

**APPLICATION FOR PERMISSION UNDER SECTION 16
PROPOSED RESIDENTIAL DEVELOPMENT (HOUSES) AND
MINOR RELAXATION OF BUILDING HEIGHT & PLOT RATIO
RESTRICTION IN “RESIDENTIAL (GROUP C)2” AND
“RESIDENTIAL (GROUP D)” ZONES, LOT 624(PART) & 787 IN
D.D.110 AND ADJOINING GOVERNMENT LAND, KAM TIN
ROAD, SHEK KONG SAN TSUEN, YUEN LONG**

TRAFFIC IMPACT ASSESSMENT



IDENTIFICATION TABLE

Client/Project owner	Glory Time Development Ltd
Project	Application for Permission Under Section 16 Proposed Residential Development (Houses) and Minor Relaxation of Building Height & Plot Ratio Restriction in “Residential (Group C)2” and “Residential (Group D)” Zones, Lot 624(part) & 787 in D.D.110 and Adjoining Government Land, Kam Tin Road, Shek Kong San Tsuen, Yuen Long
Study	Traffic Impact Assessment
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TABLE OF CONTENTS

1.	INTRODUCTION	1
1.1	BACKGROUND	1
1.2	STUDY OBJECTIVES	1
1.3	REPORT STRUCTURE	1
2.	PROPOSED DEVELOPMENT	2
2.1	SITE LOCATION	2
2.2	PROPOSED DEVELOPMENT SCHEDULE	2
2.3	INTERNAL TRANSPORT FACILITY	2
2.4	VEHICULAR ACCESS	3
3.	EXISTING TRAFFIC CONTEXT	4
3.1	SURROUNDING ROAD NETWORK	4
3.2	CURRENT JUNCTION OPERATIONAL PERFORMANCE	4
3.3	NEARBY PUBLIC TRANSPORT	6
4.	TRAFFIC FORECAST	7
4.1	DESIGN YEAR	7
4.2	REFERENCE TRAFFIC FORECAST	7
4.3	DEVELOPMENT TRAFFIC GENERATIONS	9
4.4	TRAFFIC FORECAST DATA	10
5.	TRAFFIC IMPACT ASSESSMENT	11
5.1	YEAR 2036 JUNCTION OPERATIONAL PERFORMANCE	11
6.	CONCLUSION	13
6.1	SUMMARY	13
6.2	CONCLUSION	13

ANNEX A GAZETTE DRAWINGS OF ROAD IMPROVEMENT WORKS AT KAM TIN ROAD

ANNEX B SWEPT PATH ANALYSIS

ANNEX C DETAIL OF JUNCTION CALCULATION SHEETS

LIST OF DRAWINGS

Drawing 2.1	Site Location	3
Drawing 2.2	Proposed Master Layout Plan	3
Drawing 2.3	Proposed Access Road Connected to Kam Tin Road	3
Drawing 3.1	Major Ingress and Egress Route	6
Drawing 3.2	Identified Key Junctions and Road Links	6
Drawing 3.3	Existing Junction Layout of Kam Tin Road / Kam Tin Bypass and Tung Wui Road (A)	6
Drawing 3.4	Existing Junction Layout of Kam Tin Bypass and Kong Tai Road (B)	6
Drawing 3.5	Existing Junction Layout of Kam Tin Road and Kam Tai Road (C)	6
Drawing 3.6	Existing Junction Layout of Kam Tin Road and Fan Kam Road (D)	6
Drawing 3.7	Existing Junction Layout of Kam Tin Road and Access Road (E and F)	6
Drawing 3.8	2026 Observed Traffic Flows	6
Drawing 3.9	Current Provision of Public Transport Services	6
Drawing 4.1	Local Planned and Committed Developments	10
Drawing 4.2	2036 Reference Traffic Flows	10
Drawing 4.3	Development Traffic Flows	10
Drawing 4.4	2036 Design Traffic Flows	10

LIST OF TABLES

Table 2.1	Comparison of Flat Mix in Previous Approved Scheme and Current Proposed Scheme	2
Table 2.2	Proposed Provision of the Internal Transport Facilities	3
Table 3.1	Identified Local Key Junctions and Road Links	4
Table 3.2	Current Junction Operational Performance	5
Table 3.3	Current Road Links Performance	5
Table 3.4	Existing Nearby Public Transport Services	6
Table 4.1	ATC Traffic Counts between Year 2019 to Year 2024	7
Table 4.2	2021-based TPEDM Planning Data	8
Table 4.3	Other Planned/Committed Developments	8
Table 4.4	Estimated Trip Rates of Proposed Development	9
Table 4.5	Estimated Trip Generation of Proposed Development	9
Table 5.1	Year 2036 Junction Operational Performance	11
Table 5.2	Year 2036 Road Links Performance	11

1. INTRODUCTION

1.1 Background

- 1.1.1 The subject site is located at Lot 624 & Lot 787 in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories. It is sited adjacent to the Shek Kong Barracks.
- 1.1.2 The site falls within an area zoned as “Residential (Group C) 2 and Residential (Group D)” on the Approved Kam Tin North Outline Zoning Plan (OZP) No. S/YL-KTN/11. The previous Section 16 Planning Application (Application no. A/YL-KTN/761-3) was approved with conditions on 26 January 2026 for a proposed house development with 12 houses.
- 1.1.3 MVA Hong Kong Limited (MVA) has been commissioned by the client as the traffic consultant for the captioned project. Subject to the updated Master Layout Plan (MLP) with the revised run-in/out and the vehicular access to Kam Tin Road, this traffic impact assessment is to investigate the potential traffic impact on the adjacent local road network in support of the discharge of the planning approval conditions.

1.2 Study Objectives

- 1.2.1 The objectives of this TIA study are summarised as follows:
- Present the proposed development schedule and its internal transport provisions;
 - Review the current traffic conditions in the vicinity;
 - Estimate the traffic generation/attraction of the proposed development;
 - Produce traffic forecasts for the local road network at the adopted design year;
 - Investigate the traffic impact on the local road network upon operation of the proposed development; and,
 - Suggest any traffic improvement measures, if considered necessary, to alleviate the potential traffic problem.

1.3 Report Structure

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

2. PROPOSED DEVELOPMENT

2.1 Site Location

- 2.1.1 The proposed residential development is located at Lot 624 & Lot 787 in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories. The site location is shown in **Drawing 2.1**.

2.2 Proposed Development Schedule

- 2.2.1 Under the current proposed MLP, the number of residential units will be increased from 12 houses in the approved scheme in Section 16 application to 22 houses. The current scheme will provide 22 houses with average house size of 121.8 m².
- 2.2.2 The domestic GFA, flat mix and plot ratio will be changed, compared with those in the previous approved S16 application. **Table 2.1** summarises the flat mix of the previous approved and current proposed scheme.

Table 2.1 Comparison of Flat Mix in Previous Approved Scheme and Current Proposed Scheme

	Previous Approved MLP (Application no. A/YL-KTN/761-3)	Current Proposed MLP	Difference
Domestic GFA	1,600.16 m ²	2,680 m ²	+1,079.84 m ²
Domestic Plot Ratio	0.3997	0.48	+0.0803
No. of Units	12	22	+10 Houses
Average House Size	133.3 m ²	121.8 m ²	-11.5 m ²

- 2.2.3 As indicated in **Table 2.1**, the current proposed MLP has an increase of 10 houses with the change of domestic GFA and plot ratio, and leading to a decrease of average house size.
- 2.2.4 It is anticipated that the proposed development will be completed by year 2033.

2.3 Internal Transport Facility

- 2.3.1 The provision of the internal transport facilities in the current proposed MLP is determined based on the latest Hong Kong Planning Standards and Guidelines (HKPSG). **Table 2.2** summarises the proposed provision of the internal transport facilities for the current proposed MLP, as shown in **Drawing 2.2**.

Table 2.2 Proposed Provision of the Internal Transport Facilities

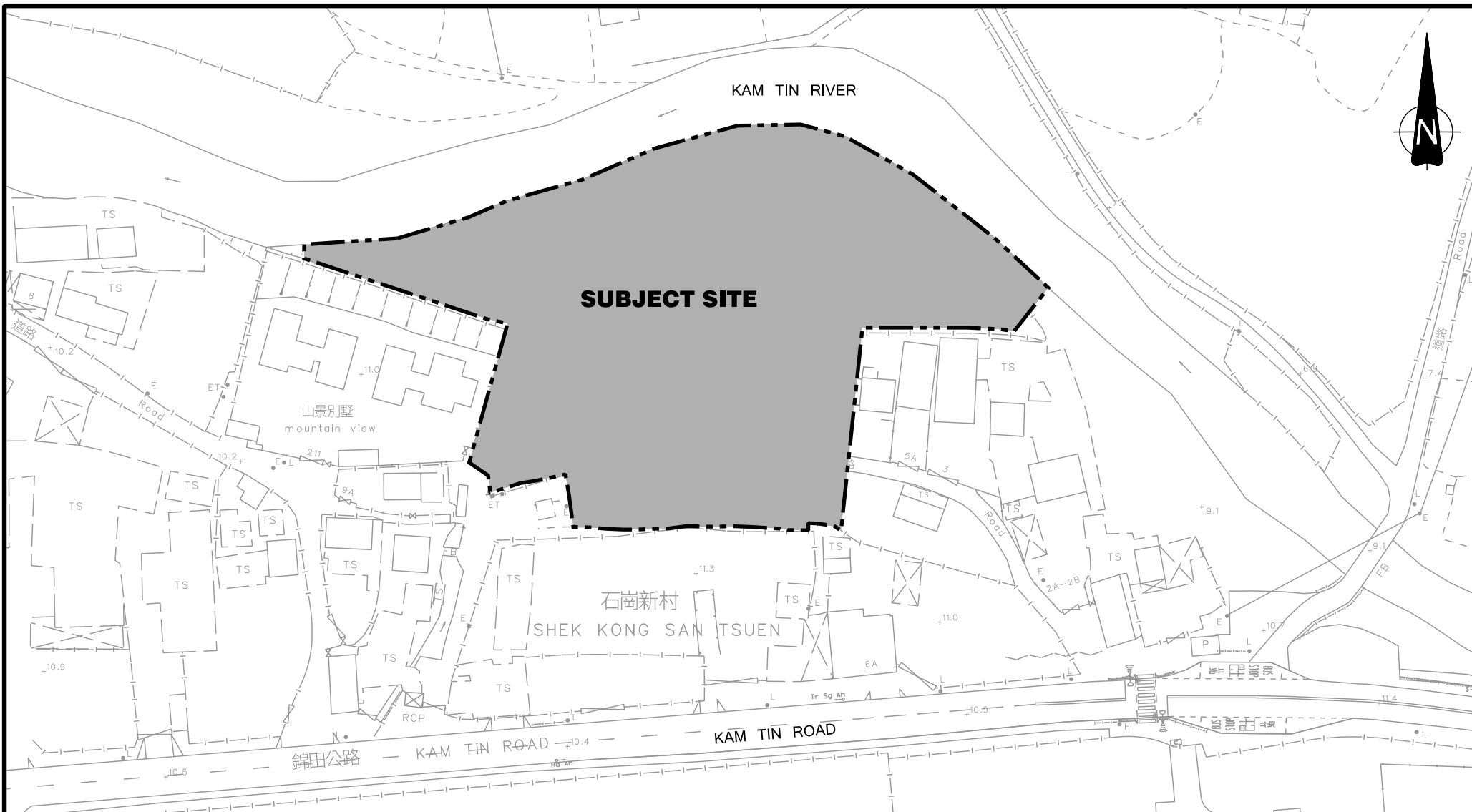
Internal Transport Facilities	Previous Approved MLP (Application no. A/YL-KTN/761-3)			Current Proposed MLP		
	Parameters	Required Provision	Proposed Provision	Parameters	Proposed Requirement under HKPSG	Proposed Provision
Residential Parking Provision						
Residential Carparking Space	11 units of 130<FS≤160 m ²	1 space per 0.56 units	20	6 units of 70<FS≤100 m ²	1 space per 1.28 units	5
				2 units of 100<FS≤130 m ²	1 space per 0.75 units	3
	1 unit of FS>160 m ²	1 space per 0.44 units	3	6 units of 130<FS≤160 m ²	1 space per 0.56 units	11
				8 units of FS>160 m ²	1 space per 0.44 units	19
	Sub-total		23	Sub-total		38
Accessible Parking Space	23	1 accessible car parking space for 1 – 50 car parking by Building Authority	1	38	1 accessible car parking space for 1 – 50 car parking by Building Authority	1
Motorcycle Parking Space	12 units	1 space per 100 – 150 flats	2	22 units	1 space per 100 – 150 flats	2 ⁽¹⁾
Loading/unloading Bay	12 units	1 bay per 800 units	1	22 units	1 bay per 800 units	1 ⁽²⁾

Remarks: (1) Same to the previous approved S.16 planning application.
(2) LGV loading/unloading bay proposed, same to the previous approved S.16 planning application.

2.3.2 All the parking spaces and loading/unloading bay would be proposed on ground level. The swept path analysis for internal private carparking and L/UL space within the development is as indicated in **Annex B**.

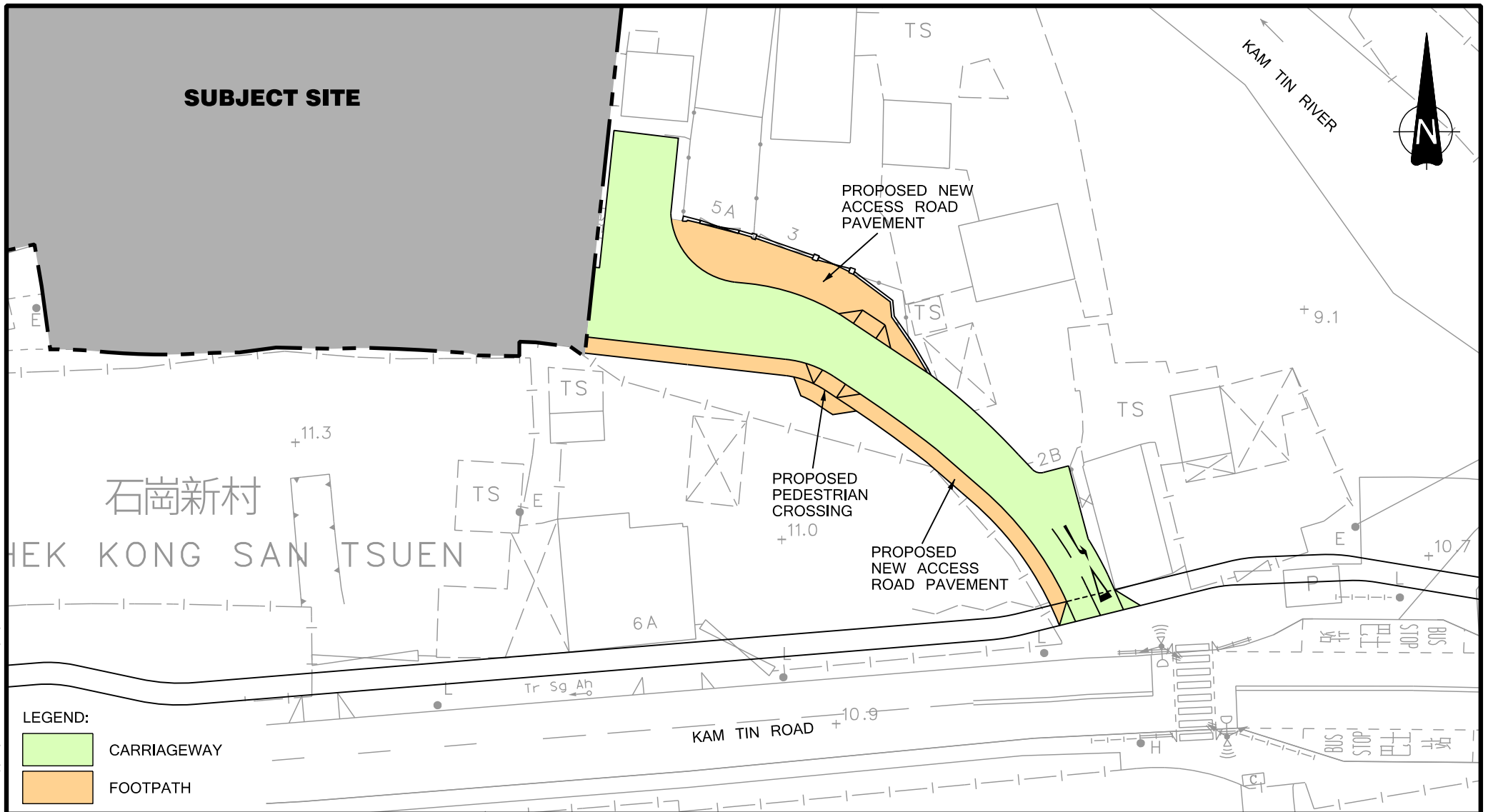
2.4 Vehicular Access

2.4.1 In the revised vehicular access alignment, it is proposed to upgrade the existing access road connecting Kam Tin Road and the proposed development with minimum carriageway width of 4.5m maintained. A passing bay and pedestrian crossing will be provided under the upgrading proposal which are illustrated in **Drawing 2.3**. With the gazette plan for the Kam Tin Road improvement works under PWP Item No. 6820TH Upgrading of Remaining Sections of Kam Tin Road and Lam Kam Road, the affected section of Kam Tin Road would be widened to 10.3m-wide single two-lane carriageway, as illustrated in **Annex A**. Although the detailed design of the Kam Tin Road improvement work is in progress, it is assumed that the improvement work would be completed and considered in the design year under this study. The swept path analysis is as shown in **Annex B**.



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LEGEND:

- CARRIAGEWAY
- FOOTPATH

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3. EXISTING TRAFFIC CONTEXT

3.1 Surrounding Road Network

- 3.1.1 As indicated in **Drawing 2.3**, the development traffic would be connected to Kam Tin Road via the upgraded access road. The future ingress and egress routes of the subject site are illustrated in **Drawing 3.1**.
- 3.1.2 Kam Tin Road is a single 2-lane two-way rural road running in east-west direction, connecting Castle Peak Road - Yuen Long and Kam Sheung Road at its both ends which serving and provide connection to the adjacent local developments in Shek Kong area.

3.2 Current Junction Operational Performance

- 3.2.1 A total of 6 local junctions and 4 screenlines, as indicated in **Drawing 3.2**, have been identified for assessment purpose in this study. The identified junctions are listed in **Table 3.1**, and their existing layouts are shown in **Drawings 3.3** to **Drawings 3.7**.

Table 3.1 Identified Local Key Junctions and Road Links

Ref. ⁽¹⁾	Junction/Road Links	Type	Drawing No.
A	Kam Tin Road / Kam Tin Bypass / Tung Wui Road	Roundabout	3.3
B	Kam Tin Bypass / Kong Tai Road	Signalized	3.4
C	Kam Tin Road / Kam Tai Road	Priority	3.5
D	Kam Tin Road / Fan Kam Road	Roundabout	3.6
E	Kam Tin Road / Access Road	Priority	3.7
F	Kam Tin Road	Priority	3.7
Screenline L1	Kam Tin Bypass WB	Dual 2-lane carriageway	3.2
Screenline L2	Kam Tin Bypass EB	Dual 2-lane carriageway	3.2
Screenline L3	Kam Tin Road (Tung Wui Road to Kam Tai Road)	Single 2-lane carriageway	3.2
Screenline L4	Kam Tin Road (Kam Tai Road to Fan Kam Road)	Single 2-lane carriageway	3.2

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

Traffic Surveys

- 3.2.2 A series of manual classified traffic surveys have been conducted at the identified junctions and road links to establish the current traffic condition in the vicinity. The surveys were carried out during the morning and evening peak hour periods on a typical weekday in June 2026. The observed traffic data indicates that the morning peak hour and evening peak hour occurred from 7:45am to 8:45am and 5:15pm to 6:15pm. The observed peak periods are adopted for forecasting and assessment purposes in this study. The observed peak hour traffic flows are shown in **Drawing 3.8**.
- 3.2.3 Junction capacity and Volume/Capacity Ratio (V/C Ratio) assessments have been conducted for the identified junctions and road links with respect to the observed traffic flows to evaluate their current operational performance during the weekday peak hours and the results are as shown in **Table 3.2** and **Table 3.3**. The junction calculation sheets are attached in **Annex C**.

Table 3.2 Current Junction Operational Performance

Ref. ⁽¹⁾	Junction	RC/RFC ⁽²⁾	
		AM Peak	PM Peak
A	Kam Tin Bypass / Kam Tin Road / Tung Wui Road	0.41	0.42
B	Kam Tin Bypass / Kong Tai Road	50%	76%
C	Kam Tin Road / Kam Tai Road	0.29	0.33
D	Kam Tin Road / Fan Kam Road	0.65	0.63
E	Kam Tin Road/ Local Access Road	0.06	0.04
F	Kam Tin Road	52%	62%

Remarks: (1) Refer to **Drawing 3.2** for junction reference; and,
(2) RC = reserve capacity, RFC = ratio of flow to capacity.

Table 3.3 Current Road Links Performance

Ref. ⁽¹⁾	Road Link	Directions	Design Capacity, (veh/hr)	Design Capacity, (pcu/hr) ⁽⁴⁾	2026 Traffic Flow			
					Traffic Flow (pcu/hr)		V/C ⁽⁵⁾	
					AM	PM	AM	PM
L1	Kam Tin Bypass	WB	2,800 ⁽²⁾	3,640	495	635	0.14	0.17
L2	Kam Tin Bypass	EB	2,800 ⁽²⁾	3,640	755	495	0.21	0.14
L3	Kam Tin Road (Tung Wui Road to Kam Tai Road)	2-way	1,348 ⁽³⁾	1,750	1,895	1,880	1.08	1.07
L4	Kam Tin Road (Kam Tai Road to Fan Kam Road)	2-way	1,473 ⁽⁴⁾	1,910	1,900	1,870	0.99	0.98

Remarks: (1) Refer to **Drawing 3.2** for key road links;
(2) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 2-lane dual primary distributor will be taken as 2,800 veh/hr for one-way direction;
(3) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 2-lane single carriageway will be taken as 1,400 veh/hr for two-way traffic. Site adjustment factor has been applied with due consideration of the existing width of Kam Tin Road (6.5m), i.e. Lane capacity (veh/hr) = 1400 veh/hr*6.5m/6.75m=1,348 veh/hr;
(4) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 2-lane single carriageway will be taken as 1,400 veh/hr for two-way traffic. Site adjustment factor has been applied with due consideration of the existing width of Kam Tin Road (7.1), i.e. Lane capacity (veh/hr) = 1400 veh/hr*7.1/6.75m=1,473 veh/hr;
(5) PCU factor of 1.3 as derived by the traffic survey adopted, and the capacity rounded to nearest 10; and,
(6) V/C = volume to capacity ratio.

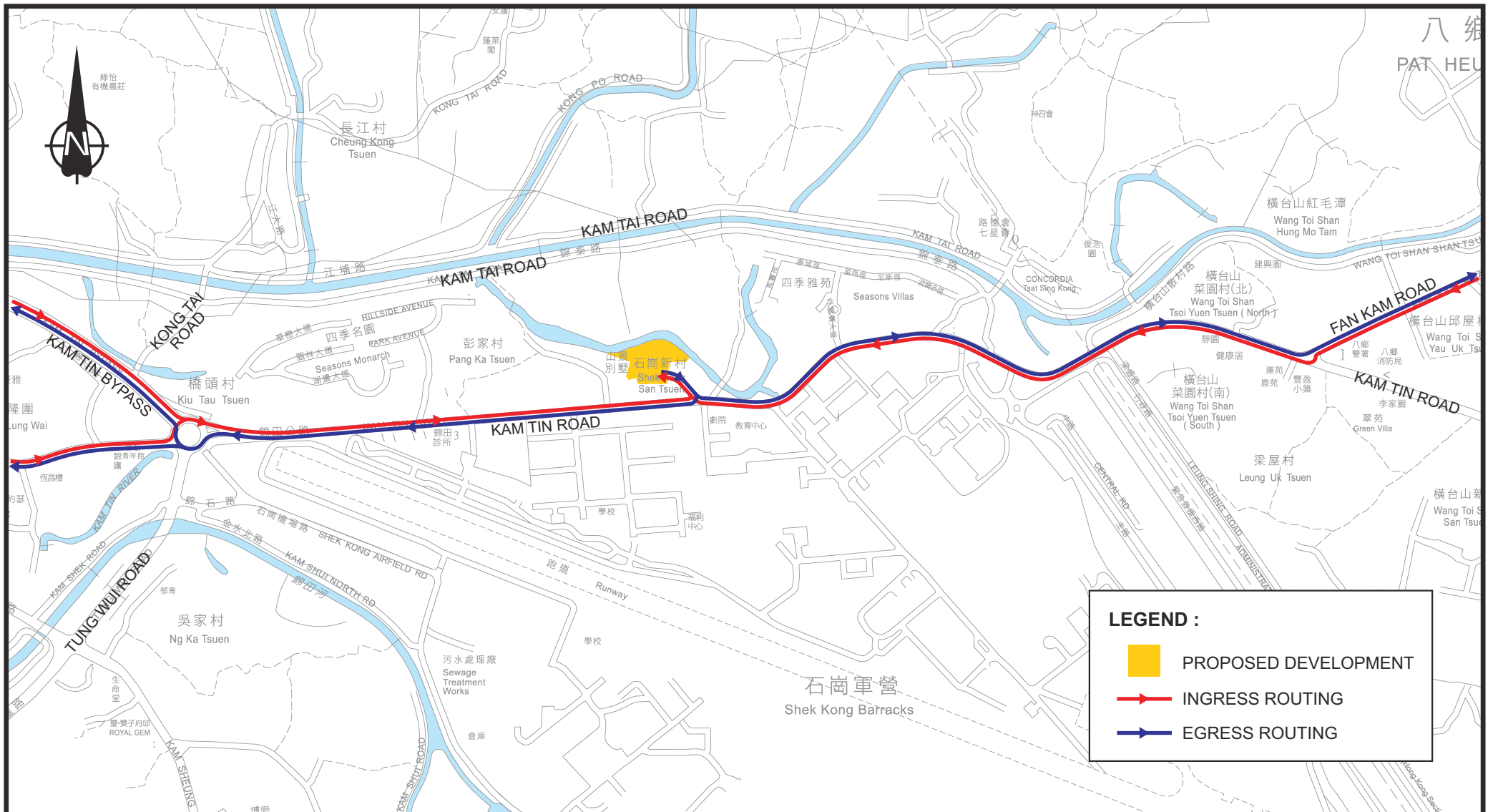
3.2.4 The results in **Table 3.2** and **Table 3.3** have indicated that all identified junctions and road links are currently operating with ample capacity or at capacity during the typical weekday morning and evening peak hours.

3.3 Nearby Public Transport

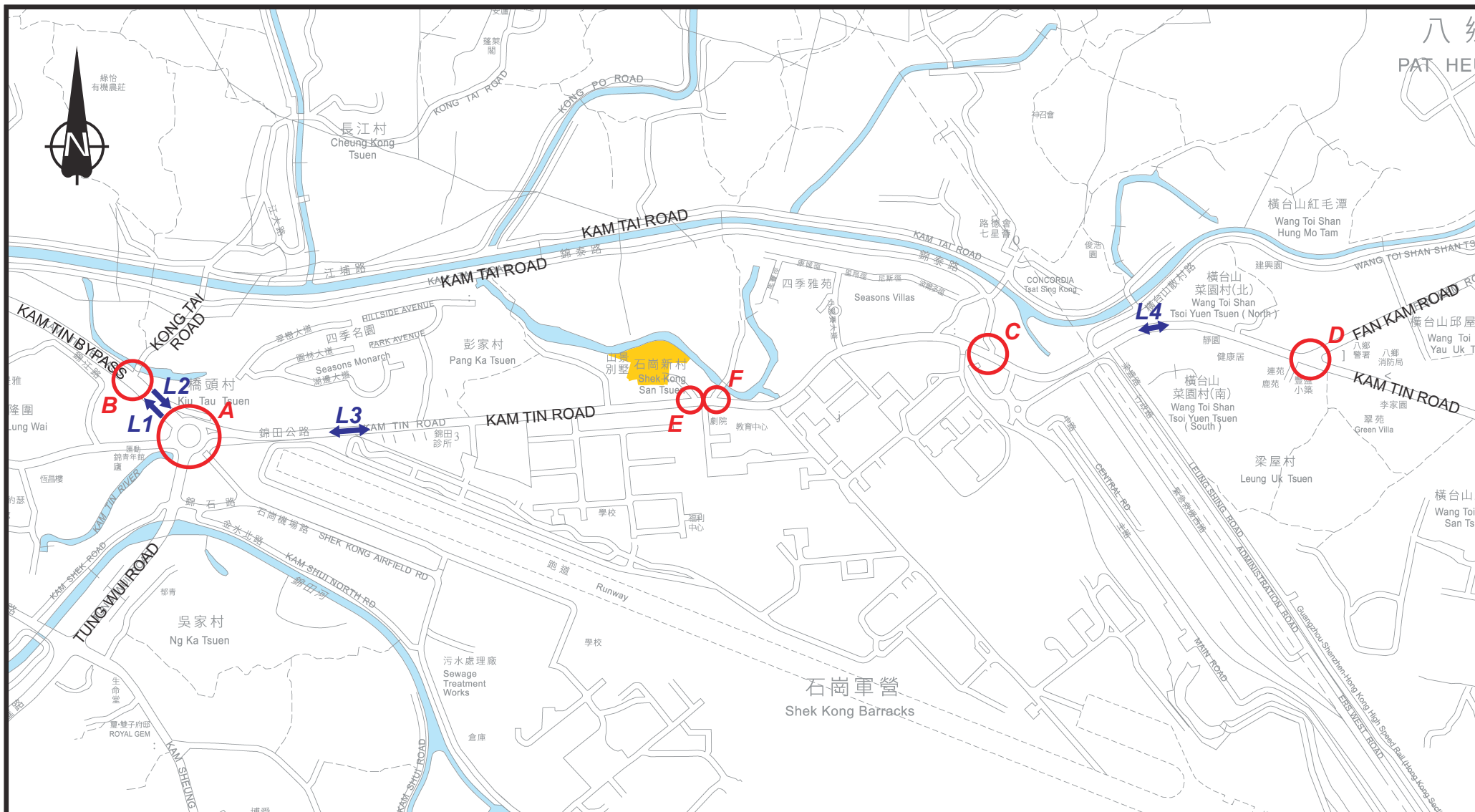
- 3.3.1 The current road-based public transport services are available in vicinity of the proposed development at Kam Tin Road with service stops located within 500-metre walking distance from the subject site, as shown in **Drawing 3.9** and as summarized in **Table 3.4** below.

Table 3.4 Existing Nearby Public Transport Services

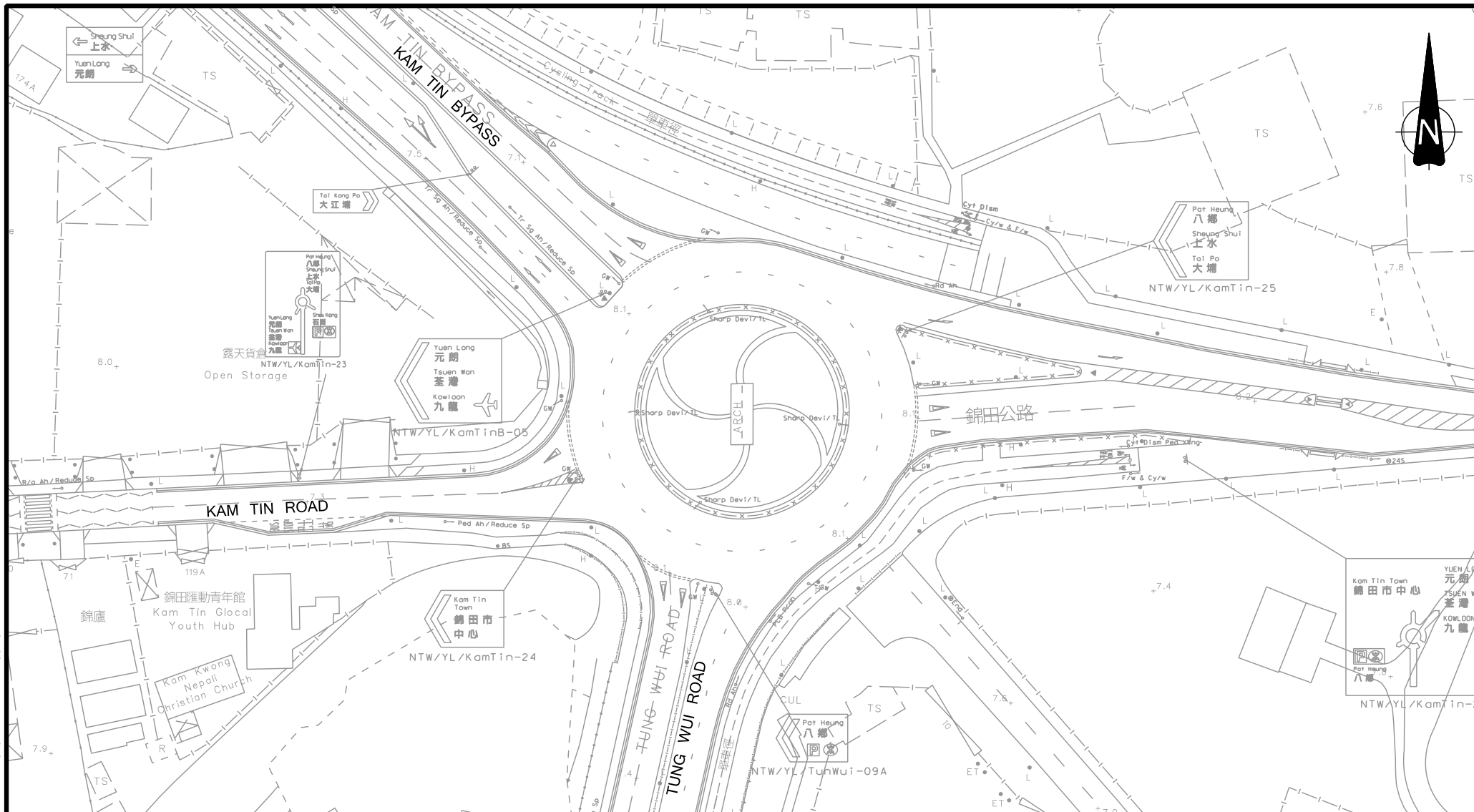
Route No.	Destination	Frequency (min)
Franchised Bus		
54	Yuen Long (West) – Sheung Tsuen (CIR)	30
77K	Sheung Shui – Yuen Long (Fung Cheung Road)	12 - 30
251B	Pat Heung Road – Sheung Tsuen (CIR)	20 - 30
251M	Sheung Tsuen – Tsuen Wan Station	07:00, 08:00, 09:00 (Mon – Fri)
Green Minibus (GMB)		
608	Wang Toi Shan – Yuen Long (Fung Cheung Road) (CIR)	10 - 13
608S	Concordia Tsat Sing Kong PLB Terminus – Kam Sheung Road Station PTI (CIR)	15 - 30



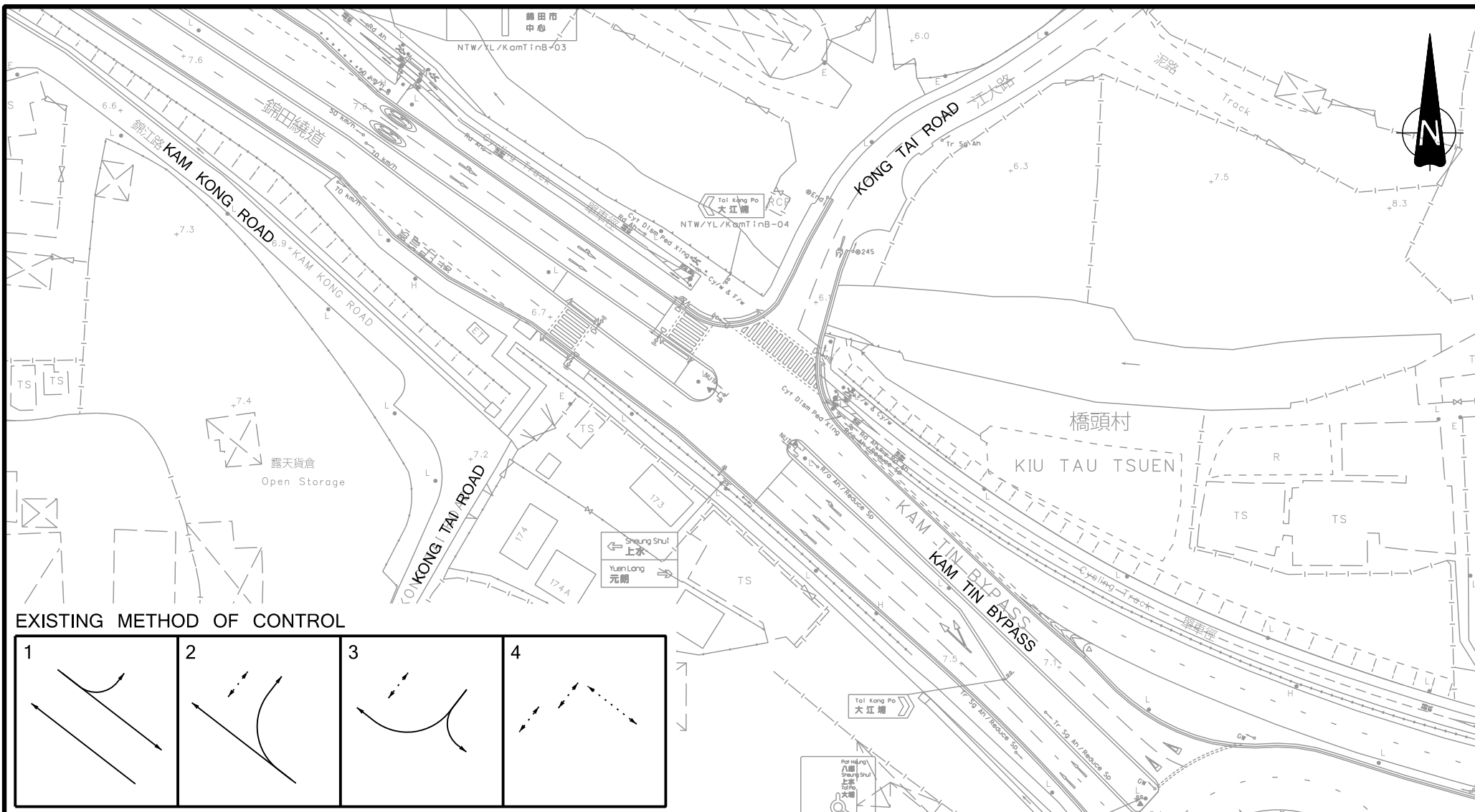
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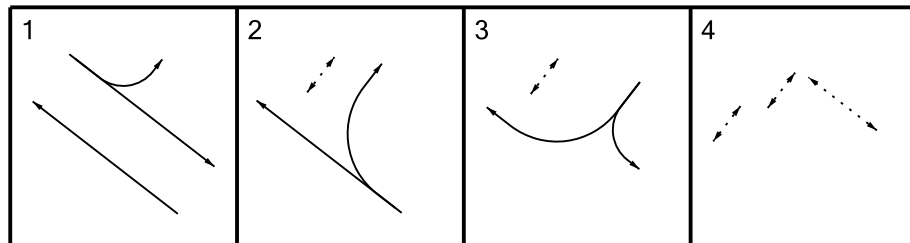
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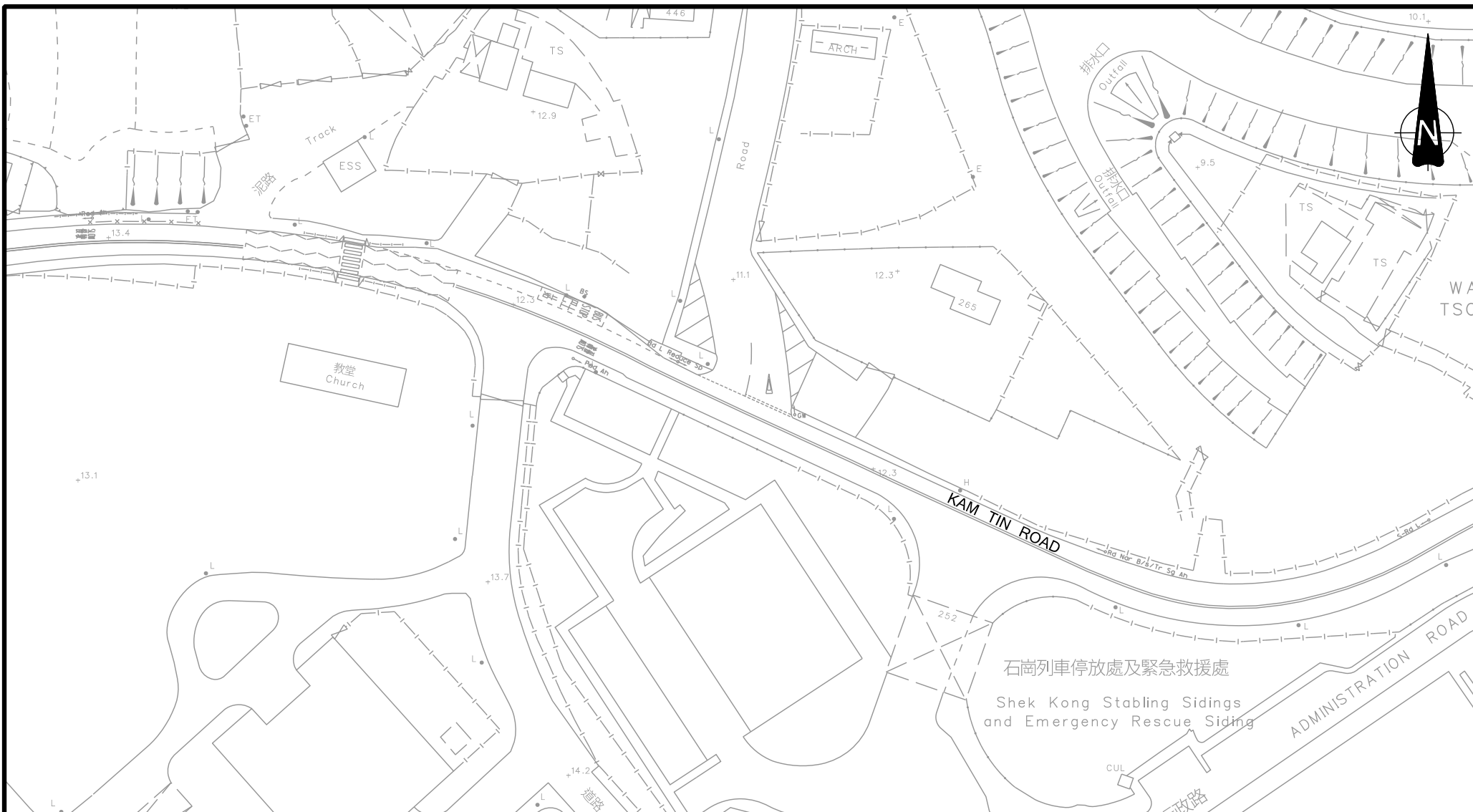
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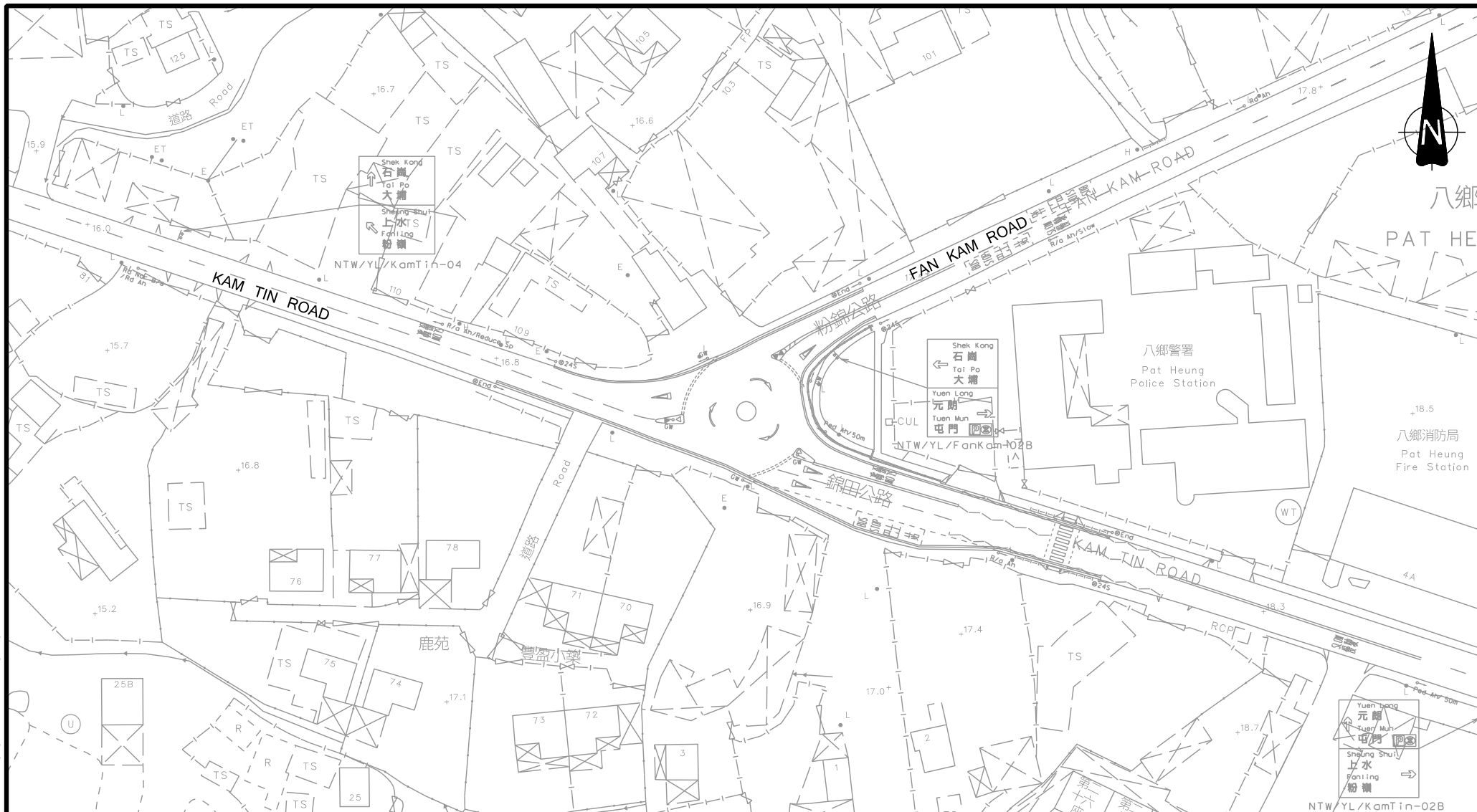
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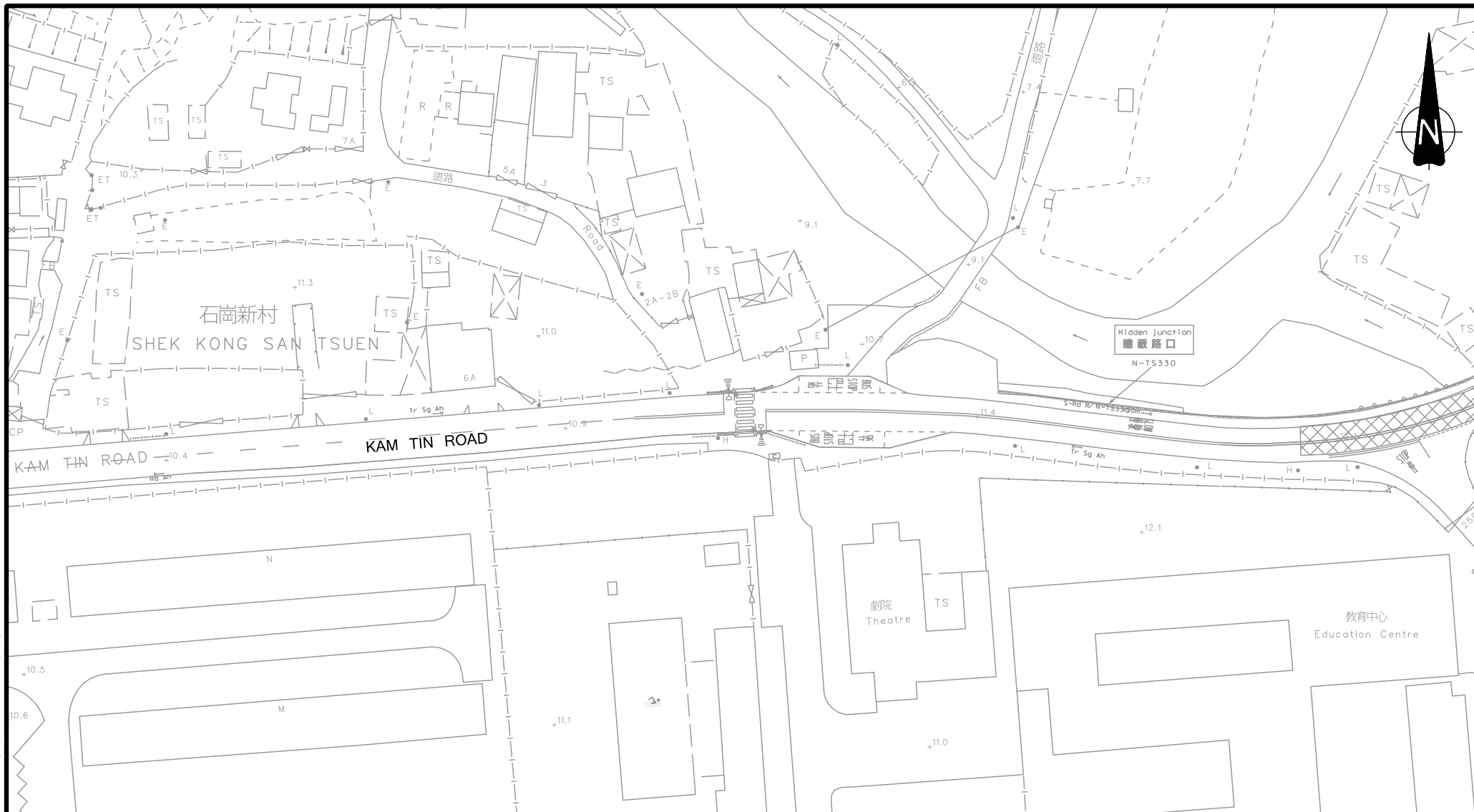
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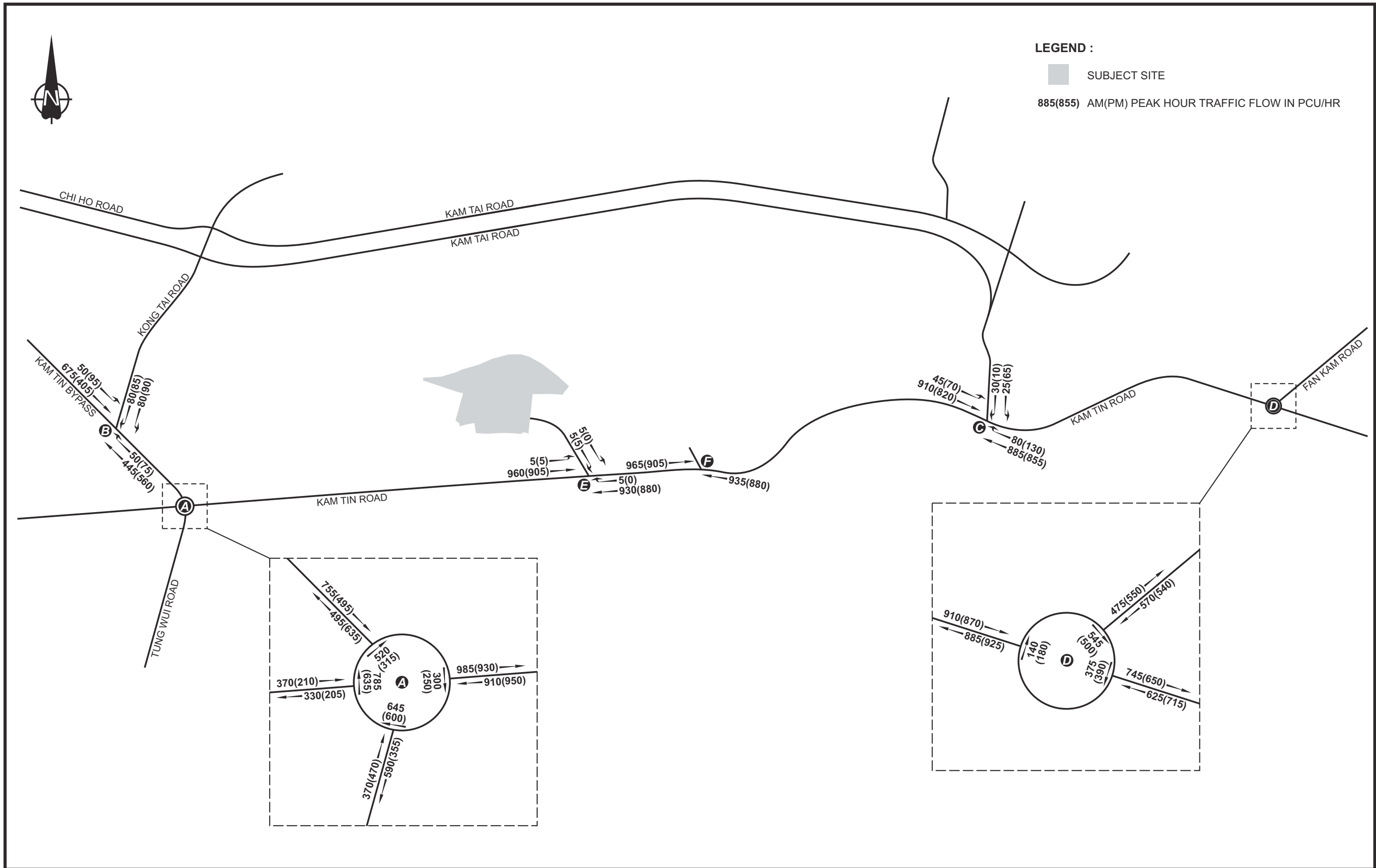
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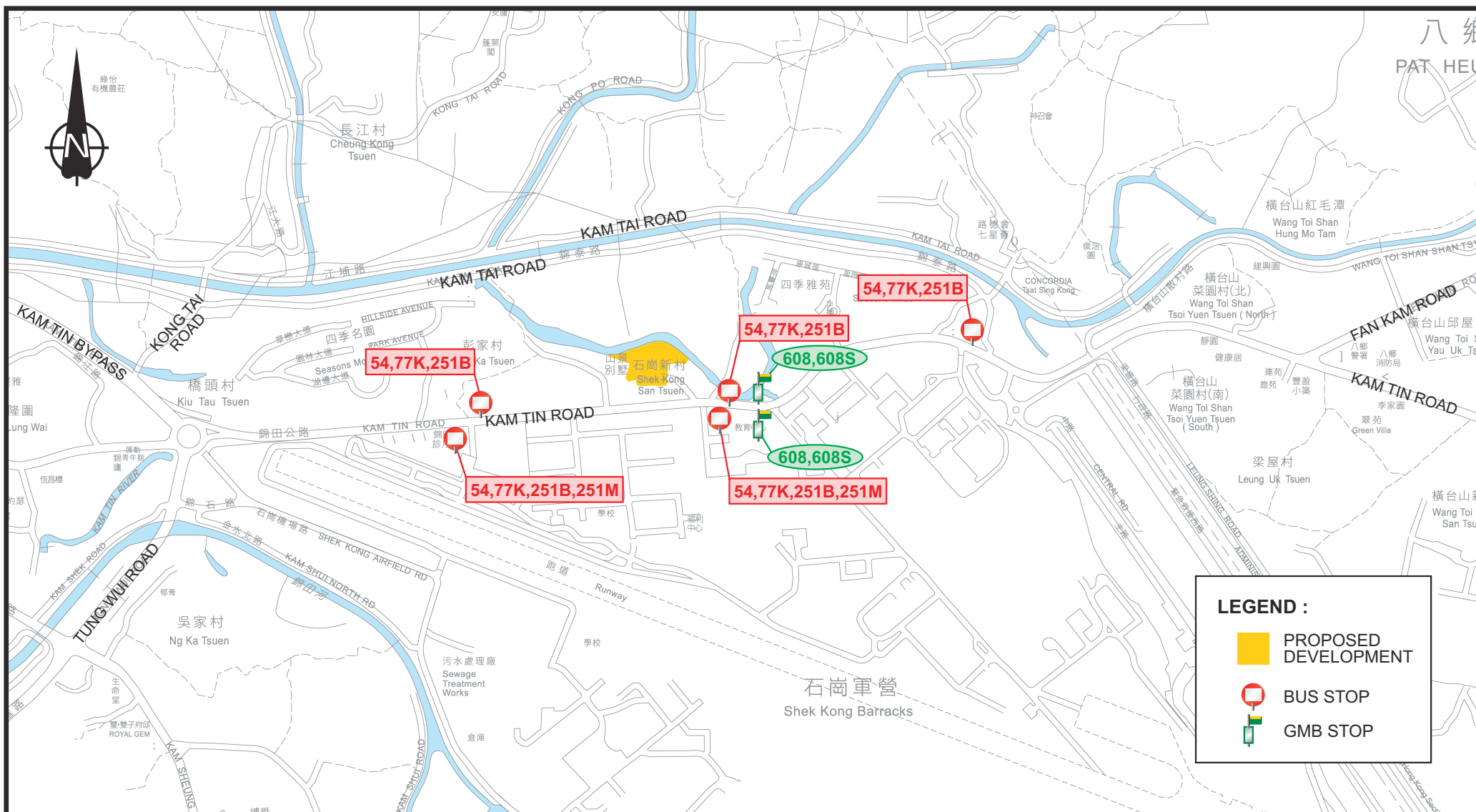
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-	-	-	-		Designed	FSC	Checked	CFC	Scale	NTS		Date	AUG 2026	Drawing No.	3.8	Rev.	-
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Rev.	Description			Checked	Date												



Rev.	Description	Checked	Date	Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
Project Title				Drawing Title							
APPLICATION FOR PERMISSION UNDER SECTION 16 PROPOSED RESIDENTIAL DEVELOPMENT (HOUSES) AND MINOR RELAXATION OF BUILDING HEIGHT & PLOT RATIO RESTRICTION IN "RESIDENTIAL (GROUP C)2" AND "RESIDENTIAL (GROUP D)" ZONES, LOT 624(PART) & 787 IN D.D.110 AND ADJOINING GOVERNMENT LAND, KAM TIN ROAD, SHEK KONG SAN TSUEN, YUEN LONG				CURRENT PROVISION OF PUBLIC TRANSPORT SERVICES							
Designed	FSC	Checked	CFC	Scale	NTS	Date	AUG 2026	Drawing No.	3.9	Rev.	-

SYSTRA
MVA

4. TRAFFIC FORECAST

4.1 Design Year

- 4.1.1 The tentative operation year of the proposed development is by 2033. Hence, the design year of 2036, three years upon completion, has been adopted for traffic forecast and assessment purposes.

4.2 Reference Traffic Forecast

- 4.2.1 The traffic forecast has been derived by taking into account of the nearby planned developments and based on the review of the historical traffic data of the Annual Traffic Census (ATC) reports published annually by the Transport Department and the latest Territorial Population and Employment Data Matrix (TPEDM) published by the Planning Department.

Historical Traffic Growth Trend

- 4.2.2 To establish the background traffic growth rates, five ATC traffic count stations within the study area are referenced. The annual average daily traffic counts at the identified stations over a period between Year 2019 and Year 2024 are summarised in **Table 4.1**.

Table 4.1 ATC Traffic Counts between Year 2019 to Year 2024

ATC Station No.	Road Name	Average Annual Daily Traffic (AADT)						Growth Rate (p.a.)
		2019	2020	2021	2022	2023	2024	2019-2024
5254	Kam Tin Rd (from Fan Kam Rd to Kam Sheung Rd eastern junction)	18,510	18,330	19,040	18,850	15,740	16,320	-2.49%
6110	Kam Tin Bypass (from Kam Tin Rd to Kam Tin Rd)	14,990	12,810	12,450	12,980	14,490	15,110	+0.16%
6207	Kam Tin Rd (from Kam Sheung Rd western junction to Fan Kam Rd)	21,300	21,640	20,490	20,520	21,510	20,230	-1.03%
6208	Kam Sheung Road (from Kam Tin Rd to Kam Tin Rd)	8,080	9,400	8,960	9,600	10,460	10,060	+4.48%
6212	Fan Kam Rd (from Kam Tin Rd to Fanling Highway)	11,660	12,250	12,450	12,400	13,890	13,920	+3.61%
Total		74,540	74,430	73,390	74,350	76,090	75,640	+0.29%

Planning Data

- 4.2.3 Apart from the historical traffic data, references have been made to the latest 2021-based Territorial Population and Employment Data Matrix (TPEDM) as published by the Planning

Department (PlanD) for the projection of population of Yuen Long District Council District from the years 2021 to 2031 to derive the annual growth rates, as summarised in **Table 4.2**.

Table 4.2 2021-based TPEDM Planning Data

Data	Yuen Long District Council District			Avg. Annual Growth Rate (p.a.)
	Year			
	2021	2026	2031	2021-2031
Population	668,100	685,000	760,600	+1.31%

Adopted Growth Rate

- 4.2.4 Taking account of the historical local traffic pattern and the future local population projection planning data, +1.31% per annum is adopted for the background traffic growth of the local road links from Year 2026 to Year 2036.

Other Planned/Committed Developments

- 4.2.5 There are also a number of other planned/committed developments located in the vicinity that are expected to be completed by year 2036. The development schedules of these developments and estimated traffic generations are summarized in **Table 4.3** and the locations of these developments are indicated in **Drawing 4.1**.

Table 4.3 Other Planned/Committed Developments

Ref.	Developments Location; Application No.	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
1	Grand Mayfair I (Kam Sheung Road Station Property Development - Phase 1)	1,520 units (average flat size of about 76 m ²)	161	92	65	90
2	Public Housing Development at Kam Sheung Road Site 1	3,800 units (average flat size of about 46 m ²)	237	162	113	153
		Retail (2,300 m ²)	5	6	7	8
		Primary School (30 Classrooms)	7	30	1	1
		Social Welfare / Community Facilities	9	9	9	9
		Adjoining GIC Site	40	50	40	61
3	Public Housing Development at Kam Sheung Road Site 4a	3,100 units (average flat size of about 56 m ²)	193	133	93	125
		Retail (2,900 m ²)	7	7	9	10
		Social Welfare / Community Facilities	5	5	5	5
4	Public Housing Development at Kam Sheung Road Site 6	1,600 units (average flat size of about 49 m ²)	100	69	48	65
		Primary School (30 Classrooms)	7	30	1	1
		Social Welfare / Community Facilities	2	2	2	2
5	Lot 2206 in D.D. 109, Kam Tai Road (A/YL-KTN/791)	330 units (average flat size of about 39 m ²)	24	15	10	13

Ref.	Developments Location; Application No.	Parameters	Trip Generations (pcu/hr)			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
6	Lot 1071 in D.D. 103, Ha Ko Po Tsuen, Kam Tin, Yuen Long (A/YL-KTN/964)	566 units (average flat size of about 41 m ²)	41	25	17	21
		Retail (1,165 m ²)	3	3	4	4
7	Proposed Residential Development at Lot Nos.519 RP (part) and 520 RP in D.D. 110 and the Adjoining Government land, Shek Kong, Yuen Long, N.T. (Y/YL-KTN/6)	240 units (average flat size of about 36 m ²)	25	18	10	13

4.2.6 Based on the above, the year 2036 reference traffic flows, as shown in **Drawing 4.2**, are produced according to the following:

Year 2036 reference traffic flows: Observed Traffic Flows x Adopted Growth Factor (i.e. +1.31%) + Other Planned/Committed Development Trip Generation

4.3 Development Traffic Generations

Trip Generation of Proposed Development

4.3.1 The proposed development will provide 22 houses with an average flat size of approximately 121.8 m². The trip generations of the proposed development are estimated in accordance with the relevant trip rates as tabulated in the Transport Planning Design Manual (TPDM). **Table 4.4** summarises the trip rates of the proposed development.

Table 4.4 Estimated Trip Rates of Proposed Development

	Trip Generations			
	AM Peak		PM Peak	
	Gen	Att	Gen	Att
Residential Trip Rate (pcu/hr/flat)				
R(B), Average flat size = 120m ² per unit, Mean rate	0.2246	0.1157	0.1068	0.1468

4.3.2 The resulting trip generations of the proposed development are summarized in **Table 4.5**.

Table 4.5 Estimated Trip Generation of Proposed Development

	Trip Generations			
	AM Peak		PM Peak	
	Gen	Att	Gen	Att
Residential Trips⁽¹⁾				
22 units with an average flat size of 120m ²	5	3	3	4

Remarks: (1) By referring to **Table 4.4**.

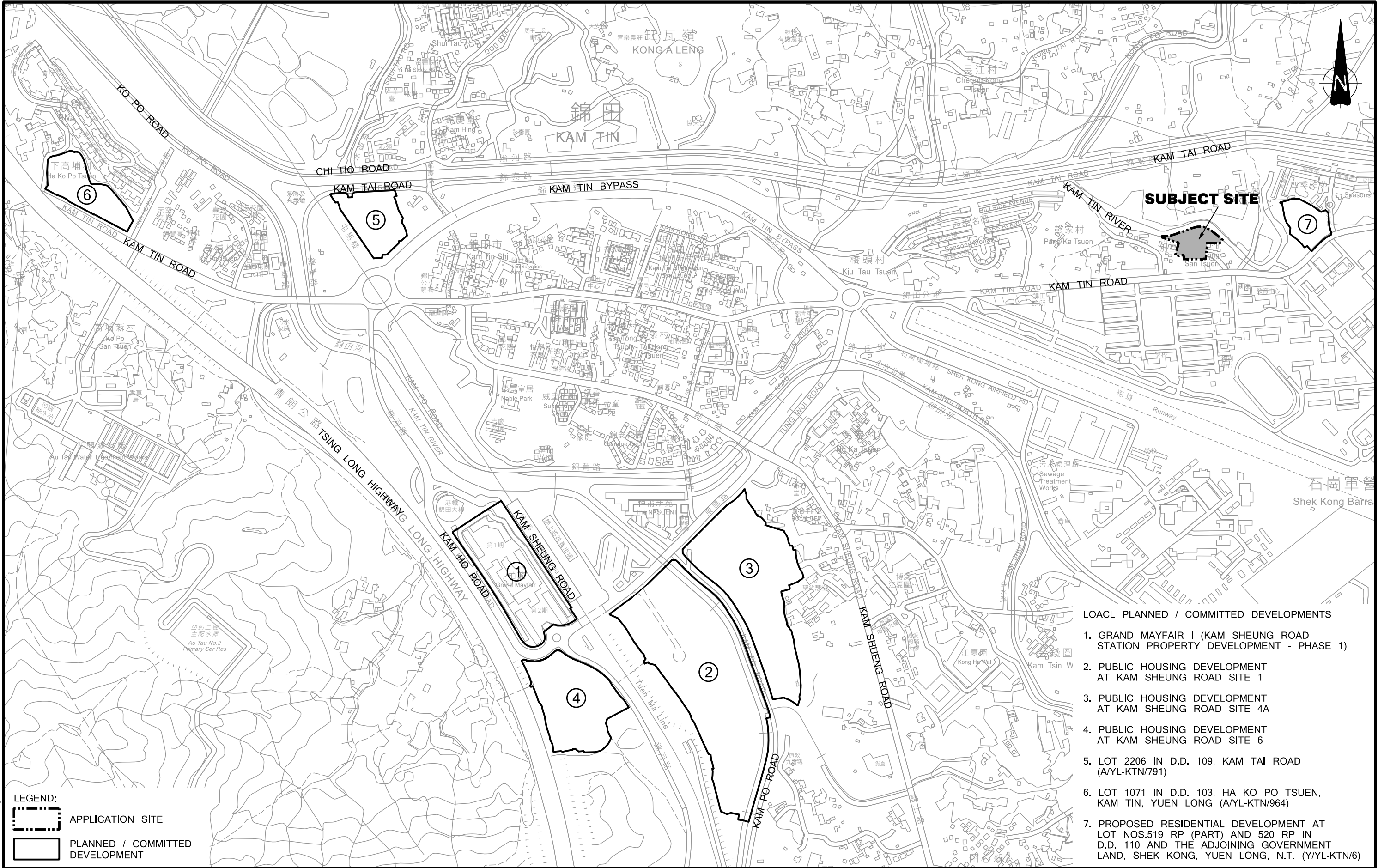
4.3.3 As indicated in **Table 4.5**, the proposed development would generate a two-way total of 8 pcu/hr and 7 pcu/hr during the weekday morning and evening peak hour periods respectively, which is considered as minimal. The development trip distributions are shown in **Drawing 4.3**.

4.4 Traffic Forecast Data

4.4.1 Based on the above, the year 2036 design flows, as shown in **Drawing 4.4** are produced according to the following.

Year 2036 Design Case = Year 2036 Reference Case + Proposed Development Trip Generation

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PRINTED BY: cchan
DATE: 05-Aug-26
TIME: 10:57:42 AM



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Rev.	Description	Checked	Date

Project Title
APPLICATION FOR PERMISSION UNDER SECTION 16
PROPOSED RESIDENTIAL DEVELOPMENT (HOUSES) AND
MINOR RELAXATION OF BUILDING HEIGHT & PLOT RATIO
RESTRICTION IN "RESIDENTIAL (GROUP C)2" AND
"RESIDENTIAL (GROUP D)" ZONES, LOT 624(PART) & 787
IN D.D.110 AND ADJOINING GOVERNMENT LAND,
KAM TIN ROAD, SHEK KONG SAN TSUEN, YUEN LONG

Drawing Title LOCAL PLANNED AND COMMITTED DEVELOPMENTS					
Designed MYC	Checked CFC	Scale 1:8000(A3)	Date AUG 2026	Drawing No. 4.1	Rev. -



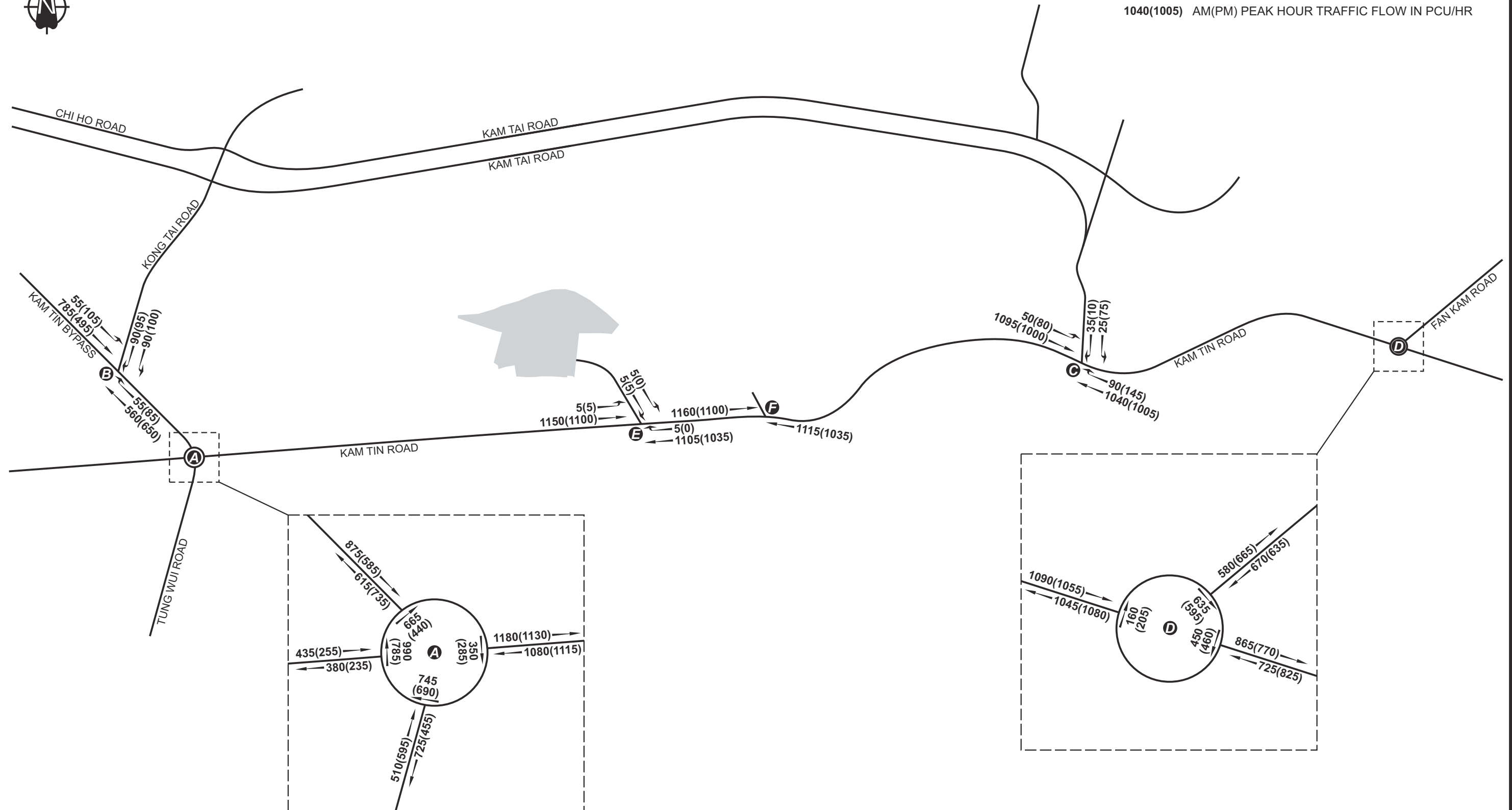


LEGEND :



SUBJECT SITE

1040(1005) AM(PM) PEAK HOUR TRAFFIC FLOW IN PCU/HR



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Rev.	Description	Checked	Date

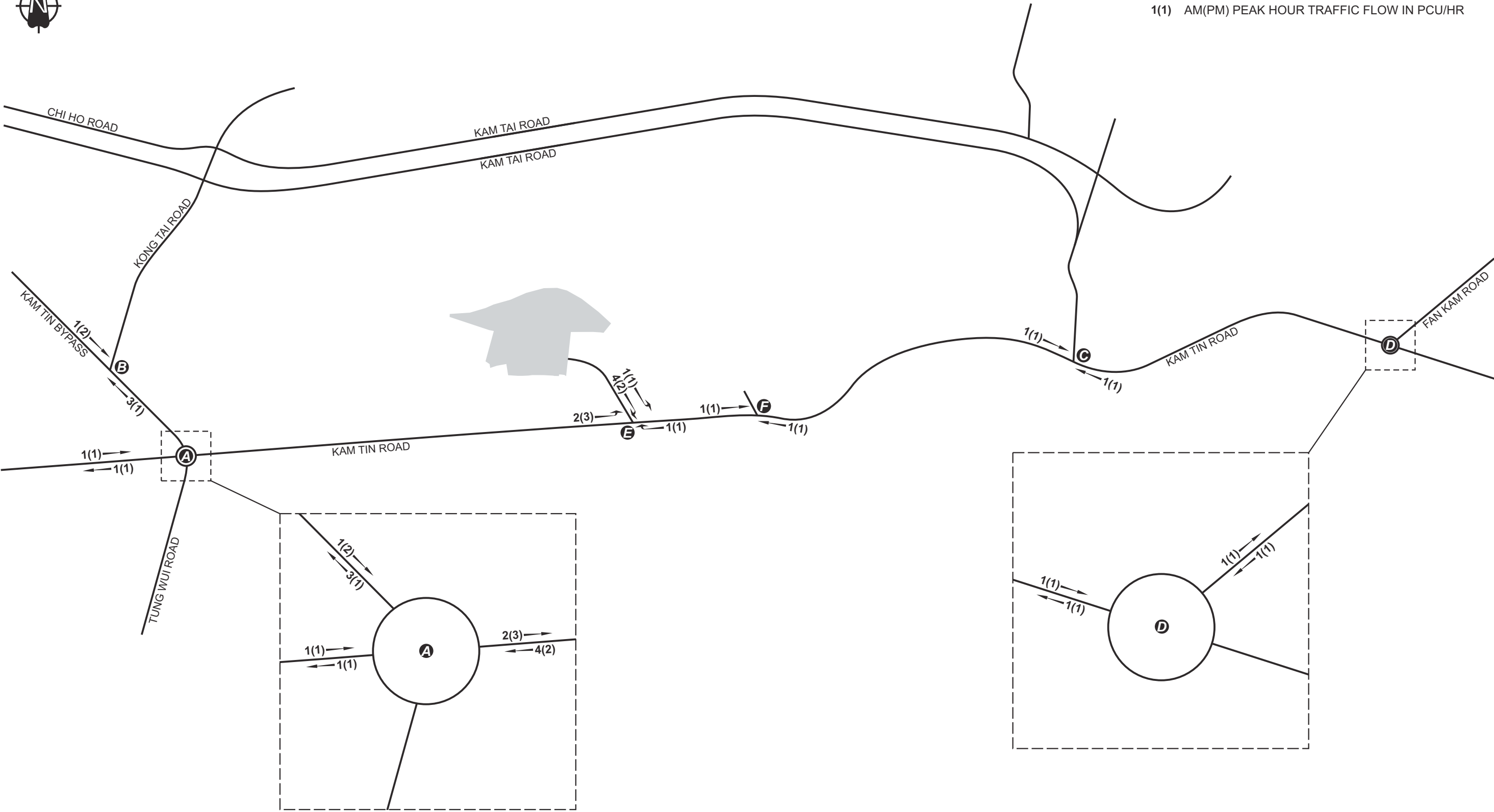
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APPLICATION FOR PERMISSION UNDER SECTION 16
PROPOSED RESIDENTIAL DEVELOPMENT (HOUSES) AND
MINOR RELAXATION OF BUILDING HEIGHT & PLOT RATIO
RESTRICTION IN "RESIDENTIAL (GROUP C)2" AND
"RESIDENTIAL (GROUP D)" ZONES, LOT 624(PART) & 787
IN D.D.110 AND ADJOINING GOVERNMENT LAND,
KAM TIN ROAD, SHEK KONG SAN TSUEN, YUEN LONG

Drawing Title
2036 REFERENCE TRAFFIC FLOWS





- LEGEND :
- SUBJECT SITE
 - 1(1) AM(PM) PEAK HOUR TRAFFIC FLOW IN PCU/HR



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Rev.	Description	Checked	Date

Project Title
APPLICATION FOR PERMISSION UNDER SECTION 16
PROPOSED RESIDENTIAL DEVELOPMENT (HOUSES) AND
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IN D.D.110 AND ADJOINING GOVERNMENT LAND,
KAM TIN ROAD, SHEK KONG SAN TSUEN, YUEN LONG

Drawing Title

DEVELOPMENT TRAFFIC FLOWS

SYSTRAMVA

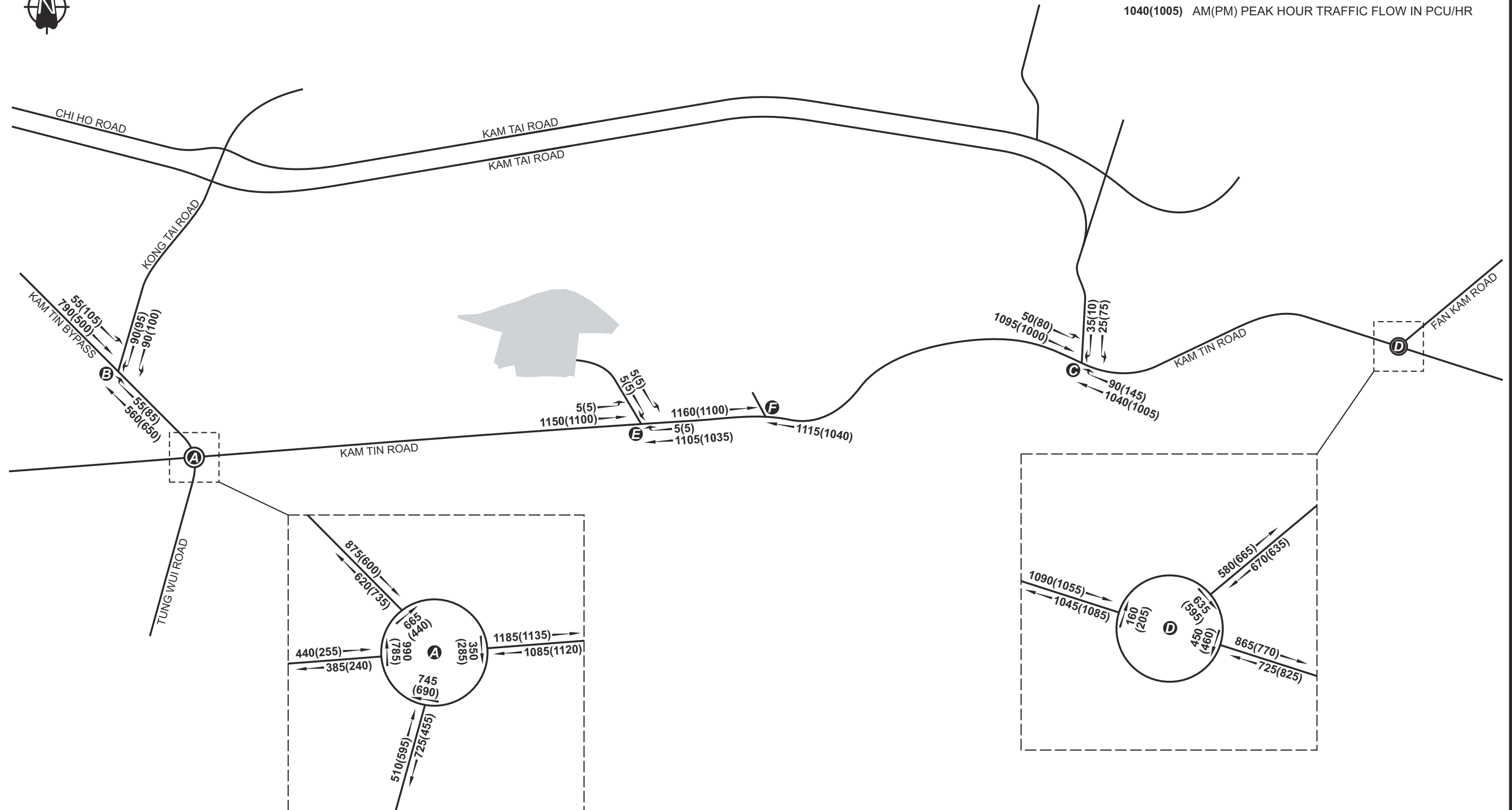


LEGEND :



SUBJECT SITE

1040(1005) AM(PM) PEAK HOUR TRAFFIC FLOW IN PCU/HR



-	-	-	-
-	-	-	-
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Rev.	Description	Checked	Date

Project Title
APPLICATION FOR PERMISSION UNDER SECTION 16
PROPOSED RESIDENTIAL DEVELOPMENT (HOUSES) AND
MINOR RELAXATION OF BUILDING HEIGHT & PLOT RATIO
RESTRICTION IN "RESIDENTIAL (GROUP C)2" AND
"RESIDENTIAL (GROUP D)" ZONES, LOT 624(PART) & 787
IN D.D.110 AND ADJOINING GOVERNMENT LAND,
KAM TIN ROAD, SHEK KONG SAN TSUEN, YUEN LONG

Drawing Title					
2036 DESIGN TRAFFIC FLOWS					
Designed	FSC	Checked	CFC	Scale	NTS
Date	AUG 2026	Drawing No.	4.4	Rev.	-



5. TRAFFIC IMPACT ASSESSMENT

5.1 Year 2036 Junction Operational Performance

5.1.1 To investigate the traffic impact of the proposed development on the surrounding road network at the design year 2036, operational performance of the identified key local junctions has been assessed based on the existing layout for both 2036 reference and design cases. The assessment results for the year 2036 reference and design cases are summarised in **Table 5.1**. The junction calculation sheets are attached in **Annex C**.

Table 5.1 Year 2036 Junction Operational Performance

Ref. ⁽¹⁾	Junction	RC/RFC ⁽²⁾			
		2036 Reference Case		2036 Design Case	
		AM Peak	PM Peak	AM Peak	PM Peak
A	Kam Tin Bypass / Kam Tin Road / Tung Wui Road	0.52	0.50	0.53	0.50
B	Kam Tin Bypass / Kong Tai Road	31%	52%	30%	51%
C	Kam Tin Road / Kam Tai Road	0.63	0.42	0.63	0.42
D	Kam Tin Road / Fan Kam Road	0.79	0.77	0.79	0.77
E	Kam Tin Road/ Local Access Road	0.11	0.07	0.11	0.09
F	Kam Tin Road	26%	33%	26%	33%

Remarks: (1) Refer to **Drawing 3.2** for junction reference; and,
(2) RC = reserve capacity, RFC = ratio of flow to capacity.

5.1.2 The anticipated trip generations of the current proposed scheme would be slightly larger in both AM peak and PM peak periods, compared with the previous approved scheme. The assessment results in **Table 5.1** indicated that all identified key junctions would operate with ample capacity in both reference and design cases in Year 2036.

5.1.3 The road link performance for identified road links was conducted as summarised in **Table 5.2**.

Table 5.2 Year 2036 Road Links Performance

Ref. ⁽¹⁾	Road Link	Directions	Design Capacity (veh/hr)	Design Capacity (pcu/hr) ⁽⁴⁾	2036 Reference Case				2036 Design Case			
					Traffic Flow (pcu/hr)		V/C ⁽⁵⁾		Traffic Flow (pcu/hr)		V/C ⁽⁵⁾	
					AM	PM	AM	PM	AM	PM	AM	PM
L1	Kam Tin Bypass	WB	2,800 ⁽²⁾	3,640	615	735	0.17	0.20	620	735	0.17	0.20
L2	Kam Tin Bypass	EB	2,800 ⁽²⁾	3,640	880	595	0.24	0.16	880	600	0.24	0.16
L3	Kam Tin Road (Tung Wui Road to Kam Tai Road)	2-WAY	2,200 ⁽³⁾	2,860	2,265	2,245	0.79	0.78	2,270	2,250	0.79	0.79
L4	Kam Tin Road (Kam Tai Road to Fan Kam Road)	2-WAY	2,200 ⁽³⁾	2,860	2,250	2,225	0.79	0.78	2,250	2,225	0.79	0.78

Remarks:

- (1) Refer to **Drawing 3.2** for key road links;
- (2) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 2-lane dual primary distributor will be taken as 2,800 veh/hr for one-way direction;
- (3) By TPDM Volume 2 Chapter 2 Table 2.4.1.1, design flow of a 2-lane single carriageway will be taken as 2,200 veh/hr for two-way traffic. Reference has been made to the proposed road widening works on Kam Tin Road;
- (4) PCU factor of 1.3 as derived by the traffic survey adopted, and the capacity rounded to nearest 10; and,
- (5) V/C = volume to capacity ratio.

5.1.4 The assessment results in **Table 5.3** indicate that all identified key road links would operate with ample capacity in year 2036, under the proposed road widening works on Kam Tin Road, upon completion of the proposed development.

5.1.5 Therefore, it is anticipated that the proposed development would not cause any significant traffic impact to the road network.

6. CONCLUSION

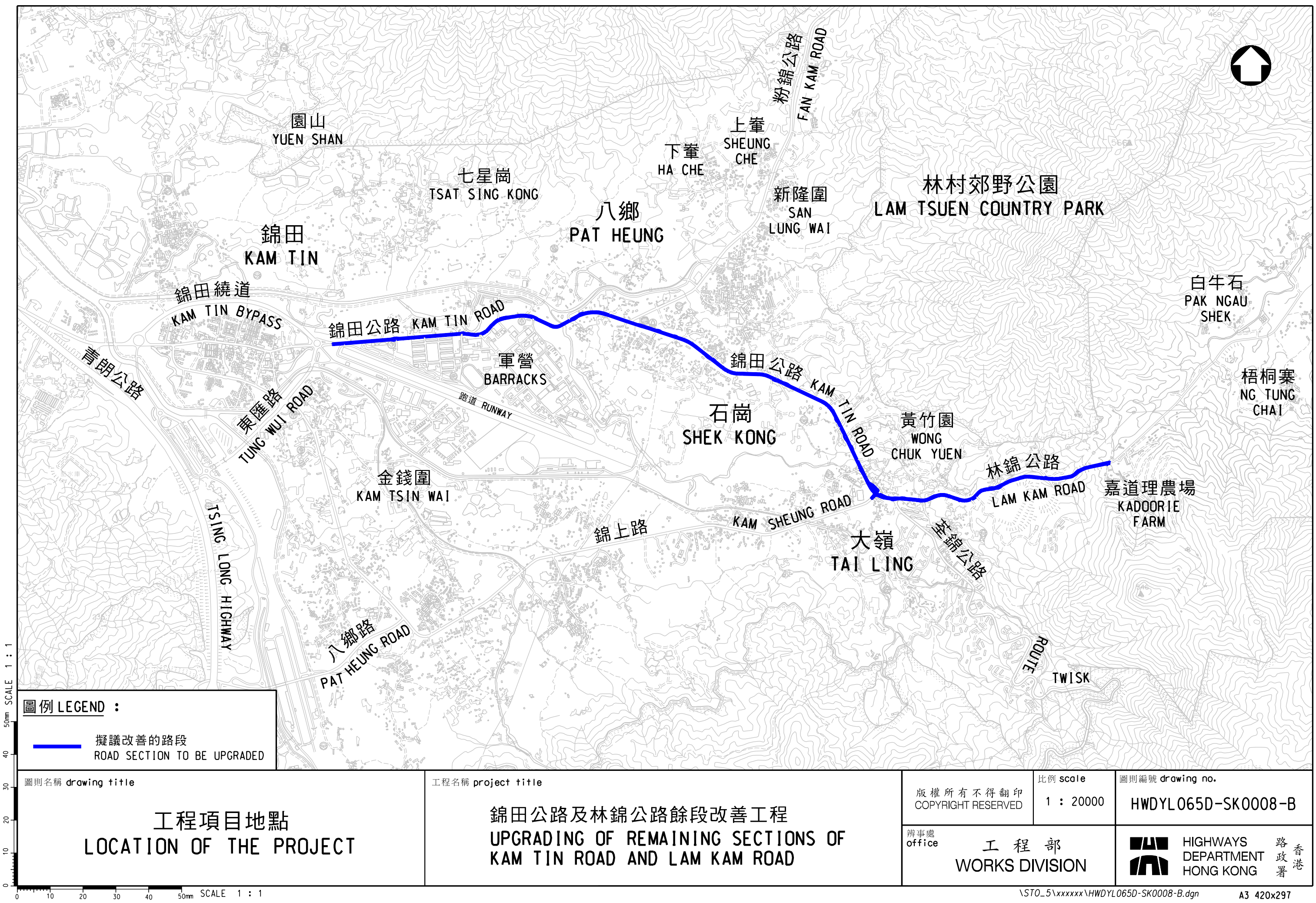
6.1 Summary

- 6.1.1 The previous Section 16 Planning Application (Application no. A/YL-KTN/761-3) was approved with conditions on 26 January 2026 for a proposed house development with 12 houses. Subject to the updated Master Layout Plan (MLP) with the revised run-in/out and the vehicular access to Kam Tin Road, this traffic impact assessment is to investigate the potential traffic impact on the adjacent local road network in support of the discharge of the planning approval conditions. The domestic GFA, flat mix and plot ratio will increase, while the average house size will decrease.
- 6.1.2 Same to the previous approved scheme, the development vehicular access would be through the upgrade of existing connecting to Kam Tin Road.
- 6.1.3 The provision of the internal transport facilities in the current proposed MLP is determined in accordance with the latest updated HKPSG requirements. The provision would be the same to the previous approved scheme.
- 6.1.4 Traffic surveys have been conducted to establish the current traffic condition in the vicinity of the subject site.
- 6.1.5 The tentative operation year of proposed development is 2033. Thus, the design year of 2036 is adopted for traffic forecast and assessment purposes.
- 6.1.6 Subject to the gazetted Kam Tin Road improvement works, the affected section of Kam Tin Road would be widened to 10.3m-wide single two-lane carriageway. Although the detailed design of the Kam Tin Road improvement work is in progress, it is assumed that the improvement work would be completed and considered in the design year.
- 6.1.7 Operational performance of the identified local junctions and road link capacity have been assessed based on the anticipated year 2036 traffic flows. The anticipated trip generation of the current proposed scheme would be larger in both AM peak and PM peak periods, compared with the previous approved scheme. The assessment results revealed that all identified key junctions and road links will operate with ample capacity upon completion of the proposed development.
- 6.1.8 Therefore, it is anticipated that the proposed development would not cause any significant traffic impact to the road network.

6.2 Conclusion

- 6.2.1 In conclusion, the traffic impact assessment has demonstrated that the traffic generated by the proposed development can be absorbed by the nearby road network. Hence, it can be concluded that the proposed development is considered acceptable in traffic terms.

ANNEX A – GAZETTE DRAWINGS OF ROAD IMPROVEMENT WORKS AT KAM TIN ROAD



圖例 LEGEND :

 擬議改善的路段
ROAD SECTION TO BE UPGRADED

圖則名稱 drawing title

工程項目地點
LOCATION OF THE PROJECT

工程名稱 project title

錦田公路及林錦公路餘段改善工程
UPGRADING OF REMAINING SECTIONS OF
KAM TIN ROAD AND LAM KAM ROAD

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辦事處
office

工 程 部
WORKS DIVISION

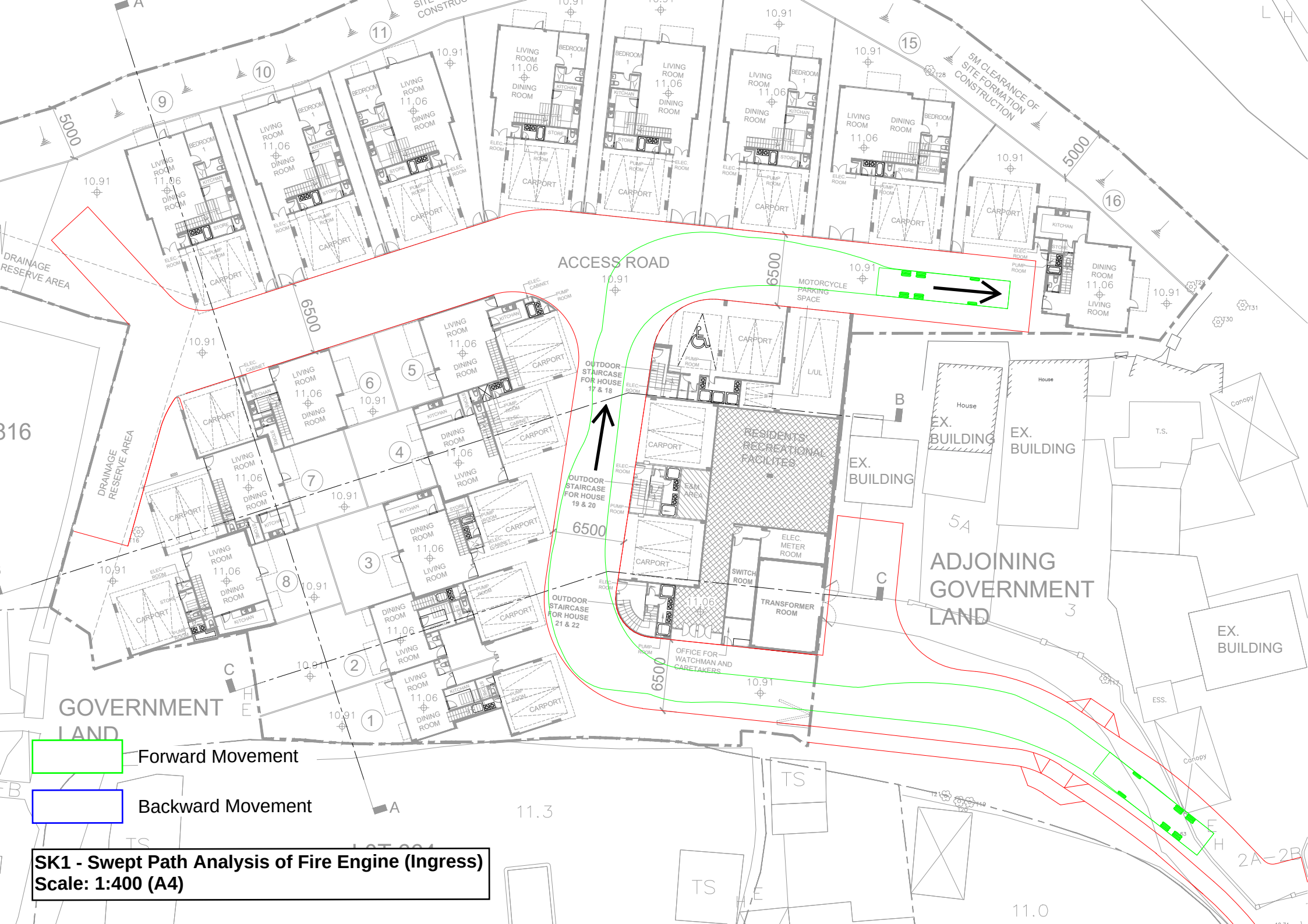
比例 scale
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圖則編號 drawing no.
HWDYL065D-SK0008-B

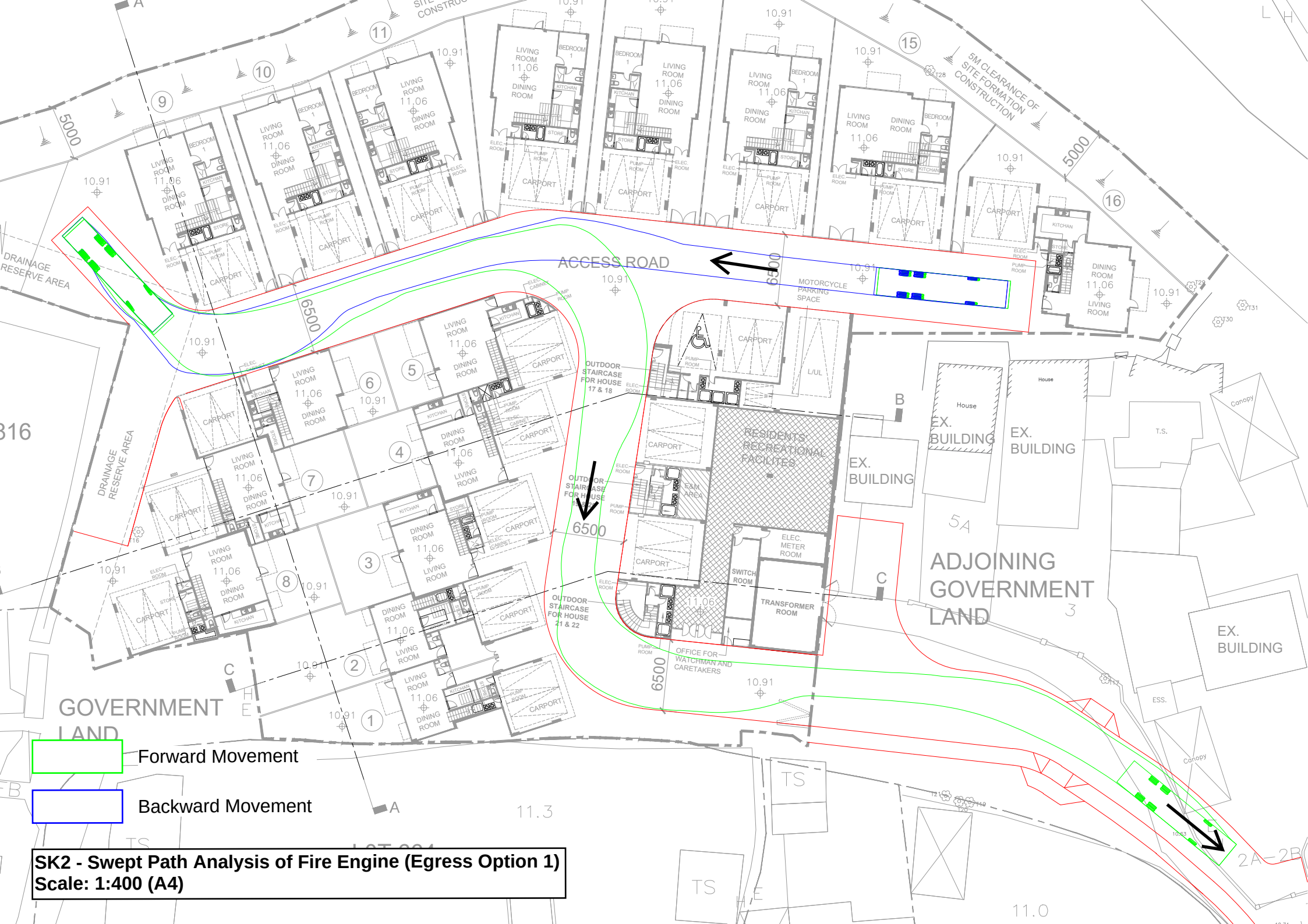


HIGHWAYS
DEPARTMENT
HONG KONG
路 政 署
香 港

ANNEX B – SWEPT PATH ANALYSIS



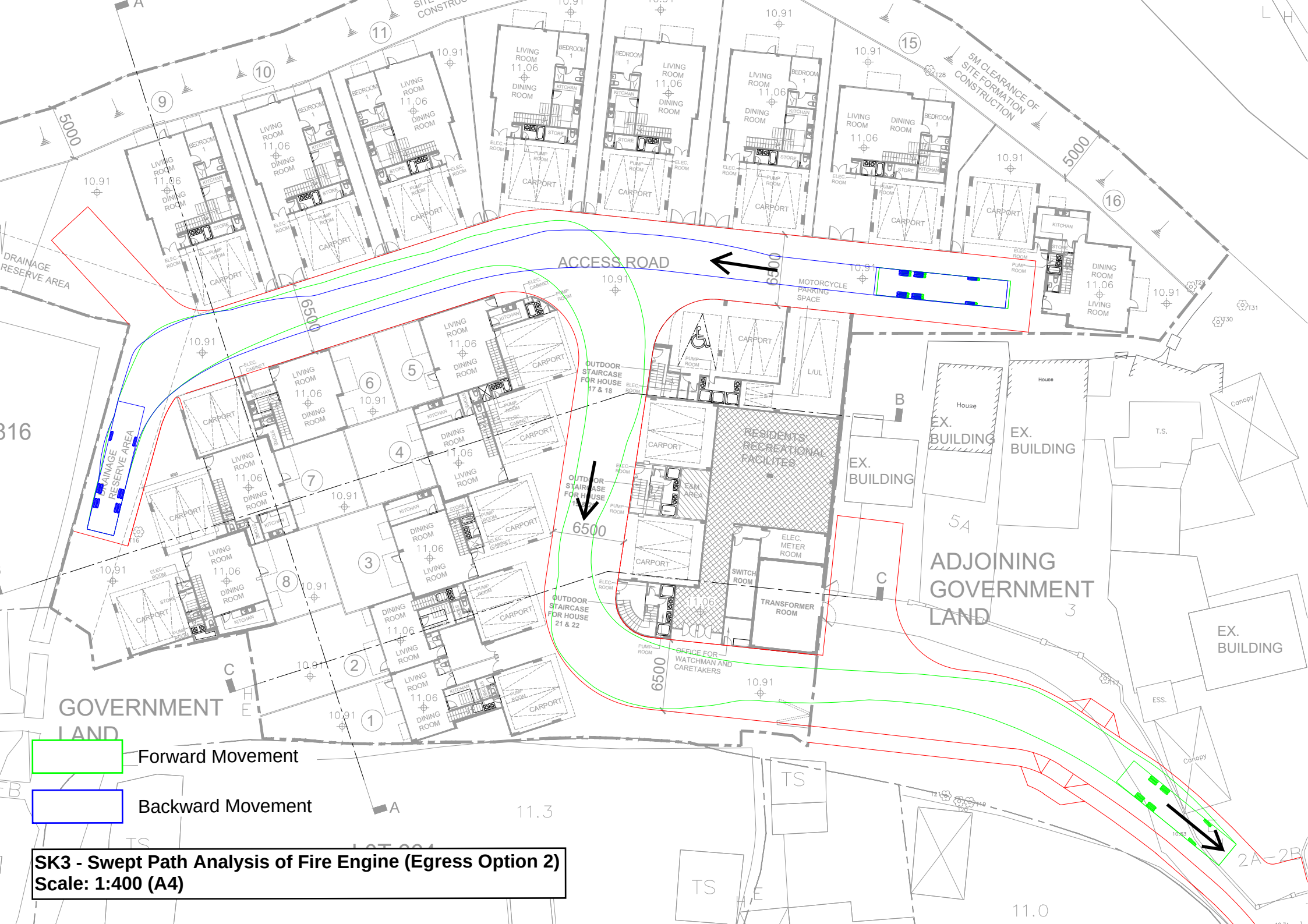
SK1 - Swept Path Analysis of Fire Engine (Ingress)
Scale: 1:400 (A4)



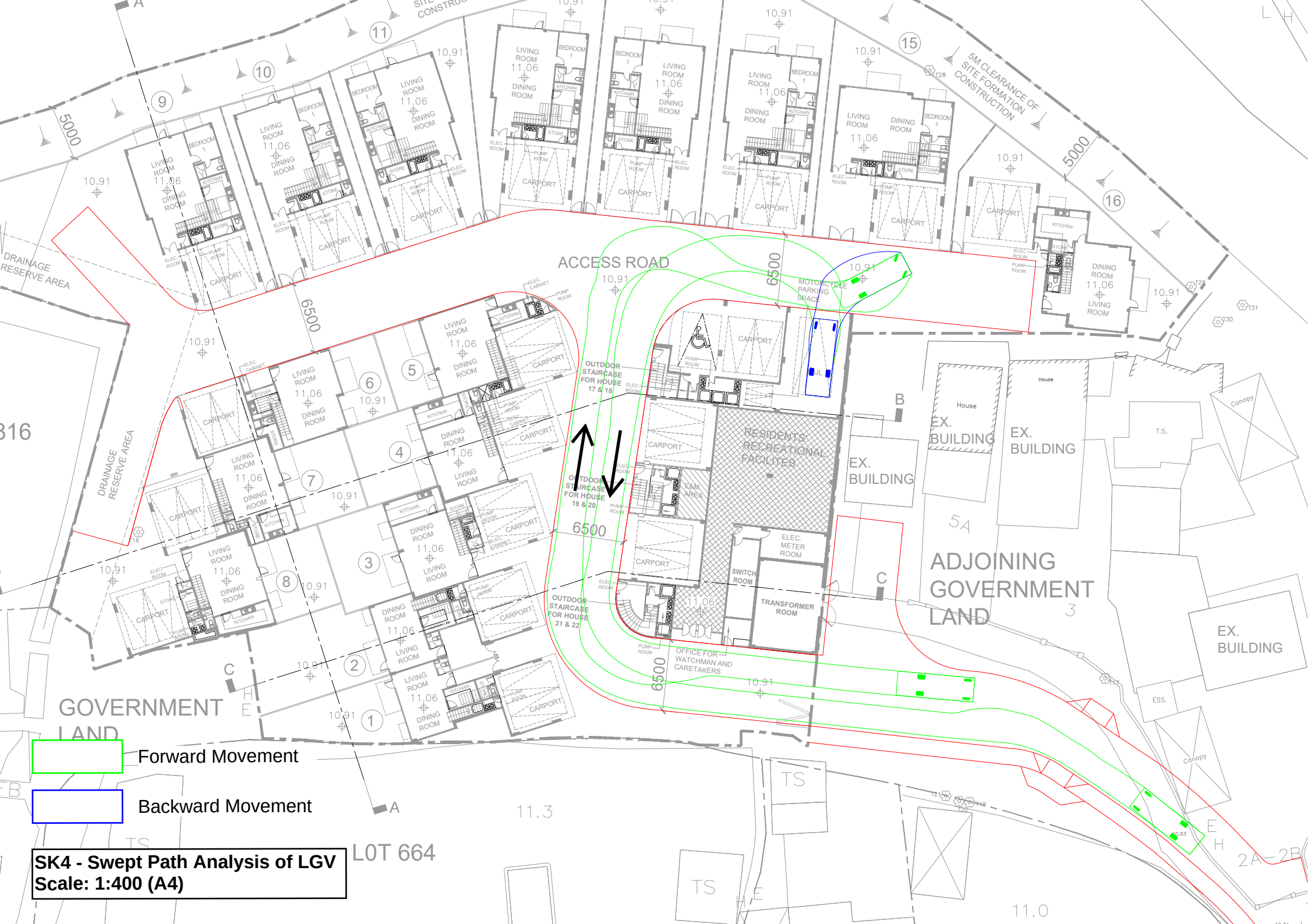
Forward Movement

Backward Movement

SK2 - Swept Path Analysis of Fire Engine (Egress Option 1)
Scale: 1:400 (A4)



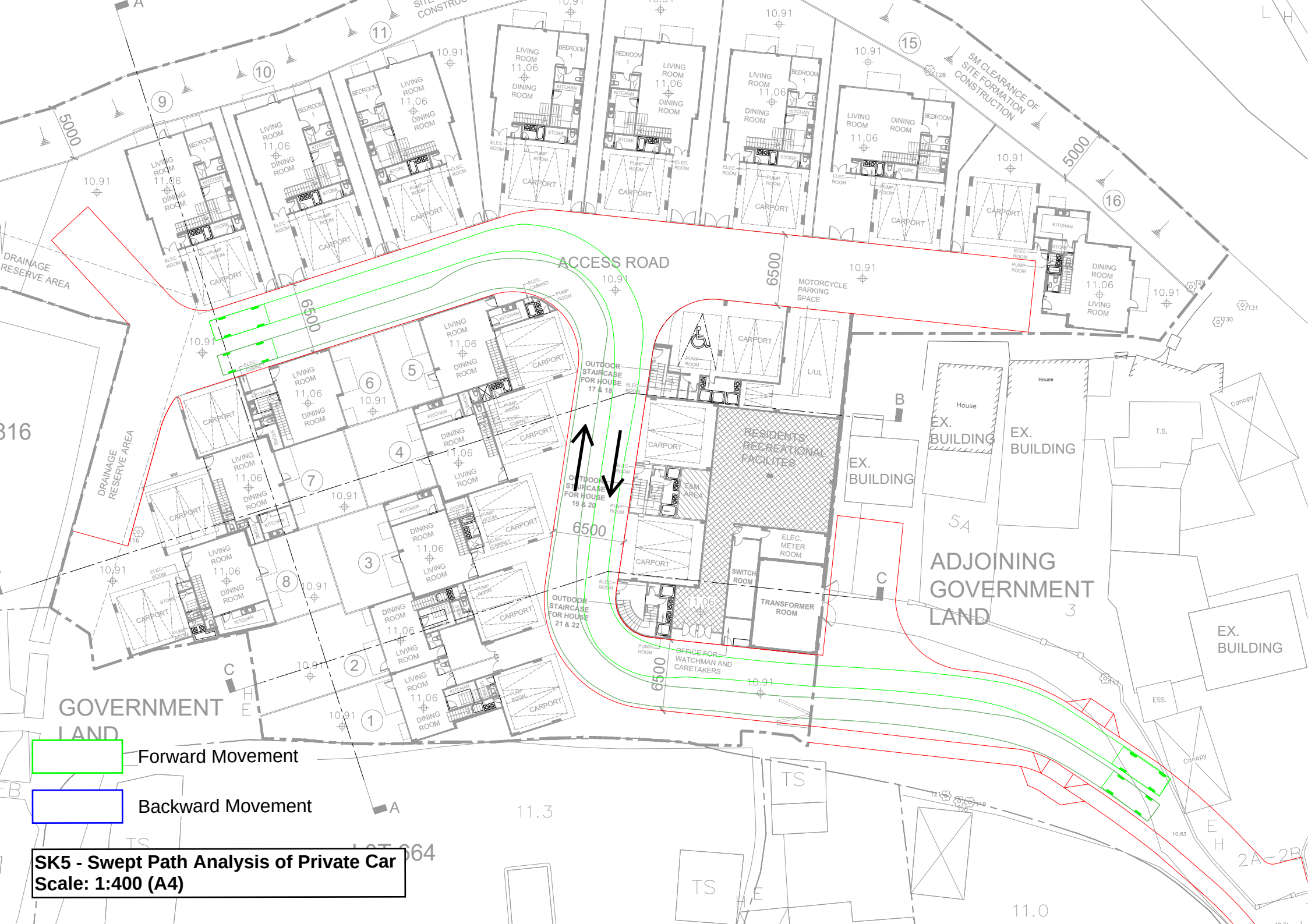
SK3 - Swept Path Analysis of Fire Engine (Egress Option 2)
Scale: 1:400 (A4)

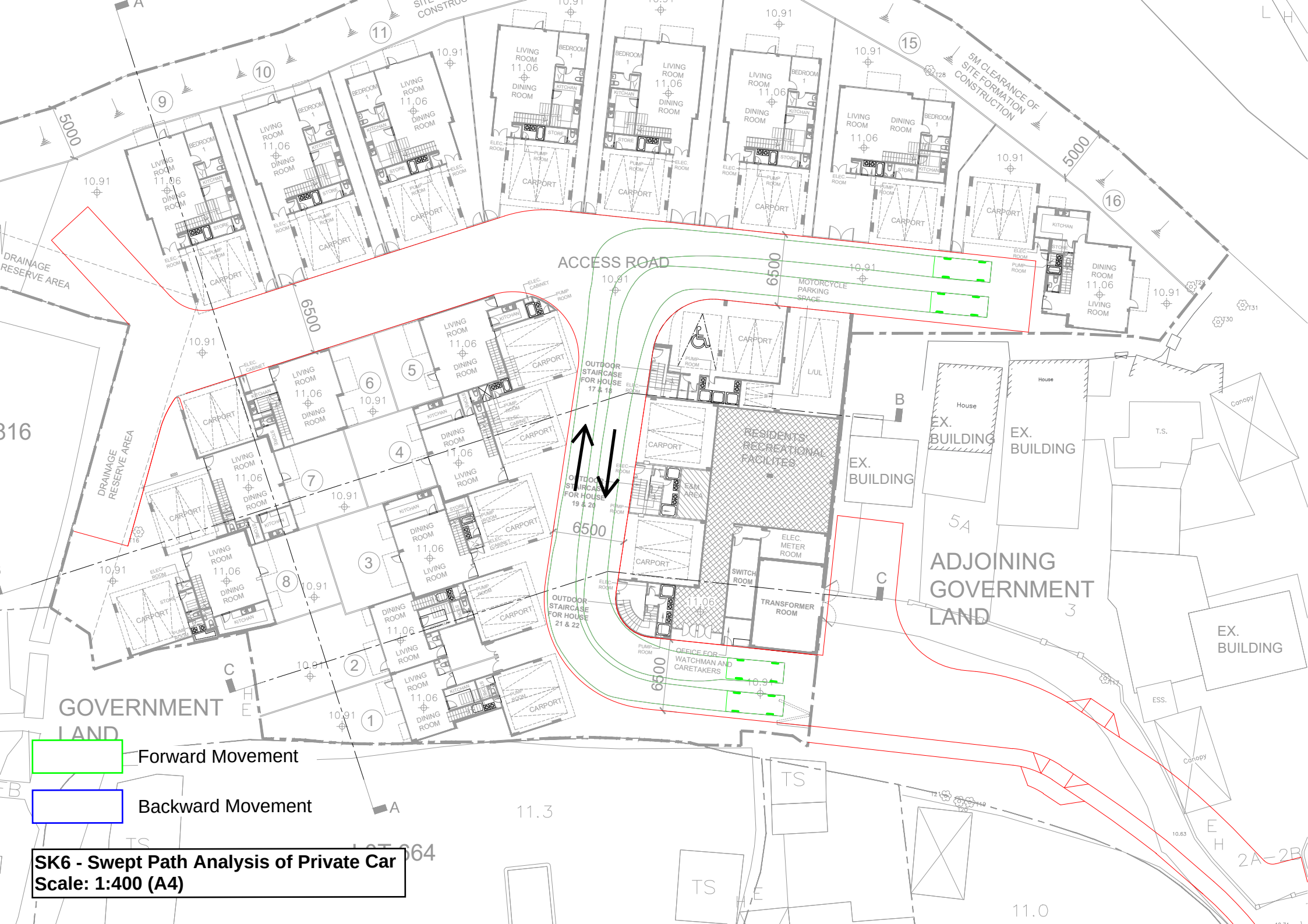


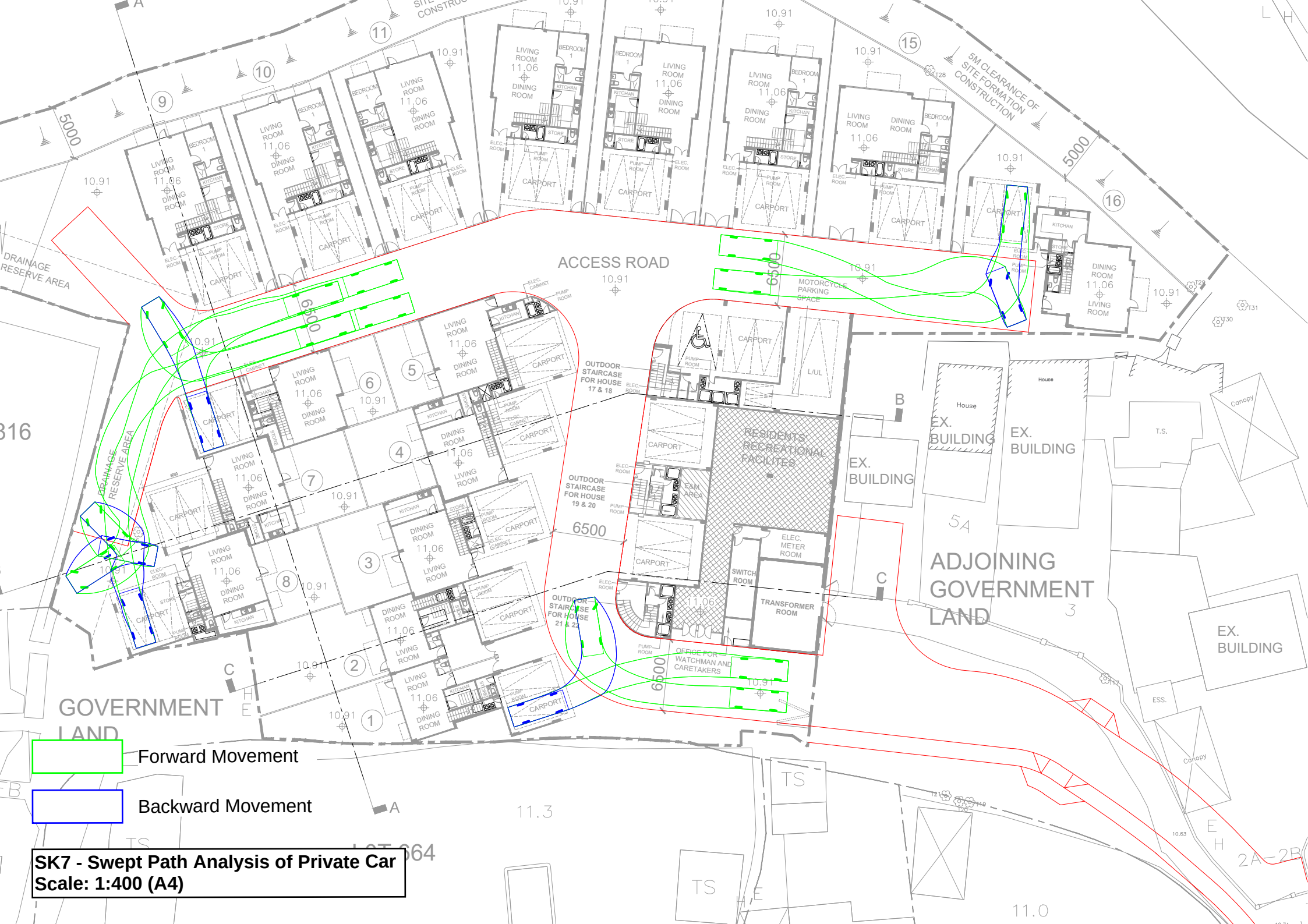
SK4 - Swept Path Analysis of LGV
Scale: 1:400 (A4)

Forward Movement

Backward Movement



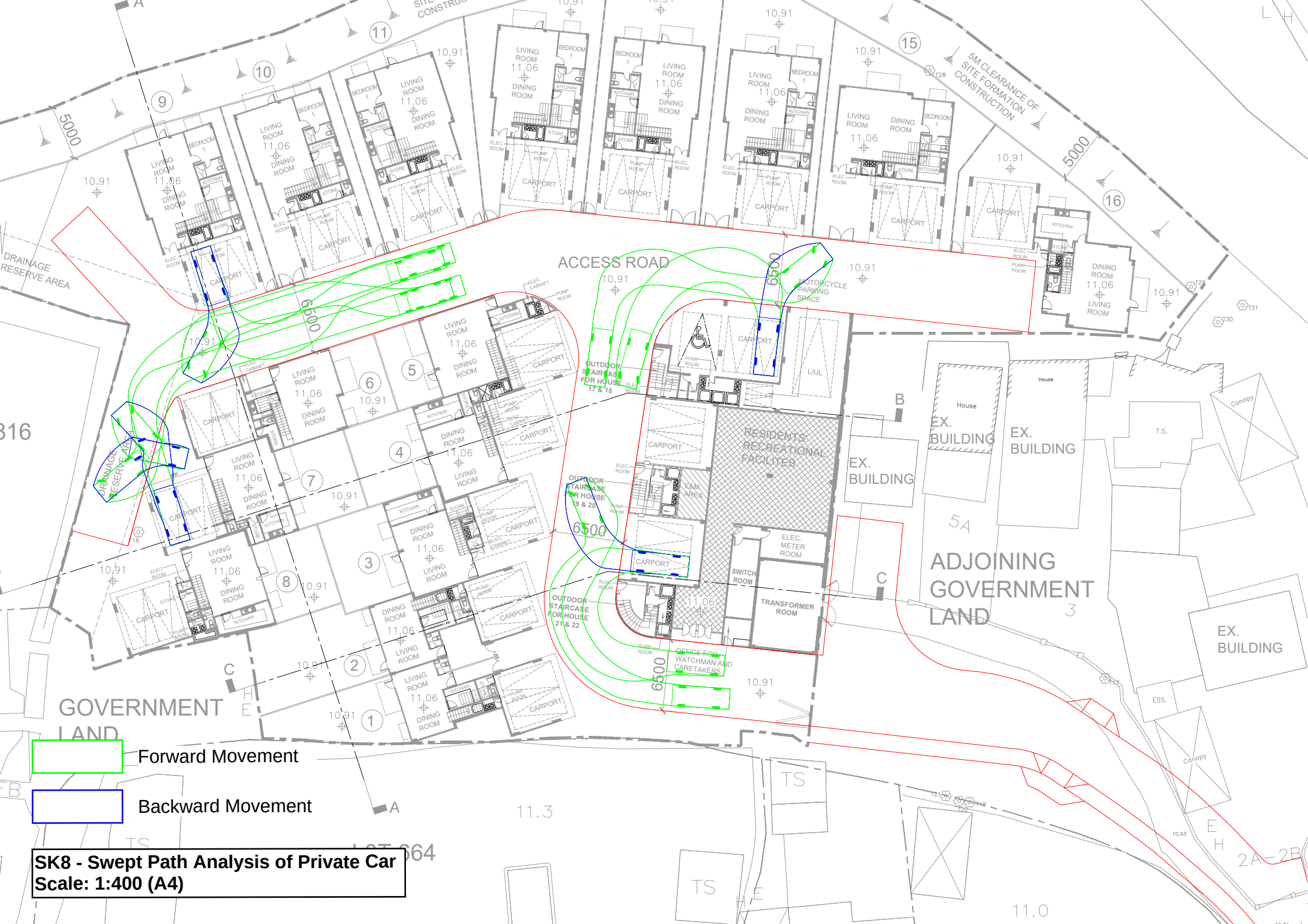




Forward Movement

Backward Movement

SK7 - Swept Path Analysis of Private Car
Scale: 1:400 (A4)



SK8 - Swept Path Analysis of Private Car
Scale: 1:400 (A4)

ANNEX C – DETAIL OF JUNCTION CALCULATION SHEETS

Calculation Spreadsheets
for
2026 Observed Scenario

Job Title:

Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories

Junction:

Kam Tin Bypass / Kam Tin Road / Tung Wui Road (A)

Ref. No.:

2026O

Scheme:

Observe

Ref. No.:

A

Year:

2026

Job No.:

Rev.:

AM

PM

ARM A:

Kam Tin Road (EB)

ARM B:

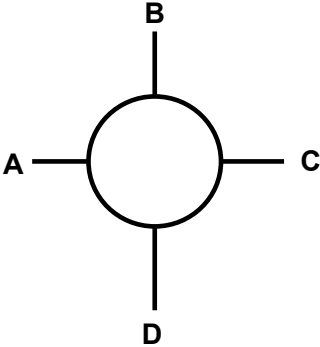
Kam Tin Bypass

ARM C:

Kam Tin Road (WB)

ARM D:

Tung Wui Road



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	3.50	7.50	4	20	62	42	1.60
B	7.30	11.00	4	35	62	44	1.48
C	9.00	12.00	1	12.5	62	63	4.80
D	7.30	7.30	1	12.5	62	44	0.00

AM FLOWS

from \ to	A	B	C	D	Circ	Entry	Exit
A					785	370	330
B					520	755	495
C					300	910	985
D					645	370	590

PM FLOWS

from \ to	A	B	C	D	Circ	Entry	Exit
A					635	210	205
B					315	495	635
C					250	950	930
D					600	470	355

CALCULATIONS

ARM	K	X ₂	M	F	t _D	f _c	Q _E	AM	PM	RFC	AM	PM
A	0.96	4.45	1.22	1349	1.23	0.49		927	997	0.40	0.21	
B	0.97	8.23	1.22	2495	1.23	0.68		2082	2218	0.36	0.22	
C	0.86	9.28	1.22	2813	1.23	0.73		2219	2251	0.41	0.42	
D	0.92	7.30	1.22	2212	1.23	0.63		1663	1689	0.22	0.28	

Critical Arm:

C

C

RFC:

0.41

0.42

AM

PM

- In accordance with TPDM V2.4

Calculated by:

FSC

Date:

Jul 2026

Checked by:

CFC

SKST - Junction Cal_20260708.xlsm \ 2026O_JA

Junction: Kam Tin Bypass / Kong Tai Road (B)

Design Year: 2026

Description: Observe

Designed By: FSC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Kam Tin Bypass EB	↖	A	1	2.800	13			14%	41%	1865	1810	345	0.185	0.185	234	0.129	
	→	A	1	3.000								380	0.185		266	0.129	0.129
Kam Tin Bypass WB	↑	C	2	3.000		15				1870	1870	50	0.027		75	0.040	0.040
	←	B	1,2	3.500						2105	2105	233	0.111		293	0.139	
	←	B	1,2	3.000						1915	1915	212	0.111		267	0.139	
Kong To Road SB	↕	D	3	3.000	10	12		50% / 50% 51% / 49%		1685	1685	160	0.095	0.095	175	0.104	0.104
Pedestrian Crossing		Ep	4	MIN GREEN + FLASH =			12	+	15	=	27			*			*
		Fp	2,3,4	MIN GREEN + FLASH =			7	+	7	=	14						
		Gp	4	MIN GREEN + FLASH =			7	+	7	=	14						

Notes:

Flow: (pcu/hr)

↑ N

80(85) ← 80(90)

50(95) → 675(405)

50(75) → 445(560)

Group	B,D,Ep	A,C,D,Ep	Group	B,D,Ep	A,C,D,Ep
y	0.206	0.280	y	0.243	0.273
L (sec)	37	48	L (sec)	37	42
C (sec)	90	90	C (sec)	90	90
y pract.	0.530	0.420	y pract.	0.530	0.480
R.C. (%)	158%	50%	R.C. (%)	118%	76%

Stage / Phase Diagrams

1.

A

B

2.

Fp

C

B

3.

Fp

D

4.

Fp

Gp

Ep

5.

I/G= 3		I/G= 6	5	I/G= 5		I/G= 4	27	I/G=	
I/G= 3		I/G= 6		I/G= 5		I/G= 4	27	I/G=	

Simplified Priority Junction Capacity Calculation

Job Title: Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories			
Junction: Kam Tin Road / Kam Tai Road (C)		Ref. No.: 2026O	
Scheme: Observe		Ref. No.: C	
Year: 2026	Job No.: [REDACTED]	Rev.: [REDACTED]	
ARM A: Kam Tin Road (EB)			
ARM B: Kam Tai Road			
ARM C: Kam Tin Road (WB)			

ARM C

AM	(PM)
885	(855)
80	(130)

Kam Tin Road (WB)

ARM A

AM	(PM)
910	(820)
45	(70)

Kam Tin Road (EB)

ARM B

AM	(PM)
25	30
(65)	(10)

Kam Tai Road

GEOMETRY					
Major road width	W	6.00	Lane widths	w(b-a)	2.25
Central Reserve width	Wcr	0.00		w(b-c)	2.25
2 Lane Minor Arm (Y/N)		N		w(c-b)	2.20
Visibilities	Vr(b-a)	65	Calculated	D	0.79
	VI(b-a)	78		E	0.83
	Vr(b-c)	65		F	0.80
	Vr(c-b)	40		Y	0.79

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		885	855	
	q(c-b)		80	130	
	q(a-b)		45	70	
	q(a-c)		910	820	
	q(b-a)		30	10	
	q(b-c)		25	65	
	f		0.45	0.87	
CAPACITIES	Q(b-a)	Factor	131	137	
	Q(b-c)	1	394	413	
	Q(c-b)	1	376	391	
	Q(b-ac)	1	188	326	
RFC's	b-a		0.23	0.07	
	b-c		0.06	0.16	
	c-b		0.21	0.33	
	b-ac		0.29	0.23	
Worst RFC			0.29	0.33	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

Capacity of combined streams
- In accordance with TPDM V2 Ch4

Calculated by: FSC	Date: Jul-26	Checked by: CFC
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Job Title:Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories

Junction:Kam Tin Road / Fan Kam Road (D)

Ref. No.:2026O

Scheme:Observe

Ref. No.:D

Year:2026

Job No.:

Rev.:

AM

PM

ARM A:Kam Tin Road (EB)

ARM B:Fan Kam Road

ARM C:Kam Tin Road (WB)

A

B

C

GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	3.80	8.00	10	44	113	80	0.67
B	3.00	6.80	4	13.4	113	27	1.52
C	5.70	6.40	7.8	166	113	30	0.14

AM FLOWS

from \ to	A	B	C	Circ	Entry	Exit
A				140	910	885
B				545	570	475
C				375	625	745

PM FLOWS

from \ to	A	B	C	Circ	Entry	Exit
A				180	870	925
B				500	540	550
C				390	715	650

CALCULATIONS

ARM	K	X ₂	M	F	t _D	f _c	AM	PM	Q _E	RFC	AM	PM
A	0.85	5.59	200.34	1694	1.00	0.45	1392	1377		0.65	0.63	
B	0.99	3.94	200.34	1194	1.00	0.38	975	992		0.58	0.54	
C	1.04	6.24	200.34	1892	1.00	0.47	1788	1781		0.35	0.40	

Critical Arm:

A

A

RFC:

0.65

0.63

AM

PM

- In accordance with TPDM V2.4

Calculated by:FSC

Date:Jul 2026

Checked by:CFC

Simplified Priority Junction Capacity Calculation

Job Title: Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories			
Junction: Kam Tin Road/ Local Access Road (E)		Ref. No.: 2026O	
Scheme: Observe		Ref. No.: E	
Year: 2026	Job No.: [REDACTED]	Rev.:	
ARM A: Kam Tin Road (EB)			
ARM B: Local Access Road			
ARM C: Kam Tin Road (WB)			

ARM C

AM	(PM)
930	(880)
5	(0)

Kam Tin Road (WB)

ARM A

AM	(PM)
960	(905)
5	(5)

Kam Tin Road (EB)

ARM B

AM	(PM)
5	(0)
5	(5)

Local Access Road

GEOMETRY					
Major road width	W	6.00	Lane widths	w(b-a)	1.10
Central Reserve width	Wcr	0.00		w(b-c)	1.10
2 Lane Minor Arm (Y/N)		N		w(c-b)	2.20
Visibilities	Vr(b-a)	0	Calculated	D	0.62
	VI(b-a)	0		E	0.68
	Vr(b-c)	0		F	0.77
	Vr(c-b)	0		Y	0.79

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		930	880	
	q(c-b)		5	0	
	q(a-b)		5	5	
	q(a-c)		960	905	
	q(b-a)		5	5	
	q(b-c)		5	0	
	f		0.50	0.00	
CAPACITIES	Q(b-a)	Factor: 1	110	127	
	Q(b-c)	1	317	328	
	Q(c-b)	1	359	372	
	Q(b-ac)	1	163	127	
RFC's	b-a		0.05	0.04	
	b-c		0.02	0.00	
	c-b		0.01	0.00	
	b-ac		0.06	0.04	
Worst RFC			0.06	0.04	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

Capacity of combined streams
- In accordance with TPDM V2 Ch4

Calculated by: FSC	Date: Jul-26	Checked by: CFC
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Junction: Kam Tin Road (F)

Design Year: 2026

Description: Observe

Designed By: FSC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Kam Tin Road EB	→	A	1	3.400						1955	1955	965	0.494	0.494	905	0.463	0.463
Kam Tin Road EB	←	A	1	3.400						1955	1955	935	0.478		880	0.450	
Pedestrian Crossing		B	2	MIN GREEN + FLASH =			6	+	7	=	13			*			*

Notes:

Flow: (pcu/hr)

→
965(905)

←
935(880)

↑
N

Group		A,B	Group		A,B
y		0.494	y		0.463
L (sec)		20	L (sec)		20
C (sec)		120	C (sec)		120
y pract.		0.750	y pract.		0.750
R.C. (%)		52%	R.C. (%)		62%

Stage / Phase Diagrams

1.

A→

←A

2.

↑
B

↓

3.

4.

5.

I/G= 4		I/G= 4	13	I/G=		I/G=		I/G=	
I/G= 4		I/G= 4	13	I/G=		I/G=		I/G=	

Date: JUL, 2026

Junction: Kam Tin Road (F)

F

Calculation Spreadsheets
for
2036 Reference Scenario

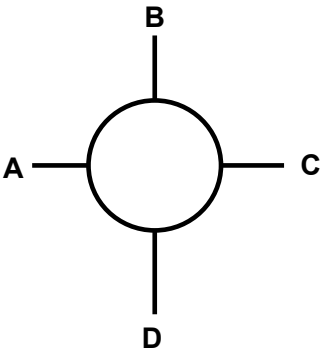
Job Title: Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories

Junction: Kam Tin Bypass / Kam Tin Road / Tung Wui Road (A)Ref. No.: 2036R

Scheme: ReferenceRef. No.: A

Year: 2036Job No.: Rev.:

ARM A: Kam Tin Road (EB)
ARM B: Kam Tin Bypass
ARM C: Kam Tin Road (WB)
ARM D: Tung Wui Road



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	3.50	7.50	4	20	62	42	1.60
B	7.30	11.00	4	35	62	44	1.48
C	9.00	12.00	1	12.5	62	63	4.80
D	7.30	7.30	1	12.5	62	44	0.00

AM FLOWS

from \ to	A	B	C	D	Circ	Entry	Exit
A					990	435	380
B					665	875	615
C					350	1080	1180
D					745	510	725

PM FLOWS

from \ to	A	B	C	D	Circ	Entry	Exit
A					785	255	235
B					440	595	735
C					285	1115	1130
D					690	595	455

CALCULATIONS

ARM	K	X ₂	M	F	t _D	f _c	AM	PM	AM	PM
A	0.96	4.45	1.22	1349	1.23	0.49	831	927	0.52	0.28
B	0.97	8.23	1.22	2495	1.23	0.68	1986	2135	0.44	0.28
C	0.86	9.28	1.22	2813	1.23	0.73	2188	2229	0.49	0.50
D	0.92	7.30	1.22	2212	1.23	0.63	1605	1637	0.32	0.36

Critical Arm: A C
RFC: 0.52 0.50
AM PM

- In accordance with TPDM V2.4

Calculated by: FSCDate: Jul 2026Checked by: CFC

Junction: Kam Tin Bypass / Kong Tai Road (B)

Design Year: 2036

Description: Reference

Designed By: FSC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Kam Tin Bypass EB	↗	A	1	2.800	13			14%	37%	1865	1815	400	0.214	0.214	282	0.155	0.155
	→	A	1	3.000								440	0.214		318	0.155	
Kam Tin Bypass WB	↖	C	2	3.000		15				1870	1870	55	0.029		85	0.045	0.045
	←	B	1,2	3.500						2105	2105	293	0.139		340	0.162	
	←	B	1,2	3.000						1915	1915	267	0.139		310	0.162	
Kong To Road SB	↘	D	3	3.000	10	12		50% / 50%	51% / 49%	1685	1685	180	0.107	0.107	195	0.116	0.116
Pedestrian Crossing		Ep	4	MIN GREEN + FLASH =			12	+	15	=	27			*			*
		Fp	2,3,4	MIN GREEN + FLASH =			7	+	7	=	14						
		Gp	4	MIN GREEN + FLASH =			7	+	7	=	14						

Notes:

Flow: (pcu/hr)

90(95) ←

→ 90(100)

55(105) ↑

785(495) →

55(85) ↑

560(650) ←

N ↑

Group	B,D,Ep	A,C,D,Ep	Group	B,D,Ep	A,C,D,Ep
y	0.246	0.321	y	0.278	0.317
L (sec)	37	48	L (sec)	37	42
C (sec)	90	90	C (sec)	90	90
y pract.	0.530	0.420	y pract.	0.530	0.480
R.C. (%)	115%	31%	R.C. (%)	91%	52%

Stage / Phase Diagrams

1.

A ↗

← B

2.

↕ Fp

↖ C

← B

3.

↕ Fp

↘ D

4.

↕ Fp

↖ Ep

↕ Gp

5.

I/G= 3

I/G= 6

5

I/G= 5

I/G= 4

27

I/G=

I/G= 3

I/G= 6

I/G= 5

I/G= 4

27

I/G=

Simplified Priority Junction Capacity Calculation

Job Title: Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories			
Junction: Kam Tin Road / Kam Tai Road (C)		Ref. No.: 2036R	
Scheme: Reference		Ref. No.: C	
Year: 2036	Job No.: [REDACTED]	Rev.:	
ARM A: Kam Tin Road (EB)			
ARM B: Kam Tai Road			
ARM C: Kam Tin Road (WB)			

AM	(PM)
1040	(1005)
90	(145)

ARM C
Kam Tin Road (WB)

↓ N

<table border="1" style="margin: 0 auto;"> <tr> <th>AM</th> <th>(PM)</th> </tr> <tr> <td>1095</td> <td>(1000)</td> </tr> <tr> <td>50</td> <td>(80)</td> </tr> </table> ARM A Kam Tin Road (EB)				AM	(PM)	1095	(1000)	50	(80)
AM	(PM)								
1095	(1000)								
50	(80)								
<table border="1" style="margin: 0 auto;"> <tr> <th>AM</th> <th>(PM)</th> </tr> <tr> <td>25</td> <td>35</td> </tr> <tr> <td>(75)</td> <td>(10)</td> </tr> </table> ARM B Kam Tai Road				AM	(PM)	25	35	(75)	(10)
AM	(PM)								
25	35								
(75)	(10)								

GEOMETRY					
Major road width	W	6.00	Lane widths	w(b-a)	2.25
Central Reserve width	Wcr	0.00		w(b-c)	2.25
2 Lane Minor Arm (Y/N)		N		w(c-b)	2.20
Visibilities	Vr(b-a)	65	Calculated	D	0.79
	VI(b-a)	78		E	0.83
	Vr(b-c)	65		F	0.80
	Vr(c-b)	40		Y	0.79

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		1040	1005	
	q(c-b)		90	145	
	q(a-b)		50	80	
	q(a-c)		1095	1000	
	q(b-a)		35	10	
	q(b-c)		25	75	
	f		0.42	0.88	
CAPACITIES	Q(b-a)	Factor	63	69	
	Q(b-c)	1	349	369	
	Q(c-b)	1	332	347	
	Q(b-ac)	1	96	244	
RFC's	b-a		0.56	0.14	
	b-c		0.07	0.20	
	c-b		0.27	0.42	
	b-ac		0.63	0.35	
Worst RFC			0.63	0.42	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

Capacity of combined streams
- In accordance with TPDM V2 Ch4

Calculated by: FSC	Date: Jul-26	Checked by: CFC
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Job Title:Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories

Junction:Kam Tin Road / Fan Kam Road (D)

Ref. No.:2036R

Scheme:Reference

Ref. No.:D

Year:2036

Job No.:

Rev.:

AMPM

ARM A:Kam Tin Road (EB)

ARM B:Fan Kam Road

ARM C:Kam Tin Road (WB)

GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	3.80	8.00	10	44	113	80	0.67
B	3.00	6.80	4	13.4	113	27	1.52
C	5.70	6.40	7.8	166	113	30	0.14

AM FLOWS

from \ to	A	B	C	Circ	Entry	Exit
A				160	1090	1045
B				635	670	580
C				450	725	865

PM FLOWS

from \ to	A	B	C	Circ	Entry	Exit
A				205	1055	1080
B				595	635	665
C				460	825	770

CALCULATIONS

ARM	K	X ₂	M	F	t _D	f _c	AM	PM	Q _E	RFC	
										AM	PM
A	0.85	5.59	200.34	1694	1.00	0.45	1385	1368		0.79	0.77
B	0.99	3.94	200.34	1194	1.00	0.38	942	957		0.71	0.66
C	1.04	6.24	200.34	1892	1.00	0.47	1751	1746		0.41	0.47

Critical Arm:

RFC:

AM

PM

A

0.79

A

0.77

- In accordance with TPDM V2.4

Calculated by:FSC

Date:Jul 2026

Checked by:CFC

Simplified Priority Junction Capacity Calculation

Job Title: Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories	
Junction: Kam Tin Road/ Local Access Road (E)	Ref. No.: 2036R
Scheme: Reference	Ref. No.: E
Year: 2036	Job No.: XXXXXXXXXX
Rev.:	
ARM A: Kam Tin Road (EB)	
ARM B: Local Access Road	
ARM C: Kam Tin Road (WB)	

ARM C

AM	(PM)
1105	(1035)
5	(0)

Kam Tin Road (WB)

ARM A

AM	(PM)
1150	(1100)
5	(5)

Kam Tin Road (EB)

ARM B

AM	(PM)
5	(0)
5	(5)

Local Access Road

GEOMETRY					
Major road width	W	6.00	Lane widths	w(b-a)	1.10
Central Reserve width	Wcr	0.00		w(b-c)	1.10
2 Lane Minor Arm (Y/N)		N		w(c-b)	2.20
Visibilities	Vr(b-a)	0	Calculated	D	0.62
	VI(b-a)	0		E	0.68
	Vr(b-c)	0		F	0.77
	Vr(c-b)	0		Y	0.79

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		1105	1035	
	q(c-b)		5	0	
	q(a-b)		5	5	
	q(a-c)		1150	1100	
	q(b-a)		5	5	
	q(b-c)		5	0	
	f		0.50	0.00	
CAPACITIES	Q(b-a)	Factor	57	75	
	Q(b-c)	1	280	290	
	Q(c-b)	1	317	328	
	Q(b-ac)	1	95	75	
RFC's	b-a		0.09	0.07	
	b-c		0.02	0.00	
	c-b		0.02	0.00	
	b-ac		0.11	0.07	
Worst RFC			0.11	0.07	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

Capacity of combined streams
- In accordance with TPDM V2 Ch4

Calculated by: FSC	Date: Jul-26	Checked by: CFC
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Junction: Kam Tin Road (F)

Design Year: 2036

Description: Reference

Designed By: FSC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Kam Tin Road EB	→	A	1	3.400						1955	1955	1160	0.593	0.593	1100	0.563	0.563
Kam Tin Road EB	←	A	1	3.400						1955	1955	1115	0.570		1035	0.529	
Pedestrian Crossing		B	2	MIN GREEN + FLASH =			6	+	7	=	13			*			*

Notes:	Flow: (pcu/hr)		↑ N → 1160(1100) ← 1115(1035)	Group		A,B	Group		A,B
				y		0.593	y		0.563
				L (sec)		20	L (sec)		20
				C (sec)		120	C (sec)		120
				y pract.		0.750	y pract.		0.750
				R.C. (%)		26%	R.C. (%)		33%

Stage / Phase Diagrams									
1. A → ← A		2. ↑ B ↓		3.		4.		5.	
I/G= 4		I/G= 4	13	I/G=		I/G=		I/G=	
I/G= 4		I/G= 4	13	I/G=		I/G=		I/G=	

Calculation Spreadsheets
for
2036 Design Scenario

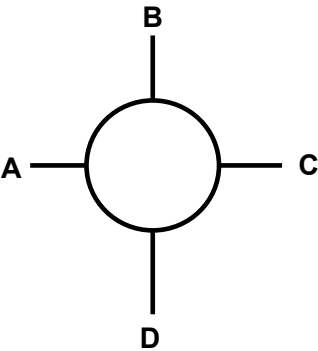
Job Title: Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories

Junction: Kam Tin Bypass / Kam Tin Road / Tung Wui Road (A)Ref. No.: 2036D

Scheme: DesignRef. No.: A

Year: 2036Job No.: Rev.:

ARM A: Kam Tin Road (EB)
ARM B: Kam Tin Bypass
ARM C: Kam Tin Road (WB)
ARM D: Tung Wui Road



GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	3.50	7.50	4	20	62	42	1.60
B	7.30	11.00	4	35	62	44	1.48
C	9.00	12.00	1	12.5	62	63	4.80
D	7.30	7.30	1	12.5	62	44	0.00

AM FLOWS

from \ to	A	B	C	D	Circ	Entry	Exit
A					990	440	385
B					665	875	620
C					350	1085	1185
D					745	510	725

PM FLOWS

from \ to	A	B	C	D	Circ	Entry	Exit
A					785	255	240
B					440	600	735
C					285	1120	1135
D					690	595	455

CALCULATIONS

ARM	K	X ₂	M	F	t _D	f _c	AM	PM	AM	PM
A	0.96	4.45	1.22	1349	1.23	0.49	831	927	0.53	0.28
B	0.97	8.23	1.22	2495	1.23	0.68	1986	2135	0.44	0.28
C	0.86	9.28	1.22	2813	1.23	0.73	2188	2229	0.50	0.50
D	0.92	7.30	1.22	2212	1.23	0.63	1605	1637	0.32	0.36

Critical Arm: A C
RFC: 0.53 0.50
AM PM

- In accordance with TPDM V2.4

Calculated by: FSCDate: Jul 2026Checked by: CFC

Junction: Kam Tin Bypass / Kong Tai Road (B)

Design Year: 2036

Description: Design

Designed By: FSC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Kam Tin Bypass EB	↗	A	1	2.800	13			14%	37%	1865	1815	402	0.216	0.216	284	0.156	0.156
	→	A	1	3.000								443	0.216		321	0.156	
Kam Tin Bypass WB	↖	C	2	3.000		15				1870	1870	55	0.029		85	0.045	0.045
	←	B	1,2	3.500						2105	2105	293	0.139		340	0.162	
	←	B	1,2	3.000						1915	1915	267	0.139		310	0.162	
Kong To Road SB	↘	D	3	3.000	10	12		50% / 50% 51% / 49%		1685	1685	180	0.107	0.107	195	0.116	0.116
Pedestrian Crossing		Ep	4	MIN GREEN + FLASH =			12	+	15	=	27			*			*
		Fp	2,3,4	MIN GREEN + FLASH =			7	+	7	=	14						
		Gp	4	MIN GREEN + FLASH =			7	+	7	=	14						

Notes:

Flow: (pcu/hr)

90(95) ←

→ 90(100)

55(105) ↑

790(500) →

55(85) ↑

← 560(650)

↑ N

Group	B,D,Ep	A,C,D,Ep	Group	B,D,Ep	A,C,D,Ep
y	0.246	0.322	y	0.278	0.318
L (sec)	37	48	L (sec)	37	42
C (sec)	90	90	C (sec)	90	90
y pract.	0.530	0.420	y pract.	0.530	0.480
R.C. (%)	115%	30%	R.C. (%)	91%	51%

Stage / Phase Diagrams

1.

A ↗

← B

2.

↕ Fp

↖ C

← B

3.

↕ Fp

↘ D

4.

↕ Fp

↖ Ep

↕ Gp

5.

I/G= 3

I/G= 6

5

I/G= 5

I/G= 4

27

I/G=

I/G= 3

I/G= 6

I/G= 5

I/G= 4

27

I/G=

Simplified Priority Junction Capacity Calculation

Job Title: Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories			
Junction: Kam Tin Road / Kam Tai Road (C)		Ref. No.: 2036D	
Scheme: Design		Ref. No.: C	
Year: 2036	Job No.: [REDACTED]	Rev.: [REDACTED]	
ARM A: Kam Tin Road (EB)			
ARM B: Kam Tai Road			
ARM C: Kam Tin Road (WB)			

ARM C

AM	(PM)
1040	(1005)
90	(145)

Kam Tin Road (WB)

ARM A

AM	(PM)
1095	(1000)
50	(80)

Kam Tin Road (EB)

ARM B

AM	(PM)
25	35
(75)	(10)

Kam Tai Road

GEOMETRY					
Major road width	W	6.00	Lane widths	w(b-a)	2.25
Central Reserve width	Wcr	0.00		w(b-c)	2.25
2 Lane Minor Arm (Y/N)		N		w(c-b)	2.20
Visibilities	Vr(b-a)	65	Calculated	D	0.79
	VI(b-a)	78		E	0.83
	Vr(b-c)	65		F	0.80
	Vr(c-b)	40		Y	0.79

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		1040	1005	
	q(c-b)		90	145	
	q(a-b)		50	80	
	q(a-c)		1095	1000	
	q(b-a)		35	10	
	q(b-c)		25	75	
	f		0.42	0.88	
CAPACITIES	Q(b-a)	Factor 1	63	69	
	Q(b-c)	1	349	369	
	Q(c-b)	1	332	347	
	Q(b-ac)	1	96	244	
RFC's	b-a		0.56	0.14	
	b-c		0.07	0.20	
	c-b		0.27	0.42	
	b-ac		0.63	0.35	
Worst RFC			0.63	0.42	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

Capacity of combined streams
- In accordance with TPDM V2 Ch4

Calculated by: FSC	Date: Jul-26	Checked by: CFC
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Job Title:Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories

Junction:Kam Tin Road / Fan Kam Road (D)

Ref. No.:2036D

Scheme:Design

Ref. No.:D

Year:2036

Job No.:

Rev.:

AMPM

ARM A:Kam Tin Road (EB)

ARM B:Fan Kam Road

ARM C:Kam Tin Road (WB)

GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	3.80	8.00	10	44	113	80	0.67
B	3.00	6.80	4	13.4	113	27	1.52
C	5.70	6.40	7.8	166	113	30	0.14

AM FLOWS

from \ to	A	B	C	Circ	Entry	Exit
A				160	1090	1045
B				635	670	580
C				450	725	865

PM FLOWS

from \ to	A	B	C	Circ	Entry	Exit
A				205	1055	1085
B				595	635	665
C				460	825	770

CALCULATIONS

ARM	K	X ₂	M	F	t _D	f _c	AM	PM	Q _E	RFC	AM	PM
A	0.85	5.59	200.34	1694	1.00	0.45	1385	1368		0.79	0.77	
B	0.99	3.94	200.34	1194	1.00	0.38	942	957		0.71	0.66	
C	1.04	6.24	200.34	1892	1.00	0.47	1751	1746		0.41	0.47	

Critical Arm:

RFC:

AM

PM

A

0.79

A

0.77

- In accordance with TPDM V2.4

Calculated by:FSC

Date:Jul 2026

Checked by:CFC

Simplified Priority Junction Capacity Calculation

Job Title: Proposed Residential Development at Lot 624 & Lot 787 both in D.D. 110 and Adjoining Government Land at Kam Tin Road, Shek Kong San Tsuen, Yuen Long, New Territories		Ref. No.: 2036D	
Junction: Kam Tin Road/ Local Access Road (E)		Ref. No.: E	
Scheme: Design		Rev.:	
Year: 2036	Job No.:		
ARM A: Kam Tin Road (EB)			
ARM B: Local Access Road			
ARM C: Kam Tin Road (WB)			

Diagram showing the junction layout and traffic flow directions. The junction involves Kam Tin Road (WB) (ARM C), Kam Tin Road (EB) (ARM A), and Local Access Road (ARM B). Traffic flow data is provided for each arm.

Arm	Direction	AM	PM
ARM C (Kam Tin Road WB)	Left	1105	1035
	Right	5	(5)
ARM A (Kam Tin Road EB)	Left	1150	1100
	Right	5	(5)
ARM B (Local Access Road)	Left	5	(5)
	Right	5	(5)

GEOMETRY					
Major road width	W	6.00	Lane widths	w(b-a)	1.10
Central Reserve width	Wcr	0.00		w(b-c)	1.10
2 Lane Minor Arm (Y/N)		N		w(c-b)	2.20
Visibilities	Vr(b-a)	0	Calculated	D	0.62
	VI(b-a)	0		E	0.68
	Vr(b-c)	0		F	0.77
	Vr(c-b)	0		Y	0.79

ANALYSIS					
			AM PEAK	(PM) PEAK	
TRAFFIC FLOWS	q(c-a)		1105	1035	
	q(c-b)		5	5	
	q(a-b)		5	5	
	q(a-c)		1150	1100	
	q(b-a)		5	5	
	q(b-c)		5	5	
	f		0.50	0.50	
CAPACITIES	Q(b-a)	Factor 1	57	73	
	Q(b-c)	1	280	290	
	Q(c-b)	1	317	328	
	Q(b-ac)	1	95	117	
RFC's	b-a		0.09	0.07	
	b-c		0.02	0.02	
	c-b		0.02	0.02	
	b-ac		0.11	0.09	
Worst RFC			0.11	0.09	

Where VI and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$

Capacity of combined streams

- In accordance with TPDM V2 Ch4

Calculated by: FSC	Date: Jul-26	Checked by: CFC
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Junction: Kam Tin Road (F)

Design Year: 2036

Description: Design

Designed By: FSC

Checked By: CFC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Kam Tin Road EB	→	A	1	3.400						1955	1955	1160	0.593	0.593	1100	0.563	0.563
Kam Tin Road EB	←	A	1	3.400						1955	1955	1115	0.570		1040	0.532	
Pedestrian Crossing		B	2	MIN GREEN + FLASH =			6	+	7	=	13			*			*

Notes:	Flow: (pcu/hr)		↑ N → 1160(1100) ← 1115(1040)	Group		A,B	Group		A,B
				y		0.593	y		0.563
				L (sec)		20	L (sec)		20
				C (sec)		120	C (sec)		120
				y pract.		0.750	y pract.		0.750
				R.C. (%)		26%	R.C. (%)		33%

Stage / Phase Diagrams									
1. A → ← A		2. ↑ B ↓		3.		4.		5.	
I/G= 4		I/G= 4	13	I/G=		I/G=		I/G=	
I/G= 4		I/G= 4	13	I/G=		I/G=		I/G=	