 - 0.00347(\emptyset - 30) - 0.978[(1/r) - 0.05]$
F	$= 303x_2$
f _c	$= 0.210t_D(1 + 0.2x_2)$
t _D	$= 1 + 0.5/(1 + M)$
M	$= \exp[(D - 60)/10]$
x ₂	$= v + (e - v)/(1 + 2S)$
S	$= 1.6(e - v)/L$

Limitation

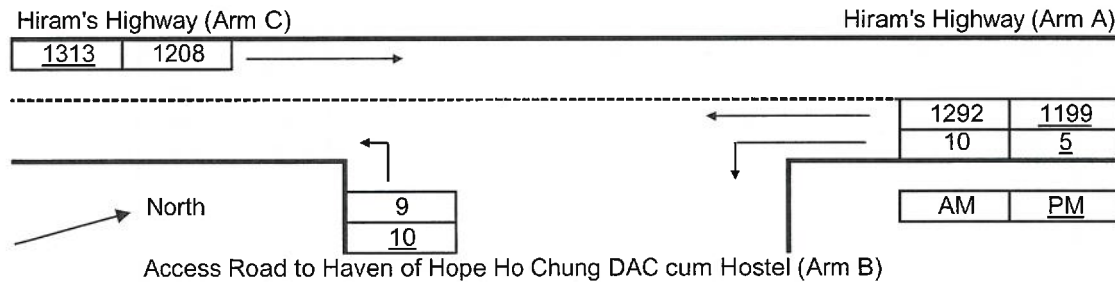
e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

Arm	x ₂	M	t _D	K	F	f _c	Q _E		Entry Flow		RFC	
							AM	PM	AM	PM	AM	PM
From A	7.500	7.389	1.060	0.959	2272.500	0.556	2119	2118	1390	1285	0.656	0.607
From B	5.015	7.389	1.060	0.925	1519.591	0.446	872	935	78	58	0.090	0.062
From C	8.220	7.389	1.060	0.934	2490.512	0.588	2276	2272	1271	1424	0.559	0.627
From D	6.744	7.389	1.060	0.947	2043.461	0.523	1285	1219	89	60	0.070	0.049

Priority Junction Analysis

Junction:	Hiram's Highway / Access Road to Haven of Hope Ho Chung DAC cum Hostel			R1A / P.2-1
Design Year:	2026	Job Number:	J7494	Date: 04 August 2026
Scenario:	existing condition			



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	16.00	V-rBA	0	w-BA	0.00	D	0.5332
	W-CR	1.50	V-IBA	0	w-BC	4.20	E	0.9712
			V-rBC	35	w-CB	0.00	F	0.5860
			V-rCB	0			Y	0.4480

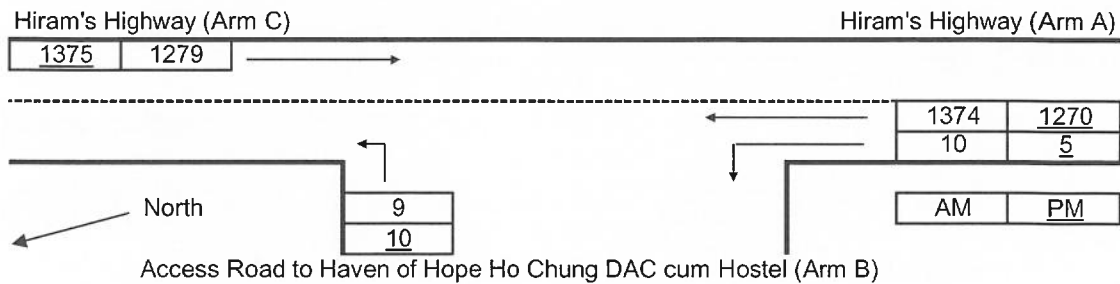
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	1208	1313	Q-BA	167	169
q-CB	0	0	Q-BC	518	533
q-AB	10	5	Q-CB	312	322
q-AC	1292	1199	Q-BAC	518	533
q-BA	0	0			
q-BC	9	10			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.017	0.019
C-B	0.000	0.000
B-AC	0.017	0.019

Priority Junction Analysis

Junction:	Hiram's Highway / Access Road to Haven of Hope Ho Chung DAC cum Hostel			R1A / P.2-2
Design Year:	2029	Job Number:	J7494	Date: 04 August 2026
Scenario:	without proposed development			



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

Input	Input	Input	Calculated
W	16.00	V-rBA	0
W-CR		V-IBA	0
		V-rBC	35
		V-rCB	0
		w-BA	0.00
		w-BC	4.20
		w-CB	0.00
		D	0.5332
		E	0.9712
		F	0.5860
		Y	0.4480

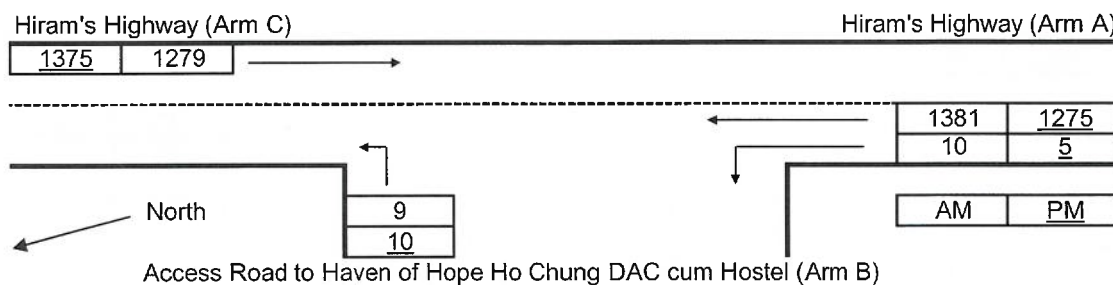
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	1279	1375	Q-BA	145	149
q-CB	0	0	Q-BC	505	522
q-AB	10	5	Q-CB	304	315
q-AC	1374	1270	Q-BAC	505	522
q-BA	0	0			
q-BC	9	10			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.018	0.019
C-B	0.000	0.000
B-AC	0.018	0.019

Priority Junction Analysis

Junction: Hiram's Highway / Access Road to Haven of Hope Ho Chung DAC cum Hostel R1A / P.2-3
 Design Year: 2029 Job Number: J7494 Date: 04 August 2026
 Scenario: with proposed development



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

Input	Input	Input	Calculated
W	16.00	V-rBA	0
W-CR		V-lBA	0
		V-rBC	35
		V-lCB	0
		w-BA	0.00
		w-BC	4.20
		w-CB	0.00
		D	0.5332
		E	0.9712
		F	0.5860
		Y	0.4480

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	1279	1375	Q-BA	144	148
q-CB	0	0	Q-BC	504	521
q-AB	10	5	Q-CB	304	314
q-AC	1381	1275	Q-BAC	504	521
q-BA	0	0			
q-BC	9	10			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.018	0.019
C-B	0.000	0.000
B-AC	0.018	0.019

Signal Junction Analysis

Junction: Hiram's Highway / Ho Chung Road / Access Road to Berkeley Bay Villa

Job Number: J7494

Scenario: existing condition

R1A / P.3-1

Design Year: 2026

Designed By:

Checked By:

Date: 04 August 2026

[illegible]

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

	1	2	3	4	5
AM					
PM					

Signal Junction Analysis

Junction: Hiram's Highway / Ho Chung Road / Access Road to Berkeley Bay Villa

Job Number: J7494

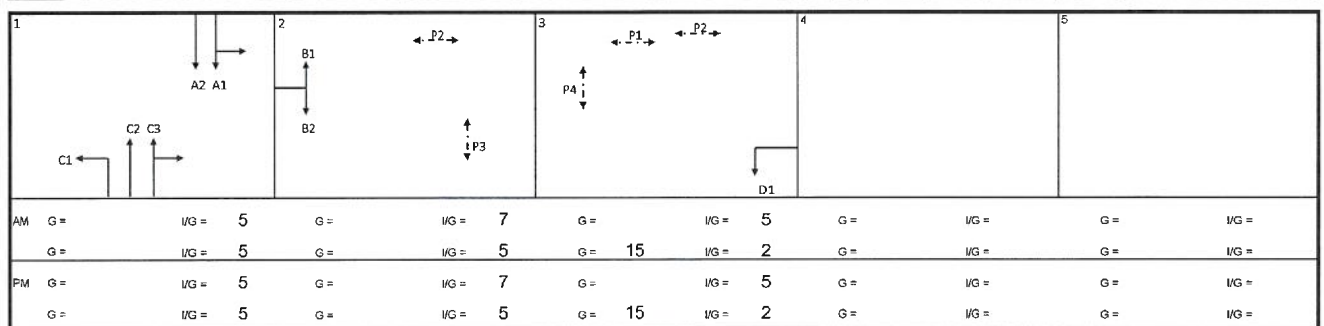
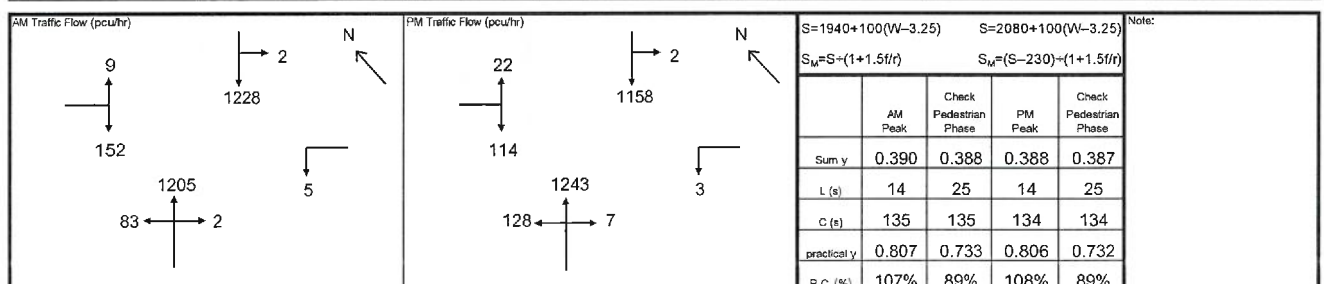
Scenario: without proposed development

R1A / P.3-2Design Year: 2029

Designed By: _____

Checked By: _____

Date: 04 August 2026

[illegible]

Signal Junction Analysis

Job Number: J7494

R1A / P.3-3

Date: 04 August 2026[illegible]

AM Traffic Flow (pcu/hr)

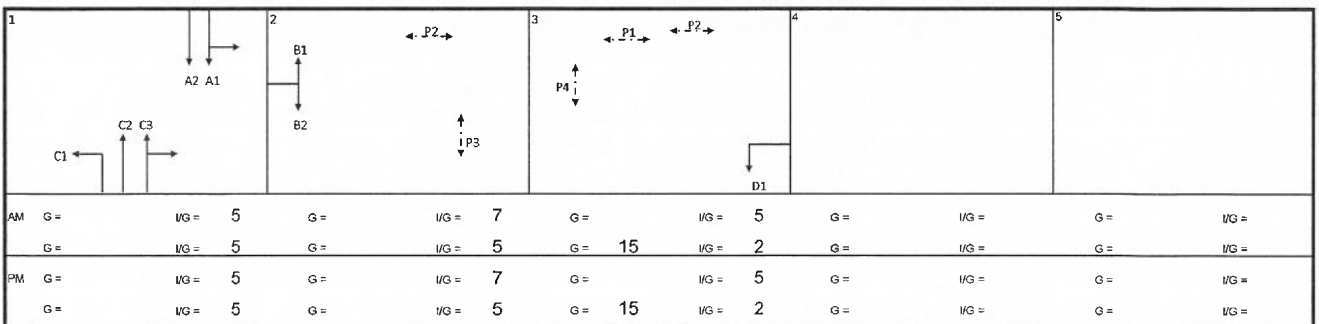
PM Traffic Flow (pcu/hr)

Notes:

$S = 1940 + 100(W - 3.25)$ $S = 2080 + 100(W - 3.25)$

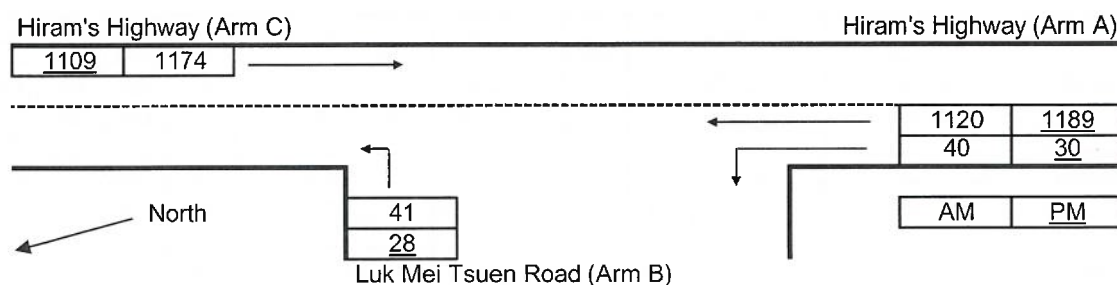
$S_m = S + (1 + 1.5f/r)$ $S_m = (S - 230) + (1 + 1.5f/r)$

	AM Peak	Check Pedestrian Phase	PM Peak	Check Pedestrian Phase
Sum γ	0.395	0.393	0.391	0.390
L (s)	14	25	14	25
C (s)	135	135	134	134
practical γ	0.807	0.733	0.806	0.732
R.C. (%)	104%	87%	106%	88%



Priority Junction Analysis

Junction:	Hiram's Highway / Luk Mei Tsuen Road			R1A / P.4-1
Design Year:	2026	Job Number:	J7494	Date: 04 August 2026
Scenario:	existing condition			



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	18.00	V-rBA	0	w-BA	0.00	D	0.5332
	W-CR	2.50	V-IBA	0	w-BC	4.50	E	1.0216
			V-rBC	60	w-CB	0.00	F	0.5860
			V-rCB	0			Y	0.3790

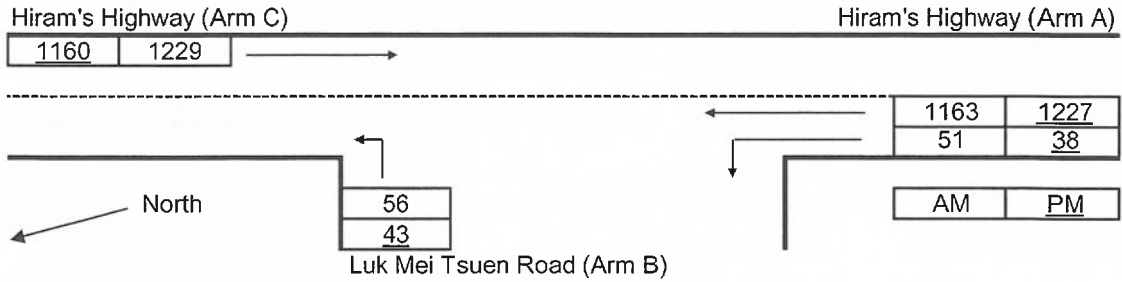
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	1174	1109	Q-BA	215	213
q-CB	0	0	Q-BC	601	592
q-AB	40	30	Q-CB	343	338
q-AC	1120	1189	Q-BAC	601	592
q-BA	0	0			
q-BC	41	28			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.068	0.047
C-B	0.000	0.000
B-AC	0.068	0.047

Priority Junction Analysis

Junction:	Hiram's Highway / Luk Mei Tsuen Road	R1A / P.4-2
Design Year:	2029	Job Number: J7494
Scenario:	without proposed development	



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

$q-AB$, etc = the design flow of movement AB, etc

W = major road width

$W-CR$ = central reserve width

$w-BA$, etc = lane width to vehicle

$v-rBA$, etc = visibility to the right for waiting vehicles in stream BA, etc

$v-IBA$, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

Input		Input		Input		Calculated	
W	18.00	$V-rBA$	0	$w-BA$	0.00	D	0.5332
$W-CR$		$V-IBA$	0	$w-BC$	4.50	E	1.0216
		$V-rBC$	60	$w-CB$	0.00	F	0.5860
		$V-rCB$	0			Y	0.3790

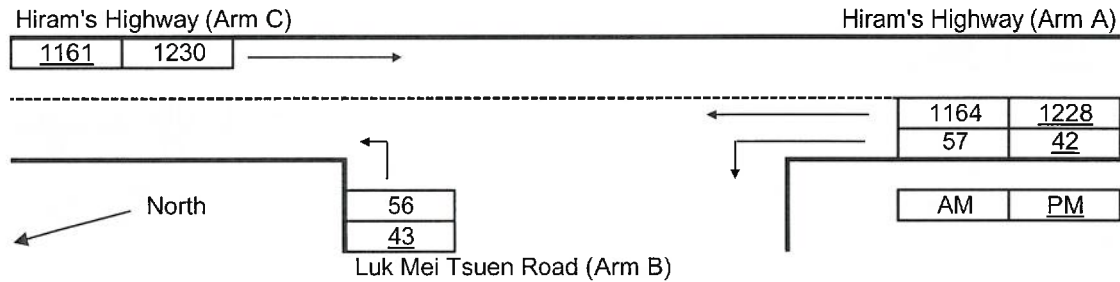
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
$q-CA$	1229	1160	$Q-BA$	190	189
$q-CB$	0	0	$Q-BC$	594	586
$q-AB$	51	38	$Q-CB$	338	334
$q-AC$	1163	1227	$Q-BAC$	594	586
$q-BA$	0	0			
$q-BC$	56	43			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.094	0.073
C-B	0.000	0.000
B-AC	0.094	0.073

Priority Junction Analysis

Junction: Hiram's Highway / Luk Mei Tsuen Road R1A / P.4-3
 Design Year: 2029 Job Number: J7494 Date: 04 August 2026
 Scenario: with proposed development



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

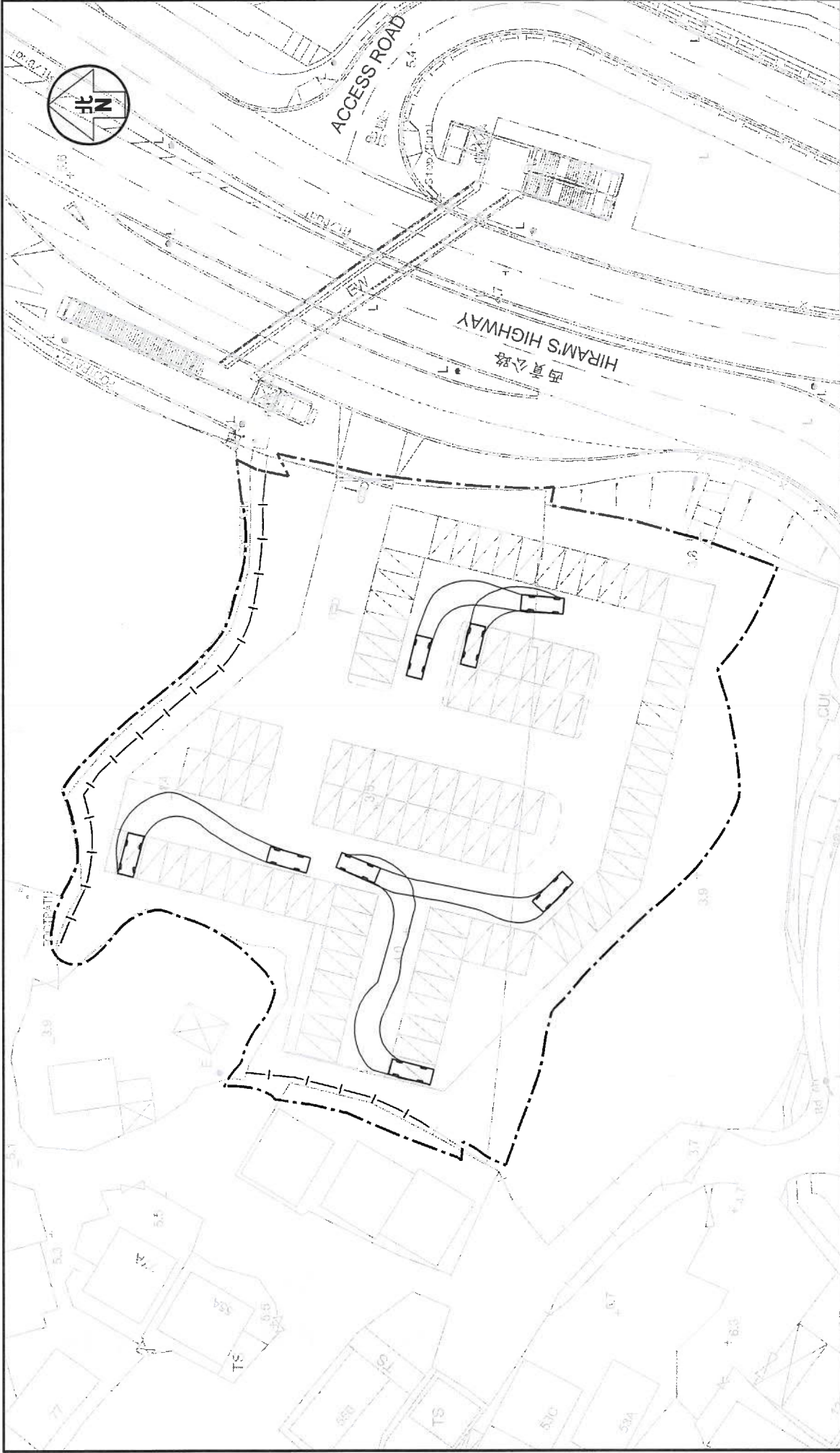
Geometry :	Input		Input		Input		Calculated	
	W	18.00	V-rBA	0	w-BA	0.00	D	0.5332
	W-CR		V-IBA	0	w-BC	4.50	E	1.0216
			V-rBC	60	w-CB	0.00	F	0.5860
			V-rCB	0			Y	0.3790

Analysis :

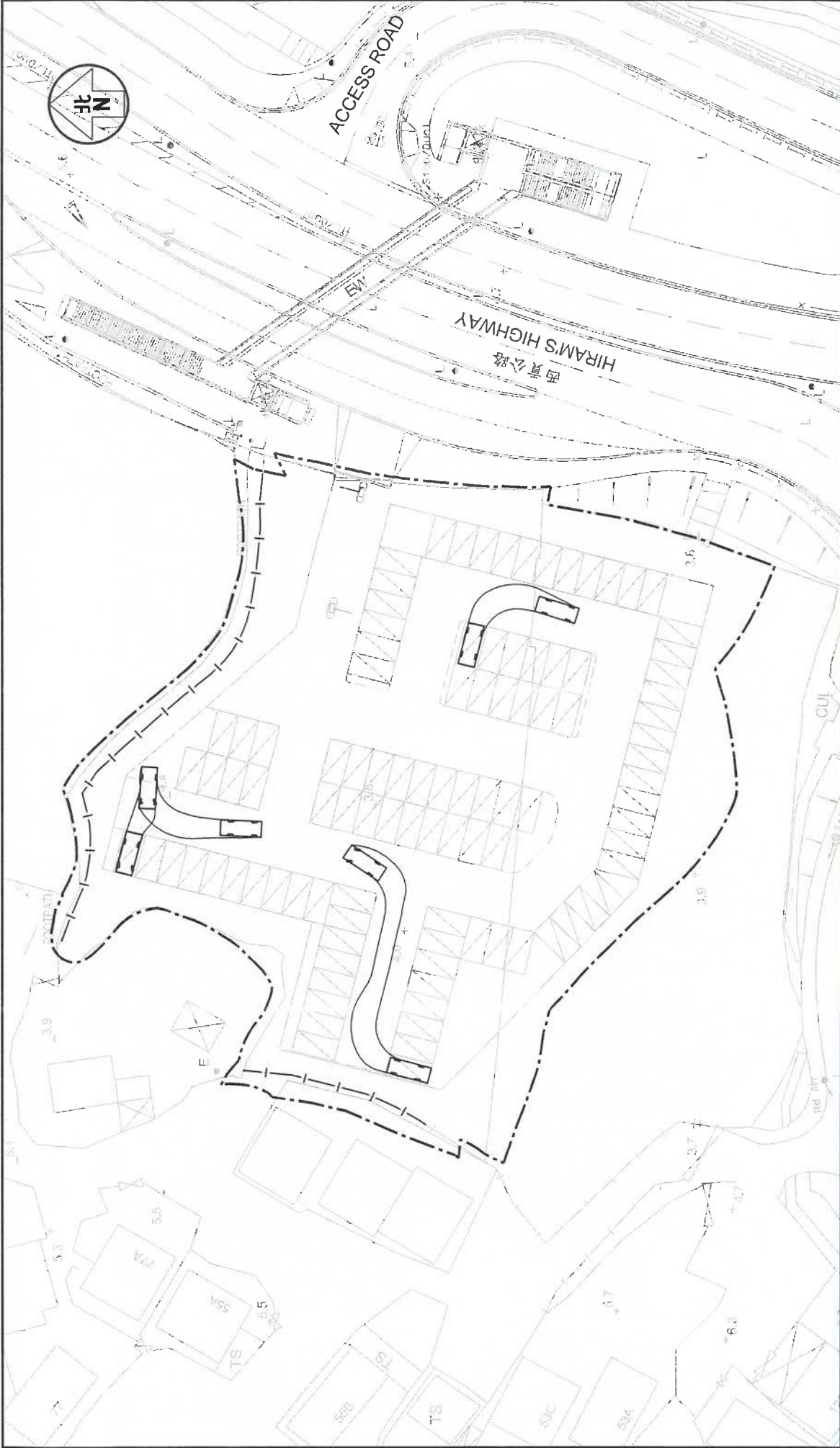
Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	1230	1161	Q-BA	190	189
q-CB	0	0	Q-BC	594	586
q-AB	57	42	Q-CB	338	334
q-AC	1164	1228	Q-BAC	594	586
q-BA	0	0			
q-BC	56	43			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.094	0.074
C-B	0.000	0.000
B-AC	0.094	0.074

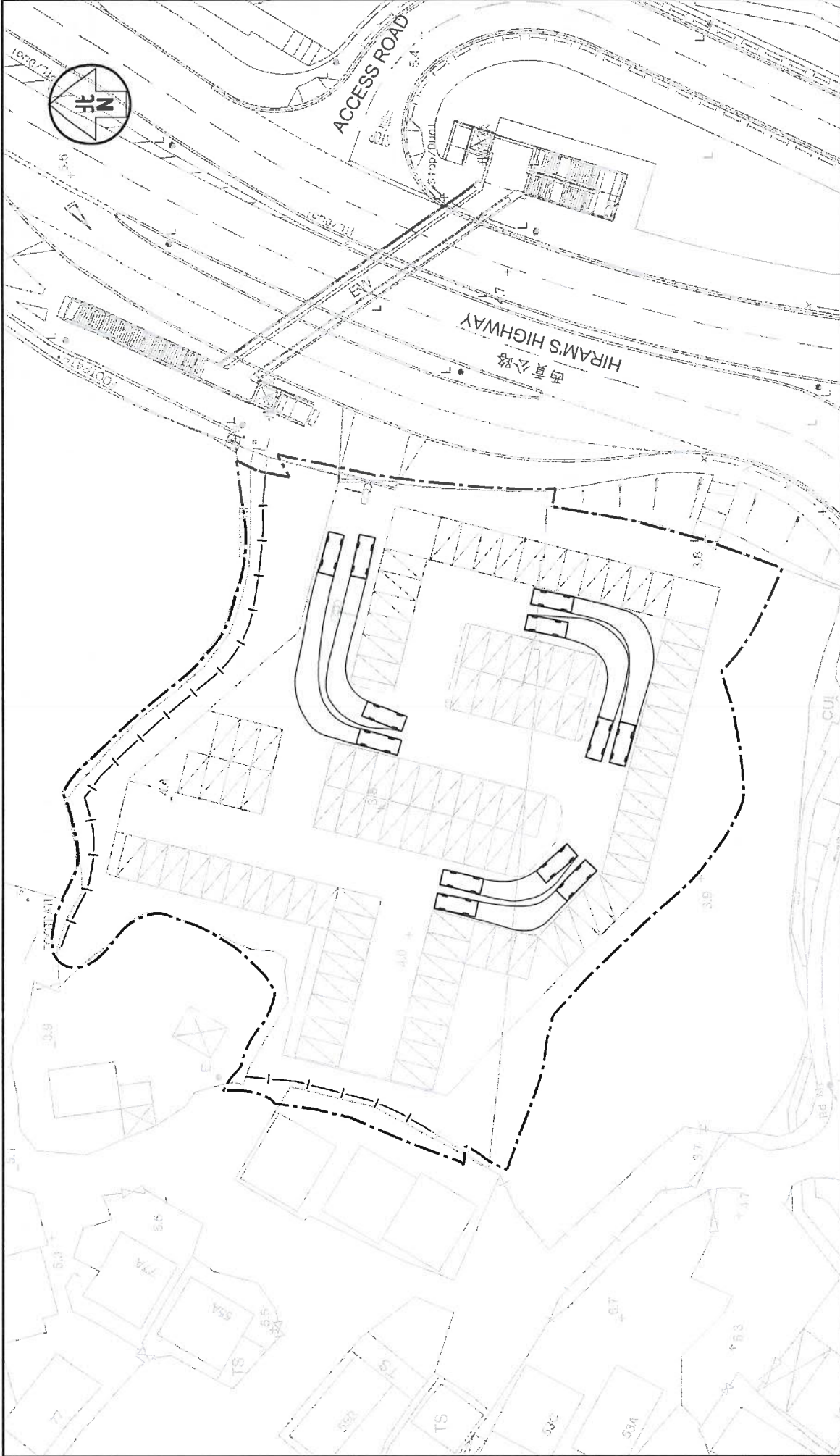
Appendix B – Swept Path Analysis



Project Title PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG	Figure No. J7494	Revision SP1	Checked by		Date 04 AUG 2026
			Designed by	Down by	
			Y K C	C C L	
Figure Title SWEPT PATH OF PRIVATE CAR ENTERING THE PROPOSED TEMPORARY CAR PARK			Scale in A4 1 : 600		
CKM Asia Limited Traffic and Transportation Planning Consultants					

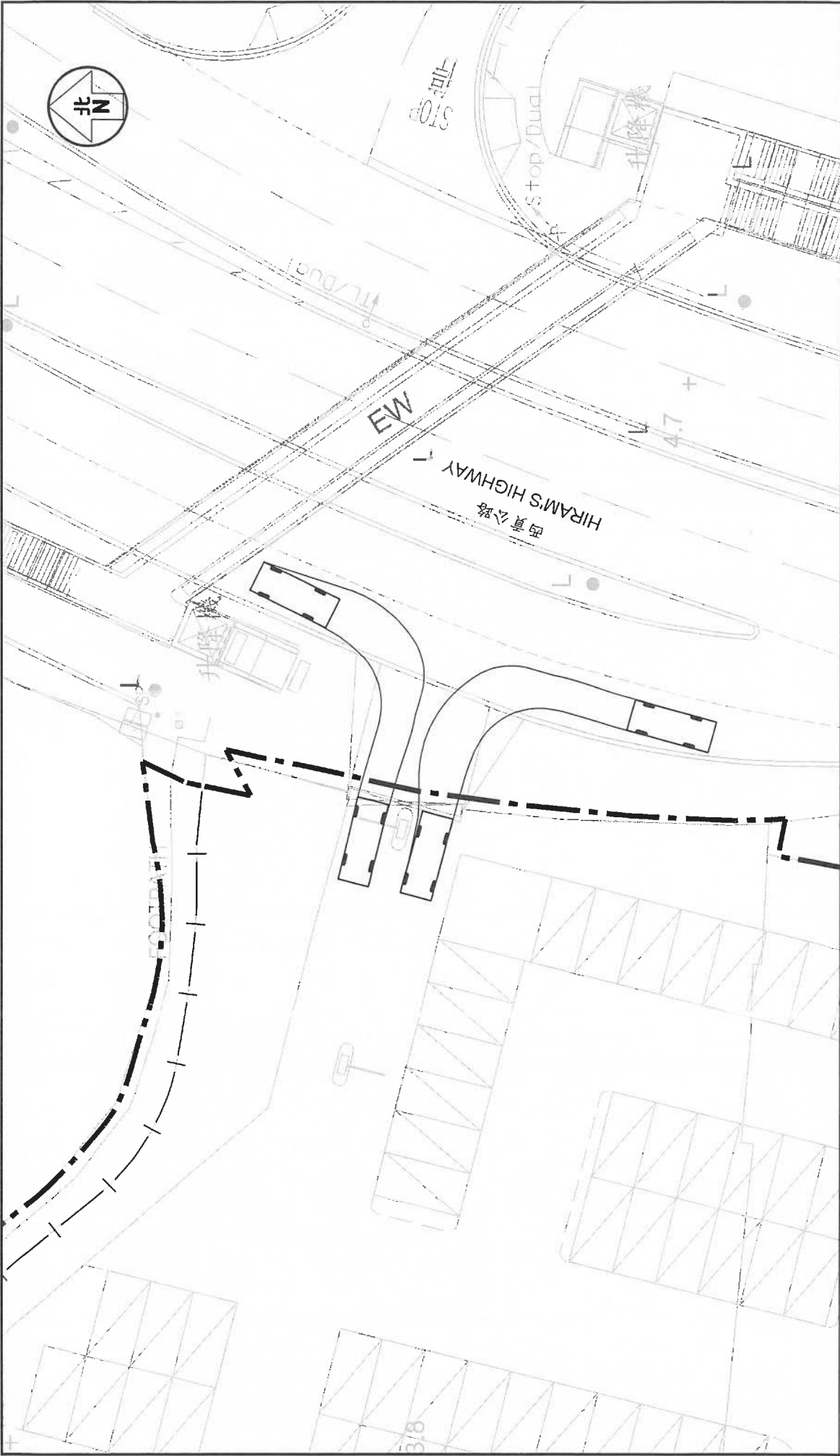


Project Title	PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG				Figure No.	SP2			Revision	A	
	Figure Title	SWEPT PATH OF PRIVATE CAR LEAVING THE PROPOSED TEMPORARY CAR PARK				Designed by	Y	K	C	Checked by	K
						Drawn by	C	C	L	C	
						Scale in A4	1 : 600			Date	04 AUG 2026



Project Title	PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG				Figure No.	SP3	Revision	A
	SWEPT PATH OF PRIVATE CAR IN 2 WAYS AT THE PROPOSED TEMPORARY CAR PARK				J7494	Designed by	Drawn by	Checked by
						Y K C	C C L	K C
Figure Title					Scale in 1:1	1 : 600	Date	04 AUG 2026

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Project Title	PLANNING PERMISSION FOR PROPOSED 3-YEAR TEMPORARY PUBLIC VEHICLE PARK AT VARIOUS LOTS AND ADJOINING GOVERNMENT LAND IN DD 244, HO CHUNG, SAI KUNG	Figure No.	J7494	SP4	Revision	CKM Asia Limited Traffic and Transportation Planning Consultants	
					Checked by		K C
Figure Title	SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE TEMPORARY CAR PARK AT THE VEHICULAR ACCESS	Scale in A4	1 : 250	Date	04 AUG 2026		

