

Appendix 1

Traffic Impact Assessment

**Proposed Flat and Shop and Services Uses
with Minor Relaxation of Plot Ratio Restriction
at Lots 4614 and 4615RP in DD116,
and Lots 1753sBRP (part), 1753sBss3 (part),
1756sA (part), 1756RP (part), 1757, 1758RP,
1760RP in DD120, and adjoining Government land,
Tai Kei Leng, Yuen Long**

Traffic Impact Assessment

**Final Report
March 2023**

Prepared by: CKM Asia Limited

Prepared for: Onfine Development Limited

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Restriction at Lots 4614 and 4615RP in DD116, and Lots 1753sBRP (part),
1753sBss3 (part), 1756sA (part), 1756RP (part), 1757, 1758RP, 1760RP in
DD120, and adjoining Government land, Tai Kei Leng, Yuen Long**

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1.0 INTRODUCTION

Background

- 1.1 The subject site is located at the south-east corner of the junction of Tai Tong Road / Tai Shu Ha Road East / Tai Shu Ha Road West in Yuen Long. The location of the subject site is shown in **Figure 1.1**.
- 1.2 The subject site is zoned R(B) and the construction of a residential development with plot ratio of 3.5 is permitted (the “Permitted Scheme”). The Owner of the subject site is seeking for the relaxation of the maximum plot ratio for the residential development by 20% (the “Proposed Development”).
- 1.3 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned by the Owner to conduct a traffic study in support of the Proposed Development. This report presents the findings and recommendations of the traffic study for the Proposed Development.

Structure of 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 EXISTING SITUATION

Site and Road Network

- 2.1 The subject site is bounded by Tai Tong Road to the north, and Tai Shu Ha Road East to the west. Tai Tong Road is single carriageway 2-lane road running north-south direction, with local widening at its junction with Shap Pat Heung Road. Footpaths and bus stops are provided along Tai Tong Road.
- 2.2 The section of Tai Shu Ha Road East to the west of the subject site is a single carriageway 1-way southbound road running along the eastern-side of the nullah.

Existing Traffic Flows

- 2.1 To quantify the traffic flows in the vicinity of the subject site, manual classified counts were conducted on Wednesday, 19th October 2022 during the AM and PM peak at the following junctions:
- J1: Shap Pat Heung Road / Tai Tong Road;
 - J2: Shap Pat Heung Road / Fung Ki Road;
 - J3: Shap Pat Heung Road / Tai Kei Leng Road;
 - J4: Shap Pat Heung Interchange;
 - J5: Tai Tong Road / Tai Shu Ha Road East / Tai Shu Ha Road West; and
 - J6: Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West.
- 2.2 The locations of these junctions are shown in **Figure 2.1** and the layouts are shown in **Figures 2.2 – 2.7** respectively.
- 2.3 The traffic counts are classified by vehicle type to enable traffic flows in passenger car units (“pcu”) to be calculated. The AM and PM peak hours identified from the surveys are found to be between 0730 – 0830 hours and 1745 – 1845 hours respectively. The existing AM and PM peak hour traffic flows in pcu/hour are presented in **Figure 2.8**.

Existing Junction Performance

- 2.4 The existing junction performance of the surveyed junctions are calculated based on the existing traffic flows, and the analysis was undertaken using the methods outlined in Volume 2 of the Transport Planning and Design Manual (“TPDM”). The results are summarised in **Table 2.1** and the detailed calculations are found in **Appendix A**.

TABLE 2.1 EXISTING JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction (Parameter)	AM Peak	PM Peak
J1	Shap Pat Heung Road / Tai Tong Road	Signal (RC)	15%	22%
J2	Shap Pat Heung Road / Fung Ki Road	Signal (RC)	117%	65%
J3	Shap Pat Heung Road / Tai Kei Leng Road	Signal (RC)	120%	105%
J4	Shap Pat Heung Interchange	Roundabout (DFC)	0.80	0.95
J5	Tai Tong Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Priority (DFC)	0.44	0.70
J6	Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Priority (DFC)	0.97	> 1.20

Note: RC – reserve capacity; DFC – design flow/capacity ratio

2.5 The above results indicate that the surveyed junctions currently operate with capacities during the AM and PM peak hours, except for J4 and J6, i.e., junction of Shap Pat Heung Road Interchange and Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West.

Public Transport Facilities

2.6 The subject site is located close to public transport services, including franchised buses and public light buses which operate within 350 metres or some 6-minutes' walk away. Some of these are feeder services to Yuen Long town and Long Ping MTR station. Details of the public transport facilities provided in the vicinity of the subject site are presented in **Table 2.2** and shown in **Figure 2.9**.

TABLE 2.2 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Routing
KMB 968 ⁽¹⁾	Yuen Long Park – Causeway Bay
KMB 268C ⁽¹⁾	Yuen Long Park – Kwun Tong
KMB 68E	Yuen Long Park – Tsing Yi Station
KMB 68F	Yuen Long Park – Park Yoho
MTRB K66	Tai Tong – Long Ping Station
GMB 73	Long Ping Station – Sung Shan San Tsuen
	Yuen Long Kau Yuk Road – Tong Tau Po Tsuen
RMB	Tai Tong – Hung Min Wai
	Tai Tong – Yuen Long MTR Station

Note: KMB – Kowloon Motor Bus MTRB – MTR Feeder Bus
 GMB – Green Minibus RMB – Red Minibus

⁽¹⁾ Morning Special Services only

3.0 THE PROPOSED DEVELOPMENT

Key Parameters

- 3.1 The Permitted Scheme and Proposed Development key parameters are presented in **Table 3.1**.

TABLE 3.1 KEY PARAMETERS

Item	Permitted Scheme	Proposed Development
Site Area	About 2,470.72 m ²	2,539.95 m ²
Domestic Plot Ratio	3.5	4.2
Domestic GFA	8,647.52 m ²	10,667.77 m ²
Non-Domestic GFA	N/A	220 m ²
No. of Flats	<u>290</u>	<u>345</u>

Provision of Internal Transport Facilities

- 3.2 The internal transport facilities for the Proposed Development are provided in accordance with the recommendations of the Hong Kong Planning Standards and Guidelines (“HKPSG”) and are presented in **Table 3.2**.

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR PROPOSED DEVELOPMENT

Facility	HKPSG Recommendation	Provision
Car Parking Space	For Residents: Parking Requirement = GPS x R1 x R2 x R3 Global Parking Standard (GPS): 1 car parking space per 4 - 7 flats Demand Adjustment Ratio (R1): 0.5 for flat size ≤ 40 m ² GFA 1.2 for flat size 40 –70 m ² GFA Accessibility Adjustment Ratio(R2): 1.0 outside 500m-radius of rail station Development Intensity Adjustment Ratio (R3): 1.0 for Plot Ratio 2.0 – 5.0 For 345 flats with flat size ≤ 40 m ² GFA Minimum: (345 / 7 x 0.5 x 1 x 1.0) = 24.6, say 25 nos. Maximum: (345 / 4 x 0.5 x 1 x 1.0) = 43.1, say 44 nos.	44 nos. @ 5.0m (L) x 2.5m (W) x 2.4m (H) = HKPSG maximum
	For Visitors: 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 recommendations, or as determined by the Authority. For 1 block with 345 flats: 5 nos.	5 nos. (4 nos. @ 5.0m(L) x 2.5m(W) x 2.4m(H) + 1 nos. @ 5.0m(L) x 3.5m(W) x 2.4m(H) for person with disabilities) = HKPSG maximum
	For Non-domestic Uses: <i>Retail: Generally nil provision is permitted for small road-side retail shops which are mainly serving local residents</i> For 220m ² road-side retail shop: Nil Provision	Nil Provision = comply HKPSG recommendation
	Total Car Parking Space: Minimum = 25 + 5 = 30 nos. Maximum = 44 + 5 = 49 nos. Note: For total no. of car parking space in lot = 1 – 50 nos., the Building (planning) regulation 72 require provision of 1 accessible car parking space	49 nos. (including 1 accessible car parking spaces)

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR THE PROPOSED DEVELOPMENT (CONT'D)

Facility	HKPSG Recommendation	Provision
Motorcycle Parking Space	For Residential Uses: 1 motorcycle parking space per 100 – 150 flats excluding non-residential elements For 345 flats: 3 – 4 nos.	3 nos. @ 2.4m (L) x 1.0m (W) x Min. 2.4m (H) = HKPSG minimum, OK
	For Non-domestic Uses: 5% - 10% of total private car provision for Non-residential development. For Nil provision of car parking spaces for Non-domestic Uses: Nil provision	Nil Provision = comply HKPSG recommendation
	Total Motorcycle Parking Space: Minimum = 3 nos. Maximum = 4 nos.	3 nos.
Goods Vehicle Loading/ Unloading Bay	For Residential Uses: Minimum of 1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block or as determined by the Authority. For 1block with 345 flats: 1 no.	1 no. @ 11.0m (L) x 3.5m (W) x Min. 4.7m (H) = HKPSG minimum, OK
	For Non-domestic Uses: Retail: 1 loading/unloading bay for goods vehicles for every 800 – 1,200m ² GFA. Minimum: 220 / 1,200 = 0.18, say 1 no. Maximum: 220 / 800 = 0.28, say 1 no.	1 no. @ 7.0m (L) x 3.5m (W) x Min. 3.6m (H) = HKPSG Maximum, OK
	Total Goods Vehicle Loading/ Unloading Bay: Minimum: 1 + 1 = 2 Maximum: 1 + 1 = 2	2 nos. (1 no. of HGV loading / unloading bay and 1 no. of LGV loading / unloading bay)
Bicycle Parking Spaces	For Residential Uses: Within 0.5 – 2km to rail station, 1 space per 15 flats with flat size < 70m ² = 345 ÷ 15 = 23 nos.	23 no. @ 1.8m (L) x 0.8m (W) x Min. 2.4m (H) = comply HKPSG, OK

3.3 Table 3.2 shows that the internal transport facilities provided comply with the recommendations of the HKPSG, except for the proportion of goods vehicle loading / unloading bays provided.

3.4 The G/F layout plans of the Proposed Development are shown in Figure 3.1.

Removal of Existing Lay-by abutting to the Proposed Development

3.5 To discourage illegal parking at existing lay-by, it is proposed to remove a section of this layby and convert to footpath as shown in Figure 3.2. In addition, a section of existing footpath to the south of the run-in/out is proposed to be converted to road carriageway in order cater for the ease of manoeuvring of heavy goods vehicle leaving the subject site.

Potential Road Widening Works at Tai Shu Ha Road East

- 3.6 It is understood that government has no road widening plan for the section of Tai Shu Ha Road East fronting the subject site. However, to accommodate future road widening works, a 3.7m-wide strip (approximate) along Tai Shu Ha Road East as highlighted in green in **Figure 3.3** is reserved as non-building area within the Proposed Development.
- 3.7 Upon request by the government, the owner will surrender the non-building area, which would allow for Tai Shu Ha Road East to be widened to 7.3m and also to provide a 3m-wide footpath.

Swept Path Analysis

- 3.8 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 the swept path analysis drawings are found in **Appendix B**. Vehicles are found to have no manoeuvring problems.

4.0 TRAFFIC IMPACT

Design Year

- 4.1 The Proposed Development is expected to be completed in 2028, and the design year adopted for the traffic assessment is whichever later of the 2: (i) at least 3 years after the planned completion of the development, i.e., 2031, or (ii) 5 years from the date of this application, i.e., 2028. Therefore, Year 2031 is adopted for junction capacity analysis.

Traffic Forecasting

- 4.2 Year 2031 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the BDTM; (ii) estimated growth from 2026 to 2031; (iii) expected traffic generation by the planned / committed developments in the vicinity; and (iv) expected traffic generation by the 2 cases, i.e., Permitted Scheme and Proposed Development.

Estimated Traffic Growth Rate from 2026 to 2031

- 4.3 Reference is made to the (i) the Annual Average Daily Traffic (“AADT”) found in the Annual Traffic Census published by Transport Department, of the core stations which are located in the vicinity, (ii) Population and Employment of “2019-based Territorial Population and Employment Data Matrix” (the “TPEDM”) from the Planning Department for Yuen Long, and (iii) the Hong Kong Population Projection published by Census and Statistics Department.
- 4.4 The above information is presented in **Tables 4.1 – 4.3** respectively.

TABLE 4.1 AADT OF THE CORE STATIONS IN THE VICINITY OF THE SUBJECT SITE

Station	6055	5017	Overall
Road	Shap Pat Heung Rd	Tai Tong Road	-
From	Shap Pat Heung Int	Hop Yick Road	-
To	Tai Tong Road	Sam Chung	-
2010	---	12,070*	33,040
2011	20,860	12,180*	26,060
2012	17,000	9,060	26,470
2013	16,830*	9,640	27,260
2014	17,540*	9,720*	27,050
2015	17,430*	9,620*	32,560
2016	23,020	9,540*	32,620
2017	21,960	10,660	32,330
2018	21,810*	10,520	33,280
2019 [#]	22,500*	10,780*	34,110
2020 [#]	26,860	10,270*	37,130
2021 [#]	29,360	11,110	40,470
Average Annual Growth (2010-2018)	0.95%	-1.52%	0.09%

Note: * Estimated by Growth Factor

[#] Excluded due to the impact of the public events in 2019 and COVID-19 pandemic in 2020 and 2021.

TABLE 4.2 POPULATION AND EMPLOYMENT FROM THE TPEDM FOR YUEN LONG

Year	2019-based TPEDM for Yuen Long	
	Population	Employment
2026	172,350	70,700
2031	159,850	70,250
Average Annual Growth (2026 to 2031)	-1.49%	-0.13%

TABLE 4.3 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

Year	Population in Hong Kong (thousands)
2026	7,806.3
2031	7,945.8
Average Annual Growth (2026 – 2031)	0.35%

- 4.5 **Table 4.1** shows that the annual average traffic growth of 0.09%. **Table 4.2** shows that the average annual population growth and employment growth between 2026 – 2031 of -1.49% and -0.13% in Yuen Long. **Table 4.3** shows that the annual population growth between 2026 – 2031 is 0.35%. To be conservative, the annual growth rate of 0.35% is adopted for 2026 – 2031.

Additional Planned/ Committed Developments Near the Subject Site

- 4.6 The additional planned/ committed developments near the Subject Site which are not considered in the BDTM are included in the forecast. The major additional planned / committed developments are listed in **Table 4.4** and the locations are presented in **Figure 4.1**.

TABLE 4.4 THE MAJOR ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

Ref	Address	Use	Parameters
A	Yuen Long South New Development Area (Phases 1 and 2)	PRH	16,900 flats
B	Shap Pat Heung Public Housing	PRH	4,400 flats
C	Tai Kei Leng Public Housing	PRH	2,300 flats
D	Shap Pat Heung Road Public Housing	HOS	910 flats
E	Yuen Lung Street Public Housing	HOS	720 flats
F	Lot 5384 in D.D. 116	Residential	409 flats
G	Lot 4054 in D.D. 116	Residential	63 flats
H	Private Subsidized Housing at Lam Hi Road	Residential	312 flats
I	Lot 4041 in D.D. 120, Fraser Village	Residential	16 houses
J	Po Leung Kuk Lee Shau Kee Youth Oasis	Hostel	1,248 rooms
K	Lot 1846 RP in D.D. 120 and adjoining Government Land, Ma Tin Pok	RCHE	197 places
L	Lots 1695 S.D RP, 1741 RP(Part) and 1394 S.B RP (Part) in D.D. 120 and adjoining Government land, Tai Kei Leng	RCHE	380 places
M	Lots 1695 S.E ss.1 RP, 1695 S.F ss.1 and 1695 S.H RP (Part) in D.D. 120 and adjoining Government land, Tai Kei Leng	RCHE	281 places
N	Lots 1694, 1695 S.F RP (Part) and 3721 in D.D. 120, Tai Kei Leng	Kindergarten	356 students
		Church	680 seats

PRH – Public Rental Housing HOS – Home Ownership Scheme
RCHE – Residential Care Home for the Elderly

Yuen Long South New Development Area

- 4.7 According to the official website of the Yuen Long South New Development Area (“YLSNDA”), road improvements will be completed gradually from 2023 to 2031. Since the design year adopted for the traffic impact assessment is 2031, the road improvements which are scheduled to be opened in or before 2031 have been included in the traffic forecast. Details are enclosed in the **Appendix C**.

Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng

- 4.8 According to the Yuen Long District Council Documents (Nos. 36 - 39/2022) for the meeting held on 25th Oct 2022, the road improvements in the Yuen Long will be completed gradually before 2031. Since the design year adopted for the traffic impact assessment is 2031, the road improvements which are scheduled to be opened in or before 2031 have been included in the traffic forecast. Details are enclosed in the **Appendix D**.
- 4.9 Apart from junction improvements shown in **Appendices C and D**, it is understood that the improvement at junction of Tai Kei Leng / Tai Shu Ha Road East / Tai Shu Ha Road West is still under investigation. Therefore, existing layout of the junction shown in **Figure 2.7** is adopted for 2031 junction assessment.

Traffic Generation of Permitted Scheme

- 4.10 The traffic generations of Permitted Scheme is calculated by adopting the mean trip rate of residential use from the TPDM, and the adopted traffic generation rates and the calculated traffic generation are presented in **Table 4.5**.

TABLE 4.5 TPDM TRIP RATES AND TRAFFIC GENERATION FOR PERMITTED SCHEME

Permitted Scheme	Parameter	AM Peak		PM Peak	
		GEN	ATT	GEN	ATT
290 flats with flat size less than 60m ² GFA	Trip Rates (pcu/ flat/ hr)	0.0718	0.0425	0.0286	0.0370
	Traffic Generations (pcu/ hr)	21	13	9	11

Note: GEN – generation ATT – attraction

Traffic Generation of Proposed Development

- 4.11 The traffic generation of the Proposed Development is calculated by adopting the mean traffic generation rate of residential and retail uses from the TPDM. The adopted traffic generation rates and the calculated traffic generation are presented in **Table 4.6**.

TABLE 4.6 ADOPTED TRIP RATES AND TRAFFIC GENERATION FOR PROPOSED DEVELOPMENT

Proposed Development	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
<i>Trip Rates</i>				
Residential Use with avg. 60m ² (pcu/ flat/ hr)	0.0718	0.0425	0.0286	0.0370
Retail Use (pcu/ 100m ² / hr)	0.2296	0.2434	0.3100	0.3563
<i>Traffic Generations (pcu/ hr)</i>				
345 flats with flat size less than 60m ² GFA	25	15	10	13
Non-domestic Use (220m ² GFA)	1	1	1	1
Total	26	16	11	14

4.12 The net increase in traffic generation between the Proposed Development and the Permitted Scheme is presented in **Table 4.7**.

TABLE 4.7 NET INCREASE IN TRAFFIC GENERATION

Scheme	Traffic Generation (pcu/ hr)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Proposed Development (from Table 4.6) [a]	26	16	11	14
Permitted Scheme (from Table 4.5) [b]	21	13	9	11
Net Increase in Traffic Generation [a] – [b]:	+5	+3	+2	+3
	+8		+5	

4.13 **Table 4.7** shows that compared with the Permitted Scheme, the Proposed Development is expected to generate 8 and 5 additional pcu (2-way) in AM peak and PM peak respectively.

Year 2031 Traffic Flows

4.14 Year 2031 traffic flows for the following cases are derived:

Year 2031 With Permitted = Traffic flows derived with reference to 2026 NTW2 BDTM + estimated traffic growth between 2026 and 2031 + estimated traffic generation of the planned / committed developments after 2015 + estimated traffic generation for Permitted Scheme

Year 2031 With Proposed = [A] + net increase in traffic generation by Proposed Development Development [B]

4.15 Year 2031 peak hour traffic flows for the above two cases are shown in **Figures 4.2 and 4.3** respectively.

Year 2031 Junction Capacity Analysis

4.16 Year 2031 junction capacity analysis for the cases, i.e., with Permitted Scheme and with Proposed Development are summarised in **Table 4.8** and detailed calculations are found in the **Appendix A**.

TABLE 4.8 YEAR 2031 JUNCTION PERFORMANCE

Ref	Junction	Type of Junction (Parameter)	2031 With Permitted Scheme		2031 With Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Shap Pat Heung Road / Tai Tong Road	Signal (RC)	12%	25%	12%	25%
J2	Shap Pat Heung Road / Fung Ki Road	Signal (RC)	83%	54%	83%	54%
J3	Shap Pat Heung Road / Tai Kei Leng Road	Signal (RC)	68%	75%	68%	75%
J4	Shap Pat Heung Interchange	RA (DFC)	0.73	0.67	0.73	0.67
J5	Tai Tong Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Priority (DFC)	0.43	0.63	0.43	0.63
J6	Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Priority (DFC)	> 1.20	> 1.20	> 1.20	> 1.20

Note: RC – reserve capacity; RA – Roundabout, DFC – design flow/capacity ratio

4.17 **Table 4.8** shows that the net increase in traffic generation by the Proposed Development has negligible traffic impact to the road junctions analysed, except J6, i.e., junction of Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West.

Hypothetical Improvement Scheme at Junction of Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West

4.18 Based on the junction performance of Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West for the case of Year 2031 with Permitted Scheme, the following have capacity issues:

- Tai Shu Ha Road West northbound turn right to Tai Kei Leng Road;
- Tai Kei Leng Road westbound turn left to Tai Shu Ha Road East;
- Tai Kei Leng Road straight ahead on both eastbound and westbound

4.19 Therefore, a hypothetical junction improvement is assumed to be implemented as shown in **Figure 4.4** and the detail are as follows:

- Additional right turn only traffic lane is provided by converting Tai Shu Ha Road West to one-way northbound;
- Additional left turn traffic lane for Tai Kei Leng Road westbound to Tai Shu Ha Road East;
- Widen the Tai Kei Leng Road to 4-lane single carriageway near the junction of Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West.
- Signalise the junction

4.20 Based on the above, Year 2031 junction performance of Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West is presented as **Table 4.9** and detailed calculations are found in the **Appendix A**.

TABLE 4.9 YEAR 2031 JUNCTION PERFORMANCE AT TAI KEI LENG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST WITH HYPOTHETICAL JUNCTION IMPROVEMENT

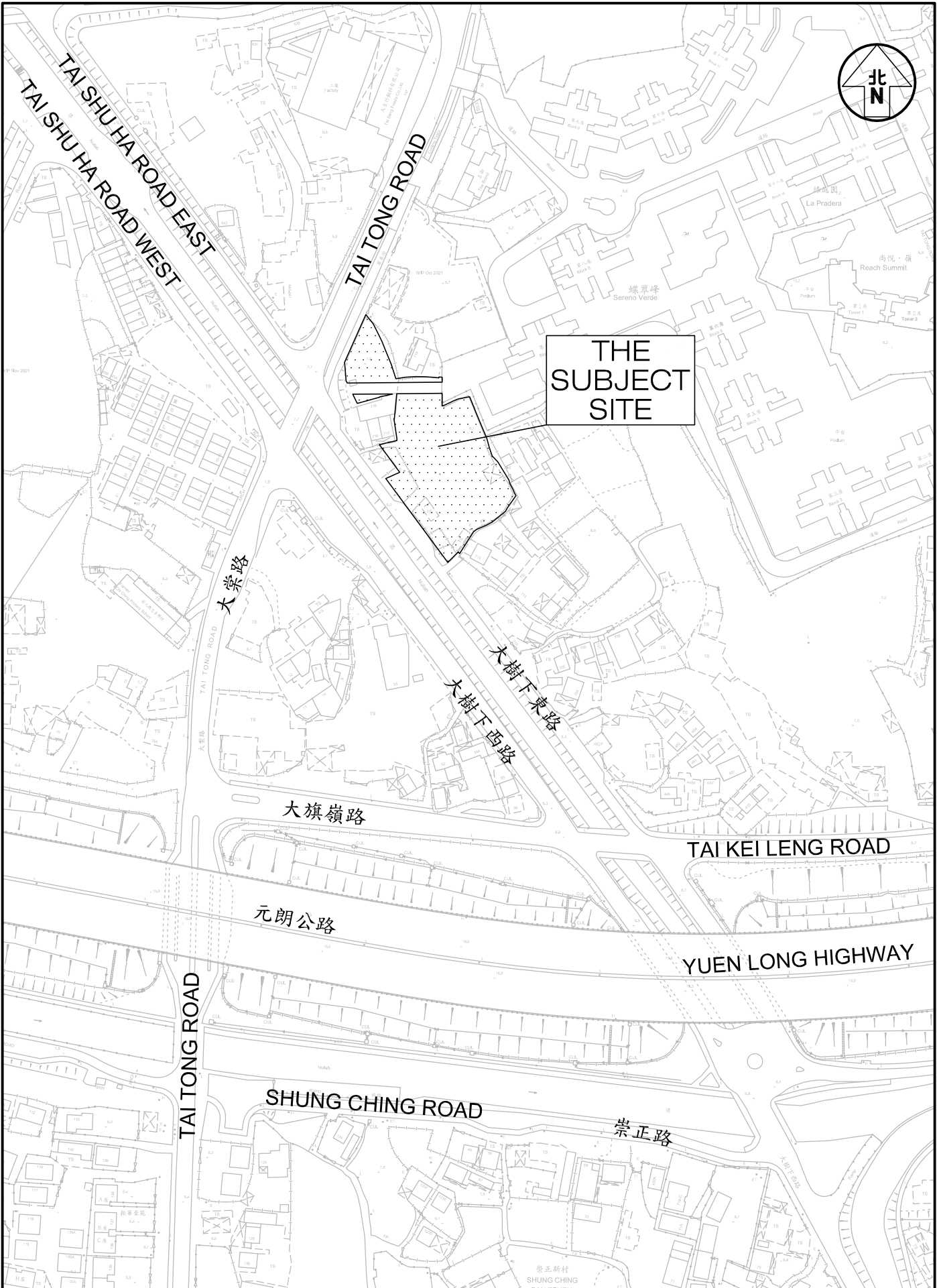
Ref	Junction	Type of Junction (Parameter)	2031 With Permitted Scheme		2031 With Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak
J6	Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West	existing layout	> 1.20	> 1.20	> 1.20	> 1.20
		with improvement	41%	30%	40%	29%

Note: DFC – design flow/capacity ratio RC – Reserve Capacity

- 4.21 With the hypothetical junction improvement, **Table 4.9** shows that (1) the junction would have sufficient capacity in Year 2031 for the cases with Permitted Scheme and with Proposed Development; and (2) the additional traffic generation associated with the Proposed Development has negligible traffic impact.

5.0 SUMMARY

- 5.1 The subject site is located at the south-east corner of the junction of Tai Tong Road / Tai Shu Ha Road East / Tai Shu Ha Road West in Yuen Long. The Owner of the subject site is seeking the relaxation of the maximum plot ratio of the Proposed Development by 20%.
- 5.2 Manual classified counts were conducted at junctions which are located in the vicinity in order to establish the existing traffic flows during AM Peak and PM peak hours.
- 5.3 The internal transport facilities provided for residential and non-domestic uses comply with recommendations of the HKPSG.
- 5.4 Year 2031 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the BDTM; (ii) estimated traffic growth from 2026 to 2031; (iii) expected traffic generation by the planned / committed developments in the vicinity; and (iv) expected traffic generation by the 2 cases, i.e., Permitted Scheme and Proposed Development.
- 5.5 Compared to the Permitted Scheme, the Proposed Development will generate only 8 and 5 additional pcu (2-way) in AM peak and PM peak respectively.
- 5.6 This TIA concluded that the net increase in traffic generation by the Proposed Development has negligible traffic impact to the surrounding road network, and, is acceptable from traffic terms.



THE
SUBJECT
SITE

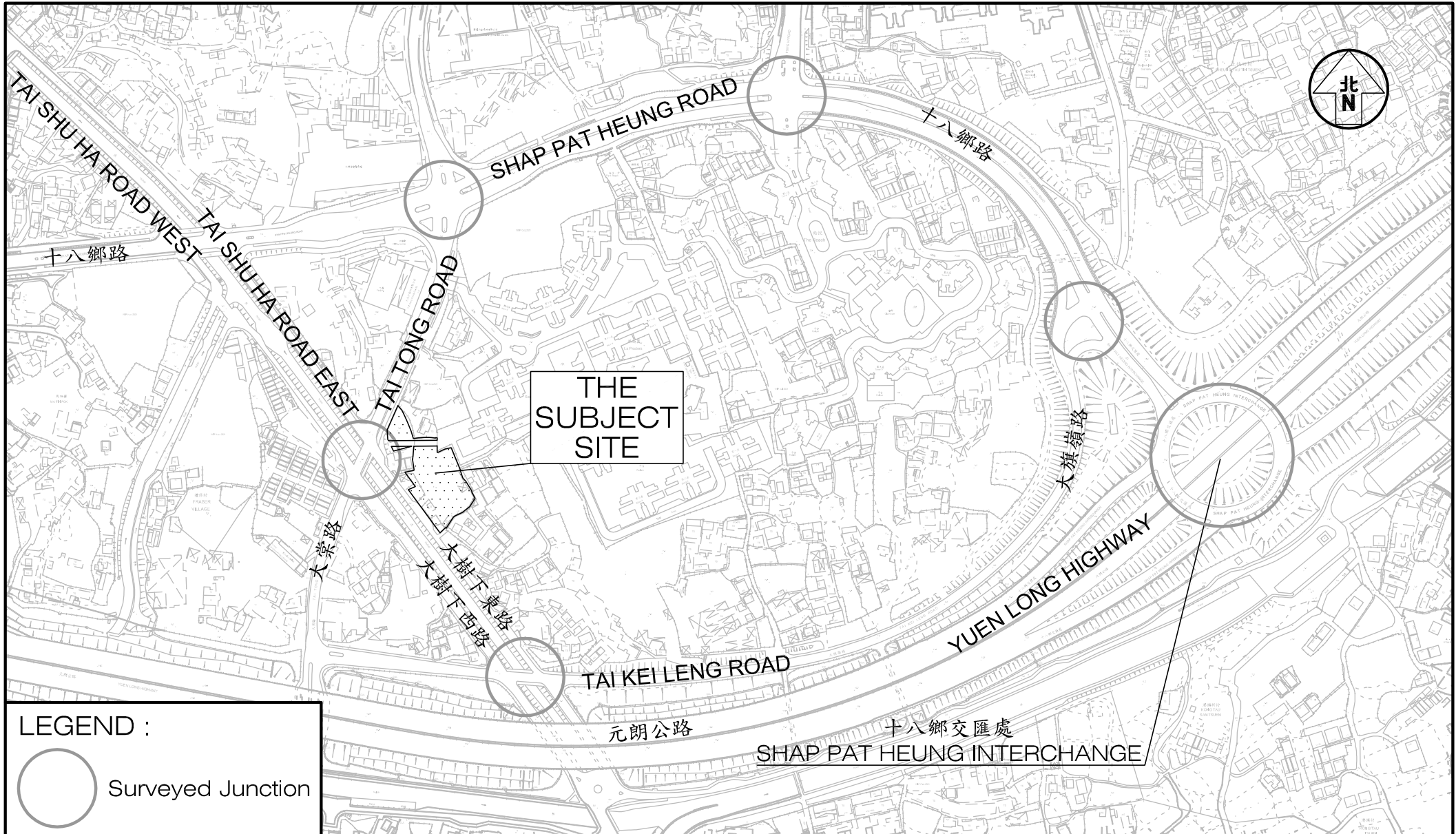
Project Title PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753BRP (PART), 1753BS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG

Job No. J7231	Figure No. 1.1	Scale in A4 1 : 2,000	
Designed by L K W	Drawn by W S W	Checked by K C	Revision D
		Date 28 MAR 2023	

Figure Title
LOCATION OF THE SUBJECT SITE

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THE
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SITE

LEGEND :

 Surveyed Junction

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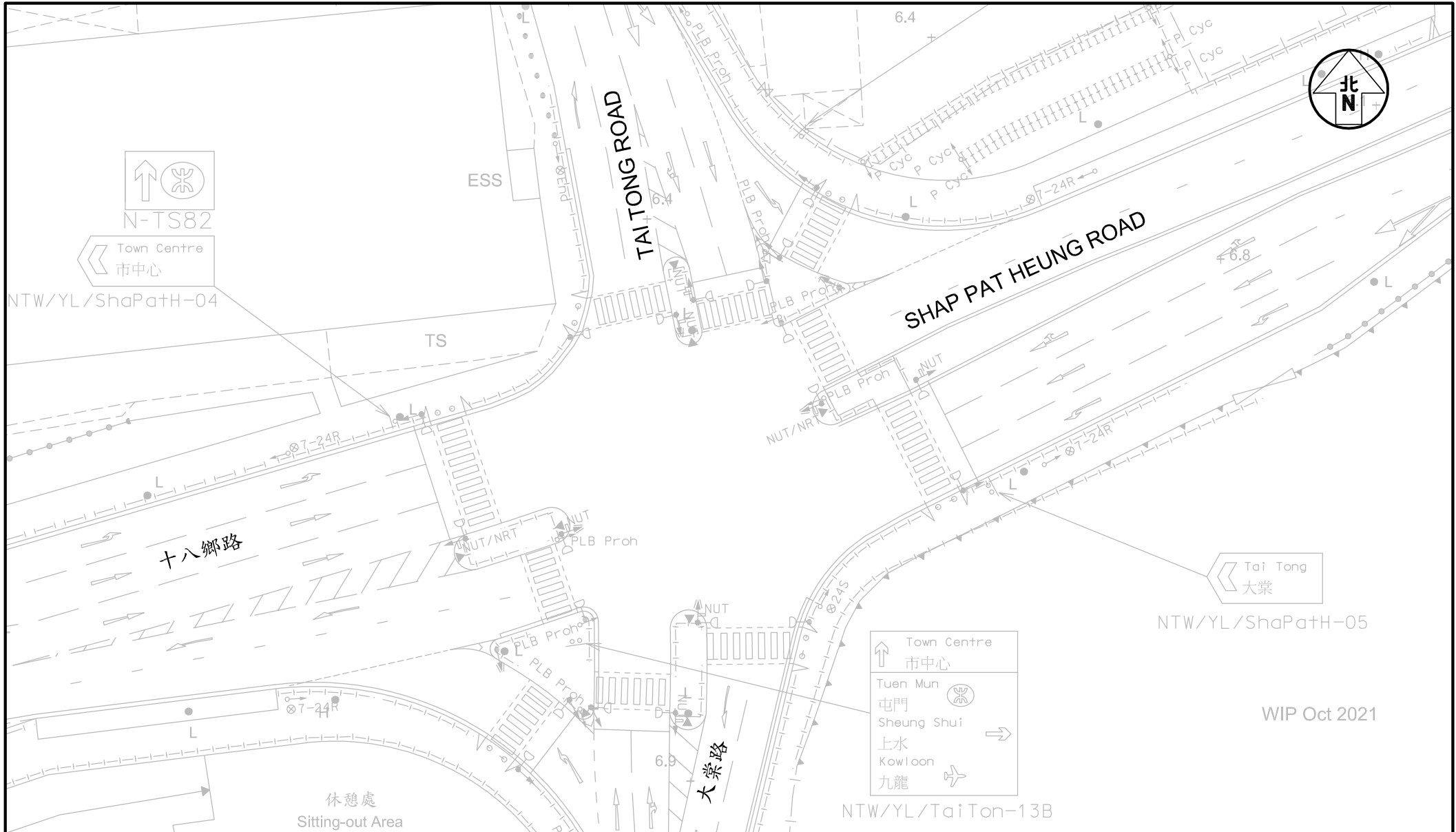
Figure Title

LOCATION OF SURVEYED JUNCTION

Figure No.	2.1	Revision	D
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Figure No. **2.2** Revision **D**

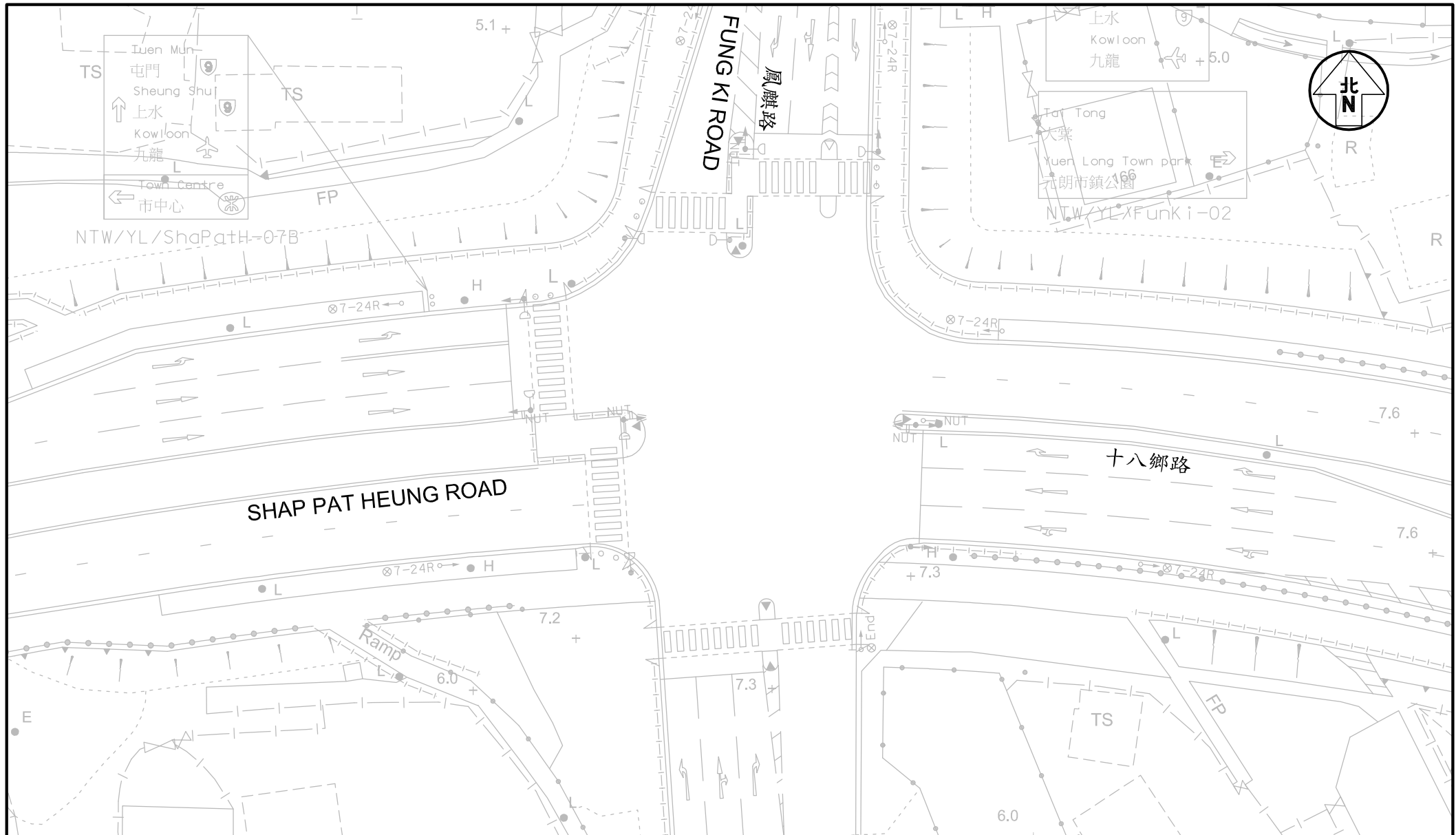
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Figure Title **LAYOUT OF JUNCTION OF SHAP PAT HEUNG ROAD / TAI TONG ROAD**

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Scale in A4 **1 : 500** Date **28 MAR 2023**

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Project Title **PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG** J7231

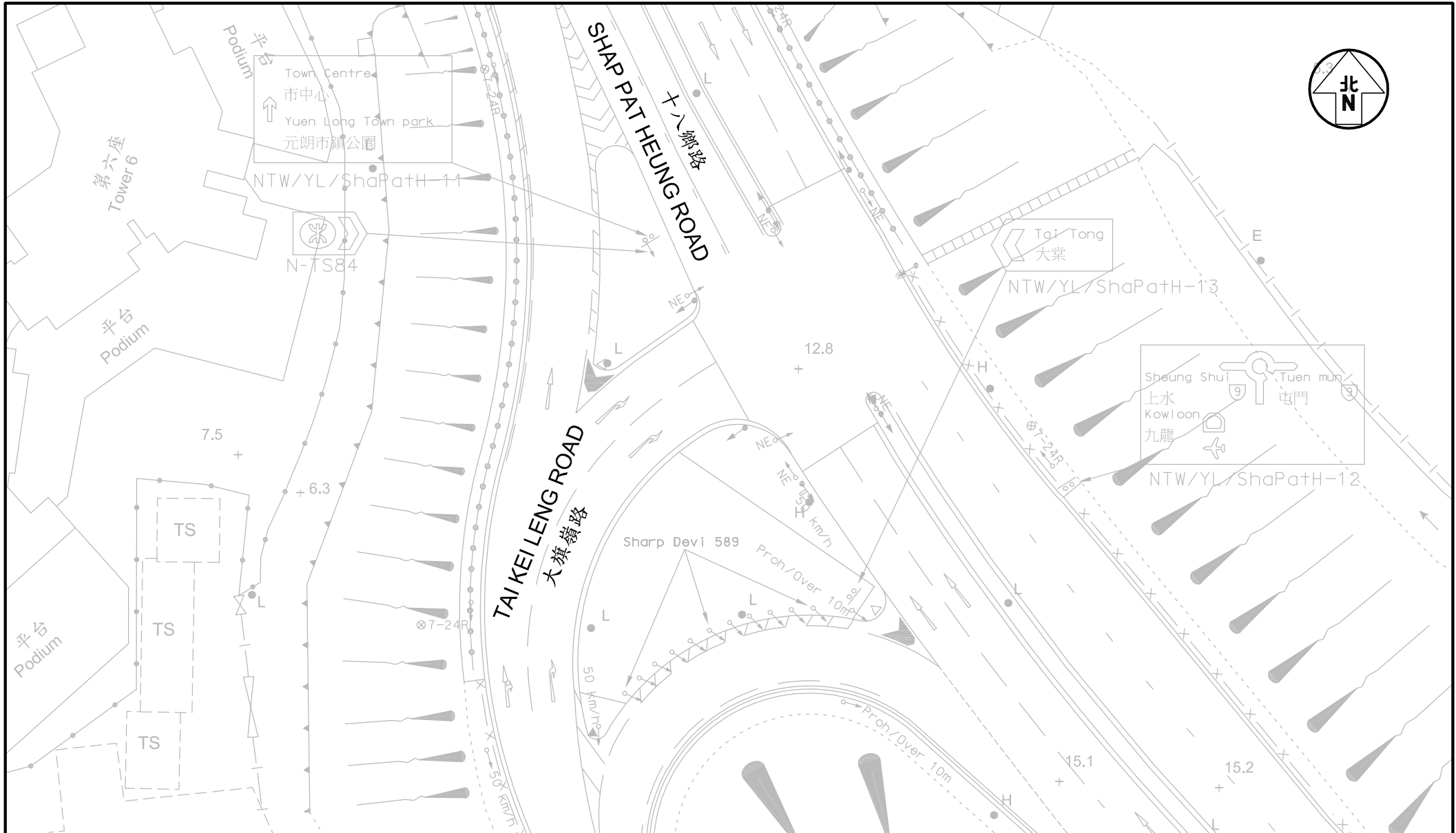
Figure No. **2.3** Revision **D**

Figure Title **LAYOUT OF JUNCTION OF SHAP PAT HEUNG ROAD / FUNG KI ROAD**

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Scale in A4 1 : 500	Date 28 MAR 2023	

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Project Title PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG J7231

Figure No. 2.4
Revision D

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Figure Title
LAYOUT OF JUNCTION OF SHAP PAT HEUNG ROAD / TAI KEI LENG ROAD

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Scale in A4 1 : 500	Date 28 MAR 2023	

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Project Title **PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG** J7231

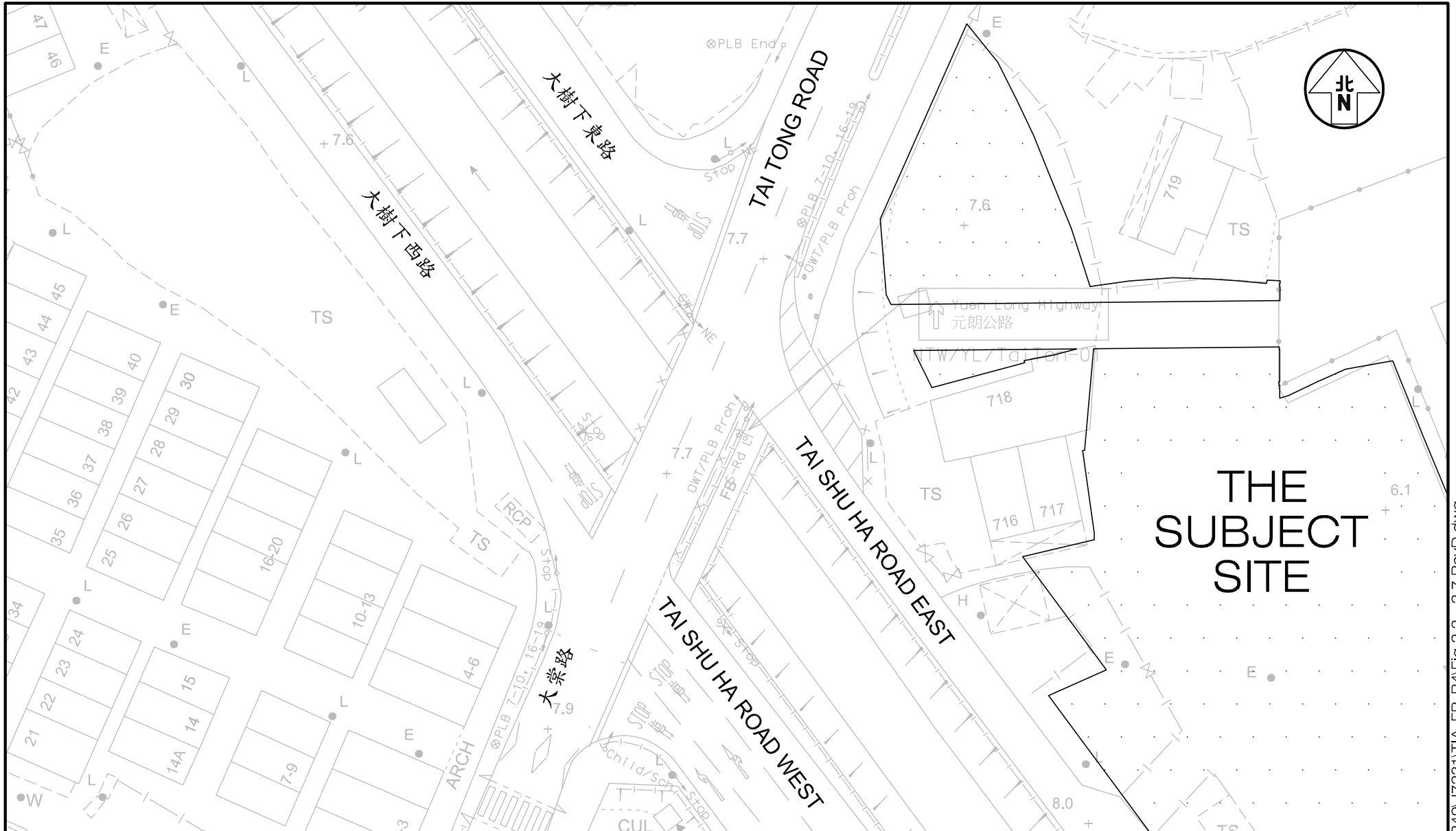
Figure No. **2.5** Revision **D**

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Figure Title
LAYOUT OF JUNCTION OF SHAP PAT HEUNG INTERCHANGE

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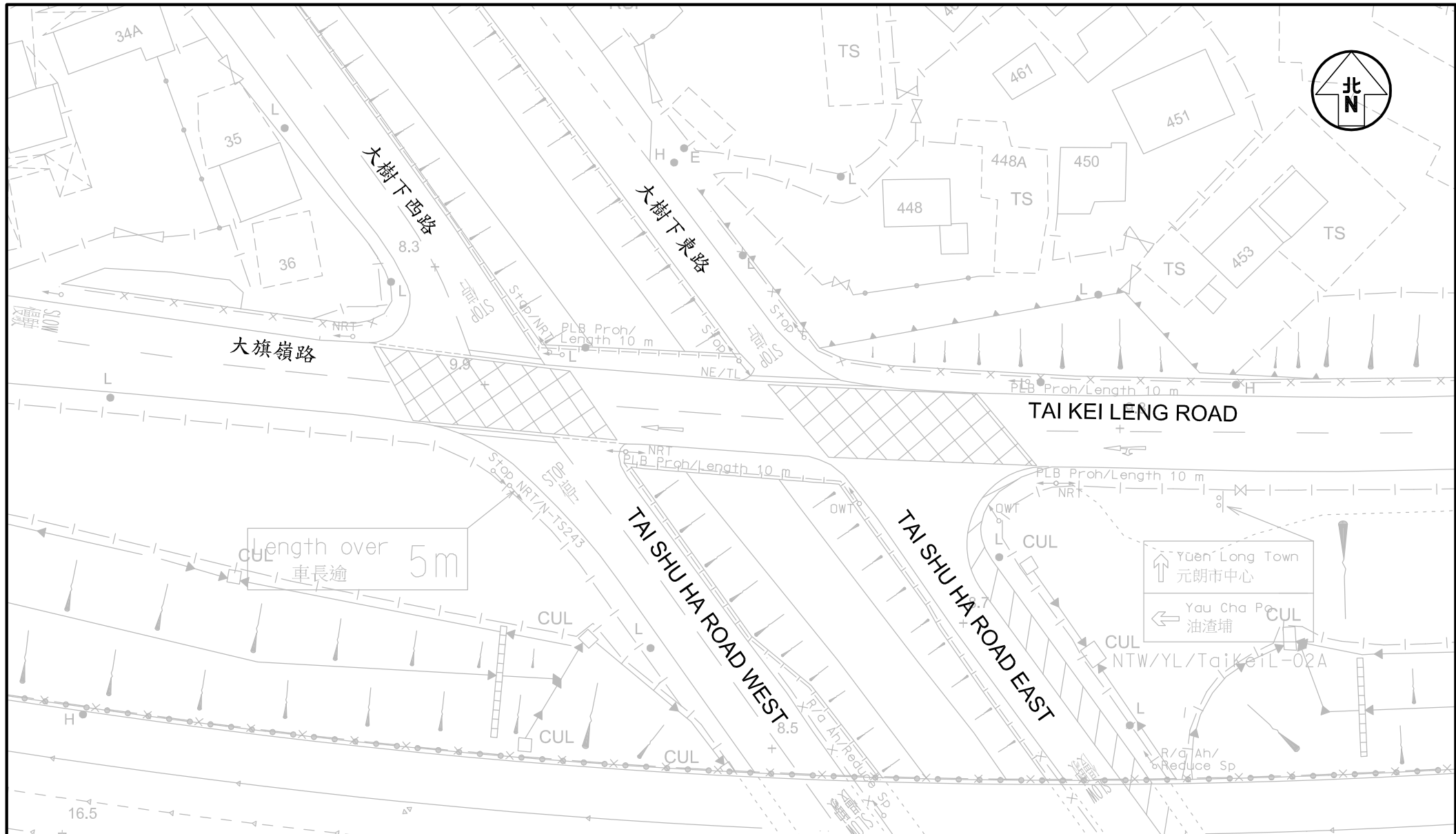
Figure No. **2.6** Revision **D**

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Figure Title **LAYOUT OF JUNCTION OF TAI TONG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST**

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Figure No. **2.7** Revision **D**

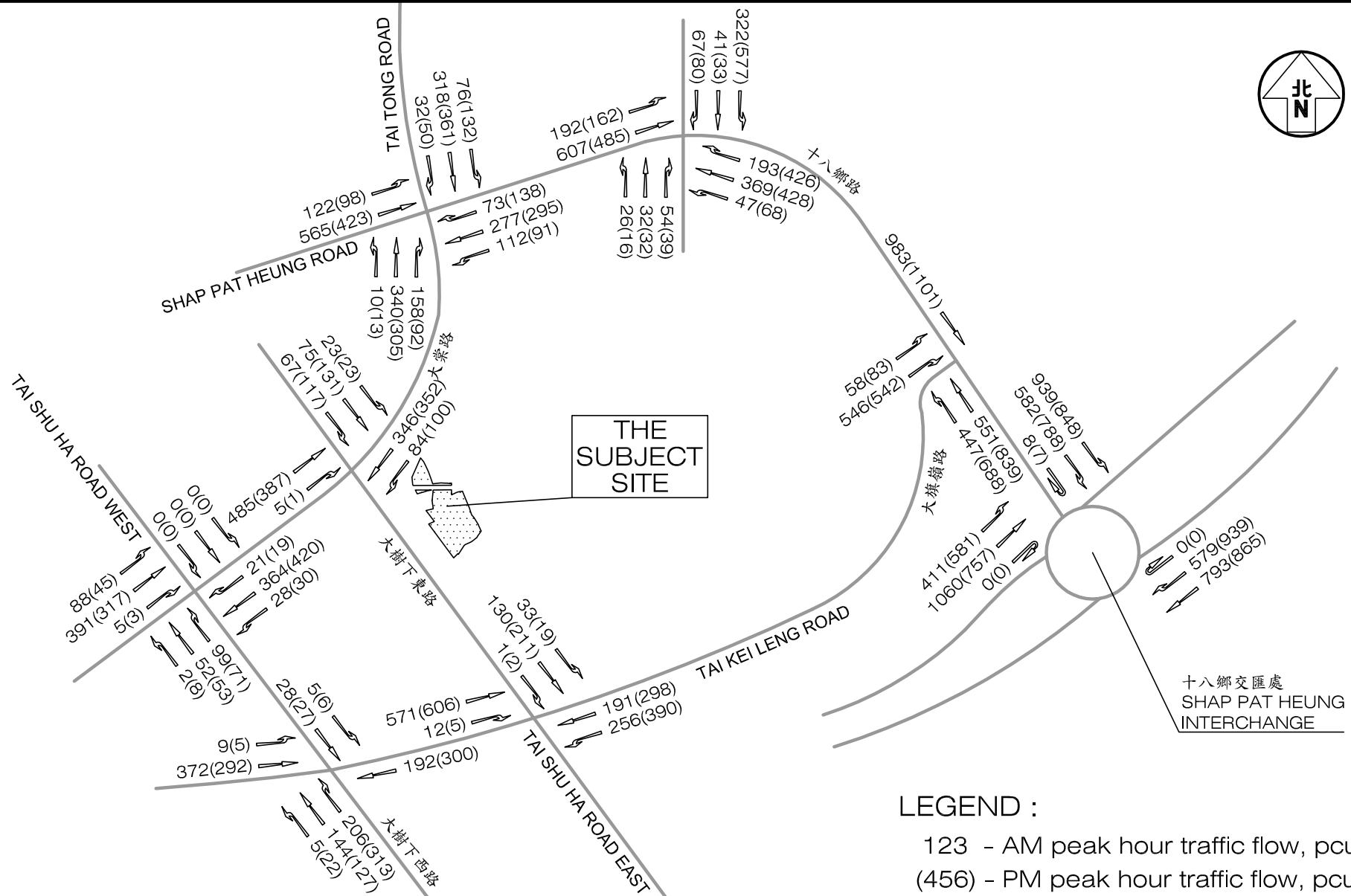
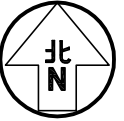
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Figure Title **LAYOUT OF JUNCTION OF TAI KEI LENG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST**

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Project Title **PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG**

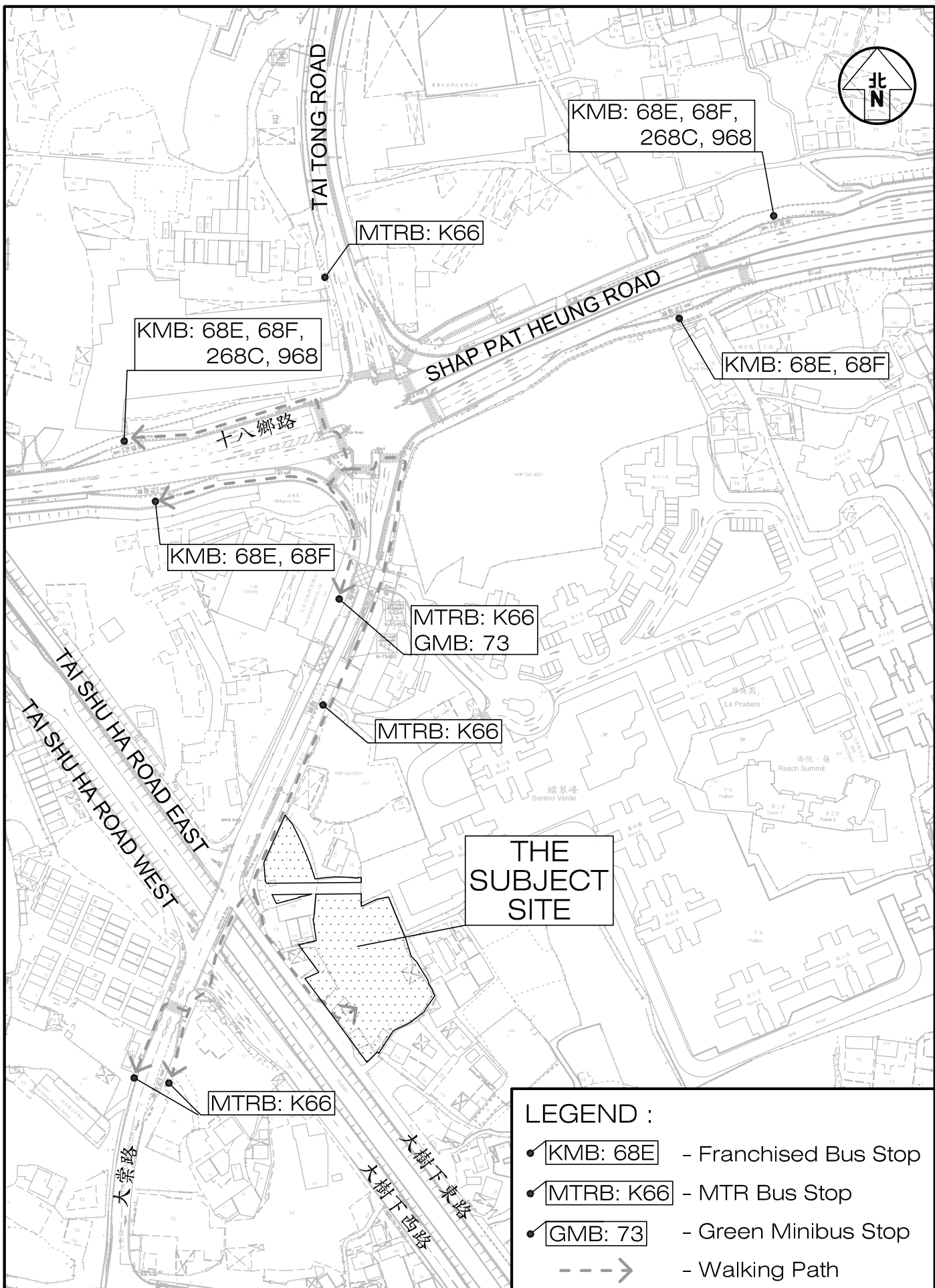
Figure No. **2.8**

Revision **D**

Figure Title **EXISTING PEAK HOUR TRAFFIC FLOWS**

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 Drawn by **W S W**
 Checked by **K C**
 Scale in A4 **N.T.S.**
 Date **28 MAR 2023**

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KMB: 68E, 68F,
268C, 968

MTRB: K66

KMB: 68E, 68F,
268C, 968

KMB: 68E, 68F

KMB: 68E, 68F

MTRB: K66
GMB: 73

MTRB: K66

THE
SUBJECT
SITE

MTRB: K66

LEGEND :

- KMB: 68E - Franchised Bus Stop
- MTRB: K66 - MTR Bus Stop
- GMB: 73 - Green Minibus Stop
- > - Walking Path

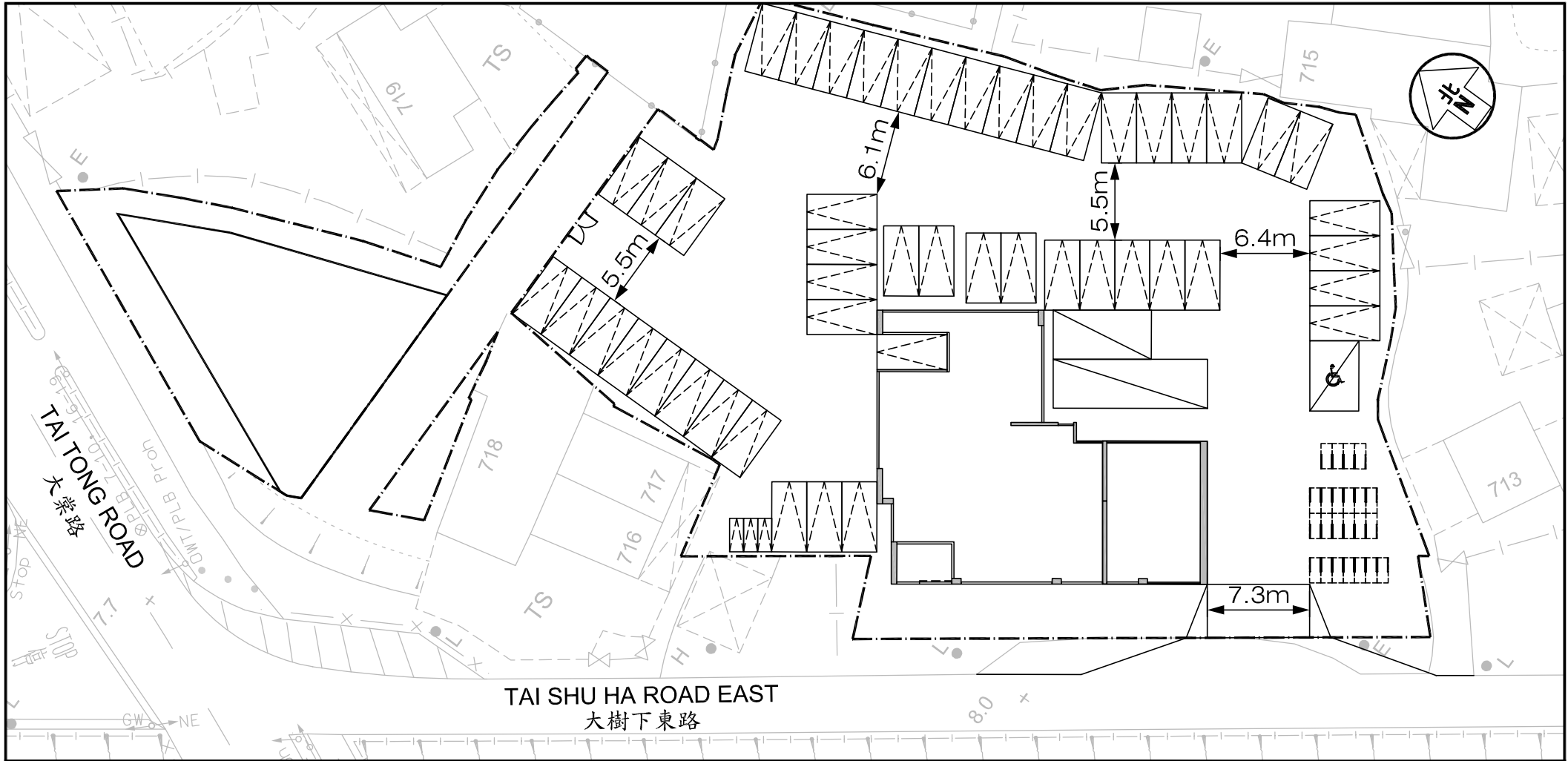
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Job No. J7231	Figure No. 2.9	Scale in A4 1 : 2,000	
Designed by L K W	Drawn by W S W	Checked by K C	Revision D
		Date 28 MAR 2023	

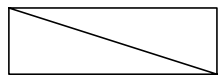
Figure Title
ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE

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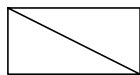
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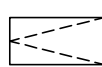
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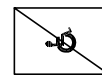
HGV loading / unloading bay



LGV loading / unloading bay



Car parking space



Accessible car parking space



Motorcycle parking space



Bicycle parking space

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Figure No. **3.1** Revision **D**

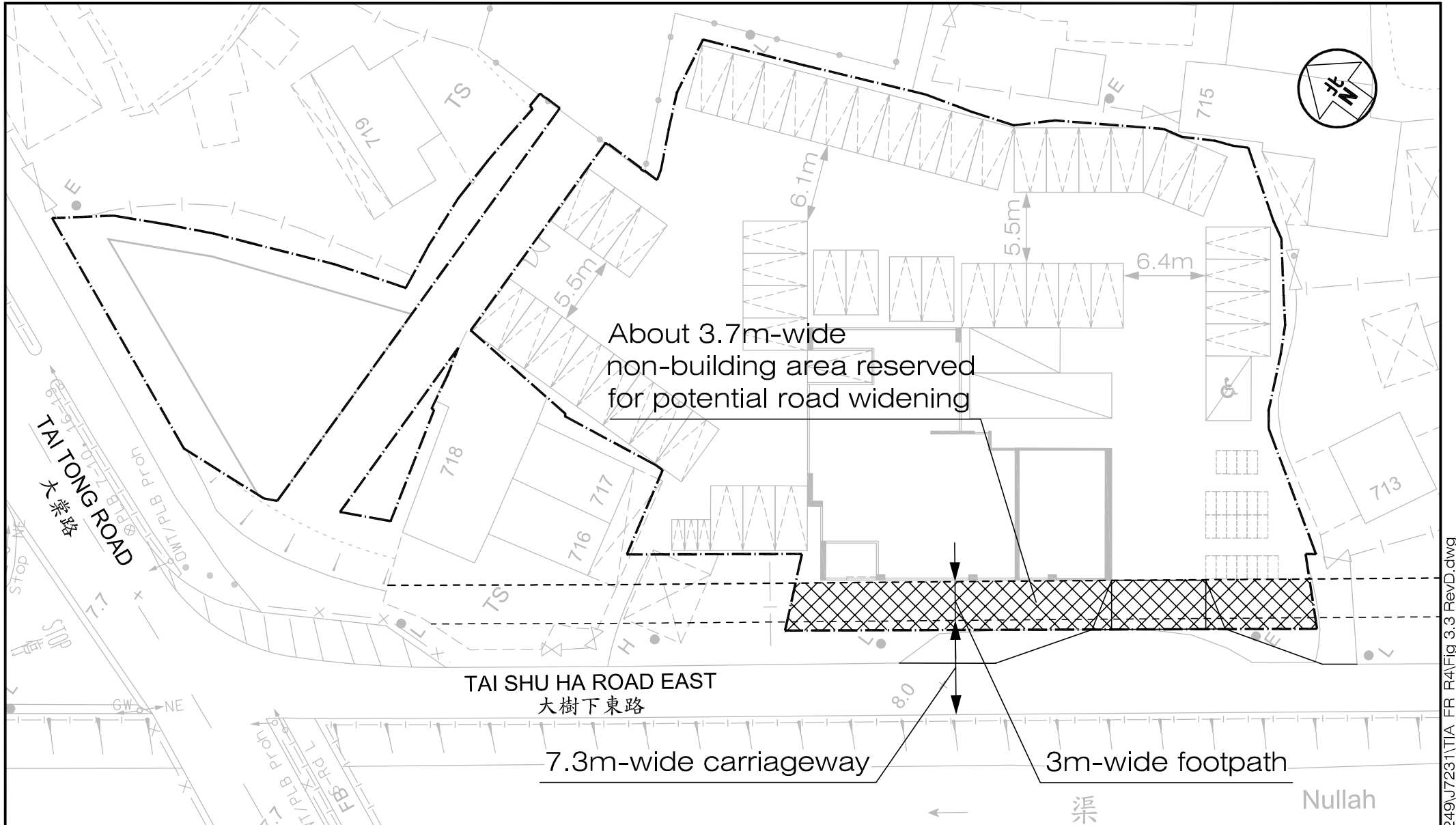
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Figure Title **PROPOSED G/F LAYOUT PLAN**

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Project Title PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG J7231

Figure No. 3.3 Revision D

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Figure Title
POTENTIAL ROAD WIDENING WORKS AT TAI SHU HA ROAD EAST

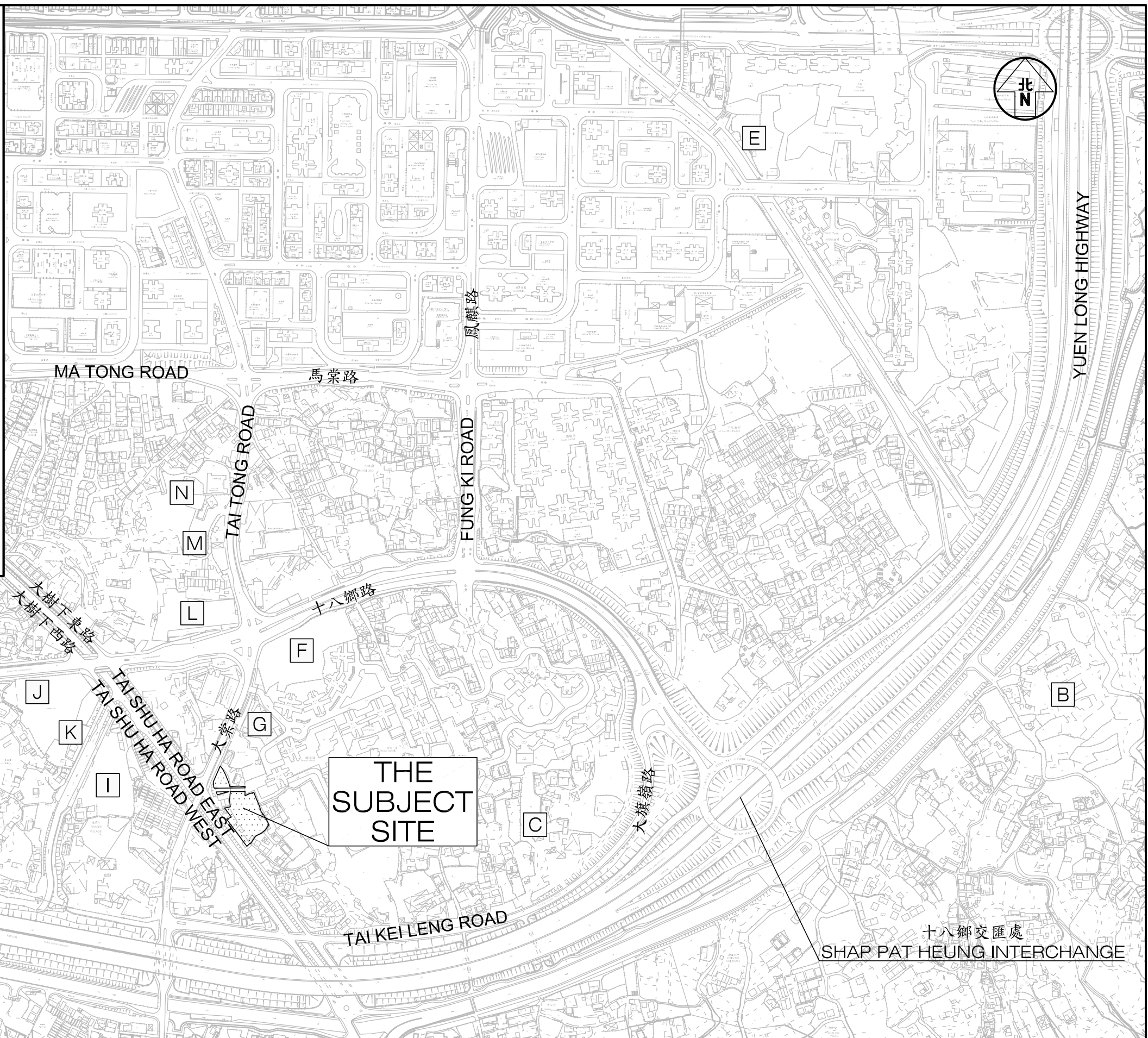
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LEGEND :

- A** Yuen Long South New Development Areas (Phases 1 and 2)
- B** Shap Pat Heung Public Housing
- C** Tai Kei Leng Public Housing
- D** Shap Pat Heung Road Public Housing
- E** Yuen Lung Street Public Housing
- F** Lot 5384 in D.D. 116
- G** Lot 4054 in D.D. 116
- H** Private Subsidized Housing at Lam Hi Road
- I** Lot 4041 in D.D. 120, Fraser Village
- J** Po Leung Kuk Lee Shau Kee Youth Oasis
- K** Lot 1846 RP in D.D. 120 and adjoining Government Land, Ma Tin Pok
- L** Lots 1695 S.D RP, 1741 RP(Part) and 1394 S.B RP (Part) in D.D. 120 and adjoining Government land, Tai Kei Leng
- M** Lots 1695 S.E ss.1 RP, 1695 S.F ss.1 and 1695 S.H RP (Part) in D.D. 120 and adjoining Government land, Tai Kei Leng
- N** Lots 1694, 1695 S.F RP (Part) and 3721 in D.D. 120, Tai Kei Leng



Project Title: PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG

Figure No. 4.1
J7231

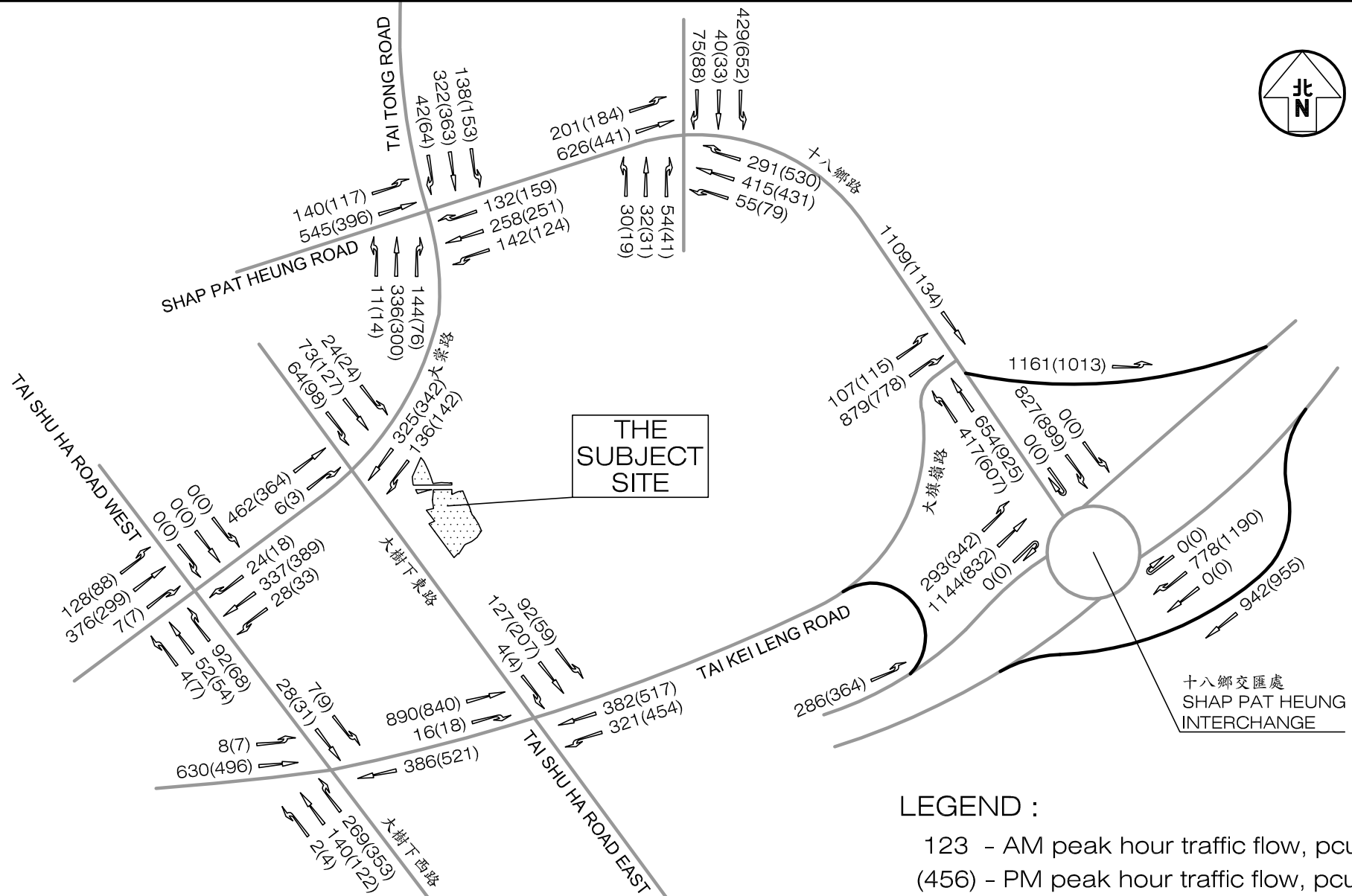
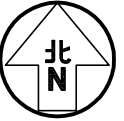
Revision D
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Figure Title: THE MAJOR ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

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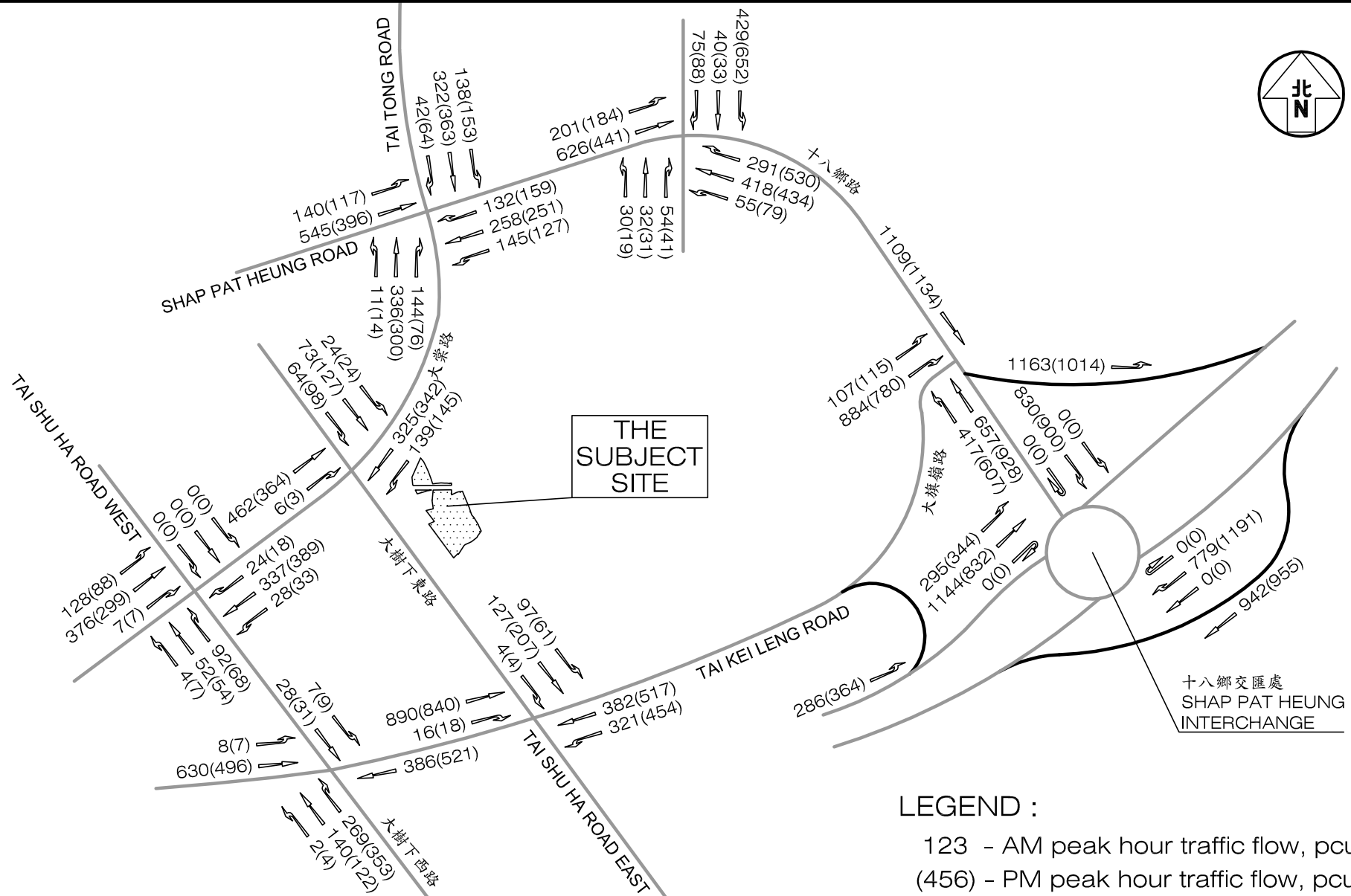
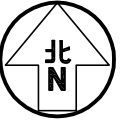


Project Title **PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG**

Figure Title **YEAR 2031 PEAK HOUR TRAFFIC FLOWS WITH PERMITTED SCHEME**

Figure No.	4.2	Revision	D
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Checked by	K C	Date	28 MAR 2023
Scale in A4	N.T.S.		

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Figure Title YEAR 2031 PEAK HOUR TRAFFIC FLOWS WITH PROPOSED DEVELOPMENT

Figure No. 4.3

Revision D

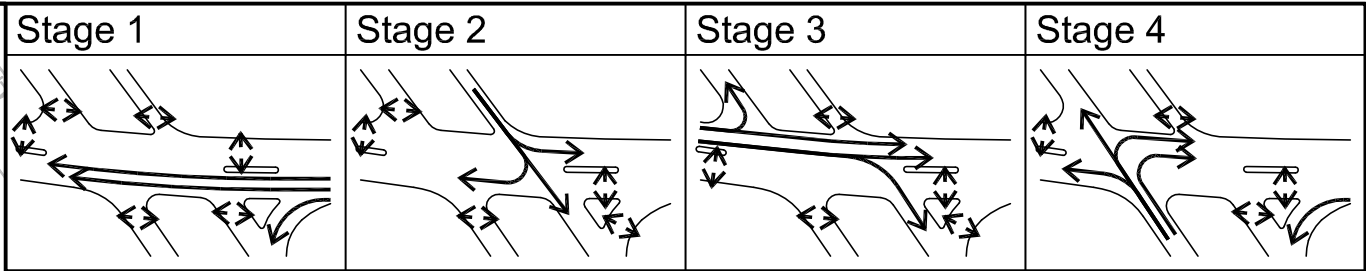
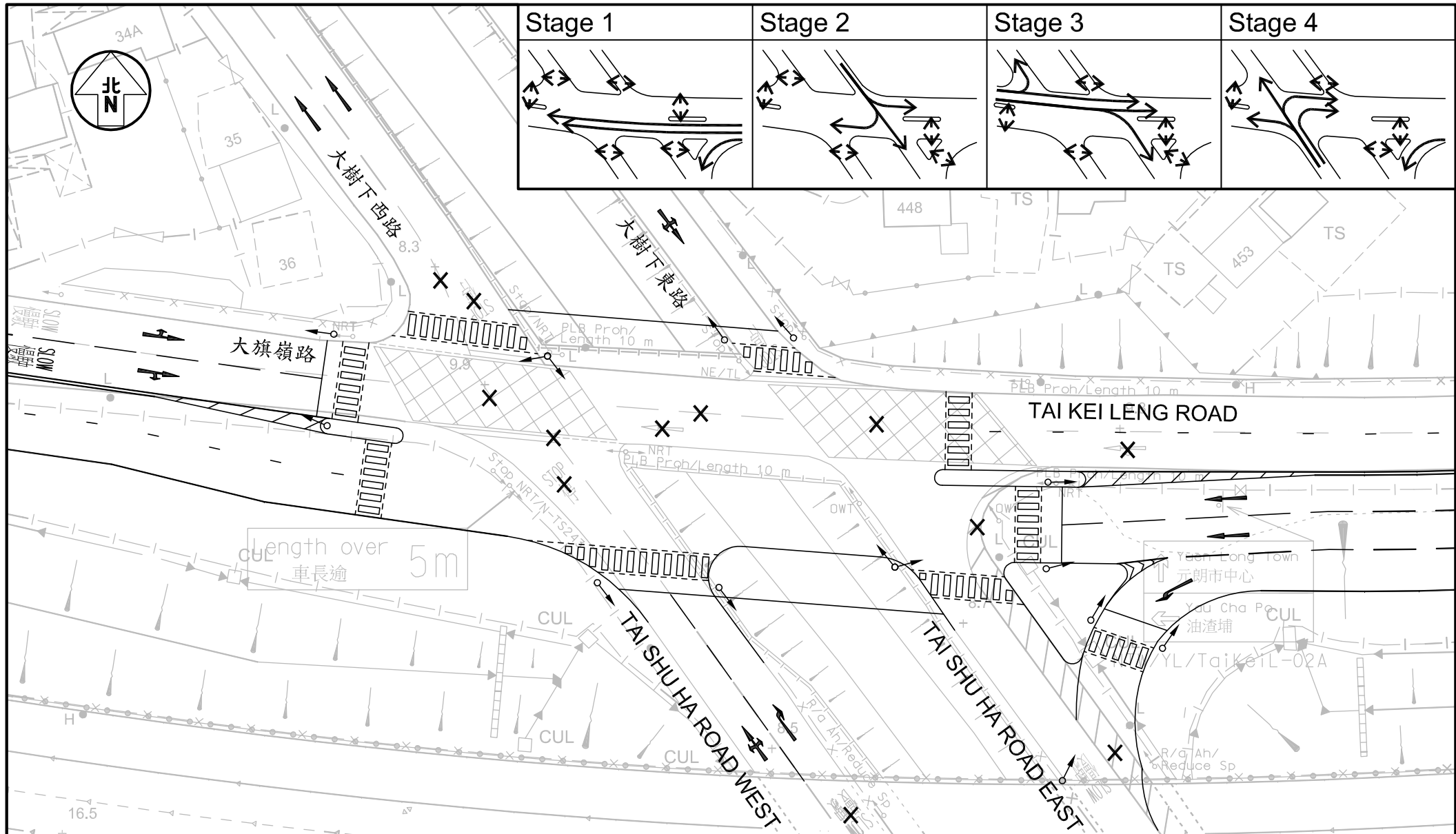
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Figure Title **HYPOTHETICAL IMPROVEMENT SCHEME AT JUNCTION OF TAI KEI LENG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST**

Figure No. **4.4**

Designed by **L K W** Drawn by **W S W** Checked by **K C**

Scale in A4 **1 : 500** Date **28 MAR 2023**

Revision **D**

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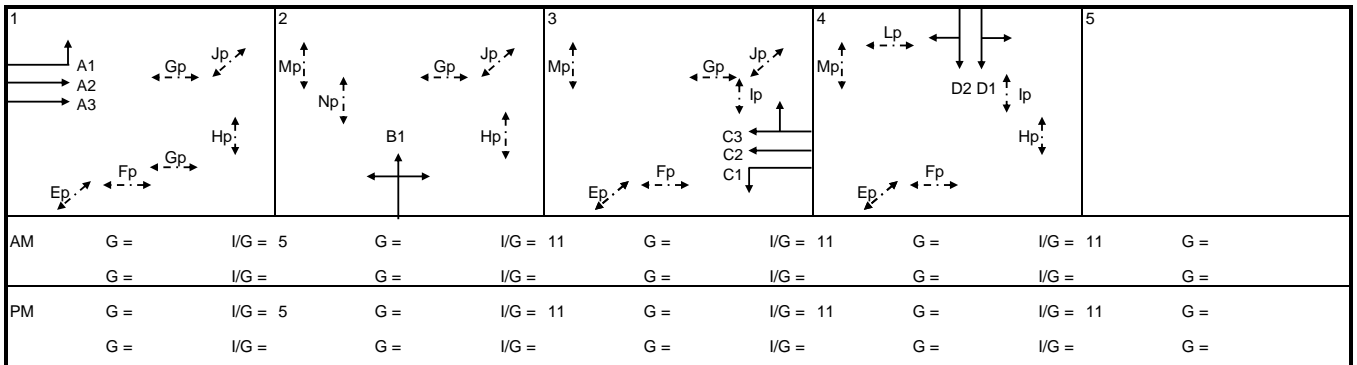
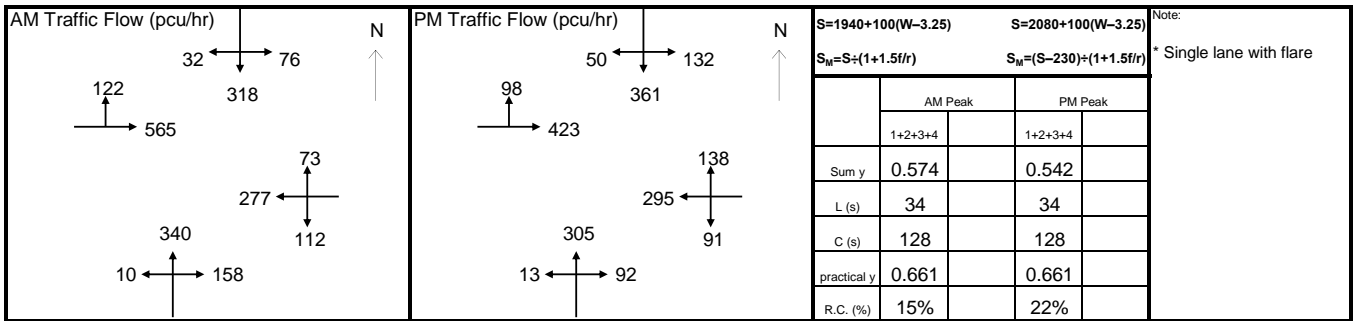
Appendix A – Junction Capacity Analysis

Signal Junction Analysis

Junction: Shap Pat Heung Road / Tai Tong Road
 Scenario: Existing Condition
 Design Year: 2022 Designed By: _____ Checked By: _____

Job Number: J7231
 P. 1
 Date: 18 Jan 2023

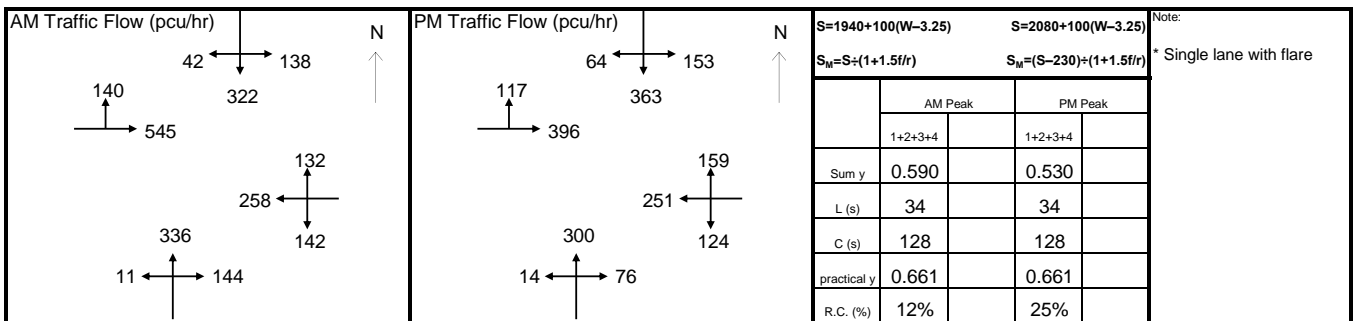
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak				
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Shap Pat Heung Road	LT	A1	1	3.60	10.0	100	1717	122	0.071		100	1717	98	0.057	
EB	SA	A2	1	3.60			2115	283	0.134	0.134		2115	212	0.100	0.100
	SA	A3	1	3.60			2115	282	0.133			2115	211	0.100	
Tai Tong Road NB	LT+SA +RT*	B1	2	3.50	25.0	33	2027	508	0.251	0.251	26	2027	410	0.202	0.202
Shap Pat Heung Road	LT	C1	3	3.60	15.0	100	1795	112	0.062		100	1795	91	0.051	
WB	SA	C2	3	3.60			2115	180	0.085			2115	227	0.107	0.107
	SA+RT	C3	3	3.60	10.0	43	1987	170	0.086	0.086	67	1922	206	0.107	
Tai Tong Road SB	LT+SA*	D1	4	3.70	25.0	36	2013	209	0.104	0.104	49	2013	267	0.133	0.133
	SA+RT	D2	4	3.70	15.0	15	2094	217	0.104		18	2087	276	0.132	
pedestrian phase		Ep	1, 3, 4				min crossing time = 6	sec GM + 6				sec FGM = 12	sec		
		Fp	1, 3, 4				min crossing time = 7	sec GM + 7				sec FGM = 14	sec		
		Gp	1, 2				min crossing time = 8	sec GM + 8				sec FGM = 16	sec		
		Hp	1, 2, 4				min crossing time = 10	sec GM + 10				sec FGM = 20	sec		
		Ip	3, 4				min crossing time = 8	sec GM + 8				sec FGM = 16	sec		
		Jp	1, 2, 3				min crossing time = 6	sec GM + 8				sec FGM = 14	sec		
		Kp	1, 2, 3				min crossing time = 6	sec GM + 6				sec FGM = 12	sec		
		Lp	4				min crossing time = 9	sec GM + 6				sec FGM = 15	sec		
		Mp	2, 3, 4				min crossing time = 10	sec GM + 6				sec FGM = 16	sec		
		Np	1, 2				min crossing time = 8	sec GM + 6				sec FGM = 14	sec		



Signal Junction Analysis

Junction: Shap Pat Heung Road / Tai Tong Road Job Number: J7231
 Scenario: Future Condition (With Permitted Scheme) P. 2
 Design Year: 2031 Designed By: _____ Checked By: _____ Date: 18 Jan 2023

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak				
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Shap Pat Heung Road	LT	A1	1	3.60	10.0	100	1717	140	0.082		100	1717	117	0.068	
EB	SA	A2	1	3.60			2115	273	0.129	0.129		2115	198	0.094	0.094
	SA	A3	1	3.60			2115	272	0.129			2115	198	0.094	
Tai Tong Road NB	LT+SA +RT*	B1	2	3.50	25.0	32	2027	491	0.242	0.242	23	2027	390	0.192	0.192
Shap Pat Heung Road	LT	C1	3	3.60	15.0	100	1795	142	0.079		100	1795	124	0.069	
WB	SA	C2	3	3.60			2115	205	0.097	0.097		2115	217	0.103	0.103
	SA+RT	C3	3	3.60	10.0	71	1911	185	0.097		82	1883	193	0.102	
Tai Tong Road SB	LT+SA*	D1	4	3.70	25.0	56	2013	246	0.122	0.122	54	2013	285	0.142	0.142
	SA+RT	D2	4	3.70	15.0	16	2092	256	0.122		22	2079	295	0.142	
pedestrian phase		Ep	1, 3, 4		min crossing time =	6	sec GM +	6	sec FGM =	12	sec				
		Fp	1, 3, 4		min crossing time =	7	sec GM +	7	sec FGM =	14	sec				
		Gp	1, 2		min crossing time =	8	sec GM +	8	sec FGM =	16	sec				
		Hp	1, 2, 4		min crossing time =	10	sec GM +	10	sec FGM =	20	sec				
		Ip	3, 4		min crossing time =	8	sec GM +	8	sec FGM =	16	sec				
		Jp	1, 2, 3		min crossing time =	6	sec GM +	8	sec FGM =	14	sec				
		Kp	1, 2, 3		min crossing time =	6	sec GM +	6	sec FGM =	12	sec				
		Lp	4		min crossing time =	9	sec GM +	6	sec FGM =	15	sec				
		Mp	2, 3, 4		min crossing time =	10	sec GM +	6	sec FGM =	16	sec				
		Np	1, 2		min crossing time =	8	sec GM +	6	sec FGM =	14	sec				

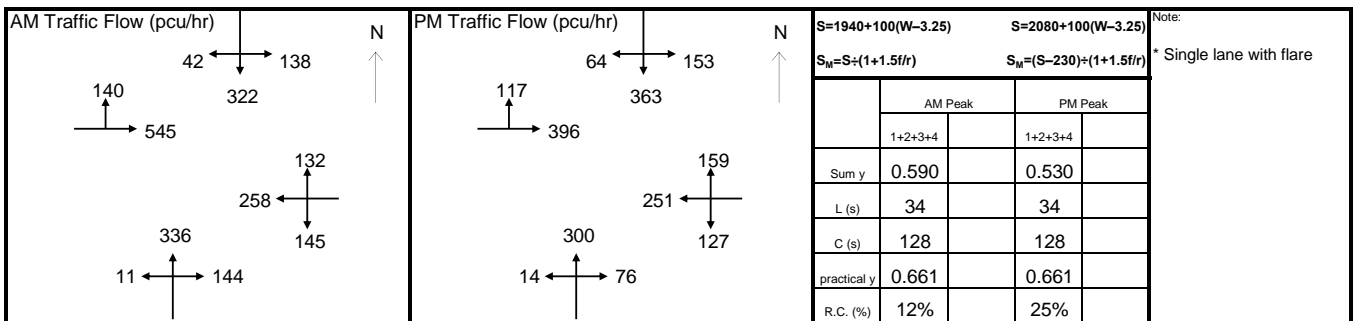


1	2	3	4	5
AM G = I/G = 5	G = I/G = 11	G = I/G = 11	G = I/G = 11	G = I/G = 11
PM G = I/G = 5	G = I/G = 11	G = I/G = 11	G = I/G = 11	G = I/G = 11

Signal Junction Analysis

Junction: Shap Pat Heung Road / Tai Tong Road Job Number: J7231
 Scenario: Future Condition (With Proposed Development) P. 3
 Design Year: 2031 Designed By: _____ Checked By: _____ Date: 18 Jan 2023

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak				
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Shap Pat Heung Road	LT	A1	1	3.60	10.0	100	1717	140	0.082		100	1717	117	0.068	
EB	SA	A2	1	3.60			2115	273	0.129	0.129		2115	198	0.094	0.094
	SA	A3	1	3.60			2115	272	0.129			2115	198	0.094	
Tai Tong Road NB	LT+SA +RT*	B1	2	3.50	25.0	33	2027	491	0.242	0.242	23	2027	390	0.192	0.192
Shap Pat Heung Road	LT	C1	3	3.60	15.0	100	1795	145	0.081		100	1795	127	0.071	
WB	SA	C2	3	3.60			2115	205	0.097	0.097		2115	217	0.103	0.103
	SA+RT	C3	3	3.60	10.0	71	1911	185	0.097		82	1883	193	0.102	
Tai Tong Road SB	LT+SA*	D1	4	3.70	25.0	56	2013	246	0.122	0.122	54	2013	285	0.142	0.142
	SA+RT	D2	4	3.70	15.0	16	2092	256	0.122		22	2079	295	0.142	
pedestrian phase		Ep	1, 3, 4		min crossing time =	6	sec GM +	6	sec FGM =	12	sec				
		Fp	1, 3, 4		min crossing time =	7	sec GM +	7	sec FGM =	14	sec				
		Gp	1, 2		min crossing time =	8	sec GM +	8	sec FGM =	16	sec				
		Hp	1, 2, 4		min crossing time =	10	sec GM +	10	sec FGM =	20	sec				
		Ip	3, 4		min crossing time =	8	sec GM +	8	sec FGM =	16	sec				
		Jp	1, 2, 3		min crossing time =	6	sec GM +	8	sec FGM =	14	sec				
		Kp	1, 2, 3		min crossing time =	6	sec GM +	6	sec FGM =	12	sec				
		Lp	4		min crossing time =	9	sec GM +	6	sec FGM =	15	sec				
		Mp	2, 3, 4		min crossing time =	10	sec GM +	6	sec FGM =	16	sec				
		Np	1, 2		min crossing time =	8	sec GM +	6	sec FGM =	14	sec				



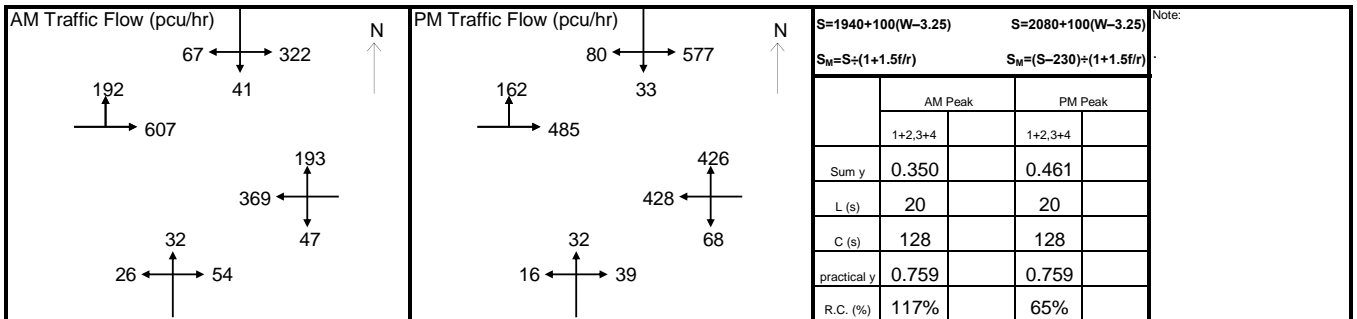
1	2	3	4	5
AM	G = I/G = 5	G = I/G = 11	G = I/G = 11	G = I/G = 11
PM	G = I/G = 5	G = I/G = 11	G = I/G = 11	G = I/G = 11

Signal Junction Analysis

Junction: Shap Pat Heung Road / Fung Ki Road
 Scenario: Existing Condition
 Design Year: 2022 Designed By: _____ Checked By: _____

Job Number: J7231
 P. 4
 Date: 18 Jan 2023

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak				
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Shap Pat Heung Road	LT	A1	1	3.50	14.0	100	1775	192	0.108		100	1775	162	0.091	
EB	SA	A2	1	3.50			2105	304	0.144	0.144		2105	243	0.115	0.115
	SA	A3	1	3.50			2105	303	0.144			2105	242	0.115	
Shap Pat Heung Road	LT+SA	B1	2	3.50	9.0	11	1930	199	0.103		14	1920	237	0.123	
WB	SA	B2	2	3.50			2105	217	0.103			2105	259	0.123	
	RT	B3	2	3.50	18.0	100	1943	193	0.099		100	1943	426	0.219	
Fung Ki Road SB	LT	C1	2,3	3.50	13.0	100	1762	322	0.183	0.183	100	1762	577	0.327	0.327
	SA+RT	C2	3	3.50	22.0	27	2067	56	0.027		43	2045	58	0.028	
	RT	C3	3	3.50	19.0	100	1951	52	0.027		100	1951	55	0.028	
Fung Ki Road NB	LT	C1	4	3.50	10.0	100	1709	26	0.015		100	1709	16	0.009	
	ST+RT	C2	4	3.50	14.0	30	2039	46	0.023	0.023	16	2070	38	0.018	0.018
	RT	C3	4	3.00	11.0	100	1808	40	0.022		100	1808	33	0.018	
pedestrian phase	Fp	1, 4					min crossing time = 7	sec GM + 10			sec FGM = 17	sec			
	Gp	2, 3, 4					min crossing time = 5	sec GM + 10			sec FGM = 15	sec			
	Hp	1					min crossing time = 5	sec GM + 9			sec FGM = 14	sec			
	lp	1					min crossing time = 10	sec GM + 9			sec FGM = 19	sec			
	jp	3					min crossing time = 5	sec GM + 8			sec FGM = 13	sec			

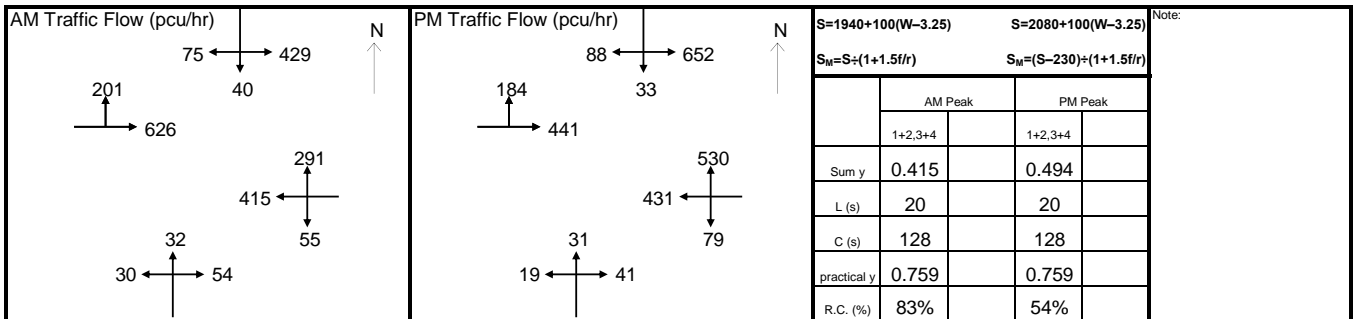


1	2	3	4	5
AM	G = I/G = 6	G = I/G =	G = I/G = 9	G = I/G = 8
PM	G = I/G = 6	G = I/G =	G = I/G = 9	G = I/G = 8

Signal Junction Analysis

Junction: Shap Pat Heung Road / Fung Ki Road Job Number: J7231
 Scenario: Future Condition (With Permitted Scheme) P. 5
 Design Year: 2031 Designed By: _____ Checked By: _____ Date: 18 Jan 2023

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak				
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Shap Pat Heung Road	LT	A1	1	3.50	14.0	100	1775	201	0.113		100	1775	184	0.104	
EB	SA	A2	1	3.50			2105	313	0.149	0.149		2105	221	0.105	0.105
	SA	A3	1	3.50			2105	313	0.149			2105	220	0.105	
Shap Pat Heung Road	LT+SA	B1	2	3.50	9.0	12	1926	225	0.117		15	1917	243	0.127	
WB	SA	B2	2	3.50			2105	245	0.116			2105	267	0.127	
	RT	B3	2	3.50	18.0	100	1943	291	0.150		100	1943	530	0.273	
Fung Ki Road SB	LT	C1	2,3	3.50	13.0	100	1762	429	0.243	0.243	100	1762	652	0.370	0.370
	SA+RT	C2	3	3.50	22.0	32	2060	59	0.029		47	2040	62	0.030	
	RT	C3	3	3.50	19.0	100	1951	56	0.029		100	1951	59	0.030	
Fung Ki Road NB	LT	C1	4	3.50	10.0	100	1709	30	0.018		100	1709	19	0.011	
	ST+RT	C2	4	3.50	14.0	30	2039	46	0.023	0.023	18	2065	38	0.018	
	RT	C3	4	3.00	11.0	100	1808	40	0.022		100	1808	34	0.019	0.019
pedestrian phase	Fp	1, 4			min crossing time =	7	sec GM +	10	sec FGM =	17	sec				
	Gp	2, 3, 4			min crossing time =	5	sec GM +	10	sec FGM =	15	sec				
	Hp	1			min crossing time =	5	sec GM +	9	sec FGM =	14	sec				
	Ip	1			min crossing time =	10	sec GM +	9	sec FGM =	19	sec				
	Jp	3			min crossing time =	5	sec GM +	8	sec FGM =	13	sec				

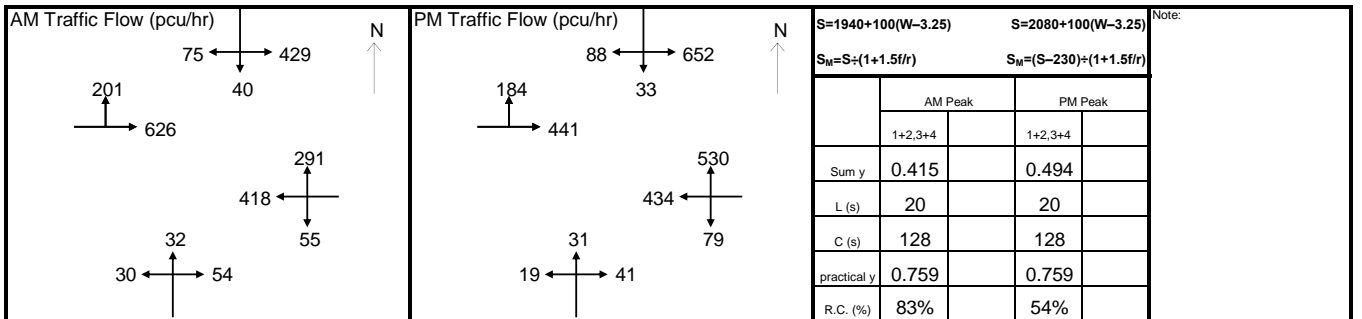


1	2	3	4	5
AM	G = I/G = 6	G = I/G =	G = I/G = 9	G = I/G = 8
PM	G = I/G = 6	G = I/G =	G = I/G = 9	G = I/G = 8

Signal Junction Analysis

Junction: Shap Pat Heung Road / Fung Ki Road Job Number: J7231
 Scenario: Future Condition (With Proposed Development) P. 6
 Design Year: 2031 Designed By: _____ Checked By: _____ Date: 18 Jan 2023

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak				
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Shap Pat Heung Road	LT	A1	1	3.50	14.0	100	1775	201	0.113		100	1775	184	0.104	
EB	SA	A2	1	3.50			2105	313	0.149	0.149		2105	221	0.105	0.105
	SA	A3	1	3.50			2105	313	0.149			2105	220	0.105	
Shap Pat Heung Road	LT+SA	B1	2	3.50	9.0	12	1926	226	0.117		15	1917	245	0.128	
WB	SA	B2	2	3.50			2105	247	0.117			2105	268	0.127	
	RT	B3	2	3.50	18.0	100	1943	291	0.150		100	1943	530	0.273	
Fung Ki Road SB	LT	C1	2,3	3.50	13.0	100	1762	429	0.243	0.243	100	1762	652	0.370	0.370
	SA+RT	C2	3	3.50	22.0	32	2060	59	0.029		47	2040	62	0.030	
	RT	C3	3	3.50	19.0	100	1951	56	0.029		100	1951	59	0.030	
Fung Ki Road NB	LT	C1	4	3.50	10.0	100	1709	30	0.018		100	1709	19	0.011	
	ST+RT	C2	4	3.50	14.0	30	2039	46	0.023	0.023	18	2065	38	0.018	
	RT	C3	4	3.00	11.0	100	1808	40	0.022		100	1808	34	0.019	0.019
pedestrian phase	Fp	1, 4					min crossing time = 7	sec GM +	10			sec FGM = 17	sec		
	Gp	2, 3, 4					min crossing time = 5	sec GM +	10			sec FGM = 15	sec		
	Hp	1					min crossing time = 5	sec GM +	9			sec FGM = 14	sec		
	Ip	1					min crossing time = 10	sec GM +	9			sec FGM = 19	sec		
	Jp	3					min crossing time = 5	sec GM +	8			sec FGM = 13	sec		



1	2	3	4	5
AM G = I/G = 6	G = I/G =	G = I/G =	G = I/G = 9	G = I/G = 8
PM G = I/G = 6	G = I/G =	G = I/G =	G = I/G = 9	G = I/G = 8

Roundabout Analysis

Junction: Shap Pat Heung Interchange Job Number: J7231
 Scenario: Existing Condition P. 10
 Design Year: 2022 Designed By: _____ Checked By: _____ Date: 18 Jan 2023

AM Peak

Arm	To A	To B	To C	Total	q _c
From A	8	939	582	1529	1060
From B	579	0	793	1372	590
From C	411	1060	0	1471	587
Total	998	1999	1375	4372	

PM Peak

Arm	To A	To B	To C	Total	q _c
From A	7	848	788	1643	757
From B	939	0	865	1804	795
From C	581	757	0	1338	946
Total	1527	1605	1653	4785	

Legend

Arm	Road (in clockwise order)
A	Shap Pat Heung Road SB
B	Slip Road WB
C	Slip Road EB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	10.0	7.3	25.0	7.0	100	40	0.6
From B	8.5	7.3	30.0	3.0	100	40	0.6
From C	10.0	7.3	40.0	5.0	100	50	0.9
From D							
From E							
From F							
From G							
From H							

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(∅-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	8.51	54.60	1.01	0.98	2578.06	0.57	1922.13	2091	1529	1643	0.80	0.79
From B	7.83	54.60	1.01	0.98	2371.37	0.54	2012.95	1904	1372	1804	0.68	0.95
From C	8.29	54.60	1.01	0.96	2511.79	0.56	2083.15	1890	1471	1338	0.71	0.71
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Shap Pat Heung Interchange Job Number: J7231
 Scenario: Future Condition (With Permitted Scheme) P. 11
 Design Year: 2031 Designed By: _____ Checked By: _____ Date: 18 Jan 2023

AM Peak

Arm	To A	To B	To C	Total	q _c
From A	0	0	827	827	1144
From B	778	0	0	778	827
From C	293	1144	0	1437	778
				0	2215
Total	1071	1144	827	3042	

PM Peak

Arm	To A	To B	To C	Total	q _c
From A	0	0	899	899	832
From B	1190	0	0	1190	899
From C	342	832	0	1174	1190
				0	2364
Total	1532	832	899	3263	

Legend

Arm	Road (in clockwise order)
A	Shap Pat Heung Road SB
B	Slip Road WB
C	Slip Road EB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	10.0	7.3	25.0	7.0	100	40	0.6
From B	8.5	7.3	30.0	3.0	100	40	0.6
From C	10.0	7.3	40.0	5.0	100	50	0.9
From D							
From E							
From F							
From G							
From H							

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(∅-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	8.51	54.60	1.01	0.98	2578.06	0.57	1875	2049	827	899	0.44	0.44
From B	7.83	54.60	1.01	0.98	2371.37	0.54	1886	1848	778	1190	0.41	0.64
From C	8.29	54.60	1.01	0.96	2511.79	0.56	1980	1759	1437	1174	0.73	0.67
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Shap Pat Heung Interchange Job Number: J7231
 Scenario: Future Condition (With Proposed Development) P. 12
 Design Year: 2031 Designed By: _____ Checked By: _____ Date: 18 Jan 2023

AM Peak

Arm	To A	To B	To C	Total	q _c
From A	0	0	830	830	1144
From B	779	0	0	779	830
From C	295	1144	0	1439	779
				0	2218
Total	1074	1144	830	3048	

PM Peak

Arm	To A	To B	To C	Total	q _c
From A	0	0	900	900	832
From B	1191	0	0	1191	900
From C	344	832	0	1176	1191
				0	2367
Total	1535	832	900	3267	

Legend

Arm	Road (in clockwise order)
A	Shap Pat Heung Road SB
B	Slip Road WB
C	Slip Road EB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	10.0	7.3	25.0	7.0	100	40	0.6
From B	8.5	7.3	30.0	3.0	100	40	0.6
From C	10.0	7.3	40.0	5.0	100	50	0.9
From D							
From E							
From F							
From G							
From H							

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(∅-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

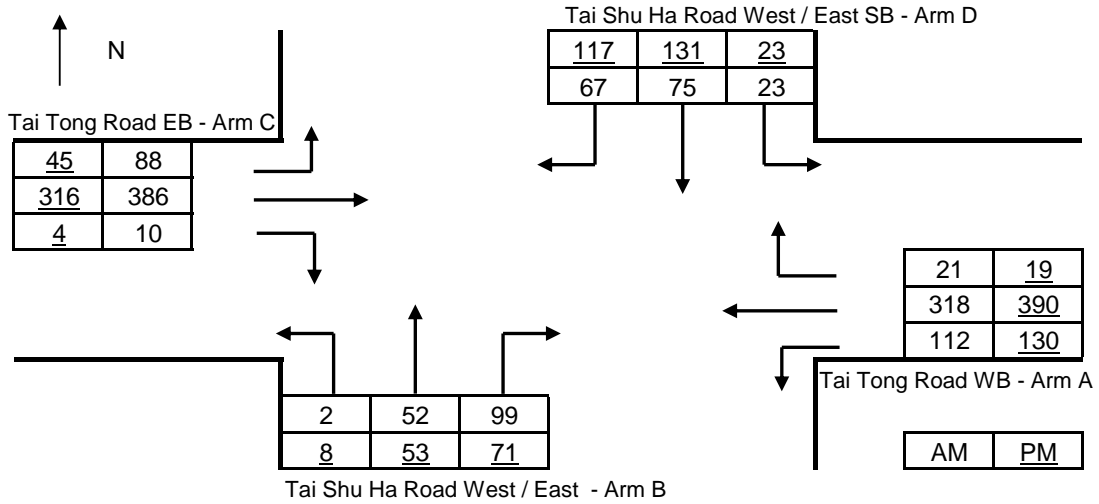
e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

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	8.51	54.60	1.01	0.98	2578.06	0.57	1875	2049	830	900	0.44	0.44
From B	7.83	54.60	1.01	0.98	2371.37	0.54	1885	1848	779	1191	0.41	0.64
From C	8.29	54.60	1.01	0.96	2511.79	0.56	1980	1758	1439	1176	0.73	0.67
From D												
From E												
From F												
From G												
From H												

Priority Junction Analysis

Junction: Tai Shu Ha Road West / Tai Shu Ha Road East / Tai Tong Road
 Design Year: 2022 Job Number: J7231 Date: 18 Jan 2023
 Scheme: Existing Condition Page 13



$$Y = 1 - 0.0345W$$

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

where 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

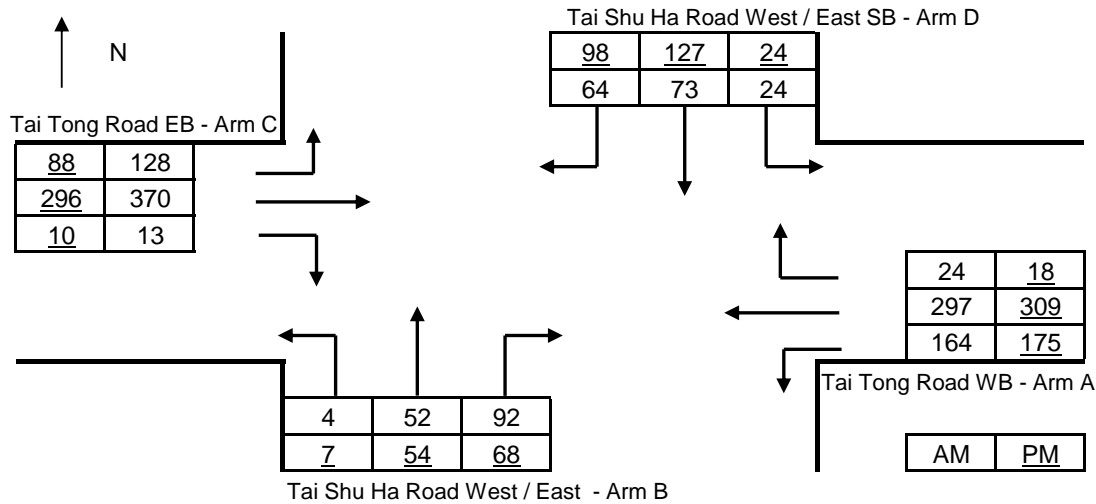
Geometry :	Input	Input	Input	Input
	W 7.50	V-CB 200	V-AD 200	w-BA 3.50
	W-CR 0.00	V-lBA 25	V-lDC 22	w-BC 3.60
	W-CB 3.75	V-rBC 142	V-rDA 63	w-DA 5.00
	W-AD 3.75			w-DC 5.00

Traffic Flows, pcu/min	AM	PM	Capacity, pcu/min	AM	PM
Analysis : q-B-CD	0.66	0.75	Q-B-CD	6.05	6.50
q-B-AD	2.15	1.67	Q-A-AD	6.12	5.73
q-A-BCD	0.84	0.85	Q-A-BCD	14.68	16.21
q-A-B	1.94	2.26	Q-A-B		
q-A-C	5.50	6.78	Q-A-C		
q-D-ABC	3.03	4.97	Q-D-ABC	6.96	7.06
q-C-ABD	0.43	0.14	Q-C-ABD	15.33	13.58
q-C-D	1.57	0.82	Q-C-D		
q-C-A	6.89	5.74	Q-C-A		

Ratio-of-flow to Capacity	AM	PM
B-CD	0.11	0.12
B-AD	0.35	0.29
A-BCD	0.06	0.05
D-ABC	0.44	0.70
C-ABD	0.03	0.01

Priority Junction Analysis

Junction: Tai Shu Ha Road West / Tai Shu Ha Road East / Tai Tong Road
 Design Year: 2031 Job Number: J7231 Date: 18 Jan 2023
 Scheme: Future Condition (With Permitted Scheme) Page 14



$$Y = 1 - 0.0345W$$

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

where 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

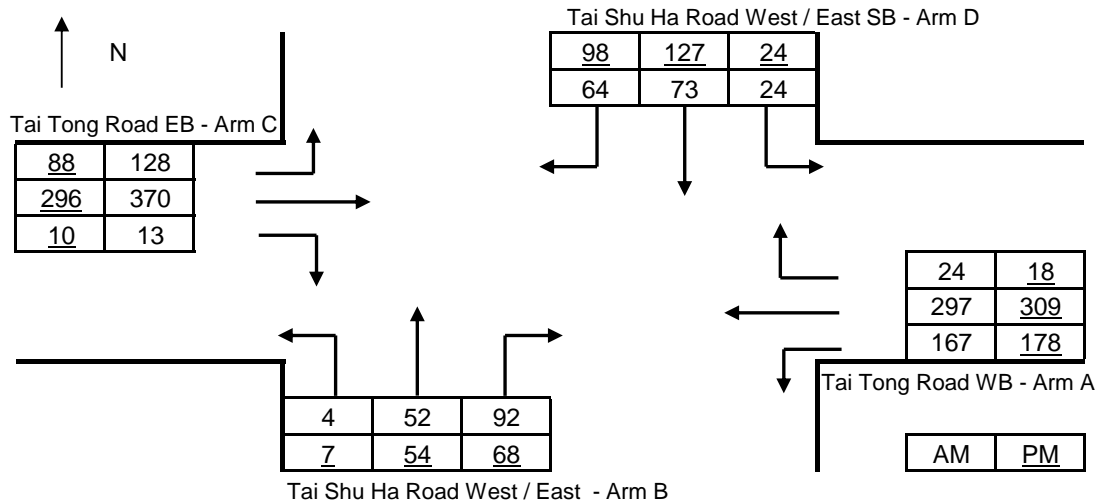
Geometry :		Input	Input	Input	Input	
	W	7.50	V-CB	200	w-BA	3.50
	W-CR	0.00	V-lBA	25	w-BC	3.60
	W-CB	3.75	V-rBC	142	w-DA	5.00
	W-AD	3.75			w-DC	5.00

Traffic Flows, pcu/min			Capacity, pcu/min		
Analysis :	AM	PM		AM	PM
q-B-CD	0.68	0.73	Q-B-CD	6.12	6.69
q-B-AD	2.03	1.64	Q-A-AD	6.13	6.09
q-A-BCD	1.02	0.77	Q-A-BCD	14.98	15.66
q-A-B	2.80	3.05	Q-A-B		
q-A-C	5.08	5.39	Q-A-C		
q-D-ABC	2.95	4.57	Q-D-ABC	6.94	7.26
q-C-ABD	0.58	0.37	Q-C-ABD	15.52	14.01
q-C-D	2.26	1.57	Q-C-D		
q-C-A	6.53	5.29	Q-C-A		

Ratio-of-flow to Capacity	AM	PM
B-CD	0.11	0.11
B-AD	0.33	0.27
A-BCD	0.07	0.05
D-ABC	0.43	0.63
C-ABD	0.04	0.03

Priority Junction Analysis

Junction: Tai Shu Ha Road West / Tai Shu Ha Road East / Tai Tong Road
 Design Year: 2031 Job Number: J7231 Date: 18 Jan 2023
 Scheme: Future Condition (With Proposed Development) Page 15



Geometry :

$Y = 1 - 0.0345W$

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

where 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

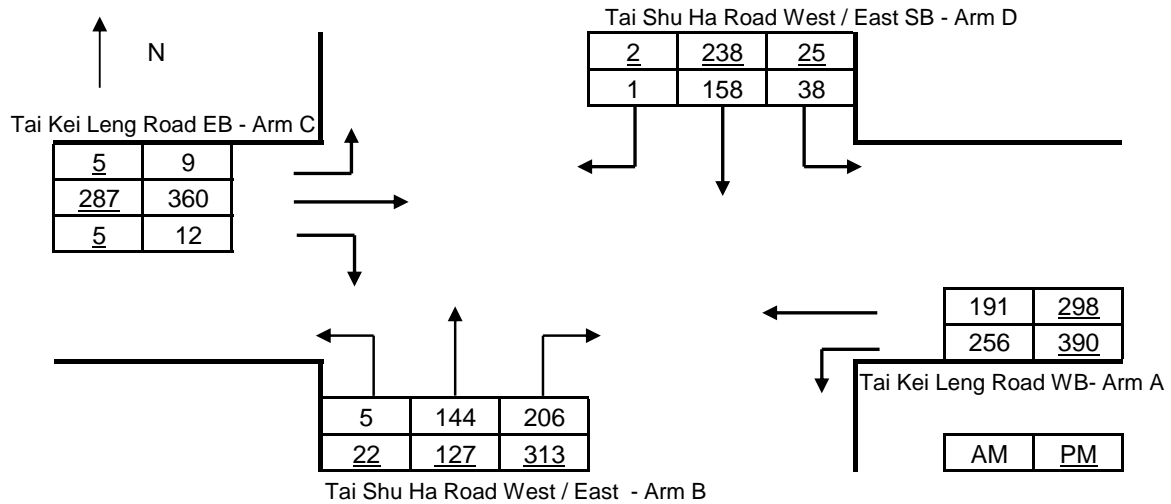
	Input		Input		Input		Input	
	W	7.50	V-CB	200	V-AD	200	w-BA	3.50
Geometry :	W-CR	0.00	V-lBA	25	V-IDC	22	w-BC	3.60
	W-CB	3.75	V-rBC	142	V-rDA	63	w-DA	5.00
	W-AD	3.75					w-DC	5.00

	Traffic Flows, pcu/min	AM	PM		Capacity, pcu/min	AM	PM
Analysis :	q-B-CD	0.68	0.73		Q-B-CD	6.12	6.68
	q-B-AD	2.03	1.64		Q-A-AD	6.13	6.09
	q-A-BCD	1.02	0.77		Q-A-BCD	15.01	15.70
	q-A-B	2.86	3.11		Q-A-B		
	q-A-C	5.08	5.39		Q-A-C		
	q-D-ABC	2.95	4.57		Q-D-ABC	6.94	7.26
	q-C-ABD	0.58	0.37		Q-C-ABD	15.51	14.00
	q-C-D	2.26	1.57		Q-C-D		
	q-C-A	6.53	5.29		Q-C-A		

Ratio-of-flow to Capacity		AM	PM
	B-CD	0.11	0.11
	B-AD	0.33	0.27
	A-BCD	0.07	0.05
	D-ABC	0.43	0.63
	C-ABD	0.04	0.03

Priority Junction Analysis

Junction: Tai Shu Ha Road West / Tai Shu Ha Road East / Tai Kei Leng Road
 Design Year: 2022 Job Number: J7231 Date: 18 Jan 2023
 Scheme: Existing Condition Page 16



$$Y = 1 - 0.0345W$$

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

where 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

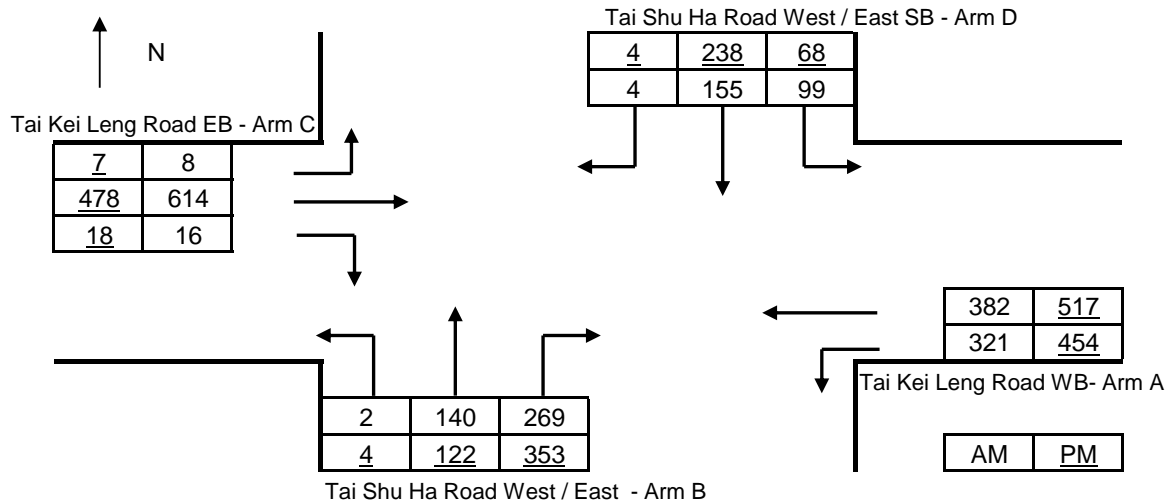
Geometry :	Input	Input	Input	Input
	W 7.00	V-CB 200	V-AD 200	w-BA 3.60
	W-CR 0.00	V-IBA 41	V-IDC 30	w-BC 3.60
	W-CB 3.50	V-rBC 132	V-rDA 42	w-DA 3.40
	W-AD 3.50			w-DC 3.40

Traffic Flows, pcu/min	AM	PM	Capacity, pcu/min	AM	PM
Analysis : q-B-ACD	6.51	8.48	Q-B-ACD	6.70	5.90
q-A-BCD	0.00	0.00	Q-A-BCD	9.68	10.09
q-A-B	4.70	7.16	Q-A-B		
q-A-C	3.50	5.47	Q-A-C		
q-D-ABC	3.62	4.86	Q-D-ABC	6.47	5.93
q-C-ABD	0.43	0.16	Q-C-ABD	14.05	12.15
q-C-D	0.16	0.09	Q-C-D		
q-C-A	6.41	5.19	Q-C-A		

Ratio-of-flow to Capacity	AM	PM
B-ACD	0.97	1.44
A-BCD	0.00	0.00
D-ABC	0.56	0.82
C-ABD	0.03	0.01

Priority Junction Analysis

Junction: Tai Shu Ha Road West / Tai Shu Ha Road East / Tai Kei Leng Road
 Design Year: 2031 Job Number: J7231 Date: 18 Jan 2023
 Scheme: Future Condition (With Permitted Scheme) Page 17



$$Y = 1 - 0.0345W$$

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

where 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

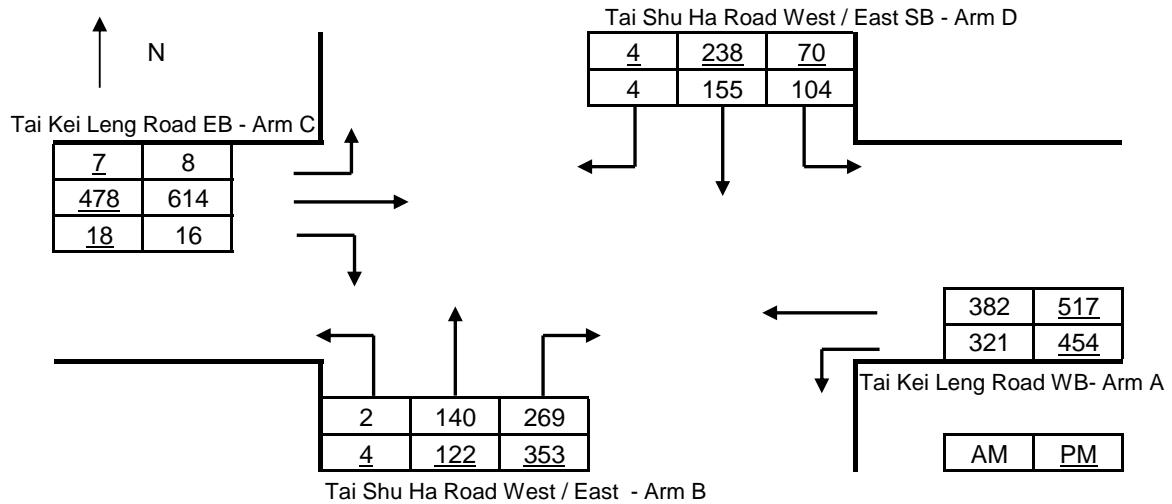
Geometry :	Input	Input	Input	Input
	W 7.00	V-CB 200	V-AD 200	w-BA 3.60
	W-CR 0.00	V-IBA 41	V-IDC 30	w-BC 3.60
	W-CB 3.50	V-rBC 132	V-rDA 42	w-DA 3.40
	W-AD 3.50			w-DC 3.40

Traffic Flows, pcu/min	AM	PM	Capacity, pcu/min	AM	PM
Analysis : q-B-ACD	7.54	8.79	Q-B-ACD	4.52	3.45
q-A-BCD	0.00	0.00	Q-A-BCD	8.47	9.10
q-A-B	5.89	8.33	Q-A-B		
q-A-C	7.01	9.49	Q-A-C		
q-D-ABC	4.73	5.69	Q-D-ABC	5.18	4.60
q-C-ABD	0.96	0.94	Q-C-ABD	16.50	13.79
q-C-D	0.14	0.12	Q-C-D		
q-C-A	10.61	8.17	Q-C-A		

Ratio-of-flow to Capacity	AM	PM
B-ACD	1.67	2.55
A-BCD	0.00	0.00
D-ABC	0.91	1.24
C-ABD	0.06	0.07

Priority Junction Analysis

Junction: Tai Shu Ha Road West / Tai Shu Ha Road East / Tai Kei Leng Road
 Design Year: 2031 Job Number: J7231 Date: 18 Jan 2023
 Scheme: Future Condition (With Proposed Development) Page 18



Geometry :

$Y = 1 - 0.0345W$

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

where 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

	Input		Input		Input		Input	
	W	7.00	V-CB	200	V-AD	200	w-BA	3.60
Geometry :	W-CR	0.00	V-IBA	41	V-IDC	30	w-BC	3.60
	W-CB	3.50	V-rBC	132	V-rDA	42	w-DA	3.40
	W-AD	3.50					w-DC	3.40

	Traffic Flows, pcu/min	AM	PM		Capacity, pcu/min	AM	PM
Analysis :	q-B-ACD	7.54	8.79		Q-B-ACD	4.49	3.44
	q-A-BCD	0.00	0.00		Q-A-BCD	8.47	9.10
	q-A-B	5.89	8.33		Q-A-B		
	q-A-C	7.01	9.49		Q-A-C		
	q-D-ABC	4.83	5.73		Q-D-ABC	5.22	4.61
	q-C-ABD	0.96	0.94		Q-C-ABD	16.50	13.79
	q-C-D	0.14	0.12		Q-C-D		
	q-C-A	10.61	8.17		Q-C-A		

Ratio-of-flow to Capacity		AM	PM
	B-ACD	1.68	2.56
	A-BCD	0.00	0.00
	D-ABC	0.93	1.24
	C-ABD	0.06	0.07

Signal Junction Analysis

Junction: Tai Shu Ha Road West / Tai Shu Ha Road East / Tai Kei Leng Road
 Scenario: Future Condition with Road Improvement Scheme (With Permitted Scheme)
 Design Year: 2031 Designed By: _____ Checked By: _____

Job Number: J7231
 P. 17
 Date: 18 Jan 2023

Approach	Nearside	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak				
							Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Tai Kei Leng Road	LT	A1	1,4	4.00	20.0		100	1874	321	0.171		100	1874	454	0.242	
WB	SA	A2	1	3.65				2120	191	0.090	0.090		2120	259	0.122	0.122
	SA	A3	1	3.65				2120	191	0.090			2120	258	0.122	
Tai Shu Ha Road East	LT+SA	B1	2	3.40	15.0		40	1880	258	0.137	0.137	23	1911	310	0.162	0.162
SB	+RT															
Tai Kei Leng Road	LT+SA	C1	3	3.65	10.0		3	1971	315	0.160	0.160	3	1971	251	0.127	
EB	SA+RT	C2	3	3.65			5	2120	339	0.160		7	2120	270	0.127	0.127
Tai Shu Ha Road East	LT+SA	D1	4	3.38	13.0		33	1881	209	0.111	0.111	49	1848	241	0.130	0.130
NB	+RT															
	RT	D2	4	3.37	10.0		100	1819	202	0.111		100	1819	238	0.131	
pedestrian phase		Fp	1,2,4			min crossing time =	6	sec GM +	8	sec FGM =	14	sec				
		Gp	1,2			min crossing time =	10	sec GM +	11	sec FGM =	21	sec				
		Hp	1,3,4			min crossing time =	6	sec GM +	8	sec FGM =	14	sec				
		Ip	1			min crossing time =	7	sec GM +	9	sec FGM =	16	sec				
		Jp	1,2,3			min crossing time =	10	sec GM +	11	sec FGM =	21	sec				
		Kp	2,3,4			min crossing time =	7	sec GM +	9	sec FGM =	16	sec				
		Lp	2,3			min crossing time =	7	sec GM +	8	sec FGM =	15	sec				
		Mp	1			min crossing time =	6	sec GM +	8	sec FGM =	14	sec				
		Np	1			min crossing time =	8	sec GM +	10	sec FGM =	18	sec				

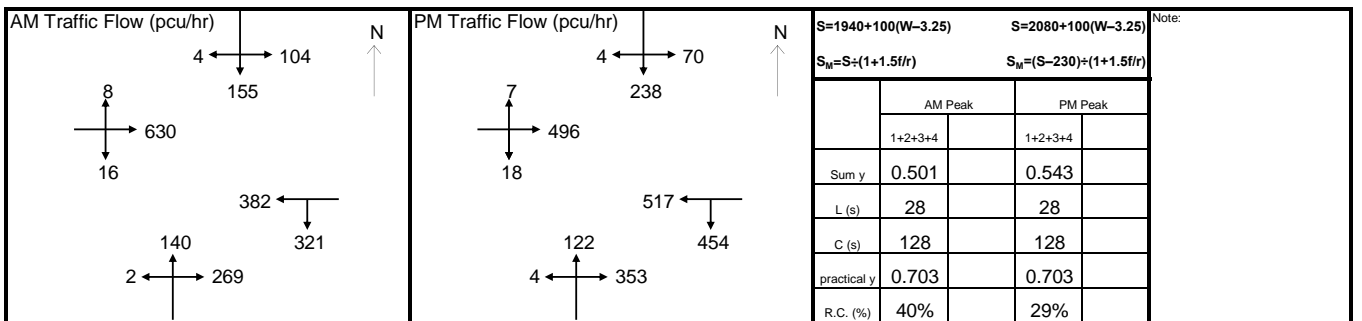
<p>AM Traffic Flow (pcu/hr)</p>	<p>PM Traffic Flow (pcu/hr)</p>	<p>S=1940+100(W-3.25) S=2080+100(W-3.25) Note:</p> <p>S_w=S*(1+1.5f/r) S_w=(S-230)*(1+1.5f/r)</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2"></th> <th>AM Peak</th> <th>PM Peak</th> </tr> <tr> <th>1+2+3+4</th> <th>1+2+3+4</th> </tr> </thead> <tbody> <tr> <td>Sum y</td> <td>0.498</td> <td>0.542</td> </tr> <tr> <td>L (s)</td> <td>28</td> <td>28</td> </tr> <tr> <td>C (s)</td> <td>128</td> <td>128</td> </tr> <tr> <td>practical y</td> <td>0.703</td> <td>0.703</td> </tr> <tr> <td>R.C. (%)</td> <td>41%</td> <td>30%</td> </tr> </tbody> </table>		AM Peak	PM Peak	1+2+3+4	1+2+3+4	Sum y	0.498	0.542	L (s)	28	28	C (s)	128	128	practical y	0.703	0.703	R.C. (%)	41%	30%
	AM Peak	PM Peak																				
	1+2+3+4	1+2+3+4																				
Sum y	0.498	0.542																				
L (s)	28	28																				
C (s)	128	128																				
practical y	0.703	0.703																				
R.C. (%)	41%	30%																				

1	2	3	4	5
AM	G = I/G = 6	G = I/G = 10	G = I/G = 6	G = I/G = 10
PM	G = I/G = 6	G = I/G = 10	G = I/G = 6	G = I/G = 10

Signal Junction Analysis

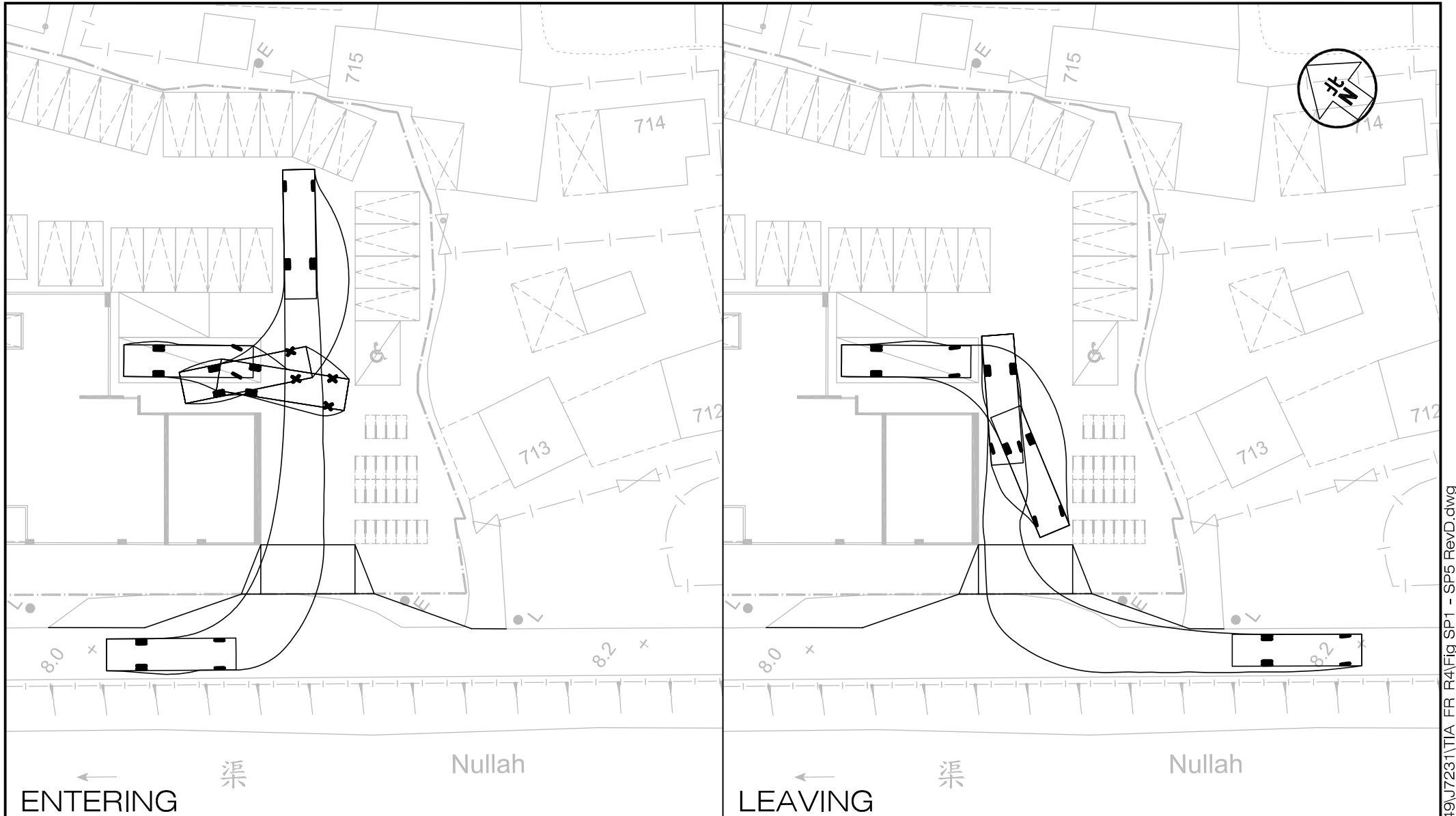
Junction: Tai Shu Ha Road West / Tai Shu Ha Road East / Tai Kei Leng Road Job Number: J7231
 Scenario: Future Condition with Road Improvement Scheme (With Proposed Development) P. 18
 Design Year: 2031 Designed By: _____ Checked By: _____ Date: 18 Jan 2023

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak				
						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Tai Kei Leng Road	LT	A1	1,4	4.00	20.0	100	1874	321	0.171		100	1874	454	0.242	
WB	SA	A2	1	3.65			2120	191	0.090	0.090		2120	259	0.122	0.122
	SA	A3	1	3.65			2120	191	0.090			2120	258	0.122	
Tai Shu Ha Road East	LT+SA	B1	2	3.40	15.0	41	1878	263	0.140	0.140	24	1909	312	0.163	0.163
SB	+RT														
Tai Kei Leng Road	LT+SA	C1	3	3.65	10.0	3	1971	315	0.160	0.160	3	1971	251	0.127	
EB	SA+RT	C2	3	3.65		5	2120	339	0.160		7	2120	270	0.127	0.127
Tai Shu Ha Road East	LT+SA	D1	4	3.38	13.0	33	1881	209	0.111	0.111	49	1848	241	0.130	0.130
NB	+RT														
	RT	D2	4	3.37	10.0	100	1819	202	0.111		100	1819	238	0.131	
pedestrian phase		Fp	1,2,4				min crossing time = 6	sec GM + 8				sec FGM = 14	sec		
		Gp	1,2				min crossing time = 10	sec GM + 11				sec FGM = 21	sec		
		Hp	1,3,4				min crossing time = 6	sec GM + 8				sec FGM = 14	sec		
		Ip	1				min crossing time = 7	sec GM + 9				sec FGM = 16	sec		
		Jp	1,2,3				min crossing time = 10	sec GM + 11				sec FGM = 21	sec		
		Kp	2,3,4				min crossing time = 7	sec GM + 9				sec FGM = 16	sec		
		Lp	2,3				min crossing time = 7	sec GM + 8				sec FGM = 15	sec		
		Mp	1				min crossing time = 6	sec GM + 8				sec FGM = 14	sec		
		Np	1				min crossing time = 8	sec GM + 10				sec FGM = 18	sec		



1	2	3	4	5
AM	G = I/G = 6	G = I/G = 10	G = I/G = 6	G = I/G = 10
PM	G = I/G = 6	G = I/G = 10	G = I/G = 6	G = I/G = 10

Appendix B – Swept Path Analysis



Project Title PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT
 LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART),
 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG J7231

Figure No. SP1
 Revision D

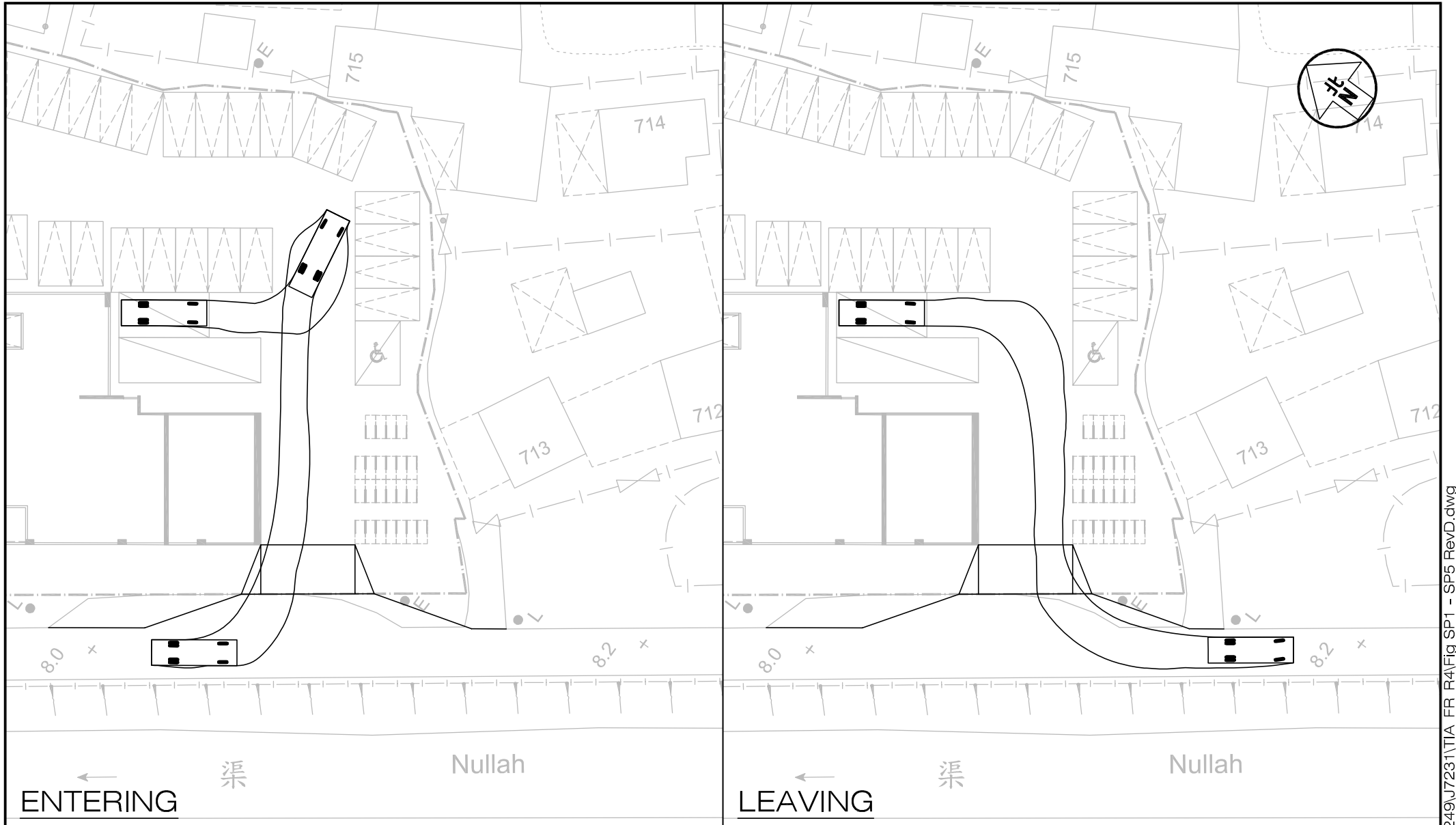
CKM Asia Limited
 Traffic and Transportation Planning Consultants

Figure Title
**SWEPT PATH OF HGV ENTERING AND LEAVING
 THE LOADING / UNLOADING BAY**

Designed by L K W
 Drawn by W S W
 Checked by K C
 Scale in A4 1 : 400
 Date 28 MAR 2023

21st Floor, Methodist House, 36 Hennessy Road,
 Wan Chai, Hong Kong
 Tel : (852) 2520 5990 Fax : (852) 2528 6343
 Email : mail@ckmasia.com.hk

T:\JOB\J7200-J7249\J7231\TIA_FR_R4\Fig.SP1 - SP5 RevD.dwg



Project Title PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG J7231

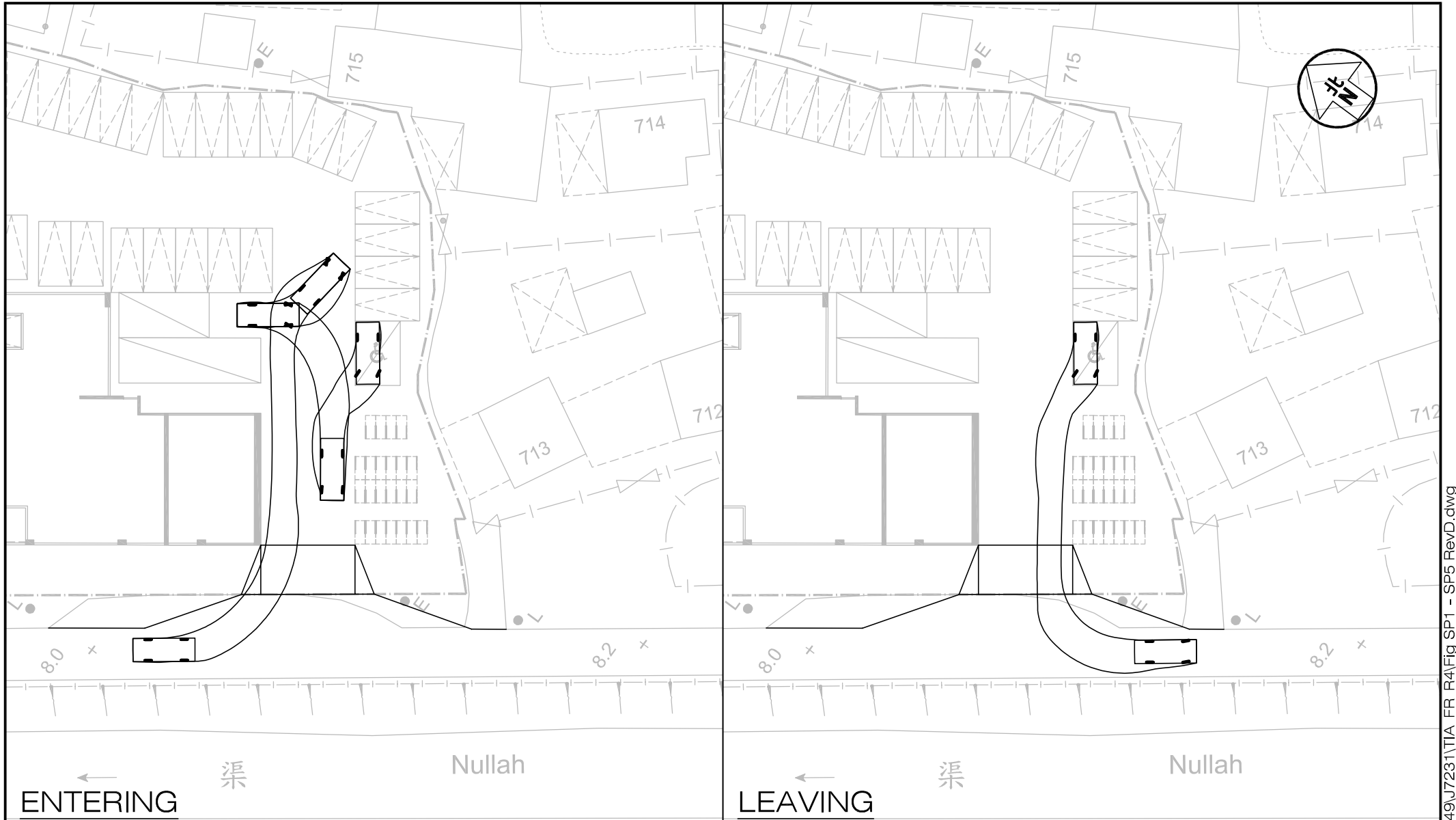
Figure No. SP2 Revision D

CKM Asia Limited
Traffic and Transportation Planning Consultants

Figure Title **SWEPT PATH OF LGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY**

Designed by L K W
Drawn by W S W
Checked by K C
Scale in A4 1 : 400
Date 28 MAR 2023

21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk



Project Title PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG J7231

Figure No. SP3
Revision D

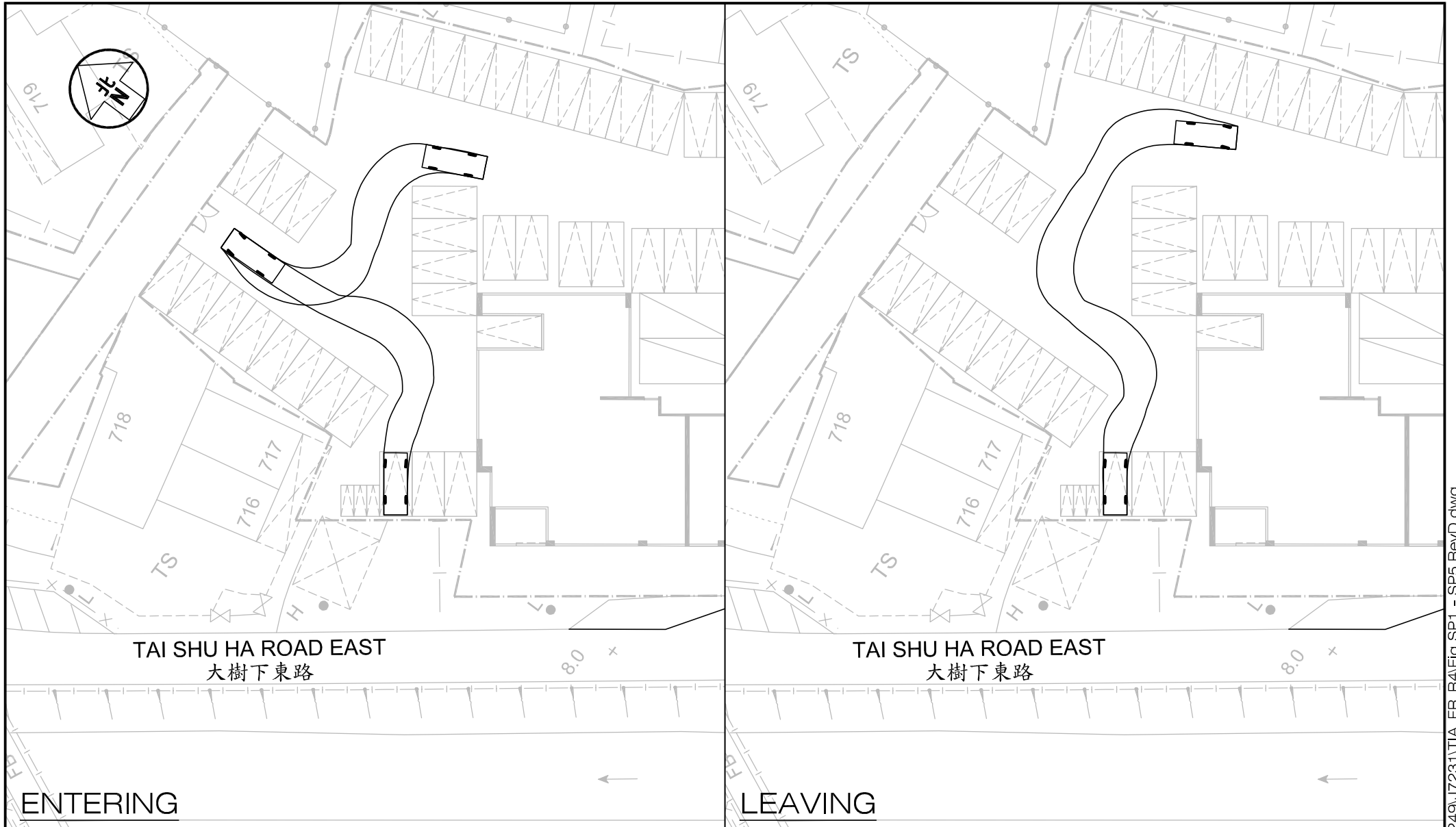
CKM Asia Limited
Traffic and Transportation Planning Consultants

Figure Title
SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE

Designed by L K W
Drawn by W S W
Checked by K C
Scale in A4 1 : 400
Date 28 MAR 2023

21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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TAI SHU HA ROAD EAST
大樹下東路

TAI SHU HA ROAD EAST
大樹下東路

8.0 x

8.0 x

ENTERING

LEAVING

Project Title PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG J7231

Figure No. SP4
Revision D

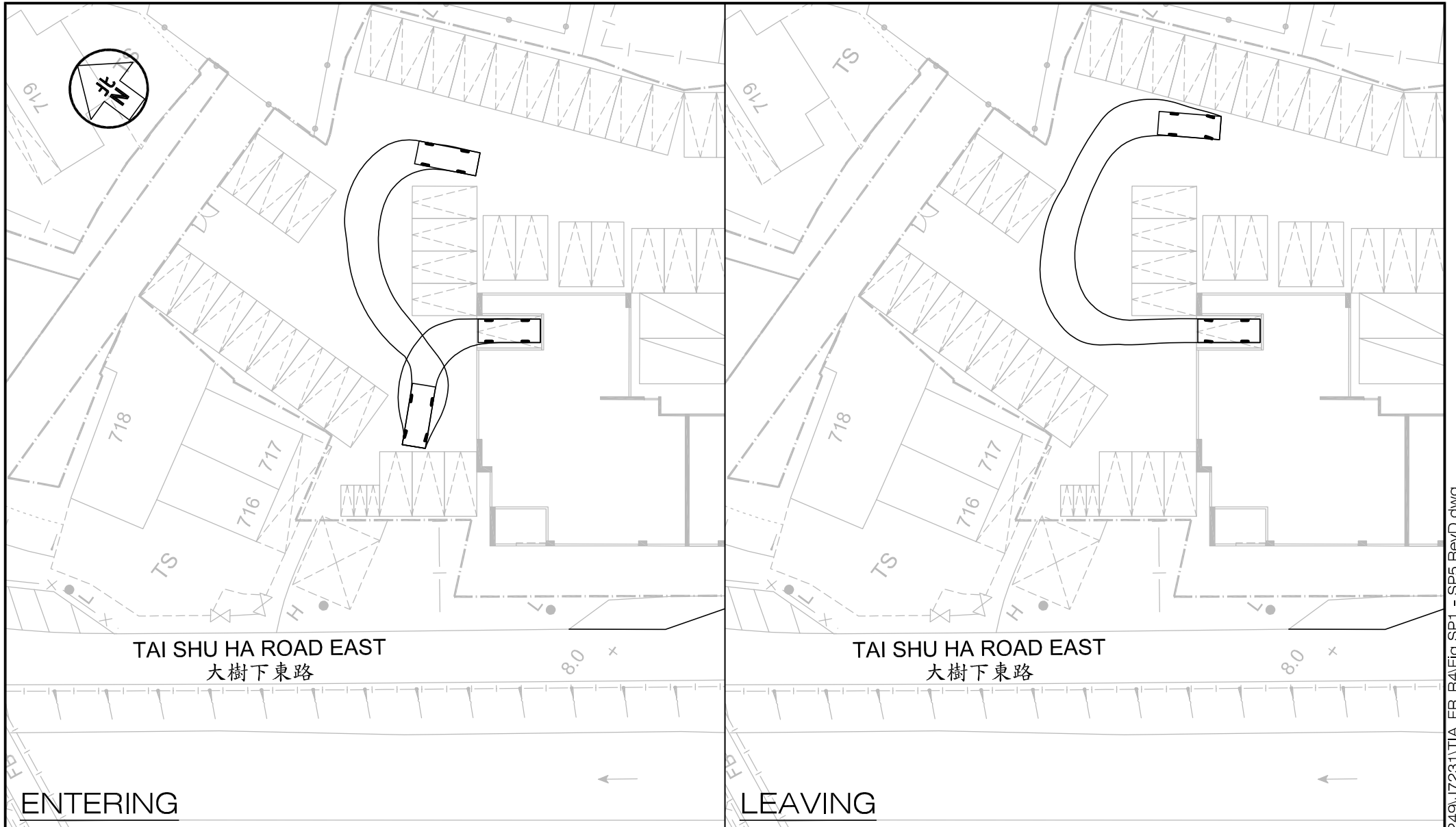
CKM Asia Limited
Traffic and Transportation Planning Consultants

Figure Title
SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE

Designed by L K W
Drawn by W S W
Checked by K C
Scale in A4 1 : 400
Date 28 MAR 2023

21st Floor, Methodist House, 36 Hennessy Road,
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Project Title **PROPOSED FLAT AND SHOP AND SERVICES USES WITH MINOR RELAXATION OF PLOT RATIO RESTRICTION AT LOTS 4614 AND 4615RP IN DD116, AND LOTS 1753SBRP (PART), 1753SBSS3 (PART), 1756SA (PART), 1756RP (PART), 1757, 1758RP, 1760RP IN DD120, AND ADJOINING GOVERNMENT LAND, TAI KEI LENG, YUEN LONG** J7231

Figure Title **SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE**

Figure No.	SP5		Revision	D
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				K C
Scale in A4	1 : 400		Date	28 MAR 2023

CKM Asia Limited
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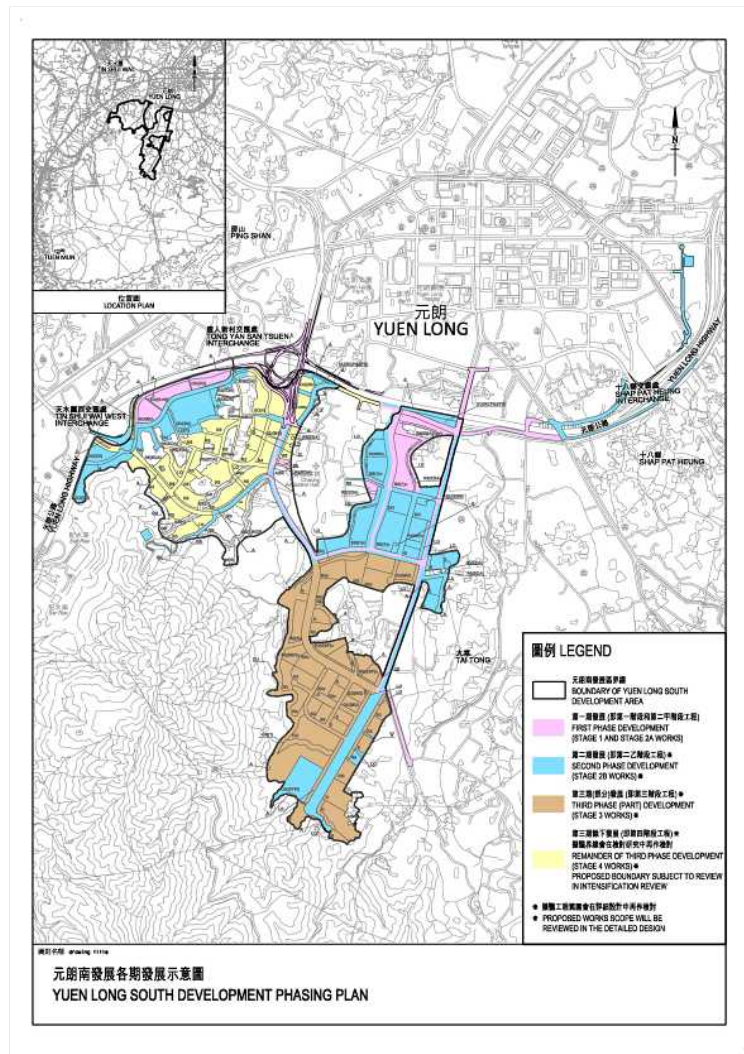


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YUEN LONG SOUTH DEVELOPMENT AREA

Development Phasing

The phasing plan and key figures of the Yuen Long South Development key figures are provided below:



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Last Review Date: 20/04/2022

	First Phase Development	Second Phase Development	Third Phase Development [#]	Entire Development [#]
Development area	22 ha	63 ha	100 ha	185 ha
Housing yield (public/private)	4 300 units (4 300/Nil)	12 600 units (12 600/Nil)	16 000 units (5 400/10 600)	32 900 units (22 300/10 600)
Estimated new population	13 200	38 500	47 000	98 700
Industrial gross floor area	218 400 m ²	278 500 m ²	N/A	496 900 m ²
Commercial gross floor area	16 600 m ²	48 400 m ²	164 900 m ²	229 900 m ²
Estimated new employment	1 700	4 100	7 900	13 700
Private land to be resumed for Development area	15 ha [*]	135 ha		150 ha
Government land to be cleared for Development area	7 ha [*]	28 ha		35 ha
No. of households to be cleared	95	462		557
No. of business undertakings to be cleared	220	644		864
Active farmland to be affected	0.5 ha	4.5 ha		5 ha (Based on the site survey conducted in 2013 under the "Planning and Engineering Study for Housing Sites in Yuen Long South – Investigation")
Timing for site formation and engineering infrastructure works	2022 - 2028	2025 - 2031 tentative	2029 – 2033/2038 tentative	2022 - 2038 tentative

Footnote:

[#] The development area, development intensity and flat yield of the Third Phase development and accordingly the entire development will be subject to change pending the Intensification Review.

^{*} Not including about 31 ha of affected area (27 ha government land and 4 ha private land) mainly for roadworks outside the boundary of YLS Development.

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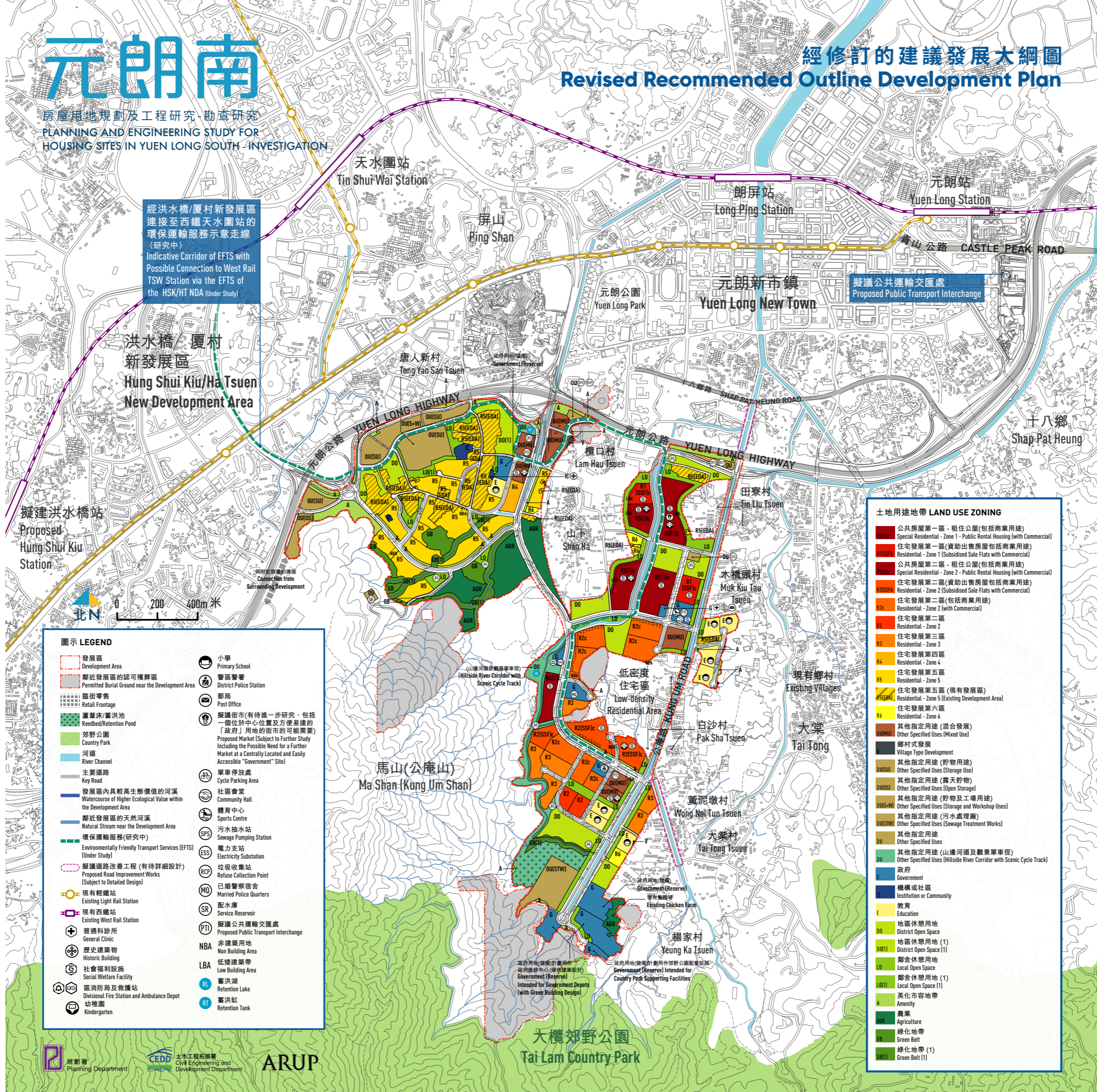
Best viewed with Google Chrome / Microsoft Edge.



元朗南

房屋用地規劃及工程研究- 調查研究
 PLANNING AND ENGINEERING STUDY FOR
 HOUSING SITES IN YUEN LONG SOUTH - INVESTIGATION

經修訂的建議發展大綱圖 Revised Recommended Outline Development Plan



經洪水橋/厦村新發展區
 連接至西鐵天水圍站的
 環保運輸服務示意走線
 (研究中)
 Indicative Corridor of EFTS with
 Possible Connection to West Rail
 TSW Station via the EFTS of
 the HSK/HT NDA (Under Study)

洪水橋/厦村
 新發展區
 Hung Shui Kiu/Ha Tsuen
 New Development Area

擬建洪水橋站
 Proposed
 Hung Shui Kiu
 Station



圖示 LEGEND	
	發展區 Development Area
	鄰近發展區的認可殮葬區 Permitted Burial Ground near the Development Area
	臨街零售 Retail Frontage
	蘆葦床/蓄洪池 Reedbed/Retention Pond
	郊野公園 Country Park
	河道 River Channel
	主要道路 Key Road
	發展區內具較高生態價值的河渠 Watercourse of Higher Ecological Value within the Development Area
	鄰近發展區的自然河渠 Natural Stream near the Development Area
	環保運輸服務(研究中) Environmentally Friendly Transport Services (EFTS) (Under Study)
	擬議道路改善工程(有待詳細設計) Proposed Road Improvement Works (Subject to Detailed Design)
	現有輕鐵站 Existing Light Rail Station
	現有西鐵站 Existing West Rail Station
	普通科診所 General Clinic
	歷史建築物 Historic Building
	社會福利設施 Social Welfare Facility
	區消防局及救護站 Divisional Fire Station and Ambulance Depot
	幼稚園 Kindergarten
	小學 Primary School
	警區警署 District Police Station
	郵局 Post Office
	擬議街市(有待進一步研究, 包括一個位於中心位置及方便易達的「政府」用地的街市的可能需要) Proposed Market (Subject to Further Study Including the Possible Need for a Further Market at a Centrally Located and Easily Accessible "Government" Site)
	單車停放處 Cycle Parking Area
	社區會堂 Community Hall
	體育中心 Sports Centre
	污水抽水站 Sewage Pumping Station
	電力站 Electricity Substation
	垃圾收集站 Refuse Collection Point
	已婚警察宿舍 Married Police Quarters
	配水庫 Service Reservoir
	擬議公共運輸交匯處 Proposed Public Transport Interchange
	非建築用地 Non Building Area
	低矮建築帶 Low Building Area
	蓄洪湖 Retention Lake
	蓄洪缸 Retention Tank

土地用途地帶 LAND USE ZONING	
	公共房屋第一區 - 租住公屋(包括商業用途) Special Residential - Zone 1 - Public Rental Housing (with Commercial)
	住宅發展第一區(資助出售房屋包括商業用途) Residential - Zone 1 (Subsidised Sale Flats with Commercial)
	公共房屋第二區 - 租住公屋(包括商業用途) Special Residential - Zone 2 - Public Rental Housing (with Commercial)
	住宅發展第二區(資助出售房屋包括商業用途) Residential - Zone 2 (Subsidised Sale Flats with Commercial)
	住宅發展第二區(包括商業用途) Residential - Zone 2 (with Commercial)
	住宅發展第二區 Residential - Zone 2
	住宅發展第三區 Residential - Zone 3
	住宅發展第四區 Residential - Zone 4
	住宅發展第五區 Residential - Zone 5
	住宅發展第五區(現有發展區) Residential - Zone 5 (Existing Development Area)
	住宅發展第六區 Residential - Zone 6
	其他指定用途(混合發展) Other Specified Uses (Mixed Use)
	鄉村式發展 Village Type Development
	其他指定用途(貯物用途) Other Specified Uses (Storage Use)
	其他指定用途(露天貯物) Other Specified Uses (Open Storage)
	其他指定用途(貯物及工場用途) Other Specified Uses (Storage and Workshop Uses)
	其他指定用途(污水處理廠) Other Specified Uses (Sewage Treatment Works)
	其他指定用途 Other Specified Uses
	其他指定用途(山邊河道及觀景單車徑) Other Specified Uses (Hillside River Corridor with Scenic Cycle Track)
	政府 Government
	機構或社區 Institution or Community
	教育 Education
	地區休憩用地 District Open Space
	地區休憩用地(1) District Open Space (1)
	地區休憩用地(1) District Open Space (1)
	鄰舍休憩用地 Local Open Space
	鄰舍休憩用地(1) Local Open Space (1)
	美化市容地帶 Amenity
	農業 Agriculture
	綠化地帶 Green Belt
	綠化地帶(1) Green Belt (1)

**Appendix D – Extract of Site Formation
and Infrastructure Works for Proposed
Public Housing Developments at Sha
Po, Shap Pat Heung and Tai Kei Leng**

元朗區議會會議

擬議修訂《錦田北分區計劃大綱核准圖編號 S/YL-KTN/9》

及

元朗沙埔公營房屋發展計劃

1. 目的

本文件旨在向各議員徵詢有關《錦田北分區計劃大綱核准圖編號 S/YL-KTN/9》(下稱《大綱圖》)，就元朗沙埔棕地群作公營房屋及社區用地發展計劃所擬議的修訂項目(圖 1)，以及該公營房屋發展計劃(圖 2)的意見。

2. 前言

- 2.1 2017 年 4 月，規劃署展開《新界棕地使用及作業現況研究—可行性研究》(下稱《棕地研究》)，以掌握新界各處棕地的狀況、了解有關主要行業的運作細節，以及探討相關的主要課題。2019 年 11 月，規劃署公布《棕地研究》的結果，該研究指出在 1 579 公頃棕地當中，共有 450 公頃未有發展計劃、但具較高發展潛力的棕地。
- 2.2 為配合行政長官於《2019 年施政報告》中提出增加土地供應以回應市民對房屋迫切需要的目標，規劃署分階段檢視這 450 公頃棕地，以評估當中有多少適合作短、中期公營房屋發展。規劃署於 2019 年完成檢視首階段 160 公頃較接近現有基建設施的棕地，並於元朗、屯門及大埔物色了八組具潛力在短、中期作較高密度公營房屋發展的棕地群，位於元朗沙埔的棕地群是其中之一。
- 2.3 2020 年 7 月，土木工程拓展署(下稱土拓署)就擬議在元朗沙埔棕地群發展公營房屋及社區用地的計劃展開工程可行性研究。有關研究已進行一系列技術評估，以確保擬議的發展計劃在實施所需的緩解措施後不會帶來重大的影響。

2.4 上述的發展計劃位於元朗沙埔村以北，新田公路及新潭路以東，模範鄉以南及逢吉鄉以西。擬議發展用地在《大綱圖》上現劃為「工業(丁類)」地帶及「農業」地帶，現時主要為一些棕地作業（包括露天貯物場、工場和倉庫）及鄉郊民居。擬議發展用地面積約為 15.9 公頃，當中約 11.8 公頃的土地為擬議公營房屋發展用地，其總地積比率為 6.7 倍，預計可興建約 16 300 個公營房屋單位。

3. 擬議《大綱圖》修訂項目及相關發展計劃

3.1 擬議發展的初步主要發展參數¹ 概述如下(公營房屋發展計劃概念設計見圖 2):

擬議發展用地面積	約 15.9 公頃
擬議房屋發展用地面積	約 11.8 公頃
擬議房屋發展總地積比率	不超過 6.7 倍
擬議樓宇高度	不高於主水平基準上 185 米
擬建單位數目	約 16 300 個單位
預計人口	約 46 000 人
康樂設施	參照《香港規劃標準與準則》的指引，提供休憩及兒童遊樂設施、綠化空間等。
泊車設施	參照《香港規劃標準與準則》的指引，提供附屬泊車設施。
其他設施	擬議發展用地內提供一間小學、消防局、警局、康樂體育中心、小型足球場、綜合公共交通交匯處、零售設施、停車場、幼稚園及社會福利設施。
公營房屋發展的預計竣工年份	2031 ²

¹ 發展參數及附件只供參考，有關公營房屋及社區用地發展計劃的細節尚待詳細規劃及於設計階段與相關部門磋商。

² 公營房屋發展的預計竣工年份須視乎實際情況或須有所修訂，例如有關地盤能否如期移交香港房屋委員會等。

- 3.2 為配合上述發展計劃，政府當局現建議把該用地由「工業(丁類)」地帶及「農業」地帶改劃為「住宅(甲類)」地帶(修訂項目A項)及「政府、機構或社區」地帶(修訂項目B項)(圖3)。此外，我們建議把不被納入發展計劃的「上將府」等建築物的用地由「工業(丁類)」地帶改劃作「住宅(丙類)3」地帶(修訂項目C項)(圖3)，以反映有關建築物目前的用途。
- 3.3 根據土拓署所委託顧問進行的工程可行性研究，預期元朗沙埔公營房屋及社區用地發展項目不會對附近地區的交通及運輸、環境、排污、排水、供水、視覺、景觀及空氣流通等方面帶來無法克服的技術問題。交通及運輸影響評估結果顯示，在實施了建議的交通改善措施後，擬議發展對整體交通及運輸不會帶來重大的影響。在視覺及空氣流通方面，透過合適的布局、座向和間距規劃，擬議建築物會保持相當的通透性。適當的園林及建築設計亦會為居民提供理想的生活環境。

4. 徵詢意見

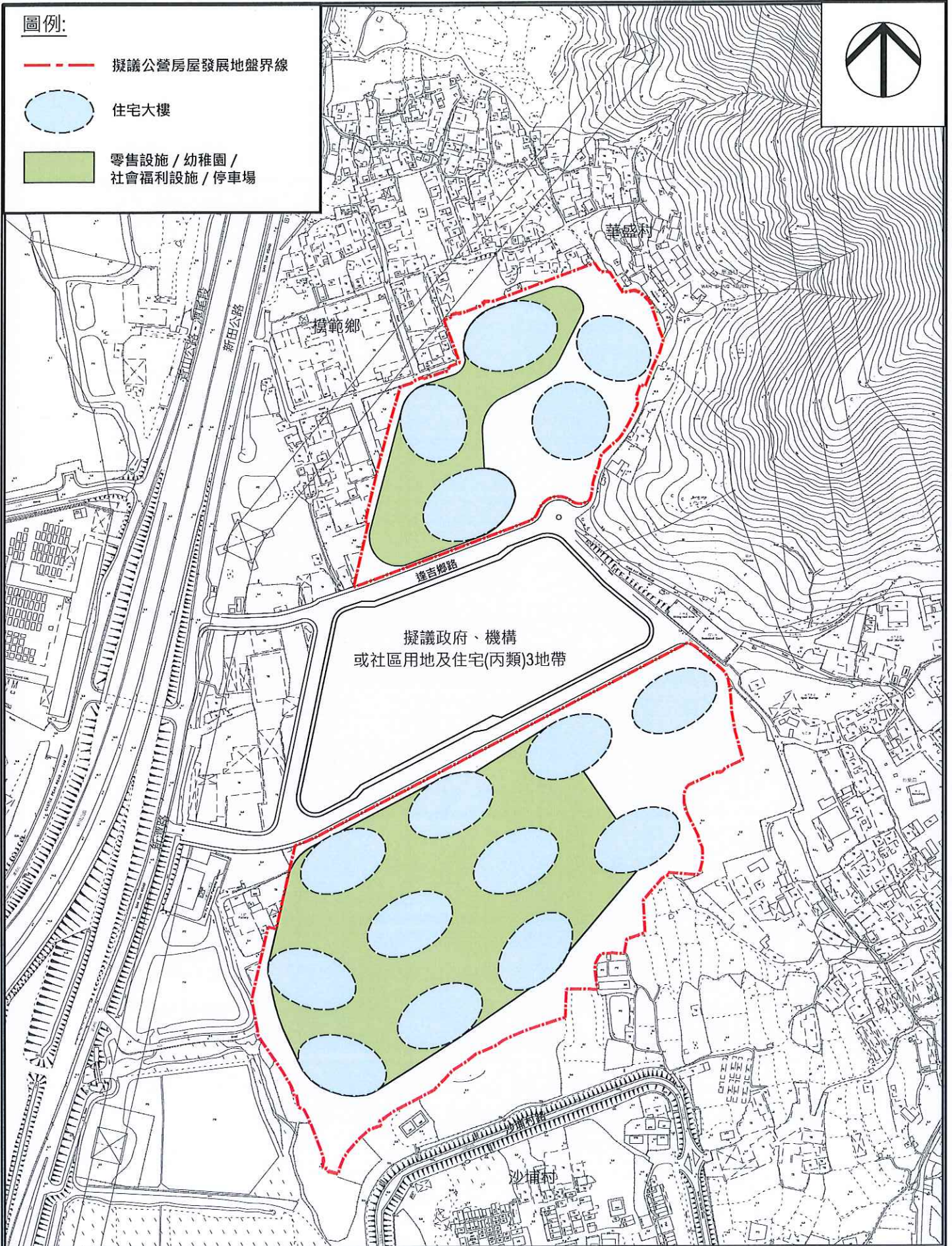
歡迎各位議員對上述擬議《大綱圖》修訂項目及公營房屋發展計劃提出意見。議員就《大綱圖》修訂項目提出的意見，將會與修訂項目和政府部門的意見一併提交城市規劃委員會(下稱「城規會」)轄下的鄉郊及新市鎮規劃小組委員會(下稱「小組委員會」)考慮。如小組委員會同意有關擬議修訂項目，城規會將根據《城市規劃條例》第5條展示涵蓋有關修訂項目的分區計劃大綱草圖作公眾諮詢，為期兩個月。屆時，公眾人士可對修訂項目提出申述。至於議員對公營房屋發展計劃的意見，房屋署會在詳細規劃及設計階段考慮。

5. 附件

- 圖 1 位置圖
- 圖 2 擬議公營房屋發展計劃-概念設計圖
- 圖 3 擬議修訂項目

圖例:

- 擬議公營房屋發展地盤界線
- 住宅大樓
- 零售設施 / 幼稚園 / 社會福利設施 / 停車場



元朗沙埔公營房屋發展計劃 - 概念設計圖

(備註: 只供參考, 最終設計會因應需要而更改)



房屋署
HOUSING DEPARTMENT

1:4000 @ A4

圖 2

日期: 10/2022

元朗區議會會議

擬議修訂《元朗分區計劃大綱核准圖編號 S/YL/25》

及

元朗大旗嶺公營房屋發展計劃

1. 目的

本文件旨在向各議員徵詢有關《元朗分區計劃大綱核准圖編號 S/YL/25》(下稱《大綱圖》)，就元朗大旗嶺棕地群作公營房屋發展計劃所擬議的修訂項目(圖 1)，以及該發展計劃(圖 2)的意見。

2. 前言

- 2.1 2017年4月，規劃署展開《新界棕地使用及作業現況研究—可行性研究》(下稱《棕地研究》)，以掌握新界各處棕地的狀況、了解有關主要行業的運作細節，以及探討相關的主要課題。2019年11月，規劃署公布《棕地研究》的結果。該研究指出在1,579公頃棕地當中，共有450公頃未有發展計劃、但具較高發展潛力的棕地。
- 2.2 為配合行政長官於《2019年施政報告》中提出增加土地供應以回應市民對房屋迫切需要的目標，規劃署分階段檢視這450公頃棕地，以評估當中有多少適合作短、中期公營房屋發展。規劃署於2019年完成檢視首階段160公頃較接近現有基建設施的棕地，並於元朗、屯門及大埔物色了八組具潛力在短、中期作較高密度公營房屋發展的棕地群，當中包括位於元朗大旗嶺的棕地群。
- 2.3 2020年7月，土木工程拓展署(下稱土拓署)就擬議在元朗大旗嶺棕地群發展公營房屋的計劃展開工程可行性研究。有關研究已進行一系列技術評估，以確保擬議的發展計劃在實施緩解措施後不會帶來重大的影響。

2.4 擬議發展計劃位於元朗新市鎮的東南面，元朗公路和大旗嶺路以北，及十八鄉交匯處以西。此發展用地在《大綱圖》上現主要劃為「休憩用地」地帶及小部分為「住宅(乙類)」地帶，現時主要為一些棕地作業(包括露天貯物場、停車場、汽車維修工場和倉庫等)及鄉郊民居。擬議發展用地面積及總地積比率分別約為 1.8 公頃及 6.7 倍，預計可興建約 2,300 個公營房屋單位。

3. 擬議《大綱圖》修訂項目及相關發展計劃

3.1 擬議發展的初步主要發展參數¹ 概述如下(公營房屋發展計劃概念設計見圖 2):

擬議房屋發展用地面積	約 1.8 公頃
擬議房屋發展總地積比率	不超過 6.7 倍
擬議樓宇高度	不高於主水平基準上 185 米
擬建單位數目	約 2 300 個單位
預計人口	約 6 440 人
康樂設施	將參照《香港規劃標準與準則》的指引，提供休憩及兒童遊樂設施、綠化空間等。
泊車設施	將參照《香港規劃標準與準則》的指引，提供附屬泊車設施。
其他設施	房屋發展用地外提供巴士專用區。房屋發展用地內提供幼稚園、零售設施、停車場及社會福利設施。
公營房屋發展的預計竣工年份	2031 ²

3.2 為配合上述元朗大旗嶺公營房屋發展計劃，政府當局現建議把該用地由「休憩用地」地帶及「住宅(乙類)」地帶改劃為「住宅(甲類) 6」地帶(修訂項目 A 項)(圖 3)。

¹ 發展參數及附件只供參考，有關公營房屋發展計劃的細節尚待詳細規劃及於設計階段與相關部門磋商。

² 公營房屋發展的預計竣工年份須視乎實際情況或須有所修訂，例如有關地盤能否如期移交香港房屋委員會等。

3.3 根據土拓署所委託顧問進行的工程可行性研究，預期該發展計劃不會對附近地區的交通及運輸、環境、排污、排水、供水、視覺、景觀及空氣流通等方面帶來無法克服的技術問題。根據交通及運輸影響評估結果顯示，在實施了建議的交通改善措施後，擬議發展計劃對整體交通及運輸不會帶來重大的影響。在視覺及空氣流通方面，透過合適的布局、座向和間距規劃，擬議建築物會保持相當的通透性。適當的園林及建築設計亦會為居民提供理想的生活環境。

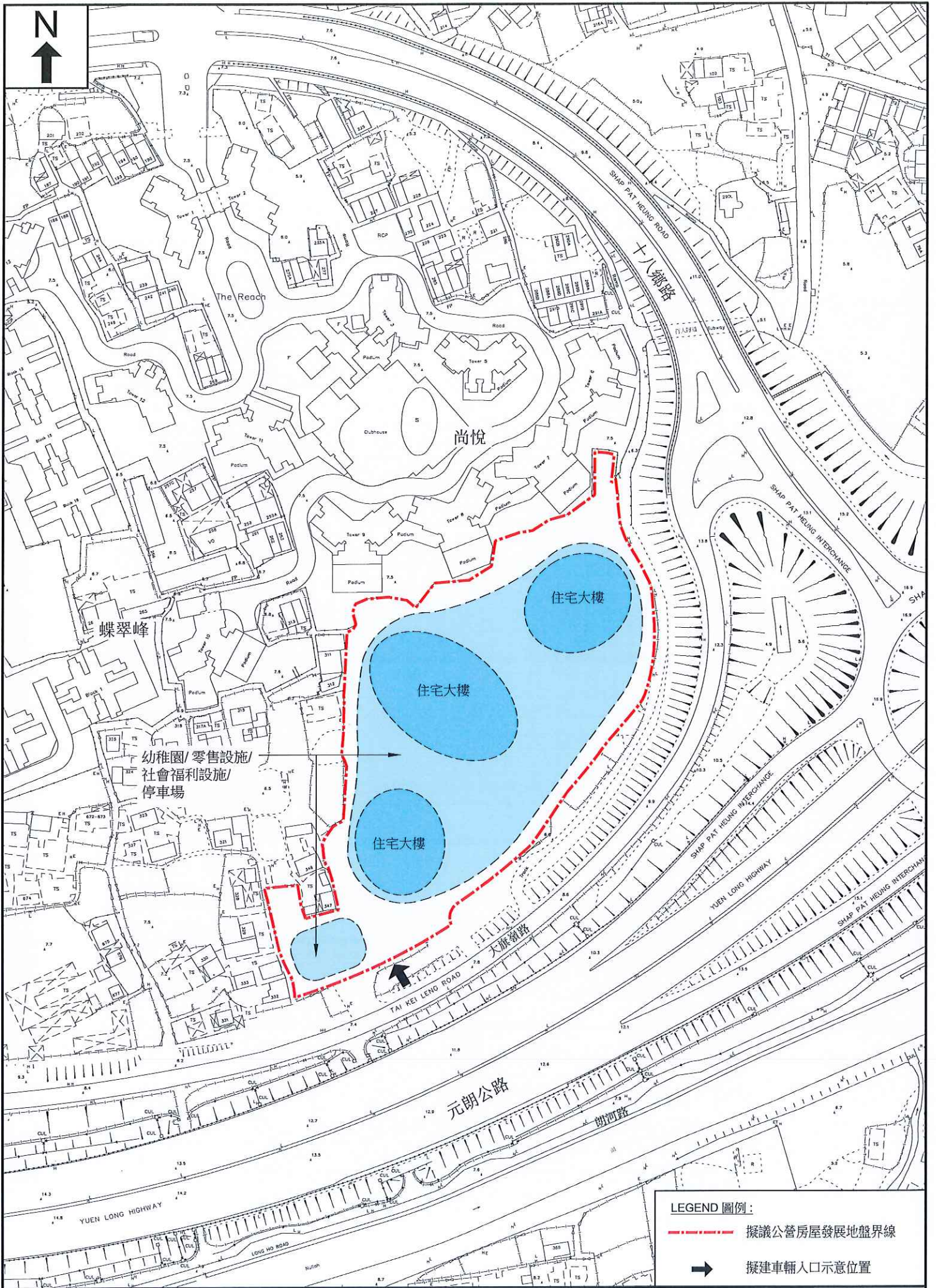
4. 徵詢意見

歡迎各位議員對上述擬議《大綱圖》修訂項目及公營房屋發展計劃提出意見。議員就《大綱圖》有關修訂項目提出的意見，會與修訂項目和政府部門的意見一併提交城市規劃委員會（下稱「城規會」）轄下的鄉郊及新市鎮規劃小組委員會（下稱「小組委員會」）考慮。如小組委員會同意有關擬議修訂項目，城規會將根據《城市規劃條例》第5條展示涵蓋有關修訂項目的分區計劃大綱草圖作公眾諮詢，為期兩個月。屆時，公眾人士可對修訂項目提出申述。至於議員對公營房屋發展計劃的意見，房屋署會與相關政府部門商討，及在詳細規劃及設計階段考慮。

5. 附件

- 圖 1 位置圖
- 圖 2 擬議公營房屋發展計劃 - 概念設計圖
- 圖 3 平面圖

規劃署、土木工程拓展署及房屋署
2022年10月



大旗嶺公營房屋發展計劃 - 概念設計圖

(備註：只供參考，最終設計會因應需要而更改)

1:2000 @ A4

LEGEND 圖例：

- - - - - 擬議公營房屋發展地盤界線
- ➔ 擬建車輛入口示意位置



圖2

日期：
10.2022

元朗區議會

工務計劃項目第 B875CL，B874CL 號及 B873CL 號
元朗沙埔、十八鄉和大旗嶺公營房屋發展
之工地平整和基礎設施工程
- 諮詢擬建公共道路及污水設施

目的

本文件旨在向元朗區議會介紹土木工程拓展署(土拓署)因應元朗沙埔、十八鄉和大旗嶺公營房屋發展計劃所擬建公共道路及排污設施工程。土拓署計劃在進行詳細設計前，徵詢各委員對上述擬建公共道路及排污設施工程的意見。

項目背景

2. 因應社會對公營房屋的殷切需求，政府在不同地區物色適合發展公營房屋的土地，以善用土地資源，推動房屋政策。這些用地包括一幅位於元朗沙埔村以北，新田公路及新潭路以東，模範鄉以南及逢吉鄉以西的用地、一幅位於元朗竹新村以南，元朗公路、十八鄉交匯處及元朗排水繞道以東的用地及一幅位於元朗新市鎮的東南面，元朗公路和大旗嶺路以北，及十八鄉交匯處以西的用地，以發展公營房屋。(位置圖請參閱附件一及附件二)。

3. 為配合上述發展計劃，土拓署已於二零二二年七月展開《元朗沙埔、十八鄉和大旗嶺公營房屋發展之工地平整及基礎設施工程－勘查研究、設計及建造》的顧問合約。有關基礎設施工程包括建造新道路、優化發展用地周邊道路設計及增建連接發展用地與周邊地區的行人過路設施、排污設施及食水和沖廁水供應設施等。為配合上述發展計劃，有關的基礎設施工程將會在公營房屋發展項目入伙前完成。

4. 擬建工地平整及基礎設施工程主要包括以下項目(位置圖載於附件一及附件二)：

- (i) 在發展用地進行工地平整，包括土力及斜坡穩固工程以及興建擋土牆；
- (ii) 興建相關公共道路，包括行車道及行人道等工程，以連接擬建發展；
- (iii) 推展有關發展的相關交通改善工程，包括改善附近的道路、路口及行人過路設施等，以滿足因發展項目所產生的交通需求；及
- (iv) 相關的排水、排污及水務工程。

擬建公共道路、道路改善措施及公共運輸設施工程

(一) 沙埔

5. 顧問公司的初步交通及運輸影響評估中所提出的道路改善措施主要包括將一段由近青山公路－潭美段/新潭路交界處至錦綉花園迴旋處的新潭路由雙線行車擴闊至三到四線不分隔公共行車道(約長 2,000 米)，及擴闊於錦綉花園迴旋處的出入口，以連接計劃中的發展用地和現有公共道路。此外，政府亦會為受道路擴闊工程影響之行人天橋進行改善工程。(位置圖載於附件一)。

6. 為應付擬建發展計劃所增加的交通流量，本工程亦將會包括以下道路及路口改善工程(位置圖載於附件一)：

- (i) 於錦綉花園迴旋處，擴闊青山公路－潭尾段(北行)及新田公路支路(南行)的迴旋處入口，以及增設由新田公路支路(北行)進入青山公路－潭美段(南行)的專用左轉行車路；
- (ii) 於凹頭迴旋處增設一段往青山公路－元朗段東行線的行車路；
- (iii) 擴闊一段由逢吉鄉路往新潭路的連接路；及
- (iv) 於擬建發展用地內增設一條新連接路往新潭路。

7. 此外，擬建發展計劃將因應詳細需求研究提供公共運輸交匯處，以配合該發展項目的公共交通需求。

(二) 十八鄉和大旗嶺

8. 顧問公司的初步交通及運輸影響評估中所提出的道路改善措施主要包括於擬建發展用地內增設一條連接路及擴闊一段通過元朗排水繞道的行車路，以連接計劃中的元朗十八鄉發展用地和現有公共道路。此外，為應付擬議發展計劃所增加的交通流量，有關工程包括改善十八鄉交匯處、大樹下西路／大樹下東路／大旗嶺路交界處、及大樹下西路／大樹下東路／朗河路迴旋處，以配合將來的交通需求(位置圖載於附件二)。

9. 此外，擬建發展計劃將於十八鄉發展用地及於大旗嶺發展用地分別興建巴士總站及巴士專用區，以配合該發展項目的公共交通需求。

10. 為配合上述三項擬議房屋發展及周邊地區的暢達性，政府亦建議於合適位置提供公共運輸工具使用的上落客設施。

11. 總括而言，根據初步交通評估結果，若能在整體公營房屋發展項目入伙前完成相關道路改善工程，預計區內將不會因擬建公營房屋發展項目出現不可接受的交通影響。

擬建排污設施工程

(一) 沙埔

12. 排污影響評估顯示，這項公營房屋發展所產生的污水可以收集至公共污水管道，並輸送至元朗污水處理廠。為配合擬建發展計劃的污水排放需求，現時的沙埔污水泵房需要進行擴建工程。該污水泵房現時採用全封閉模式，並在擴建後繼續採取全封閉模式運作，以減少噪音和氣味的影響。因此，只要採用了建議的污水收集系統及污水處理策略後，擬建房屋發展項目將不會對污水系統方面產生負面影響。有關擬建排污設施的位置圖，請參閱附

件一。

13. 沙埔污水泵房屬於《環境影響評估條例》(第 499 章)的指定工程項目。現時，沙埔污水泵房的建造和營運已根據《環境影響評估條例》取得環境許可證。顧問公司將會在工程的勘查研究、設計及建造階段就沙埔污水泵房擴建工程按照《環境影響評估條例》進行評估程序，確保沙埔污水泵房擴建工程不會對附近環境造成負面影響，並向環境保護署申請更改現有環境許可證後才施工。根據在可行性研究階段已完成的初步環境評審報告，沙埔污水泵房擴建工程預計不會對附近環境造成負面影響。

(二) 十八鄉和大旗嶺

14. 排污影響評估顯示，這項公營房屋發展所產生的污水可以經擬建的污水管道收集至現有公共污水管道，並輸送至新圍污水處理廠，而現有污水網絡可以承受擬議發展項目所增加的污水流量。因此，只要採用了建議的污水收集系統及污水處理策略後，擬建公營房屋發展項目將不會對污水系統方面產生負面影響。有關擬建污水排放設施的位置圖，請參閱附件二。

15. 在施工期間，區內部分道路會分階段實施臨時交通安排。土拓署會要求承建商採取適當措施，包括分階段施工及依據路政署的“道路工程的照明、標誌及防護工作守則”提供足夠及清晰的臨時交通指示等，務求把工程對附近道路交通的影響減至最低。

16. 上述擬建排污設施工程將會於公營房屋發展項目入伙前完成。

土地徵收

17. 為了落實有關的基礎設施工程，當局會根據相關條例，收回工程範圍內的有關的私人土地，並會按現行政策及法例向受影響的土地業權人及有關人士作出補償。

下一步工作

18. 政府計劃就上述擬建的基礎設施工程，預計於二零二三年上半年按《道路(工程、使用及補償)條例》(第 370 章)和《水污染管制(排污設備)規例》(第 358AL 章附屬法例)刊登憲報以諮詢公眾。在工程獲批准後，上述工地平整及基礎設施工程預計在二零二五年動工，並於二零二六年至二零三一年分階段完成，及把平整後的工地轉交給房屋署進行公營房屋發展工程。

19. 土拓署現正進行勘測、設計工作包括進一步的詳細交通影響評估，待法定程序和詳細設計完成後，會向立法會提出撥款申請建造有關擬建工地平整及基礎設施工程，以配合這項公營房屋發展計劃。

意見徵詢

20. 歡迎各位議員對上述擬建公共道路、道路改善措施、公共運輸設施及排污設施工程提供寶貴意見。

附件

附件一 元朗沙埔公營房屋發展之工地平整和基礎設施工程平面圖

附件二 元朗十八鄉和大旗嶺公營房屋發展之工地平整和基礎設施工程平面圖

土木工程拓展署

二零二二年十月

- 圖例:
- 公用房屋用地
 - 學校用地
 - 擬議政府、團體或住宅用地
 - 擬議現有的污水渠
 - 擬議的公共道路/渠進行道路改善工程
 - （各項渠段均須經過諮詢及獲得位於另一工程項目的擬議的公共道路/渠改善的公共道路）
 - 擬議的污水渠

CEPD
合同編號: CE 10/2020 (CE)
元朗沙埔、十八鄉及大嶼嶼公務房屋發展之土地平整及基礎設施工程
- 可行性研究

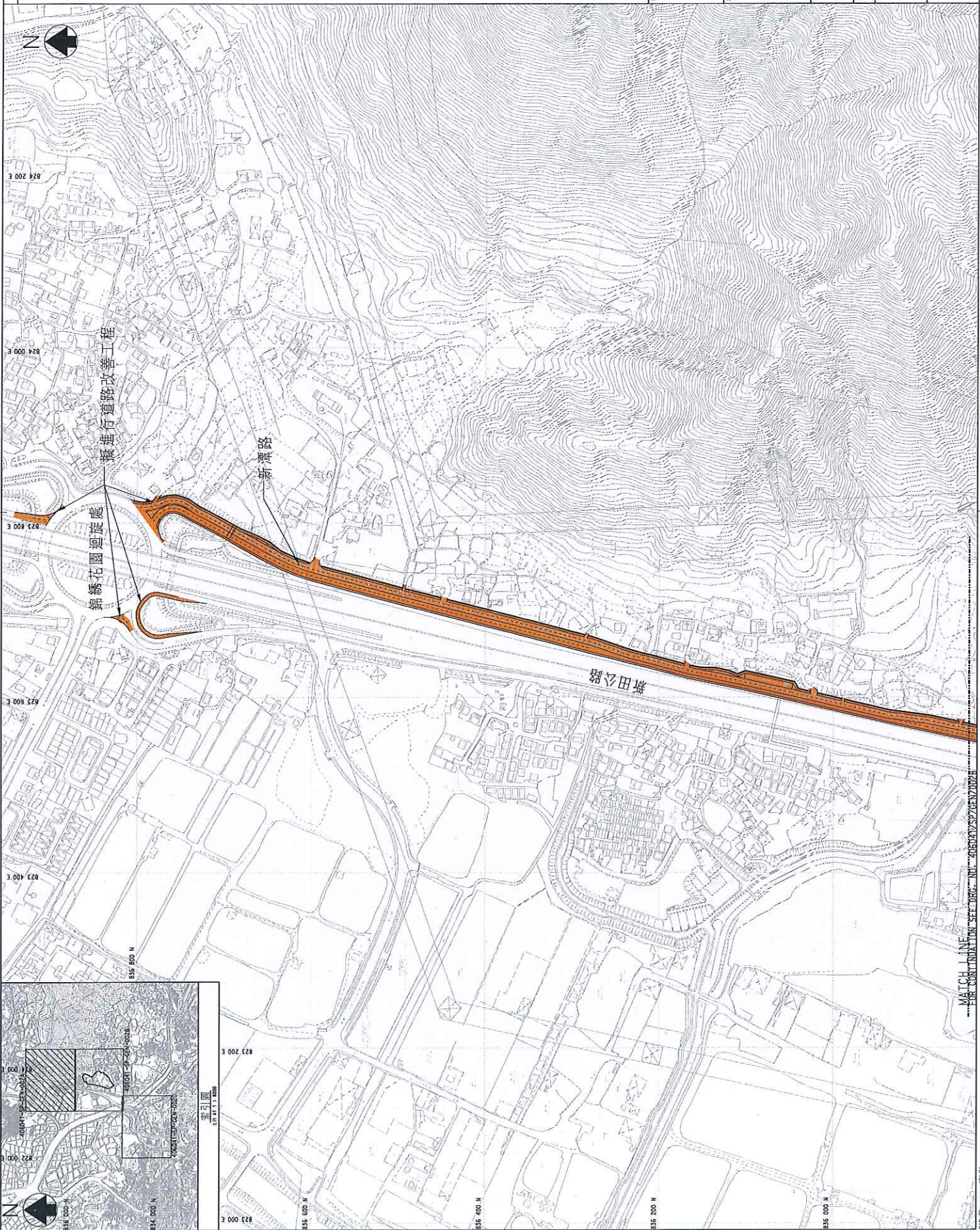
PROJECT
元朗沙埔公務房屋發展計劃
土地平整及基礎設施工程平面圖

PROJECT NO.
406041/SP/GEN/002A

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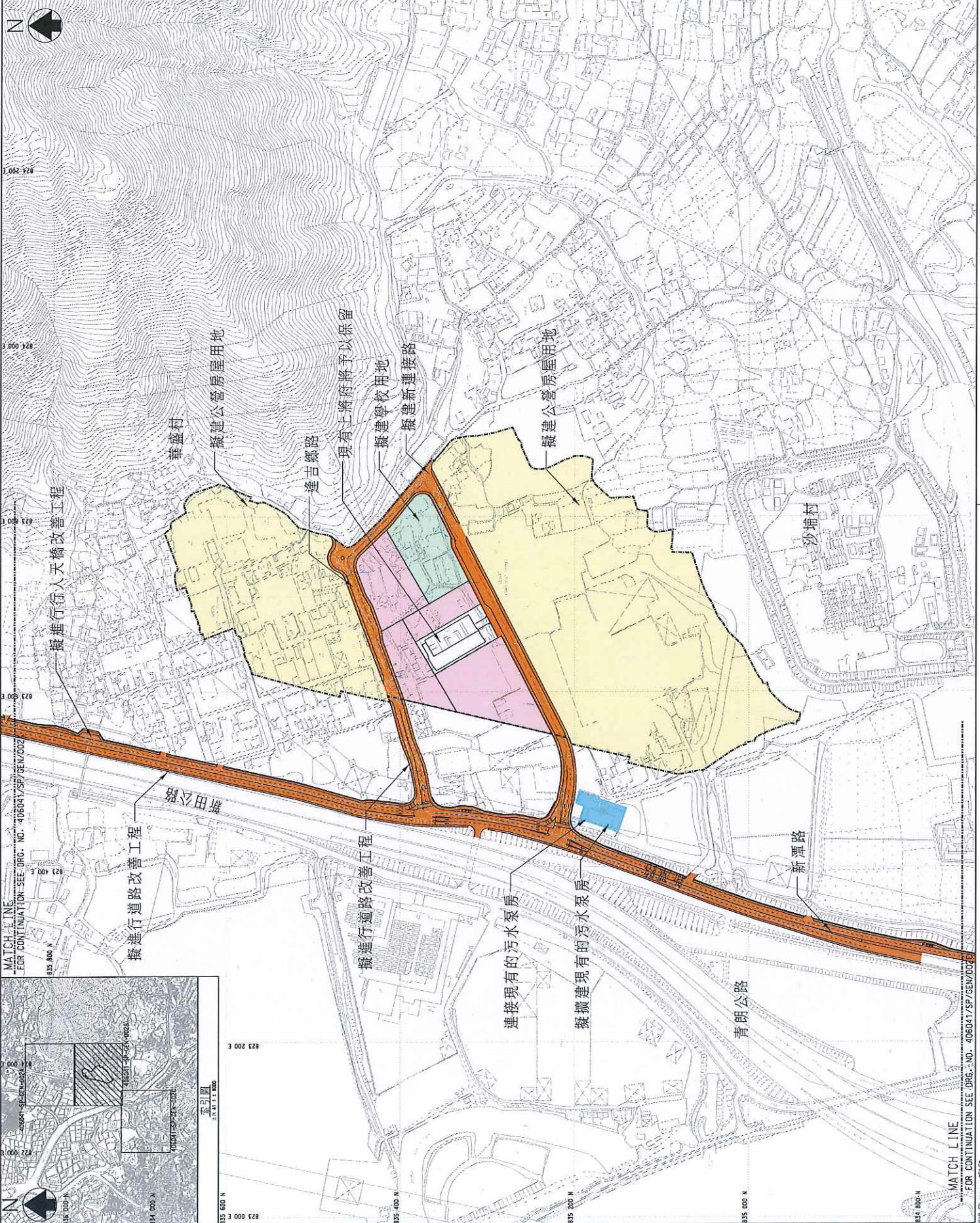
CLIENT
土木工程拓展署
CEDD Civil Engineering and Development Department

CONSULTANT
BINNIES HONG KONG LIMITED
寶尼斯工程顧問有限公司



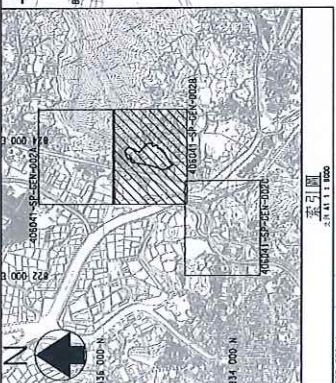
圖例:

- 公務房屋用地
- 學校用地
- 擬建的政府、機構或社區用地
- 擬擴建現有的污水泵房
- 擬建的公共屋邨/擬進行道路改善工程 (有關該項改善工程的地區只對另一項項目所擬建的公共屋邨/擬改善的公共屋邨)
- 擬建的污水管



MATCH LINE FOR CONTINUATION SEE DRG. NO. 406041/SP/GEN/002B

MATCH LINE FOR CONTINUATION SEE DRG. NO. 406041/SP/GEN/002B



合約編號 CE 10/2020 (CE)
元朗沙埔-十八鄉及大圍公營房屋
發展之土地平整及基礎設施工程
- 可行性研究

元朗沙埔公營房屋發展計劃
土地平整與基礎設施
工程平面圖

406041/SP/GEN/002B

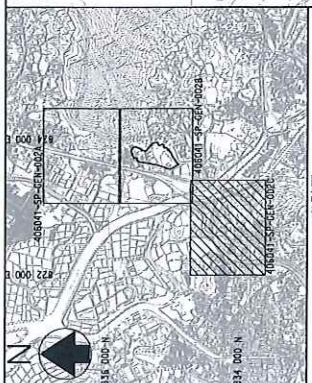
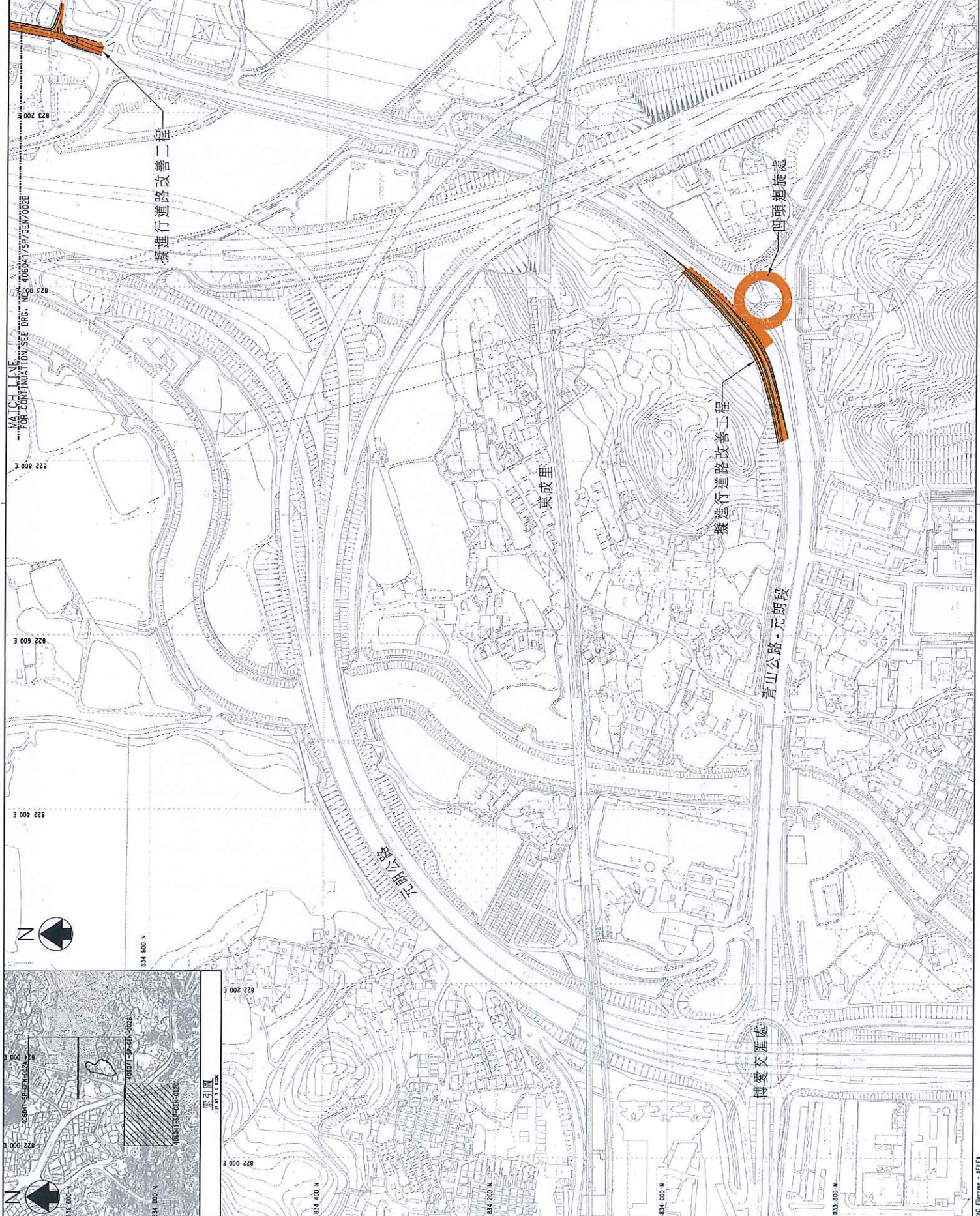
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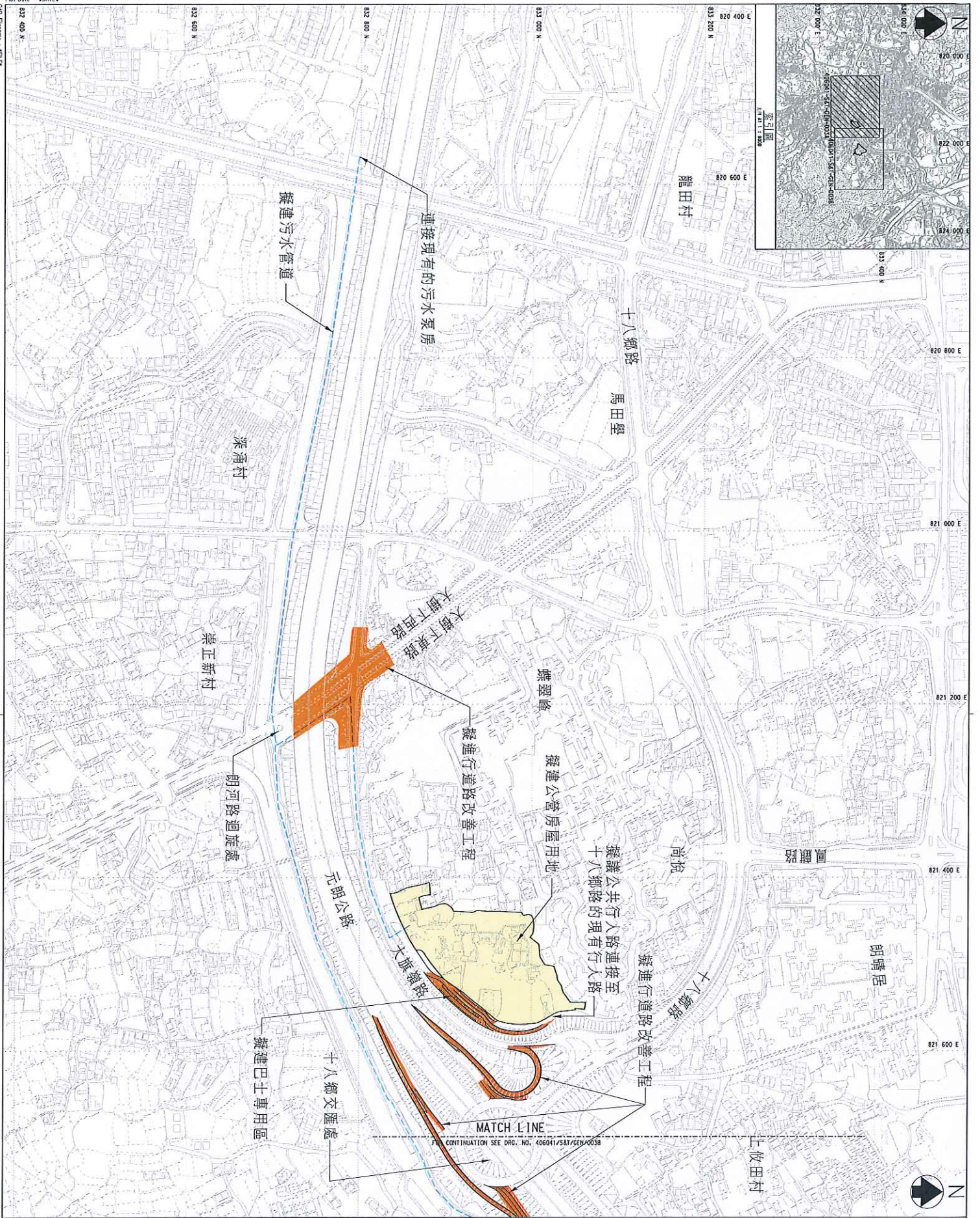
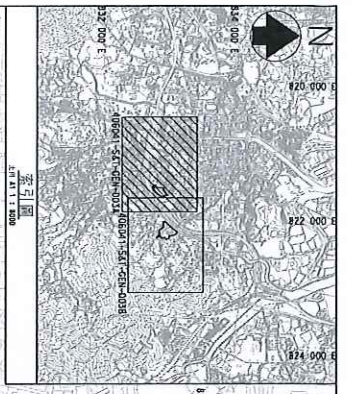
土木工程拓展署
CEDD Civil Engineering and
Development Department

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BINNIES HONG KONG LIMITED
賓尼士工程顧問有限公司

- 圖例:
- 公營房屋用地
 - 學校用地
 - 擬建政府、機構或社團用地
 - 擬建現有污水渠
 - 擬建公共道路/擬進行道路改善工程
 - 另一主要項目所擬建的公共道路/擬改善的公共道路
 - 擬建的污水渠

<small>項目名稱</small>	合約編號 CE 10/2020 (CE) 元朗沙埔十八鄉及大嶺坳公營房屋發展之土地平整及基礎設施工程 - 可行性研究
<small>項目地點</small>	元朗沙埔公營房屋發展計劃 土地平整及基礎設施工程 工程平面圖
<small>圖則編號</small>	406041/SP/GEN/002C
<small>日期</small>	A1 : 2000 A3 : 2000
土木工程拓展署 CEDD Civil Engineering and Development Department	
BINNIES HONG KONG LIMITED 賓尼士工程顧問有限公司	





圖例:

	公營房屋用地
	學校用地
	擬建的公共道路/擬進行道路改善工程/擬議公共行人路/擬議公共行人路連接至十八鄉路的現有行人路/擬議公共行人路
	擬建的分水管道

合約編號: CE 10/2020 (1E) 元朗沙埔·十八鄉及大樹坳公營房屋發展之土地平整及基礎設施工程 - 可行性研究	元朗十八鄉及大樹坳公營房屋發展計劃 土地平整及基礎設施工程 工程中期圖	406041/S&T/GEN/O03A A1:1:4000 A2:1:4000	EDD Civil Engineering and Development Department	BINNIES HONG KONG LIMITED 黃志新 工程師有限公司
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圖例:

- 公營房屋用地
- 學校用地
- 擬建公營屋宇/擬進行道路改善工程
- 工務處擬議的臨時建築地盤/擬建的工程項目/擬建的公共屋宇
- 擬建的公共屋宇
- 擬建的污水渠

合約編號: CE 10/2020 (CE)
 元朗沙埔十八鄉及大旗嶺公營房屋發展之土地平整及基礎設施工程
 - 可行性研究

元朗十八鄉及大旗嶺公營房屋發展計劃
 土地平整及基礎設施工程平面圖

406041/5&T/6EN/003B

比例尺: 1:4000

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