Appendix D –

Traffic Impact Assessment

Section 16 Planning Application for Proposed Comprehensive Residential Development with Commercial Uses and Social Welfare Facility and Minor Relaxation of Maximum Plot Ratio and Building Height Restrictions in "Comprehensive Development Area (5)" Zone at Yeung Uk Road / Kwu Hang Road / Wang Wo Tsai Street, Tsuen Wan

Traffic Impact Assessment

March 2025

AECOM

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1 INTRODUCTION

1.1 Background

1.1.1 The Application Site is located in the northern fringe of the Tsuen Wan East industrial area at various lots in D.D. 443 and bounded by Yeung Uk Road, Kwu Hang Road and Wang Wo Tsai Street as shown in **Figure 1.1.** It is currently zoned "Comprehensive Development Area (5)" ("CDA(5)") in Tsuen Wan OZP No. S/TW/37 and covers a total site area of approximately 7,353m^2.

1.1.2 To well utilize of the subject site, the Applicant proposes to increase the plot ratio from 5.0 to 6.11 and the total flat units will be increased from about 738 to 886.

1.1.3 AECOM Asia Co. Ltd was commissioned by the Applicant to prepare a Traffic Impact Assessment (TIA) report in support of the Section 16 planning application.

1.2 Objectives

1.2.1 The main objectives of this report are as follows: -

- Outline the proposed development parameters and internal transport facilities;
- Review the current traffic condition in the vicinity of the Application Site;
- Estimate the potential traffic generations and attractions of the proposed development;
- Produce traffic forecasts on the surrounding road network at the adopted design year;
- Assess traffic impact on the surrounding road network induced from the proposed development; and
- Develop traffic improvement proposal(s) if necessary

1.3 Report Structure

1.3.1 Following this introductory chapter, the TIA is structured as follows:

- Chapter 2: Proposed Development, describes the development schedule of the proposed development and its internal traffic facilities provisions, access arrangement, etc.;
- Chapter 3: Existing Traffic Conditions, reviews the current traffic conditions in the vicinity;
- Chapter 4: Future Traffic Conditions, describes the traffic forecasting methodology and presents the estimated traffic flows in design year;
- Chapter 5: Traffic Impact Assessment, assesses the traffic impact induced on the surrounding road network and recommends improvement schemes, if considered necessary; and
- Chapter 6: Future Public Transport Proposal, elaborates the anticipated public transport demand and discusses the future possible public transport proposal;

- Chapter 7: Summary and Conclusion, summarizes the findings of the study and presents the conclusion of this TIA.

2 PROPOSED DEVELOPMENT

2.1 Development Schedule

2.1.1 The development schedule of the Proposed Development is presented in **Table 2.1**. The proposed indicative Master Layout Plan (MLP) under the current application is presented in **Figure 2.1** for reference.

Table 2.1 Development Schedule

Parameter	Phase 1 (Site A)	Phase 2a (Site B)	Phase 2b (Site C)	Phase 2c (Site D)	Phase 2d (Site E)	Phase 2e (Site F)
Site Area	1,858m^2	929m^2	956m^2	1,057m^2	697m^2	1,331m^2
Domestic Plot Ratio	6.0					
Non-Domestic Plot Ratio	0.25	0.15	0.15	-	-	-
Total GFA	11,607m^2	5,714m^2	5,880m^2	6,342m^2	4,812m^2	7,986m^2
No. of Flats	About 277 flats	About 116 flats	About 116 flats	About 145 flats	About 87 flats	About 145 flats
Average Flat Size	About 40.2m^2	About 48.1m^2	About 49.4m^2	About 43.7m^2	About 48.1m^2	About 55.1m^2

2.2 Development Access at Site A

2.2.1 The vehicular access for the Proposed Development at Site A would be shifted to the east by approximately 8m, whilst the existing bus stop would be maintained in **Figure 2.2**. Swept path analysis for the Proposed Development access at Site A is shown in **Annex A** for reference.

2.2.2 To enhance visibility from the vehicular access of the subject site, the existing bus stop along Yeung Uk Road near the development will be relocated westward. The proposed location of the bus stop is presented in **Figure 2.2**.

2.3 Internal Transport Facilities

2.3.1 The parking and loading/unloading facilities of the Proposed Development will be provided in accordance with the requirements as stipulated in the Hong Kong Planning Standards and Guidelines (HKPSG) to cater for the transport demand. The respective requirements for all sites are summarized in **Table 2.2** and **Table 2.3** respectively.

Table 2.2 Provision of Car Parking and Servicing Facilities (Site A)

Parking/ Servicing Facilities	**HKPSG Requirements**		**No. of Unit**	**No. of Internal Transport Facilities required by HKPSG**	**Proposed Internal Transport Facilities(1)**
Residential Parking Spaces	Flat Size≤40m^2	1 space per 8.9-15.6 units(2)	247	16 - 28	19
	40m^2<Flat Size≤70m^2	1 space per 3.7-6.5 units(3)	28	5 - 8	6
	70m^2<Flat Size≤100m^2	1 space per 1.9-3.2 units(4)	2	1 - 2	1
	Total		**277**	**22 - 38**	**26(5)**
Visitor Parking Spaces	5 spaces per block		1 block	**5**	**5**
Motorcycle Parking Spaces	1 space per 100 -150 units		277	**2-3**	**3**
Loading/ Unloading Bays	1 bay per block		1 block	**1**	**1**
Retail Component (280m^2)					
Retail Parking Spaces	1 space per 150m^2 - 300m^2 GFA		240m^2	1 - 2	2
Retail Loading / Unloading Bays	1 space per 800m^2 - 1200m^2 GFA		240m^2	1	1
Social Work Service Team for Pre-primary Institutions (SWSPPI)					
Private Light Bus Parking Space	-				**-**

Notes:
(1) Figures are rounded up to nearest number.
(2) According to HKPSG, Parking Requirement = Global Parking Standard (GPS) x Demand Adjustment Ratio (R1) x Accessibility Adjustment Ratio (R2) x Development Intensity Adjustment Ratio (R3), i.e. 1 car space per 4-7 units x 0.5 x 1.0 x 0.9 = 1 car space per 8.9-15.6 units.
(3) According to HKPSG, Parking Requirement = Global Parking Standard (GPS) x Demand Adjustment Ratio (R1) x Accessibility Adjustment Ratio (R2) x Development Intensity Adjustment Ratio (R3), i.e. 1 car space per 4-7 units x 1.2 x 1.0 x 0.9 = 1 car space per 3.7-6.5 units.
(4) According to HKPSG, Parking Requirement = Global Parking Standard (GPS) x Demand Adjustment Ratio (R1) x Accessibility Adjustment Ratio (R2) x Development Intensity Adjustment Ratio (R3), i.e. 1 car space per 4-7 units x 2.4 x 1.0 x 0.9 = 1 car space per 1.9-3.2 units.
(5) Taken into consideration the proximity to public transport services, availability of public car parking space, traffic conditions and the illegal parking condition in the vicinity, it is proposed to adopt a GPS of 6 for calculating the carparking provision according to HKPSG. Prior agreement with TD on adopting GPS 6 has been obtained on 14 February 2025 separately. The approved technical note is enclosed in **Annex C** for reference.

Table 2.3 Provision of Car parking and Servicing Facilities (Site B – Site F)

Parking/ Servicing Facilities	HKPSG Requirements	Site B		Site C		Site D		Site E		Site F	
		No. of Units/ No. of Blocks	Proposed Provision	No. of Units/ No. of Blocks	Proposed Provision	No. of Units/ No. of Blocks	Proposed Provision	No. of Units/ No. of Blocks	Proposed Provision	No. of Units/ No. of Blocks	Proposed Provision
Residential Component											
Residential Parking Spaces	$40m^2$ <Flat Size≤ $70m^2$ 1 space per 5.56 units(2)	116	21	116	21	145	27	87	16	145	27
Visitor Parking Spaces	5 spaces per block	1	5	1	5	1	5	1	5	1	5
Motorcycle Parking Spaces	1 space per 100 -150 units	116	2	116	2	145	2	87	2	145	2
Loading/ Unloading Bays	1 bay per block	1	1	1	1	1	1	1	1	1	1
Retail Component											
Retail Parking Spaces	1 space per $150m^2$ - $300m^2$ GFA	140	1	144	1	-	-	-	-	-	-
Retail Loading / Unloading Bays	1 space per $800m^2$ - $1200m^2$ GFA	140	1	144	1	-	-	-	-	-	-

Notes:
(1) Figures are rounded up to nearest number.
(2) Taken into consideration the proximity to public transport services, availability of public car parking space, traffic conditions and the illegal parking condition in the vicinity, it is proposed to adopt a GPS of 6 for calculating the carparking provision according to HKPSG.

3 EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Network

3.1.1 The existing road network in the vicinity of the Application Site is shown in **Figure 3.1**.

3.1.2 Texaco Road is a District Distributor (DD) running in north-south direction. It connects Tsuen Kam Interchange on its north leading to Tuen Mun and Shatin via Cheng Pei Sha Road (i.e. Route 9), and Tsuen Tsing Interchange on its south leading to Tsing Yi and Lantau Island via Tsuen Tsing Road as well as Kowloon via Tsuen Wan Road (i.e. Route 5).

3.1.3 Sha Tsui Road is a District Distributor (DD) running in east-west direction. It connects Texaco Road on its east and Castle Peak Road – Tsuen Wan on its west.

3.1.4 Yeung Uk Road is a District Distributor (DD) running in east-west direction. It connects Texaco Road on its east and Tai Ho Road on its west.

3.2 Traffic Survey

3.2.1 Total of 6 critical junctions have been identified for assessment and listed in **Table 3.1** and shown in **Figure 3.1**.

Table 3.1 Critical Junctions

Ref.	Junction	Type	Fig. No.
J1	Sha Tsui Road / Kwan Mun Hau Street / Luen Yan Street	Signal	3.2
J2	Sha Tsui Road / Texaco Road	Signal	3.3
J3	Texaco Road / Yeung Uk Road / Kwai Fuk Road	Signal	3.4
J4	Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road	Signal	3.5
J5	Wang Wo Tsai Street / Kwu Hang Road	Priority	3.6
J6	Yeung Uk Road / Wang Wo Tsai Street	Priority	3.7

3.2.2 The existing layout of the above junctions is shown in **Figure 3.2** to **Figure 3.7**.

3.2.3 Series of manual classified traffic counts surveys were carried out to establish the current traffic condition in the vicinity. The surveys were undertaken on a typical weekday on December 2023 at 07:30 - 09:30 and 17:00 - 19:00 to appraise the existing traffic conditions of the above junctions.

3.2.4 The survey results indicated that the commuting morning (AM) and evening (PM) peak hours were at 08:30 – 09:30 and 17:30 – 18:30 respectively.

3.2.5 The 2023 observed AM and PM peak hour traffic flows are shown in **Figure 3.8**.

3.3 Junction Assessment

3.3.1 Junction capacity analysis was carried out for the above surveyed junctions which are located in the vicinity of the Site to appraise the existing traffic condition based on the 2023 observed peak hour traffic flows.

3.3.2 Based on the turning flows at the above junctions, capacity assessments were carried out in accordance with the methodology documented in the appendices of Transport Planning and Design Manual (TPDM) Vol.2 Ch.4 on priority junction and roundabout capacity assessment. Signal junction assessments were based on TPDM Vol.4.

3.3.3 The existing junction performances of the critical junctions are summarized in **Table 3.2**. Capacity calculation sheets are attached in **Annex B**.

Table 3.2 Existing Junction Performance

Ref.	Junction	Indicator(1)	2023 Observed	
			AM Peak	PM Peak
J1	Sha Tsui Road / Kwan Mun Hau Street / Luen Yan Street	RC	45%	46%
J2	Sha Tsui Road / Texaco Road	RC	48%	33%
J3	Texaco Road / Yeung Uk Road / Kwai Fuk Road	RC	33%	28%
J4	Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road	RC	65%	77%
J5	Wang Wo Tsai Street / Kwu Hang Road	DFC	0.13	0.17
J6	Yeung Uk Road / Wang Wo Tsai Street	DFC	0.33	0.36

Note:
(1) RC = Reserve Capacity for signal junction; DFC = Design Flow / Capacity ratio for priority junction or roundabout

3.3.4 At present, all critical junctions are operating within capacity.

3.4 Existing Public Transport Facilities

3.4.1 The Application Site is located outside 500m radius of railway stations. The distance from the Application Site to Tsuen Wan Station / Tai Wo Hau Station of MTR Tsuen Wan Line and Tsuen Wan West Station of MTR West Rail Line are about 700m and 1km respectively.

3.4.2 Apart from railway transit, there are franchised bus, green minibus and public light bus services with on-street passenger pick-up/ drop-off points along Sha Tsui Road, Texaco Road, Yeung Uk Road, Luen Yan Street and Kwan Mun Hau Street in the vicinity of the proposed development. The respective servicing schedules are listed in **Table 3.3**. The location of the bus stop and minibus stops are presented in **Figure 3.9**.

Table 3.3 Public Transport Services

Route No.	Origin – Destination	Frequency (min.)
Franchised Bus		
30	Allway Gardens B/T - Cheung Sha Wan B/T	25 - 30
31	Tsuen Wan West Railway Station B/T - Shek Lei (Circular)	12 - 20
33A	Tsuen Wan (Nina Tower) - Mong Kok (Park Avenue)	15 - 20
34	Kwai Shing B/T (Central) - Bayview Garden B/T	15 - 20
36	Lei Muk Shue B/T - Tsuen Wan West Railway Station B/T	10 - 20
38A	Riviera Gardens B/T - Mei Foo B/T	20 - 30
39A	Tsuen Wan West Railway Station B/T - Allway Gardens (Circular)	20 - 25
41M	Tsing Yi Ferry B/T - Tsuen Wan Railway Station B/T	12 - 25
42	Cheung Hong B/T - Shun Lee B/T	15 - 20
42C	Cheung Hang B/T - Lam Tin Railway Station B/T	5 - 13
42M	Cheung Wang - Discovery Park B/T	7 - 15
43	Cheung Hong B/T - Tsuen Wan West Railway Station B/T	12 - 20
43B	Cheung Ching B/T - Tsuen Wan West Railway Station B/T	12 - 25
49X	Kwong Yuen B/T - Tsing Yi Ferry B/T	5 - 15
235	On Yam B/T - Tsuen Wan (Circular)	8 - 15
238M	Riviera Gardens B/T - Tsuen Wan Railway Station B/T	8 - 15
243M	Mayfair Garden B/T - Discovery Park B/T	10 - 15
243P	Mayfair Garden B/T - Allway Gardens	7:20, 8:00
251M	Sheung Tsuen B/T - Tsing Yi Railway Station B/T	7:00, 8:00, 9:00
848	Shatin Race Course B/T - Kwai Fong Railway Station B/T	-
930	Tsuen Wan West Railway Station - Exhibition Centre Station B/T	10 - 15
930A	Tsuen Wan West Station - Exhibition Centre Station B/T (3 trips in AM peak)	-
E31	Discovery Park B/T - Tung Chung (Yat Tung)	15 - 25
N31	Discovery Park B/T - Airport (Ground Transportation Centre)	45
R42	Disneyland - Tai Wai Railway Station B/T (1 trip after fireworks)	-
Green Mini-Bus (GMB)		
80	Tsuen Wan (Chuen Lung Street / Shiu Wo Street) - Chuen Lung	7 – 15
81	Tsuen Wan (Siu Wo Street) - Lo Wai	6 - 25
81M	Tsuen Wan (Siu Wo Street) - Shek Wai Kok Estate	10 - 20
82	Tsuen Wan (Siu Wo Street) - Shing Mun Reservoir	8 - 25
82M	Tsuen Wan (Siu Wo Street) - Cheung Shan Estate	12 - 20
83A	Tsuen Wan (Chuen Lung Street) - On Yam Estate (On Chit Street)	8 - 30
85	Tsuen Wan (Siu Wo Street) - Fu Yung Shan (Chuk Lam Sim Yuen)	15 – 30
86	Tsuen Wan (Hoi Kwai Road) - Shek Lei (Lei Pui Street)	10 - 20
86A	Tsuen Wan (Chuen Lung Street) - Shek Lei (Lei Pui Street)	15 - 30

Route No.	Origin – Destination	Frequency (min.)
86M	Tsuen Wan (Chuen Lung Street) - Shek Lei (Lei Pui Street)	5 - 20
87	Kwai Shing (Shing Fong Street) - Tsuen Wan (Ham Tin Street)	8 - 10
87K	Kwai Fong Station - Tsuen Wan West Railway Station	6 - 10
89	Shek Tau Street - Tsuen Wan (Ho Pui Street)	5 - 10
89A	Kwai Hing Station - Tsuen Wan (Ho Pui Street)	8 - 18
89B	Tsuen Wan (Hoi Kwai Road) - Kwai Shing North (Kwai Hau Street)	8 - 12
91	Highland Park - Tsuen Wan (Ham Tin Street)	7 - 10
93	Wah Yuen Chuen - Tsuen Wan (Ham Tin Street)	6 - 15
98	Kwai Shing North (Kwai Hau Street) – Kwai Chung Plaza	4 - 8
302	Hong Kong Garden - Kwai Fong	5 – 8
312	Tsing Yi Station - Lei Muk Shue Estate PTI	4 - 8
313	Tsuen Wan (Tso Kung Street) - Princess Margaret Hospital	6 - 11
401	Tsing Yi Ferry Pier - Shek Yam	7 - 10
406	Shek Lei - Kwai Shing	-
Public Light Bus (PLB)		
-	Tsuen Wan (Hoi Pa Street) – Shek Wai Kok	-
-	Tsuen Wan (Vision City) – Lei Muk Shue	-
-	Tsuen Wan (Chuen Lung Street) - Shatin Race Course	-
-	Tsuen Wan (Market Street) – Kwun Tong (Yee On Street)	-
-	Tsuen Wan (Market Street) – Yau Tong/ Lei Yue Mun	-
-	Tsuen Wan (Market Street) – San Po Kong/ Ping Shek	-
-	Tsuen Wan (Hoi Pa Street) – Tsz Wan Shan	-
-	Tsuen Wan (Chuen Lung Street) – To Kwa Wan (Jubilant Place)	-
-	Tsuen Wan (Vision City) – Jordan Road	-
-	Tsuen Wan (Hoi Pa Street) – Jordan Road	-
-	Tsuen Wan (Hoi Pa Street) – Mong Kok (Langham Place)	-
-	Tsuen Wan (Market Street) – Sheung Wan	-

4 FUTURE TRAFFIC CONDITIONS

4.1 Design Year

4.1.1 The proposed development is tentatively scheduled for completion in 2030. Year 2033 is selected as a design year in this TIA for assessment purpose (i.e. 3 years after the planned completion).

4.2 Traffic Forecast

4.2.1 The traffic forecast for the Reference Case (year 2033 with the Permitted Scheme of proposed development) were formulated by (i) applying the annual growth rate to the 2023 observed traffic flows to derive 2033 background traffic flows and (ii) superimposing the traffic flows generated from the Permitted Scheme and other planned / potential future developments in the vicinity of the Site.

4.2.2 The traffic forecast for the Design Case (year 2033 with the Proposed Scheme of proposed development) would be the traffic forecast in Reference Case plus the net changes of traffic generation due to the Proposed Scheme of proposed development.

4.2.3 To obtain the aforesaid annual growth rate, two sets of data was referenced. The data include (i) the historical traffic data in Annual Traffic Census (ATC) and (ii) the planning data in "2019-based Territorial Population and Employment Data Matrix" (TPEDM) published by the Planning Department in the website.

Historical Traffic Data from ATC

4.2.4 The annual average daily traffic (AADT) flow and annual growths of the nearby counting stations from 2017 to 2022 as presented in the ATC reports published annually by Transport Department are summarized in below **Table 4.1**.

Table 4.1 Historical Annual Average Daily Traffic (AADT) Flows from ATC

ATC Stn. No.	Road Name	A.A.D.T. (veh/day)					
		2017	2018	2019	2020	2021	2022
5830	Sha Tsui Rd	18,950	19,230	19,160	18,980	19,890	20,400
5831	Yeung Uk Rd	23,620	23,970	23,890	23,660	28,290	28,810
5833	Texaco Rd	31,740	32,210	32,100	31,780	32,420	33,240
6028	Texaco Rd	30,060	27,600	27,510	27,240	25,240	25,540
Total		104,370	103,010	102,660	101,660	105,840	107,990
Average Traffic Growth Rate from 2017 to 2022 = +0.7% per annum							

4.2.5 As shown in **Table 4.1**, the average growth rate from 2017 to 2022 is about **+0.7%** per annum according to the historical ATC data.

Population and Employment estimates from TPEDM

4.2.6 The traffic growth rate was also referred to 2019-based TPEDM data which is available in Planning Department's website. **Table 4.2** shows the years 2019 and 2031 population and employment planning data in Tsuen Wan district.

Table 4.2 2019-based TPEDM Planning Data

Planning Data District	Year 2019		Year 2031	
	Population	Employment	Population	Employment
Tsuen Wan	293,700	165,000	249,400	160,650
Total	458,700		410,050	
	Annual Growth Rate = -0.93%			

Adopted Annual Growth Rate

4.2.7 Based on the results given by TPEDM estimates and AADT historical data, an annual growth rate of **0.7%** per annum is adopted for projecting the peak hour traffic flows from 2023 to 2033 for conservative assessments.

4.3 Planned / Potential Future Developments

4.3.1 There are several planned / potential future developments adjacent to the Proposed Development. The development parameters of the planned / potential future developments and their location are shown in **Table 4.3** and **Figure 4.1** respectively.

Table 4.3 Planned / Potential Future Developments in the Vicinity

Ref.	Development Site	Land Use	Assumed Development Parameter
1	A/TW/537	Private Housing	629 flats with average flat size of 43m^2
2	A/TW/527	Private Housing	1,330 flats with average flat size of 47m^2
3	A/TW/505	Industrial	Additional 3,530m^2 Industrial GFA
4	A/TW/514	Industrial	Additional 1,127m^2 Industrial GFA
5	A/TW/521	Industrial	Additional 2,926m^2 Industrial GFA
6	R(A)	Private Housing	790 flats with average flat size of 50m^2
7	C(7)	Commercial	52,513m^2 Commercial GFA

4.3.2 Estimation of the traffic generation and attraction volume are derived from the trip rates as stipulated in Annex C of Transport Planning and Design Manual (TPDM) Volume 1 Chapter 3 published by Transport Department**.**

4.3.3 **Table 4.4** summarizes the estimated trip generations of the above Planned and Potential Future Developments.

Table 4.4 Estimated Trip Generation for the Planned / Potential Future Developments

Ref.	Development Site	Estimated Trips (pcu/hr)			
		AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
1	A/TW/537	54	32	22	28
2	A/TW/527	96	57	39	50
3	A/TW/505	4	5	5	4
4	A/TW/514	2	2	2	2
5	A/TW/521	3	5	4	4
6	R(A)	57	34	23	30
7	C(7)	89	129	83	62

4.4 Traffic Generation of the Proposed Development

4.4.1 Based on the development scheme as mentioned in Section 2, the adopted trip rate extracted from Annex D of TPDM Volume 1 Chapter 3 and the development trip generation and attraction under the Permitted Scheme and Proposed Scheme for the Subject Site are illustrated in below tables.

Table 4.5 Adopted Trip Rate for the Subject Site under Permitted Scheme

Average Flat Size	Adopted Trip Rates (pcu/hr/flat)				Note
	AM Peak		PM Peak		
	Gen.	Att.	Gen.	Att.	
≤ 60 m^2	0.0718	0.0425	0.0286	0.0370	(1)

Note:
(1) Based on the traffic rates for private housing: high-density/R(A) with average flat size 60m^2

Table 4.6 Estimated Trip Generation and Attraction for the Subject Site under Permitted Scheme

Subject Site (Permitted Scheme)			Trip Generation and Attraction (pcu/hr)			
	Average Flat Size	No. of Flat / GFA	AM Peak		PM Peak	
			Gen.	Att.	Gen.	Att.
Residential	40m^2	739	54	32	22	28

Table 4.7 Adopted Trip Rate for the Subject Site under Proposed Scheme

Average Flat Size / GFA	Adopted Trip Rates (pcu/hr/flat)				Note
	AM Peak		PM Peak		
	Gen.	Att.	Gen.	Att.	
Residential (≤ 60 m^2)	0.0718	0.0425	0.0286	0.0370	(1)
Retail (pcu/hr/100 m^2 GFA)	0.2296	0.2434	0.3100	0.3563	(2)

Note:
(1) Based on the mean traffic rates for private housing: high-density/R(A) with average flat size 60m^2
(2) Based on the mean traffic rates for Retail / Shopping Complex (Office + Retail)

Table 4.8 Estimated Trip Generation and Attraction for the Subject Site under Proposed Scheme

Subject Site (Proposed Scheme)			Trip Generation and Attraction (pcu/hr)			
	Average Flat Size	No. of Flat / GFA	AM Peak		PM Peak	
			Gen.	Att.	Gen.	Att.
Residential	40m^2	886	64	38	26	33
Retail	-	280m^2	1	1	1	1

4.4.2 By comparing the total development trip generated and attracted by the Subject Site under the Permitted Scheme and Proposed Scheme, the net differences of the development trips are presented in **Table 4.9**.

Table 4.9 Estimated Traffic Flows for the Proposed Development

Subject Development	Estimated Trips (pcu/hr)			
	AM Peak		PM Peak	
	Gen.	Att.	Gen.	Att.
Permitted Scheme	54	32	22	28
Proposed Scheme	65	39	27	34
Net Difference = Proposed Scheme – Permitted Scheme in OZP	**11**	**7**	**5**	**6**

4.4.3 As shown in **Table 4.9**, 2-way traffic of the Proposed Development will be increased +18 pcu/hr and +11 pcu/hr during AM and PM peak hour respectively. Thus, it is anticipated that the Proposed Development would have minimal impact to the road network.

4.5 2033 Traffic Forecasts

4.5.1 By applying the adopted growth rate +0.7% per annum to 2023 existing traffic flow and superimposing the planned / potential future developments trips as listed in **Table 4.4**, the 2033 background traffic forecast (without proposed development) has been obtained. Based on the 2033 background traffic forecasts (without proposed development) as described in **Section 4.3**, the 2033 reference traffic flows were produced by adding the trips generated by the proposed development as permitted in OZP as listed in **Table 4.9**. The 2033 reference traffic flows are shown in **Figure 4.2**.

4.5.2 The net increase of the Proposed Development as estimated in **Table 4.9** were superimposed to 2033 reference traffic flows to produce 2033 design traffic flows. The 2033 design traffic flows are shown in **Figure 4.3**.

5 TRAFFIC IMPACT ASSESSMENT

5.1 Junction Capacity Assessment

5.1.1 The operational performance of the 6 critical junctions based on year 2033 traffic forecasts as mentioned in **Section 4** have been assessed.

5.1.2 The results of junction capacity analysis are summarized in **Table 5.1.**

Table 5.1 Junction Performance in 2033

Ref.	Junction	Indicator(1)	2033			
			Reference Case		Design Case	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Sha Tsui Road / Kwan Mun Hau Street / Luen Yan Street	RC	30%	34%	30%	34%
J2	Sha Tsui Road / Texaco Road	RC	30%	21%	29%	21%
J3	Texaco Road / Yeung Uk Road / Kwai Fuk Road	RC	19%	18%	19%	18%
J4	Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road	RC	40%	53%	39%	52%
J5	Wang Wo Tsai Street / Kwu Hang Road	DFC	0.20	0.24	0.20	0.24
J6	Yeung Uk Road / Wang Wo Tsai Street	DFC	0.54	0.46	0.55	0.46

Note:
(1) RC = Reserve Capacity for signal junction; DFC = Design Flow / Capacity ratio for priority junction or roundabout

5.1.3 As shown in **Table 5.1**, all junctions would be operating within capacity in 2033. As such, it is considered that the proposed development would have no significant traffic impact onto the surrounding road network.

6 REVIEW ON FUTURE PUBLIC TRANSPORT DEMAND

6.1 Future Public Transport Demand

6.1.1 To review the appropriate public transport provision to be provided due to the population intake of the Proposed Development, the future public transport demand for the Proposed Development is reviewed with reference to the information/data as available in the Travel Characteristics Survey 2011 Final Report as available in Transport Department's website. The estimation of future public transport demand is summarized in **Table 6.1**.

Table 6.1 Estimation on Future Public Transport Demand for the Proposed Development

Parameters	Formula	Proposed Scheme
Estimated Population	(a)	748(1)
Average daily mechanised trips per person	(b)	1.83(2)
Peak hour factor (AM/PM) to daily total	(c)	12%(3)
Modal Split for Public Transport	(d)	73%(4)
Estimated public transport demand per hour during peak hours	(e) = (a) x (b) x (c) x (d)	**120**

Notes:
(1) The anticipated population is derived by assuming 2.7 persons per flat as per the average household size of Tsuen Wan District in 2022 under General Household Survey by Census and Statistics Department. The estimated population 748 persons (277 flats*2.7 persons per flat=748 persons) only included site A under proposed development.
(2) The daily mechanised trip rate per population is 1.83 trips according to the Travel Characteristics Survey 2011 Final Report.
(3) The peak hour factor is about 12% of daily trips according to the Travel Characteristics Survey 2011 Final Report.
(4) Modal split for public transport is made reference with Table 3.6 of Travel Characteristics Survey 2011 Final Report.

6.2 Future Public Transport Proposal

6.2.1 Currently, it was observed that approximately 46% of the existing public transport demand going to Tsuen Wan and Kwai Chung direction whilst 29% are travelling to Tsing Yi, and the remaining 25% of the public transport demand going to other destinations. Meanwhile, about 97% of the public transport demand to Tsuen Wan and Kwai Chung would take 243M and GMB 409K and 87K etc. whilst approximately 82% of those would take 42M and 49X to Tsing Yi.

6.2.2 Taking into account the existing public transport pattern as observed on site, the anticipated pattern future public demand for the Proposed Development is summarized in **Table 6.2**.

Table 6.2 Summary of Anticipated Future Public Transport Demand

Direction	**Bus Routes**		**Total**
To Tsuen Wan / Kwai Chung	**Route 243M**	**Other Routes**	55 (46%)
	54 (97%)	1 (3%)	
To Tsing Yi	**Route 42M**	**Other Routes**	35 (29%)
	29(82%)	6 (18%)	
To Others Destination	**Route 30X**	**Other Routes**	30 (25%)
	18 (60%)	12 (40%)	
		Total Public Transport Demand	**120** (100%)

6.2.3 Based on survey result, the occupancy of existing bus route was approximately 40% during the morning peak period. It is anticipated that the existing bus service would be sufficient to accommodate the additional public transport demand generation by the subject site as estimated in **Table 6.1**.

7 SUMMARY AND CONCLUSION

7.1 Summary

7.1.1 The Application Site is located in the northern fringe of the Tsuen Wan East industrial area at various lots in D.D. 443 and bounded by Yeung Uk Road, Kwu Hang Road and Wang Wo Tsai Street. The Applicant proposes to increase plot ratio from 5.0 to 6.11 for the subject site and the total flat units will be increased from about 738 to 886.

7.1.2 AECOM Asia Co. Ltd was commissioned by the Applicant to prepare a TIA report in support of the Section 16 planning application.

7.1.3 In order to review the existing traffic condition, traffic count surveys at identified critical junctions were conducted to investigate the peak hour traffic condition. The critical junctions include: -

- J/O Sha Tsui Road / Kwan Mun Hau Street / Luen Yan Street (J1)
- J/O Sha Tsui Road / Texaco Road (J2)
- J/O Texaco Road / Yeung Uk Road / Kwai Fuk Road (J3)
- J/O Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road (J4)
- J/O Wang Wo Tsai Street / Kwu Hang Road (J5)
- J/O Yeung Uk Road / Wang Wo Tsai Street (J6)

7.1.4 Junction capacity analysis revealed that all the critical junctions are operating within capacity currently.

7.1.5 The Proposed Development is scheduled for completion in 2030 tentatively. Traffic forecast for design year 2033 was produced to assess the traffic impact arising from the Proposed Development.

7.1.6 Peak hour traffic forecasts in design year 2033 were established based on the growth rate determined by the Historical Traffic Data from ATC and 2019-based TPEDM data.

7.1.7 Traffic trip generation and attraction volumes for Proposed Scheme are estimated with reference to the latest TPDM and the respective development schedule. The difference in the total development trips generated/ attracted by the proposed development under the Permitted Scheme and Proposed Scheme are compared in **Table 4.9**.

7.1.8 It is anticipated that the 2-way traffic of the Application Site will be increased by about +18 pcu/hr and +11 pcu/hr during the AM and PM peak hour for the Proposed Scheme comparing to the conforming development.

7.1.9 Junction capacity assessment was conducted for both 2033 reference and design scenarios. The results revealed that the traffic impact induced by the Proposed Development would be minimal. All junctions would be operating within capacity under both reference and design case in 2033.

7.2 Conclusion

7.2.1 In light of the findings of this TIA, it is concluded that the Proposed Development would be acceptable in traffic terms.

Figure

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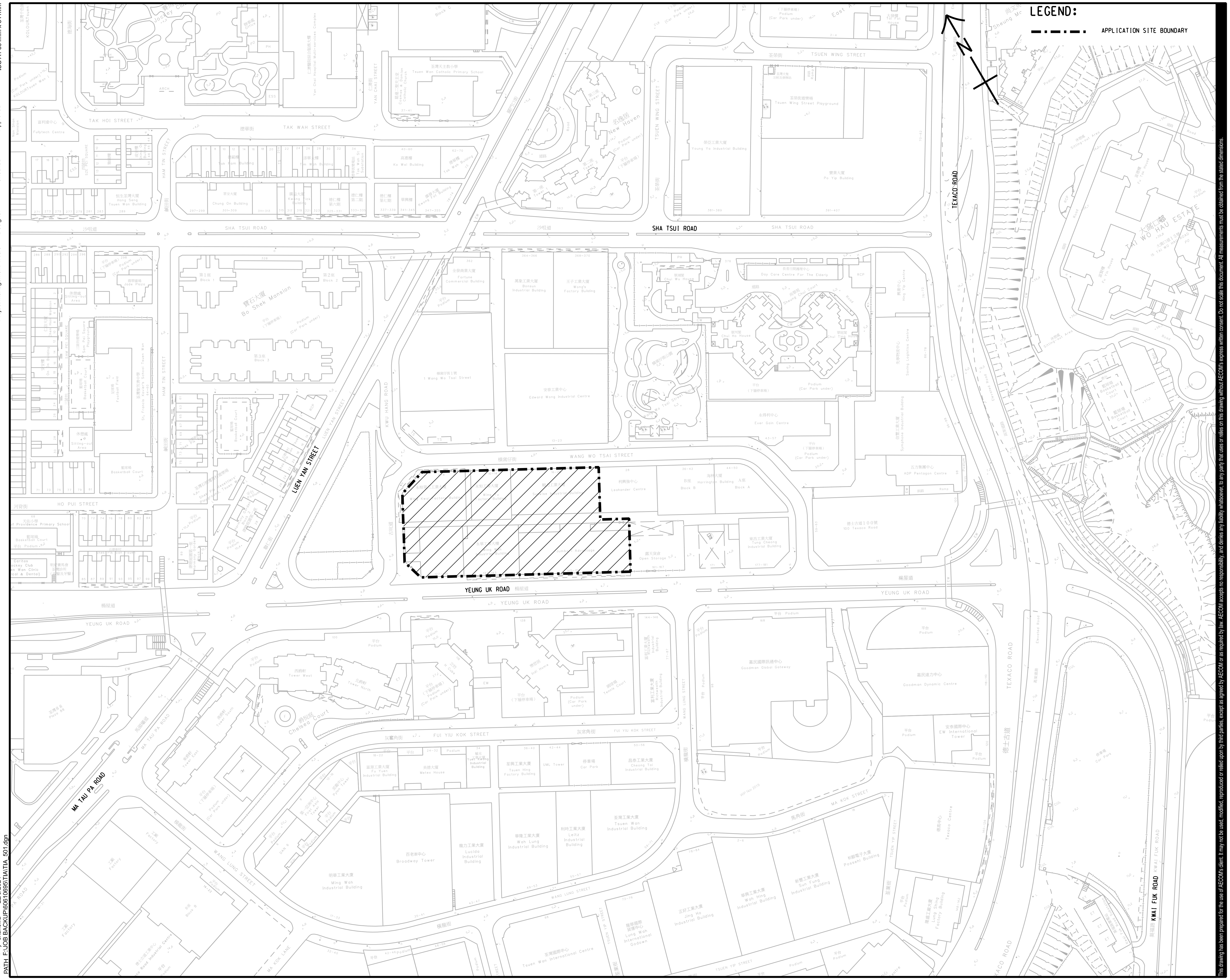
Approved:

Checked:

Designer:

Project Management Initials:



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PROJECT
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SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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STATUS
階段

SCALE 比例	**DIMENSION UNIT** 尺寸單位
A3 1 : 2000	METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號	**CONTRACT NO.** 合約編號
60610695	

SHEET TITLE
圖紙名稱

SITE LOCATION PLAN

SHEET NUMBER
圖紙編號

FIGURE 1.1

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PATH F:\JOB BACKUP\60610695\TIA\TIA_501.dgn

LEGEND:

APPLICATION SITE

LUEN YAN STREET

WANG WO TSAI STREET

横窩仔街

KWU HANG

古坑道

YEUNG UK ROAD

楊屋道

YEUNG-UK-ROAD

PUBLIC LANE

SITE A LAYOUT FOR THIS APPLICATION

SITE B INDICATIVE LAYOUT

SITE C INDICATIVE LAYOUT

SITE D INDICATIVE LAYOUT

SITE E INDICATIVE LAYOUT

SITE F INDICATIVE LAYOUT

TOWER 120.00mPD

LANDSCAPE AREA

Jumbo i Advantage

利興強中心

Leahander Centre

露天貨倉

Open Storage

SITE BOUNDARY

RUN-IN / RUN-OUT

DELETION OF EXISTING RUN-IN/OUT

8 pm-8 am
下午八時至上午八時
N-TS900

PGV/N-TS900

PGV/P1C 2121

PGV/P1C 2122

8-10,17-19S

8-10,17-19R/EGH

8-10,17-19R/GV⊗End/EGH

8-10,17-19S/GV⊗7-19S/EGH-19R/EGH

KEEP CLEAR 請勿停車

BUS STOP 巴士站

平台 Podium

AECOM

PROJECT 項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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STATUS 階段

SCALE 比例

A3 1 : 500

DIMENSION UNIT 尺寸單位

METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號

60610695

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱

MASTER LAYOUT PLAN

SHEET NUMBER 圖紙編號

FIGURE 2.1

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PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60610695\TIATIA_503.dgn

LEGEND:

APPLICATION SITE

LUEN YAN STREET

WANG WO TSAI STREET

横窩仔街

KWU HANG

古坑道

YEUNG UK ROAD

YEUNG-UK-ROAD

楊屋道

PUBLIC LANE

SITE A LAYOUT FOR THIS APPLICATION

SITE B INDICATIVE LAYOUT

SITE C INDICATIVE LAYOUT

SITE D INDICATIVE LAYOUT

SITE E INDICATIVE LAYOUT

SITE F INDICATIVE LAYOUT

TOWER 120.00mPD

LANDSCAPE AREA

Jumbo i Advantage

利興強中心

Leahander Centre

露天貨倉

Open Storage

PLANNED PEDESTRIAN CROSSING TO BE IMPLEMENTED BY THE GOVERNMENT (REFERS TO TD DRAWING E231574.001)

EXISTING RUN-IN/OUT WILL NO LONGER BE OPERATED

PROPOSED RELOCATION OF BUS STOP

PROPOSED RUN-IN/OUT

(TS2230/⊗8-10,17-19S/ (TS836/EGH/ TS860) E tax up/off

平台 Podium

8 pm-8 am 下午八時至上午八時 N-TS900

PGV/N-TS900/→

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

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STATUS
階段

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60610695

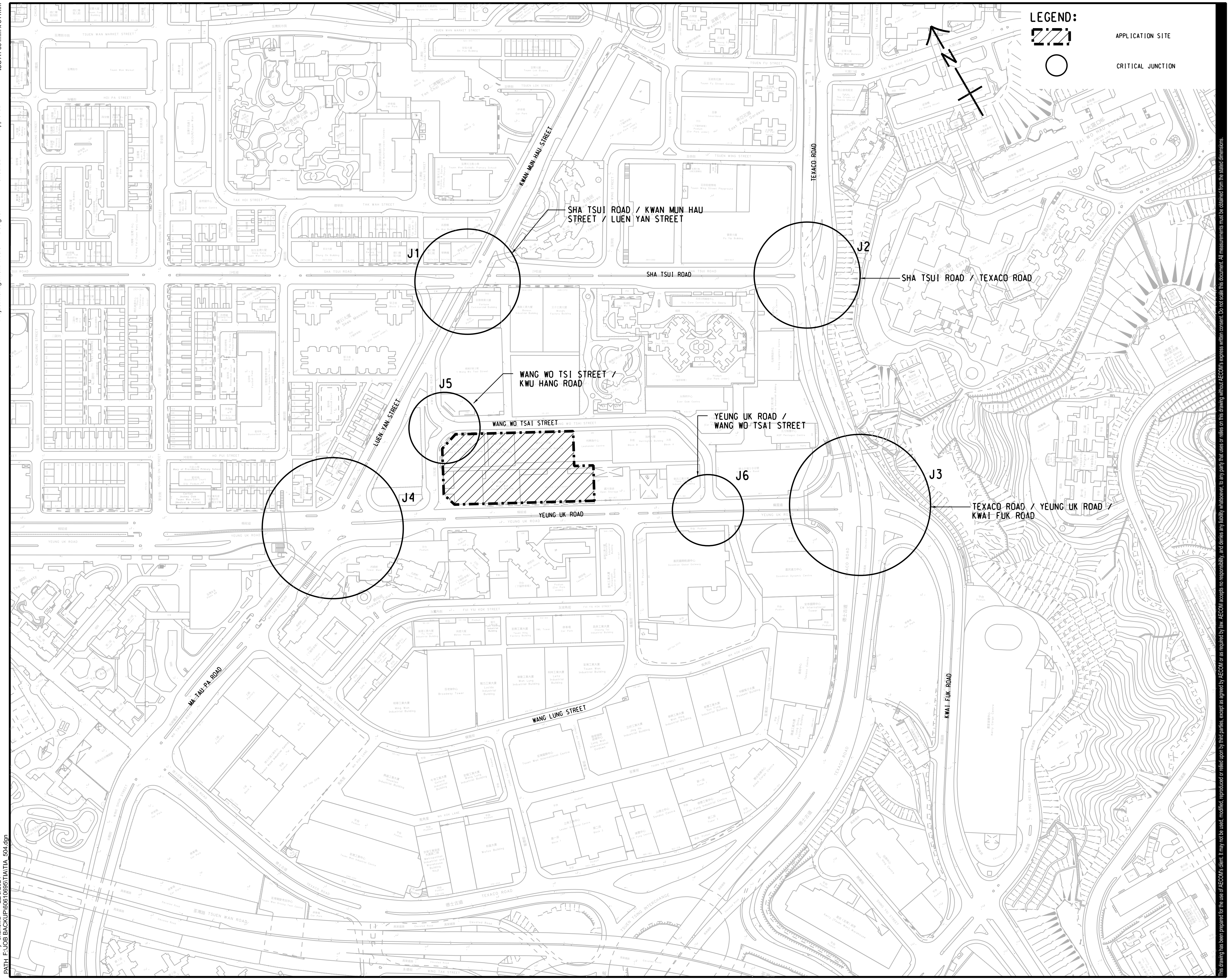
CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

VEHICULAR ACCESS ARRANGEMENT

SHEET NUMBER
圖紙編號

FIGURE 2.2



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STATUS
階段

SCALE
比例

A3 1 : 3000

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60610695

CONTRACT NO.
合約編號

SHEET TITLE
圖紙名稱

EXISTING ROAD NETWORK AND CRITICAL JUNCTIONS

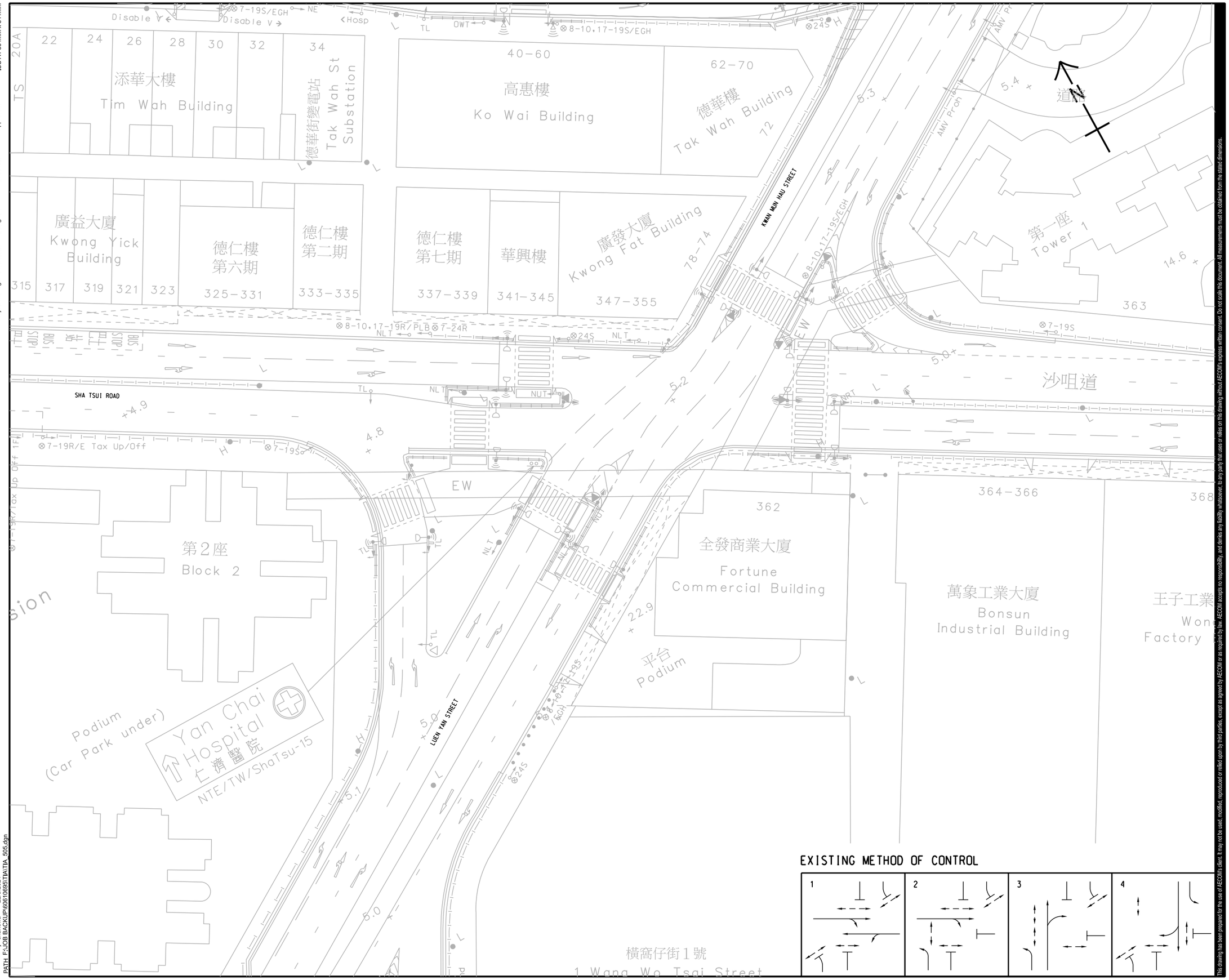
SHEET NUMBER
圖紙編號

FIGURE 3.1

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:

Plot File by: chancwa 22/8/2024
PATH F:\JOB BACKUP\60610695\TIA\TIA_504.dgn

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



EXISTING METHOD OF CONTROL

AECOM

PROJECT 項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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STATUS 狀況

SCALE 比例 A3 1 : 500

DIMENSION UNIT 尺寸單位 METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號 60610695

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱

EXISTING LAYOUT FOR JUNCTION OF SHA TSUI ROAD / KWAN MUN HAU STREET / LUEN YAN STREET (J1)

SHEET NUMBER 圖紙編號

FIGURE 3.2

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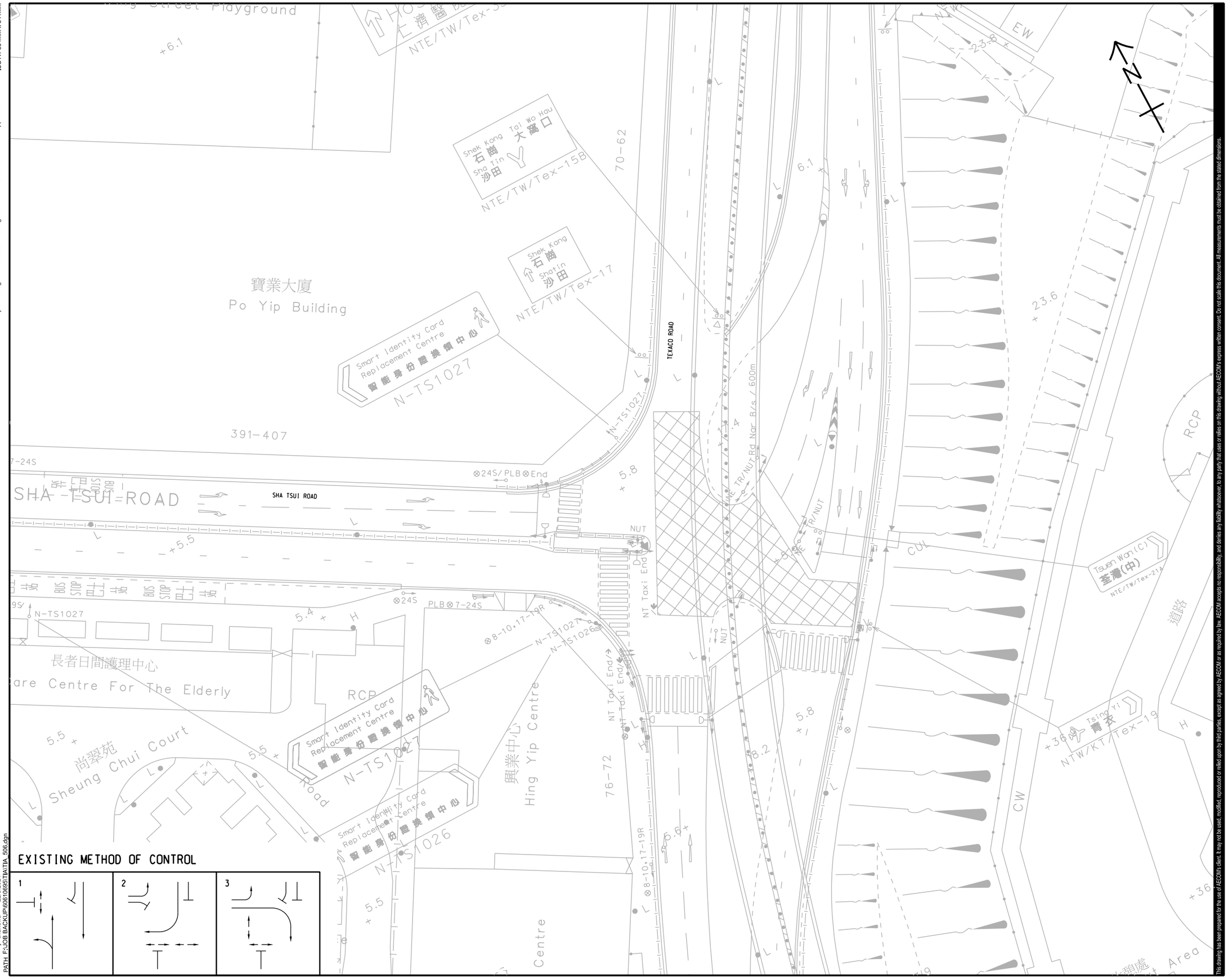
PATH: P:\JOB BACKUP\60610095\TIA\TIA_505.dgn

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



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PATH: F:\JOB BACKUP\60610095\TIATTA_506.dgn

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STATUS 階段

SCALE 比例 A3 1 : 500

DIMENSION UNIT 尺寸單位 METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號 60610695

CONTRACT NO. 合約編號

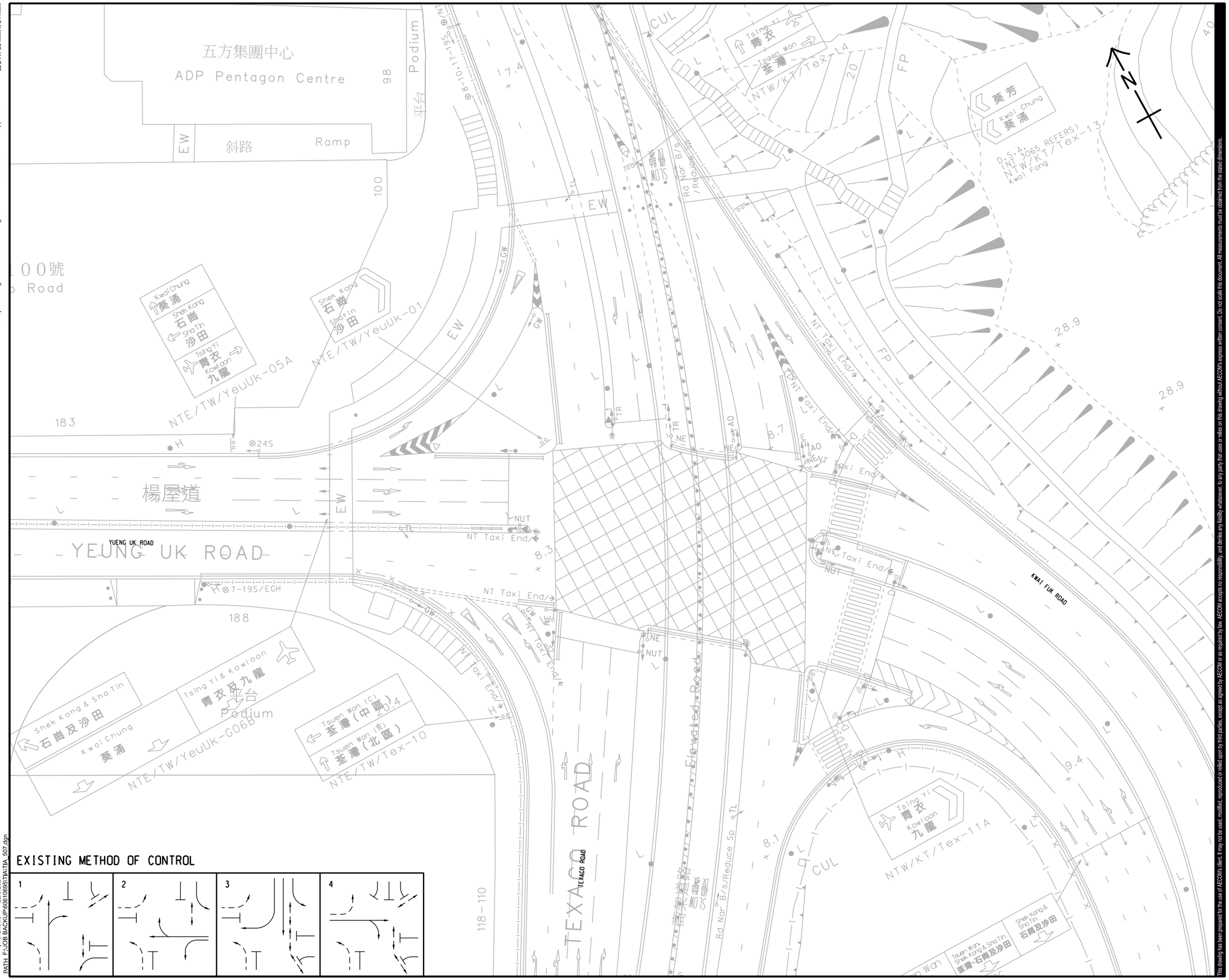
SHEET TITLE 圖紙名稱

EXISTING LAYOUT FOR JUNCTION OF SHA TSUI ROAD / TEXACO ROAD (J2)

SHEET NUMBER 圖紙編號

FIGURE 3.3

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



EXISTING METHOD OF CONTROL

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PATH: F:\JOB BACKUP\60610695\11ATA\11ATA_507.dgn

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SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號
60610695

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱
EXISTING LAYOUT FOR JUNCTION OF YEUNG UK ROAD / TEXACO ROAD / KWAI FUK ROAD (J3)

SHEET NUMBER 圖紙編號
FIGURE 3.4

ISO A1 594mm x 841mm

Approved:

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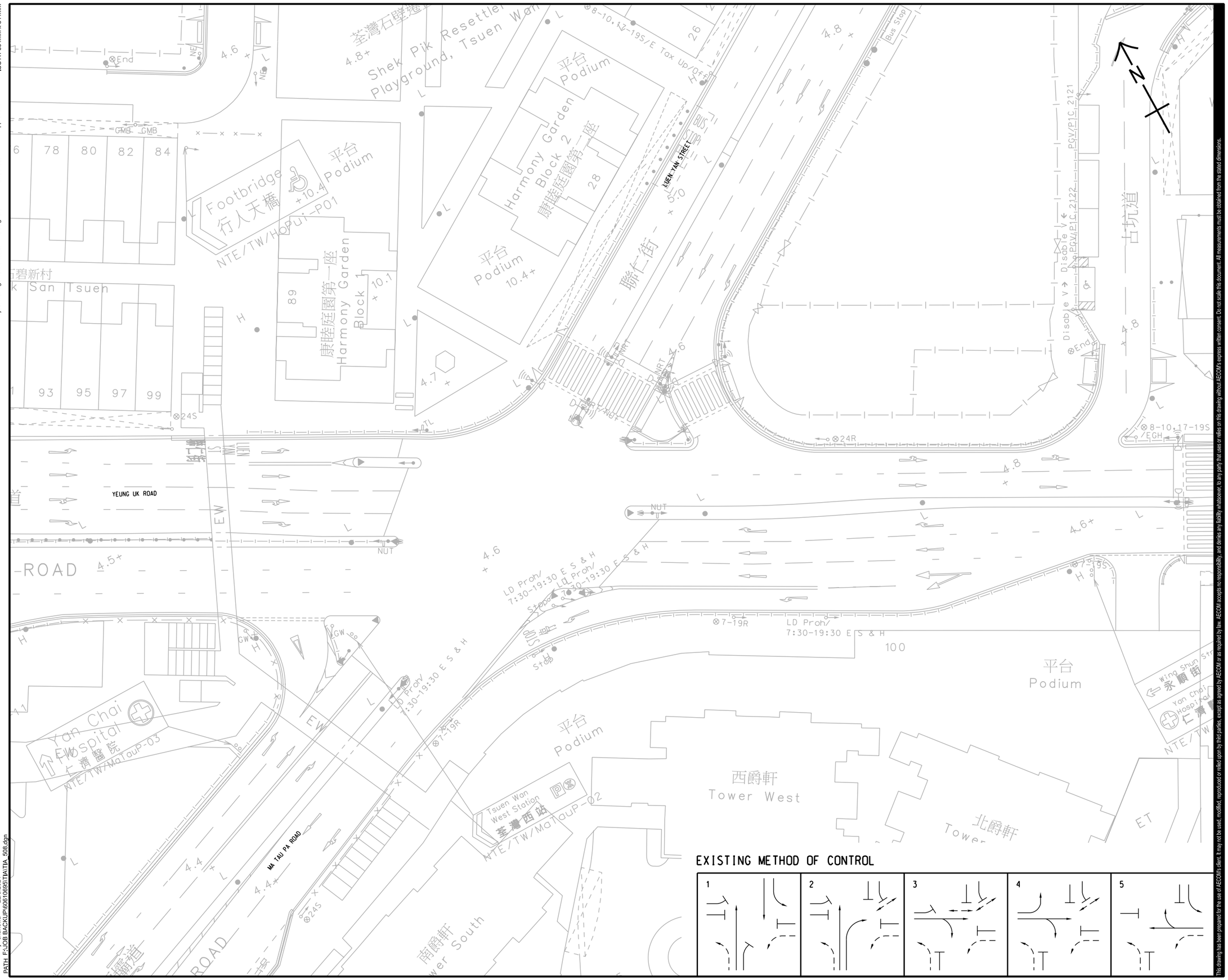
Designer:

Project Management Initials:



EXISTING METHOD OF CONTROL

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STATUS
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SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

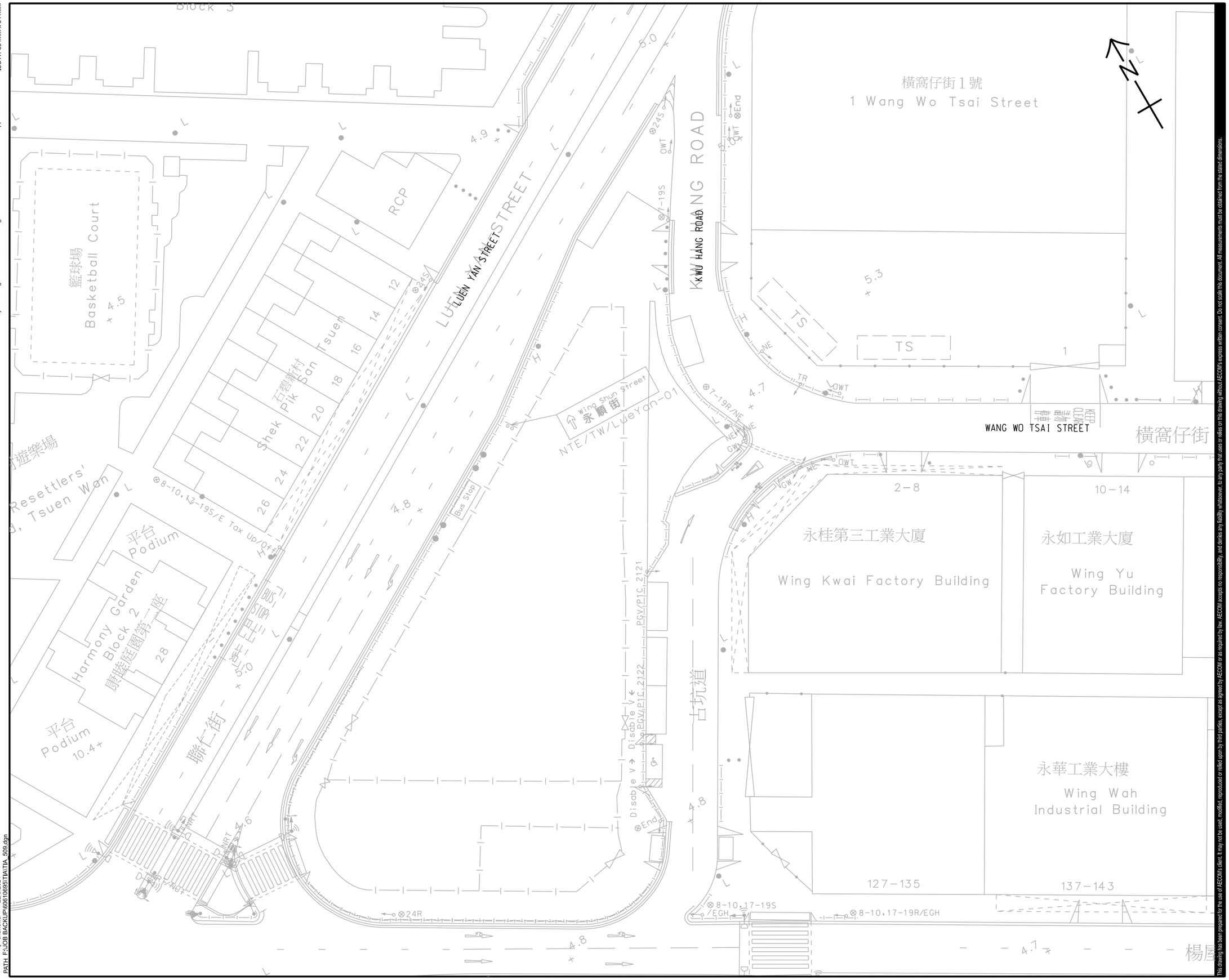
PROJECT NO. 項目編號
60610695

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
EXISTING LAYOUT FOR JUNCTION OF YEUNG UK ROAD / LUEN YAN STREET / MA TAU PA ROAD (J4)

SHEET NUMBER
圖紙編號
FIGURE 3.5

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



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狀況

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60610695

CONTRACT NO. 合約編號

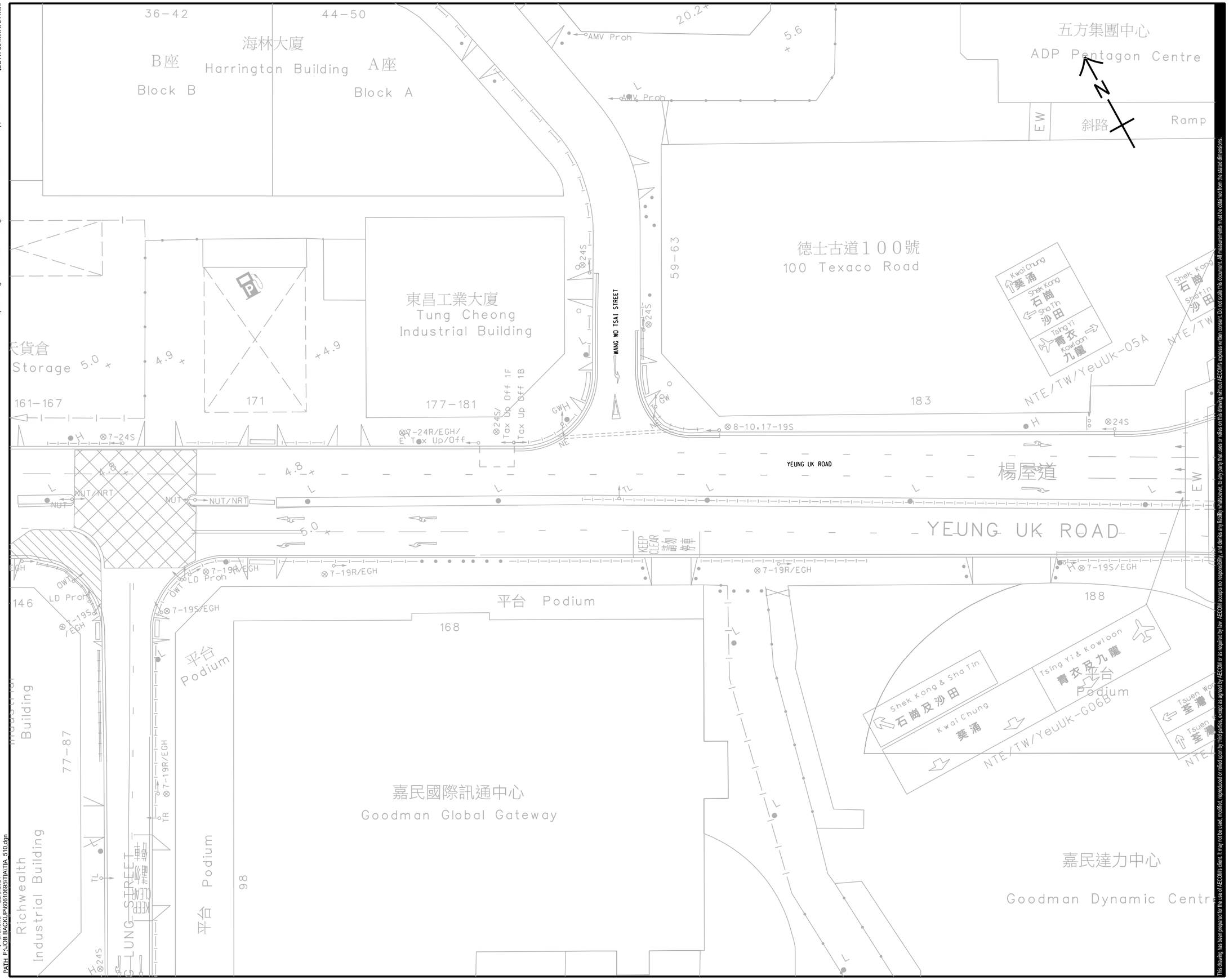
SHEET TITLE
圖紙名稱

EXISTING LAYOUT FOR JUNCTION OF WANG WO TSAI STREET / KWU HANG ROAD (J5)

SHEET NUMBER
圖紙編號

FIGURE 3.6

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



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SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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STATUS
狀況

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60610695

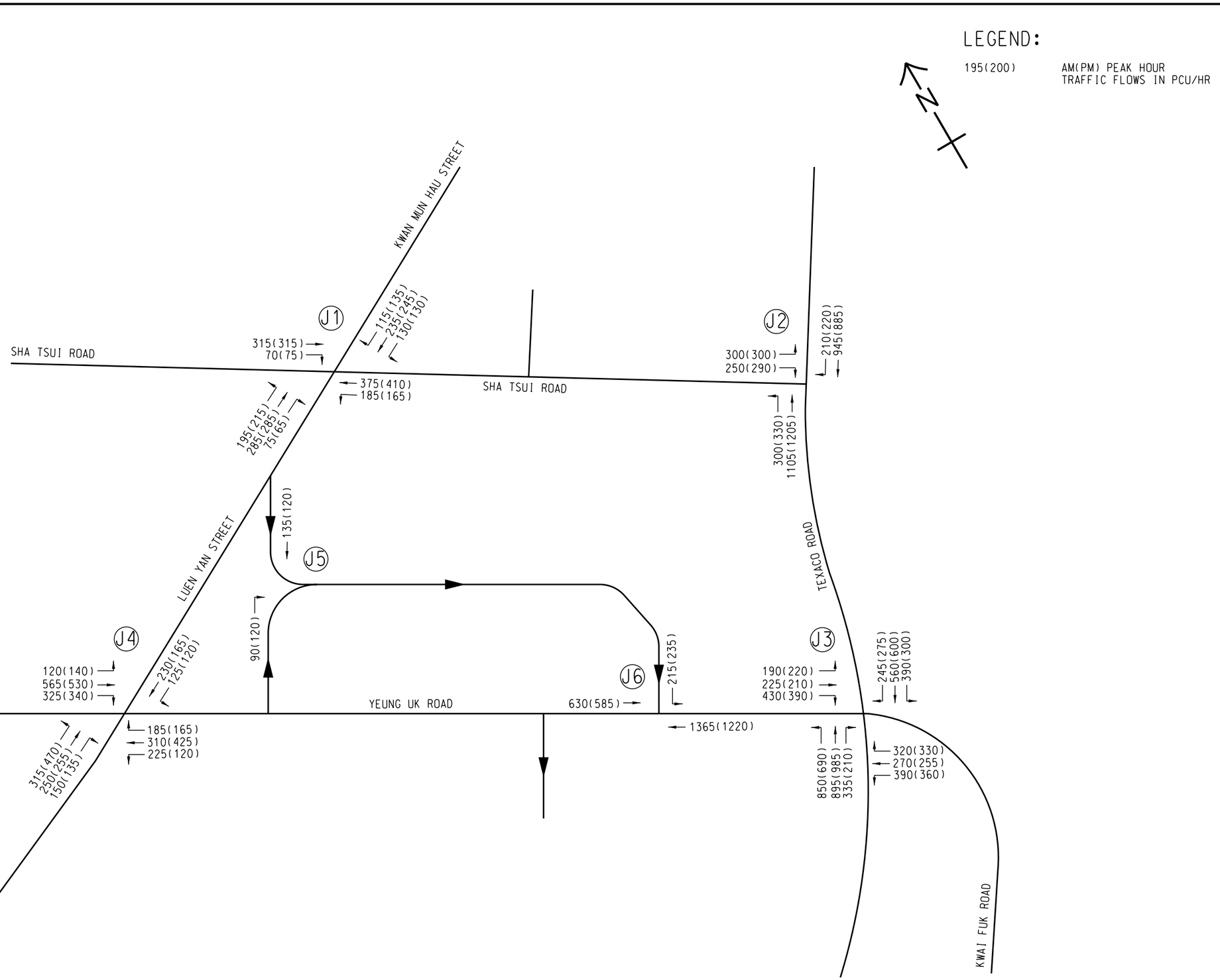
CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

EXISTING LAYOUT FOR JUNCTION OF YEUNG UK ROAD / WANG WO TSAI STREET (J6)

SHEET NUMBER
圖紙編號

FIGURE 3.7



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PROJECT 項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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SCALE 比例 A3 N. T. S.

DIMENSION UNIT 尺寸單位 METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號 60610695

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱

2023 OBSERVED TRAFFIC FLOWS

SHEET NUMBER 圖紙編號

FIGURE 3.8

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Plot File by: chancwa 22/8/2024
PATH: F:\JOB BACKUP\60610695\11ATA\TA_511.dgn

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

Plot File by: $USERS
PATH $FILES

$DATE$

LEGEND:

SUBJECT SITE

EXISTING GMB STOP

EXISTING BUS STOP

GMB ROUTE NO.
83A, 86, 86A, 313

BUS ROUTE NO.
31, 34, 36, 43, 930, 930X, 933, E31, E32A, N31

GMB ROUTE NO.
83A, 86, 86A

BUS ROUTE NO.
33, 33B, 36, 49A, 243M

BUS ROUTE NO.
30, 31, 34, 43, 235, 930X, E31, E32A, N31

BUS ROUTE NO.
30, 31, 34, 36, 43, 49A, 235, 930, E31, E32A, N31

GMB ROUTE NO.
312

GMB ROUTE NO.
83A, 86, 86A, 313

BUS ROUTE NO.
30, 31, 33B, 39A, 49A, 238M, 243M, 243P

GMB ROUTE NO.
83A, 86, 86A, 302, 313

GMB ROUTE NO.
809

GMB ROUTE NO.
401

BUS ROUTE NO.
34, 36, 43, 49A, 243M, 243P, 930, N31

GMB ROUTE NO.
83A, 86, 86A, 89, 89A, 89B, 98

GMB ROUTE NO.
87, 93, 93A, 401

GMB ROUTE NO.
91, 93, 93A

BUS ROUTE NO.
32H, 33, 33B, 243M, 930X, A31, NA31

GMB ROUTE NO.
409, 409K, 409S

GMB ROUTE NO.
87

BUS ROUTE NO.
32H, 33, 33B, 38A, 38B, 39A, 238M, 930, 930X, 933, A31, NA31

BUS ROUTE NO.
30X, 32H, 33A, 41M, 42M, 49X, 73P, 243M, 930A, R42

GMB ROUTE NO.
87, 87K, 89, 89A, 91, 93, 93A, 98, 409K

BUS ROUTE NO.
30X, 32H, 33A, 41M, 42M, 49X, 73P, 930A, R42

GMB ROUTE NO.
87, 87K, 91, 93, 93A

GMB ROUTE NO.
401, 99

BUS ROUTE NO.
33, 33B, 38A, 38B, 238M, A31, NA31

BUS ROUTE NO.
930X, 933, N930

GMB ROUTE NO.
401, 99

SHA TSUI ROAD

TEXACO ROAD

YEUNG UK ROAD

MA TAU PA ROAD

KWAI FUK ROAD

LUEN YAN STREET

TSUEN WING STREET

WANG WO TSAI STREET

HO PUI STREET

MA KOK STREET

WANG LUNG STREET

FU YIU KOK STREET

TAI WO HAU ESTATE

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PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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STATUS
階段

SCALE 比例
A3 1 : 2000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60610695

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
EXISTING PUBLIC TRANSPORT FACILITIES

SHEET NUMBER
圖紙編號
FIGURE 3.9

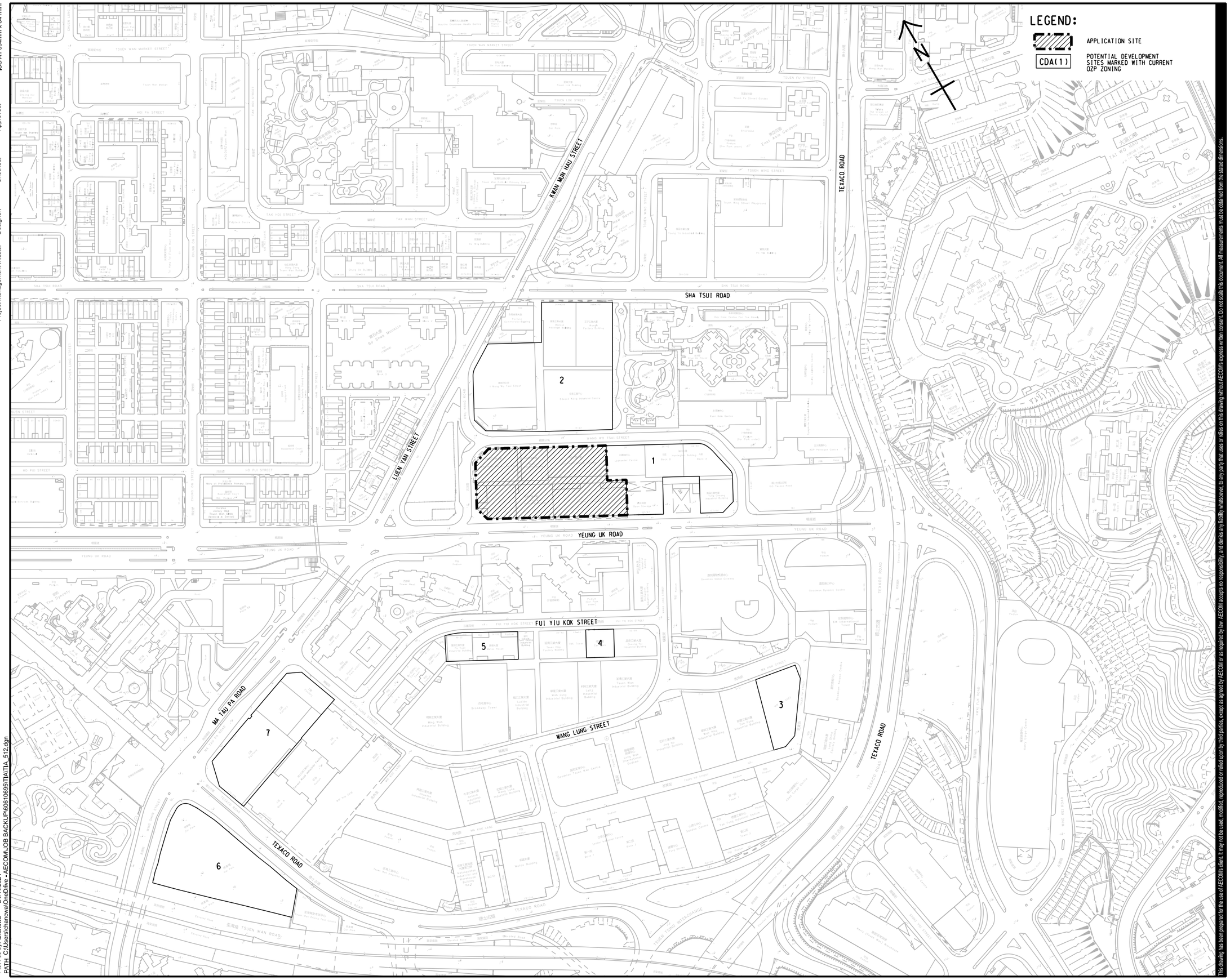
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



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PROJECT
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SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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STATUS
狀況

SCALE 比例
A3 1 : 3000

DIMENSION UNIT 尺寸單位
METRES

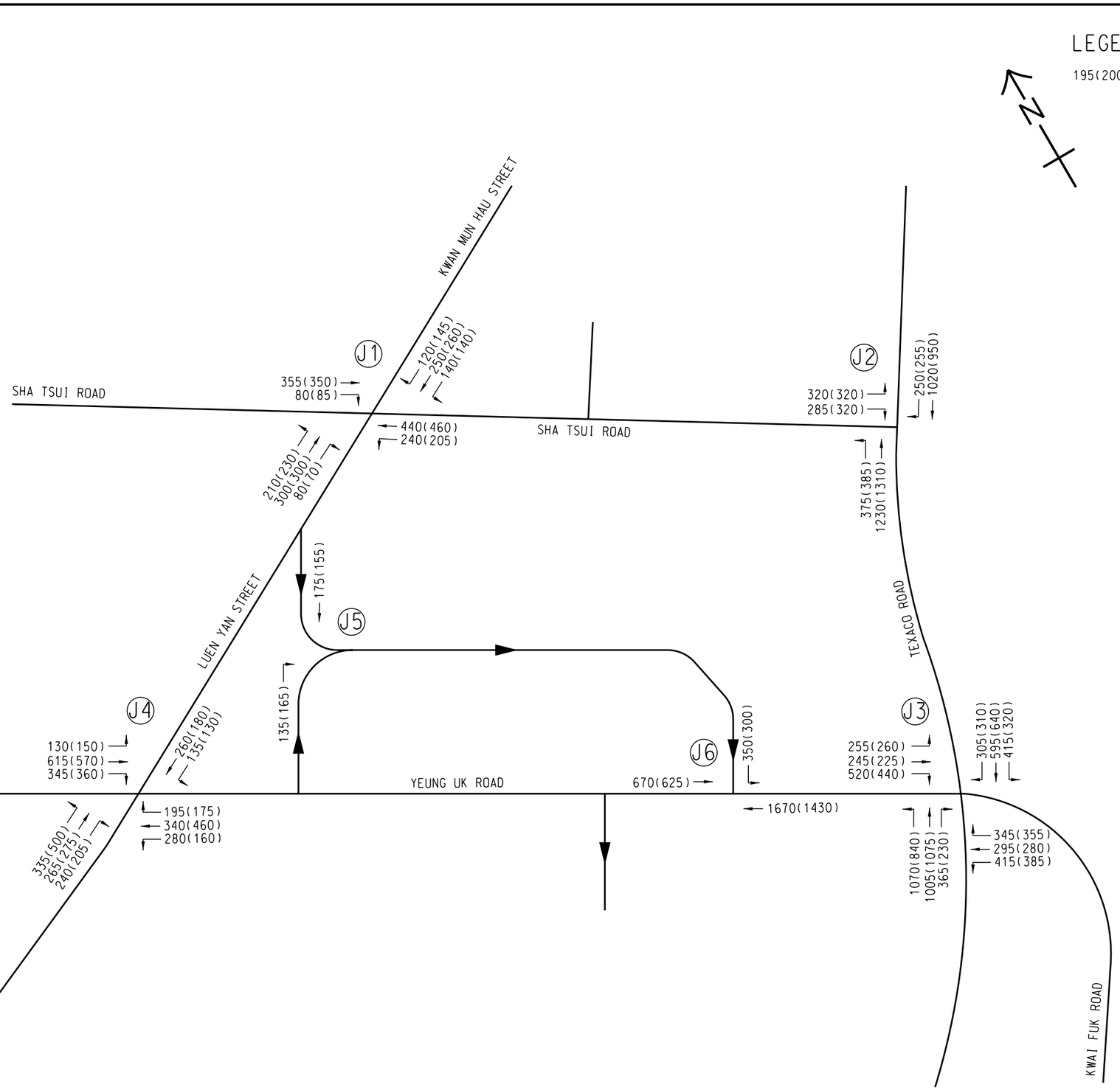
KEY PLAN
索引圖

PROJECT NO. 項目編號
60610695

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
FUTURE POTENTIAL DEVELOPMENTS IN VICINITY OF THE APPLICATION SITE

SHEET NUMBER
圖紙編號
FIGURE 4.1



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PROJECT 項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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STATUS 階段

SCALE 比例 A3 N. T. S.

DIMENSION UNIT 尺寸單位 METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號 60610695

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱

2033 REFERENCE TRAFFIC FLOWS

SHEET NUMBER 圖紙編號

FIGURE 4.2

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

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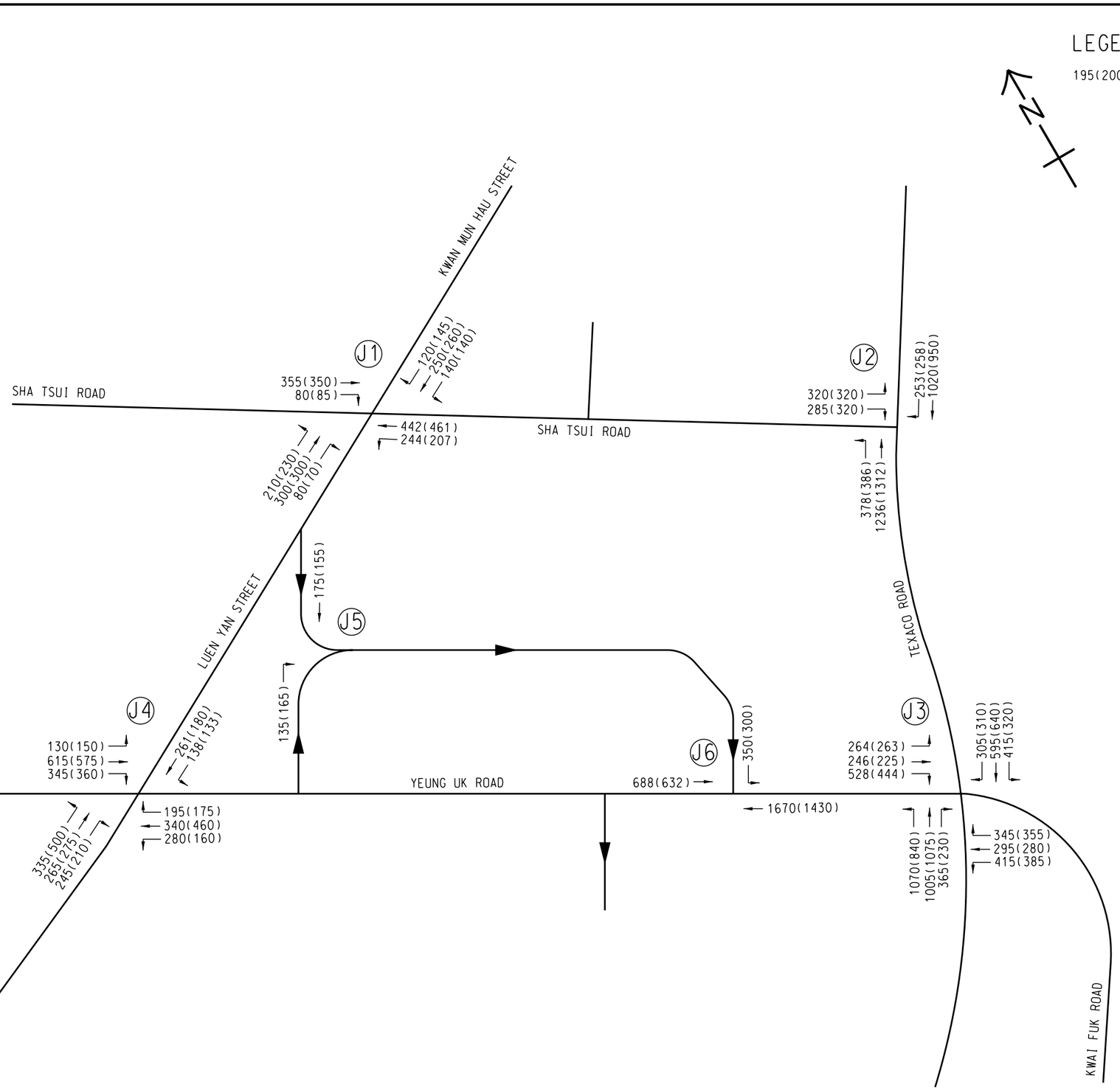

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

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STATUS
階段

SCALE 比例: A3 N. T. S.

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60610695

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

2033 DESIGN TRAFFIC FLOWS

SHEET NUMBER
圖紙編號

FIGURE 4.3

Annex A

Swept Path Analysis for the Proposed Development Access at Site A

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

LEGEND:

APPLICATION SITE BOUNDARY

WANG WO TSAI STREET

YEUNG UK ROAD

SCAVENGING LANE

PLANNED PEDESTRIAN CROSSING TO BE IMPLEMENTED BY THE GOVERNMENT (REFERS TO TD DRAWING E231574.00)

RUN-IN

RUN-OUT

7m LGV

11m HGV

(TS2230/⊗8-10,17-19S/ (TS836/EGH/ TS860) E tax up/off

REFUSE STORAGE AND MATERIAL RECOVERY CHAMBERS

E&M

RAMP DN TO B/F CARPARK

SWSPPI

CLUBHOUSE

RESIDENTIAL LOBBY

RETAIL

PLANTER

E.V.A.

Jumbo i Advantage

Wing Wah Industrial Building

Kwai Factory Building

Wing Yu Factory Building

Sunwise Industrial Building

Leahander Centre

Block B

Harrington B

Richwealth Industrial Building

Indi Home

H Cube

Podium

露天貨倉

Open Storage

楊屋道

橫窩仔街

永華工業大樓

永如工業大廈

順力工業大廈

利興強中心

海林大廈

立坊

樂悠居

富利工業大廈

2-8

10-14

16-26

28

36-42

127-135

137-143

144-146

138

118

77-87

171

167

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SECTION 16 PLANNING APPLICATION FOR PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT WITH COMMERCIAL USES AND SOCIAL WELFARE FACILITY AND MINOR RELAXATION OF MAXIMUM PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "COMPREHENSIVE DEVELOPMENT AREA (5)" ZONE AT YEUNG UK ROAD / KWU HANG ROAD / WANG WO TSAI STREET, TSUEN WAN

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STATUS
階段

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60610695

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
SWEPT PATH ANALYSIS AT VEHICULAR ACCESS OF THE SUBJECT SITE

SHEET NUMBER
圖紙編號
ANNEX A

Annex B

Junction Capacity Calculation Sheets

JUNCTION CAPACITY CALCULATION

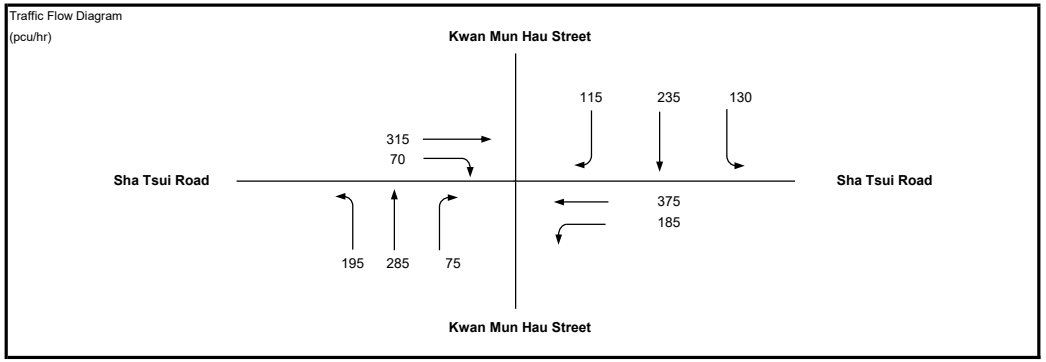
AECOM

Junction J1 - Sha Tsui Road / Texaco Road	2023 AM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J1

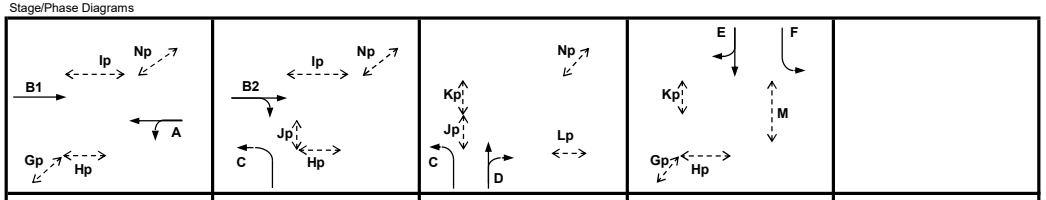
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	4	
Cycle time		C =	110	sec
Sum(y)		Y =	0.389	
Lost time		L =	41	sec
Total Flow		=	26,515	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	109	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	67	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.593	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	52.4	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	72	sec
Y_{max}	= 1-L/C	=	0.627	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 12	G = 9	I/G = 5	I/G = 12	I/G = 6

Critical Case : A,B2,D,F

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 45%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↰	A	1	3.300	1	15			1		0		1945	185			185	100%		1768	0.105	
←	A	1	3.300	1				0		0		2085		375		375			2085	0.180	0.180
→	B1	1	3.300	1				1		0		1945		315		315			1945	0.162	
→	B2	2	3.300	1				1		0		1945		0		0			1945	0.000	
↱	B2	2	3.300	2		15	0	0		0		4170		0	70	70		100%	3791	0.018	
↰	C	2,3	3.500	2	20			1		0		4070	195			195	100%		3786	0.052	
↑	D	3	3.300	1				0		0		2085		285		285			2085	0.137	0.137
↱	D	3	3.300	1		30	0	0		0		2085			75	75		100%	1986	0.038	
↳	F	4	4.000	1	12.5			1		0		2015	130			130	100%		1799	0.072	0.072
↓	E	4	3.300	1				0		0		2085		178		178			2085	0.086	
↓	E	4	3.300	1		25	0	0		0		2085		57	115	172		67%	2004	0.086	

Pedestrian Crossing			GM		FGM				
Gp	1,4	min.	5	+	9	=	14	sec	
Hp	1,4	min.	5	+	7	=	12	sec	
Ip	1,2	min.	5	+	10	=	15	sec	
Jp	2,3	min.	5	+	6	=	11	sec	
Kp	3,4	min.	5	+	6	=	11	sec	
Lp	3	min.	5	+	6	=	11	sec	
Mp	4	min.	5	+	7	=	12	sec	
Np	1,2,3	min.	5	+	7	=	12	sec	

JUNCTION CAPACITY CALCULATION

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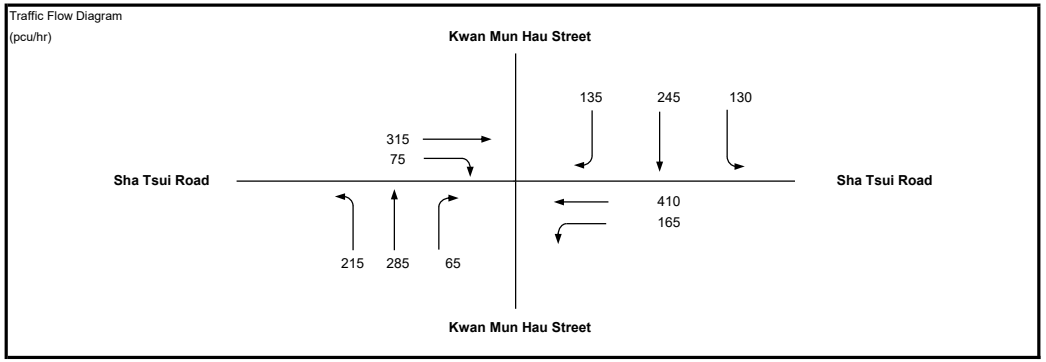
Junction J1 - Sha Tsui Road / Texaco Road	2023 PM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J1

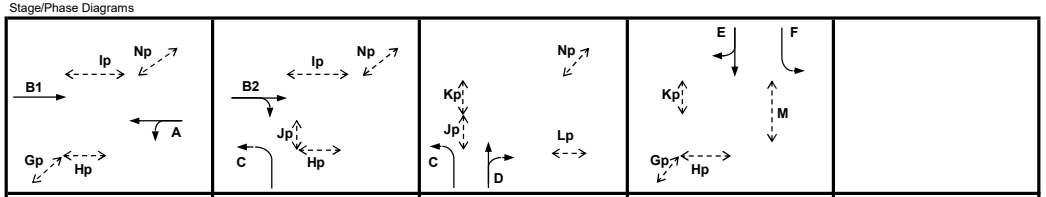
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	4	
Cycle time		C =	120	sec
Sum(y)		Y =	0.426	
Lost time		L =	37	sec
Total Flow		=	26,515	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	105	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	65	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.623	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	46.0	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	70	sec
Y_{max}	$= 1-L/C$	=	0.692	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 12	G = 9	I/G = 5	I/G = 8	I/G = 6

Critical Case : A,B2,D,E

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 46%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↰	A	1	3.300	1	15			1		0		1945	165			165	100%		1768	0.093	
←	A	1	3.300	1				0		0		2085		410		410			2085	0.197	0.197
→	B1	1	3.300	1				1		0		1945		315		315			1945	0.162	
→	B2	2	3.300	1				1		0		1945		0		0			1945	0.000	
↱	B2	2	3.300	2		15	0	0		0		4170		0	75	75		100%	3791	0.020	
↰	C	2,3	3.500	2	20			1		0		4070	215			215	100%		3786	0.057	
↑	D	3	3.300	1				0		0		2085		285		285			2085	0.137	0.137
↱	D	3	3.300	1		30	0	0		0		2085			65	65		100%	1986	0.033	
↳	F	4	4.000	1	12.5			1		0		2015	130			130	100%		1799	0.072	
↓	E	4	3.300	1				0		0		2085		194		194			2085	0.093	0.093
↱	E	4	3.300	1		25	0	0		0		2085		51	135	186		73%	1998	0.093	

Pedestrian Crossing			GM		FGM				
Gp	1,4	min.	5	+	9	=	14	sec	
Hp	1,4	min.	5	+	7	=	12	sec	
Ip	1,2	min.	5	+	10	=	15	sec	
Jp	2,3	min.	5	+	6	=	11	sec	
Kp	3,4	min.	5	+	6	=	11	sec	
Lp	3	min.	5	+	6	=	11	sec	
Mp	4	min.	5	+	7	=	12	sec	
Np	1,2,3	min.	5	+	7	=	12	sec	

JUNCTION CAPACITY CALCULATION

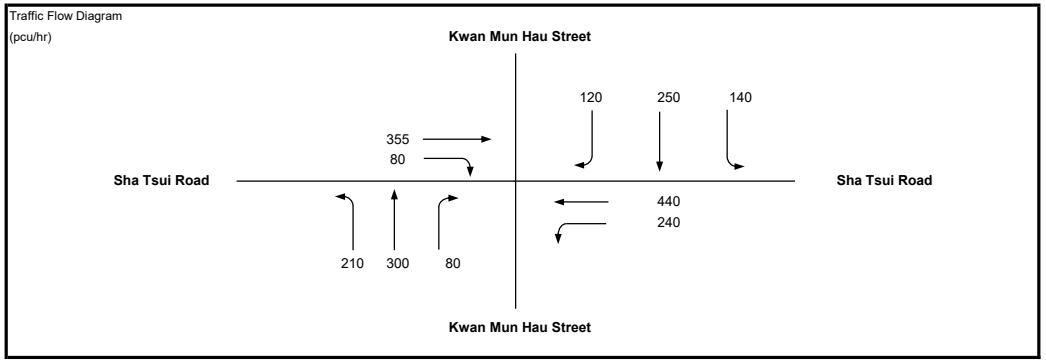
AECOM

Junction J1 - Sha Tsui Road / Texaco Road	2033 AM Peak Reference Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J1

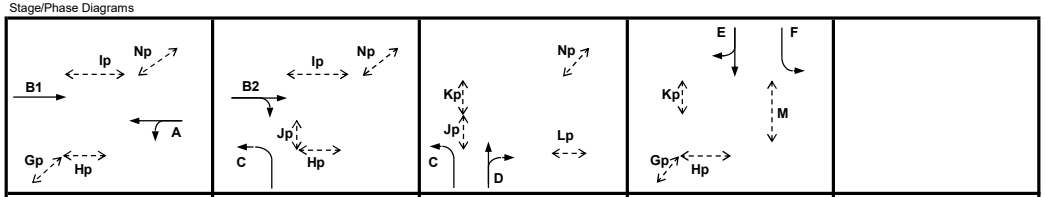
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	4	
Cycle time		C =	110	sec
Sum(y)		Y =	0.433	
Lost time		L =	41	sec
Total Flow		=	26,515	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	117	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	72	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.593	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	36.9	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	79	sec
Y_{max}	$= 1-L/C$	=	0.627	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 12	G = 9	I/G = 5	I/G = 12	I/G = 6

Critical Case : A,B2,D,F

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 30%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	A	1	3.300	1	15			1		0		1945	240			240	100%		1768	0.136	
	A	1	3.300	1				0		0		2085		440		440			2085	0.211	0.211
	B1	1	3.300	1				1		0		1945		355		355			1945	0.183	
	B2	2	3.300	1				1		0		1945		0		0			1945	0.000	
	B2	2	3.300	2		15	0	0		0		4170		0	80	80		100%	3791	0.021	
	C	2,3	3.500	2	20			1		0		4070	210			210	100%		3786	0.055	
	D	3	3.300	1				0		0		2085		300		300			2085	0.144	0.144
	D	3	3.300	1		30	0	0		0		2085			80	80		100%	1986	0.040	
	F	4	4.000	1	12.5			1		0		2015	140			140	100%		1799	0.078	0.078
	E	4	3.300	1				0		0		2085		189		189			2085	0.090	
	E	4	3.300	1		25	0	0		0		2085		61	120	181		66%	2005	0.090	

Pedestrian Crossing				GM		FGM			
	Gp	1,4	min.	5	+	9	=	14	sec
	Hp	1,4	min.	5	+	7	=	12	sec
	Ip	1,2	min.	5	+	10	=	15	sec
	Jp	2,3	min.	5	+	6	=	11	sec
	Kp	3,4	min.	5	+	6	=	11	sec
	Lp	3	min.	5	+	6	=	11	sec
	Mp	4	min.	5	+	7	=	12	sec
	Np	1,2,3	min.	5	+	7	=	12	sec

JUNCTION CAPACITY CALCULATION

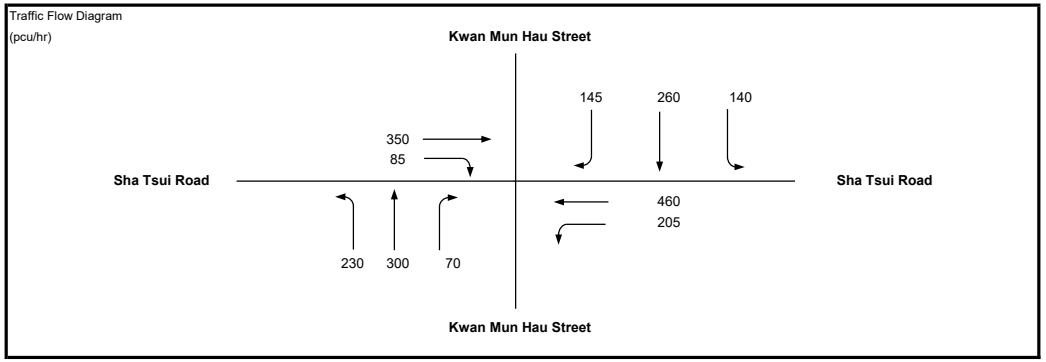
AECOM

Junction J1 - Sha Tsui Road / Texaco Road	2033 PM Peak Reference Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J1

Traffic Flow Diagram

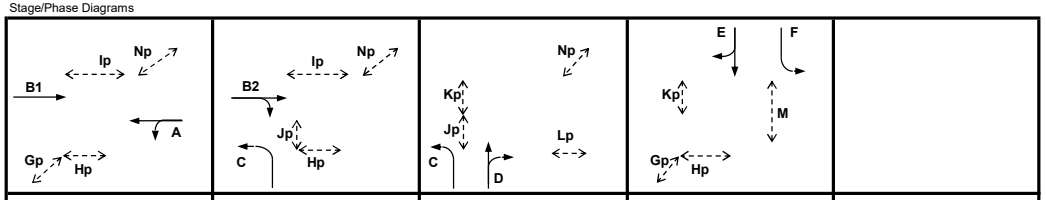
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.442	
Lost time	L =	41	sec
Total Flow	=	26,515	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	119	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	74	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.593	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	34.0	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	81	sec
Y_{max}	$= 1-L/C$	=	0.658	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 12	G = 9	I/G = 5	I/G = 12	I/G = 6

Critical Case : A,B2,D,F

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 34%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	A	1	3.300	1	15			1		0		1945	205			205	100%		1768	0.116	
	A	1	3.300	1				0		0		2085		460		460			2085	0.221	0.221
	B1	1	3.300	1				1		0		1945		350		350			1945	0.180	
	B2	2	3.300	1				1		0		1945		0		0			1945	0.000	
	B2	2	3.300	2		15	0	0		0		4170		0	85	85		100%	3791	0.022	
	C	2,3	3.500	2	20			1		0		4070	230			230	100%		3786	0.061	
	D	3	3.300	1				0		0		2085		300		300			2085	0.144	0.144
	D	3	3.300	1		30	0	0		0		2085			70	70		100%	1986	0.035	
	F	4	4.000	1	12.5			1		0		2015	140			140	100%		1799	0.078	0.078
	E	4	3.300	1				0		0		2085		207		207			2085	0.099	
	E	4	3.300	1		25	0	0		0		2085		53	145	198		73%	1997	0.099	

Pedestrian Crossing			GM		FGM				
Gp	1,4	min.	5	+	9	=	14	sec	
Hp	1,4	min.	5	+	7	=	12	sec	
Ip	1,2	min.	5	+	10	=	15	sec	
Jp	2,3	min.	5	+	6	=	11	sec	
Kp	3,4	min.	5	+	6	=	11	sec	
Lp	3	min.	5	+	6	=	11	sec	
Mp	4	min.	5	+	7	=	12	sec	
Np	1,2,3	min.	5	+	7	=	12	sec	

JUNCTION CAPACITY CALCULATION

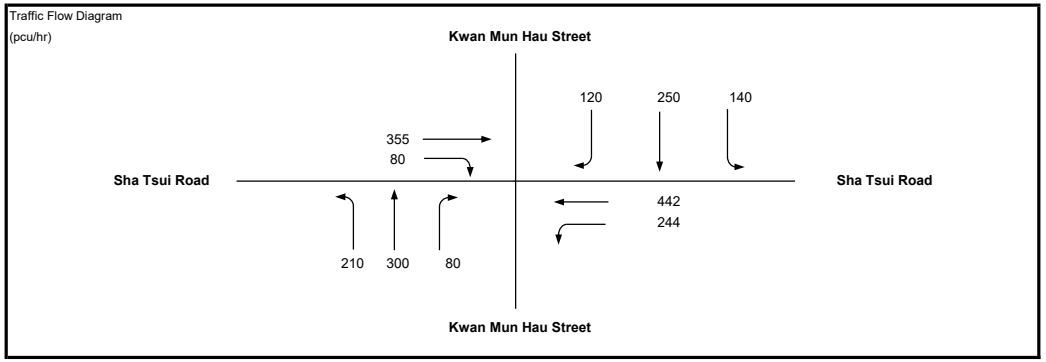
AECOM

Junction J1 - Sha Tsui Road / Texaco Road	2033 AM Peak Design Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J1

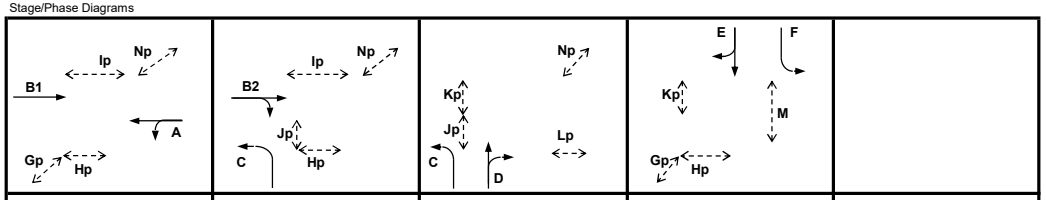
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	4	
Cycle time		C =	110	sec
Sum(y)		Y =	0.434	
Lost time		L =	41	sec
Total Flow		=	26,515	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	117	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	72	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.593	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	36.6	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	79	sec
Y_{max}	$= 1-L/C$	=	0.627	

Stage/Phase Diagrams



I/G = 12 G = 9 I/G = 5 I/G = 12 I/G = 6

Critical Case : A,B2,D,F

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 30%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↰	A	1	3.300	1	15			1		0		1945	244			244	100%		1768	0.138	
←	A	1	3.300	1				0		0		2085		442		442			2085	0.212	0.212
→	B1	1	3.300	1				1		0		1945		355		355			1945	0.183	
→	B2	2	3.300	1				1		0		1945		0		0			1945	0.000	
↱	B2	2	3.300	2		15	0	0		0		4170		0	80	80		100%	3791	0.021	
↰	C	2,3	3.500	2	20			1		0		4070	210			210	100%		3786	0.055	
↑	D	3	3.300	1				0		0		2085		300		300			2085	0.144	0.144
↱	D	3	3.300	1		30	0	0		0		2085			80	80		100%	1986	0.040	
↳	F	4	4.000	1	12.5			1		0		2015	140			140	100%		1799	0.078	0.078
↓	E	4	3.300	1				0		0		2085		189		189			2085	0.090	
↲	E	4	3.300	1		25	0	0		0		2085		61	120	181		66%	2005	0.090	

Pedestrian Crossing				GM		FGM			
	Gp	1,4	min.	5	+	9	=	14	sec
	Hp	1,4	min.	5	+	7	=	12	sec
	Ip	1,2	min.	5	+	10	=	15	sec
	Jp	2,3	min.	5	+	6	=	11	sec
	Kp	3,4	min.	5	+	6	=	11	sec
	Lp	3	min.	5	+	6	=	11	sec
	Mp	4	min.	5	+	7	=	12	sec
	Np	1,2,3	min.	5	+	7	=	12	sec

JUNCTION CAPACITY CALCULATION

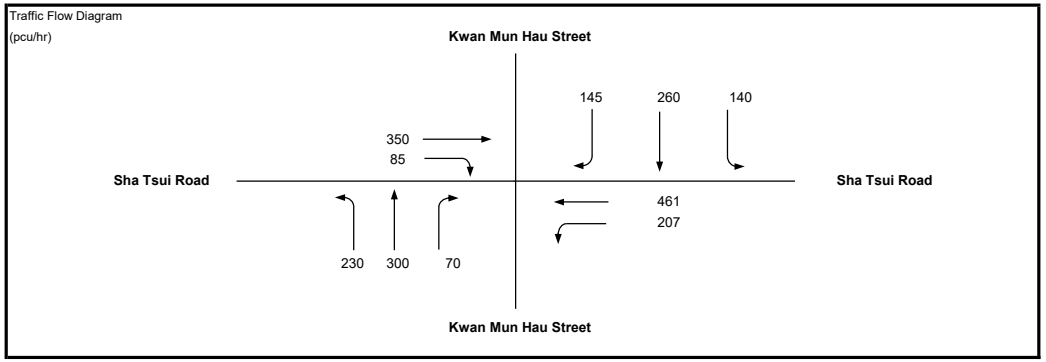
AECOM

Junction J1 - Sha Tsui Road / Texaco Road	2033 PM Peak Design Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J1

Traffic Flow Diagram

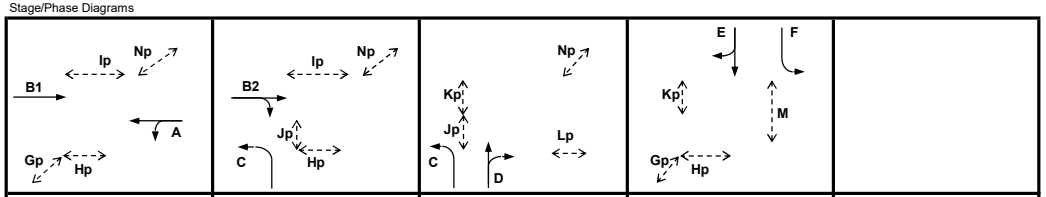
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.443	
Lost time	L =	41	sec
Total Flow	=	26,515	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	119	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	74	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.593	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	33.8	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	81	sec
Y_{max}	$= 1-L/C$	=	0.658	

Stage/Phase Diagrams



I/G = 12 G = 9 I/G = 5 I/G = 12 I/G = 6

Critical Case : A,B2,D,F

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 34%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↰	A	1	3.300	1	15			1		0		1945	207			207	100%		1768	0.117	
←	A	1	3.300	1				0		0		2085		461		461			2085	0.221	0.221
→	B1	1	3.300	1				1		0		1945		350		350			1945	0.180	
→	B2	2	3.300	1				1		0		1945		0		0			1945	0.000	
↱	B2	2	3.300	2		15	0	0		0		4170		0	85	85		100%	3791	0.022	
↰	C	2,3	3.500	2	20			1		0		4070	230			230	100%		3786	0.061	
↑	D	3	3.300	1				0		0		2085		300		300			2085	0.144	0.144
↱	D	3	3.300	1		30	0	0		0		2085			70	70		100%	1986	0.035	
↳	F	4	4.000	1	12.5			1		0		2015	140			140	100%		1799	0.078	0.078
↓	E	4	3.300	1				0		0		2085		207		207			2085	0.099	
↲	E	4	3.300	1		25	0	0		0		2085		53	145	198		73%	1997	0.099	

Pedestrian Crossing				GM		FGM				
	Gp	1,4	min.	5	+	9	=	14	sec	
	Hp	1,4	min.	5	+	7	=	12	sec	
	Ip	1,2	min.	5	+	10	=	15	sec	
	Jp	2,3	min.	5	+	6	=	11	sec	
	Kp	3,4	min.	5	+	6	=	11	sec	
	Lp	3	min.	5	+	6	=	11	sec	
	Mp	4	min.	5	+	7	=	12	sec	
	Np	1,2,3	min.	5	+	7	=	12	sec	

JUNCTION CAPACITY CALCULATION

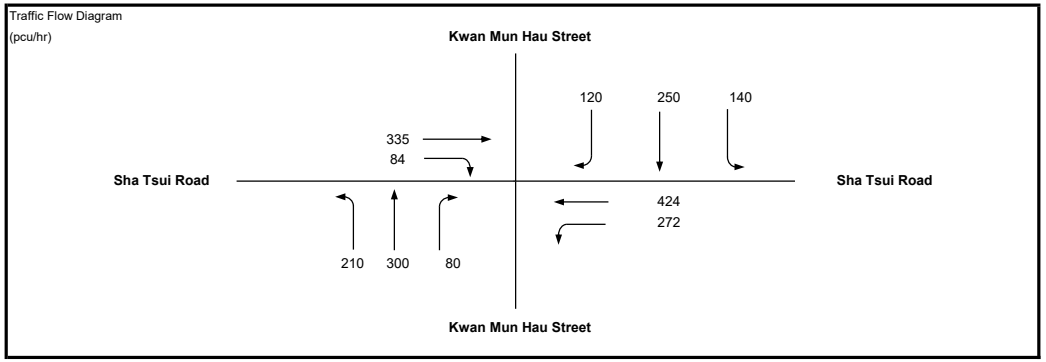
AECOM

Junction J1 - Sha Tsui Road / Texaco Road	2033 AM Peak Design Flows (Sensitivity)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J1

Traffic Flow Diagram

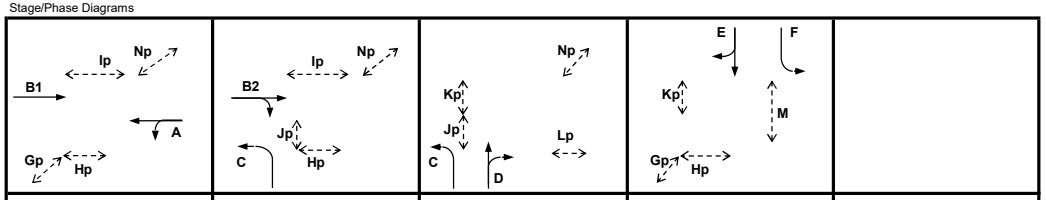
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	110	sec
Sum(y)	Y =	0.425	
Lost time	L =	41	sec
Total Flow	=	26,515	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	116	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	71	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.593	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	39.4	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	78	sec
Y_{max}	$= 1-L/C$	=	0.627	

Stage/Phase Diagrams



I/G = 12 G = 9 I/G = 5 I/G = 12 I/G = 6

Critical Case : A,B2,D,F

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 33%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	A	1	3.300	1	15			1		0		1945	272			272	100%		1768	0.154	
	A	1	3.300	1				0		0		2085		424		424			2085	0.203	0.203
	B1	1	3.300	1				1		0		1945		335		335			1945	0.172	
	B2	2	3.300	1				1		0		1945		0		0			1945	0.000	
	B2	2	3.300	2		15	0	0		0		4170		0	84	84		100%	3791	0.022	
	C	2,3	3.500	2	20			1		0		4070	210			210	100%		3786	0.055	
	D	3	3.300	1				0		0		2085		300		300			2085	0.144	0.144
	D	3	3.300	1		30	0	0		0		2085			80	80		100%	1986	0.040	
	F	4	4.000	1	12.5			1		0		2015	140			140	100%		1799	0.078	0.078
	E	4	3.300	1				0		0		2085		189		189			2085	0.090	
	E	4	3.300	1		25	0	0		0		2085		61	120	181		66%	2005	0.090	

Pedestrian Crossing				GM		FGM			
Gp	1,4	min.	5	+	9	=	14	sec
Hp	1,4	min.	5	+	7	=	12	sec
Ip	1,2	min.	5	+	10	=	15	sec
Jp	2,3	min.	5	+	6	=	11	sec
Kp	3,4	min.	5	+	6	=	11	sec
Lp	3	min.	5	+	6	=	11	sec
Mp	4	min.	5	+	7	=	12	sec
Np	1,2,3	min.	5	+	7	=	12	sec

JUNCTION CAPACITY CALCULATION

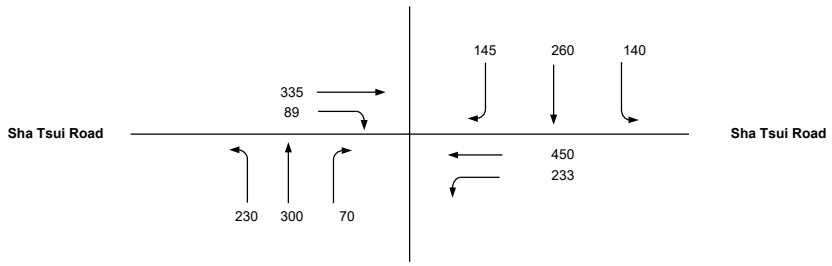
AECOM

Junction J1 - Sha Tsui Road / Texaco Road	2033 PM Peak Design Flows (Sensitivity)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J1

Traffic Flow Diagram

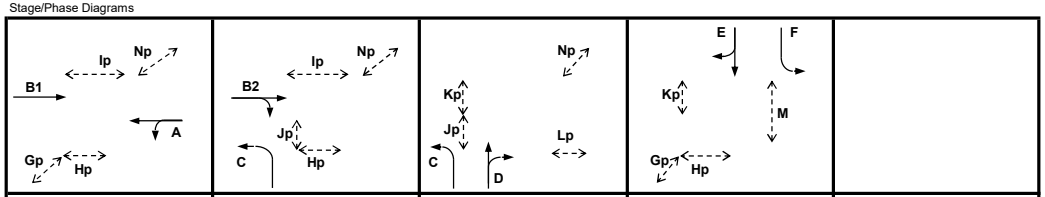
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	120	sec
Sum(y)	Y =	0.438	
Lost time	L =	41	sec
Total Flow	=	26,515	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	118	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	73	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.593	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	35.4	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	80	sec
Y_{max}	= 1-L/C	=	0.658	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 12	G = 9	I/G = 5	I/G = 12	I/G = 6

Critical Case : A,B2,D,F

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 35%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↰	A	1	3.300	1	15			1		0		1945	233			233	100%		1768	0.132	
←	A	1	3.300	1				0		0		2085		450		450			2085	0.216	0.216
→	B1	1	3.300	1				1		0		1945		335		335			1945	0.172	
→	B2	2	3.300	1				1		0		1945		0		0			1945	0.000	
↱	B2	2	3.300	2		15	0	0		0		4170		0	89	89		100%	3791	0.023	
↰	C	2,3	3.500	2	20			1		0		4070	230			230	100%		3786	0.061	
↑	D	3	3.300	1				0		0		2085		300		300			2085	0.144	0.144
↱	D	3	3.300	1		30	0	0		0		2085			70	70		100%	1986	0.035	
↳	F	4	4.000	1	12.5			1		0		2015	140			140	100%		1799	0.078	0.078
↓	E	4	3.300	1				0		0		2085		207		207			2085	0.099	
↲	E	4	3.300	1		25	0	0		0		2085		53	145	198		73%	1997	0.099	

Pedestrian Crossing				GM		FGM				
	Gp	1,4	min.	5	+	9	=	14	sec	
	Hp	1,4	min.	5	+	7	=	12	sec	
	Ip	1,2	min.	5	+	10	=	15	sec	
	Jp	2,3	min.	5	+	6	=	11	sec	
	Kp	3,4	min.	5	+	6	=	11	sec	
	Lp	3	min.	5	+	6	=	11	sec	
	Mp	4	min.	5	+	7	=	12	sec	
	Np	1,2,3	min.	5	+	7	=	12	sec	

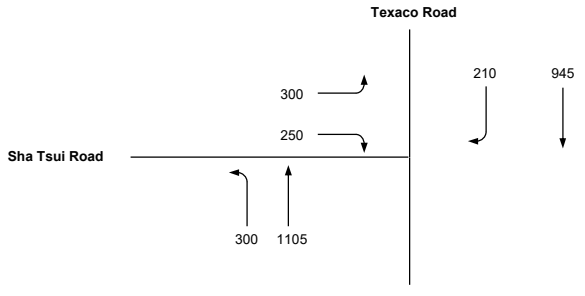
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sha Tsui Road / Texaco Road	2023 AM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

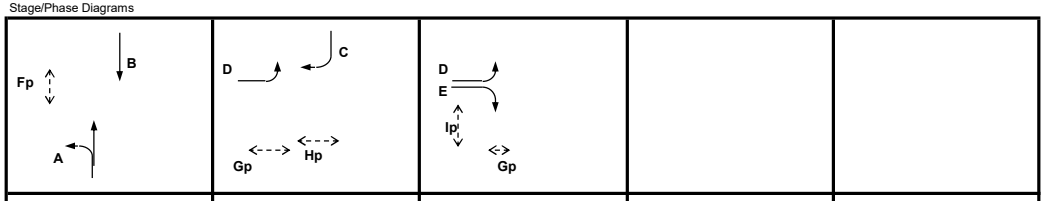
J2

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	125	sec
Sum(y)		Y =	0.477	
Lost time		L =	27	sec
Total Flow		=	16,380	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	87	sec
Min. Cycle Time C_m	= L/(1-Y)	=	52	sec
Y_{ult}	= 0.9-0.0075×L	=	0.698	
$R.C._{ult}$	= $(Y_{ult}-Y)/Yx100\%$	=	46.3	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	57	sec
Y_{max}	= 1-L/C	=	0.784	

Stage/Phase Diagrams



Critical Case : A,Hp,E

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 48%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	A	1	3.500	1	20			1		0		1965	300	367		667	45%		1901	0.351	0.351
	A	1	3.500	1				0		0		2105		738		738			2105	0.351	
	B	1	3.300	2				1		0		4030		945		945			4030	0.234	
	C	2	3.500	2		25	0	0		0		4210			210	210		100%	3972	0.053	
	D	2,3	3.500	1	20			1		0		1965	300			300	100%		1828	0.164	
	E	3	3.500	1		25	0	0		0		2105			250	250		100%	1986	0.126	0.126

Pedestrian Crossing			GM		FGM			
Fp	1	min.	8	+	8	=	16	sec
Gp	2,3	min.	5	+	10	=	15	sec
Hp	2	min.	5	+	10	=	15	sec
Ip	3	min.	5	+	14	=	19	sec

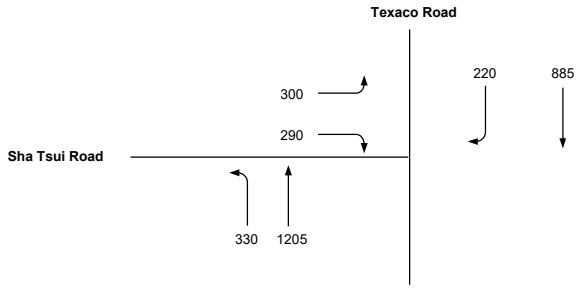
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sha Tsui Road / Texaco Road	2023 PM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

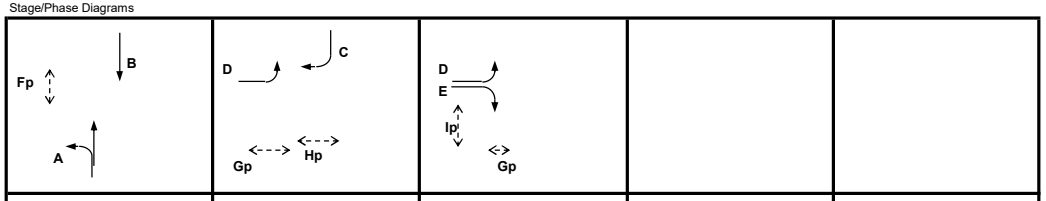
J2

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	125	sec
Sum(y)		Y =	0.529	
Lost time		L =	27	sec
Total Flow		=	16,380	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	97	sec
Min. Cycle Time C_m	= L/(1-Y)	=	57	sec
Y_{ult}	= 0.9-0.0075×L	=	0.698	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	31.8	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	66	sec
Y_{max}	= 1-L/C	=	0.784	

Stage/Phase Diagrams



Critical Case : A,Hp,E

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 33%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↰↑	A	1	3.500	1	20			1		0		1965	330	398		728	45%		1900	0.383	0.383
↑	A	1	3.500	1				0		0		2105		807		807			2105	0.383	
↓	B	1	3.300	2				1		0		4030		885		885			4030	0.220	
↳	C	2	3.500	2		25	0	0		0		4210			220	220		100%	3972	0.055	
↰	D	2,3	3.500	1	20			1		0		1965	300			300	100%		1828	0.164	
↱	E	3	3.500	1		25	0	0		0		2105			290	290		100%	1986	0.146	0.146

Pedestrian Crossing				GM		FGM				
	Fp	1	min.	8	+	8	=	16	sec	
	Gp	2,3	min.	5	+	10	=	15	sec	
	Hp	2	min.	5	+	10	=	15	sec	
	Ip	3	min.	5	+	14	=	19	sec	

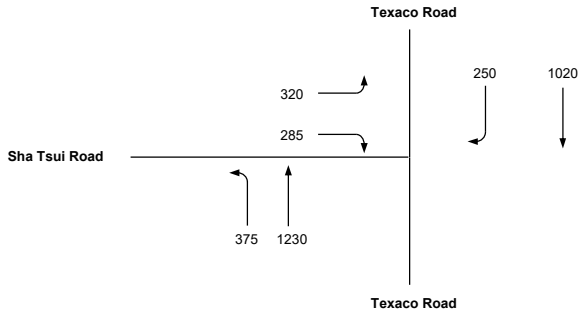
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sha Tsui Road / Texaco Road	2033 AM Peak Reference Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J2

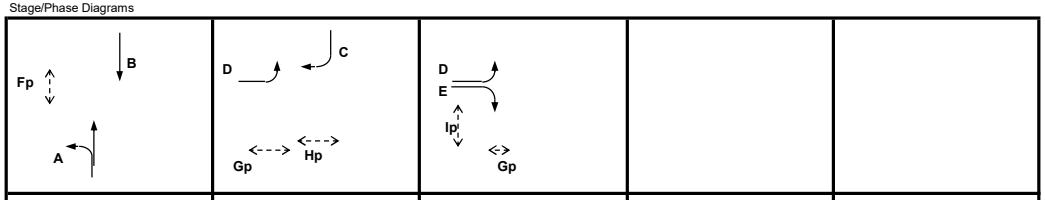
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	3	
Cycle time	C =	125	sec
Sum(y)	Y =	0.545	
Lost time	L =	27	sec
Total Flow	=	16,380	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	100	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	59	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.698	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	28.0	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	68	sec
Y_{max}	$= 1-L/C$	=	0.784	

Stage/Phase Diagrams



I/G = 7 G = 5 I/G = 12 I/G = 5

Critical Case : A,Hp,E

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 30%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
←	A	1	3.500	1	20			1		0		1965	375	385		760	49%		1895	0.401	0.401
↑	A	1	3.500	1				0		0		2105		845		845			2105	0.401	
↓	B	1	3.300	2				1		0		4030		1020		1020			4030	0.253	
→	C	2	3.500	2		25	0	0		0		4210			250	250		100%	3972	0.063	
←	D	2,3	3.500	1	20			1		0		1965	320			320	100%		1828	0.175	
→	E	3	3.500	1		25	0	0		0		2105			285	285		100%	1986	0.144	0.144

Pedestrian Crossing				GM		FGM			
Fp	1	min.	8	+	8	=	16	sec	
Gp	2,3	min.	5	+	10	=	15	sec	
Hp	2	min.	5	+	10	=	15	sec	
Ip	3	min.	5	+	14	=	19	sec	

JUNCTION CAPACITY CALCULATION

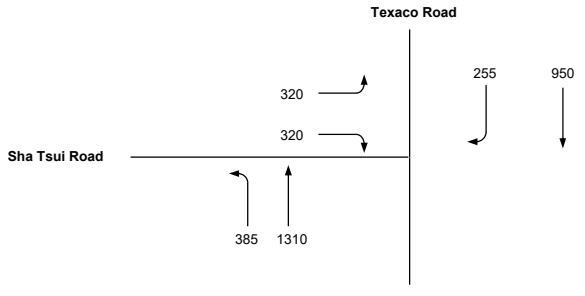
AECOM

Junction J2 - Sha Tsui Road / Texaco Road	2033 PM Peak Reference Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J2

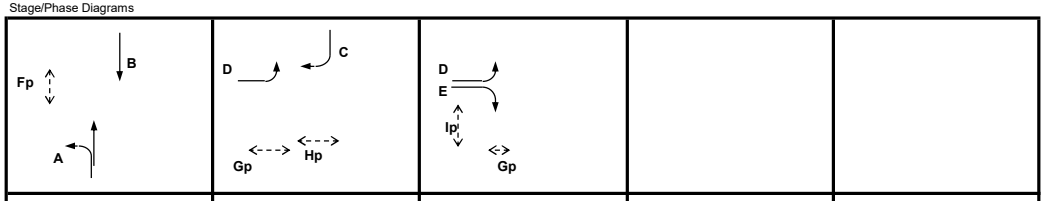
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	125	sec
Sum(y)		Y =	0.585	
Lost time		L =	27	sec
Total Flow		=	16,380	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	110	sec
Min. Cycle Time C_m	= L/(1-Y)	=	65	sec
Y_{ult}	= 0.9-0.0075×L	=	0.698	
$R.C._{ult}$	= $(Y_{ult}-Y)/Yx100\%$	=	19.3	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	77	sec
Y_{max}	= 1-L/C	=	0.784	

Stage/Phase Diagrams



Critical Case : A,Hp,E

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 21%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↰	A	1	3.500	1	20			1		0		1965	385	418		803	48%		1897	0.424	0.424
↑	A	1	3.500	1				0		0		2105		892		892			2105	0.424	
↓	B	1	3.300	2				1		0		4030		950		950			4030	0.236	
↳	C	2	3.500	2		25	0	0		0		4210			255	255		100%	3972	0.064	
↰	D	2,3	3.500	1	20			1		0		1965	320			320	100%		1828	0.175	
↳	E	3	3.500	1		25	0	0		0		2105			320	320		100%	1986	0.161	0.161

Pedestrian Crossing				GM		FGM			
	Fp	1	min.	8	+	8	=	16	sec
	Gp	2,3	min.	5	+	10	=	15	sec
	Hp	2	min.	5	+	10	=	15	sec
	Ip	3	min.	5	+	14	=	19	sec

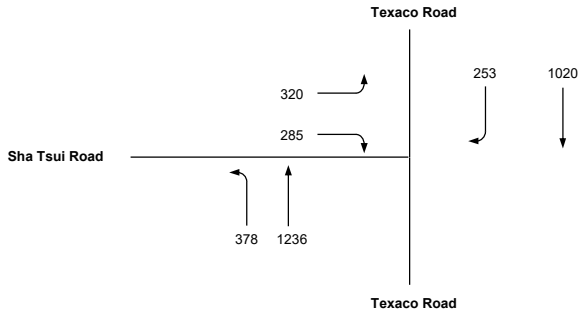
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sha Tsui Road / Texaco Road	2033 AM Peak Design Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J2

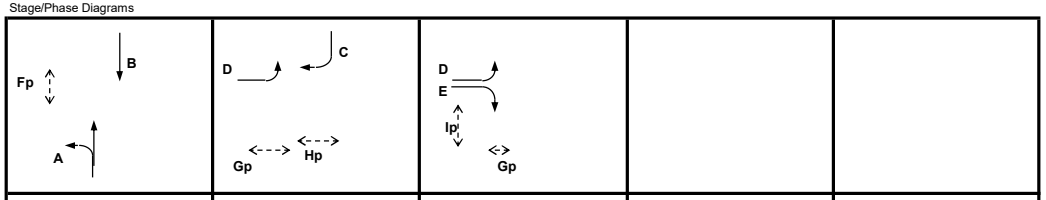
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	3	
Cycle time	C =	125	sec
Sum(y)	Y =	0.547	
Lost time	L =	27	sec
Total Flow	=	16,380	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	100	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	60	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.698	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	27.5	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	69	sec
Y_{max}	$= 1-L/C$	=	0.784	

Stage/Phase Diagrams



Critical Case : A,Hp,E

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 29%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
←	A	1	3.500	1	20			1		0		1965	378	387		765	49%		1895	0.404	
↑	A	1	3.500	1				0		0		2105		849		849			2105	0.404	0.404
↓	B	1	3.300	2				1		0		4030		1020		1020			4030	0.253	
→	C	2	3.500	2		25	0	0		0		4210			253	253		100%	3972	0.064	
↰	D	2,3	3.500	1	20			1		0		1965	320			320	100%		1828	0.175	
↱	E	3	3.500	1		25	0	0		0		2105			285	285		100%	1986	0.144	0.144

Pedestrian Crossing				GM		FGM			
Fp	1	min.	8	+	8	=	16	sec	
Gp	2,3	min.	5	+	10	=	15	sec	
Hp	2	min.	5	+	10	=	15	sec	
Ip	3	min.	5	+	14	=	19	sec	

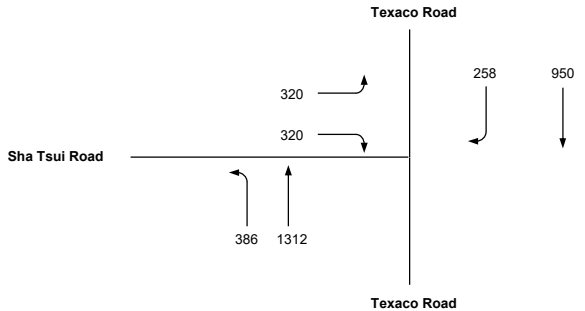
JUNCTION CAPACITY CALCULATION

AECOM

Junction J2 - Sha Tsui Road / Texaco Road	2033 PM Peak Design Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J2

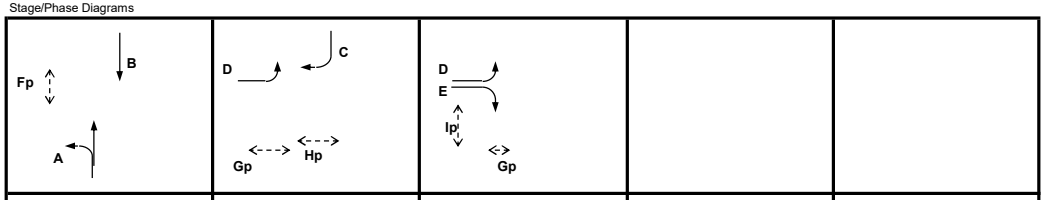
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	3	
Cycle time	C =	125	sec
Sum(y)	Y =	0.585	
Lost time	L =	27	sec
Total Flow	=	16,380	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	110	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	65	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.698	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	19.1	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	77	sec
Y_{max}	$= 1-L/C$	=	0.784	

Stage/Phase Diagrams



Critical Case : A,Hp,E

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 21%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
←	A	1	3.500	1	20			1		0		1965	386	419		805	48%		1897	0.424	0.424
↑	A	1	3.500	1				0		0		2105		893		893			2105	0.424	
↓	B	1	3.300	2				1		0		4030		950		950			4030	0.236	
→	C	2	3.500	2		25	0	0		0		4210			258	258		100%	3972	0.065	
←	D	2,3	3.500	1	20			1		0		1965	320			320	100%		1828	0.175	
→	E	3	3.500	1		25	0	0		0		2105			320	320		100%	1986	0.161	0.161

Pedestrian Crossing			GM		FGM			
Fp	1	min.	8	+	8	=	16	sec
Gp	2,3	min.	5	+	10	=	15	sec
Hp	2	min.	5	+	10	=	15	sec
Ip	3	min.	5	+	14	=	19	sec

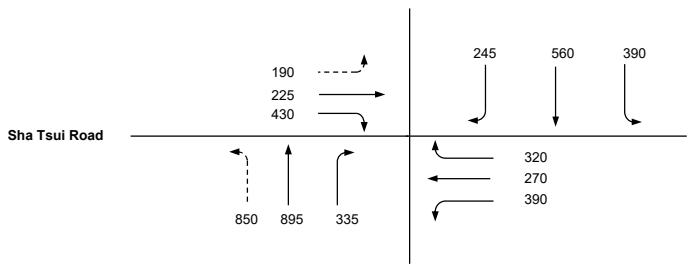
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Texaco Road / Yeung Uk Road / Kwai Fuk Road	2023 AM Peak Observed Flows	DESIGN:	CHECK:	JOB NO: 60223708	DATE: 十月 20

J3

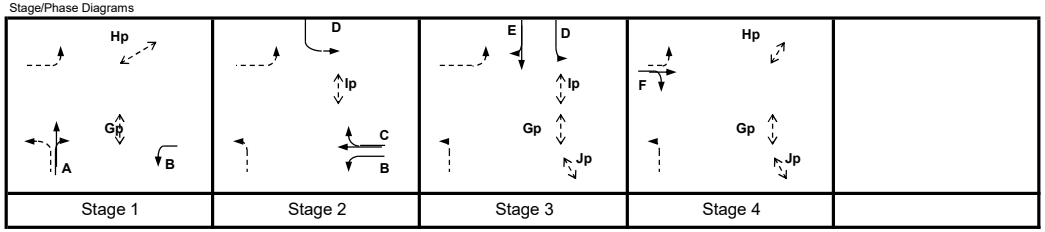
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	125	sec
Sum(y)	Y =	0.563	
Lost time	L =	21	sec
Total Flow	=	31,045	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	84	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	48	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.743	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	31.9	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	56	sec
Y_{max}	= 1-L/C	=	0.832	

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 33%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.500	2				1		0		4070		895		895			4070	0.220	0.220
↱	A	1	3.500	1		15	0	0		0		2105			335	335		100%	1914	0.175	
↰	B	1,2	3.600	1	20			1		0		1975	390			390	100%		1837	0.212	
←	C	2	3.600	1				0		0		2115		205		205			2115	0.097	
↰↑	C	2	3.600	1		20	0			0		2115		65	130	195		66%	2015	0.097	0.097
↰	C	2	3.600	1		20	0	0		0		2115			190	190		100%	1967	0.097	
↳	D	2,3	4.000	1	100			1		0		2015	390			390	100%		1985	0.196	
↓	E	3	3.500	2				0		0		4210		560		560			4210	0.133	0.133
↲	E	3	3.500	2		20	0	0		0		4210			245	245		100%	3916	0.063	
→	F	4	3.300	1				1		0		1945		221		221			1945	0.113	
↱→	F	4	3.300	1		19	0			0		2085		4	215	219		98%	1935	0.113	
↳	F	4	3.300	1		15	0	0		0		2085			215	215		100%	1895	0.113	0.113

Pedestrian Crossing				GM		FGM			
	Gp	1,3,4	min.	7	+	12	=	19	sec
	Hp	1,4	min.	4	+	7	=	11	sec
	Ip	2,3	min.	6	+	8	=	14	sec
	Jp	3,4	min.	7	+	6	=	13	sec

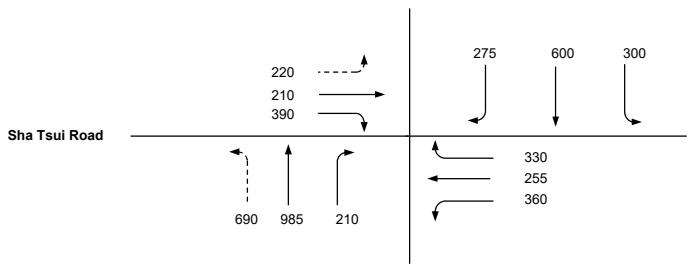
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Texaco Road / Yeung Uk Road / Kwai Fuk Road	2023 PM Peak Observed Flows	DESIGN:	CHECK:	JOB NO: 60223708	DATE: 十月 20

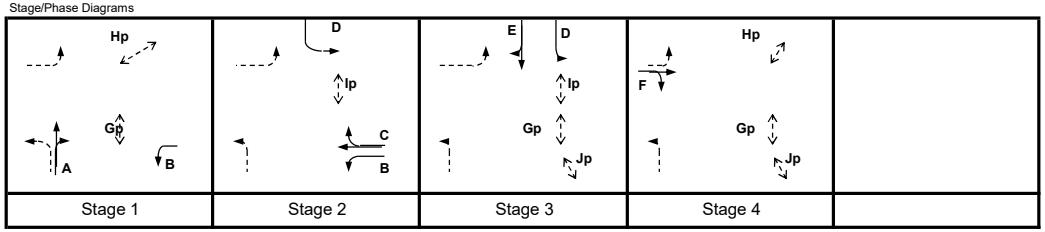
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.584	
Lost time		L =	21	sec
Total Flow		=	31,045	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	88	sec
Min. Cycle Time C_m	= L/(1-Y)	=	51	sec
Y_{ult}	= 0.9-0.0075×L	=	0.743	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	27.0	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	60	sec
Y_{max}	= 1-L/C	=	0.832	

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 28%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.500	2				1		0		4070		985		985			4070	0.242	0.242
↱	A	1	3.500	1		15	0	0		0		2105			210	210		100%	1914	0.110	
↰	B	1,2	3.600	1	20			1		0		1975	360			360	100%		1837	0.196	
←	C	2	3.600	1				0		0		2115		203		203			2115	0.096	0.096
↰↑	C	2	3.600	1		20	0			0		2115		52	141	193		73%	2005	0.096	
↑	C	2	3.600	1		20	0	0		0		2115			189	189		100%	1967	0.096	
↳	D	2,3	4.000	1	100			1		0		2015	300			300	100%		1985	0.151	
↓	E	3	3.500	2				0		0		4210		600		600			4210	0.143	0.143
↲	E	3	3.500	2		20	0	0		0		4210			275	275		100%	3916	0.070	
→	F	4	3.300	1				1		0		1945		202		202			1945	0.104	0.104
↴↓	F	4	3.300	1		19	0			0		2085		8	193	201		96%	1938	0.104	
↴	F	4	3.300	1		15	0	0		0		2085			197	197		100%	1895	0.104	

Pedestrian Crossing			GM		FGM			
Gp	1,3,4	min.	7	+	12	=	19	sec
Hp	1,4	min.	4	+	7	=	11	sec
Ip	2,3	min.	6	+	8	=	14	sec
Jp	3,4	min.	7	+	6	=	13	sec

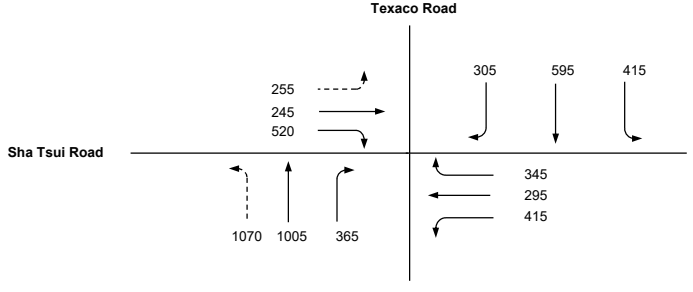
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Texaco Road / Yeung Uk Road / Kwai Fuk Road	2033 AM Peak Reference Flows	DESIGN:	CHECK:	JOB NO: 60223708	DATE: 十月 20

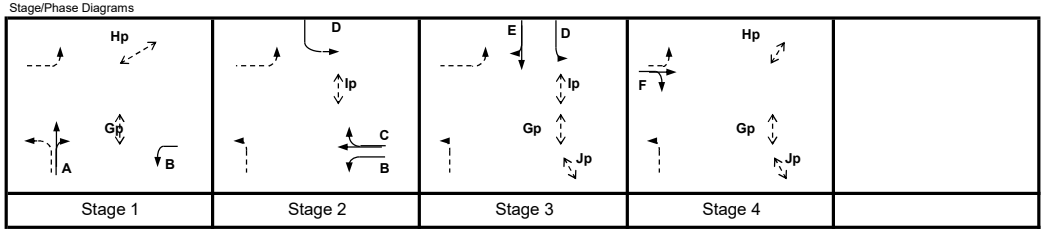
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.629	
Lost time		L =	21	sec
Total Flow		=	31,045	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	98	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	57	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.743	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	18.0	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	70	sec
Y_{max}	$= 1-L/C$	=	0.832	

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 19%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.500	2				1		0		4070		1005		1005			4070	0.247	0.247
↱	A	1	3.500	1		15	0	0		0		2105			365	365		100%	1914	0.191	
↰	B	1,2	3.600	1	20			1		0		1975	415			415	100%		1837	0.226	
←	C	2	3.600	1				0		0		2115		222		222			2115	0.105	0.105
↰↑	C	2	3.600	1		20	0			0		2115		73	139	212		65%	2016	0.105	
↰	C	2	3.600	1		20	0	0		0		2115			206	206		100%	1967	0.105	
↳	D	2,3	4.000	1	100			1		0		2015	415			415	100%		1985	0.209	
↓	E	3	3.500	2				0		0		4210		595		595			4210	0.141	0.141
↲	E	3	3.500	2		20	0	0		0		4210			305	305		100%	3916	0.078	
→	F	4	3.300	1				1		0		1945		245		245			1945	0.126	
↱→	F	4	3.300	1		19	0			0		2085		0	263	263		100%	1932	0.136	0.136
↱	F	4	3.300	1		15	0	0		0		2085			257	257		100%	1895	0.136	

Pedestrian Crossing				GM		FGM				
	Gp	1,3,4	min.	7	+	12	=	19	sec	
	Hp	1,4	min.	4	+	7	=	11	sec	
	Ip	2,3	min.	6	+	8	=	14	sec	
	Jp	3,4	min.	7	+	6	=	13	sec	

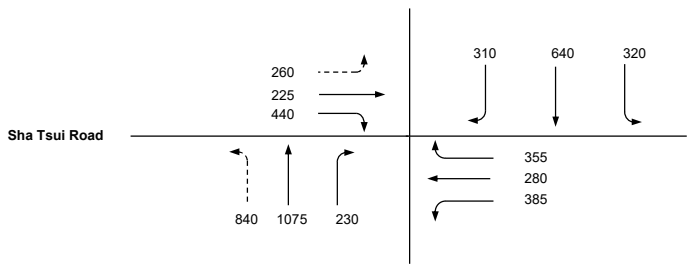
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Texaco Road / Yeung Uk Road / Kwai Fuk Road	2033 PM Peak Reference Flows	DESIGN:	CHECK:	JOB NO: 60223708	DATE: 十月 20

J3

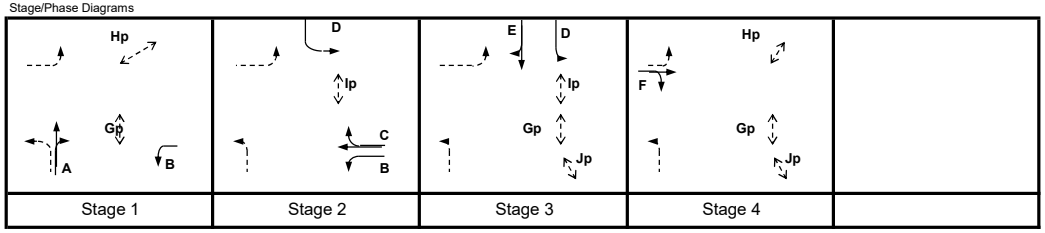
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	125	sec
Sum(y)	Y =	0.636	
Lost time	L =	21	sec
Total Flow	=	31,045	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	100	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	58	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.743	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	16.8	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	71	sec
Y_{max}	$= 1-L/C$	=	0.832	

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 18%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.500	2				1		0		4070		1075		1075			4070	0.264	0.264
↱	A	1	3.500	1		15	0	0		0		2105			230	230		100%	1914	0.120	
↰	B	1,2	3.600	1	20			1		0		1975	385			385	100%		1837	0.210	
←	C	2	3.600	1				0		0		2115		221		221			2115	0.104	
↰↑	C	2	3.600	1		20	0			0		2115		59	150	209		72%	2007	0.104	0.104
↑	C	2	3.600	1		20	0	0		0		2115			205	205		100%	1967	0.104	
↳	D	2,3	4.000	1	100			1		0		2015	320			320	100%		1985	0.161	
↓	E	3	3.500	2				0		0		4210		640		640			4210	0.152	0.152
↓↳	E	3	3.500	2		20	0	0		0		4210			310	310		100%	3916	0.079	
→	F	4	3.300	1				1		0		1945		224		224			1945	0.115	0.115
→↓	F	4	3.300	1		19	0			0		2085		1	222	223		100%	1933	0.115	
↓	F	4	3.300	1		15	0	0		0		2085			218	218		100%	1895	0.115	

Pedestrian Crossing				GM		FGM			
	Gp	1,3,4	min.	7	+	12	=	19	sec
	Hp	1,4	min.	4	+	7	=	11	sec
	Ip	2,3	min.	6	+	8	=	14	sec
	Jp	3,4	min.	7	+	6	=	13	sec

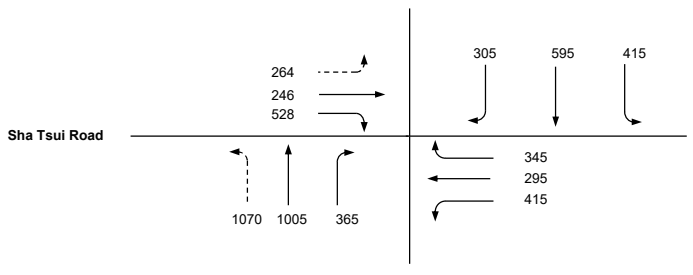
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Texaco Road / Yeung Uk Road / Kwai Fuk Road	2033 AM Peak Design Flows	DESIGN:	CHECK:	JOB NO: 60223708	DATE: 十月 20

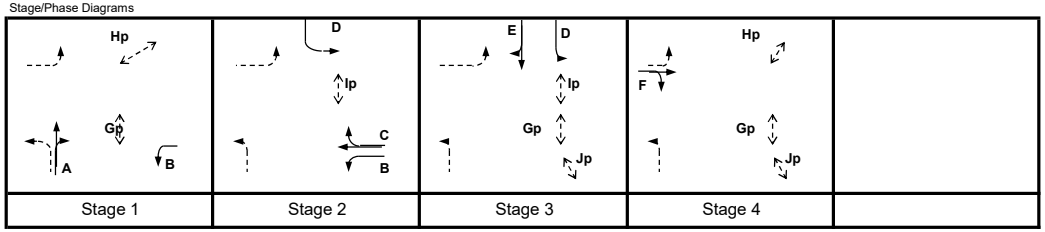
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.631	
Lost time		L =	21	sec
Total Flow		=	31,045	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	99	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	57	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.743	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	17.6	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	70	sec
Y_{max}	$= 1-L/C$	=	0.832	

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 19%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.500	2				1		0		4070		1005		1005			4070	0.247	0.247
↱	A	1	3.500	1		15	0	0		0		2105			365	365		100%	1914	0.191	
↰	B	1,2	3.600	1	20			1		0		1975	415			415	100%		1837	0.226	
←	C	2	3.600	1				0		0		2115		222		222			2115	0.105	0.105
↰↑	C	2	3.600	1		20	0			0		2115		73	139	212		65%	2016	0.105	
↑	C	2	3.600	1		20	0	0		0		2115			206	206		100%	1967	0.105	
↳	D	2,3	4.000	1	100			1		0		2015	415			415	100%		1985	0.209	
↓	E	3	3.500	2				0		0		4210		595		595			4210	0.141	0.141
↲	E	3	3.500	2		20	0	0		0		4210			305	305		100%	3916	0.078	
→	F	4	3.300	1				1		0		1945		246		246			1945	0.126	
↱↓	F	4	3.300	1		19	0			0		2085		0	267	267		100%	1932	0.138	0.138
↳	F	4	3.300	1		15	0	0		0		2085			261	261		100%	1895	0.138	

Pedestrian Crossing				GM		FGM			
	Gp	1,3,4	min.	7	+	12	=	19	sec
	Hp	1,4	min.	4	+	7	=	11	sec
	Ip	2,3	min.	6	+	8	=	14	sec
	Jp	3,4	min.	7	+	6	=	13	sec

JUNCTION CAPACITY CALCULATION

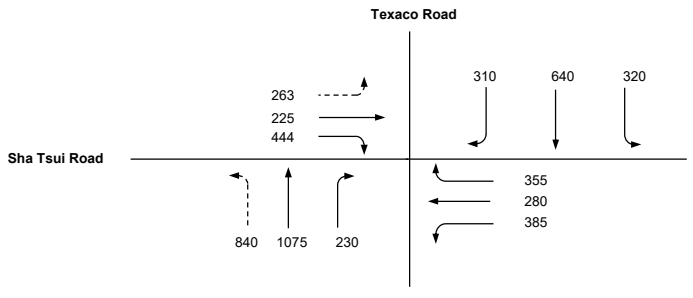
AECOM

Junction J3 - Texaco Road / Yeung Uk Road / Kwai Fuk Road	2033 PM Peak Design Flows	DESIGN:	CHECK:	JOB NO: 60223708	DATE: 十月 20

J3

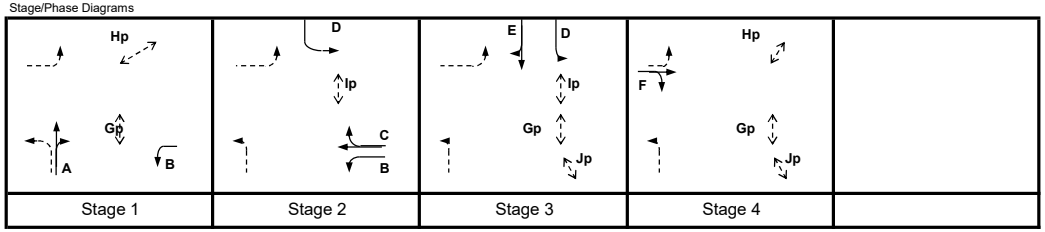
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	4	
Cycle time		C =	125	sec
Sum(y)		Y =	0.636	
Lost time		L =	21	sec
Total Flow		=	31,045	pcu
Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	100	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	58	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.743	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	16.7	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	72	sec
Y_{max}	$= 1-L/C$	=	0.832	

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 18%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.500	2				1		0		4070		1075		1075			4070	0.264	0.264
↱	A	1	3.500	1		15	0	0		0		2105			230	230		100%	1914	0.120	
↰	B	1,2	3.600	1	20			1		0		1975	385			385	100%		1837	0.210	
←	C	2	3.600	1				0		0		2115		221		221			2115	0.104	
↰↑	C	2	3.600	1		20	0			0		2115		59	150	209		72%	2007	0.104	0.104
↰	C	2	3.600	1		20	0	0		0		2115			205	205		100%	1967	0.104	
↱	D	2,3	4.000	1	100			1		0		2015	320			320	100%		1985	0.161	
↓	E	3	3.500	2				0		0		4210		640		640			4210	0.152	0.152
↳	E	3	3.500	2		20	0	0		0		4210			310	310		100%	3916	0.079	
→	F	4	3.300	1				1		0		1945		225		225			1945	0.116	
↱↓	F	4	3.300	1		19	0			0		2085		0	224	224		100%	1932	0.116	0.116
↳	F	4	3.300	1		15	0	0		0		2085			220	220		100%	1895	0.116	

Pedestrian Crossing				GM		FGM				
	Gp	1,3,4	min.	7	+	12	=	19	sec	
	Hp	1,4	min.	4	+	7	=	11	sec	
	Ip	2,3	min.	6	+	8	=	14	sec	
	Jp	3,4	min.	7	+	6	=	13	sec	

JUNCTION CAPACITY CALCULATION

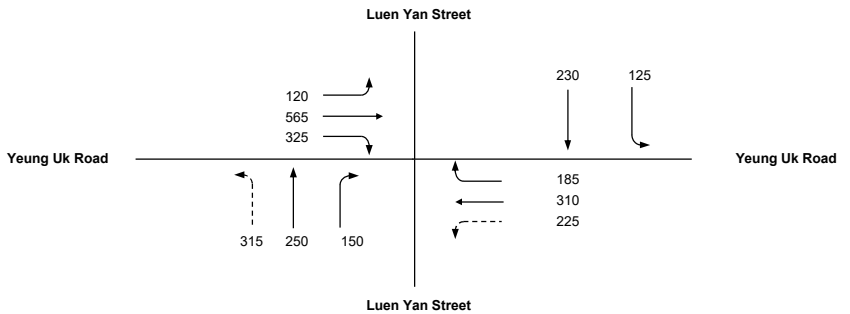
AECOM

Junction J4 - Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road	2023 AM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

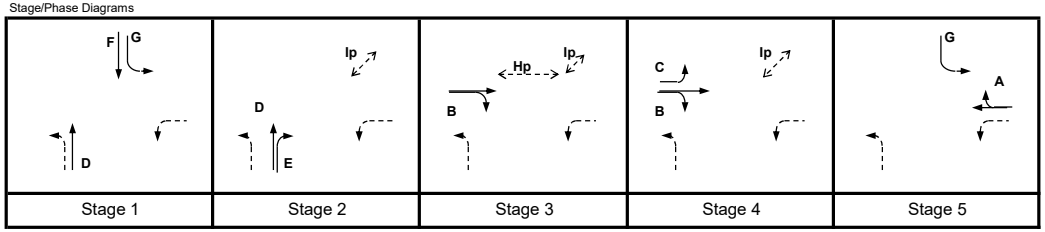
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle	N =	5	
Cycle time	C =	120	sec
Sum(y)	Y =	0.446	
Lost time	L =	22	sec
Total Flow	=	22,655	pcu
Optimum Cycle C_o = (1.5×L+5)/(1-Y)	=	69	sec
Min. Cycle Time C_m = L/(1-Y)	=	40	sec
Y_{ult} = 0.9-0.0075×L	=	0.735	
R.C.$_{ult}$ = (Y_{ult}-Y)/Yx100%	=	64.7	%
Practical Cycle Time C_p = 0.9×L/(0.9-Y)	=	44	sec
Y_{max} = 1-L/C	=	0.817	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
I/G = 6	I/G =	I/G = 7	I/G = 7	I/G = 6

Critical Case : F,E,B,A

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 65%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
←	A	5	3.300	2				0		0		4170		310		310			4170	0.074	
↰	A	5	3.400	1		20	0	0		0		2095			185	185		100%	1949	0.095	0.095
↳	C	4	3.500	1	20			1		0		1965	120			120	100%		1828	0.066	
→	B	3,4	3.500	1				0		0		2105		347		347			2105	0.165	0.165
↱	B	3,4	3.500	1		20	0			0		2105		338	9	347		3%	2101	0.165	
↴	B	3,4	3.500	1		15	0	0		0		2105			316	316		100%	1914	0.165	
↑	D	1,2	3.500	1				1		0		1965		250		250			1965	0.127	
↱	E	2	3.500	1		20	0	0		0		2105			150	150		100%	1958	0.077	0.077
↳	G	1,5	3.300	1	15			1		0		1945	125			125	100%		1768	0.071	
↓	F	1	3.400	1				0		0		2095		230		230			2095	0.110	0.110

Pedestrian Crossing				GM		FGM				
	Hp	3	min.	7	+	7	=	14	sec	
	Ip	2,3,4	min.	5	+	7	=	12	sec	

JUNCTION CAPACITY CALCULATION

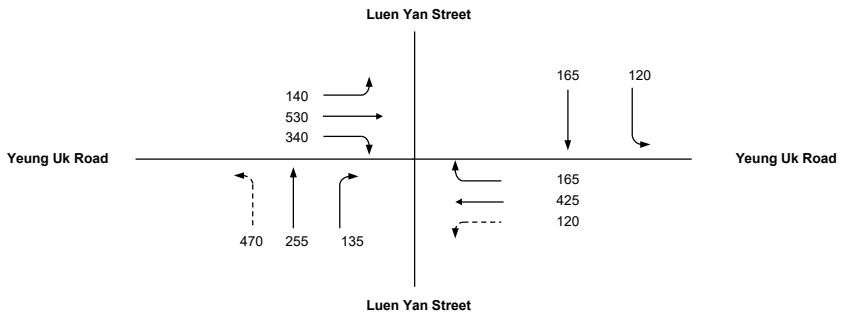
AECOM

Junction J4 - Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road	2023 PM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

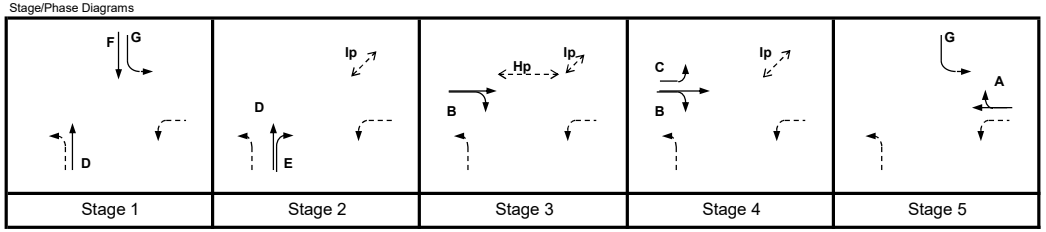
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	5	
Cycle time		C =	120	sec
Sum(y)		Y =	0.415	
Lost time		L =	22	sec
Total Flow		=	22,655	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	65	sec
Min. Cycle Time C_m	= L/(1-Y)	=	38	sec
Y_{ult}	= 0.9-0.0075×L	=	0.735	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	77.2	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	41	sec
Y_{max}	= 1-L/C	=	0.817	

Stage/Phase Diagrams



Critical Case : F,E,B,A

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 77%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
←	A	5	3.300	2				0		0		4170		425		425			4170	0.102	0.102
↰	A	5	3.400	1		20	0	0		0		2095			165	165		100%	1949	0.085	
↳	C	4	3.500	1	20			1		0		1965	140			140	100%		1828	0.077	
→	B	3,4	3.500	1				0		0		2105		348		348			2105	0.165	0.165
↱	B	3,4	3.500	1		20	0			0		2105		322	24	346		7%	2094	0.165	
↴	B	3,4	3.500	1		15	0	0		0		2105			316	316		100%	1914	0.165	
↑	D	1,2	3.500	1				1		0		1965		255		255			1965	0.130	
↱	E	2	3.500	1		20	0	0		0		2105			135	135		100%	1958	0.069	0.069
↳	G	1,5	3.300	1	15			1		0		1945	120			120	100%		1768	0.068	
↓	F	1	3.400	1				0		0		2095		165		165			2095	0.079	0.079

Pedestrian Crossing			GM		FGM			
Hp	3	min.	7	+	7	=	14	sec
Ip	2,3,4	min.	5	+	7	=	12	sec

JUNCTION CAPACITY CALCULATION

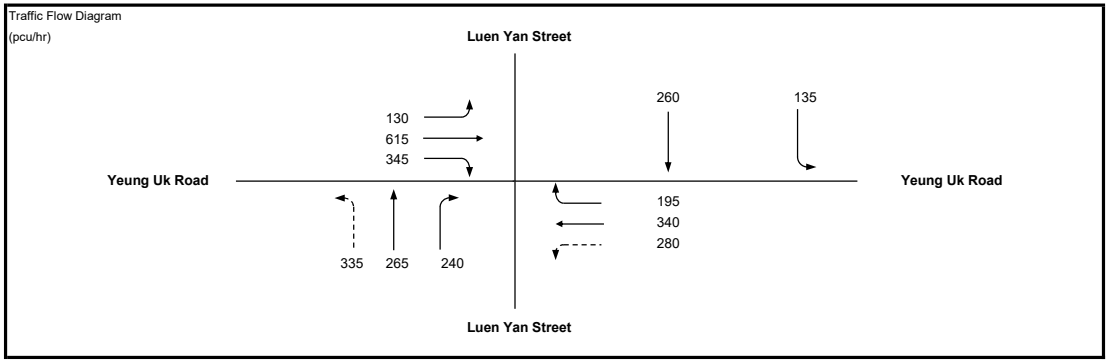
AECOM

Junction J4 - Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road	2033 AM Peak Reference Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

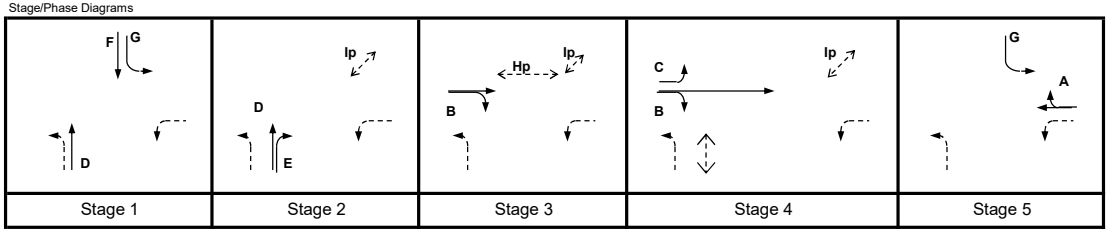
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	5	
Cycle time		C =	120	sec
Sum(y)		Y =	0.418	
Lost time		L =	42	sec
Total Flow		=	22,655	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	117	sec
Min. Cycle Time C_m	= L/(1-Y)	=	72	sec
Y_{ult}	= 0.9-0.0075×L	=	0.585	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	40.0	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	78	sec
Y_{max}	= 1-L/C	=	0.650	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
I/G = 6	I/G = 11	G = 7 I/G = 9	I/G = 7	I/G = 6

Critical Case : F,E,Hp,C,A

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 40%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	ADJ. SAT. FLOW	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
←	A	5	3.300	2				0		0		4170	4170		340		340			4170	0.082	
↑→	A	5	3.400	1		20	0	0		0		2095	2095			195	195		100%	1949	0.100	0.100
↳	C	4	3.500	1	20			1		0		1965	1965	130			130	100%		1828	0.071	0.071
→	B	3,4	3.500	1				0		0		2105	2105		375		375			2105	0.178	
↓→	B	3,4	3.500	1		20	0			0		2105	2105		370	4	374		1%	2103	0.178	
↓	B	3,4	3.500	1		15	0	0		0		2105	2105			341	341		100%	1914	0.178	
↑	D	1,2	3.500	1				1		0		1965	1965		265		265			1965	0.135	
↑→	E	2	3.500	1		20	0	0		0		2105	2105			240	240		100%	1958	0.123	0.123
↳	G	1,5	3.300	1	15			1		0		1945	1945	135			135	100%		1768	0.076	
↓	F	1	3.400	1				0		0		2095	2095		260		260			2095	0.124	0.124
Pedestrian Crossing				GM		FGM																
	Hp	3	min.	7	+	7	=	14	sec													
	Ip	2,3,4	min.	5	+	7	=	12	sec													

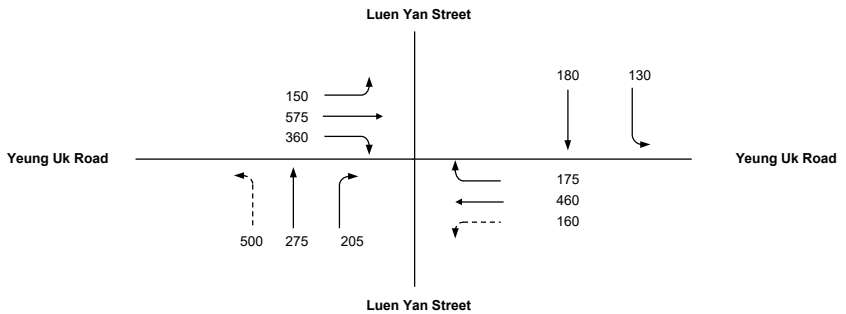
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road	2033 PM Peak Reference Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

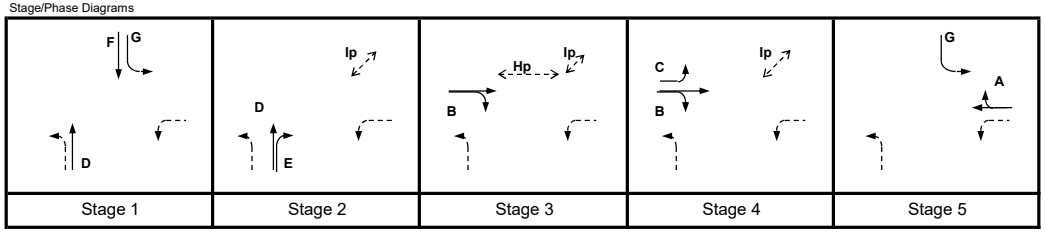
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	5	
Cycle time		C =	120	sec
Sum(y)		Y =	0.383	
Lost time		L =	42	sec
Total Flow		=	22,655	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	110	sec
Min. Cycle Time C_m	= L/(1-Y)	=	68	sec
Y_{ult}	= 0.9-0.0075×L	=	0.585	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	52.7	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	73	sec
Y_{max}	= 1-L/C	=	0.650	

Stage/Phase Diagrams



Critical Case : F,E,Hp,C,A

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 53%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
←	A	5	3.300	2				0		0		4170		460		460			4170	0.110	0.110
↰	A	5	3.400	1		20	0	0		0		2095			175	175		100%	1949	0.090	
↱	C	4	3.500	1	20			1		0		1965	150			150	100%		1828	0.082	0.082
→	B	3,4	3.500	1				0		0		2105		373		373			2105	0.177	
↗	B	3,4	3.500	1		20	0			0		2105		352	20	372		6%	2096	0.177	
↘	B	3,4	3.500	1		15	0	0		0		2105			340	340		100%	1914	0.177	
↑	D	1,2	3.500	1				1		0		1965		275		275			1965	0.140	
↱	E	2	3.500	1		20	0	0		0		2105			205	205		100%	1958	0.105	0.105
↳	G	1,5	3.300	1	15			1		0		1945	130			130	100%		1768	0.074	
↓	F	1	3.400	1				0		0		2095		180		180			2095	0.086	0.086
Pedestrian Crossing				GM		FGM															
	Hp	3	min.	7	+	7	=	14	sec												
	Ip	2,3,4	min.	5	+	7	=	12	sec												

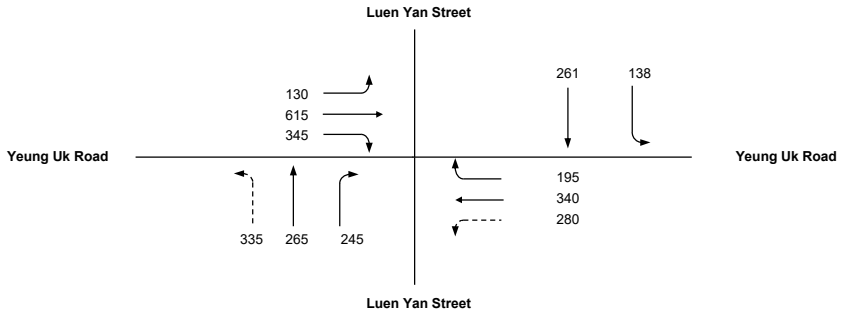
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road	2033 AM Peak Design Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

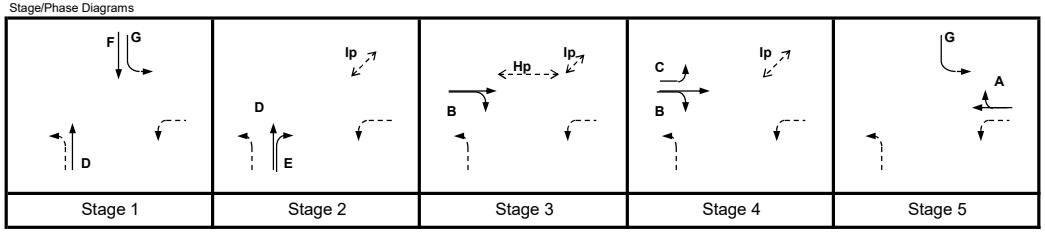
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	5	
Cycle time		C =	120	sec
Sum(y)		Y =	0.421	
Lost time		L =	42	sec
Total Flow		=	22,655	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	117	sec
Min. Cycle Time C_m	= L/(1-Y)	=	73	sec
Y_{ult}	= 0.9-0.0075×L	=	0.585	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	39.0	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	79	sec
Y_{max}	= 1-L/C	=	0.650	

Stage/Phase Diagrams



Critical Case : F,E,Hp,C,A

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 39%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
←	A	5	3.300	2				0		0		4170		340		340			4170	0.082	
↰	A	5	3.400	1		20	0	0		0		2095			195	195		100%	1949	0.100	0.100
↳	C	4	3.500	1	20			1		0		1965	130			130	100%		1828	0.071	0.071
→	B	3,4	3.500	1				0		0		2105		375		375			2105	0.178	
↱	B	3,4	3.500	1		20	0			0		2105		370	4	374		1%	2103	0.178	
↴	B	3,4	3.500	1		15	0	0		0		2105			341	341		100%	1914	0.178	
↑	D	1,2	3.500	1				1		0		1965		265		265			1965	0.135	
↱	E	2	3.500	1		20	0	0		0		2105			245	245		100%	1958	0.125	0.125
↳	G	1,5	3.300	1	15			1		0		1945	138			138	100%		1768	0.078	
↓	F	1	3.400	1				0		0		2095		261		261			2095	0.125	0.125

Pedestrian Crossing			GM		FGM				
Hp	3	min.	7	+	7	=	14	sec	
Ip	2,3,4	min.	5	+	7	=	12	sec	

JUNCTION CAPACITY CALCULATION

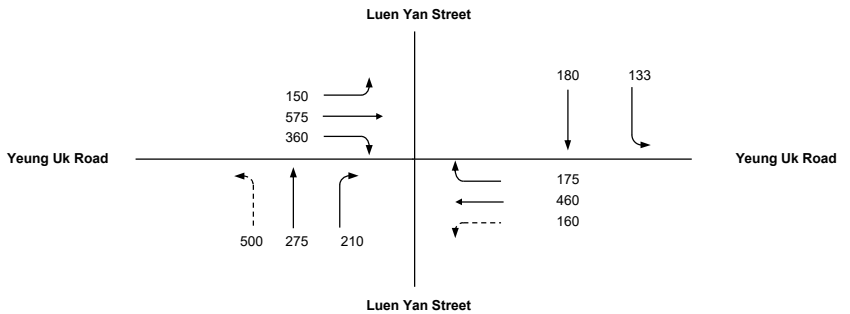
AECOM

Junction J4 - Yeung Uk Road / Luen Yan Street / Ma Tau Pa Road	2033 PM Peak Design Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

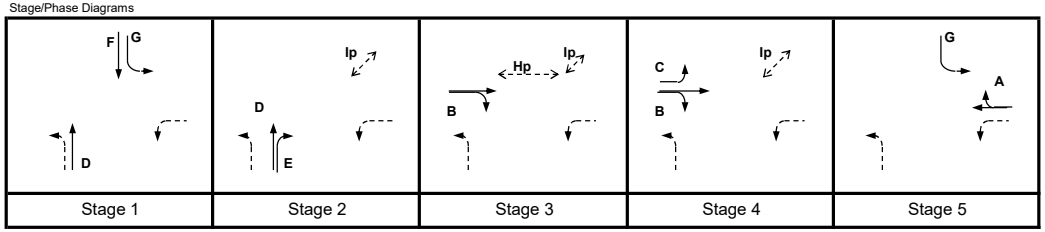
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	5	
Cycle time		C =	120	sec
Sum(y)		Y =	0.386	
Lost time		L =	42	sec
Total Flow		=	22,655	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	111	sec
Min. Cycle Time C_m	= L/(1-Y)	=	68	sec
Y_{ult}	= 0.9-0.0075×L	=	0.585	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	51.7	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	73	sec
Y_{max}	= 1-L/C	=	0.650	

Stage/Phase Diagrams



Critical Case : F,E,Hp,C,A

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 52%

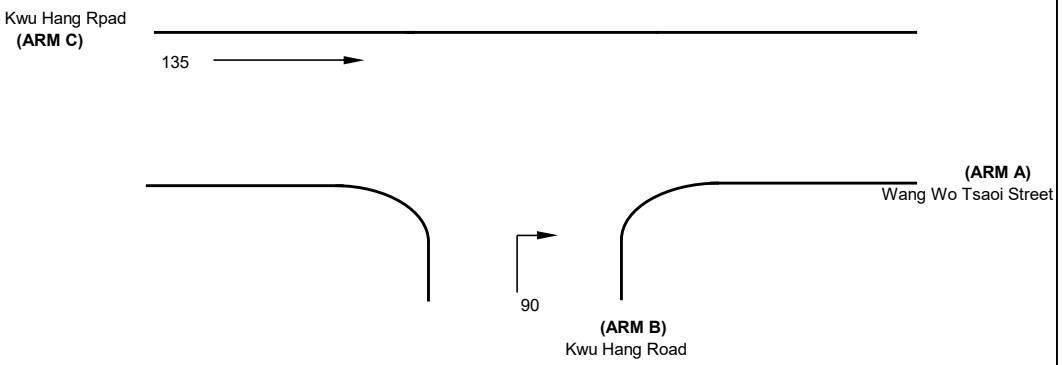
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
←	A	5	3.300	2				0		0		4170		460		460			4170	0.110	0.110
↑	A	5	3.400	1		20	0	0		0		2095			175	175		100%	1949	0.090	
↳	C	4	3.500	1	20			1		0		1965	150			150	100%		1828	0.082	0.082
→	B	3,4	3.500	1				0		0		2105		373		373			2105	0.177	
↱	B	3,4	3.500	1		20	0			0		2105		352	20	372		6%	2096	0.177	
↱	B	3,4	3.500	1		15	0	0		0		2105			340	340		100%	1914	0.177	
↑	D	1,2	3.500	1				1		0		1965		275		275			1965	0.140	
↱	E	2	3.500	1		20	0	0		0		2105			210	210		100%	1958	0.107	0.107
↳	G	1,5	3.300	1	15			1		0		1945	133			133	100%		1768	0.075	
↓	F	1	3.400	1				0		0		2095		180		180			2095	0.086	0.086

Pedestrian Crossing				GM		FGM				
	Hp	3	min.	7	+	7	=	14	sec	
	Ip	2,3,4	min.	5	+	7	=	12	sec	

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Wang Wo Tsai Street / Kwu Hang Road	2023 AM Obsersved Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J5

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=		(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	135	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	7.3	(metres)
W b-c	=	0	(metres)
Vl b-a	=	70	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	90	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.140539
E	=	0.585955
F	=	0.585955
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	689
Q b-c	=	437
Q c-b	=	437
Q b-ac	=	689

CRITICAL DFC = 0.13

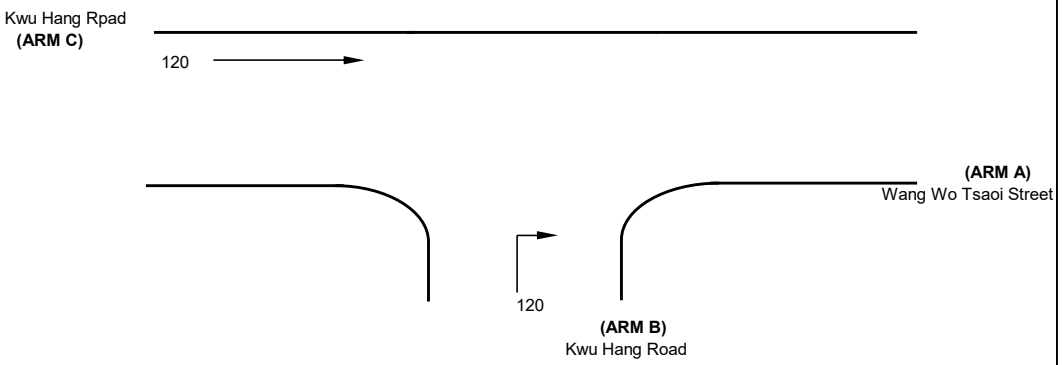
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.13
DFC b-c	=	0.00
DFC c-b	=	0.00
DFC b-ac	=	0.13

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Wang Wo Tsai Street / Kwu Hang Road	2023 PM Obsersved Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J5

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=		(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	120	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	7.3	(metres)
W b-c	=	0	(metres)
Vl b-a	=	70	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	120	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.140539
E	=	0.585955
F	=	0.585955
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	692
Q b-c	=	437
Q c-b	=	437
Q b-ac	=	692

CRITICAL DFC = 0.17

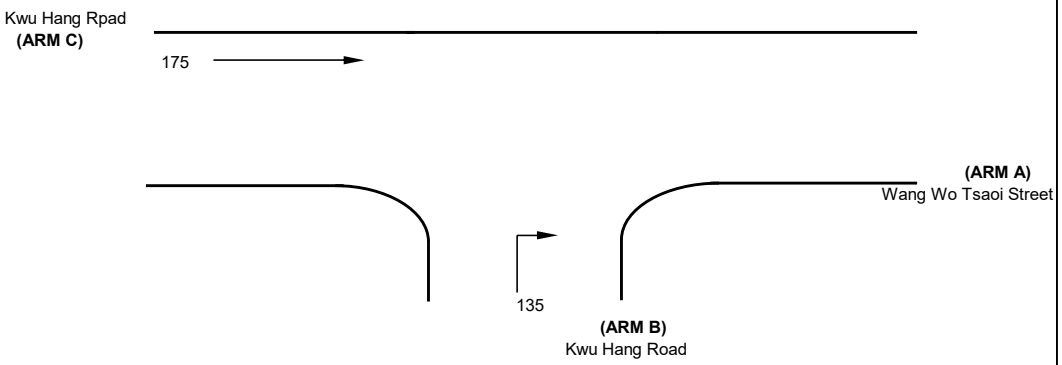
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.17
DFC b-c	=	0.00
DFC c-b	=	0.00
DFC b-ac	=	0.17

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Wang Wo Tsai Street / Kwu Hang Road	2033 AM Reference Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J5

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=		(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	175	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	7.3	(metres)
W b-c	=	0	(metres)
Vl b-a	=	70	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	135	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.140539
E	=	0.585955
F	=	0.585955
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	681
Q b-c	=	437
Q c-b	=	437
Q b-ac	=	681

CRITICAL DFC = 0.20

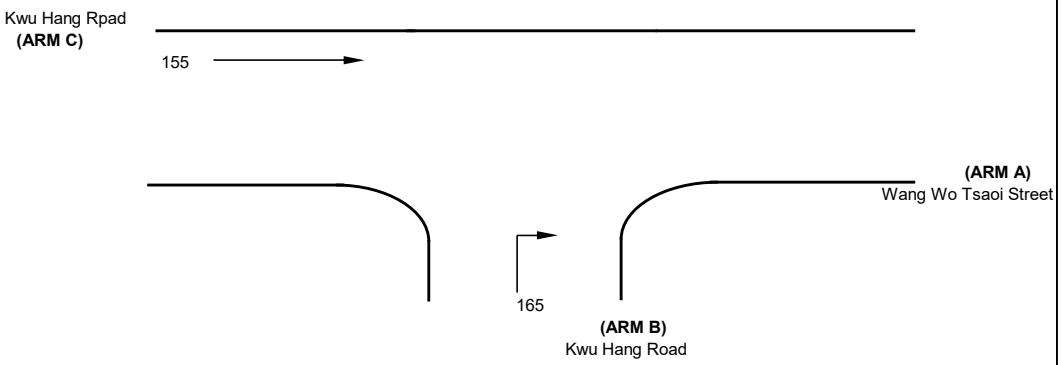
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.20
DFC b-c	=	0.00
DFC c-b	=	0.00
DFC b-ac	=	0.20

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Wang Wo Tsai Street / Kwu Hang Road	2033 PM Reference Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



J5

NOTES : (GEOMETRIC INPUT DATA)

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=		(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	155	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	7.3	(metres)
W b-c	=	0	(metres)
Vl b-a	=	70	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	165	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.140539
E	=	0.585955
F	=	0.585955
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	685
Q b-c	=	437
Q c-b	=	437
Q b-ac	=	685

CRITICAL DFC = 0.24

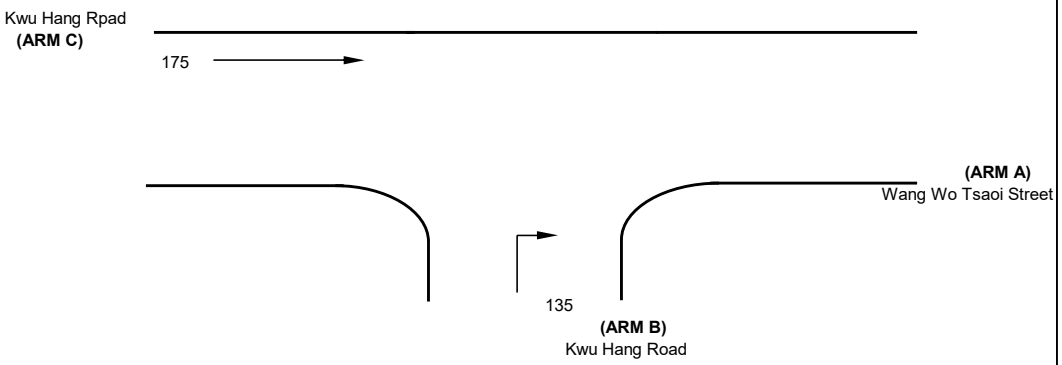
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.24
DFC b-c	=	0.00
DFC c-b	=	0.00
DFC b-ac	=	0.24

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Wang Wo Tsai Street / Kwu Hang Road	2033 AM Design Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J5

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=		(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	175	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	7.3	(metres)
W b-c	=	0	(metres)
Vl b-a	=	70	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	135	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.140539
E	=	0.585955
F	=	0.585955
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	681
Q b-c	=	437
Q c-b	=	437
Q b-ac	=	681

COMPARISION OF DESIGN FLOW TO CAPACITY :

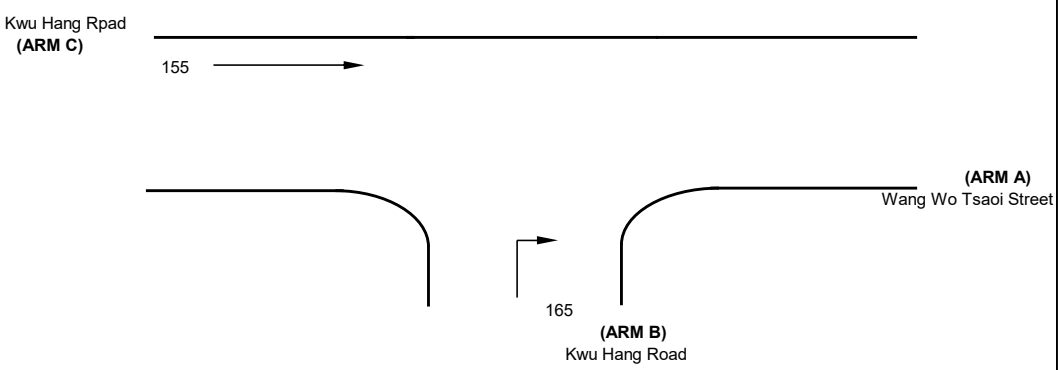
DFC b-a	=	0.20
DFC b-c	=	0.00
DFC c-b	=	0.00
DFC b-ac	=	0.20

CRITICAL DFC = 0.20

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Wang Wo Tsai Street / Kwu Hang Road	2033 PM Design Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J5

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.3	(metres)
W cr	=		(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=		(metres)
Vr c-b	=		(metres)
q c-a	=	155	(pcu/hr)
q c-b	=	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	7.3	(metres)
W b-c	=	0	(metres)
Vl b-a	=	70	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	0	(metres)
q b-a	=	165	(pcu/hr)
q b-c	=	0	(pcu/hr)

GEOMETRIC FACTORS :

D	=	1.140539
E	=	0.585955
F	=	0.585955
Y	=	0.748150

THE CAPACITY OF MOVEMENT :

Q b-a	=	685
Q b-c	=	437
Q c-b	=	437
Q b-ac	=	685

CRITICAL DFC = 0.24

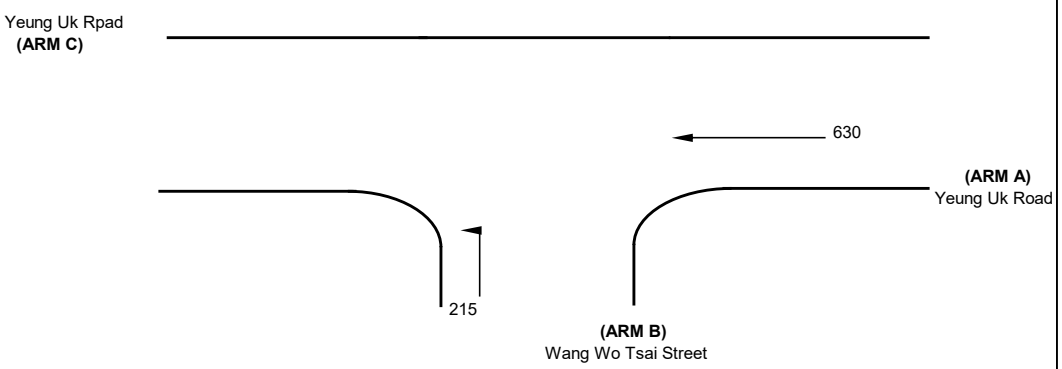
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.24
DFC b-c	=	0.00
DFC c-b	=	0.00
DFC b-ac	=	0.24

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Yeung Uk Road / Wang Wo Tsai Street	2023 AM Observed Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
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	=	16.1	(metres)
W cr	=	1.5	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	630	(pcu/hr)

MAJOR ROAD (ARM C)

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

MINOR ROAD (ARM B)

W b-a	=	0	(metres)
W b-c	=	4.5	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	50	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	215	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.533219
E	=	1.011866
F	=	0.585955
Y	=	0.444550

THE CAPACITY OF MOVEMENT :

Q b-a	=	291
Q b-c	=	651
Q c-b	=	377
Q b-ac	=	651

CRITICAL DFC = 0.33

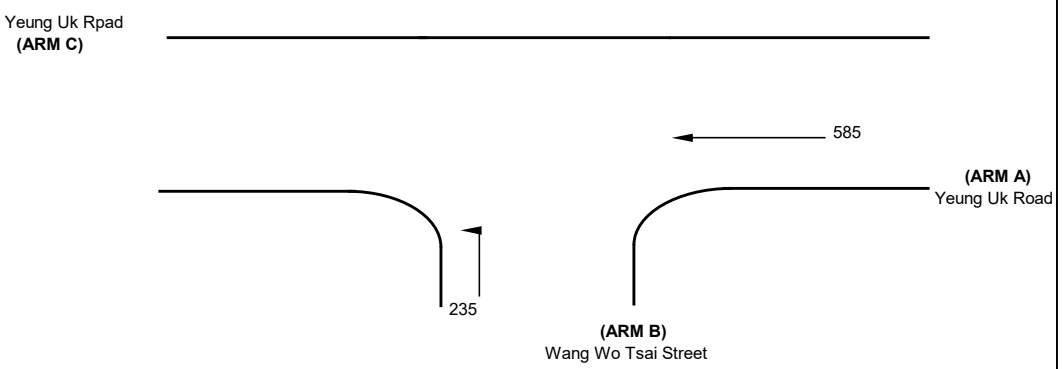
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.33
DFC c-b	=	0.00
DFC b-ac	=	0.33

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Yeung Uk Road / Wang Wo Tsai Street	2023 PM Observed Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
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	=	16.1	(metres)
W cr	=	1.5	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	585	(pcu/hr)

MAJOR ROAD (ARM C)

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

MINOR ROAD (ARM B)

W b-a	=	0	(metres)
W b-c	=	4.5	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	50	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	235	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.533219
E	=	1.011866
F	=	0.585955
Y	=	0.444550

THE CAPACITY OF MOVEMENT :

Q b-a	=	295
Q b-c	=	658
Q c-b	=	381
Q b-ac	=	658

CRITICAL DFC = 0.36

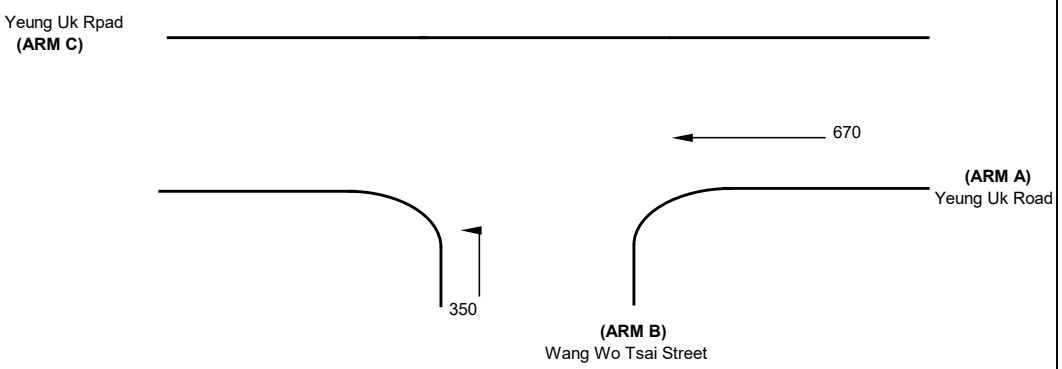
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.36
DFC c-b	=	0.00
DFC b-ac	=	0.36

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Yeung Uk Road / Wang Wo Tsai Street	2033 AM Reference Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
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	=	16.1	(metres)
W cr	=	1.5	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	670	(pcu/hr)

MAJOR ROAD (ARM C)

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

MINOR ROAD (ARM B)

W b-a	=	0	(metres)
W b-c	=	4.5	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	50	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	350	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.533219
E	=	1.011866
F	=	0.585955
Y	=	0.444550

THE CAPACITY OF MOVEMENT :

Q b-a	=	288
Q b-c	=	644
Q c-b	=	373
Q b-ac	=	644

CRITICAL DFC = 0.54

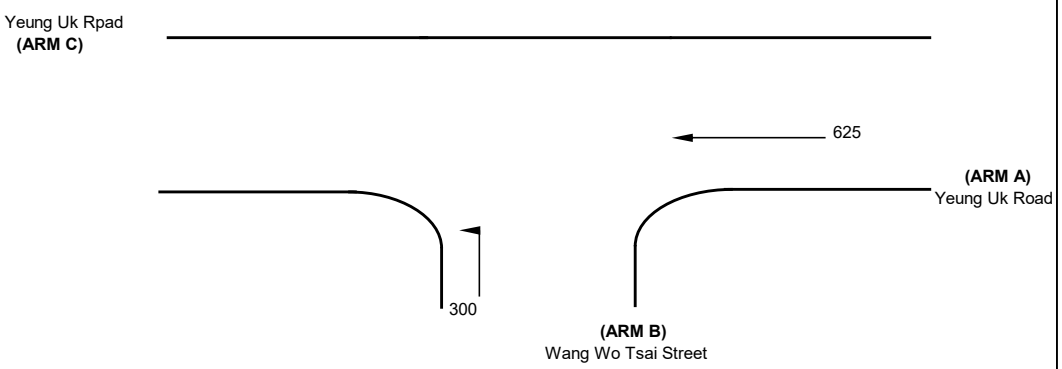
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.54
DFC c-b	=	0.00
DFC b-ac	=	0.54

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Yeung Uk Road / Wang Wo Tsai Street	2033 PM Reference Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
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	=	16.1	(metres)
W cr	=	1.5	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	625	(pcu/hr)

MAJOR ROAD (ARM C)

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

MINOR ROAD (ARM B)

W b-a	=	0	(metres)
W b-c	=	4.5	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	50	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	300	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.533219
E	=	1.011866
F	=	0.585955
Y	=	0.444550

THE CAPACITY OF MOVEMENT :

Q b-a	=	292
Q b-c	=	652
Q c-b	=	377
Q b-ac	=	652

CRITICAL DFC = 0.46

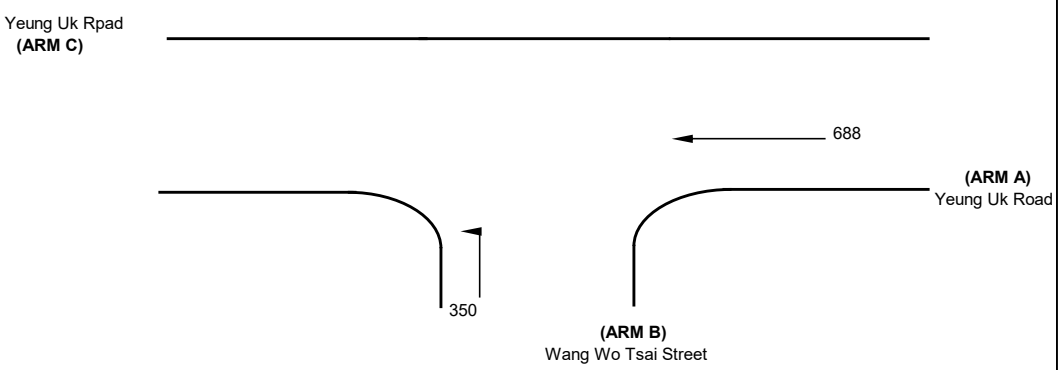
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.46
DFC c-b	=	0.00
DFC b-ac	=	0.46

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Yeung Uk Road / Wang Wo Tsai Street	2033 AM Design Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
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	=	16.1	(metres)
W cr	=	1.5	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	688	(pcu/hr)

MAJOR ROAD (ARM C)

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

MINOR ROAD (ARM B)

W b-a	=	0	(metres)
W b-c	=	4.5	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	50	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	350	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.533219
E	=	1.011866
F	=	0.585955
Y	=	0.444550

THE CAPACITY OF MOVEMENT :

Q b-a	=	286
Q b-c	=	641
Q c-b	=	371
Q b-ac	=	641

CRITICAL DFC = 0.55

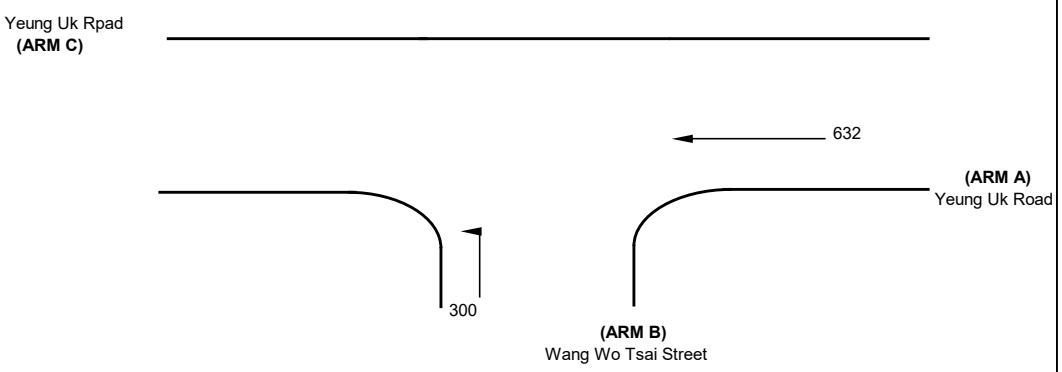
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.55
DFC c-b	=	0.00
DFC b-ac	=	0.55

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Yeung Uk Road / Wang Wo Tsai Street	2033 PM Design Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 24



NOTES : (GEOMETRIC INPUT DATA)

J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
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	=	16.1	(metres)
W cr	=	1.5	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	632	(pcu/hr)

MAJOR ROAD (ARM C)

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

MINOR ROAD (ARM B)

W b-a	=	0	(metres)
W b-c	=	4.5	(metres)
Vl b-a	=	0	(metres)
Vr b-a	=	0	(metres)
Vr b-c	=	50	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	300	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.533219
E	=	1.011866
F	=	0.585955
Y	=	0.444550

THE CAPACITY OF MOVEMENT :

Q b-a	=	291
Q b-c	=	650
Q c-b	=	377
Q b-ac	=	650

CRITICAL DFC = 0.46

COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.46
DFC c-b	=	0.00
DFC b-ac	=	0.46

Annex C

Approved Technical Note on Parking Provision Requirement

Yeung, David

From: Ken HK CHEUNG <kenhkcheung@td.gov.hk>
Sent: Friday, February 14, 2025 5:04 PM
To: Yeung, David
Cc: Edwin Wing Chow CHAN; Lei, Gary; Ken HK CHEUNG; Kit Ying LI
Subject: RE: Proposed Comprehensive Residential (Flat), Commercial and Social Welfare Facility Development in CDA5 at Lots 459 RP, 461, 469, 475 and 476 in D.D. 443, TWTL11 - Technical Note on Parking Provision Requirements
Attachments: 20250123 TW Jumbo GPSI.pdf; Appendix A.pdf

Dear David,

I have no further comment from traffic engineering point of view.

Regards,

Ken H.K. CHEUNG
E/TW4
Transport Department
Tel. No.: 2399 6985

From: "Yeung, David" <David.Yeung@aecom.com>
To: "Ken HK CHEUNG" <kenhkcheung@td.gov.hk>
Cc: "Edwin Wing Chow CHAN" <edwinchan@td.gov.hk>, "Lei, Gary" <Gary.LEI@aecom.com>, "Kit Ying LI" <kityingli@td.gov.hk>
Date: 06/02/2025 11:07 AM
Subject: RE: Proposed Comprehensive Residential (Flat), Commercial and Social Welfare Facility Development in CDA5 at Lots 459 RP, 461, 469, 475 and 476 in D.D. 443, TWTL11 - Technical Note on Parking Provision Requirements

---

Dear Ken,

Please find attached Appendix A for the observed public carparking spaces availability for your review and consideration.

Should you have any queries or require further information, please feel free to call me.

Thank you for your kind assistance,

Regards,

David Yeung
Senior Engineer, Traffic & Transport Planning,

Land Supply / Municipal, Hong Kong
D +852-3856 5538
david.yeung@aecom.com

AECOM
18/F, Grand Central Plaza
Tower 2, 138 Shatin Rural Committee Road
Shatin, Hong Kong
T +852-3922-9000
aecom.com

From: Ken HK CHEUNG <kenhkcheung@td.gov.hk>
Sent: Wednesday, February 5, 2025 11:35 AM
To: Yeung, David <David.Yeung@aecom.com>
Cc: Edwin Wing Chow CHAN <edwinchan@td.gov.hk>; Lei, Gary <Gary.LEI@aecom.com>; Ken HK CHEUNG <kenhkcheung@td.gov.hk>; Kit Ying LI <kityingli@td.gov.hk>
Subject: RE: Proposed Comprehensive Residential (Flat), Commercial and Social Welfare Facility Development in CDA5 at Lots 459 RP, 461, 469, 475 and 476 in D.D. 443, TWTL11 - Technical Note on Parking Provision Requirements

Dear David,

As discussed, please provide the survey record of the said 25% of public car parking spaces available during the peak hours for further review. Thanks

Regards,

Ken H.K. CHEUNG
E/TW4
Transport Department
Tel. No.: 2399 6985

From: "Yeung, David" <David.Yeung@aecom.com>
To: "Ken HK CHEUNG" <kenhkcheung@td.gov.hk>
Cc: "Lei, Gary" <Gary.LEI@aecom.com>, "Edwin Wing Chow CHAN" <edwinchan@td.gov.hk>, "Kit Ying LI" <kityingli@td.gov.hk>
Date: 23/01/2025 01:50 PM
Subject: RE: Proposed Comprehensive Residential (Flat), Commercial and Social Welfare Facility Development in CDA5 at Lots 459 RP, 461, 469, 475 and 476 in D.D. 443, TWTL11 - Technical Note on Parking Provision Requirements

Dear Ken,

By excluding the public parking spaces at Kwun Hang Road and Tsuen Wing Street (a total of 7 disable parking spaces), the remaining number parking spaces in the vicinity of the subject development would be 483. This is still considered sufficient for the subject development. Therefore, the findings listed in Table 2.3 remain valid.

Please find attached revised TN for your review and further consideration.

Should you have any queries or require further information, please feel free to call me.

Thank you for your kind assistance.

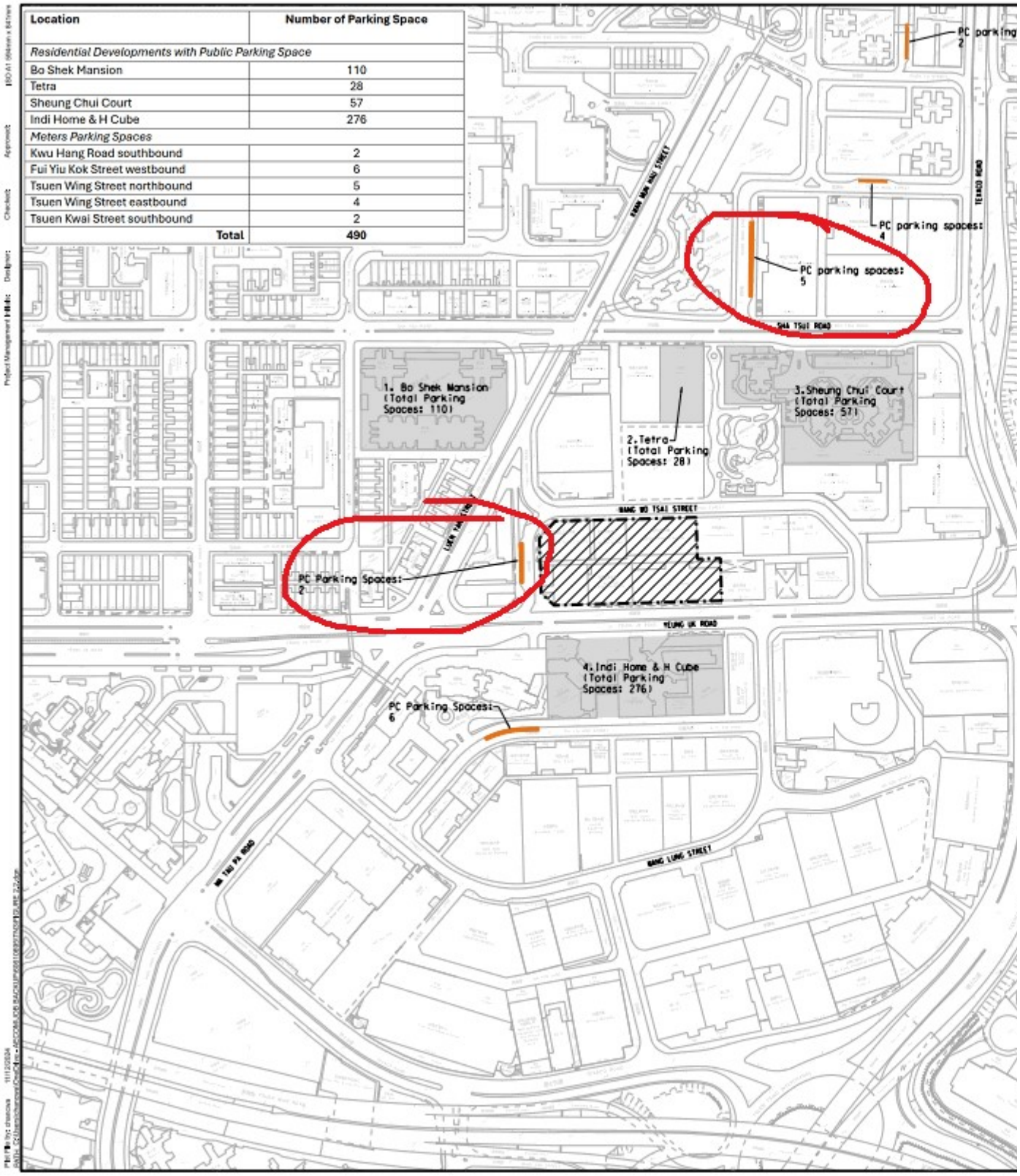
Regards,
David

From: Ken HK CHEUNG <kenhkcheung@td.gov.hk>
Sent: Wednesday, January 22, 2025 6:51 PM
To: Yeung, David <David.Yeung@aecom.com>
Cc: Lei, Gary <Gary.LEI@aecom.com>; kenhkcheung@td.gov.hk; Edwin Wing Chow CHAN <edwinchan@td.gov.hk>; Kit Ying LI <kityingli@td.gov.hk>
Subject: Re: Proposed Comprehensive Residential (Flat), Commercial and Social Welfare Facility Development in CDA5 at Lots 459 RP, 461, 469, 475 and 476 in D.D. 443, TWTL11 - Technical Note on Parking Provision Requirements

Dear David,

Please note that no parking spaces for PCs were provided at Kwu Hang Road and Tsuen Wing Street and only metered parking spaces for GV and disabled parking spaces. Please review Figure 2.2 and the said public parking spaces are considered quite available as specified in Table 2.3.

Location	Number of Parking Space
Residential Developments with Public Parking Space	
Bo Shek Mansion	110
Tetra	28
Sheung Chui Court	57
Indi Home & H Cube	276
Meters Parking Spaces	
Kwu Hang Road southbound	2
Fui Yiu Kok Street westbound	6
Tsuen Wing Street northbound	5
Tsuen Wing Street eastbound	4
Tsuen Kwai Street southbound	2
Total	490



Regards,

Ken H.K. CHEUNG
E/TW4
Transport Department
Tel. No.: 2399 6985

From: "Yeung, David" <David.Yeung@aecom.com>

To: "kenhkcheung@td.gov.hk" <kenhkcheung@td.gov.hk>
Cc: "Lei, Gary" <Gary.LEI@aecom.com>
Date: 11/12/2024 10:18 PM
Subject: Proposed Comprehensive Residential (Flat), Commercial and Social Welfare Facility Development in CDA5 at Lots 459 RP, 461, 469, 475 and 476 in D.D. 443, TWTL11 - Technical Note on Parking Provision Requirements

---

Dear Mr. Cheung,

We refer to your comments (item 3) regarding the parking provision for the captioned project.

The Global Parking Standard (GPS) under the Hong Kong Planning Standards and Guidelines (HKPSG) is determined by several key factors:

Availability of Public Transport (PT) Services: The extent and efficiency of public transport options in the area.
Availability of Public Car Parking Spaces: The existing supply of public parking spaces nearby.
Traffic Conditions: The current traffic flow and congestion levels.
Level of Illegal Parking: The frequency and impact of illegal parking in the area.

Considering these factors, a GPS of 6 is considered appropriate for the Proposed Development. This aligns with the HKPSG's goal to balance parking needs with available transport options and overall traffic management strategies.

We would be grateful if you could provide your comments, if any, at your earliest convenience.

Should you have any queries, please feel free to call me.

Thank you for your kind assistance.

Regards,

David Yeung
Senior Engineer, Traffic & Transport Planning,

Land Supply / Municipal, Hong Kong
D +852-3856 5538
david.yeung@aecom.com

AECOM
11/F, Grand Central Plaza
Tower 2, 138 Shatin Rural Committee Road
Shatin, Hong Kong
T +852-3922-9000
aecom.com

1 Background

1.1 The Application Site is located in the northern fringe of the Tsuen Wan East industrial area at various lots in D.D. 443 and bounded by Yeung Uk Road, Kwu Hang Road and Wang Wo Tsai Street as indicated in **Figure 1.1**. It is currently zoned "Comprehensive Development Area (5)" ("CDA(5)") in Tsuen Wan OZP No. S/TW/37 and covers a total site area of approximately 7,353m^2.

1.2 To well utilize of the subject site, the Applicant proposes to increase the plot ratio from 5.0 to 6.11 and the total flat units will be increased from about 738 to 886.

1.3 Reference is also made to the lease modification for residential development at TWTL 160 in Wang Wo Tsai Street executed on 29 May 2024. The parking requirements for residential parking spaces stipulated in the lease condition adopted GPS "1 space per 7 flats", extract of the relevant lease conditions is shown in **Annex A**. Since TWTL 160 site is located in close proximity to the subject site, with a similar scale and nature of development as well as comparable site characteristic, the approved parking requirements are good benchmark for the subject site.

1.4 This technical note is to assess/ determine the GPS (Global Parking Standard) under HKPSG adopted for the development site.

2 Factors affecting GPS

2.1 **Table 2.1** and **Table 2.2** summarize the factors and their weighting/ value for determining GPS.

Table 2.1 Factors And Their Weighting/ Value For Determining GPS

Factor	Weighting	Value				
Proximity and convenience for access to public transport services (1) (excluding rail)	20%	Remote and not accessible	Marginally accessible	Moderately accessible	Quite accessible	Close and easy accessible
		1	0.75	0.5	0.25	0
Availability of public car parking spaces during peak hours (2)	30%	Not available	Slightly available	Moderately available	Quite Available	Easily Available
		1	0.75	0.5	0.25	0
Traffic conditions (3)	10%	Smooth	Slightly congested	Moderately congested	Quite congested	Seriously congested
		1	0.75	0.5	0.25	0
Level of illegal parking (4)	40%	Severe	Quite severe	Moderately severe	Slightly severe	None
		1	0.75	0.5	0.25	0

Notes :

(1) A development within 100m from a public transport corridor such as Nathan Road, is considered "close and easily accessible" to public transport services, whereas a development located in the remote area in the New Territories is considered to be "remote and not accessible" to public transport services.

(2) A development within 100m from public car parking facilities (e.g. on-street parking, public car park, etc.) with reasonably available (i.e. not utilised) parking spaces during peak hours is considered to have "easily available" parking, whereas a development with no public car parking facility in the vicinity (within 300m) is considered to have no available parking.

(3) Traffic condition is "smooth" if traffic flows smoothly without any traffic queue, whereas traffic condition is "seriously congested" if the general daily traffic movements are very slow with long traffic queues before road junctions.

(4) Level of illegal parking is considered "severe" if illegal parking is common in the vicinity of a development, whereas it is considered "none" if no such activity can generally be found in the vicinity of a development.

Table 2.2 GPS value based on GPSI

	GPS
GPSI≥0.7	4
0.4≤GPSI<0.7	5
0.2≤GPSI<0.4	6
GPSI<0.2	7

2.2 Based on the above tables, an assessment on the values of various factors have been carried out and summarized as follows:

Table 2.3 Adopted Values and Justifications

	Assessment	Adopted Values	Weighting
Proximity and convenience for access to public transport services (excluding rail)	There are over 60 routes of franchised bus, green minibus and public light bus services along Sha Tsui Road, Texaco Road, Yeung Uk Road, Luen Yan Street and Kwan Mun Hau Street in the vicinity of the subject site in particular that there are bus stops next to the vehicular access of the subject site. Hence, the development site is considered to be moderately accessible to the public transport services. The location of bus stops and minibus stops are presented in **Figure 2.1**.	0.25	20%
Availability of public car parking spaces during peak hours	There are several on-street public carpark provided at Fui Yui Kok Street, Tsuen Kwai Street and Tseun Wing Street, which are in close proximity to the development site. Additionally, there are numerous other parking facilities in the vicinity of the subject development. According to the survey, there are approx. 25% of public car parking spaces available during the peak hours. Therefore, the public parking spaces are considered to be quite available for the Subject Development. The location plan of on-street public carpark as well as the car parking is enclosed in **Figure 2.2** for information.	0.25	30%
Traffic conditions	The nearby critical junctions in the vicinity have been assessed in the submitted TIA. All the assessed junctions will operate within capacity. Hence, the traffic conditions is considered to be quite congested.	0.25	10%
Level of illegal parking	An overnight parking survey has been carried out in the vicinity of the development site. There are 3 nos. of private cars were observed near Wang Wo Tsai Street, Kwu Hang Road, Sha Tsui Road and Yeung Uk Road around the development site. Hence, the level of illegal parking in the vicinity is considered to be moderately severe. The summary plan of illegal parking is enclosed in **Figure 2.3**.	0.5	40%

2.3 Based on the above assessment and the adopted values for respective factors, the GPSI is determined as 0.35 (i.e. 0.25 x 20% + 0.25 x 30% + 0.25 x 10% + 0.5 x 40%), which is less than 0.4. Referring to **Table 2.2**, a GPS of 6 would be adopted.

3 Conclusion

3.1 Having review the various factors for determining the GPS for the Proposed Development, it is concluded that a GPS of 6 would be appropriate for calculating the carparking provision at the Proposed Development according to HKPSG requirements.

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

LEGEND:

SUBJECT SITE

EXISTING GMB STOP

EXISTING BUS STOP

GMB ROUTE NO.
83A, 86, 86A, 313

BUS ROUTE NO.
31, 34, 36, 43, 930, 930X, 933, E31, E32A, N31

GMB ROUTE NO.
83A, 86, 86A

BUS ROUTE NO.
30, 31, 34, 43, 235, 930X, E31, E32A, N31

BUS ROUTE NO.
33, 33B, 36, 49A, 243M

BUS ROUTE NO.
30, 31, 34, 36, 43, 49A, 235, 930, E31, E32A, N31

GMB ROUTE NO.
312

GMB ROUTE NO.
83A, 86, 86A, 313

SHA TSUI ROAD

TEXACO ROAD

BUS ROUTE NO.
30, 31, 33B, 39A, 49A, 238M, 243M, 243P

GMB ROUTE NO.
83A, 86, 86A, 302, 313

GMB ROUTE NO.
809

GMB ROUTE NO.
401

BUS ROUTE NO.
34, 36, 43, 49A, 243M, 243P, 930, N31

GMB ROUTE NO.
87, 93, 93A, 401

GMB ROUTE NO.
83A, 86, 86A, 89, 89A, 89B, 98

GMB ROUTE NO.
91, 93, 93A

BUS ROUTE NO.
32H, 33, 33B, 243M, 930X, A31, NA31

GMB ROUTE NO.
409, 409K, 409S

GMB ROUTE NO.
87

LUEN YAM STREET

BUS ROUTE NO.
32H, 33, 33B, 38A, 38B, 39A, 238M, 930, 930X, 933, A31, NA31

YEUNG UK ROAD

BUS ROUTE NO.
30X, 32H, 33A, 41M, 42M, 49X, 73P, 243M, 930A, R42

GMB ROUTE NO.
87, 87K, 89, 89A, 91, 93, 93A, 98, 409K

BUS ROUTE NO.
30X, 32H, 33A, 41M, 42M, 49X, 73P, 930A, R42

GMB ROUTE NO.
87, 87K, 91, 93, 93A

GMB ROUTE NO.
401, 99

BUS ROUTE NO.
33, 33B, 38A, 38B, 238M, A31, NA31

MA TAU PA ROAD

BUS ROUTE NO.
930X, 933, N930

GMB ROUTE NO.
401, 99

KWAI FUK ROAD

Plot File by: chancwa 11/12/2024
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60610695\TM3\FIGURE 2.1.dgn

AECOM

PROJECT
項目

PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT IN "CDA(3)" ZONE, WANG WO TSAI STREET / SHA TSUI ROAD, TSUEN WAN

CLIENT
業主

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核

STATUS
階段

SCALE 比例
A3 1 : 2000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

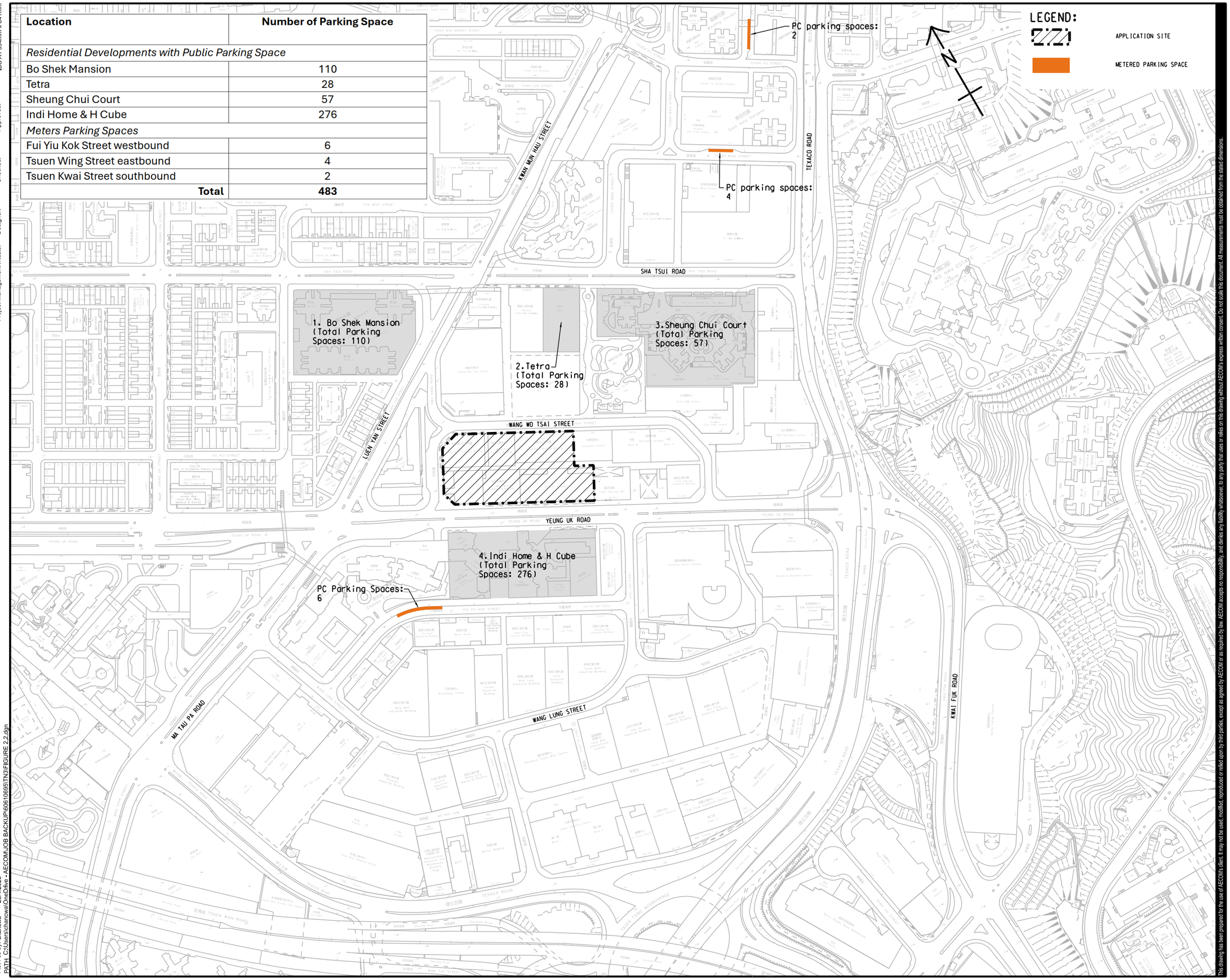
PROJECT NO. 項目編號
60610695

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
EXISTING PUBLIC TRANSPORT FACILITIES

SHEET NUMBER
圖紙編號
FIGURE 2.1

Location	Number of Parking Space
Residential Developments with Public Parking Space	
Bo Shek Mansion	110
Tetra	28
Sheung Chui Court	57
Indi Home & H Cube	276
Meters Parking Spaces	
Fui Yiu Kok Street westbound	6
Tsuen Wing Street eastbound	4
Tsuen Kwai Street southbound	2
Total	**483**



ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

Plot File by: chancwa 23/1/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60610695\TN3\FIGURE 2.2.dgn

AECOM

PROJECT 項目

PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT IN "CDA(3)" ZONE, WANG WO TSAI STREET / SHA TSUI ROAD, TSUEN WAN

CLIENT 客戶

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核

STATUS 圖紙

SCALE 比例
A3 1 : 3000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號
60610695

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱
LOCATION PLAN FOR PUBLIC CARPARKING SPACES

SHEET NUMBER 圖紙編號
FIGURE 2.2

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

LEGEND:

OBSERVED ILLEGAL PARKING DURING NIGHT TIME PERIOD

N

SUBJECT SITE

WIP Oct 2023

LUEN YAN STREET 麟欣街

KWU HANG ROAD 古洞路

WANG WO TSAI STREET 橫窩仔街

YEUNG UK ROAD 楊屋道

FUK YIU KOK STREET 福耀谷街

SHA TSUI ROAD 沙咀道

Podium (Car Park under)

Yan Chai Hospital 仁濟醫院

NTE/TW/ShaTsu-15

第3座 Block 3

Basketball Court

RCP

石廈村 Shek Pik San Tsuen

全發商業大廈 Fortune Commercial Building

萬象工業大廈 Bonsun Industrial Building

形方 Tetra

橫窩仔街1號 1 Wang Wo Tsai Street

平台 Podium

Wing Shun Street 永順街

NTE/TW/LueYan-01

至福居 Tsuen Fook Kui

8 pm-8 am 下午八時至上午八時 N-TS900

利興強中心 Leahander Centre

B座 Block B

海林大廈 A座 Block A Harrington Building

露天貨倉 Open Storage

東昌工業大廈 Tung Cheong Industrial Building

信豐工業大廈 Symphone Industrial Building

永得利中心 Ever Gain Centre

五方集團中心 ADP Pentagon Centre

樂悠居 Indi Home

富利工業大廈 Richwealth Industrial Building

細球場

橫窩仔街公園 Wang Wo Tsai Street Garden

New Haven

第一座 Tower 1

第二座 Tower 2

平台 (下層停車場)

翠湖閣 Chui Wo House

翠雲閣 Chui Wun House

尚翠苑 Sheung Chui Court

翠頂閣 Chui Ting House

長者日間護理中心 Day Care Centre For The Elderly

道路

斜路

NTE/TW/YeuUK-12

Plot File by: chanova 11/12/2024
PATH: C:\Users\chanova\OneDrive - AECOM\JOB BACKUP\60610695\TN3\FIGURE 2.3.dgn

AECOM

PROJECT 項目

PROPOSED COMPREHENSIVE RESIDENTIAL DEVELOPMENT IN "CDA(3)" ZONE, WANG WO TSAI STREET / SHA TSUI ROAD, TSUEN WAN

CLIENT 業主

CONSULTANT 工程顧問公司

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ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核

STATUS 階段

SCALE 比例
A3 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號
60610695

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱
REVIEW ON LLLEGAL PARKING DURING NIGHT-TIME PERIOD

SHEET NUMBER 圖紙編號
FIGURE 2.3

ANNEX A

Size of each residential unit	**Number of the residential parking spaces to be provided under this sub-clause (a)(i)**
Less than 40 square metres	One space for every 15.6 residential units or part thereof
Not less than 40 square metres but less than 70 square metres	One space for every 6.5 residential units or part thereof
Not less than 70 square metres but less than 100 square metres	One space for every 3.2 residential units or part thereof
Not less than 100 square metres but less than 130 square metres	One space for every 1.9 residential units or part thereof
Not less than 130 square metres but less than 160 square metres	One space for every 1.4 residential units or part thereof
Not less than 160 square metres	One space for every 1.1 residential units or part thereof

The spaces to be provided under this sub-clause (a)(i) (as may be varied under Special Condition No. 50 hereof) are hereinafter referred to as "the Residential Parking Spaces".

(ii) For the purpose of sub-clause (a)(i) of this Special Condition, the total number of the Residential Parking Spaces to be provided shall be the aggregate of the respective number of the Residential Parking Spaces calculated by reference to the respective size of each residential unit in terms of gross floor area as set out in the table of sub-clause (a)(i) of this Special Condition and for the purpose of these Conditions, the term "size of each residential unit in terms of gross floor area" shall mean the sum of (I) and (II) below:–

(I) the gross floor area of a residential unit exclusively used and enjoyed by the resident of that unit, which shall be measured from the exterior of the enclosing walls or parapet of such unit except where such enclosing walls separate two adjoining units in which case the measurement shall be taken from the middle of those walls, and shall include the internal partitions and columns within such unit, but, for the avoidance of doubt, shall exclude all floor area within such unit which is not taken into account for the calculation of gross floor area stipulated in Special Condition No. 34(a) hereof; and

(II) the pro-rata gross floor area of the Residential Common Area (as hereinafter defined) in respect of a residential unit, and in so calculating, the total gross floor area of residential common area, which is for common use and benefit of the residents of the residential block or blocks erected or to be erected on the lot, outside the enclosing walls of the residential units but, for the avoidance of doubt, excluding all floor area which is not taken into account for the

RtoC Appendix A