Appendix 4

TRAFFIC IMPACT ASSESSMENT

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Traffic Impact Assessment Study Report
March 2025

Ozzo Technology (HK) Ltd
15/F, Heng Shan Centre
145 Queen's Road East, Wanchai, Hong Kong
Tel: 3488 5449 Fax: 3020 0370
http:// www.ozzotec.com

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Traffic Impact Assessment Study Report March 2025

Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Prepared / Date	Checked / Date	Approved / Date
0	Study Report	30/09/2024 AH,SC	04/10/2024 DP	04/10/2024 OC
0a	Study Report	07/10/2024 AH,NL	08/10/2024 DP	09/10/2024 OC
0b	Study Report	15/10/2024 AH,NL	16/10/2024 DP	16/10/2024 OC
0c	Study Report	30/10/2024 AH,NL	04/11/2024 DP	05/11/2024 OC
1	Study Report	11/12/2024 AH,NL	17/12/2024 DP	17/12/2024 OC
1a	Study Report	30/12/2024 AH,NL	03/01/2025 DP	03/01/2025 OC
1b	Study Report	11/03/2025 AH,NL	12/03/2025 DP	12/03/2025 OC

CONTENT

		Page
1	**INTRODUCTION**	**1**
1.1	Background	1
1.2	Study Objectives	1
1.3	Report Structure	2
2	**THE PROPOSED HOSPITAL REDEVELOPMENT**	**3**
2.1	Site Location and Study Area	3
2.2	The Proposed Hospital Redevelopment	3
2.3	Vehicular and Pedestrian Access Arrangements	4
2.4	Proposed Parking and Loading/ Unloading Provisions	5
3	**EXISTING TRAFFIC CONDITION**	**6**
3.1	Existing Road Network	6
3.2	Existing Public Transport Services	6
3.3	Existing Peak Hour Traffic	11
3.4	Existing Junction Performance	11
3.5	Existing Link Performance	12
4	**FUTURE TRAFFIC SITUATION**	**14**
4.1	Design Year	14
4.2	Methodology	14
4.3	Historical Traffic Growth	15
4.4	Future Developments in the Area	15
4.5	2035 Background Traffic Flows	16
4.6	2035 Reference Traffic Flows	16
4.7	Development Trip Generations	21
4.8	Design Years Traffic Flows	21
5	**TRAFFIC IMPACT ASSESSMENT**	**22**
5.1	Traffic Impact Assessment	22
6	**CONSTRUCTION TRAFFIC IMPACT ASSESSMENT**	**24**
6.1	Construction Traffic Impact Assessment	24
7	**SUMMARY AND CONCLUSION**	**26**
7.1	Summary	26
7.2	Conclusions	27

LIST OF TABLES

		Page
Table 2-1	Summary of Development Parameters	3
Table 2-2	Proposed Parking and Loading/ Unloading Provisions	5
Table 3-1	Public Transport Services in the Study Area	6
Table 3-2	Passenger Car Unit Conversion Factors	11
Table 3-3	2024 Peak Hour Performance at Key Junctions	12
Table 3-4	2024 Peak Hour Performances of Key Road Links	13
Table 4-1	Average Annual Daily Traffic from Annual Traffic Census	15
Table 4-2	2019-Based TPEDM for Kowloon City District	16
Table 4-3	Planned Developments and Peak Hour Development Traffic	16
Table 4-4	Existing and Estimated Peak Hour Development Traffic	21
Table 5-1	2035 Peak Hour Performance at Key Junctions	22
Table 5-2	2035 Peak Hour Performance at Road Links	22
Table 6-1	2032 Peak Hour Performance at Key Junctions	24
Table 6-2	2032 Peak Hour Performance at Road Links	24

LIST OF FIGURES

Figure 2-1 Site Location and Study Area
Figure 2-2 Proposed Vehicular and Pedestrian Access Arrangement at Ground Level
Figure 2-3 Existing Road Markings /Street Furniture to be Modified
Figure 2-4 Proposed Parking Layout at Basement B1
Figure 2-5 Proposed Parking Layout at Basement B2
Figure 3-1 Existing Public Transport Inventory
Figure 3-2 Locations of Surveyed Junctions
Figure 3-3 2024 Observed Peak Hour Traffic Flows
Figure 4-1 2035 Reference Peak Hour Traffic Flows
Figure 4-2 Peak Hour Development Traffic Flows
Figure 4-3 2035 Design Peak Hour Traffic Flows

ANNEXES

Annex A Swept Path Assessment Results
Annex B 2024 Junction Calculation Sheets
Annex C 2035 Junction Calculation Sheets
Annex D 2032 Junction Calculation Sheets

1 INTRODUCTION

1.1 Background

1.1.1 OZZO Technology (HK) Limited ("**OZZO**") has been commissioned to prepare and submit this Traffic Impact Assessment ("**TIA**") in support of Section 12A Planning Application ("**S12A**") / Rezoning Request ("**RR**") for Proposed Amendment to the Approved Ma Tau Kok Outline Zoning Plan No. S/K10/30 ("**Approved OZP**") to relax the Building Height Restriction ("**BHR**") for the Redevelopment of Evangel Hospital ("**EH**") at No. 222 Argyle Street, Kowloon (the "**Site**" / "**Application Site**").

1.1.2 The Site is currently zoned "Government, Institution or Community" ("**G/IC"**) with a maximum Building Height Restriction ("**BHR"**) of 5 storeys as stipulated on the Approved OZP and is subject of a Planning Approval under RR (TPB Ref: Y/K10/5) granted by Town Planning Board ("**TPB**") on 28 July 2023 to amend the BHR to 80mPD ("**Approved S12A Scheme"**). Since the TPB approval in 2023, EH has further reviewed the building design the needs for medical facilities taking into consideration the rising demands for community healthcare services and is in line with the recent Policy Addresses initiatives to improve livelihoods through sustainable development of the healthcare system and increased expenditure on welfare and healthcare.

1.1.3 The Rezoning Request ("**RR**") thus proposes to relax the maximum BHR to 110mPD to facilitate the redevelopment of EH ("**Proposed Hospital Redevelopment**"). An Indicative Development Scheme ("**IDS**") is put forth to demonstrate the feasibility of the proposed development parameters.

1.1.4 The main objective of this TIA study is to assess the potential traffic impact to be induced by the Proposed Hospital Redevelopment on the road network in the vicinity of the Application Site.

1.2 Study Objectives

1.2.1 The objectives of the TIA study are as follows:

- To review the existing traffic situation of the surrounding road network;
- To estimate the potential traffic generations/attractions to be induced by the Proposed Hospital Redevelopment;
- To assess the future traffic situation of the surrounding road network;

- To appraise the potential traffic impact of the Proposed Hospital Redevelopment on the surrounding road network and to recommend improvement proposals, if required; and
- To advise on the internal transport arrangements.

1.3 Report Structure

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

- Chapter 2 describes the Proposed Hospital Redevelopment;
- Chapter 3 summarizes the existing traffic condition in the vicinity of the Application Site;
- Chapter 4 provides traffic forecast in the future design year;
- Chapter 5 presents the traffic impact assessment results;
- Chapter 6 presents the construction traffic impact assessment results; and
- A summary of the findings and conclusion of this TIA study are given in Chapter 7.

2 THE PROPOSED HOSPITAL REDEVELOPMENT

2.1 Site Location and Study Area

2.1.1 **Figure 2-1** shows the location of the Application Site. At present, the Site is zoned "Government, Institution or Community" ("G/IC") in the Approved OZP. "Hospital" is a Column 1 use under the "G/IC" zone.

2.1.2 **Figure 2-1** also shows the proposed Study Area for this TIA Study and which includes the key junctions in the vicinity of the Application Site.

2.2 The Proposed Hospital Redevelopment

2.2.1 At present, the Site is occupied by Evangel Hospital (EH). **Table 2-1** summarizes the development parameters of the Existing Hospital, the Approved S12A Scheme and the IDS.

Table 2-1 Summary of Development Parameters

Parameters	Existing Hospital	Approved S12A Scheme (TPB Ref. No. Y/K10/5)	IDS
Site Area	Approx. 1,463 m^2		
Plot Ratio (PR)	About 2.68	About 8.9	About 12.53
Site Coverage	65%	Below 15m = about 78% Above 15m = about 63%	Below 39m = about 83% Above 39m = about 65%
Number of Storeys	5 Storeys	16-Storeys over 2 levels of basement	22-Storeys over 2 levels of basement
Building Height (Maximum at Main Roof Level)	26.9mPD	80mPD	110mPD
Gross Floor Area (GFA)	Approx. 3,917 m^2	Approx. 13,021 m^2	Approx. 18,331 m^2
Number of beds / recliners	57 in-patient beds 3 day beds	76 in-patient beds 4 HDUs 38 day beds	104 in-patient beds 4 HDUs 30 recliners 6 chemo places

Notes: 104 in-patient beds and 4 HDUs are adopted for calculation in the TIA assessment, while the 30 recliners & 6 chemo places are excluded from calculation as the recliners and chemo places are like resting area instead of formal beds

2.3 Vehicular and Pedestrian Access Arrangements

2.3.1 **Figure 2-2** shows the proposed vehicular and pedestrian access arrangement for the IDS. As shown in the figure, the main entrance for pedestrians will be located at Argyle Street similar to the existing arrangement.

2.3.2 The existing run-in/out of EH is located at Fu Ning Street and only 20m away from Argyle Street. Same as the Approved S12A Scheme, it is proposed to relocate the vehicular access of the Proposed Hospital Redevelopment to Fuk Cheung Street to improve the traffic flow conditions on this junction approach. The access vehicular and pedestrian access are shown in **Figure 2-2**.

2.3.3 As shown in **Figure 2-3**, with the relocation of the run-in/out to Fuk Cheung Street, the existing run-in/out and "Yellow Box" markings at Fu Ning Street will be removed and new pedestrian railings will be provided. Also, the existing Refuse Collection Vehicle (RCV) bay on Fuk Cheung Street will need to be relocated towards the west, which is the same as the arrangement in the Approved S12A Scheme. The location of the relocated RCV Space has already been adopted in the Approved S12A Scheme and there is no change to this location under the current S12A Application. The RCV bay is used by FEHD RCV to serve the developments alongside Fuk Cheung Road. EH does not use the FEHD Refuse Collection Service as they have their own contract-out services.

2.3.4 To enhance pedestrian safety along Fuk Cheung Street, alarming system may be considered (subjected to actual need in later Stage) at the vehicular access to alert pedestrian when vehicles are entering / leaving the Site. In addition, additional warning sign is proposed adjacent to the pedestrian crossing of Fuk Cheung Street (with details presented in **Figure 2-3**) so as to alert pedestrians using the cautionary crossing, particularly when RCV is in operation.

2.4 Proposed Parking and Loading/ Unloading Provisions

2.4.1 **Table 2-2** summarizes the proposed internal car parking and loading/ unloading provisions for the IDS, which meet the daily operational needs of EH and relevant HKPSG requirements as appropriate.

Table 2-2 Proposed Parking and Loading/ Unloading Provisions

Type	Vehicle Type	HKPSG Requirements		Proposed Provision (108 beds) (1)		
		Criteria	Required	Provided	Size	Headroom
Parking	Private Car	1 space per 3-12 beds	9 – 36	34	5m x 2.5m	>2.4m
	Disabled Visitor Parking	2-5 spaces	2 - 5	5	5m x 3.5m	>2.4m
	Motorcycle	5%-10% of total car parking provisions	1 – 5	5	2.4m x 1.0m	>2.4m
	Ambulance*	3 spaces(2)	3	1*	9m x 3m	>3.3m
	Hearse	HKPSG no requirement	--	1	7m x 3m	>3.3m
Loading/ Unloading	Goods Vehicle	1 – 3 lay-bys for MGV/HGV	1 – 3	1	11m x 3.5m	>4.7m
	Taxi/Car	1 lay-by (under cover) for every 160 beds(2)	1	1	5m x 2.5m	>2.4m
	Ambulance*	1 - 2 lay-bys(2) (under cover)	1 – 2	1*	9m x 3m	>3.3m
	Public Light Bus / Maxicab L/UL lay-by	1 lay-by for every 400 beds (2)	1	0(3)	8m x 3m	>3.3m
	Refuse Vehicle	HKPSG no requirement	--	1	9m x 3m	>4.7m

Notes: *(1) 104 in-patient beds and 4 HDUs are adopted for calculation in the TIA assessment, while the 30 recliners & 6 chemo places are excluded from calculation as the recliners and chemo places are like resting area instead of formal beds.*
(2) Criteria for hospital without Accident and Emergency (A+E) departments.
(3) EH confirmed that nil Public Light Bus / Maxicab L/UL lay-by is sufficient for their daily operation.
**1 of the ambulance parking space is share-used with ambulance lay-by.*

2.4.2 The loading/ unloading bays for goods vehicles and ambulances and the taxi/car lay-by will be located on the Ground Floor of the IDS as shown in **Figure 2-2**.

2.4.3 The parking spaces for private car and motor-cycle will be provided on the basement levels as shown in **Figure 2-4** and **Figure 2-5** for B1 and B2 respectively.

2.4.4 The results of vehicle swept path assessments are shown in **Annex A**.

3 EXISTING TRAFFIC CONDITION

3.1 Existing Road Network

3.1.1 **Figure 2-1** shows the location of the Application Site and the existing road network in the vicinity of the Application Site.

3.1.2 Argyle Street is classified as a Primary Distributor road which is a major north-south corridor linking Yau Tsim Mong District to the west and Kowloon City to the east. The section of Argyle Street in the vicinity of the Application Site is a dual-3 lane carriageway road.

3.1.3 Fu Ning Street, a single two-lane carriageway road, is classified as a District Distributor road which connects Argyle Street at its north and Ma Tau Chung Road to the south. Fuk Cheung Street is a local access road providing access to developments adjacent to the street.

3.2 Existing Public Transport Services

3.2.1 The area is well served by public transport services including MTR, franchised bus, Green Minibus and Red Minibus services. **Table 3-1** summarized the public transport services serving the area and **Figure 3-1** shows the locations of the bus/GMB stops in the vicinity of the Application Site. MTR Sung Wong Toi Station is located within a distance of about 400 meters (5 min walking time) as indicated in **Figure 3-1**.

Table 3-1 Public Transport Services in the Study Area

Route No.	Termination Points		Frequency (Mins)
Franchised Bus Services			
5	Fu Shan	Star Ferry	Daily service every 10-25 mins
9	Choi Fook	Tsim Sha Tsui East (Mody Road)	Daily service every 15-30 mins
11	Diamond Hill Station	Kowloon Station	Daily service every 15-30 mins
14	Lei Yue Mun Estate	China Ferry Terminal	Daily service every 15-30 mins
15	Ping Tin	Hung Hom (Hung Luen Road)	Daily service every 12-30 mins
16	Lam Tin (Kwong Tin Estate)	Mong Kok (Park Avenue)	Daily service every 9-25 mins
16*	Ping Tin	Mong Kok (Park Avenue)	Weekday service every 20-30mins from 06:40 to 09:20 Saturday service at 06:40, 07:20, 08:20 and 09:20
17	Ho Man Tin (Oi Man Estate)	Kwun Tong (Yue Man Square)	Daily service every 6-25 mins
21	Choi Wan	Hung Hom Station	Daily service every 20-30 mins
24	Kai Yip	Mong Kok (Circular)	Daily service every 20-30 mins
24*	Kai Yip	Mong Kok	Weekday service at 07:45
24*	Kai Yip	Mong Kok	Weekday service at 18:15
26	Shun Tin	Tsim Sha Tsui East	Daily service every 8-30 mins
27	Shun Tin	Mong Kok (Circular)	Daily service every 6-20 mins

Route No.	Termination Points		Frequency (Mins)
27X	Shun Tin	Olympic Station	Weekday service at 07:45 and 08:15
27X	Olympic Station	Shun Tin	Weekday service at 18:10 and 18:30
28	Star Ferry	Lok Wah	Daily service every 12-25 mins
42	Tsing Yi (Cheung Hong Estate)	Shun Lee	Daily service every 15-25 mins
85	Fo Tan (Shan Mei Street)	Kowloon City Ferry	Daily service every 20-30 mins
85B	Chun Shek	Kowloon City Ferry	Weekday service at 07:00, 07:30 and 08:00
85B	Kowloon City Ferry	Chun Shek	Weekday service at 18:00 and 18:30
95	Tsui Lam	Kowloon Station	Daily service every 12-30 mins
101	Kwun Tong (Yue Man Square)	Kennedy Town	Daily service every 4-20 mins
101*	Kwun Tong (Yue Man Square)	Des Voeux Rd Central	Weekday service at 16:50
101*	Kwun Tong (Yue Man Square)	Belcher's Street	Saturday service at 05:36
106	Wong Tai Sin	Siu Sai Wan (Island Resort)	Daily service every 6-22 mins
107	Kowloon Bay	Wah Kwai	Monday to Saturday service every 8-25 mins Holiday service every 10-20 mins from 06:45 to 09:00 and 11:30 to 00:00
107*	Kowloon Bay	Wah Kwai	Holiday service every 10-15 mins from 09:00 to 11:30
108	Kai Yip	Braemar Hill	Daily service every 15-30 mins
108*	Sung Wong Toi Road	Causeway bay (Pennington Street)	Weekday service at 08:00
111	Ping Shek / Choi Hung Station	Central (Macau Ferry)	Daily service every 6-20 mins
111*	Ma Tau Chung Road	Central (Macau Ferry)	Weekday service at 08:25
111*	Ning Yuen Street	Central (Macau Ferry)	Weekday service at 07:55
116	Tsz Wan Shan (Central)	Quarry Bay (Yau Man St)	Daily service every 4-20 mins
297	Hung Hom (Hung Luen Road)	Po Lam	Daily service every 15-30 mins
106A	Wong Tai Sin	Tai Koo (Kornhill Plaza)	Weekday service at 07:25, 07:35, 07:45, 07:55
106P	Wong Tai Sin	Siu Sai Wan (Island Resort)	Weekday service at 17:15, 17:35
111P	Choi Fook	Central (Macau Ferry)	Weekday service at 07:07, 07:17, 07:40 and 07:55 Saturday service at 07:17, 07:55
11B	Kwun Tong (Tsui Ping Road)	Kowloon City Ferry	Daily service every 15-30 mins
11D	Lok Fu	Kwun Tong Ferry	Daily service every 15-30 mins
11K	Chuk Yuen Estate	Hung Hom Station	Daily service every 20-30 mins
12A	Whampoa Garden	Cheung Sha Wan (Sham Mong Road)	Daily service every 12-25 mins
13D	Po Tat	Island Harbourview	Weekday service every 15-20 mins from 05:15 to 09:40 Saturday service every 20-30 mins from 05:15 to 09:45 Holiday service every 25-30 mins from 05:15 to 09:55

Route No.	Termination Points		Frequency (Mins)
13D*	Po Tat	Island Harbourview	Monday to Saturday service every 20-30 mins from 10:00 to 23:40 Holiday service every 15-30 mins from 10:15 to 23:40
16X	Lam Tin (Kwong Tin Estate)	Mong Kok (Park Avenue)	Daily service every 20-60 mins from 07:55 to 12:00 Saturday service every 30 mins from 10:00 to 16:00
16P	Mong Kok (Park Avenue)	Kwun Tong Ferry	Weekday service at 07:50
16P	Kwun Tong Ferry	Mong Kok (Park Avenue)	Weekday service at 17:30
1A	Sau Mau Ping (Central)	Star Ferry	Daily service every 7-15 mins
203E	Choi Hung	Kowloon Station	Daily service every 15-30 mins
213D	Sau Mau Ping (Central)	Mong Kok (Circular)	Daily service every 10-25 mins
275X	Tai Po (Fu Shin)	Hung Hom (Hung Luen Road)	Weekday service at 07:05, 07:18, 07:32 and 07:45
275X	Hung Hom (Hung Luen Road)	Tai Po (Fu Shin)	Weekday service at 18:05, 18:18, 18:32 and 18:45
293S	Hang Hau (Ngan O Road)	Mong Kok East Station	Daily service at 04:00, 04:20 and 05:00
296C	Sheung Tak	Cheung Sha Wan (Hoi Ying Estate)	Daily service every 15-30 mins
296P	Lai Chi Kok Station	Sheung Tak	Weekday service at 17:45
298C	LOHAS Park Station	Mei Foo	Weekday service at 07:35
298C	Mei Foo	LOHAS Park Station	Weekday service at 17:30
298X	Hang Hau (North) (Tseung Kwan O Hospital)	Cheung Sha Wan (Kom Tsun Street)	Weekday service at 07:30, 07:50, 08:10
298X	Cheung Sha Wan (Kom Tsun Street)	Hang Hau (North) (Tseung Kwan O Hospital)	Weekday service at 17:35, 17:55, 18:15
2A	Lok Wah	Mei Foo	Daily service every 12-25 mins
2X	Mei Foo	Choi Fook	Daily service every 30 mins
3B	Tsz Wan Shan (Central)	Hung Hom (Hung Luen Road)	Daily service every 20-30 mins
5A	Kai Tak (Kai Ching Estate)	Star Ferry	Monday to Saturday service every 25-30 mins Holiday service every 30 mins from 08:40 to 19:10
5C	Tsz Wan Shan (Central)	Star Ferry	Daily service every 8-20 mins
5C*	Yuk Wah Street	Star Ferry	Weekday service at 07:20 and 07:40
5P	Tsz Wan Shan (Central)	Star Ferry	Daily service every 15 mins from 07:15 to 08:00
61X	Tuen Mun Central	Kowloon City Ferry	Daily service every 10-25 mins
6D	Ngau Tau Kok	Mei Foo	Daily service every 13-25 mins
6P	Cheung Sha Wan (So Uk Estate)	Lei Yue Mun Estate	Weekday service every 20 mins from 07:00 to 07:40
6X	Shing Tak Street	Mei Foo	Weekday service at 17:25, 17:55 and 18:25
75X	Fu Shin Estate	Kowloon City Ferry	Daily service every11-25 mins
85A	Kwong Yuen	Kowloon City Ferry	Daily service every 20-30 mins
85B	Chun Shek	Kowloon City Ferry	Weekday service at 7:00, 7:30, 8:00
85S	Yiu On	Hung Hom (Hung Luen Road)	Weekday service at 07:45 and 08:00

Route No.	Termination Points		Frequency (Mins)
85X	Ma On Shan Town Centre	Hung Hom (Hung Luen Road)	Daily service every 12-30 mins
93K	Po Lam	Mong Kok East Station	Daily service every 17-30 mins
98C	Hang Hau (North) (Tseung Kwan O Hospital)	Mei Foo	Daily service every 10-25 mins
98S	Lohas Park Station	Mei Foo	Weekday service at 06:40, 07:00, 07:20 and 07:40
20	Kai Tak (Muk On Street)	Cheung Sha Wan (Hoi Tat)	Daily service every 12-30 mins
22M	Kai Tak Cruise Terminal	To Kwa Wan	Daily service every 20-30 mins
608	Shau Kei Wan	Kowloon City (Shing Tak Street)	Daily service every 12-30 mins
608*	Kowloon City (Shing Tak Street)	Shau Kei Wan	Weekday service every 25-30 mins from 05:40 to 07:00 and every 10-15 mins from 07:20 to 08:00 and at 08:25, 08:55
608P	Siu Sai Wan (Island Resort)	Kowloon City (Shing Tak Street)	Weekday service at 07:30 and 07:45
793	Tseung Kwan O Industrial Estate	So Uk	Daily service every 15-20 mins
793*	Tseung Kwan O Industrial Estate	So Uk	Monday to Saturday service at 07:30 and every 60 mins from 09:00 to 16:00
796X	Tseung Kwan O Industrial Estate / Tseung Kwan O Station	Tsim Sha Tsui (East)	Daily service every 12-30 mins
796X*	Tseung Kwan O Industrial Estate / Tseung Kwan O Station	Tsim Sha Tsui (East)	Monday to Saturday every 25-30 mins from 06:25 to 07:40
A22	Airport (Via HZMB Hong Kong Port)	Lam Tin Station	Daily service every 15-60 mins
E23	Airport (Ground Transportation Centre)	Tsz Wan Shan (South)	Daily service every 20-30 mins from 13:20 to 00:00
E23A	Airport (Via Tung Chung North)	Tsz Wan Shan (South)	Daily service every 20-30 mins from 05:30 to 13:00
Green Minibus (GMB) Services			
GMB 2	Whampoa Garden Public Transport Interchange	Festival Walk Public Transport Interchange	Daily service every 10-25 mins
GMB 2A	Whampoa Garden Public Transport Interchange	Festival Walk Public Transport Interchange	Daily service every 10-25 mins
GMB 13	Kowloon Tong (Broadcast Drive)	Hung Hom (Hung Luen Road)	Daily service every 15-30 mins from 07:00 to 19:00
GMB 17M	Prince Edward Station	Kowloon Hospital	Daily service every 7-15 mins
GMB 46	Richland Gardens	Tai Kok Tsui (Olympic Station)	Daily service every 3-15 mins
GMB 49	Shun Tin Estate	Kowloon City Ferry Pier	Daily service every 25 mins from 06:20 to 09:15 and 16:10 to 19:40
GMB 69	Laguna City	Kowloon City (Lion Rock Road)	Daily service every 20-30 mins
GMB 69A	Laguna City	Tung Choi Street	Daily service every 15-20 mins
GMB 105	Tseung Kwan O (Hong Sing Garden)	To Kwa Wan (Ko Shan Theatre)	Daily service every 5-20 mins
GMB 110	Tiu Keng Leng Station Public Transport Interchange	Kowloon City	Daily service every 15-30 mins
Red Minibus (RMB) Services			
--	To Kwa Wan (Tam Kung Road)	Oi Man Estate	Daily service from 06:35 to 23:30
--	Tsz Wan Shan	Mong Kok (Sincere Podium)	24hour daily service
--	Tsz Wan Shan	Jordan Road (Nanking Street)	Daily service from 04:45 to 03:45

Route No.	Termination Points		Frequency (Mins)
--	To Kwa Wan (Jubilant Place)	Mong Kok (Sincere Podium)	24-hour daily service
--	To Kwa Wan (Jubilant Place)	Mei Foo	Monday to Friday service from 06:00 to 10:00 and 17:30 to 19:30 Saturday service from 06:00 to 10:00
--	Hung Hom (Station Lane)	Ngau Tau Kok and Kwun Tong	Monday to Saturday service from 08:45 to 12:45
--	Kwun Tong (Yue Man Square)	Mong Kok (Tung Choi Street)	24-hour daily service
--	Kwan Tong (Ngau Tau Kok Road)	Mong Kok (Dundas Street)	Daily service every 10-15 mins from 06:30 to 23:30
--	Mong Kok(Sincere Podium)	Kowloon Bay (Lam Fung Street)	Monday to Saturday service every 5-20 mins from 08:00 to 23:45, Sunday and Public Holiday service every 15-20 mins from 11:00 to 23:45
--	Sau Mau Ping	Mong Kok (Tung Choi Street)	24-hour daily service
--	Sau Mau Ping	Jordan Road (Pak Hoi Street)	Daily service every 6-10 mins from 05:40 to 01:00
--	Mong Kok (Fa Yuen Street)	Lam Tin	24-hour daily service
--	Jordan Road (Ning Po Street)	Lam Tin	Daily service every 8-20 mins from 05:30 to 02:35
--	Mong Kok (Sincere Podium)	Yau Tong and Lei Yue Mun	24-hour daily service
--	Jordan Road (Woosung Street)	Yau Tong and Lei Yue Mun	Daily service every 15-20 mins from 04:20 to 00:05
--	Sai Kung Town Centre	Mong Kok (Dundas Street)	Daily service from every 6–30 mins 06:45 to 01:30
--	Kwun Tong (Yee On Street)	Kennedy Town (Belcher's Street)	Daily service every 10-15 mins from 06:45 to 10:30
--	Kennedy Town (Belcher's Street)	Kwun Tong (Yee On Street)	Daily service every 10-15 mins from 07:15 to 09:00
--	Wan Chai	Kwun Tong	Daily service every 10-15 mins from 20:30 to 01:30
--	Sai Kung Town Centre	Causeway Bay (Tang Lung Street)	Weekday service every 10-15 mins from 18:30 to 00:00 Holiday service every 10-15 mins from 19:30 to 00:00
--	Wong Tai Sin and Kowloon City	Mong Kok (Sincere Podium)	24-hour daily service
--	Kwun Tong (Yue Man Square))	Jordan Road (Shanghai Street)	24-hour daily service
--	Aberdeen (Wu Pak Street)	Kwun Tong (Yee On Street)	Weekday service every 20 mins from 07:20 to 07:40
--	To Kwa Wan (Jubilant Place)	Kwun Tong	Monday to Saturday service at AM peak only
--	Cheung Sha Wan (Yee Kuk West Street)	Yau Tong (Ko Chun Court)	Daily service every 25 mins from 05:30 to 10:00 and 14:00 to 23:30
--	Kwun Tong	Castle Peak Road	Daily service every 5-7 mins for 24-hour
--	Kowloon City and Wong Tai Sin	Castle Peak Road	Daily service from 06:30 to 23:30

As of 2024.08.07

3.3 Existing Peak Hour Traffic

3.3.1 To gain an understanding of the existing traffic conditions in the Study Area, classified turning movement counts were undertaken at the key junctions in the vicinity of the Application Site on 25 June 2024 (Tuesday). The survey periods were 07:00 to 10:00 (AM peak period) and 16:00 to 19:00 (PM peak period). **Figure 3-2** shows the locations of the surveyed junctions.

3.3.2 All vehicle flows in the subsequent analysis have been 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) and shown in **Table 3-2**.

Table 3-2 Passenger Car Unit Conversion Factors

Vehicle Type	PCU Conversion Factor	
	Traffic Signal	Priority
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

Source: Table 2.3.1.1, Chapter 2.3, Volume 2, TPDM-2024

3.3.3 By applying the above PCU factors, vehicular traffic flows in PCUs are calculated and the AM peak hour (07:30 – 08:30) and PM peak hour (17:45 – 18:45) traffic flows on the road network in the vicinity of the Application Site are shown in **Figure 3-3**.

3.4 Existing Junction Performance

3.4.1 Based on the observed peak hour traffic flows, the performances of the key junctions are assessed and the assessment results are indicated in **Table 3-3**. Detailed junction calculation sheets are given in **Annex B**.

Table 3-3 2024 Peak Hour Performance at Key Junctions

Jn. ID.	Location	Type	Capacity Index(1)	2024 Weekday	
				AM Peak	PM Peak
J1	Argyle Street / Forfar Road / Fu Ning Street	Signal	R.C.	76.0%	100%+
J2	Fu Ning Street / Fuk Cheung Street	Priority	DFC	0.26	0.04
J3	Fu Ning Street / Shing Tak Street	Priority	DFC	0.27	0.07
J4	Ma Tau Chung Road / Sung Wong Toi Road / Fu Ning Street	Signal	R.C.	88.1%	60.6%
J5	Argyle Street / Lomond Road	Signal	R.C.	58.4%	43.3%

Notes: (1) The Capacity Index for Signal controlled junction is the Reserve Capacity (RC)
The Capacity Index for Priority Junction and Roundabout is Design Flow to Capacity Ratio (DFC)

3.4.2 The results of the junction assessments show that all the key junctions in the vicinity of the Application Site operate within capacity during both the AM and PM peak hours in 2024.

3.5 Existing Link Performance

3.5.1 Based on the 2024 observed peak hour traffic flows, the peak hour performances of the key links in the vicinity of the Application Site are also assessed. The assessment results are indicated in **Table 3-4**.

Table 3-4 2024 Peak Hour Performances of Key Road Links

Link ID.	Section(1)	Direc-tion	Design Capacity (veh/hr)	Flows (veh/hr)	2024 Weekday	
					AM Peak	PM Peak
L1	Argyle Street between Forfar Road and Stirling Road	EB	4200	Flows	1048	1197
				P/Df	0.25	0.29
		WB	4200	Flows	1583	1395
				P/Df	0.38	0.33
L2	Argyle Street between Lomond Road and Forfar Road	EB	2800	Flows	1127	1271
				P/Df	0.40	0.45
		WB	4200	Flows	1751	1645
				P/Df	0.42	0.39
L3	Fu Ning Street between Fuk Cheung Street and Shing Tak Street	NB	700	Flows	323	350
				P/Df	0.46	0.50
		SB	700	Flows	164	46
				P/Df	0.23	0.07
L4	Ma Tau Chung Road between Ma Tau Kok Road and Sung Wong Toi Road	EB	4200	Flows	1249	1268
				P/Df	0.30	0.30
		WB	4200	Flows	1283	1054
				P/Df	0.31	0.25

Notes: (1) Refer to Figure 3-2 for locations of the key links

3.5.2 The results show that the key road links in the vicinity of the Proposed Development operate within capacity during peak hours in 2024.

4 FUTURE TRAFFIC SITUATION

4.1 Design Year

4.1.1 The anticipated commencement / operation for the Proposed Hospital Redevelopment is 2031 / 2032. Hence, the "Design Year" for this TIA study is set as 2035, i.e. 3 years after year 2032.

4.2 Methodology

4.2.1 In forecasting the future traffic flows on the road network in the Study Area, references are made to the following sources of information which include:

- Historical traffic data from Annual Traffic Census (ATC);
- The forecast population and employment from the 2019-based Territorial Population and Employment Data Matrix (TPEDM) planning data published by Planning Department; and
- Committed and Planned developments in the Study Area.

4.2.2 The following steps are undertaken to derive the 2035 Peak Hour Reference Flows (i.e. without the Proposed Redevelopment) and Design Flows (i.e. with the Proposed Redevelopment):

2035 Background Flows =	2024 Observed Flows x annual growth factors
2035 Reference Flows =	2035 Background Flows + additional traffic generated by planned developments
2035 Design Flows =	2035 Reference Flows + additional traffic generated by the Proposed Redevelopment

4.2.3 In particular, the operation traffic impact to be induced by the Proposed Hospital Redevelopment is assessed by comparing the 2035 Peak Hour Reference Traffic Flows against the 2035 Design Traffic Flows.

4.3 Historical Traffic Growth

4.3.1 To gain an understanding of the historical trends of traffic growth on the nearby road network, relevant traffic data over the 5-year period of 2017-2022 are extracted from the Annual Traffic Census (ATC) Reports for the ATC stations in the Study Area. **Table 4-1** describes the locations of the ATC stations and provides the corresponding traffic data.

Table 4-1 Average Annual Daily Traffic from Annual Traffic Census

Station	Road	Between		2017	2018	2019	2020	2021	2022	Average Growth Rate p.a.
3234	Kowloon City RA	Ma Tau Chung Rd	Argyle St	30240	26220	40630	38030	39650	37780	4.55%
				--	-13.29%	54.96%	-6.40%	4.26%	-4.72%	
3472	Fu Ning St	Ma Tau Chung Rd	Argyle St	6120	6090	6780	5650	5810	5530	-2.01%
				--	-0.49%	11.33%	-16.67%	2.83%	-4.82%	
3423	Argyle St	Fu Ning St	Lomond Rd	43940	44120	41460	41210	42970	40940	-1.40%
				--	0.41%	-6.03%	-0.60%	4.27%	-4.72%	
3221	Argyle St	Tin Kwong Rd	Lomond Rd	54470	52080	60870	56970	59400	56600	0.77%
				--	-4.39%	16.88%	-6.41%	4.27%	-4.71%	
4061	Sung Wong Toi Rd	Tam Kung Rd	Ma Tau Chung Rd	25980	27820	27260	26260	26990	24080	-1.51%
				--	7.08%	-2.01%	-3.67%	2.78%	-10.78%	
3436	Ma Tau Chung Rd	Ma Tau Kok Rd	Sung Wong Toi Rd	41480	40930	37120	35730	36230	34320	-3.72%
				--	-1.33%	-9.31%	-3.74%	1.40%	-5.27%	
3638	Ma Tau Chung Rd	Sung Wong Toi Rd	Slip Rd to Olympic Ave	67690	66800	65870	58320	71050	67300	-0.12%
				--	-1.31%	-1.39%	-11.46%	21.83%	-5.28%	
3618	Argyle St & FO <K11B>	Kowloon City INT	Fu Ning St	40640	40810	41100	39490	43510	41450	0.40%
				--	0.42%	0.71%	-3.92%	10.18%	-4.73%	
			Total	**310,560**	**304,870**	**321,090**	**301,660**	**325,610**	**308,000**	**-0.17%**
				-	**-1.83%**	**5.32%**	**-6.05%**	**7.94%**	**-5.41%**	

Source: 2017-2022 Annual Traffic Census (ATC) Reports published by Transport Department

4.3.2 As indicated in **Table 4-1**, there was a slight reduction of traffic volume (-0.17% per annum) on the road network in the vicinity of the Application Site over the period from 2017 – 2022.

4.4 Future Developments in the Area

4.4.1 Reference is also made to the 2019-based Territorial Population and Employment Data Matrix (TPEDM) planning data published by Planning Department. **Table 4-2** presents the population and employment data in Kowloon City District for 2019, 2026 and 2031.

Table 4-2 2019-Based TPEDM for Kowloon City District

Category	2019	2026	2031	% Growth p.a. 2019 - 2031
Population	429,300	451,100	420,050	-0.18%
Employment	212,000	237,900	227,850	+0.60%
Total	641,300	689,000	647,900	+0.09%

Source: 2019-based TPEDM published by Planning Department.

4.4.2 As shown in the table, the predicted growth of population and employment in Kowloon City District from 2019 to 2031 is approximately -0.18% and +0.60% per annum respectively.

4.5 2035 Background Traffic Flows

4.5.1 Taking into account the above factors, it is proposed to adopt an average growth rate of +0.60% per annum with reference to the growth in employment in the area as shown in **Table 4-2** to estimate the 2035 peak hour Background Traffic Flows in the Study Area.

4.6 2035 Reference Traffic Flows

4.6.1 According to the published information, **Table 4-3** presents a list of the planned and committed developments in the vicinity of the Study Area. The table also shows the estimated peak hour traffic to be generated by these developments.

Table 4-3 Planned Developments and Peak Hour Development Traffic

Location			Use	Traffic Flows (pcu/hour)			
				AM Peak		PM Peak	
				In	Out	In	Out
1	CDA at Ma Tau Kok, Kowloon	Portion 1 [A/K10/259]	Commercial (3,150m^2) (1)	8	8	12	10
			Private Housing (48 flats with average unit size 274m^2) (2)	13	16	20	14
2		Portion 2 [A/K10/256]	Commercial (6,111m^2) (1)	15	15	22	19
			Private Housing (777 flats with average unit size 64.35m^2) (3)	34	56	29	23

Location			Use	Traffic Flows (pcu/hour)			
				AM Peak		PM Peak	
				In	Out	In	Out
3	Mok Cheong Street and Sung Wong Toi Road, Ma Tau Kok, Kowloon [A/K10/265]	Phase 1	Commercial (2,729.4m^2) (1)	7	7	10	9
			Private Housing (350 flats with average unit size 70.6m^2) (3)	22	38	21	15
		Phase 2	Commercial (4,869.1 m^2) (1)	12	12	18	16
			Private Housing (396 flats with average unit size 95.7m^2) (3)	24	42	24	17
4	No. 349 Prince Edwrd Road West [A/K10/261]		Residential Care Home for Elderly (91 beds) (4)	3	4	3	2
5	Kai Tak Sports Park [A/K22/17] and [A/K22/28]		Place of Recreation Sports or Culture (215,540 m^2) (5)	107	76	116	86
			Retail (59,420 m^2) (1)	145	137	212	185
			Office (16,585 m^2) (6)	41	29	20	27
			Hotel (440 guest rooms) (7)	65	59	69	57
6	The Kai Tak Development Site 2B1 [A/K22/30]		Subsidised Housing (1,790 flats with average unit size 50.1 m^2) (8)	77	130	67	52
			Retail (4,140 m^2) (8)	11	10	15	13
7	The Kai Tak Development Site 2B2		Subsidised Housing (1,840 flats with average unit size 43.0 m^2) (9)	60	80	56	44
			Commercial (1,600 m^2) (1)	4	4	6	5
8	The Kai Tak Development Site 2B3		Subsidised Housing (1,280 flats with average unit size 47.5 m^2) (9)	55	85	52	39
			Wet Market (1,120 m^2) (1)	3	3	4	3
			Social Welfare Facilities (8,100 m^2) (1)	20	19	29	25
			Kindergarten (9 classroom) (10)	21	21	0	0
			Retail (1,180 m^2) (1)	3	3	4	4
			Underground Shopping Street Connection (no shop will be provided) (300 m^2) (11)	0	0	0	0
9	The Kai Tak Development Site 2B4		Subsidised Housing (1,840 flats with average unit size 46.5 m^2) (9)	79	122	74	55
			Kindergarten (9 classroom) (10)	21	21	0	0
			Retail (1,180 m^2) (1)	3	3	4	4

Location			Use	Traffic Flows (pcu/hour)			
				AM Peak		PM Peak	
				In	Out	In	Out
10	The Kai Tak Development Site 2B5		Subsidised Housing (1,736 flats with unit size 17.3-41.6 m²) (9)	57	75	53	42
			Non-Domestic (1,400 m²) (1)	4	4	5	5
11	The Kai Tak Development Site 2B6		Subsidised Housing (2,046 flats with unit size 25.8-44.1 m²) (9)	88	136	83	61
			Non-Domestic (1,000 m²) (1)	3	3	4	4
12	21-31 Sheung Heung Road (odd numbers), To Kwa Wan, Kowloon [A/K10/267]		Commercial (1,268 m²) (1)	4	3	5	4
			Proposed Flat (201 flats with average unit size 37.9 m²) (3)	9	15	8	6
13	Lucky Building, 3-5 San Ma Tau Street, Ma Tau Kok, Kowloon [Y/K22/3]		Office (18,478 m²) (6)	46	32	22	30
			Commercial (5,978 m²) (1)	15	14	22	19
14	Nga Tsin Wai Road / Carpenter Road Development Scheme (KC-017)	Site A	Retail (13,353 m²) (12)	33	31	48	41
			Residential (106,824 m²) (2,297 flats with average unit size 46.5 m²) (12)	98	165	85	66
			Public Vehicle Park (360 spaces) (12)	64	14	116	50
			New GIC (1,000 m²) (12)	2	2	1	2
		Site B	New GIC (10,000 m²) (12)	25	17	12	16
		Site C1	Retail (2,000 m²) (12)	5	5	7	6
		Site C2	Retail (9,949 m²) (12)	24	23	35	31
			Residential (95,592 m²) (2,056 flats with average unit size 46.5 m²) (12)	87	148	76	59
			New GIC (2,000 m²) (12)	5	3	2	3
15	Kai Tak Road / Sa Po Road Development Scheme (KC-015)		Non-domestic (8,028 m²) (13)	20	19	29	25
			Residential (40,140 m²) (810 flats with average unit size 49.6 m²) (13)	35	59	30	24
			Public Vehicle Park (300 spaces) (13)	57	30	66	51

Location		Use	Traffic Flows (pcu/hour)			
			AM Peak		PM Peak	
			In	Out	In	Out
16	Shing Tak Street / Ma Tau Chung Road Development Project (CBS-1: KC)	Non-domestic (6,449 m²) (1)	16	15	23	20
		Residential (32,243 m²) (640 flats with average unit size 50 m²) (3)	28	40	26	20
17	128 Carpenter Road, Kowloon City, Kowloon [Y/K10/3]	Residential (850 flats with average unit size 52.2 m²) (3)	36	61	31	24
		Commercial (8,882 m²) (1)	22	20	32	28
18	The Kai Tak Development Site 2A2 [A/K22/38]	Residential (about 930 flats with average unit size about 44m²) (14)	40	67	34	27
		Retail (6,270 m²) (14)	15	14	22	19
19	Ming Lun Street / Ma Tau Kok Road Development Scheme (KC-018)	Residential (1,276 flats with average unit size 53.5 m²) (15)	55	92	48	37
		Non-domestic (10,496 m²) (15)	26	25	38	33
		GIC facilities (1,000 m²) (15)	3	3	2	2
20	To Kwa Wan Road / Ma Tau Kok Road Development Scheme (KC-019)	Residential (950 flats with average unit size 53.5 m²) (15)	41	69	36	28
		Retail (7,816 m²) (15)	20	18	28	25
		GIC facilities (500 m²) (15)	2	2	1	1
21	HKHS Dedicated Rehousing Estate at Ma Tau Kok	Subsidised Housing (about 1,101 flats with average units 50 m²) (16)	47	69	45	33
		Retail (8,500 m²) (16)	21	20	31	27
		Social Welfare Facilities (16)	73	94	81	65
22	Kau Pui Lung Road / Chi Kiang Street Development Scheme (CBS-2:KC)	Private Housing (1,374 flats with average unit size 50 m²) (17)	58	99	51	39
		Starter Home (SH) units (950 flats with average unit size 58 m²) (17)	40	68	35	27
		Non-domestic (15,475 m²) (17)	38	36	56	48
		GIC facilities (2,500 m²) (17)	6	6	9	8
		Public Vehicle Carpark (Provision 164 Nos. Net Increase 64 Nos.) (17)	6	5	5	3
23	Kowloon Inland Lot No. 6414, 33 Sheung Heung Road, To Kwa Wan, Kowloon [A/K10/273]	Residential (76 flats with average unit size about 38.5 m²) (18)	4	6	3	3
		Non-domestic (585.3 m²) (18)	2	2	3	2

Location		Use	Traffic Flows (pcu/hour)			
			AM Peak		PM Peak	
			In	Out	In	Out
24	Junction of Sung Wong Toi Road and To Kwa Wan Road, To Kwa Wan, Kowloon [A/K10/275]	Residential (756 flats with average unit size 40.7 m^2) (9)	33	51	31	23
		Non-domestic (6,150 m^2) (1)	15	15	22	20

Notes: (1) Peak Hour trip rates for Retail / Shopping Complex, TPDM Volume 1, Chapter 3, Appendix 1, Annex C, Table 2.
(2) Peak Hour trip rates for Private Housing: Low-Density, TPDM Volume 1, Chapter 3, Appendix 1, Annex C, Table 1.
(3) Peak Hour trip rates for Private Housing: High-Density, TPDM Volume 1, Chapter 3, Appendix 1, Annex C, Table 1.
(4) Source: TIA Report of the Approved TPB Application No. of A/K10/261.
(5) Trip Generation Survey at Tseung Kwan O Sports Park undertaken in March 2021
(6) Peak Hour trip rates for Office, TPDM Volume 1, Chapter 3, Appendix 1, Annex C, Table 2.
(7) Peak Hour trip rates for Hotel, TPDM Volume 1, Chapter 3, Appendix 1, Annex C, Table 2.
(8) Source: TIA Report of the Application No. of A/K22/30 updated by May 2021.
(9) Peak Hour trip rates for Subsidized Housing, TPDM Volume 1, Chapter 3, Appendix 1, Annex C, Table 1.
(10) Peak Hour trip rates for Kindergarten, TGS2006.
(11) Source: MPC Paper No. A/K22/35 of approved planning application A/K22/35 updated by 23rd March 2023.
(12) Source: TIA Report of Urban Renewal Authority Nga Tsin Wai Road / Carpenter Road Scheme (KC-017) updated by May 2022. The Scheme is planned to be implemented in four phases and full completion will be by year 2037, of which Site A, Site B and Site C1 will be completed by 2034, Site C2 will be completed by 2037.
(13) Source: TIA Report of URA KC-015 in Kowloon City: Redevelopment of Kai Tak Road / Sa Po Road updated by Feb 2019.
(14) Source: TIA Report of the Application No. of A/K22/38 updated by June 2024.
(15) Source: TIA Report of URA Ming Lun Street / Ma Tau Kok Road (KC-018) and To Kwa Wan Road / Ma Tau Kok Road (KC-019) updated by September 2022.
(16) Source: TIA Report of Hong Kong Housing Society Dedicated Rehousing Estate at Ma Tau Kok updated by September 2021.
(17) Source: TIA Report of Kau Pui Lung Road / Chi Kiang Street Development Scheme (CBS-2:KC) updated by March 2023.
(18) Source: TIA Report of the Application No. of A/K10/273 updated by April 2023.

4.6.2 It is understood that Chun Seen Mei Chuen and Ma Tau Wai Estate will be redeveloped but no programme has been published yet.

4.6.3 The additional development trips by the planned developments are then added to the 2035 peak hour Background Traffic Flows to derive the 2035 peak hour Reference Traffic Flows (i.e., without the Proposed Redevelopment) and the results are shown in **Figure 4-1**.

4.7 Development Trip Generations

4.7.1 As the existing medical services currently provided by EH will be maintained after the Redevelopment, it is assumed that the future travel patterns of visitors and staff would be similar to the current situation. Trip generation surveys were also carried out on 6 June 2019 (Thursday) between 07:00 – 10:00 and 16:00 – 19:00 to record the amount of vehicular trips generated by the existing EH. The amount of AM and PM peak hour trips generated by the hospital are summarized in **Table 4-4**.

Table 4-4 Existing and Estimated Peak Hour Development Traffic

	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
Existing Evangel Hospital (57 beds)				
Observed Trip Generations (pcu/hr)	7	5	1	7
Observed Trip Rates (pcu/hr/bed or room)	0.123	0.088	0.018	0.123
Indicative Development Scheme (108 beds)				
Estimated Trip Generations (pcu/hr)	14	10	2	14
Total 2-way Trips (pcu/hr)	24		16	

Notes: (1) No. of beds include 104 in-patient beds and 4 HDUs.

4.7.2 Based on the observed trip generation rates, the peak hour vehicular trips to be induced by the Proposed Hospital Redevelopment are derived and the results are also shown in **Table 4-4**. It is forecast that the proposed hospital redevelopment would induce total two-way traffic of 24 pcu's (14 in and 10 out) and 16 pcu's (2 in and 14 out) in the AM and PM peak hour respectively.

4.7.3 Compared to the existing traffic flows, there would be a net increase of 12 pcu's (2-way) in the AM peak and 8 pcu's in the PM peak hour. However, to provide conservative estimates, the existing traffic flows are not deducted in the subsequent traffic assessments. The peak hour development traffic flows are assigned to the road network in the Study Area as shown in **Figure 4-2.**

4.8 Design Years Traffic Flows

4.8.1 By adding the peak hour development flows (**Figure 4-2**) onto the forecast 2035 Peak Hour Reference Flows (**Figure 4-1**), the 2035 Peak Hour Design Flows (i.e. with Proposed Hospital Redevelopment) are derived and shown in **Figure 4-3**.

5 TRAFFIC IMPACT ASSESSMENT

5.1 Traffic Impact Assessment

5.1.1 Based on the 2035 Reference Flows (i.e. without Proposed Hospital Redevelopment) and 2035 Design Flows (i.e. with Proposed Hospital Redevelopment), junction and link capacity assessments are undertaken and the results are presented in **Table 5-1** with detailed calculation sheets provided in **Annex C**.

Table 5-1 2035 Peak Hour Performance at Key Junctions

Jn. ID.	Location	Type	Capacity Index(1)	Reference		Design	
				AM Peak	PM Peak	AM Peak	PM Peak
J1	Argyle Street / Forfar Road / Fu Ning Street	Signal	R.C.	52.3%	83.4%	51.3%	82.5%
J2	Fu Ning Street / Fuk Cheung Street	Priority	DFC	0.29	0.04	0.31	0.07
J3	Fu Ning Street / Shing Tak Street	Priority	DFC	0.34	0.12	0.35	0.13
J4	Ma Tau Chung Road / Sung Wong Toi Road / Fu Ning Street	Signal	R.C.	38.0%	27.2%	38.0%	27.2%
J5	Argyle Street / Lomond Road	Signal	R.C.	48.3%	34.1%	48.1%	33.8%

Notes: (1) The Capacity Index for Signal-controlled junction is Reserve Capacity (RC)
The Capacity Index for Priority Junction and Roundabout is Design Flow to Capacity Ratio (DFC)

Table 5-2 2035 Peak Hour Performance at Road Links

Link ID.	Section(1)	Direc-tion	Design Capacity (veh/hr)	Flows (veh/hr)	2035 Reference		2035 Design	
					AM Peak	PM Peak	AM Peak	PM Peak
L1	Argyle Street between Forfar Road and Stirling Road	EB	4200	Flows	1180	1340	1180	1340
				P/Df	0.28	0.32	0.28	0.32
		WB	4200	Flows	1705	1480	1713	1481
				P/Df	0.41	0.35	0.41	0.35
L2	Argyle Street between Lomond Road and Forfar Road	EB	2800	Flows	1261	1413	1261	1413
				P/Df	0.45	0.50	0.45	0.50
		WB	4200	Flows	1961	1779	1965	1785
				P/Df	0.47	0.42	0.47	0.43
L3	Fu Ning Street between Fuk Cheung Street and Shing Tak Street	NB	700	Flows	437	419	441	420
				P/Df	0.62	0.60	0.63	0.60
		SB	700	Flows	193	68	199	75
				P/Df	0.28	0.10	0.28	0.11

Link ID.	Section(1)	Direc-tion	Design Capacity (veh/hr)	Flows (veh/hr)	2035 Reference		2035 Design	
					AM Peak	PM Peak	AM Peak	PM Peak
L4	Ma Tau Chung Road between Ma Tau Kok Road and Sung Wong Toi Road	EB	4200	Flows	1606	1554	1608	1554
				P/Df	0.38	0.37	0.38	0.37
		WB	4200	Flows	1636	1351	1636	1351
				P/Df	0.39	0.32	0.39	0.32

Notes: (1) Refer to Figure 3-2 for locations of the key links

5.1.2 It is indicated in **Table 5-1** that all of the assessed junctions and links in the vicinity of the Application Site would be operating within capacity during the AM and PM peak hour for both the 2035 Reference (without Proposed Hospital Redevelopment) and Design (with Proposed Hospital Redevelopment) scenarios.

5.1.3 Therefore, it can be concluded that the traffic generated by the proposed Hospital redevelopment would not cause adverse traffic impact to the road network in the vicinity of the Application Site.

6 CONSTRUCTION TRAFFIC IMPACT ASSESSMENT

6.1 Construction Traffic Impact Assessment

6.1.1 The proposed development is anticipated to be completed by Year 2031 / 2032. For conservative, year 2032 is adopted as the peak construction year. Based on the current available information, the estimated peak construction volume would be around 4veh/hr.

6.1.2 Junction and link capacity assessments are undertaken for year 2032, with traffic conditions including the additional construction traffic summarized presented in **Table 6-1** and **Table 6.2**. Detailed calculation sheets are also provided in **Annex D**.

Table 6-1 2032 Peak Hour Performance at Key Junctions

Jn. ID.	Location	Type	Capacity Index(1)	Reference		Design	
				AM Peak	PM Peak	AM Peak	PM Peak
J1	Argyle Street / Forfar Road / Fu Ning Street	Signal	R.C.	54.9%	86.5%	54.4%	85.9%
J2	Fu Ning Street / Fuk Cheung Street	Priority	DFC	0.29	0.04	0.30	0.05
J3	Fu Ning Street / Shing Tak Street	Priority	DFC	0.34	0.11	0.35	0.13
J4	Ma Tau Chung Road / Sung Wong Toi Road / Fu Ning Street	Signal	R.C.	40.1%	29.1%	39.9%	28.9%
J5	Argyle Street / Lomond Road	Signal	R.C.	51.0%	36.5%	51.0%	36.5%

Notes: (1) The Capacity Index for Signal-controlled junction is Reserve Capacity (RC)
The Capacity Index for Priority Junction and Roundabout is Design Flow to Capacity Ratio (DFC)

Table 6-2 2032 Peak Hour Performance at Road Links

Link ID.	Section(1)	Direc-tion	Design Capacity (veh/hr)	Flows (veh/hr)	2032 Reference		2032 Design	
					AM Peak	PM Peak	AM Peak	PM Peak
L1	Argyle Street between Forfar Road and Stirling Road	EB	4200	Flows	1159	1317	1159	1317
				P/Df	0.28	0.31	0.28	0.31
		WB	4200	Flows	1674	1455	1678	1459
				P/Df	0.40	0.35	0.40	0.35
L2	Argyle Street between Lomond Road and Forfar Road	EB	2800	Flows	1239	1388	1239	1388
				P/Df	0.44	0.50	0.44	0.50
		WB	4200	Flows	1929	1749	1929	1749
				P/Df	0.46	0.42	0.46	0.42

Link ID.	Section(1)	Direc-tion	Design Capacity (veh/hr)	Flows (veh/hr)	2032 Reference		2032 Design	
					AM Peak	PM Peak	AM Peak	PM Peak
L3	Fu Ning Street between Fuk Cheung Street and Shing Tak Street	NB	700	Flows	431	412	431	412
				P/Df	0.62	0.59	0.62	0.59
		SB	700	Flows	188	67	192	71
				P/Df	0.27	0.10	0.27	0.10
L4	Ma Tau Chung Road between Ma Tau Kok Road and Sung Wong Toi Road	EB	4200	Flows	1579	1528	1583	1532
				P/Df	0.38	0.36	0.38	0.36
		WB	4200	Flows	1610	1330	1610	1330
				P/Df	0.38	0.32	0.38	0.32

Notes: (1) Refer to Figure 3-2 for locations of the key links

6.1.3 The results indicate that the key junctions and links in the vicinity of the Application Site would operate within capacity during the AM and PM peak hours even with the additional construction traffic during the construction period, i.e. the construction traffic would not create significant traffic impact on the nearby road network.

7 SUMMARY AND CONCLUSION

7.1 Summary

7.1.1 The Application Site at No. 222 Argyle Street, Kowloon is subject of a Planning Approval under RR (TPB Ref: Y/K10/5) granted by Town Planning Board on 28 July 2023 to amend the BHR from 5 storeys to 80mPD. To facilitate the revised redevelopment scheme, this TIA report is carried out in support of the S12A Planning Application for Proposed Amendment to the Approved OZP to relax the BHR to 110mPD.

7.1.2 Classified turning movement counts were carried out at the key junctions in the vicinity of the Application Site over the AM and PM peak periods on 25 June 2024 (Tuesday). Junction capacity assessments are carried out for the AM and PM peak hours for the key junctions in the vicinity of the Application Site. The results indicate that all the key junctions perform satisfactorily during the AM and PM peak hours on a weekday in 2024.

7.1.3 The anticipated completion year for the Proposed Hospital Redevelopment is 2031 / 2032 and hence the “Design Year” for this study is set as 2035, i.e. 3 years after the completion year. Having reviewed the historical trend of traffic growth in the area and the forecast development intensity in the area, to provide conservative estimates, a growth factor of +0.6% per annum is adopted for estimating the 2035 Background Traffic Flows.

7.1.4 The additional traffic to be induced by the planned developments are added to the 2035 Background Traffic Flows to obtain the 2035 Reference Traffic Flows.

7.1.5 References are made to the peak hour traffic generations observed at the existing Evangel Hospital. It is estimated that total two-way traffic of around 24 and 16 pcu’s would be induced by the Proposed Hospital Redevelopment during the AM and PM peak hour respectively. To provide conservative estimates, the existing flows generated by the existing hospital are not deducted in the assessment. The development traffic is added to the 2035 Peak Hour Reference Traffic Flows (i.e. without Proposed Redevelopment) to derive the 2035 Peak Hour Design Traffic Flows (i.e. with Proposed Hospital Redevelopment).

7.1.6 Traffic impact assessments are undertaken by comparing the peak hour junction performances of the 2035 Reference scenario against the Design scenario. Assessment results indicate that all the assessed junctions in the vicinity of the Application Site would perform within capacity during the AM and PM peak periods for both scenarios.

7.1.7 For construction traffic impact assessment, the completion year 2032 of the Proposed Redevelopment is adopted as the peak construction period. Based on the latest available information, the peak hour two-way construction traffic flows of 8 vehicles are adopted in the assessment. Assessment results indicate that the construction traffic would not create adverse traffic impact in the Study Area over the construction periods.

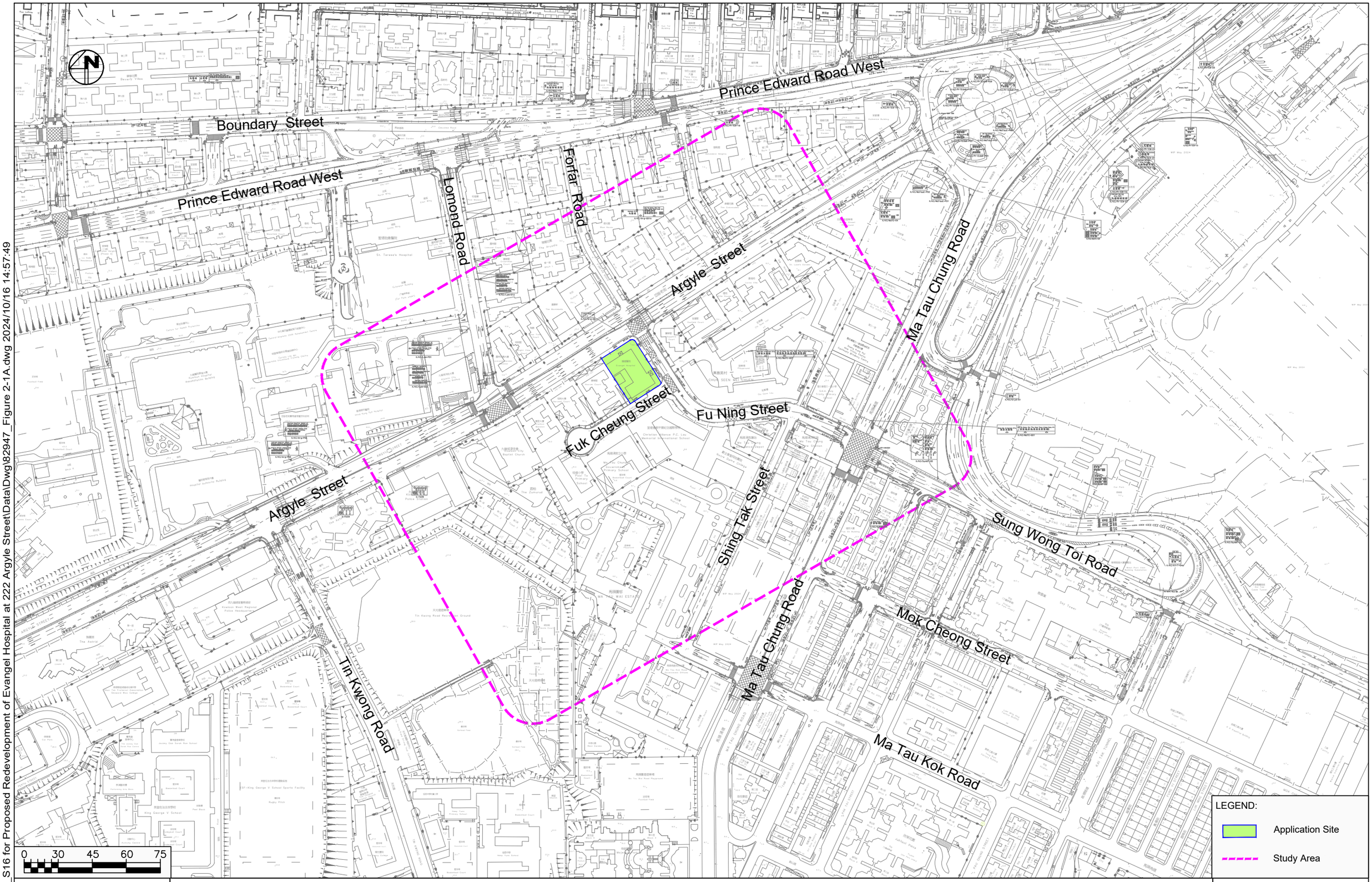
7.1.8 As the existing run-in/out situated at Fu Ning Street is very close to the junction with Argyle Street which is a main road in the district, it is proposed to relocate the run-in/out to Fuk Cheung Street in order to improve the traffic conditions on the junction approach of Fu Ning Street, which is the same arrangement adopted in the Approved S12A Scheme.

7.1.9 Sufficient parking and loading/loading provisions will be provided within the Proposed Hospital Redevelopment to satisfy the operation needs of the hospital and/or in accordance with relevant HKPSG requirements as appropriate.

7.2 Conclusions

7.2.1 Based on the results of the TIA study, it is concluded that the IDS of the Proposed Hospital Redevelopment would not induce adverse traffic impact on the road network in the vicinity of the Application Site.

Figures



X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 2-1A.dwg 2024/10/16 14:57:49

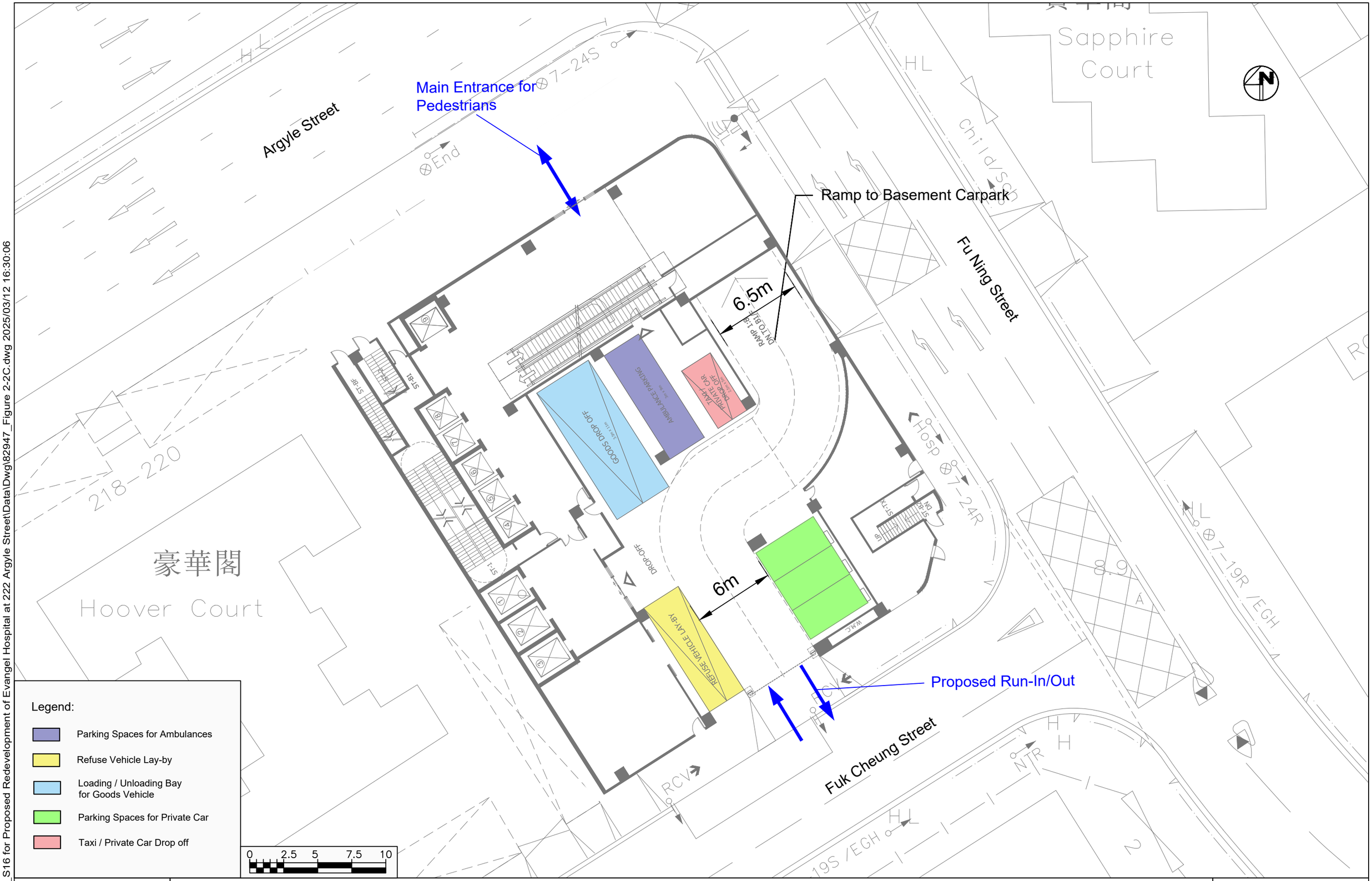
OZZO TECHNOLOGY

Date	Scale
16/10/2024	1:3000

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Site Location and Study Area

Project No. 82947	Rev.
Dwg No. Figure 2-1	A



OZZO TECHNOLOGY

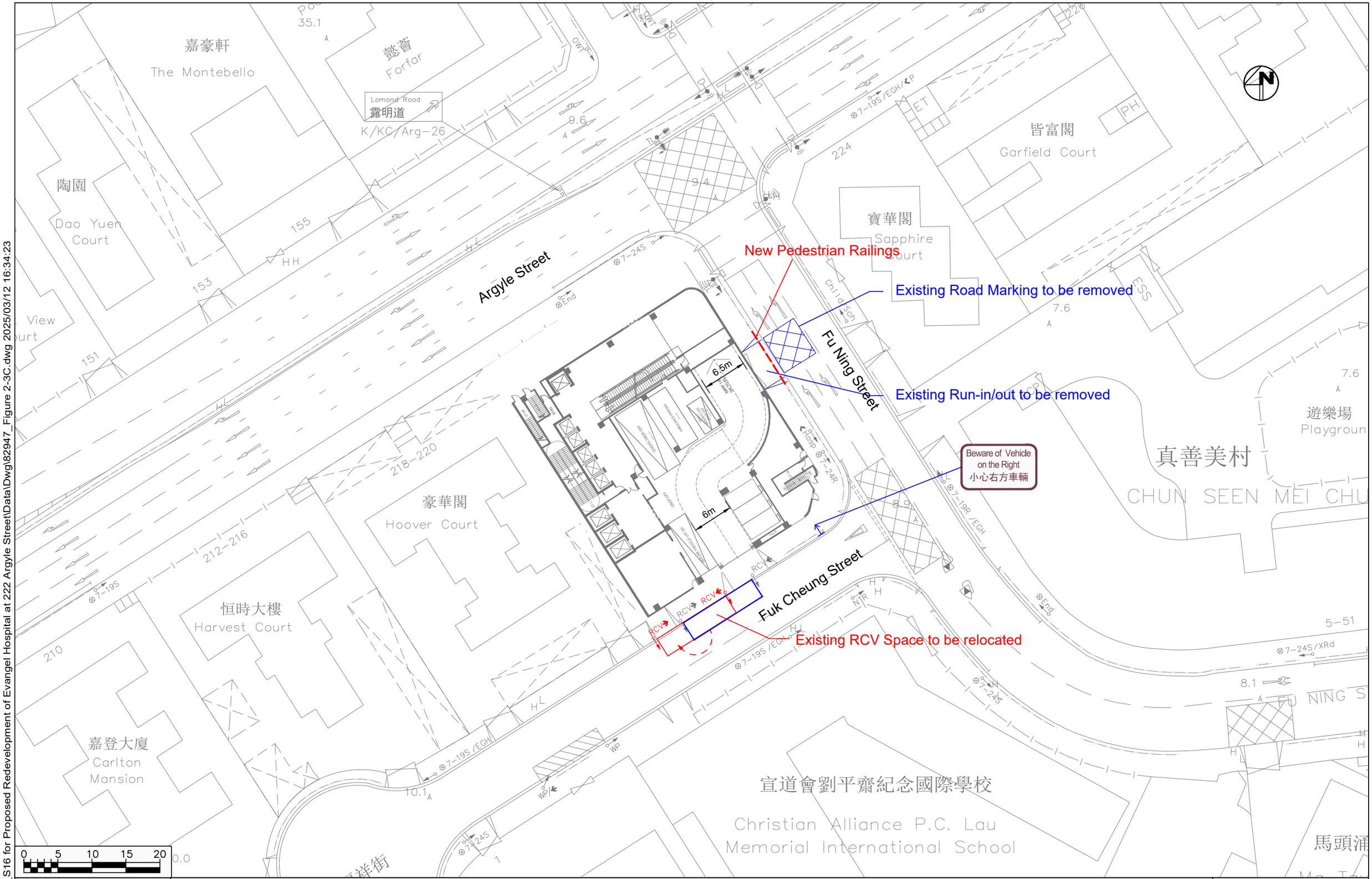
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Proposed Vehicular and Pedestrian Access Arrangement at Ground Level

Date	Scale
12/03/2025	1:250

Project No.	Rev.
82947	C
Dwg No. Figure 2-2	

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 2-2C.dwg 2025/03/12 16:30:06



X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 2-3C.dwg 2025/03/12 16:34:23

OZZO TECHNOLOGY

Date	Scale
12/03/2025	1:500

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Existing Road Markings / Street Furniture to be Modified

Project No. 82947	Rev.
Dwg No. Figure 2-3	C

Legend:

- Parking Spaces for Accessible Car
- Parking Spaces for Private Car
- Parking Spaces for Hearse
- Parking Spaces for Motorcycle

0 2 4 6 8

OZZO TECHNOLOGY

Date	Scale
12/03/2025	1:200

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Proposed Parking Layout at Basement B1

Project No. 82947	Rev.
Dwg No. Figure 2-4	C

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 2-4C.dwg 2025/03/12 15:25:58

Legend:

- Parking Spaces for Accessible Car
- Parking Spaces for Private Car
- Parking Spaces for Motorcycle

0 2 4 6 8

OZZO TECHNOLOGY

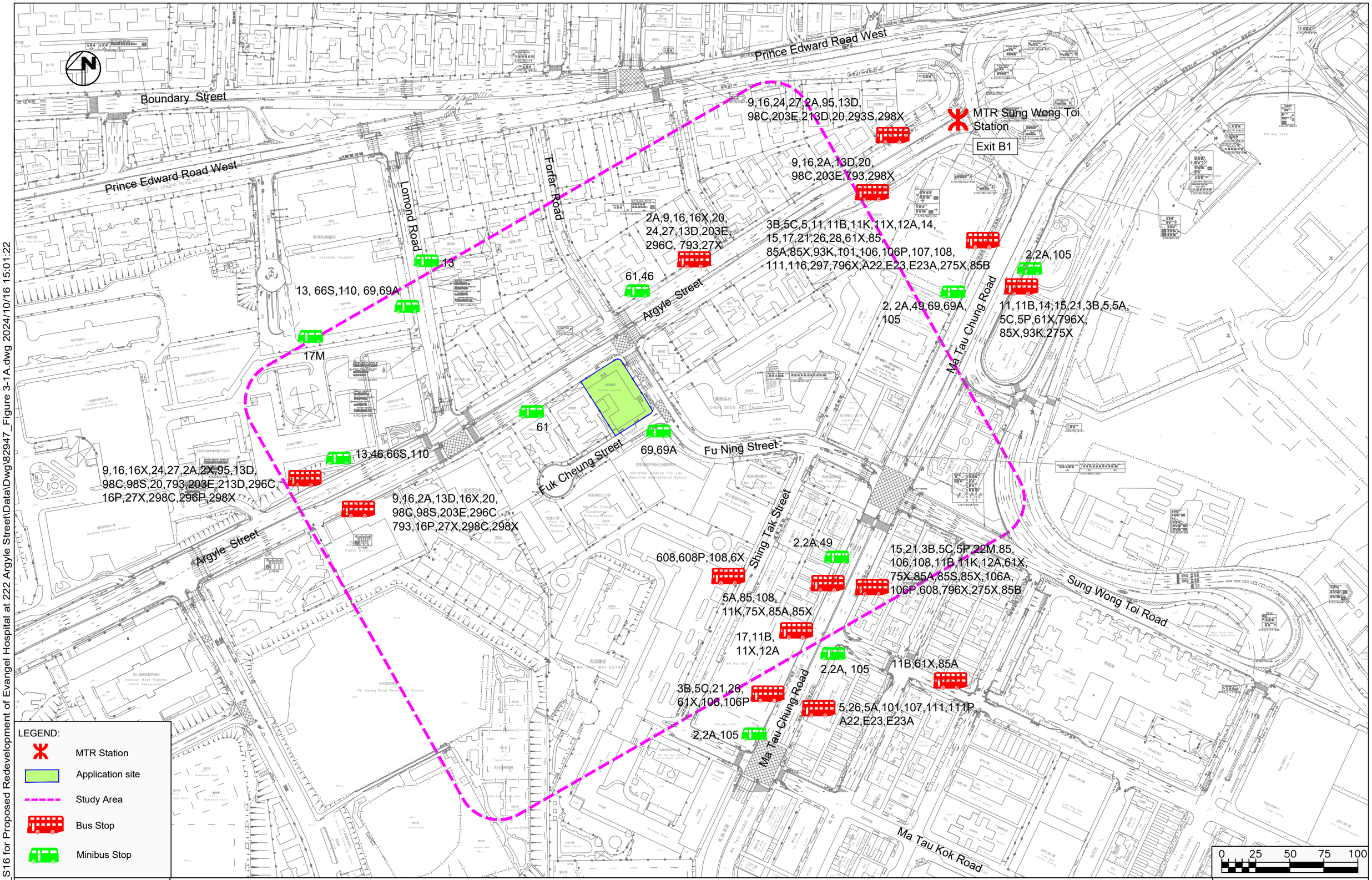
Date	Scale
12/03/2025	1:200

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Proposed Parking Layout at Basement B2

Project No. 82947	Rev.
Dwg No. Figure 2-5	C

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 2-5C.dwg 2025/03/12 14:02:42



OZZO TECHNOLOGY

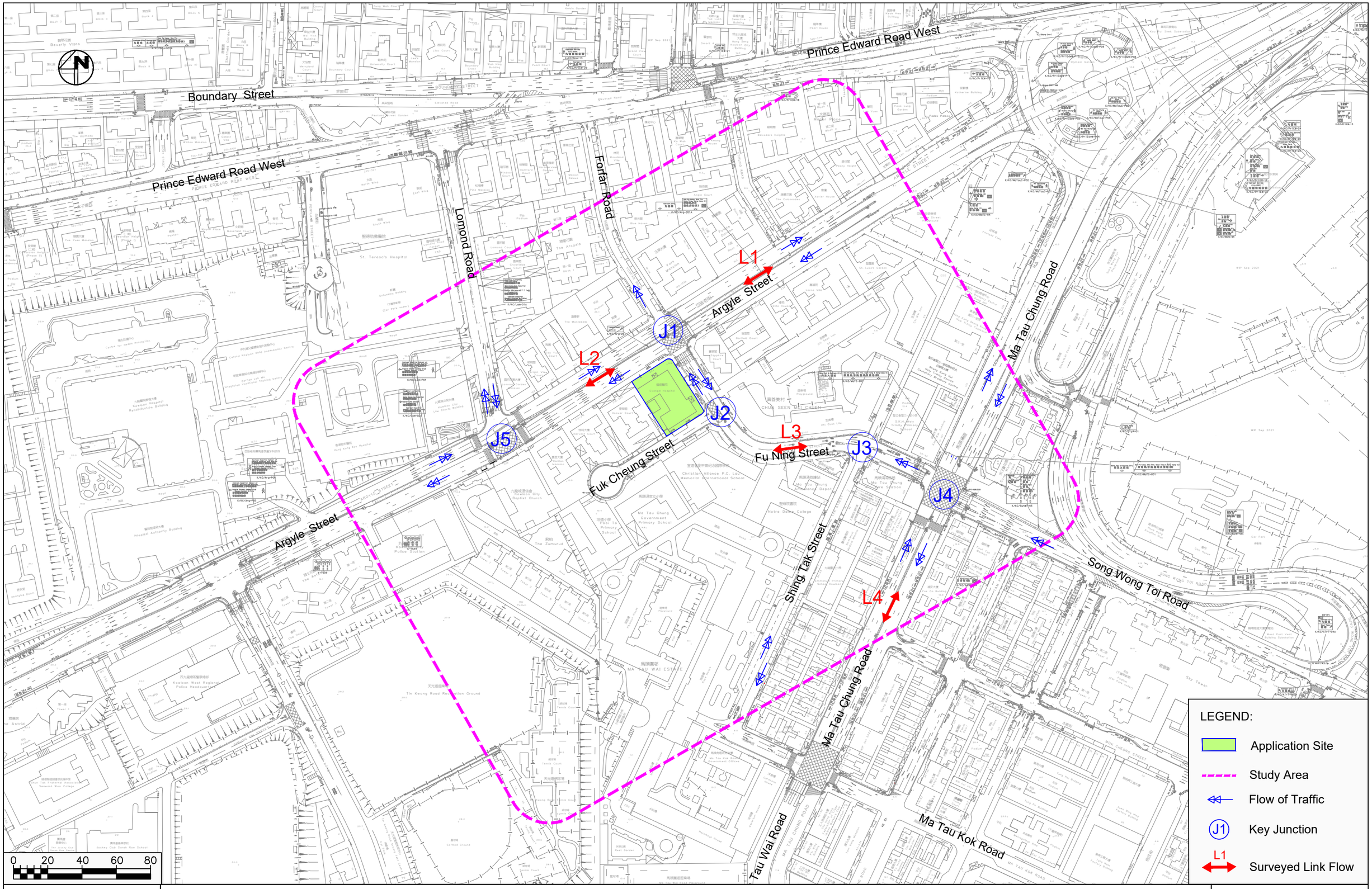
Date	Scale
16/10/2024	1:2500

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Existing Public Transport Inventory

Project No. 82947	Rev.
Dwg No. Figure 3-1	A

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 3-1A.dwg 2024/10/16 15:01:22



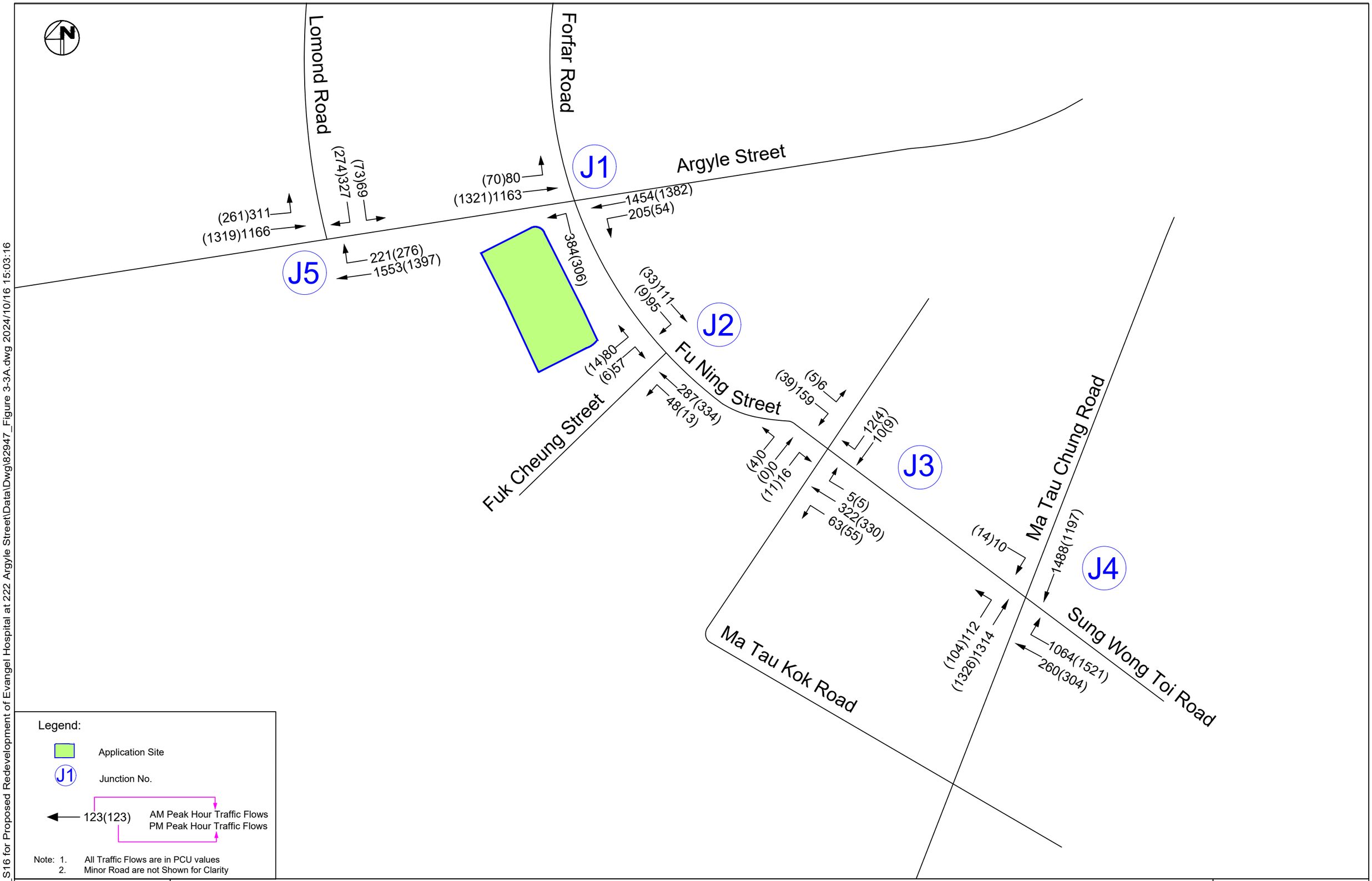
OZZO TECHNOLOGY

Date	Scale
16/10/2024	1:2000

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Locations and Types of Surveys

Project No. 82947	Rev.
Dwg No. Figure 3-2	A



Legend:

Application Site

J1 Junction No.

123(123) AM Peak Hour Traffic Flows
PM Peak Hour Traffic Flows

Note: 1. All Traffic Flows are in PCU values
2. Minor Road are not Shown for Clarity

OZZO TECHNOLOGY

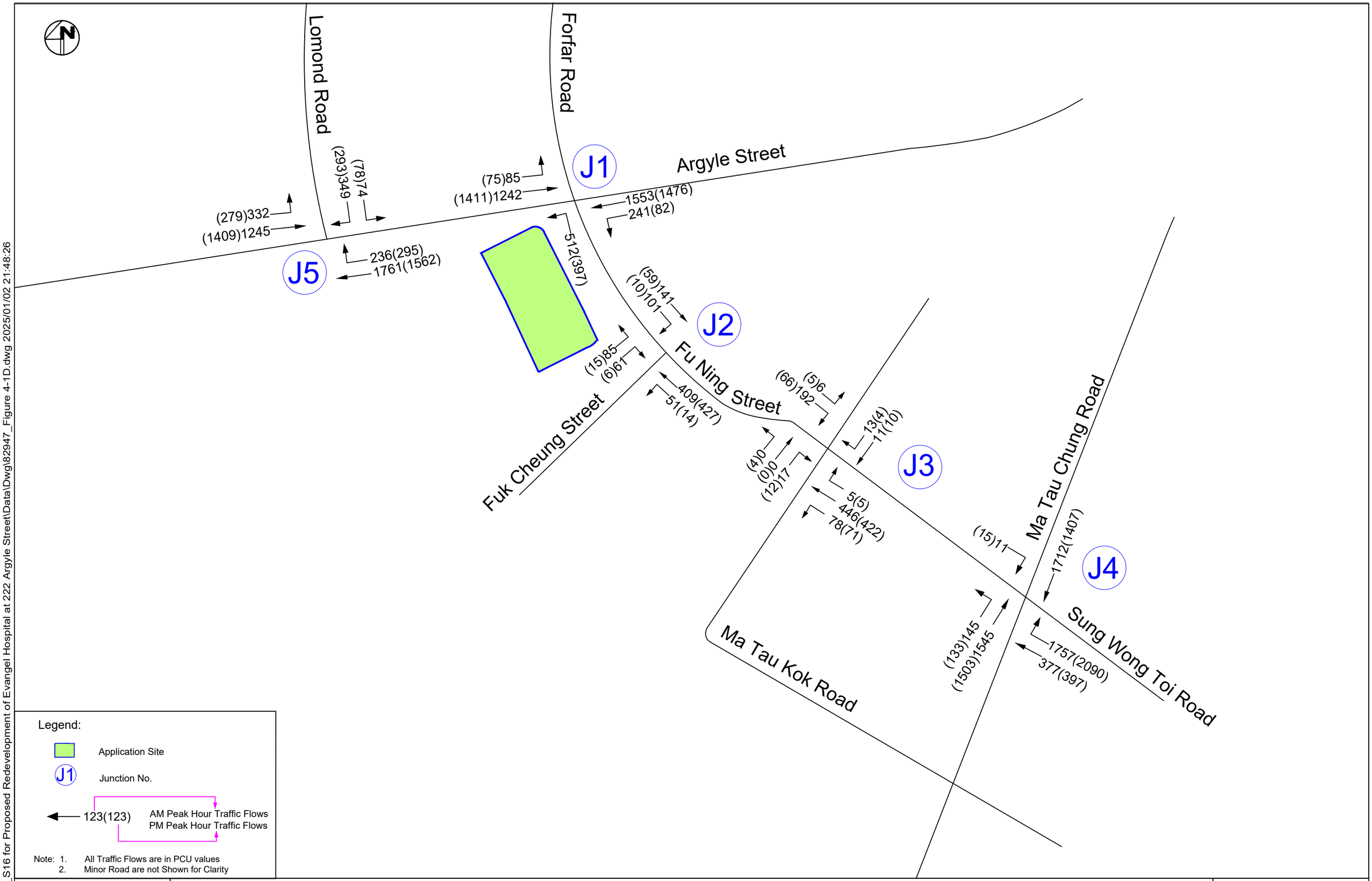
Date	Scale
16/10/2024	NTS

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

2024 Observed Peak Hour Traffic Flows

Project No. 82947	Rev.
Dwg No. Figure 3-3	A

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 3-3A.dwg 2024/10/16 15:03:16



Legend:

Application Site

J1 Junction No.

123(123) AM Peak Hour Traffic Flows
PM Peak Hour Traffic Flows

Note: 1. All Traffic Flows are in PCU values
2. Minor Road are not Shown for Clarity

OZZO TECHNOLOGY

Date 2/1/2025

Scale NTS

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

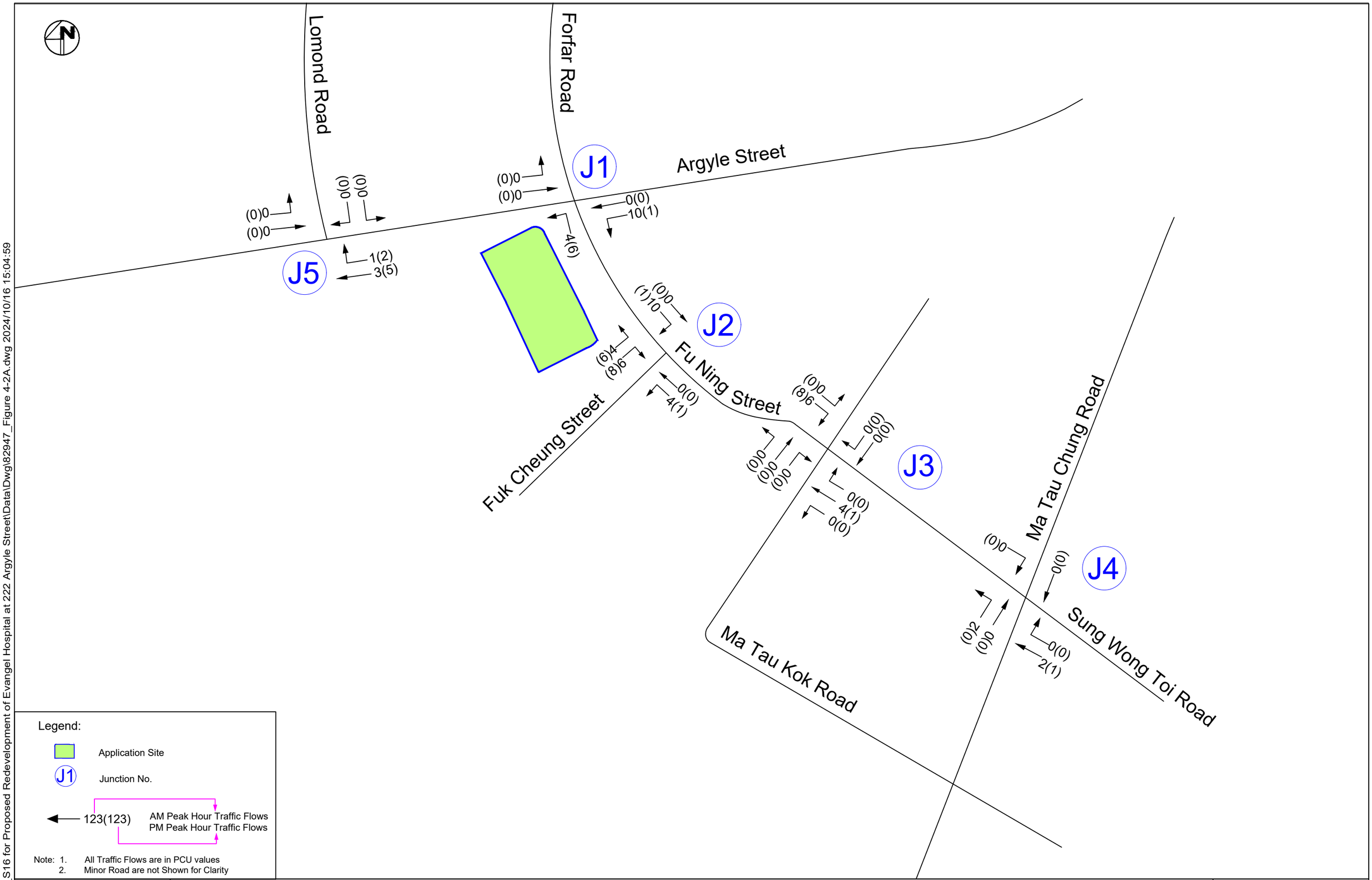
2035 Reference Peak Hour Traffic Flows

Project No. 82947

Dwg No. Figure 4-1

Rev. D

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 4-1D.dwg 2025/01/02 21:48:26



OZZO TECHNOLOGY

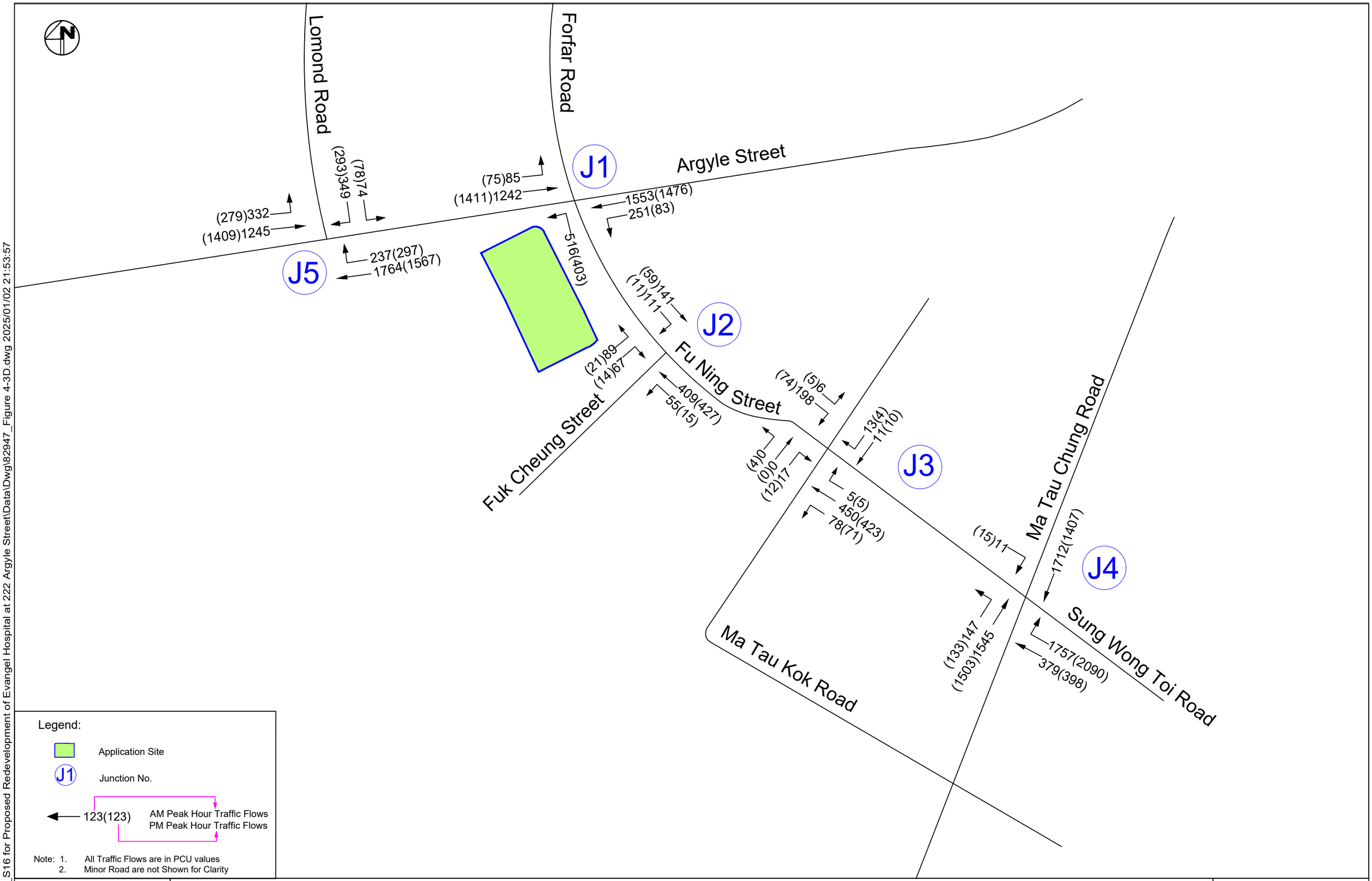
Date	Scale
16/10/2024	NTS

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Peak Hour Development Traffic Flows

Project No. 82947	Rev.
Dwg No. Figure 4-2	A

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 4-2A.dwg 2024/10/16 15:04:59



OZZO TECHNOLOGY

Date 2/1/2025

Scale NTS

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

2035 Design Peak Hour Traffic Flows

Project No. 82947

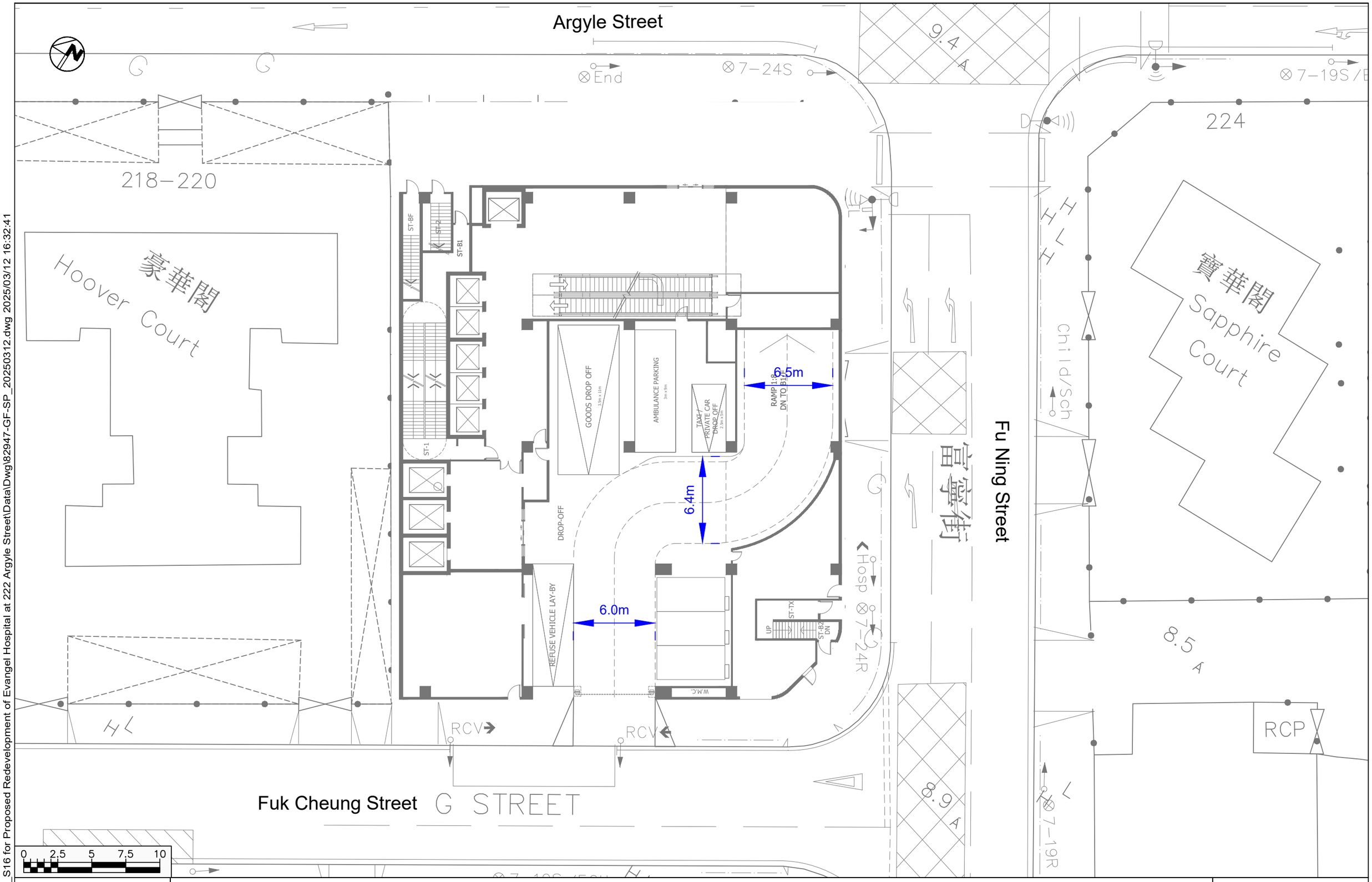
Dwg No. Figure 4-3

Rev. D

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947_Figure 4-3D.dwg 2025/01/02 21:53:57

Annex A

Swept Path Assessment Results



X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-GF-SP_20250312.dwg 2025/03/12 16:32:41

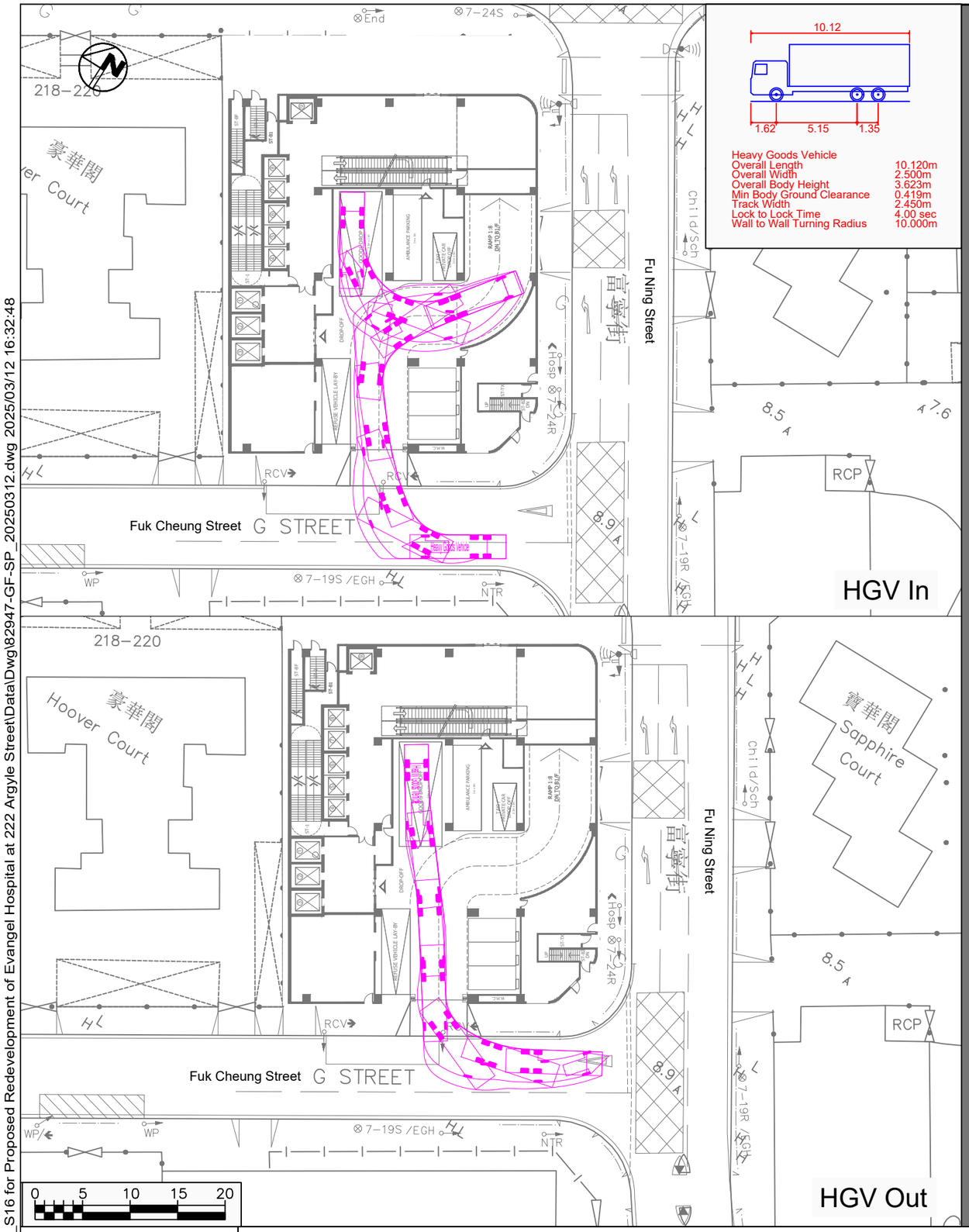
OZZO TECHNOLOGY

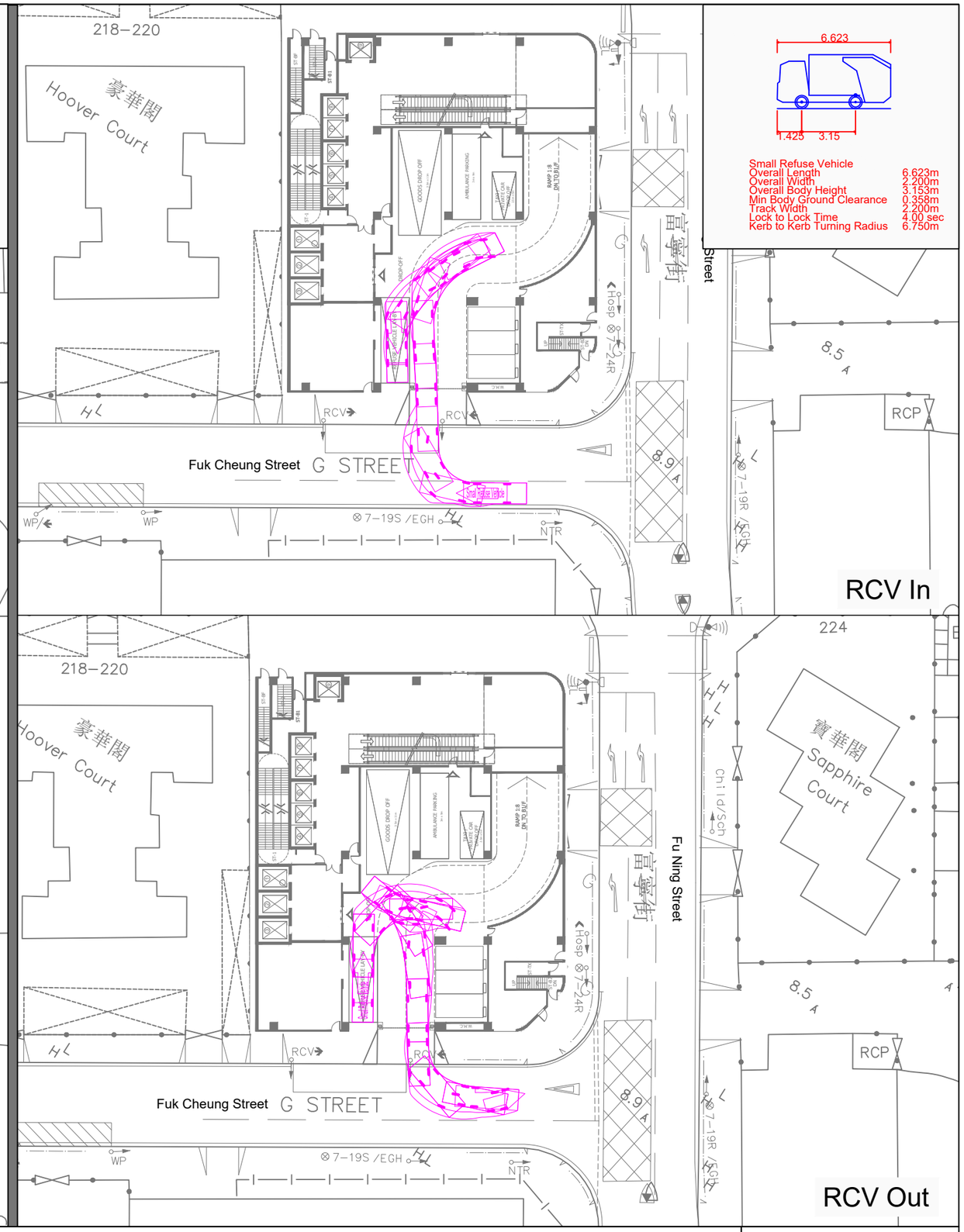
Date	Scale
12/03/2025	1:250

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Proposed Parking Layout on Ground Floor

Project No. 82947	Rev.
Dwg No. 0312-GF-Layout	-





X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-GF-SP_20250312.dwg 2025/03/12 16:32:48

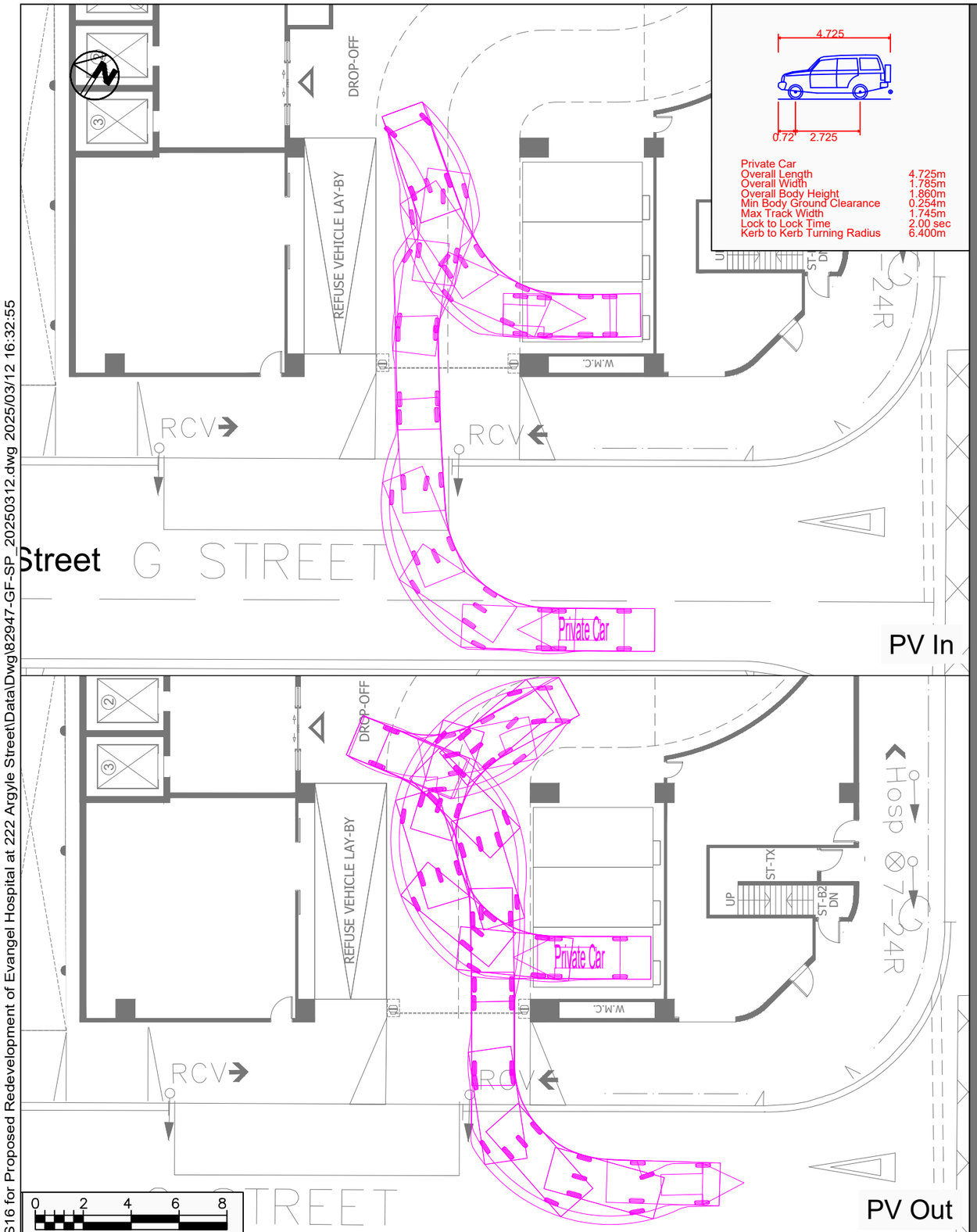
OZZO TECHNOLOGY

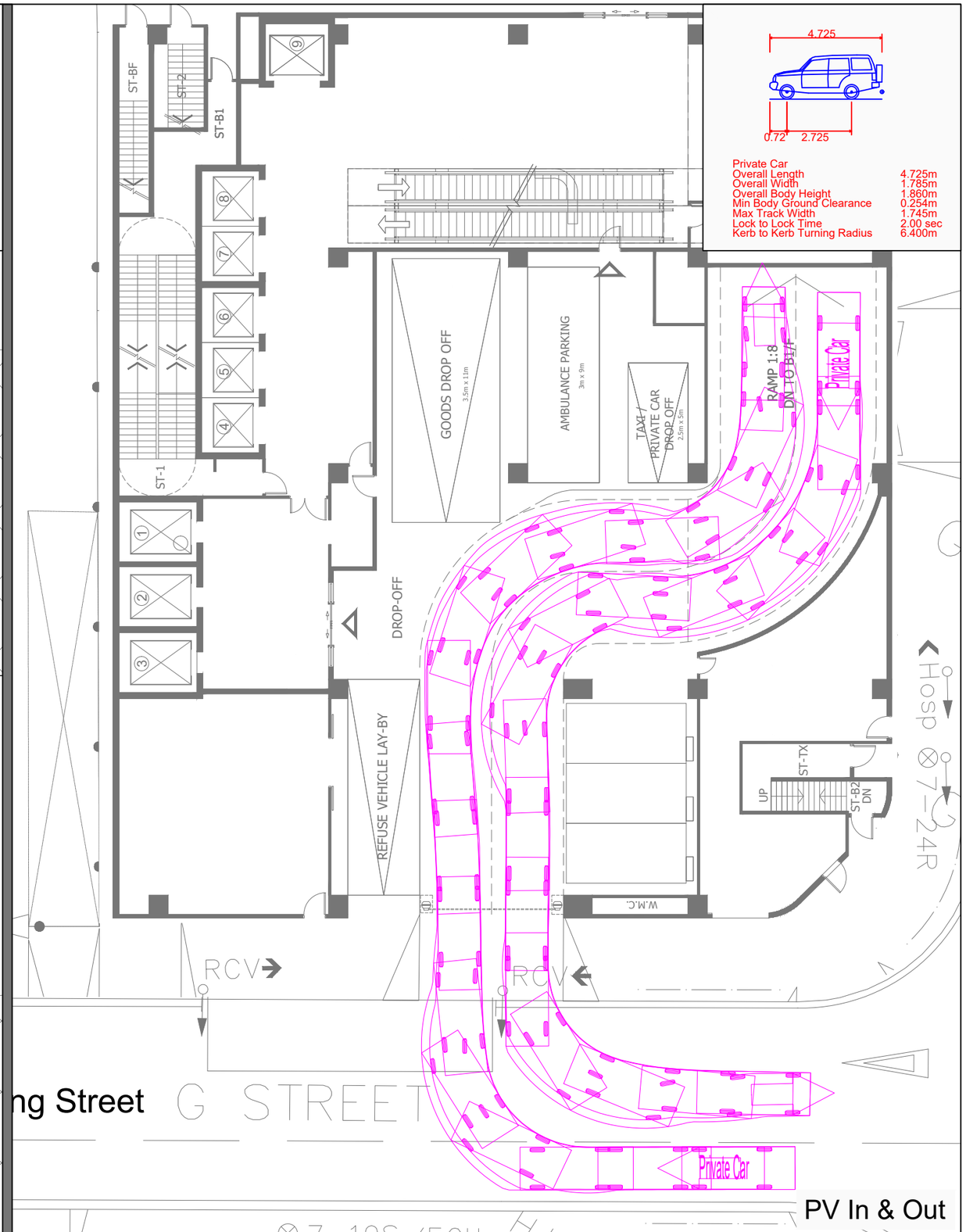
Date	Scale
12/03/2025	1:500

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Swept Path Assessments on Ground Floor

Project No. 82947	Rev.
Dwg No. 0312-GF-SP1	-





X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-GF-SP_20250312.dwg 2025/03/12 16:32:55

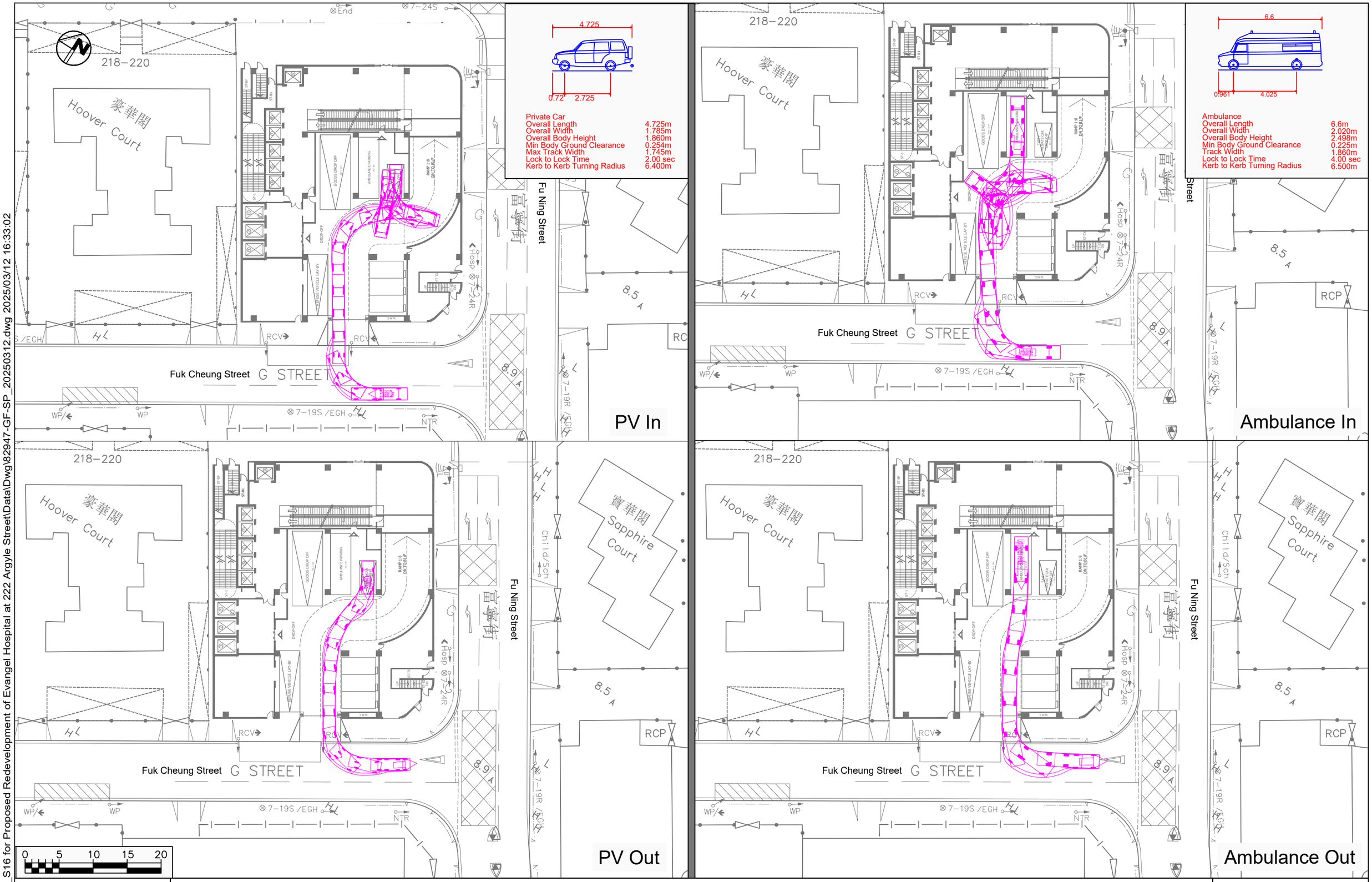
OZZO TECHNOLOGY

Date	Scale
12/03/2025	1:200

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Swept Path Assessments on Ground Floor

Project No. 82947	Rev.
Dwg No. 0312-GF-SP2	-



X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-GF-SP_20250312.dwg 2025/03/12 16:33:02

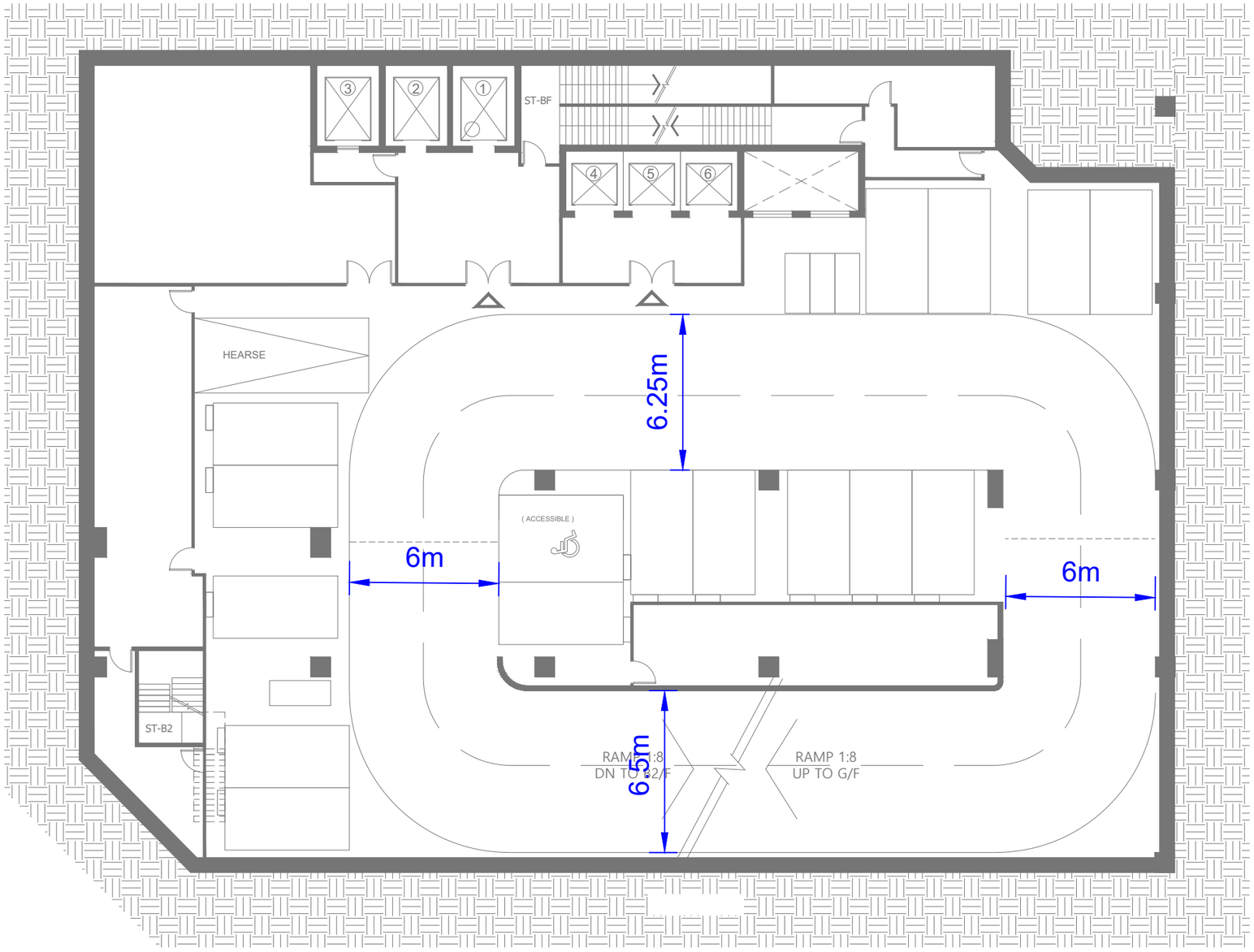
OZZO TECHNOLOGY

Date	Scale
12/03/2025	1:500

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Swept Path Assessments on Ground Floor

Project No. 82947	Rev.
Dwg No. 0312-GF-SP3	-



0 2 4 6 8

OZZO TECHNOLOGY

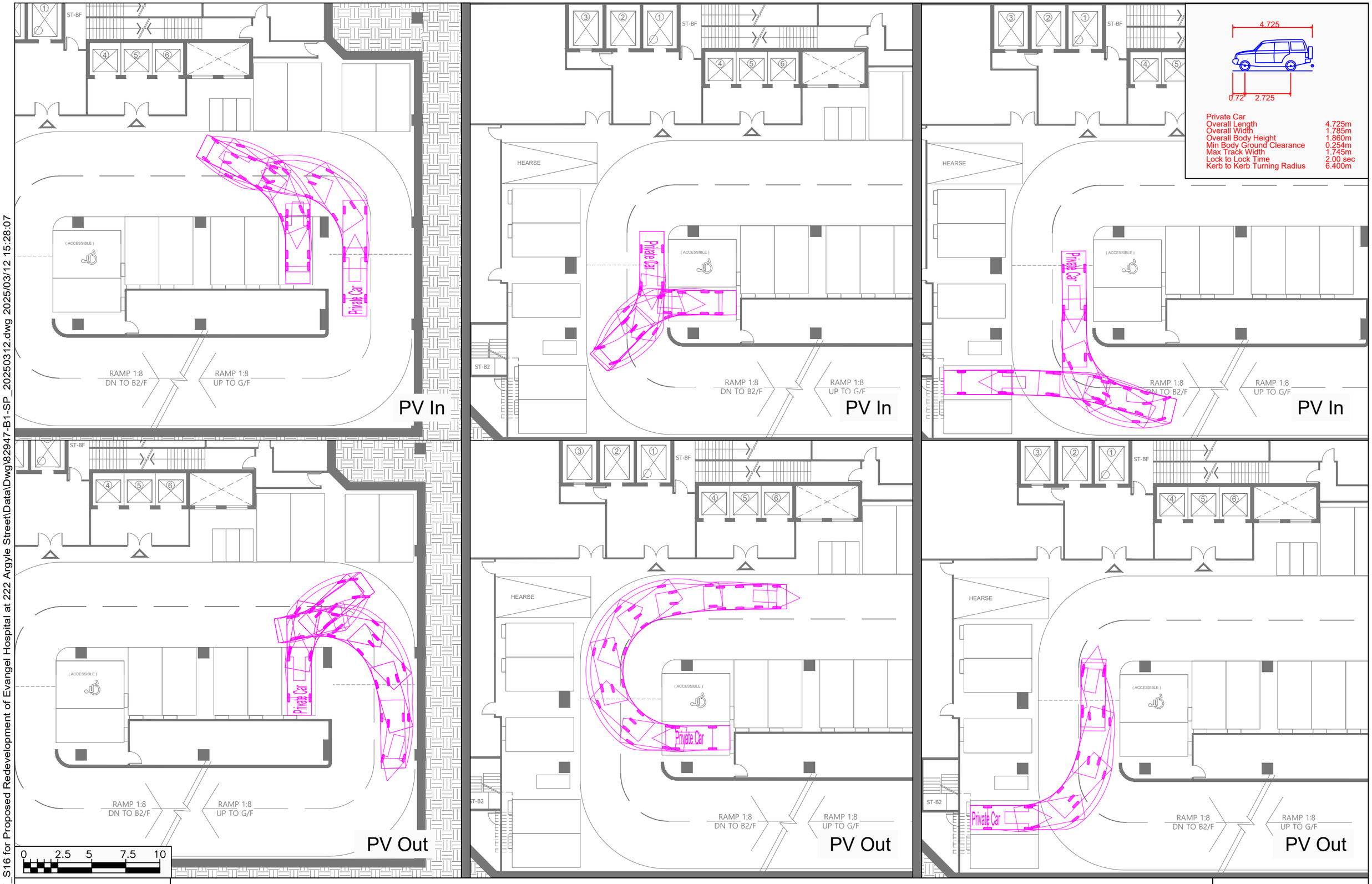
Date	Scale
12/03/2025	1:200

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Proposed Parking Layout on Basement B1

Project No. 82947	Rev.
Dwg No. 0312-B1-Layout	-

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-B1-SP_20250312.dwg 2025/03/12 15:28:06



X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-B1-SP_20250312.dwg 2025/03/12 15:28:07

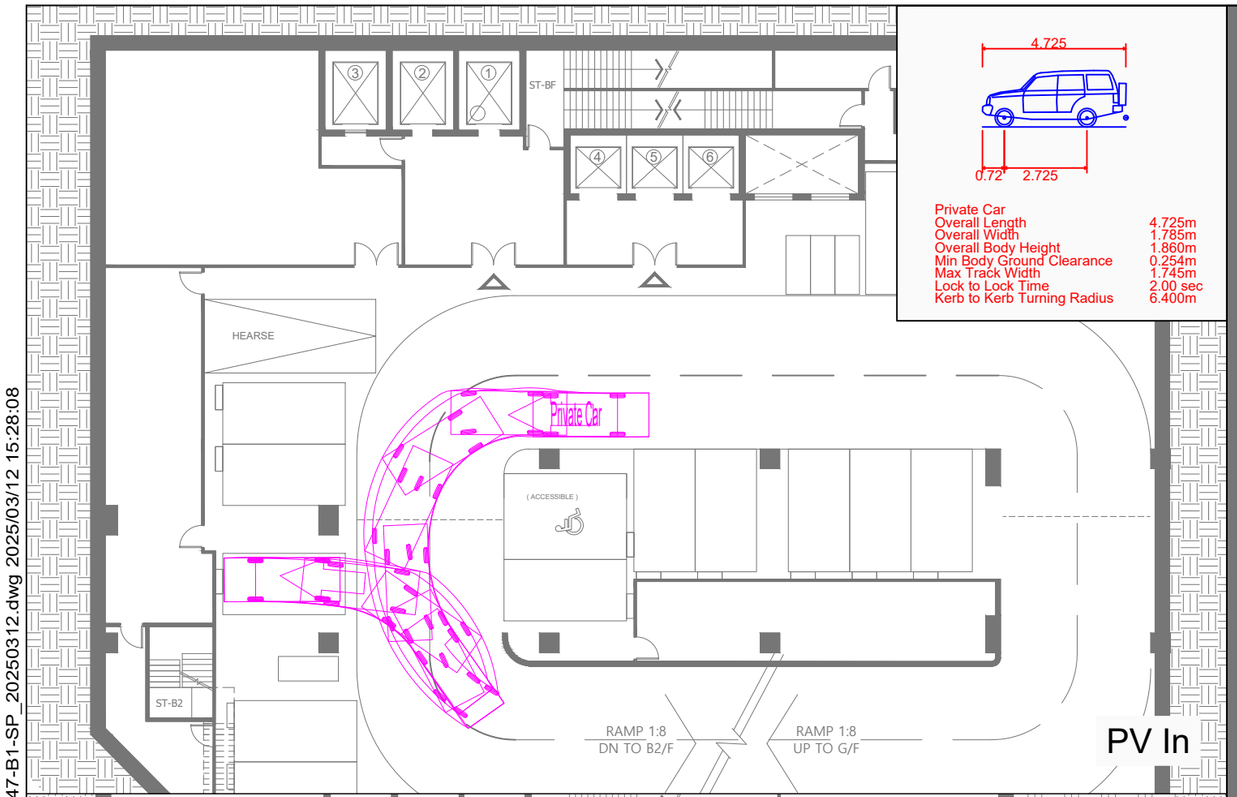
OZZO TECHNOLOGY

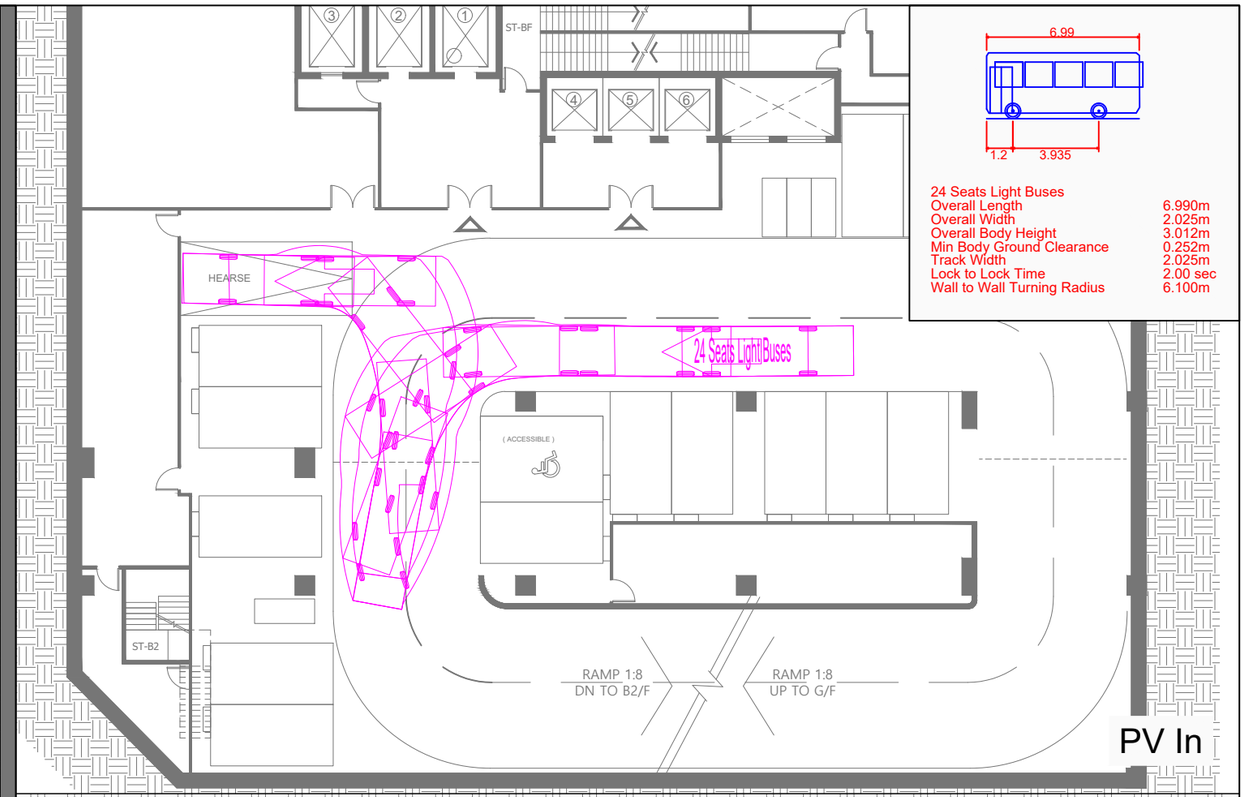
Date	Scale
12/03/2025	1:250

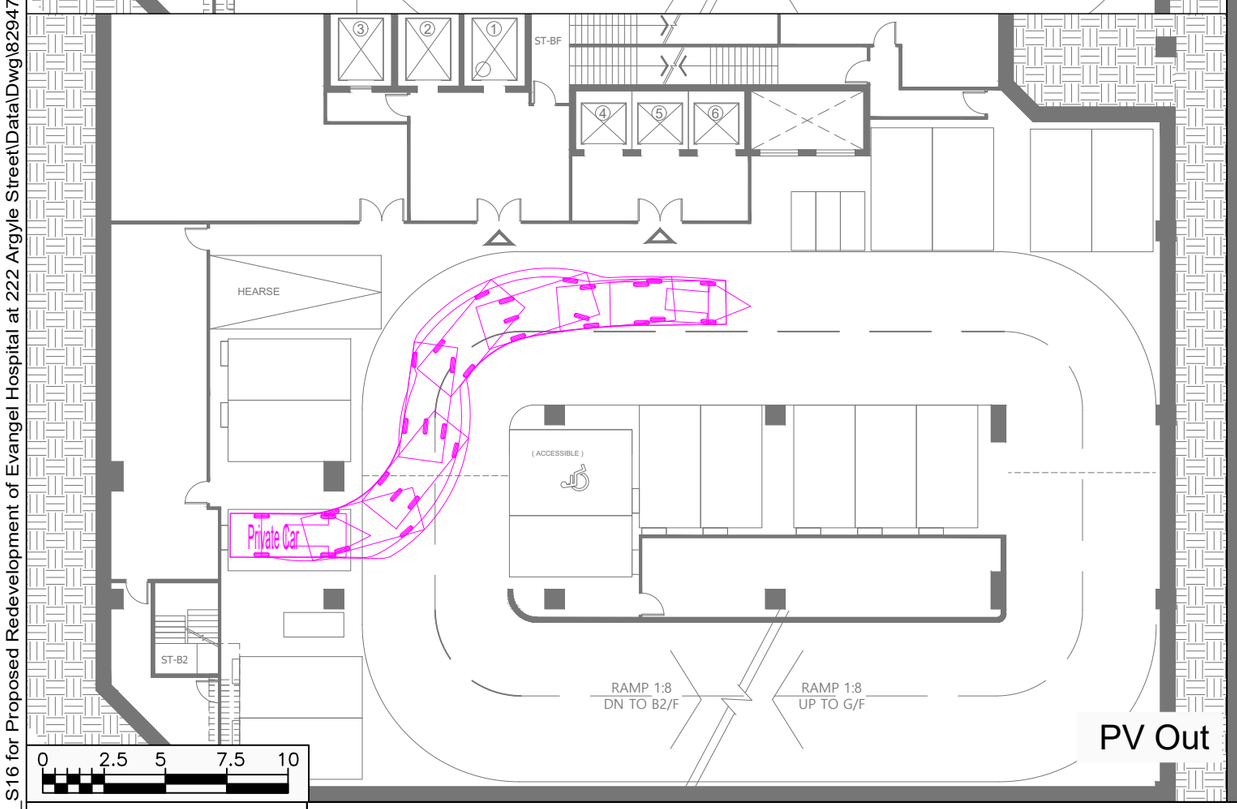
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

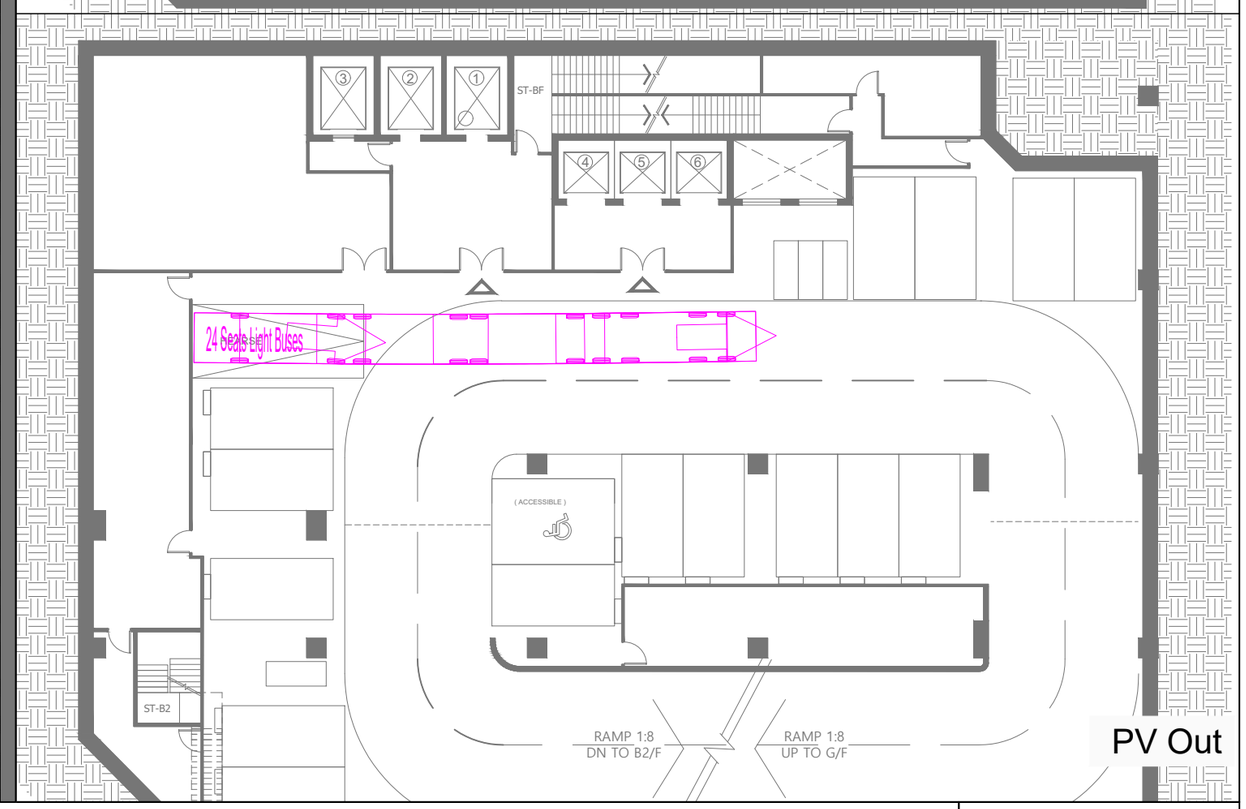
Swept Path Assessments on Basement B1

Project No. 82947	Rev.
Dwg No. 0312-B1-SP1	-









0 2.5 5 7.5 10

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-B1-SP_20250312.dwg 2025/03/12 15:28:08

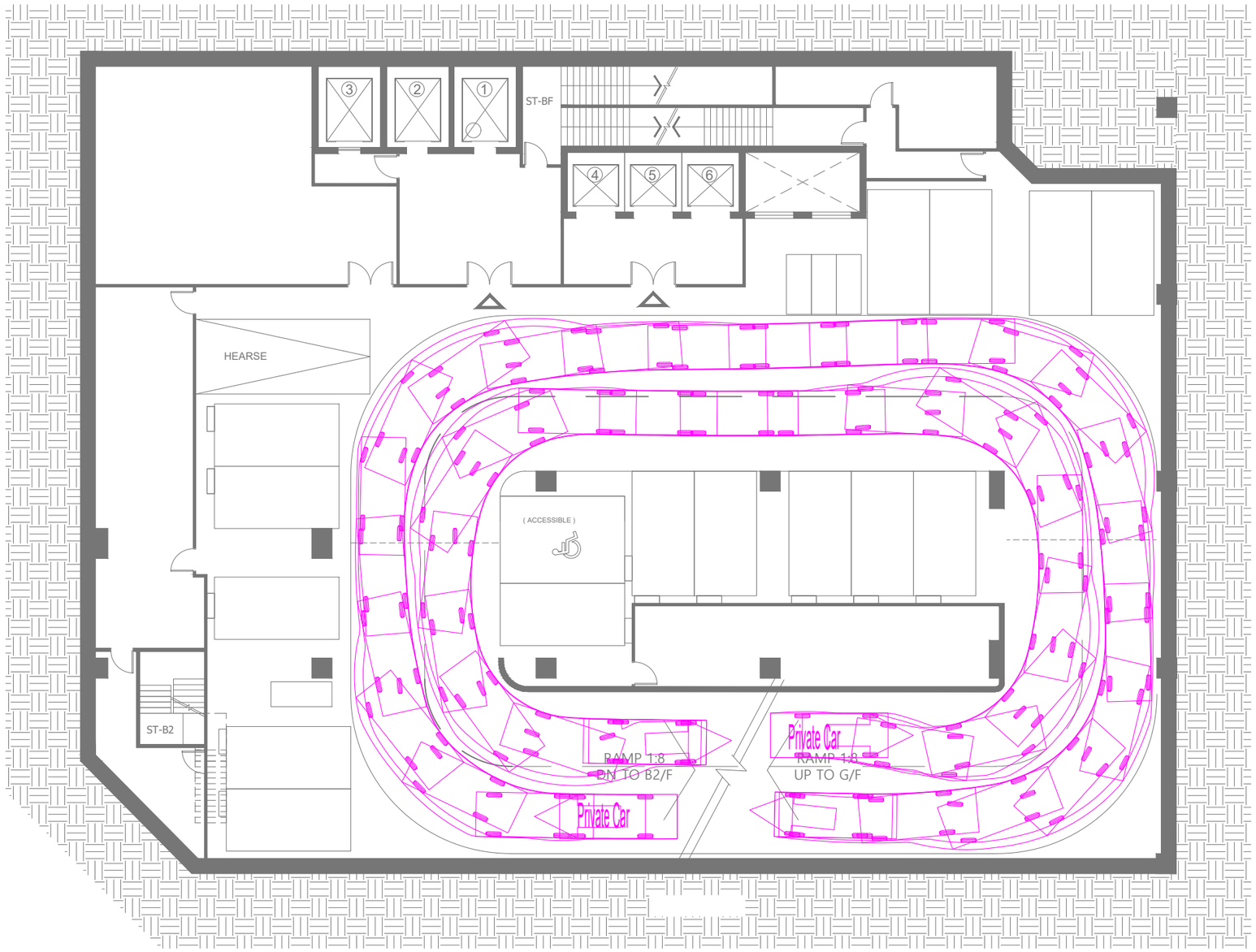
OZZO TECHNOLOGY

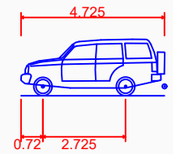
Date	Scale
12/03/2025	1:250

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Swept Path Assessments on Basement B1

Project No. 82947	Rev.
Dwg No. 0312-B1-SP2	-





Private Car	
Overall Length	4.725m
Overall Width	1.785m
Overall Body Height	1.860m
Min Body Ground Clearance	0.254m
Max Track Width	1.745m
Lock to Lock Time	2.00 sec
Kerb to Kerb Turning Radius	6.400m

PV In & Out

0 2 4 6 8

OZZO TECHNOLOGY

Date 12/03/2025

Scale 1:200

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

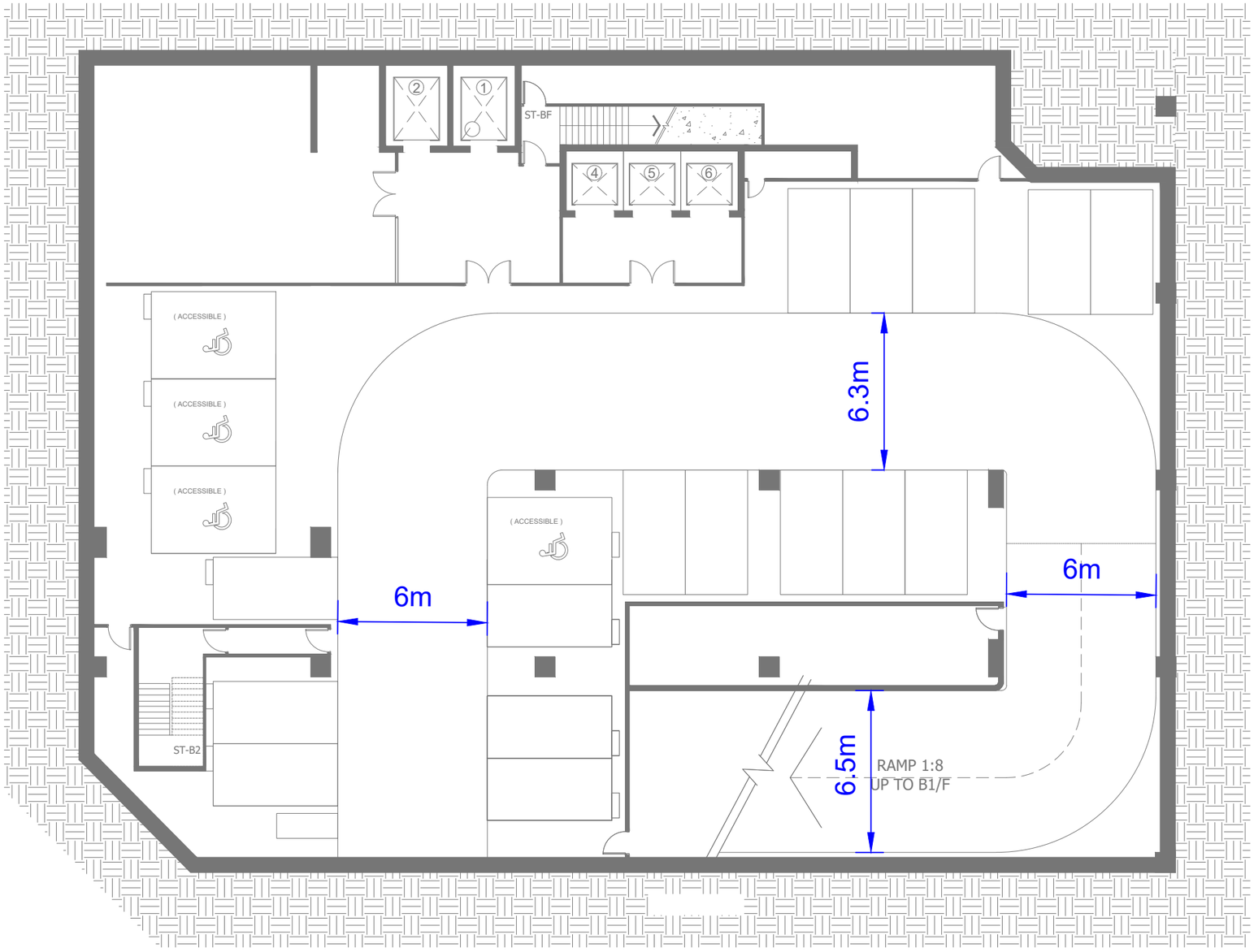
Swept Path Assessments on Basement B1

Project No. 82947

Rev. -

Dwg No. 0312-B1-SP3

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-B1-SP_20250312.dwg 2025/03/12 15:28:08



0 2 4 6 8

OZZO TECHNOLOGY

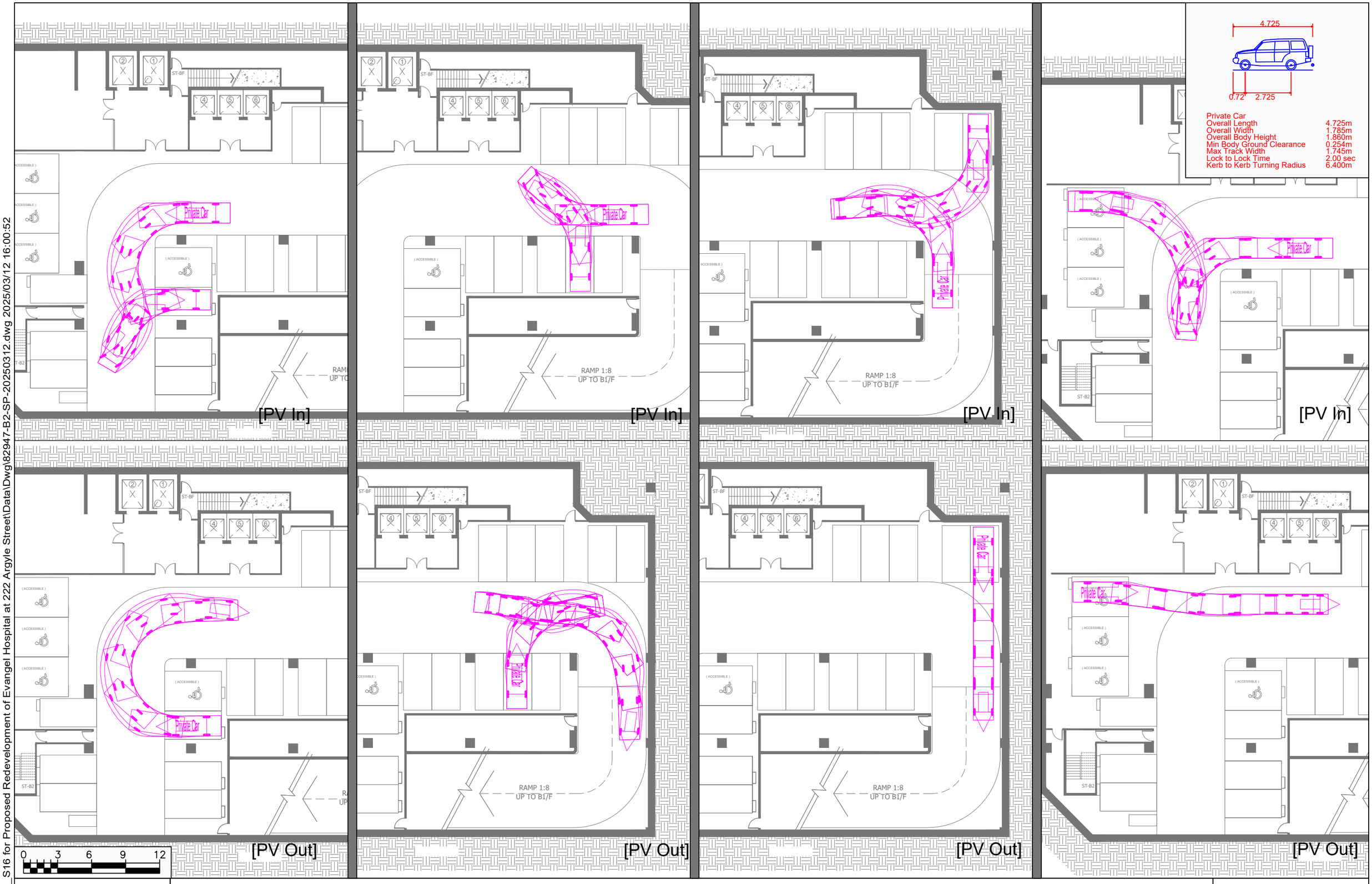
Date	Scale
12/03/2025	1:200

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Proposed Parking Layout at Basement B2

Project No. 82947	Rev.
Dwg No. 0312-B2-Layout	-

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-B2-SP-20250312.dwg 2025/03/12 16:00:51



X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-B2-SP-20250312.dwg 2025/03/12 16:00:52

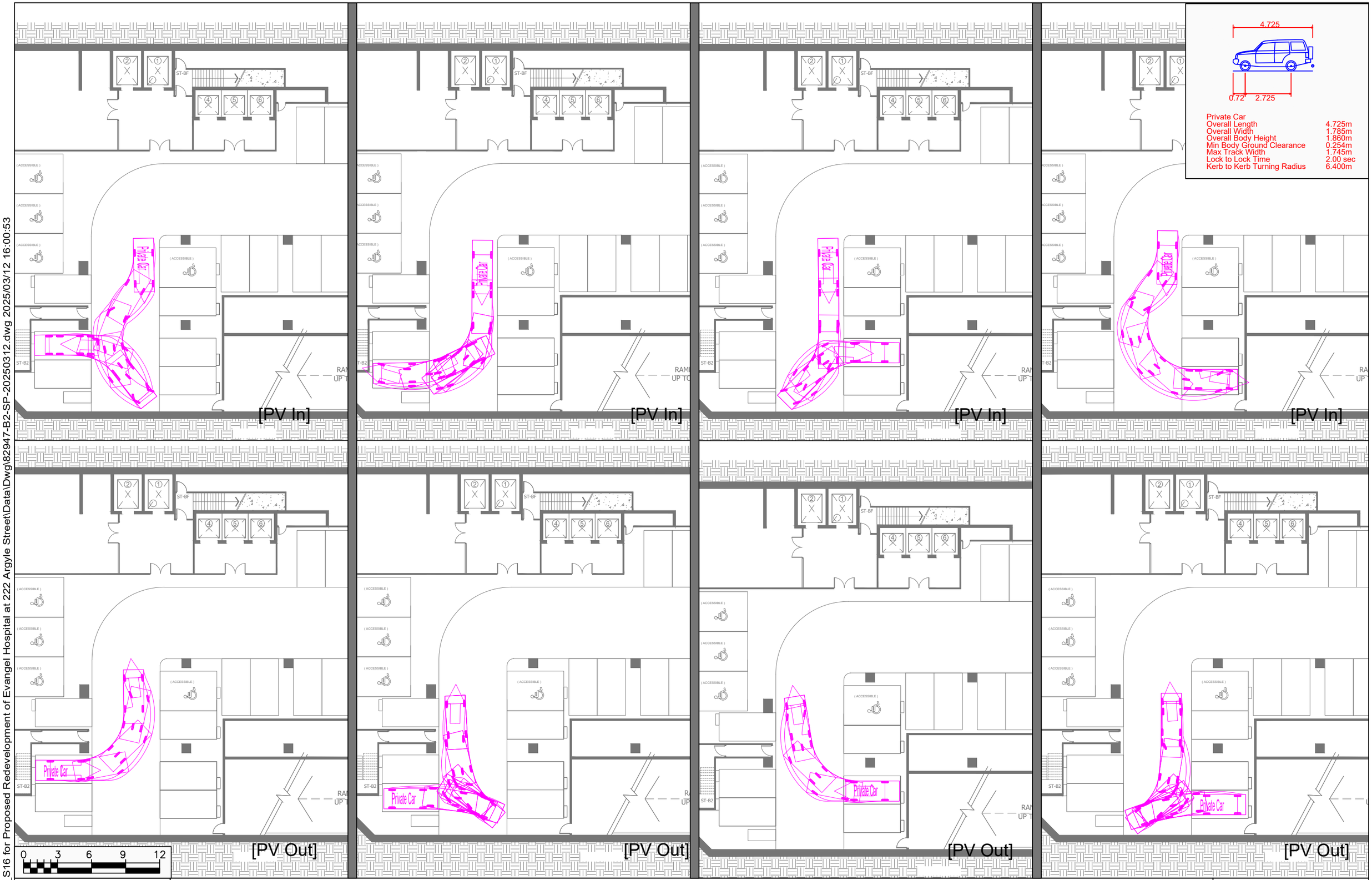
OZZO TECHNOLOGY

Date	Scale
12/03/2025	1:300

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Swept Path Assessments on Basement B2

Project No. 82947	Rev.
Dwg No. 0312-B2-SP1	-



X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-B2-SP-20250312.dwg 2025/03/12 16:00:53

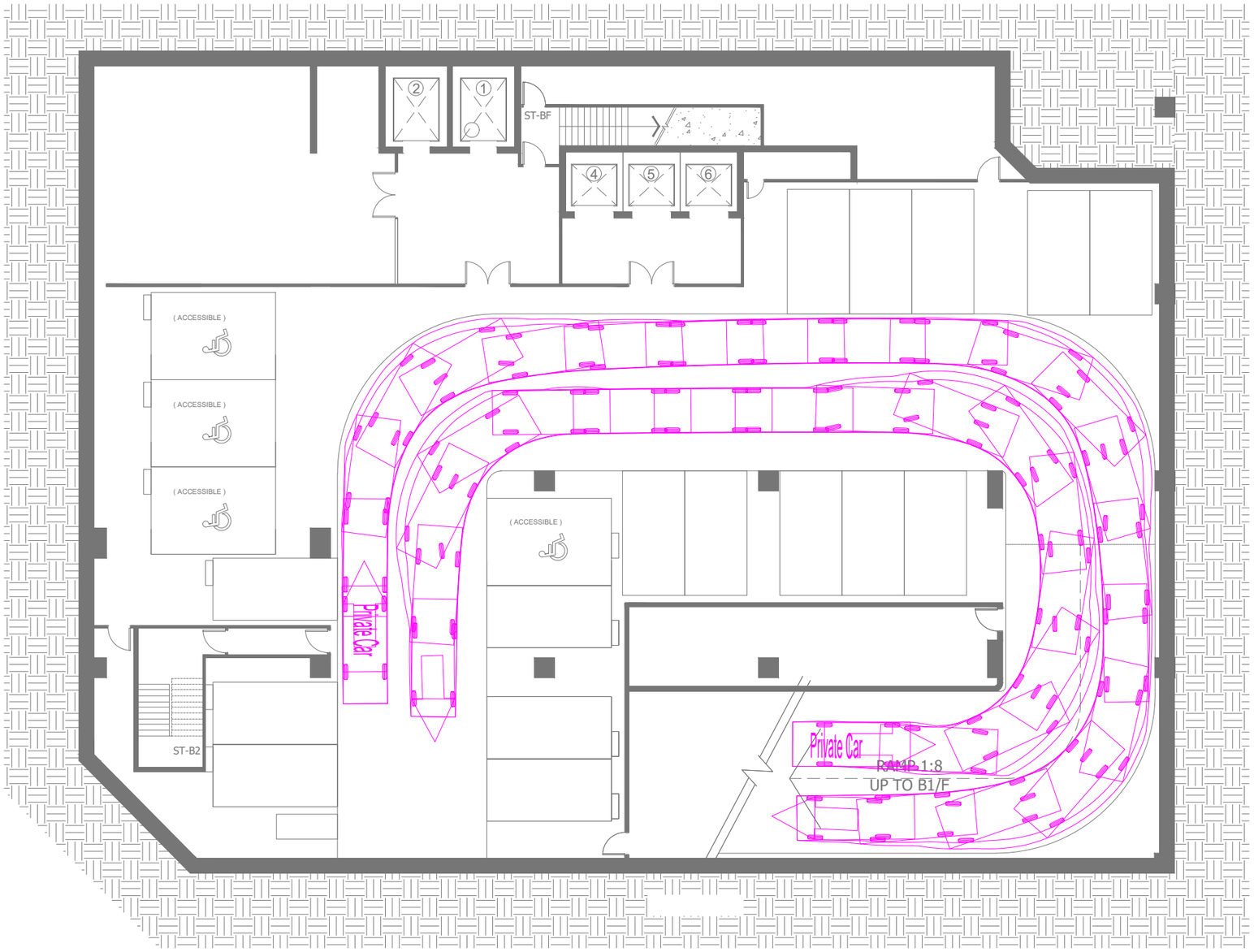
OZZO TECHNOLOGY

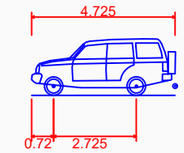
Date	Scale
12/03/2025	1:300

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Swept Path Assessments on Basement B2

Project No. 82947	Rev.
Dwg No. 0312-B2-SP2	-





Private Car	
Overall Length	4.725m
Overall Width	1.785m
Overall Body Height	1.860m
Min Body Ground Clearance	0.254m
Max Track Width	1.745m
Lock to Lock Time	2.00 sec
Kerb to Kerb Turning Radius	6.400m

PV In & Out

0 2 4 6 8

OZZO TECHNOLOGY

Date	Scale
12/03/2025	1:200

Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon

Swept Path Assessments on Basement B2

Project No. 82947	Rev.
Dwg No. 0312-B2-SP3	-

X:\Ozzo\82947_S16 for Proposed Redevelopment of Evangel Hospital at 222 Argyle Street\Data\Dwg\82947-B2-SP-20250312.dwg 2025/03/12 16:00:54

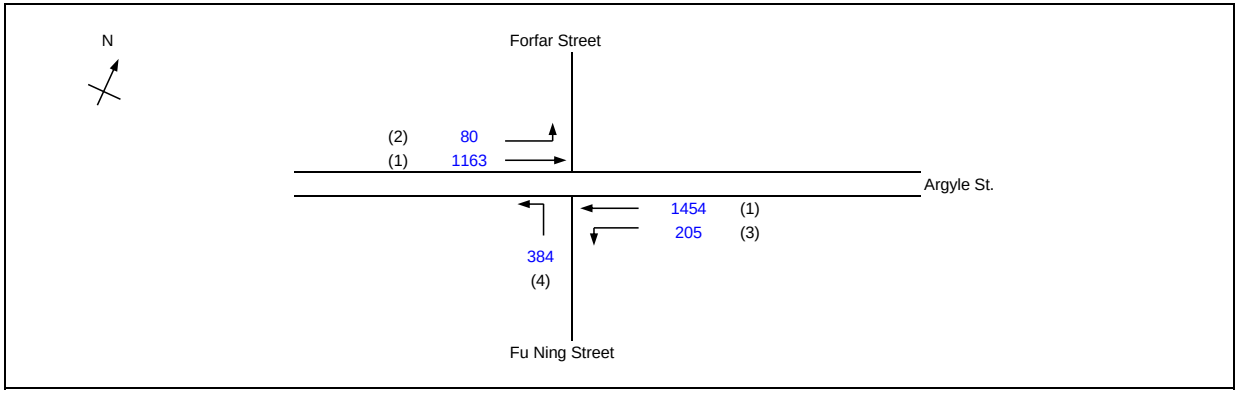
Annex B

2024 Junction Calculation Sheets

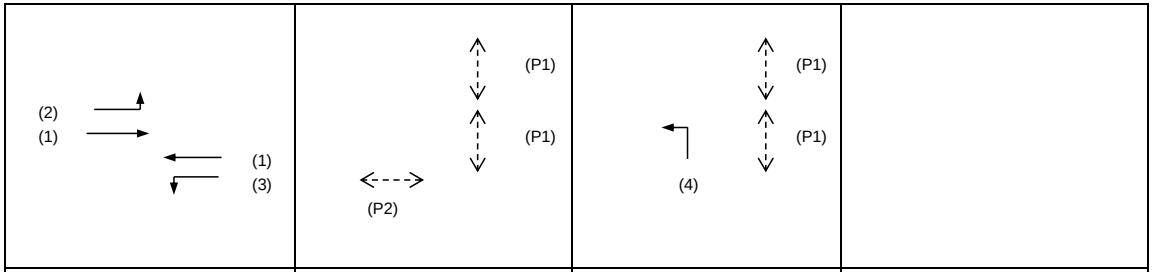
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	十二月-24
J1: Argyle Street / Forfar Road / Fu Ning Street	**2024 AM**	FILENAME :	Checked By:	MM	十二月-24
2024 AM Observed Peak Hour Traffic Flows		J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	十二月-24



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.385	
Loss time		L =	32	sec
Total Flow		=	3286	pcu
Co	= (1.5*L+5)/(1-Y)	=	86.2	sec
Cm	= L/(1-Y)	=	52.1	sec
Yult		=	0.660	
R.C.ult	= (Yult-Y)/Y*100%	=	71.2	%
Cp	= 0.9*L/(0.9-Y)	=	56.0	sec
Ymax	= 1-L/C	=	0.754	
R.C.(P)	= (0.9/Xmax-1)*100%	=	73.4	%
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	76.0	%



Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

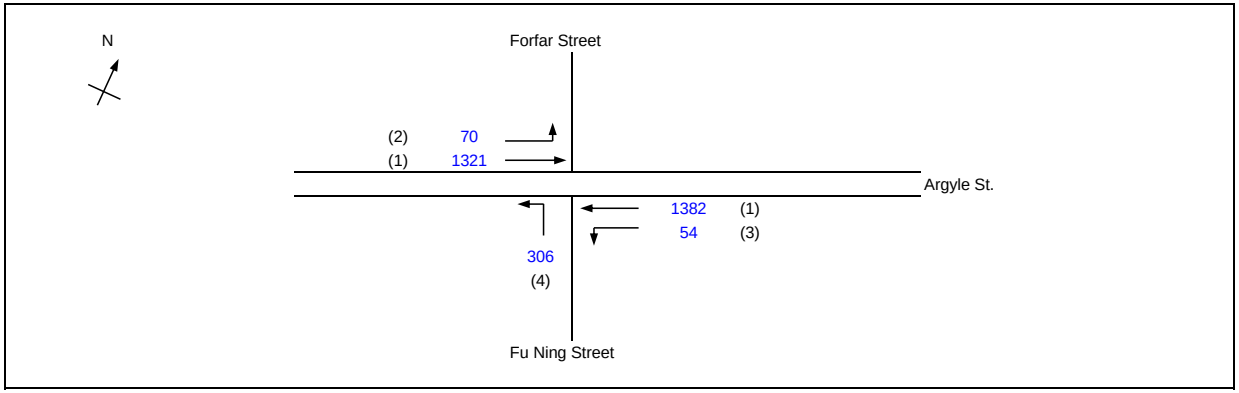
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	80	299		379	0.21	1829			1829	0.207			53	70	0.385	36	17
SA	A	3.30	1	2				4170		864		864	0.00	4170			4170	0.207			53	70	0.385	42	16
LT, SA	A	3.50	3	1	10		N	1965	205	302		507	0.40	1853			1853	0.274	0.274		70	70	0.508	48	19
SA	A	3.50	1	2				4210		1152		1152	0.00	4210			4210	0.274			70	70	0.508	57	18
LT	C	2.90	4	2	10		N	3950	384			384	1.00	3435			3435	0.112	0.112		28	28	0.519	30	43
PED	B																			23		23			

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

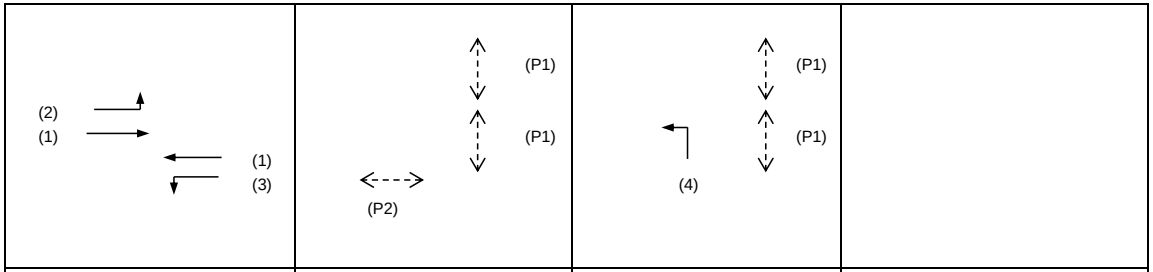
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	十二月-24
J1: Argyle Street / Forfar Road / Fu Ning Street	**2024 PM**	FILENAME :	Checked By:	MM	十二月-24
2024 PM Observed Peak Hour Traffic Flows		J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	十二月-24



			Existing Cycle Time
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.323
Loss time		L =	32 sec
Total Flow		=	3133 pcu
Co	= (1.5*L+5)/(1-Y)	=	78.3 sec
Cm	= L/(1-Y)	=	47.3 sec
Yult		=	0.660
R.C.ult	= (Yult-Y)/Y*100%	=	104.4 %
Cp	= 0.9*L/(0.9-Y)	=	49.9 sec
Ymax	= 1-L/C	=	0.754
R.C.(P)	= (0.9/Xmax-1)*100%	=	107.2 %
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	110.1 %



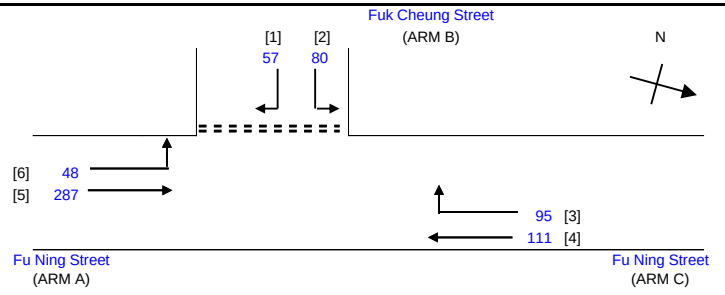
Stage A	Int = 6	Stage B	Int =	Stage C	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

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)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	70	358		428	0.16	1854			1854	0.231			70	70	0.429	42	17
SA	A	3.30	1	2				4170		963		963	0.00	4170			4170	0.231			70	70	0.429	48	17
LT, SA	A	3.50	3	1	10		N	1965	54	397		451	0.12	1930			1930	0.234	0.234		71	70	0.434	42	17
SA	A	3.50	1	2				4210		985		985	0.00	4210			4210	0.234			71	70	0.434	48	17
LT	C	2.90	4	2	10		N	3950	306			306	1.00	3435			3435	0.089	0.089		27	28	0.414	24	41
PED	B																			23		23			

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

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Dec-24
J2: Fu Ning Street / Fuk Cheung Street	**2024 AM**	FILENAME :	CHECKED BY:	MM	Dec-24
2024 AM Observed Peak Hour Traffic flows		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Dec-24



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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	48	(pcu/hr)
q a-c	=	287	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	111	(pcu/hr)
q c-b	=	95	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	57	(pcu/hr)
q b-c	=	80	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.5839416

THE CAPACITY OF MOVEMENT :

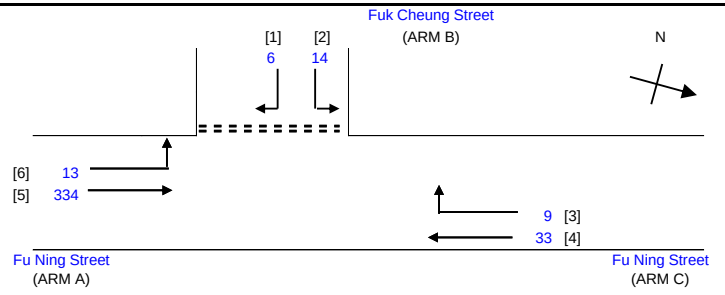
Q b-a	=	440		
Q b-c	=	625	Q b-c (O) =	604.8
Q c-b	=	659		
Q b-ac	=	531.9		
TOTAL FLOW	=	678	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1295
DFC c-b	=	0.1442
DFC b-c (share lane)	=	0.2575

CRITICAL DFC = 0.26

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Dec-24
J2: Fu Ning Street / Fuk Cheung Street	2024 PM	FILENAME :	CHECKED BY:	MM	Dec-24
2024 PM Observed Peak Hour Traffic flows		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Dec-24



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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	13	(pcu/hr)
q a-c	=	334	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	33	(pcu/hr)
q c-b	=	9	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	6	(pcu/hr)
q b-c	=	14	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.7

THE CAPACITY OF MOVEMENT :

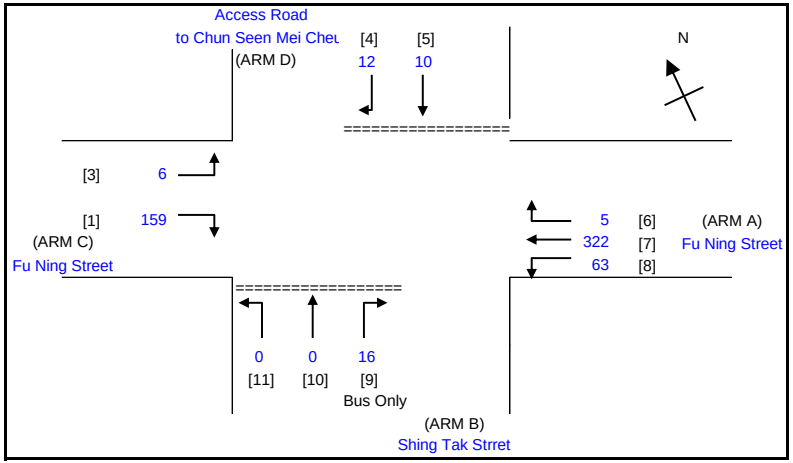
Q b-a	=	469		
Q b-c	=	618	Q b-c (O) =	616
Q c-b	=	656		
Q b-ac	=	564.2		
TOTAL FLOW	=	409	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0128
DFC c-b	=	0.0137
DFC b-c (share lane)	=	0.0354

CRITICAL DFC = 0.04

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.: 82947	PREPARED BY:	LL	十二月-24
J3: Fu Ning Street / Shing Tak Street	FILENAME :	CHECKED BY:	MM	十二月-24
2024 AM Observed Peak Hour Traffic Flows	**2024 AM** J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	十二月-24



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	11.45	(metres)		
W cr	=	0	(metres)	Y =	0.6051475

MAJOR ROAD (ARM A)				MAJOR MAJOR ROAD (ARM C)			
W a-d	=	6.00	(metres)	W c-b	=	3.30	(metres)
Vr a-d	=	25	(metres)	Vr c-b	=	35	(metres)
q a-b	=	63	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	322	(pcu/hr)	q c-b	=	159	(pcu/hr)
q a-d	=	5	(pcu/hr)	q c-d	=	6	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	2.6	(metres)	W d-c	=	1.8	(metres)
W b-c	=	2.6	(metres)	W d-a	=	1.8	(metres)
Vl b-a	=	80	(metres)	Vl d-c	=	25.0	(metres)
Vr b-a	=	50	(metres)	Vr d-c	=	85.0	(metres)
Vr b-c	=	50	(metres)	Vr d-a	=	85.0	(metres)
q b-a	=	16	(pcu/hr)	q d-c	=	12	(pcu/hr)
q b-c	=	0	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	0	(pcu/hr)	q d-b	=	10	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.811	X a	=	1.117
X c	=	0.893	X d	=	0.741
Z b	=	0.846	Z d	=	0.801
M b	=	0.811	M d	=	0.741

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.04		r d-c	=	0.030	
ql b-d	=	0	(pcu/hr)	ql d-b	=	5.1489	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	4.8511	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	402	(pcu/hr)	Q d-c	=	403	(pcu/hr)
Q b-c	=	560	(pcu/hr)	Q d-a	=	592	(pcu/hr)
Q c-b	=	588	(pcu/hr)	Q a-d	=	774	(pcu/hr)
Ql b-d	=	404	(pcu/hr)	Ql d-b	=	397	(pcu/hr)
Qr b-d	=	404	(pcu/hr)	Qr d-b	=	397	(pcu/hr)

TOTAL FLOW = 593 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

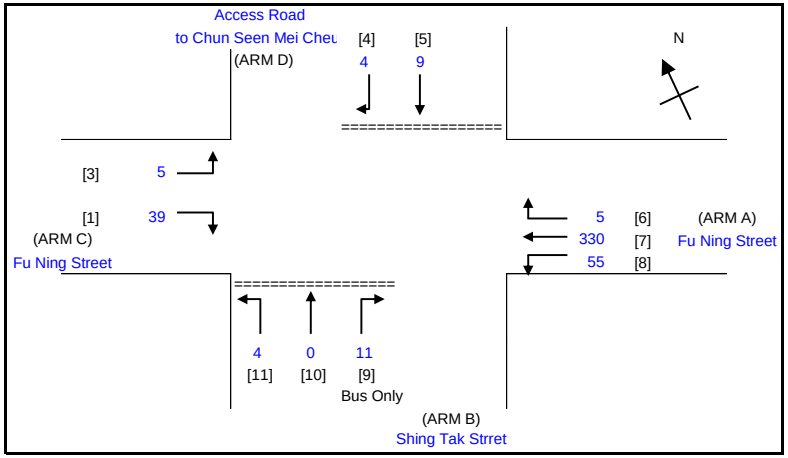
DFC b-a	=	0.0398
DFC b-c	=	0.0000
DFC c-b	=	0.2704
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0298
DFC d-a	=	0.0000
DFC a-d	=	0.0065
DFCl d-b	=	0.0130
DFCr d-b	=	0.0122

CRITICAL DFC = 0.27

OZZO TECHNOLOGY (HK) LIMITED

PRIORITY JUNCTION CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	十二月-24
J3: Fu Ning Street / Shing Tak Street	**2024 PM**	FILENAME :	CHECKED BY:	MM	十二月-24
2024 PM Observed Peak Hour Traffic Flows		J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	十二月-24



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W =	11.45	(metres)			
W cr =	0	(metres)	Y =	0.6051475	

MAJOR ROAD (ARM A)			MAJOR MAJOR ROAD (ARM C)		
W a-d =	6.00	(metres)	W c-b =	3.30	(metres)
Vr a-d =	25	(metres)	Vr c-b =	35	(metres)
q a-b =	55	(pcu/hr)	q c-a =	0	(pcu/hr)
q a-c =	330	(pcu/hr)	q c-b =	39	(pcu/hr)
q a-d =	5	(pcu/hr)	q c-d =	5	(pcu/hr)

MINOR ROAD (ARM B)			MINOR ROAD (ARM D)		
W b-a =	2.6	(metres)	W d-c =	1.8	(metres)
W b-c =	2.6	(metres)	W d-a =	1.8	(metres)
Vl b-a =	80	(metres)	Vl d-c =	25.0	(metres)
Vr b-a =	50	(metres)	Vr d-c =	85.0	(metres)
Vr b-c =	50	(metres)	Vr d-a =	85.0	(metres)
q b-a =	11	(pcu/hr)	q d-c =	4	(pcu/hr)
q b-c =	4	(pcu/hr)	q d-a =	0	(pcu/hr)
q b-d =	0	(pcu/hr)	q d-b =	9	(pcu/hr)

GEOMETRIC FACTORS :

X b =	0.811		X a =	1.117	
X c =	0.893		X d =	0.741	
Z b =	0.846		Z d =	0.801	
M b =	0.811		M d =	0.741	

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a =	0.026		r d-c =	0.010	
ql b-d =	0	(pcu/hr)	ql d-b =	4.5428	(pcu/hr)
qr b-d =	0	(pcu/hr)	qr d-b =	4.4572	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a =	433	(pcu/hr)	Q d-c =	421	(pcu/hr)
Q b-c =	561	(pcu/hr)	Q d-a =	595	(pcu/hr)
Q c-b =	588	(pcu/hr)	Q a-d =	817	(pcu/hr)
Ql b-d =	434	(pcu/hr)	Ql d-b =	417	(pcu/hr)
Qr b-d =	434	(pcu/hr)	Qr d-b =	417	(pcu/hr)

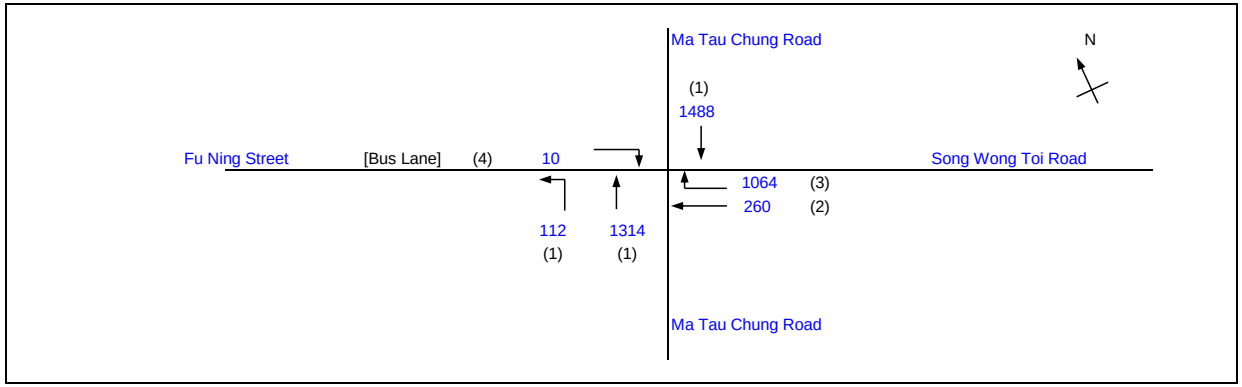
TOTAL FLOW = 462 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

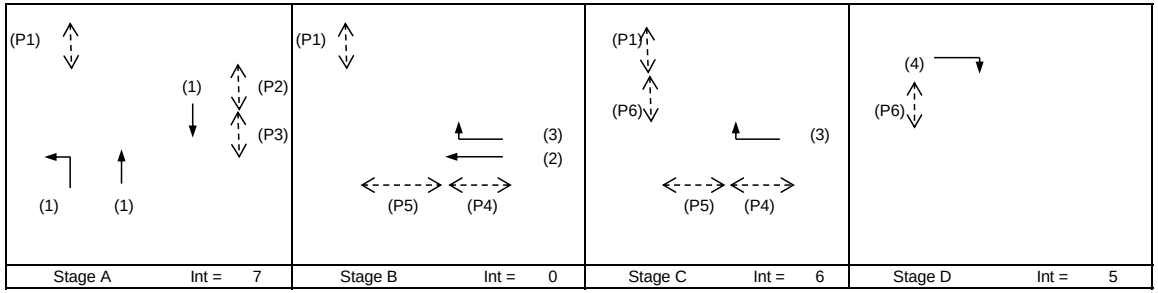
DFC b-a	=	0.0254
DFC b-c	=	0.0071
DFC c-b	=	0.0663
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0095
DFC d-a	=	0.0000
DFC a-d	=	0.0061
DFCl d-b	=	0.0109
DFCr d-b	=	0.0107

CRITICAL DFC = 0.07

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.	82947	Prepared By:	LL	Dec-24
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2024 AM**	FILENAME :		Checked By:	MM	Dec-24
2024 AM Observed Peak Hour Traffic Flows		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls		Reviewed By:	OC	Dec-24



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	137 sec
Sum(y)		Y =	0.426
Loss time		L =	15 sec
Total Flow		=	4248 pcu
Co	= (1.5*L+5)/(1-Y)	=	47.9 sec
Cm	= L/(1-Y)	=	26.1 sec
Yult		=	0.788
R.C.ult	= (Yult-Y)/Y*100%	=	84.8 %
Cp	= 0.9*L/(0.9-Y)	=	28.5 sec
Ymax	= 1-L/C	=	0.891
R.C.(P)	= (0.9/Xmax-1)*100%	=	72.6 %
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	88.1 %

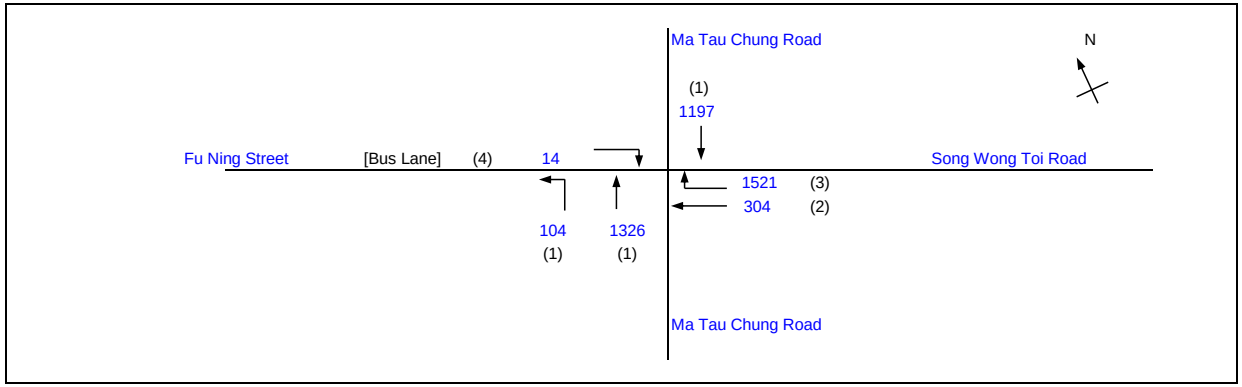


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

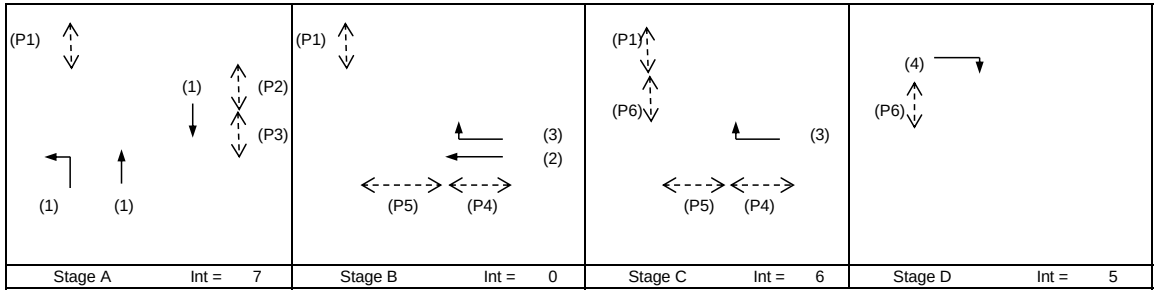
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	112	336		448	0.25	1929			1929	0.232	0.240		67	63	0.505	54	25
SA (NB)	A	3.50	1	2				4210		978		978	0.00	4210			4210	0.232			67	63	0.505	60	24
SA (SB)	A	3.60	1	3			N	6205		1488		1488	0.00	6205			6205	0.240			69	63	0.521	60	24
SA (WB)	B	3.50	2	2				4210		260		260	0.00	4210			4210	0.062			18	30	0.282	21	41
RT	B,C	3.50	3	3	30		N	6175			1064	1064	1.00	5881			5881	0.181	0.181		52	51	0.486	50	30
RT	D	3.30	4	1	33		N	1945			10	10	1.00	1860			1860	0.005	0.005		2	8	0.092	0	56

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.	82947	Prepared By:	LL	Dec-24
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2024 PM**	FILENAME :		Checked By:	MM	Dec-24
2024 PM Observed Peak Hour Traffic Flows		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls		Reviewed By:	OC	Dec-24



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	137 sec
Sum(y)		Y =	0.499
Loss time		L =	15 sec
Total Flow		=	4466 pcu
Co	= (1.5*L+5)/(1-Y)	=	54.9 sec
Cm	= L/(1-Y)	=	29.9 sec
Yult		=	0.788
R.C.ult	= (Yult-Y)/Y*100%	=	57.8 %
Cp	= 0.9*L/(0.9-Y)	=	33.7 sec
Ymax	= 1-L/C	=	0.891
R.C.(P)	= (0.9/Xmax-1)*100%	=	29.5 %
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	60.6 %



Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

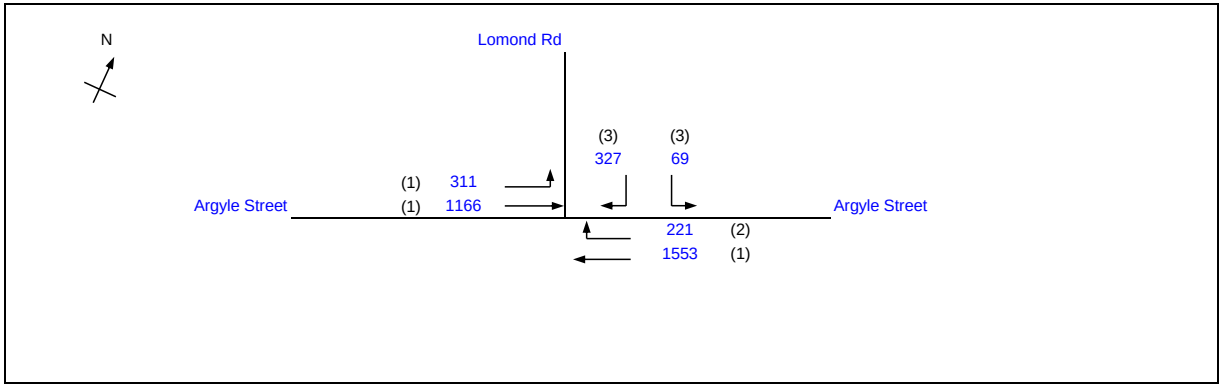
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	104	346		450	0.23	1932			1932	0.233	0.233		57	63	0.506	54	25
SA (NB)	A	3.50	1	2				4210		980		980	0.00	4210			4210	0.233			57	63	0.506	60	24
SA (SB)	A	3.60	1	3			N	6205		1197		1197	0.00	6205			6205	0.193			47	63	0.420	48	23
SA (WB)	B	3.50	2	2				4210		304		304	0.00	4210			4210	0.072			18	30	0.330	27	41
RT	B,C	3.50	3	3	30		N	6175			1521	1521	1.00	5881			5881	0.259	0.259		63	51	0.695	72	34
RT	D	3.30	4	1	33		N	1945			14	14	1.00	1860			1860	0.008	0.008		2	8	0.129	0	57

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

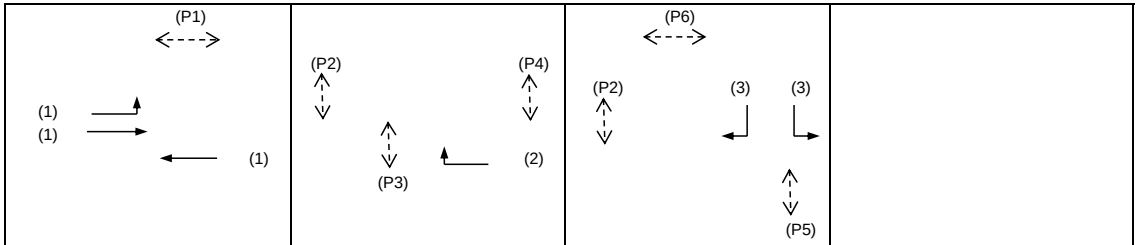
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.	82947	Prepared By:	LL	十二月-24
J5: Argyle Street/ Lomond Road	**2024 AM**	FILENAME :	Checked By:	MM	十二月-24
2024 AM Observed Peak Hour Traffic Flows		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	十二月-24



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.507	
Loss time		L =	14	sec
Total Flow		=	3647	pcu
Co	= (1.5*L+5)/(1-Y)	=	52.7	sec
Cm	= L/(1-Y)	=	28.4	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	56.8	%
Cp	= 0.9*L/(0.9-Y)	=	32.1	sec
Ymax	= 1-L/C	=	0.892	
R.C.(P)	= (0.9/Xmax-1)*100%	=	47.4	%
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	58.4	%



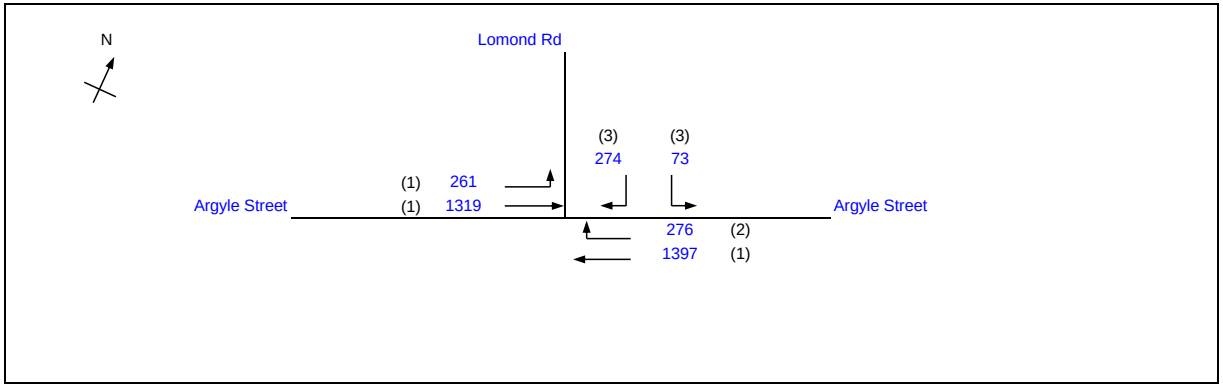
Stage A	Int = 5	Stage B	Int = 5	Stage C	Int = 7

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

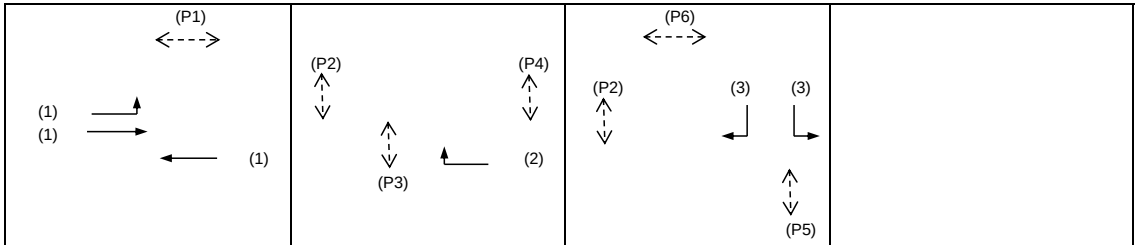
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
LT	A	3.30	1	1	10.5		N	1945	311			311	1.00	1702			1702	0.183			42	67	0.355	30	18
SA (EB)	A	3.50	1	2				4210		1166		1166	0.00	4210			4210	0.277	0.277		63	67	0.537	60	20
SA (WB)	A	3.30	1	3			N	6115		1553		1553	0.00	6115			6115	0.254			58	67	0.493	54	19
RT	B	3.30	2	1	20		N	1945			221	221	1.00	1809			1809	0.122	0.122		28	26	0.611	36	50
LT/RT	C	3.50	3	1	10		N	1965	69		116	185	1.00	1709			1709	0.108	0.108		25	23	0.610	30	53
RT	C	3.50	3	1	20			2105			211	211	1.00	1958			1958	0.108			25	23	0.610	36	52

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	十二月-24
J5: Argyle Street/ Lomond Road	**2024 PM**	FILENAME :	Checked By:	MM	十二月-24
2024 PM Observed Peak Hour Traffic Flows		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	十二月-24



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.560	
Loss time		L =	14	sec
Total Flow		=	3600	pcu
Co	= (1.5*L+5)/(1-Y)	=	59.2	sec
Cm	= L/(1-Y)	=	31.9	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	41.8	%
Cp	= 0.9*L/(0.9-Y)	=	37.1	sec
Ymax	= 1-L/C	=	0.892	
R.C.(P)	= (0.9/Xmax-1)*100%	=	18.0	%
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	43.3	%



Stage A	Int = 5	Stage B	Int = 5	Stage C	Int = 7

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

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)
																				14					
LT	A	3.30	1	1	10.5		N	1945	261			261	1.00	1702			1702	0.153			32	67	0.298	24	17
SA (EB)	A	3.50	1	2				4210		1319		1319	0.00	4210			4210	0.313	0.313		65	67	0.608	69	21
SA (WB)	A	3.30	1	3			N	6115		1397		1397	0.00	6115			6115	0.228			47	67	0.443	48	18
RT	B	3.30	2	1	20		N	1945			276	276	1.00	1809			1809	0.153	0.153		32	26	0.763	48	59
LT/RT	C	3.50	3	1	10		N	1965	73		89	162	1.00	1709			1709	0.095	0.095		20	23	0.535	24	50
RT	C	3.50	3	1	20			2105			185	185	1.00	1958			1958	0.095			20	23	0.535	30	49

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

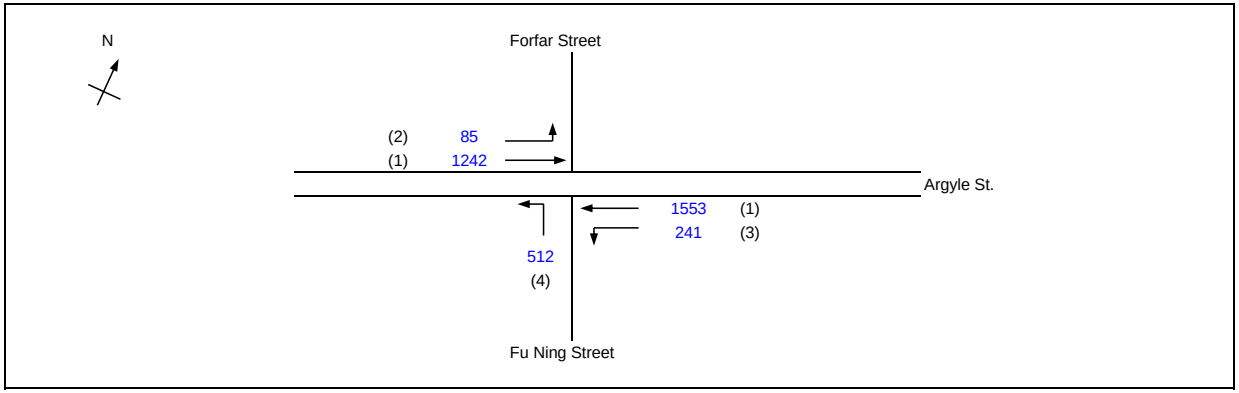
Annex C

2035 Junction Calculation Sheets

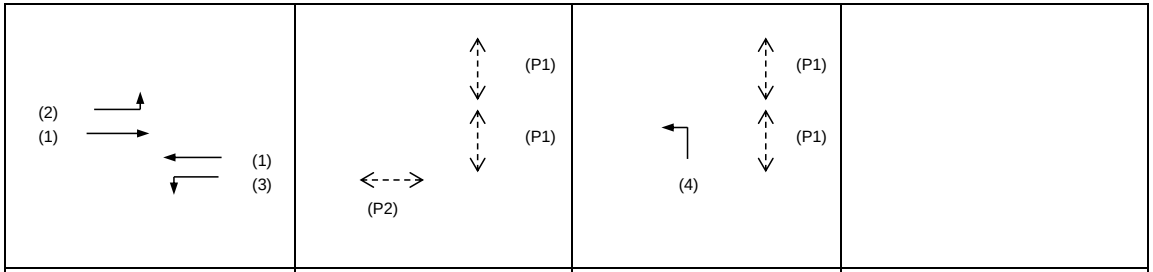
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J1: Argyle Street / Forfar Road / Fu Ning Street	**2035 Ref_AM**	FILENAME :	Checked By:	MM	一月-25
2035 AM Reference Peak Hour Traffic Flows		J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.445	
Loss time		L =	32	sec
Total Flow		=	3633	pcu
Co	= (1.5*L+5)/(1-Y)	=	95.6	sec
Cm	= L/(1-Y)	=	57.7	sec
Yult		=	0.660	
R.C.ult	= (Yult-Y)/Y*100%	=	48.2	%
Cp	= 0.9*L/(0.9-Y)	=	63.4	sec
Ymax	= 1-L/C	=	0.754	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	52.3	%



Stage A	Int = 6	Stage B	Int =	Stage C	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

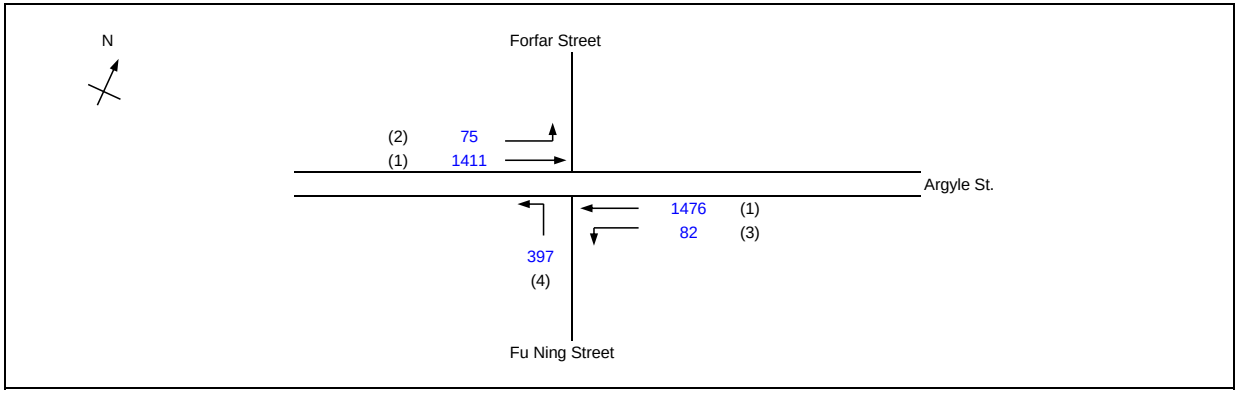
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	85	320		405	0.21	1830			1830	0.221			49	70	0.411	36	17
SA	A	3.30	1	2				4170		922		922	0.00	4170			4170	0.221			49	70	0.411	45	17
LT, SA	A	3.50	3	1	10		N	1965	241	305		546	0.44	1843			1843	0.296	0.296		65	70	0.550	54	20
SA	A	3.50	1	2				4210		1248		1248	0.00	4210			4210	0.296			65	70	0.550	60	19
LT	C	2.90	4	2	10		N	3950	512			512	1.00	3435			3435	0.149	0.149		33	28	0.692	42	47
PED	B																			23		23			

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

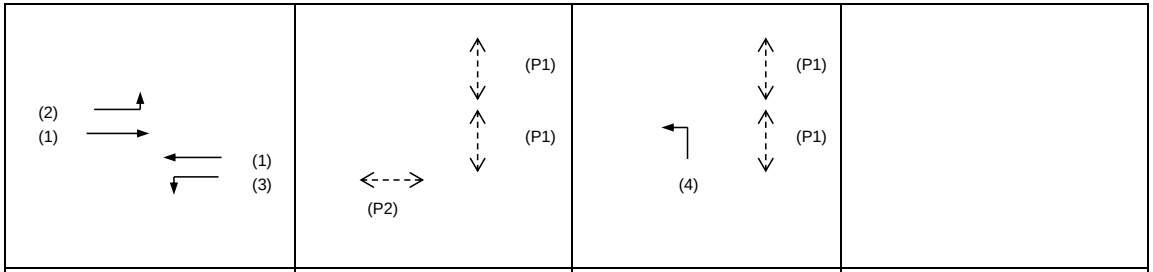
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J1: Argyle Street / Forfar Road / Fu Ning Street	**2035 Ref_PM**	FILENAME :	Checked By:	MM	一月-25
2035 PM Reference Peak Hour Traffic Flows		J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.370
Loss time		L =	32 sec
Total Flow		=	3441 pcu
Co	= (1.5*L+5)/(1-Y)	=	84.1 sec
Cm	= L/(1-Y)	=	50.8 sec
Yult		=	0.660
R.C.ult	= (Yult-Y)/Y*100%	=	78.4 %
Cp	= 0.9*L/(0.9-Y)	=	54.3 sec
Ymax	= 1-L/C	=	0.754
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	83.4 %



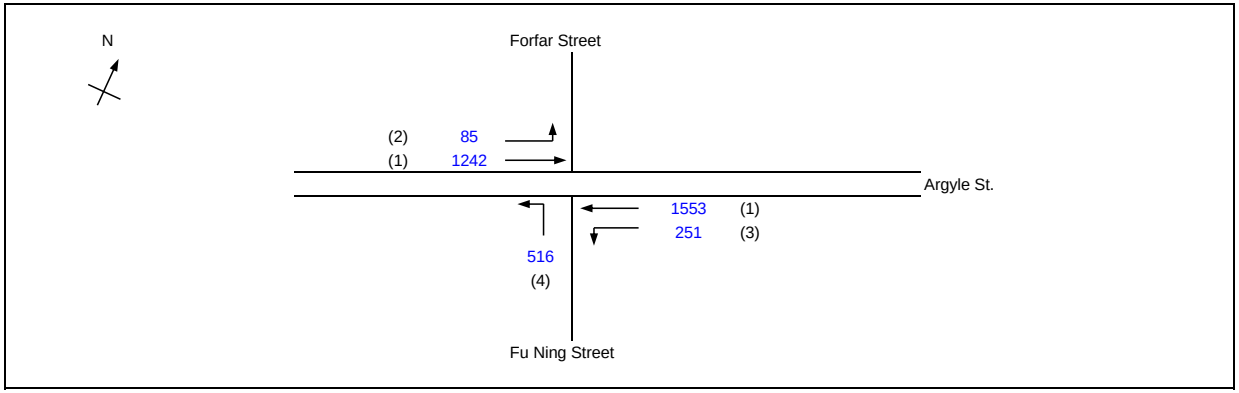
Stage A	Int = 6	Stage B	Int =	Stage C	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

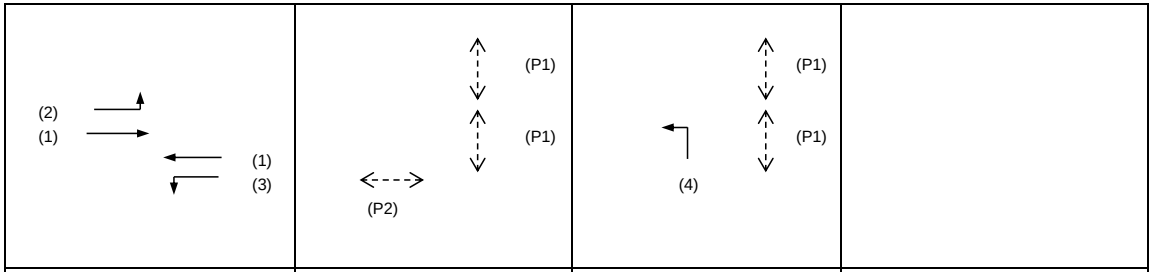
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	75	382		457	0.16	1854			1854	0.247			65	70	0.458	42	18
SA	A	3.30	1	2				4170		1029		1029	0.00	4170			4170	0.247			65	70	0.458	51	17
LT, SA	A	3.50	3	1	10		N	1965	82	405		487	0.17	1917			1917	0.254	0.254		67	70	0.472	48	18
SA	A	3.50	1	2				4210		1071		1071	0.00	4210			4210	0.254			67	70	0.472	51	17
LT	C	2.90	4	2	10		N	3950	397			397	1.00	3435			3435	0.116	0.116		31	28	0.537	33	43
PED	B																			23		23			

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO. 82947	Prepared By:	LL	一月-25
J1: Argyle Street / Forfar Road / Fu Ning Street	**2035 Des_AM**	Checked By:	MM	一月-25
2035 AM Design Peak Hour Traffic Flows	FILENAME : J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.448	
Loss time		L =	32	sec
Total Flow		=	3647	pcu
Co	= (1.5*L+5)/(1-Y)	=	96.1	sec
Cm	= L/(1-Y)	=	58.0	sec
Yult		=	0.660	
R.C.ult	= (Yult-Y)/Y*100%	=	47.2	%
Cp	= 0.9*L/(0.9-Y)	=	63.8	sec
Ymax	= 1-L/C	=	0.754	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	51.3	%



Stage A	Int = 6	Stage B	Int =	Stage C	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

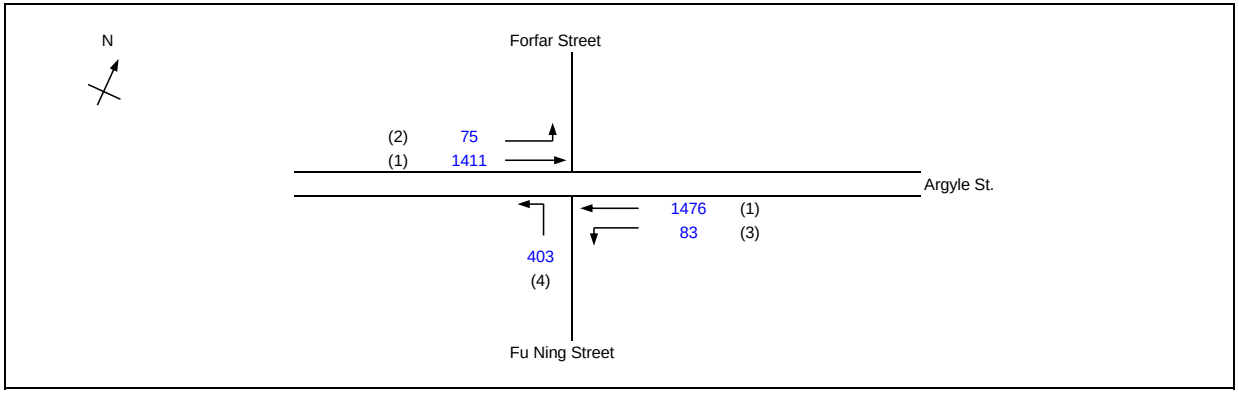
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	85	320		405	0.21	1830			1830	0.221			48	70	0.411	36	17
SA	A	3.30	1	2				4170		922		922	0.00	4170			4170	0.221			48	70	0.411	45	17
LT, SA	A	3.50	3	1	10		N	1965	251	297		548	0.46	1839			1839	0.298	0.298		65	70	0.554	54	20
SA	A	3.50	1	2				4210		1256		1256	0.00	4210			4210	0.298			65	70	0.554	60	19
LT	C	2.90	4	2	10		N	3950	516			516	1.00	3435			3435	0.150	0.150		33	28	0.697	42	47
PED	B																			23		23			

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

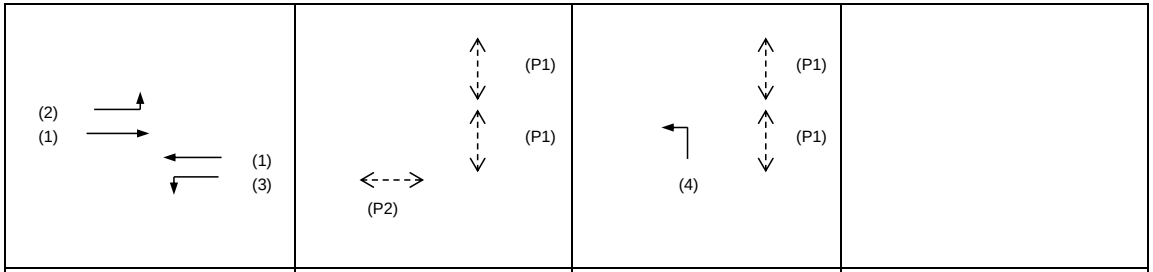
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J1: Argyle Street / Forfar Road / Fu Ning Street	**2035 Des_PM**	FILENAME :	Checked By:	MM	一月-25
2035 PM Design Peak Hour Traffic Flows		J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.372
Loss time		L =	32 sec
Total Flow		=	3448 pcu
Co	= (1.5*L+5)/(1-Y)	=	84.4 sec
Cm	= L/(1-Y)	=	50.9 sec
Yult		=	0.660
R.C.ult	= (Yult-Y)/Y*100%	=	77.5 %
Cp	= 0.9*L/(0.9-Y)	=	54.5 sec
Ymax	= 1-L/C	=	0.754
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	82.5 %



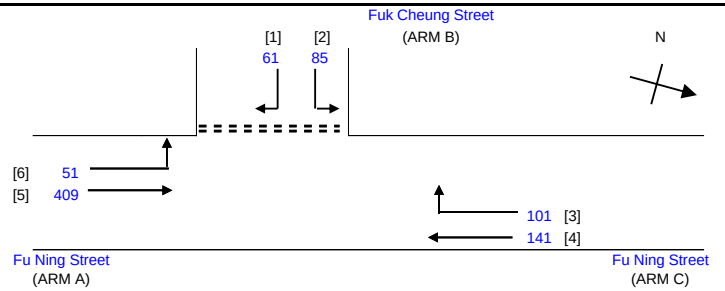
Stage A	Int = 6	Stage B	Int =	Stage C	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

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)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	75	382		457	0.16	1854			1854	0.247			65	70	0.458	42	18
SA	A	3.30	1	2				4170		1029		1029	0.00	4170			4170	0.247			65	70	0.458	51	17
LT, SA	A	3.50	3	1	10		N	1965	83	405		488	0.17	1916			1916	0.254	0.254		67	70	0.473	48	18
SA	A	3.50	1	2				4210		1071		1071	0.00	4210			4210	0.254			67	70	0.473	51	17
LT	C	2.90	4	2	10		N	3950	403			403	1.00	3435			3435	0.117	0.117		31	28	0.545	33	43
PED	B																			23		23			

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

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Jan-25
J2: Fu Ning Street / Fuk Cheung Street	**2035 Ref_AM**	FILENAME :	CHECKED BY:	MM	Jan-25
2035 Reference AM Peak Hour Traffic flows		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Jan-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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	51	(pcu/hr)
q a-c	=	409	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	141	(pcu/hr)
q c-b	=	101	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	61	(pcu/hr)
q b-c	=	85	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.5821918

THE CAPACITY OF MOVEMENT :

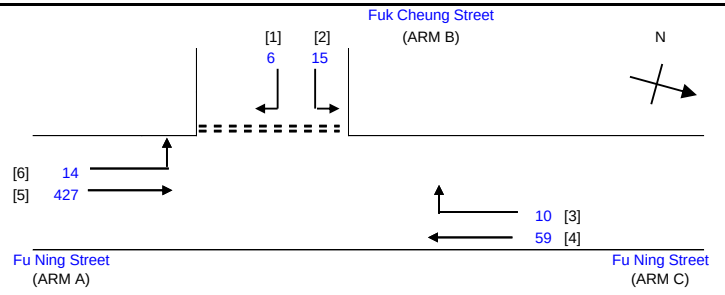
Q b-a	=	408		
Q b-c	=	597	Q b-c (O) =	574.7
Q c-b	=	629		
Q b-ac	=	500.2		
TOTAL FLOW	=	848	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1495
DFC c-b	=	0.1606
DFC b-c (share lane)	=	0.2919

CRITICAL DFC = 0.29

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Jan-25
J2: Fu Ning Street / Fuk Cheung Street	**2035 Ref_PM**	FILENAME :	CHECKED BY:	MM	Jan-25
2035 Reference PM Peak Hour Traffic flows		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Jan-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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	14	(pcu/hr)
q a-c	=	427	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	59	(pcu/hr)
q c-b	=	10	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	6	(pcu/hr)
q b-c	=	15	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.7142857

THE CAPACITY OF MOVEMENT :

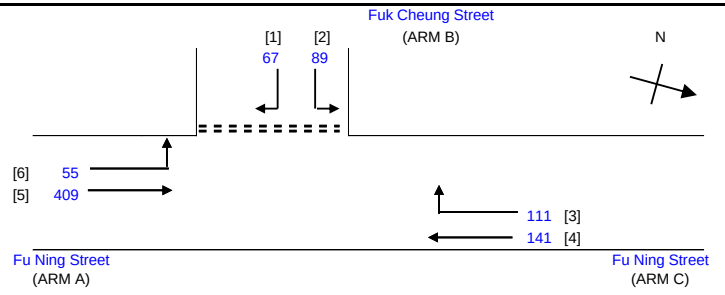
Q b-a	=	445		
Q b-c	=	597	Q b-c (O) =	595
Q c-b	=	634		
Q b-ac	=	543.9		
TOTAL FLOW	=	531	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0135
DFC c-b	=	0.0158
DFC b-c (share lane)	=	0.0386

CRITICAL DFC = 0.04

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Jan-25
J2: Fu Ning Street / Fuk Cheung Street	**2035 Des_AM**	FILENAME :	CHECKED BY:	MM	Jan-25
2035 Design AM Peak Hour Traffic flows		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Jan-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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	55	(pcu/hr)
q a-c	=	409	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	141	(pcu/hr)
q c-b	=	111	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	67	(pcu/hr)
q b-c	=	89	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.5705128

THE CAPACITY OF MOVEMENT :

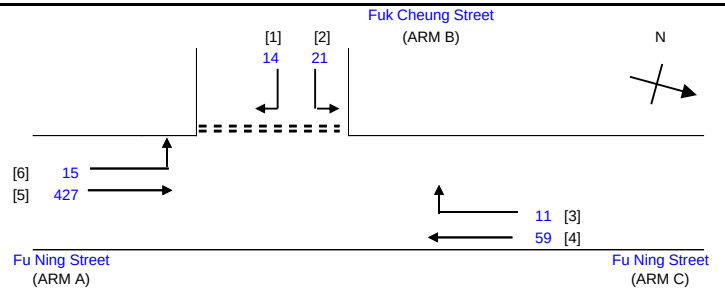
Q b-a	=	405		
Q b-c	=	597	Q b-c (O) =	572.3
Q c-b	=	628		
Q b-ac	=	496		
TOTAL FLOW	=	872	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1654
DFC c-b	=	0.1768
DFC b-c (share lane)	=	0.3145

CRITICAL DFC = 0.31

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Jan-25
J2: Fu Ning Street / Fuk Cheung Street	**2035 Des_PM**	FILENAME :	CHECKED BY:	MM	Jan-25
2035 Design PM Peak Hour Traffic flows		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Jan-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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	15	(pcu/hr)
q a-c	=	427	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	59	(pcu/hr)
q c-b	=	11	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	14	(pcu/hr)
q b-c	=	21	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.6

THE CAPACITY OF MOVEMENT :

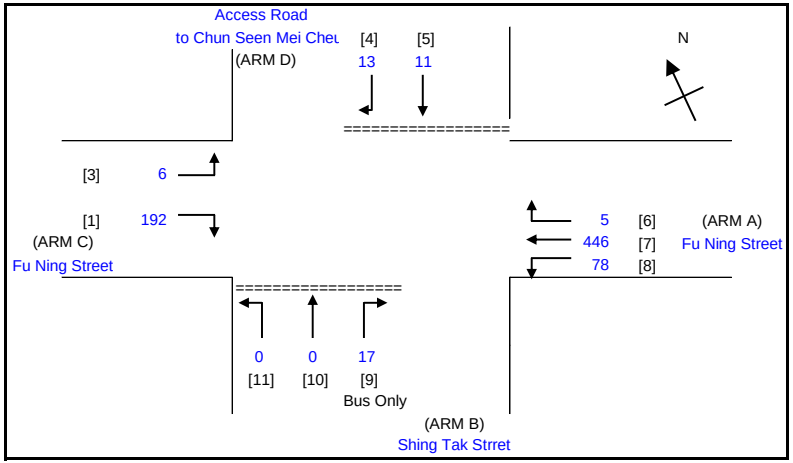
Q b-a	=	445		
Q b-c	=	597	Q b-c (O) =	592.3
Q c-b	=	634		
Q b-ac	=	525.2		
TOTAL FLOW	=	547	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0315
DFC c-b	=	0.0174
DFC b-c (share lane)	=	0.0666

CRITICAL DFC = 0.07

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.: 82947	PREPARED BY:	LL	一月-25
J3: Fu Ning Street / Shing Tak Street	FILENAME :	CHECKED BY:	MM	一月-25
2035 Reference AM Peak Hour Traffic Flows	**2035 Ref_AM** J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	一月-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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	11.45	(metres)		
W cr	=	0	(metres)	Y =	0.6051475

MAJOR ROAD (ARM A)				MAJOR MAJOR ROAD (ARM C)			
W a-d	=	6.00	(metres)	W c-b	=	3.30	(metres)
Vr a-d	=	25	(metres)	Vr c-b	=	35	(metres)
q a-b	=	78	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	446	(pcu/hr)	q c-b	=	192	(pcu/hr)
q a-d	=	5	(pcu/hr)	q c-d	=	6	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	2.6	(metres)	W d-c	=	1.8	(metres)
W b-c	=	2.6	(metres)	W d-a	=	1.8	(metres)
Vl b-a	=	80	(metres)	Vl d-c	=	25.0	(metres)
Vr b-a	=	50	(metres)	Vr d-c	=	85.0	(metres)
Vr b-c	=	50	(metres)	Vr d-a	=	85.0	(metres)
q b-a	=	17	(pcu/hr)	q d-c	=	13	(pcu/hr)
q b-c	=	0	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	0	(pcu/hr)	q d-b	=	11	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.811	X a	=	1.117
X c	=	0.893	X d	=	0.741
Z b	=	0.846	Z d	=	0.801
M b	=	0.811	M d	=	0.741

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.044		r d-c	=	0.034	
ql b-d	=	0	(pcu/hr)	ql d-b	=	5.6862	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	5.3138	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	370	(pcu/hr)	Q d-c	=	384	(pcu/hr)
Q b-c	=	535	(pcu/hr)	Q d-a	=	591	(pcu/hr)
Q c-b	=	561	(pcu/hr)	Q a-d	=	763	(pcu/hr)
Ql b-d	=	373	(pcu/hr)	Ql d-b	=	378	(pcu/hr)
Qr b-d	=	373	(pcu/hr)	Qr d-b	=	378	(pcu/hr)

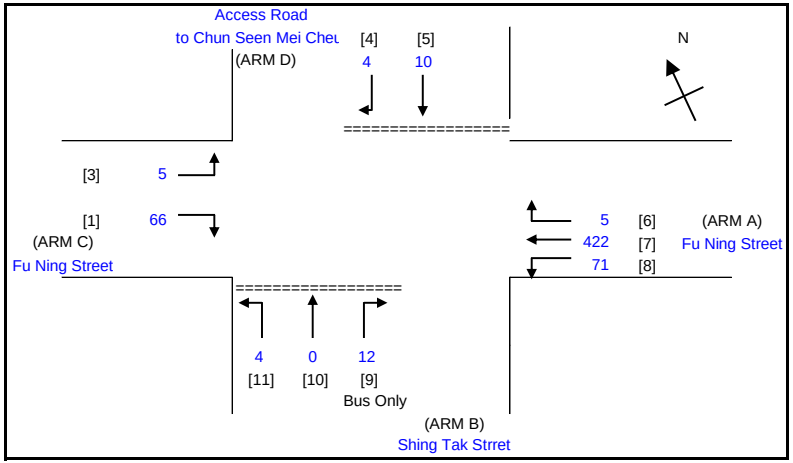
TOTAL FLOW = 768 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0459
DFC b-c	=	0.0000
DFC c-b	=	0.3422
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0339
DFC d-a	=	0.0000
DFC a-d	=	0.0066
DFCl d-b	=	0.0150
DFCr d-b	=	0.0141

CRITICAL DFC = 0.34

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.: 82947	PREPARED BY:	LL	一月-25
J3: Fu Ning Street / Shing Tak Street	**2035 Ref_PM**	CHECKED BY:	MM	一月-25
2035 Reference PM Peak Hour Traffic Flows	FILENAME : J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	一月-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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	11.45	(metres)		
W cr	=	0	(metres)	Y =	0.6051475

MAJOR ROAD (ARM A)				MAJOR MAJOR ROAD (ARM C)			
W a-d	=	6.00	(metres)	W c-b	=	3.30	(metres)
Vr a-d	=	25	(metres)	Vr c-b	=	35	(metres)
q a-b	=	71	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	422	(pcu/hr)	q c-b	=	66	(pcu/hr)
q a-d	=	5	(pcu/hr)	q c-d	=	5	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	2.6	(metres)	W d-c	=	1.8	(metres)
W b-c	=	2.6	(metres)	W d-a	=	1.8	(metres)
Vl b-a	=	80	(metres)	Vl d-c	=	25.0	(metres)
Vr b-a	=	50	(metres)	Vr d-c	=	85.0	(metres)
Vr b-c	=	50	(metres)	Vr d-a	=	85.0	(metres)
q b-a	=	12	(pcu/hr)	q d-c	=	4	(pcu/hr)
q b-c	=	4	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	0	(pcu/hr)	q d-b	=	10	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.811	X a	=	1.117
X c	=	0.893	X d	=	0.741
Z b	=	0.846	Z d	=	0.801
M b	=	0.811	M d	=	0.741

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.029		r d-c	=	0.010	
ql b-d	=	0	(pcu/hr)	ql d-b	=	5.0491	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	4.9509	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	408	(pcu/hr)	Q d-c	=	407	(pcu/hr)
Q b-c	=	542	(pcu/hr)	Q d-a	=	595	(pcu/hr)
Q c-b	=	567	(pcu/hr)	Q a-d	=	807	(pcu/hr)
Ql b-d	=	410	(pcu/hr)	Ql d-b	=	401	(pcu/hr)
Qr b-d	=	410	(pcu/hr)	Qr d-b	=	401	(pcu/hr)

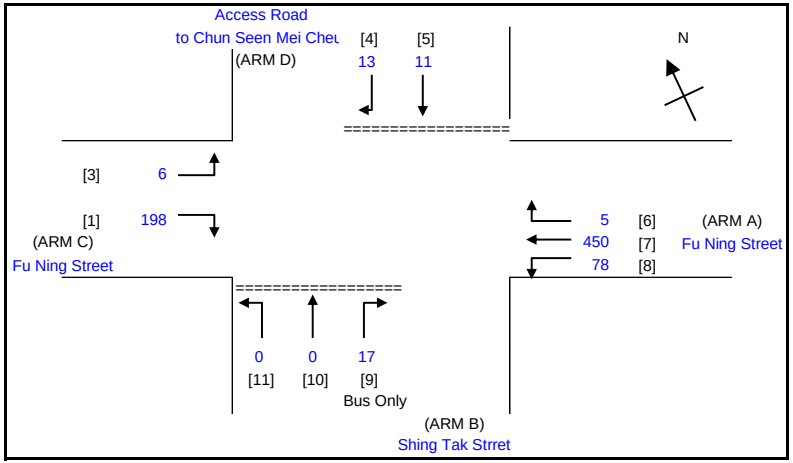
TOTAL FLOW = 599 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0294
DFC b-c	=	0.0074
DFC c-b	=	0.1164
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0098
DFC d-a	=	0.0000
DFC a-d	=	0.0062
DFCl d-b	=	0.0126
DFCr d-b	=	0.0123

CRITICAL DFC = 0.12

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.: 82947	PREPARED BY:	LL	一月-25
J3: Fu Ning Street / Shing Tak Street	**2035 Des_AM**	CHECKED BY:	MM	一月-25
2035 Design AM Peak Hour Traffic Flows	FILENAME : J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	一月-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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	11.45	(metres)		
W cr	=	0	(metres)	Y =	0.6051475

MAJOR ROAD (ARM A)				MAJOR MAJOR ROAD (ARM C)			
W a-d	=	6.00	(metres)	W c-b	=	3.30	(metres)
Vr a-d	=	25	(metres)	Vr c-b	=	35	(metres)
q a-b	=	78	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	450	(pcu/hr)	q c-b	=	198	(pcu/hr)
q a-d	=	5	(pcu/hr)	q c-d	=	6	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	2.6	(metres)	W d-c	=	1.8	(metres)
W b-c	=	2.6	(metres)	W d-a	=	1.8	(metres)
Vl b-a	=	80	(metres)	Vl d-c	=	25.0	(metres)
Vr b-a	=	50	(metres)	Vr d-c	=	85.0	(metres)
Vr b-c	=	50	(metres)	Vr d-a	=	85.0	(metres)
q b-a	=	17	(pcu/hr)	q d-c	=	13	(pcu/hr)
q b-c	=	0	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	0	(pcu/hr)	q d-b	=	11	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.811	X a	=	1.117
X c	=	0.893	X d	=	0.741
Z b	=	0.846	Z d	=	0.801
M b	=	0.811	M d	=	0.741

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.044		r d-c	=	0.034	
ql b-d	=	0	(pcu/hr)	ql d-b	=	5.6867	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	5.3133	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	368	(pcu/hr)	Q d-c	=	383	(pcu/hr)
Q b-c	=	535	(pcu/hr)	Q d-a	=	591	(pcu/hr)
Q c-b	=	560	(pcu/hr)	Q a-d	=	761	(pcu/hr)
Ql b-d	=	370	(pcu/hr)	Ql d-b	=	376	(pcu/hr)
Qr b-d	=	370	(pcu/hr)	Qr d-b	=	376	(pcu/hr)

TOTAL FLOW = 778 (PCU/HR)

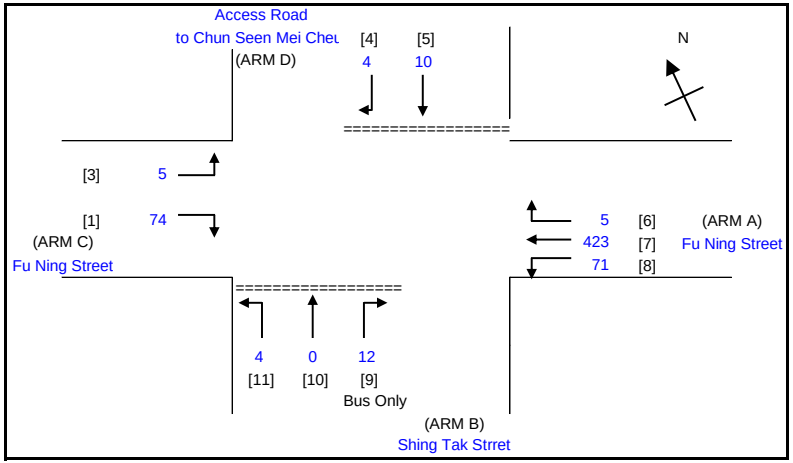
COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0462
DFC b-c	=	0.0000
DFC c-b	=	0.3536
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0339
DFC d-a	=	0.0000
DFC a-d	=	0.0066
DFCl d-b	=	0.0151
DFCr d-b	=	0.0141

CRITICAL DFC = 0.35

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.: 82947	PREPARED BY:	LL	一月-25
J3: Fu Ning Street / Shing Tak Street	FILENAME :	CHECKED BY:	MM	一月-25
2035 Design PM Peak Hour Traffic Flows	J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	一月-25

2035 Des_PM



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	11.45	(metres)		
W cr	=	0	(metres)	Y =	0.6051475

MAJOR ROAD (ARM A)				MAJOR MAJOR ROAD (ARM C)			
W a-d	=	6.00	(metres)	W c-b	=	3.30	(metres)
Vr a-d	=	25	(metres)	Vr c-b	=	35	(metres)
q a-b	=	71	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	423	(pcu/hr)	q c-b	=	74	(pcu/hr)
q a-d	=	5	(pcu/hr)	q c-d	=	5	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	2.6	(metres)	W d-c	=	1.8	(metres)
W b-c	=	2.6	(metres)	W d-a	=	1.8	(metres)
Vl b-a	=	80	(metres)	Vl d-c	=	25.0	(metres)
Vr b-a	=	50	(metres)	Vr d-c	=	85.0	(metres)
Vr b-c	=	50	(metres)	Vr d-a	=	85.0	(metres)
q b-a	=	12	(pcu/hr)	q d-c	=	4	(pcu/hr)
q b-c	=	4	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	0	(pcu/hr)	q d-b	=	10	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.811	X a	=	1.117
X c	=	0.893	X d	=	0.741
Z b	=	0.846	Z d	=	0.801
M b	=	0.811	M d	=	0.741

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.03		r d-c	=	0.010	
ql b-d	=	0	(pcu/hr)	ql d-b	=	5.0493	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	4.9507	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	406	(pcu/hr)	Q d-c	=	406	(pcu/hr)
Q b-c	=	542	(pcu/hr)	Q d-a	=	595	(pcu/hr)
Q c-b	=	567	(pcu/hr)	Q a-d	=	805	(pcu/hr)
Ql b-d	=	407	(pcu/hr)	Ql d-b	=	400	(pcu/hr)
Qr b-d	=	407	(pcu/hr)	Qr d-b	=	400	(pcu/hr)

TOTAL FLOW = 608 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

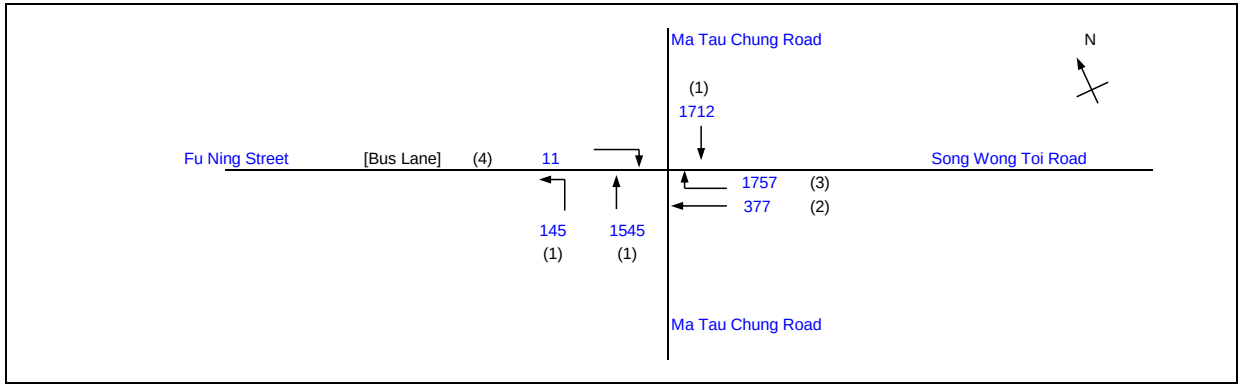
DFC b-a	=	0.0296
DFC b-c	=	0.0074
DFC c-b	=	0.1305
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0099
DFC d-a	=	0.0000
DFC a-d	=	0.0062
DFCl d-b	=	0.0126
DFCr d-b	=	0.0124

CRITICAL DFC = 0.13

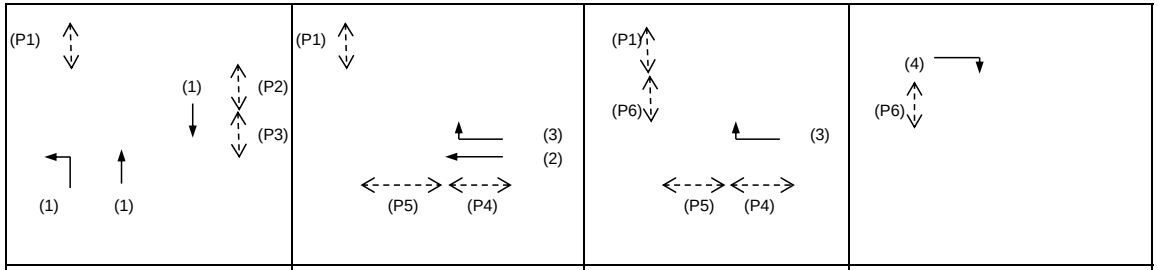
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.	82947	Prepared By:	LL	Jan-25
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2035 Ref_AM**	FILENAME :	Checked By:	MM	Jan-25
2035 Reference AM Peak Hour Traffic Flows		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls	Reviewed By:	OC	Jan-25



			Existing Cycle Time
No. of stages per cycle		N =	4
Cycle time		C =	137 sec
Sum(y)		Y =	0.581
Loss time		L =	15 sec
Total Flow		=	5547 pcu
Co	= (1.5*L+5)/(1-Y)	=	65.6 sec
Cm	= L/(1-Y)	=	35.8 sec
Yult		=	0.788
R.C.ult	= (Yult-Y)/Y*100%	=	35.6 %
Cp	= 0.9*L/(0.9-Y)	=	42.3 sec
Ymax	= 1-L/C	=	0.891
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	38.0 %



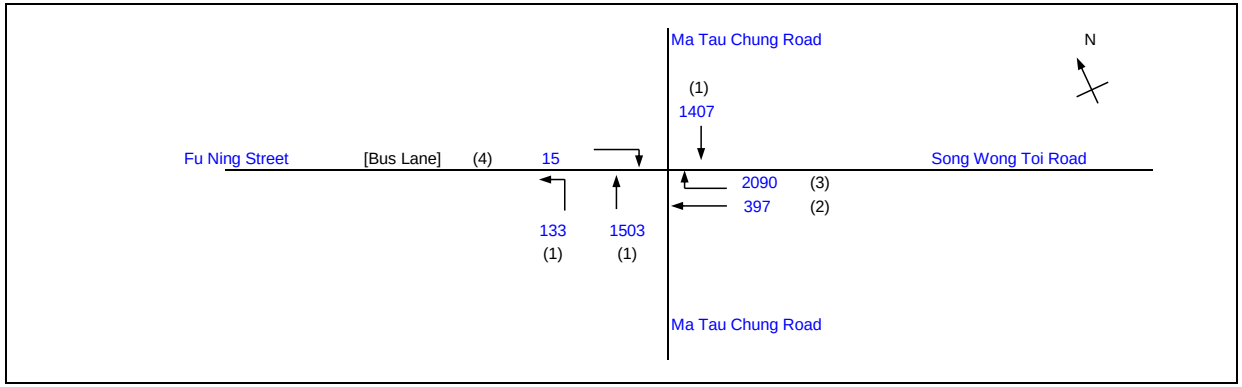
Stage A	Int = 7	Stage B	Int = 0	Stage C	Int = 6	Stage D	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

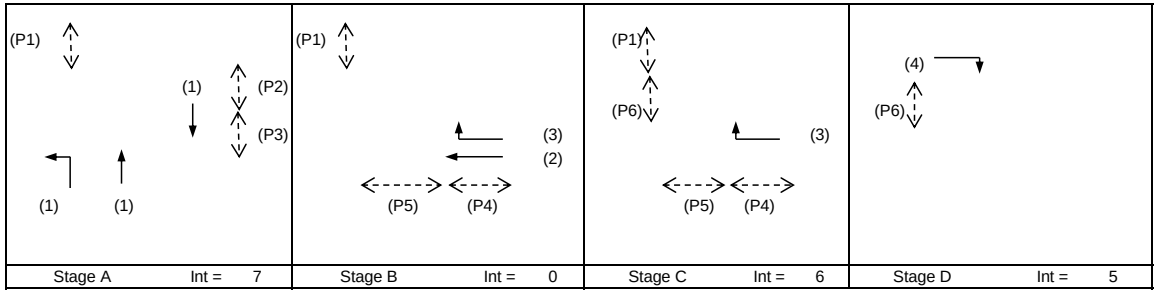
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	145	385		530	0.27	1926			1926	0.275	0.276		58	63	0.599	60	28
SA (NB)	A	3.50	1	2				4210		1160		1160	0.00	4210			4210	0.275			58	63	0.599	69	26
SA (SB)	A	3.60	1	3			N	6205		1712		1712	0.00	6205			6205	0.276			58	63	0.600	70	26
SA (WB)	B	3.50	2	2				4210		377		377	0.00	4210			4210	0.090			19	30	0.409	33	43
RT	B,C	3.50	3	3	30		N	6175			1757	1757	1.00	5881			5881	0.299	0.299		63	51	0.803	82	38
RT	D	3.30	4	1	33		N	1945			11	11	1.00	1860			1860	0.006	0.006		1	8	0.101	0	57

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.	82947	Prepared By:	LL	Jan-25
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2035 Ref_PM**	FILENAME :		Checked By:	MM	Jan-25
2035 Reference PM Peak Hour Traffic Flows		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls		Reviewed By:	OC	Jan-25



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	137	sec
Sum(y)		Y =	0.630	
Loss time		L =	15	sec
Total Flow		=	5545	pcu
Co	= (1.5*L+5)/(1-Y)	=	74.3	sec
Cm	= L/(1-Y)	=	40.5	sec
Yult		=	0.788	
R.C.ult	= (Yult-Y)/Y*100%	=	25.0	%
Cp	= 0.9*L/(0.9-Y)	=	50.0	sec
Ymax	= 1-L/C	=	0.891	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	27.2	%

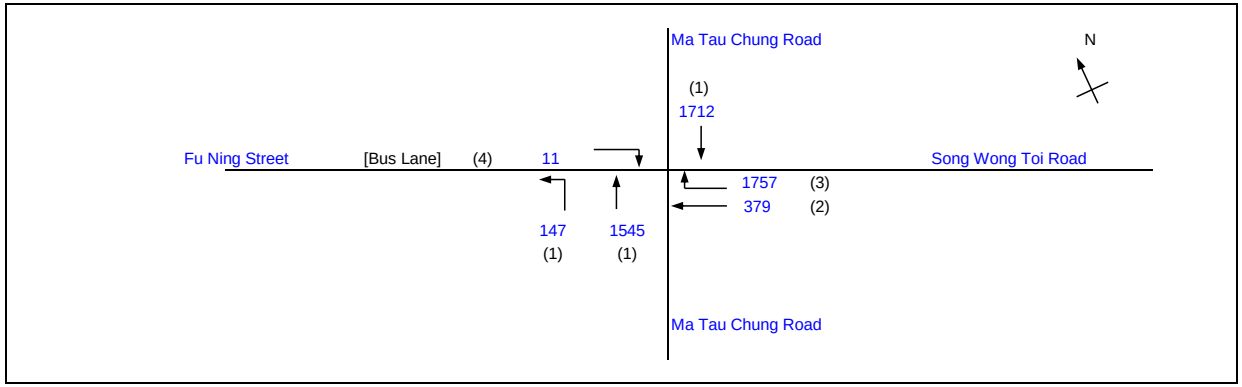


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

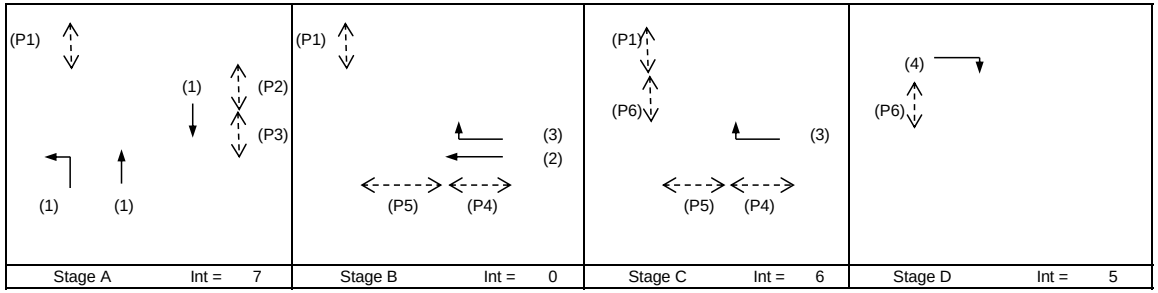
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	133	381		514	0.26	1928			1928	0.267	0.267		52	63	0.707	72	38
SA (NB)	A	3.50	1	2				4210		1122		1122	0.00	4210			4210	0.267			52	63	0.707	78	35
SA (SB)	A	3.60	1	3			N	6205		1407		1407	0.00	6205			6205	0.227			44	63	0.707	72	39
SA (WB)	B	3.50	2	2				4210		397		397	0.00	4210			4210	0.094			18	30	0.707	39	58
RT	B,C	3.50	3	3	30		N	6175			2090	2090	1.00	5881			5881	0.355	0.355		69	51	0.707	78	25
RT	D	3.30	4	1	33		N	1945			15	15	1.00	1860			1860	0.008	0.008		2	8	0.707	6	246

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.	82947	Prepared By:	LL	Jan-25
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2035 Des_AM**	FILENAME :		Checked By:	MM	Jan-25
2035 Design AM Peak Hour Traffic Flows		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls		Reviewed By:	OC	Jan-25



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	137	sec
Sum(y)		Y =	0.581	
Loss time		L =	15	sec
Total Flow		=	5551	pcu
Co	= (1.5*L+5)/(1-Y)	=	65.6	sec
Cm	= L/(1-Y)	=	35.8	sec
Yult		=	0.788	
R.C.ult	= (Yult-Y)/Y*100%	=	35.6	%
Cp	= 0.9*L/(0.9-Y)	=	42.3	sec
Ymax	= 1-L/C	=	0.891	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	38.0	%

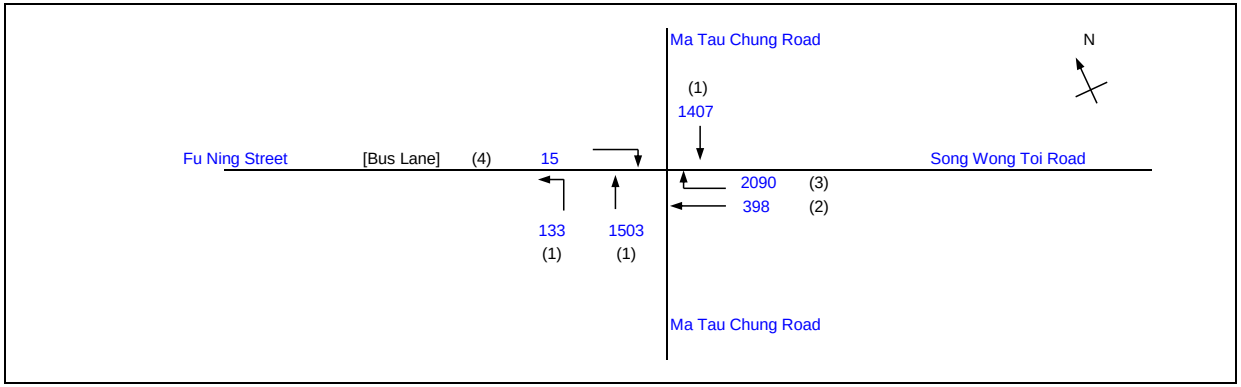


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

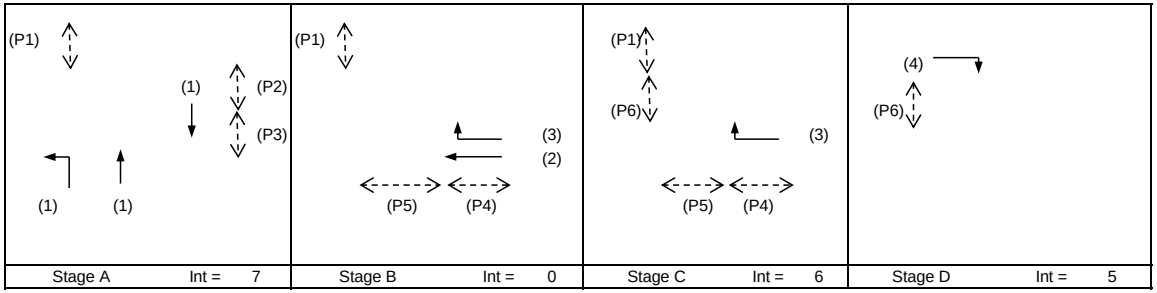
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	147	384		531	0.28	1925			1925	0.276	0.276		58	63	0.600	60	28
SA (NB)	A	3.50	1	2				4210		1161		1161	0.00	4210			4210	0.276			58	63	0.600	69	26
SA (SB)	A	3.60	1	3			N	6205		1712		1712	0.00	6205			6205	0.276			58	63	0.600	70	26
SA (WB)	B	3.50	2	2				4210		379		379	0.00	4210			4210	0.090			19	30	0.411	33	43
RT	B,C	3.50	3	3	30		N	6175			1757	1757	1.00	5881			5881	0.299	0.299		63	51	0.803	82	38
RT	D	3.30	4	1	33		N	1945			11	11	1.00	1860			1860	0.006	0.006		1	8	0.101	0	57

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.	82947	Prepared By:	LL	Jan-25
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2035 Des_PM**	FILENAME :		Checked By:	MM	Jan-25
2035 Design PM Peak Hour Traffic Flows		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls		Reviewed By:	OC	Jan-25



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	137	sec
Sum(y)		Y =	0.630	
Loss time		L =	15	sec
Total Flow		=	5546	pcu
Co	= (1.5*L+5)/(1-Y)	=	74.3	sec
Cm	= L/(1-Y)	=	40.5	sec
Yult		=	0.788	
R.C.ult	= (Yult-Y)/Y*100%	=	25.0	%
Cp	= 0.9*L/(0.9-Y)	=	50.0	sec
Ymax	= 1-L/C	=	0.891	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	27.2	%

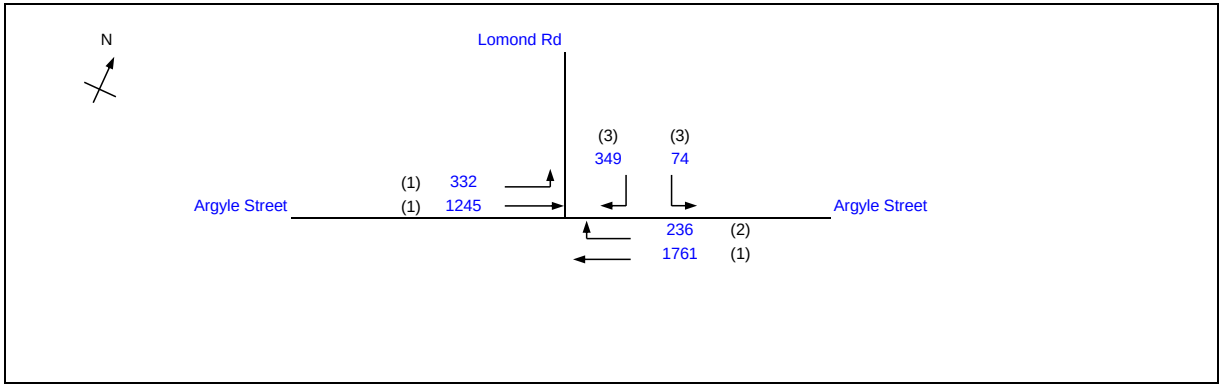


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

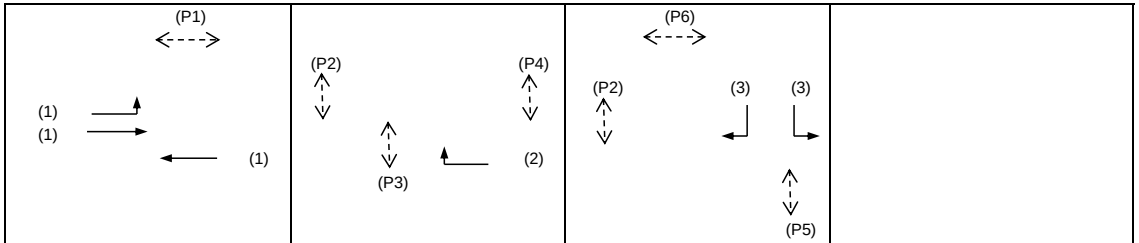
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	133	381		514	0.26	1928			1928	0.267	0.267		52	63	0.707	72	38
SA (NB)	A	3.50	1	2				4210		1122		1122	0.00	4210			4210	0.267			52	63	0.707	78	35
SA (SB)	A	3.60	1	3			N	6205		1407		1407	0.00	6205			6205	0.227			44	63	0.707	72	39
SA (WB)	B	3.50	2	2				4210		398		398	0.00	4210			4210	0.095			18	30	0.707	39	58
RT	B,C	3.50	3	3	30		N	6175			2090	2090	1.00	5881			5881	0.355	0.355		69	51	0.707	78	25
RT	D	3.30	4	1	33		N	1945			15	15	1.00	1860			1860	0.008	0.008		2	8	0.707	6	246

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J5: Argyle Street/ Lomond Road	**2035 Ref_AM**	FILENAME :	Checked By:	MM	一月-25
2035 Reference AM Peak Hour Traffic Flows		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.542	
Loss time		L =	14	sec
Total Flow		=	3997	pcu
Co	= (1.5*L+5)/(1-Y)	=	56.7	sec
Cm	= L/(1-Y)	=	30.5	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	46.8	%
Cp	= 0.9*L/(0.9-Y)	=	35.1	sec
Ymax	= 1-L/C	=	0.892	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	48.3	%



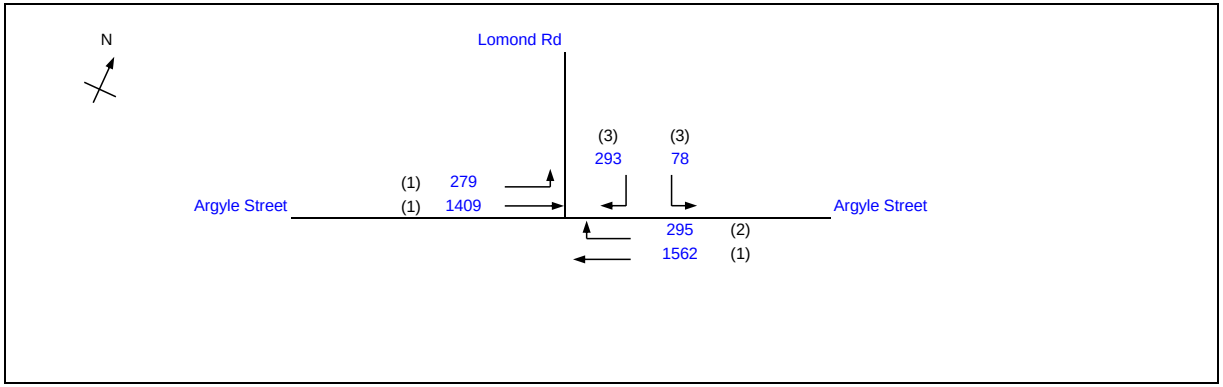
Stage A	Int = 5	Stage B	Int = 5	Stage C	Int = 7

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

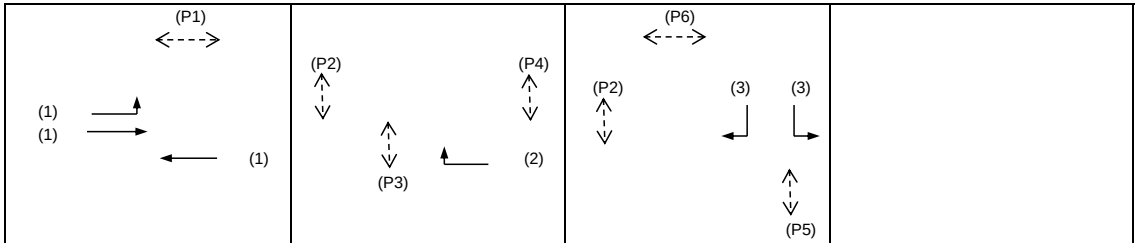
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
LT	A	3.30	1	1	10.5		N	1945	332			332	1.00	1702			1702	0.195			42	67	0.379	30	18
SA (EB)	A	3.50	1	2				4210		1245		1245	0.00	4210			4210	0.296	0.296		63	67	0.574	63	21
SA (WB)	A	3.30	1	3			N	6115		1761		1761	0.00	6115			6115	0.288			62	67	0.559	60	20
RT	B	3.30	2	1	20		N	1945			236	236	1.00	1809			1809	0.130	0.130		28	26	0.652	36	51
LT/RT	C	3.50	3	1	10		N	1965	74		123	197	1.00	1709			1709	0.115	0.115		25	23	0.652	30	55
RT	C	3.50	3	1	20			2105			226	226	1.00	1958			1958	0.115			25	23	0.652	36	54

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J5: Argyle Street/ Lomond Road	**2035 Ref_PM**	FILENAME :	Checked By:	MM	一月-25
2035 Reference PM Peak Hour Traffic Flows		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.599	
Loss time		L =	14	sec
Total Flow		=	3916	pcu
Co	= (1.5*L+5)/(1-Y)	=	64.8	sec
Cm	= L/(1-Y)	=	34.9	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	32.7	%
Cp	= 0.9*L/(0.9-Y)	=	41.8	sec
Ymax	= 1-L/C	=	0.892	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	34.1	%



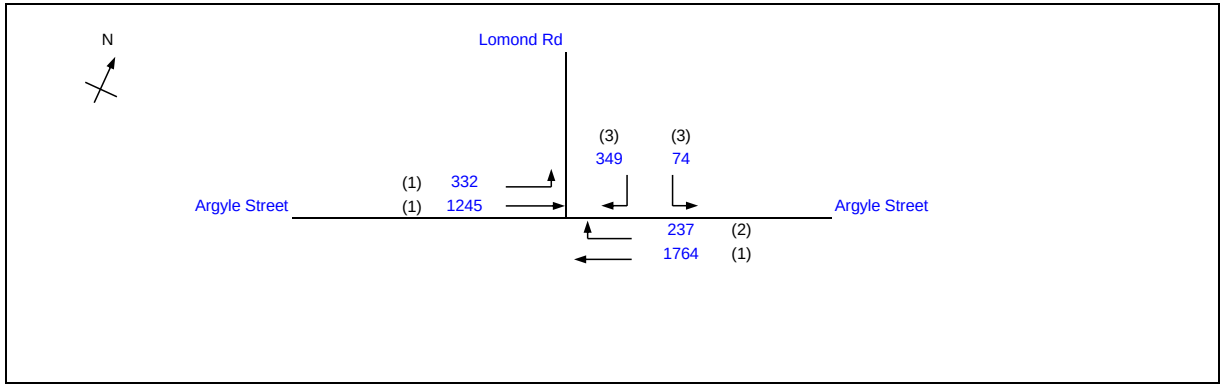
Stage A	Int = 5	Stage B	Int = 5	Stage C	Int = 7

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

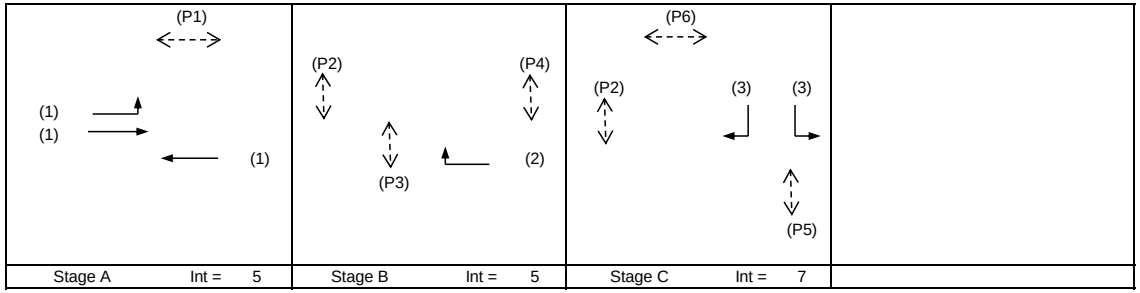
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
LT	A	3.30	1	1	10.5		N	1945	279			279	1.00	1702			1702	0.164			32	67	0.318	24	17
SA (EB)	A	3.50	1	2				4210		1409		1409	0.00	4210			4210	0.335	0.335		65	67	0.649	72	22
SA (WB)	A	3.30	1	3			N	6115		1562		1562	0.00	6115			6115	0.255			49	67	0.496	54	19
RT	B	3.30	2	1	20		N	1945			295	295	1.00	1809			1809	0.163	0.163		32	26	0.815	54	64
LT/RT	C	3.50	3	1	10		N	1965	78		95	173	1.00	1709			1709	0.101	0.101		20	23	0.572	30	51
RT	C	3.50	3	1	20			2105			198	198	1.00	1958			1958	0.101			20	23	0.572	30	50

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J5: Argyle Street/ Lomond Road	**2035 Des_AM**	FILENAME :	Checked By:	MM	一月-25
2035 Design AM Peak Hour Traffic Flows		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.542	
Loss time		L =	14	sec
Total Flow		=	4001	pcu
Co	= (1.5*L+5)/(1-Y)	=	56.8	sec
Cm	= L/(1-Y)	=	30.6	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	46.7	%
Cp	= 0.9*L/(0.9-Y)	=	35.2	sec
Ymax	= 1-L/C	=	0.892	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	48.1	%

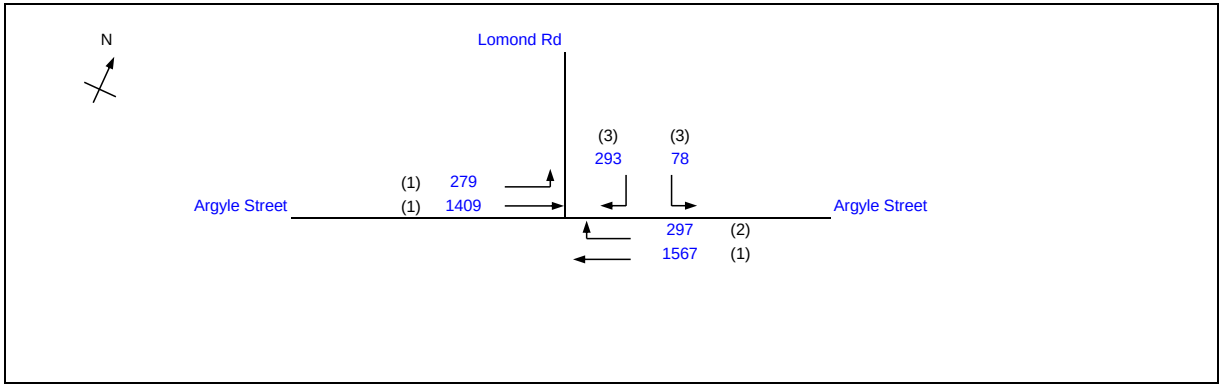


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

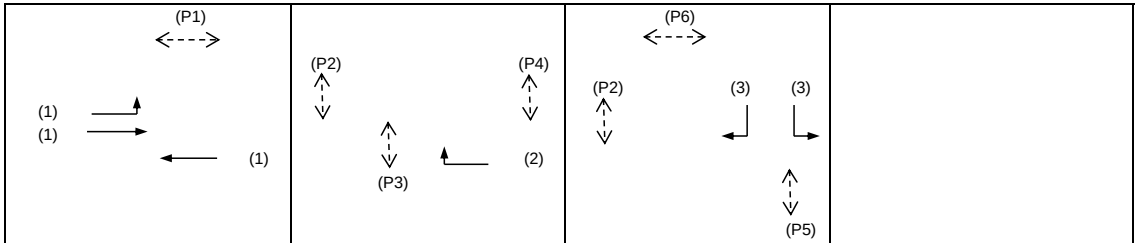
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
LT	A	3.30	1	1	10.5		N	1945	332			332	1.00	1702			1702	0.195			42	67	0.379	30	18
SA (EB)	A	3.50	1	2				4210		1245		1245	0.00	4210			4210	0.296	0.296		63	67	0.574	63	21
SA (WB)	A	3.30	1	3			N	6115		1764		1764	0.00	6115			6115	0.288			62	67	0.560	60	20
RT	B	3.30	2	1	20		N	1945			237	237	1.00	1809			1809	0.131	0.131		28	26	0.655	36	52
LT/RT	C	3.50	3	1	10		N	1965	74		123	197	1.00	1709			1709	0.115	0.115		25	23	0.652	30	55
RT	C	3.50	3	1	20			2105			226	226	1.00	1958			1958	0.115			25	23	0.652	36	54

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J5: Argyle Street/ Lomond Road	**2035 Des_PM**	FILENAME :	Checked By:	MM	一月-25
2035 Design PM Peak Hour Traffic Flows		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.600	
Loss time		L =	14	sec
Total Flow		=	3923	pcu
Co	= (1.5*L+5)/(1-Y)	=	65.0	sec
Cm	= L/(1-Y)	=	35.0	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	32.5	%
Cp	= 0.9*L/(0.9-Y)	=	42.0	sec
Ymax	= 1-L/C	=	0.892	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	33.8	%



Stage A	Int = 5	Stage B	Int = 5	Stage C	Int = 7

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

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)
																				14					
LT	A	3.30	1	1	10.5		N	1945	279			279	1.00	1702			1702	0.164			32	67	0.318	24	17
SA (EB)	A	3.50	1	2				4210		1409		1409	0.00	4210			4210	0.335	0.335		65	67	0.649	72	22
SA (WB)	A	3.30	1	3			N	6115		1567		1567	0.00	6115			6115	0.256			50	67	0.497	54	19
RT	B	3.30	2	1	20		N	1945			297	297	1.00	1809			1809	0.164	0.164		32	26	0.821	54	65
LT/RT	C	3.50	3	1	10		N	1965	78		95	173	1.00	1709			1709	0.101	0.101		20	23	0.572	30	51
RT	C	3.50	3	1	20			2105			198	198	1.00	1958			1958	0.101			20	23	0.572	30	50

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

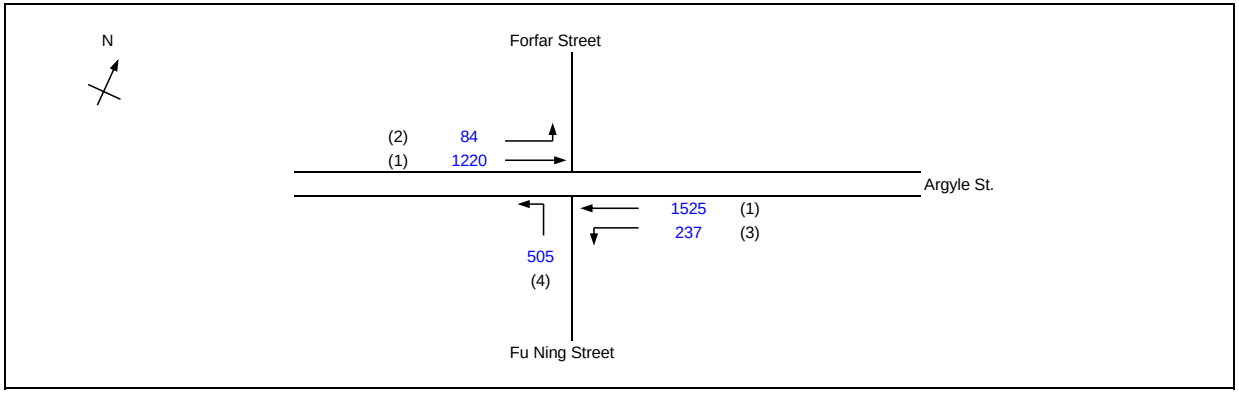
Annex D

2032 Junction Calculation Sheets

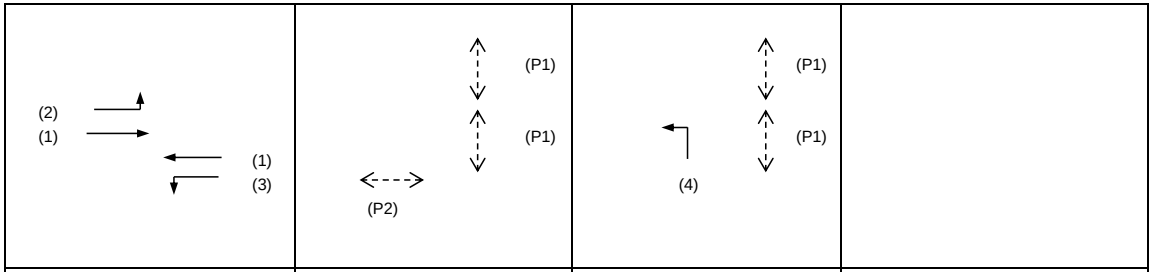
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J1: Argyle Street / Forfar Road / Fu Ning Street	**2032 Ref_AM**	FILENAME :	Checked By:	MM	一月-25
2032 AM Reference Peak Hour Traffic Flows under Construction Scenario		J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.438	
Loss time		L =	32	sec
Total Flow		=	3571	pcu
Co	= (1.5*L+5)/(1-Y)	=	94.3	sec
Cm	= L/(1-Y)	=	57.0	sec
Yult		=	0.660	
R.C.ult	= (Yult-Y)/Y*100%	=	50.6	%
Cp	= 0.9*L/(0.9-Y)	=	62.4	sec
Ymax	= 1-L/C	=	0.754	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	54.9	%



Stage A	Int = 6	Stage B	Int =	Stage C	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

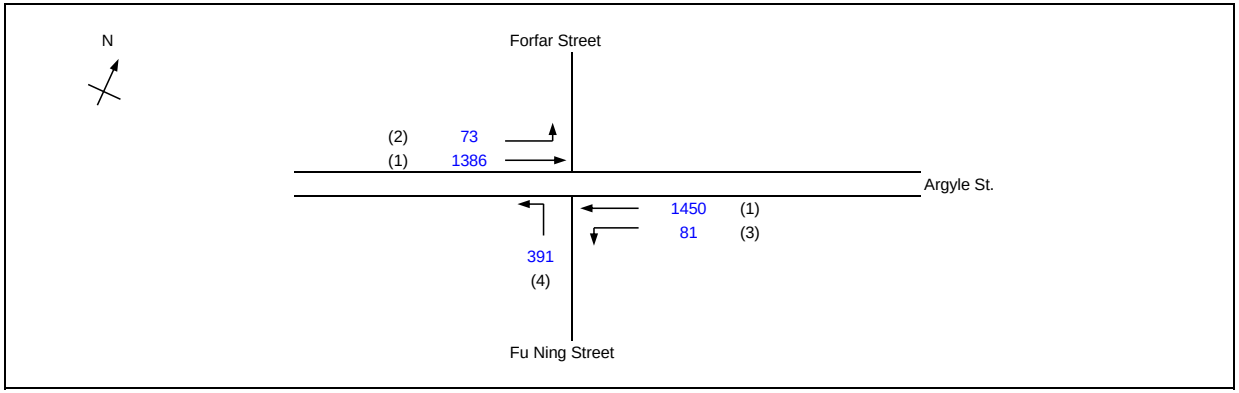
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	84	314		398	0.21	1829			1829	0.217			49	70	0.404	36	17
SA	A	3.30	1	2				4170		906		906	0.00	4170			4170	0.217			49	70	0.404	45	16
LT, SA	A	3.50	3	1	10		N	1965	237	299		536	0.44	1843			1843	0.291	0.291		65	70	0.541	48	19
SA	A	3.50	1	2				4210		1226		1226	0.00	4210			4210	0.291			65	70	0.541	60	18
LT	C	2.90	4	2	10		N	3950	505			505	1.00	3435			3435	0.147	0.147		33	28	0.683	42	47
PED	B																			23		23			

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

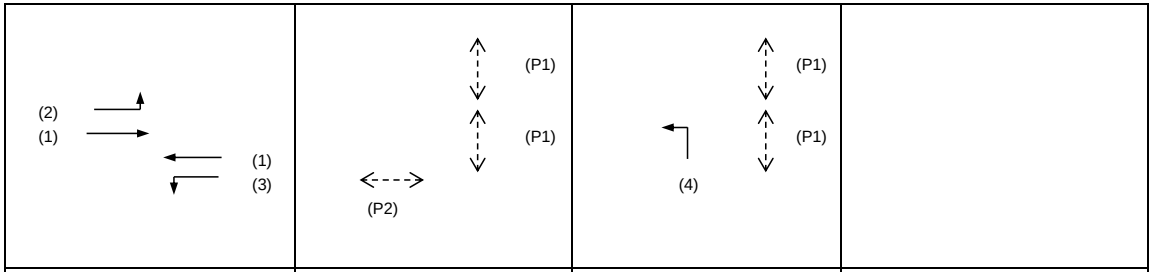
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J1: Argyle Street / Forfar Road / Fu Ning Street	**2032 Ref_PM**	FILENAME :	Checked By:	MM	一月-25
2032 PM Reference Peak Hour Traffic Flows under Construction Scenario		J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time
No. of stages per cycle		N =	3
Cycle time		C =	130 sec
Sum(y)		Y =	0.364
Loss time		L =	32 sec
Total Flow		=	3381 pcu
Co	= (1.5*L+5)/(1-Y)	=	83.3 sec
Cm	= L/(1-Y)	=	50.3 sec
Yult		=	0.660
R.C.ult	= (Yult-Y)/Y*100%	=	81.4 %
Cp	= 0.9*L/(0.9-Y)	=	53.7 sec
Ymax	= 1-L/C	=	0.754
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	86.5 %



Stage A	Int = 6	Stage B	Int =	Stage C	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

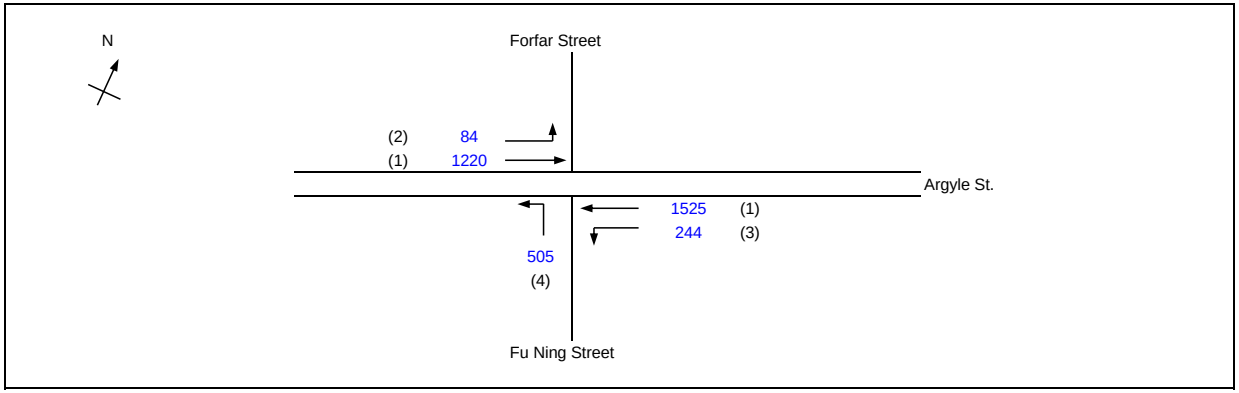
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	73	376		449	0.16	1855			1855	0.242			65	70	0.450	42	18
SA	A	3.30	1	2				4170		1010		1010	0.00	4170			4170	0.242			65	70	0.450	48	17
LT, SA	A	3.50	3	1	10		N	1965	81	398		479	0.17	1916			1916	0.250	0.250		67	70	0.464	42	18
SA	A	3.50	1	2				4210		1052		1052	0.00	4210			4210	0.250			67	70	0.464	51	17
LT	C	2.90	4	2	10		N	3950	391			391	1.00	3435			3435	0.114	0.114		31	28	0.529	33	43
PED	B																			23		23			

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

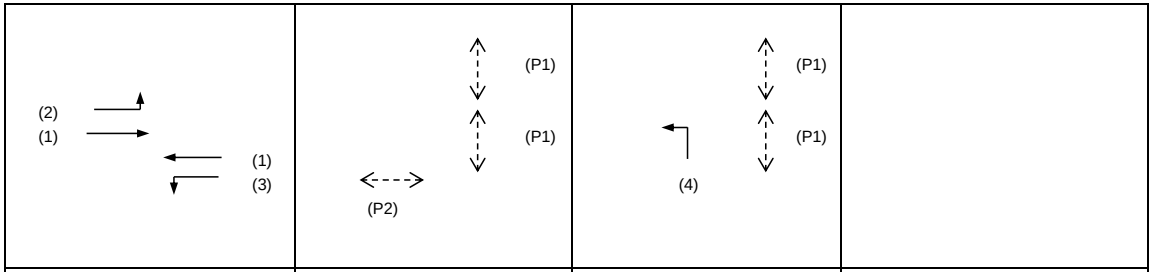
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.	82947	Prepared By:	LL	一月-25
J1: Argyle Street / Forfar Road / Fu Ning Street	**2032 Des_AM**	FILENAME :	Checked By:	MM	一月-25
2032 AM Design Peak Hour Traffic Flows under Construction Scenario		J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.439	
Loss time		L =	32	sec
Total Flow		=	3578	pcu
Co	= (1.5*L+5)/(1-Y)	=	94.5	sec
Cm	= L/(1-Y)	=	57.1	sec
Yult		=	0.660	
R.C.ult	= (Yult-Y)/Y*100%	=	50.2	%
Cp	= 0.9*L/(0.9-Y)	=	62.5	sec
Ymax	= 1-L/C	=	0.754	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	54.4	%



Stage A	Int = 6	Stage B	Int =	Stage C	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

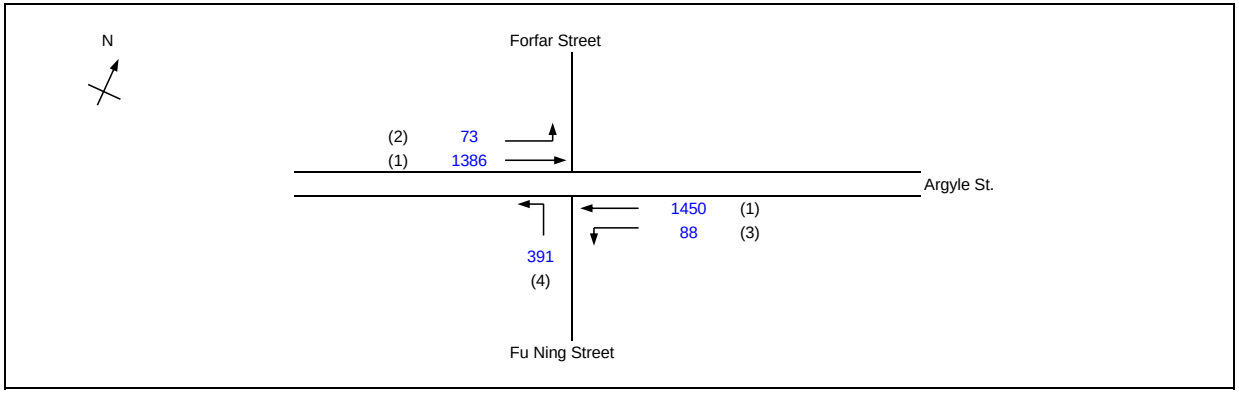
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	84	314		398	0.21	1829			1829	0.217			48	70	0.404	36	17
SA	A	3.30	1	2				4170		906		906	0.00	4170			4170	0.217			48	70	0.404	45	16
LT, SA	A	3.50	3	1	10		N	1965	244	294		538	0.45	1840			1840	0.292	0.292		65	70	0.543	48	20
SA	A	3.50	1	2				4210		1231		1231	0.00	4210			4210	0.292			65	70	0.543	60	18
LT	C	2.90	4	2	10		N	3950	505			505	1.00	3435			3435	0.147	0.147		33	28	0.683	42	47
PED	B																			23		23			

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

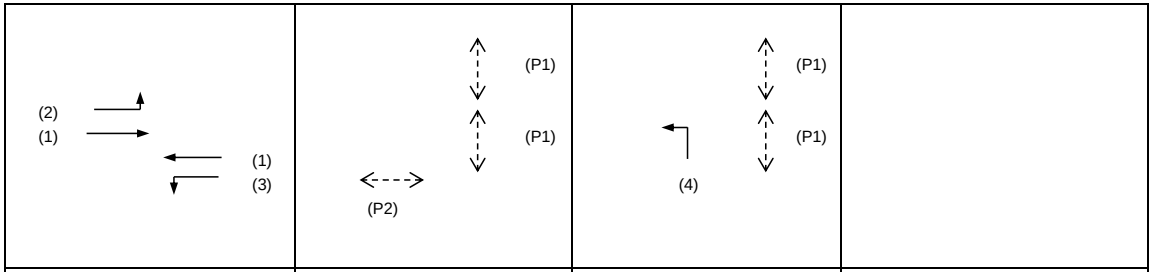
OZZO TECHNOLOGY (HK) LIMITED

TRAFFIC SIGNAL CALCULATION

				INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J1: Argyle Street / Forfar Road / Fu Ning Street	**2032 Des_PM**	FILENAME :	Checked By:	MM	一月-25
2032 PM Design Peak Hour Traffic Flows under Construction Scenario		J1_ArgyleSt_ForfarRd_FuNingSt_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.365	
Loss time		L =	32	sec
Total Flow		=	3388	pcu
Co	= (1.5*L+5)/(1-Y)	=	83.5	sec
Cm	= L/(1-Y)	=	50.4	sec
Yult		=	0.660	
R.C.ult	= (Yult-Y)/Y*100%	=	80.8	%
Cp	= 0.9*L/(0.9-Y)	=	53.8	sec
Ymax	= 1-L/C	=	0.754	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	85.9	%



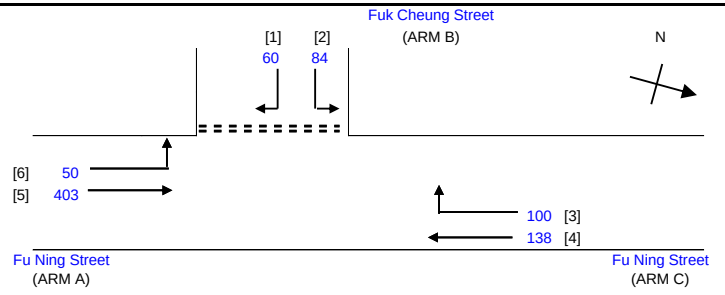
Stage A	Int = 6	Stage B	Int =	Stage C	Int = 5

Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	B,C	9.8	4.5	15	8		40	11
P2	B,C	9.8	4.5	15	8		40	11
P3	B	10.2	4.0	10	9		13	10

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)
																				9					
LT, SA	A	3.30	2	1	5		N	1945	73	376		449	0.16	1855			1855	0.242			65	70	0.450	42	18
SA	A	3.30	1	2				4170		1010		1010	0.00	4170			4170	0.242			65	70	0.450	48	17
LT, SA	A	3.50	3	1	10		N	1965	88	392		480	0.18	1912			1912	0.251	0.251		67	70	0.467	48	18
SA	A	3.50	1	2				4210		1058		1058	0.00	4210			4210	0.251			67	70	0.467	51	17
LT	C	2.90	4	2	10		N	3950	391			391	1.00	3435			3435	0.114	0.114		31	28	0.529	33	43
PED	B																			23		23			

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

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Jan-25
J2: Fu Ning Street / Fuk Cheung Street	**2032 Ref_AM**	FILENAME :	CHECKED BY:	MM	Jan-25
2032 AM Reference Peak Hour Traffic Flows under Construction Scenario		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Jan-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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	50	(pcu/hr)
q a-c	=	403	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	138	(pcu/hr)
q c-b	=	100	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	60	(pcu/hr)
q b-c	=	84	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.5833333

THE CAPACITY OF MOVEMENT :

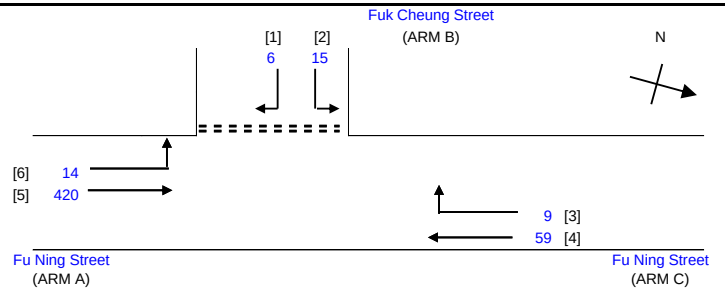
Q b-a	=	410		
Q b-c	=	599	Q b-c (O) =	577.1
Q c-b	=	631		
Q b-ac	=	502.5		
TOTAL FLOW	=	835	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1463
DFC c-b	=	0.1585
DFC b-c (share lane)	=	0.2866

CRITICAL DFC = 0.29

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Jan-25
J2: Fu Ning Street / Fuk Cheung Street	**2032 Ref_PM**	FILENAME :	CHECKED BY:	MM	Jan-25
2032 PM Reference Peak Hour Traffic Flows under Construction Scenario		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Jan-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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	14	(pcu/hr)
q a-c	=	420	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	59	(pcu/hr)
q c-b	=	9	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	6	(pcu/hr)
q b-c	=	15	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.7142857

THE CAPACITY OF MOVEMENT :

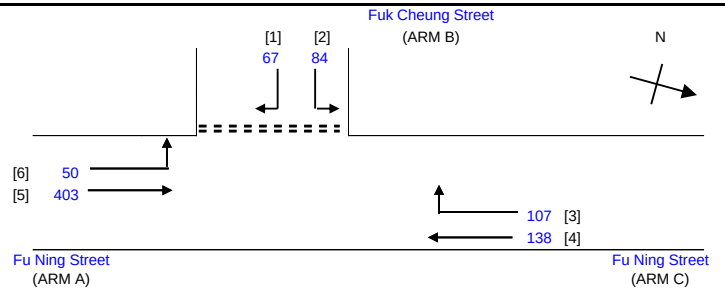
Q b-a	=	447		
Q b-c	=	598	Q b-c (O) =	596
Q c-b	=	636		
Q b-ac	=	545.4		
TOTAL FLOW	=	523	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0134
DFC c-b	=	0.0142
DFC b-c (share lane)	=	0.0385

CRITICAL DFC = 0.04

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Jan-25
J2: Fu Ning Street / Fuk Cheung Street	**2032 Des_AM**	FILENAME :	CHECKED BY:	MM	Jan-25
2032 AM Design Peak Hour Traffic Flows under Construction Scenario		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Jan-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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	50	(pcu/hr)
q a-c	=	403	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	138	(pcu/hr)
q c-b	=	107	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	67	(pcu/hr)
q b-c	=	84	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.5562914

THE CAPACITY OF MOVEMENT :

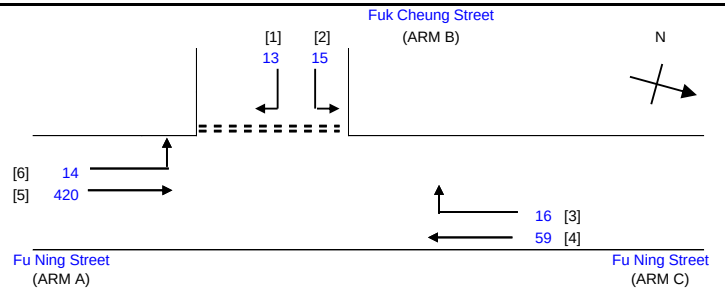
Q b-a	=	408		
Q b-c	=	599	Q b-c (O) =	574.4
Q c-b	=	631		
Q b-ac	=	496		
TOTAL FLOW	=	849	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1642
DFC c-b	=	0.1696
DFC b-c (share lane)	=	0.3044

CRITICAL DFC = 0.30

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.: 82947	PREPARED BY:	LL	Jan-25
J2: Fu Ning Street / Fuk Cheung Street	**2032 Des_PM**	FILENAME :	CHECKED BY:	MM	Jan-25
2032 PM Design Peak Hour Traffic Flows under Construction Scenario		J2 Fu Cheung St._Fu Ning St_P.xls	REVIEWED BY:	OC	Jan-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	=	9.80	(metres)
W cr	=	0	(metres)
q a-b	=	14	(pcu/hr)
q a-c	=	420	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.50	(metres)
Vr c-b	=	30	(metres)
q c-a	=	59	(pcu/hr)
q c-b	=	16	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	3.5	(metres)
W b-c	=	3.5	(metres)
Vl b-a	=	45	(metres)
Vr b-a	=	60	(metres)
Vr b-c	=	60	(metres)
q b-a	=	13	(pcu/hr)
q b-c	=	15	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.8725706
E	=	0.9312386
F	=	0.9924281
Y	=	0.6619
F for (Qb-ac)	=	0.5357143

THE CAPACITY OF MOVEMENT :

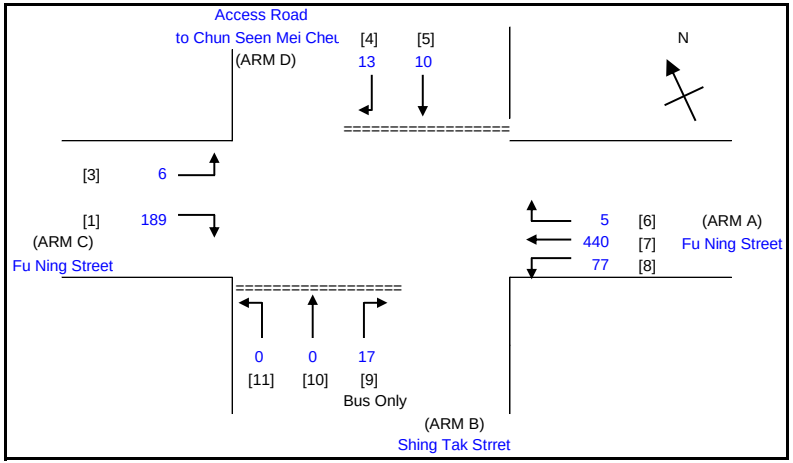
Q b-a	=	445		
Q b-c	=	598	Q b-c (O) =	593.6
Q c-b	=	636		
Q b-ac	=	515.7		
TOTAL FLOW	=	537	(PCU/HR)	

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0292
DFC c-b	=	0.0252
DFC b-c (share lane)	=	0.0543

CRITICAL DFC = 0.05

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.: 82947	PREPARED BY:	LL	一月-25
J3: Fu Ning Street / Shing Tak Street	**2032 Ref_AM**	CHECKED BY:	MM	一月-25
2032 AM Reference Peak Hour Traffic Flows under Construction Scenario	FILENAME : J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	一月-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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	11.45	(metres)		
W cr	=	0	(metres)	Y =	0.6051475

MAJOR ROAD (ARM A)				MAJOR MAJOR ROAD (ARM C)			
W a-d	=	6.00	(metres)	W c-b	=	3.30	(metres)
Vr a-d	=	25	(metres)	Vr c-b	=	35	(metres)
q a-b	=	77	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	440	(pcu/hr)	q c-b	=	189	(pcu/hr)
q a-d	=	5	(pcu/hr)	q c-d	=	6	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	2.6	(metres)	W d-c	=	1.8	(metres)
W b-c	=	2.6	(metres)	W d-a	=	1.8	(metres)
Vl b-a	=	80	(metres)	Vl d-c	=	25.0	(metres)
Vr b-a	=	50	(metres)	Vr d-c	=	85.0	(metres)
Vr b-c	=	50	(metres)	Vr d-a	=	85.0	(metres)
q b-a	=	17	(pcu/hr)	q d-c	=	13	(pcu/hr)
q b-c	=	0	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	0	(pcu/hr)	q d-b	=	10	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.811	X a	=	1.117
X c	=	0.893	X d	=	0.741
Z b	=	0.846	Z d	=	0.801
M b	=	0.811	M d	=	0.741

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.044		r d-c	=	0.034	
ql b-d	=	0	(pcu/hr)	ql d-b	=	5.1688	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	4.8312	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	372	(pcu/hr)	Q d-c	=	385	(pcu/hr)
Q b-c	=	537	(pcu/hr)	Q d-a	=	591	(pcu/hr)
Q c-b	=	562	(pcu/hr)	Q a-d	=	764	(pcu/hr)
Ql b-d	=	374	(pcu/hr)	Ql d-b	=	379	(pcu/hr)
Qr b-d	=	374	(pcu/hr)	Qr d-b	=	379	(pcu/hr)

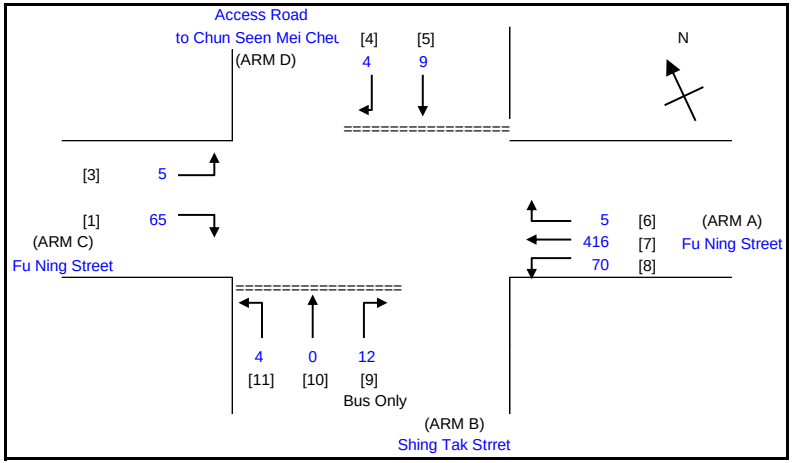
TOTAL FLOW = 757 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0457
DFC b-c	=	0.0000
DFC c-b	=	0.3363
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0338
DFC d-a	=	0.0000
DFC a-d	=	0.0065
DFCl d-b	=	0.0136
DFCr d-b	=	0.0127

CRITICAL DFC = 0.34

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.: 82947	PREPARED BY:	LL	一月-25
J3: Fu Ning Street / Shing Tak Street	**2032 Ref_PM**	CHECKED BY:	MM	一月-25
2032 PM Reference Peak Hour Traffic Flows under Construction Scenario	FILENAME : J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	一月-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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	11.45	(metres)		
W cr	=	0	(metres)	Y =	0.6051475

MAJOR ROAD (ARM A)				MAJOR MAJOR ROAD (ARM C)			
W a-d	=	6.00	(metres)	W c-b	=	3.30	(metres)
Vr a-d	=	25	(metres)	Vr c-b	=	35	(metres)
q a-b	=	70	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	416	(pcu/hr)	q c-b	=	65	(pcu/hr)
q a-d	=	5	(pcu/hr)	q c-d	=	5	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	2.6	(metres)	W d-c	=	1.8	(metres)
W b-c	=	2.6	(metres)	W d-a	=	1.8	(metres)
Vl b-a	=	80	(metres)	Vl d-c	=	25.0	(metres)
Vr b-a	=	50	(metres)	Vr d-c	=	85.0	(metres)
Vr b-c	=	50	(metres)	Vr d-a	=	85.0	(metres)
q b-a	=	12	(pcu/hr)	q d-c	=	4	(pcu/hr)
q b-c	=	4	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	0	(pcu/hr)	q d-b	=	9	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.811	X a	=	1.117
X c	=	0.893	X d	=	0.741
Z b	=	0.846	Z d	=	0.801
M b	=	0.811	M d	=	0.741

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.029		r d-c	=	0.010	
ql b-d	=	0	(pcu/hr)	ql d-b	=	4.5441	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	4.4559	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	410	(pcu/hr)	Q d-c	=	408	(pcu/hr)
Q b-c	=	544	(pcu/hr)	Q d-a	=	595	(pcu/hr)
Q c-b	=	568	(pcu/hr)	Q a-d	=	808	(pcu/hr)
Ql b-d	=	411	(pcu/hr)	Ql d-b	=	402	(pcu/hr)
Qr b-d	=	411	(pcu/hr)	Qr d-b	=	402	(pcu/hr)

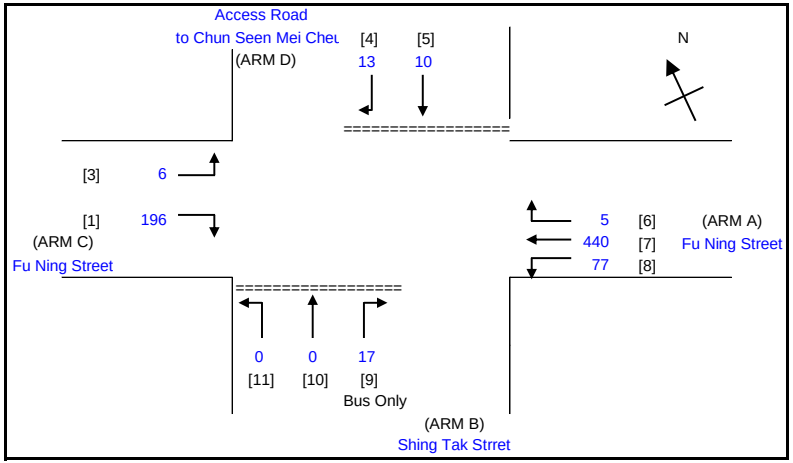
TOTAL FLOW = 590 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0293
DFC b-c	=	0.0074
DFC c-b	=	0.1144
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0098
DFC d-a	=	0.0000
DFC a-d	=	0.0062
DFCl d-b	=	0.0113
DFCr d-b	=	0.0111

CRITICAL DFC = 0.11

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.: 82947	PREPARED BY:	LL	一月-25
J3: Fu Ning Street / Shing Tak Street	**2032 Des_AM**	FILENAME :	CHECKED BY:	MM	一月-25
2032 AM Design Peak Hour Traffic Flows under Construction Scenario		J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	一月-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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	11.45	(metres)		
W cr	=	0	(metres)	Y =	0.6051475

MAJOR ROAD (ARM A)				MAJOR MAJOR ROAD (ARM C)			
W a-d	=	6.00	(metres)	W c-b	=	3.30	(metres)
Vr a-d	=	25	(metres)	Vr c-b	=	35	(metres)
q a-b	=	77	(pcu/hr)	q c-a	=	0	(pcu/hr)
q a-c	=	440	(pcu/hr)	q c-b	=	196	(pcu/hr)
q a-d	=	5	(pcu/hr)	q c-d	=	6	(pcu/hr)

MINOR ROAD (ARM B)				MINOR ROAD (ARM D)			
W b-a	=	2.6	(metres)	W d-c	=	1.8	(metres)
W b-c	=	2.6	(metres)	W d-a	=	1.8	(metres)
Vl b-a	=	80	(metres)	Vl d-c	=	25.0	(metres)
Vr b-a	=	50	(metres)	Vr d-c	=	85.0	(metres)
Vr b-c	=	50	(metres)	Vr d-a	=	85.0	(metres)
q b-a	=	17	(pcu/hr)	q d-c	=	13	(pcu/hr)
q b-c	=	0	(pcu/hr)	q d-a	=	0	(pcu/hr)
q b-d	=	0	(pcu/hr)	q d-b	=	10	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.811	X a	=	1.117
X c	=	0.893	X d	=	0.741
Z b	=	0.846	Z d	=	0.801
M b	=	0.811	M d	=	0.741

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.044		r d-c	=	0.034	
ql b-d	=	0	(pcu/hr)	ql d-b	=	5.1693	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	4.8307	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	370	(pcu/hr)	Q d-c	=	384	(pcu/hr)
Q b-c	=	537	(pcu/hr)	Q d-a	=	591	(pcu/hr)
Q c-b	=	562	(pcu/hr)	Q a-d	=	761	(pcu/hr)
Ql b-d	=	373	(pcu/hr)	Ql d-b	=	378	(pcu/hr)
Qr b-d	=	373	(pcu/hr)	Qr d-b	=	378	(pcu/hr)

TOTAL FLOW = 764 (PCU/HR)

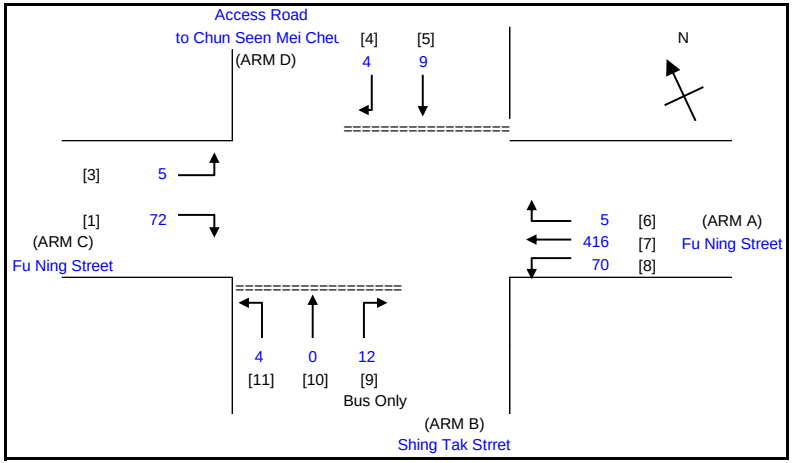
COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0459
DFC b-c	=	0.0000
DFC c-b	=	0.3488
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0339
DFC d-a	=	0.0000
DFC a-d	=	0.0066
DFCl d-b	=	0.0137
DFCr d-b	=	0.0128

CRITICAL DFC = 0.35

OZZO TECHNOLOGY (HK) LIMITED	PRIORITY JUNCTION CALCULATION		INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon	PROJECT NO.: 82947	PREPARED BY:	LL	一月-25
J3: Fu Ning Street / Shing Tak Street	FILENAME :	CHECKED BY:	MM	一月-25
2032 PM Design Peak Hour Traffic Flows under Construction Scenario	J3 Fu Ning St._Shing Tak St_C.xls	REVIEWED BY:	OC	一月-25

2032 Des_PM



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
X a	=	STREAM-SPECIFIC (RIGHT TURN FROM A)
X b	=	STREAM-SPECIFIC (RIGHT TURN FROM B)
Z b	=	STREAM-SPECIFIC (LEFT TURN FROM B)
M b	=	STREAM-SPECIFIC (STRAIGHT AHEAD FROM B - LEFT LANE)
Y	=	(1-0.0345W)
r b-a	=	RATIO OF FLOW TO CAPACITY IN STREAM b-a

GEOMETRIC DETAILS:

GENERAL

W	=	11.45	(metres)		
W cr	=	0	(metres)	Y =	0.6051475

MAJOR ROAD (ARM A)

W a-d	=	6.00	(metres)
Vr a-d	=	25	(metres)
q a-b	=	70	(pcu/hr)
q a-c	=	416	(pcu/hr)
q a-d	=	5	(pcu/hr)

MAJOR MAJOR ROAD (ARM C)

W c-b	=	3.30	(metres)
Vr c-b	=	35	(metres)
q c-a	=	0	(pcu/hr)
q c-b	=	72	(pcu/hr)
q c-d	=	5	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.6	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	50	(metres)
Vr b-c	=	50	(metres)
q b-a	=	12	(pcu/hr)
q b-c	=	4	(pcu/hr)
q b-d	=	0	(pcu/hr)

MINOR ROAD (ARM D)

W d-c	=	1.8	(metres)
W d-a	=	1.8	(metres)
Vl d-c	=	25.0	(metres)
Vr d-c	=	85.0	(metres)
Vr d-a	=	85.0	(metres)
q d-c	=	4	(pcu/hr)
q d-a	=	0	(pcu/hr)
q d-b	=	9	(pcu/hr)

GEOMETRIC FACTORS :

X b	=	0.811	X a	=	1.117
X c	=	0.893	X d	=	0.741
Z b	=	0.846	Z d	=	0.801
M b	=	0.811	M d	=	0.741

PROPORTION OF MINOR STRAIGHT AHEAD TRAFFIC :

r b-a	=	0.029		r d-c	=	0.010	
ql b-d	=	0	(pcu/hr)	ql d-b	=	4.5442	(pcu/hr)
qr b-d	=	0	(pcu/hr)	qr d-b	=	4.4558	(pcu/hr)

CAPACITY OF MOVEMENT :

Q b-a	=	408	(pcu/hr)	Q d-c	=	407	(pcu/hr)
Q b-c	=	544	(pcu/hr)	Q d-a	=	595	(pcu/hr)
Q c-b	=	568	(pcu/hr)	Q a-d	=	805	(pcu/hr)
Ql b-d	=	409	(pcu/hr)	Ql d-b	=	401	(pcu/hr)
Qr b-d	=	409	(pcu/hr)	Qr d-b	=	401	(pcu/hr)

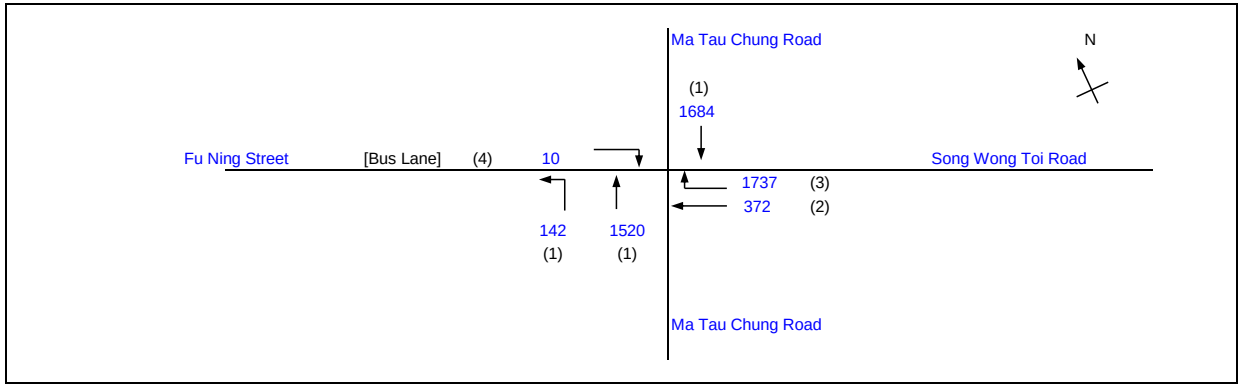
TOTAL FLOW = 597 (PCU/HR)

COMPARISION OF DESIGN FLOW TO CAPACITY:

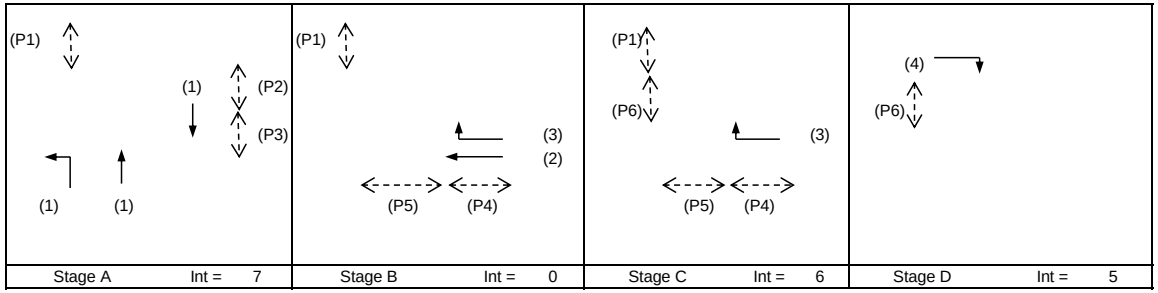
DFC b-a	=	0.0294
DFC b-c	=	0.0074
DFC c-b	=	0.1268
DFCl b-d	=	0.0000
DFCr b-d	=	0.0000
DFC d-c	=	0.0098
DFC d-a	=	0.0000
DFC a-d	=	0.0062
DFCl d-b	=	0.0113
DFCr d-b	=	0.0111

CRITICAL DFC = 0.13

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.	82947	Prepared By:	LL	Jan-25
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2032 Ref_AM**	FILENAME :		Checked By:	MM	Jan-25
2032 AM Reference Peak Hour Traffic Flows under Construction Scenario		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls		Reviewed By:	OC	Jan-25



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	137	sec
Sum(y)		Y =	0.572	
Loss time		L =	15	sec
Total Flow		=	5465	pcu
Co	= (1.5*L+5)/(1-Y)	=	64.3	sec
Cm	= L/(1-Y)	=	35.1	sec
Yult		=	0.788	
R.C.ult	= (Yult-Y)/Y*100%	=	37.6	%
Cp	= 0.9*L/(0.9-Y)	=	41.2	sec
Ymax	= 1-L/C	=	0.891	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	40.1	%

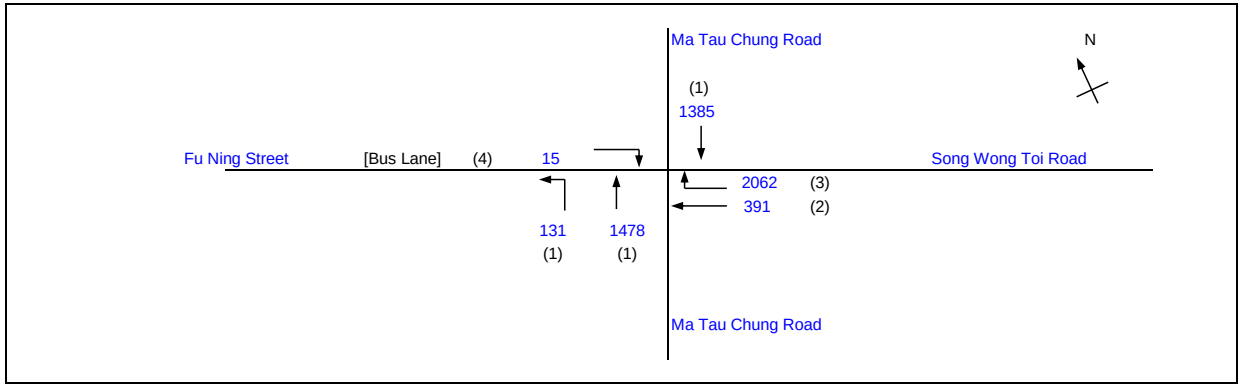


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

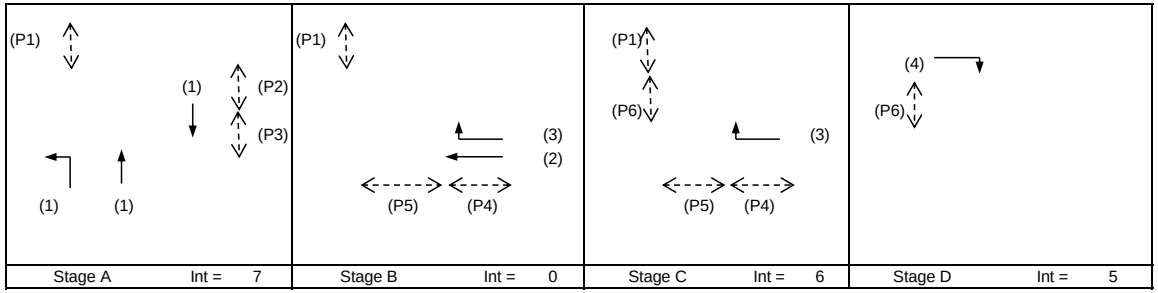
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	142	380		522	0.27	1926			1926	0.271	0.271		58	63	0.589	60	27
SA (NB)	A	3.50	1	2				4210		1140		1140	0.00	4210			4210	0.271			58	63	0.589	69	26
SA (SB)	A	3.60	1	3			N	6205		1684		1684	0.00	6205			6205	0.271			58	63	0.590	68	26
SA (WB)	B	3.50	2	2				4210		372		372	0.00	4210			4210	0.088			19	30	0.404	33	42
RT	B,C	3.50	3	3	30		N	6175			1737	1737	1.00	5881			5881	0.295	0.295		63	51	0.793	82	37
RT	D	3.30	4	1	33		N	1945			10	10	1.00	1860			1860	0.005	0.005		1	8	0.092	0	56

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	Jan-25
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2032 Ref_PM**	FILENAME :	Checked By:	MM	Jan-25
2032 PM Reference Peak Hour Traffic Flows under Construction Scenario		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls	Reviewed By:	OC	Jan-25



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	137	sec
Sum(y)		Y =	0.621	
Loss time		L =	15	sec
Total Flow		=	5462	pcu
Co	= (1.5*L+5)/(1-Y)	=	72.5	sec
Cm	= L/(1-Y)	=	39.6	sec
Yult		=	0.788	
R.C.ult	= (Yult-Y)/Y*100%	=	26.8	%
Cp	= 0.9*L/(0.9-Y)	=	48.4	sec
Ymax	= 1-L/C	=	0.891	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	29.1	%

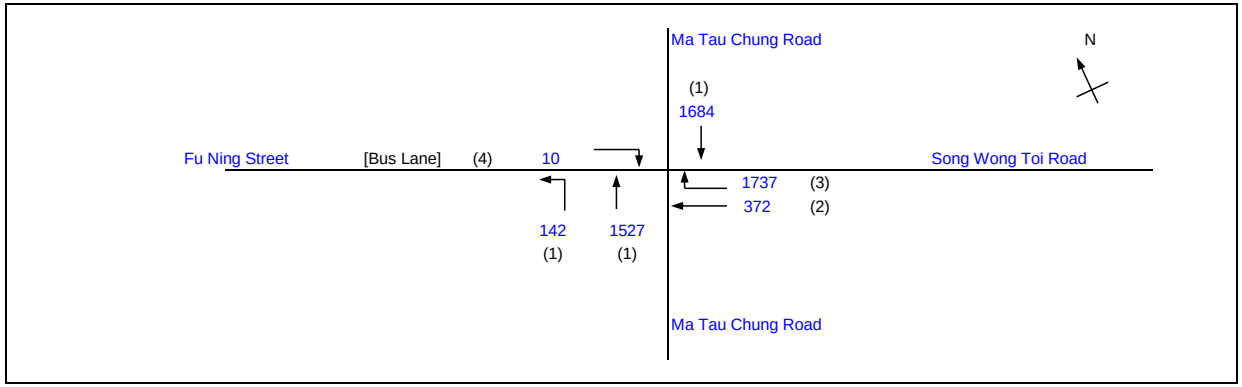


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

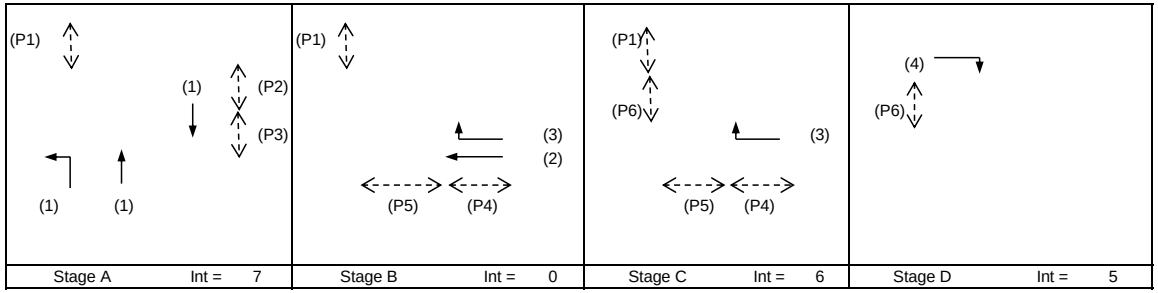
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	131	374		505	0.26	1928			1928	0.262	0.262		52	63	0.697	66	38
SA (NB)	A	3.50	1	2				4210		1104		1104	0.00	4210			4210	0.262			52	63	0.697	78	35
SA (SB)	A	3.60	1	3			N	6205		1385		1385	0.00	6205			6205	0.223			44	63	0.697	70	39
SA (WB)	B	3.50	2	2				4210		391		391	0.00	4210			4210	0.093			18	30	0.697	36	58
RT	B,C	3.50	3	3	30		N	6175			2062	2062	1.00	5881			5881	0.351	0.351		69	51	0.697	78	25
RT	D	3.30	4	1	33		N	1945			15	15	1.00	1860			1860	0.008	0.008		2	8	0.697	6	234

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.	82947	Prepared By:	LL	Jan-25
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2032 Des_AM**	FILENAME :		Checked By:	MM	Jan-25
2032 AM Design Peak Hour Traffic Flows under Construction Scenario		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls		Reviewed By:	OC	Jan-25



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	137	sec
Sum(y)		Y =	0.573	
Loss time		L =	15	sec
Total Flow		=	5472	pcu
Co	= (1.5*L+5)/(1-Y)	=	64.4	sec
Cm	= L/(1-Y)	=	35.1	sec
Yult		=	0.788	
R.C.ult	= (Yult-Y)/Y*100%	=	37.5	%
Cp	= 0.9*L/(0.9-Y)	=	41.3	sec
Ymax	= 1-L/C	=	0.891	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	39.9	%

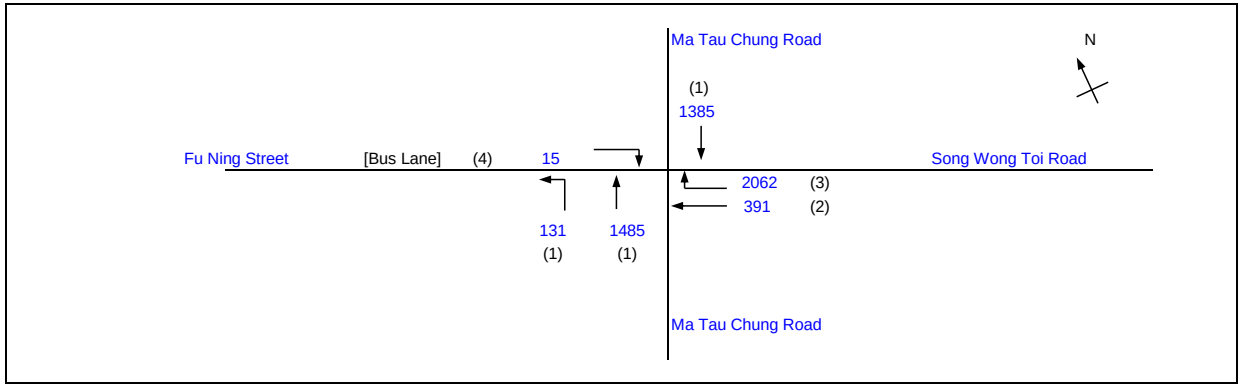


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

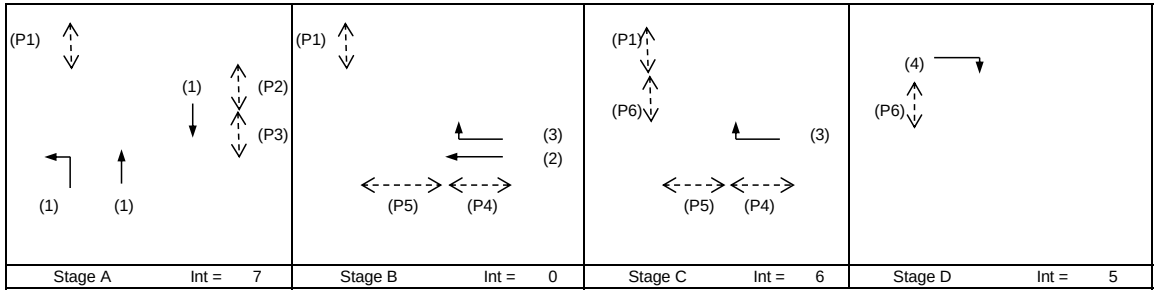
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	142	382		524	0.27	1926			1926	0.272	0.272		58	63	0.592	60	27
SA (NB)	A	3.50	1	2				4210		1145		1145	0.00	4210			4210	0.272			58	63	0.592	69	26
SA (SB)	A	3.60	1	3			N	6205		1684		1684	0.00	6205			6205	0.271			58	63	0.590	68	26
SA (WB)	B	3.50	2	2				4210		372		372	0.00	4210			4210	0.088			19	30	0.404	33	42
RT	B,C	3.50	3	3	30		N	6175			1737	1737	1.00	5881			5881	0.295	0.295		63	51	0.793	82	37
RT	D	3.30	4	1	33		N	1945			10	10	1.00	1860			1860	0.005	0.005		1	8	0.092	0	56

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO.	82947	Prepared By:	LL	Jan-25
J4:Ma Tau Chung Road / Song Wong Toi Road / Fu Ning Street	**2032 Des_PM**	FILENAME :		Checked By:	MM	Jan-25
2032 AM Design Peak Hour Traffic Flows under Construction Scenario		Ning St._Ma Tau Chung Rd_ Song Wong Toi Rd_S.xls		Reviewed By:	OC	Jan-25



			Existing Cycle Time	
No. of stages per cycle		N =	4	
Cycle time		C =	137	sec
Sum(y)		Y =	0.622	
Loss time		L =	15	sec
Total Flow		=	5469	pcu
Co	= (1.5*L+5)/(1-Y)	=	72.7	sec
Cm	= L/(1-Y)	=	39.7	sec
Yult		=	0.788	
R.C.ult	= (Yult-Y)/Y*100%	=	26.6	%
Cp	= 0.9*L/(0.9-Y)	=	48.6	sec
Ymax	= 1-L/C	=	0.891	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	28.9	%

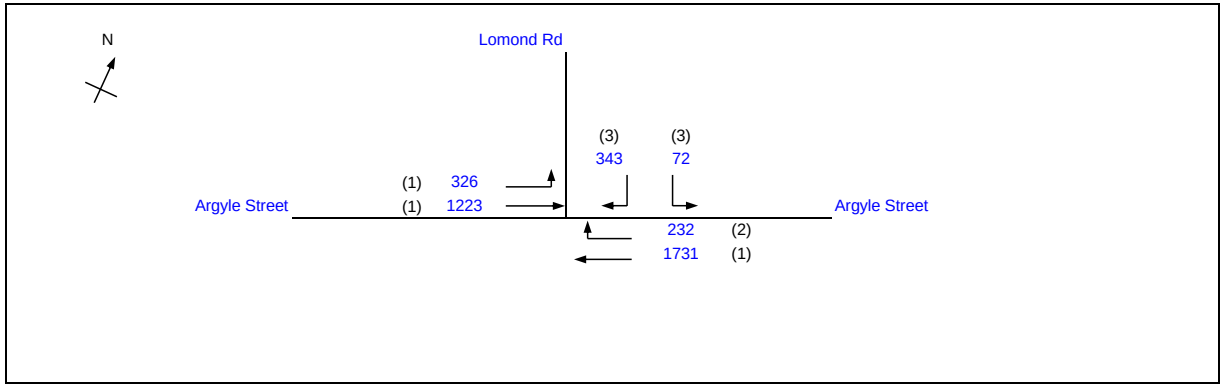


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A,B,C	3.3	3.3	5	3		107	3
P2	A	9.0	4.3	5	7		53	7
P3	A	5.5	4.3	5	5		53	7
P4	B	10.6	6.0	5	9		41	9
P5	B	10.3	6.0	5	9		41	9
P6	C,D	7.8	3.5	5	7		23	7

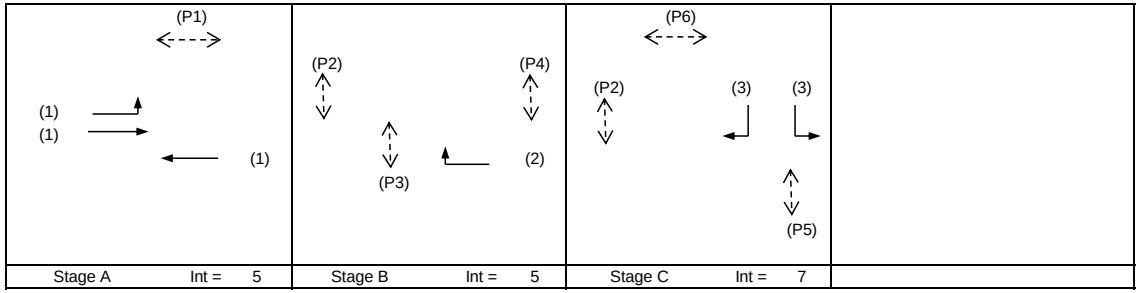
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				15					
LT, SA	A	3.50	1	1	20		N	1965	131	377		508	0.26	1928			1928	0.263	0.263		52	63	0.698	72	38
SA (NB)	A	3.50	1	2				4210		1108		1108	0.00	4210			4210	0.263			52	63	0.698	78	35
SA (SB)	A	3.60	1	3			N	6205		1385		1385	0.00	6205			6205	0.223			44	63	0.698	70	39
SA (WB)	B	3.50	2	2				4210		391		391	0.00	4210			4210	0.093			18	30	0.698	36	58
RT	B,C	3.50	3	3	30		N	6175			2062	2062	1.00	5881			5881	0.351	0.351		69	51	0.698	78	25
RT	D	3.30	4	1	33		N	1945			15	15	1.00	1860			1860	0.008	0.008		2	8	0.698	6	235

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J5: Argyle Street/ Lomond Road	**2032 Ref_AM**	FILENAME :	Checked By:	MM	一月-25
2032 AM Reference Peak Hour Traffic Flows under Construction Scenario		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.532	
Loss time		L =	14	sec
Total Flow		=	3927	pcu
Co	= (1.5*L+5)/(1-Y)	=	55.5	sec
Cm	= L/(1-Y)	=	29.9	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	49.5	%
Cp	= 0.9*L/(0.9-Y)	=	34.2	sec
Ymax	= 1-L/C	=	0.892	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	51.0	%

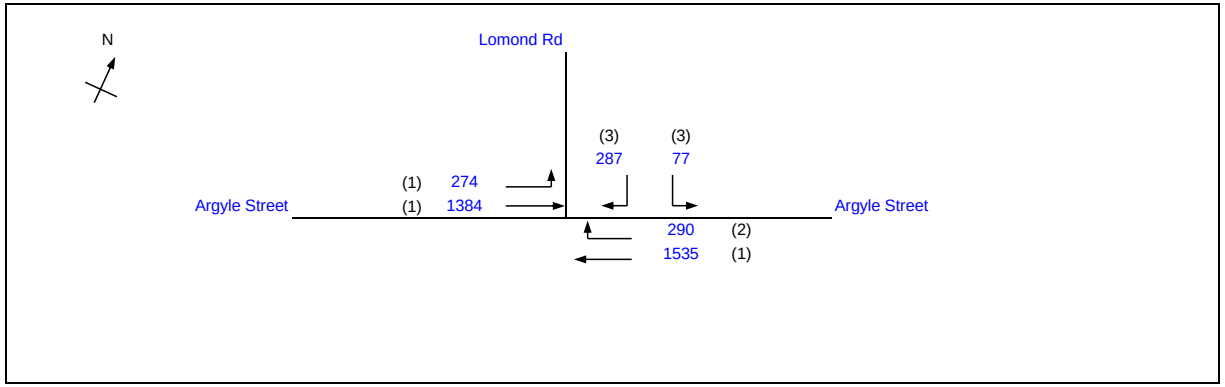


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

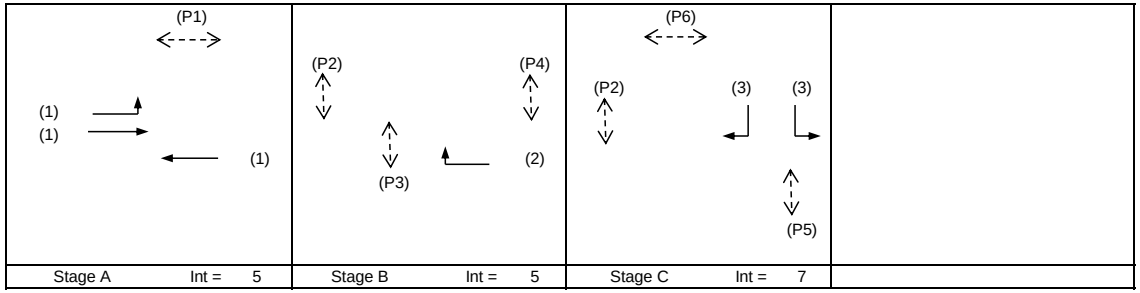
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
LT	A	3.30	1	1	10.5		N	1945	326			326	1.00	1702			1702	0.192			42	67	0.372	30	18
SA (EB)	A	3.50	1	2				4210		1223		1223	0.00	4210			4210	0.290	0.290		63	67	0.564	63	20
SA (WB)	A	3.30	1	3			N	6115		1731		1731	0.00	6115			6115	0.283			62	67	0.549	60	20
RT	B	3.30	2	1	20		N	1945			232	232	1.00	1809			1809	0.128	0.128		28	26	0.641	36	51
LT/RT	C	3.50	3	1	10		N	1965	72		121	193	1.00	1709			1709	0.113	0.113		25	23	0.640	30	54
RT	C	3.50	3	1	20			2105			222	222	1.00	1958			1958	0.113			25	23	0.640	36	53

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J5: Argyle Street/ Lomond Road	**2032 Ref_PM**	FILENAME :	Checked By:	MM	一月-25
2032 PM Reference Peak Hour Traffic Flows under Construction Scenario		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.588	
Loss time		L =	14	sec
Total Flow		=	3847	pcu
Co	= (1.5*L+5)/(1-Y)	=	63.2	sec
Cm	= L/(1-Y)	=	34.0	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	35.1	%
Cp	= 0.9*L/(0.9-Y)	=	40.4	sec
Ymax	= 1-L/C	=	0.892	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	36.5	%

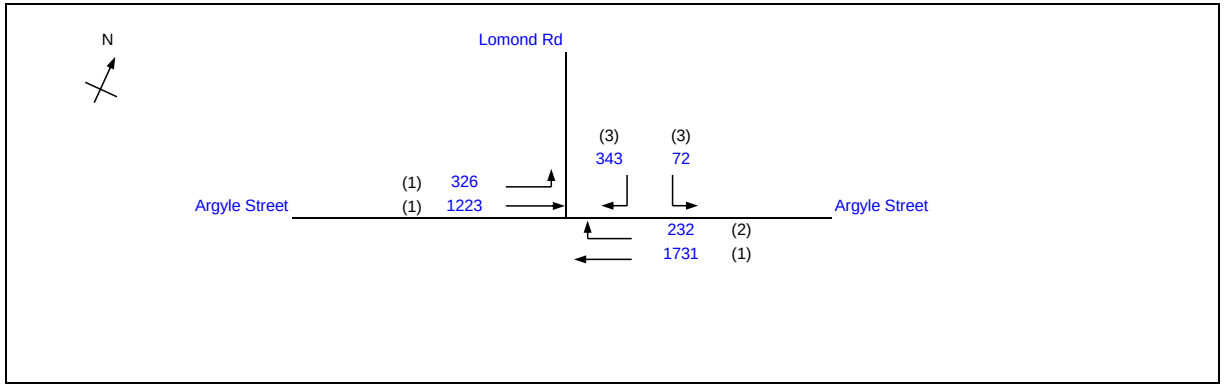


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

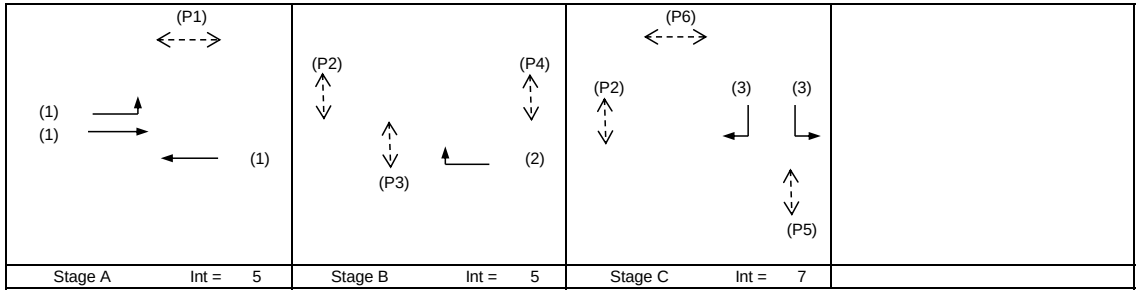
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
LT	A	3.30	1	1	10.5		N	1945	274			274	1.00	1702			1702	0.161			32	67	0.312	24	17
SA (EB)	A	3.50	1	2				4210		1384		1384	0.00	4210			4210	0.329	0.329		65	67	0.638	72	22
SA (WB)	A	3.30	1	3			N	6115		1535		1535	0.00	6115			6115	0.251			49	67	0.487	52	19
RT	B	3.30	2	1	20		N	1945			290	290	1.00	1809			1809	0.160	0.160		32	26	0.801	54	63
LT/RT	C	3.50	3	1	10		N	1965	77		93	170	1.00	1709			1709	0.099	0.099		20	23	0.561	30	51
RT	C	3.50	3	1	20			2105			194	194	1.00	1958			1958	0.099			20	23	0.561	30	50

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J5: Argyle Street/ Lomond Road	**2032 Des_AM**	FILENAME :	Checked By:	MM	一月-25
2032 AM Design Peak Hour Traffic Flows under Construction Scenario		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.532	
Loss time		L =	14	sec
Total Flow		=	3927	pcu
Co	= (1.5*L+5)/(1-Y)	=	55.5	sec
Cm	= L/(1-Y)	=	29.9	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	49.5	%
Cp	= 0.9*L/(0.9-Y)	=	34.2	sec
Ymax	= 1-L/C	=	0.892	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	51.0	%

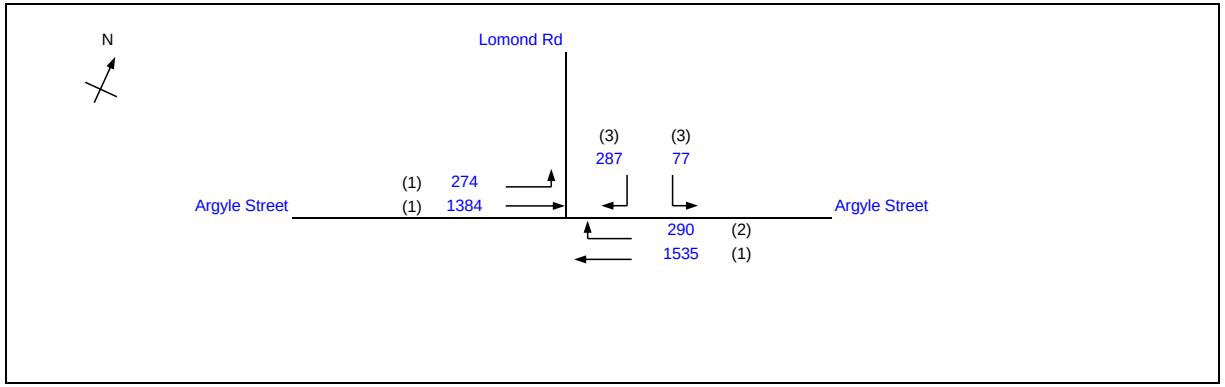


Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

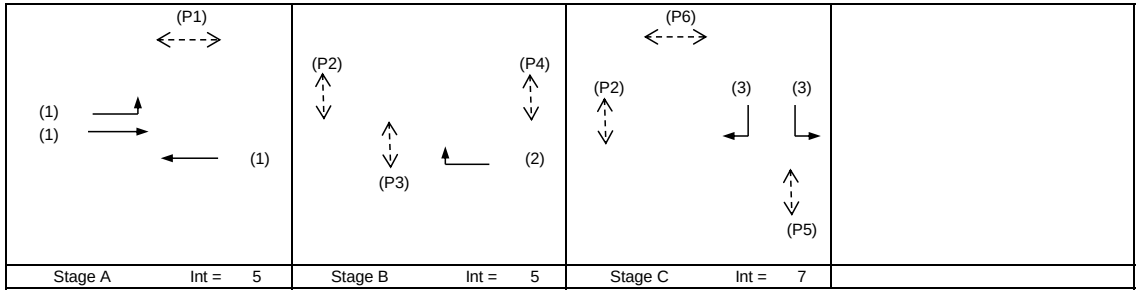
Move-ment	Stage	Lane Width m.	Phase	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Straight pcu/h	Right pcu/h	Total FLow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare lane Length m.	Share Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
																				14					
LT	A	3.30	1	1	10.5		N	1945	326			326	1.00	1702			1702	0.192			42	67	0.372	30	18
SA (EB)	A	3.50	1	2				4210		1223		1223	0.00	4210			4210	0.290	0.290		63	67	0.564	63	20
SA (WB)	A	3.30	1	3			N	6115		1731		1731	0.00	6115			6115	0.283			62	67	0.549	60	20
RT	B	3.30	2	1	20		N	1945			232	232	1.00	1809			1809	0.128	0.128		28	26	0.641	36	51
LT/RT	C	3.50	3	1	10		N	1965	72		121	193	1.00	1709			1709	0.113	0.113		25	23	0.640	30	54
RT	C	3.50	3	1	20			2105			222	222	1.00	1958			1958	0.113			25	23	0.640	36	53

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

OZZO TECHNOLOGY (HK) LIMITED	TRAFFIC SIGNAL CALCULATION			INITIALS	DATE
Section 12A Planning Application for Proposed Redevelopment of Evangel Hospital at No. 222 Argyle Street, Kowloon		PROJECT NO. 82947	Prepared By:	LL	一月-25
J5: Argyle Street/ Lomond Road	**2032 Des_PM**	FILENAME :	Checked By:	MM	一月-25
2032 PM Design Peak Hour Traffic Flows under Construction Scenario		J5 Argyle St._Lomond Rd_S.xls	Reviewed By:	OC	一月-25



			Existing Cycle Time	
No. of stages per cycle		N =	3	
Cycle time		C =	130	sec
Sum(y)		Y =	0.588	
Loss time		L =	14	sec
Total Flow		=	3847	pcu
Co	= (1.5*L+5)/(1-Y)	=	63.2	sec
Cm	= L/(1-Y)	=	34.0	sec
Yult		=	0.795	
R.C.ult	= (Yult-Y)/Y*100%	=	35.1	%
Cp	= 0.9*L/(0.9-Y)	=	40.4	sec
Ymax	= 1-L/C	=	0.892	
R.C.(C)	= (0.9*Ymax-Y)/Y*100%	=	36.5	%



Pedestrian Phase	Stage	Lenth (m)	Width (m)	Green Time Required (s) SG	FG	Delay	Green Time Provided (s) SG	FG
P1	A	5.9	2.9	5	5		49	7
P2	B,C	10.2	3.3	5	9		58	9
P3	B	10.1	4.4	5	9		27	9
P4	B	8.6	4.3	5	7		27	9
P5	C	12.1	4.2	5	10		15	11
P6	C	4.1	2.9	5	4		21	5

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)
																				14					
LT	A	3.30	1	1	10.5		N	1945	274			274	1.00	1702			1702	0.161			32	67	0.312	24	17
SA (EB)	A	3.50	1	2				4210		1384		1384	0.00	4210			4210	0.329	0.329		65	67	0.638	72	22
SA (WB)	A	3.30	1	3			N	6115		1535		1535	0.00	6115			6115	0.251			49	67	0.487	52	19
RT	B	3.30	2	1	20		N	1945			290	290	1.00	1809			1809	0.160	0.160		32	26	0.801	54	63
LT/RT	C	3.50	3	1	10		N	1965	77		93	170	1.00	1709			1709	0.099	0.099		20	23	0.561	30	51
RT	C	3.50	3	1	20			2105			194	194	1.00	1958			1958	0.099			20	23	0.561	30	50

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