

Appendix II

Traffic Impact Assessment

**S16 Planning Application for Renewal of Temporary
Concrete Batching Plant at Tsing Yi Town Lot 98,
Nos. 14-18 Tsing Tim Street, Tsing Yi
For a Period of 5 Years**

Traffic Impact Assessment

Final Report

June 2026



CTA Consultants Limited
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1. INTRODUCTION

1.1 Background

1.1.1 The subject site is situated at Tsing Yi Town Lot No. 98, Nos. 14-18 Tsing Tim Street, Tsing Yi. The planning application of the concrete batching plant had been approved on 24/09/2021 (Approved Planning Application no.: A/TY/145). The plant is currently operating and the planning permission will be expired on 15.10.2026. In this connection, a section 16 planning application for a temporary period of 5 years up to 2031 is submitted to avoid adverse impact caused to the continuous operation of the Use.

1.1.2 CTA Consultants Limited (CTA) is commissioned to undertake a Traffic Impact Assessment (TIA) study for assessing the traffic impact and to propose any feasible measures if necessary.

1.2 Study Objectives

1.2.1 The main objectives of this study are as follows:

- to carry out a traffic impact assessment to identify the acceptability of the concrete batching plant in traffic terms;
- to assess the existing traffic conditions in the vicinity of the plant;
- to forecast traffic demands in the adjacent road network in the design year 2031;
- to assess the impacts of traffic generated by the adjacent new developments in the road network; and
- to propose any traffic improvement measures for alleviating any foreseeable traffic problems if necessary.



1.3 Structure of the Report

1.3.1 Following this introductory chapter, there are SIX further chapters.

- **Chapter 2 – THE DEVELOPMENT**, which presents the site location, layout and production information of the concrete batching plant.
- **Chapter 3 – EXISTING TRAFFIC CONDITION**, which describes the existing local road network, in the vicinity of Study Area, presents a summary of the traffic count survey and assesses the existing traffic conditions.
- **Chapter 4 – THE FUTURE TRAFFIC CONDITIONS**, which estimates the future traffic flows on the surrounding road network.
- **Chapter 5 – TRAFFIC IMPACT ASSESSMENT**, which discusses the methodology for the future traffic forecasts.
- **Chapter 6 – SUMMARY AND CONCLUSION**, which summarizes the findings of the study and presents the conclusions regarding the traffic issues associated with the plant.

2. THE PROPOSED DEVELOPMENT

2.1 Site Location

2.2.1 The concrete batching plant is located at Tsing Yi Town Lot No. 98, Nos. 14-18 Tsing Tim Street, Tsing Yi., which is illustrated diagrammatically in **Figure 1.1**. The development is located at the western seaside of Tsing Yi, which can only be accessed by Sai Tso Wan Road.

2.2 Development Proposal

2.2.2 The layout of the existing plant is illustrated diagrammatically in **Figure 2.1**.

2.2.3 The planning approval for the existing concrete batching plant is scheduled to be renewed from 15.10.2026 to another 5 years to 2031.

2.2.4 There is no material change in operational parameters since the previous temporary approval (A/TY/145) granted in 2021. The normal operation hours remain unchanged from 7:00am to 7:00pm, from Mondays to Saturdays and occasionally during night time and on Sundays/public holidays. The hourly maximum production capacity of the concrete batching plant is 88.8m³/hr.

2.3 Traffic Arrangement

2.3.1 The GFA of the concrete batching plant is not more than 980m².

2.3.2 The following types of parking spaces will be provided within the plant to facilitate the operation of the proposed Concrete Batching Plant:

- ◆ 9 nos. of Private Car Parking Spaces;
- ◆ 1 no. of Trailer Parking Space;
- ◆ 6 nos. of Parking Spaces for concrete mixer trucks; and
- ◆ 3 nos. of Loading/ Unloading Spaces (including 2 under the production bays)



3. EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Network

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

3.1.2 Tsing Yi Road West is a dual-2 district distributor connecting Sai Tso Wan Road with Tsing Tsuen Road. It serves as a major road link connecting Tsing Yi Town Centre to Tsing Yi west area.

3.1.3 Sai Tso Wan Road is a 2-lane local road connecting Sai Tso Wan area and Tsing Yi Road West/Tsing Yi Road. It is a major road link providing access to/from numerous sites in Sai Tso Wan area.

3.1.4 Tsing Tim Street is a 2-lane Local Road branching off from Sai Tso Wan Road. It serves as a road link providing access between proposed plant and other development sites along Tsing Tim Street with Sai Tso Wan Road.

3.2 Critical Junctions

3.2.1 In order to establish the existing traffic condition in the vicinity, traffic survey in the forms of manual classification counts was conducted at 24 critical junctions. The location of the surveyed junctions is indicated in **Figure 3.1** and their existing junction layout arrangements are given in **Figures 3.2 to 3.25** respectively.



Table 3.1 Identified Critical Junctions

Ref.	Junction	Type	Figure No.
J1	Cheung Tsing Highway / Tsing Yi Road West	Signalized	3.2
J2	Tsing Yi Road / Tsing Yi Hong Wan Road / Tsing Sha Highway	Signalized	3.3
J3	Tsing Sheung Road / Tsing Yi Road Priority	Priority	3.4
J4	Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West	Signalized	3.5
J5	Entrance of VEC / Sai Tso Wan Road	Signalized	3.6
J6	Tsing Tim Street / Sai Tso Wan Road	Priority	3.7
J7	Tsing Yi Road West / Tsing Chin Street*	Priority	3.8
J8	Tsing Yi Road West / Ching Hong Road	Signalized	3.9
J9	Tsing Yi Road West / Liu To Road	Signalized	3.10
J10	Tsing Yi Road West / Fung Shue Wo Road	Signalized	3.11
J11	Tsing Yi Heung Sze Wui Road / Cheung Wan Street	Signalized	3.12
J12	Tsing Yi Heung Sze Wui Road / Chung Mei Road	Signalized	3.13
J13	Tsing Yi Road / Tsing Keung Street	Priority	3.14
J14	Tsing Yi Road / Planned New Road ⁽³⁾	Signalized	3.15
RA1	Tsing Yi Interchange	Roundabout	3.16
RA2	Tsing Yi Road West / Tsing Yi Hong Wan Road / Tsing Sha Highway	Roundabout	3.17
RA3	Tsing Yi Hong Wan Road	Roundabout	3.18
RA4	Hong Wan Road / Tsing Ko Road	Roundabout	3.19
RA5	Tam Kon Shan Interchange	Roundabout	3.20
RA6	Tsing Yi Heung Sze Wui Road / Fung Shue Wo Road / Tsing King Road	Roundabout	3.21
RA7	Tsing Sheung Road / Tsing Yi Hong Wan Road	Roundabout	3.22
RA8	Ching Hong Road / Tsing Yi Road	Roundabout	3.23
RA9	Tam Kon Shan Road / Tsing Yi North Costal Road	Roundabout	3.24
RA10	Tsing Ko Road / Tsing Sheung Road	Roundabout	3.25



- 3.2.2 Surveys had been conducted during the morning, logistic and evening peak periods of on 11 June 2026. The surveys provide details of the traffic situation in the nearby area. Based on surveyed traffic flows, it was found that the AM, logistic and PM peak hour occurred from 08:30 to 09:30, 11:15 to 12:15 and 17:30 to 18:30 respectively. The results of the observed traffic flows are presented in **Figure 3.26**.
- 3.2.3 Based on the observed traffic flows in **Figure 3.26**, the junction capacity assessments have been carried out and the existing operational performance of the critical junctions is listed in **Table 3.2** below.



Table 3.2 Existing Operational Performance of Identified Critical Junctions in 2026

Ref.	Junction	Method of Control	Year 2026 Observed Case		
			RC/RFC ⁽¹⁾		
			AM Peak	Logistic Peak	PM Peak
J1	Cheung Tsing Highway / Tsing Yi Road West	Signalized	46%	42%	121%
J2	Tsing Yi Road / Tsing Yi Hong Wan Road / Tsing Sha Highway	Signalized	137%	141%	225%
J3	Tsing Sheung Road / Tsing Yi Road Priority	Priority	0.36	0.33	0.38
J4	Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West	Signalized	64%	34%	149%
J5	Entrance of VEC / Sai Tso Wan Road	Signalized	138%	188%	92%
J6	Tsing Tim Street / Sai Tso Wan Road	Priority	0.25	0.24	0.17
J7	Tsing Yi Road West / Tsing Chin Street ⁽²⁾	Priority	-	-	-
J8	Tsing Yi Road West / Ching Hong Road	Signalized	89%	85%	120%
J9	Tsing Yi Road West / Liu To Road	Signalized	24%	60%	37%
J10	Tsing Yi Road West / Fung Shue Wo Road	Signalized	38%	61%	53%
J11	Tsing Yi Heung Sze Wui Road / Cheung Wan Street	Signalized	16%	8%	37%
J12	Tsing Yi Heung Sze Wui Road / Chung Mei Road	Signalized	48%	131%	77%
J13	Tsing Yi Road / Tsing Keung Street	Priority	0.32	0.25	0.13
J14	Tsing Yi Road / Planned New Road	Signalized	139%	152%	223%
RA1	Tsing Yi Interchange (North)	Roundabout	0.77	0.58	0.56
	Tsing Yi Interchange (South)	Roundabout	0.70	0.47	0.58
RA2	Tsing Yi Road West / Tsing Yi Hong Wan Road / Tsing Sha Highway	Roundabout	0.41	0.34	0.36
RA3	Tsing Yi Hong Wan Road	Roundabout	0.46	0.41	0.43
RA4	Hong Wan Road / Tsing Ko Road	Roundabout	0.31	0.28	0.30
RA5	Tam Kon Shan Interchange	Roundabout	0.42	0.37	0.38
RA6	Tsing Yi Heung Sze Wui Road / Fung Shue Wo Road / Tsing King Road	Roundabout	0.49	0.39	0.54
RA7	Tsing Sheung Road / Tsing Yi Hong Wan Road	Roundabout	0.09	0.10	0.11
RA8	Ching Hong Road / Tsing Yi Road	Roundabout	0.34	0.25	0.24
RA9	Tam Kon Shan Road / Tsing Yi North Costal Road	Roundabout	0.10	0.12	0.07
RA10	Tsing Ko Road / Tsing Sheung Road	Roundabout	0.18	0.17	0.19

Note: (1) RC = Reserve Capacity; RFC = Ratio of Flow to Capacity for Priority Junction

(2) Only ingress traffic is allowed on Tsing Chin Street. No traffic conflicts or delay is expected in this location. Therefore, no junction assessment is required.



3.2.1 The results in **Table 3.2** show that the junctions are now operating with ample capacities in peak hours except J11.

3.3 Public Transport Services in the Vicinity

3.3.1 Limited road-based public transport services are currently operating in the vicinity of the plant. Only one GMB route is operating close to the plant (within 500m radius from the plant) and the details of the GMB route are presented in **Table 3.3** below.

Table 3.3 Existing Road-based Public Transport Services in the Vicinity

Service	Route	Origin - Destination	Frequency (min)
GMB	88M	Kwai Fong Station – Sai Tso Wan Road (Hong Kong Unit Dockyard)	5 – 15



4. THE FUTURE TRAFFIC CONDITIONS

4.1 Design year

4.1.1 The concrete batching plant is currently operating. The applicant intends to apply for 5-years operation period, i.e. until 2031. Therefore, the design year of 2031 is adopted for this study.

4.2 Design Traffic Flows

4.2.1 To estimate the 2031 traffic flows in the local road network, an appropriate growth factor has to be identified for the area in the first instance based on historical trend and planning data.

Historical Trend

4.2.2 Transport Department has traffic count stations in the vicinity of the proposed development. The traffic counts reported in the Annual Traffic Census (ATC) over a period of 5 years, between 2018 and 2024 are summarized in **Table 4.1**.

Table 4.1 Historical Traffic Data from Annual Traffic Census

ATC Stn	Road Name	Annual Average Daily Traffic (AADT)							Avg. Annual Growth Rate
		2018	2019	2020	2021	2022	2023	2024	
5312	Tsing Sha Highway near Tsing Yi Road Expressway (Tsing Sha Highway Nr Stonecutters Bridge - Roundabout Nr Tsing Yi Rd)	15,920	14,750	12,580*	12,220*	11,790*	14,260	14,820	-1.19%
5655	Ching Hong Road Local Distributor (Tsing Yi Rd W - Chung Mei Rd)	12,820*	12,770*	12,420	13,360	13,230*	13,680*	13,880	1.33%
5849	Tsing Yi Rd W (Tsing Nam St - Ching Hong Road)	15,640*	15,580*	15,430*	13,690	15,820	16,350*	16,590	0.99%
6113	Tsing Yi Road (Tsing Yi Rd nr. Dow Chemical - Tsing Yi Hong Wan Rd)	11,720	11,680*	11,570*	12,020*	11,520	13,250	13,440	2.31%
6643	Sai Tso Wan Road (Tsing Yi Rd-Dockyard Front Gate)	10,030	8,390	8,960	9,410	11,200	10,200	11,330	2.05%
Total		66,130	63,170	60,960	60,700	63,560	67,740	70,060	0.97%

*AADT estimated by Growth Factor

- 4.2.1 As shown in **Table 4.1**, the average annual traffic growth pattern in the vicinity of the development shows a growth trend of +0.97% per year.

2021-Based TPEDM planning data

- 4.2.2 Reference has also been made to the latest 2021-Based Territorial Population Employment Data Matrices (TPEDM) planning data published by the Planning Department for projection of population and employment within the study district. The average annual growth rates in terms of population and employment from 2021 to 2031 are tabulated in **Table 4.2**.

Table 4.2 2021-based Planning Data from 2026 to 2031

Kwai Tsing District			
Data	Year		Average Annual Growth Rate
	2026	2031	
Population	488,750	483,050	-0.23%
Employment	223,400	227,800	+0.39%
Total	712,150	710,850	<u>-0.04%</u>

- 4.2.3 From **Table 4.2**, it is found that the average annual growth rates of population and employment in Tsing Yi from year 2026 to 2031 are -0.04% per annum.

Adopted Growth Rate

- 4.2.3 A.A.D.T. of ATC indicates that the traffic flow of the local road network has an average annual growth rate of +0.97%.
- 4.2.4 Whilst, the planning data indicates that the population and employment of the study area are expected to grow with an average annual growth rate of -0.26% and +0.06% respectively.
- 4.2.5 As a conservative approach, annual growth rate +1.0% p.a. has been adopted for projecting traffic forecasts. It is deemed sufficient to allow for any unexpected future growth as a result of some changes in land use or development in the study area.



4.3 Planned / Committed Future Developments

- 4.3.1 There are numbers of planned/committed future developments in vicinity. The updated planning parameters are shown in **Table 4.3**. The locations of these future developments are shown in **Figure 4.1**.
- 4.3.2 The traffic trips generated from these planned/committed developments are estimated and shown in **Table 4.4**.
- 4.3.3 These traffic trips were assigned to the road network to obtain the reference traffic in the design year.



Table 4.3 Development Schedule of Planned Development at Vicinity

Ref.	Development Site / Planning Application No.	Use	Development Parameters	Completion Year
A	Ching Hong Road North Public Housing Development	Public Housing	Phase 3: 1680 units Phase 4: 770 units	2029 2030-31
			Retail: 2000m ² Social Welfare Facilities	2024 - 2029
B	Housing Development at Tsing Yi Road West	Public Housing	3,400 units	2034/35
C	Y/TY/2 - Tsing Yi Town Lot 80 and 108RP (Phase 1)	Private Housing	5,048 units	2028
	Y/TY/2 - Tsing Yi Town Lot 80 and 108RP (Phase 2)	Public Housing	4,704 units	2036
		Private Housing	5,323 units	2036
D	Multi-storey Complex for Container Storage and Cargo Handling at Tsing Hung Road (TYTL No.202)	Container Storage and Cargo Handling	Site area: 44,318 m ² Max. GFA: 227,836 m ²	2031
E	Tsing Yi – Lantau Link	Infrastructure	-	2033 (Construction traffic may occur at about 2027)
F	A/TY/152	Asphalt Plant	100 tonnes/hr	Under Operation
G	A/TY/147	Concrete Batching Plant	300m ³ /hr (240m ³ /hr as limited by SP License)	Under Operation
H	A/TY/148	Asphalt Plant	260 tonnes/hr (208 tones/hr as limited by SP License)	Under Operation
I	A/TY/149	Concrete Batching Plant	250 m ³ /hr	Under Operation
J	A/TY/151	Concrete Batching Plant	240 m ³ /hr	Under Operation

4.3.4 Y/TY/2 - Tsing Yi Town Lot 80 and 108RP (Ref. C) is still under planning application and not approved yet. Also, Housing Development at Tsing Yi Road West (Ref. B) is beyond our design year. Thus, they would not be included in this assessment. A/TY/147, A/TY/148, A/TY/149, A/TY/151 and A/TY/152 (Ref. F to J) are renewal applications which are already under operation and thus no new trips will be formed. The construction traffic of Tsing Yi – Lantau Link (Ref. E) is reviewed and considered. It would not give significant impact to the road network.

4.3.5 The trip generations and attractions of the adjacent development are summarized in **Table 4.4**.

Table 4.4 Estimated Traffic Generations of Planned Vicinity Development

Development Type	Average Flat Size m ²	Unit	Trip Rate			
			AM Peak		PM Peak	
			Gen.	Att.	Gen.	Att.
Public Rental	40	Pcu/hr/flat	0.0432	0.0326	0.0237	0.0301
Retail	-	pcu/hr/100 sqm GFA	0.2296	0.2434	0.3100	0.3563
Industrial	-	pcu/hr/100 sqm GFA	0.0926	0.1386	0.1350	0.1049
Developments			Trips (Pcu/hr)			
A	Ching Hong Road North Public Housing Development	Phase 3	73	55	40	51
		Phase 4	33	25	18	23
		Retail	5	5	6	7
		Kindergarten ⁽¹⁾	30	30	30	30
		Social Welfare Facilities ⁽²⁾	10	10	10	10
D	Multi-storey Complex for Container Storage and Cargo Handling at Tsing Hung Road (TYTL No.202)		211	316	308	239
E	Tsing Yi – Lantau Link Construction Vehicles ⁽³⁾		15	15	15	15

Note: (1) Reference from other public housing TIA reports (Sheung Shui Area 4 and 30)

(2) Nominal Trips

(3) Assume 1 construction vehicle per 10 min per bound, i.e. 6 veh/hr. For 2.5 pcu factor, 15 pcu/h.

4.2.4 The locations of planned developments in the vicinity are shown diagrammatically in **Figure 4.1**.

4.3.6 The 2031 reference flows are then derived by applying the annual growth rate plus the additional traffic generations of the developments in Tsing Yi.

$$\begin{array}{ccccccc} \text{2031} & & & & \text{Adopted Growth} & & \text{Traffic Flows of} \\ \text{Reference Flows} & = & \text{2026} & \times & \text{Factor} & + & \text{Proposed} \\ \text{(without the} & & \text{Observed} & & \text{(i.e. +1\% p.a. for} & & \text{Developments at} \\ \text{Plant)} & & \text{Flows} & & \text{5 years)} & & \text{Tsing Yi} \end{array}$$

4.4 Development Traffic Flows

4.2.5 It is noted that this application is for the planning renewal only, the concrete plant is currently in operation, hence **no additional traffic** would be added to the road network by this plant under this application. Therefore, 2031 design flow are then directly derived by applying the annual growth rate plus the additional traffic generations of the adjacent developments.

$$\text{2031 Design Flows} = \text{2031 Reference Flows}$$

4.5 Planned Junction Improvement Scheme

4.5.1 Different planned junction improvement schemes will be carried out under different projects. They are summarized in **Table 4.5** below:



Table 4.5 Planned Junction Improvement Schemes

Ref.	Junction	Project Proponents	Target Completion Year	Figure No.
J2	Tsing Hung Road / Tsing Yi Road	Multi-storey Complex for Container Storage and Cargo Handling at Tsing Hung Road (TYTL No.202)	2031	4.2
J8	Tsing Yi Road West / Ching Hong Road	Tsing Yi Road West Public Housing Development	2029	4.3
J10 ⁽¹⁾	Tsing Yi Road West/ Fung Shue Wo Road	Ching Hong Road North Public Housing Development	2030/31	4.4
RA1 ⁽¹⁾	Tsing Yi Interchange (South)	Ching Hong Road North Public Housing Development	2030/31	4.5
RA2	Tsing Yi Road West / Tsing Yi Hong Wan Road / Tsing Sha Highway	Highways Department (PWP Item 6866TH)	Under Review (Original gazetted in 2019. Postponed due to COVID-19)	4.6

Notes: (1) Based on District Council discussion paper 7/D/2024 (PWP Item No.B839)

5. TRAFFIC IMPACT ASSESSMENT

5.1 Traffic Generation Calculation

5.1.1 As there is no change in the operation scale of the plant, no additional trips are generated. The traffic generation adopted in the approved TIA for the existing plant (A/TY/145) is summarized in **Table 5.1** below for reference:

Table 5.1 Adopted Hourly Traffic Generation of the Concrete Batching Plant

Types of Vehicles	Traffic Generation [veh/hr (pcu/hr)]					
	AM Peak		Noon Peak		PM Peak	
	Gen.	Att.	Gen.	Att.	Gen.	Att.
Concrete Mixer Truck	12 (30)	12 (30)	12 (30)	12 (30)	12 (30)	12 (30)
Aggregate Tipper Trucks	2 (5)	2 (5)	2 (5)	2 (5)	2 (5)	2 (5)
Cement Tanker	1 (2)	1 (2)	1 (2)	1 (2)	1 (2)	1 (2)
Private Car	0 (0)	2 (2)	1(1)	1(1)	2 (2)	0 (0)
Total	15 (37)	17 (39)	16 (38)	16 (38)	17 (39)	15 (37)
Maximum	Gen.			Att.		
	17 (39)			17 (39)		

Notes: (1) PCU factor of 2.5 has been adopted for HGV and concrete mixer.

(2) Assuming the concrete average carrying capacity of each concrete mixer truck is 7.4m³.

5.2 Operational Assessment

5.2.1 Based on the design traffic flows in **Figure 5.1**, a junction capacity assessment is carried out for the key junctions and the results of the assessment are summarized in **Table 5.2** below. The ingress and egress routes are shown in **Figure 5.2**.



Table 5.2 Junction Performance of Critical Junctions in Design Year 2031

Ref.	Junction	Method of Control	Year 2031 Design Case		
			RC/RFC ⁽¹⁾		
			AM Peak	Logistic Peak	PM Peak
J1	Cheung Tsing Highway / Tsing Yi Road West	Signalized	34%	30%	96%
J2	Tsing Yi Road / Tsing Yi Hong Wan Road / Tsing Sha Highway ⁽³⁾	Signalized	54%	73%	103%
J3	Tsing Sheung Road / Tsing Yi Road Priority	Priority	0.39	0.34	0.41
J4	Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West	Signalized	56%	28%	137%
J5	Entrance of VEC / Sai Tso Wan Road	Signalized	126%	175%	82%
J6	Tsing Tim Street / Sai Tso Wan Road	Priority	0.27	0.25	0.18
J7	Tsing Yi Road West / Tsing Chin Street ⁽²⁾	Priority	-	-	-
J8	Tsing Yi Road West / Ching Hong Road ⁽³⁾	Signalized	69%	66%	97%
J9	Tsing Yi Road West / Liu To Road	Signalized	18%	53%	30%
J10	Tsing Yi Road West / Fung Shue Wo Road ⁽³⁾	Signalized	68%	95%	87%
J11	Tsing Yi Heung Sze Wui Road / Cheung Wan Street	Signalized	<u>10%</u>	<u>3%</u>	30%
J12	Tsing Yi Heung Sze Wui Road / Chung Mei Road	Signalized	31%	95%	57%
J13	Tsing Yi Road / Tsing Keung Street	Priority	0.33	0.27	0.14
J14	Tsing Yi Road / Planned New Road	Signalized	127%	139%	207%
RA1	Tsing Yi Interchange (North)	Roundabout	0.82	0.62	0.59
	Tsing Yi Interchange (South) ⁽³⁾	Roundabout	0.50	0.40	0.41
RA2	Tsing Yi Road West / Tsing Yi Hong Wan Road / Tsing Sha Highway ⁽³⁾	Roundabout	0.50	0.40	0.39
RA3	Tsing Yi Hong Wan Road / Planned New Road	Roundabout	0.48	0.43	0.45
RA4	Hong Wan Road / Tsing Ko Road	Roundabout	0.32	0.29	0.32
RA5	Tam Kon Shan Interchange	Roundabout	0.44	0.40	0.40
RA6	Tsing Yi Heung Sze Wui Road / Fung Shue Wo Road / Tsing King Road	Roundabout	0.52	0.41	0.57
RA7	Tsing Sheung Road / Tsing Yi Hong Wan Road	Roundabout	0.10	0.10	0.12
RA8	Ching Hong Road / Tsing Yi Road	Roundabout	0.38	0.27	0.25
RA9	Tam Kon Shan Road / Tsing Yi North Coastal Road	Roundabout	0.11	0.13	0.08
RA10	Tsing Ko Road / Tsing Sheung Road	Roundabout	0.19	0.18	0.20

Note: (1) RC = Reserve Capacity; RFC = Ratio of Flow to Capacity for Priority Junction

(2) Only ingress traffic is allowed on Tsing Chin Street. No traffic conflicts or delay is expected in this location. Therefore, no junction assessment is required.

(3) Planned improvement scheme in Figures 4.2 to 4.6 were considered

- 5.2.2 Based on the assessment presented in **Table 5.2**, all junctions will be operating with ample capacities during design year except AM and logistic peak of J11.
- 5.2.3 It is revealed that J11 is already over its capacity at present. This is due to J11 is the only junction connecting to the industrial area along Cheung Wan Street/Cheung Tat Road/Cheung Fai Road. All the traffic are required to left turn from Tsing Yi Heung Sze Wui Road southbound to Cheung Wan Street and create a queue. Also, the weaving between the queue and the bus movement to/from the Greenfield Garden bus stop also worsen the situation.
- 5.2.4 According to DC paper 43/D/2024 and 54/2024, this issue was raised by DC members. TD responded that they will continue monitoring the traffic situation and study the feasibility of creating a new entrance road at Tsing Yi Road, if necessary.
- 5.2.5 As the concrete batching plant is already under operation for many years without affecting the public road and renewal applications of this plant has been applied and approved for many times. Also, the development parameter is no change under this renewal application, no additional traffic impact will be caused by the plant.

5.3 Traffic Management Plan

- 5.3.1 Detailed Traffic Management Plan will be formulated and submitted to Transport Department separately.



6. SUMMARY AND CONCLUSION

6.1 Summary

- 6.1.1 The Applicant would like to submit a S16 planning application for a 5-year renewal for the current concrete batching plant at Tsing Yi Town Lot No. 98, Nos. 14-18 Tsing Tim Street, Tsing Yi (Approved Planning Application no. A/TY/145)
- 6.1.2 CTA Consultants Ltd. (CTA) is therefore commissioned as traffic consultant to prepare the Traffic Impact Assessment (TIA) to support the planning application.
- 6.1.3 To appraise the existing traffic conditions, a traffic count survey was conducted in the surrounding road network of the proposed plant. Moreover, current operational performance of the critical junctions was assessed with the observed traffic flows. The operational assessment results revealed that all critical junctions are at present operating with adequate capacities except J11.
- 6.1.4 In order to assess the impact of the development related traffic on the local road network, the 5th year after the approval of renewal application of the plant (i.e. year 2031) has been adopted as the design year for this study.
- 6.1.5 To reveal the traffic impact of various proposed developments in the vicinity, traffic generations by the proposed developments in the vicinity have also been taken into consideration.
- 6.1.6 It is noted that the concrete plant is already operating currently, thus **no additional traffic** would be added to the road network by this plant under this application and 2031 design flows are the same as reference flows. It is noted that growth rate is also applied to the existing trips of the application plant as conservative approach.



- 6.1.7 All the assessed junctions will be operating with ample spare capacity in design year except AM and logistic peak of J11, but our plant is already under operation for many years without affecting the public road and renewal applications of this plant has been applied and approved for many times. Also, the development parameter is no change under this renewal application, no additional traffic impact will be caused by the plant and therefore would not worsen the case.

6.2 Conclusion

- 6.2.1 In conclusion, this Traffic Impact Assessment (TIA) has demonstrated that the application plant will not generate additional traffic to the surrounding road network and the junctions in vicinity would have ample capacities during design year 2031.
- 6.2.2 Hence, it is concluded that the renewal of the plant at the Application Site is acceptable from traffic engineering view point.

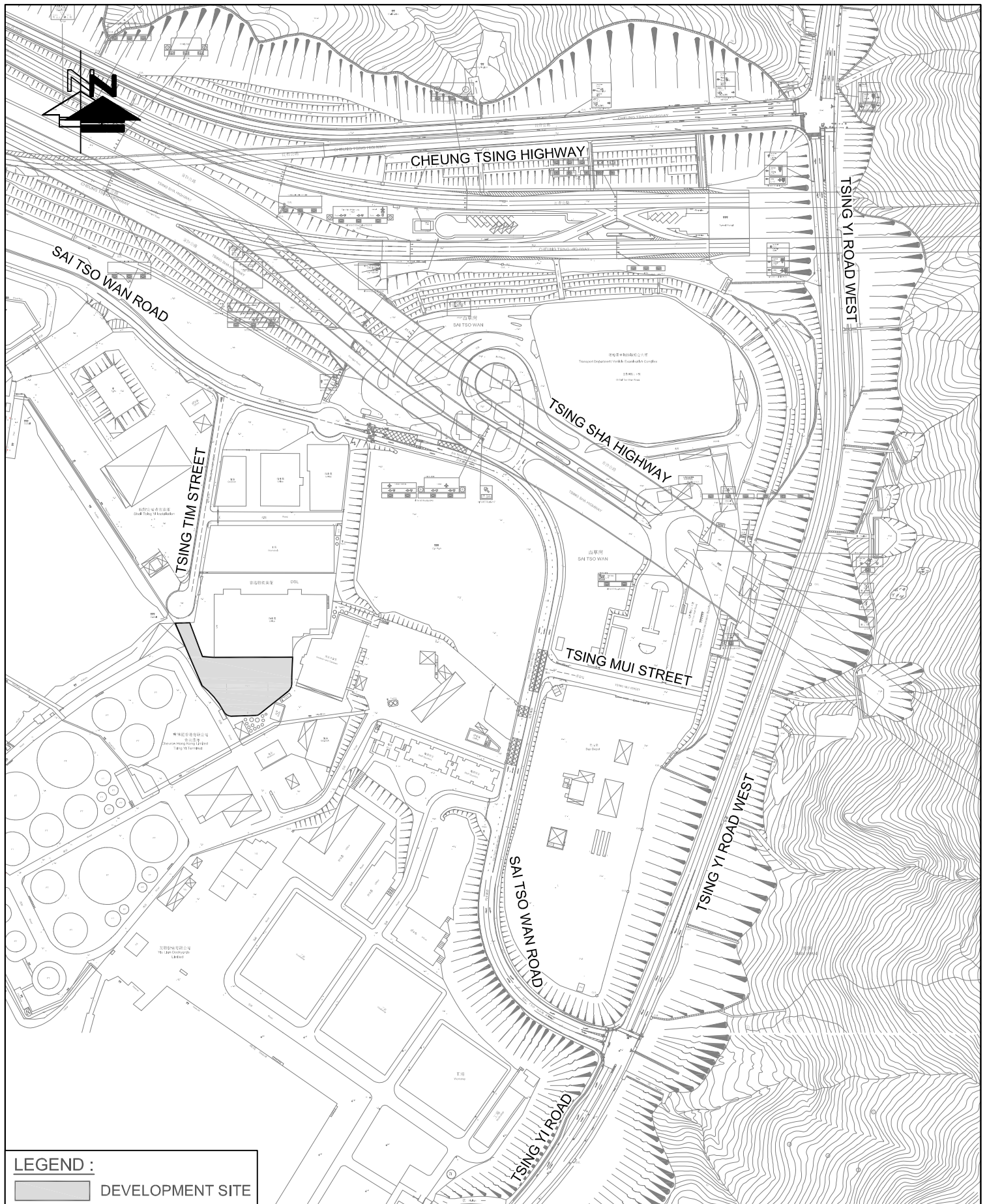


FIGURE NO.: 1.1	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	
PROJECT NO.: 26011HK SCALE: 1:4000 @A4	DRAWING TITLE: SITE LOCATION PLAN	
	DATE: 31 MAR 2026	 CTA Consultants Limited 志達顧問有限公司

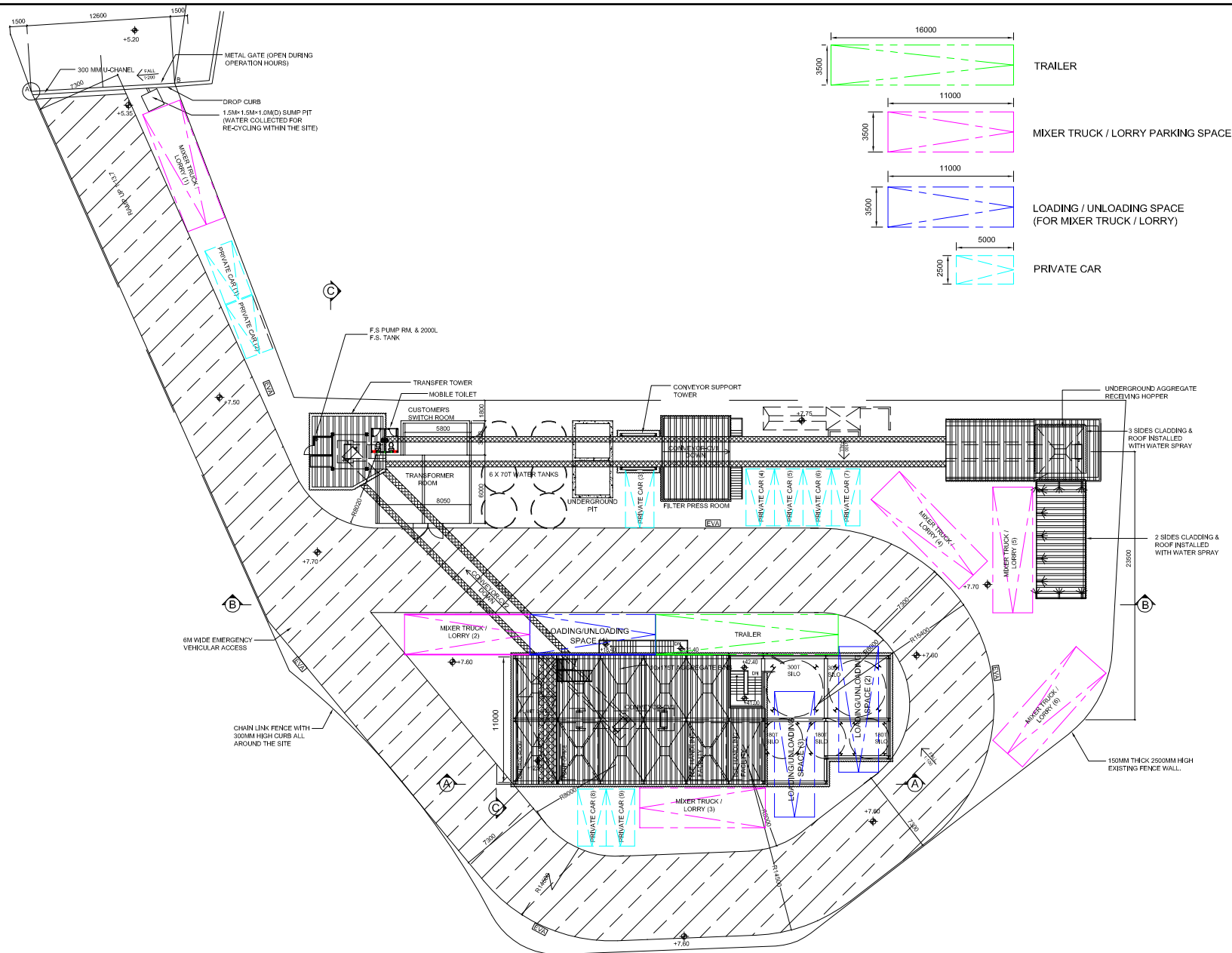


FIGURE NO.: 2.1	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING LAYOUT OF THE CONCRETE BATCHING PLANT	
SCALE: 1:500 @A4	DATE: 28 APR 2026	

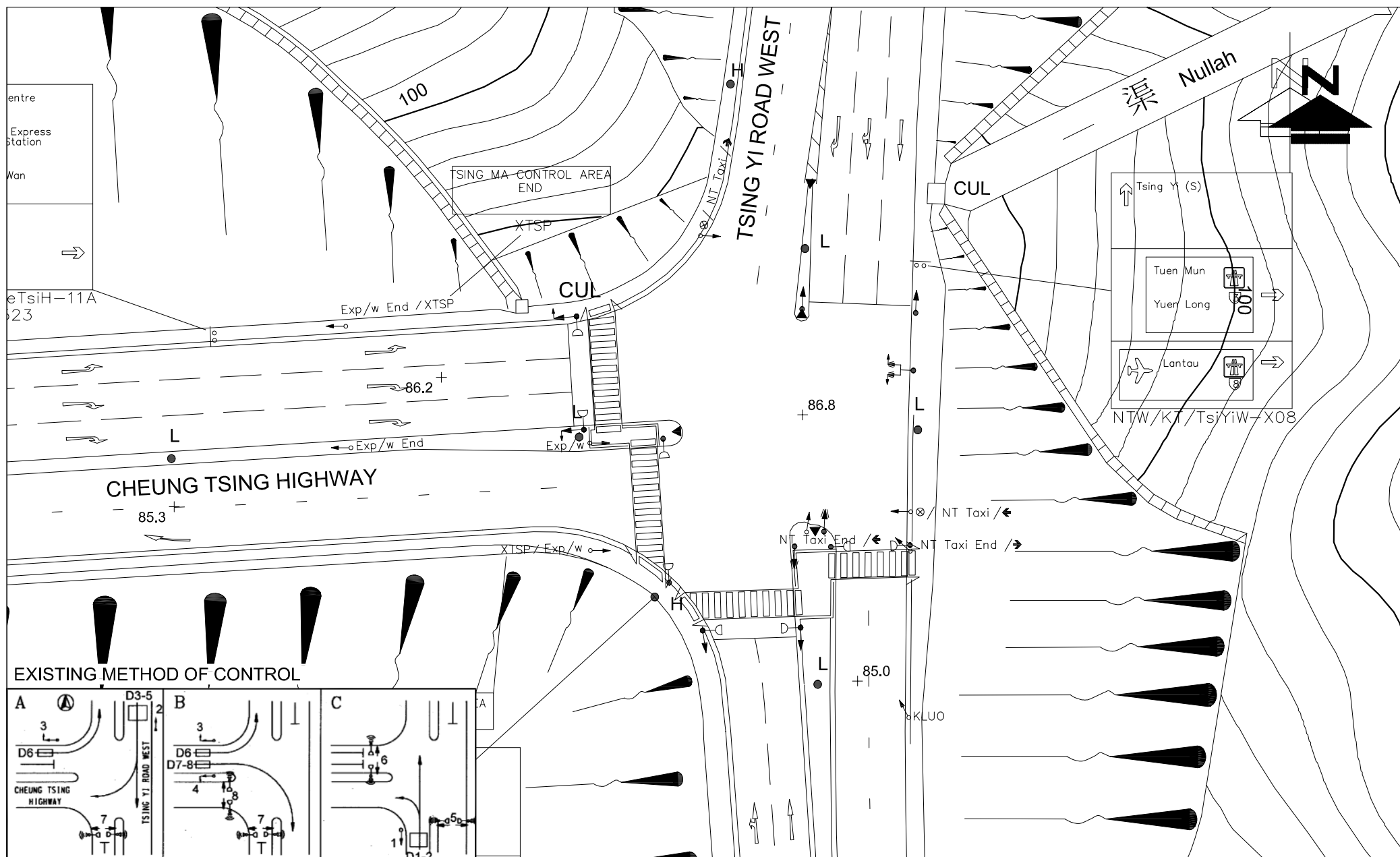


FIGURE NO.: 3.2	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING YI ROAD WEST / CHEUNG TSING HIGHWAY (J1)	
SCALE: 1 : 500 @A4	DATE: 08 JUN 2026	

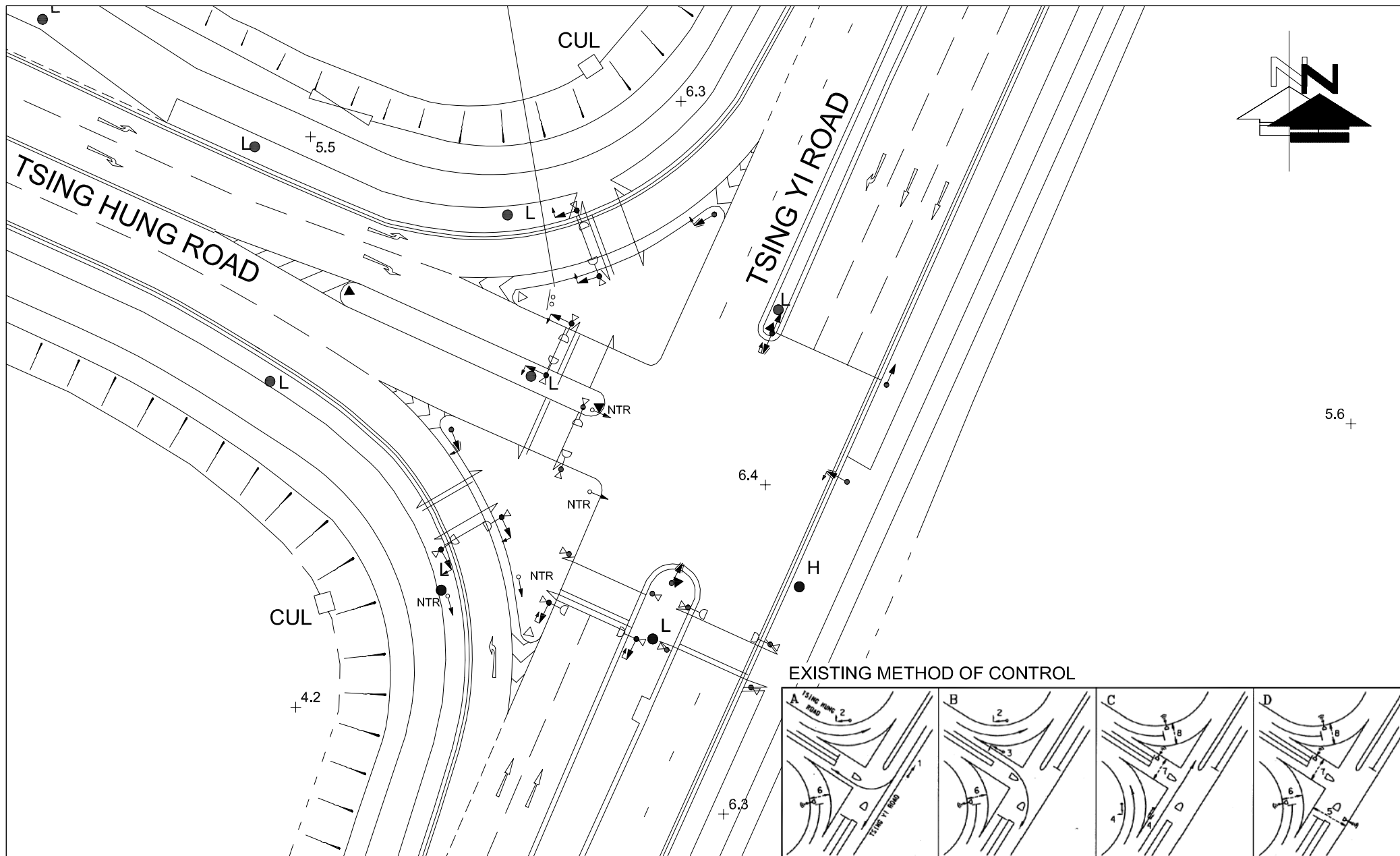


FIGURE NO.: 3.3	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING HUNG ROAD / TSING YI ROAD (J2)	
SCALE: 1 : 500 (IN A4 SIZE) DATE: 08 JUN 2026		

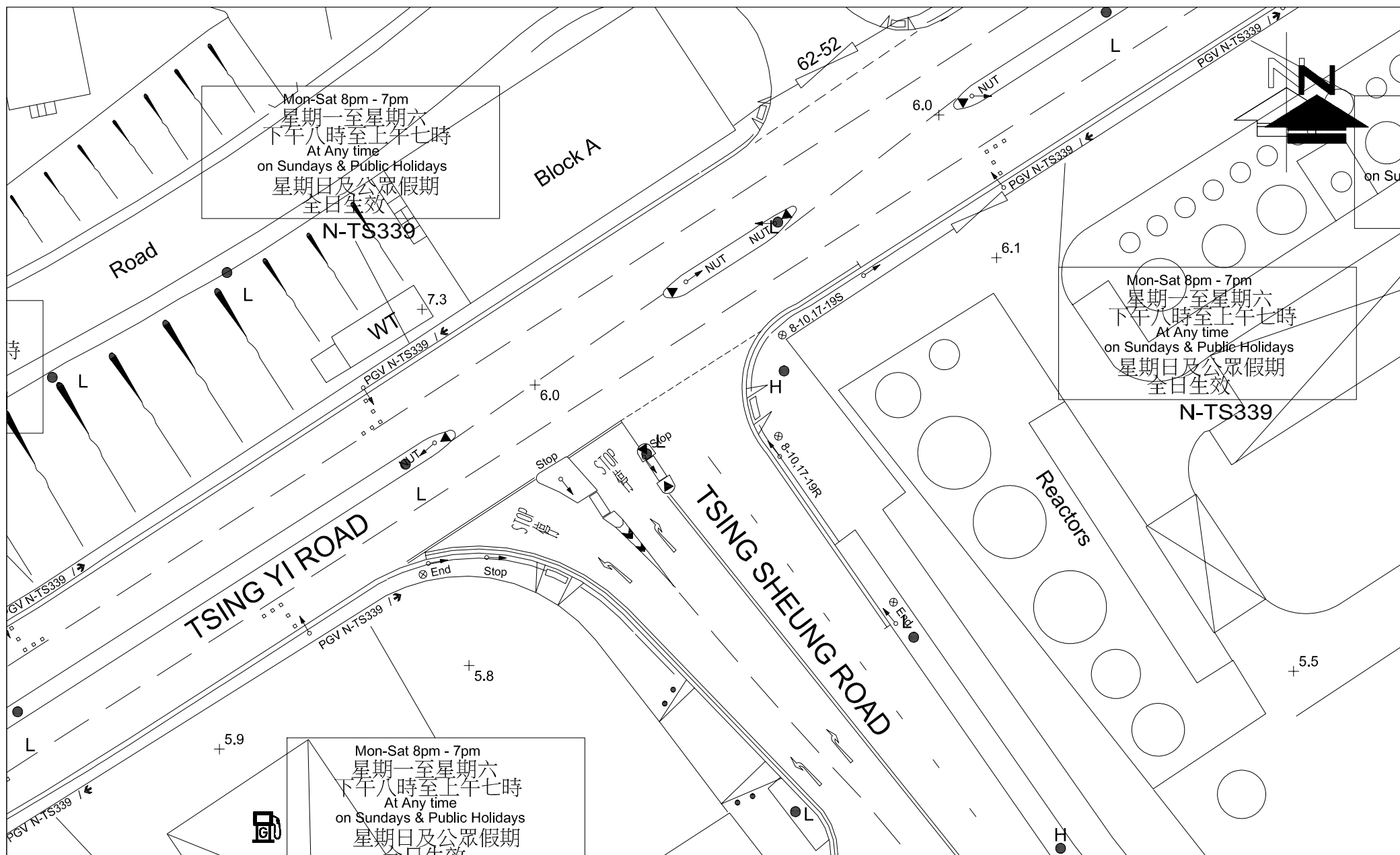
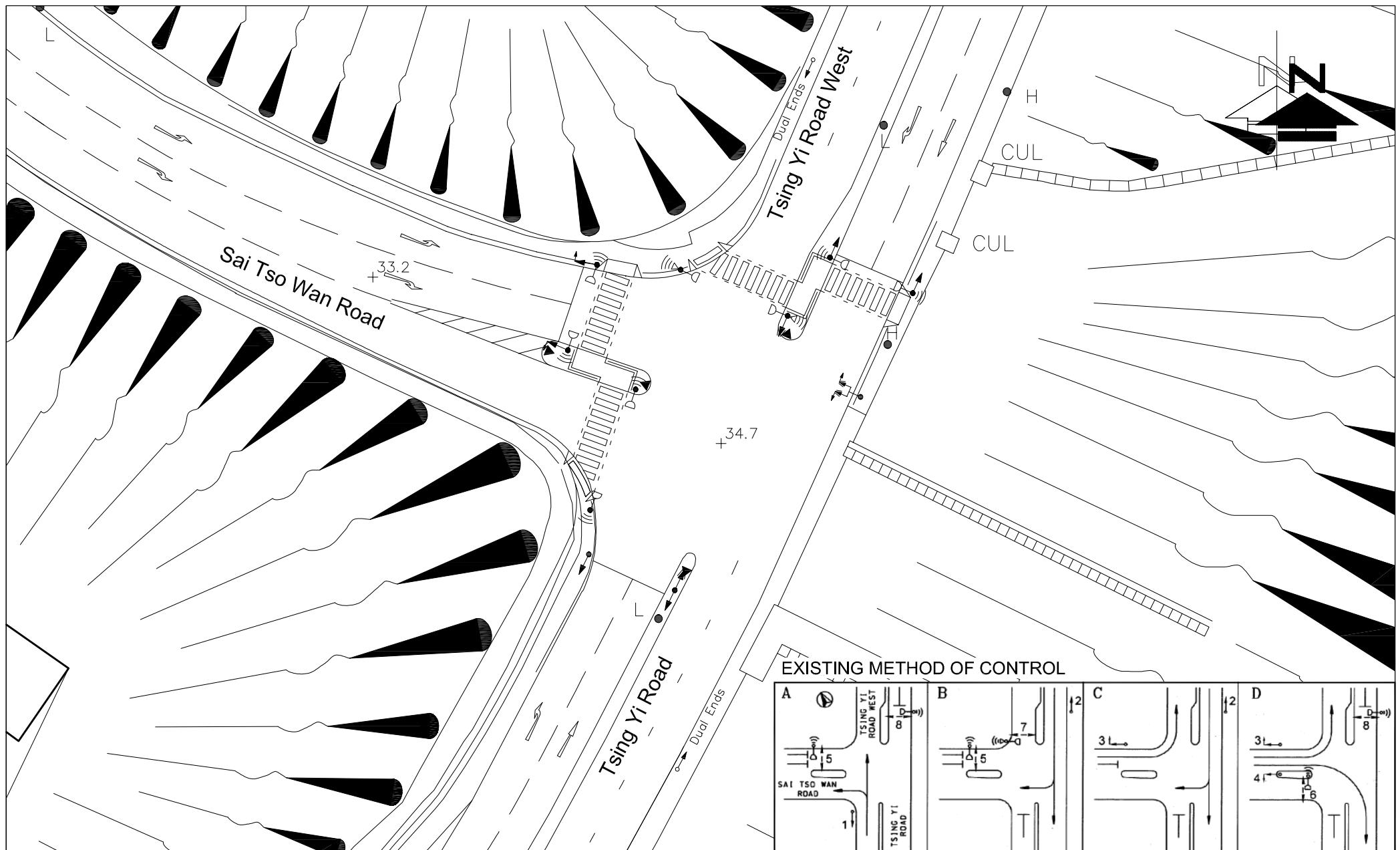


FIGURE NO.: 3.4	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING SHEUNG ROAD / TSING YI ROAD (J3)	
SCALE: 1 : 500 (IN A4 SIZE) DATE: 08 JUN 2026		



EXISTING METHOD OF CONTROL

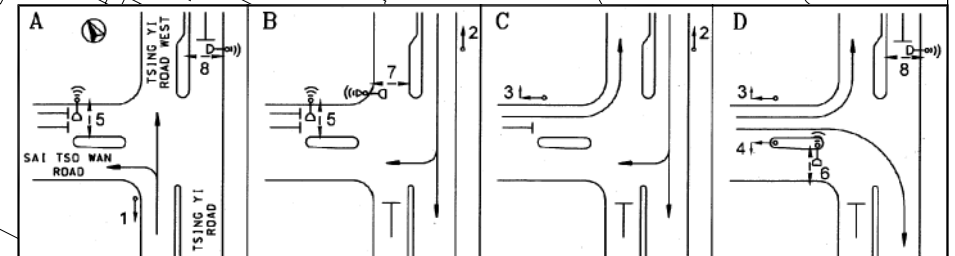
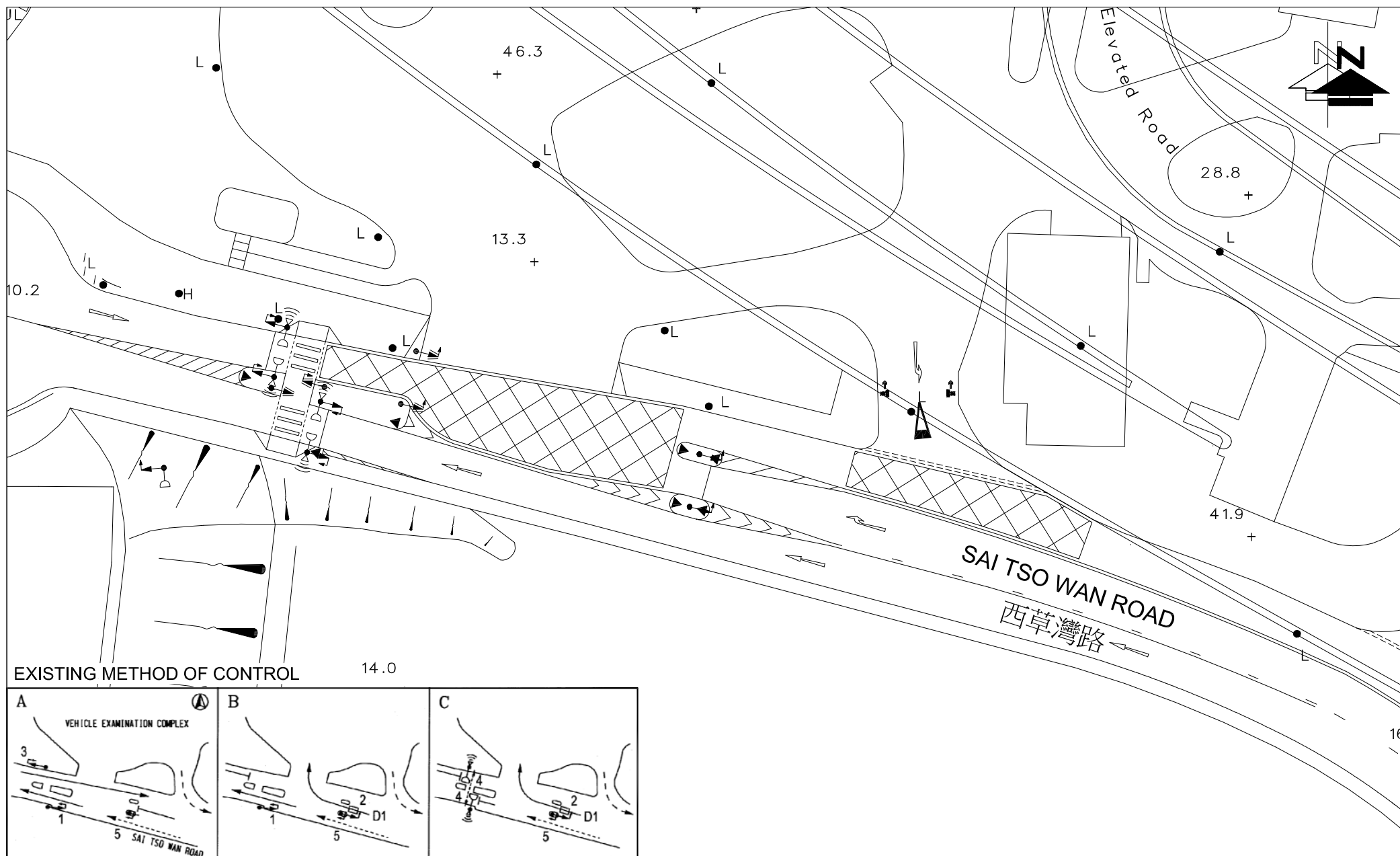


FIGURE NO.: 3.5		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF SAI TSO WAN ROAD / TSING YI ROAD WEST / TSING YI ROAD (J4)	
SCALE: 1 : 500 @A4	DATE: 08 JUN 2026		



EXISTING METHOD OF CONTROL

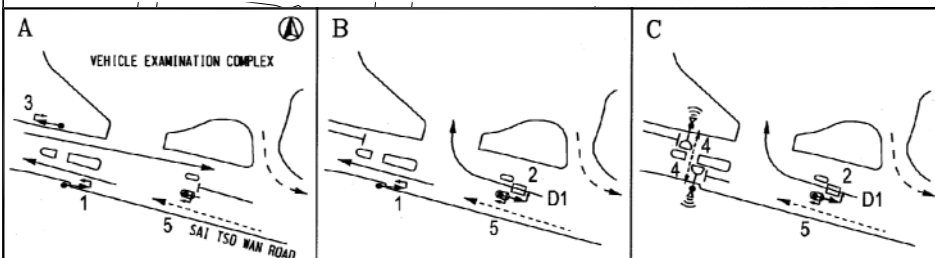


FIGURE NO.: 3.6	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF ENTRANCE OF VEC / SAI TSO ROAD (J5)	
SCALE: 1 : 500 @A4	DATE: 08 JUN 2026	

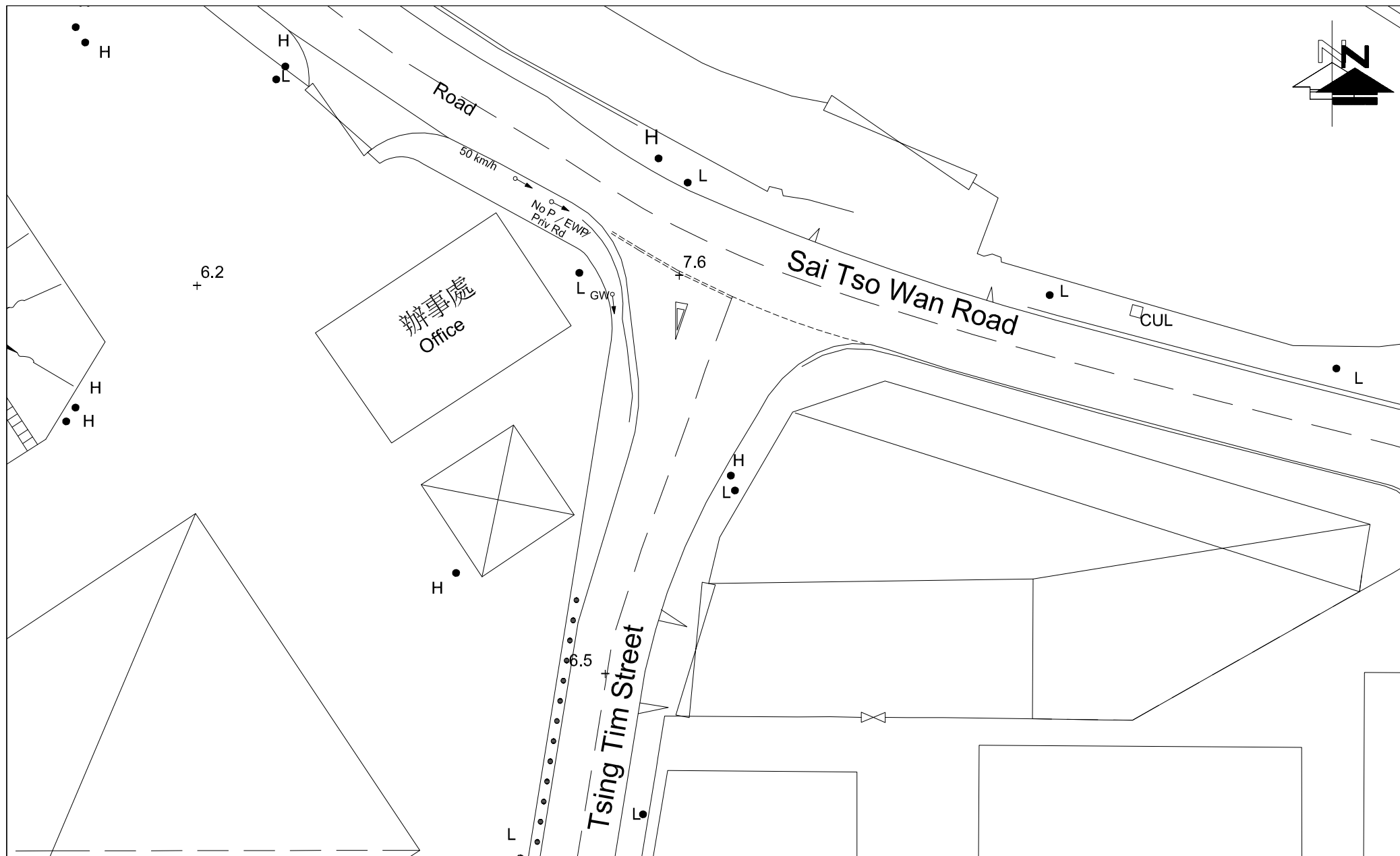


FIGURE NO.: 3.7		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145		 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING TIM STREET / SAI TSO WAN ROAD (J6)		
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 08 JUN 2026			

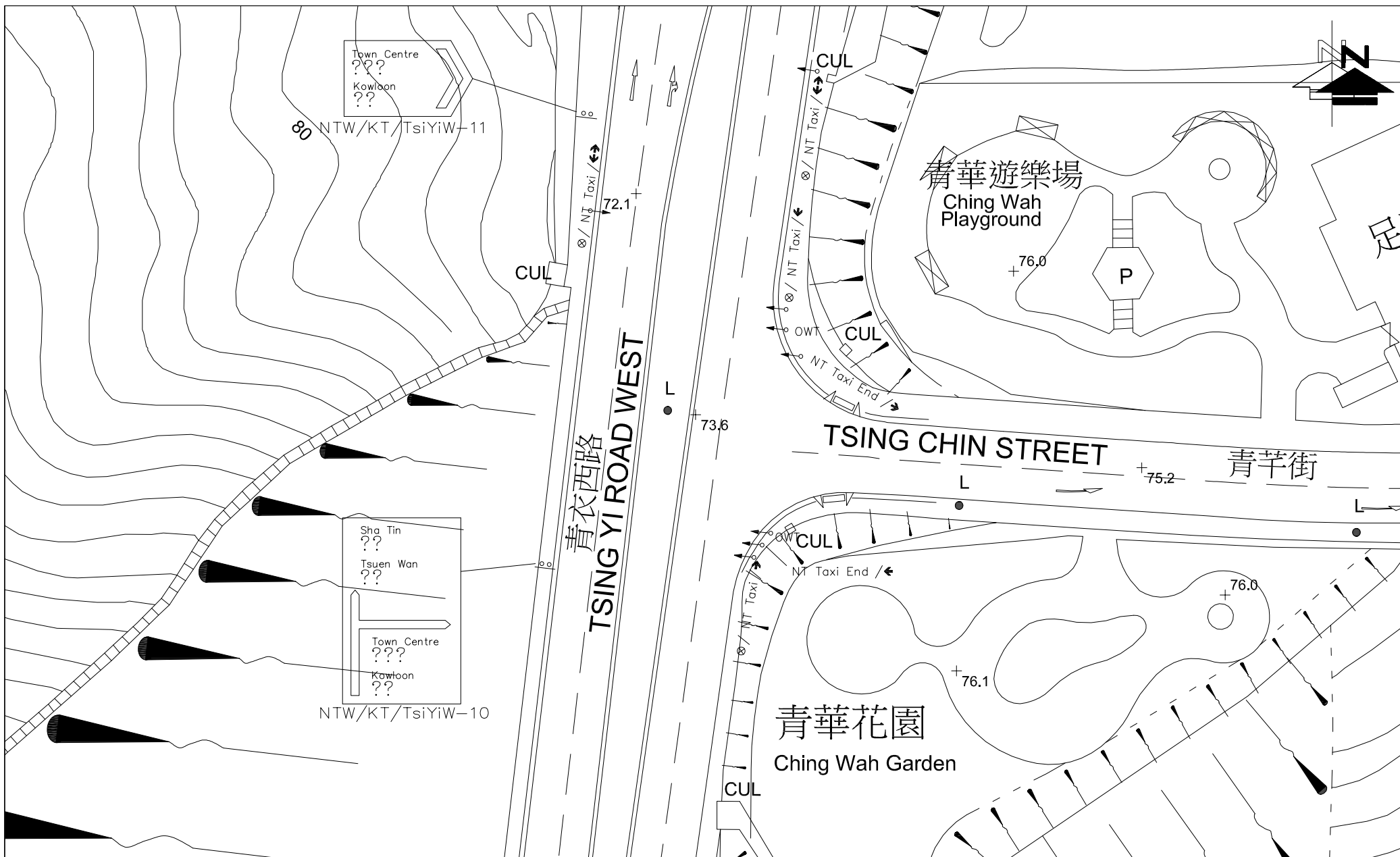


FIGURE NO.: 3.8		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF YI ROAD WEST / TSING CHIN STREET (J7)
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 08 JUN 2026	 CTA Consultants Limited 志達顧問有限公司

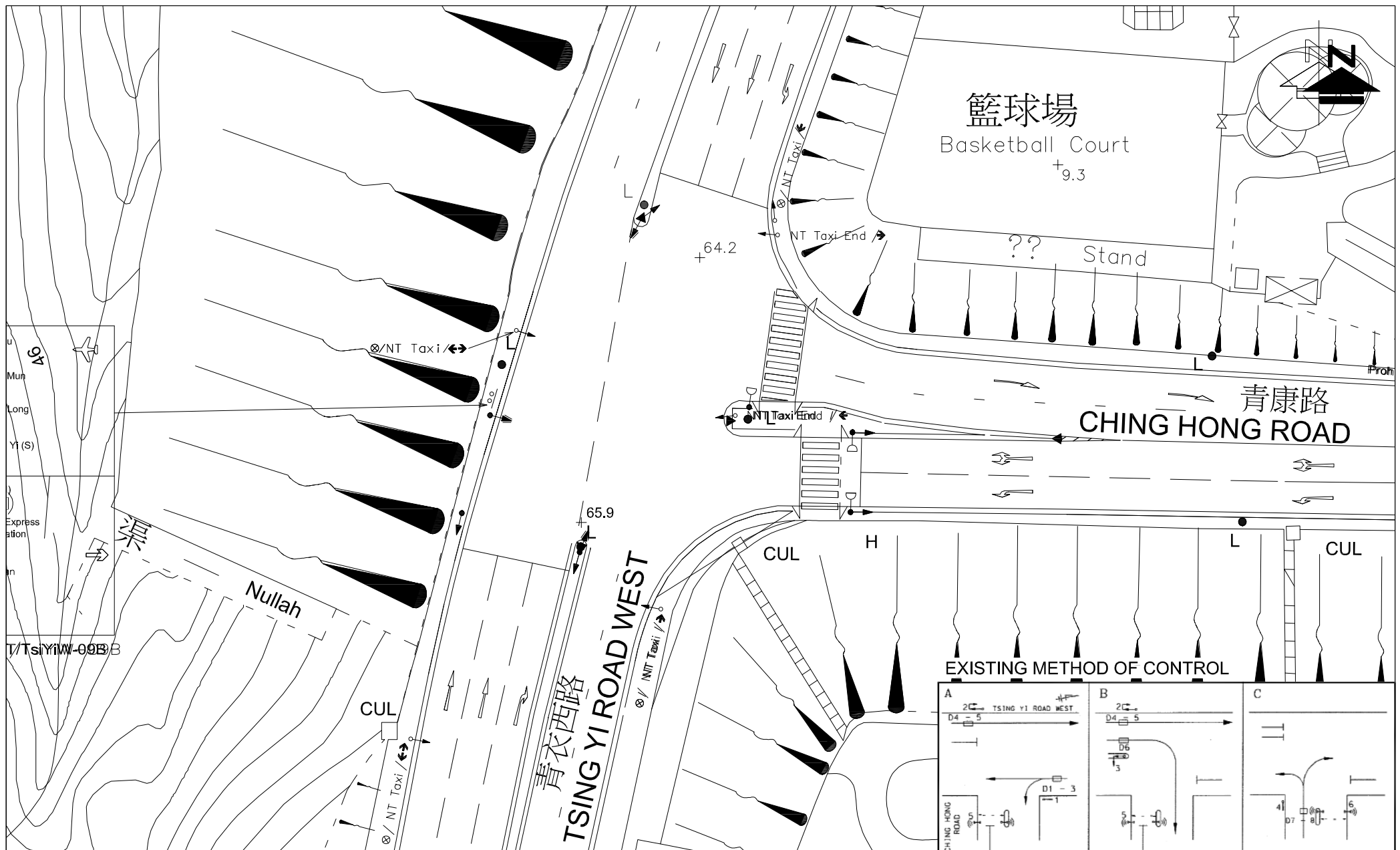


FIGURE NO.: 3.9	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING YI ROAD WEST / CHING HONG ROAD (J8)	
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 08 JUN 2026	

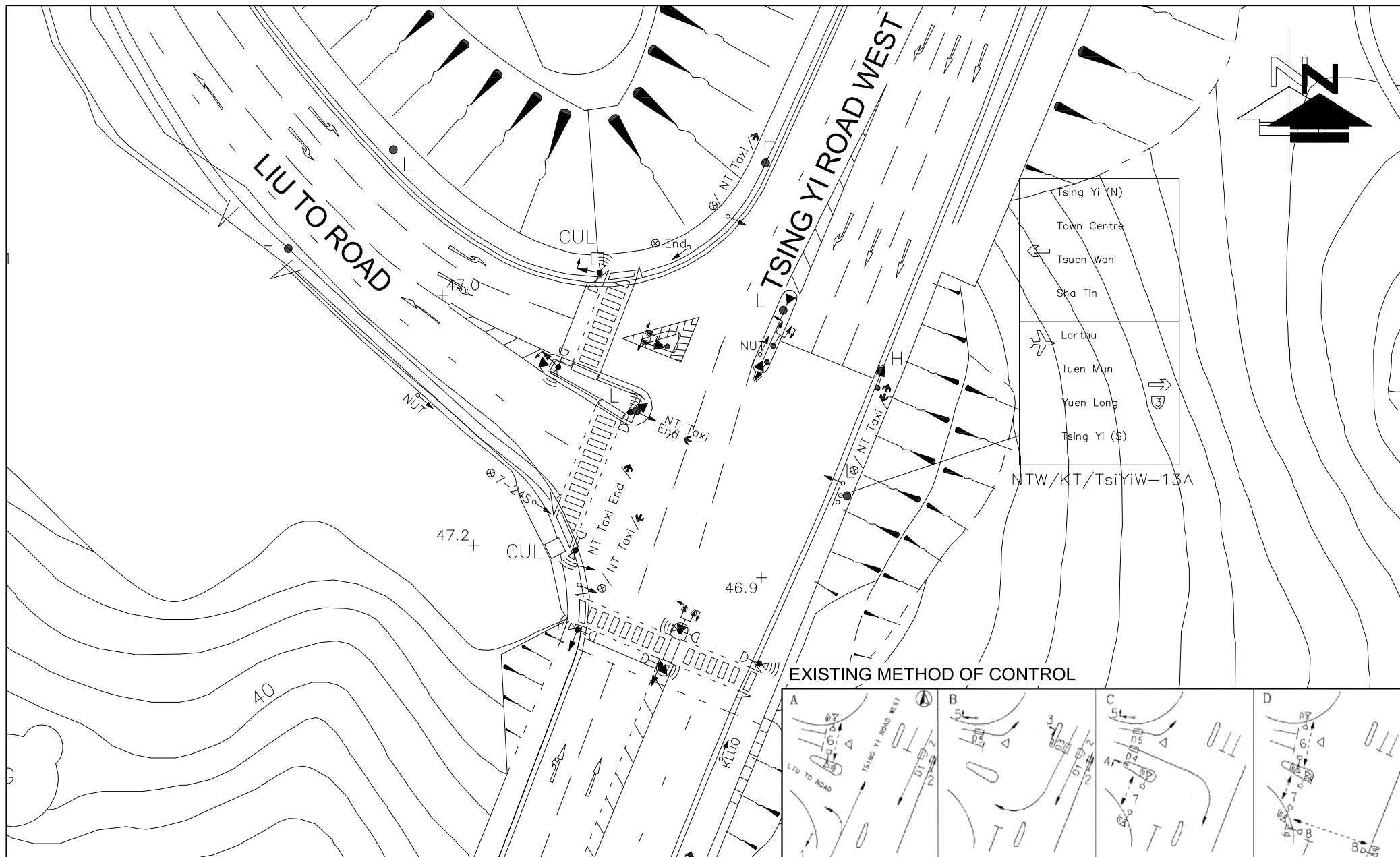


FIGURE NO.: 3.10		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING YI ROAD WEST / LIU TO ROAD (J9)	
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 08 JUN 2026		

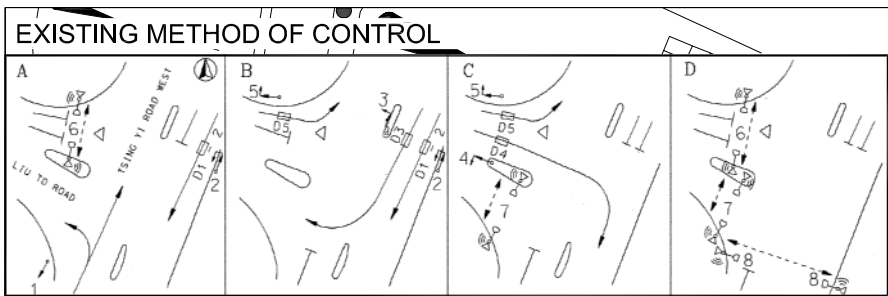
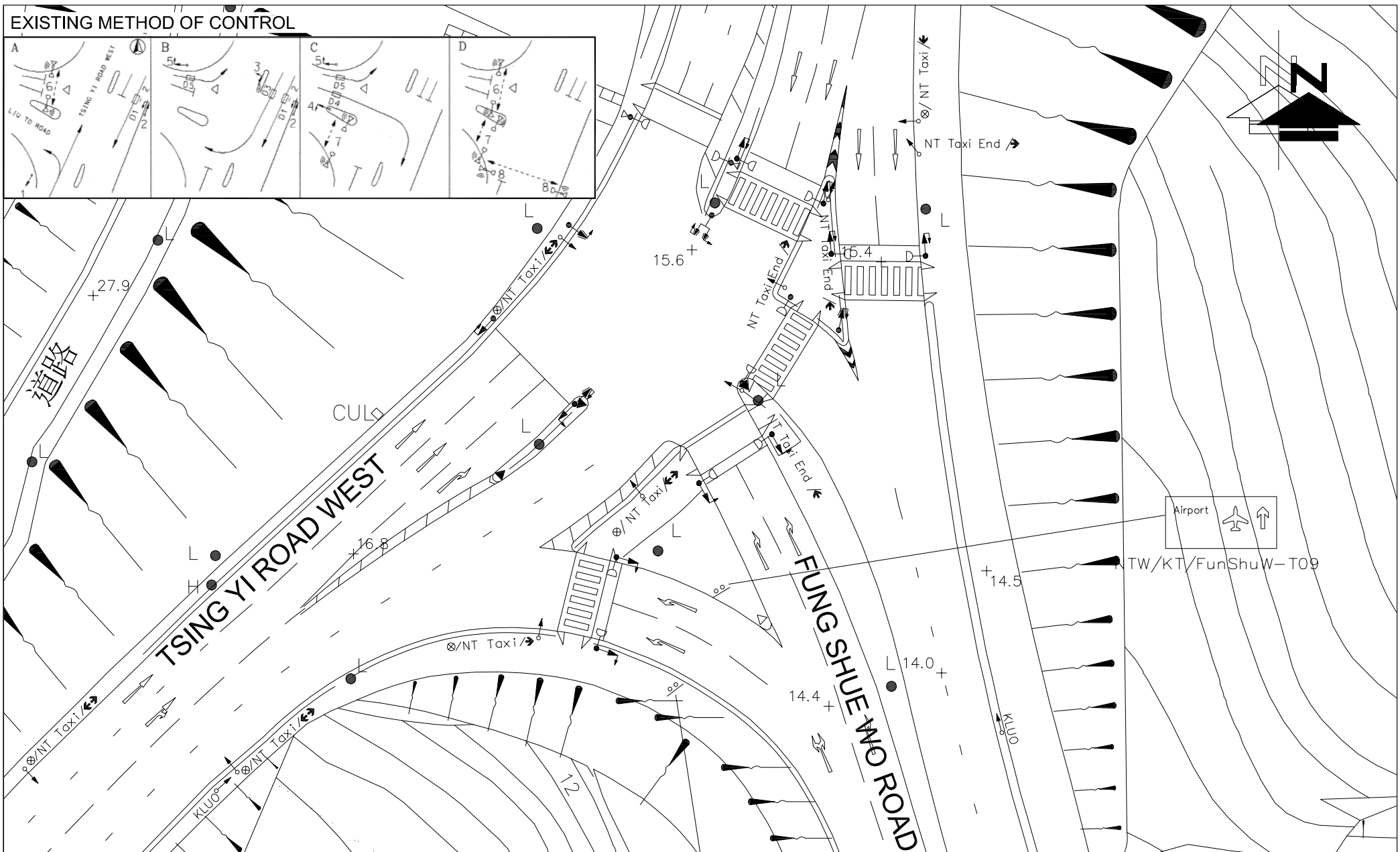


FIGURE NO.: 3.11		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING YI ROAD WEST / FUNG SHUE WO ROAD (J10)	
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 08 JUN 2026		

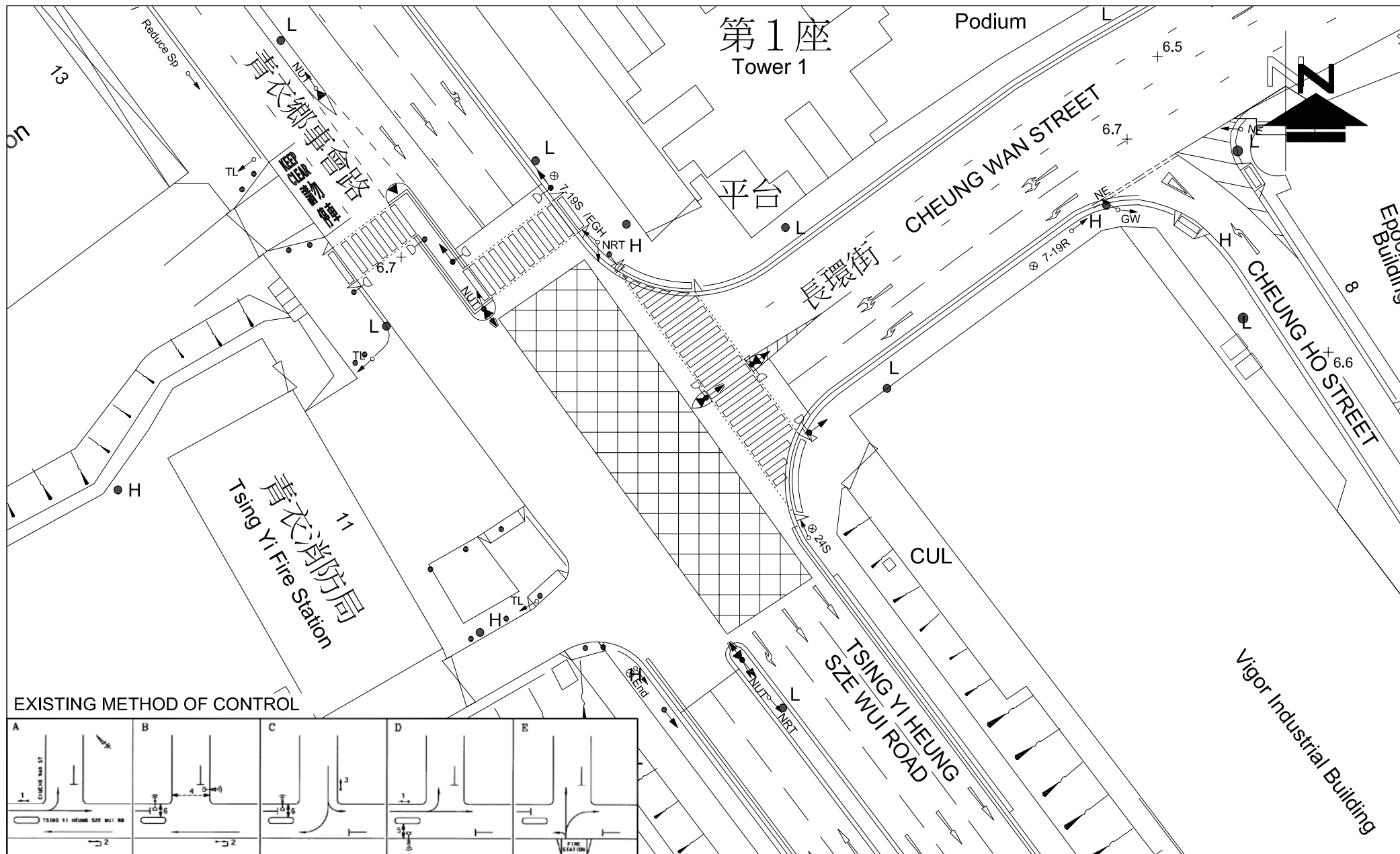


FIGURE NO.: 3.12		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING YI HEUNG SZE WUI ROAD / CHEUNG WAN STREET (J11)	
SCALE: 1 : 500 @A4	DATE: 08 JUN 2026		

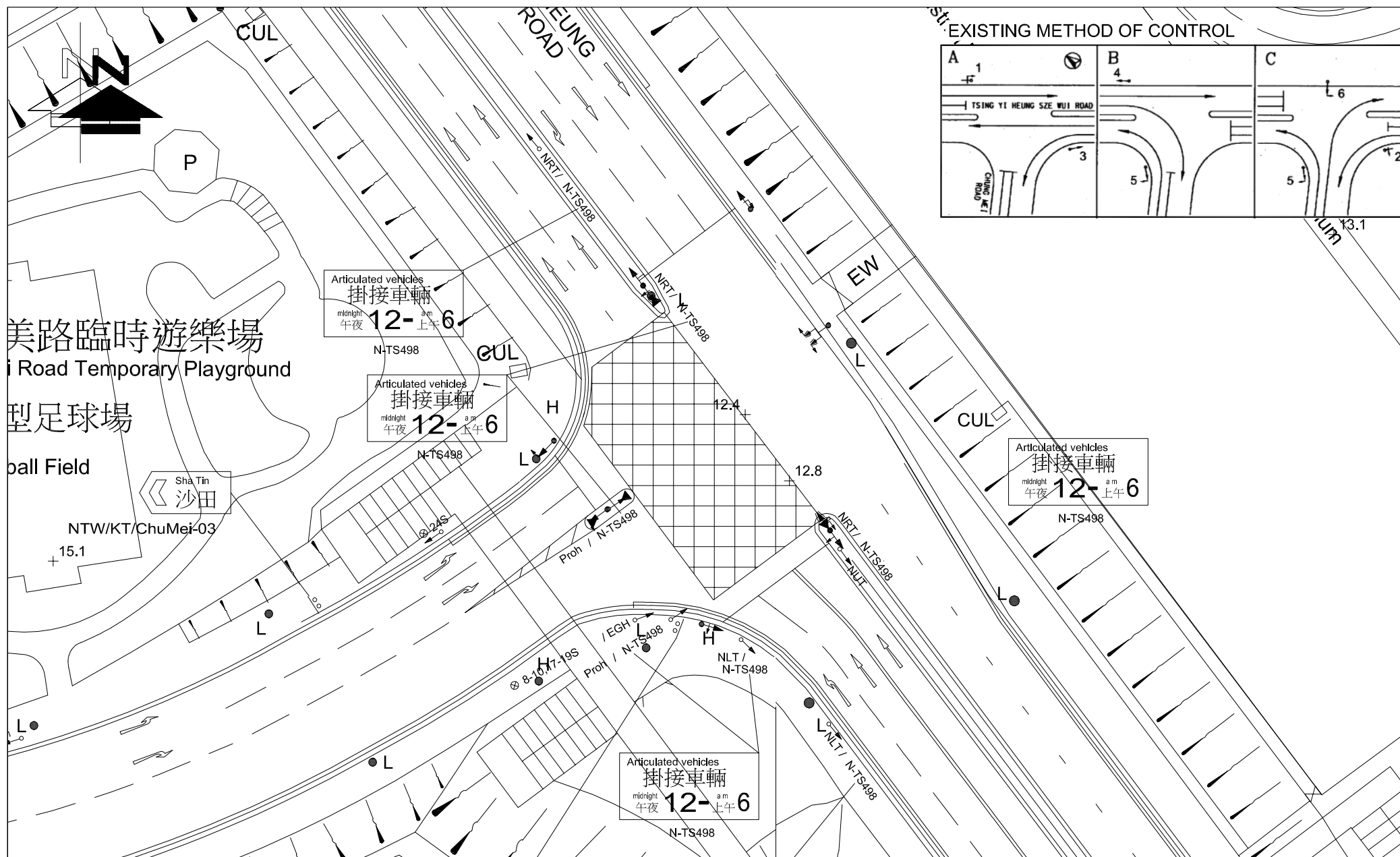


FIGURE NO.: 3.13		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING YI HEUNG SZE WUI ROAD / CHUNG MEI STREET (J12)	
SCALE: 1 : 500 @A4	DATE: 08 JUN 2026		

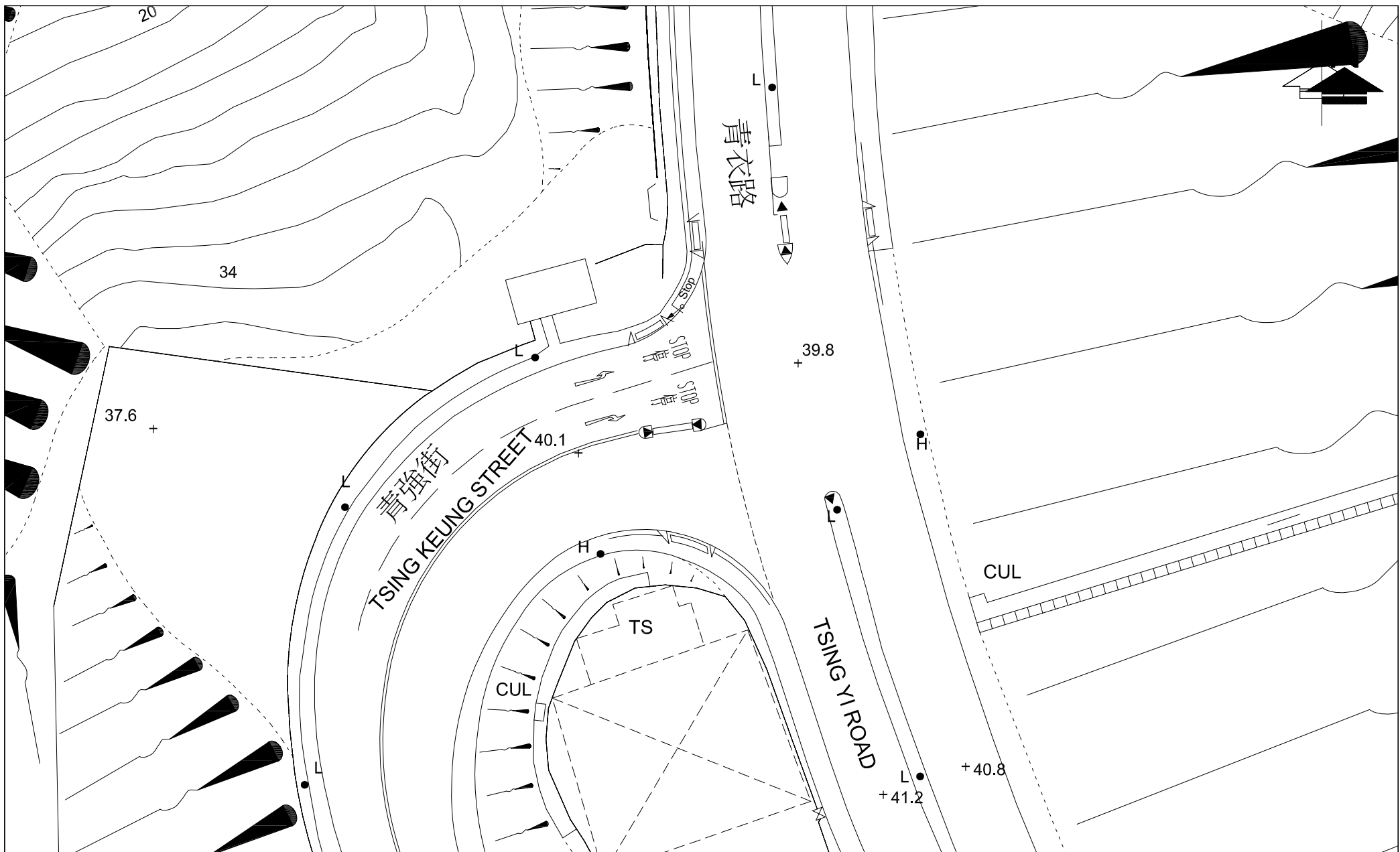


FIGURE NO.: 3.14	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING YIP ROAD / TSING KEUNG STREET (J13)	
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 08 JUN 2026	

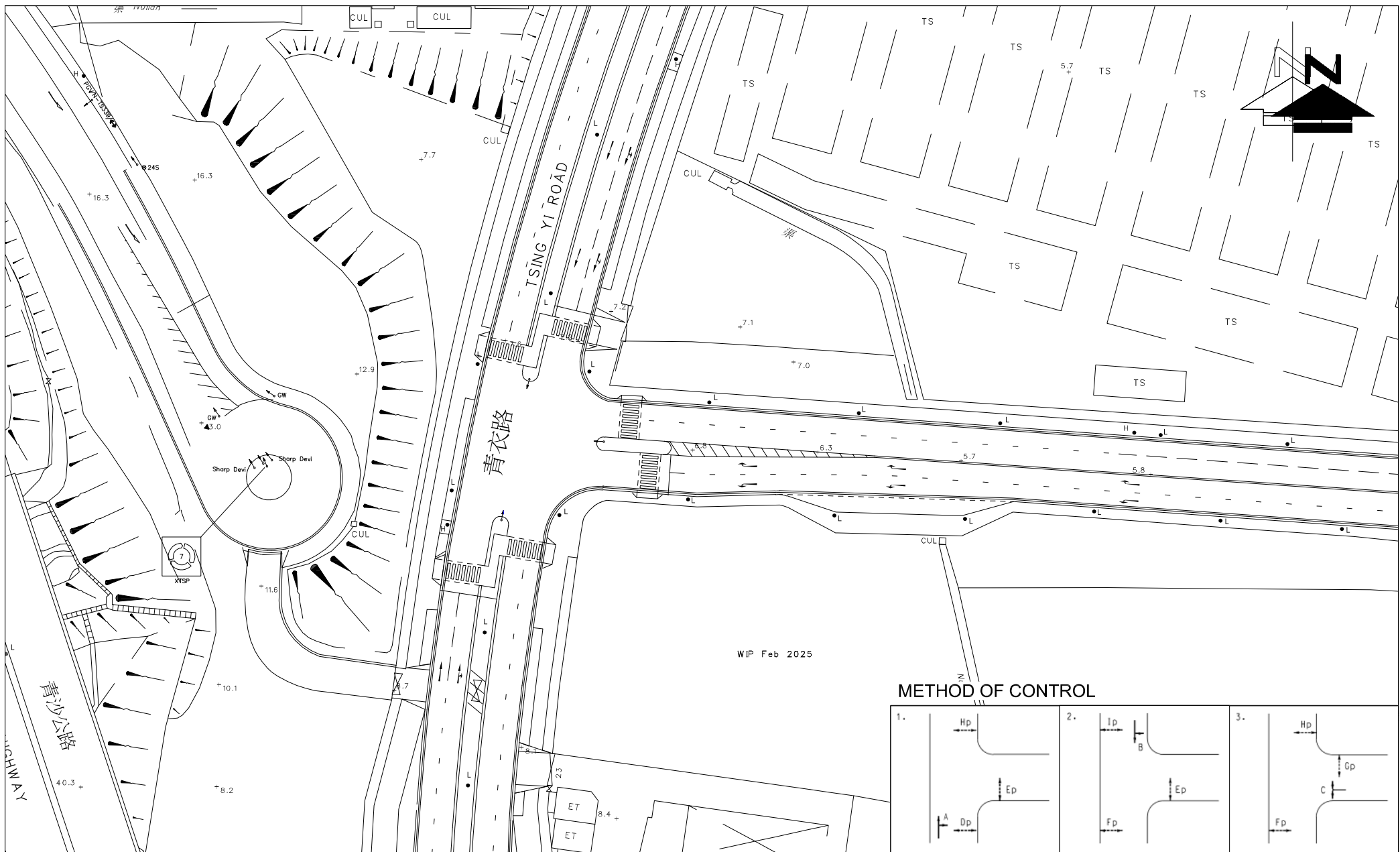


FIGURE NO.: 3.15		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF ROAD CONNECTING TSING YI HONG WAN ROAD AND TSING YI ROAD (J14)	
SCALE: 1 : 1000 (IN A4 SIZE)	DATE: 08 JUN 2026		

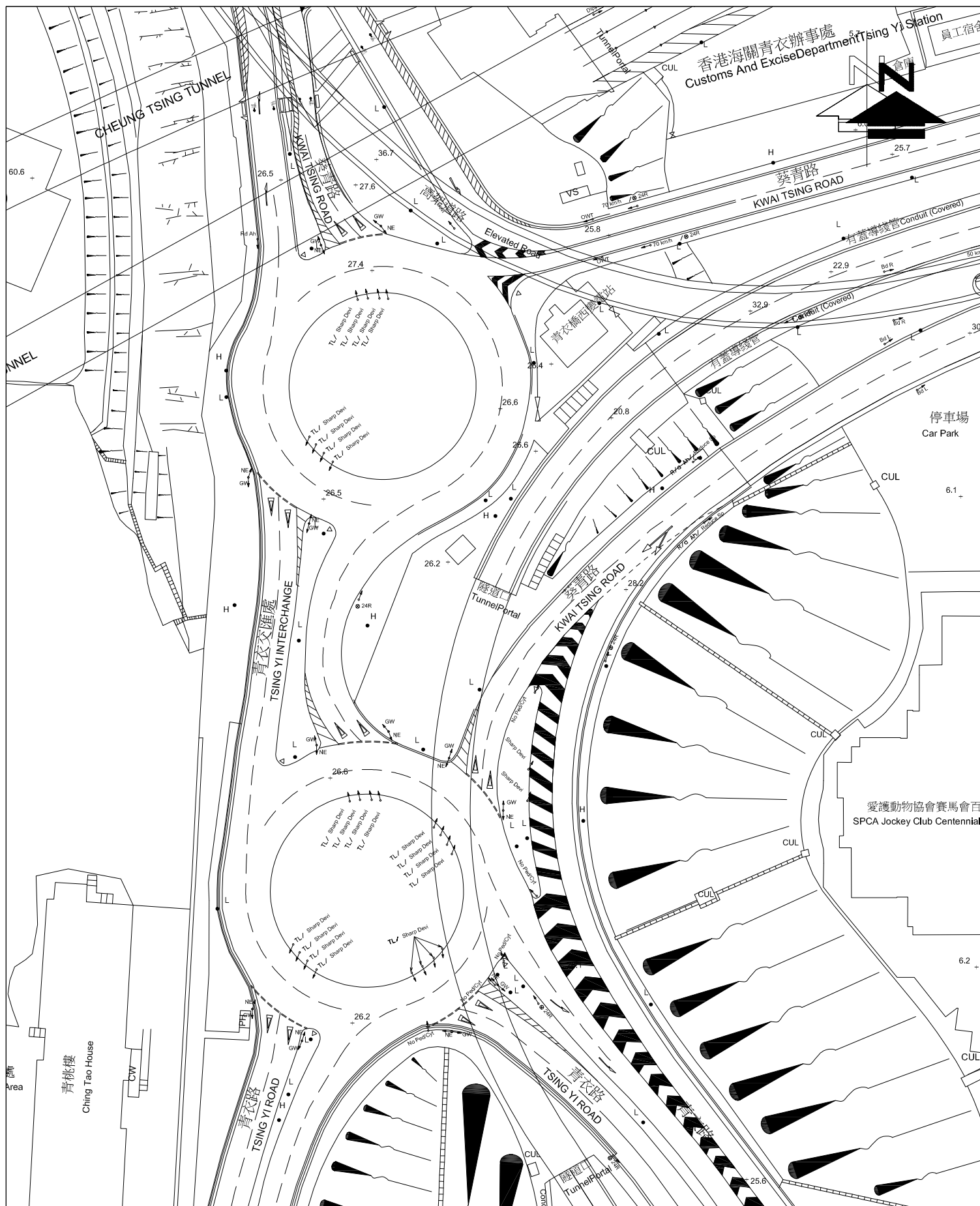


FIGURE NO.:

3.16

PROJECT TITLE:

Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145

PROJECT NO.:

26011HK

DRAWING TITLE:

EXISTING JUNCTION LAYOUT OF
SING YI INTERCHANGE (RA1)

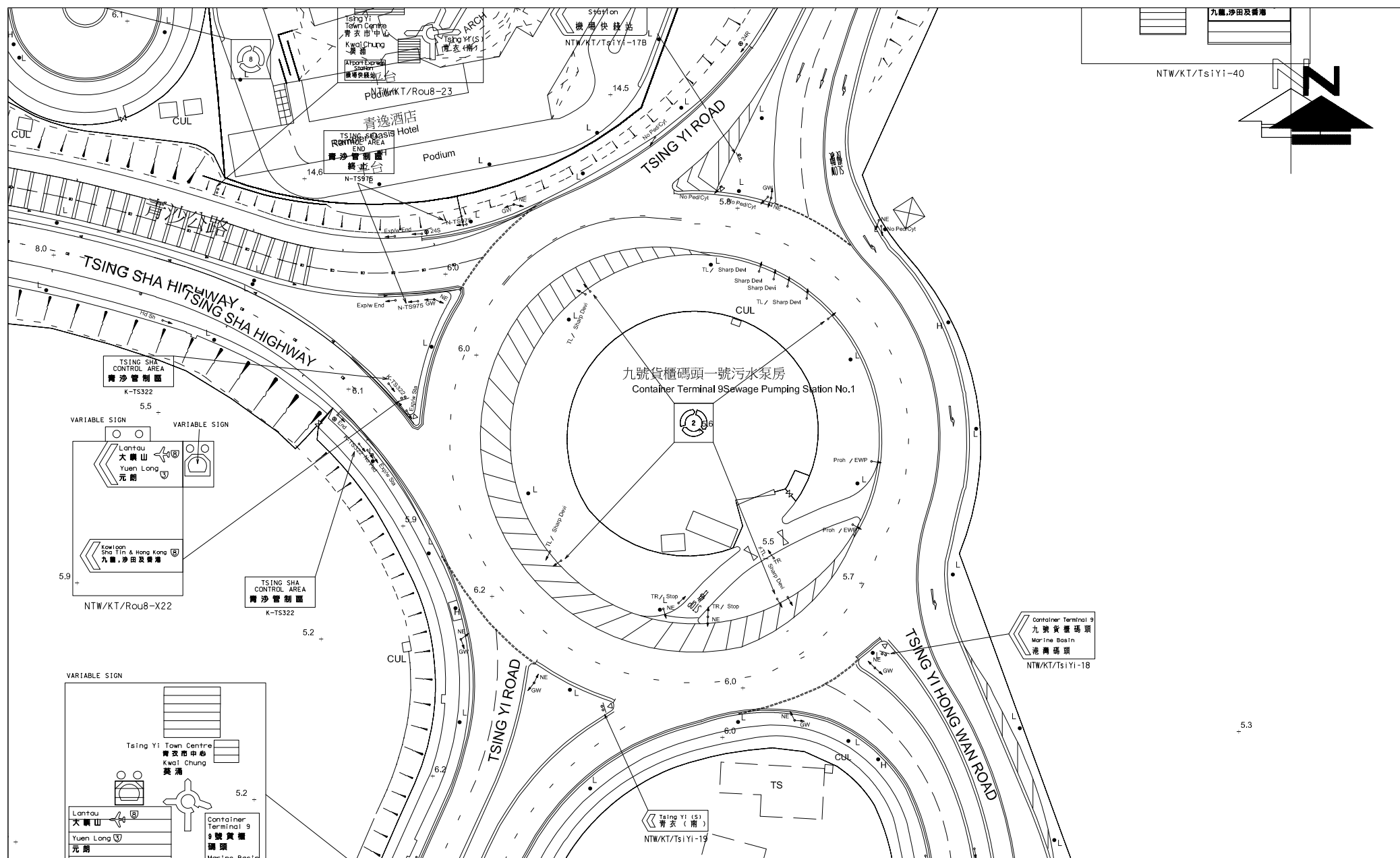
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1 : 1000
(IN A4 SIZE)

DATE:

08 JUN 2026

CTA Consultants Limited
志達顧問有限公司



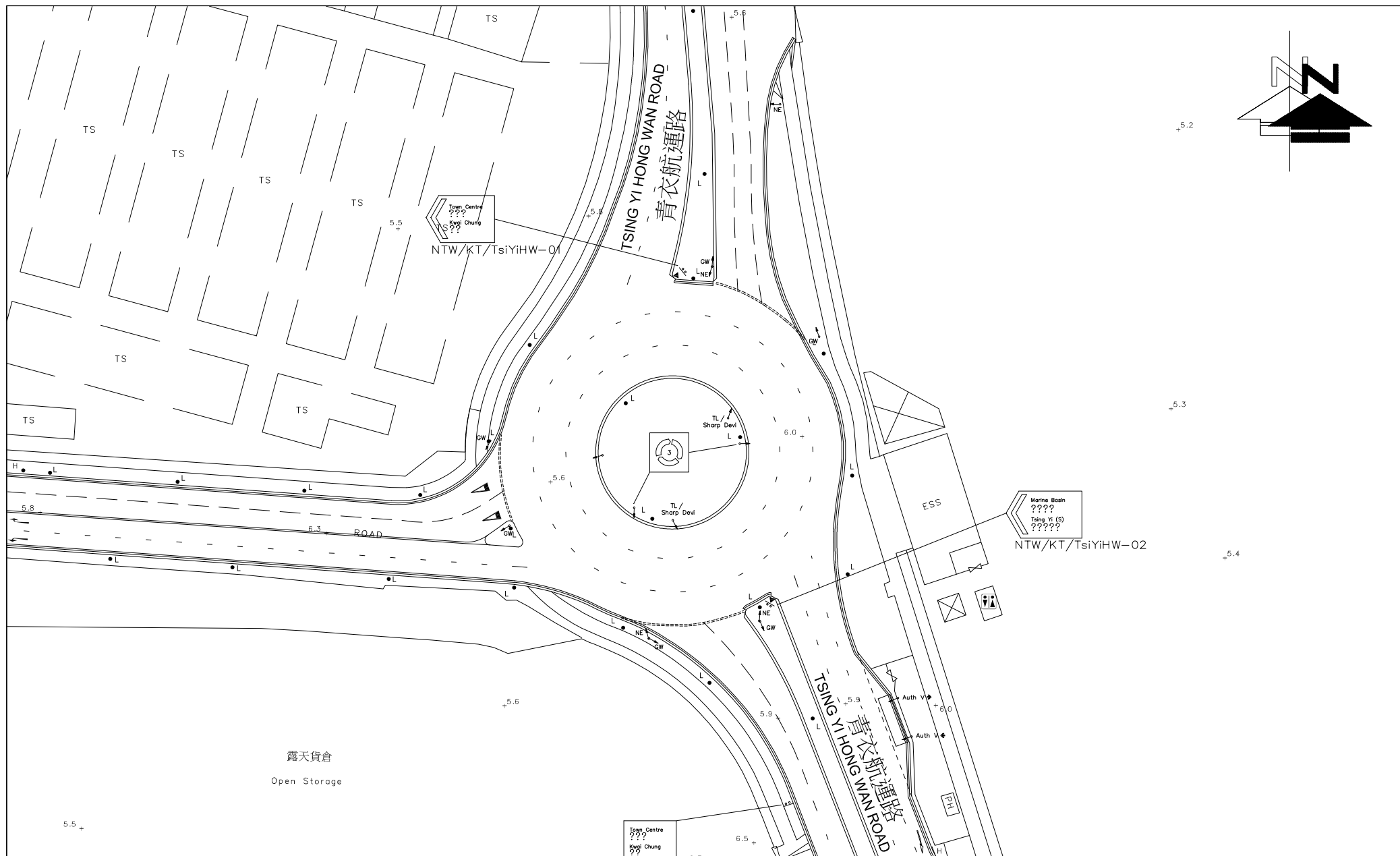


FIGURE NO.: 3.18	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING YI ROAD WEST / FUNG SHUE WO ROAD (RA3)	
SCALE: 1 : 1000 (IN A4 SIZE)	DATE: 08 JUN 2026	

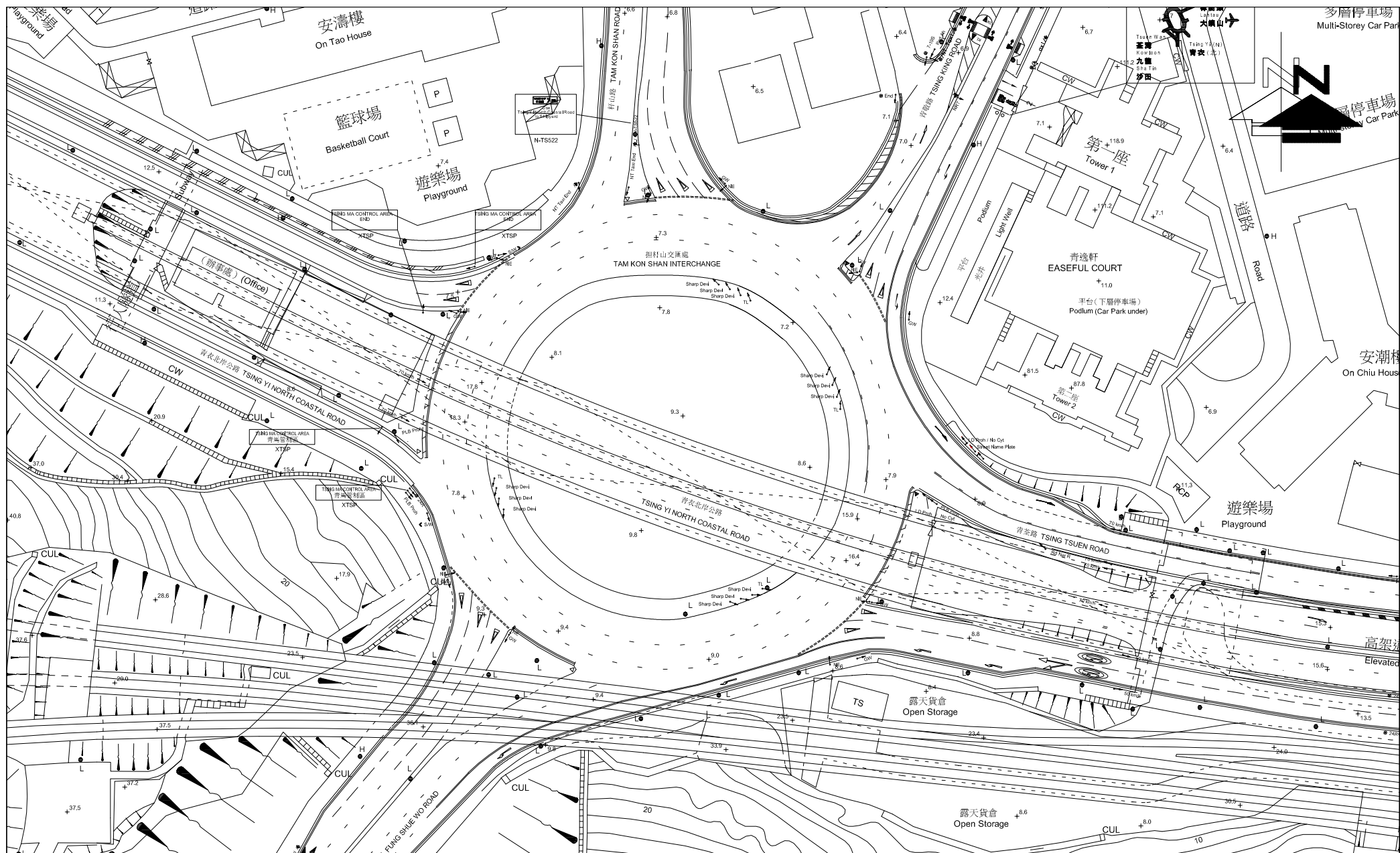


FIGURE NO.: 3.20	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TAM KON SHAN INTERCHANGE (RA5)	
SCALE: 1 : 1200 (IN A4 SIZE)	DATE: 08 JUN 2026	

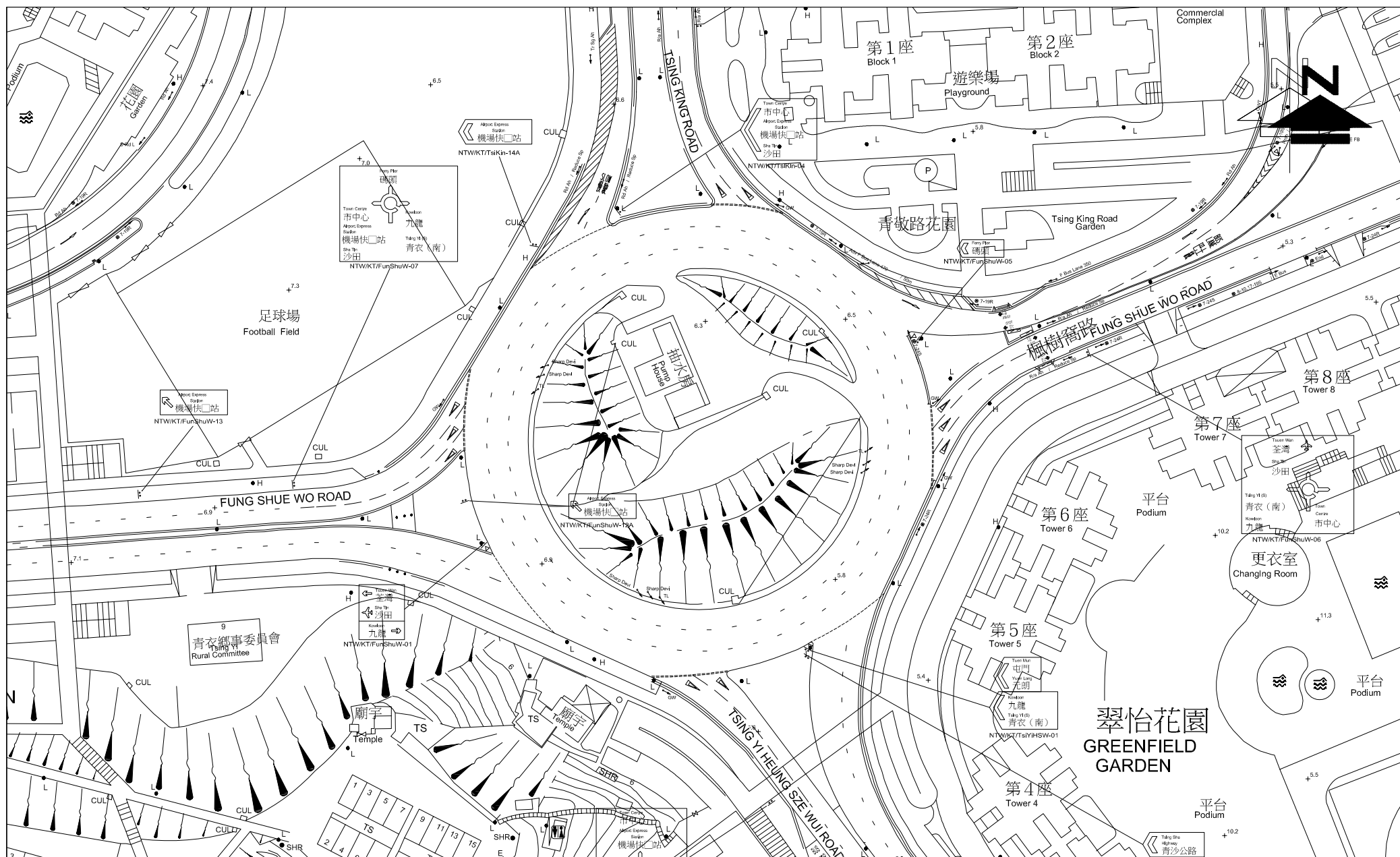


FIGURE NO.: 3.21	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING YI HEUNG SZE WUI ROAD / FUNG SHUE WO ROAD / TSING KING ROAD (RA6)	
SCALE: 1 : 1200 (IN A4 SIZE)	DATE: 08 JUN 2026	

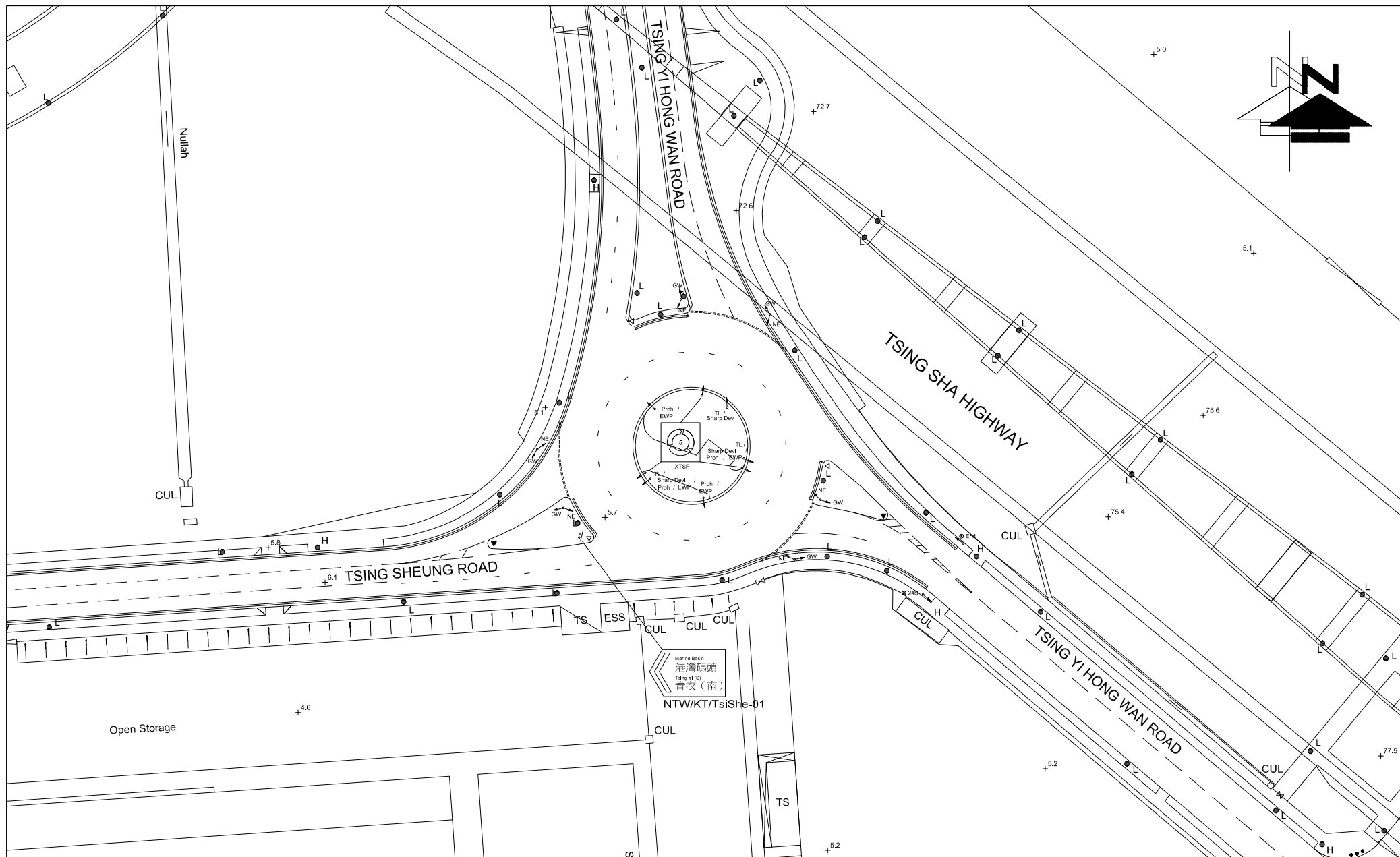


FIGURE NO.: 3.22		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING SHEUNG ROAD / TSING YI HONG WAN ROAD (RA7)	
SCALE: 1 : 1000 (IN A4 SIZE)	DATE: 08 JUN 2026		

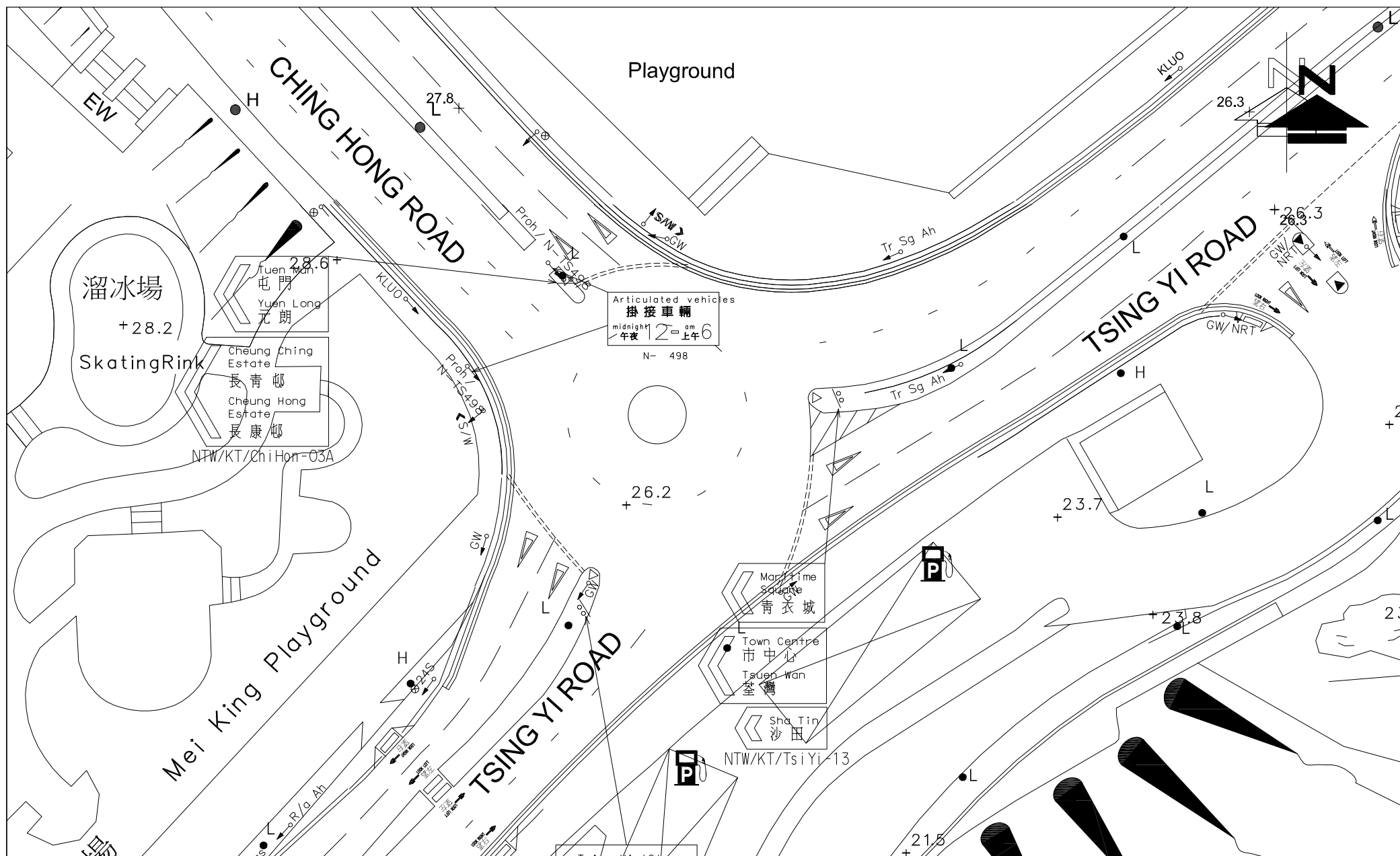


FIGURE NO.: 3.23	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF CHING HONG ROAD / TSING YI ROAD (RA8)	
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 08 JUN 2026	

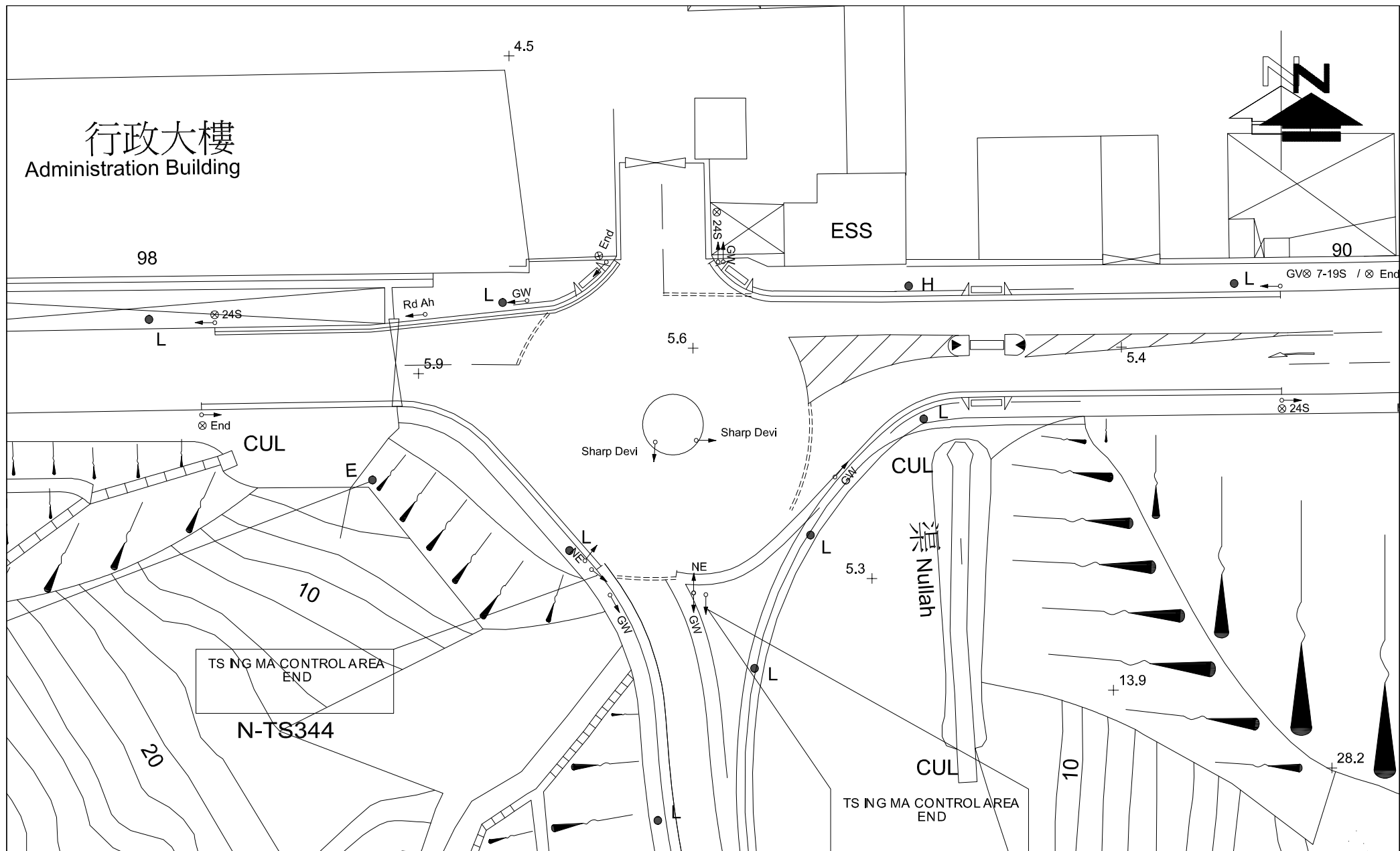


FIGURE NO.: 3.24		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TAM KON SHAN ROAD / TSING YI NORTH COSTAL ROAD (RA9)	
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 08 JUN 2026		

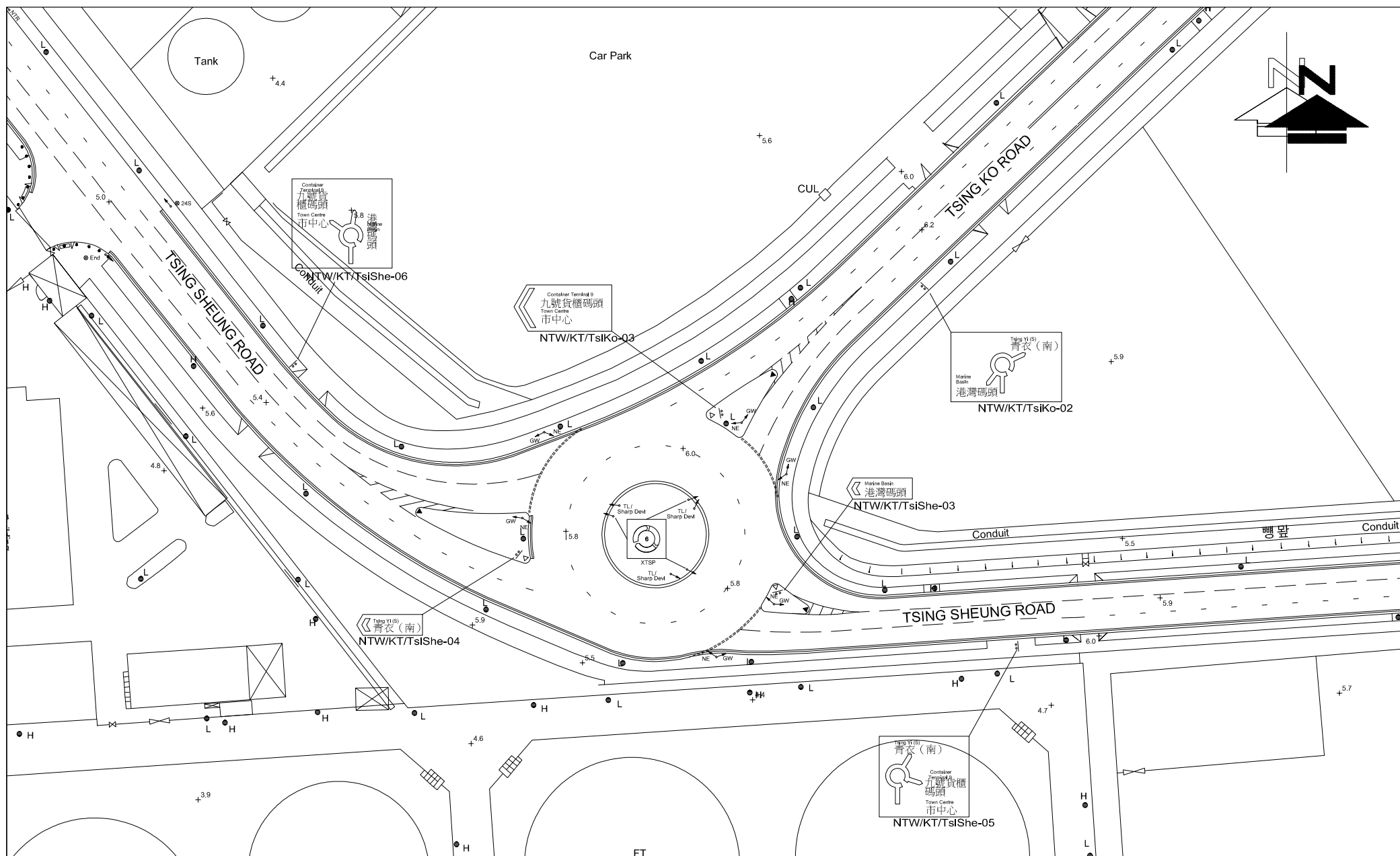


FIGURE NO.: 3.25	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TSING KO ROAD / TSING SHEUNG ROAD (RA10)	
SCALE: 1 : 1000 (IN A4 SIZE)	DATE: 08 JUN 2026	



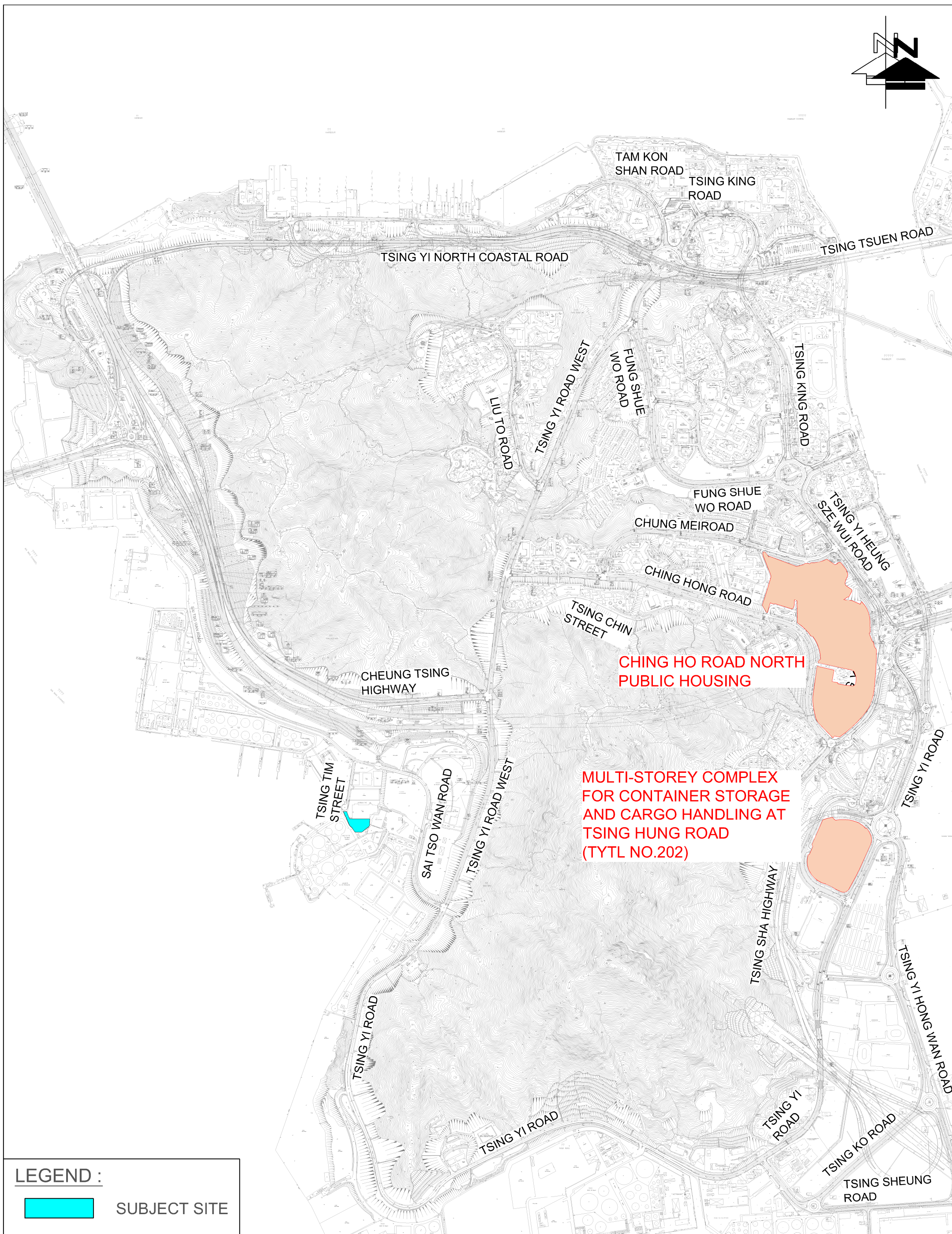
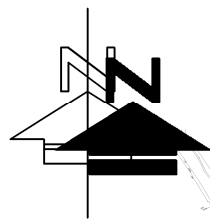
LEGEND :

SUBJECT SITE

530(500)[455]

AM [LOGISTIC](PM)
TRAFFIC FLOW (IN PCU / HR)

FIGURE NO.: 3.26	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A/TY/1 43
PROJECT NO.: 26011HK	DRAWING TITLE: 2026 OBSERVED TRAFFIC FLOW
SCALE: N.T.S. @ A3	
DATE: 12 JUN 2026	CTA Consultants Limited 志達顧問有限公司



LEGEND :



SUBJECT SITE

FIGURE NO.: 4.1

PROJECT NO.: 26011HK

SCALE: 1 : 12000 @A3
DATE: 10 JUN 2026

PROJECT TITLE:
Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145

DRAWING TITLE:
PLANNED DEVELOPMENT IN VICINITY



CTA Consultants Limited
志達顧問有限公司

PLANNED METHOD OF CONTROL 天貨倉

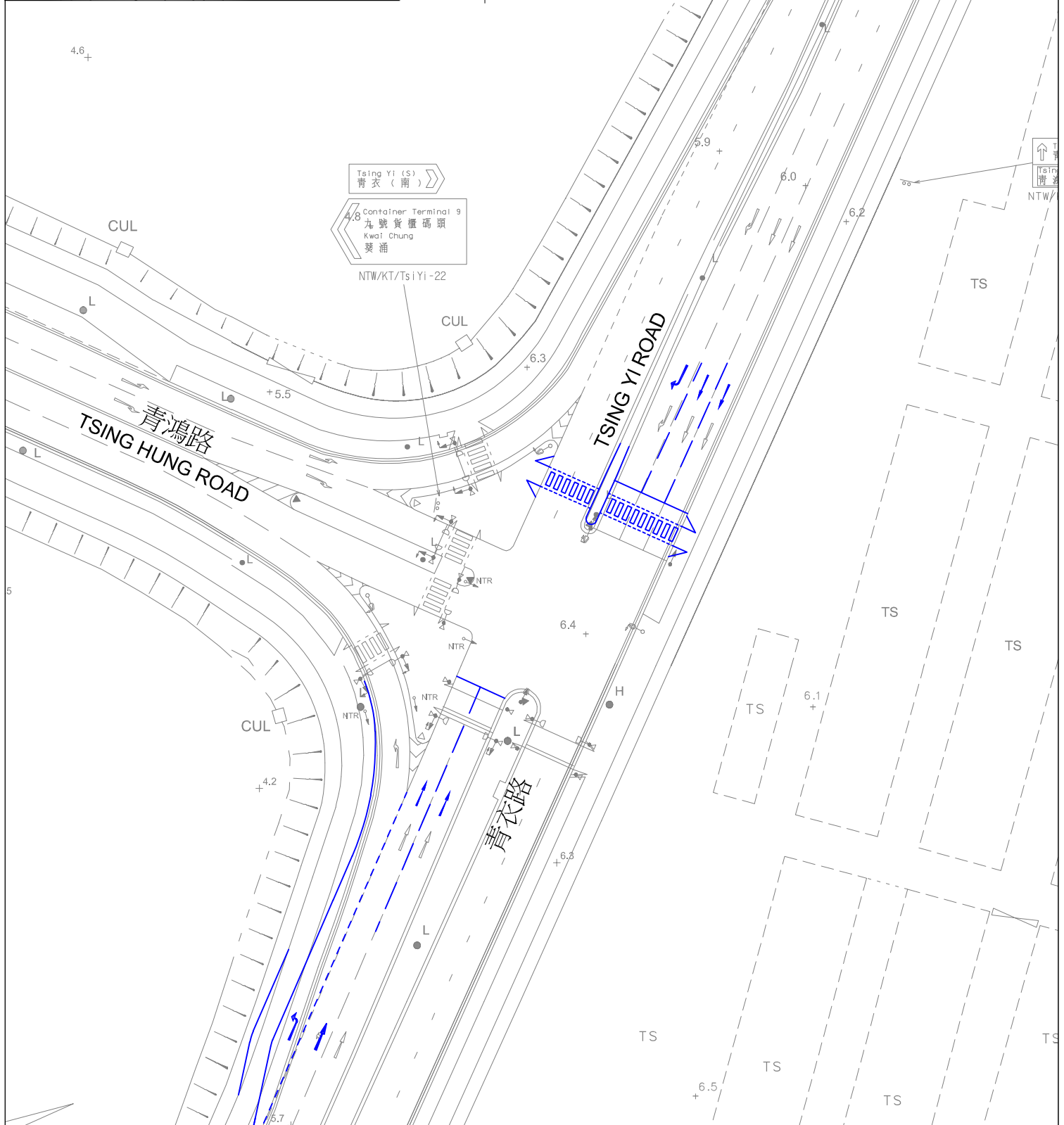
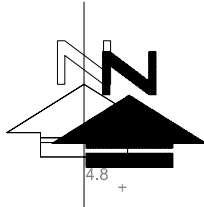
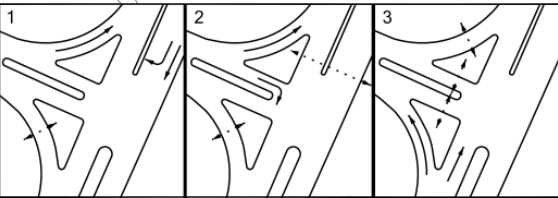


FIGURE NO.: 4.2		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	
PROJECT NO.: 26011HK		DRAWING TITLE: PLANNED JUNCTION IMPROVEMENT OF TSING HUNG ROAD / TSING YI ROAD (J2)	 CTA Consultants Limited 志達顧問有限公司
SCALE: 1 : 750 (IN A4 SIZE)	DATE: 10 JUN 2026		

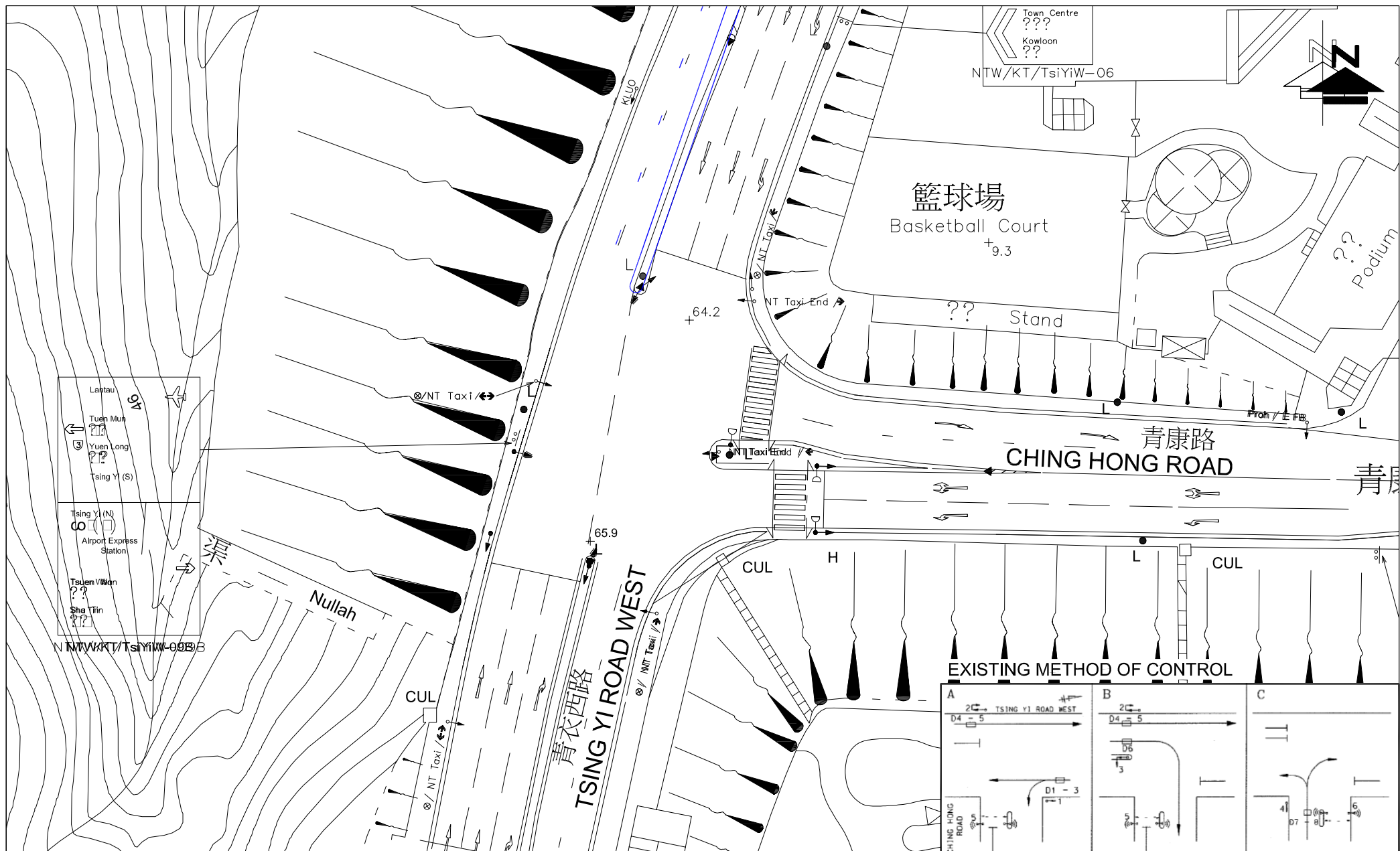


FIGURE NO.: 4.3	PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK	DRAWING TITLE: PLANNED JUNCTION IMPROVEMENT OF TSING YI ROAD WEST / CHING HONG ROAD (J8)	
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 10 JUN 2026	

PLANNED METHOD OF CONTROL

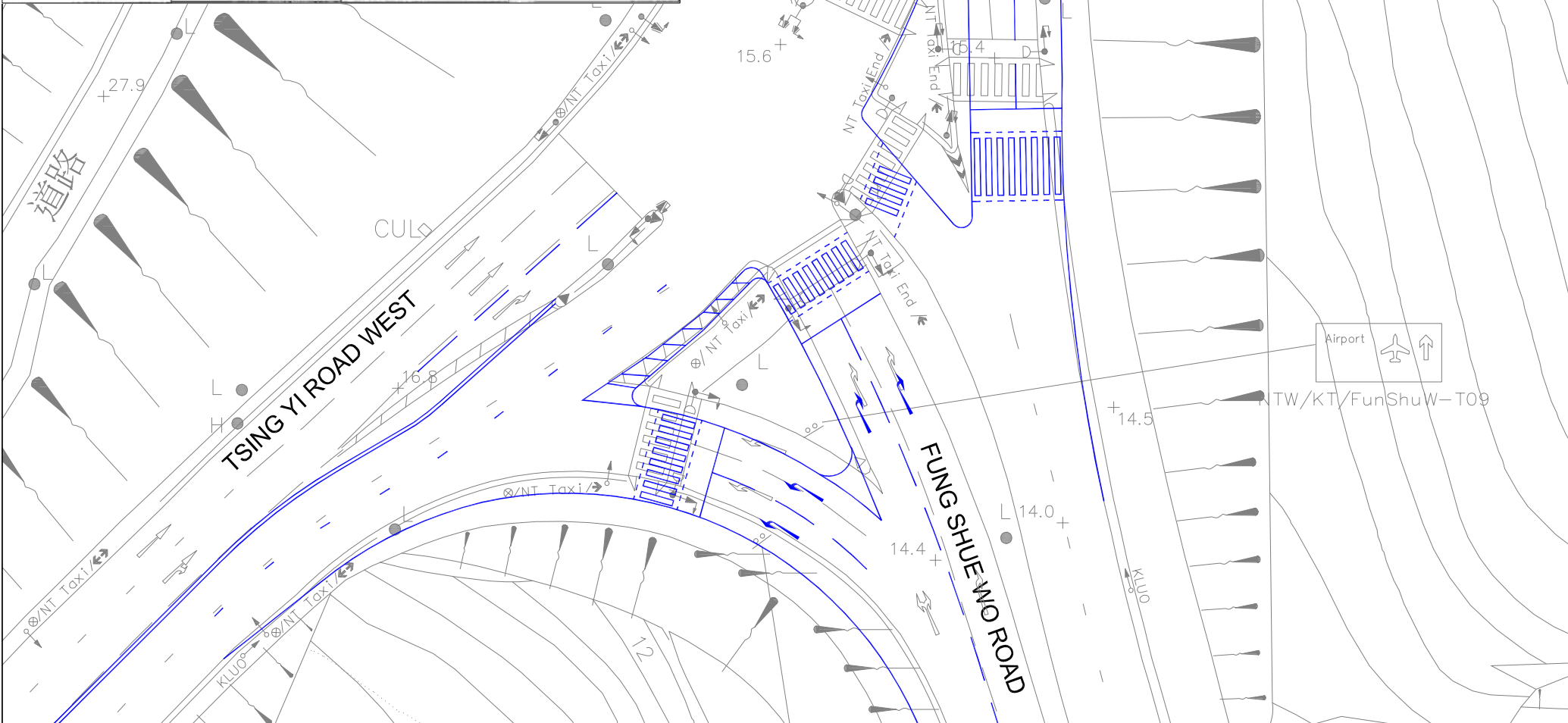
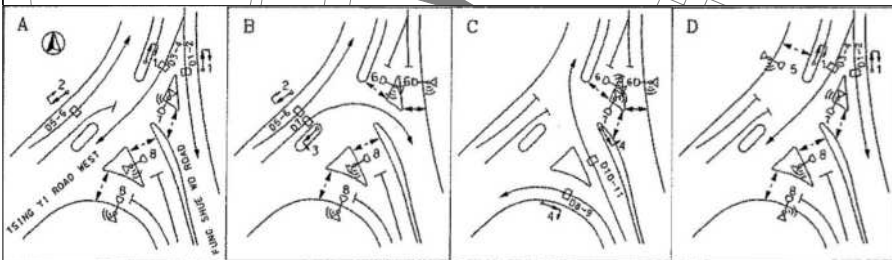


FIGURE NO.: 4.4		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE: PLANNED JUNCTION IMPROVEMENT OF TSING YI ROAD WEST / FUNG SHUE WO ROAD (J10)	
SCALE: 1 : 500 (IN A4 SIZE)	DATE: 10 JUN 2026		

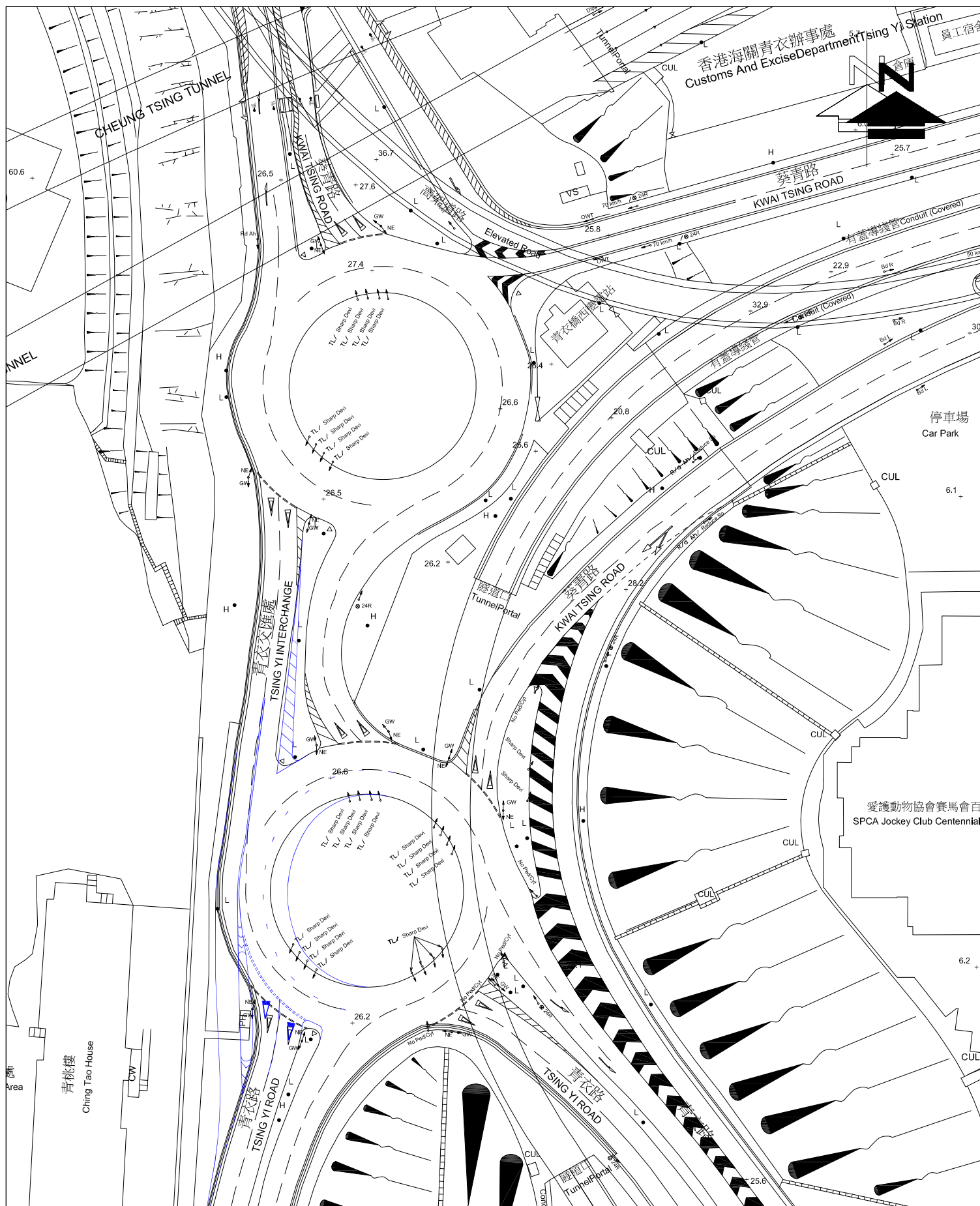


FIGURE NO.:

4.5

PROJECT TITLE:

Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145

PROJECT NO.:

26011HK

DRAWING TITLE:

PLANNED JUNCTION IMPROVEMENT OF
TSING YI INTERCHANGE (RA1)

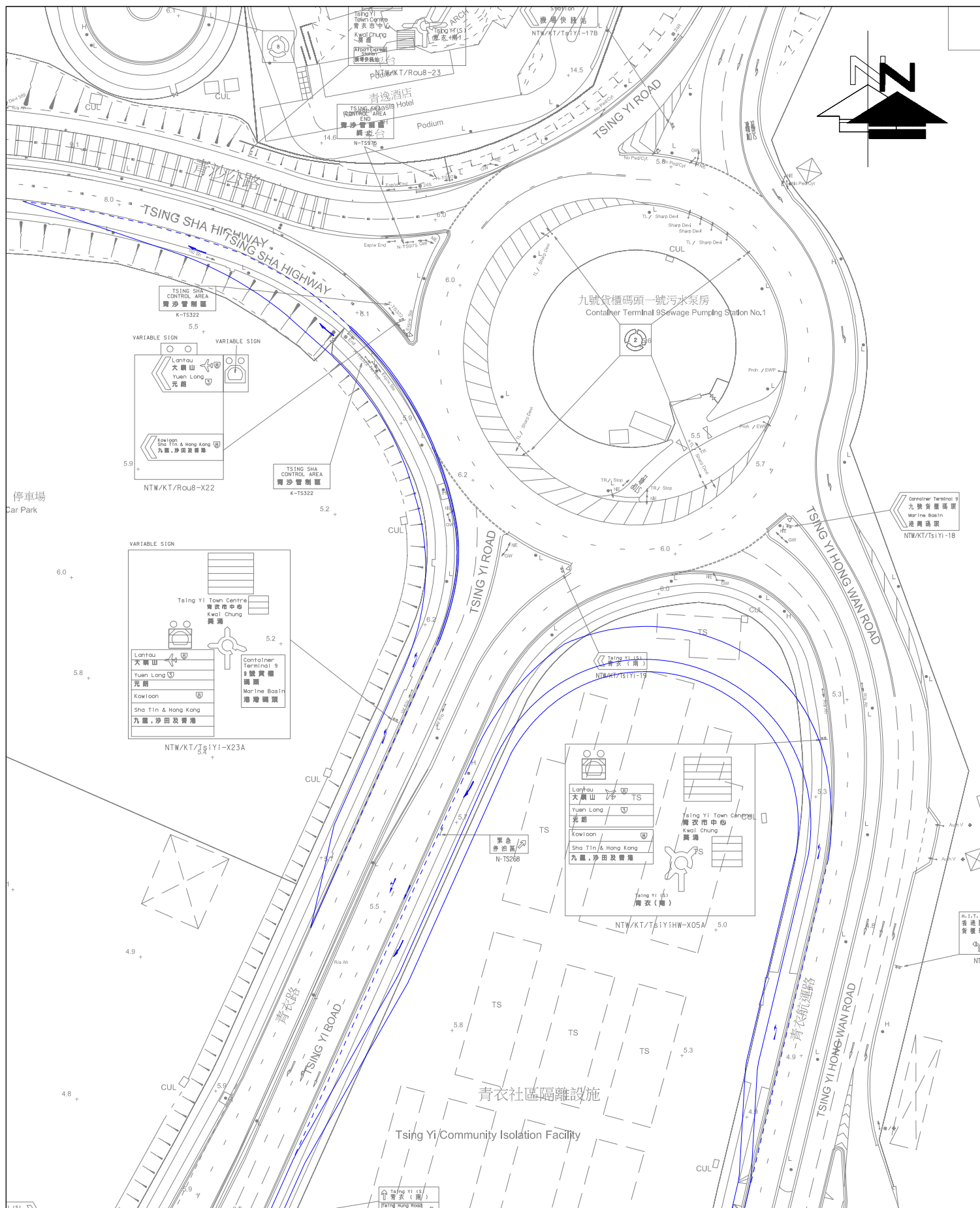
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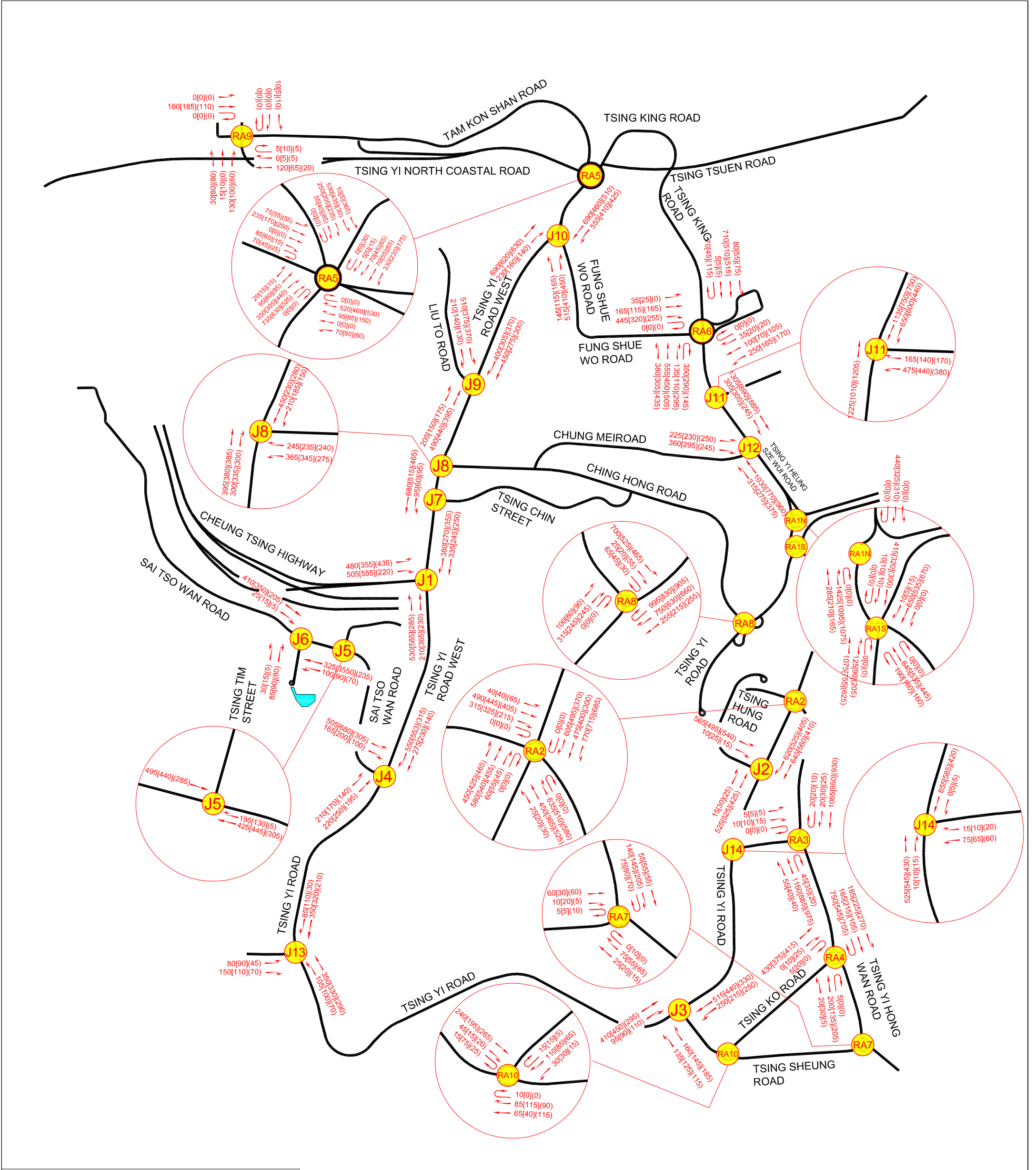
1 : 1000
(IN A4 SIZE)

DATE:

10 JUN 2026

CTA Consultants Limited
志達顧問有限公司





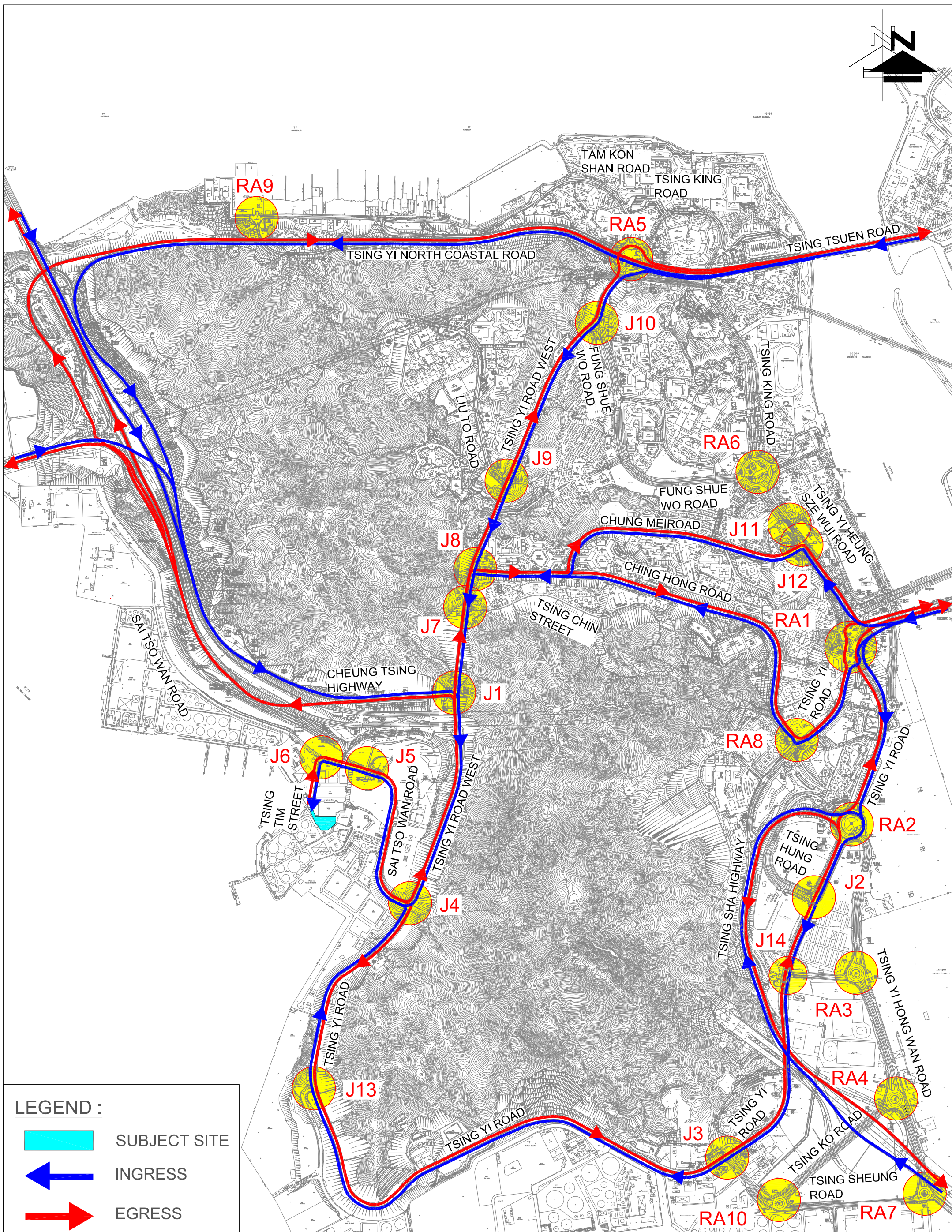


FIGURE NO.: 5.2		PROJECT TITLE: Concrete Batching Plant at Tsing Yi - Renewal Application A / TY / 145	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26011HK		DRAWING TITLE:	
SCALE: 1 : 12000 @A3	DATE: 10 JUN 2026	TRAFFIC ROUTINGS	



Appendix 1

Junction Calculation Sheets

Junction: (J1) Tsing Yi Road West / Cheung Tsing Highway																											
Description: 2026 Observed Traffic Flow																											
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak						
						Left	Right			A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y				
Tsing Yi Road West	S	↓	2	A	3.5	0	0	0	1	0%	0%	1965	6135	1965	1965	5890	5865	215	0.109	0.110	184	0.094	0.094				
	S	↔	2	A	3.3	0	20	0	0	52%	70%	2085	0	2005	1980	0	0	220	0.110		186	0.094					
	S	↙	2	A	3.3	0	17.5	0	0	100%	100%	2085	0	1920	1920	0	0	210	0.109		180	0.094					
Cheung Tsing Highway	E	↗	3	A,B	3.4	20	0	0	1	100%	100%	1955	1955	1820	1820	1820	1820	425	0.234		385	0.212					
	E	↔	4	B	3.5	0	30	0	0	100%	100%	2105	4210	2005	2005	3990	3990	234	0.117		98	0.049					
	E	↘	4	B	3.5	0	25	0	0	100%	100%	2105	0	1985	1985	0	0	231	0.117	0.117	97	0.049	0.049				
Tsing Yi Road West	N	↔	1	C	3.6	20	0	6.5	1	100%	100%	1702	3544	1585	1585	3425	3425	490	0.309	0.309	255	0.161	0.161				
	N	↑	1	C	3.6	0	0	6.5	0	0%	0%	1842	0	1840	1840	0	0	200	0.109		220	0.120					
Pedestrian crossing			5P	C	Min. Green time = 5GM + 10FG = 15s																						
			6P	C	Min. Green time = 5GM + 6FG = 11s																						
			7P	A,B	Min. Green time = 5GM + 9FG = 14s																						
			8P	B	Min. Green time = 5GM + 10FG = 15s																						
Notes:													Traffic Flow (pcu / hr)				A.M. Check Phase		P.M. Check Phase								
																	ey	0.535	0.543	ey	0.304	0.372					
																	L (sec)	13	9	L (sec)	13	9					
																	C (sec)	100	100	C (sec)	105	105					
																	y pract.	0.783	0.819	y pract.	0.789	0.823					
																	R.C. (%)	46%	51%	R.C. (%)	160%	121%					
Stage / Phase Diagrams																											
I/G = 5						I/G = 5						I/G = 6															

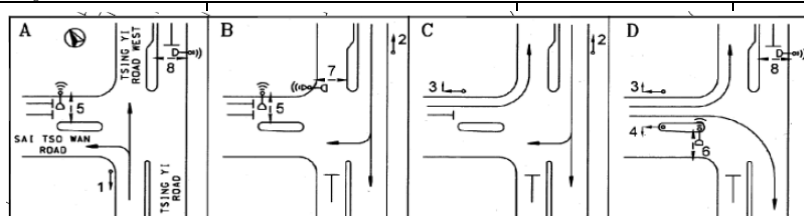
Junction: (J2) Tsing Hung Road / Tsing Yi Road																													
Description: 2026 Observed Traffic Flow																													
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak									
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y							
Tsing Yi Road	S	↓	1	A	3.5	0.0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	297	0.151		188	0.096								
	S	↓	1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	318	0.151		202	0.096								
	S	↙	1	A	3.6	0.0	18	0	100%	100%	2115	2115	1950	1950	1950	1950	290	0.149		160	0.082	0.096							
Tsing Yi Road	N	↑	4	C	4.0	30.0	0	1	100%	100%	2015	2015	1920	1920	1920	1920	15	0.008		25	0.013								
	N	↑	4	C	3.5	0.0	0	0	0%	0%	2105	4210	2105	2105	4210	4210	250	0.119	0.119	203	0.096								
	N	↑	4	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	250	0.119		203	0.096	0.096							
Tsing Hung Road	E	→	2	A,B	3.3	25.0	0	1	100%	100%	1945	1945	1835	1835	1835	1835	335	0.183	0.183	220	0.120								
	E	→	3	B	4.0	0.0	22	0	100%	100%	2155	2155	2015	2015	2015	2015	10	0.005		15	0.007								
Pedestrian Crossing		↕	5P	D																									
		↕	6P	A,B,D																									
		↕	7P	C,D																									
		↕	8P	C,D																									
										Min. Green time = 5GM + 7FG = 12s Min. Green time = 5GM + 5FG = 10s Min. Green time = 5GM + 10FG = 15s Min. Green time = 5GM + 5FG = 10s																			
Notes:										Traffic Flow (pcu / hr) Weekday AM Peak 335(220) 10(15) 15(25) 290(160) 615(390) 500(405)										A,B,C,D AB,C,D AM Peak Check Phase εy 0.275 0.301 L (sec) 33 22 C (sec) 120 120 y pract. 0.653 0.735 R.C. (%) 137% 144% PM Peak Check Phase εy 0.178 0.216 L (sec) 33 22 C (sec) 100 100 y pract. 0.603 0.702 R.C. (%) 238% 225%									
Stage / Phase Diagrams																													
I/G = 2					I/G = 5					I/G = 5 + 12																			
I/G = 2					I/G = 6 + Min. G 5					I/G = 5					I/G = 5 + 12														

Junction: (J4) Sai Tso Wan Road / Tsing Yi Road West / Tsing Yi Road
Description: 2026 Observed Traffic Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Radius (%) uphill Gradient	Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak		
						Left	Right			A.M.	P.M.			A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Tsing Yi Road	NE		1	A	4.5	15	0	6.5	1	100%	100%	1792	1792	1630	1630	200	0.123	0.123	135	0.083	0.102
	NE		1	A	3.4	0	0	6.5	0	0%	0%	1822	1822	1820	1820	210	0.115		185	0.102	
Sai Tso Wan Road	NW		3	C,D	3.8	15	0	0	1	100%	100%	1995	1995	1815	1815	480	0.264		290	0.160	
	NW		4	D	3.8	0	25	0	0	100%	100%	2135	2135	2015	2015	155	0.077	0.077	95	0.047	0.047
Tsing Yi Road West	SE		2	B,C	3.4	0	0	0	1	0%	0%	1955	1955	1955	1955	260	0.133		135	0.069	
	SE		2	B,C	3.7	0	25	0	0	100%	100%	2125	2125	2005	2005	525	0.262	0.262	300	0.150	0.150
Pedestrian crossing			5p	A,B	Min. Green time = 5GM + 8FG = 13s																
			6p	D	Min. Green time = 5GM + 10FG = 15s																
			7p	B,C	Min. Green time = 5GM + 9FG = 14s																
			8p	A,D	Min. Green time = 5GM + 7FG = 12s																

Notes:	Traffic Flow (pcu / hr)	A,B,C,D		A,B,CD	A,B,C,D		A,B,CD
		A.M. Check Phase			P.M. Check Phase		
		525(300) 260(135) 480(290) 155(95) 200(135) 210(185)	Ey L (sec) C (sec) y pract. R.C. (%)	0.461 19 120 0.758 64%	0.387 30 120 0.675 74%	Ey L (sec) C (sec) y pract. R.C. (%)	0.261 19 110 0.655 150%

Stage / Phase Diagrams



$l/G = 7$	$l/G = 10$	$l/G = 5$

Junction: (J8) Tsing Yi Road West / Ching Hong Road																								
Description: 2026 Observed Traffic Flow																								
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient)	Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak			
						Left	Right			AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Tsing Yi Road West	S	↓	1	A	3.0	0.0	0	5.5	0	0%	0%	1824	3698	1824	1824	3698	3698	212	0.116	0.131	131	0.072	0.095	
	S	↓	1	A	3.5	0.0	0	5.5	0	0%	0%	1874	0	1874	1874	0	0	218	0.116		134	0.072		
	S	↘	1	A	3.7	10.0	0	5.5	1	100%	100%	1754	1754	1525	1525	1525	1525	200	0.131		145	0.095		
Tsing Yi Road West	N	↑	2	A,B	3.5	0.0	0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	181	0.092		176	0.090		
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	194	0.092		189	0.090		
	N	↗	3	B	3.3	0.0	18	0	0	100%	100%	2085	2085	1925	1925	1925	1925	255	0.132	0.132	255	0.132	0.132	
Ching Hong Road	W	↔	4	C	3.4	18.0	20	0	0	18% / 82%	5% / 95%	2095	0	1945	1950	0	0	285	0.147	0.147	243	0.125	0.125	
	W	↘	4	C	3.4	15.0	0	0	1	100%	100%	1955	4050	1775	1775	3720	3725	260	0.146		222	0.125		
Pedestrian crossing		↕	5P	A,B	Min. Green time = 11GM + 8FG = 19s																			
		↕	6P	C	Min. Green time = 5GM + 12FG = 17s																			
Notes:												Traffic Flow (pcu / hr) Weekday AM Peak 430(265) 200(145) 375(365) 255(255)						AM Peak Check Phase Ey 0.410 L (sec) 14 C (sec) 100 y pract. 0.774 R.C. (%) 89%				PM Peak Check Phase Ey 0.352 L (sec) 14 C (sec) 100 y pract. 0.774 R.C. (%) 120%		
Stage / Phase Diagrams																								
I/G = 5					I/G = 5					I/G = 7														

Junction: (J9) Tsing Yi Road West / Liu To Road																							
Description: 2026 Observed Traffic Flow																							
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		uphill Gradient (%)	Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right			AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Tsing Yi Road West	S	↓	2	A,B	3.3	0.0	0	5	1	0%	0%	1735	3610	1735	1735	3610	3610	207	0.119		137	0.079	
	S	↓	2	A,B	3.3	0.0	0	5	0	0%	0%	1875	0	1875	1875	0	0	223	0.119		148	0.079	
	S	↙	3	B	3.3	0.0	22	5	0	100%	100%	1875	1875	1755	1755	1755	1755	380	0.217	0.217	350	0.199	0.199
Tsing Yi Road West	N	↕	1	A	3.2	10.0	0	0	1	66%	68%	1935	4100	1760	1755	3925	3920	296	0.168	0.168	242	0.138	0.138
	N	↑	1	A	4.1	0.0	0	0	0	0%	0%	2165	0	2165	2165	0	0	364	0.168		298	0.138	
Liu To Road	E	↗	5	B,C	3.2	10.0	0	0	1	100%	100%	1935	1935	1685	1685	1685	1685	485	0.288		350	0.208	
	E	↘	4	C	4.1	0.0	18	0	0	100%	100%	2165	2165	2000	2000	2000	2000	200	0.100	0.100	125	0.063	0.063
Pedestrian crossing		↕	6P	A,D	AM: Green time = 49GM + 9FG = 58s, PM: Green time = 46GM + 9FG = 55s																		
		↕	7P	C,D	AM: Green time = 51GM + 13FG = 64s, PM: Green time = 28GM + 13FG = 41s																		
		↔	8P	D	Green time = 10GM + 8FG = 18s																		
Pedestrian Crossing																							
																A,BC,D		A,B,C,D		A,BC,D		A,B,C,D	
Notes:												Traffic Flow (pcu / hr) Weekday AM Peak						AM Peak Check Phase			PM Peak Check Phase		
																		ay	0.456	0.485	ay	0.345	0.400
																		L (sec)	39	43	L (sec)	39	43
																		C (sec)	130	130	C (sec)	110	110
																		y pract.	0.630	0.602	y pract.	0.581	0.548
																		R.C. (%)	38%	24%	R.C. (%)	68%	37%
Stage / Phase Diagrams																							
L/G = 5					L/G = 7					L/G = 5					L/G = 11 + Ped 18								

TRAFFIC SIGNALS CALCULATION										Job No: 26011HK										CTA Consultants Ltd.														
Junction: (J10) Tsing Yi Road West / Fung Shue Wo Road																																		
Description: 2026 Observed Traffic Flow																																		
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient)	Nearside Ø1	Pro. Turning (%)		Site Factor	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak												
						Left	Right			AM	PM				AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y										
Fung Shue Wo Road (To Tsing Yi Road West)	S	↓	1	A,D	4.1	0.0	0	3	0	0%	0%	1	2039	4058	2039	2039	4058	4058	329	0.161	0.231	176	0.086	0.176										
	S	↓	1	A,D	3.9	0.0	0	3	0	0%	0%	1	2019	0	2019	2019	0	0	326	0.161		174	0.086											
Fung Shue Wo Road (To Fung Shue Wo Road)	S	↓	1	A,D	4.0	0.0	0	3	1	0%	0%	1	1889	2294.8	1889	1889	2294.8	2294.8	436	0.231		333	0.176											
	S	↓	1	A,D	4.0	0.0	0	3	0	0%	0%	0.2	405.8	0	405.8	405.8	0	0	94	0.231		72	0.176											
Tsing Yi Road West	N	↑	2	A,B	3.5	0.0	0	0	1	0%	0%	1	1965	2491.3	1965	1965	2491.25	2491.25	517	0.263		473	0.241											
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	0%	0.25	526.25	0	526.25	526.25	0	0	138	0.263		127	0.241											
	N	↷	3	B	3.6	0.0	18	0	0	100%	100%	1	2115	2115	1950	1950	1950	1950	220	0.113	0.113	135	0.069	0.069										
Fung Shue Wo Road	N	↶	4	C	3.8	35.0	0	3	1	100%	100%	1	1869	2193.6	1790	1790	2100	2100	119	0.067		132	0.074											
	N	↶	4	C	4.0	38.0	0	3	0	100%	100%	0.16	324.64	0	310	310	0	0	21	0.067		23	0.074											
Fung Shue Wo Road	N	↷	4	C	3.6	0.0	43	3	0	100%	100%	0.23	457.47	2446.5	440	440	2355	2355	92	0.208	0.208	80	0.183	0.183										
	N	↷	4	C	3.6	0.0	40	3	0	100%	100%	1	1989	0	1915	1915	0	0	398	0.208		350	0.183											
Pedestrian crossing	← - - - →	5p	D	Min. Green time = 5GM + 8FG = 13s																														
	← - - - →	6P	B,C	Min. Green time = 5GM + 8FG = 13s																														
	↑	7P	A,C,D	Min. Green time = 5GM + 7FG = 12s																														
	↓	8P	A,B,D	Min. Green time = 5GM + 8FG = 13s																														
Notes:										Traffic Flow (pcu / hr)										Weekday AM Peak					AD,B,C AB,C,D					AD,B,C AB,C,D				
										655(485) 530(405) ↓ 655(600) 220(135) 140(155) 490(430)										AM Peak Check Phase Ey 0.552 0.471 L (sec) 12 28 C (sec) 100 100 y pract. 0.792 0.648 R.C. (%) 44% 38%					PM Peak Check Phase Ey 0.428 0.423 L (sec) 12 28 C (sec) 100 100 y pract. 0.792 0.648 R.C. (%) 85% 53%									
Stage / Phase Diagrams																																		
A					B					C					D																			
I/G = 5					I/G = 5					I/G = 5																								

TRAFFIC SIGNALS CALCULATION

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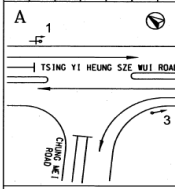
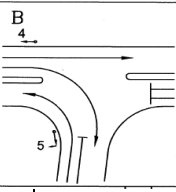
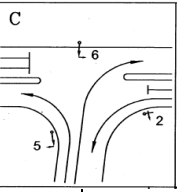
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Junction: (J11) Tsing Yi Heung Sze Wui Road / Cheung Wan Street																									
Description: 2026 Observed Traffic Flow																									
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(%) uphill Gradient	Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak				
						Left	Right			AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y		
Tsing Yi Heung Sze Wui Road	N	↑	2	A,B	3.5	0.0	0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	577	0.294		558	0.284	0.284		
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	618	0.294		597	0.284			
Cheung Wan Street	W	↔	3	C	3.5	18.0	20	0	0	51% / 49%	41% / 59%	2105	0	1950	1950	0	0	316	0.162	0.162	272	0.139	0.139		
	W	↔	3	C	3.5	15.0	0	0	1	100%	100%	1965	4070	1785	1785	3735	3735	289	0.162		248	0.139			
Tsing Yi Heung Sze Wui Road	S	↘	1	A,D	3.5	10.0	0	0	1	100%	100%	1965	6175	1710	1710	5920	5920	620	0.363	0.363	420	0.246			
	S	↓	1	A,D	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	540	0.257		358	0.170			
	S	↓	1	A,D	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	540	0.257		358	0.170			
Pedestrian crossing		↔	4P	B						AM: Green time = 12GM + 11FG = 23s, PM: Green time = 12GM + 11FG = 23s															
		↑↓	5P	D						AM: Green time = 6GM + 8FG = 14s, PM: Green time = 10GM + 8FG = 18s															
		↔	6P	B,C						AM: Green time = 45GM + 10FG = 55s, AM: Green time = 41GM + 10FG = 51s															
														AB,C,D		AD,B,C		AB,C,D		AD,B,C					
Notes:												Traffic Flow (pcu / hr) Weekday AM Peak				AM Peak Check Phase				PM Peak Check Phase					
												1080(715) 620(420)				Ey 0.456 0.525				Ey 0.423 0.385					
												↓ ↘ ↗				L (sec) 31 37				L (sec) 35 37					
												↑ ↘ ↗				C (sec) 114 114				C (sec) 100 100					
												155(160) 450(360)				y pract. 0.655 0.608				y pract. 0.585 0.567					
												↑				R.C. (%) 44% 16%				R.C. (%) 38% 47%					
												1195(1155)													
Stage / Phase Diagrams																									
I/G = 2						I/G = 8 + Ped 23						I/G = 3						I/G = 5							
												I/G = 5						I/G = 12 + Ped 18							

TRAFFIC SIGNALS CALCULATION

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Junction: (J12) Tsing Yi Heung Sze Wui Road / Chung Mei Road																							
Description: 2026 Observed Traffic Flow																							
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right			AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Chung Mei Road	E		5	B,C	3.3	10.0	0	0	1	100%	100%	1945	1945	1690	1690	1690	1690	215	0.127		240	0.142	
	E		6	C	3.3	0.0	18	0	0	100%	100%	2085	2085	1925	1925	1925	1925	265	0.138	0.138	170	0.088	0.088
Tsing Yi Heung Sze Wui Road	N		2	A,C	3.3	25.0	0	0	1	100%	100%	1945	1945	1835	1835	1835	1835	230	0.125		285	0.155	
	N		3	A	3.5	0.0	0	0	0	0%	0%	2105	4210	2105	2105	4210	4210	490	0.233	0.233	458	0.217	0.217
	N		3	A	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	490	0.233		458	0.217	
Tsing Yi Heung Sze Wui Road	S		1	A,B	3.5	0.0	0	3	1	0%	0%	1839	3818	1839	1839	3818	3818	597	0.325		405	0.220	
	S		1	A,B	3.5	0.0	0	3	0	0%	0%	1979	0	1979	1979	0	0	643	0.325		435	0.220	
	S		4	B	3.5	0.0	22	3	0	100%	100%	1979	1979	1855	1855	1855	1855	290	0.156	0.156	235	0.127	0.127
Notes:												Traffic Flow (pcu / hr) Weekday AM Peak					AM Peak Check Phase			PM Peak Check Phase			
												215(240) 265(170) 					E_y 0.527 L (sec) 15 C (sec) 114 y pract. 0.782 R.C. (%) 48%			E_y 0.432 L (sec) 15 C (sec) 100 y pract. 0.765 R.C. (%) 77%			
Stage / Phase Diagrams																							
																							
I/G = 5						I/G = 5						I/G = 8											

TRAFFIC SIGNALS CALCULATION

Job No: 26011HK

CTA Consultants Ltd.

Junction: (J14) Tsing Yi Road / Planned New Road																													
Description: 2026 Observed Traffic Flow																													
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak								
						Left	Right			AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y						
Tsing Yi Road	N	↑	A	1	3.5	0.0	0	0	1	0%	0%	1965	4070	1965	1965	4065	4065	246	0.125	0.126	205	0.105	0.105						
	N	↗	A	1	3.5	0.0	40	0	0	4%	7%	2105	0	2100	2100	0	0	264	0.126		220	0.105							
Planned New Road	W	↖	C	3	3.5	0.0	18	0	0	100%	100%	2105	2105	1945	1945	1945	1945	15	0.008		20	0.010							
	W	↙	C	3	3.5	10.0	0	0	1	100%	100%	1965	1965	1710	1710	1710	1710	70	0.041	0.041	55	0.032	0.032						
Tsing Yi Road	S	↘	B	2	3.5	10.0	0	0	1	0%	3%	1965	4070	1965	1955	4070	4060	302	0.154	0.154	195	0.100	0.100						
	S	↓	B	2	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	323	0.154		210	0.100							
Pedestrian crossing	↔		Dp	1	AM: Green time = 26GM + 7FG = 33s, PM: Green time = 32GM + 7FG = 39s																								
	↑↓		EP	1,2	AM: Green time = 76GM + 7FG = 83s, PM: Green time = 82GM + 7FG = 89s																								
	↔		Fp	2,3	AM: Green time = 70GM + 7FG = 77s, PM: Green time = 64GM + 7FG = 71s																								
	↑↓		Gp	3	AM: Green time = 22GM + 7FG = 29s, PM: Green time = 16GM + 7FG = 23s																								
	↔		Hp	1,3	AM: Green time = 66GM + 7FG = 73s, PM: Green time = 66GM + 7FG = 73s																								
	↔		Ip	2	AM: Green time = 32GM + 7FG = 39s, PM: Green time = 32GM + 7FG = 39s																								
Notes:												Traffic Flow (pcu / hr) Weekday AM Peak						AM Peak Check Phase				PM Peak Check Phase							
												500(410) 10(15) 625(400) 0(5)						15(20) y pract. 0.765 70(55) R.C. (%) 139%				15(20) y pract. 0.765 70(55) R.C. (%) 223%							
Stage / Phase Diagrams																													
1.					2.					3.																			
I/G = 5					I/G = 10					I/G = 6																			

Junction: (J1) Cheung Tsing Highway / Tsing Yi Road West																																				
Description: 2026 Observed Traffic Flow																																				
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak			Flow (pcu/hr)			y Value	Critical y												
						Left	Right			Logistic Peak			Logistic Peak		Logistic Peak		Flow (pcu/hr)	y Value	Critical y																	
Tsing Yi Road West	S	↓	2	A	3.5	0	0	0	1	0%	1965	6135	1965		5900		152	0.077	0.077																	
	S	↙	2	A	3.3	0	20	0	0	46%	2085	0	2015		0		155	0.077																		
	S	↘	2	A	3.3	0	17.5	0	0	100%	2085	0	1920		0		148	0.077																		
Cheung Tsing Highway	E	↗	3	A,B	3.4	20	0	0	1	100%	1955	1955	1820		1820		310	0.170																		
	E	↓	4	B	3.5	0	30	0	0	100%	2105	4070	2005		3860		268	0.133																		
	E	↘	4	B	3.5	0	25	0	1	100%	1965	0	1855		0		247	0.133	0.133																	
Tsing Yi Road West	N	↙	1	C	3.6	20	0	6.5	1	100%	1702	3544	1585		3425		540	0.341	0.341																	
	N	↑	1	C	3.6	0	0	6.5	0	0%	1842	0	1840		0		345	0.188																		
Pedestrian crossing		↔	5P	C						Min. Green time = 5GM + 10FG = 15s																										
		↕	6P	C						Min. Green time = 5GM + 6FG = 11s																										
		↔	7P	A,B						Min. Green time = 5GM + 9FG = 14s																										
		↕	8P	B						Min. Green time = 5GM + 10FG = 15s																										
Notes:										Traffic Flow (pcu / hr)						Logistic Peak Check Phase																				
										310 ↗ ↘ 515 ↙ ↘ 540 345						A,B,C AB,C <table><tr><td>Ey</td><td>0.551</td><td>0.511</td></tr><tr><td>L (sec)</td><td>13</td><td>9</td></tr><tr><td>C (sec)</td><td>100</td><td>100</td></tr><tr><td>y pract.</td><td>0.783</td><td>0.819</td></tr><tr><td>R.C. (%)</td><td>42%</td><td>60%</td></tr></table>				Ey	0.551	0.511	L (sec)	13	9	C (sec)	100	100	y pract.	0.783	0.819	R.C. (%)	42%	60%		
Ey	0.551	0.511																																		
L (sec)	13	9																																		
C (sec)	100	100																																		
y pract.	0.783	0.819																																		
R.C. (%)	42%	60%																																		
Stage / Phase Diagrams																																				
A B C																																				
I/G = 5					I/G = 5					I/G = 6																										

Junction: (J2) Tsing Hung Road / Tsing Yi Road																								
Description: 2026 Observed Traffic Flow																								
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak								
						Left	Right					Logistic Peak	Logistic Peak		Logistic Peak		Flow (pcu/hr)	y Value				Critical y	Flow (pcu/hr)	y Value
Tsing Yi Road	S	↓	1	A	3.5	0.0	0	1	0%	1965	4070	1965		4070		258	0.131							
	S	↓	1	A	3.5	0.0	0	0	0%	2105	0	2105		0		277	0.131							
	S	↙	1	A	3.6	0.0	18	0	100%	2115	2115	1950		1950		200	0.103	0.131						
Tsing Yi Road	N	↑	4	C	4.0	30.0	0	1	100%	2015	2015	1920		1920		30	0.016							
	N	↑	4	C	3.5	0.0	0	0	0%	2105	4210	2105		4210		250	0.119							
	N	↑	4	C	3.5	0.0	0	0	0%	2105	0	2105		0		250	0.119	0.119						
Tsing Hung Road	E	→	2	A,B	3.3	25.0	0	1	100%	1945	1945	1835		1835		270	0.147							
	E	→	3	B	4.0	0.0	22	0	100%	2155	2155	2015		2015		25	0.012							
Pedestrian Crossing		↕	5P	D	Min. Green time = 5GM + 7FG = 12s																			
		↕	6P	A,B,D	Min. Green time = 5GM + 5FG = 10s																			
		↕	7P	C,D	Min. Green time = 5GM + 10FG = 15s																			
		↕	8P	C,D	Min. Green time = 5GM + 5FG = 10s																			
Notes:										Traffic Flow (pcu / hr) Weekday AM Peak					A,B,C,D AB,C,D									
															Logistic Peak Check Phase									
															E y 0.250 0.266									
															L (sec) 33 22									
															C (sec) 100 100									
															y pract. 0.603 0.702									
															R.C. (%) 141% 164%									
Stage / Phase Diagrams																								
I/G = 2					I/G = 6 + Min. G 5					I/G = 5					I/G = 5 + 12									

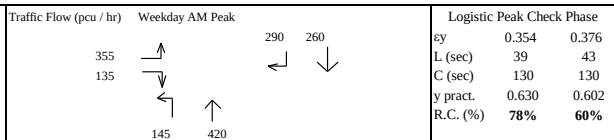
Junction: (J4) Sai Tso Wan Road / Tsing Yi Road West / Tsing Yi Road																						
Description: 2026 Observed Traffic Flow																						
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		uphill Gradient (%)	Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Logistic Peak			Critical y				
						Left	Right			Logistic Peak			Logistic Peak	Flow (pcu/hr)	y Value	Critical y						
Tsing Yi Road	NE	↖	1	A	4.5	15	0	6.5	1	100%	1792	1792	1630	160	0.098	0.132						
	NE	↗	1	A	3.4	0	0	6.5	0	0%	1822	1822	1820	240	0.132							
Sai Tso Wan Road	NW	↖	3	C,D	3.8	15	0	0	1	100%	1995	1995	1815	645	0.355							
	NW	↗	4	D	3.8	0	25	0	0	100%	2135	2135	2015	190	0.094	0.094						
Tsing Yi Road West	SE	↗	2	B,C	3.4	0	0	0	1	0%	1955	1955	1955	220	0.113							
	SE	↖	2	B,C	3.7	0	25	0	0	100%	2125	2125	2005	530	0.264	0.264						
Pedestrian crossing		↕	5p	A,B	Min. Green time = 5GM + 8FG = 13s																	
		↕	6p	D	Min. Green time = 5GM + 10FG = 15s																	
		↔	7p	B,C	Min. Green time = 5GM + 9FG = 14s																	
		↔	8p	A,D	Min. Green time = 5GM + 7FG = 12s																	
Notes:											Traffic Flow (pcu / hr)				Logistic Peak Check Phase							
															8y	0.491	0.487					
															L (sec)	19	30					
															C (sec)	110	110					
															y pract.	0.745	0.655					
															R.C. (%)	52%	34%					
Stage / Phase Diagrams																						
I/G = 5					I/G = 5										I/G = 5							
I/G = 5					I/G = 8+12					I/G = 2												

Junction: (J8) Tsing Yi Road West / Ching Hong Road																								
Description: 2026 Observed Traffic Flow																								
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak			Critical y				
						Left	Right			Logistic Peak			Logistic Peak	Logistic Peak	Logistic Peak	Flow (pcu/hr)	y Value							
Tsing Yi Road West	S	↓	1	A	3.0	0.0	0	5.5	0	0%	1824	3698	1824		3698		109	0.059	0.115					
	S	↓	1	A	3.5	0.0	0	5.5	0	0%	1874	0	1874		0		111	0.059						
	S	↘	1	A	3.7	10.0	0	5.5	1	100%	1754	1754	1525		1525		175	0.115						
Tsing Yi Road West	N	↑	2	A,B	3.5	0.0	0	0	1	0%	1965	4070	1965		4070		174	0.088						
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	2105	0	2105		0		186	0.088						
	N	↗	3	B	3.3	0.0	18	0	0	100%	2085	2085	1925		1925		290	0.151	0.151					
Ching Hong Road	W	↖	4	C	3.4	18.0	20	0	0	17% / 83%	2095	0	1945		0		272	0.140	0.140					
	W	↙	4	C	3.4	15.0	0	0	1	100%	1955	4050	1775		3720		248	0.140						
Pedestrian crossing		↕	5P	A,B	Min. Green time = 11GM + 8FG = 19s																			
		↕	6P	C	Min. Green time = 5GM + 12FG = 17s																			
Notes:											Traffic Flow (pcu / hr) Weekday AM Peak					Logistic Peak Check Phase								
											360290220175					E_y 0.405 L (sec) 12 C (sec) 71 y pract. 0.748 R.C. (%) 85%								
Stage / Phase Diagrams																								
A					B					C														
I/G = 5					I/G = 5					I/G = 7														

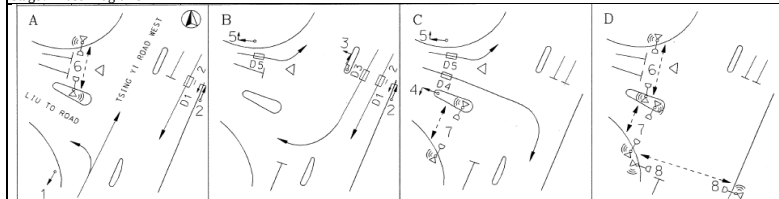
Junction: **J9 - Tsing Yi Road West / Liu To Road**
Description: **2026 Observed Traffic Flow**

[illegible]

Notes:



Stage / Phase Diagrams



I/G = 5	I/G = 7	I/G = 5	I/G = 11 + Ped 18
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TRAFFIC SIGNALS CALCULATION Job No: 26011HK

TRAFFIC SIGNALS CALCULATION Job No: 26011HK

TRAFFIC SIGNALS CALCULATION

Junction: **J10 - Tsing Yi Road West / Fung Shue Wo Road**

Station:	920 - 13th Avenue West / 13th Street NW Road
Description:	2025 Observed Traffic Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside 0/1	Pro. Turning (%)	Site Factor	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak					
						Left	Right												Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value
Fung Shue Wo Road (To Tsing Yi Road West)	S	↓	1	A,D	4.1	0.0	0	3	0	0%	1	2039	4058	2039		4058	221	0.108	0.170				
	S	↓	1	A,D	3.9	0.0	0	3	0	0%	1	2019	0	2019		0	219	0.108					
Fung Shue Wo Road (To Fung Shue Wo Road)	S	↓	1	A,D	4.0	0.0	0	3	1	0%	1	1889	2294.8	1889		2294.8	321	0.170					
	S	↓	1	A,D	4.0	0.0	0	3	0	0%	0.2	405.8	0	405.8		0	69	0.170					
Tsing Yi Road West	N	↑	2	A,B	3.5	0.0	0	0	1	0%	1	1965	2491.3	1965		2491.25	465	0.237					
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	0.25	526.25	0	526.25		0	125	0.237					
	N	↷	3	B	3.6	0.0	18	0	0	100%	1	2115	2115	1950		1950	150	0.077	0.077				
Fung Shue Wo Road	N	↶	4	C	3.8	35.0	0	3	1	100%	1	1869	2193.6	1790		2100	94	0.052					
	N	↶	4	C	4.0	38.0	0	3	0	100%	0.16	324.64	0	310		0	16	0.052					
Fung Shue Wo Road	N	↷	4	C	3.6	0.0	43	3	0	100%	0.23	457.47	2446.5	440		2355	73	0.166	0.166				
	N	↷	4	C	3.6	0.0	40	3	0	100%	1	1989	0	1915		0	317	0.166					
Pedestrian crossing		↔↔↔	5p	D		Min. Green time = 5s (G) + 8s (FS) = 13s																	
		↔↔↔	6P	B,C		Min. Green time = 5s (G) + 8s (FS) = 13s																	
		↑	7P	A,C,D		Min. Green time = 5s (G) + 8s (FS) = 13s																	
		↓	8P	A,B,D		Min. Green time = 5s (G) + 7s (FS) = 12s																	

AD.B.C AB.C.D

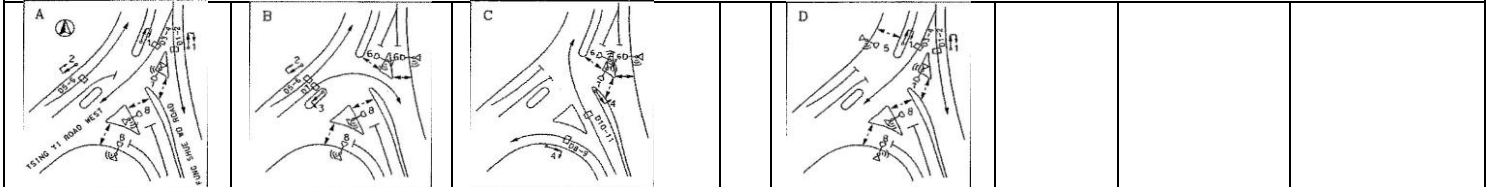
Notes:

Notes:	Traffic Flow (pcu / hr)	Weekday AM Peak	Logistic Peak Check Phase
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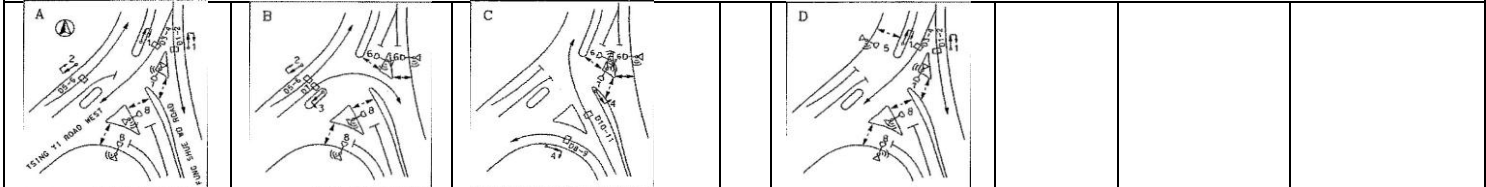
Notes:	Weekday AM Peak 590 150 440 390 110	Logistic Peak Check Phase <table border="1"> <tr> <td>Ex</td> <td>0.412</td> <td>0.402</td> </tr> <tr> <td>L (sec)</td> <td>12</td> <td>28</td> </tr> <tr> <td>C (sec)</td> <td>90</td> <td>100</td> </tr> <tr> <td>y pract.</td> <td>0.780</td> <td>0.648</td> </tr> <tr> <td>R.C. (%)</td> <td>89%</td> <td>61%</td> </tr> </table>	Ex	0.412	0.402	L (sec)	12	28	C (sec)	90	100	y pract.	0.780	0.648	R.C. (%)	89%	61%
	Ex	0.412	0.402														
L (sec)	12	28															
C (sec)	90	100															
y pract.	0.780	0.648															
R.C. (%)	89%	61%															

Notes:	Weekday AM Peak 590 150 440 390 110	Logistic Peak Check Phase <table border="1"> <tr> <td>Ex</td> <td>0.412</td> <td>0.402</td> </tr> <tr> <td>L (sec)</td> <td>12</td> <td>28</td> </tr> <tr> <td>C (sec)</td> <td>90</td> <td>100</td> </tr> <tr> <td>y pract.</td> <td>0.780</td> <td>0.648</td> </tr> <tr> <td>R.C. (%)</td> <td>89%</td> <td>61%</td> </tr> </table>	Ex	0.412	0.402	L (sec)	12	28	C (sec)	90	100	y pract.	0.780	0.648	R.C. (%)	89%	61%
	Ex	0.412	0.402														
L (sec)	12	28															
C (sec)	90	100															
y pract.	0.780	0.648															
R.C. (%)	89%	61%															

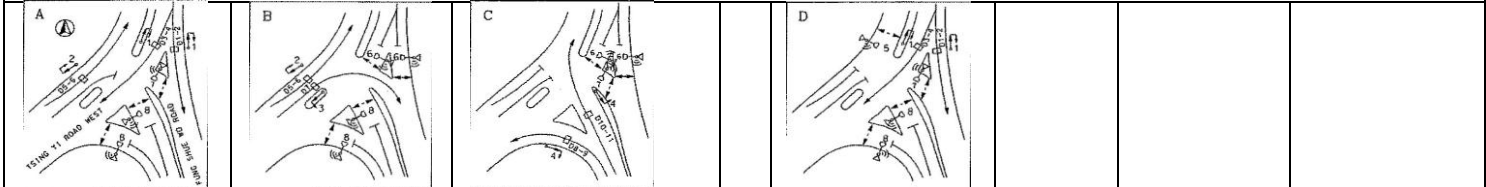
Stage / Phase Diagrams



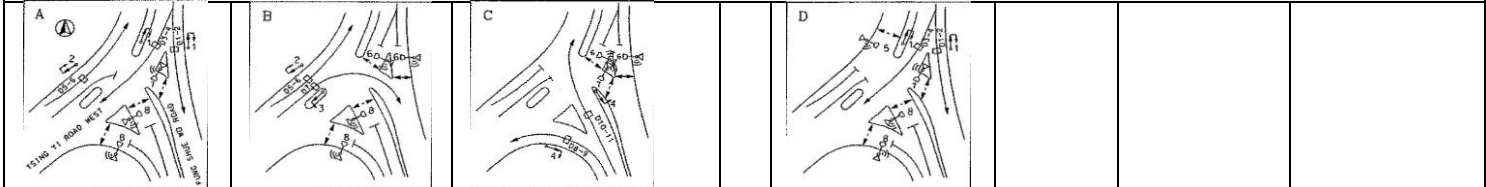
$I/G = 5$	$I/G = 5$	$I/G = 5$				
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$I/G = 5$	$I/G = 5$	$I/G = 5$				
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$I/G = 5$	$I/G = 5$	$I/G = 5$				
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$I/G = 5$	$I/G = 5$	$I/G = 5$				
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Junction: (J11) Tsing Yi Heung Sze Wui Road / Cheung Wan Street																											
Description: 2026 Observed Traffic Flow																											
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		uphill Gradient (%)	Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak			Flow (pcu/hr)			y Value	Critical y			
						Left	Right						Logistic Peak			Logistic Peak		Flow (pcu/hr)	y Value						Critical y		
Tsing Yi Heung Sze Wui Road	N	↑	2	A,B	3.5	0.0	0	0	1	0%	1965	4070	1965		4070		463	0.236									
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	2105	0	2105		0		497	0.236									
Cheung Wan Street	W	↵	3	C	3.5	18.0	20	0	0	53% / 47%	2105	0	1950		0		290	0.149	0.149								
	W	↵	3	C	3.5	15.0	0	0	1	100%	1965	4070	1785		3735		265	0.149									
Tsing Yi Heung Sze Wui Road	S	↘	1	A,D	3.0	10.0	0	0	1	100%	1915	6025	1665		5775		570	0.342	0.342								
	S	↓	1	A,D	3.0	0.0	0	0	0	0%	2055	0	2055		0		358	0.174									
	S	↓	1	A,D	3.0	0.0	0	0	0	0%	2055	0	2055		0		358	0.174									
Pedestrian crossing		↔	4P	B						Green time = 12GM + 11FG = 23s																	
		↑	5P	D						Green time = 8GM + 8FG = 16s																	
		↓	6P	B,C						Green time = 42GM + 10FG = 52s																	
												AB,C,D AD,B,C															
Notes:												Traffic Flow (pcu / hr) Weekday AM Peak				Logistic Peak Check Phase											
												715 570				Ey 0.384 0.491											
												↘ ↙ ↗				L (sec) 33 37											
												↑ ↘ ↗				C (sec) 90 90											
												960 135 420				y pract. 0.570 0.530											
																R.C. (%) 48% 8%											
Stage / Phase Diagrams																											
I/G = 2						I/G = 5						I/G = 12 + Ped 16															

Junction: (J12) Tsing Yi Heung Sze Wui Road / Chung Mei Road																						
Description: 2026 Observed Traffic Flow																						
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		uphill Gradient (%)	Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak					
						Left	Right			Logistic Peak				Logistic Peak		Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Chung Mei Road	E	↗	5	B,C	3.3	10.0	0	0	1	100%	1945	1945	1690		1690	220	0.130					
	E	↘	6	C	3.3	0.0	18	0	0	100%	2085	2085	1925		1925	205	0.106	0.106				
Tsing Yi Heung Sze Wui Road	N	↖	2	A,C	3.3	25.0	0	0	1	100%	1945	1945	1835		1835	190	0.104					
	N	↑	3	A	3.5	0.0	0	0	0	0%	2105	4210	2105		4210	158	0.075	0.075				
	N	↑	3	A	3.5	0.0	0	0	0	0%	2105	0	2105		0	158	0.075					
Tsing Yi Heung Sze Wui Road	S	↓	1	A,B	3.5	0.0	0	3	1	0%	1839	3818	1839		3818	147	0.080					
	S	↓	1	A,B	3.5	0.0	0	3	0	0%	1979	0	1979		0	158	0.080					
	S	↙	4	B	3.5	0.0	22	3	0	100%	1979	1979	1855		1855	290	0.156	0.156				
Pedestrian crossing																						
Notes:											Traffic Flow (pcu / hr) Weekday AM Peak					Logistic Peak Check Phase						
											220 ↗ 205 ↘ ↖ ↑ 190 735					290 ↖ 845.00 ↓			By 0.338 L (sec) 15 C (sec) 114 y pract. 0.782 R.C. (%) 131%			
Stage / Phase Diagrams																						
A 1 B 4 C 6																						
I/G = 5			I/G = 5			I/G = 8																

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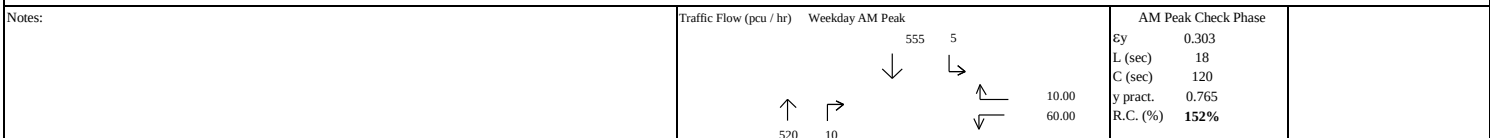
TRAFFIC SIGNALS CALCULATION Job No: 26011HK CTA Consultants Ltd.

TRAFFIC SIGNALS CALCULATION Job No: 26011HK CTA Consultants Ltd.

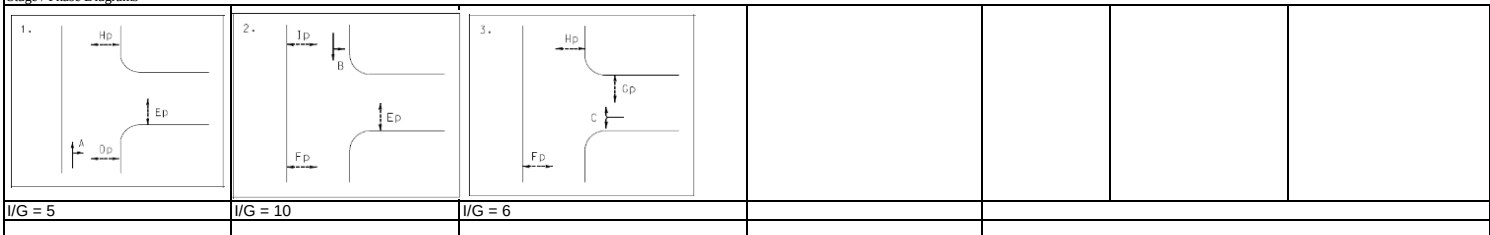
Junction: (J14) Tsing Yi Road / Planned New Road
Description: 2026 Observed Traffic Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(%) uphill Gradient	Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak					
						Left	Right						Logistic Peak	Logistic Peak		Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Tsing Yi Road	N	↑	A	1	3.5	0.0	0	0	1	0%	1965	4070	1965		4065		256	0.130	0.130			
	N	↗	A	1	3.5	0.0	40	0	0	4%	2105	0	2100		0		274	0.130				
Planned New Road	W	↖	C	3	3.5	0.0	18	0	0	100%	2105	2105	1945		1945		10	0.005				
	W	↙	C	3	3.5	10.0	0	0	1	100%	1965	1965	1710		1710		60	0.035	0.035			
Tsing Yi Road	S	↘	B	2	3.5	10.0	0	0	1	2%	1965	4070	1960		4065		270	0.138	0.138			
	S	↓	B	2	3.5	0.0	0	0	0	0%	2105	0	2105		0		290	0.138				
Pedestrian crossing		↔	Dp	1	Green time = 28GM + 7FG = 35s																	
		↕	EP	1,2	Green time = 78GM + 7FG = 85s																	
		↔	Fp	2,3	Green time = 68GM + 7FG = 75s																	
		↕	Gp	3	Green time = 20GM + 7FG = 27s																	
		↔	Hp	1,3	Green time = 66GM + 7FG = 73s																	
		↔	Ip	2	Green time = 32GM + 7FG = 39s																	

Notes:	Traffic Flow (pcu / hr)	Weekday AM Peak	AM Peak Check Phase
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Stage / Phase Diagrams			
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Priority Junction Calculation

Junction :	(J3) Tsing Yi Road / Tsing Sheung Road	Job No.:	26011HK
Scenario :	2026 Observed Traffic Flow		

Arm C Tsing Yi Road

390	<430>	(280)
90	<85>	(105)

Arm A Tsing Yi Road

490	<420>	(315)
240	<205>	(240)

130	150
<120>	<140>
(110)	(175)

Arm B Tsing Sheung Road

AM	[Logistic]	(PM)
[Logistic]		
(PM)		

The predictive equations of capacity of movement are:

$$Q-BA = D(627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB))$$

$$Q-BC = E(745 - Y(0.364q-AC + 0.144q-AB))$$

$$Q-CB = F(745 - 0.364Y(q-AC + q-AB))$$

The geometric parameters represented by D, E, F are:

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

$$E = (1 + 0.094(w-BC - 3.65))(1 + 0.0009(V-rBC - 120))$$

$$F = (1 + 0.094(w-CB - 3.65))(1 + 0.0009(V-rCB - 120))$$

where

Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input					Calculated		
	W	14	V-rBA	30	w-BA	4.5	D	0.933
	W-CR	0	V-IBA	50	w-BC	4.5	E	1.012
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)		0	V-rBC	50	w-CB	0	F	0.616
Minor Road Share LT&RT? (Yes: 1, No: 0)		0	V-rCB	50			Y	0.517

Analysis :	Traffic Flow pcu/hr	AM	Logistic	PM	Capacity pcu/hr	AM	Logistic	PM	
	q-CA	390	430	280	Q-BA	417	428	456	
	q-CB	90	85	105	Q-BC	642	658	676	
	q-AB	240	205	240	Q-CB	374	386	394	
	q-AC	490	420	315	Q-CA	N/A	N/A	N/A	(If C-B blocked C-
	q-BA	150	140	175	Q-BAC	N/A	N/A	N/A	(If Minor Road Share LT&RT)
	q-BC	130	120	110					
	f	0.464	0.462	0.386					

Results :	Ratio of Flow-to-Capacity	AM	Logistic	PM
	B-A	0.36	0.33	0.38
	B-C	0.20	0.18	0.16
	C-B	0.24	0.22	0.27
	C-A	N/A	N/A	N/A
	B-AC	N/A	N/A	N/A
	Critical DFC	0.36	0.33	0.38

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Priority Junction Calculation

Junction :	(J6) Sai Tso Wan Road / Tsing Tim Street	Job No.:	26011HK
Scenario :	2026 Observed Traffic Flow		

Arm C Sai Tso Wan Road		
390	<335>	(195)
25	<25>	(5)

Arm A Sai Tso Wan Road		
310	<340>	(225)
95	<85>	(65)

30	80
<15>	<85>
(5)	(75)

AM	[Logistic]	(PM)
[Logistic]		
(PM)		

Arm B Tsing Tim Street

The predictive equations of capacity of movement are:

$$Q-BA = D(627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB))$$

$$Q-BC = E(745 - Y(0.364q-AC + 0.144q-AB))$$

$$Q-CB = F(745 - 0.364Y(q-AC + q-AB))$$

The geometric parameters represented by D, E, F are:

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

$$E = (1 + 0.094(w-BC - 3.65))(1 + 0.0009(V-rBC - 120))$$

$$F = (1 + 0.094(w-CB - 3.65))(1 + 0.0009(V-rCB - 120))$$

where

Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input	Calculated
W	7	D 0.877
W-CR	0	E 0.933
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	F 0.616
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.759

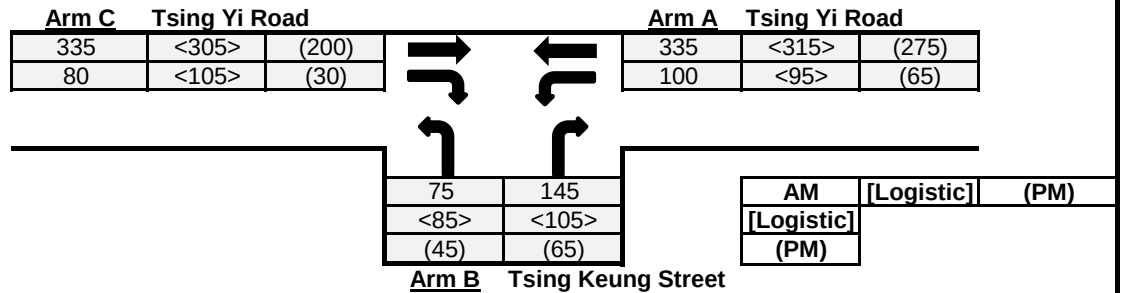
Analysis :	Traffic Flow pcu/hr	AM	Logistic	PM	Capacity pcu/hr	AM	Logistic	PM
	q-CA	390	335	195	Q-BA	397	400	458
	q-CB	25	25	5	Q-BC	605	599	630
	q-AB	95	85	65	Q-CB	390	386	409
	q-AC	310	340	225	Q-CA	N/A	N/A	N/A
	q-BA	80	85	75	Q-BAC	439	421	466
	q-BC	30	15	5				
	f	0.273	0.150	0.063				

(If C-B blocked C-
(If Minor
Road Share
LT&RT)

Results :	Ratio of Flow-to-Capacity	AM	Logistic	PM
	B-A	N/A	N/A	N/A
	B-C	N/A	N/A	N/A
	C-B	0.06	0.06	0.01
	C-A	N/A	N/A	N/A
	B-AC	0.25	0.24	0.17
	Critical DFC	0.25	0.24	0.17

Priority Junction Calculation

Junction :	(J13) Tsing Yi Road / Tsing Keung Street	Job No.:	26011HK
Scenario :	2026 Observed Traffic Flow		



The predictive equations of capacity of movement are:

$$Q-BA = D(627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB))$$

$$Q-BC = E(745 - Y(0.364q-AC + 0.144q-AB))$$

$$Q-CB = F(745 - 0.364Y(q-AC + q-AB))$$

The geometric parameters represented by D, E, F are:

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

$$E = (1 + 0.094(w-BC - 3.65))(1 + 0.0009(V-rBC - 120))$$

$$F = (1 + 0.094(w-CB - 3.65))(1 + 0.0009(V-rCB - 120))$$

where

$$Y = 1 - 0.0345W$$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input					Calculated	
	W	15	V-rBA	50	w-BA	4	D 0.910
	W-CR	0	V-IBA	50	w-BC	4	E 0.968
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	V-rBC	50	w-CB	0	F 0.616	
Minor Road Share LT&RT? (Yes: 1, No: 0)	0	V-rCB	50			Y 0.483	

Analysis :	Traffic Flow	AM	Logistic	PM	Capacity	AM	Logistic	PM	
	pcu/hr				pcu/hr				
	q-CA	335	305	200	Q-BA	459	459	495	
	q-CB	80	105	30	Q-BC	657	661	670	
	q-AB	100	95	65	Q-CB	412	414	422	
	q-AC	335	315	275	Q-CA	N/A	N/A	N/A	(If C-B blocked C-
	q-BA	145	105	65	Q-BAC	N/A	N/A	N/A	(If Minor Road Share
	q-BC	75	85	45					LT&RT)
	f	0.341	0.447	0.409					

Results :	Ratio of Flow-to-Capacity	AM	Logistic	PM
	B-A	0.32	0.23	0.13
	B-C	0.11	0.13	0.07
	C-B	0.19	0.25	0.07
	C-A	N/A	N/A	N/A
	B-AC	N/A	N/A	N/A
	Critical DFC	0.32	0.25	0.13

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Roundabout Junction Calculation

Junction :	(RA1) Tsing Yi Interchange (North)	Job No.:	26011HK
Scenario :	2026 Observed Traffic Flow		

Arm 4 Tsing Yi Heung Sze Wui Road

0		420	
<0>		<310>	
(0)		(295)	

Arm 1 Tsing Yi Bridge

420	<310>	(295)

Arm 3

1335	<1020>	(1010)

Arm 2 Tsing Yi Interchange Access Road

1605	<1220>	(1165)

	270	1335	0
	<200>	<1020>	<0>
	(155)	(1010)	(0)

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)		6		6
E	=	Entry width (m)		7		7
L	=	Effective length of flare (m)		5		5
R	=	Entry radius		62		41
D	=	Inscribed circle diameter (m)		60		60
A	=	Entry angle (degree)		27		60
Q	=	Entry flow (pcu/hr)	AM	1605		420
			Logistic	1220		310
			PM	1165		295
Qc	=	Circulating flow across entry (pcu/hr)	AM	0		1335
			Logistic	0		1020
			PM	0		1010

Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$		0.32		0.32
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$		1.04		0.92
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$		6.61		6.61
M	=	$\text{Exp}((D - 60) / 10)$		1.00		1.00
F	=	$303 \cdot X2$		2003		2003
Td	=	$1 + (0.5 / (1 + M))$		1.25		1.25
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$		0.61		0.61
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	2090		1095
			Logistic	2090		1272
			PM	2090		1277
DFC	=	Entry Flow/Capacity = Q / Qe	AM	0.77		0.38
			Logistic	0.58		0.24
			PM	0.56		0.23

DFC of Critical Approach	=	AM	0.77		
		Logistic	0.58		
		PM	0.56		

Roundabout Junction Calculation

Junction :	(RA1) Tsing Yi Interchange (South)	Job No.: 26011HK
Scenario :	2026 Observed Traffic Flow	

10	600	0
<5>	<490>	<0>
(15)	(620)	(0)

525	<400>	(490)
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395	<305>	(285)
10	<10>	(10)
0	<0>	(0)

120	<85>	(195)
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1000		120	0
<695>		<85>	<0>
(580)		(195)	(0)

625	<515>	(1060)
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0	0	0
615	510	425
180	150	150

AM	[Logistic]	(PM)
[Logistic]		
(PM)		

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	7	6.8	7	6
E	=	Entry width (m)	7.2	7	7.3	6.3
L	=	Effective length of flare (m)	5	5	5	5
R	=	Entry radius	23	25	24	44
D	=	Inscribed circle diameter (m)	60	60	60	60
A	=	Entry angle (degree)	43	54	27	23
Q	=	Entry flow (pcu/hr)	AM 795	1120	405	610
			Logistic 660	780	315	495
			PM 575	775	295	635
Qc	=	Circulating flow across entry (pcu/hr)	AM 620	625	120	525
			Logistic 505	515	85	400
			PM 645	1060	195	490

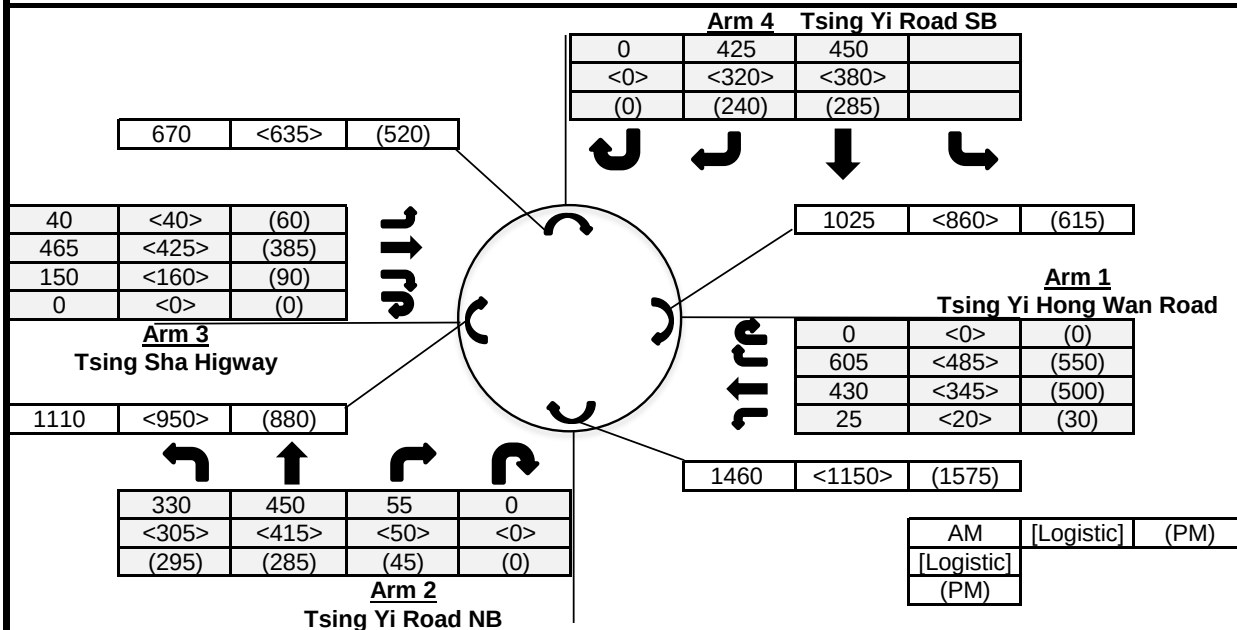
Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = 1.6*(E-V)/L	0.06	0.06	0.10	0.10
K	=	1-0.00347*(A-30)-0.978*(1/R-0.05)	0.96	0.93	1.02	1.05
X2	=	V+((E-V)/(1+2*S))	7.18	6.98	7.25	6.25
M	=	Exp((D-60)/10)	1.00	1.00	1.00	1.00
F	=	303*X2	2175	2114	2197	1894
Td	=	1+(0.5/(1+M))	1.25	1.25	1.25	1.25
Fc	=	0.21*Td*(1+0.2*X2)	0.64	0.63	0.64	0.59
Qe	=	Capacity = K*(F-Fc*Qc)	AM 1709	1595	2159	1665
			Logistic 1780	1659	2182	1742
			PM 1694	1341	2110	1687
DFC	=	Entry Flow/Capacity = Q/Qe	AM 0.47	0.70	0.19	0.37
			Logistic 0.37	0.47	0.14	0.28
			PM 0.34	0.58	0.14	0.38

DFC of Critical Approach	=	AM 0.70
		Logistic 0.47
		PM 0.58

Roundabout Junction Calculation

Junction : (RA2) Tsing Yi Road / Tsing Yi Hong Wan Road / Tsing Sha Hig Job No.: 26011HK

Scenario : 2026 Observed Traffic Flow



Input Parameters				Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)		7.3	7.1	7.3	7.3
E	=	Entry width (m)		13.5	12	9.5	10
L	=	Effective length of flare (m)		30	15	30	15
R	=	Entry radius		45	97	52	34
D	=	Inscribed circle diameter (m)		100	100	100	100
A	=	Entry angle (degree)		29	32	31	46
Q	=	Entry flow (pcu/hr)	AM	1060	835	655	875
			Logistic	850	770	625	700
			PM	1080	625	535	525
Qc	=	Circulating flow across entry (pcu/hr)	AM	1025	1460	1110	670
			Logistic	860	1150	950	635
			PM	615	1575	880	520

Output Parameters				Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$		0.33	0.52	0.12	0.29
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$		1.03	1.03	1.03	0.96
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$		11.03	9.50	9.08	9.01
M	=	$\text{Exp}((D - 60) / 10)$		54.60	54.60	54.60	54.60
F	=	$303 \cdot X2$		3343	2877	2752	2731
Td	=	$1 + (0.5 / (1 + M))$		1.01	1.01	1.01	1.01
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$		0.68	0.61	0.60	0.59
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	2727	2043	2145	2251
			Logistic	2843	2240	2243	2271
			PM	3014	1971	2286	2336
DFC	=	Entry Flow/Capacity = Q / Qe	AM	0.39	0.41	0.31	0.39
			Logistic	0.30	0.34	0.28	0.31
			PM	0.36	0.32	0.23	0.22

DFC of Critical Approach = AM 0.41
Logistic 0.34
PM 0.36

Roundabout Junction Calculation

Junction :	(RA3) Tsing Yi Hong Wan Road	Job No.:	26011HK
Scenario :	2026 Observed Traffic Flow		

Arm 4 Tsing Yi Hong Wan Road SB

20	20	1015
<20>	<30>	<905>
(10)	(25)	(885)

Arm 1

1110	<1000>	(955)
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Arm 3

5	<5>	(5)
10	<10>	(15)
0	<0>	(0)

Arm 2 Tsing Yi Hong Wan Road NB

1170	<895>	(960)
50	1105	45
<40>	<840>	<35>
(40)	(930)	(20)

Input Parameters		Arm 1	Arm 2	Arm 3	Arm 4
V	= Approach half width (m)		7	7.3	7.3
E	= Entry width (m)		14	13	12
L	= Effective length of flare (m)		20	10	2
R	= Entry radius		65	25	75
D	= Inscribed circle diameter (m)		68	68	68
A	= Entry angle (degree)		53	60	46
Q	= Entry flow (pcu/hr)	AM	1200	15	1055
		Logistic	915	15	955
		PM	990	20	920
Qc	= Circulating flow across entry (pcu/hr)	AM	40	1170	55
		Logistic	50	895	45
		PM	920	960	35

Output Parameters		Arm 1	Arm 2	Arm 3	Arm 4
S	= Sharpness of flare = $1.6 \cdot (E - V) / L$		0.56	0.91	3.76
K	= $1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$		0.95	0.91	0.98
X2	= $V + ((E - V) / (1 + 2 \cdot S))$		10.30	9.32	7.85
M	= $\text{Exp}((D - 60) / 10)$		2.23	2.23	2.23
F	= $303 \cdot X2$		3121	2823	2379
Td	= $1 + (0.5 / (1 + M))$		1.16	1.16	1.16
Fc	= $0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$		0.74	0.69	0.62
Qe	= Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	2950	1821	2299
		Logistic	2943	1994	2305
		PM	2326	1953	2311
DFC	= Entry Flow/Capacity = Q / Qe	AM	0.41	0.01	0.46
		Logistic	0.31	0.01	0.41
		PM	0.43	0.01	0.40

DFC of Critical Approach	=	AM	0.46		
		Logistic	0.41		
		PM	0.43		

Roundabout Junction Calculation

Junction :	(RA4) Tsing Yi Hong Wan Road / Tsing Ko Road	Job No.:	26011HK
Scenario :	2026 Observed Traffic Flow		

Arm 4 Tsing Yi Hong Wan Road SB

715		155	175
<520>		<205>	<215>
(670)		(100)	(260)

Arm 1 Tsing Yi Hong Wan Road

880	<755>	(795)

Arm 3 Tsing Ko Road

410	355	395
0	10	25
5	20	0

Arm 2 Tsing Yi Hong Wan Road NB

910	<650>	(865)
20	190	5
<30>	<130>	<0>
(5)	(195)	(0)

		AM	[Logistic]	(PM)	
		[Logistic]			
		(PM)			

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)		6.7	6.3	7.3
E	=	Entry width (m)		13.5	12.5	15
L	=	Effective length of flare (m)		18	30	30
R	=	Entry radius		47	100	75
D	=	Inscribed circle diameter (m)		68	68	68
A	=	Entry angle (degree)		41	22	46
Q	=	Entry flow (pcu/hr)		215	415	1045
		AM		215	415	1045
		Logistic		160	385	940
		PM		200	420	1030
Qc	=	Circulating flow across entry (pcu/hr)		720	910	10
		AM		720	910	10
		Logistic		540	650	30
		PM		770	865	25

Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6*(E-V)/L$		0.60	0.33	0.41
K	=	$1-0.00347*(A-30)-0.978*(1/R-0.05)$		0.99	1.07	0.98
X2	=	$V+((E-V)/(1+2*S))$		9.78	10.03	11.53
M	=	$Exp((D-60)/10)$		2.23	2.23	2.23
F	=	$303*X2$		2963	3040	3493
Td	=	$1+(0.5/(1+M))$		1.16	1.16	1.16
Fc	=	$0.21*Td*(1+0.2*X2)$		0.72	0.73	0.80
Qe	=	Capacity = $K*(F-Fc*Qc)$		2422	2535	3416
		AM		2422	2535	3416
		Logistic		2550	2737	3401
		PM		2387	2570	3405
DFC	=	Entry Flow/Capacity = Q/Qe		0.09	0.16	0.31
		AM		0.09	0.16	0.31
		Logistic		0.06	0.14	0.28
		PM		0.08	0.16	0.30

DFC of Critical Approach	=	AM	0.31		
		Logistic	0.28		
		PM	0.30		

Roundabout Junction Calculation

Junction :		(RA5) Tam Kon Shan Interchange		Job No.: 26011HK	
Scenario :		2026 Observed Traffic Flow			

Arm 4 Tam Kon Shan Road

0	50	240	505	10
<0>	<40>	<415>	<415>	<5>
(0)	(80)	(30)	(30)	(350)

1640 <1570> (680)

1900 <1590> (1735)

70	<50>	(50)
225	<160>	(240)
0	<0>	(0)
80	<55>	(15)
65	<45>	(25)

Arm 3
Tsing Yi North Coastal Road EB

1715	<1490>	(1705)
------	--------	--------

20	90	335	700	0
<15>	<75>	<290>	<600>	<0>
(15)	(90)	(420)	(500)	(0)

Arm 2
Fung Shue Wo Road

Arm 5 Tsing King Road

0	5	65	65	0
<0>	<5>	<45>	<50>	<0>
(30)	(15)	(60)	(60)	(0)

570 <655> (315)

Arm 1
Tsing Yi North Coastal Road WB

0	<0>	(0)
495	<440>	(505)
90	<80>	(145)
0	<0>	(0)
0	<0>	(0)

770 <655> (860)

AM	[Logistic]	(PM)
[Logistic]		
(PM)		

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4	Arm 5	
V	=	Approach half width (m)	7	7.3	5.5	7.3	7	
E	=	Entry width (m)	9	13.5	7.5	13.5	11	
L	=	Effective length of flare (m)	9	20	11	50	10	
R	=	Entry radius	100	35	45	35	45	
D	=	Inscribed circle diameter (m)	100	100	100	100	100	
A	=	Entry angle (degree)	30	25	25	45	45	
Q	=	Entry flow (pcu/hr)	AM	585	1145	440	805	135
			Logistic	520	980	310	875	100
			PM	650	1025	330	490	165
Qc	=	Circulating flow across entry (pcu/hr)	AM	570	770	1715	1900	1640
			Logistic	655	655	1490	1590	1570
			PM	315	860	1705	1735	680

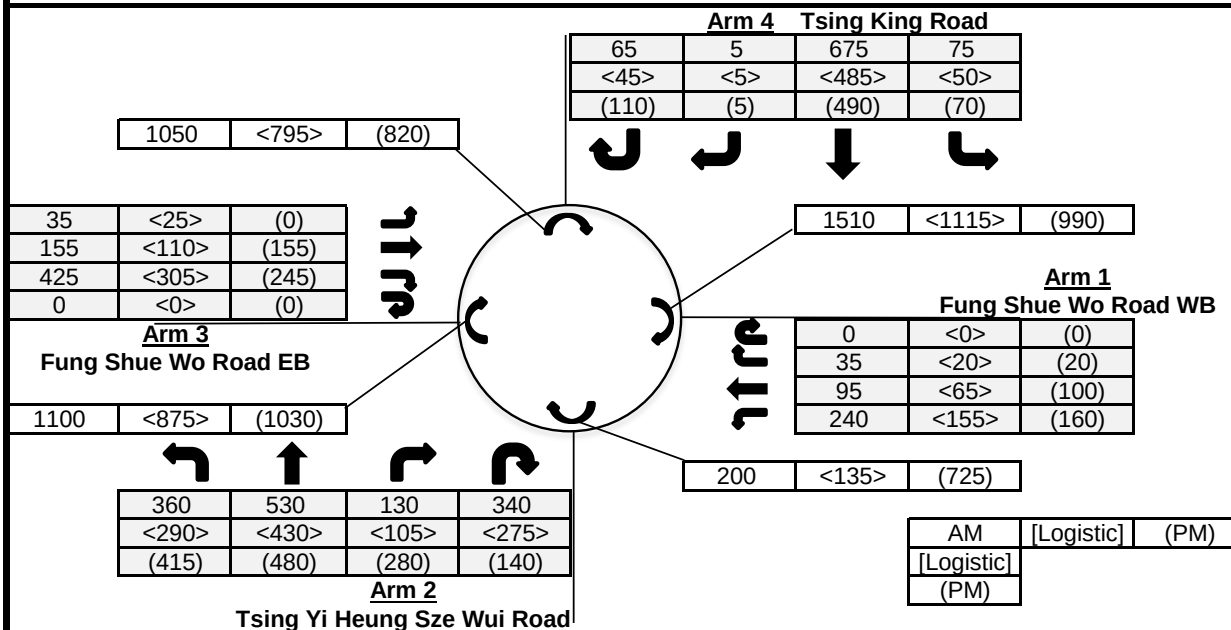
Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4	Arm 5	
S	=	Sharpness of flare = 1.6*(E-V)/L	0.36	0.50	0.29	0.20	0.64	
K	=	1-0.00347*(A-30)-0.978*(1/R-0.05)	1.04	1.04	1.04	0.97	0.98	
X2	=	V+((E-V)/(1+2*S))	8.17	10.41	6.76	11.74	8.75	
M	=	Exp((D-60)/10)	54.60	54.60	54.60	54.60	54.60	
F	=	303*X2	2475	3155	2050	3557	2653	
Td	=	1+(0.5/(1+M))	1.01	1.01	1.01	1.01	1.01	
Fc	=	0.21*Td*(1+0.2*X2)	0.56	0.65	0.50	0.71	0.58	
Qe	=	Capacity = K*(F-Fc*Qc)	AM	2241	2754	1248	2140	1654
			Logistic	2192	2832	1365	2353	1694
			PM	2389	2693	1253	2254	2200
DFC	=	Entry Flow/Capacity = Q/Qe	AM	0.26	0.42	0.35	0.38	0.08
			Logistic	0.24	0.35	0.23	0.37	0.06
			PM	0.27	0.38	0.26	0.22	0.07

DFC of Critical Approach	=	AM	0.42
		Logistic	0.37
		PM	0.38

Roundabout Junction Calculation

Junction : (RA6) Tsing King Road / Fung Shue Wo Road Job No.: 26011HK

Scenario : 2026 Observed Traffic Flow



Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	6.7	7.3	7.3	6.9
E	=	Entry width (m)	9.7	10	9.2	8.9
L	=	Effective length of flare (m)	16	20	14	16
R	=	Entry radius	55	71	60	62
D	=	Inscribed circle diameter (m)	100	100	100	100
A	=	Entry angle (degree)	36	30	18	25
Q	=	Entry flow (pcu/hr)	AM	370	1360	615
			Logistic	240	1100	440
			PM	280	1315	400
Qc	=	Circulating flow across entry (pcu/hr)	AM	1510	200	1100
			Logistic	1115	135	875
			PM	990	725	1030

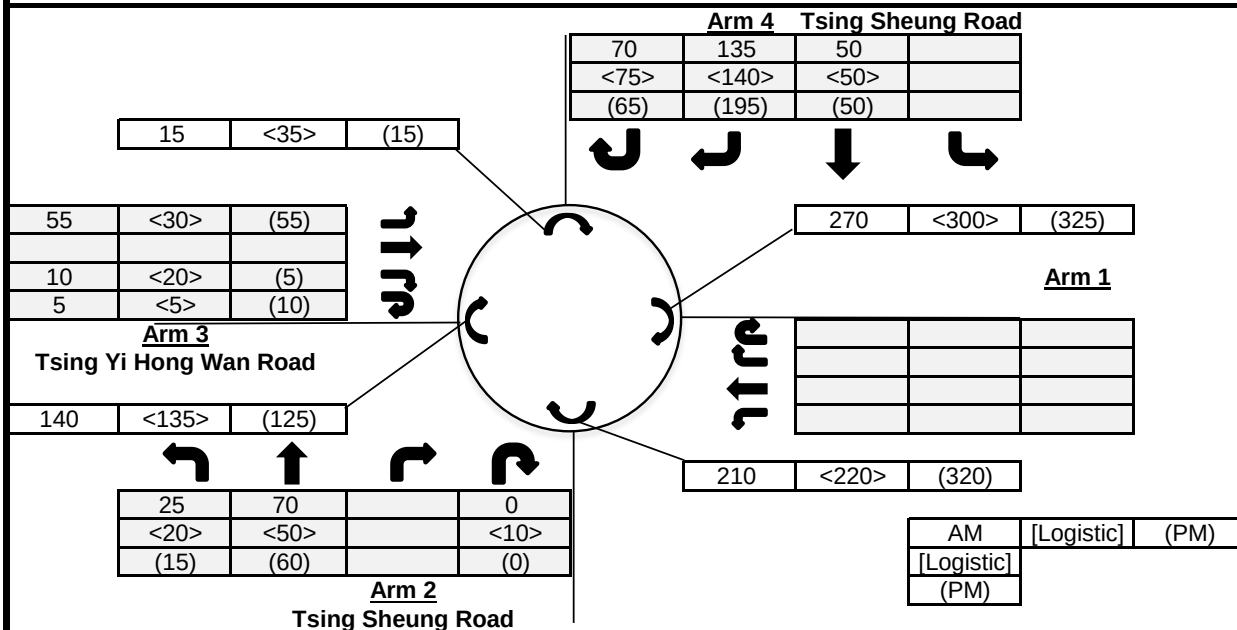
Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$	0.30	0.22	0.22	0.20
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$	1.01	1.04	1.07	1.05
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$	8.58	9.19	8.62	8.33
M	=	$\text{Exp}((D - 60) / 10)$	54.60	54.60	54.60	54.60
F	=	$303 \cdot X2$	2598	2783	2613	2524
Td	=	$1 + (0.5 / (1 + M))$	1.01	1.01	1.01	1.01
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.58	0.60	0.58	0.56
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	1747	2757	2125
			Logistic	1977	2797	2265
			PM	2050	2430	2168
DFC	=	Entry Flow/Capacity = Q / Qe	AM	0.21	0.49	0.29
			Logistic	0.12	0.39	0.19
			PM	0.14	0.54	0.18

DFC of Critical Approach = AM 0.49
Logistic 0.39
PM 0.54

Roundabout Junction Calculation

Junction : (RA7) Tsing Yi Hong Wan Road / Tsing Sheung Road Job No.: 26011HK

Scenario : 2026 Observed Traffic Flow



Input Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)		5.2	3	6.7
E	=	Entry width (m)		9	8.4	12
L	=	Effective length of flare (m)		25	15	23
R	=	Entry radius		63	55	11.6
D	=	Inscribed circle diameter (m)		53	53	53
A	=	Entry angle (degree)		33	48	38
Q	=	Entry flow (pcu/hr)	AM	95	70	255
			Logistic	80	55	265
			PM	75	70	310
Qc	=	Circulating flow across entry (pcu/hr)	AM	210	140	15
			Logistic	220	135	35
			PM	320	125	15

Output Parameters

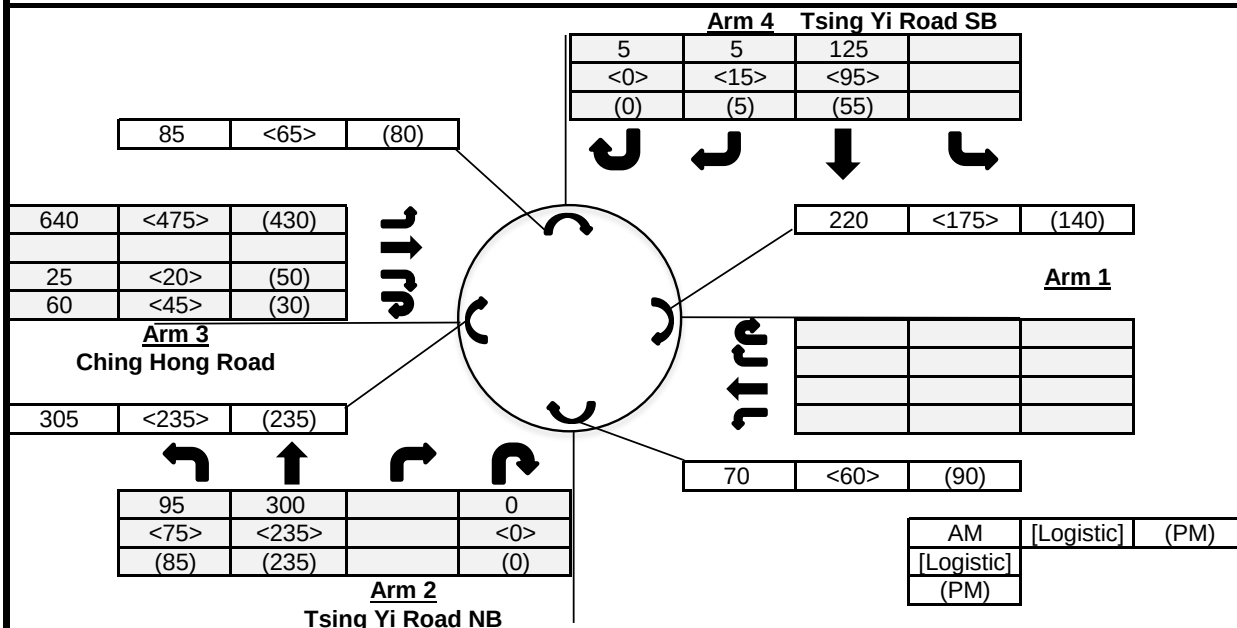
			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$		0.24	0.58	0.37
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$		1.02	0.97	0.94
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$		7.76	5.51	9.75
M	=	$\text{Exp}((D - 60) / 10)$		0.50	0.50	0.50
F	=	$303 \cdot X2$		2350	1669	2954
Td	=	$1 + (0.5 / (1 + M))$		1.33	1.33	1.33
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$		0.71	0.59	0.83
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	2251	1537	2756
			Logistic	2243	1540	2741
			PM	2170	1546	2756
DFC	=	Entry Flow/Capacity = Q / Qe	AM	0.04	0.05	0.09
			Logistic	0.04	0.04	0.10
			PM	0.03	0.05	0.11

DFC of Critical Approach = AM 0.09
Logistic 0.10
PM 0.11

Roundabout Junction Calculation

Junction : (RA8) Tsing Yi Road / Ching Hong Road Job No.: 26011HK

Scenario : 2026 Observed Traffic Flow



Input Parameters

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)		4.5	7.3	7
E	=	Entry width (m)		9	8.5	8.5
L	=	Effective length of flare (m)		25	4	16
R	=	Entry radius		24.5	30	100
D	=	Inscribed circle diameter (m)		30	30	30
A	=	Entry angle (degree)		44	40	27
Q	=	Entry flow (pcu/hr)	AM	395	725	135
			Logistic	310	540	110
			PM	320	510	60
Qc	=	Circulating flow	AM	70	305	85
		across entry (pcu/hr)	Logistic	60	235	65
			PM	90	235	80

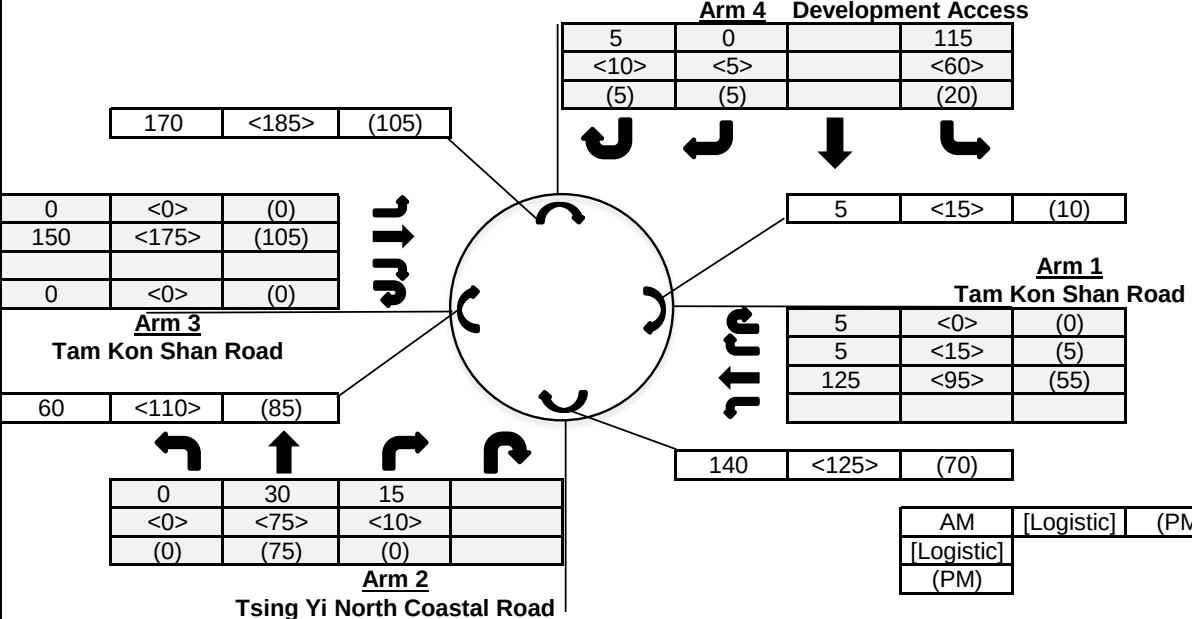
Output Parameters

Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = 1.6*(E-V)/L		0.29	0.48	0.15
K	=	1-0.00347*(A-30)-0.978*(1/R-0.05)		0.96	0.98	1.05
X2	=	V+((E-V)/(1+2*S))		7.36	7.91	8.15
M	=	Exp((D-60)/10)		0.05	0.05	0.05
F	=	303*X2		2229	2397	2471
Td	=	1+(0.5/(1+M))		1.48	1.48	1.48
Fc	=	0.21*Td*(1+0.2*X2)		0.77	0.80	0.82
Qe	=	Capacity = K*(F-Fc*Qc)	AM	2089	2114	2520
			Logistic	2096	2169	2537
			PM	2074	2169	2525
DFC	=	Entry Flow/Capacity = Q/Qe	AM	0.19	0.34	0.05
			Logistic	0.15	0.25	0.04
			PM	0.15	0.24	0.02

DFC of Critical Approach = AM 0.34
Logistic 0.25
PM 0.24

Roundabout Junction Calculation

Junction :	(RA9) Tam Kon Shan Road	Job No.:	26011HK
Scenario :	2026 Observed Traffic Flow		



Input Parameters		Arm 1	Arm 2	Arm 3	Arm 4
V	= Approach half width (m)	3.3	4	3.4	4.2
E	= Entry width (m)	6.7	4.9	5.8	5.4
L	= Effective length of flare (m)	10	10	10	10
R	= Entry radius	32	97	52	34
D	= Inscribed circle diameter (m)	30	30	30	30
A	= Entry angle (degree)	34	32	31	46
Q	= Entry flow (pcu/hr)	135	45	150	120
		Logistic	110	85	175
		PM	60	75	105
Qc	= Circulating flow across entry (pcu/hr)	5	140	60	170
		Logistic	15	125	110
		PM	10	70	85

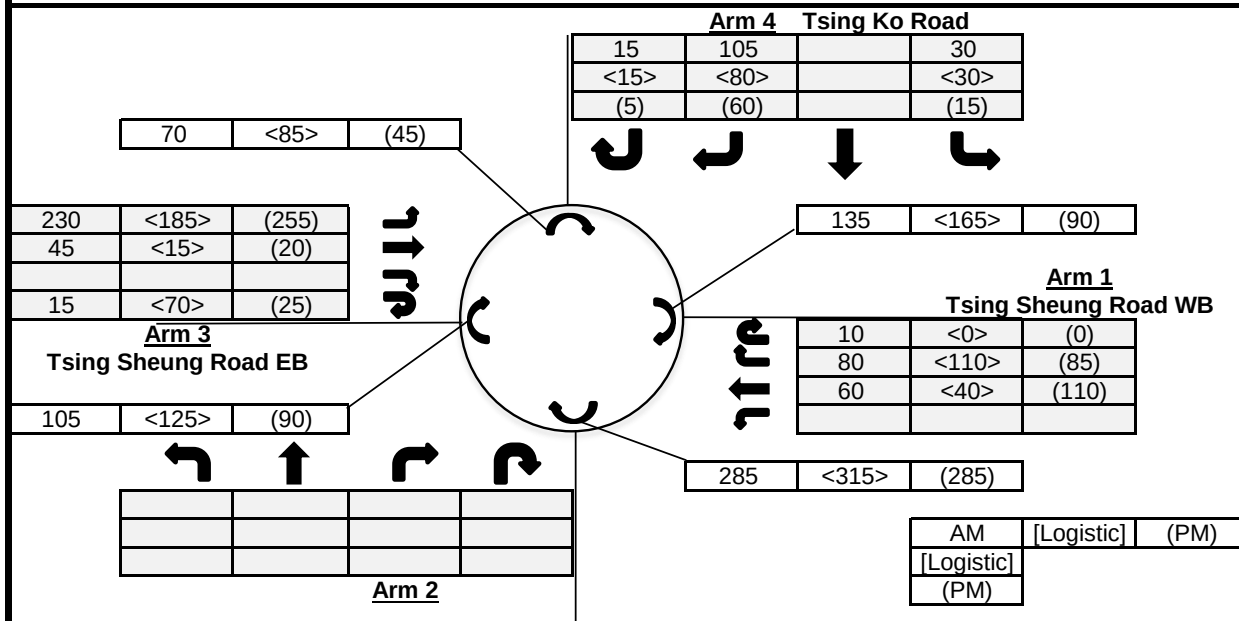
Output Parameters		Arm 1	Arm 2	Arm 3	Arm 4
S	= Sharpness of flare = $1.6 \cdot (E - V) / L$	0.54	0.14	0.38	0.19
K	= $1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1/R - 0.05)$	1.00	1.03	1.03	0.96
X2	= $V + ((E - V) / (1 + 2 \cdot S))$	4.93	4.70	4.76	5.07
M	= $\exp((D - 60) / 10)$	0.05	0.05	0.05	0.05
F	= $303 \cdot X2$	1493	1424	1442	1535
Td	= $1 + (0.5 / (1 + M))$	1.48	1.48	1.48	1.48
Fc	= $0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.62	0.60	0.61	0.62
Qe	= Capacity = $K \cdot (F - Fc \cdot Qc)$	1497	1382	1443	1379
		Logistic	1491	1392	1412
		PM	1494	1426	1427
DFC	= Entry Flow/Capacity = Q/Qe	0.09	0.03	0.10	0.09
		Logistic	0.07	0.06	0.12
		PM	0.04	0.05	0.07

DFC of Critical Approach	=	AM	0.10
		Logistic	0.12
		PM	0.07

Roundabout Junction Calculation

Junction : (RA10) Tsing Sheung Road / Tsing Ko Road Job No.: 26011HK

Scenario : 2026 Observed Traffic Flow



Input Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	6.6		5.6	6.4
E	=	Entry width (m)	12.9		5.1	11.6
L	=	Effective length of flare (m)	18		30	30
R	=	Entry radius	47		67.3	75
D	=	Inscribed circle diameter (m)	50		50	50
A	=	Entry angle (degree)	41		22	46
Q	=	Entry flow (pcu/hr)	AM 150		290	150
			Logistic 150		270	125
			PM 195		300	80
Qc	=	Circulating flow across entry (pcu/hr)	AM 135		105	70
			Logistic 165		125	85
			PM 90		90	45

Output Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6*(E-V)/L$	0.56		-0.03	0.28
K	=	$1-0.00347*(A-30)-0.978*(1/R-0.05)$	0.99		1.06	0.98
X2	=	$V+((E-V)/(1+2*S))$	9.57		5.07	9.74
M	=	$\text{Exp}((D-60)/10)$	0.37		0.37	0.37
F	=	$303*X2$	2900		1537	2953
Td	=	$1+(0.5/(1+M))$	1.37		1.37	1.37
Fc	=	$0.21*Td*(1+0.2*X2)$	0.84		0.58	0.85
Qe	=	Capacity = $K*(F-Fc*Qc)$	AM 2759		1568	2837
			Logistic 2734		1556	2824
			PM 2797		1577	2857
DFC	=	Entry Flow/Capacity = Q/Qe	AM 0.05		0.18	0.05
			Logistic 0.05		0.17	0.04
			PM 0.07		0.19	0.03

DFC of Critical Approach = AM 0.18
Logistic 0.17
PM 0.19

Junction: (J1) Tsing Yi Road West / Cheung Tsing Highway																												
Description: 2031 Design Traffic Flow																												
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M. Peak			P.M. Peak							
						Left	Right			A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y					
Tsing Yi Road West	S	↓	2	A	3.5	0	0	0	1	0%	0%	1965	6135	1965	1965	5880	5855	239	0.122	0.122	203	0.103	0.103					
	S	↔	2	A	3.3	0	20	0	0	60%	77%	2085	0	1995	1970	0	0	243	0.122		204	0.103						
	S	↘	2	A	3.3	0	17.5	0	0	100%	100%	2085	0	1920	1920	0	0	233	0.122		198	0.103						
Cheung Tsing Highway	E	↗	3	A,B	3.4	20	0	0	1	100%	100%	1955	1955	1820	1820	1820	1820	480	0.264		435	0.239						
	E	↔	4	B	3.5	0	30	0	0	100%	100%	2105	4210	2005	2005	3990	3990	254	0.127		111	0.055						
	E	↘	4	B	3.5	0	25	0	0	100%	100%	2105	0	1985	1985	0	0	251	0.127	0.127	109	0.055	0.055					
Tsing Yi Road West	N	↔	1	C	3.6	20	0	6.5	1	100%	100%	1702	3544	1585	1585	3425	3425	530	0.334	0.334	285	0.180	0.180					
	N	↑	1	C	3.6	0	0	6.5	0	0%	0%	1842	0	1840	1840	0	0	210	0.114		230	0.125						
Pedestrian crossing	↕	↔	5P	C	Min. Green time = 5GM + 10FG = 15s																							
		↕	6P	C	Min. Green time = 5GM + 6FG = 11s																							
		↔	7P	A,B	Min. Green time = 5GM + 9FG = 14s																							
		↕	8P	B	Min. Green time = 5GM + 10FG = 15s																							
Notes:													Traffic Flow (pcu / hr)		A.M. Check Phase			P.M. Check Phase										
															ey 0.583 0.598			ey 0.338 0.419										
															L (sec) 13 9			L (sec) 13 9										
															C (sec) 100 100			C (sec) 105 105										
															y pract. 0.783 0.819			y pract. 0.789 0.823										
															R.C. (%) 34% 37%			R.C. (%) 133% 96%										
Stage / Phase Diagrams																												
I/G = 5						I/G = 5						I/G = 6																

Junction: (J2) Tsing Hung Road / Tsing Yi Road																											
Description: 2031 Design Traffic Flow (With Planned Improvement)																											
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak							
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y					
Tsing Yi Road	S	↓	1	A	3.5	0.0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	311	0.158	0.318	198	0.101	0.208					
	S	↓	1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	334	0.158		212	0.101						
	S	↙	1	A	3.6	0.0	18	0	100%	100%	2115	2115	1950	1950	1950	1950	620	0.318		405	0.208						
Tsing Yi Road	N	↑	4	C	4.0	30.0	0	1	100%	100%	2015	2015	1920	1920	1920	1920	15	0.008		25	0.013						
	N	↑	4	C	3.5	0.0	0	0	0%	0%	2105	4210	2105	2105	4210	4210	263	0.125	0.125	213	0.101	0.101					
	N	↑	4	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	263	0.125		213	0.101						
Tsing Hung Road	E	→	2	A,B	3.3	25.0	0	1	100%	100%	1945	1945	1835	1835	1835	1835	565	0.308		540	0.294						
	E	→	3	B	4.0	0.0	22	0	100%	100%	2155	2155	2015	2015	2015	2015	10	0.005		15	0.007						
Pedestrian Crossing		↔	5P	D																							
		↔	6P	A,B,D																							
		↔	7P	C,D																							
		↔	8P	C,D																							
										Min. Green time = 5GM + 7FG = 12s Min. Green time = 5GM + 5FG = 10s Min. Green time = 5GM + 10FG = 15s Min. Green time = 5GM + 5FG = 10s																	
Notes:										Traffic Flow (pcu / hr) Weekday AM Peak 565(540) 10(15) 15(25) 620(405) 645(410) 525(425)										AB,C A,B,C		AM Peak Check Phase Ey L (sec) C (sec) y pract. R.C. (%)		AB,C A,B,C		PM Peak Check Phase Ey L (sec) C (sec) y pract. R.C. (%)	
Stage / Phase Diagrams																											
1 2 3																											
I/G = 5I/G = 5I/G = 3 + Ped 21I/G = 3 + Ped 21I/G = 2I/G = 2																											

Junction: (J8) Tsing Yi Road West / Ching Hong Road																								
Description: 2031 Design Traffic Flow (With Planned Improvement)																								
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak			
						Left	Right			AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Tsing Yi Road West	S	↓	1	A	3.5	0.0	0	5.5	0	0%	0%	1874	3748	1874	1874	3748	3748	225	0.120	0.138	115	0.061	0.098	
	S	↓	1	A	3.5	0.0	0	5.5	0	0%	0%	1874	0	1874	1874	0	0	225	0.120		115	0.061		
	S	↘	1	A	3.7	10.0	0	5.5	1	100%	100%	1754	1754	1525	1525	1525	1525	210	0.138		150	0.098		
Tsing Yi Road West	N	↑	2	A,B	3.5	0.0	0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	191	0.097		186	0.095		
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	204	0.097		199	0.095		
	N	↗	3	B	3.3	0.0	18	0	0	100%	100%	2085	2085	1925	1925	1925	1925	300	0.156	0.156	300	0.156	0.156	
Ching Hong Road	W	←	4	C	3.4	18.0	20	0	0	23% / 77%	11% / 89%	2095	0	1945	1945	0	0	319	0.164	0.164	269	0.139	0.139	
	W	↙	4	C	3.4	15.0	0	0	1	100%	100%	1955	4050	1775	1775	3720	3720	291	0.164		246	0.138		
Pedestrian crossing		↕	5P	A,B	Min. Green time = 11GM + 8FG = 19s																			
		↕	6P	C	Min. Green time = 5GM + 12FG = 17s																			
Notes:												Traffic Flow (pcu / hr) Weekday AM Peak					AM Peak Check Phase				PM Peak Check Phase			
												450(280) 210(150)					E _y 0.458				E _y 0.393			
												↓ ↘					L (sec) 14				L (sec) 14			
												↗ ↘					C (sec) 100				C (sec) 100			
												↑ ↗					y pract. 0.774				y pract. 0.774			
												395(385) 300(300)					R.C. (%) 69%				R.C. (%) 97%			
Stage / Phase Diagrams																								
I/G = 5					I/G = 5					I/G = 7														

Junction: (J9) Tsing Yi Road West / Liu To Road																								
Description: 2031 Design Traffic Flow																								
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		uphill Gradient (%)	Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak			
						Left	Right			AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Tsing Yi Road West	S	↓	2	A,B	3.3	0.0	0	5	1	0%	0%	1735	3610	1735	1735	3610	3610	216	0.125		144	0.083		
	S	↓	2	A,B	3.3	0.0	0	5	0	0%	0%	1875	0	1875	1875	0	0	234	0.125		156	0.083		
	S	↙	3	B	3.3	0.0	22	5	0	100%	100%	1875	1875	1755	1755	1755	1755	400	0.228	0.228	370	0.211	0.211	
Tsing Yi Road West	N	↕	1	A	3.2	10.0	0	0	1	66%	69%	1935	4100	1760	1755	3925	3920	312	0.177	0.177	255	0.145	0.145	
	N	↑	1	A	4.1	0.0	0	0	0	0%	0%	2165	0	2165	2165	0	0	383	0.177		315	0.145		
Liu To Road	E	↗	5	B,C	3.2	10.0	0	0	1	100%	100%	1935	1935	1685	1685	1685	1685	510	0.303		370	0.220		
	E	↘	4	C	4.1	0.0	18	0	0	100%	100%	2165	2165	2000	2000	2000	2000	210	0.105	0.105	130	0.065	0.065	
Pedestrian crossing		↕	6P	A,D	AM: Green time = 49GM + 9FG = 58s, PM: Green time = 46GM + 9FG = 55s																			
		↕	7P	C,D	AM: Green time = 51GM + 13FG = 64s, PM: Green time = 28GM + 13FG = 41s																			
		↔	8P	D	Green time = 10GM + 8FG = 18s																			
Pedestrian Crossing																								
																		A,BC,D	A,B,C,D		A,BC,D	A,B,C,D		
Notes:												Traffic Flow (pcu / hr) Weekday AM Peak						AM Peak Check Phase			PM Peak Check Phase			
																		ay	0.480	0.510	ay	0.365	0.421	
																		L (sec)	39	43	L (sec)	39	43	
																		C (sec)	130	130	C (sec)	110	110	
																		y pract.	0.630	0.602	y pract.	0.581	0.548	
																		R.C. (%)	31%	18%	R.C. (%)	59%	30%	
Stage / Phase Diagrams																								
I/G = 5					I/G = 7					I/G = 5					I/G = 11 + Ped 18									

Junction: (J10) Tsing Yi Road West / Fung Shue Wo Road																													
Description: 2031 Design Traffic Flow (With Planned Improvement)																													
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		uphill Gradient (%)	Nearside O/I	Pro. Turning (%)		Site Factor	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak							
						Left	Right			AM	PM				AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y					
Fung Shue Wo Road (To Tsing Yi Road West)	S	↓	1	A,D	4.1	0.0	0	3	0	0%	0%	1	2039	4058	2039	2039	4058	4058	347	0.170	0.170	186	0.091	0.108					
	S	↓	1	A,D	3.9	0.0	0	3	0	0%	0%	1	2019	0	2019	2019	0	0	343	0.170		184	0.091						
Fung Shue Wo Road (To Fung Shue Wo Road)	S	↓	1	A,D	4.0	0.0	0	3	1	0%	0%	1	1889	3918	1889	1889	3918	3918	268	0.142		205	0.108						
	S	↓	1	A,D	4.0	0.0	0	3	0	0%	0%	1	2029	0	2029	2029	0	0	287	0.142		220	0.108						
Tsing Yi Road West	N	↑	2	A,B	3.5	0.0	0	0	1	0%	0%	1	1965	2722.8	1965	1965	2722.8	2722.8	498	0.253		455	0.231						
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	0%	0.36	757.8	0	757.8	757.8	0	0	192	0.253		175	0.231						
	N	↗	3	B	3.6	0.0	18	0	0	100%	100%	1	2115	2115	1950	1950	1950	1950	230	0.118	0.118	140	0.072	0.072					
Fung Shue Wo Road	N	↖	4	C	4.0	35.0	0	3	1	100%	100%	1	1889	2213.6	1810	1810	2120	2120	124	0.068		141	0.078						
	N	↖	4	C	4.0	38.0	0	3	0	100%	100%	0.16	324.64	0	310	310	0	0	21	0.068		24	0.078						
Fung Shue Wo Road	N	↗	4	C	4.0	0.0	43	3	0	100%	100%	1	2029	4058	1960	1960	3915	3915	258	0.132	0.132	225	0.115	0.115					
	N	↗	4	C	4.0	0.0	40	3	0	100%	100%	1	2029	0	1955	1955	0	0	257	0.132		225	0.115						
Pedestrian crossing		← - - - →	5p	D		Min. Green time = 5GM + 8FG = 13s																							
		← - - - →	6P	B,C		Min. Green time = 5GM + 8FG = 13s																							
		↑ - - - ↓	7P	A,C,D		Min. Green time = 5GM + 7FG = 12s																							
		↑ - - - ↓	8P	A,B,D		Min. Green time = 5GM + 8FG = 13s																							
Notes:												Traffic Flow (pcu / hr)										AD,B,C AB,C,D				AD,B,C AB,C,D			
												Weekday AM Peak										AM Peak Check Phase				PM Peak Check Phase			
												690(510) 555(425)										by 0.420 0.385				by 0.295 0.346			
												↓ ↓										L (sec) 12 28				L (sec) 12 28			
												↑ ↗										C (sec) 100 100				C (sec) 100 100			
												690(630) 230(140) 145(165) 515(450)										y pract. 0.792 0.648				y pract. 0.792 0.648			
																						R.C. (%) 89% 68%				R.C. (%) 168% 87%			
Stage / Phase Diagrams																													
I/G = 5						I/G = 5						I/G = 5																	

TRAFFIC SIGNALS CALCULATION

Job No: 26011HK

CTA Consultants Ltd.

Junction: (J11) Tsing Yi Heung Sze Wui Road / Cheung Wan Street																							
Description: 2031 Design Traffic Flow																							
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(%) uphill Gradient	Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right			AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Tsing Yi Heung Sze Wui Road	N	↑	2	A,B	3.5	0.0	0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	606	0.308		587	0.299	0.299
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	649	0.308		628	0.299	
Cheung Wan Street	W	↕	3	C	3.5	18.0	20	0	0	51% / 49%	41% / 59%	2105	0	1950	1950	0	0	334	0.171	0.171	287	0.147	0.147
	W	↕	3	C	3.5	15.0	0	0	1	100%	100%	1965	4070	1785	1785	3735	3735	306	0.171		263	0.147	
Tsing Yi Heung Sze Wui Road	S	↘	1	A,D	3.5	10.0	0	0	1	100%	100%	1965	6175	1710	1710	5920	5920	650	0.380	0.380	440	0.257	
	S	↓	1	A,D	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	568	0.270		375	0.178	
	S	↓	1	A,D	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	568	0.270		375	0.178	
Pedestrian crossing		↔	4P	B						AM: Green time = 12GM + 11FG = 23s, PM: Green time = 12GM + 11FG = 23s													
		↑↓	5P	D						AM: Green time = 6GM + 8FG = 14s, PM: Green time = 10GM + 8FG = 18s													
		↕	6P	B,C						AM: Green time = 45GM + 10FG = 55s, AM: Green time = 41GM + 10FG = 51s													
														AB,C,D		AD,B,C		AB,C,D		AD,B,C			
Notes:												Traffic Flow (pcu / hr) Weekday AM Peak				AM Peak Check Phase				PM Peak Check Phase			
												1135(750) 650(440)				Ey	0.480	0.551		Ey	0.446	0.405	
												↓ ↘ ↗				L (sec)	31	37		L (sec)	35	37	
												↗ ↘ ↗				C (sec)	114	114		C (sec)	100	100	
												↗ ↘ ↗				y pract.	0.655	0.608		y pract.	0.585	0.567	
												↗ ↘ ↗				R.C. (%)	37%	10%		R.C. (%)	31%	40%	
												↑				165(170) 475(380)							
												1255(1215)											
Stage / Phase Diagrams																							
I/G = 2						I/G = 8 + Ped 23						I/G = 3						I/G = 5					
												I/G = 5						I/G = 12 + Ped 18					

TRAFFIC SIGNALS CALCULATION Job No: 26011HK **CTA Consultants Ltd.**

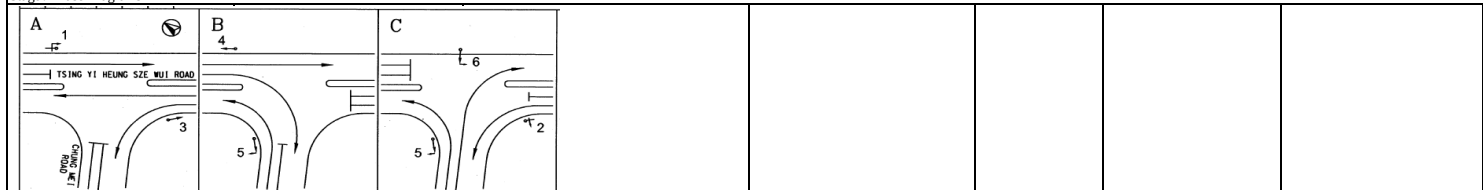
TRAFFIC SIGNALS CALCULATION Job No: 26011HK **CTA Consultants Ltd.**

TRAFFIC SIGNALS CALCULATION Job No: 26011HK **CTA Consultants Ltd.**

Junction: (J12) Tsing Yi Heung Sze Wui Road / Chung Mei Road
Description: 2031 Design Traffic Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right			AM	PM			AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y		
Chung Mei Road	E		5	B,C	3.3	10.0	0	0	1	100%	100%	1945	1945	1690	1690	1690	1690	225	0.133		250	0.148	
	E		6	C	3.3	0.0	18	0	0	100%	100%	2085	2085	1925	1925	1925	1925	365	0.190	0.190	245	0.127	0.127
Tsing Yi Heung Sze Wui Road	N		2	A,C	3.3	25.0	0	0	1	100%	100%	1945	1945	1835	1835	1835	1835	315	0.172		375	0.204	
	N		3	A	3.5	0.0	0	0	0	0%	0%	2105	4210	2105	2105	4210	4210	515	0.245	0.245	480	0.228	0.228
	N		3	A	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	515	0.245		480	0.228	
Tsing Yi Heung Sze Wui Road	S		1	A,B	3.5	0.0	0	3	1	0%	0%	1839	3818	1839	1839	3818	3818	629	0.342		426	0.232	
	S		1	A,B	3.5	0.0	0	3	0	0%	0%	1979	0	1979	1979	0	0	676	0.342		459	0.232	
	S		4	B	3.5	0.0	22	3	0	100%	100%	1979	1979	1855	1855	1855	1855	305	0.164	0.164	245	0.132	0.132

Notes:	Traffic Flow (pcu / hr)		Weekday AM Peak		AM Peak Check Phase		PM Peak Check Phase	
	225(250)	↗		305(245) 1305(885)	Ey	0.599	Ey	0.487
	365(245)	↘		↖ ↘	L (sec)	15	L (sec)	15
			↙ ↗		C (sec)	114	C (sec)	100
			315(375) 1030(960)		y pract.	0.782	y pract.	0.765
					R.C. (%)	31%	R.C. (%)	57%

[illegible]

$I/G = 5$	$I/G = 5$	$I/G = 8$			
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$I/G = 5$	$I/G = 8$				
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$1/G = 8$				
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TRAFFIC SIGNALS CALCULATION

Job No: 26011HK

CTA Consultants Ltd.

Junction: (J14) Tsing Yi Road / Planned New Road																																			
Description: 2031 Design Traffic Flow																																			
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak																	
						Left	Right				AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y															
Tsing Yi Road	N	↑	A	1	3.5	0.0	0	0	1	0%	0%	1965	4070	1965	1965	4065	4065	258	0.132	0.132	215	0.109	0.109												
	N	↗	A	1	3.5	0.0	40	0	0	4%	7%	2105	0	2100	2100	0	0	277	0.132		230	0.109													
Planned New Road	W	↖	C	3	3.5	0.0	18	0	0	100%	100%	2105	2105	1945	1945	1945	1945	15	0.008		20	0.010													
	W	↙	C	3	3.5	10.0	0	0	1	100%	100%	1965	1965	1710	1710	1710	1710	75	0.044	0.044	60	0.035	0.035												
Tsing Yi Road	S	↘	B	2	3.5	10.0	0	0	1	0%	2%	1965	4070	1965	1960	4070	4065	316	0.161	0.161	205	0.104	0.105												
	S	↓	B	2	3.5	0.0	0	0	0	0%	0%	2105	0	2105	2105	0	0	339	0.161		220	0.105													
Pedestrian crossing			↔↔	Dp	1	AM: Green time = 26GM + 7FG = 33s, PM: Green time = 32GM + 7FG = 39s																													
			↕	EP	1,2	AM: Green time = 76GM + 7FG = 83s, PM: Green time = 82GM + 7FG = 89s																													
			↔↔	Fp	2,3	AM: Green time = 70GM + 7FG = 77s, PM: Green time = 64GM + 7FG = 71s																													
			↕	Gp	3	AM: Green time = 22GM + 7FG = 29s, PM: Green time = 16GM + 7FG = 23s																													
			↔↔	Hp	1,3	AM: Green time = 66GM + 7FG = 73s, PM: Green time = 66GM + 7FG = 73s																													
			↔↔	Ip	2	AM: Green time = 32GM + 7FG = 39s, PM: Green time = 32GM + 7FG = 39s																													
Notes:						Traffic Flow (pcu / hr) Weekday AM Peak 525(430) 10(15) 655(420) 0(5)										AM Peak Check Phase Ey 0.336 L (sec) 18 C (sec) 120 y pract. 0.765 R.C. (%) 127%				PM Peak Check Phase Ey 0.249 L (sec) 18 C (sec) 120 y pract. 0.765 R.C. (%) 207%															
Stage / Phase Diagrams																																			
1.						2.						3.																							
I/G = 5						I/G = 10						I/G = 6																							

Junction: (J1) Cheung Tsing Highway / Tsing Yi Road West																															
Description: 2031 Design Traffic Flow																															
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak			Flow (pcu/hr)			y Value			Critical y					
						Left	Right			Logistic Peak			Logistic Peak	Logistic Peak	Flow (pcu/hr)	y Value	Critical y														
Tsing Yi Road West	S	↓	2	A	3.5	0	0	0	1	0%	1965	6135	1965		5885		172	0.088	0.088												
	S	↙	2	A	3.3	0	20	0	0	58%	2085	0	2000		0		175	0.087													
	S	↘	2	A	3.3	0	17.5	0	0	100%	2085	0	1920		0		168	0.088													
Cheung Tsing Highway	E	↗	3	A,B	3.4	20	0	0	1	100%	1955	1955	1820		1820		355	0.195													
	E	↓	4	B	3.5	0	30	0	0	100%	2105	4070	2005		3860		288	0.144													
	E	↘	4	B	3.5	0	25	0	1	100%	1965	0	1855		0		267	0.144	0.144												
Tsing Yi Road West	N	↙	1	C	3.6	20	0	6.5	1	100%	1702	3544	1585		3425		585	0.369	0.369												
	N	↑	1	C	3.6	0	0	6.5	0	0%	1842	0	1840		0		365	0.198													
Pedestrian crossing		↔	5P	C						Min. Green time = 5GM + 10FG = 15s																					
		↕	6P	C						Min. Green time = 5GM + 6FG = 11s																					
		↔	7P	A,B						Min. Green time = 5GM + 9FG = 14s																					
		↕	8P	B						Min. Green time = 5GM + 10FG = 15s																					
Notes:										Traffic Flow (pcu / hr)				A,B,C		Logistic Peak Check Phase															
																Eγ 0.600 0.564															
																L (sec) 13 9															
																C (sec) 100 100															
																y pract. 0.783 0.819															
																R.C. (%) 30% 45%															
Stage / Phase Diagrams																															
I/G = 5				I/G = 5				I/G = 6																							

Junction: (J2) Tsing Hung Road / Tsing Yi Road																										
Description: 2031 Design Traffic Flow (With Planned Improvement)																										
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak			Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y		
						Left	Right						Logistic Peak	Logistic Peak		Logistic Peak		Flow (pcu/hr)							y Value	Critical y
Tsing Yi Road	S	↓	1	A	3.5	0.0	0	1	0%	1965	4070	1965		4070		270	0.138	0.269								
	S	↓	1	A	3.5	0.0	0	0	0%	2105	0	2105		0		290	0.138									
	S	↙	1	A	3.6	0.0	18	0	100%	2115	2115	1950		1950		525	0.269									
Tsing Yi Road	N	↑	4	C	4.0	30.0	0	1	100%	2015	2015	1920		1920		30	0.016									
	N	↑	4	C	3.5	0.0	0	0	0%	2105	4210	2105		4210		263	0.125	0.125								
	N	↑	4	C	3.5	0.0	0	0	0%	2105	0	2105		0		263	0.125									
Tsing Hung Road	E	→	2	A,B	3.3	25.0	0	1	100%	1945	1945	1835		1835		495	0.270									
	E	→	3	B	4.0	0.0	22	0	100%	2155	2155	2015		2015		25	0.012									
Pedestrian Crossing		↕	5P	D					Min. Green time = 5GM + 7FG = 12s																	
		↕	6P	A,B,D					Min. Green time = 5GM + 5FG = 10s																	
		↕	7P	C,D					Min. Green time = 5GM + 10FG = 15s																	
		↕	8P	C,D					Min. Green time = 5GM + 5FG = 10s																	
Notes:										Traffic Flow (pcu / hr) Weekday AM Peak 495 25 30 525 560 525										AB,C A,B,C AM Peak Check Phase Delay 11 120 0.818 107% A,B,C 0.394 29 120 0.683 73%						
Stage / Phase Diagrams																										
1 2 3																										
I/G = 5						I/G = 3 + Ped 21						I/G = 2														

Junction: **(J4) Sai Tso Wan Road / Tsing Yi Road West / Tsing Yi Road**
Description: **2031 Design Traffic Flow**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient)	Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Logistic Peak					
						Left	Right			Logistic Peak			Logistic Peak		Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Tsing Yi Road	NE	↶	1	A	4.5	15	0	6.5	1	100%	1792	1792	1630		170	0.104	0.137			
	NE	↷	1	A	3.4	0	0	6.5	0	0%	1822	1822	1820		250	0.137				
Sai Tso Wan Road	NW	↶	3	C,D	3.8	15	0	0	1	100%	1995	1995	1815		680	0.375				
	NW	↷	4	D	3.8	0	25	0	0	100%	2135	2135	2015		200	0.099	0.099			
Tsing Yi Road West	SE	↷	2	B,C	3.4	0	0	0	1	0%	1955	1955	1955		230	0.118				
	SE	↶	2	B,C	3.7	0	25	0	0	100%	2125	2125	2005		555	0.277	0.277			
Pedestrian crossing		↕	5p	A,B	Min. Green time = 5GM + 8FG = 13s															
		↕	6p	D	Min. Green time = 5GM + 10FG = 15s															
		↔	7p	B,C	Min. Green time = 5GM + 9FG = 14s															
		↔	8p	A,D	Min. Green time = 5GM + 7FG = 12s															

Notes:	Traffic Flow (pcu / hr)		Logistic Peak Check Phase	
			8y	0.513 0.512
			L (sec)	19 30
			C (sec)	110 110
			y pract.	0.745 0.655
			R.C. (%)	45% 28%

Stage / Phase Diagrams				
I/G = 5	I/G = 5		I/G = 5	
I/G = 5	I/G = 8+12	I/G = 2		

Job No: 26011HK

Junction: (J5) Sai Tso Wan Road Near VEC

Description: **2031 Design Traffic Flow**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak							
						Left	Right					Logistic Peak		Logis tic Peak		Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y		
Sai Tso Wan Road	EB	→	3	A	4.0	0.0	0	1	0%	2015	2015	2015		2015	440	0.218	0.218						
Sai Tso Wan Road	WB	↖	2	B,C	4.0	0.0	10	0	100%	2155	2155	1875		1875	130	0.069							
Sai Tso Wan Road	WB	←	1	A,B	4.0	0.0	0	1	0%	2015	2015	2015		2015	445	0.221	0.221						
Pedestrian Crossing		↑ ↓	4P	C		Green time = 13Gm + 5 FGm = 18s																	
Notes:										Traffic Flow (pcu / hr)				AM (PM) Peak		A,B,C		AB,C					
(None)										440				→				Logistic Peak Check Phase					
														↖		130		Ey		0.288 0.221			
														←		200		L (sec)		11 25			
																		C (sec)		91 91			
																		y pract.		0.791 0.653			
																		R.C. (%)		175% 196%			
Stage / Phase Diagrams																							
I/G = 6						I/G = 7						I/G = 3						I/G = 5 + Ped 18s					
I/G = 3						I/G = 7																	

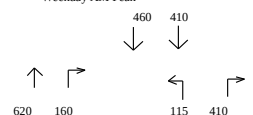
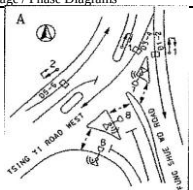
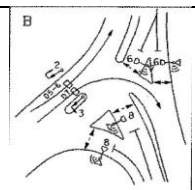
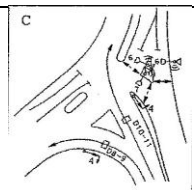
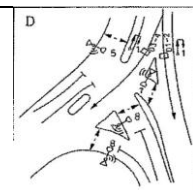
Junction: (J8) Tsing Yi Road West / Ching Hong Road																								
Description: 2031 Design Traffic Flow																								
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak			Critical y				
						Left	Right						Logistic Peak	Logistic Peak		Logistic Peak		Flow (pcu/hr)	y Value					
Tsing Yi Road West	S	↓	1	A	3.5	0.0	0	5.5	0	0%	1874	3748	1874		3748		75	0.040	0.121					
	S	↓	1	A	3.5	0.0	0	5.5	0	0%	1874	0	1874		0		75	0.040						
	S	↘	1	A	3.7	10.0	0	5.5	1	100%	1754	1754	1525		1525		185	0.121						
Tsing Yi Road West	N	↑	2	A,B	3.5	0.0	0	0	1	0%	1965	4070	1965		4070		183	0.093						
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	2105	0	2105		0		197	0.093						
	N	↗	3	B	3.3	0.0	18	0	0	100%	2085	2085	1925		1925		335	0.174	0.174					
Ching Hong Road	W	←	4	C	3.4	18.0	20	0	0	23% / 77%	2095	0	1945		0		303	0.156	0.156					
	W	↙	4	C	3.4	15.0	0	0	1	100%	1955	4050	1775		3720		277	0.156						
Pedestrian crossing		↕	5P	A,B	Min. Green time = 11GM + 8FG = 19s																			
		↕	6P	C	Min. Green time = 5GM + 12FG = 17s																			
Notes:											Traffic Flow (pcu / hr) Weekday AM Peak					Logistic Peak Check Phase								
											380335230185					ey0.451L (sec)12C (sec)71y pract.0.748R.C. (%)66%								
Stage / Phase Diagrams																								
A					B					C														
I/G = 5					I/G = 5					I/G = 7														

Junction: J9 - Tsing Yi Road West / Liu To Road																									
Description: 2031 Design Traffic Flow																									
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		uphill Gradient (%)	Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak								
						Left	Right							Logistic Peak			Logistic Peak		Flow (pcu/hr)				y Value	Critical y	
Tsing Yi Road West	S	↓	2	A,B	3.3	0.0	0	5	1	0%	1735	3610	1735		3610		132	0.076							
	S	↓	2	A,B	3.3	0.0	0	5	0	0%	1875	0	1875		0		143	0.076							
	S	↙	3	B	3.3	0.0	22	5	0	100%	1875	1875	1755		1755		305	0.174	0.174						
Tsing Yi Road West	N	↕	1	A	3.2	10.0	0	0	1	56%	1935	4100	1785		3950		267	0.149	0.149						
	N	↑	1	A	4.1	0.0	0	0	0	0%	2165	0	2165		0		323	0.149							
Liu To Road	E	↗	5	B,C	3.2	10.0	0	0	1	100%	1935	1935	1685		1685		375	0.223							
	E	↘	4	C	4.1	0.0	18	0	0	100%	2165	2165	2000		2000		140	0.070	0.070						
Pedestrian crossing		↕	6P	A,D		Green time = 46GM + 9FG = 55s																			
		↕	7P	C,D		Green time = 31GM + 13FG = 44s																			
		↔	8P	D		Green time = 10GM + 8FG = 18s																			
Pedestrian Crossing																									
										A,BC,D A,B,C,D															
Notes:										Traffic Flow (pcu / hr) Weekday AM Peak										Logistic Peak Check Phase					
										375 305 275 140 ↙ ↓ 150 440										by 0.372 0.393					
																				L (sec) 39 43					
																				C (sec) 130 130					
																				y pract. 0.630 0.602					
																				R.C. (%) 69% 53%					
Stage / Phase Diagrams																									
I/G = 5					I/G = 7					I/G = 5					I/G = 11 + Ped 18										

TRAFFIC SIGNALS CALCULATION

Job No: 26011HK

CTA Consultants Ltd.

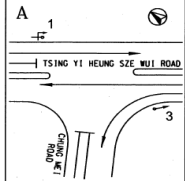
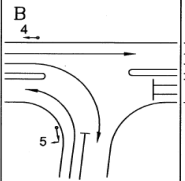
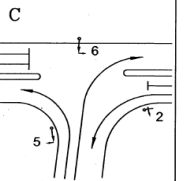
Junction: J10 - Tsing Yi Road West / Fung Shue Wo Road																													
Description: 2031 Design Traffic Flow (With Planned Improvement)																													
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(% uphill Gradient	Nearside 0/1	Pro. Turning (%)	Site Factor	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak											
						Left	Right							Logistic Peak	Logistic Peak		Logistic Peak		Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y					
Fung Shue Wo Road	S	↓	1	A,D	4.1	0.0	0	3	0	0%	1	2039	4058	2039		4058		231	0.113	0.113									
(To Tsing Yi Road West)	S	↓	1	A,D	3.9	0.0	0	3	0	0%	1	2019	0	2019		0		229	0.113										
Fung Shue Wo Road	S	↓	1	A,D	4.0	0.0	0	3	1	0%	1	1889	3918	1889		3918		198	0.105										
(To Fung Shue Wo Road)	S	↓	1	A,D	4.0	0.0	0	3	0	0%	1	2029	0	2029		0		212	0.105										
Tsing Yi Road West	N	↑	2	A,B	3.5	0.0	0	0	1	0%	1	1965	2722.8	1965		2722.8		447	0.228										
	N	↑	2	A,B	3.5	0.0	0	0	0	0%	0.36	757.8	0	757.8		0		173	0.228										
	N	↗	3	B	3.6	0.0	18	0	0	100%	1	2115	2115	1950		1950		160	0.082	0.082									
Fung Shue Wo Road	N	↖	4	C	4.0	35.0	0	3	1	100%	1	1889	2213.6	1810		2120		98	0.054										
	N	↖	4	C	4.0	38.0	0	3	0	100%	0.16	324.64	0	310		0		17	0.054										
Fung Shue Wo Road	N	↗	4	C	4.0	0.0	43	3	0	100%	1	2029	4058	1960		3915		205	0.105	0.105									
	N	↗	4	C	4.0	0.0	40	3	0	100%	1	2029	0	1955		0		205	0.105										
Pedestrian crossing		← - - - →	5p	D		Min. Green time = 5s (G) + 8s (FS) = 13s																							
		← - - - →	6P	B,C		Min. Green time = 5s (G) + 8s (FS) = 13s																							
		↑	7P	A,C,D		Min. Green time = 5s (G) + 8s (FS) = 13s																							
		↓	8P	A,B,D		Min. Green time = 5s (G) + 7s (FS) = 12s																							
Notes:												AD,B,C AB,C,D																	
												Traffic Flow (pcu / hr)												Logistic Peak Check Phase					
												Weekday AM Peak												Ey 0.300 0.332					
																								L (sec) 12 28					
																								C (sec) 90 100					
																								y pract. 0.780 0.648					
												R.C. (%) 160% 95%																	
Stage / Phase Diagrams																													
																													
I/G = 5						I/G = 5						I/G = 5																	

Description: **2031 Design Traffic Flow**

AB,C,D AD,B,C

Ey	0.403	0.516
L (sec)	33	37
C (sec)	90	90
y pract.	0.570	0.530
R.C. (%)	41%	3%

$I/G = 2$	$I/G = 5$	$I/G = 12 + \text{Ped } 16$
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Junction: (J12) Tsing Yi Heung Sze Wui Road / Chung Mei Road																											
Description: 2031 Design Traffic Flow																											
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		uphill Gradient (%)	Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak										
						Left	Right						Logistic Peak	Logistic Peak		Logistic Peak		Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y				
Chung Mei Road	E		5	B,C	3.3	10.0	0	0	1	100%	1945	1945	1690		1690		230	0.136									
	E		6	C	3.3	0.0	18	0	0	100%	2085	2085	1925		1925		305	0.158	0.158								
Tsing Yi Heung Sze Wui Road	N		2	A,C	3.3	25.0	0	0	1	100%	1945	1945	1835		1835		275	0.150									
	N		3	A	3.5	0.0	0	0	0	0%	2105	4210	2105		4210		165	0.078	0.078								
	N		3	A	3.5	0.0	0	0	0	0%	2105	0	2105		0		165	0.078									
Tsing Yi Heung Sze Wui Road	S		1	A,B	3.5	0.0	0	3	1	0%	1839	3818	1839		3818		154	0.084									
	S		1	A,B	3.5	0.0	0	3	0	0%	1979	0	1979		0		166	0.084									
	S		4	B	3.5	0.0	22	3	0	100%	1979	1979	1855		1855		305	0.164	0.164								
Pedestrian crossing																											
Notes:											Traffic Flow (pcu / hr) Weekday AM Peak					Logistic Peak Check Phase											
											230 305     275 770					305 890.00  				by 0.401 L (sec) 15 C (sec) 114 y pract. 0.782 R.C. (%) 95%							
Stage / Phase Diagrams																											
																											
I/G = 5						I/G = 5						I/G = 8															

TRAFFIC SIGNALS CALCULATION Job No: 26011HK CTA Consultants Ltd.

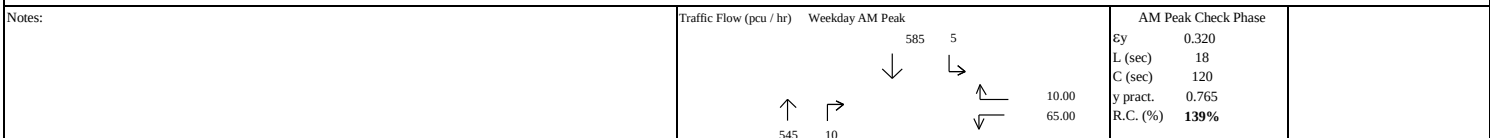
TRAFFIC SIGNALS CALCULATION Job No: 26011HK CTA Consultants Ltd.

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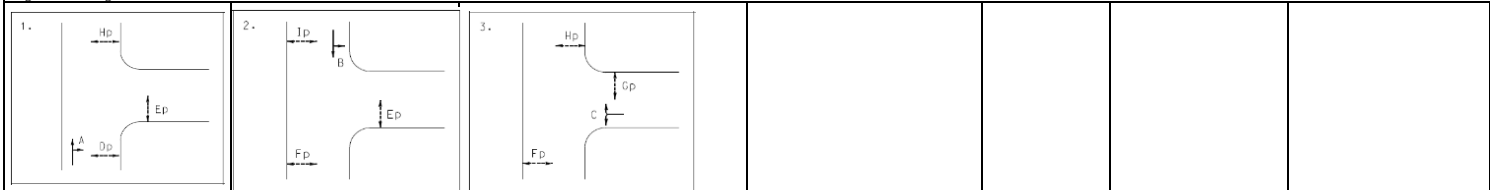
Junction: (J14) Tsing Yi Road / Planned New Road
Description: 2031 Design Traffic Flow

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		(%) uphill Gradient	Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		Logistic Peak					
						Left	Right						Logistic Peak	Logistic Peak		Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
Tsing Yi Road	N	↑	A	1	3.5	0.0	0	0	1	0%	1965	4070	1965		4065		268	0.136	0.137			
	N	↗	A	1	3.5	0.0	40	0	0	3%	2105	0	2100		0		287	0.137				
Planned New Road	W	↖	C	3	3.5	0.0	18	0	0	100%	2105	2105	1945		1945		10	0.005				
	W	↙	C	3	3.5	10.0	0	0	1	100%	1965	1965	1710		1710		65	0.038	0.038			
Tsing Yi Road	S	↘	B	2	3.5	10.0	0	0	1	2%	1965	4070	1960		4065		284	0.145	0.145			
	S	↓	B	2	3.5	0.0	0	0	0	0%	2105	0	2105		0		306	0.145				
Pedestrian crossing		↔	Dp	1	Green time = 28GM + 7FG = 35s																	
		↕	EP	1,2	Green time = 78GM + 7FG = 85s																	
		↔	Fp	2,3	Green time = 68GM + 7FG = 75s																	
		↕	Gp	3	Green time = 20GM + 7FG = 27s																	
		↔	Hp	1,3	Green time = 66GM + 7FG = 73s																	
		↔	Ip	2	Green time = 32GM + 7FG = 39s																	

Notes:	Traffic Flow (pcu / hr)	Weekday AM Peak	AM Peak Check Phase
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Stage / Phase Diagrams				
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$I/G = 5$	$I/G = 10$	$I/G = 6$			
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$I/G = 5$	$I/G = 10$	$I/G = 6$			
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$I/G = 5$	$I/G = 10$	$I/G = 6$			
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Priority Junction Calculation

Junction :	(J3) Tsing Yi Road / Tsing Sheung Road	Job No.:	26011HK
Scenario :	2031 Design Traffic Flow		

Arm C Tsing Yi Road

410	<450>	(295)
95	<90>	(110)

Arm A Tsing Yi Road

515	<440>	(330)
250	<215>	(250)

135	160
<125>	<145>
(115)	(185)

AM	[Logistic]	(PM)
[Logistic]		
(PM)		

Arm B Tsing Sheung Road

The predictive equations of capacity of movement are:

$$Q-BA = D(627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB))$$

$$Q-BC = E(745 - Y(0.364q-AC + 0.144q-AB))$$

$$Q-CB = F(745 - 0.364Y(q-AC + q-AB))$$

The geometric parameters represented by D, E, F are:

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

$$E = (1 + 0.094(w-BC - 3.65))(1 + 0.0009(V-rBC - 120))$$

$$F = (1 + 0.094(w-CB - 3.65))(1 + 0.0009(V-rCB - 120))$$

where

Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA = visibility to the left for waiting vehicles in stream BA, etc

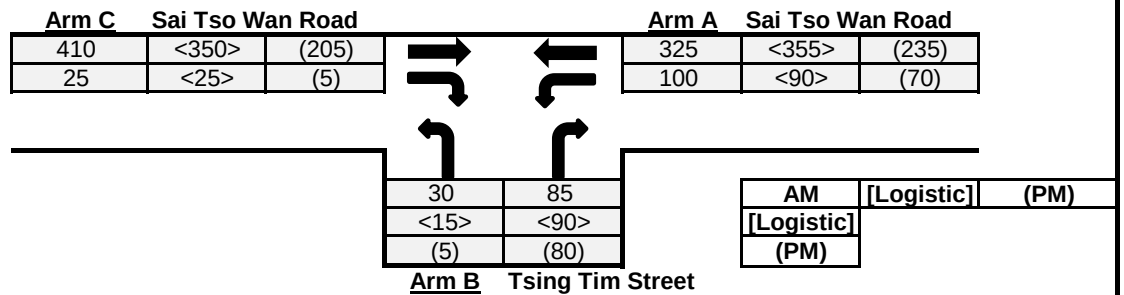
Geometry :	Input	Calculated
W	14	D 0.933
W-CR	0	E 1.012
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	F 0.616
Minor Road Share LT&RT? (Yes: 1, No: 0)	0	Y 0.517
V-rBA	30	
V-IBA	50	
V-rBC	50	
V-rCB	50	
w-BA	4.5	
w-BC	4.5	
w-CB	0	

Analysis :	Traffic Flow pcu/hr	AM	Logistic	PM	Capacity pcu/hr	AM	Logistic	PM	
q-CA	410	450	295		Q-BA	408	420	449	
q-CB	95	90	110		Q-BC	637	654	672	
q-AB	250	215	250		Q-CB	370	383	391	
q-AC	515	440	330		Q-CA	N/A	N/A	N/A	(If C-B blocked C-
q-BA	160	145	185		Q-BAC	N/A	N/A	N/A	(If Minor Road Share
q-BC	135	125	115						LT&RT)
f	0.458	0.463	0.383						

Results :	Ratio of Flow-to-Capacity	AM	Logistic	PM
	B-A	0.39	0.34	0.41
	B-C	0.21	0.19	0.17
	C-B	0.26	0.24	0.28
	C-A	N/A	N/A	N/A
	B-AC	N/A	N/A	N/A
	Critical DFC	0.39	0.34	0.41

Priority Junction Calculation

Junction : (J6) Sai Tso Wan Road / Tsing Tim Street Job No.: 26011HK
 Scenario : 2031 Design Traffic Flow



The predictive equations of capacity of movement are:

$$Q-BA = D(627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB))$$

$$Q-BC = E(745 - Y(0.364q-AC + 0.144q-AB))$$

$$Q-CB = F(745 - 0.364Y(q-AC + q-AB))$$

The geometric parameters represented by D, E, F are:

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

$$E = (1 + 0.094(w-BC - 3.65))(1 + 0.0009(V-rBC - 120))$$

$$F = (1 + 0.094(w-CB - 3.65))(1 + 0.0009(V-rCB - 120))$$

where

$$Y = 1 - 0.0345W$$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input				Calculated	
	W	7	V-rBA	50	w-BA	3.6
	W-CR	0	V-IBA	50	w-BC	3.6
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)		0	V-rBC	50	w-CB	0
Minor Road Share LT&RT? (Yes: 1, No: 0)		1	V-rCB	50		
					D	0.877
					E	0.933
					F	0.616
					Y	0.759

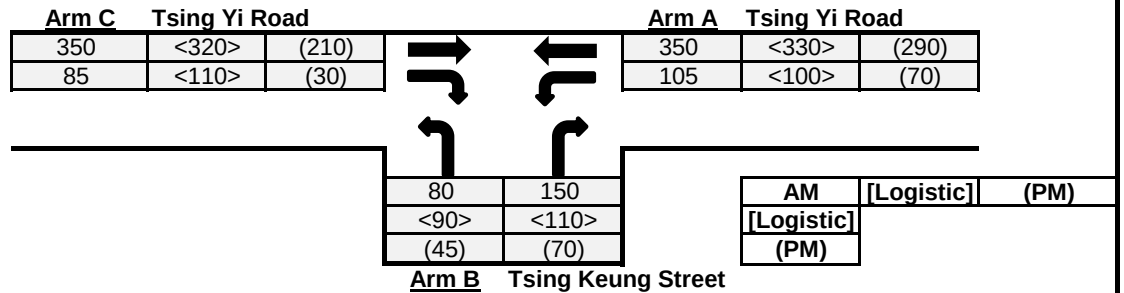
Analysis :	Traffic Flow	AM	Logistic	PM	Capacity	AM	Logistic	PM	
	pcu/hr				pcu/hr				
	q-CA	410	350	205	Q-BA	390	393	453	
	q-CB	25	25	5	Q-BC	601	594	627	
	q-AB	100	90	70	Q-CB	386	383	407	
	q-AC	325	355	235	Q-CA	N/A	N/A	N/A	(If C-B blocked C- (If Minor Road Share LT&RT)
	q-BA	85	90	80	Q-BAC	430	413	461	
	q-BC	30	15	5					
	f	0.261	0.143	0.059					

Results :	Ratio of Flow-to-Capacity	AM	Logistic	PM
	B-A	N/A	N/A	N/A
	B-C	N/A	N/A	N/A
	C-B	0.06	0.07	0.01
	C-A	N/A	N/A	N/A
	B-AC	0.27	0.25	0.18
	Critical DFC	0.27	0.25	0.18

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Priority Junction Calculation

Junction : (J13) Tsing Yi Road / Tsing Keung Street Job No.: 26011HK
 Scenario : 2031 Design Traffic Flow



The predictive equations of capacity of movement are:

$$Q-BA = D(627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB))$$

$$Q-BC = E(745 - Y(0.364q-AC + 0.144q-AB))$$

$$Q-CB = F(745 - 0.364Y(q-AC + q-AB))$$

The geometric parameters represented by D, E, F are:

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

$$E = (1 + 0.094(w-BC - 3.65))(1 + 0.0009(V-rBC - 120))$$

$$F = (1 + 0.094(w-CB - 3.65))(1 + 0.0009(V-rCB - 120))$$

where

$$Y = 1 - 0.0345W$$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA = visibility to the left for waiting vehicles in stream BA, etc

Geometry :		Input			Calculated			
	W	15	V-rBA	50	w-BA	4	D	0.910
	W-CR	0	V-IBA	50	w-BC	4	E	0.968
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)		0	V-rBC	50	w-CB	0	F	0.616
Minor Road Share LT&RT? (Yes: 1, No: 0)		0	V-rCB	50			Y	0.483

Analysis :	Traffic Flow	AM	Logistic	PM	Capacity	AM	Logistic	PM	
	pcu/hr				pcu/hr				
	q-CA	350	320	210	Q-BA	453	454	492	
	q-CB	85	110	30	Q-BC	654	658	667	
	q-AB	105	100	70	Q-CB	409	412	420	
	q-AC	350	330	290	Q-CA	N/A	N/A	N/A	(If C-B blocked C-
	q-BA	150	110	70	Q-BAC	N/A	N/A	N/A	(If Minor Road Share
	q-BC	80	90	45					LT&RT)
	f	0.348	0.450	0.391					

Results :	Ratio of Flow-to-Capacity	AM	Logistic	PM
	B-A	0.33	0.24	0.14
	B-C	0.12	0.14	0.07
	C-B	0.21	0.27	0.07
	C-A	N/A	N/A	N/A
	B-AC	N/A	N/A	N/A
	Critical DFC	0.33	0.27	0.14

CTA Consultants Ltd.

Roundabout Junction Calculation

Junction :	(RA1) Tsing Yi Interchange (North)	Job No.: 26011HK
Scenario :	2031 Design Traffic Flow	

Arm 4 Tsing Yi Heung Sze Wui Road

0		440	
<0>		<325>	
(0)		(310)	

Arm 1 Tsing Yi Bridge

440	<325>	(310)	

Arm 2 Tsing Yi Interchange Access Road

1710	<1305>	(1240)	
	285	1425	0
	<210>	<1095>	<0>
	(165)	(1075)	(0)

Arm 3

1425	<1095>	(1075)	

Input Parameters		Arm 1	Arm 2	Arm 3	Arm 4
V	= Approach half width (m)		6		6
E	= Entry width (m)		7		7
L	= Effective length of flare (m)		5		5
R	= Entry radius		62		41
D	= Inscribed circle diameter (m)		60		60
A	= Entry angle (degree)		27		60
Q	= Entry flow (pcu/hr)	AM Logistic PM	1710 1305 1240		440 325 310
Qc	= Circulating flow across entry (pcu/hr)	AM Logistic PM	0 0 0		1425 1095 1075

Output Parameters		Arm 1	Arm 2	Arm 3	Arm 4
S	= Sharpness of flare = $1.6 \cdot (E - V) / L$		0.32		0.32
K	= $1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$		1.04		0.92
X2	= $V + ((E - V) / (1 + 2 \cdot S))$		6.61		6.61
M	= $\text{Exp}((D - 60) / 10)$		1.00		1.00
F	= $303 \cdot X2$		2003		2003
Td	= $1 + (0.5 / (1 + M))$		1.25		1.25
Fc	= $0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$		0.61		0.61
Qe	= Capacity = $K \cdot (F - Fc \cdot Qc)$	AM Logistic PM	2090 2090 2090		1045 1230 1241
DFC	= Entry Flow/Capacity = Q / Qe	AM Logistic PM	0.82 0.62 0.59		0.42 0.26 0.25

DFC of Critical Approach	=	AM	0.82	Logistic	0.62	PM	0.59
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Roundabout Junction Calculation

Junction :	(RA1) Tsing Yi Interchange (South)	Job No.: 26011HK
Scenario :	2031 Design Traffic Flow (Planned Improvement)	

Arm 4 Tsing Yi Bridge

10	650	0
<5>	<535>	<0>
(15)	(670)	(0)

Arm 1 Tsing Yi Road (Right)

0	0	0
645	535	445
190	160	160

Arm 3 Tsing Yi Interchange Access Road

125	<90>	(205)
415	<320>	(300)
10	<10>	(10)
0	<0>	(0)

Arm 2 Tsing Yi Road (Left)

125	0
<90>	<0>
(205)	(0)

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	7	7.3	7	6
E	=	Entry width (m)	7.2	10.6	7.3	6.3
L	=	Effective length of flare (m)	5	17	5	5
R	=	Entry radius	23	60	24	44
D	=	Inscribed circle diameter (m)	60	60	60	60
A	=	Entry angle (degree)	43	55	27	23
Q	=	Entry flow (pcu/hr)	835	125	425	660
		AM	835	125	425	660
		Logistic	695	90	330	540
		PM	605	205	310	685
Qc	=	Circulating flow across entry (pcu/hr)	670	655	125	550
		AM	670	655	125	550
		Logistic	550	540	90	420
		PM	695	1130	205	515

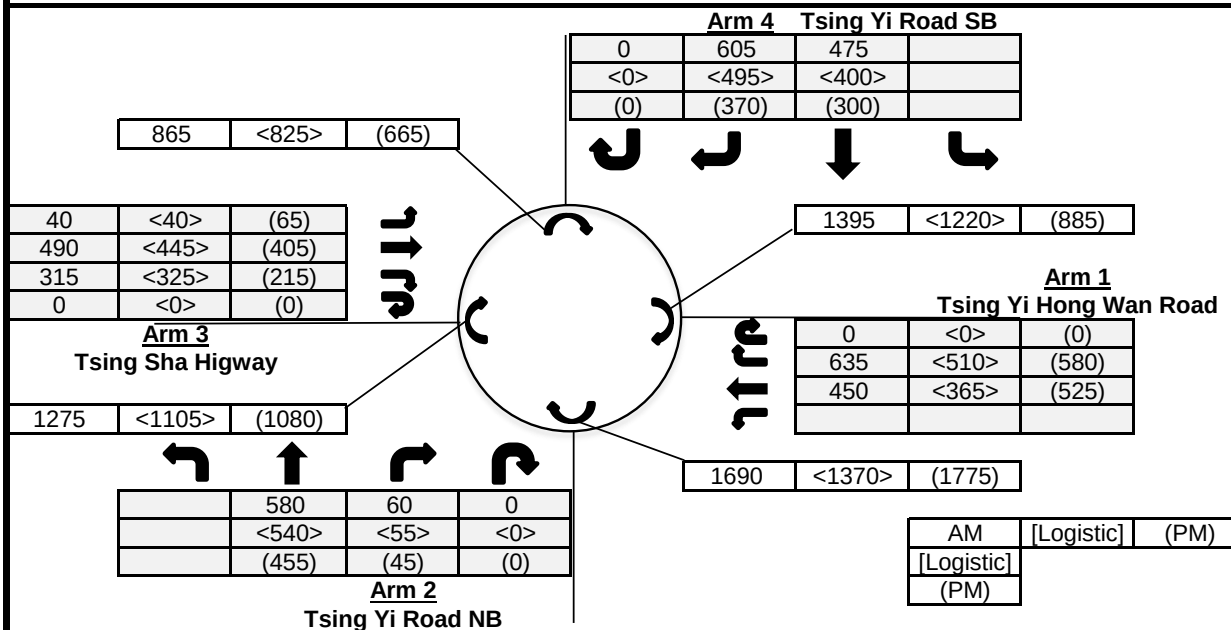
Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$	0.06	0.31	0.10	0.10
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$	0.96	0.95	1.02	1.05
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$	7.18	9.34	7.25	6.25
M	=	$\text{Exp}((D - 60) / 10)$	1.00	1.00	1.00	1.00
F	=	$303 \cdot X2$	2175	2829	2197	1894
Td	=	$1 + (0.5 / (1 + M))$	1.25	1.25	1.25	1.25
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.64	0.75	0.64	0.59
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	1679	2209	2156	1649
		AM	1679	2209	2156	1649
		Logistic	1752	2291	2179	1730
		PM	1663	1871	2104	1671
DFC	=	Entry Flow/Capacity = Q / Qe	0.50	0.06	0.20	0.40
		AM	0.50	0.06	0.20	0.40
		Logistic	0.40	0.04	0.15	0.31
		PM	0.36	0.11	0.15	0.41

DFC of Critical Approach	=	AM	0.50		
		Logistic	0.40		
		PM	0.41		

Roundabout Junction Calculation

Junction : (RA2) Tsing Yi Road / Tsing Yi Hong Wan Road / Tsing Sha Hig Job No.: 26011HK

Scenario : 2031 Design Traffic Flow (With Planned Improvement)



Input Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	7.3	7.1	7.3	7.3
E	=	Entry width (m)	13.5	12	9.5	10
L	=	Effective length of flare (m)	30	15	30	15
R	=	Entry radius	45	97	52	34
D	=	Inscribed circle diameter (m)	100	100	100	100
A	=	Entry angle (degree)	29	32	31	46
Q	=	Entry flow (pcu/hr)	AM 1085	640	845	1080
			Logistic 875	595	810	895
			PM 1105	500	685	670
Qc	=	Circulating flow across entry (pcu/hr)	AM 1395	1690	1275	865
			Logistic 1220	1370	1105	825
			PM 885	1775	1080	665

Output Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$	0.33	0.52	0.12	0.29
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$	1.03	1.03	1.03	0.96
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$	11.03	9.50	9.08	9.01
M	=	$\exp((D - 60) / 10)$	54.60	54.60	54.60	54.60
F	=	$303 \cdot X2$	3343	2877	2752	2731
Td	=	$1 + (0.5 / (1 + M))$	1.01	1.01	1.01	1.01
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.68	0.61	0.60	0.59
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM 2468	1898	2044	2139
			Logistic 2591	2101	2148	2162
			PM 2825	1844	2163	2253
DFC	=	Entry Flow/Capacity = Q / Qe	AM 0.44	0.34	0.41	0.50
			Logistic 0.34	0.28	0.38	0.41
			PM 0.39	0.27	0.32	0.30

DFC of Critical Approach = AM 0.50
Logistic 0.41
PM 0.39

Roundabout Junction Calculation

Junction :	(RA3) Tsing Yi Hong Wan Road	Job No.:	26011HK
Scenario :	2031 Design Traffic Flow		

Arm 4 Tsing Yi Hong Wan Road SB

20	20	1065
<20>	<30>	<950>
(10)	(25)	(930)

Arm 1

1160	<1045>	(1000)

Arm 2 Tsing Yi Hong Wan Road NB

55	1160	45
<40>	<885>	<35>
(40)	(975)	(20)

Arm 3

1225	<940>	(1005)

Input Parameters		Arm 1	Arm 2	Arm 3	Arm 4
V	= Approach half width (m)		7	7.3	7.3
E	= Entry width (m)		14	13	12
L	= Effective length of flare (m)		20	10	2
R	= Entry radius		65	25	75
D	= Inscribed circle diameter (m)		68	68	68
A	= Entry angle (degree)		53	60	46
Q	= Entry flow (pcu/hr)		1260	15	1105
		AM			
		Logistic	960	15	1000
		PM	1035	20	965
Qc	= Circulating flow across entry (pcu/hr)		40	1225	55
		AM			
		Logistic	50	940	45
		PM	965	1005	35

Output Parameters		Arm 1	Arm 2	Arm 3	Arm 4
S	= Sharpness of flare = $1.6 \cdot (E - V) / L$		0.56	0.91	3.76
K	= $1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$		0.95	0.91	0.98
X2	= $V + ((E - V) / (1 + 2 \cdot S))$		10.30	9.32	7.85
M	= $\text{Exp}((D - 60) / 10)$		2.23	2.23	2.23
F	= $303 \cdot X2$		3121	2823	2379
Td	= $1 + (0.5 / (1 + M))$		1.16	1.16	1.16
Fc	= $0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$		0.74	0.69	0.62
Qe	= Capacity = $K \cdot (F - Fc \cdot Qc)$		2950	1787	2299
		AM			
		Logistic	2943	1966	2305
		PM	2295	1925	2311
DFC	= Entry Flow/Capacity = Q / Qe		0.43	0.01	0.48
		AM			
		Logistic	0.33	0.01	0.43
		PM	0.45	0.01	0.42

DFC of Critical Approach	=	AM	0.48		
		Logistic	0.43		
		PM	0.45		

Roundabout Junction Calculation

Junction :	(RA4) Tsing Yi Hong Wan Road / Tsing Ko Road	Job No.:	26011HK
Scenario :	2031 Design Traffic Flow		

Arm 4 Tsing Yi Hong Wan Road SB

750		165	185
<545>		<215>	<225>
(705)		(105)	(275)

Arm 1 Tsing Yi Hong Wan Road

925	<790>	(835)

Arm 2 Tsing Yi Hong Wan Road NB

755	<565>	(810)

Arm 3 Tsing Ko Road

955	<680>	(910)

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)		6.7	6.3	7.3
E	=	Entry width (m)		13.5	12.5	15
L	=	Effective length of flare (m)		18	30	30
R	=	Entry radius		47	100	75
D	=	Inscribed circle diameter (m)		68	68	68
A	=	Entry angle (degree)		41	22	46
Q	=	Entry flow (pcu/hr)	AM	225	435	1100
			Logistic	165	405	985
			PM	210	440	1085
Qc	=	Circulating flow across entry (pcu/hr)	AM	755	955	10
			Logistic	565	680	30
			PM	810	910	25

Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$		0.60	0.33	0.41
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$		0.99	1.07	0.98
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$		9.78	10.03	11.53
M	=	$\text{Exp}((D - 60) / 10)$		2.23	2.23	2.23
F	=	$303 \cdot X2$		2963	3040	3493
Td	=	$1 + (0.5 / (1 + M))$		1.16	1.16	1.16
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$		0.72	0.73	0.80
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	2397	2500	3416
			Logistic	2532	2714	3401
			PM	2358	2535	3405
DFC	=	Entry Flow/Capacity = Q / Qe	AM	0.09	0.17	0.32
			Logistic	0.07	0.15	0.29
			PM	0.09	0.17	0.32

DFC of Critical Approach	=	AM	0.32	
		Logistic	0.29	
		PM	0.32	

Roundabout Junction Calculation

Junction :		(RA5) Tam Kon Shan Interchange		Job No.: 26011HK	
Scenario :		2031 Design Traffic Flow			

Arm 4 Tam Kon Shan Road

0	55	250	530	10
<0>	<40>	<435>	<435>	<5>
(0)	(85)	(30)	(30)	(370)

1725 <1645> (710)

1995 <1670> (1815)

75	<55>	(55)
235	<170>	(250)
0	<0>	(0)
85	<60>	(15)
70	<45>	(25)

Arm 3
Tsing Yi North Coastal Road EB

1800	<1565>	(1785)
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20	95	350	735	0
<15>	<80>	<305>	<630>	<0>
(15)	(95)	(440)	(525)	(0)

Arm 2
Fung Shue Wo Road

Arm 5 Tsing King Road

0	5	70	70	0
<0>	<5>	<45>	<55>	<0>
(30)	(15)	(65)	(65)	(0)

605 <685> (330)

Arm 1
Tsing Yi North Coastal Road WB

0	<0>	(0)
520	<460>	(530)
95	<85>	(150)
0	<0>	(0)
0	<0>	(0)

815 <680> (900)

AM	[Logistic]	(PM)
[Logistic]		
(PM)		

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4	Arm 5	
V	=	Approach half width (m)	7	7.3	5.5	7.3	7	
E	=	Entry width (m)	9	13.5	7.5	13.5	11	
L	=	Effective length of flare (m)	9	20	11	50	10	
R	=	Entry radius	100	35	45	35	45	
D	=	Inscribed circle diameter (m)	100	100	100	100	100	
A	=	Entry angle (degree)	30	25	25	45	45	
Q	=	Entry flow (pcu/hr)	AM	615	1200	465	845	145
			Logistic	545	1030	330	915	105
			PM	680	1075	345	515	175
Qc	=	Circulating flow across entry (pcu/hr)	AM	605	815	1800	1995	1725
			Logistic	685	680	1565	1670	1645
			PM	330	900	1785	1815	710

Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4	Arm 5	
S	=	Sharpness of flare = 1.6*(E-V)/L	0.36	0.50	0.29	0.20	0.64	
K	=	1-0.00347*(A-30)-0.978*(1/R-0.05)	1.04	1.04	1.04	0.97	0.98	
X2	=	V+((E-V)/(1+2*S))	8.17	10.41	6.76	11.74	8.75	
M	=	Exp((D-60)/10)	54.60	54.60	54.60	54.60	54.60	
F	=	303*X2	2475	3155	2050	3557	2653	
Td	=	1+(0.5/(1+M))	1.01	1.01	1.01	1.01	1.01	
Fc	=	0.21*Td*(1+0.2*X2)	0.56	0.65	0.50	0.71	0.58	
Qe	=	Capacity = K*(F-Fc*Qc)	AM	2221	2723	1204	2075	1606
			Logistic	2175	2815	1326	2298	1652
			PM	2381	2665	1211	2199	2183
DFC	=	Entry Flow/Capacity = Q/Qe	AM	0.28	0.44	0.39	0.41	0.09
			Logistic	0.25	0.37	0.25	0.40	0.06
			PM	0.29	0.40	0.28	0.23	0.08

DFC of Critical Approach	=	AM	0.44
		Logistic	0.40
		PM	0.40

Roundabout Junction Calculation

Junction :	(RA6) Tsing King Road / Fung Shue Wo Road	Job No.:	26011HK
Scenario :	2031 Design Traffic Flow		

Arm 4 Tsing King Road

70	5	710	80
<45>	<5>	<510>	<55>
(115)	(5)	(515)	(75)

Arm 1 Fung Shue Wo Road WB

0	<0>	(0)
35	<20>	(20)
100	<70>	(105)
250	<165>	(170)

Arm 3 Fung Shue Wo Road EB

1150	<915>	(1080)	
380	555	135	355
<305>	<450>	<110>	<290>
(435)	(505)	(295)	(145)

Arm 2 Tsing Yi Heung Sze Wui Road

210	<140>	(760)	
380	555	135	355
<305>	<450>	<110>	<290>
(435)	(505)	(295)	(145)

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	6.7	7.3	7.3	6.9
E	=	Entry width (m)	9.7	10	9.2	8.9
L	=	Effective length of flare (m)	16	20	14	16
R	=	Entry radius	55	71	60	62
D	=	Inscribed circle diameter (m)	100	100	100	100
A	=	Entry angle (degree)	36	30	18	25
Q	=	Entry flow (pcu/hr)	385	1425	645	865
		AM	385	1425	645	865
		Logistic	255	1155	460	615
		PM	295	1380	420	710
Qc	=	Circulating flow across entry (pcu/hr)	1585	210	1150	1100
		AM	1585	210	1150	1100
		Logistic	1170	140	915	835
		PM	1035	760	1080	860

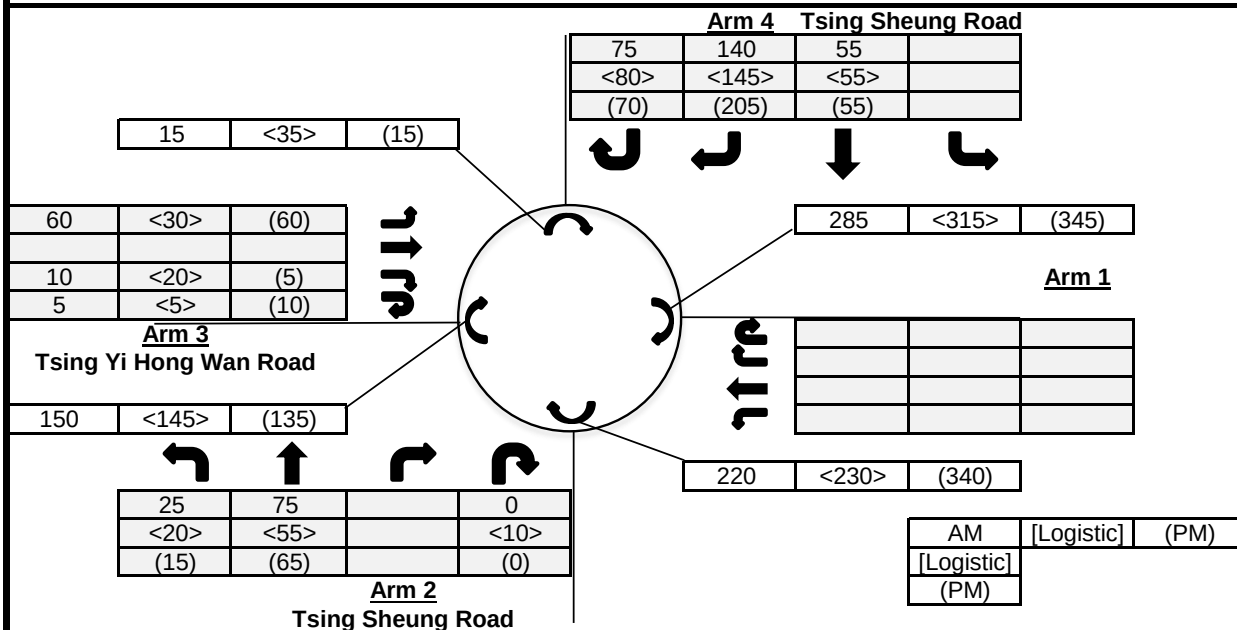
Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = 1.6*(E-V)/L	0.30	0.22	0.22	0.20
K	=	1-0.00347*(A-30)-0.978*(1/R-0.05)	1.01	1.04	1.07	1.05
X2	=	V+((E-V)/(1+2*S))	8.58	9.19	8.62	8.33
M	=	Exp((D-60)/10)	54.60	54.60	54.60	54.60
F	=	303*X2	2598	2783	2613	2524
Td	=	1+(0.5/(1+M))	1.01	1.01	1.01	1.01
Fc	=	0.21*Td*(1+0.2*X2)	0.58	0.60	0.58	0.56
Qe	=	Capacity = K*(F-Fc*Qc)	1704	2750	2094	1998
		AM	1704	2750	2094	1998
		Logistic	1945	2794	2240	2155
		PM	2023	2408	2137	2141
DFC	=	Entry Flow/Capacity = Q/Qe	0.23	0.52	0.31	0.43
		AM	0.23	0.52	0.31	0.43
		Logistic	0.13	0.41	0.21	0.29
		PM	0.15	0.57	0.20	0.33

DFC of Critical Approach	=	AM	0.52
		Logistic	0.41
		PM	0.57

Roundabout Junction Calculation

Junction : (RA7) Tsing Yi Hong Wan Road / Tsing Sheung Road Job No.: 26011HK

Scenario : 2031 Design Traffic Flow



Input Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)		5.2	3	6.7
E	=	Entry width (m)		9	8.4	12
L	=	Effective length of flare (m)		25	15	23
R	=	Entry radius		63	55	11.6
D	=	Inscribed circle diameter (m)		53	53	53
A	=	Entry angle (degree)		33	48	38
Q	=	Entry flow (pcu/hr)	AM	100	75	270
			Logistic	85	55	280
			PM	80	75	330
Qc	=	Circulating flow across entry (pcu/hr)	AM	220	150	15
			Logistic	230	145	35
			PM	340	135	15

Output Parameters

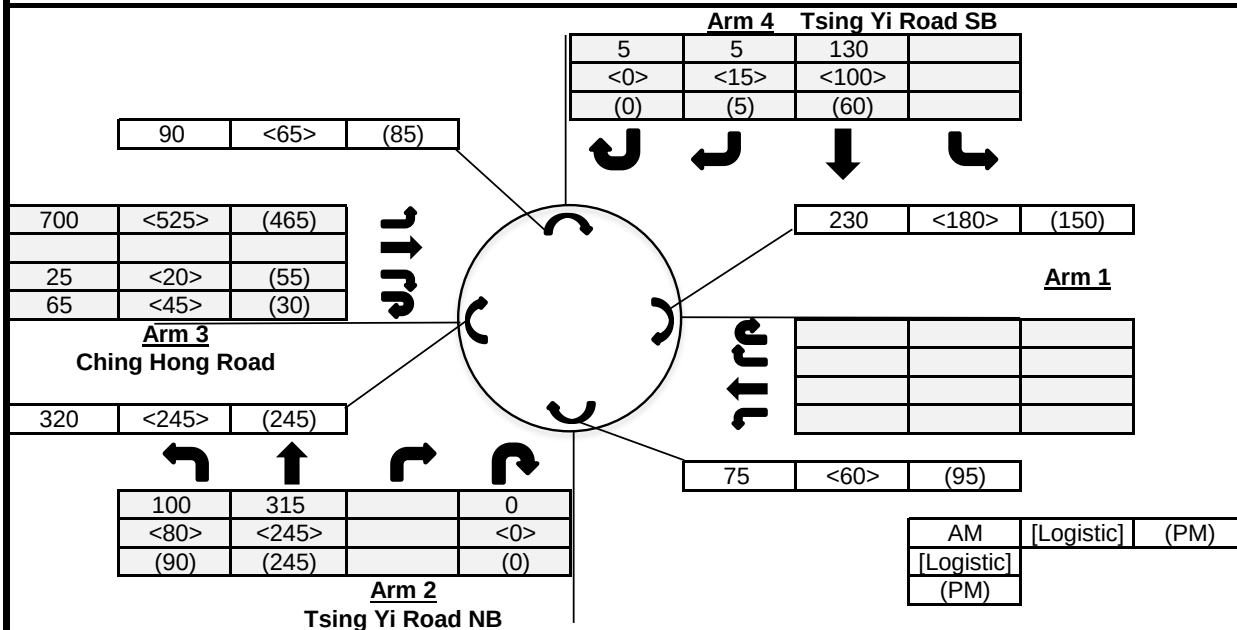
			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$		0.24	0.58	0.37
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$		1.02	0.97	0.94
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$		7.76	5.51	9.75
M	=	$\text{Exp}((D - 60) / 10)$		0.50	0.50	0.50
F	=	$303 \cdot X2$		2350	1669	2954
Td	=	$1 + (0.5 / (1 + M))$		1.33	1.33	1.33
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$		0.71	0.59	0.83
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	2243	1531	2756
			Logistic	2236	1534	2741
			PM	2156	1540	2756
DFC	=	Entry Flow/Capacity = Q / Qe	AM	0.04	0.05	0.10
			Logistic	0.04	0.04	0.10
			PM	0.04	0.05	0.12

DFC of Critical Approach = AM 0.10
Logistic 0.10
PM 0.12

Roundabout Junction Calculation

Junction : (RA8) Tsing Yi Road / Ching Hong Road Job No.: 26011HK

Scenario : 2031 Design Traffic Flow



Input Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)		4.5	7.3	7
E	=	Entry width (m)		9	8.5	8.5
L	=	Effective length of flare (m)		25	4	16
R	=	Entry radius		24.5	30	100
D	=	Inscribed circle diameter (m)		30	30	30
A	=	Entry angle (degree)		44	40	27
Q	=	Entry flow (pcu/hr)	AM	415	790	140
			Logistic	325	590	115
			PM	335	550	65
Qc	=	Circulating flow across entry (pcu/hr)	AM	75	320	90
			Logistic	60	245	65
			PM	95	245	85

Output Parameters

			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$		0.29	0.48	0.15
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1 / R - 0.05)$		0.96	0.98	1.05
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$		7.36	7.91	8.15
M	=	$\text{Exp}((D - 60) / 10)$		0.05	0.05	0.05
F	=	$303 \cdot X2$		2229	2397	2471
Td	=	$1 + (0.5 / (1 + M))$		1.48	1.48	1.48
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$		0.77	0.80	0.82
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	AM	2085	2102	2516
			Logistic	2096	2161	2537
			PM	2071	2161	2520
DFC	=	Entry Flow/Capacity = Q / Qe	AM	0.20	0.38	0.06
			Logistic	0.16	0.27	0.05
			PM	0.16	0.25	0.03

DFC of Critical Approach = AM 0.38
Logistic 0.27
PM 0.25

Roundabout Junction Calculation

Junction :	(RA9) Tam Kon Shan Road	Job No.:	26011HK
Scenario :	2031 Design Traffic Flow		

5	0	120
<10>	<5>	<65>
(5)	(5)	(20)

180	<195>	(110)
0	<0>	(0)
160	<185>	(110)
0	<0>	(0)

60	<115>	(90)
0	30	15
<0>	<80>	<10>
(0)	(80)	(0)

5	<0>	(0)
5	<15>	(5)
130	<100>	(60)
145	<130>	(75)

AM	[Logistic]	(PM)
[Logistic]		
(PM)		

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	3.3	4	3.4	4.2
E	=	Entry width (m)	6.7	4.9	5.8	5.4
L	=	Effective length of flare (m)	10	10	10	10
R	=	Entry radius	32	97	52	34
D	=	Inscribed circle diameter (m)	30	30	30	30
A	=	Entry angle (degree)	34	32	31	46
Q	=	Entry flow (pcu/hr)	140	45	160	125
		AM	115	90	185	80
		Logistic	65	80	110	30
		PM	5	145	60	180
Qc	=	Circulating flow across entry (pcu/hr)	15	130	115	195
		AM	10	75	90	110
		Logistic				
		PM				

Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = $1.6 \cdot (E - V) / L$	0.54	0.14	0.38	0.19
K	=	$1 - 0.00347 \cdot (A - 30) - 0.978 \cdot (1/R - 0.05)$	1.00	1.03	1.03	0.96
X2	=	$V + ((E - V) / (1 + 2 \cdot S))$	4.93	4.70	4.76	5.07
M	=	$\text{Exp}((D - 60) / 10)$	0.05	0.05	0.05	0.05
F	=	$303 \cdot X2$	1493	1424	1442	1535
Td	=	$1 + (0.5 / (1 + M))$	1.48	1.48	1.48	1.48
Fc	=	$0.21 \cdot Td \cdot (1 + 0.2 \cdot X2)$	0.62	0.60	0.61	0.62
Qe	=	Capacity = $K \cdot (F - Fc \cdot Qc)$	1497	1379	1443	1373
		AM	1491	1388	1408	1364
		Logistic	1494	1423	1424	1415
		PM	0.09	0.03	0.11	0.09
DFC	=	Entry Flow/Capacity = Q/Qe	0.08	0.06	0.13	0.06
		AM	0.04	0.06	0.08	0.02
		Logistic				
		PM				

DFC of Critical Approach	=	AM	0.11
		Logistic	0.13
		PM	0.08

Roundabout Junction Calculation

Junction :	(RA10) Tsing Sheung Road / Tsing Ko Road	Job No.:	26011HK
Scenario :	2031 Design Traffic Flow		

Arm 4 Tsing Ko Road

15	110	30
<15>	<85>	<30>
(5)	(65)	(15)

Arm 1 Tsing Sheung Road WB

10	<0>	(0)
85	<115>	(90)
65	<40>	(115)

Arm 3 Tsing Sheung Road EB

240	<195>	(270)
45	<15>	(20)
15	<75>	(25)

Arm 2

70	<90>	(45)
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		AM	[Logistic]	(PM)
		[Logistic]		
		(PM)		

Input Parameters			Arm 1	Arm 2	Arm 3	Arm 4
V	=	Approach half width (m)	6.6		5.6	6.4
E	=	Entry width (m)	12.9		5.1	11.6
L	=	Effective length of flare (m)	18		30	30
R	=	Entry radius	47		67.3	75
D	=	Inscribed circle diameter (m)	50		50	50
A	=	Entry angle (degree)	41		22	46
Q	=	Entry flow (pcu/hr)	160		300	155
		AM	160		300	155
		Logistic	155		285	130
		PM	205		315	85
Qc	=	Circulating flow across entry (pcu/hr)	140		110	70
		AM	140		110	70
		Logistic	175		130	90
		PM	95		95	45

Output Parameters			Arm 1	Arm 2	Arm 3	Arm 4
S	=	Sharpness of flare = 1.6*(E-V)/L	0.56		-0.03	0.28
K	=	1-0.00347*(A-30)-0.978*(1/R-0.05)	0.99		1.06	0.98
X2	=	V+((E-V)/(1+2*S))	9.57		5.07	9.74
M	=	Exp((D-60)/10)	0.37		0.37	0.37
F	=	303*X2	2900		1537	2953
Td	=	1+(0.5/(1+M))	1.37		1.37	1.37
Fc	=	0.21*Td*(1+0.2*X2)	0.84		0.58	0.85
Qe	=	Capacity = K*(F-Fc*Qc)	2755		1565	2837
		AM	2755		1565	2837
		Logistic	2726		1552	2820
		PM	2792		1574	2857
DFC	=	Entry Flow/Capacity = Q/Qe	0.06		0.19	0.05
		AM	0.06		0.19	0.05
		Logistic	0.06		0.18	0.05
		PM	0.07		0.20	0.03

DFC of Critical Approach	=	AM	0.19	
		Logistic	0.18	
		PM	0.20	



Appendix 2

Tsing Yi School Schedules

保良局陳百強伉儷青衣學校
二零二五至二零二六年度學校校曆表

2025年6月23日編訂

	週次	日	一	二	三	四	五	六	摘 要
九 月	1		1	2	3	4	5	6	
	2		7	8	9	10	11	12	
	3		14	15	16	17	18	19	
	4		21	22	23	24	25	26	
	5		28	29	30				
十 月	6				△	2	3	4	1/10 國慶日，放假1天 6/10 學校自決假期，放假1天 7/10 中秋節翌日，放假1天 10/10 教職發展日，學生不用上課 16/10 學校資訊日 29/10 重陽節，放假1天 31/10 保良局特殊學校聯校運動會
	7		5	6	△	8	9	△	
	8		12	13	14	15	16	17	
	9		19	20	21	22	23	24	
	10		26	27	28	△	30	31	
十一 月	11							1	
	12		2	3	4	5	6	7	
	13		9	10	11	12	13	14	
	14		16	17	18	19	20	21	
	15		23	24	25	26	27	28	
十二 月	16			1	2	3	4	5	8/12 立法會換屆選舉翌日，放假1天 12/12 教職發展日，學生不用上課 24/12-31 聖誕節及新年假期，放假11天
	17		7	△	8	9	10	△	
	18		14	15	16	17	18	19	
	19		21	22	23	△	△	△	
	20		28	△	△	△	△	△	
一 月	21					△	△	△	
	22		4	5	6	7	8	9	
	23		11	12	13	14	15	16	
	24		18	19	20	21	22	23	
	25		25	26	27	28	29	30	
二 月	26		1	2	3	4	5	6	13/2-24/2 農曆新年假期，放假12天
	27		8	9	10	11	12	△	
	28		△	△	△	△	△	△	
	29		△	△	△	△	△	△	
	30		△	△	△	△	△	△	

	週次	日	一	二	三	四	五	六	摘 要
三 月	27		1	2	3	4	5	6	13/3 學校自決假期，放假1天
	28		8	9	10	11	12	△	
	29		15	16	17	18	19	20	
	30		22	23	24	25	26	27	
	31		29	30	31				
四 月	32				1	△	△	△	2/4-14/4 清明節及復活節假期，放假13天
	33		△	△	△	△	△	△	
	34		12	13	14	15	16	17	
	35		19	20	21	22	23	24	
	36		26	27	28	29	30		
五 月	37						△	2	1/5 勞動節，放假1天 25/5 佛誕翌日，放假1天
	38		3	4	5	6	7	8	
	39		10	11	12	13	14	15	
	40		17	18	19	20	21	22	
	41		24	△	26	27	28	29	
六 月	42								5/6 保良局特殊學校聯校畢業禮(首選) 12/6 保良局特殊學校聯校畢業禮(次選) 19/6 端午節，放假1天 24/6 學校教學成果日 26/6 學校自決假期，放假1天
	43		1	2	3	4	5	6	
	44		7	8	9	10	11	12	
	45		14	15	16	17	18	△	
	46		21	22	23	24	25	△	
七 月	47		28	29	30				1/7 香港特區成立紀念日，放假1天 16/7-31/8 暑假，放假47天
	48					△	2	3	
	49		5	6	7	8	9	10	
	50		12	13	14	15	△	△	
	51		19	20	21	22	△	△	
八 月	52		26	27	28	29	30	31	
	53								
	54		△	△	△	△	△	△	
	55		△	△	△	△	△	△	
	56		△	△	△	△	△	△	

公眾假期 學校自決假期 △教職發展日 ×學校假期
 學生全年上課日：190日 本學年擬訂學校假期合計：94日（包括3日學校自決假期）
 教職發展日，學生不用上課：2日

東華三院黃士心小學 2025/2026 年度校曆表
下學期

[illegible]

2023-2024 學生行事曆 (3-7 月)

郭怡雅神父
紀念學校

月份	循環週次	月訓	日	一	二	三	四	五	六	假期	評估 / 注意事項
三 月		堅毅						① DS	2	26/3-6/4 清明節及復活節假期 25/3 教師發展日	5-6/3 試後活動暨全方位活動日 16/3 家教會會員大會 18/3 主保瞻禮日暨校慶日 19/3-23/3 姊妹學校跨境交流 20-22/3 小六教育營 21/3-22/3 小四內地考察團
	3		3	④ DS	⑤ DS	⑥ DS	7 D1	8 D2	9		
	4		10	11 D3	12 D4	13 D5	14 D6	15 D1	16		
			17	⑱ DS	19 D2	20 D3	21 D4	22 D5	23		
			24	25	26	27	28	29	30		
			31								
四 月		誠信		1	2	3	4	5	6		12/4 全民國家安全教育日活動暨升旗禮 12/4 小六升中選校家長會 20/4 小一至小五家長日 20/4 小五呈分考試家長會 20/4 小六升中選校家長面談 23/4 閱讀嘉年華 26/4 校運會
	5		7	8 D6	9 D1	10 D2	11 D3	12 D4	13		
	6		14	15 D5	16 D6	17 D1	18 D2	19 D3	20		
			21	22 D4	⑳ DS	24 D5	25 D6	⑳ DS	27		
	7		28	29 D1	30 D2						
五 月		孝順				1	2 D3	3 D4	4	1/5 勞動節 15/5 佛誕	24/5 課外活動最後一課 31/5 輔導課最後一課
	8		5	6 D5	7 D6	8 D1	9 D2	10 D3	11		
	9		12	13 D4	14 D5	15	16 D6	17 D1	18		
			19	20 D2	21 D3	22 D4	23 D5	24 D6	25		
	10		26	27 D1	28 D2	29 D3	30 D4	31 D5			
六 月		關愛							1	10/6 端午節	4-7/6 P.1-P.4 第三次考試 P.5 呈分試 P.6 畢業評估 24/6-15/7 試後活動 28/6 特區成立紀念日升旗禮
			2	3 D6	④ DS	⑤ DS	⑥ DS	⑦ DS	8		
	11		9	10	11 D1	⑫ DS	⑬ DS	14 D2	15		
	12		16	17 D3	18 D4	19 D5	20 D6	21 D1	22		
			23	⑭ DS	⑮ DS	⑯ DS	⑰ DS	⑱ DS	29		
			30								
七 月		感恩珍惜		1	② DS	③ DS	④ DS	⑤ DS	6	1/7 特區成立紀念日 16/7-31/8 暑假開始	5/7 畢業綵排 6/7 畢業禮(13/7 後備) 6/7 校友會會員大會 9/7 升中放榜 11/7 結業頒獎禮 11-12/7 升中註冊 12/7 才藝繽紛 Show 16/7 中一入學前香港學科測驗
			7	⑧ DS	⑨ DS	⑩ DS	⑪ DS	⑫ DS	13		
			14	⑮ DS	16	17	18	19	20		
			21	22	23	24	25	26	27		
			28	29	30	31					



學校假期



學校自決假期



教師發展日

① 半天上課：12：30 放學

DS: 特別日子，上課內容另有安排

青衣商會小學
Tsing Yi Trade Association Primary School
2025-2026
2nd Term School Calendar 下學期校曆表

月份 Month	週次 Week	日 Sun	一 Mon	二 Tue	三 Wed	四 Thu	五 Fri	六 Sat	月訓 Monthly Focus	事項	Events
一月 JAN	一 1st	25	26	27	28	29	30	31	堅毅 Perseverance	26/1 下學期開始， 下午 12:30 放學	26/1 Start of the Second Term 12:30pm dismiss
二月 FEB	二 2nd	1	2	3	4	5	6	7	和平友愛 Peace & Kindliness	13/2 中華文化日-2 及 盆菜宴,下午 2:00 放學 16/2-28/2 農曆新年假期	13/2 Chinese Cultural Day-2 & Poon Choi Feast 2:00pm dismiss 16/2-28/2 Lunar New Year Holidays
	三 3rd	8	9	10	11	12	13	14			
	四 4th	15	16	17	18	19	20	21			
	五 5th	22	23	24	25	26	27	28			
三月 MAR	六 6th	1	2	3	4	5	6	7	團結 Unity	12/3-13/3 及 16/3-17/3 P.1 第一次考試、P.2-P.6 第二次 考試	12/3-13/3 & 16/3-17/3 P.1 First Exam, P.2-P.6 Second Exam
	七 7th	8	9	10	11	12	13	14			
	八 8th	15	16	17	18	19	20	21			
	九 9th	22	23	24	25	26	27	28			
	十 10th	29	30	31							
四月 APR	十一 11th	5	6	7	8	9	10	11	承擔 Commitment	1/4-8/4 復活節及清明節假期 5/4 清明節 24/4 家長日	1/4-8/4 Easter and Ching Ming Holidays 5/4 Ching Ming Festival 24/4 Parents' Day
	十二 12th	12	13	14	15	16	17	18			
	十三 13th	19	20	21	22	23	24	25			
	十四 14th	26	27	28	29	30					
							1	2			
五月 MAY	十五 15th	3	4	5	6	7	8	9	孝親 Filial Piety	1/5 勞動節 6/5 或 7/5 小三 TSA 說話及視訊 評估 24/5 佛誕 25/5 佛誕翌日	1/5 Labour Day 6/5 或 7/5 TSA Oral and Audio- visual Assessment (Primary 3) 24/5 The Birthday of the Buddha 25/5 The day following the Birthday of the Buddha
	十六 16th	10	11	12	13	14	15	16			
	十七 17th	17	18	19	20	21	22	23			
	十八 18th	24	25	26	27	28	29	30			
	十九 19th	31									
六月 JUN			1	2	3	4	5	6	尊重他人 Respect for Others	1/6-4/6 小一第二次考試；小二 至小六第三次考試 15/6-16/6 小三 TSA 筆試評估 19/6 端午節 22/6-10/7 半天課 24/6 聯校畢業典禮	1/6-4/6 P.1 Second Exam, P.2-P.6 Third Exam 15/6-16/6 TSA Written Assessment (Primary 3) 19/6 Tuen Ng Festival 22/6-10/7 Half-day School 24/6 Joint Schools Graduation Ceremony
	二十 20th	7	8	9	10	11	12	13			
	廿一 21st	14	15	16	17	18	19	20			
	廿二 22nd	21	22	23	24	25	26	27			
	廿三 23rd	28	29	30							
七月 JUL					1	2	3	4	善用餘暇 Delight in Leisure	1/7 香港特別行政區成立紀念日 3/7 P6 畢業禮暨 P1-P5 結業禮 7/7 公布中學學位分配結果 9/7-10/7 向中學註冊 14/7 中一入學前香港學科測驗 (教育局暫定) 13/7-31/8 暑假	1/7 Hong Kong Special Administrative Region Establishment Day 3/7 P6 Graduation Ceremony P1-P5 Year End Ceremony 7/7 Release of Secondary One places allocation results 9/7-10/7 Secondary One Admission Registration 14/7 Pre-Secondary One Hong Kong Attainment Test (TBC by EDB) 13/7-31/8 Summer Holidays
	廿四 24th	5	6	7	8	9	10	11			
	廿五 25th	12	13	14	15	16	17	18			
	廿六 26th	19	20	21	22	23	24	25			
	廿七 27th	26	27	28	29	30	31				

註：紅色日子為假期，不用上課。著黃色底日子為考試日。 半天課日子，學生於下午 12:30 放學。

Remarks: The holidays are in red, no school on these days. The exam days are marked in yellow grids.

Students dismiss at 12:30 pm on the days of half-day school.