Annex I - Traffic Impact Assessment

JOINT-USER COMPLEX AND JOINT-USER GENERAL OFFICE BUILDING
AT AREA 29, KWU TUNG NORTH

Quotation Contract No. ASD 101/8705/CX/06/QC6

Contract Consultancy Services for Joint-user Complex and Joint-user General Office Building at Area 29, Kwu Tung North

Traffic Impact Assessment Report

April 2025

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April 2025

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Content

Page

1 INTRODUCTION 1
  - 1.1 Background 1
  - 1.2 Study Objectives 1
  - 1.3 Report Structure 1

2 DESCRIPTONS OF THE PROPOSED SCHEME 2
  - 2.1 Site Location and Study Area 2
  - 2.2 Development Parameters for the Proposed Scheme 2
  - 2.3 Parking and Loading/Unloading Facilities 2
  - 2.4 Vehicular and Pedestrian Access Arrangements 3

3 EXISTING TRAFFIC CONDITIONS 4
  - 3.1 Existing Road Network 4
  - 3.2 Traffic Surveys at Key Links and Junctions 4
  - 3.3 Existing Vehicle Traffic Conditions 4

4 TRAFFIC FORECASTS 6
  - 4.1 Modelling Methodology 6
  - 4.2 Validation Results 6
  - 4.3 Design Year 7
  - 4.4 2034 Peak Hour Reference Flows 7
  - 4.5 Peak Hour Project Flows 7
  - 4.6 Future Year Design Peak Hour Traffic Flows 9

5 TRAFFIC IMPACT ASSESSMENT 10
  - 5.1 Future Year Junction Capacity Assessments 10
  - 5.2 Future Year Link Capacity Assessments 10
  - 5.3 Pedestrian Connections 11

6 SUMMARY AND CONCLUSION 12
  - 6.1 Summary 12
  - 6.2 Conclusion 13

List of Table Page

Table 2-1 Summary of Development Parameters 2
Table 2-2 Provision of Parking and L/UL Facilities 3
Table 3-1 Summary of Vehicular Traffic Count Surveys 4
Table 3-2 Passenger Car Unit Conversion Factors 4
Table 3-3 2024 Peak Hour Junction Capacity Assessment 5
Table 3-4 2024 Peak Hour Road Link Capacity Assessment 5
Table 4-1 Locations of Screenline for Validation 6
Table 4-2 Validation Criteria 6
Table 4-3 Validation Results 7
Table 4-4 Adopted Vehicular Trip Rates for the Project Site 8
Table 4-5 Estimated Peak Hour Vehicle Flows for the Project Site 8
Table 5-1 2034 Peak Hour Junction Capacity Assessment 10
Table 5-2 2034 Peak Hour Road Link Capacity Assessment 11

List of Figures

Figure 2-1 Site Location and Study Area
Figure 2-2 Proposed Vehicular and Pedestrian Accesses
Figure 3-1 Locations of Surveyed Junctions and Road Links
Figure 3-2 2024 Observed Peak Hour Traffic Flows
Figure 4-1 Future Road Network in the Study Area
Figure 4-2 Locations of Key Junctions and Road Links for Assessment
Figure 4-3 2034 Peak Hour Reference Flows
Figure 4-4 Development Peak Hour Traffic Flows
Figure 4-5 2034 Peak Hour Design Flows
Figure 5-1 Pedestrian Connections at G/F
Figure 5-2 Pedestrian Connections at LG/F

Appendices

Appendix A 2024 Junction Calculation Sheets
Appendix B 2034 Junction Calculation Sheets

1 INTRODUCTION

1.1 Background

1.1.1 The Government proposes to develop the lands zoned as Government, Institution of Community ("GIC") in Area 29, Kwu Tung North, into a Joint-user Complex ("JUC") and Joint-user General Office Building ("JUB"). To achieving better air ventilation, enhancing the environmental sustainability and quality of the spaces particularly at pedestrian level, mitigating the heat island effect, allowing provision of more greenery on ground levels for public enjoyment and retaining of a Tree of Particular Interest (TPI) of large size near the northwest corner with the Project Site, a planning application for relaxation of the building height restriction of the Project site to 170mPD under Section 16 (S16) of the Town Planning Ordinance, Cap 131 is proposed.

1.1.2 Ozzo Technology (HK) Limited has been commissioned to undertake a Traffic Impact Assessment (TIA) Study in support of the above S16 planning application of the Joint-user Complex and Joint-user General Office Building at Area 29, Kwu Tung North ("the Project Site").

1.2 Study Objectives

1.2.1 The main objectives of this Traffic Impact Assessment ("TIA") Study are as follows:

- To review the existing traffic condition of the surrounding road network;
- To estimate the potential traffic generations/attractions to be induced by the Proposed Scheme;
- To assess the future traffic situation of the surrounding road network; and
- To appraise the potential traffic impact of the Proposed Scheme on the surrounding road network and to recommend improvement proposals, if required.

1.3 Report Structure

1.3.1 Following this introductory chapter, this report is arranged as follows:

- Chapter 2 describes the location and the development parameters of the Proposed Scheme;
- Chapter 3 summarizes the existing traffic conditions in the vicinity of the Project Site;
- Chapter 4 describes the methodology for estimating the amount of vehicular traffic to be induced by the Proposed Scheme;
- Chapter 5 details the traffic forecast and the results of traffic impact assessment; and
- A summary of the findings and conclusion of this TIA study are given in Chapter 6.

2 DESCRIPTONS OF THE PROPOSED SCHEME

2.1 Site Location and Study Area

2.1.1 The Project Site, with a total site area of approx. 20,980m^2, is situated at Kwu Tong North New Development Area and is bounded by Fanling Highway and Castle Peak Road (Chau Tau) to the south, Heung Tsz Road to the north.

2.1.2 **Figure 2-1** shows the location of the Project Site and the proposed Study Area for this TIA Study.

2.2 Development Parameters for the Proposed Scheme

2.2.1 The Proposed Scheme consists of the Joint-user General Office Building (JUB) and Joint-user Complex (JUC) with a total GFA of approx. 163,400 m^2. **Table 2-1** summarizes the development parameters of the Proposed Scheme.

Table 2-1 Summary of Development Parameters

Parameters	JUB & JUC
Site Area	~20,980 m^2
Plot Ratio (PR)	~7.8
Office	~120,900 m^2
Office (supporting community facilities)	~4,440 m^2
Kindergarten (13 classrooms)	~930 m^2
Clinic	~8,070 m^2
Library	~6,060 m^2
Swimming Pool and Sports Centre	~21,020 m^2
Children Care Centre	~1,980 m^2
Total GFA	**~163,400 m^2**

2.3 Parking and Loading/Unloading Facilities

2.3.1 The parking and loading / unloading (L/UL) facilities comply with the agreed provisions under the Project Definition Statement (PDS) in Traffic Feasibility Study (TFS) stage in which a total of about 433 parking and L/UL spaces will be provided. **Table 2-2** summarizes the internal transport facilities to be provided by the Proposed Scheme.

Table 2-2 Provision of Parking and L/UL Facilities

Use	Vehicle Type	Proposed Provision	Size (L x W x H)	Total Nos. of Spaces
Parking Spaces	Private Car	~337	5m x 2.5m x 2.4m	Total Nos. of Parking Spaces = ~400
	Coach	4	12m x 3.5m x 3.8m	
	Van	13	7m x 3.5m x 3.6m	
	Ambulance	2	8m x 3.5m x 3.6m	
	Estate cars	7	5m x 3m x 2.4m	
	Medium / Heavy Goods Vehicles	3	11m x 3.5m x 4.7m	
	Bicycle	20	2m x 0.7m x 2.4m	
	Motorcycle	7	2.5m x 1m x 2.4m	
	16-seater Van	3	7m x 3m x 3.5m	
	Large Van	1	5.3m x 2.2m x 2.4m	
	10-seater Van	1	5.7m x 3.13m x 2m	
	GOPC Accessible Parking	2	5m x 3.5m x 2.4m	
Loading / Unloading (L/UL) Spaces	Private Car	4	5m x 2.5m x 2.4m	Total Nos. of L/UL Spaces = 33
	Coach	6	12m x 3.5m x 3.8m	
	Van	6	7m x 3.5m x 3.6m	
	Ambulance	4	8m x 3.5m x 3.6m	
	Ambulance	2	9m x 3m x 3.6m	
	Medium/Heavy Goods Vehicles	6	11m x 3.5m x 4.7m	
	16-seater Van	1	7m x 3m x 3.5m	
	Light Goods Van	1	7m x 3.5m x 3m	
	GOPC Loading Platform	2	11m x 3.5m x 4.7m	
	GOPC Garbage truck	1	9m x 3m x 4.7m	
Total Nos. of Parking and L/UL spaces		~433		

2.4 Vehicular and Pedestrian Access Arrangements

2.4.1 The proposed vehicular accesses will be situated at Road L1 at the northern boundary of the Project Site, and at Castle Peak Road at the southern boundary of the Project Site. The pedestrian accesses will be situated at the northern and eastern boundary of the Project Site. A drop-off area will be provided on the G/F of the Proposed Scheme and other parking and loading/unloading facilities will be provided at the basement. The locations of the proposed vehicular and pedestrian accesses are shown in **Figure 2-2**.

3 EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Network

3.1.1 The existing road network in the vicinity of the Project Site is shown in **Figure 2-1**.

3.1.2 Castle Peak Road - Chau Tau section, a Local Distributor road, is a single-2 lane carriageway connecting Castle Peak Road - San Tin in the west and Castle Peak Road - Kwu Tung in the east.

3.1.3 Heung Tsz Road is a local access road with single-2 lane configuration which connects Pak Sau Road to the west, providing access to developments along the road.

3.2 Traffic Surveys at Key Links and Junctions

3.2.1 To understand the existing traffic conditions on the road network within the Study Area, vehicular traffic count surveys were conducted at key road junctions and road links on 18 Dec 2024 (Wednesday) between 06:30-09:30 and 16:00-19:00. **Table 3-1** presents a summary of the vehicular traffic count surveys being undertaken and the survey locations are shown in **Figure 3-1**.

Table 3-1 Summary of Vehicular Traffic Count Surveys

Survey Type	Location	Figure	Survey Date	Data Collected
Vehicular Count Surveys	J1, J2, J3, L1, L2	Figure 3-1	2024-12-18 (Wednesday)	Manual Classified count in 15 min intervals

3.3 Existing Vehicle Traffic Conditions

3.3.1 All vehicle flows recorded during the traffic surveys are converted to passenger car unit (PCU) based on the PCU factors as indicated in Table 2.3.1.1 of Volume 2 of Transport Planning and Design Manual (TPDM) as summarized in **Table 3-2**.

Table 3-2 Passenger Car Unit Conversion Factors

Vehicle Type	PCU Conversion Factor(1)	
	Traffic Signal	Priority junction/ Roundabout
Car / Taxi	1.00	1.00
Public Light Bus / Minibus	1.50	1.50
Light Goods Vehicle	1.50	1.50
Medium/ Heavy Goods Vehicle	1.75	2.80
Bus / Coach	2.00	2.80

Notes: (1) Table 2.3.1.1, Chapter 2.3, Volume 2, TPDM-2024

3.3.2 By applying the above PCU factors, vehicular traffic flows in PCUs are calculated and the AM and PM peak hour is identified to occur at 07:45-08:45 and 17:15-18:15 respectively. **Figure 3-2** presents the 2024 observed AM and PM peak hour traffic flows.

3.3.3 Based on the existing traffic flows, the peak hour performance of the key junctions in the vicinity of the Project Site is assessed. The assessment results are indicated in **Table 3-3** and detailed junction calculation sheets are given in **Appendix A**.

Table 3-3 2024 Peak Hour Junction Capacity Assessment

Jn. ID.	Location(1)	Type	Capacity Index(2)	2024 Weekday	
				AM Peak	PM Peak
J1	Castle Peak Road (Chau Tau) / Pak Sau Road	Priority	DFC	0.33	0.47
J2	Castle Peak Road (Chau Tau) / Unnamed Road	Priority	DFC	0.44	0.37
J3	Castle Peak Road (Kwu Tung) / Ho Sheung Heung Road	Priority	DFC	0.69	0.67

Notes: (1) Refer to Figure 3-1 for junction locations
(2) DFC = Design Flow to Capacity for priority junction

3.3.4 The results reveal that all the key junctions within the Study Area operate satisfactorily during the peak hours currently.

3.3.5 Based on the existing traffic flows, the peak hour performances of the key road links in the vicinity of the Project Site are also assessed and the results are indicated in **Table 3-4**.

Table 3-4 2024 Peak Hour Road Link Capacity Assessment

No.	Location(1)	Direction	Design Capacity (pcu/hr)	Flows (pcu/hr)	2024 Weekday	
					AM Peak	PM Peak
L1	Fanling Highway	EB	6,100	Flows	4,409	4,381
				P/Df(2)	0.72	0.72
		WB	6,100	Flows	4,194	4,129
				P/Df(2)	0.69	0.68
L2	Castle Peak Road (Chau Tau)	EB	1,250	Flows	575	355
				P/Df(2)	0.46	0.28
		WB	1,250	Flows	578	677
				P/Df(2)	0.46	0.54

Notes: (1) Refer to Figure 3-1 for road link locations
(2) P/Df = Peak Hourly Flows/Design Flow Ratios (P/Df) for road links

3.3.6 The results reveal that all the key road links in the vicinity of the Project Site operate satisfactorily during the peak hours.

4 TRAFFIC FORECASTS

4.1 Modelling Methodology

4.1.1 A Local Area Traffic Model (LATM) is developed for this study based on the 2019-based BDTM (NTE1) obtained from the Transport Planning Division of Transport Department, where the future year assumptions under the 2019-based BDTM (including future development, road network, toll assumptions and public transport services) are adopted.

4.1.2 To ensure the robustness of the future year model, validation has been conducted by comparing the 2024 surveyed traffic flows and the LATM 2024 base year modelled flows, at the proposed screenline locations as shown in **Table 4-1**.

Table 4-1 Locations of Screenline for Validation

No.	Location	Direction
L1	Fanling Highway	EB
		WB
L2	Castle Peak Road (Chau Tau)	EB
		WB

4.1.3 For the purpose of base year model validation, the validation process shall strictly follow the criteria as stated in **Table 4-2**.

Table 4-2 Validation Criteria

Validation Criteria	Validation Target
Total Link Flows at Screenline	100% within 10% of actual counts
Individual Link Flow at Screenline	100% within 20% of actual counts

4.2 Validation Results

4.2.1 The model validation results are shown in **Table 4-3**. The results indicated that all individual link flows are within 20% of actual counts, and the total link flows are within 10% of actual counts. The validation criteria for the base year model are well satisfied.

Table 4-3 Validation Results

No.	Location(1)	Direction	2024 Observed Flows (pcu/hr)		2024 Modelled Flows (pcu/hr)		Difference (%)	
			AM	PM	AM	PM	AM	PM
L1	Fanling Highway	EB	4,409	4,381	4,422	4,205	-0.3%	4.2%
		WB	4,194	4,129	4,334	3,671	-3.2%	12.5%
L2	Castle Peak Road (Chau Tau)	EB	575	355	525	327	9.5%	8.7%
		WB	578	677	532	616	8.7%	9.9%
Total			9,756	9,542	9,812	8,818	-0.6%	8.2%

4.3 Design Year

4.3.1 Based on the latest information, the Proposed Scheme is anticipated to be completed by 2031. Thus, the “Design Year” for this TIA study is 2034, i.e. 3 years after the planned full completion of the Proposed Scheme.

4.4 2034 Peak Hour Reference Flows

4.4.1 Model assumptions in 2031 BDTM (NTE1) such as planned road networks, railway and highway networks, new development area and planned road-based public transport services are adopted in the 2034 LATM for forecasting future traffic flows.

4.4.2 Also, any adjustments in deriving the 2024 LATM from the 2019 BDTM are applied to the 2031 BDTM as appropriate. In addition, with reference to the 2021-based Territorial Population and Employment Data Matrices (TPEDM) published by Planning Department, a growth factor of 1% p.a. is applied to represent the growth from 2031 to 2034.

4.4.3 **Figure 4-1** shows the future road network in the Study Area that are included in the 2034 LATM. Heung Tsz Road will become Road L1 and connect with Road D1 at the western end. **Figure 4-2** also shows the links and junctions to be assessed in this Study.

4.4.4 The 2034 Peak Hour Reference Flows (i.e. without the Proposed Scheme) output from the LATM are presented in **Figure 4-3**.

4.5 Peak Hour Project Flows

4.5.1 The peak hour vehicular trips to be induced by the Proposed Scheme are estimated with reference to the existing trip rates observed at different uses similar to the corresponding uses by the Proposed Scheme. **Table 4-4** shows the adopted trip rates for different type of uses.

Table 4-4 Adopted Vehicular Trip Rates for the Project Site

Development Type	Trip Rate Unit	Adopted Peak Hour Vehicular Trips			
		Weekday AM		Weekday PM	
		In	Out	In	Out
Office / Office (supporting community facilities) (1)	per 100m² GFA	0.2452	0.1703	0.1175	0.1573
Kindergarten (2)	per classroom	1.9231	1.4615	0.6154	1.1538
Clinic (3)	per 100m² GFA	0.1257	0.1029	0.0800	0.0914
Swimming Pool and Sports Centre (4)	per 100m² GFA	0.2856	0.2317	0.3152	0.3125
Children Care Centre (5)	per 100m² GFA	0.0663	0.0400	0.0554	0.0518

Notes: (1) Adopt mean trip of Office from TPDM
(2) Peak Hour trip rates observed at Zenith Kindergarten
(3) Peak Hour trip rates observed at Yau Ma Tei Polyclinic
(4) Peak Hour trip rates observed at Fung Kam Street Sports Centre
(5) Peak Hour trip rates observed at Kwu Tung North Multi Welfare Service Complex

4.5.2 Based on the adopted trip rates, the estimated peak hour vehicular trips to be generated by the Proposed Scheme are shown in **Table 4-5**.

Table 4-5 Estimated Peak Hour Vehicle Flows for the Project Site

Development Type	Vehicular Trips for the Project Site			
	AM Peak Hour Trip (pcu/hr)		PM Peak Hour Trip (pcu/hr)	
	In	Out	In	Out
Office / Office (supporting community facilities) (125,340 m²)	307	213	147	197
Kindergarten (13 classrooms)	18	14	6	11
Clinic (8,070 m²)	10	8	6	7
Library (1) (6,060 m²)	5	5	5	5
Swimming Pool and Sports Centre (21,020 m²)	38	31	42	42
Children Care Centre (1,980 m²)	1	1	1	1
Sub-Total	**379**	**272**	**207**	**263**
2-way Total	**651**		**470**	

Notes: (1) No vehicular trips generation or attraction is expected from library. For conservative, peak hour trips of 5 pcu/hr per direction is assumed for library.

4.5.3 It is estimated that the Proposed Scheme would generate two-way flows of 651 pcu/hr (379 in and 272 out) and 470 pcu/hr (207 in and 263 out) in the AM and PM peak hour respectively.

4.6 Future Year Design Peak Hour Traffic Flows

4.6.1 The additional development traffic in **Table 4-5** is then assigned onto the nearby road network. The resulting Peak Hour Project flows are shown in **Figure 4-4**.

4.6.2 By adding the Project Flows in **Figure 4-3** to the 2034 Peak Hour Reference Flows (i.e. without the Proposed Scheme) in **Figure 4-2**, the 2034 Peak Hour Design Flows (i.e. with the Proposed Scheme) are derived and shown in **Figure 4-5**.

5 TRAFFIC IMPACT ASSESSMENT

5.1 Future Year Junction Capacity Assessments

5.1.1 Based on the 2034 Peak Hour Reference Flows shown in **Figure 4-3** and the Design Flows shown in **Figure 4-5**, junction capacity assessment are undertaken and the results are presented in **Table 5-1** with detailed calculation sheets provided in **Appendix B**.

Table 5-1 2034 Peak Hour Junction Capacity Assessment

Jn. ID.	Location(1)	Type	Capacity Index(2)	2034 Reference Scenario		2034 Design Scenario	
				AM Peak	PM Peak	AM Peak	PM Peak
J1	Castle Peak Road (Chau Tau) / Pak Sau Road	Priority	DFC	0.32	0.09	0.42	0.11
J3	Castle Peak Road (Kwu Tung) / Ho Sheung Heung Road	Priority	DFC	0.31	0.28	0.31	0.29
J4	Road D1 / Road L1	Signal	RC	100%+	100%+	43.7%	93.1%
J5	Road P1 / Road D1 / Slip Road to Fanling Highway	Roundabout	DFC	0.30	0.39	0.37	0.41
J6	Castle Peak Road (Chau Tau) / Road P1	Roundabout	DFC	0.37	0.27	0.45	0.29

Notes: (1) Refer to Figure 3-2 for junction locations. J2 is removed in future road network.
(2) RC = Reserve Capacity for signal-controlled junction; DFC = Design Flow to Capacity for priority junction

5.1.2 It is indicated in **Table 5-1** that all the key junctions in the vicinity of the Project Site would be operating within capacity during the peak hours for both the Reference and Design scenarios.

5.2 Future Year Link Capacity Assessments

5.2.1 Based on the 2034 Peak Hour Reference Flows and Design Flows, link capacity assessments for Design Year 2034 are carried out and the results are presented in **Table 5-2**.

Table 5-2 2034 Peak Hour Road Link Capacity Assessment

No.	Location(1)	Direction	Design Capacity (pcu/hr)	Flows (pcu/hr)	2034 Reference Scenario		2034 Design Scenario	
					AM Peak	PM Peak	AM Peak	PM Peak
L1	Fanling Highway	EB	8,200(3)	Flows	5,112	4,770	5,261	4,925
				P/Df(2)	0.62	0.58	0.64	0.60
		WB	8,200(3)	Flows	5,061	4,023	5,179	4,067
				P/Df(2)	0.62	0.49	0.63	0.50
L2	Castle Peak Road (Chau Tau)	EB	1,250	Flows	649	489	719	524
				P/Df(2)	0.52	0.39	0.58	0.42
		WB	1,250	Flows	634	707	714	742
				P/Df(2)	0.51	0.57	0.57	0.59
L3	Road L1	EB	1,250	Flows	74	219	339	364
				P/Df(2)	0.06	0.18	0.27	0.29
		WB	1,250	Flows	322	86	512	270
				P/Df(2)	0.26	0.07	0.41	0.22

Notes: (1) Refer to Figure 3-2 for road link locations
(2) P/Df = Peak Hourly Flows/Design Flow Ratios (P/Df) for road links
(3) Fanling Highway to be widen to 4-lanes dual carriageway

5.2.2 Assessment results indicate that all the key road links in the vicinity of the Project Site would be operating within capacity during the peak hours for both Reference and Design scenario.

5.3 Pedestrian Connections

5.3.1 The Project Site is well connected to the future Kwu Tung Station and a Public Transport Interchange (PTI) located at the North of the site, and Castle Peak Road and footbridge at the South of the site. Pedestrian of the Proposed Scheme can travel to the public transport facilities via the Urban Plaza & Greenery at the East of the Project Site.

5.3.2 **Figure 5-1** and **Figure 5-2** shows the pedestrian connections to the Kwu Tung Station, PTI, and other local areas, from the G/F and LG/F of the project site respectively.

6 SUMMARY AND CONCLUSION

6.1 Summary

6.1.1 The Government proposes to develop the lands zoned as Government, Institution of Community ("GIC") in Area 29, Kwu Tung North, into a Joint-user Complex ("JUC") and Joint-user General Office Building ("JUB"). To achieving better air ventilation, enhancing the environmental sustainability and quality of the spaces particularly at pedestrian level, mitigating the heat island effect, allowing provision of more greenery on ground levels for public enjoyment and retaining of a Tree of Particular Interest (TPI) of large size near the northwest corner with the Project Site, the Applicant proposes a relaxation of the building height restriction of the Project site to 170mPD under Section 16 of the Town Planning Ordinance.

6.1.2 Ozzo Technology (HK) Limited is commissioned to undertake a Traffic Impact Assessment (TIA) Study to assess the traffic impact to be induced by the Proposed Scheme on the nearby road networks.

6.1.3 Capacity assessments are undertaken to reveal the 2024 AM and PM peak hour traffic conditions in the vicinity of the Project Site. The assessment results indicate that all the key junctions and road links perform satisfactorily during the AM and PM peak hours at present.

6.1.4 The anticipated completion year of the Proposed Scheme is 2031. The assessment year for the TIA study is therefore set as 2034, i.e. 3 years after the anticipated completion in 2031.

6.1.5 With reference to the 2019-based Base District Traffic Model (NTE-1), a Local Area Traffic Model is developed for forecasting the future traffic flows in the Study Area. Based on the forecast 2034 model flows, junction capacity assessments are undertaken to assess both the 2034 AM and PM peak hour conditions. The assessment results indicate that all the key junctions would perform within capacity during the peak hours for both Reference Scenario (i.e. without Proposed Scheme) and Design Scenario (i.e. with Proposed Scheme).

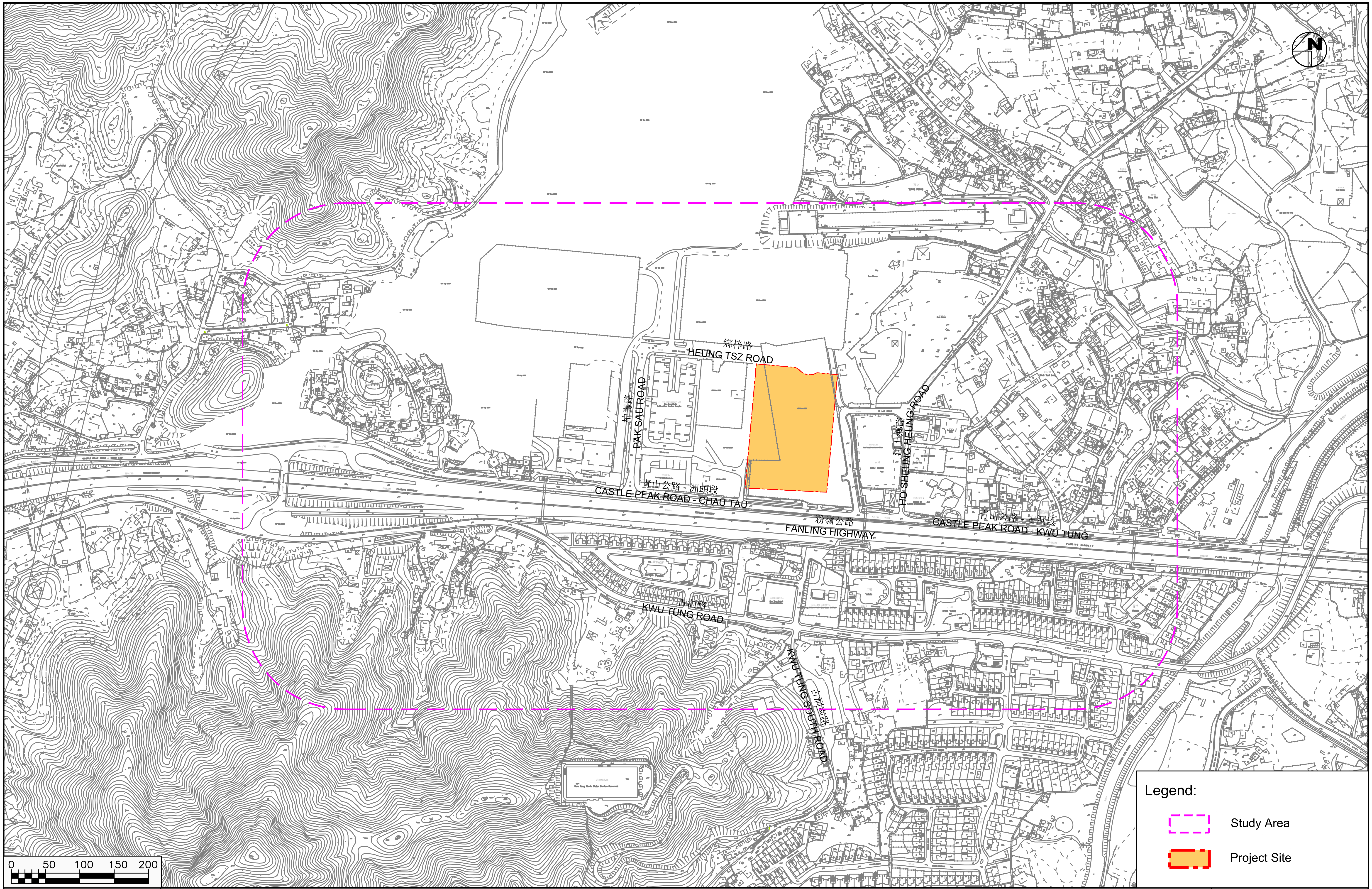
6.1.6 Link capacity assessments are also undertaken and the assessment results indicate that all the key road links in the Study Area would be operating within capacity during the 2034 AM and PM peak hour for both Reference and Design scenario.

6.1.7 A total of about 433 parking and loading / unloading (L/UL) spaces will be provided within the Project Site that comply with the agreed provisions under the Project Definition Statement (PDS) in Traffic Feasibility Study (TFS) stage.

6.2 Conclusion

6.2.1 The traffic impact assessment results indicate that the Proposed Scheme would not create adverse impact on the future road network in the vicinity of the Project Site.

Figures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FANLING HIGHWAY
青山公路 - 古洞段
CASTLE PEAK ROAD - KWU TUNG
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KWU TUNG ROAD
古洞南路
KWU TUNG SOUTH ROAD
0 50 100 150 200
Legend:
Study Area
Project Site

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

Site Location and Study Area

Date 26/12/2024

Scale 1:5000

OZZO TECHNOLOGY

Project No. 83114

Rev. -

Dwg No. Figure 2-1

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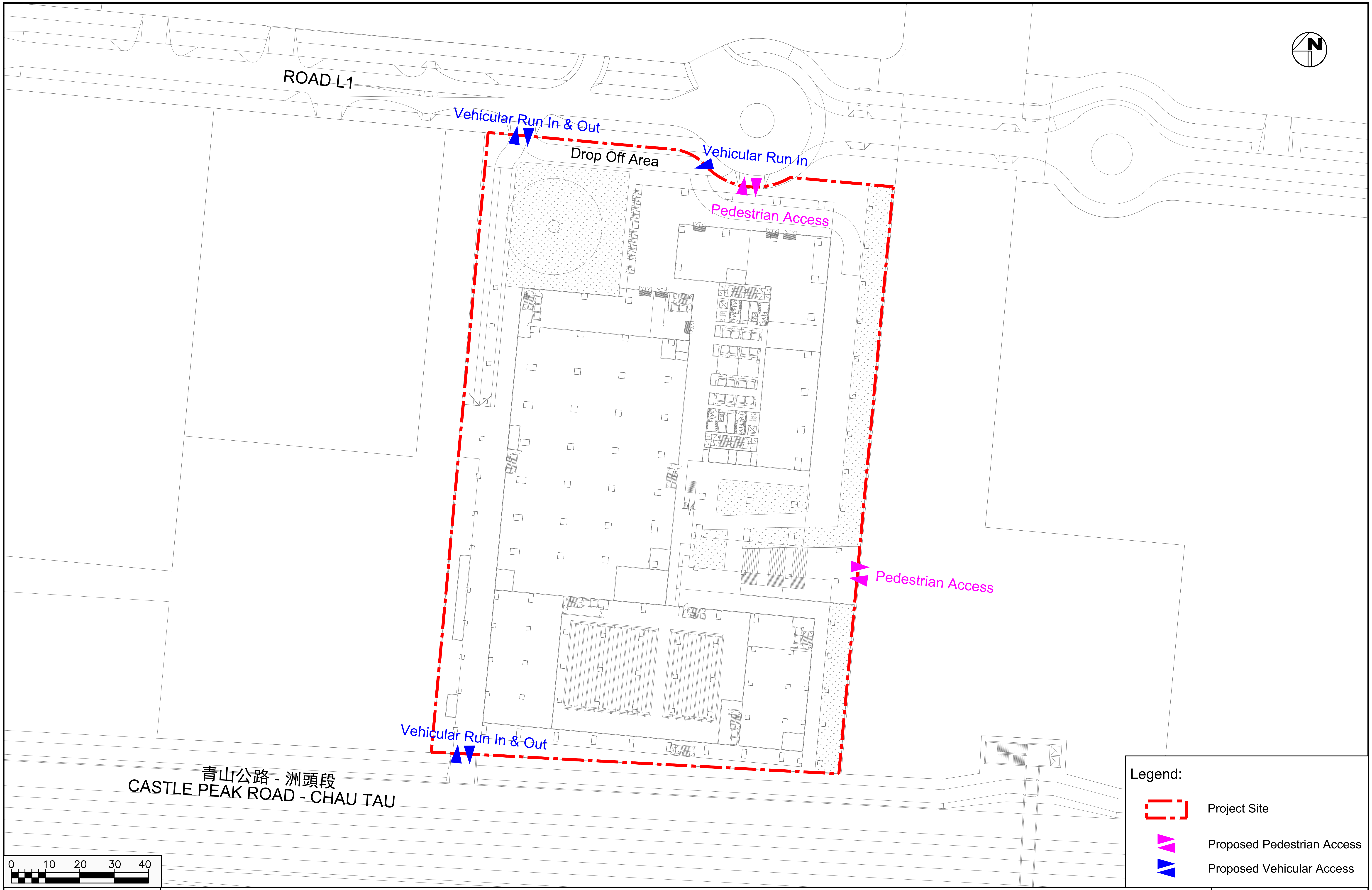

ROAD L1
Vehicular Run In & Out
Drop Off Area
Vehicular Run In
Pedestrian Access
Pedestrian Access
Vehicular Run In & Out
青山公路 - 洲頭段
CASTLE PEAK ROAD - CHAU TAU
N
0
10
20
30
40
Legend:
Project Site
Proposed Pedestrian Access
Proposed Vehicular Access

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

Proposed Vehicular and Pedestrian Accesses

Date	Scale
31/03/2025	1:1000

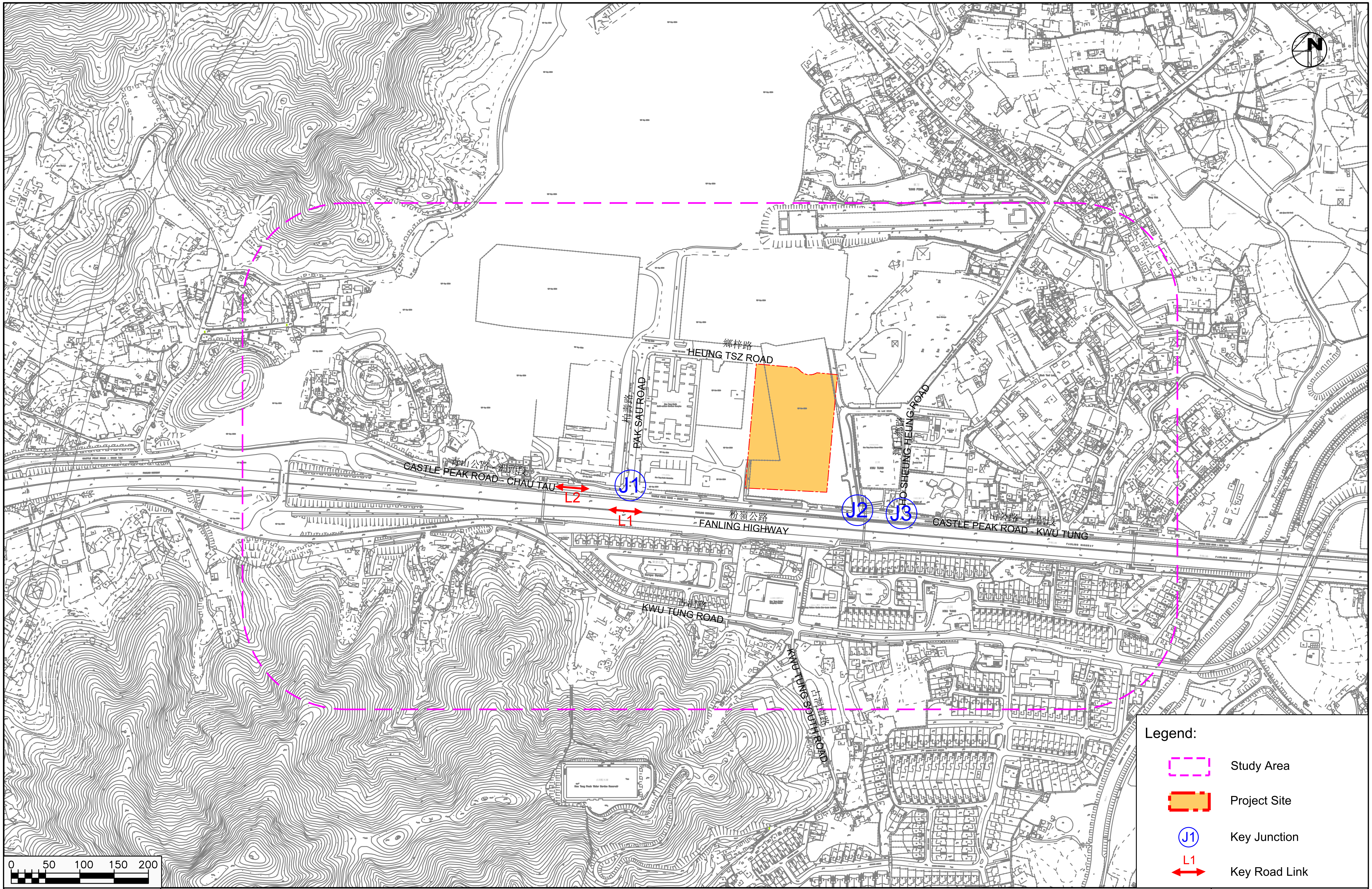
OZZO TECHNOLOGY

Project No. 83114

Dwg No. Figure 2-2

Rev. -

X:\Ozzo\83114_Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North\Data\Dwg\83114_Figure 2-2A.dwg 2025/03/31 15:00:15


N
鄉梓路
HEUNG TSZ ROAD
柏秀路
PAK SAU ROAD
河上鄉路
HO SHEUNG HEUNG ROAD
青山公路-洲頭段
CASTLE PEAK ROAD - CHAU TAU
J1
L2
L1
粉嶺公路
FANLING HIGHWAY
J2
J3
青山公路-古洞段
CASTLE PEAK ROAD - KWU TUNG
古洞路
KWU TUNG ROAD
古洞南路
KWU TUNG SOUTH ROAD
0
50
100
150
200
Legend:
Study Area
Project Site
J1
Key Junction
L1
Key Road Link

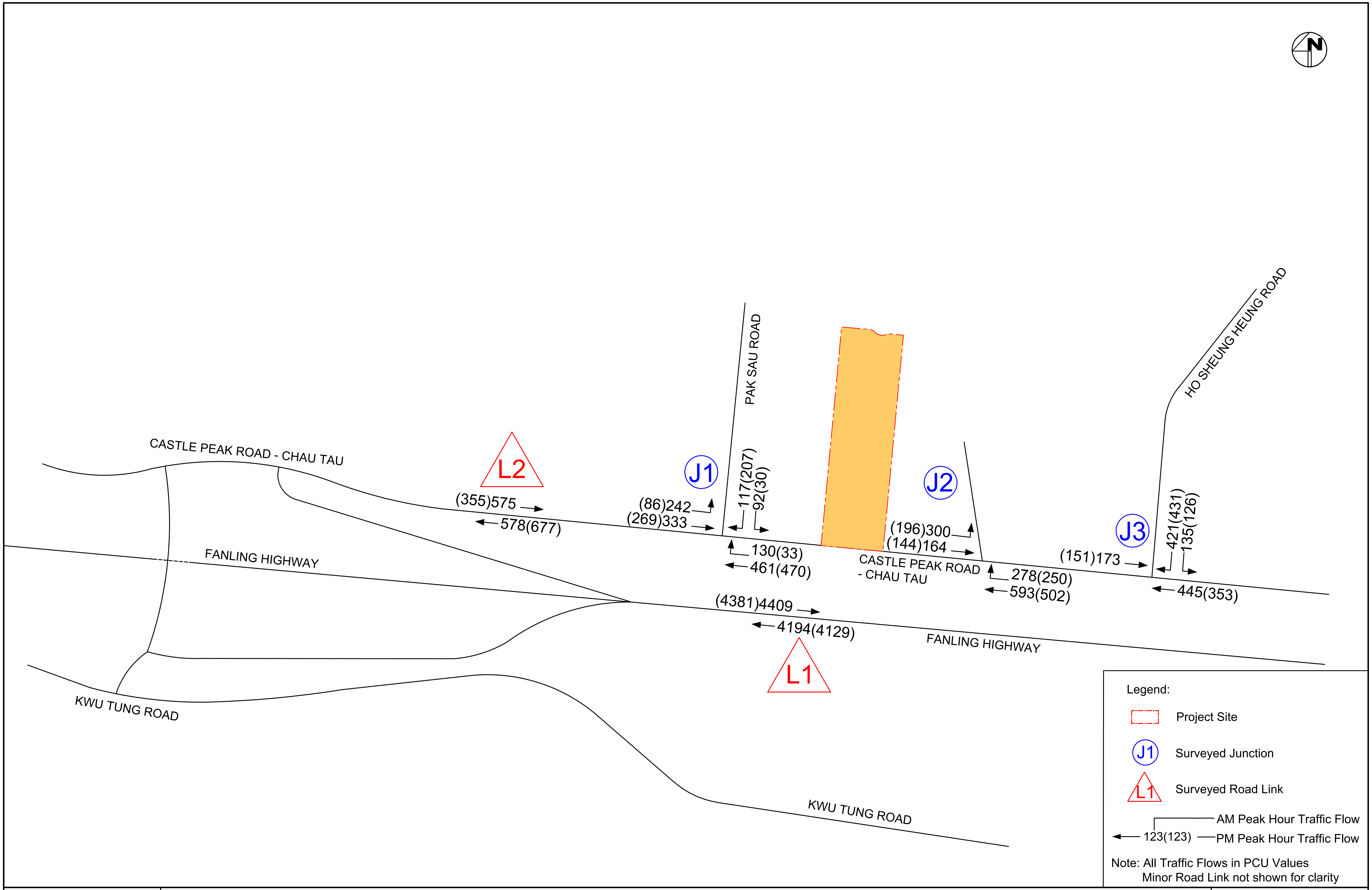
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

Locations of Surveyed Junctions and Road Links

Date	Scale
17/01/2025	1:5000

Project No. 83114	Rev.
Dwg No. Figure 3-1	-

X:\Ozzo\83114_Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North\Data\Dwg\83114_Figure 3-1_20250219.dwg 2025/02/19 18:58:52


N
CASTLE PEAK ROAD - CHAU TAU
L2
(355)575
578(677)
J1
(86)242
(269)333
117(207)
92(30)
PAK SAU ROAD
130(33)
461(470)
J2
(196)300
(144)164
CASTLE PEAK ROAD
- CHAU TAU
278(250)
593(502)
J3
(151)173
421(431)
135(126)
445(353)
HO SHEUNG HEUNG ROAD
FANLING HIGHWAY
(4381)4409
4194(4129)
L1
FANLING HIGHWAY
KWU TUNG ROAD
KWU TUNG ROAD
Legend:
Project Site
J1
Surveyed Junction
L1
Surveyed Road Link
AM Peak Hour Traffic Flow
123(123)
PM Peak Hour Traffic Flow

Note: All Traffic Flows in PCU Values
Minor Road Link not shown for clarity

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

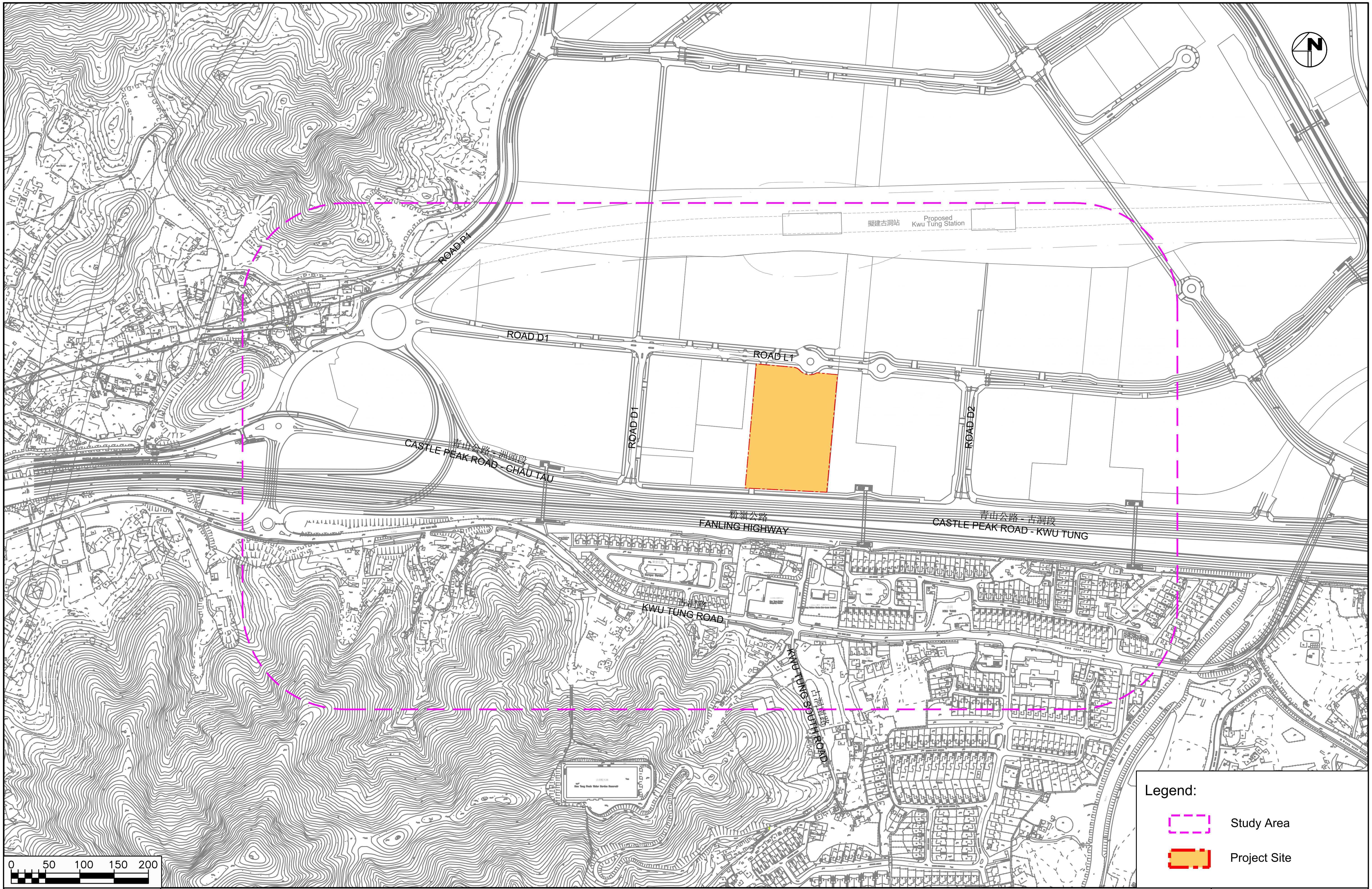
2024 Observed Peak Hours Traffic Flows

Date	Scale
26/12/2024	NTS

OZZO TECHNOLOGY

Project No. 83114	Rev.
Dwg No. Figure 3-2	-

X:\Ozzo\83114_Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North\Data\Dwg\83114_Figure 3-2_20250219.bak.dwg 2025/02/27 15:47:36


N
ROAD P1
ROAD D1
ROAD L1
ROAD D1
ROAD D2
擬建古洞站
Proposed Kwu Tung Station
青山公路 - 洲頭段
CASTLE PEAK ROAD - CHAU TAU
粉嶺公路
FANLING HIGHWAY
青山公路 - 古洞段
CASTLE PEAK ROAD - KWU TUNG
古洞路
KWU TUNG ROAD
古洞南路
KWU TUNG SOUTH ROAD
0 50 100 150 200
Legend:
Study Area
Project Site

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

Future Road Network in the Study Area

Date
24/02/2025

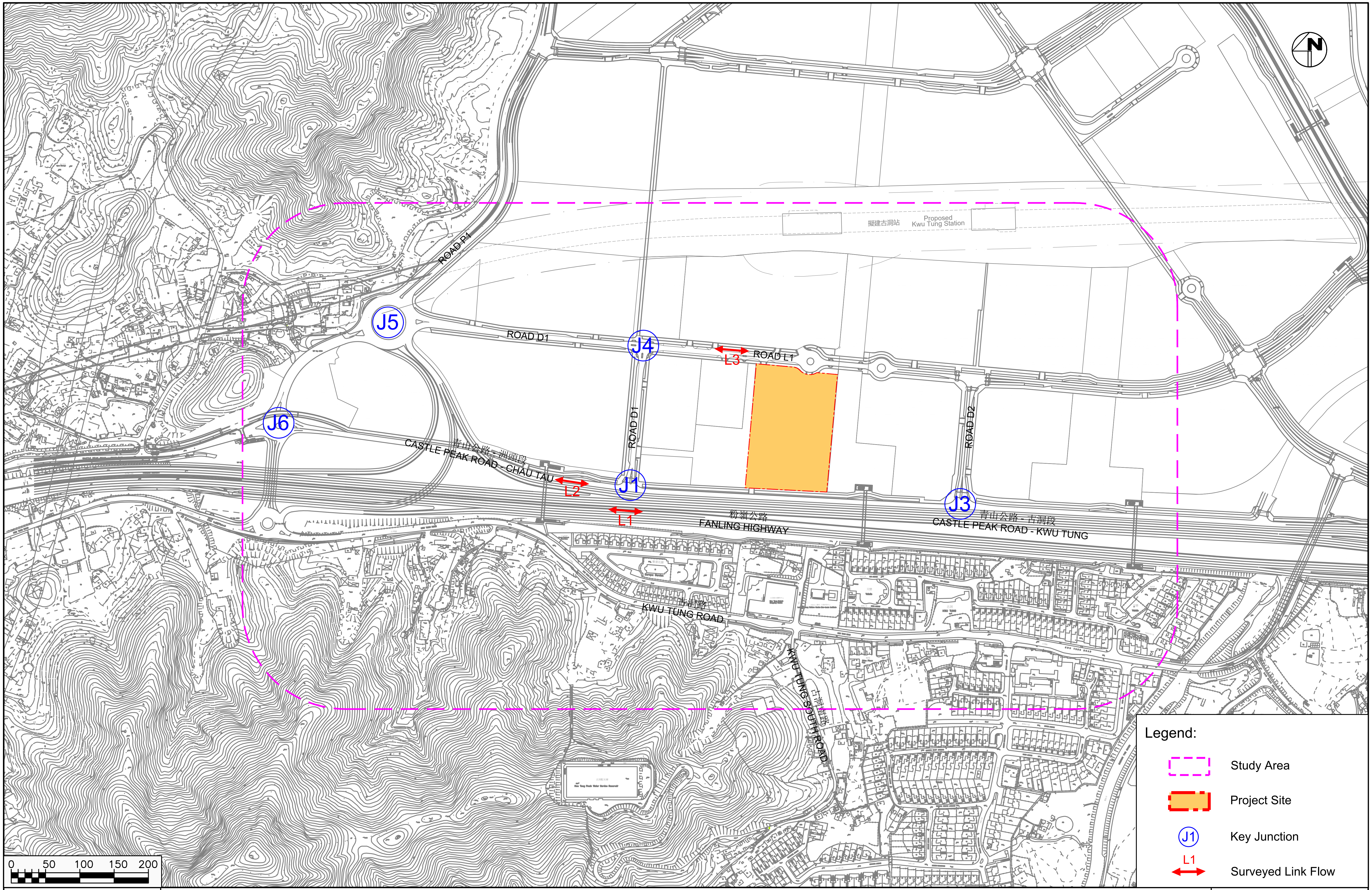
Scale
1:5000

Project No. 83114

Rev.
-

Dwg No. Figure 4-1

X:\Ozzo\83114_Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North\Data\Dwg\83114_Figure 4-1_20250219.dwg 2025/03/05 10:35:36


ROAD P1
J5
ROAD D1
J4
L3
ROAD L1
擬建古洞站
Proposed Kwu Tung Station
J6
ROAD D1
ROAD D2
青山公路 - 洲頭段
CASTLE PEAK ROAD - CHAU TAU
L2
J1
L1
粉嶺公路
FANLING HIGHWAY
J3
青山公路 - 古洞段
CASTLE PEAK ROAD - KWU TUNG
古洞路
KWU TUNG ROAD
KWU TUNG SOUTH ROAD
古洞南路
N
0 50 100 150 200
Legend:
Study Area
Project Site
J1 Key Junction
L1 Surveyed Link Flow

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

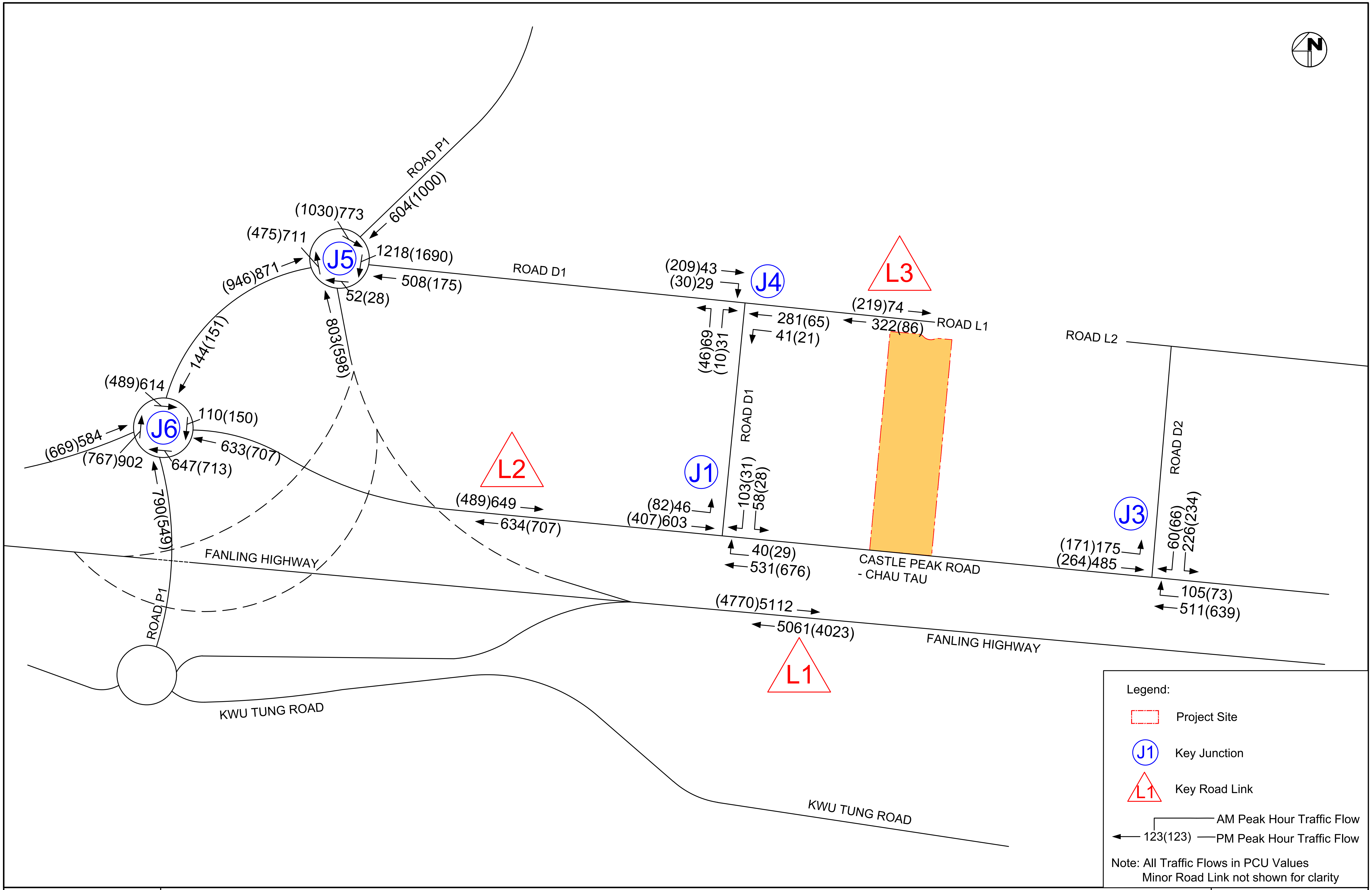
Locations of Key Junctions and Road Links for Assessment

Date	Scale
24/02/2025	1:5000

OZZO TECHNOLOGY

Project No. 83114	Rev.
Dwg No. Figure 4-2	-

X:\Ozzo\83114_Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North\Data\Dwg\83114_Figure 4-2_20250305.dwg 2025/03/05 10:36:09


N
ROAD P1
604(1000)
(1030)773
(475)711
J5
1218(1690)
508(175)
52(28)
(946)871
803(598)
144(151)
ROAD D1
(209)43
(30)29
J4
L3
(219)74
281(65)
322(86)
ROAD L1
41(21)
(46)69
(10)31
ROAD L2
(489)614
J6
110(150)
(669)584
633(707)
(767)902
647(713)
790(549)
L2
ROAD D1
J1
103(31)
58(28)
ROAD D2
J3
60(66)
226(234)
(489)649
634(707)
(82)46
(407)603
40(29)
531(676)
(171)175
(264)485
105(73)
511(639)
CASTLE PEAK ROAD - CHAU TAU
FANLING HIGHWAY
(4770)5112
5061(4023)
L1
FANLING HIGHWAY
ROAD P1
KWU TUNG ROAD
KWU TUNG ROAD
Legend:
Project Site
J1
Key Junction
L1
Key Road Link
AM Peak Hour Traffic Flow
123(123)
PM Peak Hour Traffic Flow
Note: All Traffic Flows in PCU Values
Minor Road Link not shown for clarity

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

2034 Peak Hours Reference Flows

Date	Scale
27/02/2025	NTS

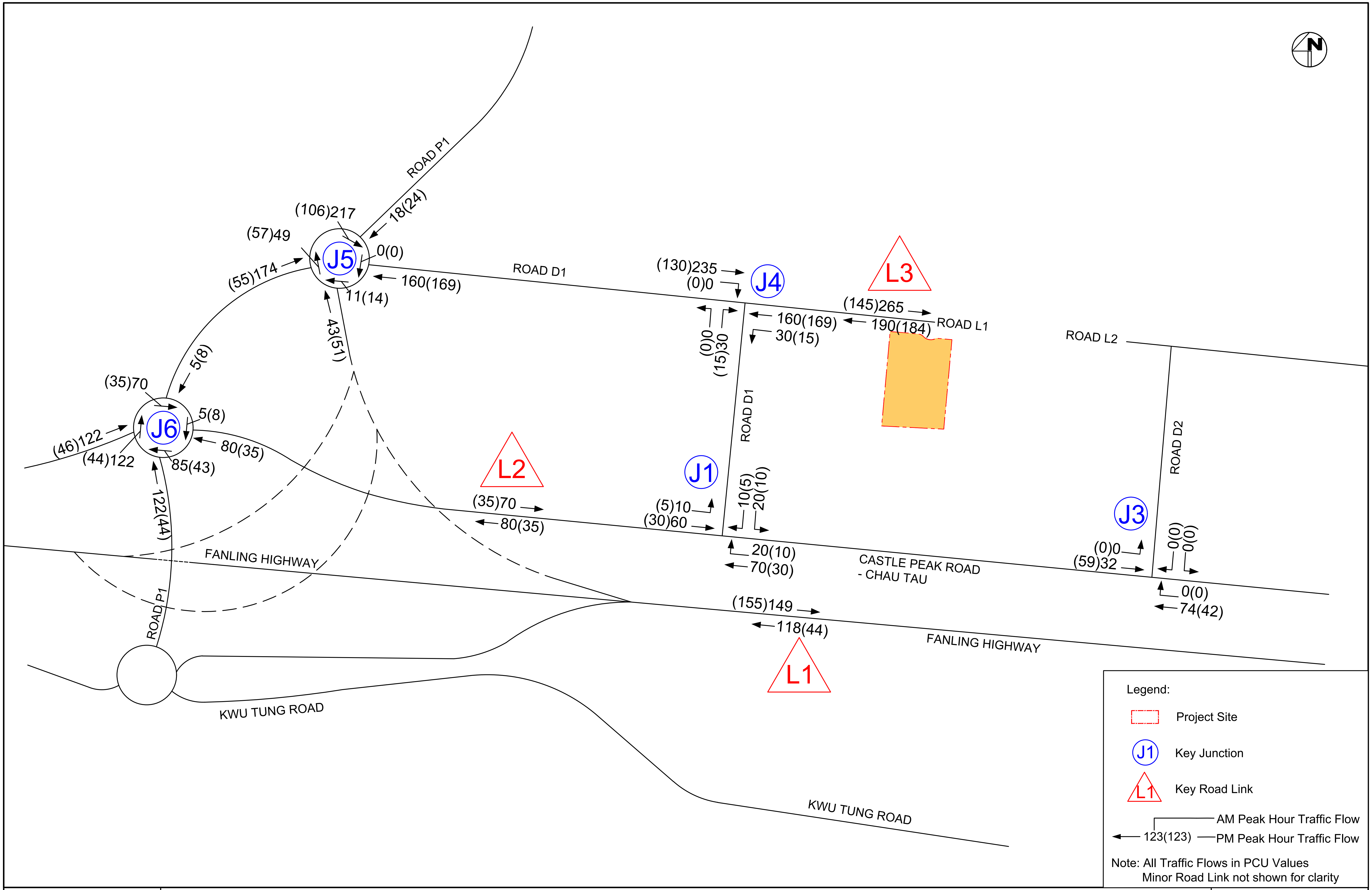
OZZO TECHNOLOGY

Project No. 83114

Rev. -

Dwg No. Figure 4-3

X:\Ozzo\83114_Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North\Data\Dwg\83114_Figure 4-3.dwg 2025/02/27 15:46:11


ROAD P1
18(24)
(106)217
(57)49
0(0)
J5
(55)174
160(169)
11(14)
ROAD D1
(130)235
(0)0
J4
L3
(145)265
160(169)
190(184)
ROAD L1
30(15)
(0)0
(15)30
43(51)
5(8)
(35)70
5(8)
J6
(46)122
(44)122
80(35)
85(43)
122(44)
ROAD L2
ROAD D1
J1
L2
(35)70
80(35)
(5)10
(30)60
10(5)
20(10)
20(10)
70(30)
FANLING HIGHWAY
CASTLE PEAK ROAD
- CHAU TAU
ROAD D2
J3
(0)0
(59)32
0(0)
0(0)
0(0)
74(42)
(155)149
118(44)
L1
FANLING HIGHWAY
ROAD P1
KWU TUNG ROAD
KWU TUNG ROAD
Legend:
Project Site
J1
Key Junction
L1
Key Road Link
123(123)
AM Peak Hour Traffic Flow
PM Peak Hour Traffic Flow
Note: All Traffic Flows in PCU Values
Minor Road Link not shown for clarity

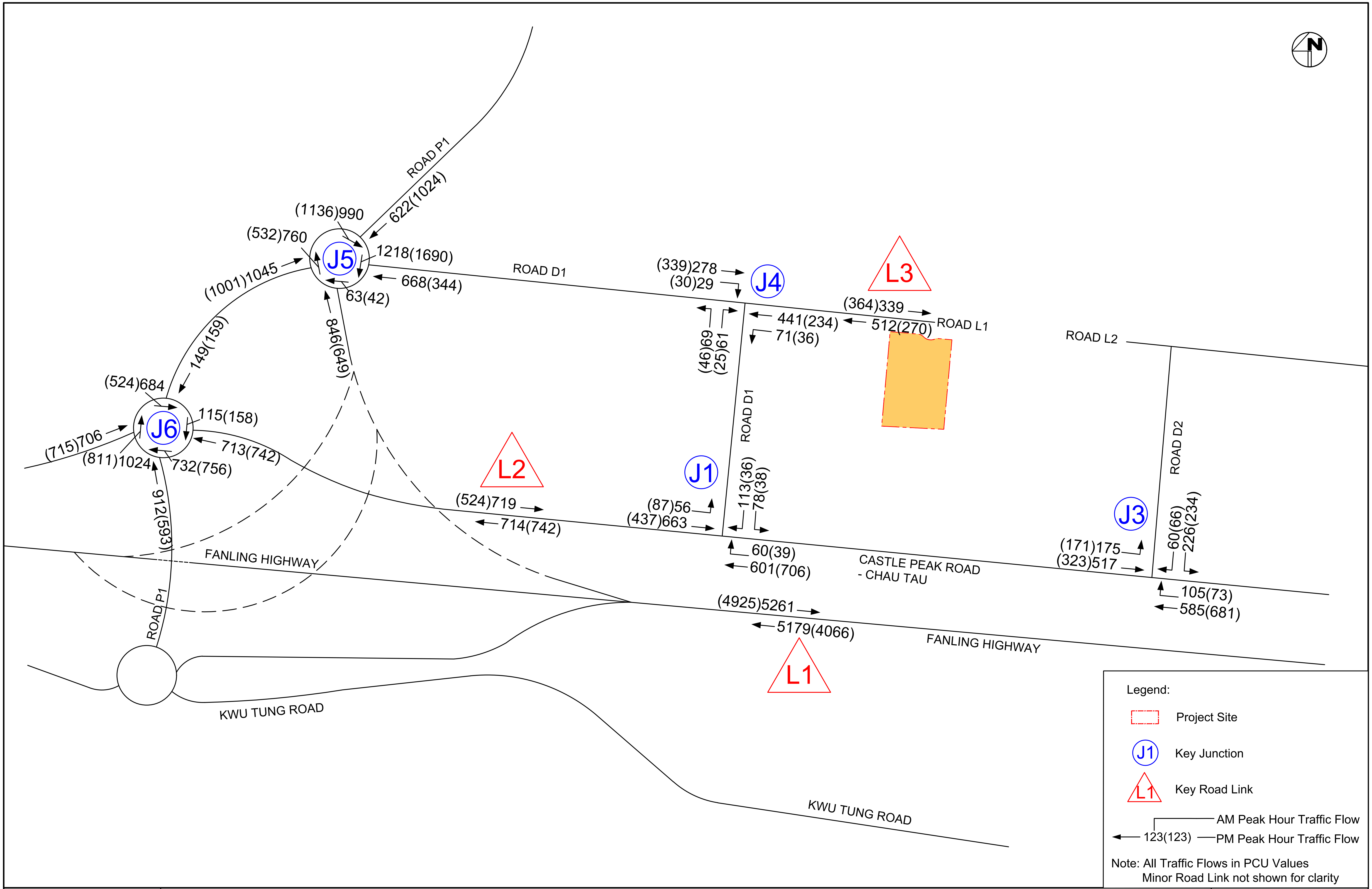
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

Peak Hour Development Traffic Flows

Date	Scale
31/03/2025	NTS

OZZO TECHNOLOGY

Project No. 83114	Rev.
Dwg No. Figure 4-4	-


ROAD P1
622(1024)
(1136)990
(532)760
1218(1690)
(1001)1045
J5
668(344)
63(42)
846(649)
149(159)
ROAD D1
(339)278
(30)29
J4
L3
(364)339
441(234)
512(270)
ROAD L1
71(36)
(46)69
(25)61
ROAD L2
(524)684
J6
115(158)
(715)706
(811)1024
713(742)
732(756)
ROAD D1
ROAD D2
L2
J1
912(593)
(524)719
714(742)
(87)56
(437)663
113(36)
78(38)
J3
60(66)
226(234)
(171)175
(323)517
FANLING HIGHWAY
60(39)
601(706)
CASTLE PEAK ROAD - CHAU TAU
105(73)
585(681)
ROAD P1
(4925)5261
5179(4066)
FANLING HIGHWAY
L1
KWU TUNG ROAD
KWU TUNG ROAD
Legend:
Project Site
J1
Key Junction
L1
Key Road Link
123(123)
AM Peak Hour Traffic Flow
PM Peak Hour Traffic Flow
Note: All Traffic Flows in PCU Values
Minor Road Link not shown for clarity

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

2034 Peak Hours Design Flows

Date	Scale
31/03/2025	NTS

OZZO TECHNOLOGY

Project No. 83114

Dwg No. Figure 4-5

Rev. -

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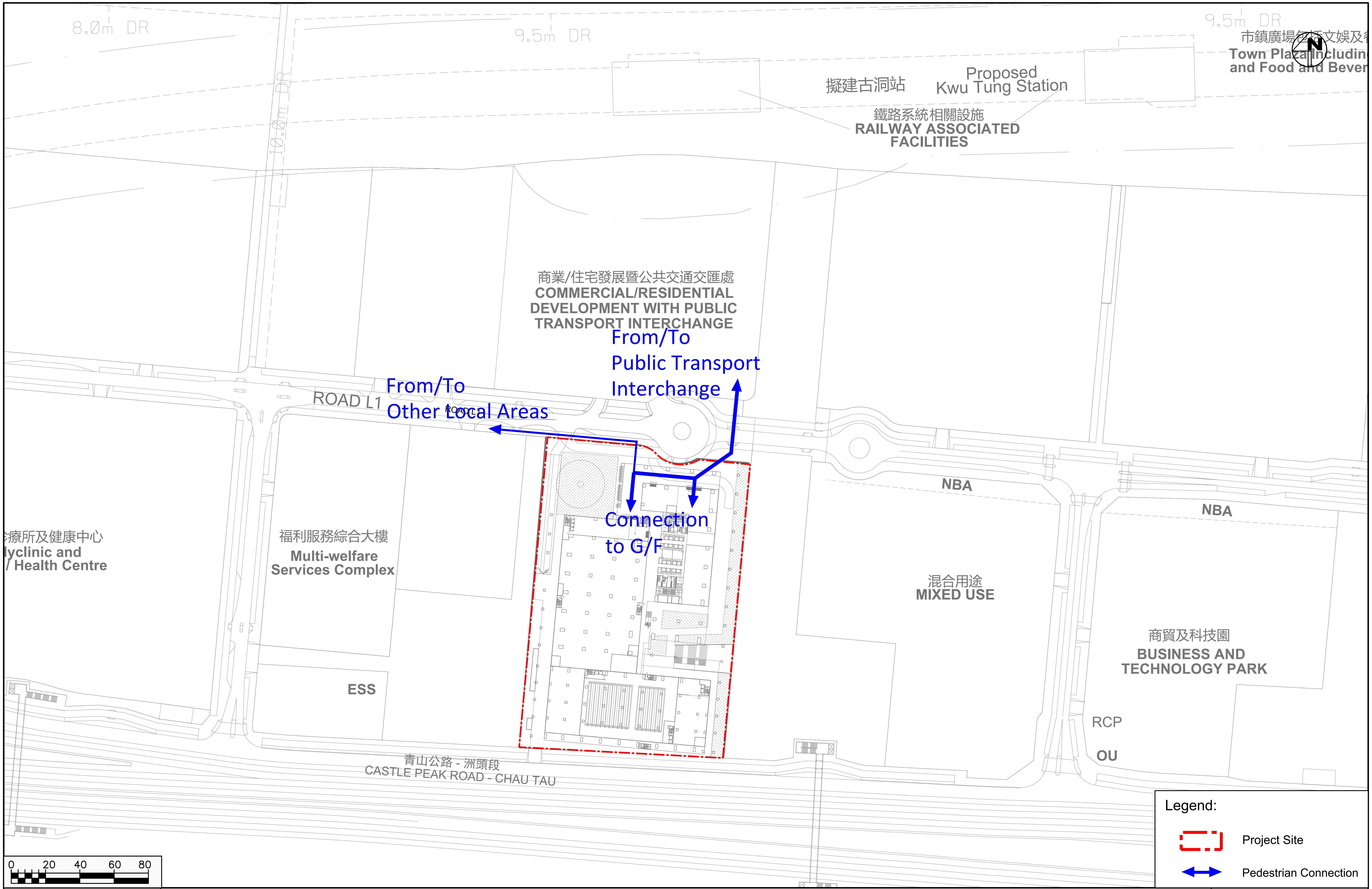

8.0m DR
9.5m DR
10.0m DR
9.5m DR
市鎮廣場包括文娛及餐
Town Plaza including
and Food and Bever
N
擬建古洞站
Proposed
Kwu Tung Station
鐵路系統相關設施
RAILWAY ASSOCIATED
FACILITIES
商業/住宅發展暨公共交通交匯處
COMMERCIAL/RESIDENTIAL
DEVELOPMENT WITH PUBLIC
TRANSPORT INTERCHANGE
From/To
Public Transport
Interchange
From/To
Other Local Areas
ROAD L1
ROAD
Connection
to G/F
NBA
NBA
療所及健康中心
lyclinic and
/ Health Centre
福利服務綜合大樓
Multi-welfare
Services Complex
ESS
混合用途
MIXED USE
商貿及科技園
BUSINESS AND
TECHNOLOGY PARK
RCP
OU
青山公路 - 洲頭段
CASTLE PEAK ROAD - CHAU TAU
0
20
40
60
80
Legend:
Project Site
Pedestrian Connection

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

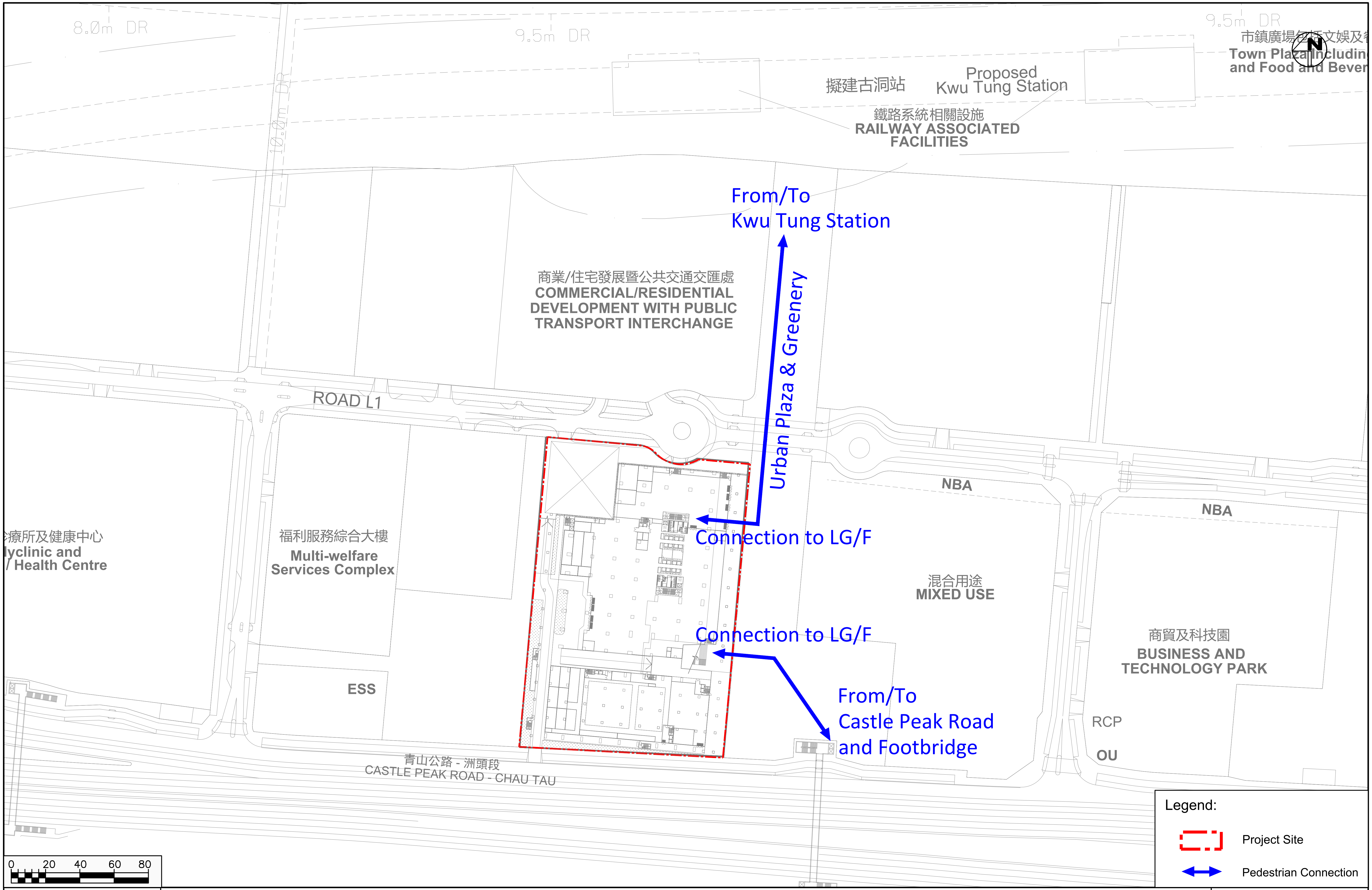
Pedestrian Connections at G/F

Date	Scale
31/03/2025	1:2000

OZZO TECHNOLOGY

Project No. 83114
Dwg No. Figure 5-1
Rev. -

X:\Ozzo\83114_Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North\Data\Dwg\83114_Figure 5-1A.dwg 2025/03/31 15:01:52


8.0m DR
9.5m DR
9.5m DR
10.0m DR
市鎮廣場包括文娛及餐
Town Plaza including
and Food and Bever
N
擬建古洞站
Proposed
Kwu Tung Station
鐵路系統相關設施
RAILWAY ASSOCIATED
FACILITIES
From/To
Kwu Tung Station
Urban Plaza & Greenery
商業/住宅發展暨公共交通交匯處
COMMERCIAL/RESIDENTIAL
DEVELOPMENT WITH PUBLIC
TRANSPORT INTERCHANGE
ROAD L1
NBA
NBA
Connection to LG/F
Connection to LG/F
診療所及健康中心
lyclinic and
/ Health Centre
福利服務綜合大樓
Multi-welfare
Services Complex
混合用途
MIXED USE
商貿及科技園
BUSINESS AND
TECHNOLOGY PARK
ESS
From/To
Castle Peak Road
and Footbridge
RCP
OU
青山公路 - 洲頭段
CASTLE PEAK ROAD - CHAU TAU
0 20 40 60 80
Legend:
Project Site
Pedestrian Connection

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

Pedestrian Connections at LG/F

Date	31/03/2025
Scale	1:2000
Project No.	83114
Dwg No.	Figure 5-2
Rev.	-

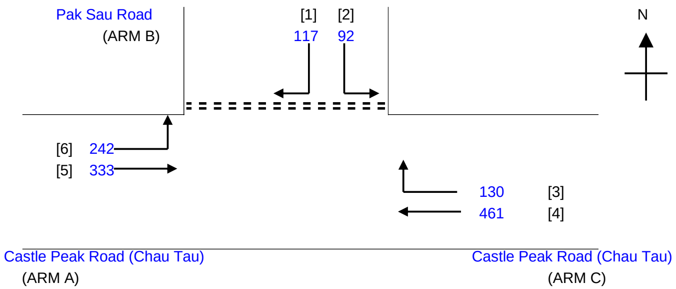
OZZO TECHNOLOGY

X:\Ozzo\83114_Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North\Data\Dwg\83114_Figure 5-2A.dwg 2025/04/09 11:38:12

Appendix A

2024 Junction Calculation Sheets

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North	PROJECT NO.: 83114	PREPARED BY:	CSY	Feb-25
J1: Castle Peak Road (Chau Tau) / Pak Sau Road	**2024 AM**	FILENAME :	CHECKED BY:	LL	Feb-25
2024 Observed AM Peak Hour Traffic Flows		Peak Road (Chau Tau)_Pak Sau Road_P.xls	REVIEWED BY:	PCN	Feb-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 242 (pcu/hr)
q a-c = 333 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 461 (pcu/hr)
q c-b = 130 (pcu/hr)

MINOR ROAD (ARM B)
W b-a = 3.9 (metres)
W b-c = 3.9 (metres)
Vl b-a = 150 (metres)
Vr b-a = 150 (metres)
Vr b-c = 150 (metres)
q b-a = 117 (pcu/hr)
q b-c = 92 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.0484314
E = 1.0484314
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 354
Q b-c = 637
Q c-b = 593
Q b-ac = 354

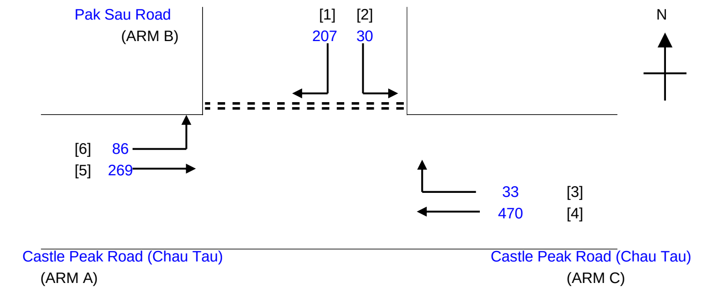
TOTAL FLOW = 1375 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.3305
DFC b-c = 0.1444
DFC c-b = 0.2192
DFC b-c (share lane) = 0.5904

CRITICAL DFC = 0.33

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North	PROJECT NO.: 83114	PREPARED BY:	CSY	Feb-25
J1: Castle Peak Road (Chau Tau) / Pak Sau Road	FILENAME :	CHECKED BY:	LL	Feb-25
2024 Observed PM Peak Hour Traffic Flows	**2024 PM** J1_Castle Peak Road (Chau Tau)_Pak Sau Road_P.xls	REVIEWED BY:	PCN	Feb-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 86 (pcu/hr)
q a-c = 269 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 470 (pcu/hr)
q c-b = 33 (pcu/hr)

MINOR ROAD (ARM B)
W b-a = 3.9 (metres)
W b-c = 3.9 (metres)
Vl b-a = 150 (metres)
Vr b-a = 150 (metres)
Vr b-c = 150 (metres)
q b-a = 207 (pcu/hr)
q b-c = 30 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.0484314
E = 1.0484314
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 441
Q b-c = 679
Q c-b = 667
Q b-ac = 441

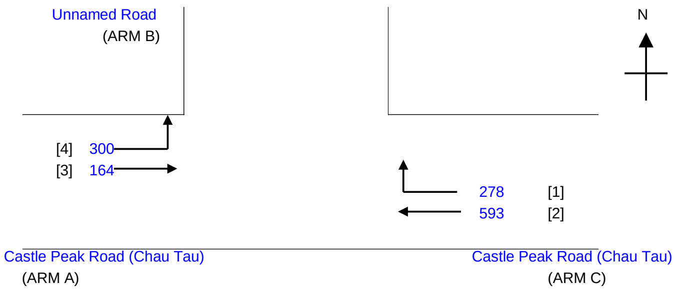
TOTAL FLOW = 1095 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.4694
DFC b-c = 0.0442
DFC c-b = 0.0495
DFC b-c (share lane) = 0.5374

CRITICAL DFC = 0.47

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO.: 83114	PREPARED BY:	CSY	Feb-25
J2: Castle Peak Road (Chau Tau)_Unnamed Road	**2024 AM**	FILENAME :	CHECKED BY:	LL	Feb-25
2024 Observed AM Peak Hour Traffic Flows		eak Road (Chau Tau)_Unnamed Road_P .xls	REVIEWED BY:	PCN	Feb-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 300 (pcu/hr)
q a-c = 164 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.50 (metres)
Vr c-b = 200 (metres)
q c-a = 593 (pcu/hr)
q c-b = 278 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.5332189
E = 0.5859548
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 155
Q b-c = 384
Q c-b = 630
Q b-ac = 155

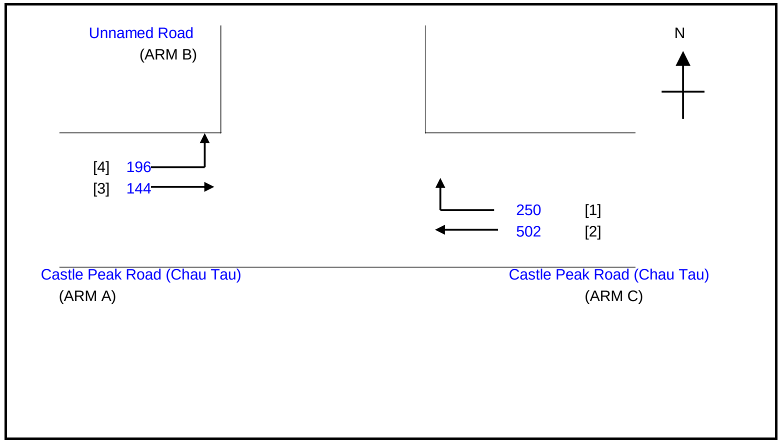
TOTAL FLOW = 1335 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0000
DFC b-c = 0.0000
DFC c-b = 0.4413
DFC b-c (share lane) = 0.0000

CRITICAL DFC = 0.44

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION	INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North	PROJECT NO.: 83114	PREPARED BY: CSY	Feb-25
J2: Castle Peak Road (Chau Tau)_Unnamed Road	FILENAME :	CHECKED BY: LL	Feb-25
2024 Observed PM Peak Hour Traffic Flows	**2024 PM** J2_Castle Peak Road (Chau Tau)_Unnamed Road_P .xls	REVIEWED BY: PCN	Feb-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 196 (pcu/hr)
q a-c = 144 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.50 (metres)
Vr c-b = 200 (metres)
q c-a = 502 (pcu/hr)
q c-b = 250 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.5332189
E = 0.5859548
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 182
Q b-c = 395
Q c-b = 672
Q b-ac = 182

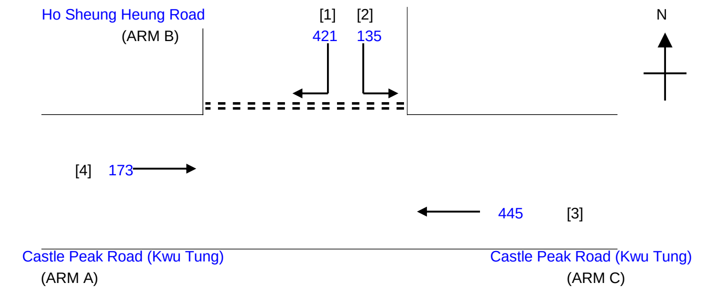
TOTAL FLOW = 1092 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0000
DFC b-c = 0.0000
DFC c-b = 0.3720
DFC b-c (share lane) = 0.0000

CRITICAL DFC = 0.37

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO.: 83114	PREPARED BY:	CSY	Feb-25
J3: Castle Peak Road (Kwu Tung)_Ho Sheung Heung Road	**2024 AM**	FILENAME :	CHECKED BY:	LL	Feb-25
2024 Observed AM Peak Hour Traffic Flows		d (Kwu Tung)_Ho Sheung Heung Road_P.xls	REVIEWED BY:	PCN	Feb-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 0 (pcu/hr)
q a-c = 173 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 445 (pcu/hr)
q c-b = 0 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 6.9 (metres)
W b-c = 6.9 (metres)
Vl b-a = 100 (metres)
Vr b-a = 120 (metres)
Vr b-c = 120 (metres)
q b-a = 421 (pcu/hr)
q b-c = 135 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.2632349
E = 1.302304
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 609
Q b-c = 898
Q c-b = 729
Q b-ac = 609

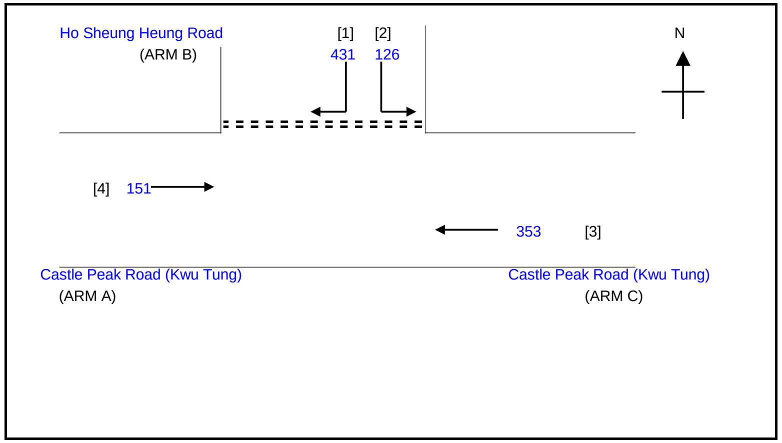
TOTAL FLOW = 1174 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.6913
DFC b-c = 0.1503
DFC c-b = 0.0000
DFC b-c (share lane) = 0.9130

CRITICAL DFC = 0.69

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO.: 83114	PREPARED BY:	CSY	Feb-25
J3: Castle Peak Road (Kwu Tung)_Ho Sheung Heung Road	**2024 PM**	FILENAME :	CHECKED BY:	LL	Feb-25
2024 Observed PM Peak Hour Traffic Flows		J3_Castle Peak Road (Kwu Tung)_Ho Sheung Heung Road_P.xls	REVIEWED BY:	PCN	Feb-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 0 (pcu/hr)
q a-c = 151 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 353 (pcu/hr)
q c-b = 0 (pcu/hr)

MINOR ROAD (ARM B)
W b-a = 6.9 (metres)
W b-c = 6.9 (metres)
Vl b-a = 100 (metres)
Vr b-a = 120 (metres)
Vr b-c = 120 (metres)
q b-a = 431 (pcu/hr)
q b-c = 126 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.2632349
E = 1.302304
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 641
Q b-c = 907
Q c-b = 736
Q b-ac = 641

TOTAL FLOW = 1061 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

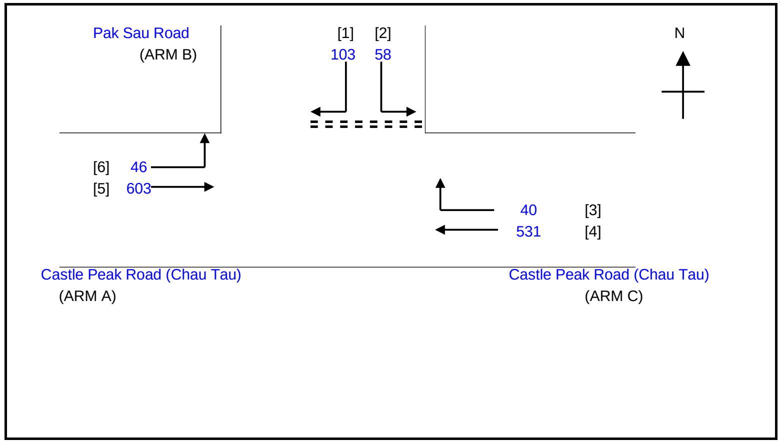
DFC b-a = 0.6724
DFC b-c = 0.1389
DFC c-b = 0.0000
DFC b-c (share lane) = 0.8690

CRITICAL DFC = 0.67

Appendix B

2034 Junction Calculation Sheets

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION	INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North	PROJECT NO.: 83114	PREPARED BY: CW	Mar-25
J1: Castle Peak Road (Chau Tau) / Road D1	**2034 Ref AM** FILENAME :	CHECKED BY: DP	Mar-25
2034 Reference AM Peak Hour Traffic Flows	Peak Road (Chau Tau)_Pak Sau Road_P.xls	REVIEWED BY: OC	Mar-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 46 (pcu/hr)
q a-c = 603 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 531 (pcu/hr)
q c-b = 40 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 3.9 (metres)
W b-c = 3.9 (metres)
Vl b-a = 150 (metres)
Vr b-a = 150 (metres)
Vr b-c = 150 (metres)
q b-a = 103 (pcu/hr)
q b-c = 58 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.0484314
E = 1.0484314
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 318
Q b-c = 573
Q c-b = 568
Q b-ac = 318

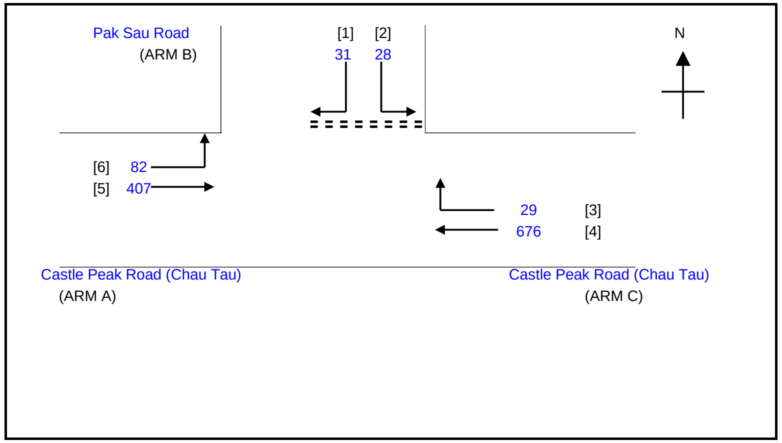
TOTAL FLOW = 1381 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.3239
DFC b-c = 0.1012
DFC c-b = 0.0704
DFC b-c (share lane) = 0.5063

CRITICAL DFC = 0.32

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO.: 83114	PREPARED BY: CW	Mar-25
J1: Castle Peak Road (Chau Tau) / Road D1	**2034 Ref PM**	FILENAME :	CHECKED BY: DP	Mar-25
2034 Reference PM Peak Hour Traffic Flows		Peak Road (Chau Tau)_Pak Sau Road_P.xls	REVIEWED BY: OC	Mar-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 82 (pcu/hr)
q a-c = 407 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 676 (pcu/hr)
q c-b = 29 (pcu/hr)

MINOR ROAD (ARM B)
W b-a = 3.9 (metres)
W b-c = 3.9 (metres)
Vl b-a = 150 (metres)
Vr b-a = 150 (metres)
Vr b-c = 150 (metres)
q b-a = 31 (pcu/hr)
q b-c = 28 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.0484314
E = 1.0484314
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 353
Q b-c = 634
Q c-b = 622
Q b-ac = 353

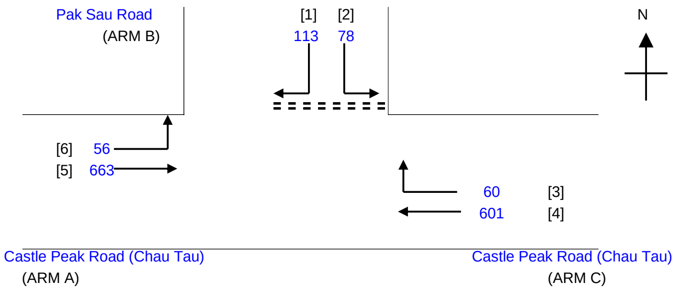
TOTAL FLOW = 1253 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.0878
DFC b-c = 0.0442
DFC c-b = 0.0466
DFC b-c (share lane) = 0.1671

CRITICAL DFC = 0.09

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO.: 83114	PREPARED BY:	CW	Mar-25
J1: Castle Peak Road (Chau Tau) / Road D1	**2034 Des AM**	FILENAME :	CHECKED BY:	DP	Mar-25
2034 Design AM Peak Hour Traffic Flows		Peak Road (Chau Tau)_Pak Sau Road_P.xls	REVIEWED BY:	OC	Mar-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 56 (pcu/hr)
q a-c = 663 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 601 (pcu/hr)
q c-b = 60 (pcu/hr)

MINOR ROAD (ARM B)
W b-a = 3.9 (metres)
W b-c = 3.9 (metres)
Vl b-a = 150 (metres)
Vr b-a = 150 (metres)
Vr b-c = 150 (metres)
q b-a = 113 (pcu/hr)
q b-c = 78 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.0484314
E = 1.0484314
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 272
Q b-c = 551
Q c-b = 544
Q b-ac = 272

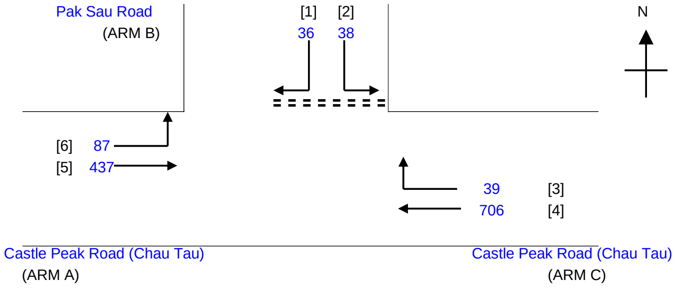
TOTAL FLOW = 1571 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.4154
DFC b-c = 0.1416
DFC c-b = 0.1103
DFC b-c (share lane) = 0.7022

CRITICAL DFC = 0.42

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO.: 83114	PREPARED BY:	CW	Mar-25
J1: Castle Peak Road (Chau Tau) / Road D1	**2034 Des PM**	FILENAME :	CHECKED BY:	DP	Mar-25
2034 Design PM Peak Hour Traffic Flows		Peak Road (Chau Tau)_Pak Sau Road_P.xls	REVIEWED BY:	OC	Mar-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 87 (pcu/hr)
q a-c = 437 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 706 (pcu/hr)
q c-b = 39 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 3.9 (metres)
W b-c = 3.9 (metres)
Vl b-a = 150 (metres)
Vr b-a = 150 (metres)
Vr b-c = 150 (metres)
q b-a = 36 (pcu/hr)
q b-c = 38 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.0484314
E = 1.0484314
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 331
Q b-c = 623
Q c-b = 610
Q b-ac = 331

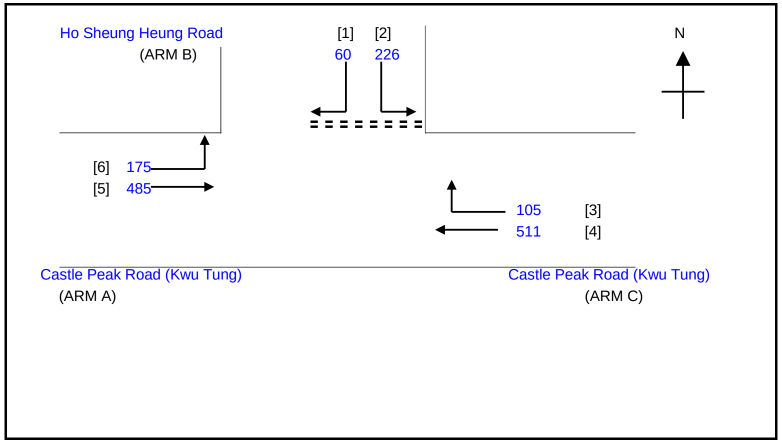
TOTAL FLOW = 1343 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.1088
DFC b-c = 0.0610
DFC c-b = 0.0639
DFC b-c (share lane) = 0.2236

CRITICAL DFC = 0.11

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO.: 83114	PREPARED BY:	CW	Mar-25
J3: Castle Peak Road (Kwu Tung)/ Road D2	**2034 Ref AM**	FILENAME :	CHECKED BY:	DP	Mar-25
2034 Reference AM Peak Hour Traffic Flows		d (Kwu Tung)_Ho Sheung Heung Road_P.xls	REVIEWED BY:	OC	Mar-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 175 (pcu/hr)
q a-c = 485 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 511 (pcu/hr)
q c-b = 105 (pcu/hr)

MINOR ROAD (ARM B)
W b-a = 6.9 (metres)
W b-c = 6.9 (metres)
Vl b-a = 100 (metres)
Vr b-a = 120 (metres)
Vr b-c = 120 (metres)
q b-a = 60 (pcu/hr)
q b-c = 226 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.2632349
E = 1.302304
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 377
Q b-c = 739
Q c-b = 564
Q b-ac = 377

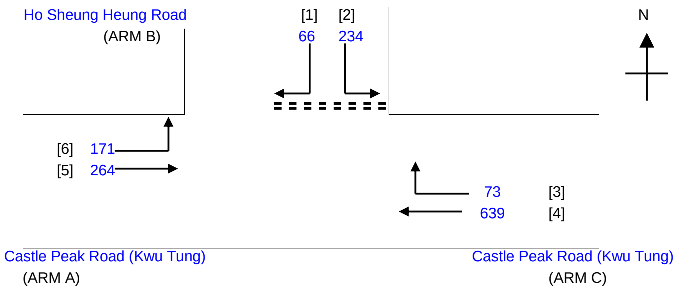
TOTAL FLOW = 1562 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.1592
DFC b-c = 0.3058
DFC c-b = 0.1862
DFC b-c (share lane) = 0.7586

CRITICAL DFC = 0.31

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North	PROJECT NO.: 83114	PREPARED BY:	CW	Mar-25
J3: Castle Peak Road (Kwu Tung)/ Road D2	**2034 Ref PM** FILENAME :	CHECKED BY:	DP	Mar-25
2034 Reference PM Peak Hour Traffic Flows	d (Kwu Tung)_Ho Sheung Heung Road_P.xls	REVIEWED BY:	OC	Mar-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 171 (pcu/hr)
q a-c = 264 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 639 (pcu/hr)
q c-b = 73 (pcu/hr)

MINOR ROAD (ARM B)
W b-a = 6.9 (metres)
W b-c = 6.9 (metres)
Vl b-a = 100 (metres)
Vr b-a = 120 (metres)
Vr b-c = 120 (metres)
q b-a = 66 (pcu/hr)
q b-c = 234 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.2632349
E = 1.302304
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 453
Q b-c = 832
Q c-b = 640
Q b-ac = 453

TOTAL FLOW = 1447 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.1457
DFC b-c = 0.2813
DFC c-b = 0.1141
DFC b-c (share lane) = 0.6623

CRITICAL DFC = 0.28

OZZO TECHNOLOGY (HK) LIMITED

PRIORITY JUNCTION CALCULATION

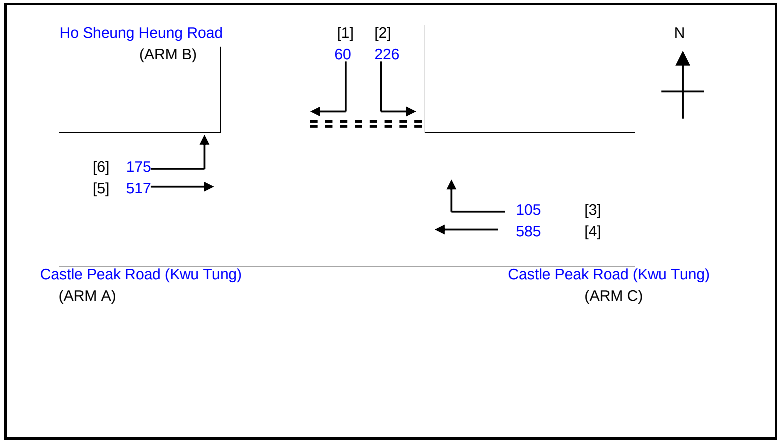
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North

J3: Castle Peak Road (Kwu Tung)/ Road D2

2034 Design AM Peak Hour Traffic Flows

2034 Des AM

		INITIALS	DATE
PROJECT NO.: 83114	PREPARED BY:	CW	Mar-25
FILENAME :	CHECKED BY:	DP	Mar-25
d (Kwu Tung)_Ho Sheung Heung Road_P.xls	REVIEWED BY:	OC	Mar-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 175 (pcu/hr)
q a-c = 517 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 585 (pcu/hr)
q c-b = 105 (pcu/hr)

MINOR ROAD (ARM B)
W b-a = 6.9 (metres)
W b-c = 6.9 (metres)
Vl b-a = 100 (metres)
Vr b-a = 120 (metres)
Vr b-c = 120 (metres)
q b-a = 60 (pcu/hr)
q b-c = 226 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.2632349
E = 1.302304
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 346
Q b-c = 726
Q c-b = 553
Q b-ac = 346

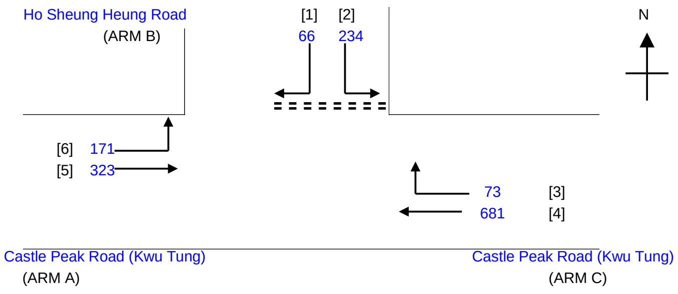
TOTAL FLOW = 1668 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a = 0.1734
DFC b-c = 0.3113
DFC c-b = 0.1899
DFC b-c (share lane) = 0.8266

CRITICAL DFC = 0.31

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO.: 83114	PREPARED BY:	CW	Mar-25
J3: Castle Peak Road (Kwu Tung)/ Road D2	**2034 Des PM**	FILENAME :	CHECKED BY:	DP	Mar-25
2034 Design PM Peak Hour Traffic Flows		d (Kwu Tung)_Ho Sheung Heung Road_P.xls	REVIEWED BY:	OC	Mar-25



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 = 3.50 (metres)
W cr = 0 (metres)
q a-b = 171 (pcu/hr)
q a-c = 323 (pcu/hr)

MAJOR ROAD (ARM C)
W c-b = 3.5 (metres)
Vr c-b = 200 (metres)
q c-a = 681 (pcu/hr)
q c-b = 73 (pcu/hr)

MINOR ROAD (ARM B)
W b-a = 6.9 (metres)
W b-c = 6.9 (metres)
Vl b-a = 100 (metres)
Vr b-a = 120 (metres)
Vr b-c = 120 (metres)
q b-a = 66 (pcu/hr)
q b-c = 234 (pcu/hr)

GEOMETRIC FACTORS :

D = 1.2632349
E = 1.302304
F = 1.0568848
Y = 0.87925

F for (Qb-ac) = 0

THE CAPACITY OF MOVEMENT :

Q b-a = 419
Q b-c = 807
Q c-b = 620
Q b-ac = 419

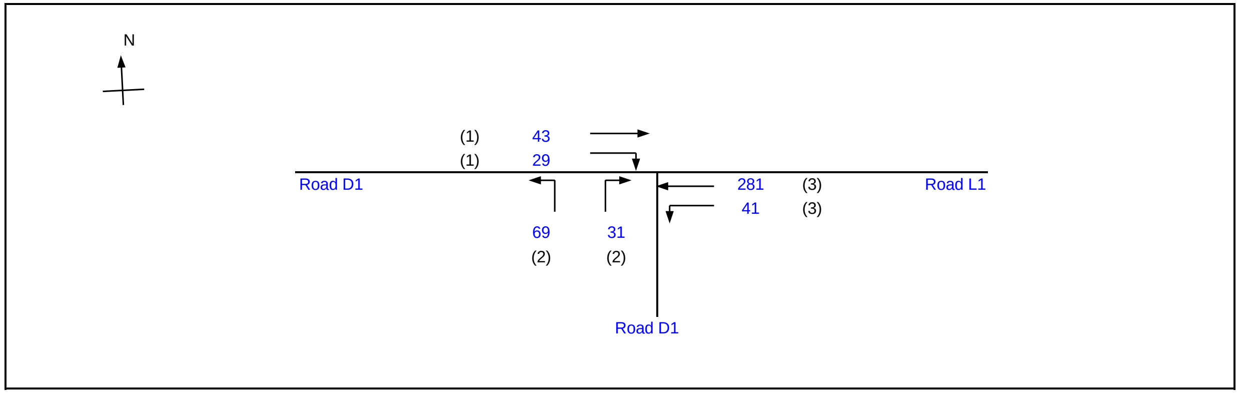
TOTAL FLOW = 1548 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

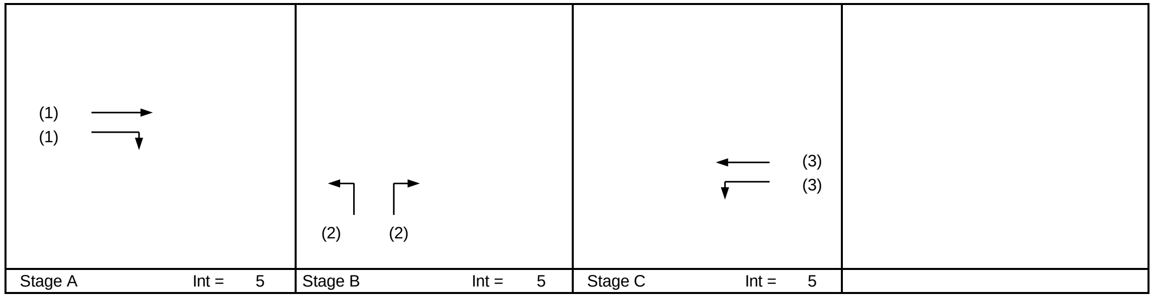
DFC b-a = 0.1575
DFC b-c = 0.2900
DFC c-b = 0.1177
DFC b-c (share lane) = 0.7160

CRITICAL DFC = 0.29

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION		INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North	PROJECT NO. 81838	Prepared By:	CW	Mar-25
J4: Road D1 / Road L1	**2034 Ref AM** FILENAME :	Checked By:	DP	Mar-25
2034 Reference AM Peak Hour Traffic Flows	J4_Road D1_Road L1_S.xls	Reviewed By:	SC	Mar-25



			Existing Cycle Time
No. of stages per cycle		N =	3
Cycle time		C =	90 sec
Sum(y)		Y =	0.241
Loss time		L =	24 sec
Total Flow		=	494 pcu
Co	= (1.5*L+5)/(1-Y)	=	54.0 sec
Cm	= L/(1-Y)	=	31.6 sec
Yult		=	0.720
R.C.ult	= (Yult-Y)/Y*100%	=	198.4 %
Cp	= 0.9*L/(0.9-Y)	=	32.8 sec
Ymax	= 1-L/C	=	0.733
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	173.6 %

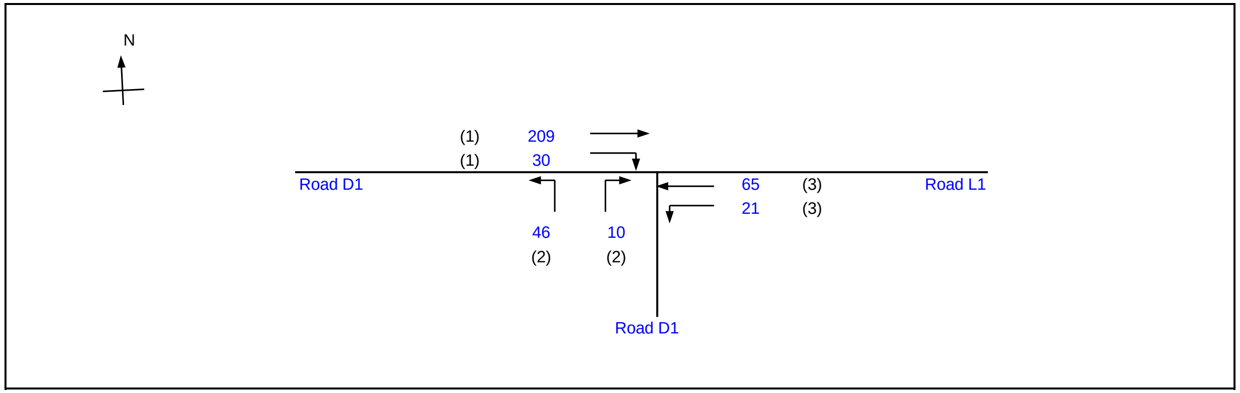


Pedestrian Phase	Stage	Length (m)	Green Time Required (s)			Green Time Provided (s)	
			SG	FG	Delay	SG	FG

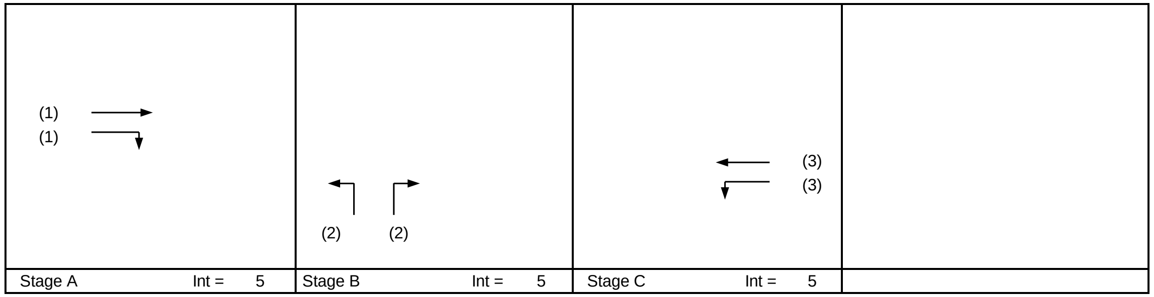
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Movement Straight pcu/h	Movement Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				12					
SA,RT	A	5.00	1	1	20		N	2115		43	29	72	0.40	2053			2053	0.035	0.035		10	10	0.329	6	37
LT,RT	B	5.00	2	1	15		N	2115	69		31	100	1.00	1923			1923	0.052	0.052		14	14	0.329	12	33
LT,SA	C	5.00	3	1	15		N	2115	41	281		322	0.13	2088			2088	0.154	0.154		42	42	0.329	24	14
PED	D																			12					

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO. 81838	Prepared By:	CW	Mar-25
J4: Road D1 / Road L1	**2034 Ref PM**	FILENAME :	Checked By:	DP	Mar-25
2034 Reference PM Peak Hour Traffic Flows		J4_Road D1_Road L1_S.xls	Reviewed By:	SC	Mar-25



			Existing Cycle Time
No. of stages per cycle		N =	3
Cycle time		C =	90 sec
Sum(y)		Y =	0.185
Loss time		L =	24 sec
Total Flow		=	381 pcu
Co	= (1.5*L+5)/(1-Y)	=	50.3 sec
Cm	= L/(1-Y)	=	29.4 sec
Yult		=	0.720
R.C.ult	= (Yult-Y)/Y*100%	=	289.5 %
Cp	= 0.9*L/(0.9-Y)	=	30.2 sec
Ymax	= 1-L/C	=	0.733
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	257.1 %



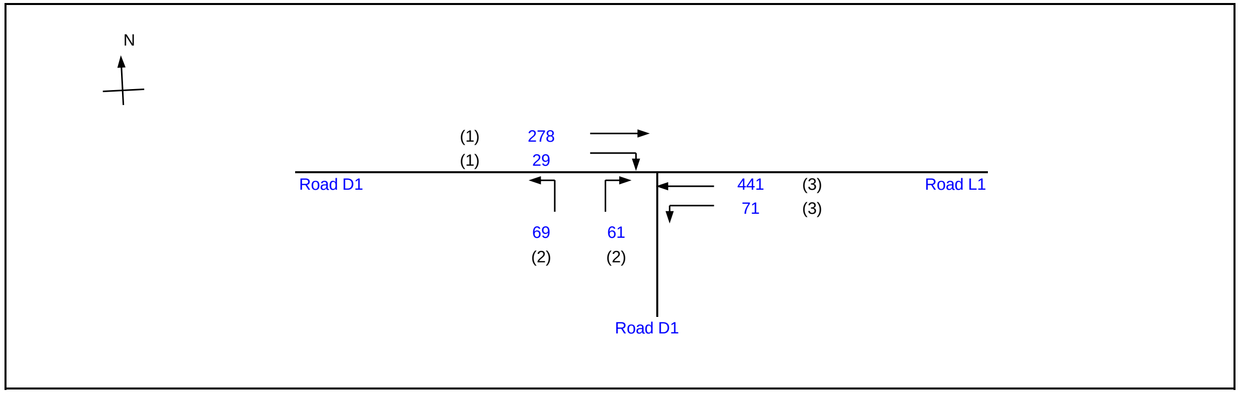
Stage A	Int = 5	Stage B	Int = 5	Stage C	Int = 5

Pedestrian Phase	Stage	Length (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG

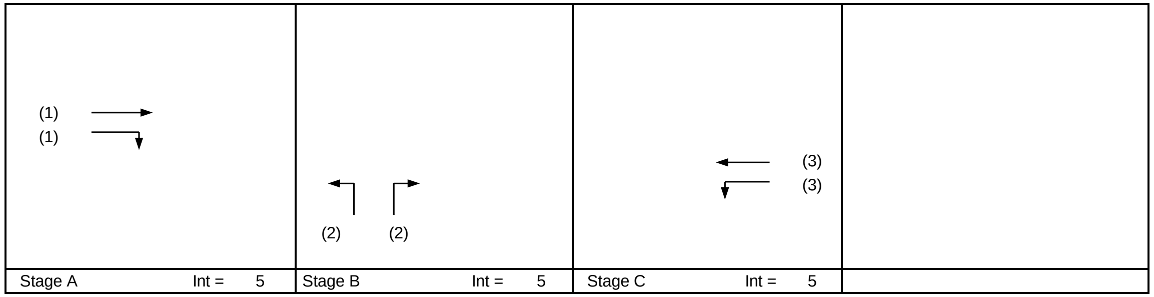
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
SA,RT	A	5.00	1	1	20		N	2115		209	30	239	0.13	2095			2095	0.114	0.114	12	41	**41**	**0.252**	**18**	**14**
LT,RT	B	5.00	2	1	15		N	2115	46		10	56	1.00	1923			1923	0.029	0.029		10	**10**	**0.252**	**6**	**35**
LT,SA	C	5.00	3	1	15		N	2115	21	65		86	0.24	2065			2065	0.042	0.042		15	**15**	**0.252**	**6**	**31**
PED	D																			12					

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO. 81838	Prepared By:	CW	Mar-25
J4: Road D1 / Road L1	**2034 Des AM**	FILENAME :	Checked By:	DP	Mar-25
2034 Design AM Peak Hour Traffic Flows		J4_Road D1_Road L1_S.xls	Reviewed By:	SC	Mar-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.459	
Loss time		L =	24	sec
Total Flow		=	949	pcu
Co	= (1.5*L+5)/(1-Y)	=	75.8	sec
Cm	= L/(1-Y)	=	44.4	sec
Yult		=	0.720	
R.C.ult	= (Yult-Y)/Y*100%	=	56.8	%
Cp	= 0.9*L/(0.9-Y)	=	49.0	sec
Ymax	= 1-L/C	=	0.733	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	43.7	%



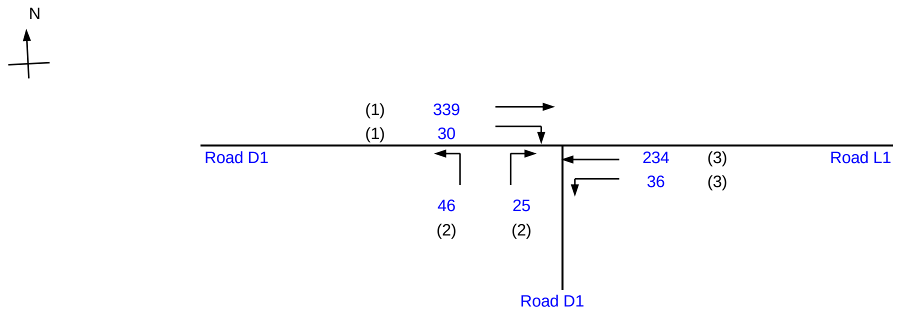
Stage A Int = 5 | Stage B Int = 5 | Stage C Int = 5

Pedestrian Phase	Stage	Length (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG

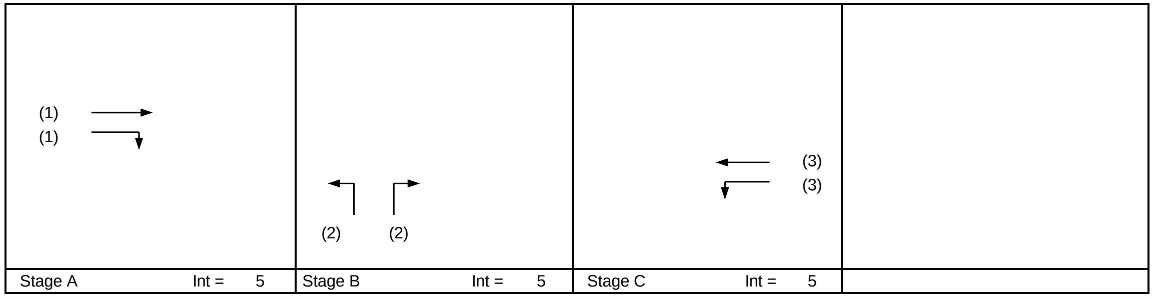
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
SA,RT	A	5.00	1	1	20		N	2115		278	29	307	0.09	2100			2100	0.146	0.146	12	21	21	0.626	30	33
LT,RT	B	5.00	2	1	15		N	2115	69		61	130	1.00	1923			1923	0.068	0.068		10	10	0.626	18	48
LT,SA	C	5.00	3	1	15		N	2115	71	441		512	0.14	2086			2086	0.245	0.245		35	35	0.626	42	23
PED	D																			12					

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung North		PROJECT NO. 81838	Prepared By:	CW	Mar-25
J4: Road D1 / Road L1	**2034 Des PM**	FILENAME :	Checked By:	DP	Mar-25
2034 Design PM Peak Hour Traffic Flows		J4_Road D1_Road L1_S.xls	Reviewed By:	SC	Mar-25



			Existing Cycle Time
No. of stages per cycle		N =	3
Cycle time		C =	90 sec
Sum(y)		Y =	0.342
Loss time		L =	24 sec
Total Flow		=	710 pcu
Co	= (1.5*L+5)/(1-Y)	=	62.3 sec
Cm	= L/(1-Y)	=	36.5 sec
Yult		=	0.720
R.C.ult	= (Yult-Y)/Y*100%	=	110.6 %
Cp	= 0.9*L/(0.9-Y)	=	38.7 sec
Ymax	= 1-L/C	=	0.733
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	93.1 %



Stage A	Int = 5	Stage B	Int = 5	Stage C	Int = 5

Pedestrian Phase	Stage	Length (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG

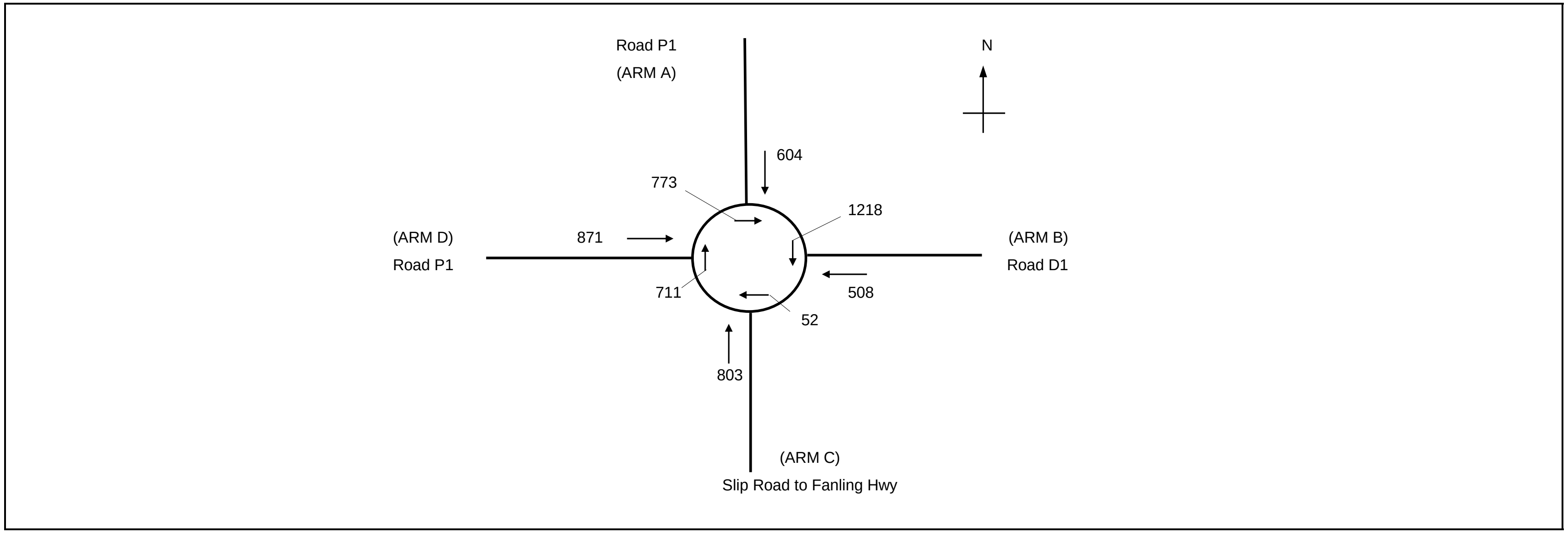
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Movement Straight pcu/h	Movement Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
SA,RT	A	5.00	1	1	20		N	2115		339	30	369	0.08	2102			2102	0.176	0.176	12	34	34	0.466	30	21
LT,RT	B	5.00	2	1	15		N	2115	46		25	71	1.00	1923			1923	0.037	0.037		7	7	0.466	6	45
LT,SA	C	5.00	3	1	15		N	2115	36	234		270	0.13	2087			2087	0.129	0.129		25	25	0.466	24	27
PED	D																			12					

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

OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung	2034 Ref AM	PROJECT NO.: 83114	PREPARED BY:	CW	Mar-25
J5: Road P1 / Road D1 / Slip Road to Fanling Hwy		FILENAME :	CHECKED BY:	DP	Mar-25
2034 Reference AM Peak Hour Traffic Flows		J5_Road P1_Road D1_R.xls	REVIEWED BY:	OC	Mar-25

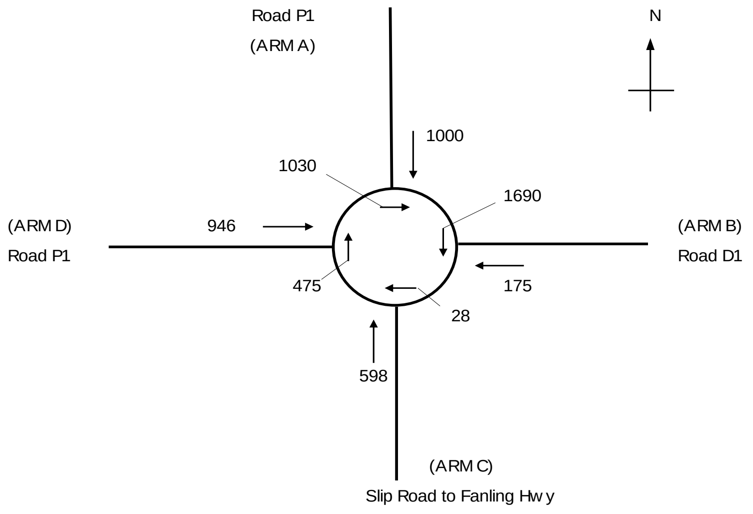


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.3	6.8	4.0	7.3
E	=	Entry width (m)	25.0	19.0	19.0	19.0
L	=	Effective length of flare (m)	20.0	40.0	20.0	20.0
R	=	Entry radius (m)	20.0	30.0	100.0	40.0
D	=	Inscribed circle diameter (m)	80.0	80.0	80.0	80.0
A	=	Entry angle (degree)	60.0	40.0	20.0	40.0
Q	=	Entry flow (pcu/h)	604	508	803	871
Qc	=	Circulating flow across entry (pcu/h)	773	1218	52	711
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	0.49	1.20	0.94
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.98	1.07	0.99
X2	=	V + ((E-V)/(1+2S))	11.92	12.97	8.41	11.37
M	=	EXP((D-60)/10)	7	7	7	7
F	=	303*X2	3611	3931	2549	3446
Td	=	1+(0.5/(1+M))	1.06	1.06	1.06	1.06
Fc	=	0.21*Td(1+0.2*X2)	0.75	0.80	0.60	0.73
Qe	=	K(F-Fc*Qc)	2714	2902	2704	2898
DFC	=	Design flow/Capacity = Q/Qe	0.22	0.18	0.30	0.30

Total In Sum = 2786 PCU

DFC of Critical Approach = 0.30

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION				INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung	**2034 Ref PM**	PROJECT NO.:	83114	PREPARED BY:	CW	Mar-25
J5: Road P1 / Road D1 / Slip Road to Fanling Hwy		FILENAME :		CHECKED BY:	DP	Mar-25
2034 Reference PM Peak Hour Traffic Flows			J5_Road P1_Road D1_R.xls	REVIEWED BY:	OC	Mar-25

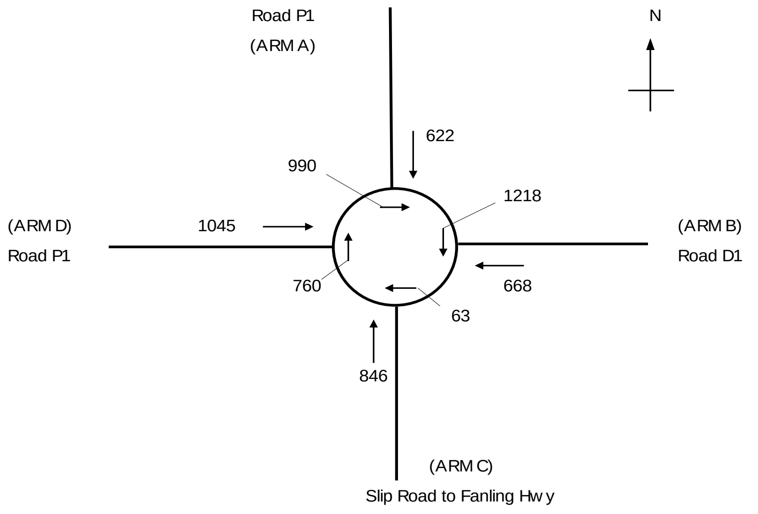


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.3	6.8	4.0	7.3
E	=	Entry width (m)	25.0	19.0	19.0	19.0
L	=	Effective length of flare (m)	20.0	40.0	20.0	20.0
R	=	Entry radius (m)	20.0	30.0	100.0	40.0
D	=	Inscribed circle diameter (m)	80.0	80.0	80.0	80.0
A	=	Entry angle (degree)	60.0	40.0	20.0	40.0
Q	=	Entry flow (pcu/h)	1000	175	598	946
Qc	=	Circulating flow across entry (pcu/h)	1030	1690	28	475
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	0.49	1.20	0.94
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.98	1.07	0.99
X2	=	V + ((E-V)/(1+2S))	11.92	12.97	8.41	11.37
M	=	EXP((D-60)/10)	7	7	7	7
F	=	303*X2	3611	3931	2549	3446
Td	=	1+(0.5/(1+M))	1.06	1.06	1.06	1.06
Fc	=	0.21*Td(1+0.2*X2)	0.75	0.80	0.60	0.73
Qe	=	K(F-Fc*Qc)	2541	2532	2719	3068
DFC	=	Design flow/Capacity = Q/Qe	0.39	0.07	0.22	0.31

Total In Sum = 2719 PCU

DFC of Critical Approach = 0.39

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung	**2034 Des AM**	PROJECT NO.: 83114	PREPARED BY:	CW	Mar-25
J5: Road P1 / Road D1 / Slip Road to Fanling Hwy		FILENAME :	CHECKED BY:	DP	Mar-25
2034 Design AM Peak Hour Traffic Flows		J5_Road P1_Road D1_R.xls	REVIEWED BY:	OC	Mar-25

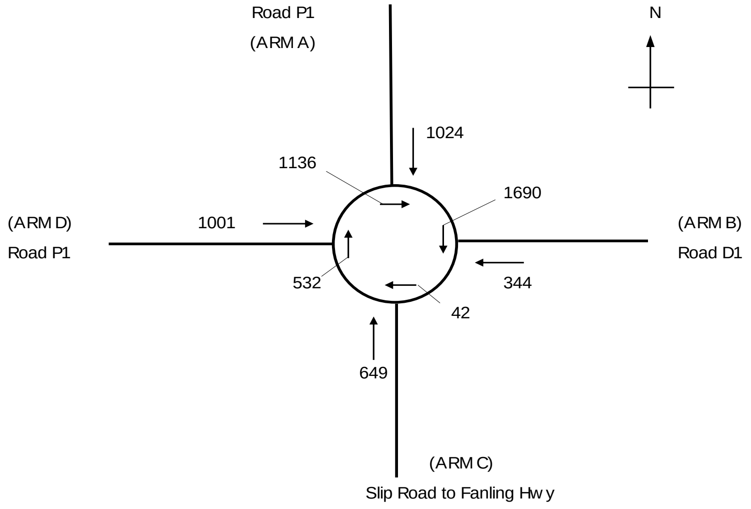


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.3	6.8	4.0	7.3
E	=	Entry width (m)	25.0	19.0	19.0	19.0
L	=	Effective length of flare (m)	20.0	40.0	20.0	20.0
R	=	Entry radius (m)	20.0	30.0	100.0	40.0
D	=	Inscribed circle diameter (m)	80.0	80.0	80.0	80.0
A	=	Entry angle (degree)	60.0	40.0	20.0	40.0
Q	=	Entry flow (pcu/h)	622	668	846	1045
Qc	=	Circulating flow across entry (pcu/h)	990	1218	63	760
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	0.49	1.20	0.94
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.98	1.07	0.99
X2	=	V + ((E-V)/(1+2S))	11.92	12.97	8.41	11.37
M	=	EXP((D-60)/10)	7	7	7	7
F	=	303*X2	3611	3931	2549	3446
Td	=	1+(0.5/(1+M))	1.06	1.06	1.06	1.06
Fc	=	0.21*Td(1+0.2*X2)	0.75	0.80	0.60	0.73
Qe	=	K(F-Fc*Qc)	2568	2902	2697	2863
DFC	=	Design flow/Capacity = Q/Qe	0.24	0.23	0.31	0.37

Total In Sum = 3181 PCU

DFC of Critical Approach = 0.37

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION				INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung	**2034 Des PM**	PROJECT NO.:	83114	PREPARED BY:	CW	Mar-25
J5: Road P1 / Road D1 / Slip Road to Fanling Hwy		FILENAME :		CHECKED BY:	DP	Mar-25
2034 Design PM Peak Hour Traffic Flows			J5_Road P1_Road D1_R.xls	REVIEWED BY:	OC	Mar-25



ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.3	6.8	4.0	7.3
E	=	Entry width (m)	25.0	19.0	19.0	19.0
L	=	Effective length of flare (m)	20.0	40.0	20.0	20.0
R	=	Entry radius (m)	20.0	30.0	100.0	40.0
D	=	Inscribed circle diameter (m)	80.0	80.0	80.0	80.0
A	=	Entry angle (degree)	60.0	40.0	20.0	40.0
Q	=	Entry flow (pcu/h)	1024	344	649	1001
Qc	=	Circulating flow across entry (pcu/h)	1136	1690	42	532
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	1.42	0.49	1.20	0.94
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.90	0.98	1.07	0.99
X2	=	V + ((E-V)/(1+2S))	11.92	12.97	8.41	11.37
M	=	EXP((D-60)/10)	7	7	7	7
F	=	303*X2	3611	3931	2549	3446
Td	=	1+(0.5/(1+M))	1.06	1.06	1.06	1.06
Fc	=	0.21*Td(1+0.2*X2)	0.75	0.80	0.60	0.73
Qe	=	K(F-Fc*Qc)	2469	2532	2710	3027
DFC	=	Design flow/Capacity = Q/Qe	0.41	0.14	0.24	0.33

Total In Sum = 3018 PCU

DFC of Critical Approach = 0.41

OZZO TECHNOLOGY (HK) LIMITED

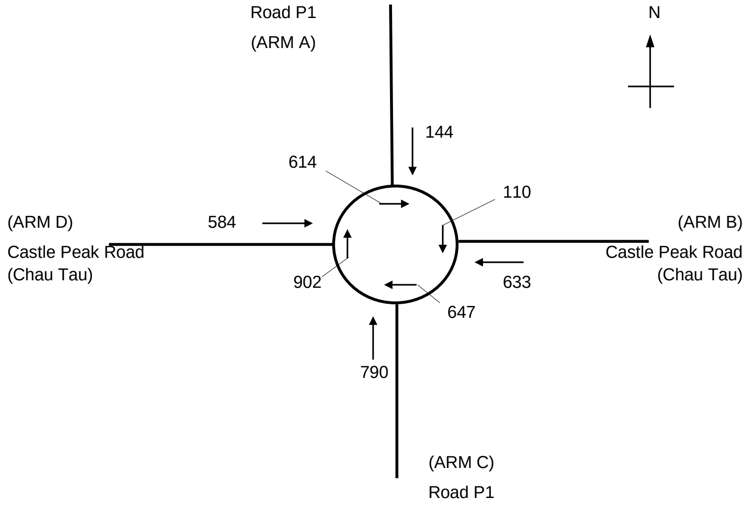
TRAFFIC SIGNAL CALCULATION

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung
J6: Castle Peak Road (Chau Tau) / Road P1
2034 Reference AM Peak Hour Traffic Flows

2034 Ref AM

PROJECT NO.: 83114
FILENAME :
J6_Castle Peak Road (Chau Tau)_Road P1_R.xls

	INITIALS	DATE
PREPARED BY:	CW	Mar-25
CHECKED BY:	DP	Mar-25
REVIEWED BY:	OC	Mar-25

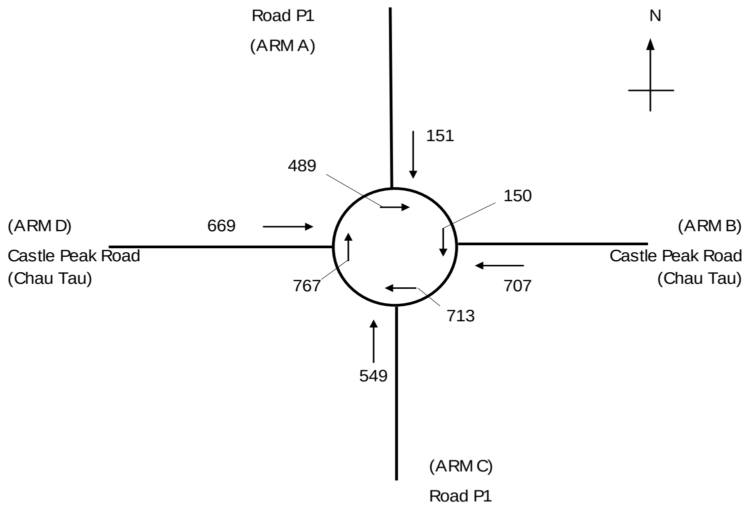

Road P1
(ARM A)
N
144
614
110
(ARM D)
Castle Peak Road
(Chau Tau)
584
(ARM B)
Castle Peak Road
(Chau Tau)
902
633
647
790
(ARM C)
Road P1

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.3	4.5	6.8	6.0
E	=	Entry width (m)	11.5	12.0	10.0	14.0
L	=	Effective length of flare (m)	20.0	35.0	15.0	35.0
R	=	Entry radius (m)	30.0	50.0	20.0	100.0
D	=	Inscribed circle diameter (m)	45.0	45.0	45.0	45.0
A	=	Entry angle (degree)	40.0	30.0	30.0	20.0
Q	=	Entry flow (pcu/h)	144	633	790	584
Qc	=	Circulating flow across entry (pcu/h)	614	110	647	902
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.34	0.34	0.34	0.37
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.03	1.00	1.07
X2	=	V + ((E-V)/(1+2S))	9.81	8.95	8.70	10.62
M	=	EXP((D-60)/10)	0	0	0	0
F	=	303*X2	2973	2712	2637	3218
Td	=	1+(0.5/(1+M))	1.41	1.41	1.41	1.41
Fc	=	0.21*Td(1+0.2*X2)	0.88	0.83	0.81	0.92
Qe	=	K(F-Fc*Qc)	2390	2698	2112	2560
DFC	=	Design flow/Capacity = Q/Qe	0.06	0.23	0.37	0.23

Total In Sum = 2151 PCU

DFC of Critical Approach = 0.37

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION				INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung	**2034 Ref PM**	PROJECT NO.:	83114	PREPARED BY:	CW	Mar-25
J6: Castle Peak Road (Chau Tau) / Road P1		FILENAME :		CHECKED BY:	DP	Mar-25
2034 Reference PM Peak Hour Traffic Flows		J6_Castle Peak Road (Chau Tau)_Road P1_R.xls		REVIEWED BY:	OC	Mar-25

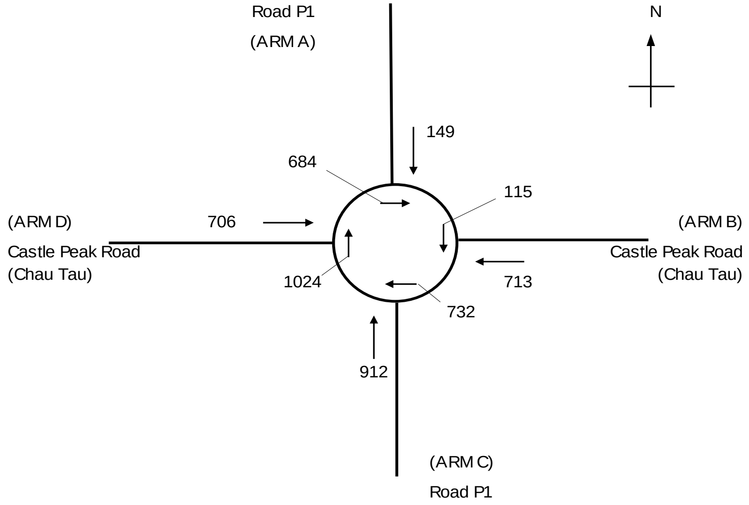

Road P1
(ARM A)
N
151
489
150
(ARM D)
669
Castle Peak Road
(Chau Tau)
(ARM B)
Castle Peak Road
(Chau Tau)
767
707
713
549
(ARM C)
Road P1

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.3	4.5	6.8	6.0
E	=	Entry width (m)	11.5	12.0	10.0	14.0
L	=	Effective length of flare (m)	20.0	35.0	15.0	35.0
R	=	Entry radius (m)	30.0	50.0	20.0	100.0
D	=	Inscribed circle diameter (m)	45.0	45.0	45.0	45.0
A	=	Entry angle (degree)	40.0	30.0	30.0	20.0
Q	=	Entry flow (pcu/h)	151	707	549	669
Qc	=	Circulating flow across entry (pcu/h)	489	150	713	767
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.34	0.34	0.34	0.37
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.03	1.00	1.07
X2	=	V + ((E-V)/(1+2S))	9.81	8.95	8.70	10.62
M	=	EXP((D-60)/10)	0	0	0	0
F	=	303*X2	2973	2712	2637	3218
Td	=	1+(0.5/(1+M))	1.41	1.41	1.41	1.41
Fc	=	0.21*Td(1+0.2*X2)	0.88	0.83	0.81	0.92
Qe	=	K(F-Fc*Qc)	2498	2664	2059	2694
DFC	=	Design flow/Capacity = Q/Qe	0.06	0.27	0.27	0.25

Total In Sum = 2076 PCU

DFC of Critical Approach = 0.27

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung	**2034 Des AM**	PROJECT NO.: 83114	PREPARED BY:	CW	Mar-25
J6: Castle Peak Road (Chau Tau) / Road P1		FILENAME :	CHECKED BY:	DP	Mar-25
2034 Design AM Peak Hour Traffic Flows		J6_Castle Peak Road (Chau Tau)_Road P1_R.xls	REVIEWED BY:	OC	Mar-25


Road P1
(ARM A)
N
149
684
115
(ARM D)
706
(ARM B)
Castle Peak Road
(Chau Tau)
Castle Peak Road
(Chau Tau)
1024
713
732
912
(ARM C)
Road P1

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.3	4.5	6.8	6.0
E	=	Entry width (m)	11.5	12.0	10.0	14.0
L	=	Effective length of flare (m)	20.0	35.0	15.0	35.0
R	=	Entry radius (m)	30.0	50.0	20.0	100.0
D	=	Inscribed circle diameter (m)	45.0	45.0	45.0	45.0
A	=	Entry angle (degree)	40.0	30.0	30.0	20.0
Q	=	Entry flow (pcu/h)	149	713	912	706
Qc	=	Circulating flow across entry (pcu/h)	684	115	732	1024
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.34	0.34	0.34	0.37
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.03	1.00	1.07
X2	=	V + ((E-V)/(1+2S))	9.81	8.95	8.70	10.62
M	=	EXP((D-60)/10)	0	0	0	0
F	=	303*X2	2973	2712	2637	3218
Td	=	1+(0.5/(1+M))	1.41	1.41	1.41	1.41
Fc	=	0.21*Td(1+0.2*X2)	0.88	0.83	0.81	0.92
Qe	=	K(F-Fc*Qc)	2330	2693	2043	2439
DFC	=	Design flow/Capacity = Q/Qe	0.06	0.26	0.45	0.29

Total In Sum = 2480 PCU

DFC of Critical Approach = 0.45

OZZO TECHNOLOGY (HK) LIMITED

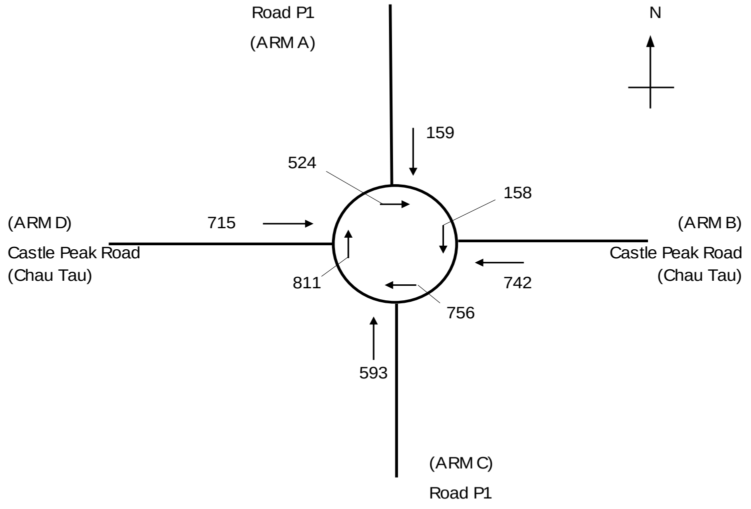
TRAFFIC SIGNAL CALCULATION

Contract No ASD 1018705CX06QC6 S16 for JUC & JUB at Area 29, Kwu Tung
J6: Castle Peak Road (Chau Tau) / Road P1
2034 Design PM Peak Hour Traffic Flows

2034 Des PM

PROJECT NO.: 83114
FILENAME : J6_Castle Peak Road (Chau Tau)_Road P1_R.xls

	INITIALS	DATE
PREPARED BY:	CW	Mar-25
CHECKED BY:	DP	Mar-25
REVIEWED BY:	OC	Mar-25



Road P1
(ARM A)
N
159
524
158
(ARM D)
715
(ARM B)
Castle Peak Road
(Chau Tau)
Castle Peak Road
(Chau Tau)
811
742
756
593
(ARM C)
Road P1

ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.3	4.5	6.8	6.0
E	=	Entry width (m)	11.5	12.0	10.0	14.0
L	=	Effective length of flare (m)	20.0	35.0	15.0	35.0
R	=	Entry radius (m)	30.0	50.0	20.0	100.0
D	=	Inscribed circle diameter (m)	45.0	45.0	45.0	45.0
A	=	Entry angle (degree)	40.0	30.0	30.0	20.0
Q	=	Entry flow (pcu/h)	159	742	593	715
Qc	=	Circulating flow across entry (pcu/h)	524	158	756	811
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.34	0.34	0.34	0.37
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.98	1.03	1.00	1.07
X2	=	V + ((E-V)/(1+2S))	9.81	8.95	8.70	10.62
M	=	EXP((D-60)/10)	0	0	0	0
F	=	303*X2	2973	2712	2637	3218
Td	=	1+(0.5/(1+M))	1.41	1.41	1.41	1.41
Fc	=	0.21*Td(1+0.2*X2)	0.88	0.83	0.81	0.92
Qe	=	K(F-Fc*Qc)	2468	2657	2024	2651
DFC	=	Design flow/Capacity = Q/Qe	0.06	0.28	0.29	0.27

Total In Sum = 2209 PCU

DFC of Critical Approach = 0.29