S.16 Planning Application for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No. 356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling North, New Territories

TRAFFIC IMPACT ASSESSMENT

Reference: 80110-R02-01
Date: January 2025
Prepared by: 8FM Consultancy Limited

8FM Consultancy Limited

1 INTRODUCTION

1.1 Background

The Applicant intends to seek planning permission for the S.16 Planning Application for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No. 356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling North, New Territories ("Project Site").

The location of the Project Site is shown in **Figure 1**.

Comments from Transport Department were received on 15 Oct. 2024 and 2 Jan. 2025 respectively. The Applicant was required to respond to TD comments, and 8FM Consultancy Limited was therefore commissioned as the traffic consultant to carry out a Traffic Review in support of this planning application.

2 PROPOSED DEVELOPMENT

2.1 The Site Location

The Project Site is located in the north of the village cluster of Tsung Yuen Ha, and it is adjacent to the Heung Yuan Wai Boundary Control Point (HYW BCP). The Project Site can be accessible from Ling Ma Hang Road via a local track road and its location is shown in **Figure 1**.

2.2 The Development Schedule

The project site is subject to a previously application No. A/NE-TKLN/35 approved on January 2021, which was purposed as the temporary eating place, shop and services with ancillary office/store room and car park for a period of three years.

The current application seeks to maintain the existing temporary eating place, shop and services with ancillary office and store room whilst introducing a public vehicle park on a temporary basis of 3 years.

The project site has a total area of about 3,053m^2, including eating place, local provision store, ancillary office, store room and car park. The layout of the project site is shown in **Figure 2.1**. Key development parameters of the proposed use are tabulated in **Table 2.1**.

Table 2.1 Key Development Parameters

Proposed Use	Eating Place with Ancillary Facilities	Car Park
Operation Hours	9:00am-9:00pm (Monday – Sunday, Including Public Holidays)	24Hours (Monday – Sunday, Including Public Holidays)
Area	200m^2	2853m^2

2.3 Vehicle Access Arrangement

At present, there is an existing local access road to the project site. Access to the project site will be provided through an 7m-wide ingress/egress point located at the southwestern boundary, which is connected to a local track leading to Ling Ma Hang Road. The vehicle access arrangement is presented in **Figure 2.1** for reference.

2.4 Internal Transport Facilities

The internal transport facilities to be provided in the project site are summarized in **Table 2.2**. The proposed parking and loading/unloading provisions have complied with the requirements in the Hong Kong Planning Standards and Guidelines.

Table 2.2 Internal Transport Facilities

Type of Ancillary Transport Facilities	Size	Proposed Provision
Private Car Parking Spaces	5m(L) x 2.5m(W)	60
L/UL Bays	7m(L) x 3.5m(W)	1

The swept path analysis is also conducted in **Figure 2.2**, which demonstrates that the existing site access and parking space arrangement are adequate for maneuvering.

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

The project site is located at the east of Lin Ma Hang Road, and it can be accessible from Lin Ma Hang Road via a local unnamed road. The existing condition of the connecting carriageways are summarized as follows:

- Lin Ma Hang Road is a single-two carriageway served as a local road running in north-south direction.

- Unnamed Road 1 is a single track access road connecting Lin Ma Road in the west to Tsung Yuen Ha Tsuen in the east. Acting as single carriageway with 1-lane-2 way operation, it serves as the critical access route to the project site, measuring 20 meters in length.

3.2 Traffic Survey

In order to evaluate the existing traffic conditions in the vicinity, the classified traffic surveys were conducted from 08:00 to 20:00 on 1 December 2024 (Sunday). The key junctions and road links of the study area are indicated **in Figure 3.1.**

The traffic flows collected during the traffic surveys have been converted to passenger car unit (PCU) based on the PCU factors as indicated in Volume 2 of Transport Planning and Design Manual (TPDM).

The results of traffic survey identified that the AM and PM peak hours occur during 09:30 to 10:30 in the morning and 17:00 to 18:00 in the evening, respectively. The 2024 observed peak hours traffic flows in the study area are presented in **Figure 3.2**.

3.3 Existing Traffic Condition

Based on the observed traffic flows, the performance of the key junctions and traffic links in the vicinity of the project site during the AM and PM peak hours was assessed.

3.3.1 Existing Road Link Capacity Assessment

The existing links capacity are calculated respectively based on the design capacity suggested in Volume 2 of the TPDM and the results are shown in **Table 3.1**.

Table 3.1 Existing Road Link Capacity Assessment

Link No.	Link Location	Peak	Design Capacity (veh/hr)	Traffic Flow (veh/hr)	V/C Ratio[(ii)]
L1	Lin Ma Road (Northbound)	AM	600[(i)]	235	0.39
		PM	600	112	0.19
	Lin Ma Road (Southbound)	AM	600	72	0.12
		PM	600	153	0.26
L2	Unnamed Road 1 (two-way)	AM	100[(ii)]	136	1.36
		PM	100	118	1.18

Notes:

(i) According to the Note of Traffic Forecast Review (Western Section) dated March 2019, the design capacity of Lin Ma Hang Road is about 600 veh/hr.

(ii) Design capacity can be referred to TPDM Vol2 chapter 2.4.1.1 and chapter 3.11.3.1.

(iii) V/C Ratio =Volume/ Design Capacity. A peak hour v/c ratio of 1.0 or less indicates a satisfactory level of traffic. A V/C ratio between 1.0 and 1.2 indicates a manageable degree of congestion. A V/C ratio above 1.2 indicates more serious congestion.

The results reveal that the traffic demand of Unnamed Road 1(L2) exceeds the capacity during peak hours, potentially generating congestion at the concerned road section.

3.3.2 Existing Junction Capacity Assessment

The results of junction performance are indicated in **Table 3.2** and detailed junction calculation sheets are given in **Appendix A**.

Table 3.2 Existing Junction Capacity Assessment

Jn No.	Junction Location	Type/ Capacity Index	AM Peak	PM Peak
A	Lin Ma Hang Road / Unnamed Rd1	Priority / DFC(i)	<0.1	
B	Unnamed Rd 2 / Unnamed Rd 3	Priority / DFC(i)	<0.1	

**Notes:*

(i) DFC - Design Flow / Capacity Ratio. The performance of a priority junction or roundabout is normally measured by its Design Flow / Capacity (DFC) ratio. A DFC ratio less than 1.0 indicates that the junction is operating within design capacity. A DFC ratio greater than 1.0 indicates that the junction is overloaded, resulting in traffic queues and longer delay time to the minor arm traffic.

As shown in Table 3.3, it can be seen that the surveyed junctions perform satisfactorily during peak hours with adequate reserve capacities.

3.4 Proposed Road Improvement Measure

Considering that Unnamed Road 1 is a single-track road with a design link capacity insufficient to accommodate the observed two-way flow, it is proposed to improve the road performance by widening the lane width in each direction. Consequently, Unnamed Road 1, classified as a local road, will be modified from a single-track road to a single two-lane carriageway, with the design flow for both directions increased to 800 veh/hr, in accordance with Section 2.4.1.1 of TPDM Vol. 2. The details of the proposed road improvement are illustrated in **Figure 3.3**, and this improvement will be taken into account when assessing future traffic conditions."

4 DEVELOPMENT TRAFFIC GENERATION

4.1 Estimated Development Flows

As the proposed development will be operated as car park and a build-up eating place with ancillary facilities, the trip generation & attraction arising from the operational needs will be estimated respectively based on the different land use.

4.1.1 Car Park

The trip attraction/generation for car park will make reference with the approved applications of similar use and the applications in operation within the same outline zoning plan (OZP) approved by the TPB in the recent years, which is tabulated in **Table 4.1**.

Table 4.1 Similar Application within the Same OZP

Case No.	Site Area (sqm)	No. of Parking Spaces	Traffic Generation (pcu/hr)		Traffic Attraction (pcu/hr)	
			AM	PM	AM	PM
A/NE/TKLN/75	3,776	77	13	16	13	16
A/NE/TKLN/58	2,148	26	4	3	3	3
Trip Rates (pcu/hr/parking space)						
A/NE/TKLN/75			**0.1688**	**0.2078**	**0.1688**	**0.2078**
A/NE/TKLN/58			0.1538	0.1154	0.1154	0.1154

For conservative estimation, reference is made with the application with higher trip rates, i.e. case no. A/NE/TKLN/75. The calculated traffic generation & attraction arsing from the proposed car park during the peak hours are esitmated in **Table 4.2**.

Table 4.2 Estimated Traffic Generation & Attraction Arising from Car Park

Land Use	No. of Parking Spaces	AM (pcu/hr)		PM (pcu/hr)	
		Generation	Attraction	Generation	Attraction
Car Park	61	11	13	11	13

4.1.2 Eating Place with Ancillary Facilities

The trip generation & attraction of the build-up development is estimated with reference to the the trip rate tabulated in the TPDM Vol 1. **Table 4.3** shows the trip rates for retail development. Considering the targeted customers and small scale nature of the retail development, the level of mean limit is adopted for conservative assessment.

Table 4.3 Traffic Rates for Office Development

Land Use	Unit	Upper Limit/ Mean/ Lower Limit	AM		PM	
			Generation Rate	Attraction Rate	Generation Rate	Attraction Rate
Retail Building	(pcu/hr/100sq m GFA)	Upper Limit	0.3307	0.3342	0.3839	0.45504
		Mean	**0.2296**	**0.2434**	**0.3100**	**0.3563**
		Lower Limit	0.1285	0.1525	0.2360	0.2622

The calculated traffic generation & attraction arsing from the operation of Eating Place with Ancillary Facilities during the peak hours are esitmated in **Table 4.4**.

Table 4.4 Estimated Traffic Generation & Attraction Arising from Office

Land Use	Area	AM (pcu/hr)		PM (pcu/hr)	
		Generation	Attraction	Generation	Attraction
Retail Building	200m^2	1	1	1	1

4.1.3 Estimated Development Flow

With the trip generation & attraction estimated for different land use, the development flow is summarized in **Table 4.5.**

Table 4.5 Estimated Development Flow

Land Use	AM (pcu/hr)		PM (pcu/hr)	
	Generation	Attraction	Generation	Attraction
Car Park	11	13	11	13
Retail Building	1	1	1	1
total	**12**	**14**	**12**	**14**

5 FUTURE TRAFFIC SITUATION

5.1 Design Year

The planning application for the proposed development involves a temporary period of 3 years, it is assumed that the end year for the Project Site would be year 2028. Therefore, year 2028 is adopted as the design year of this study.

5.2 Traffic Forecast Methodology

To conduct the traffic forecast on the road networks in the vicinity of the project site, the existing traffic flows will be adjusted with the following factors considered:

- Historical traffic data from Annual Traffic Census (ATC) by Transport Department;
- Highways Department Agreement No. CE 51/2013 (HY) Widening of Western Section and Eastern Section of Lin Ma Hang Road – Design and Construction Note of Traffic Forecast Review (Western Section);
- Committed and planned developments adjacent the project site.

5.3 Regional Traffic Growth

5.3.1 Annual Traffic Census (ATC)

Reference has been made to the ATC reports from year 2017 to 2022. Based on the historical traffic data of the nearby Annual Traffic Census station 6533 Ping Che Road, between Sha Tau Kok Road and Lin Ma Hang Road, traffic increased from 11,360 in 2017 to 11,510 in 2022, which is an average growth rate of 0.26% per year.

5.3.2 Agreement No. CE 51/2013 (HY)

According to the Highways Department Agreement No. CE 51/2013 (HY) Widening of Western Section and Eastern Section of Lin Ma Hang Road – Design and Construction Note of Traffic Forecast Review (Western Section), the steady traffic growth rate of 0.6% p.a. is anticipated.
Reference:https://www.legco.gov.hk/yr18-19/chinese/fc/pwsc/papers/pwsc20190213pwsc157-1-c.pdf

5.3.3 Planned and Committed Development

Based on the published information from Town Planning Board, no planned/committed developments in the site vicinity are identified in design year 2028 in the vicinity of project site.

Based on the findings of the above, a conservative growth rate of 0.6% per annum was adopted to estimate the background traffic growth from 2024 to 2028.

5.4 2028 Traffic Flows

The growth factor will be applied to the 2024 observed peak hours traffic flows to estimate the 2028 reference flows.

The reference and design flows of the design year 2028 are calculated from the following formula:

2028 Reference Flows (Fig. 5.1)	=	2024 Observed Flows (Fig 3.2) x $(1+0.6\%)^4$
2028 Design Flows (Fig. 5.2)	=	2028 Reference Flows (Fig. 5.1) + Net Change in Development Traffic Flows

Figure 5.1 shows the 2028 Reference Peak Hours Flows in the area. By adding the net development traffic, **Figure 5.2** shows the 2028 Design Peak Hours Traffic Flows.

5.5 Future Traffic Impact Assessment

The traffic impact assessments for design year 2028 were conducted for the key junctions and road links in the vicinity of project site for both Reference and Design scenarios.

5.5.1 Future Year Link Capacity Assessment

Based on the Reference Flows and Design Flows, link capacity assessments for design year 2028 are carried out and the results are presented in **Table 5.1**.

Table 5.1 Future Year Link Capacity Assessment

Link No.	Link Location	Design Capacity(i) (veh/hr)	V/C Ratio			
			2028 Reference Scenario		2028 Design Scenario	
			AM	PM	AM	PM
L1	Lin Ma Road (Northbound)	600	0.45	0.23	0.47	0.25
	Lin Ma Road (Southbound)	600	0.17	0.30	0.19	0.32
L2	Unnamed Road 1 (Eastbound)	400(ii)	0.31	0.12	0.35	0.15
	Unnamed Road 1 (Westbound)	400	0.04	0.19	0.07	0.22

Notes: V/C Ratio =Volume/ Design Capacity

*(i) *A peak hour v/c ratio of 1.0 or less indicates a satisfactory level of traffic. A peak hour v/c ratio greater than 1.0 indicates an unsatisfactory level of traffic with overloaded traffic volume.*

(ii) Refer to Section3.4, with the improvement work proposed, the capacity of Unnamed Road 1 is expected to accommodate the traffic flow of 800 veh/hr (two-way).

Table 5.1 reveals that the key road links in the vicinity of the project site will operate within capacity during peak hours for both Reference and Design Scenarios.

5.5.2 Future Year Junction Capacity Assessment

Based on the Reference Flows and Design Flows, junction capacity assessments for design year 2028 are carried out and the results are presented in **Table 5.2**, with detailed calculation sheets given in **Appendix A**.

Table 5.2 Future Year Junction Capacity Assessment

Jun No.	Junction Location	Type/ Capacity Index	2028 Reference Scenario		2028 Design Scenario	
			AM	PM	AM	PM
A	Lin Ma Hang Road / Unnamed Rd1	Priority / DFC	0.03	0.13	0.05	0.15
B	Unnamed Rd 2 / Unnamed Rd 3	Priority / DFC	<0.01	0.01	<0.01	0.01

Notes: RC =reserve capacity; DFC - Design Flow / Capacity Ratio

(i) The performance of a priority junction or roundabout is normally measured by its Design Flow / Capacity (DFC) ratio. A DFC ratio less than 1.0 indicates that the junction is operating within design capacity. A DFC ratio greater than 1.0 indicates that the junction is overloaded, resulting in traffic queues and longer delay time to the minor arm traffic.

(ii) The performance of a traffic signalised junction is indicated by its reserve capacity (RC). A positive RC (RC>0) indicates that the junction is operating with spare capacity. A negative RC (RC<0) indicates that the junction is overloaded; resulting in traffic queues and longer delay time.

Table 5.2 reveals that all the junctions will operate satisfactorily with ample junction capacity in both 2028 reference and 2028 design scenarios during peak hours.

6 Summary and Conclusion

6.1 Summary

The Applicant intends to seek the Town Planning Board permission to utilise the Project Site as the Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) on a temporary basis of 3 years.

In order to appraise the existing traffic conditions, classified turning movement count surveys have been carried out at the key junctions and road links in the vicinity of project site on 1 December 2024 (Sunday) from 08:00 to 20:00. The morning and evening peak hours of the road network have been identified as 09:30am to 0:30 am and 17:00pm to 18:00pm, respectively.

Based on the assessment of existing traffic condition, the link capacity of Unnamed Road 1 is found insufficient to accommodate the observed two-way flow. The road improvement work is proposed by modifying Unnamed Road 1 from a single-track road to a single two-lane carriageway, thereby enhancing its link capacity. The future traffic situation will be assessed based on the improvement work committed by the Applicant.

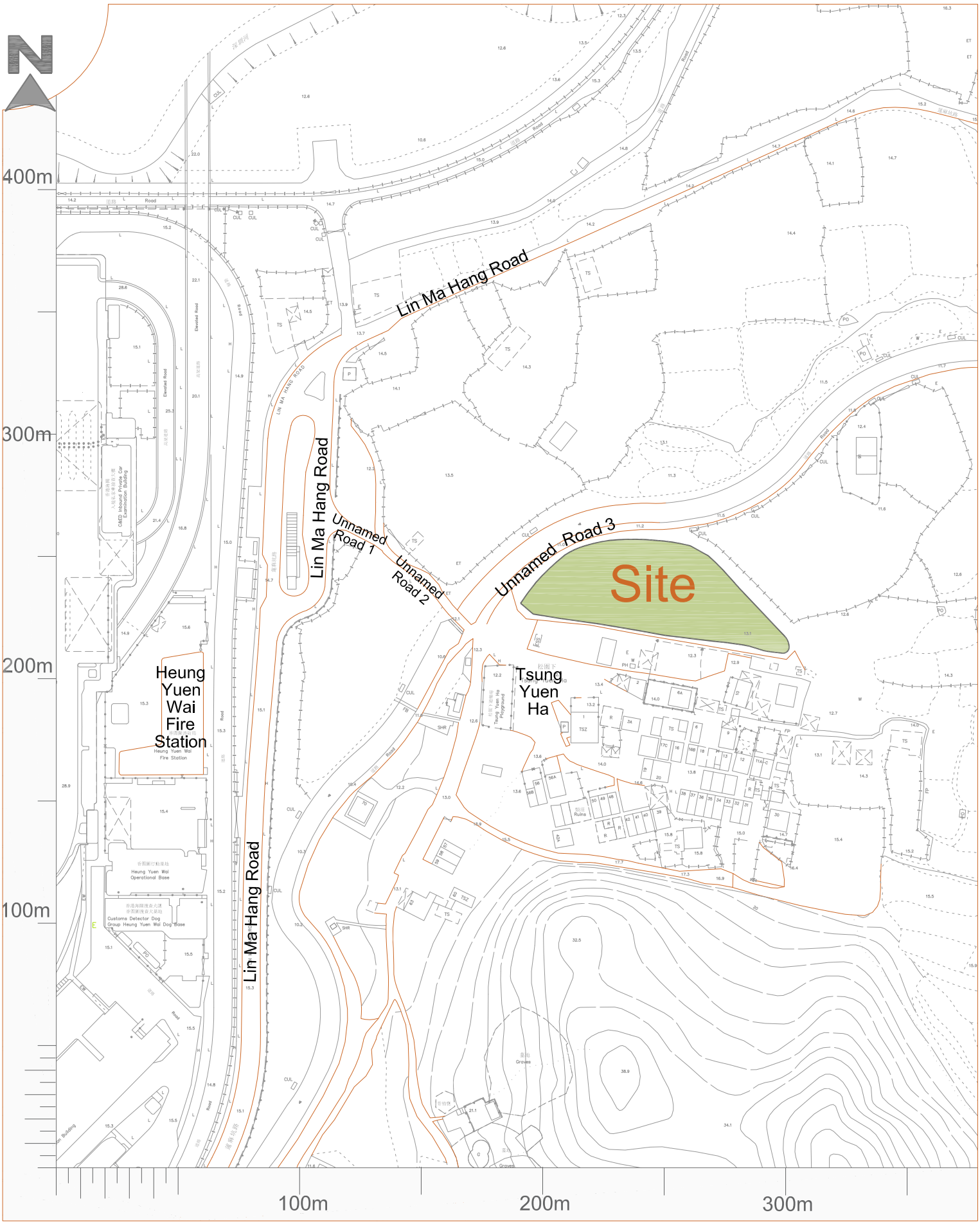
Year 2028 is used as the design year for the traffic impact assessment. Based on the historical data, an annual growth rate of 0.6% was adopted for this study. This growth factor has been applied to the observed traffic flows in 2024 to determine the anticipated traffic flows in design year 2028.

The assessment results reveal that all the key junctions and road links will operate satisfactorily with sufficient capacity in both 2028 reference and 2028 design scenarios during peak hours.

6.2 Conclusion

The findings of this study show that, with the road improvement work proposed, the development traffic will not cause adverse traffic impact onto the local road network. The proposed development is therefore supported from the traffic engineering point of view at this stage.

Figures



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Proposal - Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room, and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years Lot No. 356 in D.D. 78, Tsung Yuen Ha, Ta Kwu Ling North, New Territories			
Drawing Title - Location of the Project Site	Dwg No. - Figure 1	Rev. - --	8FM CONSULTANCY LIMITED
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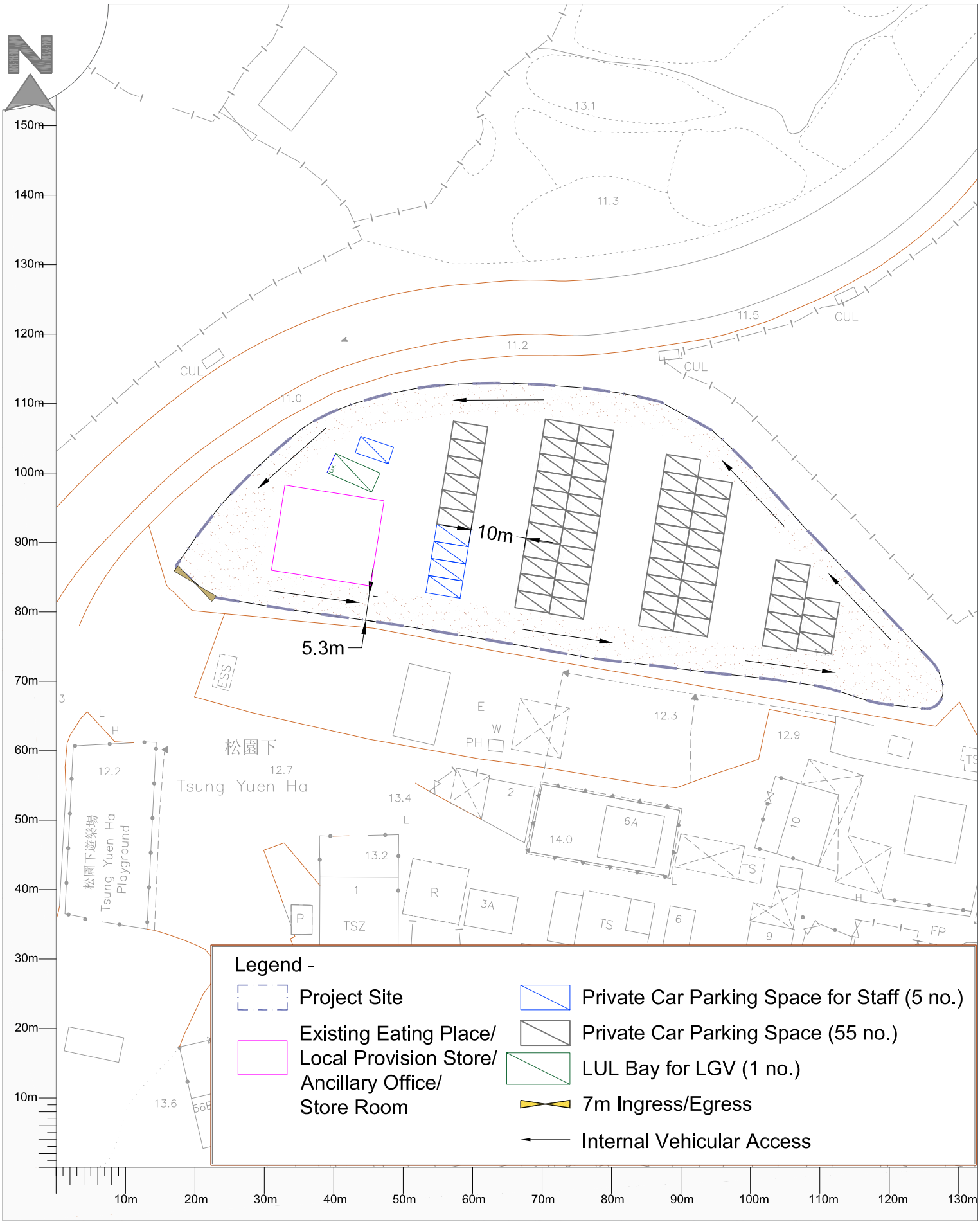

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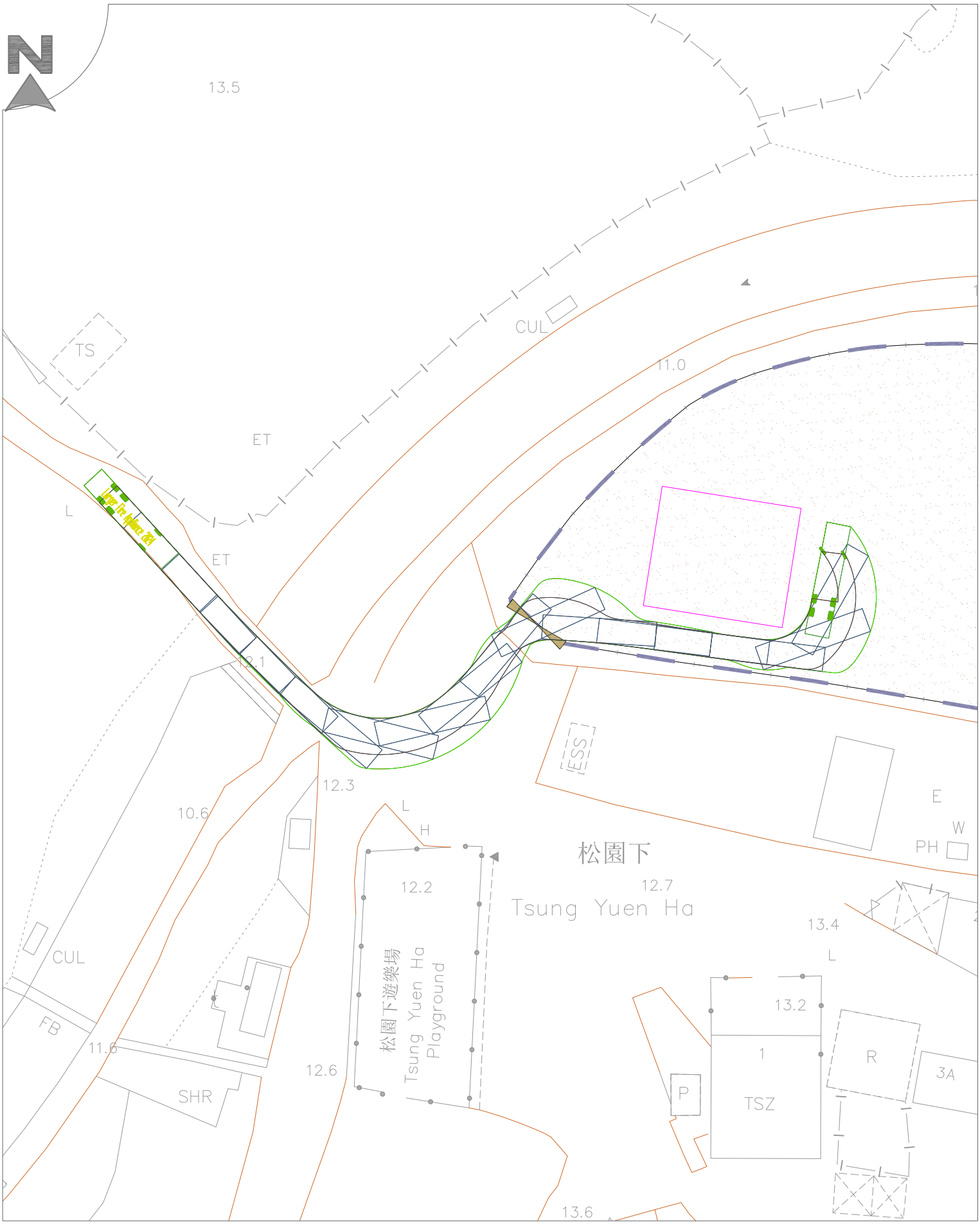
Proposal - Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room, and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years
Lot No. 356 in D.D. 78, Tsung Yuen Ha, Ta Kwu Ling North, New Territories

Drawing Title -	Dwg No. - Figure 2.1	Rev. - --	8FM CONSULTANCY LIMITED
Layout of Project Site	Scale - 1:700@A4	Date - Jan 2025	



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Proposal - Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room, and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years
Lot No. 356 in D.D. 78, Tsung Yuen Ha, Ta Kwu Ling North, New Territories

Drawing Title - Swept Path Analysis for 12m Large Fire Appliance	Dwg No. - Figure 2.2	Rev. - ---	8FM CONSULTANCY LIMITED
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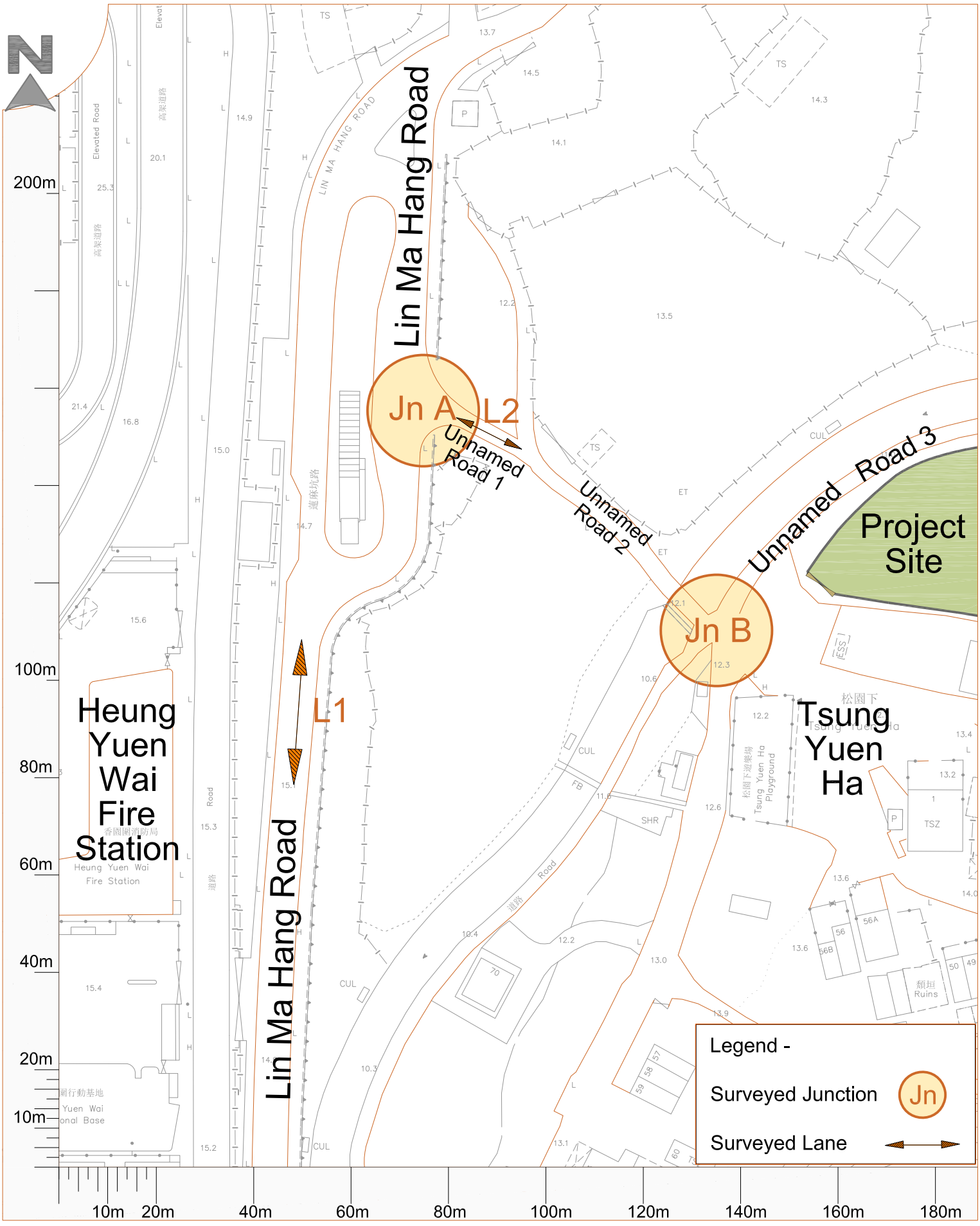

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Proposal - Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room, and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years
Lot No. 356 in D.D. 78, Tsung Yuen Ha, Ta Kwu Ling North, New Territories

Drawing Title -	Dwg No. - Figure 3.1	Rev. - --
Key Junctions & Road Links	Scale - 1:1000@A4	Date - Jan 2025

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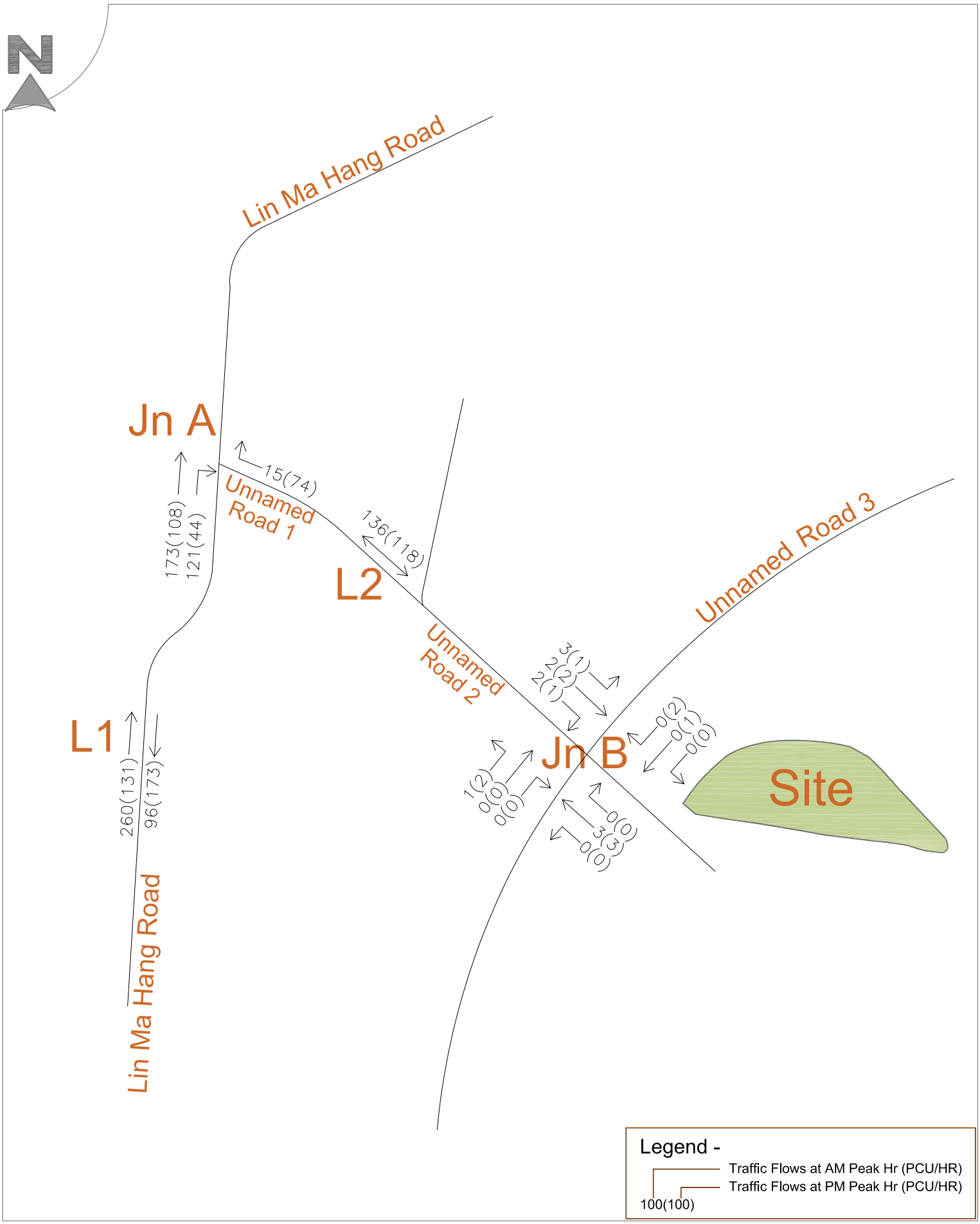

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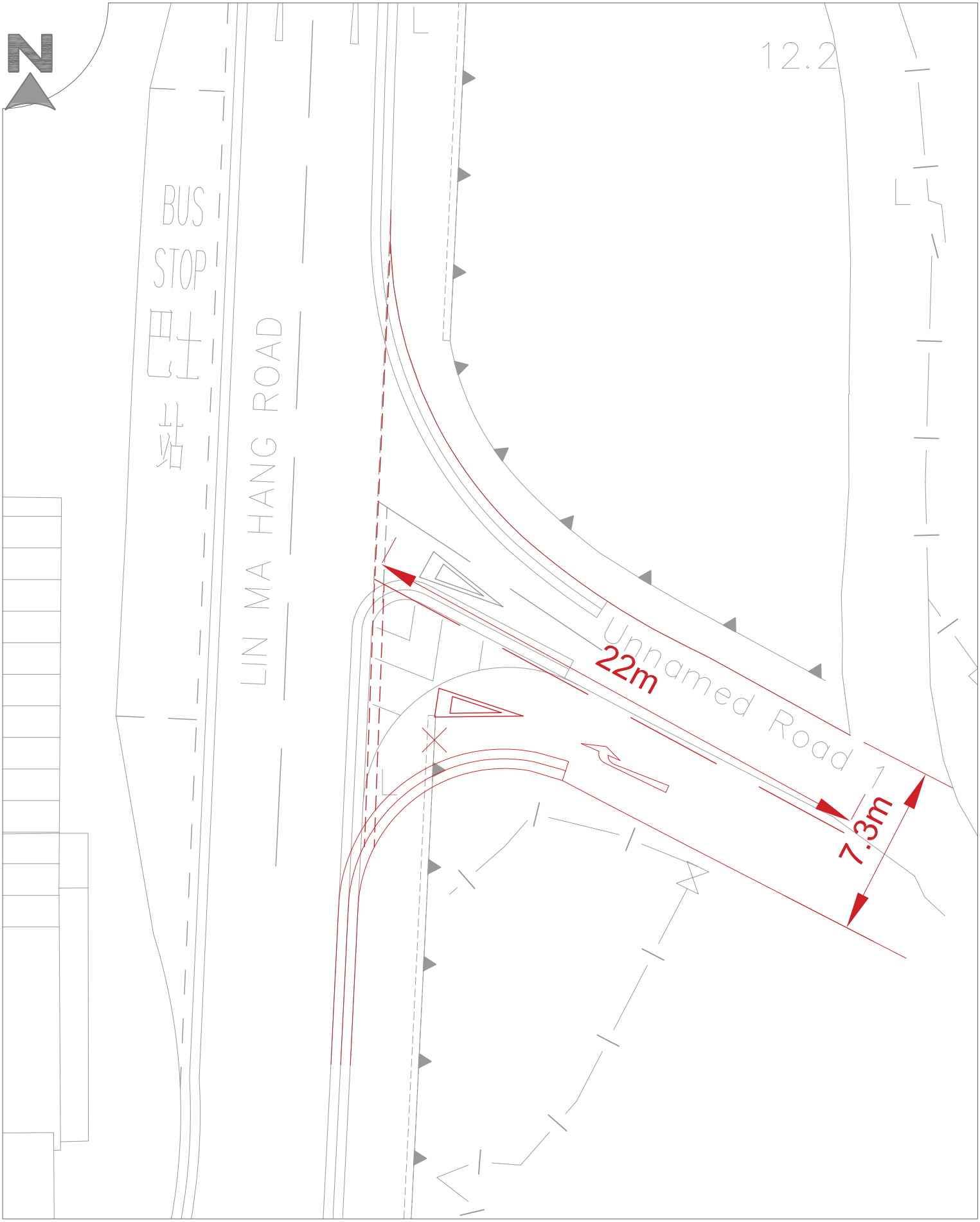
Proposal - Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room, and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years Lot No. 356 in D.D. 78, Tsung Yuen Ha, Ta Kwu Ling North, New Territories			
Drawing Title - Observed Flow during AM & PM Peak Hours	Dwg No. - Figure 3.2	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - ---	Date - Jan 2025	



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Proposal - Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room, and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years Lot No. 356 in D.D. 78, Tsung Yuen Ha, Ta Kwu Ling North, New Territories			
Drawing Title - Proposed Road Improvement	Dwg No. - Figure 3.3	Rev. - ---	8FM CONSULTANCY LIMITED
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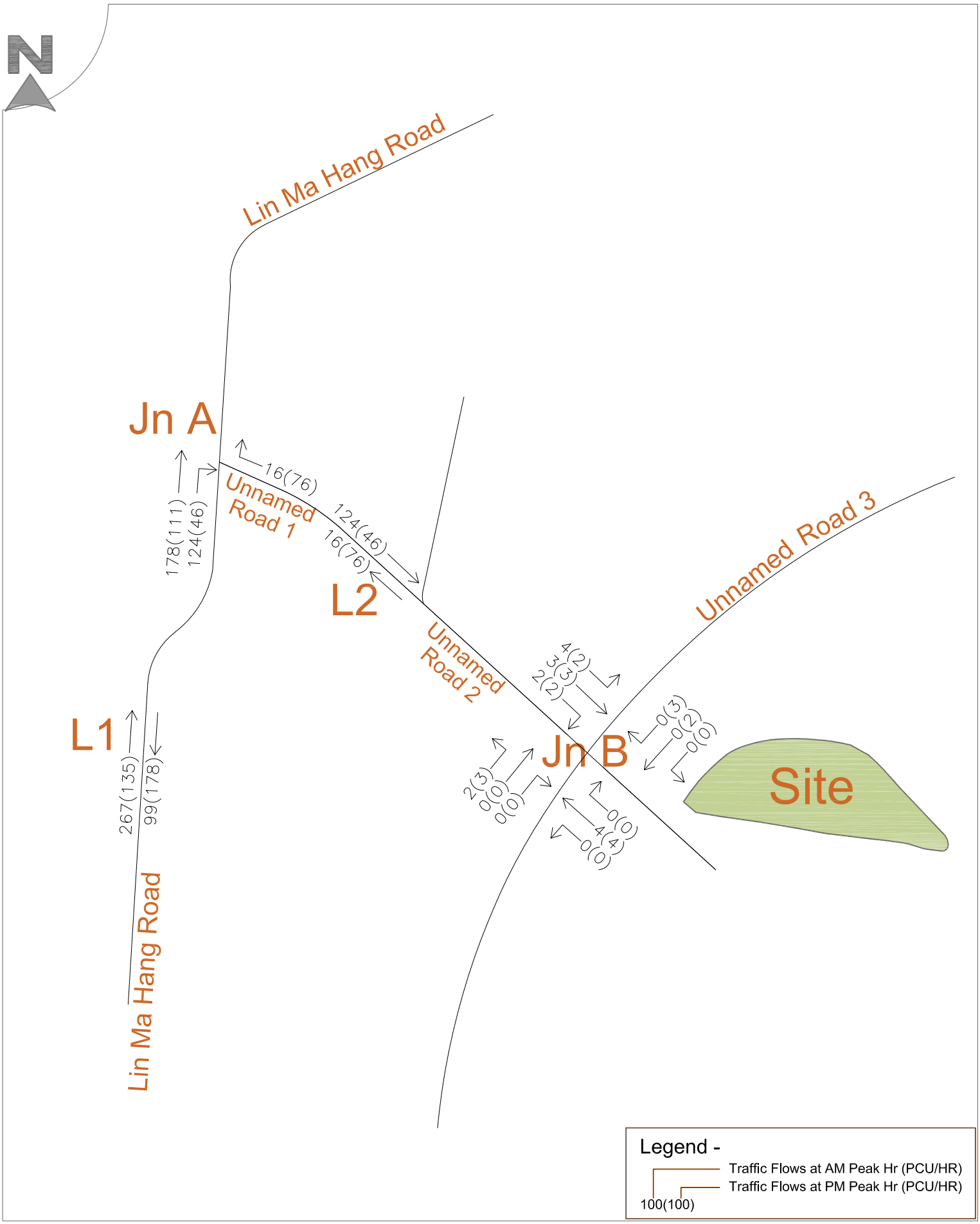

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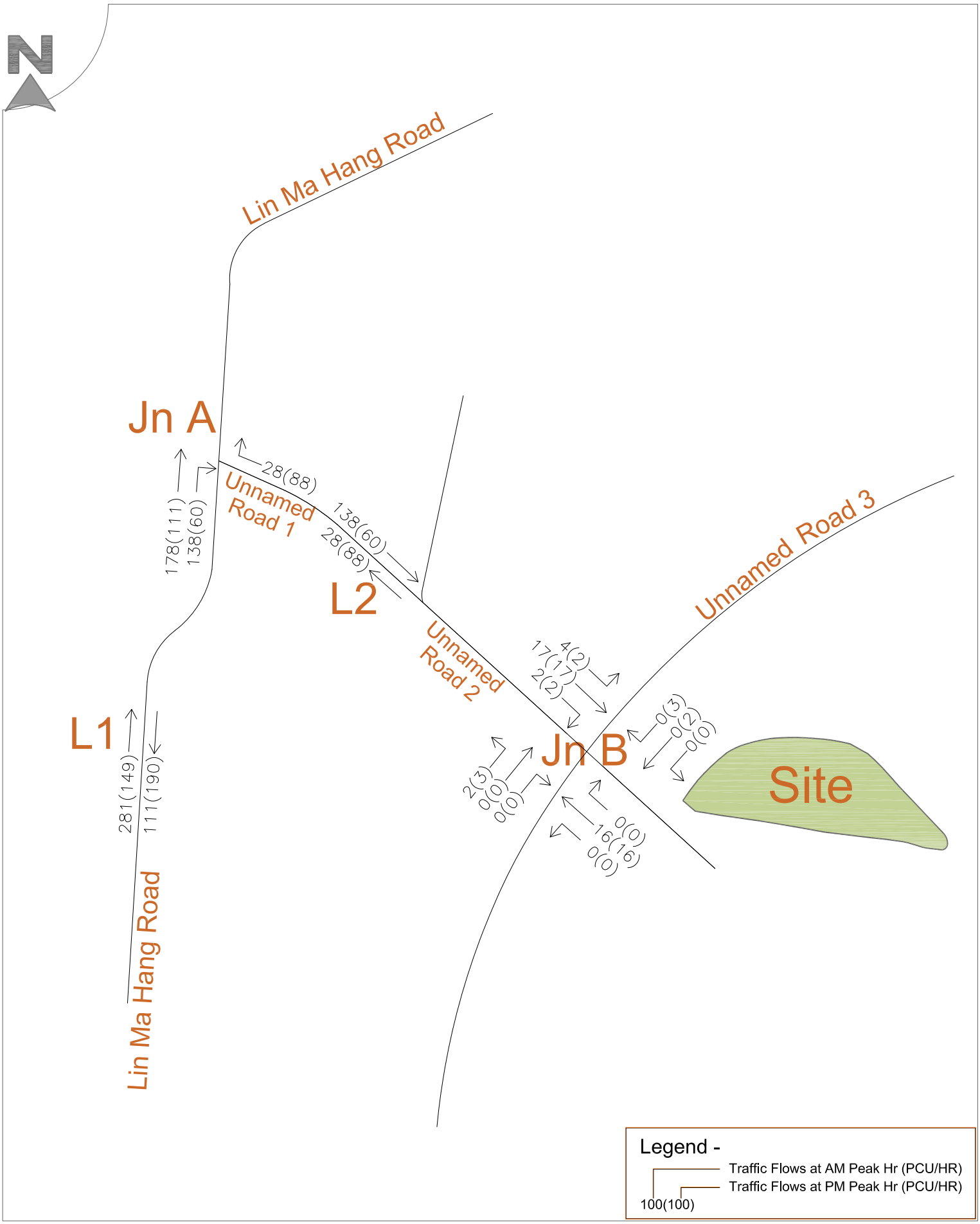
Proposal - Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room, and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years Lot No. 356 in D.D. 78, Tsung Yuen Ha, Ta Kwu Ling North, New Territories			
Drawing Title - 2028 Reference Traffic Flows during Peak Hours	Dwg No. - Figure 5.1	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - ---	Date - Jan 2025	



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Proposal - Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room, and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years
Lot No. 356 in D.D. 78, Tsung Yuen Ha, Ta Kwu Ling North, New Territories

Drawing Title - 2028 Design Traffic Flows during Peak Hours	Dwg No. - Figure 5.2	Rev. - ---
	Scale - ---	Date - Jan 2025

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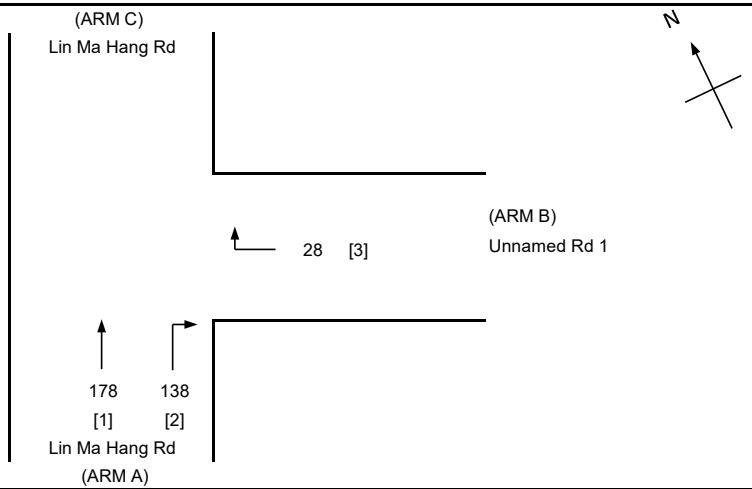
Appendix A

Junction Calculation Sheets

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn A - Lin Ma Hang Road / Unnamed Rd1	2028 Design - AM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.0	(metres)
W cr	=	0	(metres)
q a-b	=	138	(pcu/hr)
q a-c	=	178	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.0	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	15	(metres)
Vr b-a	=	24	(metres)
Vr b-c	=	24	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	28	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.749
E	=	0.815
F	=	0.586
Y	=	0.759
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

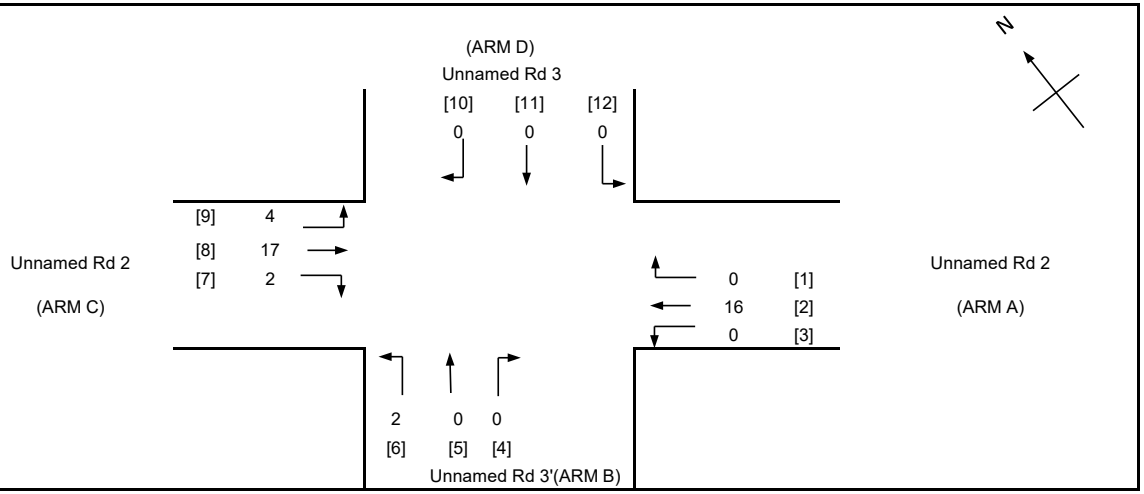
Q b-a	=	421	(pcu/hr)
Q b-c	=	555	(pcu/hr)
Q c-b	=	385	(pcu/hr)
Q b-ac	=	555	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	344	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0505
DFC c-b	=	0.0000
DFC b-ac	=	0.0505
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.05

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn B - Unnamed Rd 2 / Unnamed Rd 3	2028 Design - AM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

GENERAL

W	=	3.90 (metres)			
W cr	=	0 (metres)	Y	=	0.865

MAJOR ROAD (ARM A)			MAJOR ROAD (ARM C)		
W a-d	=	2.0 (metres)	W c-b	=	2.0 (metres)
Vr a-d	=	18 (metres)	Vr c-b	=	18 (metres)
q a-b	=	0 (pcu/hr)	q c-a	=	17 (pcu/hr)
q a-c	=	16 (pcu/hr)	q c-b	=	2 (pcu/hr)
q a-d	=	0 (pcu/hr)	q c-d	=	4 (pcu/hr)

MINOR ROAD (ARM B)			MINOR ROAD (ARM D)		
W b-a	=	2.0 (metres)	W d-c	=	2.0 (metres)
W b-c	=	3.3 (metres)	W d-a	=	2.0 (metres)
Vl b-a	=	18 (metres)	Vl d-c	=	18 (metres)
Vr b-a	=	18 (metres)	Vr d-c	=	18 (metres)
Vr b-c	=	20 (metres)	Vr d-a	=	20 (metres)
q b-a	=	0 (pcu/hr)	q d-c	=	0 (pcu/hr)
q b-c	=	2 (pcu/hr)	q d-a	=	0 (pcu/hr)
q b-d	=	0 (pcu/hr)	q d-b	=	0 (pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.707	X a	=	0.767
X c	=	0.767	X d	=	0.707
Z b	=	0.876	Z d	=	0.769
M b	=	0.806	M d	=	0.708

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0		r d-c	=	0.000	
ql b-d	=	0	(pcu/hr)	ql d-b	=	0	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	0	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	436	(pcu/hr)	Q d-c	=	436	(pcu/hr)
Q b-c	=	648	(pcu/hr)	Q d-a	=	568	(pcu/hr)
Q c-b	=	568	(pcu/hr)	Q a-d	=	566	(pcu/hr)
Ql b-d	=	497	(pcu/hr)	Ql d-b	=	437	(pcu/hr)
Qr b-d	=	436	(pcu/hr)	Qr d-b	=	436	(pcu/hr)

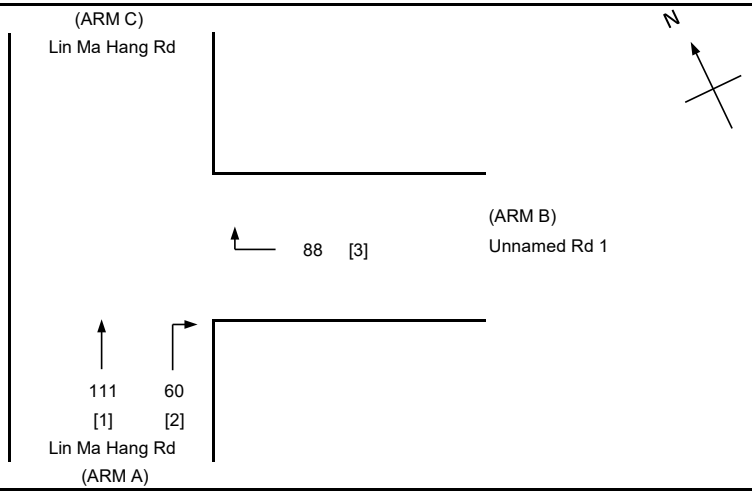
TOTAL FLOW = 41 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0031
DFC c-b	=	0.0035
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCl d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.00

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn A - Lin Ma Hang Road / Unnamed Rd1	2028 Design - PM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.0	(metres)
W cr	=	0	(metres)
q a-b	=	60	(pcu/hr)
q a-c	=	111	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.0	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	15	(metres)
Vr b-a	=	24	(metres)
Vr b-c	=	24	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	88	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.749
E	=	0.815
F	=	0.586
Y	=	0.759
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

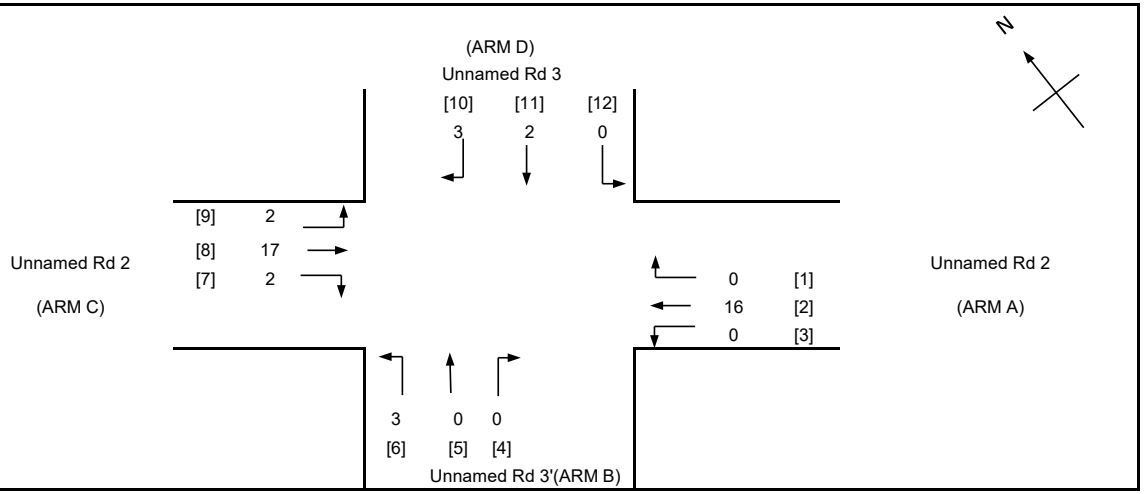
Q b-a	=	442	(pcu/hr)
Q b-c	=	577	(pcu/hr)
Q c-b	=	409	(pcu/hr)
Q b-ac	=	577	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	259	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1525
DFC c-b	=	0.0000
DFC b-ac	=	0.1525
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.15

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn B - Unnamed Rd 2 / Unnamed Rd 3	2028 Design - PM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

GENERAL

W	=	3.90 (metres)			
W cr	=	0 (metres)	Y	=	0.865

MAJOR ROAD (ARM A)			MAJOR ROAD (ARM C)		
W a-d	=	2.0 (metres)	W c-b	=	2.0 (metres)
Vr a-d	=	18 (metres)	Vr c-b	=	18 (metres)
q a-b	=	0 (pcu/hr)	q c-a	=	17 (pcu/hr)
q a-c	=	16 (pcu/hr)	q c-b	=	2 (pcu/hr)
q a-d	=	0 (pcu/hr)	q c-d	=	2 (pcu/hr)

MINOR ROAD (ARM B)			MINOR ROAD (ARM D)		
W b-a	=	2.0 (metres)	W d-c	=	2.0 (metres)
W b-c	=	3.3 (metres)	W d-a	=	2.0 (metres)
Vl b-a	=	18 (metres)	Vl d-c	=	18 (metres)
Vr b-a	=	18 (metres)	Vr d-c	=	18 (metres)
Vr b-c	=	20 (metres)	Vr d-a	=	20 (metres)
q b-a	=	0 (pcu/hr)	q d-c	=	3 (pcu/hr)
q b-c	=	3 (pcu/hr)	q d-a	=	0 (pcu/hr)
q b-d	=	0 (pcu/hr)	q d-b	=	2 (pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.707	X a	=	0.767
X c	=	0.767	X d	=	0.707
Z b	=	0.876	Z d	=	0.769
M b	=	0.806	M d	=	0.708

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0		r d-c	=	0.007	
ql b-d	=	0	(pcu/hr)	ql d-b	=	1.0068807	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	0.9931193	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	436	(pcu/hr)	Q d-c	=	436	(pcu/hr)
Q b-c	=	648	(pcu/hr)	Q d-a	=	568	(pcu/hr)
Q c-b	=	568	(pcu/hr)	Q a-d	=	566	(pcu/hr)
Ql b-d	=	498	(pcu/hr)	Ql d-b	=	437	(pcu/hr)
Qr b-d	=	436	(pcu/hr)	Qr d-b	=	436	(pcu/hr)

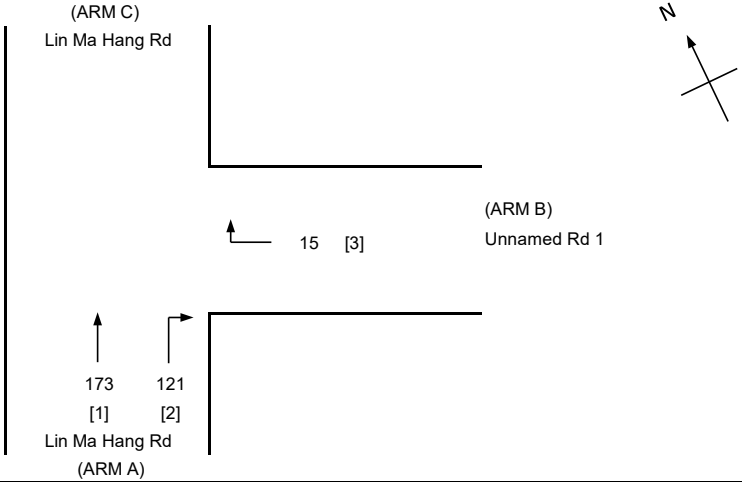
TOTAL FLOW = 45 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0046
DFC c-b	=	0.0035
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0069
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCl d-b	=	0.0023
DFCr d-b	=	0.0023

CRITICAL DFC = 0.01

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N		Prepared By:	FF	Jan-2025
Jn A - Lin Ma Hang Road / Unnamed Rd1	2024 Observed - AM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.0	(metres)
W cr	=	0	(metres)
q a-b	=	121	(pcu/hr)
q a-c	=	173	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.0	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	15	(metres)
Vr b-a	=	24	(metres)
Vr b-c	=	24	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	15	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.749
E	=	0.815
F	=	0.586
Y	=	0.759
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

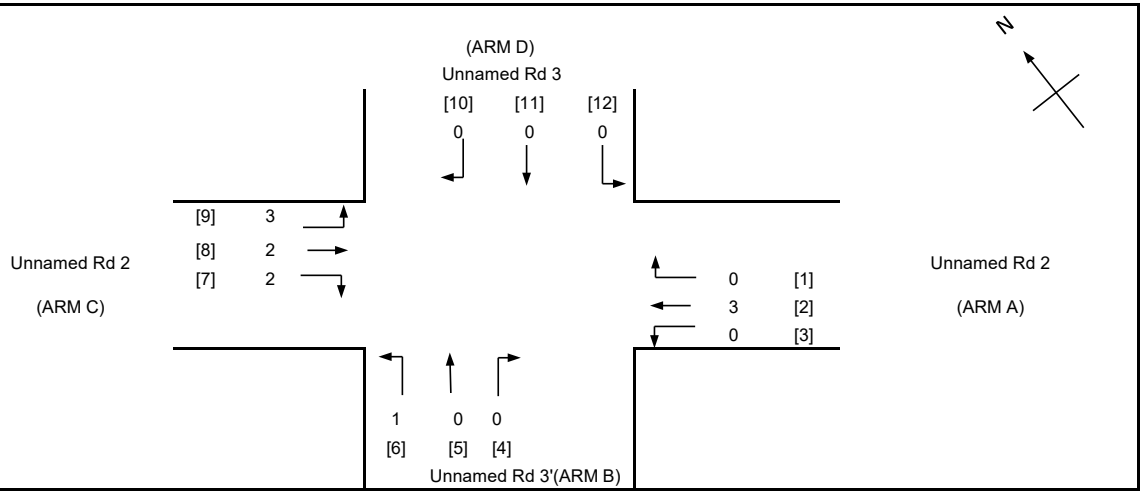
Q b-a	=	424	(pcu/hr)
Q b-c	=	557	(pcu/hr)
Q c-b	=	389	(pcu/hr)
Q b-ac	=	557	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	309	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0269
DFC c-b	=	0.0000
DFC b-ac	=	0.0269
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.03

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn B - Unnamed Rd 2 / Unnamed Rd 3	2024 Observed - AM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

GENERAL

W	=	3.90 (metres)			
W cr	=	0 (metres)	Y	=	0.865

MAJOR ROAD (ARM A)			MAJOR ROAD (ARM C)		
W a-d	=	2.0 (metres)	W c-b	=	2.0 (metres)
Vr a-d	=	18 (metres)	Vr c-b	=	18 (metres)
q a-b	=	0 (pcu/hr)	q c-a	=	2 (pcu/hr)
q a-c	=	3 (pcu/hr)	q c-b	=	2 (pcu/hr)
q a-d	=	0 (pcu/hr)	q c-d	=	3 (pcu/hr)

MINOR ROAD (ARM B)			MINOR ROAD (ARM D)		
W b-a	=	2.0 (metres)	W d-c	=	2.0 (metres)
W b-c	=	3.3 (metres)	W d-a	=	2.0 (metres)
Vl b-a	=	18 (metres)	Vl d-c	=	18 (metres)
Vr b-a	=	18 (metres)	Vr d-c	=	18 (metres)
Vr b-c	=	20 (metres)	Vr d-a	=	20 (metres)
q b-a	=	0 (pcu/hr)	q d-c	=	0 (pcu/hr)
q b-c	=	1 (pcu/hr)	q d-a	=	0 (pcu/hr)
q b-d	=	0 (pcu/hr)	q d-b	=	0 (pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.707	X a	=	0.767
X c	=	0.767	X d	=	0.707
Z b	=	0.876	Z d	=	0.769
M b	=	0.806	M d	=	0.708

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0		r d-c	=	0.000
ql b-d	=	0	(pcu/hr)	ql d-b	=	0 (pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	442	(pcu/hr)	Q d-c	=	441 (pcu/hr)
Q b-c	=	652	(pcu/hr)	Q d-a	=	572 (pcu/hr)
Q c-b	=	571	(pcu/hr)	Q a-d	=	570 (pcu/hr)
Ql b-d	=	504	(pcu/hr)	Ql d-b	=	442 (pcu/hr)
Qr b-d	=	441	(pcu/hr)	Qr d-b	=	442 (pcu/hr)

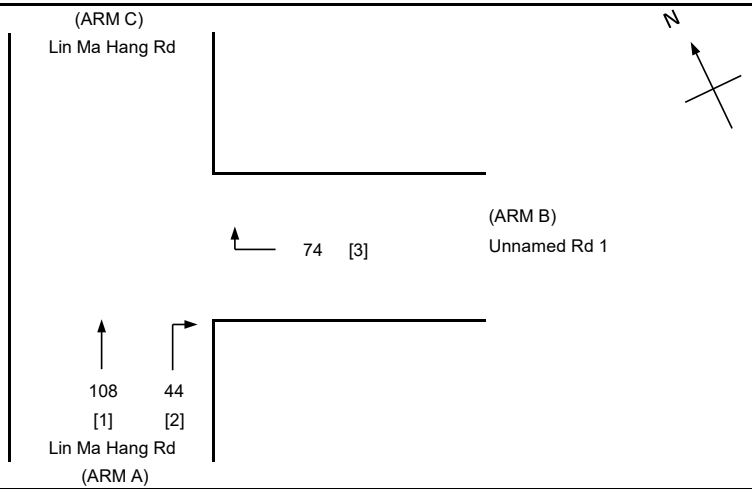
TOTAL FLOW = 11 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0015
DFC c-b	=	0.0026
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCl d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.00

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn A - Lin Ma Hang Road / Unnamed Rd1	2024 Observed - PM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.0	(metres)
W cr	=	0	(metres)
q a-b	=	44	(pcu/hr)
q a-c	=	108	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.0	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	15	(metres)
Vr b-a	=	24	(metres)
Vr b-c	=	24	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	74	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.749
E	=	0.815
F	=	0.586
Y	=	0.759
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

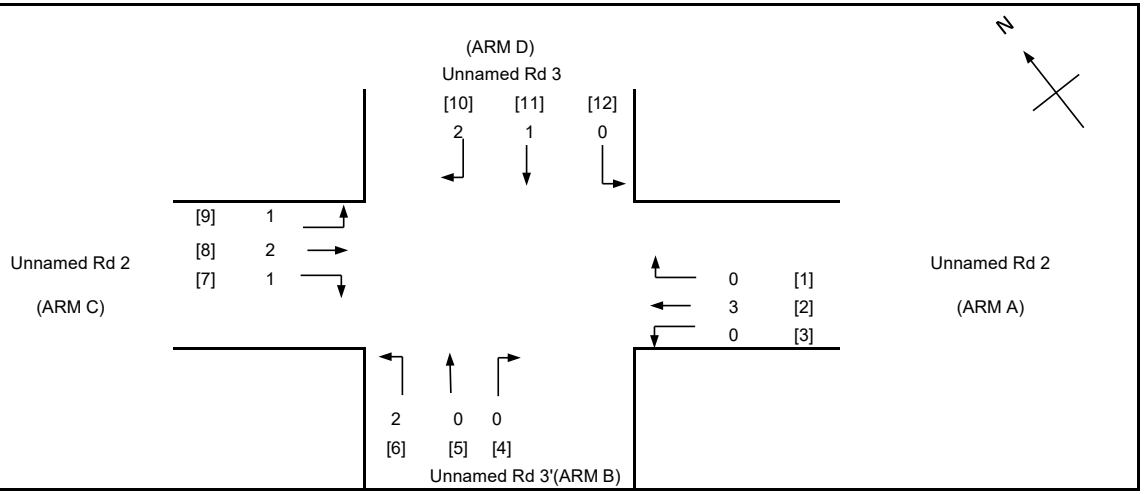
Q b-a	=	444	(pcu/hr)
Q b-c	=	579	(pcu/hr)
Q c-b	=	412	(pcu/hr)
Q b-ac	=	579	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	226	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1275
DFC c-b	=	0.0000
DFC b-ac	=	0.1275
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.13

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn B - Unnamed Rd 2 / Unnamed Rd 3	2024 Observed - PM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

GENERAL

W	=	3.90 (metres)			
W cr	=	0 (metres)	Y	=	0.865

MAJOR ROAD (ARM A)

W a-d	=	2.0 (metres)
Vr a-d	=	18 (metres)
q a-b	=	0 (pcu/hr)
q a-c	=	3 (pcu/hr)
q a-d	=	0 (pcu/hr)

MAJOR MAJOR ROAD (ARM C)

W c-b	=	2.0 (metres)
Vr c-b	=	18 (metres)
q c-a	=	2 (pcu/hr)
q c-b	=	1 (pcu/hr)
q c-d	=	1 (pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.0 (metres)
W b-c	=	3.3 (metres)
Vl b-a	=	18 (metres)
Vr b-a	=	18 (metres)
Vr b-c	=	20 (metres)
q b-a	=	0 (pcu/hr)
q b-c	=	2 (pcu/hr)
q b-d	=	0 (pcu/hr)

MINOR ROAD (ARM D)

W d-c	=	2.0 (metres)
W d-a	=	2.0 (metres)
Vl d-c	=	18 (metres)
Vr d-c	=	18 (metres)
Vr d-a	=	20 (metres)
q d-c	=	2 (pcu/hr)
q d-a	=	0 (pcu/hr)
q d-b	=	1 (pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.707	X a	=	0.767
X c	=	0.767	X d	=	0.707
Z b	=	0.876	Z d	=	0.769
M b	=	0.806	M d	=	0.708

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0		r d-c	=	0.005
ql b-d	=	0	(pcu/hr)	ql d-b	=	0.5022676 (pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	0.4977324 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	441	(pcu/hr)	Q d-c	=	441 (pcu/hr)
Q b-c	=	652	(pcu/hr)	Q d-a	=	572 (pcu/hr)
Q c-b	=	571	(pcu/hr)	Q a-d	=	571 (pcu/hr)
Ql b-d	=	504	(pcu/hr)	Ql d-b	=	443 (pcu/hr)
Qr b-d	=	442	(pcu/hr)	Qr d-b	=	442 (pcu/hr)

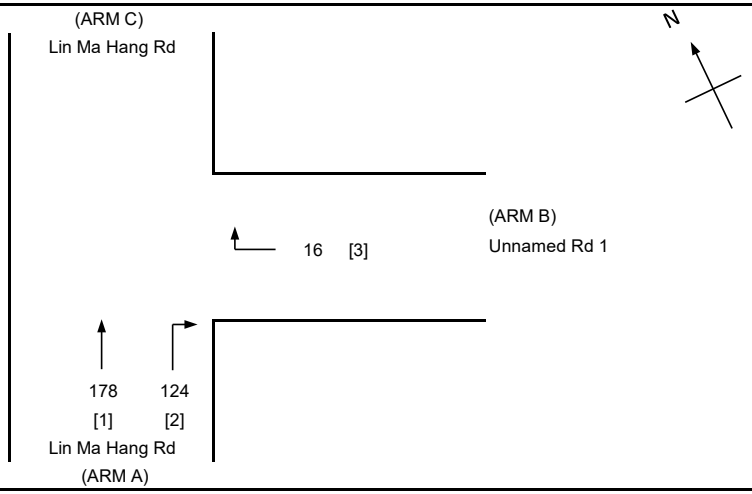
TOTAL FLOW = 12 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0031
DFC c-b	=	0.0018
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0045
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCl d-b	=	0.0011
DFCr d-b	=	0.0011

CRITICAL DFC = 0.00

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn A - Lin Ma Hang Road / Unnamed Rd1	2028 Reference - AM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.0	(metres)
W cr	=	0	(metres)
q a-b	=	124	(pcu/hr)
q a-c	=	178	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.0	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	15	(metres)
Vr b-a	=	24	(metres)
Vr b-c	=	24	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	16	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.749
E	=	0.815
F	=	0.586
Y	=	0.759
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

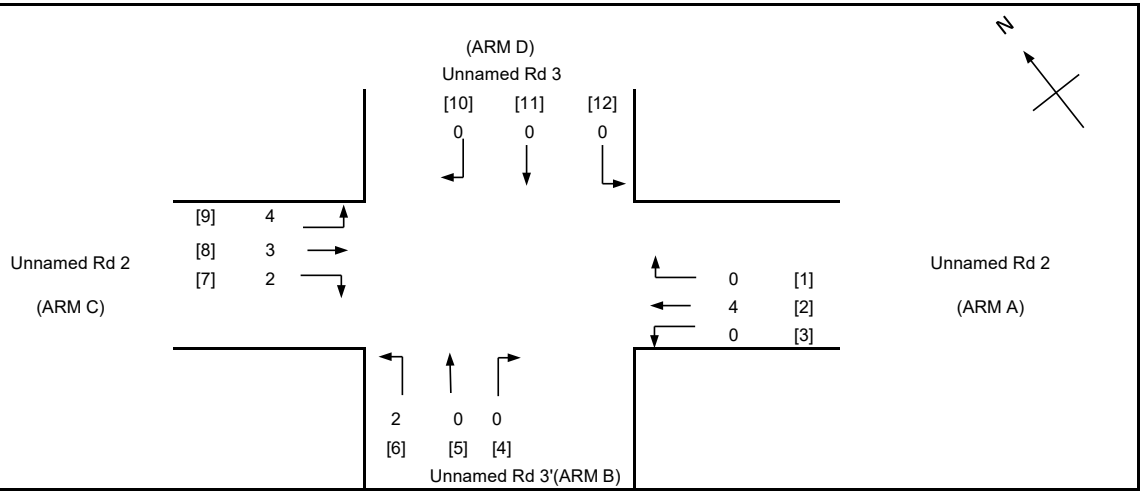
Q b-a	=	423	(pcu/hr)
Q b-c	=	556	(pcu/hr)
Q c-b	=	388	(pcu/hr)
Q b-ac	=	556	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	318	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0288
DFC c-b	=	0.0000
DFC b-ac	=	0.0288
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.03

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn B - Unnamed Rd 2 / Unnamed Rd 3	2028 Reference - AM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

GENERAL

W	=	3.90 (metres)			
W cr	=	0 (metres)	Y	=	0.865

MAJOR ROAD (ARM A)			MAJOR ROAD (ARM C)		
W a-d	=	2.0 (metres)	W c-b	=	2.0 (metres)
Vr a-d	=	18 (metres)	Vr c-b	=	18 (metres)
q a-b	=	0 (pcu/hr)	q c-a	=	3 (pcu/hr)
q a-c	=	4 (pcu/hr)	q c-b	=	2 (pcu/hr)
q a-d	=	0 (pcu/hr)	q c-d	=	4 (pcu/hr)

MINOR ROAD (ARM B)			MINOR ROAD (ARM D)		
W b-a	=	2.0 (metres)	W d-c	=	2.0 (metres)
W b-c	=	3.3 (metres)	W d-a	=	2.0 (metres)
Vl b-a	=	18 (metres)	Vl d-c	=	18 (metres)
Vr b-a	=	18 (metres)	Vr d-c	=	18 (metres)
Vr b-c	=	20 (metres)	Vr d-a	=	20 (metres)
q b-a	=	0 (pcu/hr)	q d-c	=	0 (pcu/hr)
q b-c	=	2 (pcu/hr)	q d-a	=	0 (pcu/hr)
q b-d	=	0 (pcu/hr)	q d-b	=	0 (pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.707	X a	=	0.767
X c	=	0.767	X d	=	0.707
Z b	=	0.876	Z d	=	0.769
M b	=	0.806	M d	=	0.708

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0		r d-c	=	0.000
ql b-d	=	0	(pcu/hr)	ql d-b	=	0 (pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	0 (pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	441	(pcu/hr)	Q d-c	=	441 (pcu/hr)
Q b-c	=	651	(pcu/hr)	Q d-a	=	572 (pcu/hr)
Q c-b	=	571	(pcu/hr)	Q a-d	=	569 (pcu/hr)
Ql b-d	=	503	(pcu/hr)	Ql d-b	=	442 (pcu/hr)
Qr b-d	=	441	(pcu/hr)	Qr d-b	=	441 (pcu/hr)

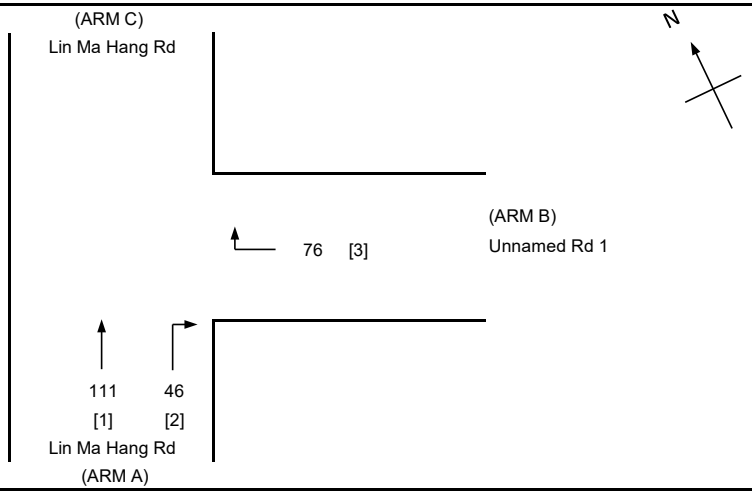
TOTAL FLOW = 15 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0031
DFC c-b	=	0.0035
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0000
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCl d-b	=	0.0000
DFCr d-b	=	0.0000

CRITICAL DFC = 0.00

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn A - Lin Ma Hang Road / Unnamed Rd1	2028 Reference - PM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.0	(metres)
W cr	=	0	(metres)
q a-b	=	46	(pcu/hr)
q a-c	=	111	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	0.0	(metres)
Vr c-b	=	0	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.5	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	15	(metres)
Vr b-a	=	24	(metres)
Vr b-c	=	24	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	76	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.749
E	=	0.815
F	=	0.586
Y	=	0.759
F for (Qb-ac)	=	1

THE CAPACITY OF MOVEMENT :

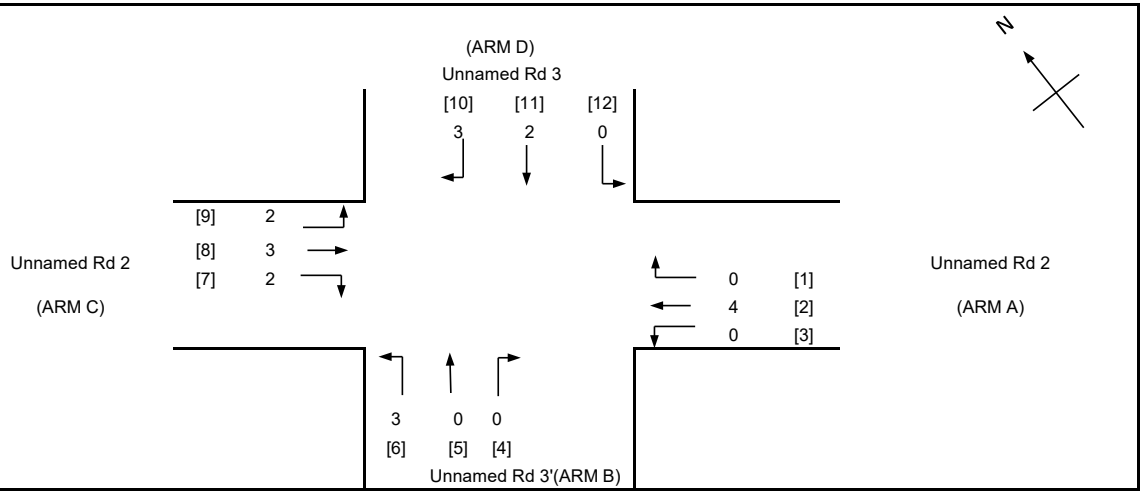
Q b-a	=	443	(pcu/hr)
Q b-c	=	578	(pcu/hr)
Q c-b	=	411	(pcu/hr)
Q b-ac	=	578	(pcu/hr)
Q c-a	=	1800	(pcu/hr)
TOTAL FLOW	=	233	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.1315
DFC c-b	=	0.0000
DFC b-ac	=	0.1315
(Share Lane)		
DFC c-a	=	0.0000

CRITICAL DFC = 0.13

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Eating Place, Local Provision Store, Ancillary Office, Store Room and Public Vehicle Park (Excluding Container Vehicle) for a Temporary Period of 3 Years at Lot No.356 in D.D.78, Tsung Yuen Ha, Tak Kwu Ling N			Prepared By:	FF	Jan-2025
Jn B - Unnamed Rd 2 / Unnamed Rd 3	2028 Reference - PM Peak	Project No.: 80110	Checked By:	MM	Jan-2025
			Reviewed By:	FM	Jan-2025



NOTES : (GEOMETRIC INPUT DATA)

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

GEOMETRIC DETAILS:

GENERAL

W	=	3.90 (metres)			
W cr	=	0 (metres)	Y	=	0.865

MAJOR ROAD (ARM A)			MAJOR ROAD (ARM C)		
W a-d	=	2.0 (metres)	W c-b	=	2.0 (metres)
Vr a-d	=	18 (metres)	Vr c-b	=	18 (metres)
q a-b	=	0 (pcu/hr)	q c-a	=	3 (pcu/hr)
q a-c	=	4 (pcu/hr)	q c-b	=	2 (pcu/hr)
q a-d	=	0 (pcu/hr)	q c-d	=	2 (pcu/hr)

MINOR ROAD (ARM B)			MINOR ROAD (ARM D)		
W b-a	=	2.0 (metres)	W d-c	=	2.0 (metres)
W b-c	=	3.3 (metres)	W d-a	=	2.0 (metres)
Vl b-a	=	18 (metres)	Vl d-c	=	18 (metres)
Vr b-a	=	18 (metres)	Vr d-c	=	18 (metres)
Vr b-c	=	20 (metres)	Vr d-a	=	20 (metres)
q b-a	=	0 (pcu/hr)	q d-c	=	3 (pcu/hr)
q b-c	=	3 (pcu/hr)	q d-a	=	0 (pcu/hr)
q b-d	=	0 (pcu/hr)	q d-b	=	2 (pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.707	X a	=	0.767
X c	=	0.767	X d	=	0.707
Z b	=	0.876	Z d	=	0.769
M b	=	0.806	M d	=	0.708

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0		r d-c	=	0.007	
ql b-d	=	0	(pcu/hr)	ql d-b	=	1.0068182	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	0.9931818	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	440	(pcu/hr)	Q d-c	=	440	(pcu/hr)
Q b-c	=	651	(pcu/hr)	Q d-a	=	571	(pcu/hr)
Q c-b	=	571	(pcu/hr)	Q a-d	=	570	(pcu/hr)
Ql b-d	=	503	(pcu/hr)	Ql d-b	=	442	(pcu/hr)
Qr b-d	=	441	(pcu/hr)	Qr d-b	=	441	(pcu/hr)

TOTAL FLOW = 19 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0000
DFC b-c	=	0.0046
DFC c-b	=	0.0035
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0068
DFC d-a	=	0.0000
DFC a-d	=	0.0000
DFCl d-b	=	0.0023
DFCr d-b	=	0.0023

CRITICAL DFC = 0.01