#### Appendix III

Traffic Impact Assessment



> Traffic Impact Assessment Final Report 21<sup>th</sup> January 2025

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## 1.0 INTRODUCTION

#### Background

- 1.1 The Applicant, Join Bright Warehousing Limited, is authorised by Glorious Concrete (Hong Kong) Limited, the affected business operator, to facilitate the relocation of their concrete batching plant ("the Existing Concrete Batching Plant"). The Existing Concrete Batching Plant is located in Yick Yuen which is within the planned Hung Shui Kiu / Ha Tsuen New Development Area ("HSK/HT NDA"). The captioned site will be acquired by the Government for construction of the planned HSK/HT NDA.
- 1.2 The Applicant is assisting the affected business operator with a proposal to relocate the Existing Concrete Batching Plant to a site located at Lots 573 RP and 1710 in D.D. 114, Shek Kong, Yuen Long (hereinafter "the Proposed Temporary Concrete Batching Plant"). **Figure 1.1** shows location of the Subject Site.
- 1.3 The Subject Site is currently zoned as "*Industrial (Group D)*" in the Approved Shek Kong Outline Zoning Plan No. S/YL-SK/9, and "*Concrete Batching Plant*" is categorized under Column 2 use. Hence, application for permission under Section 16 of the Town Planning Ordinance (Cap. 131), ("S16 Planning Application") is required for the Proposed Temporary Concrete Batching Plant.
- 1.4 In connection, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned to carry out a Traffic Impact Assessment ("TIA") in support of the S16 planning application for the Proposed Temporary Concrete Batching Plant. This TIA report has been updated in responses to the comments provided by Transport Department during the pre-submission stage.

#### Scope of Study

- 1.5 The main objectives of this study are as follows:
  - To assess the existing traffic condition in the vicinity of the Subject Site;
  - To present the provision of internal transport facilities;
  - To quantify the amount of traffic generated by the Proposed Temporary Concrete Batching Plant;
  - To examine the traffic impact on the local road network;
  - To identify any deficiencies in the road network in accommodating the expected traffic generation; and
  - To recommend traffic management proposal and improvement measures, if necessary.

#### Structure of Report

- 1.6 After this introduction, the remaining chapters contain the following:
  - Chapter Two Describes the existing condition and surveys;
  - Chapter Three Outlines the Proposed Temporary Concrete Batching Plant;
  - Chapter Four Presents the traffic impact analyses;
  - Chapter Five Summarises the overall conclusion.

## 2.0 EXISTING SITUATION

### The Subject Site

2.1 The Subject Site is located in Shek Kong to the east of Kam Tin Road. It has a site area of approximately 4,411m<sup>2</sup> and is currently occupied by an open storage. Access to the Subject Site is from an access road known as Chun Yiu Road, and is connected to Kam Tin Road.

#### The Road Network

- 2.2 Kam Tin Road is a single carriageway 2-way rural road connecting Lam Kam Road with Tai Po to the east, and it is also connected to Tsuen Wan to the south via Route Twisk. To the west, Kam Tin Road connects Castle Peak Road – Yuen Long, Tsing Long Highway (Route 3) and Fan Kam Road.
- 2.3 Chun Yiu Road is a single track access road connecting Kam Tin Road. At present, Chun Yiu Road is some 3m to 4m wide, and a portion of Chun Yiu Road is often occupied by parked vehicles along the northern side.

## Historic Traffic Growth

2.4 Table 2.1 presents the historic annual average daily traffic ("AADT") from the Annual Traffic Census ("ATC") published by the Transport Department for roads located nearby for the latest 5 years, i.e. from 2019 to 2023.

						,	
Station No.	5254	5463	6110	6207	6208	6212	OVERALL
Road	Kam Tin	Lam Kam	Kam Tin	Kam Tin	Kam	Fan Kam	
	Road	Road	Bypass	Road	Sheung	Road	
			<i>,</i> ,		Road		
From	Fan Kam	Kam	Kam Tin	Fan Kam	Kam Tin	Kam Tin	
	Road	Sheung	Road	Road	Road	Road	
		Road					
То	Kam Sheung	Lam Kam	Kam Tin	Kam Sheung	Kam Tin	Castle	
	Road	Road	Road	Road	Road	Peak	
	E. Junction			W. Junction		Road	
Year		Annu	ial Average	Daily Traffic (v	ehicles / day)		
2019	18,510	19,580	14,990	21,300	8,080	11,660	94,120
2020	18,330	19,660	12,810	21,640	9,400	12,250	94,090
2021	19,040	20,420	12,450	20,490	8,960	12,450	93,810
2022	18,850	20,220	12,980	20,520	9,600	12,400	94,570
2023	15,740	20,900	14,490	21,510	10,460	13,890	96,990
	•	•	Ave	rage Annual Gi	owth (2019 -	- 2023) =	0.75%

TABLE 2.1AADT OF ATC STATIONS LOCATED NEAR THE SUBJECT SITE

2.5 Table 2.1 shows that there is increase in AADT in the past 5 years. The average annual growth between 2019 and 2023, is found to be +0.75% per annum.

#### Public Transport Facilities

2.6 Public transport services are available along Kam Tin Road near the Subject Site, and details of the services are given in Table 2.2, and shown in **Figure 2.1**.

TABLE 2.2ROAD-BASEDPUBLICTRANSPORTSERVICESOPERATINGNEAR THE SUBJECT SITE

		<b>_</b> / • · · ·
Route	Routing	Frequency (minutes)
KMB 51	Tsuen Wan (Nina Tower) ひ Sheung Tsuen (Circular)	15 – 60
KMB 54	Yuen Long (West) ひ Sheung Tsuen (Circular)	20 - 30
KMB 64K	Yuen Long (West) ↔ Tai Po Market Station	6 - 20
KMB 64S	Sheung Tsuen Playground → Kam Sheung Road Station	10 – 15 (4 trips) (A)(1)
KMB 251A	Kam Sheung Road Station ひ Sheung Tsuen (Circular)	15 - 30
KMB 251B	Pat Heung Road ひ Sheung Tsuen (Circular)	20 – 30
LWB E36P	Sheung Tsuen → Skycity	60 (2 trips) (A)(2)
	Skycity → Sheung Tsuen	20 (2 trips) (P)(2)
KMB 251M	Sheung Tsuen → Tsuen Wan Station	60 <sup>(A)(1)</sup>
GMB 72	Yuen Long Tai Hang Street ↔ Lui Kung Tin	10
RS NR917	Fan Kam Road, Yuen Long → Wan Chai	M-F: 5 - 15 (7 trips) (A)(1)
		Sat: 15 - 20 (3 trips) (A)(2)
	Wan Chai → Fan Kam Road, Yuen Long	25 – 30 (4 trips) <sup>(P)(1)</sup>
RS NR918	Lam Kam Road → Wan Chai	M-F: 5 - 25 (8 trips) (A)(1)
		Sat: 15 - 20 (3 trips) (A)(2)
	Wan Chai → Lam Kam Road	25 – 30 (3 trips) (P)(1)

Note: KMB – Kowloon Motor Bus LWB – Long Win Bus

GMB – Green Minibus RS – Resident Services

(A) AM Peak Services only.

(P) Afternoon Peak Services only.

(1) Monday to Friday. No services on Saturdays, Sundays and Public Holidays.

(2) Monday to Saturday. No services on Sundays and Public Holidays

#### Existing Traffic Flows

- 2.7 To quantify the existing traffic flows in the vicinity of the Subject Site, manual classified counts were conducted on Tuesday, 11<sup>th</sup> June 2024, and also on Friday, 4<sup>th</sup> October 2024 at the following junctions:
  - J01 Junction of Kam Tin Road / Fan Kam Road;
  - J02 Junction of Kam Tin Road / Chun Yiu Road;
  - J03 Junction of Kam Tin Road / Kam Sheung Road / Sheung Tsuen Bus Terminus; and
  - J04 Junction of Kam Tin Road / Lam Kam Road / Route Twist.
- 2.8 Locations of these surveyed junctions and the area of influence ("AOI") are shown in Figure 2.2, and the existing junction layouts are found in Figures 2.3 2.6.
- 2.9 The traffic counts are classified by vehicle type to enable traffic flows in passenger car units ("pcu") to be calculated. This TIA adopted the higher traffic flows observed in October 2024.
- 2.10 Based on the information of the ATC Core Stations 6207 and 6212 for Kam Tin Road and Fan Kam Road, the AM and PM peak hours in the vicinity of the Subject Site is from 0900 to 1000 hours, and from 1900 to 2000 hours. Whereas, the AM and PM peak hours identified from the surveys at the above junctions are found to be from 0800 to 0900 hours, and from 1700 to 1800 hours respectively.

- 2.11 With reference to the ATC, the traffic surveys conducted, and the expected operation of the Proposed Temporary Concrete Batching Plant, the peak hour considered in this TIA included the following:
  - i) 0800 0900 hours ("AM-8 Peak Hour")
  - ii) 0900 1000 hours ("AM-9 Peak Hour")
  - iii) 1700 1800 hours ("PM Peak Hour"), and
  - iv) 1900 2000 hours ("Evening Peak Hour").
- 2.12 **Figure 2.7** presents the observed peak hour traffic flows in pcu/hour, and the detail of vehicle composition is summarised in **Appendix A.**

#### Performance of the Surveyed Junctions

2.13 Existing performance of the surveyed junctions are calculated based on the methods outlined in Volume 2 of the Transport Planning and Design Manual ("TPDM"), which is published by the Transport Department. The results of the performance of junctions are summarised in Table 2.3, and detailed calculations of junction performance are found in **Appendix B**.

Ref.	Junction	Type of	Parameter		Peak	Hour	
		Junction		AM-8	AM-9	PM	Evening
J01	Kam Tin Road / Fan Kam Road	Roundabout	RFC	0.498	0.571	0.506	0.592
J02	Kam Tin Road / Chun Yiu Road	Priority	RFC	0.055	0.054	0.167	0.167
J03	Kam Tin Road / Kam Sheung Road	Priority	RFC	0.81	0.76	0.71	0.73
	/ Sheung Tsuen Bus Terminus						
J04	Kam Tin Road / Lam Kam Road /	Roundabout	RFC	0.551	0.529	0.578	0.587
	Route Twist						

#### TABLE 2.3 EXISTING JUNCTION PERFORMANCE

Note: RFC – Ratio of Flow to Capacity

For priority and roundabout, RFC < 1 indicates the junction operates within capacity, and  $RFC \ge 1$  indicates the junction operates at / over capacity.

2.14 The results in Table 2.3 shows that the junctions analysed operate with capacity.

#### Performance of the Surveyed Road Links

2.15 The existing performance, in terms of Peak Hourly Flows / Design Flow Ratio ("P/Df"), of Kam Tin Road and Chun Yiu Road within the AOI are calculated based on the observed traffic flows and the analysis results are summarized in Table 2.4.

Road Link	Configuration	Design Flow	Peak Hour 2-way Traffic Flows (veh/hr) [Peak Hour Flows / Design Flow Ratio (P/I		(veh/hr) atio (P/Df)]	
		(veh/hr)	AM-8	AM-9	PM	Evening
Kam Tin Road	Single-2 District	1 <i>,</i> 581 <sup>(1)</sup>	836	798	866	877
	Distributor		[0.529]	[0.505]	[0.548]	[0.555]
Chun Yiu Road	Single Track	100 (2)	49	48	80	80
	Access Road		[0.490]	[0.480]	[0.800]	[0.800]

#### TABLE 2.4EXISTING ROAD LINK PERFORMANCE

(1) Design flow in reference with TPDM for single 2-lane 7.3m carriageway, i.e. 1,700 veh/hr for <u>both</u> direction of flow, and reduced by 7% considering percentage of heavy vehicles is between 15% and 20%.

(2) Design flow in reference with TPDM for single track access road, i.e. 100 veh/hr.

2.16 The results in Table 2.4 show that Kam Tin Road and Chun Yiu Road within the AOI operate with capacity.

## 3.0 THE PROPOSED TEMPORARY CONCRETE BATCHING PLANT

#### Development Schedule

3.1 The Proposed Temporary Concrete Batching Plant has 2 production lines with maximum concrete production capacity of 100m<sup>3</sup>/hour/line. Sufficient loading / unloading facilities meeting the operational requirements are provided within the Proposed Temporary Concrete Batching Plant.

#### Vehicular Access Point

3.2 The Subject Site has an existing vehicular access point at Chun Yiu Road, which connects to Kam Tin Road. The Proposed Temporary Concrete Batching Plant will continue to access via the existing vehicular access point.

#### Upgrading of Chun Yiu Road

3.3 Chun Yiu Road will be upgraded and paved to allow 2-lane 2-way traffic with a minimum carriageway width of 6m between Kam Tin Road and the Subject Site. **Figures 3.1** shows the proposed upgrading of Chun Yiu Road, and location of the vehicular access point for the Subject Site.

#### Proposed Haulage Route

3.4 Haulage routes to and from the Subject Site are presented in **Figure 3.2**.

#### **Operation of Proposed Temporary Concrete Batching Plant**

3.5 The Proposed Temporary Concrete Batching Plant is expected to operate daily from 0700 to 2300 hours. Details of vehicle movements related to the concrete production and the delivery of raw materials are presented in Table 3.1.

Type of	Type of Vehicle	Typical Vehicle	Traffic	Generation (veh	ı/hour)
Vehicle Movement		Dimension (Approx.)	AM Peak Production (0700 – 0900)	Daytime Operation (0900 – 1900)	Evening Raw Material Delivery (1900 – 2300)
Concrete Prod	luction				
Concrete	Concrete Mixer	Heavy Goods Vehicles: 11m (L) x 2.5m (W)	20 (1)	Max. 20 (2)	4
Raw Material	Delivery		•	•	
Aggregate / Sand	Aggregate/ Sand Truck	Heavy Goods Vehicles: 11m (L) x 2.5m (W)	0	10	11
lce	Ice truck		2	2	0
Admixture	Admixture Truck		0	1	0
Waste	Waste Truck		0	1	0
Cement /	Cement / PFA	Articulated Vehicles:	0	4	1
PFA	Tanker	15.4m (L) x 2.5m (W)			
		TOTAL	22	38	16 <sup>(3)</sup>

#### TABLE 3.1 DETAILS OF VEHICLE MOVEMENTS AT DIFFERENT TIME PERIODS

Note:

(1) Maximum concrete production capacity =  $100m^3$  per production line x 2 production lines ÷ typical capacity of  $10m^3$  per concrete mixer truck = 20 nos.

(2) Maximum 20 nos, may be less if hourly production demand does not reach the maximum production capacity.

(3) Due to environmental concern, traffic generation may be limited to either 4 concrete mixers <u>or</u> 12 deliveries of raw material; but to be conservative, a combined number of 16 vehicles in total are assumed in the TIA.

- 3.6 Table 3.1 shows the following:
  - During the <u>AM peak production</u>, i.e. 0700 to 0900 hours, the Proposed Temporary Concrete Batching Plant is expected to operate at its production capacity, and 20 concrete mixer trucks are generated. Raw materials will not be delivered during this time, except for ice which cannot be produced or stored on-site. Hence, a total of 22 vehicles are generated.
  - During the <u>daytime operation</u>, which is from 0900 to 1900 hours, there are no more than 20 concrete mixers and 18 vehicles delivering raw materials per hour. Hence, a total of no more than 38 vehicles are generated.
  - During the <u>evening raw material delivery period</u> which is from 1900 to 2300 hours, the production of concrete is expected to be reduced to only 4 concrete mixers per hour, **or** the delivery of raw materials is expected to be 12 vehicles per hour due to environmental constraints. To be conservative for traffic analysis, the total of 16 vehicles per hour are assumed.
- 3.7 To ensure traffic generation of the Proposed Temporary Concrete Batching Plant will match the estimation presented in Table 3.1 above, the Applicant will require the operator to keep record of all vehicles entering and leaving Proposed Temporary Concrete Batching Plant; and these records can be provided for review by the Authority upon request.

#### *Traffic Generation Surveys at Other Similar Existing Concrete Batching Plant*

- 3.8 To verify the estimated traffic generation presented in Table 3.1, traffic generation surveys were conducted at the following 2 existing concrete batching plants which are located in Tong Yan San Tsuen, Yuen Long:
  - Site 1: Golik Concrete Limited
  - Site 2: Redland Concrete Ltd
- 3.9 Similar to the Proposed Temporary Concrete Batching Plant, the 2 surveyed concrete batching plants have 2 production lines. Table 3.2 presents the survey results.

Hours	Traffic Generation (veh/hour)					
	Site 1 -	Golik Concrete L	imited	Site 2 -	Redland Concre	ete Ltd
	Concrete	Raw Material	TOTAL	Concrete	Raw Material	TOTAL
	Mixer	Delivery		Mixer	Delivery	
0700 – 0800	11	2	13	4	2	6
0800 - 0900	18	13	31	8	3	11
0900 – 1000	20	12	32	10	6	16
1000 – 1100	20	18	38	11	4	15
1100 – 1200	19	15	34	19	9	28
1200 – 1300	20	13	33	15	3	18
1300 – 1400	19	16	35	12	5	17
1400 – 1500	19	14	33	16	6	22
1500 – 1600	20	9	29	11	7	18
1600 – 1700	15	1	16	16	5	21
1700 - 1800	14	2	16	13	7	20
1800 – 1900	5	1	6	14	4	18
1900 – 2000	2	0	2	13	2	15

TABLE 3.2	RESULTS	OF	TRAFFIC	GENERATION	SURVEYS	AT	OTHER
	SIMILAR O	CON	CRETE BAT	CHING PLANTS	5		

- 3.10 Table 3.2 shows that Site 1 generates more traffic than Site 2, and the following are observed:
  - i) The number of concrete mixers trucks generated peaked at 18 to 20 vehicles per hour between 0800 and 1600 hours;
  - ii) The number of raw material delivery vehicles was no more than 19 vehicles per hour between 0800 and 1600 hours; and
  - iii) The maximum number of vehicles generated was 38, including 20 concrete mixer trucks, and 18 raw material delivery vehicles.
- 3.11 Results of the above traffic generation surveys show that the estimated traffic generation for the Proposed Temporary Concrete Batching Plant found in Table 3.1 is of similar order.

## Internal Transport Facilities

3.12 Internal transport facilities provided for the Proposed Temporary Concrete Batching Plant are presented in **Table 3.3**, and the master layout plan is shown in **Figures 3.3** 

Ref.	Туре	Dimension	Quantity			
	Car Parking S	paces				
CP1 & CP2	Car Parking Spaces	5.0m (L) x 2.5m (W) x 2.4m (H)	2			
Goods Vehicle Loading / Unloading						
LP1, LP6 & LP12	Raw Material Unloading and Waster Collection	11.0m(L) x 3.5m(W) x 4.7m(H)	3			
LP2 – LP5, & LP7 – LP9	Concrete Mixer Waiting Spaces	11.0m(L) x 3.5m(W) x 4.7m(H)	7			
LP10 & LP11	Mixer Loading Bays	11.0m(L) x 3.5m(W) x 4.7m(H)	2			
LP13 & LP14	Raw Material Unloading	16.0m(L) x 3.5m(W) x 4.7m(H)	2			
		TOTAL	2 + 14			

TABLE 3.3 INTERNAL TRANSPORT FACILITIES

## Swept Path Analysis

- 3.13 Swept path analyses using CAD-based program were carried out to ensure ease of vehicle manoeuvring within the Proposed Temporary Concrete Batching Plant. No manoeuvring issue is found.
- 3.14 In addition, in response to Transport Department comment, swept path of articulated vehicles travelling along the proposed haulage route within the AOI was also carried, and no manoeuvring issue is found also.
- 3.15 The swept path analysis drawings are found in the **Appendix C**

## 4.0 TRAFFIC IMPACT

#### Design Year

- 4.1 Should the planning application for the Proposed Temporary Concrete Batching Plant be approved by the Town Planning Board in 2025, the planning permission will expire in 5 years, i.e. 2030. Hence, the traffic assessment year adopted is 2030.
- 4.2 The 2 scenarios for year 2030 assessed are:
  - (i) Year 2030 peak hours without the Proposed Temporary Concrete Batching Plant;
  - (ii) Year 2030 peak hours with the Proposed Temporary Concrete Batching Plant

#### Traffic Forecast

- 4.3 The design year traffic flows are estimated as follows:
  - (i) Expected traffic growth from 2024 to 2030 with reference to the historic traffic growth from the ATC;
  - (ii) Traffic generated by other known planned / committed developments located in the vicinity, and
  - (iii) Traffic generation of the Proposed Temporary Concrete Batching Plant.
- 4.4 Details of the above are presented in below paragraphs.

#### (i) <u>Traffic Growth Rate</u>

4.5 With reference to Table 2.1, a conservative growth rate of 1.0% per annum is adopted to produce the 2030 traffic flows from 2024.

#### (ii) Other Known Planned / Committed Developments

4.6 A review of public domain, including the Town Planning Board's Statutory Planning Portal 3, etc., was undertaken to identify other known major planned / committed developments located in the vicinity. Only 1 development is found with expected completion on or before the design year, and details are presented in Table 4.1.

## TABLE 4.1DETAILS OF OTHER KNOWN MAJOR PLANNED / COMMITTED<br/>DEVELOPMENT WITHIN THE AOI

Location	Parameters
Proposed House Development at Lots No. 1691 RP (Part) and 1691 S.E in	8 Houses
D.D.114 and Adjoining Government Land, East of Kam Tin Road, Pat Heung,	
Yuen Long	

4.7 In addition, the Kam Tin South Public Housing Development located some 3.5km west of the Subject Site to the south of MTR Kam Sheung Road Station is also taken into consideration.

#### *(iii) Traffic Generation of the Proposed Temporary Concrete Batching Plant*

4.8 With reference to Table 3.1, the estimated traffic generation of the Proposed Temporary Concrete Batching Plant is given in Table 4.2.

## TABLE 4.2TRAFFIC GENERATION OF THE PROPOSED TEMPORARY<br/>CONCRETE BATCHING PLANT

ltem	AM Peak Production (AM-8 Peak Hour)		Daytime Operation (AM-9 and PM Peak Hour)		Evening Raw Material Delivery (Evening Peak Hour)	
	Generation	Attraction	Generation	Attraction	Generation	Attraction
Total in veh/hr [From Table 3.1]	22	22	38	38	16	16
PCU Factor	2.5	2.5	2.5	2.5	2.5	2.5
Total in	55	55	95	95	40	40
PCU/Hour	110 (2	2-way)	190 (2	2-way)	80 (2	-way)

4.9 **Table 4.2** shows that the Proposed Temporary Concrete Batching Plant is expected to generate 110 (2-way) pcu during the AM peak hour, 190 (2-way) pcu during the PM peak hour, and 80 (2-way) during the evening peak hour.

#### 2030 Traffic Flows

4.10 Year 2030 traffic flows for the following cases are derived:

2030 Traffic Flows without	= 2024 Existing Traffic Flows +
the Proposed Temporary	Traffic Growth from 2024 to 2030 +
Concrete Batching Plant [A]	Traffic Generated by Other Development
2030 Traffic Flows with the Proposed Temporary Concrete Batching Plant	= [A] + Traffic Generation of the Proposed Temporary Concrete Batching Plant

4.11 **Figures 4.1 and 4.2** show the year 2030 peak hour traffic flows for the cases without and with the Proposed Temporary Concrete Batching Plant.

#### 2030 Junction Capacity Analysis

4.12 The 2030 junction capacity analyses for the cases without and with the Proposed Temporary Concrete Batching Plant are summarised in Table 4.3 and the detailed calculations are found in **Appendix B**.

Ref.	Junction	Without Cor	emporary Plant	With the Proposed Temporary Concrete Batching Plant					
		AM-8	AM-9	PM	Evening	AM-8	AM-9	PM	Evening
J01	Kam Tin Road / Fan Kam Road	0.545	0.622	0.552	0.646	0.570	0.669	0.597	0.666
J02	Kam Tin Road / Chun Yiu	0.060	0.058	0.189	0.189	0.314	0.549	0.749	0.378
	Road								
J03	Kam Tin Road / Kam Sheung	0.91	0.85	0.78	0.81	0.97	0.95	0.88	0.85
	Road / Sheung Tsuen Bus								
	Terminus								
J04	Kam Tin Road / Lam Kam	0.594	0.571	0.622	0.633	0.637	0.646	0.697	0.665
	Road / Route Twist								

#### TABLE 4.32030 JUNCTION PERFORMANCE

Note: RFC – Ratio of Flow to Capacity

For priority and roundabout, RFC < 1 indicates the junction operates within capacity, and  $RFC \ge 1$  indicates the junction operates at / over capacity.

4.13 Table 4.3 shows that the junctions analysed have capacity to accommodate the expected traffic growth to 2030 and the traffic generated by the Proposed Temporary Concrete Batching Plant.

#### 2030 Road Link Capacity Analysis

4.14 Road link capacity analyses for 2030 without and with the Proposed Temporary Concrete Batching Plant are summarised in **Table 4.4**.

Road Link	Configuration	Design Flow	Peak Hour 2-way Traffic Flows [Peak Hour Flows / Design Flow Ratio (P/Df)]									
		(veh/hr)	AM-8	AM-9	PM	Evening						
Without the Proposed Temporary Concrete Batching Plant												
Kam Tin Road	Single-2 District	1,581 <sup>(1)</sup>	903	865	921	926						
	Distributor		[0.571]	[0.547]	[0.583]	[0.586]						
Chun Yiu Road	Single Track	100 (2)	53	52	84	84						
	Access Road		[0.530]	[0.520]	[0.840]	[0.840]						
With the Proposed Temporary Concrete Batching Plant												
Kam Tin Road	Single-2 District	1,581 <sup>(1)</sup>	999	1,031	1,087	995						
	Distributor		[0.632]	[0.652]	[0.688]	[0.629]						
Chun Yiu Road	Single-2 Local	720 <sup>(3)</sup>	171 (4)	250 (4)	287 (4)	177 (4)						
	Road		[0.238]	[0.347]	[0.399]	[0.246]						
(1) Design flow ir	n reference with TPDM	for single 2-lan	e 7.3m carriage	eway, i.e. 1,700	) veh/hr for <b>bo</b>	th direction of						

#### TABLE 4.4 2030 ROAD LINK PERFORMANCE

flow, and reduced by 7% considering percentage of heavy vehicles is between 15% and 20%
(2) Design flow in reference with TPDM for single track access road, i.e. 100 veh/hr.

(2) Design now in reference with TPDM for single track access road, i.e. 100 ven/hr.
 (3) Design flow in reference with TPDM for single 2-lane local road, i.e. 800 veh/hr, 2-way, and reduced by 10% considering high percentage of heavy vehicles

(4) In view of very high percentage of heavy vehicles, traffic flows in passenger car unit is adopted.

4.15 Table 4.4 shows that both Kam Tin Road and the upgraded Chun Yiu Road have capacity to accommodate the expected traffic growth in 2030 and the traffic generated by the Proposed Temporary Concrete Batching Plant.

## 5.0 SUMMARY

- 5.1 The Applicant proposes to relocate the concrete batching plant from Yick Yuen, Hung Sui Kiu in Yuen Long to the Subject Site which is in Shek Kong due to land acquisition by the Government for construction of the planned HSK/HT NDA.
- 5.2 The Proposed Temporary Concrete Batching Plant will have 2 production lines, and provides sufficient internal transport facilities including concrete mixer truck waiting spaces and queuing area to ensure that vehicles will not queue back onto the public road. The existing vehicle access to the Subject Site, which is Chun Yiu Road is proposed to be upgraded to 2-lane with a minimum carriageway width of 6m to serve the Proposed Temporary Concrete Batching Plant.
- 5.3 Manual classified counts were conducted at junctions located in the vicinity of the Proposed Temporary Concrete Batching Plant in order to establish the peak hour traffic flows. Currently, the junctions operate with capacities during the AM, PM and evening PM peak hours.
- 5.4 The Proposed Temporary Concrete Batching Plant is expected to be completed by 2026, and the capacity analyses are undertaken for year 2030. All junctions and road link analysed have sufficient capacity to accommodate the expected traffic flow to 2030 and the traffic generated by the Proposed Temporary Concrete Batching Plant.
- 5.5 From traffic engineering viewpoint, the Proposed Temporary Concrete Batching Plant is considered acceptable.

# Figures



\JOB\J7300-J7349\J7342\(2025 01) TIA\_R2\Fig 1 1 RevA.dwg



IOB\J7300-J7349\J7342\(2025 01) TIA\_R2\Fig 2.1 RevA.dwg





4.0 TS TS TS TS TS 43.3 + 43.3 + 43.3 + ET ET TS 43.6	TS TS TS TS TS TS TS TS TS TS TS TS TS T	J. THURSON IN THE STREET S
TS T	4.0 TS TS TS TS TS TS TS TS TS TS TS TS TS	43.3 +
Project Title PROPOSED TEMPORARY CONCRETE BATCHING PLANT WITH ANCILLARY FACILITIES FOR A PERIOD OF 5 YEARS AT LOTS 573 RP AND 1710 IN D.D. 114, SHEK KONG, YUEN LONG, NT Figure Title Figure Title Figure Title Figure Title Figure Title Figure No. Figure N	Project Title     PROPOSED TEMPORARY CONCRETE BATCHING PLANT WITH ANCILLARY FACILITIES FOR A PERIOD OF 5 YEARS AT LOTS 573 RP AND 1710 IN D.D. 114, SHEK KONG, YUEN LONG, NT       J7342	Figure No. 2.4 Designed by M.C.Y. S.C.Y. K.C. CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor: Methodist House: 36 Hennessy Road







\JOB\J7300-J7349\J7342\(2025 01) TIA\_R2\Fig 2.7 4.1 4.2 RevA.dwg







9\J7342\(2025 01) TIA\_R2\Fig 3.3 & SP1XX Rev A dwg \JOB\J7300



4.2 RevA dwg (2025 01) TIA\_R2\Fig 2.7 4.1 7342\( 349/J7 



OB\J7300-J7349\J7342\(2025 01) TIA\_R2\Fig 2.7 4.1 4.2 RevA.dwg

Appendix A – Vehicle Composition of Existing Traffic Flows



\JOB\J7300-J7349\J7342\(2025 01) TIA\_R2\Fig 2.7 4.1 4.2 RevA dwg

						0						ΤΟΤΑΙ
ID	мс	PC	Taxi	Van	LGV	M/HGV	PLB	PrLB	NFB	FBSD	FBDD	(VEH)
J01-01	6	181	14	37	11	30	26	2	3	2	3	315
J01-02	1	44	6	9	7	4	0	2	0	0	0	73
J01-03	0	3	0	0	0	1	0	0	0	0	0	4
J01-04	2	61	3	11	5	4	0	0	0	0	0	86
J01-05	9	170	40	26	14	29	7	4	0	0	4	303
J01-06	0	1	0	0	0	2	0	0	0	0	0	3
J01-07	8	202	20	14	11	21	23	2	1	1	3	306
J01-08	10	201	14	29	18	23	9	1	1	1	7	314
J01-09	0	0	0	0	0	0	0	0	0	0	0	0
J02-01	14	269	15	64	22	18	7	1	4	3	3	420
J02-02	0	8	0	1	3	0	0	0	0	0	0	12
J02-03	0	5	0	1	2	2	0	0	0	0	0	10
J02-04	0	6	0	0	0	0	0	0	0	0	0	6
J02-05	0	13	1	2	5	0	0	0	0	0	0	21
J02-06	22	242	11	51	31	19	8	2	3	2	3	394
J03-01	22	230	10	48	31	21	8	2	3	0	0	375
J03-02	0	33	0	32	5	2	0	1	2	0	0	75
J03-03	5	116	9	21	14	8	8	0	0	0	8	189
J03-04	5	95	16	21	19	16	9	4	4	0	8	197
J03-05	14	241	15	32	20	16	7	0	2	3	3	353
J03-06	0	18	1	3	7	0	0	0	0	3	3	35
J04-01	8	182	15	26	19	15	10	0	0	0	4	279
J04-02	9	185	5	27	11	3	6	0	0	0	0	246
J04-03	0	37	2	6	6	13	0	3	3	2	8	80
J04-04	6	79	2	8	4	2	9	0	0	0	0	110
J04-05	1	11	0	2	0	2	0	0	0	0	0	16
J04-06	0	0	0	0	0	0	0	0	0	0	0	0
J04-07	4	121	0	6	0	5	0	0	0	0	0	136
J04-08	5	265	17	34	6	19	9	0	3	0	6	364
J04-09	0	0	0	0	0	3	0	0	0	0	0	3

TABLE A1COMPOSITION FOR EXISTING TRAFFIC FLOW AT AM-8 PEAK HOUR

	_ 0			10112					/			ΤΟΤΑΙ
ID	МС	РС	Taxi	Van	LGV	M/HGV	PLB	PrLB	NFB	FBSD	FBDD	(VEH)
J01-01	6	187	16	35	12	44	25	4	4	2	3	338
J01-02	1	53	9	14	10	5	0	4	0	0	0	96
J01-03	0	4	0	0	0	1	0	0	0	0	0	5
J01-04	3	64	5	16	9	7	0	0	0	0	0	104
J01-05	9	211	39	25	13	28	7	4	0	0	4	340
J01-06	0	1	0	0	0	2	0	0	0	0	0	3
J01-07	8	242	19	13	10	20	22	2	1	1	3	341
J01-08	13	208	20	47	26	30	9	2	1	1	7	364
J01-09	0	0	0	0	0	0	0	0	0	0	0	0
J02-01	13	256	14	60	21	18	7	1	4	3	3	400
J02-02	0	8	0	1	3	0	0	0	0	0	0	12
J02-03	0	5	0	1	2	2	0	0	0	0	0	10
J02-04	0	6	0	0	0	0	0	0	0	0	0	6
J02-05	0	12	1	2	5	0	0	0	0	0	0	20
J02-06	21	231	10	49	29	18	8	2	3	2	3	376
J03-01	21	220	9	47	29	20	8	2	3	0	0	359
J03-02	0	31	0	30	5	2	0	1	2	0	0	71
J03-03	5	111	9	20	13	8	8	0	0	0	8	182
J03-04	5	90	15	20	18	16	9	4	4	0	8	189
J03-05	13	229	14	30	19	16	7	0	2	3	3	336
J03-06	0	17	1	3	7	0	0	0	0	3	3	34
J04-01	9	186	17	22	15	17	9	0	0	0	4	279
J04-02	10	185	5	28	11	3	6	0	0	0	0	248
J04-03	0	1	2	7	7	15	0	3	3	2	8	48
J04-04	8	94	2	9	5	2	9	0	0	0	0	129
J04-05	1	10	0	2	0	2	0	0	0	0	0	15
J04-06	0	0	0	0	0	0	0	0	0	0	0	0
J04-07	4	116	0	6	0	5	0	0	0	0	0	131
J04-08	7	238	22	35	8	19	9	0	3	0	6	347
J04-09	0	0	0	0	0	3	0	0	0	0	0	3

TABLE A2COMPOSITION FOR EXISTING TRAFFIC FLOW AT AM-9 PEAK HOUR

						1						TOTAL
ID	мс	PC	Taxi	Van	LGV	M/HGV	PLB	PrLB	NFB	FBSD	FBDD	(VEH)
J01-01	13	210	7	26	9	10	28	0	3	2	3	311
J01-02	6	57	5	11	9	4	0	0	1	0	0	93
J01-03	0	2	0	0	0	0	0	0	0	0	0	2
J01-04	8	100	4	6	11	8	2	0	1	0	0	140
J01-05	3	290	29	27	24	9	5	0	1	0	3	391
J01-06	0	2	1	0	0	0	0	0	0	0	0	3
J01-07	5	254	33	27	8	15	21	0	0	0	4	367
J01-08	15	194	10	31	8	14	8	1	3	2	3	289
J01-09	0	5	1	0	0	0	0	0	0	0	0	6
J02-01	17	246	15	44	20	27	5	3	1	1	2	381
J02-02	0	12	0	2	4	1	0	0	0	0	0	19
J02-03	0	13	0	4	3	1	0	0	0	0	0	21
J02-04	0	13	0	2	5	2	0	0	0	0	0	22
J02-05	0	13	0	3	2	0	0	0	0	0	0	18
J02-06	26	280	19	56	25	21	7	4	2	2	3	445
J03-01	26	282	17	57	28	22	7	4	2	0	0	445
J03-02	1	40	7	14	4	9	0	2	0	0	0	77
J03-03	5	104	6	27	3	5	7	0	0	0	7	164
J03-04	11	149	13	20	20	8	9	3	0	0	11	244
J03-05	15	206	7	30	19	17	5	1	1	1	2	304
J03-06	0	29	1	5	1	1	0	0	0	1	3	41
J04-01	9	307	14	21	17	8	9	0	1	0	6	392
J04-02	8	120	6	8	8	0	8	0	0	1	0	159
J04-03	2	71	8	11	7	3	2	0	1	2	6	113
J04-04	6	129	2	19	2	2	7	0	0	1	0	168
J04-05	3	15	0	4	0	1	0	0	0	0	0	23
J04-06	0	0	0	0	0	0	0	0	0	0	0	0
J04-07	3	73	0	0	0	1	0	0	0	0	0	77
J04-08	8	212	9	18	7	10	12	2	0	0	7	285
J04-09	0	1	0	0	0	2	0	0	0	0	0	3

TABLE A3COMPOSITION FOR EXISTING TRAFFIC FLOW AT PM PEAK HOUR

												TOTAL
ID	мс	PC	Taxi	Van	LGV	M/HGV	PLB	PrLB	NFB	FBSD	FBDD	(VEH)
J01-01	25	274	15	47	22	21	29	1	5	2	3	444
J01-02	13	63	10	26	21	7	0	0	2	0	0	142
J01-03	0	4	0	0	0	0	0	0	0	0	0	4
J01-04	13	131	8	8	16	10	2	0	1	0	0	189
J01-05	3	279	30	28	25	9	5	0	1	0	3	383
J01-06	0	2	1	0	0	0	0	0	0	0	0	3
J01-07	5	256	34	28	8	15	22	0	0	0	4	372
J01-08	24	251	20	42	10	18	8	1	3	2	3	382
J01-09	0	5	1	0	0	0	0	0	0	0	0	6
J02-01	16	259	14	44	21	24	5	3	1	1	2	390
J02-02	0	12	0	2	4	1	0	0	0	0	0	19
J02-03	0	13	0	4	3	1	0	0	0	0	0	21
J02-04	0	13	0	2	5	2	0	0	0	0	0	22
J02-05	0	13	0	3	2	0	0	0	0	0	0	18
J02-06	27	282	19	56	26	19	7	4	2	2	3	447
J03-01	27	285	16	57	29	20	7	4	2	0	0	447
J03-02	1	41	7	14	4	9	0	2	0	0	0	78
J03-03	5	107	6	28	3	5	7	0	0	0	7	168
J03-04	10	163	13	21	21	8	9	3	0	0	10	258
J03-05	15	222	7	31	20	16	5	1	1	1	2	321
J03-06	0	30	1	5	1	1	0	0	0	1	3	42
J04-01	9	315	15	23	19	8	9	0	1	0	6	405
J04-02	8	130	6	8	8	0	8	0	0	1	0	169
J04-03	2	51	8	10	7	3	2	0	1	2	6	92
J04-04	12	142	5	28	4	2	7	0	0	1	0	201
J04-05	3	40	0	4	0	1	0	0	0	0	0	48
J04-06	0	0	0	0	0	0	0	0	0	0	0	0
J04-07	3	74	0	0	0	1	0	0	0	0	0	78
J04-08	16	171	19	32	10	20	12	2	0	0	7	289
J04-09	0	1	0	0	0	2	0	0	0	0	0	3

TABLE A4COMPOSITION FOR EXISTING TRAFFIC FLOW AT EVENING PEAK HOUR
Appendix B – Capacity Analyses

lunction:		Kam Tin P	Poad / Ean k	(am Road						lo	h Number	17342
Scopario:			ondition	Valli Noau						- 30		1
Design V	aar.	2024		signed By	· MCV	C	becked By:	WCH		Date:	21 Jonu	1 2025
Design re	-al.	2024	. De	signed by		C	neckeu by.	WCH		Dale.	21 Janu	ary 2025
AM(08) P	EAK											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	0	358	374						732	94		
From B	359	6	95						460	379		
From C	386	83	5						474	365		
From D												
From E												
From F												
From G												
From H												
Total	745	447	474						1666			
										I		
PM (17) F	Peak										_	
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	6	407	325						738	109		
From B	426	3	157						586	333		
From C	354	104	2						460	435		
From D												
From E												
From F												
From G												
From H												
Total	786	514	484						1784			
Legend	1				Geometric	: Paramet	ers					
Arm	Road	(in clockwise	e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
A	Kam Tin I	Road (EB)			From A	7.7	3.3	35.0	10.0	25	40	0.7
В	Fan Kam	Road (SB)			From B	7.7	2.9	15.0	12.5	25	30	0.6
С	Kam Tin I	Road (WB)			From C	7.7	5.5	100.0	100.0	25	60	0.0
D					From D							
E					From E							
F					From F							
G					From G							
Н					From H							
Predictiv	e Equatior	n Q₌ = K(F -	f_q_)			Limitatio	n					
Q <sub>F</sub>	Entry Car	acity	-0-107		ו ר	e	Entry Wid	th		4.0 - 15.0	m	
q <sub>c</sub>	Circulatin	g Flow acros	ss the Entry	/		v	Approach	Half Width		2.0 - 7.3 m	ı	
ĸ	= 1-0 003		978[(1/r)-0	051		r	Entry Rad	ius		6.0 - 100.0	) m	
F	$= 303x_2$	(		]		Ľ	Effective L	_enath of Fl	are	1.0 - 100.0	) m	
f <sub>c</sub>	= 0.210t <sub>D</sub>	(1+0.2x <sub>2</sub> )				D	Inscribed	Circle Diam	eter	15 - 100 m	n	
t <sub>D</sub>	= 1+0.5/(	1+M)				Ø	Entry Ang	le		10° - 60°		
м	= exp[(D-	60)/101				s	Sharpness	s of Flare		0.0 - 3.0		
x <sub>2</sub>	= v+(e-v)/	(1+2S)			1 '		1					
s	= 1.6(e-v)	)/L										
					-4							
Ratio-of-I	Flow to Ca	pacity (RFC	C)									
					_	,	(	2 <sub>Ε</sub>	Entr	y Flow	RI	-C
Arm	X <sub>2</sub>	M	ι <sub>D</sub>	K	F	t <sub>c</sub>	AM(08)	PM (17)	AM(08)	PM (17)	AM(08)	PM (17)
From A	5.112	0.030	1.485	0.986	1549	0.631	1469	1460	732	738	0.498	0.506
⊢rom B	5.029	0.030	1.485	0.984	1524	0.626	1266	1294	460	586	0.363	0.453
⊢rom C	7.591	0.030	1.485	0.935	2300.174	0.786	1883	1831	474	460	0.252	0.251
From D												
⊢rom E												
From F												
From G												
FIOM H												

Junction:	unction: Kam Tin Road / Fan Kam Road Job Number: J7342								J7342			
Scenario:		Existing C	ondition							-	J01 - P.	2
Design Ye	ear:	2024	De	signed By:	MCY	С	hecked By:	WCH	_	Date:	21 Janu	ary 2025
AM (09) F	Peak											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	0	390	438						828	123		
From B	394	6	119						519	444		
From C	429	111	6						546	400		
From D												
From E												
From F												
From G												
From H												
Total	823	507	563						1893			
DM (19) E	Doak											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	6	413	423						842	170		
From B	419	3	210						632	433		
From C	512	163	4						679	428		
From D												
From E												
From F												
From G												
From H												
Total	937	579	637						2153			
Legend					Geometric	Paramet	ers			- / >		
Arm	Road (		e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
					From A	1.1	3.3	35.0	10.0	25	40	0.7
В	Fan Kam				From B	1.1	2.9	15.0	12.5	25	30	0.6
	Kam IIn F	Koad (WB)				1.1	5.5	100.0	100.0	25	60	0.0
					From E							
					FIOIII E							
					From G							
н					From H							
<u> </u>												
Predictiv	e Equation	Q <sub>E</sub> = K(F -	f <sub>c</sub> q <sub>c</sub> )			Limitatio	n					
Q <sub>E</sub>	Entry Cap	acity				е	Entry Widt	th		4.0 - 15.0	m	
q <sub>c</sub>	Circulating	g Flow acros	ss the Entry	/		v	Approach	Half Width		2.0 - 7.3 m	1	
K	= 1-0.0034	47(Ø-30)-0.	.978[(1/r)-0.	05]		r	Entry Radi	ius		6.0 - 100.0	) m	
⊢ _	$= 303X_2$	1.0.22				L	Effective L	ength of Fl	are	1.0 - 100.0	) m	
1 <sub>C</sub>		$(+0.2x_2)$				D	Inscribed (	Circle Diam	leter	15 - 100 m	1	
ч <sub>D</sub>	= 1+0.5/(1	+IVI)				0	Entry Angi	e		10° - 60°		
M	= exp[(D-6	50)/10] (1+28)				5	Snarpness	s of Flare		0.0 - 3.0		
^2 0	= v + (e - v)/(e - v)	(1+25)										
	– 1.0(e-v)/	/L			1							
Ratio-of-	Flow to Ca	pacity (RFC	C)				-		-			
A			÷	V	F	f			Entry	y Flow	RI	FC
Arm	×2 E 110	NI	LD	ň	1540	1 <sub>0</sub>	AIVI(09)	1422	AIVI(09)	PM(19)	AIVI(U9)	PIVI(19)
From R	5 020	0.030	1 / 25	0.900	1524	0.031	1226	1922	510	632	0.071	0.592
From C	7 501	0.030	1 /95	0.904	2300 174	0.020	1220	1232	5/6	670	0.423	0.313
From D	1.591	0.030	1.400	0.900	2000.174	0.700	1037	1030	540	079	0.294	0.370
From E												
From F												
From G												
From H												
	1											

Multiple Program 2 Concrete Batching Plant	Scenaric:         Without Proposed Temporary Concrete Batching Plant         Joi - P. 3           Design Year:         2030         Designed By:         MCY         Checked By:         WCH         Date:         21 January 2025           AM06) PEAK         Am         To A         To B         To C         To D         To E         To F         To G         To H         Total         4;           Am         To A         To B         To C         To D         To E         To F         To G         To H         Total         4;           From A         0         390         408         F         F         To G         To H         Total         4;           From B         F         F         To C         To D         To E         To F         To G         To H         Total         4;           From A         6         442         566         F         630         364         116           From B         459         3         188         F         488         630         364           From B         F         F         To C         To D         To E         To F         100 L         100 L         100 L           From A	Junction:		Kam Tin R	load / Fan k	Kam Road						Jo	b Number:	J7342
Design Yeer:         2030         Designed By         MCY         Checked By         WCH         Date:         21 January 2025           AM(0) PEAK	Design Year:         2030         Designed By:         MCY         Checked By:         WCH         Date:         21 January 2025           AM(6) PEAK	Scenario:		Without Pr	oposed Te	mporary C	Concrete Bate	ching Plar	ıt				J01 - P.	3
And (03) PEAK           Arm         To A         To B         To C         To D         To E         To F         To G         To H         Total         4.0           From A         0.0         380         6         101         503         413           From C         425         89         5         519         402           From F         -         -         -         -         -         -           From F         -         -         -         -         -         -           Prom F         -         -         1820         -         -         -           PM (T7) Peak         -         -         1820         -         -         -         -           Prom A         6         442         356         For         To F         To G         To H         Total         94           From B         459         3         168         -         1931         -	AM(69) PEAK           Arm         To A         To B         To C         To D         To E         To F         To G         To H         Total         9           From A         0         396         6         101         503         413           From B         396         6         101         519         402           From C         425         89         5         519         402           From R         From A         6         421         485         514         1820           From A         6         442         356         6         304         116           From A         6         442         356         6         3044         116           From A         6         442         356         6         3044         116           From A         6         442         356         630         384         168           From A         111         2         497         468         111         2           From A         Ran Rnod (EB)         From A         7.7         3.3         35.0         10.0         25         40         0.7           From B	Design Ye	ear:	2030	De	signed By	: MCY	С	hecked By:	WCH		Date:	21 Janu	ary 2025
$ \begin{array}{ c c c c c c } \hline AM(0) \ FRAK \\ \hline Amm & To A & To B & To C & To D & To E & To F & To G & To H & Total & Q_{+} \\ \hline From A & 0 & 390 & 408 \\ \hline From B & 396 & 6 & 101 \\ \hline From C & 425 & 89 & 5 \\ \hline From D & - & - & - & - & - & - & - & - & - &$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$													
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	AM(08) P	EAK											
From A         0         330         408         708         100           From D         366         6         101         503         413           From C         425         89         5         519         402           From D         519         402         519         402           From F         -         1820         -         -           PM (17) Peak         -         1820         -         -           PM (17) Peak         -         1820         -         -           PM (17) Pak         -         -         1820         -           PM (17) Peak         -         -         1820         -         -           PM (17) Peak         -         -         1820         -         -           Pan Kam Solid (11)         2         -         -         1931         -           Legend         -         -         -         1931         -           Legend (In clockwise order)         A         Ram Tin Road (RSh)         -         7.7         2.3         35.0         10.0         2.5         40         0.7           Geometric Parameters         -         -         17.7	From A       0       396       6       101         From B       396       6       101       503       413         From C       425       89       5       519       402         From B       821       465       514       1820       143         Prom E       700 M       821       465       514       1820         PM (17) Peak       477       1820       804       116         From A       6       442       396       56       804       116         From B       6       402       366       630       364       116         From B       A       6       442       396       56       526       1031       100         From B       From C       77       3.3       35.0       10.0       25       40       0.7         A       Kam Tin Road (KB)       Eagend       Conclusting Flow across the Entry       Kam Tin Road (VB)       Early Capacity       A       77       5.5       100.0       100.0       25       60       0.0         G       Early Capacity       Early Capacity       Early Capacity       Early Capacity       A       A       A       A <td>Arm</td> <td>IO A</td> <td>IOB</td> <td>To C</td> <td>To D</td> <td>IOE</td> <td>IOF</td> <td>To G</td> <td>IOH</td> <td>lotal</td> <td>q<sub>c</sub></td> <td></td> <td></td>	Arm	IO A	IOB	To C	To D	IOE	IOF	To G	IOH	lotal	q <sub>c</sub>		
From B         396         6         101         503         413           From D         425         89         5         519         402           From D         From B         519         402         402           From B         821         485         514         1820         -           PM (7) Peak	From B       386       6       101       503       413         From C       425       89       5       519       402         From F       519       402       402         From F       700       1820       1820       1820         PM (17) Peak       1820       1820       1820         Am       To A       To B       To C       To D       To E       To F       To G       To H       Total       9,         From A       6       442       356       804       116       630       364         From A       6       442       356       804       168       630       364         From B       459       3       168       497       468         From B       459       3       163       93       163         From B       From B       7.7       3.3       35.0       10.0       25       40       0.7         Am       649       556       526       1931       100.0       25       40       0.7         Legend       Am       Road (BB)       From B       7.7       2.9       15.0       10.0       25       60 <td>From A</td> <td>0</td> <td>390</td> <td>408</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>798</td> <td>100</td> <td></td> <td></td>	From A	0	390	408						798	100		
From C         425         89         5           From D         519         402           From F         1820         -           From F         1820         -           Prom F         1820         -           Prom F         1820         -           Prom A         6         442         336           From A         6         442         336           From A         6         442         336           From B         459         3         188           From B         459         3         188           From C         364         111         2           From C         364         497         468           From D         From N         From N         4097         468           From B         520         1331         -         -           Legend         E         -         1331         -           Legend         E         -         1331         -           E         From B         7.7         3.3         350         10.0         0.7           B         Fan Kam Road (B)         C         From B         7.	From C       425       89       5       519       402         From D       From F       519       402         From F       From C       7       6       442       366         From A       6       442       366       630       364         From A       6       442       366       630       364         From A       6       442       366       630       364         From B       459       3       168       630       364         From C       384       111       2       497       468         From B       From A       7.7       3.3       350       10.0       25       40       0.7         From B       From A       7.7       5.5       100.0       100.0       25       40       0.7         From B       From A       7.7       5.5       100.0       100.0       25       60       0.0         From B       From C       7.7       5.5       100.0       100.0       25       60       0.0         Prom C       Ran Tin Road (WB)       From F       From C       7.7       5.5       100.0       100.0       2.5 <td>From B</td> <td>396</td> <td>6</td> <td>101</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>503</td> <td>413</td> <td></td> <td></td>	From B	396	6	101						503	413		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	From D From E       From K       Image: Constraint of the second se	From C	425	89	5						519	402		
From E From F From G         Image: Second seco	From F       From G       F <t< td=""><td>From D</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	From D												
From F From H         Read (in clockwise order) From H         Geometric Parameters         Issue         Issue           Arm         To A         To B         To C         To D         To E         To F         To G         To H         Total         94           PM (17) Peak         Arm         To A         To B         To C         To D         To E         To F         To G         To H         Total         94           From B         459         3         168         -         633         364           From C         384         111         2         437         468           From B         From C         S26         1931         -         -           Legend         -         -         1931         -         -           Arm         Road (in clockwise order)         N         Arm         7.7         3.3         35.0         10.0         25         60         0.7           From H         -         -         From R         7.7         2.9         15.0         12.5         25         30         0.6           Crianting Flow arcos the Entry         K         +         -         7.7         3.3         35.0	From F       From H       Item       Item         Total       821       485       514       1820         PM (17) Peak       Arm       To A       To B       To C       To D       To E       To F       To G       To I       480       116         From A       6       442       356       630       364       116         From A       6       442       356       630       364         From B       459       3       168       630       364         From C       384       111       2       497       468         From F       From B       7.7       3.3       3.0       1.00       25       40       0.7         From H       From B       7.7       2.9       15.0       12.5       25       30       0.6         C       Kam Tin Road (EB)       From B       7.7       2.9       15.0       12.5       25       30       0.6         From E       From H       From E       From B       7.7       5.5       100.0       100.0       25       60       0.0         D       E       From H       From B       From B       7.7 <td< td=""><td>From E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	From E												
From G         From H         Issue           Tetal         821         485         514         1820           PM (17) Peak         Issue         Issue         Issue         Issue           Arm         To A         To B         To C         To D         To E         To F         To G         To H         Total         9,           From A         6         442         366         50         630         364         116           From B         459         3         168         630         364         116         630         364           From B         499         366         526         1931         1	From G       Image: Constraint of the second	From F												
From H       Image: respect to the second sec	From H	From G												
Total         821         485         514         1820           PM (17) Peak	Total       821       485       514       1820         PM (17) Peak       Image: State of the sta	From H												
PM (17) Peak           Am         To A         To B         To C         To D         To E         To F         To G         To H         Total         q.           From A         6         442         356         804         116         804         116           From B         459         3         168         933         168         933         168           From C         384         111         2         497         468           From D         From E         931         100         20         931           Legond         Kam Tin Road (k8 corder)         1031         100         25         40         0.7           B         Fan Kam Road (SB)         From B         7.7         3.3         35.0         100.0         25         40         0.7           From B         7.7         2.9         15.0         12.5         25         30         0.6           From B         From B         7.7         5.5         100.0         100.0         25         60         0.0           C         Entry Capacity         K         From B         7.7         5.5         100.0         100.0         10.0 <td< td=""><td>PM (17) Peak           Arm         To A         To B         To C         To D         To E         To F         To G         To H         Total         q.           From A         6         442         356         804         116         630         384           From B         459         3         168         830         384         111         2         497         468           From C         384         111         2         497         468         497         468           From B         From A         6         497         468         497         468           From B         From A         6         1931         931         931         931         931           Loggend         Image: Construct Parameters         Image: Construct Parameters         1931         93</td><td>Total</td><td>821</td><td>485</td><td>514</td><td></td><td></td><td></td><td></td><td></td><td>1820</td><td></td><td></td><td></td></td<>	PM (17) Peak           Arm         To A         To B         To C         To D         To E         To F         To G         To H         Total         q.           From A         6         442         356         804         116         630         384           From B         459         3         168         830         384         111         2         497         468           From C         384         111         2         497         468         497         468           From B         From A         6         497         468         497         468           From B         From A         6         1931         931         931         931         931           Loggend         Image: Construct Parameters         Image: Construct Parameters         1931         93	Total	821	485	514						1820			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$													
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	PM (17) F	Peak	To P	To C	To D	ToE	To F	To C	To H	Total	l a	1	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Ann		10 6	100	10 D	IUE	TOF	10 G	10 1	10(2)			
From B       439       3       108       6.30       304         From C       384       111       2       487       468         From E       497       468       468         From E       111       2       497       468         From F       526       1931       1         Legend       Geometric Parameters         Arm       Road (in clockwise order)       A       Arm Tin Road (EB)       From A       7.7       3.3       35.0       10.0       25       40       0.7         B       Fan Kam Road (BB)       From A       7.7       5.5       100.0       100.0       25       60       0.0         D       E       Fan Kam Road (VB)       E       From A       7.7       5.5       100.0       100.0       25       60       0.0         D       E       Fan Kam Road (VB)       E       From B       From B       From B       From B       From B       Colspan="2">Conderive Lengthon D(m)       Ø(°) * S         From D       From B       From C       T.7       5.5       100.0       100.0       25       60       0.0         Prot D       From D       From B       C	From B       4.39       3       108       e.30       364         From C       384       111       2       497       468         From D       384       111       2       497       468         From E       1931       1 <td>From A</td> <td>6</td> <td>442</td> <td>356</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>804</td> <td>116</td> <td></td> <td></td>	From A	6	442	356						804	116		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	From B	459	3	168						630	364		
From D       From F         From F       From H         From H       1931         Legend       1931         Arm       Road (in clockwise order)         A       Kam Tin Road (EB)         C       Kam Tin Road (B)         B       Fan Am Road (CB)         C       Kam Tin Road (WB)         D       B         F       G         G       From B         F       From C         F       The Road (WB)         D       E         F       G         G       H         Prodictive Equation $Q_e = K(F - f_e q_e)$ Image: Consulting Flow across the Entry         K       = 10.00347 (C2-30)-0.978 (11/r)-0.05]         F       = 303 k_2         G       = 10.00347 (C2-30)-0.978 (11/r)-0.05]         F       = 303 k_2         F       = 0.210 k_0 (1+0.2 k_2)         k_5       = 1.00.0347 (C2-30)-0.978 (11/r)-0.05]         K_2       = 1.00.0347 (11/e)         X_2       = vr(e-v)/(1+2S)         S       = 1.01/r And(0)         M       = exp(D+80) (10)         X_2       = vr(e-v)/(1+2S)         S<	From D         From F         From F         Geometric Parameters         Arm Road (in clockwise order)         A       Kam Tin Road (EB)       Arm $r (m)$ $v (m)$ $r (m)$ $L (m)$ $D (m)$ $O (^{\circ})$ $S$ B       Fan Kam Road (SB)       Form B $7.7$ $3.3$ $35.0$ $10.0$ $25$ $40$ $0.7$ B       Fan Kam Road (WB)       D $From B$ $7.7$ $5.5$ $100.0$ $100.0$ $25$ $60$ $0.0$ C       Kam Tin Road (WB)       D       From B $7.7$ $5.5$ $100.0$ $100.0$ $25$ $60$ $0.0$ C       Kam Tin Road (WB)       D       Entry Radius $6.0 - 100.0$ $0.0$ $100.0$ $25$ $60$ $0.0$ Predictive Equation $Q_E = K(F - f, q_e)$ Limitation         Constant of the meter stant of the mete	From C	384	111	2						497	468		
From E From K       Image: Constraint of the second sec	From E From F         Geometric Parameters         Arm       Road (in clockwise order) A B       Fram Kam Tin Road (EB) F       From A       T.7       3.3       35.0       10.0       25       40       0.7         B       Fan Kam Road (SB) C       From A       T.7       3.3       35.0       10.0       25       40       0.7         B       Fan Kam Road (WB)       From A       T.7       3.3       35.0       10.0       25       60       0.0         D       E       F       F       From B       T.7       5.5       100.0       100.0       25       60       0.0         From B       F.7       5.5       100.0       100.0       25       60       0.0         From B       From C       From B       From C       From C	From D												
From F From G       Geometric Parameters       1991         Legend       Arm       Road (in clockwise order) A       Arm       Geometric Parameters         Arm       Road (in clockwise order) A       Kam Tin Road (KB) C       From A       7.7       3.3       35.0       10.0       25       40       0.7         B       Fan Kam Road (SB) C       From B       7.7       2.9       15.0       12.5       25       30       0.6         D       E       From B       7.7       5.5       100.0       100.0       25       60       0.0         D       E       From B       7.7       5.5       100.0       100.0       25       60       0.0         From B       From C       F	From F         Total       849       556       526         Lagend         Construction of the second of	From E												
From G From H       gamma       gamma       gamma       gamma         Total       849       556       526         Legend         Arm       Road (in clockwise order)         A       Kam Tin Road (EB)       From A       7.7       3.3       35.0       10.0       25       40       0.7         B       Fan Kam Road (SB)       From B       7.7       2.9       15.0       12.5       25       30       0.6         C       Kam Tin Road (WB)       From B       7.7       5.5       100.0       100.0       25       60       0.0         E       From B       From F       From B       From F       From B       7.7       5.5       100.0       100.0       25       60       0.0         From B       From B       From B       From B       From B       From B       7.7       5.5       100.0       100.0       25       60       0.0         F       G       From B       From B       From B       From B       6.0       100.0       0       100.0       0       100.0       100.0       100.0       15.0       m       4.0       15.0       m <t< td=""><td>From G         Image: Signed Sig</td><td>From F</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	From G         Image: Signed Sig	From F												
From H	From H       Image: constraint of the second	From G												
Itegend         Geometric Parameters           Arm         Road (in clockwise order)         A         Kam Tin Road (EB)         Form A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         From A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         From B         7.7         2.9         15.0         12.5         2.5         30         0.6           C         Kam Tin Road (WB)         From B         7.7         5.5         100.0         100.0         25         60         0.0           From B         From B         From B         From B         From B         7.7         5.5         100.0         100.0         25         60         0.0           From B         From C <td>Iotal         849         556         526           Legend         Geometric Parameters           Arm         Road (in clockwise order)         A         Kam Tin Road (EB)         Form A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         C         Kam Tin Road (WB)         From A         7.7         2.9         15.0         12.5         25         30         0.6           D         E         From B         7.7         2.9         15.0         12.5         25         60         0.0           D         E         From B         7.7         2.9         15.0         12.5         25         60         0.0           D         E         From B         From B         From C         From C         From B         From F         From B         From F         From F         From F         From F         F         G         G         G         G         G         <t< td=""><td>From H</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<></td>	Iotal         849         556         526           Legend         Geometric Parameters           Arm         Road (in clockwise order)         A         Kam Tin Road (EB)         Form A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         C         Kam Tin Road (WB)         From A         7.7         2.9         15.0         12.5         25         30         0.6           D         E         From B         7.7         2.9         15.0         12.5         25         60         0.0           D         E         From B         7.7         2.9         15.0         12.5         25         60         0.0           D         E         From B         From B         From C         From C         From B         From F         From B         From F         From F         From F         From F         F         G         G         G         G         G <t< td=""><td>From H</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	From H												
Geometric Parameters           Arm         Road (in clockwise order)         Arm         Read (in clockwise order)           A         Kam Tin Road (EB)         From A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         From B         7.7         2.9         15.0         12.5         25         30         0.6           C         Kam Tin Road (WB)         From C         7.7         5.5         100.0         100.0         25         60         0.0           E         From C         7.7         5.5         100.0         100.0         25         60         0.0           From B         From C         7.7         5.5         100.0         100.0         25         60         0.0           From B         From C         From G         From G         From G         From G         From G           F         9030x         f         Find Kall Width         2.0 - 7.3 m         F         Entry Radius         6.0 - 10.0 m         D         Inscribed Circle Diameter         15 - 100 m         Ø         Entry Angle         10' - 60°         S         S harpness of Flare         0.0 - 3.0         S	Geometric Parameters           Arm         Road (in clockwise order)         A         Kam Tin Road (EB)         From A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         From A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         From B         7.7         2.9         15.0         12.5         25         30         0.6           C         Kam Tin Road (WB)         From D         From C         7.7         5.5         100.0         100.0         25         60         0.0           F         G         From D         From D <td>lotal</td> <td>849</td> <td>556</td> <td>526</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1931</td> <td></td> <td></td> <td></td>	lotal	849	556	526						1931			
Light         Geometric Parameters           Arm         Road (in clockwise order)         A           A         Kam Tin Road (EB)         From A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         From A         7.7         2.9         15.0         12.5         25         30         0.6           C         Kam Tin Road (WB)         From B         7.7         5.5         100.0         100.0         25         60         0.0           F <td>Legend         Geometric Parameters           Arm         Road (in clockwise order)         A           A         Kam Tin Road (EB)         From A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         From A         7.7         2.9         15.0         12.5         25         30         0.6           D         E         From B         7.7         2.9         15.0         12.5         25         60         0.0           F         From C         7.7         5.5         100.0         100.0         25         60         0.0           F         From C         7.7         5.5         100.0         100.0         25         60         0.0           F         From C         From B         From C         7.7         5.5         100.0         100.0         25         60         0.0           Generative Equation <math>Q_e \in K(F \cdot f_e q_e)</math>         E         Imitation         E         Entry Width         4.0 - 15.0 m         V         Approach Half Width         2.0 - 7.3 m         T         Entry Radius         6.0 - 100.0 m         L         Effective Length of Flare         1.0 - 100.0 m</td> <td colspan="12"></td>	Legend         Geometric Parameters           Arm         Road (in clockwise order)         A           A         Kam Tin Road (EB)         From A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB)         From A         7.7         2.9         15.0         12.5         25         30         0.6           D         E         From B         7.7         2.9         15.0         12.5         25         60         0.0           F         From C         7.7         5.5         100.0         100.0         25         60         0.0           F         From C         7.7         5.5         100.0         100.0         25         60         0.0           F         From C         From B         From C         7.7         5.5         100.0         100.0         25         60         0.0           Generative Equation $Q_e \in K(F \cdot f_e q_e)$ E         Imitation         E         Entry Width         4.0 - 15.0 m         V         Approach Half Width         2.0 - 7.3 m         T         Entry Radius         6.0 - 100.0 m         L         Effective Length of Flare         1.0 - 100.0 m													
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Arm         Road (if blockwise order)         Arm         if (m)         V (m) $L(m)$ $D(n)$ $D(r)$	Legena	Deed	(			Geometric		ers		1 (	D (m)	a w	0
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Arm	Koad (		e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	5
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	A					From A	1.1	3.3	35.0	10.0	25	40	0.7
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	C       Ram In Road (WB)       From C       7.7       5.5       100.0       100.0       2.5       60       0.0         D       E       From D       From D       From D       From D       7.7       5.5       100.0       100.0       2.5       60       0.0         Predictive Equation $Q_E = K(F - f_c q_c)$ E       From B       From H       From B       From H       4.0 - 15.0 m       9.0	В	Fan Kam				From B	1.1	2.9	15.0	12.5	25	30	0.6
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Kam In F	Koad (WB)				1.1	5.5	100.0	100.0	25	60	0.0
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $													
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	F       G       From F         G       From G       From G         Predictive Equation $Q_E = K(F - f_c q_c)$ Limitation         Q_E       Entry Capacity       4.0 - 15.0 m         q_c       Circulating Flow across the Entry       K       = 1-0.00347( $\varnothing$ -30)-0.978[(1/r)-0.05]       Entry Radius       6.0 - 100.0 m         F       = 303x_2       f_c       = 0.210b_0(1+0.2x_2)       t_b       Effective Length of Flare       1.0 - 100.0 m         D       Inscribed Circle Diameter       15 - 100 m       Ø       Entry Angle       10° - 60°       S         M       = exp[(D-60)/10]       X2       v (e-v)/(1+2S)       S       S       S harpness of Flare       0.0 - 3.0         Ratio-of-Flow to Capacity (RFC)       K       F       f_c       AM(08)       PM (17)       AM(08)       PM (17)         From A       5.112       0.030       1.485       0.986       1549       0.631       1465       1455       798       804       0.545       0.552         From B       5.029       0.030       1.485       0.935       2300.174       0.786       1855       1807       519       497       0.280       0.275         From D       Com D       Colin Circle Di	E					From E							
G H       From G From H         Predictive Equation $Q_{g} = K(F - f_{c}q_{c})$ Eimitation $Q_{e}$ Entry Capacity $q_{c}$ Circulating Flow across the Entry $K$ $f = 10.00347(0^{-}30) - 0.978[(1/r) - 0.05]$ $F$ $f = 303x_{2}$ $f_{c}$ $f = 0.210t_{0}(1+0.2x_{2})$ $t_{0}$ $f = 1+0.5/(1+M)$ $M$ $e exp[(D-60)/10]$ $x_{2}$ $e + (e-v)/(1+2S)$ $S$ $s = 1.6(e-v)/L$ Limitation $Q_{e}$ $Q_{e}$ $Entry Flow - 60^{\circ}$ $S$ $S = 1.6(e-v)/L$ $Ratio-of-Flow to Capacity (RFC)$ Arm $x_{2}$ $M$ $t_{0}$ $K$ $T$ $T$ $T$ $T$ $T$ $Q_{e}$ $Entry Flow - 7.591$ $0.30$ $1.485$ $0.986$ $1549$ $0.631$ $1465$ $1455$ $798$ $804$ $0.545$ $0.552$ $7.591$ $0.30$ $1.485$ $0.935$ $2300.174$ $0.786$ $1855$ $1807$ $519$ $497$ $0.280$ $0.275$ $759$ $From F$ $Fro$	G       From G         Predictive Equation $Q_E = K(F - f_c q_c)$ Limitation $Q_E$ Entry Capacity $q_c$ Circulating Flow across the Entry $K$ = 1-0.00347( $\varnothing$ -30)-0.978[(1/r)-0.05] $F$ = 303x_2 $f_c$ = 0.210t <sub>0</sub> (1+0.2x_2) $t_o$ = 1+0.5((1+M)         M       = exp[(D-60)/10] $x_2$ = v+(e-v)/(1+2S)         S       = 1.6(e-v)/L             Ratio-of-Flow to Capacity (RFC)       K       F       f_c       AM(08)       PM (17)       AM(08)       PM (17)           From A     5.112     0.030     1.485     0.986     1549     0.631     1465     1455     798     804     0.545     0.552     0.552     0.529     0.030     1.485     0.935     2300.174     0.786     1855     1807     519     497     0.280     0.275     0.275     0.280     0.275     0.275     0.280     0.275     0.280     0.275     0.280     0.275     0.280     0.275     0.280     0.275     0.280     0.275     0.280     0.275     0.280     0.275	F					From F							
Predictive Equation $Q_E = K(F \cdot f_c q_c)$ Limitation $Q_E$ Entry Capacity       4.0 - 15.0 m $q_c$ Circulating Flow across the Entry $K$ $= 1.0.00347(\emptyset - 30) - 0.978[(1/r) - 0.05]$ $F$ $F$ $= 303x_2$ $f_c$ $= 0.210t_0(1 + 0.2x_2)$ $= 1.0.00347(\emptyset - 30) - 0.978[(1/r) - 0.05]$ $F$ $f_c$ $= 0.210t_0(1 + 0.2x_2)$ $= 1.40.5/(1+M)$ $= 0.210t_0(1 + 0.2x_2)$ $= 1.40.5/(1+M)$ $M$ $= exp[(D-60)/10]$ $x_2$ $= v+(e-v)/(1+2S)$ $S$ $S$ $S$ $= 1.6(e-v)/L$ $= 1.6(e-v)/L$ $= 1.6(e-v)/L$ $= 1.6(e-v)/L$ $= 1.6(e-v)/L$ Ratio-of-Flow to Capacity (RFC)         Ratio-of-Flow to Capacity (RFC)         Ratio-0.30 $1.485$ $0.986$ $1549$ $0.631$ $1465$ $198$ $0.404$ $0.494$ From A $5.112$ $0.030$ $1.485$ $0.935$ $2300.174$ $0.786$ $1855$ $1807$ $519$ $497$ $0.280$ $0.275$ From G $F$ $f_c$ $AM(08)$ $PM (17)$ $AM(08)$ $PM (17)$	H       From H       From H $Q_E$ Entry Capacity $4.0 - 15.0 \text{ m}$ $Q_c$ Circulating Flow across the Entry $k$ $4.0 - 15.0 \text{ m}$ $K$ $= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$ $F$ $= 303x_2$ $f_c$ $= 0.210t_0(1+0.2x_2)$ $L$ Effective Length of Flare $1.0 - 100.0 \text{ m}$ $t_b$ $= 1+0.5/(1+M)$ $M$ $= exp[(D-60)/10]$ $x_2$ $= v+(e-v)/(1+2S)$ $S$ $S \text{ Sharpness of Flare}$ $0.0 - 3.0$ Ratio-of-Flow to Capacity (RFC)         Q <sub>E</sub> Entry Flow       REC         Arm $x_2$ M $t_D$ $K$ $F$ $f_c$ AM(08)       PM (17)       AM(08)       PM (17)         From A       5.112       0.030       1.485       0.986       1549       0.631       1465       1455       798       804       0.545       0.552         From B       5.029       0.030       1.485       0.984       1524       0.626       1245       1275       503       630       0.404       0.494         From D       C       7.591       0.030       1.485       0.935       <	G					From G							
$ \begin{array}{c c c c c c c c c } \hline Predictive Equation Q_{E} = K(F - f_{c}q_{c}) \\ \hline Q_{E} & Entry Capacity \\ q_{c} & Circulating Flow across the Entry \\ K &= 1 - 0.00347 (\varnothing - 30) - 0.978[(1/r) - 0.05] \\ F &= 303x_{2} \\ f_{c} &= 0.210t_{D}(1 + 0.2x_{2}) \\ t_{0} &= 1 + 0.57(1 + M) \\ M &= exp[(D - 60)/10] \\ x_{2} &= v + (e - v)/(1 + 2S) \\ S &= 1.6(e - v)/L \\ \hline \end{array} $	Limitation         Qe Entry Capacity $Q_c$ Circulating Flow across the Entry         K       = 1-0.00347(Ø-30)-0.978[(1/r)-0.05]       e       Entry Radius       6.0 - 100.0 m         F       = 303x_2       f.c       = 0.210t_0(1+0.2x_2)       Entry Radius       6.0 - 100.0 m         to       = 1+0.5/(1+M)       Ø       Entry Angle       10° - 60°       S       Sharpness of Flare       0.0 - 3.0         X2       V       Approach Half Width       2.0 - 7.3 m       r       Entry Radius       6.0 - 100.0 m       L       Effective Length of Flare       1.0 - 100.0 m       D       Inscribed Circle Diameter       15 - 100 m       Ø       Entry Angle       10° - 60°       S       Sharpness of Flare       0.0 - 3.0       M       REC         X2       M       to       K       F       f.c       AM(08)       PM (17)       AM(08)       PM (17)       AM(08)       PM (17)         X2       M       to       K       F       f.c       AM(08)       PM (17)													
$ \begin{array}{c c c c c c c } \hline Q_{E} & Entry Capacity & & & & & & & & & & & & & & & & & & &$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Predictiv	e Equation	Q <sub>E</sub> = K(F -	f <sub>c</sub> q <sub>c</sub> )			Limitatio	n					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Q <sub>E</sub>	Entry Cap	acity			ו ר	е	Entry Wid	th		4.0 - 15.0	m	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c} K &= 1-0.00347(\varnothing - 30) - 0.978[(1/r) - 0.05] \\ F &= 303x_2 \\ f_c &= 0.210t_D(1 + 0.2x_2) \\ t_D &= 1 + 0.5/(1 + M) \\ M &= \exp[(D - 60)/10] \\ x_2 &= v + (e - v)/(1 + 2S) \\ S &= 1.6(e - v)/L \\ \end{array} \right) \begin{array}{c} r & Entry \ Radius & 6.0 - 100.0 \ m \\ D & Inscribed \ Circle \ Diameter & 15 - 100 \ m \\ \varnothing & Entry \ Angle & 10^\circ - 60^\circ \\ S & Sharpness \ of \ Flare & 0.0 - 3.0 \\ \end{array} \right) \\ \hline \\ \begin{array}{c} Ratio-of-Flow to \ Capacity \ (RFC) \\ \hline \\ \hline \\ Arm & x_2 & M & t_{D} & K & F & f_c \\ AM(08) & PM \ (17) & AM(08) & PM \ (17) \\ From \ A & 5.112 & 0.030 & 1.485 & 0.986 & 1549 & 0.631 \\ From \ S & 5.029 & 0.030 & 1.485 & 0.984 & 1524 & 0.626 \\ From \ B & 5.029 & 0.030 & 1.485 & 0.935 & 2300.174 \\ From \ C & 7.591 & 0.030 & 1.485 & 0.935 & 2300.174 \\ From \ D & I855 & 1807 & 519 \\ From \ B & I \ S \ I \ $	q <sub>c</sub>	Circulating	g Flow acros	ss the Entry	/		v	Approach	Half Width		2.0 - 7.3 m	ı	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	к	= 1-0.003	- 47(Ø-30)-0.	۔ .978[(1/r)-0	051		r	Entry Rad	ius		6 0 - 100 0	) m	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	F	$= 303x_2$			]		Ĺ	Effective L	Length of Fl	are	1.0 - 100.0	) m	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	f <sub>c</sub>	= 0.210t <sub>D</sub> (	(1+0.2x <sub>2</sub> )				D	Inscribed	Circle Diam	eter	15 - 100 m	1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	t <sub>D</sub>	= 1+0.5/(1	(+M)				Ø	Entry Ana	le		10° - 60°		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	м	= exp[(D-6	, 50)/101				S	Sharpnes	s of Flare		00-30		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	x <sub>2</sub>	= v+(e-v)/	(1+2S)			L		enaiphiee			010 010		
Ratio-of-Flow to Capacity (RFC)           Arm         x2         M         to         K         F         fc         AM(08)         PM (17)         AM(08)         AM (0.44)         AM (0.44)         AM (0.44) <td>Q<sub>E</sub>         Entry Flow         RFC           Arm         X<sub>2</sub>         M         to         Q<sub>E</sub>         Entry Flow         RFC           Arm         X<sub>2</sub>         M         t<sub>D</sub>         K         F         f<sub>c</sub>         AM(08)         PM (17)         AM(08)         D(0.552)         AM(17)         AM</td> <td>s</td> <td>= 1 6(e-v)</td> <td>//</td> <td></td>	Q <sub>E</sub> Entry Flow         RFC           Arm         X <sub>2</sub> M         to         Q <sub>E</sub> Entry Flow         RFC           Arm         X <sub>2</sub> M         t <sub>D</sub> K         F         f <sub>c</sub> AM(08)         PM (17)         AM(08)         D(0.552)         AM(17)         AM	s	= 1 6(e-v)	//										
Ratio-of-Fuence Capacity (RFC)           Arm         x2         M         t0         K         F         fc         AM(08)         PM (17)         AM(08)         Question (15)         Question (15)         Question (15)         Question (15)	Ratio-of-Flow to Capacity (RFC)           Arm         x2         M         t0         K         F         fc         AM(08)         PM (17)         AM(08)         Question (17)         AM(08)         PM (17)         AM(08)         Question (17)						4							
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Arm         X2         M         to         K         F         fc         AM(08)         PM (17)         AM(08)         D.0552         Common Set	Ratio-of-	Flow to Ca	pacity (RFC	<b>C)</b>									
Arm         x2         M         to         K         F         fc         AM(08)         PM (17)         AM(08)         D.552         D.552         D.	Arm         x <sub>2</sub> M         t <sub>D</sub> K         F         f <sub>c</sub> AM(08)         PM (17)         AM(08)								0	2 <sub>E</sub>	Entry	y Flow	RI	=C
From A       5.112       0.030       1.485       0.986       1549       0.631       1465       1455       798       804       0.545       0.552         From B       5.029       0.030       1.485       0.984       1524       0.626       1245       1275       503       630       0.404       0.494         From C       7.591       0.030       1.485       0.935       2300.174       0.786       1855       1807       519       497       0.280       0.275         From D       From F       From F       From G       Image: Second S	From A         5.112         0.030         1.485         0.986         1549         0.631         1465         1455         798         804         0.545         0.552           From B         5.029         0.030         1.485         0.984         1524         0.626         1245         1275         503         630         0.404         0.494           From C         7.591         0.030         1.485         0.935         2300.174         0.786         1855         1807         519         497         0.280         0.275           From D         From E         Fro	Arm	x <sub>2</sub>	М	t <sub>D</sub>	K	F	f <sub>c</sub>	AM(08)	PM (17)	AM(08)	PM (17)	AM(08)	PM (17)
From B       5.029       0.030       1.485       0.984       1524       0.626       1245       1275       503       630       0.404       0.494         From C       7.591       0.030       1.485       0.935       2300.174       0.786       1855       1807       519       497       0.280       0.275         From D       From F       From F       Image: Constraint of the second seco	From B         5.029         0.030         1.485         0.984         1524         0.626         1245         1275         503         630         0.404         0.494           From C         7.591         0.030         1.485         0.935         2300.174         0.786         1855         1807         519         497         0.280         0.275           From D         From F         0 <t< td=""><td>From A</td><td>5.112</td><td>0.030</td><td>1.485</td><td>0.986</td><td>1549</td><td>0.631</td><td>1465</td><td>1455</td><td>798</td><td>804</td><td>0.545</td><td>0.552</td></t<>	From A	5.112	0.030	1.485	0.986	1549	0.631	1465	1455	798	804	0.545	0.552
From C       7.591       0.030       1.485       0.935       2300.174       0.786       1855       1807       519       497       0.280       0.275         From D       From E       From F       Image: Constraint of the second sec	From C         7.591         0.030         1.485         0.935         2300.174         0.786         1855         1807         519         497         0.280         0.275           From D         From F         Image: Constraint of the second sec	From B	5.029	0.030	1.485	0.984	1524	0.626	1245	1275	503	630	0.404	0.494
From D       From E       From F       From G	From D	From C	7.591	0.030	1.485	0.935	2300.174	0.786	1855	1807	519	497	0.280	0.275
From E       From F       From G	From E	From D												
From G		From E												
From G	From F	From F												
	From G	From G												
From H	From H	From H												

Outland Proposed Tempore Concrete Batching Plant         John I. P. 4           Q300         Designed By         MCY         Checked By         WCH         Date:         21 January 2025           AM (09) Peak           Am         To A         To B         To C         To D         To E         To F         To G         To H         Total         9.01         13           From B         433         6         126         For B         665         482           From C         From F         For A         0         2060         Image: Colspan="2">Option F           From B         433         6         126         To E         To F         To G         To H         Total         9.03           From F         For A         To B         To C         To D         To E         To F         To G         To H         Total         9.14         181           From B         A         To A         To B         To C         To F         To G         To H         Total         9.1           From B         A         Add         460         7.7         2.3         3.0         10.0	Junction:	ction: Kam Tin Road / Fan Kam Road Job Number: J7342											
Design Year:         2030         Designed By         MCY         Checked By         WCH         Date:         21.January 2025.           AM (6) Peak         Am         To A         To B         To C	Scenario:		Without Pr	oposed Ter	mporary C	Concrete Bate	ching Plar	ıt				J01 - P.	4
AM (99) Peck           Am         To A         To B         To C         To D         To E         To F         To G         To H         Total         9.00         131           From B         433         6         126         565         482         565         482         565         482         565         482         565         482         566         482         566         482         566         482         566         482         566         482         566         482         566         482         566         482         566         484         480         770	Design Ye	ear:	2030	De	signed By	: MCY	C	hecked By:	WCH		Date:	21 Janu	ary 2025
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	AM (09) F	Peak											
From A         0         424         476         900         131           From B         433         6         126         595         482           From C         470         119         6         595         482           From C         470         119         6         595         439           From B         -         2080         -         -         595         439           From A         6         448         40         -         595         470           From A         6         448         40         -         104         40           From A         6         448         40         -         104         40           From B         452         3         224         -         729         461           From B         -         -         2322         -         -         2322         -           From H         -         -         -         1010         25         40         0.7           From B         -         -         -         -         2322         -         -           From H         -         -         7.7	Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From B         433         6         126           From C         470         119         6         595         439           From F         595         439         595         439           From F         503         549         608         2080         1           PM (19) Peak         -         2080         -         2080         -           Prom A         6         448         460         723         461         174           From A         6         448         460         723         461         174           From A         6         448         460         723         461         174           From B         452         3         224         723         461         174           From B         -         -         -         123         461         174           From B         77         3.3         36.0         10.0         25         40         0.7           From B         From A         7.7         3.3         36.0         10.0         25         60         0.0           From B         From B         7.7         5.5         10.0         10.	From A	0	424	476						900	131		
From C         470         119         6           From E         596         439           From F         2080         -           Prom F         2080         -           Prom A         6         448         460           Prom A         6         448         460           Prom A         6         448         460         -         914         181           From A         6         448         460         -         924         410         470           From A         6         448         460         -         914         181           From C         551         174         4         -         2322         -           From D         From R         Ram Road (In clockwise order)         Am         Ram Road (ISB)         Constant Road (SB)         2322         -           C         Catal In Road (SB)         Constant Road (SB)         Constant Road (SB)         Constant Road (SB)         -         2322         -           Prom E         From B         From C         7.7         3.3         35.0         10.0         25.5         40         0.7           G         Contrulating Flow acors the Entry	From B	433	6	126						565	482		
From D From F From F From G         Image: Second Seco	From C	470	119	6						595	439		
From F From F From A         Solution A         To A         To B         To C         To F         To G         To H         Total         903         549         606           PM (19) Peak	From D												
From FG From H       Product       2060         PM (19) Pack       2060       2060         Arm       To A       To B       To C       To D       To E       To F       To G       To H       Total       913       944         From A       6       448       480       979       470       974       181         From B       452       3       224       729       461       779       470         From B       From C       551       174       4       729       461       729       461         From B       From A       6       448       460       77       729       461         From B       From A       7.7       3.3       35.0       10.0       292.2       0         Legond       Arm       Road (in clockwise order)       Arm       Coconstric Parameters       2322       0       0.7         Arm Road (SB)       C       Kam Tin Road (KB)       Tron B       7.7       2.9       15.0       12.5       25       30       0.6         From C       T.7       5.9       100.0       100.0       2.5       80       0.0       0       100.0       0       2.0<	From E												
From G       Image: constraint of the second	From F												
From H         Image: constraint of the second	From G												
Tetal         903         549         608           PM (19) Peak         2060           Arm         To A         To B         To C         To D         To E         To F         To G         To H         1014         181           From A         6         448         460         From F         679         470           From C         551         174         4         729         461           From F         From F         From F         729         461           From F         From A         6         448         400         729         461           From F         From A         Read (in clockwise order)         Read (in clockwise order)         Read (in clockwise order)         A         Mar Read (S8)         From A         7.7         2.9         15.0         12.5         25         30         0.6           F         From B         7.7         2.9         15.0         12.5         25         30         0.6           Ge         Entry Capacity         Error B         From C         7.7         2.9         15.0         12.5         25         30         0.6           G         G         Circulating Flow across the Entry	From H												
PM (19) Peak           Arm         To A         To B         To C         To D         To E         To F         To G         To H         Total $q_c$ From A         6         448         460         914         181         729         461           From C         551         174         4         729         461         729         461           From E         From H         2322         2322         2322         3           Legend         Cecnetric Parameters         2322         3         3         461         7         7         3         3         5         0         0         2         100         2         100         2         100         0         2         10         0         10         2         10         0         10         2         10         0         10         2         10         0         10 <th10< th="">         10         &lt;</th10<>	Total	903	549	608						2060			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$													
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	PM (19) F	Peak	To P	TaC	ToD	ToE	To E	TaG	To H	Total	a a a a a a a a a a a a a a a a a a a	I	
From B         452         3         224         914         101           From C         551         174         4         729         461           From D         From B         From C         729         461           From C         551         174         4         729         461           From D         From A         729         461         400           From H         2322         -         -         -           Legend         2322         -         -         -         -           Arm         Road (in clockwise order)         A         Amm Tin Road (WB)         -			440	460	10.0	10 L	101	10.0	1011	014	401		
From D       432       3       224       0.79       4.10         From D       551       174       4       729       461         From D       From F       729       461       729       461         From E       From F       Secondaria       2322       100       729       461         Liggend       Zam       Road (in clockwise order)       A       Kam Tin Road (EB)       Early Capacity       2322       20         B       Fan Kam Road (B)       From A       7.7       3.3       35.0       10.0       25       40       0.7         B       Fan Kam Road (B)       From B       From A       7.7       5.5       100.0       100.0       25       60       0.0         D       E       From B       From R       From B       From B       From B       7.7       5.5       100.0       100.0       25       60       0.0         D       E       From H       From B       From B       From B       4.0 - 15.0 m       12.5       2.3       12.5       12.5       10.0       10.0       12.5       10.0       10.0       12.5       12.5       12.5       12.5       12.5       12.5       1	From A	0	448	460						914	181		
From D       From D       From D       From D       From B       From B       Z332         From H       1009       625       688       2322       -         Legend       2322       2       -       -       -         Am       Road (in clockwise order)       A       Kam Tin Road (EB)       -       -       -       -       -         B       Fan Kam Road (SB)       From A       7.7       3.3       35.0       10.0       25       40       0.7         C       Kam Tin Road (WB)       From B       7.7       2.9       15.0       12.5       25       30       0.6         From D       From D       From C       7.7       5.5       100.0       100.0       25       60       0.0         From D       From D       From D       From H       -       <		452	3	224						720	470		
From D       From F       F       E       2322         Import of the second of	From C	551	174	4						129	401		
From E From G       Z322         Legend       Carr       2322         A       Road (in clockwise order) A       Kam Tin Road (2B) Form A       Carr       S       S       C         A       Kam Tin Road (3B) C       C       C       A       Rom Tin Road (3B) C       C       Tom A       7.7       3.3       35.0       10.0       25       40       0.7         B       Fan Kam Road (3B) C       C       Kam Tin Road (WB) D       D       From A       7.7       3.3       35.0       10.0       25       60       0.0         C       Kam Tin Road (WB) C       D       From B       7.7       2.9       15.0       12.5       25       30       0.6         C       Kam Tin Road (WB) C       D       Error B       From F       S       100.0       100.0       25       60       0.0         Q       Entry Capacity       Q       Entry Width       2.0 - 7.3 m       R       Form F       Form F       Form F       Form F       S       100 m       Q       Entry Width       2.0 - 7.3 m       T	From D												
From F       Image: From H       Image: From F       Image: From H       Image: From F       Image: From F       Image: From H       Image: From F       Image: F	From E												
Initial       1009       625       688       2332         Lagend       Commetric Parameters         Arm       Road (in clockwise order)       A       Kam Tin Road (EB)       From A       7.7       3.3       35.0       10.0       25       40       0.7         B       Fan Kam Road (SB)       From B       7.7       2.9       15.0       12.5       25       30       0.6         D       E       From B       7.7       5.5       100.0       100.0       25       60       0.0         D       E       From B       7.7       5.5       100.0       100.0       25       60       0.0         D       E       E       From B       7.7       5.5       100.0       100.0       25       60       0.0         Prom D       From B       From H       E       E       E       E       E       E       D       E       E       0.0       0.0       25       60       0.0         Qc       Entry Capacity       Qc       Entry Madius       6.0       100.0       M       E       E       E       E       E       E       E       E       E       E       <	From F												
Prioriti         1009         625         688           Legend         Ceometric Parameters           Arm         Road (in clockwise order) A         A         Kam Tin Road (EB) B         From A         7.7         3.3         35.0         10.0         25         40         0.7           B         Fan Kam Road (SB) C         Kam Tin Road (WB) D         From A         7.7         3.3         35.0         10.0         25         40         0.7           F         F         From D         From B         7.7         5.5         100.0         100.0         25         60         0.0           F         From D         From C         From C         From C         From C         From D         From H         2.0 - 7.3 m         T         E         E         From H         2.0 - 7.3 m         T         E         E         F         E         F         F         E         F         F         E         F         F         F         F         F         F         F         F         F         F         F         F         F <td>From G</td> <td></td>	From G												
Index       1003       0.03       0.00       Communication       Comm       Comm       Comm <td>Total</td> <td>1000</td> <td>625</td> <td>688</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2322</td> <td></td> <td></td> <td></td>	Total	1000	625	688						2322			
Geometric Parameters           Arm         Read (in clockwise order)         Arm $e$ (m) $v$ (m) $r$ (m) $L$ (m) $D$ (m) $Q$ (°)         S           A         Kam Tin Road (EB)         From A         7.7         3.3         35.0         10.0         2.5         40         0.7           B         Fan Kam Road (SB)         From B         7.7         2.9         15.0         12.5         2.5         30         0.6           C         Kam Tin Road (WB)         From B         7.7         5.5         100.0         100.0         25         60         0.0           E         From C         7.7         5.5         100.0         100.0         25         60         0.0           From D         From F         From F         From F         From H         4.0<-15.0 m	Total	1000	020	000						2022			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Legend					Geometric	Paramet	ers					
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Arm	Road (	in clockwise	e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	А	Kam Tin F	Road (EB)			From A	7.7	3.3	35.0	10.0	25	40	0.7
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	В	Fan Kam I	Road (SB)			From B	7.7	2.9	15.0	12.5	25	30	0.6
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	С	Kam Tin F	Road (WB)			From C	7.7	5.5	100.0	100.0	25	60	0.0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	D					From D							
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Е					From E							
G       H       From G         Predictive Equation $Q_E = K(F - f_c q_c)$ Limitation         Q <sub>E</sub> Entry Capacity       4.0 - 15.0 m         q <sub>c</sub> Circulating Flow across the Entry       V       Approach Half Width       2.0 - 7.3 m         K       = 1-0.00347( $\odot$ -30)-0.978[(1/r)-0.05]       F       6.0 - 100.0 m       L         F       = 303x <sub>2</sub> 6.0 - 100.0 m       L       Effective Length of Flare       1.0 - 100.0 m         to       = 1+0.5/(1+0.2x <sub>2</sub> )       to       T       Entry Angle       10° - 60°         to       = 1+0.5/(1+0.2x <sub>2</sub> )       to       Entry Angle       10° - 60°         S       sharpness of Flare       0.0 - 3.0       S         X <sub>2</sub> = v+(e-v)/(1+2S)       S       S       Sharpness of Flare       0.0 - 3.0         Ratio-of-Flow to Capacity (RFC)       K       F       f       AM(09)       PM(19)       AM(09)       PM(19)         From A       5.112       0.030       1.485       0.986       1549       0.631       1446       1415       900       914       0.622       0.646         From B       5.029       0.030       1.485       0.935       2300.174       0.786       1828       1812	F					From F							
H       From H         Predictive Equation $Q_E = K(F - f_c q_c)$ Limitation $Q_E$ Entry Capacity $4.0 - 15.0 \text{ m}$ $Q_c$ Circulating Flow across the Entry $V$ Approach Half Width $2.0 - 7.3 \text{ m}$ $K$ $= 1-0.00347(\emptyset - 30) - 0.978[(1/r) - 0.05]$ $F$ $= 303x_2$ $6.0 - 100.0 \text{ m}$ $F$ $= 303x_2$ $E$ $E$ $E$ $E$ $f_c$ $= 0.210t_0(1+0.2x_2)$ $E$ $E$ $E$ $E$ $f_0$ $= 10.5/(1+M)$ $M$ $e \exp[(D-60)/10]$ $X_2$ $Y$ $P$ $0^\circ - 60^\circ$ $S$ $X_2$ $= v_1(e-v)/L$ $V$ $V$ $P$ $O_E$ $E$ $E$ $E$ Ratio-of-Flow to Capacity (RFC)         Qe $E$ $E$ $E$ $E$ $E$ $E$ $F$ $C$ $A$ $A$ $A$ $A$ $A$ $A$ $A$ $A$ $A$ $O_0 = 3.0$ $X$ $Y$	G					From G							
Limitation         Qe Entry Capacity         Qe Circulating Flow across the Entry $K$ $4.0 - 15.0 \text{ m}$ K = 1-0.00347(Ø-30)-0.978[(1/r)-0.05] $F$ $303x_2$ $6.0 - 100.0 \text{ m}$ fc = 0.210t_0(1+0.2x_2) $L$ Effective Length of Flare $1.0 - 100.0 \text{ m}$ b = 1+0.5/(1+M) $L$ Effective Length of Flare $1.0 - 100.0 \text{ m}$ M = exp[(D-60)/10] $X_2$ $y + (y - y)/(1 + 2S)$ $S$ Sharpness of Flare $0.0 - 3.0$ Ratio-of-Flow to Capacity (RFC)         Ratio-of Flow to Capacity (RFC)         Arm $x_2$ M $t_0$ K F fc $c$ $F$ $f_c$ $AM(09)$ PM(19) $AM(09)$ PM(19) $AM(09)$ PM(19)         From A 5.112 0.030 1.485 0.986 1549 0.631       1446 1415 900       914 0.622 0.646         From B 5.029 0.030 1.485 0.985 2300.174 0.786 1828 1812 595 729 0.325 0.402       0.402         From B 5.029 0.030 1.485 0.985 2300.174 0.786 1828 1812 595 729 0.325 0.402       0.402         From B From C       7.591 0.030 1.485 0.935 2300.174 0.786 1828 1812 595 729 0.325 0.402         From From G       From From From G         From H       I       I       I	Н					From H							
$\begin{array}{c c c c c c } \hline Q_{\mathbb{E}} & \mbox{Entry Capacity} & \mbox{entry K} & \mbox{entry Capacity} & \mbox{f} & \mbox{entry Capacity} & \mbox{entry K} & \mbox{entry Capacity} & \mbox{entry Capacity} & \mbox{entry K} & \mbox{entry Capacity} & $	Predictiv	e Equation	Q₌ = K(F -	f_q_)			l imitatio	n					
qc       Circulating Flow across the Entry       V       Approach Half Width       2.0 - 7.3 m         K       = 1-0.00347(∅-30)-0.978[(1/r)-0.05]       F       = 303x2       6.0 - 100.0 m         fc       = 0.210tp(1+0.2x2)       L       Entry Radius       6.0 - 100.0 m         to       = 1+0.5/(1+M)       L       Effective Length of Flare       1.0 - 100.0 m         M       = exp[(D-60)/10]       X2       = v+(e-v)/(1+2S)       S       S harpness of Flare       0.0 - 3.0         S       = 1.6(e-v)/L       K       F       fc       AM(09)       PM(19)       AM(09)       PM(19)         From A       5.112       0.030       1.485       0.986       1549       0.631       1446       1415       900       914       0.622       0.661         From B       5.029       0.030       1.485       0.984       1524       0.626       1202       1210       565       679       0.470       0.561         From B       5.029       0.030       1.485       0.935       2300.174       0.786       1828       1812       595       729       0.325       0.402         From C       7.591       0.030       1.485       0.935       2300.174       0.78	Q <sub>F</sub>	Entry Cap	acity	-0407		ו ר	e	Entry Widt	th		4.0 - 15.0	m	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	q <sub>c</sub>	Circulating	Flow acros	ss the Entry	,		v	Approach	Half Width		2.0 - 7.3 m	1	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	ĸ	= 1-0.0034	47(Ø-30)-0	978[(1/r)-0	051		r	Entry Rad	ius		6.0 - 100 0	) m	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	F	$= 303x_2$	(				Ĺ	Effective L	_ength of Fl	are	1.0 - 100.0	) m	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	f <sub>c</sub>	= 0.210t <sub>D</sub> (	1+0.2x <sub>2</sub> )				D	Inscribed	- Circle Diam	eter	15 - 100 m	1	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	t <sub>D</sub>	= 1+0.5/(1	+M)				Ø	Entry Angl	le		10° - 60°		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	М	= exp[(D-6	50)/10]				S	Sharpness	s of Flare		0.0 - 3.0		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	x <sub>2</sub>	= v+(e-v)/	(1+2S)										
Ratio-of-Flow to Capacity (RFC)           Arm         X2         M         tD         K         F         fc         AM(09)         PM(19)         AM(09)         AM(09)         PM(19)         AM(09)         AM(09	s	= 1.6(e-v)/	/L										
Arm         X2         M         to         K         F         fc         AM(09)         PM(19)         AM(09)	Patia of	Flow to Ca	aacity (PEC	•		_							
Arm         x2         M         tD         K         F         fc         AM(09)         PM(19)         AM(09)				1					Q <sub>E</sub>	Entr	y Flow	RI	FC
From A       5.112       0.030       1.485       0.986       1549       0.631       1446       1415       900       914       0.622       0.646         From B       5.029       0.030       1.485       0.984       1524       0.626       1202       1210       565       679       0.470       0.561         From C       7.591       0.030       1.485       0.935       2300.174       0.786       1828       1812       595       729       0.325       0.402         From D       From F       From F       From G       From G       From H       Image: Second	Arm	x <sub>2</sub>	М	t <sub>D</sub>	К	F	f <sub>c</sub>	AM(09)	PM(19)	AM(09)	PM(19)	AM(09)	PM(19)
From B       5.029       0.030       1.485       0.984       1524       0.626       1202       1210       565       679       0.470       0.561         From C       7.591       0.030       1.485       0.935       2300.174       0.786       1828       1812       595       729       0.325       0.402         From D       From F       From F       Image: Constraint of the second seco	From A	5.112	0.030	1.485	0.986	1549	0.631	1446	1415	900	914	0.622	0.646
From C       7.591       0.030       1.485       0.935       2300.174       0.786       1828       1812       595       729       0.325       0.402         From D       From E       From F       Image: Constraint of the constraint of	From B	5.029	0.030	1.485	0.984	1524	0.626	1202	1210	565	679	0.470	0.561
From D     From E       From F     From G       From H     From H	From C	7.591	0.030	1.485	0.935	2300.174	0.786	1828	1812	595	729	0.325	0.402
From E     From F       From G     From H	From D												
From F From G From H	From E												
From H	From F												
From H	From G												
	From H												

Junction:	on: Kam Tin Road / Fan Kam Road Job Number: J7342										J7342	
Scenario:		With Propo	osed Temp	orary Con	crete Batchir	ng Plant					J01 - P.	5
Design Ye	ear:	2030	De	signed By	: MCY	C	hecked By:	WCH		Date:	21 Janu	ary 2025
AM(08) P	EAK											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	0	390	436						826	127		
From B	396	6	128						530	441		
From C	453	116	5						574	402		
From D												
From E												
From F												
From G												
From H												
Total	849	512	569						1930			
Total	010	012	000						1000			
PM (17) F	Peak								-			
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	6	442	404						852	163		
From B	459	3	215						677	412		
From C	432	158	2						592	468		
From D												
From E												
From F												
From G												
From H												
Total	897	603	621						2121			
											-	
Legend					Geometric	Paramet	ers					
Arm	Road (	in clockwise	e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
А	Kam Tin F	Road (EB)			From A	7.7	3.3	35.0	10.0	25	40	0.7
В	Fan Kam	Road (SB)			From B	7.7	2.9	15.0	12.5	25	30	0.6
С	Kam Tin F	Road (WB)			From C	7.7	5.5	100.0	100.0	25	60	0.0
D	0				From D							
Е					From E							
F					From F							
G					From G							
Н					From H							
Predictiv	e Equation	0- = K/F -	fa)			Limitatio	-					
Q <sub>E</sub>	Entry Can	acity	·c4c/		ו ר		Entry Wid	th		40-150	m	
~ <u>⊢</u>	Circulating	n Flow acros	s the Entry	,		v	Approach	Half Width		20 - 73 m	)	
90 K	- 1 0 002	17(320)	070[/1/m) 0	051						2.0 - 7.0 1	)	
	$= 303x_{\circ}$	+1 (\$\$-30)-0.3	ə <i>r</i> o <u>[</u> (1/1)-0.	00]		T I	Enuy Kad	enath of El	are	1.0 - 100.0	) m	
f.	= 0 210t_(	1+0.2x <sub>2</sub> )					Inscribed	Circle Diam	eter	15 - 100.0	, 1	
'c te	= 1±0 5//1	+M)				a	Entry Ana			10° 60°		
ч <u>о</u> М	= 1+0.5/(1	TIVI)				6				10 - 00		
IVI Xa	$= \exp[(D - c)$	00)/10] (1+28)				5	Snarpness	s of Flare		0.0 - 3.0		
~2 C	= 1.6(a.v)	(1+23)										
5	= 1.6(e-v)	(L										
Ratio-of-I	Flow to Ca	pacity (RFC	;)									
<b>A</b>			+	K	-	f			Entry	y Flow	R	=C
Arm	×2		4 407	K	+		AIVI(08)	PIVI (17)		PIM (17)	AIVI(U8)	PIVI (17)
From A	5.112	0.030	1.485	0.986	1549	0.631	1448	1426	826	852	0.570	0.597
From B	5.029	0.030	1.485	0.984	1524	0.626	1227	1245	530	677	0.432	0.544
From C	7.591	0.030	1.485	0.935	2300.174	0.786	1855	1807	574	592	0.309	0.328
From D												
From E												
From F												
From G												
From H												

Junction:	ion: Kam Tin Road / Fan Kam Road Job Number: <u>J7342</u>										J7342	
Scenario:		With Propo	osed Temp	orary Con	crete Batchir	ng Plant					J01 - P.	6
Design Ye	ear:	2030	De	signed By	: MCY	C	hecked By:	WCH		Date:	21 Janu	ary 2025
AM (09) F	Peak											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	0	424	524						948	178		
From B	433	6	173						612	530		
From C	518	166	6						690	439		
From D												
From E												
From F												
From G												
From H												
Total	951	596	703						2250			
	1											
PM (19) P	Peak								-			
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	6	448	480						934	201		
From B	452	3	244						699	490		
From C	571	194	4						769	461		
From D												
From E												
From F												
From G												
From H												
Total	1029	645	728						2402			
Legend					Geometric	Paramet	ers					
Arm	Road (	in clockwise	e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
A	Kam Tin F	Road (EB)			From A	7.7	3.3	35.0	10.0	25	40	0.7
В	Fan Kam	Road (SB)			From B	7.7	2.9	15.0	12.5	25	30	0.6
С	Kam Tin F	Road (WB)			From C	7.7	5.5	100.0	100.0	25	60	0.0
D					From D							
E					From E							
F					From F							
G					From G							
H					From H							
Predictive	e Equation	Q₌ = K(F -	f_q_)			l imitatio	n					
Q <sub>E</sub>	Entry Cap	acity			ו ר	e	Entry Widt	th		4.0 - 15.0	m	
q <sub>c</sub>	Circulating	n Flow acros	s the Entry	,		v	Approach	Half Width		20-73m	1	
ĸ	= 1_0 003	17(Ø_30)_0 (	978[(1/r)_0	051		r	Entry Radi	iue		60-1000	) m	
F	$= 303x_2$	+/ (© 00) 0.	070[(1/1) 0.	00]		i	Effective I	enath of Fl	are	1 0 - 100.0	) m	
f	= 0.210t <sub>D</sub> (	1+0.2x <sub>2</sub> )				– D	Inscribed (	Circle Diam	eter	15 - 100 m	1	
to	= 1+0 5/(1	+M)				ø	Entry And	le		10° - 60°		
м	= evp[/D 6	SO)/101				ŝ	Sharphee	e of Elare		00 30		
X <sub>2</sub>	= v+(e-v)/	(1+2S)			L	0	onarphos			0.0 - 0.0		
S	$= 1.6(e_{-1}y)$	(1.20)										
	- 1.0(C-V)	<b>L</b>			1							
Ratio-of-I	Flow to Ca	pacity (RFC	;)									
Arm	¥.	м	t_	ĸ		f			Entry	Flow	RI AM(00)	=C
	- ^2 E 110	171	۳D 1 405	0.000	1540	1 <sub>C</sub>	4447	1400		FIVI(19)	AIVI(09)	PIVI(19)
	5.112	0.030	1.405	0.986	1549	0.631	141/	1402	948	934	0.009	0.000
From B	5.029	0.030	1.485	0.984	1524	0.626	11/3	1197	612	699	0.522	0.584
From C	/.591	0.030	1.485	0.935	2300.174	0.786	1828	1812	690	769	0.377	0.424
⊢rom D												
From E												
From F												
From G												
⊢rom H												















Junctions 9
PICADY 9 - Priority Intersection Module
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Filename: J7342\_TIA\_R2.j9

Path: J:\ENG\Job\J73XX\J7342 Kam Tin - S16 for Proposed Concrete Batching Plant\working\(2024 10) TIA\_R2\Junction9 Report generation date: 21/1/2025 17:59:09

```
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2024 EXISTING, AM (08)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2024 EXISTING, AM (09)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2024 EXISTING, PM (17)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2024 EXISTING, PM (19)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITHOUT, AM (08)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITHOUT, AM (09)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITHOUT, PM (17)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITHOUT, PM (19)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITHOUT, PM (19)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITH, AM (08)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITH, PM (17)
»Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITH, PM (17)
```

#### Summary of junction performance

	AM (08)	AM (09)	PM (17)	PM (19)
	RFC	RFC	RFC	RFC
	Kam Tin Rd / Kam	Sheung Rd / Sheun	ig Tsuen BT [Locked	I] - 2024 EXISTING
Stream B-ACD	0.81	0.76	0.71	0.73
Stream A-D	0.00	0.00	0.00	0.00
Stream D-ABC	0.08	0.08	0.09	0.09
Stream C-B	0.00	0.00	0.00	0.00
	Kam Tin Rd / Kam	] - 2030 WITHOUT		
Stream B-ACD	0.91	0.85	0.78	0.81
Stream A-D	0.00	0.00	0.00	0.00
Stream D-ABC	0.09	0.09	0.09	0.10
Stream C-B	0.00	0.00	0.00	0.00
	Kam Tin Rd / Ka	im Sheung Rd / She	ung Tsuen BT [Lock	ed] - 2030 WITH
Stream B-ACD	0.97	0.95	0.88	0.85
Stream A-D	0.00	0.00	0.00	0.00
Stream D-ABC	0.09	0.09	0.10	0.10
Stream C-B	0.00	0.00	0.00	0.00

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.



## File summary

## File Description

Title	Proposed Concrete Batching Plant
Location	Kam Tin
Site number	
Date	31/12/2024
Version	
Status	TIA_R2
Identifier	
Client	
Jobnumber	J7342
Enumerator	СКМ
Description	

## Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

## **Analysis Options**

Calculate Queue Percentiles Calculate residual capacity		RFC Threshold	Average Delay threshold (s)	(s) Queue threshold (PCU	
		1.00	36.00	20.00	

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DEX08	2024 EXISTING	AM (08)	ONE HOUR	08:00	09:30	15
DEX09	2024 EXISTING	AM (09)	ONE HOUR	09:00	10:30	15
DEX17	2024 EXISTING	PM (17)	ONE HOUR	17:00	18:30	15
DEX19	2024 EXISTING	PM (19)	ONE HOUR	19:00	20:30	15
DRF08	2030 WITHOUT	AM (08)	ONE HOUR	08:00	09:30	15
DRF09	2030 WITHOUT	AM (09)	ONE HOUR	09:00	10:30	15
DRF17	2030 WITHOUT	PM (17)	ONE HOUR	17:00	18:30	15
DRF21	2030 WITHOUT	PM (19)	ONE HOUR	19:00	20:30	15
DWT08	2030 WITH	AM (08)	ONE HOUR	08:00	09:30	15
DWT09	2030 WITH	AM (09)	ONE HOUR	09:00	10:30	15
DWT17	2030 WITH	PM (17)	ONE HOUR	17:00	18:30	15
DWT19	2030 WITH	PM (19)	ONE HOUR	19:00	20:30	15

## **Analysis Set Details**

ID	Name	Locked	Network flow scaling factor (%)
AJ03	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	~	100.000



# Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2024 EXISTING, AM (08)

#### **Data Errors and Warnings**

Severity	verity Area Item		Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	9.59	А

#### **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
Α	Kam Tin Road		Major
в	Kam Sheung Road (Arm B) Kam Sheung Road (Arm B) Kam Sheung Road (Arm B) v		Minor
С	Kam Tin Road		Major
D	Sheung Tsuen B/T		Minor

#### **Major Arm Geometry**

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
Α	7.80			100.0		-
С	7.80			65.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

#### **Minor Arm Geometry**

Arm	Minor arm type Lane width (m)		Visibility to left (m)	Visibility to right (m)		
в	One lane	5.00	35	30		
D	One lane	5.00	15	20		



### Slope / Intercept / Capacity

#### **Priority Intersection Slopes and Intercepts**

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	632	-	-	-	-	-	-	0.226	0.322	0.226	-	-	-
1	B-A	605	0.101	0.257	0.257	-	-	-	0.161	0.366	-	0.257	0.257	0.128
1	B-C	772	0.109	0.276	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	605	0.101	0.257	0.257	-	-	-	0.161	0.366	0.161	-	-	-
1	B-D, offside lane	605	0.101	0.257	0.257	-	-	-	0.161	0.366	0.161	-	-	-
1	C-B	612	0.218	0.218	0.312	-	-	-	-	-	-	-	-	-
1	D-A	764	-	-	-	-	-	-	0.273	-	0.108	-	-	-
1	D-B, nearside lane	591	0.158	0.158	0.358	-	-	-	0.251	0.251	0.099	-	-	-
1	D-B, offside lane	591	0.158	0.158	0.358	-	-	-	0.251	0.251	0.099	-	-	-
1	D-C	591	-	0.158	0.358	0.125	0.251	0.251	0.251	0.251	0.099	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DEX08	2024 EXISTING	AM (08)	ONE HOUR	08:00	09:30	15

 Vehicle mix source
 PCU Factor for a HV (PCU)

 HV Percentages
 2.00

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	650	100.000
в		~	311	100.000
С		✓	425	100.000
D		✓	48	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

	То								
		Α	в	С	D				
	Α	0	252	398	0				
From	в	224	0	87	0				
	С	425	0	0	0				
	D	48	0	0	0				

## **Vehicle Mix**

#### **Heavy Vehicle Percentages**

	То								
		A	в	С	D				
	Α	0	0	0	0				
From	в	0	0	0	0				
	С	0	0	0	0				
	D	0	0	0	0				



## **Detailed Demand Data**

## Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	489	489
00.00 00.45	в	234	234
08:00-08:15	С	320	320
	D	36	36
	Α	584	584
09.45 09.20	в	280	280
08.15-08.50	С	382	382
	D	43	43
	Α	716	716
08:30-08:45	в	342	342
	С	468	468
	D	53	53
	Α	716	716
08:45-09:00	в	342	342
00.45-05.00	С	468	468
	D	53	53
	A	584	584
00.00 00.15	в	280	280
09.00-09.15	С	382	382
	D	43	43
	Α	489	489
09-15-09-20	в	234	234
09.15-09:30	С	320	320
	D	36	36

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.81	43.28	3.9	E
A-B				
A-C				
A-D	0.00	0.00	0.0	А
D-ABC	0.08	6.17	0.1	А
C-D				
C-A				
С-В	0.00	0.00	0.0	А



## Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2024 EXISTING, AM (09)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	7.74	А

#### **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DEX09	2024 EXISTING	AM (09)	ONE HOUR	09:00	10:30	15

Vehicle mix source	PCU Factor for a HV (PCU)		
HV Percentages	2.00		

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	623	100.000
в		✓	299	100.000
С		✓	407	100.000
D		~	47	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

	То				
		A	в	c	D
	Α	0	243	380	0
From	в	216	0	83	0
	С	407	0	0	0
	D	47	0	0	0



	То				
		Α	в	С	D
	Α	0	0	0	0
From	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

## **Detailed Demand Data**

## Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	469	469
00.00 00.45	в	225	225
09:00-09:15	С	306	306
	D	35	35
	Α	560	560
00.45 00.20	в	269	269
09:15-09:30	С	366	366
	D	42	42
	Α	686	686
09:30-09:45	в	329	329
	С	448	448
	D	52	52
	Α	686	686
00.45 40.00	в	329	329
09:45-10:00	С	448	448
	D	52	52
	Α	560	560
10.00 10.15	в	269	269
10.00-10.15	С	366	366
	D	42	42
	Α	469	469
40.45 40.20	в	225	225
10:15-10:30	С	306	306
	D	35	35

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.76	34.65	3.0	D
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.08	6.10	0.1	А
C-D				
C-A				
С-В	0.00	0.00	0.0	A



# Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2024 EXISTING, PM (17)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	5.58	A

#### **Junction Network Options**

Driving side	Lighting	
Left	Normal/unknown	

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DEX17	2024 EXISTING	PM (17)	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)		
HV Percentages	2.00		

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Jse O-D data Average Demand (PCU/hr)	
Α		~	630	100.000
в		✓	277	100.000
С		✓	495	100.000
D		~	49	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

	То					
From		Α	в	c	D	
	Α	0	286	344	0	
	в	186	0	91	0	
	С	495	0	0	0	
	D	49	0	0	0	



	То				
		Α	В	С	D
	Α	0	0	0	0
From	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

## **Detailed Demand Data**

#### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	474	474
47.00 47.45	в	209	209
17:00-17:15	С	373	373
	D	37	37
	Α	566	566
17:15-17:30	в	249	249
	С	445	445
	D	44	44
17:30-17:45	Α	694	694
	в	305	305
	С	545	545
	D	54	54
47 45 40 00	Α	694	694
	в	305	305
17:45-16:00	С	545	545
	D	54	54
	Α	566	566
49.00 49.45	в	249	249
18:00-18:15	С	445	445
	D	44	44
	Α	474	474
40.45 40.20	в	209	209
18:15-18:30	С	373	373
	D	37	37

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.71	28.11	2.3	D
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.09	6.41	0.1	A
C-D				
C-A				
С-В	0.00	0.00	0.0	A



# Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2024 EXISTING, PM (19)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	6.11	A

#### **Junction Network Options**

Driving side	Lighting	
Left	Normal/unknown	

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DEX19	2024 EXISTING	PM (19)	ONE HOUR	19:00	20:30	15

Vehicle mix source	PCU Factor for a HV (PCU)		
HV Percentages	2.00		

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	660	100.000
в		✓	282	100.000
С		✓	494	100.000
D		~	50	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

	То				
		A	в	c	D
From	Α	0	300	360	0
	в	190	0	92	0
	С	494	0	0	0
	D	50	0	0	0



	То				
		Α	В	С	D
From	Α	0	0	0	0
	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

## **Detailed Demand Data**

## Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	497	497
40.00 40.45	в	212	212
19:00-19:15	С	372	372
	D	38	38
	Α	593	593
10.15-10.30	в	254	254
19:15-19:30	С	444	444
	D	45	45
	Α	727	727
19:30-19:45	в	310	310
	С	544	544
	D	55	55
19:45-20:00	Α	727	727
	в	310	310
	С	544	544
	D	55	55
	Α	593	593
20.00-20.15	в	254	254
20.00-20.15	С	444	444
	D	45	45
	Α	497	497
20.15-20.20	в	212	212
20.15-20.30	С	372	372
	D	38	38

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.73	31.06	2.6	D
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.09	6.42	0.1	A
C-D				
C-A				
С-В	0.00	0.00	0.0	A



## Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITHOUT, AM (08)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	16.02	С

#### **Junction Network Options**

Driving side	Lighting	
Left	Normal/unknown	

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DRF08	2030 WITHOUT	AM (08)	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)	
HV Percentages	2.00	

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	705	100.000
в		✓	331	100.000
С		✓	461	100.000
D		~	51	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

	То					
		A	в	С	D	
	Α	0	268	437	0	
From	в	238	0	93	0	
	С	461	0	0	0	
	D	51	0	0	0	



	То				
		Α	В	С	D
	Α	0	0	0	0
From	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

## **Detailed Demand Data**

## Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	531	531
00-00-00-45	в	249	249
08:00-08:15	С	347	347
	D	38	38
	Α	634	634
09.15 09.20	в	298	298
08:15-08:30	С	414	414
	D	46	46
	Α	776	776
08:30-08:45	в	364	364
	С	508	508
	D	56	56
	Α	776	776
08.45 00.00	в	364	364
08:45-09:00	С	508	508
	D	56	56
	Α	634	634
00.00 00.45	в	298	298
09:00-09:15	с	414	414
	D	46	46
	Α	531	531
00.45 00.20	в	249	249
09:15-09:30	С	347	347
	D	38	38

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.91	73.97	6.9	F
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.09	6.32	0.1	A
C-D				
C-A				
С-В	0.00	0.00	0.0	A



## Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITHOUT, AM (09)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	11.59	В

#### **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DRF09	2030 WITHOUT	AM (09)	ONE HOUR	09:00	10:30	15

Vehicle mix source	PCU Factor for a HV (PCU)	
HV Percentages	2.00	

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	676	100.000
в		✓	318	100.000
С		✓	442	100.000
D		~	50	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

	То				
		Α	в	С	D
	Α	0	258	418	0
From	в	229	0	89	0
	С	442	0	0	0
	D	50	0	0	0



	То				
		Α	в	С	D
	Α	0	0	0	0
From	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

## **Detailed Demand Data**

#### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	509	509
09:00-09:15	в	239	239
	С	333	333
	D	38	38
	Α	608	608
09:15-09:30	в	286	286
	С	397	397
	D	45	45
	Α	744	744
09:30-09:45	в	350	350
	c	487	487
	D	55	55
09:45-10:00	Α	744	744
	в	350	350
	С	487	487
	D	55	55
	Α	608	608
10.00 10.15	в	286	286
10:00-10:15	С	397	397
	D	45	45
	Α	509	509
10:15-10:30	в	239	239
	С	333	333
	D	38	38

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.85	53.17	4.8	F
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.09	6.25	0.1	A
C-D				
C-A				
С-В	0.00	0.00	0.0	A



# Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITHOUT, PM (17)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	7.56	А

#### **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DRF17	2030 WITHOUT	PM (17)	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)		
HV Percentages	2.00		

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	676	100.000
в		✓	295	100.000
С		✓	535	100.000
D		~	52	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

	То				
		Α	в	С	D
	Α	0	304	372	0
From	в	197	0	98	0
	С	535	0	0	0
	D	52	0	0	0



	То				
		Α	в	С	D
	Α	0	0	0	0
From	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

## **Detailed Demand Data**

#### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	509	509
47.00 47.45	в	222	222
17:00-17:15	С	403	403
	D	39	39
	Α	608	608
17.15-17.30	в	265	265
17:15-17:30	С	481	481
	D	47	47
	Α	744	744
17:30-17:45	в	325	325
	c	589	589
	D	57	57
47.45.40.00	Α	744	744
	в	325	325
17.45-18.00	С	589	589
	D	57	57
	Α	608	608
10.00 10.15	в	265	265
10.00-10.15	С	481	481
	D	47	47
	A	509	509
18-15-18-20	в	222	222
10.15-10:30	С	403	403
	D	39	39

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.78	38.75	3.3	E
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.09	6.59	0.1	A
C-D				
C-A				
С-В	0.00	0.00	0.0	A



# Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITHOUT, PM (19)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	8.72	A

#### **Junction Network Options**

Driving side	Lighting	
Left	Normal/unknown	

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DRF21	2030 WITHOUT	PM (19)	ONE HOUR	19:00	20:30	15

Vehicle mix source	PCU Factor for a HV (PCU)	
HV Percentages	2.00	

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	707	100.000
в		✓	301	100.000
С		✓	534	100.000
D		~	53	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

	То				
		Α	в	С	D
	Α	0	318	389	0
From	в	202	0	99	0
	С	534	0	0	0
	D	53	0	0	0



	То				
		Α	В	С	D
	Α	0	0	0	0
From	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

## **Detailed Demand Data**

## Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	532	532
40.00 40.45	в	227	227
19:00-19:15	С	402	402
	D	40	40
	Α	636	636
40.45 40.20	в	271	271
19:15-19:30	С	480	480
	D	48	48
	Α	778	778
19:30-19:45	в	331	331
	с	588	588
	D	58	58
40.45.00.00	Α	778	778
	в	331	331
19:45-20:00	С	588	588
	D	58	58
	Α	636	636
20.00 20.45	в	271	271
20:00-20:15	с	480	480
	D	48	48
	Α	532	532
00.45 00.00	в	227	227
20:15-20:30	С	402	402
	D	40	40

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.81	45.05	3.9	E
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.10	6.60	0.1	A
C-D				
C-A				
С-В	0.00	0.00	0.0	A



## Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITH, AM (08)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	22.25	С

#### **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DWT08	2030 WITH	AM (08)	ONE HOUR	08:00	09:30	15

 Vehicle mix source
 PCU Factor for a HV (PCU)

 HV Percentages
 2.00

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	760	100.000
в		✓	331	100.000
С		✓	516	100.000
D		~	51	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

		То			
		Α	в	c	D
	Α	0	268	492	0
From	в	238	0	93	0
	С	516	0	0	0
	D	51	0	0	0



			То		
		Α	В	С	D
	Α	0	0	0	0
From	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

## **Detailed Demand Data**

## Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	572	572
09.00 09.45	в	249	249
08:00-08:15	С	388	388
	D	38	38
	Α	683	683
09.15 09.20	в	298	298
08.15-08.50	С	464	464
	D	46	46
	Α	837	837
09.20 09.45	в	364	364
08:30-08:45	c	568	568
	D	56	56
	Α	837	837
09.45 00.00	в	364	364
08.45-09.00	c	568	568
	D	56	56
	Α	683	683
00.00 00.15	в	298	298
09:00-09:15	С	464	464
	D	46	46
	Α	572	572
00.15 00.20	в	249	249
09.15-09:30	С	388	388
	D	38	38

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.97	110.43	10.7	F
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.09	6.51	0.1	A
C-D				
C-A				
С-В	0.00	0.00	0.0	A



## Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT -2030 WITH, AM (09)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	19.51	С

#### **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DWT09	2030 WITH	AM (09)	ONE HOUR	09:00	10:30	15

 Vehicle mix source
 PCU Factor for a HV (PCU)

 HV Percentages
 2.00

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	771	100.000
в		✓	318	100.000
С		✓	537	100.000
D		~	50	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

	То				
		Α	в	c	D
	Α	0	258	513	0
From	в	229	0	89	0
	С	537	0	0	0
	D	50	0	0	0



	То				
		Α	в	С	D
	Α	0	0	0	0
From	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

## **Detailed Demand Data**

## Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	580	580
00.00 00.45	в	239	239
09:00-09:15	С	404	404
	D	38	38
	Α	693	693
00.45 00.20	в	286	286
09:15-09:30	С	483	483
	D	45	45
	Α	849	849
00.20 00.45	в	350	350
09:30-09:45	С	591	591
	D	55	55
	Α	849	849
00.45 40.00	в	350	350
09:45-10:00	С	591	591
	D	55	55
	Α	693	693
40.00 40.45	в	286	286
10:00-10:15	С	483	483
	D	45	45
	Α	580	580
40.45 40.20	в	239	239
10:15-10:30	С	404	404
	D	38	38

## Results

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.95	101.80	9.4	F
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.09	6.57	0.1	A
C-D				
C-A				
С-В	0.00	0.00	0.0	A


# Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT -2030 WITH, PM (17)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	11.48	В

#### **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DWT17	2030 WITH	PM (17)	ONE HOUR	17:00	18:30	15

 Vehicle mix source
 PCU Factor for a HV (PCU)

 HV Percentages
 2.00

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	771	100.000
в		✓	295	100.000
С		✓	630	100.000
D		~	52	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

		То			
		Α	в	С	D
	Α	0	304	467	0
From	в	197	0	98	0
	С	630	0	0	0
	D	52	0	0	0

# **Vehicle Mix**



#### Heavy Vehicle Percentages

			То		
		Α	в	С	D
	Α	0	0	0	0
From	в	0	0	0	0
	С	0	0	0	0
	D	0	0	0	0

# Detailed Demand Data

#### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	580	580
47.00 47.45	в	222	222
17:00-17:15	С	474	474
	D	39	39
	Α	693	693
17.15-17.30	в	265	265
17.15-17.30	С	566	566
	D	47	47
	Α	849	849
17.30-17.45	в	325	325
17:30-17:45	С	694	694
	D	57	57
	Α	849	849
17.45-18.00	в	325	325
17.45-18.00	С	694	694
	D	57	57
	Α	693	693
10.00 10.15	в	265	265
18:00-18:15	С	566	566
	D	47	47
	Α	580	580
10.15 10.20	в	222	222
10.15-10:30	С	474	474
	D	39	39

# Results

#### **Results Summary for whole modelled period**

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.88	66.79	5.6	F
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.10	6.96	0.1	A
C-D				
C-A				
С-В	0.00	0.00	0.0	A



# Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT - 2030 WITH, PM (19)

#### **Data Errors and Warnings**

Severity	Area	ltem	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## **Junction Network**

#### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Kam Tin Rd / Kam Sheung Rd / Sheung Tsuen BT	Crossroads	Two-way	10.39	В

#### **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## **Traffic Demand**

#### **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DWT19	2030 WITH	PM (19)	ONE HOUR	19:00	20:30	15

 Vehicle mix source
 PCU Factor for a HV (PCU)

 HV Percentages
 2.00

#### **Demand overview (Traffic)**

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		~	747	100.000
в		✓	301	100.000
С		✓	574	100.000
D		~	53	100.000

## **Origin-Destination Data**

#### Demand (PCU/hr)

			То		
		Α	в	c	D
From	Α	0	318	429	0
	в	202	0	99	0
	С	574	0	0	0
	D	53	0	0	0

# **Vehicle Mix**



#### Heavy Vehicle Percentages

		То										
		Α	в	С	D							
From	Α	0	0	0	0							
	в	0	0	0	0							
	С	0	0	0	0							
	D	0	0	0	0							

# Detailed Demand Data

#### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
	Α	562	562
40.00 40.45	в	227	227
19:00-19:15	С	432	432
	D	40	40
	Α	672	672
10.15-10.30	в	271	271
13.13-13.30	С	516	516
	D	48	48
	Α	822	822
10.30-10.45	в	331	331
19.30-19.43	С	632	632
	D	58	58
	Α	822	822
19-45-20-00	в	331	331
19.45-20.00	С	632	632
	D	58	58
	Α	672	672
20.00 20.15	в	271	271
20.00-20.15	С	516	516
	D	48	48
	Α	562	562
20.15-20.20	в	227	227
20.15-20.30	С	432	432
	D	40	40

# Results

#### **Results Summary for whole modelled period**

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.85	56.64	4.8	F
A-B				
A-C				
A-D	0.00	0.00	0.0	A
D-ABC	0.10	6.75	0.1	A
C-D				
C-A				
С-В	0.00	0.00 0.00		A



Junction:		Kam Tin R	load / Lam	Kam Road	d / Route Tv	visk				Jo	b Number:	J7342
Scenario:		Existing C	ondition							-	J04 - P.	1
Design Ye	ear:	2024	. De	signed By	: MCY		Checked By:	WCH	_	Date:	21 Janu	ary 2025
AM(08) P		To P	To C	To D	To E	ToE	To C	ТаЦ	Total	a	1	
	10 A	10 D	100	10 D	IUE	IUF	10 G	10 11	10(a)	Чс 00		
	121	318	208						697 560	20		
From B	411	8	141						560	379		
	110	18	0						130	540		
From E												
From F												
From G												
Total	650	244	200						1202			
Total	050	344	299						1393		1	
PM (17) F	Peak										_	
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	136	427	167						730	30		
From B	318	6	77						401	303		
From C	176	24	0						200	460		
From D												
From E												
From F												
From G												
From H												
Total	630	457	244						1331			
Logond					Goomotri	c Paramot	ore					
Arm	Road	in clockwis	a order)		Arm		v (m)	r (m)	L (m)	D (m)	Ø (°)	S
	Kam Tin F	and (FR)			From A	60	3.5	100.0	5.5	27	60	0.7
B	ll am Kam				From B	6.0	3.5	25.0	8.0	27	60	0.7
	Route Twi	sk (NR)			From C	7.0	3.5	20.0 65.0	12.0	27	35	0.5
					From D	1.0	0.0	00.0	12.0	21	00	0.0
F					From F							
F					From F							
G					From G							
н					From H							
Duesdietie		0 - K/F	£ )									
Predictiv	Entry Can	$Q_E = K(F - C_E)$	T <sub>c</sub> <b>q</b> <sub>c</sub> )		٦	Limitatio	Entry Wid	th		40 150	m	1
d.	Circulating	acity a Elow acros	ee the Entr	,		e v		Half Width		4.0 - 15.0	· · · ·	
90 K		47(~ 20) 0	070[(1/r) 0	051		v	Costra Dod			2.0 - 7.0 1	1	
r F	$= 303x_{0}$	47( <i>©</i> -30)-0.	970[(1/1)-0.	05]			Effective I	enath of F	are	1.0 - 100.0	) m	
fa	$= 0.210 t_{\rm p}$	(1+0.2x <sub>2</sub> )					Inscribed	Circle Diam	eter	15 - 100.0	)     1	
to	= 1+0 5/(1	+M)				Ø	Entry And			10° - 60°	1	
M	= 1.0.0/(1)	SO)/101				s	Sharphee	s of Flare		0 30		
	$= v + (e_v)/$	(1+2S)				5	Sharphes	SUITATE		0.0 - 3.0		l
s	= 1.6(e-v)	/1										
		·			4							
Ratio-of-	Flow to Ca	pacity (RFC	C)				0-		Entry Flou	,	DEC	
Arm	x <sub>2</sub>	М	t <sub>D</sub>	К	F	f <sub>c</sub>	QE AM(08)	PM (17)	AM(08)	PM (17)	AM(08)	PM (17)
From A	4.519	0.037	1.482	0.935	1369	0.593	1266	1264	697	730	0.551	0.578
From B	4.750	0.037	1.482	0.906	1439	0.607	1095	1137	560	401	0.511	0.353
From C	5.310	0.035	1.483	1.017	1609	0.642	1283	1335	136	200	0.106	0.150
From D												
From E												
From F												
From G												
From H												

Junction:		Kam Tin R	load / Lam	Kam Road	d / Route TW	IST				Jo	b Number:	J7342
Scenario:		Existing Co	ondition							-	J04 - P.	2
Design Ye	ear:	2024	De	signed By	: MCY	C	hecked By:	WCH		Date:	21 Janu	ary 2025
AM (09) F	Peak											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	92	318	260						670	25		
From B	394	8	136						538	352		
From C	137	17	0						154	494		
From D												
From E												
From F												
From G												
From H												
Total	623	343	396						1362			
PM (19) F	Peak											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	115	442	177						734	55		
From B	335	6	78						419	292		
From C	210	49	0						259	456		
From D												
From E												
From F												
From G												
From H												
Total	660	497	255						1412			
						_						
Legend	<u> </u>				Geometric	Paramet	ers					
Arm	Road (	in clockwise	e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
A	Kam I in F	Road (EB)			From A	6.0	3.5	100.0	5.5	27	60	0.7
В	Lam Kam	Road WB)			From B	6.0	3.5	25.0	8.0	27	60	0.5
C	Route I wi	sk (NB)			From C	7.0	3.5	65.0	12.0	27	35	0.5
					From D							
					From E							
F					From F							
G					From G							
н					From H							
Predictiv	e Equation	Q <sub>F</sub> = K(F -	f.a.)			l imitatio	n					
Q	Entry Can	acity	-0-107		ו ר	e	Entry Widt	'n		40-150	m	
q <sub>c</sub>	Circulating	n Flow acros	ss the Entry	/		v	Approach	Half Width		20-73 m	ייי ו	
ĸ	= 1_0 003	17(Ø_30)_0	078[(1/r)_0	051		r	Entry Radi			6.0 100.0	) m	
F	$= 303x_{2}$	+ <i>1</i> ( <i>©</i> -00)-0.	370[(1/1)-0.	00]		1	Effective I	enath of Fl	are	1 0 - 100.0	) m	
f	= 0.210t <sub>D</sub> (	1+0.2x <sub>2</sub> )				– D	Inscribed (	Circle Diam	eter	15 - 100 m	1	
t	= 1+0 5/(1	+M)				ø	Entry Angl	e		10° - 60°		
м	$= exp[(D_f)]$	SO)/101				ŝ	Sharnness	of Flare		0.0-3.0		
X <sub>2</sub>	= v+(e-v)/	(1+2S)			<sup>1</sup>		onarphood			0.0 0.0		
s	= 1 6(e-v)	(1										
		-			4							
Ratio-of-	Flow to Ca	pacity (RFC	C)					<u></u>	Ente	· <b>F</b> low		-
Arm	x <sub>2</sub>	М	t <sub>D</sub>	к	F	f <sub>c</sub>	AM(09)	PM(19)	Entr AM(09)	PM(19)	AM(09)	PM(19)
From A	4.519	0.037	1.482	0.935	1369	0.593	1266	1250	670	734	0.529	0.587
From B	4.750	0.037	1.482	0.906	1439	0.607	1110	1143	538	419	0.485	0.367
From C	5.310	0.035	1.483	1.017	1609	0.642	1313	1338	154	259	0.117	0.194
From D												
From E												
From F												
From G												
From H												
	•						•				•	

Junction:	: Kam Tin Road / Lam Kam Road / Route Twisk Job Number: J7342										J7342	
Scenario:		Without Pr	oposed Te	mporary C	Concrete Bate	ching Plar	nt				J04 - P.	3
Design Ye	ear:	2030	De	signed By	: MCY	C	Checked By:	WCH	_	Date:	21 Janu	ary 2025
									-			
AM(08) P	EAK									-	-	
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>	ĺ	
From A	128	349	274						751	27	1	
From B	451	8	150						609	402	1	
From C	125	19	0						144	587	1	
From D											1	
From E											1	
From F											1	
From G											1	
From H											1	
Total	704	376	424						1504		1	
PM (17) F	Peak											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	144	464	177						785	31		
From B	345	6	82						433	321		
From C	187	25	0						212	495		
From D												
From E												
From F												
From G												
From H												
Total	676	495	259						1430			
Legend					Geometric	Paramet	ters					
Arm	Road	(in clockwise	e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
А	Kam Tin I	Road (EB)			From A	6.0	3.5	100.0	5.5	27	60	0.7
В	Lam Kam	Road WB)			From B	6.0	3.5	25.0	8.0	27	60	0.5
С	Route Tw	isk (NB)			From C	7.0	3.5	65.0	12.0	27	35	0.5
D	(	)			From D							
E					From E							
F					From F							
G					From G							
н					From H							
					-							
Predictiv	e Equatior	י Q <sub>E</sub> = K(F -	f <sub>c</sub> q <sub>c</sub> )			Limitatio	n					
Q <sub>E</sub>	Entry Cap	pacity				е	Entry Widt	th		4.0 - 15.0	m	
q <sub>c</sub>	Circulatin	g Flow acros	ss the Entry	/		v	Approach	Half Width		2.0 - 7.3 m	1	
К	= 1-0.003	47(Ø-30)-0.	978[(1/r)-0.	05]		r	Entry Rad	ius		6.0 - 100.0	) m	
F	= 303x <sub>2</sub>					L	Effective L	ength of F	are	1.0 - 100.0	) m	
f <sub>c</sub>	= 0.210t <sub>D</sub>	(1+0.2x <sub>2</sub> )				D	Inscribed	Circle Diam	leter	15 - 100 m	1	
t <sub>D</sub>	= 1+0.5/(	1+M)				Ø	Entry Angl	le		10° - 60°		
М	= exp[(D-	60)/10]				S	Sharpness	s of Flare		0.0 - 3.0		
x <sub>2</sub>	= v+(e-v)	/(1+2S)										
S	= 1.6(e-v)	)/L										
Ratio-of-	Flow to Ca	pacity (RFC	<b>;</b> )									
				14	-	£	QE		Entry Flow		RFC	
Arm	X <sub>2</sub>	M	LD	K	+	I <sub>C</sub>	AM(08)	PM (17)	AM(08)	PM (17)	AM(08)	PM (17)
From A	4.519	0.037	1.482	0.935	1369	0.593	1265	1263	751	785	0.594	0.622
From B	4.750	0.037	1.482	0.906	1439	0.607	1083	1127	609	433	0.563	0.384
From C	5.310	0.035	1.483	1.017	1609	0.642	1252	1312	144	212	0.115	0.162
From D												
From E												
From F												
From G												
From H											<u> </u>	

Junction:		Kam Tin R	oad / Lam	Kam Road	ad / Route TWIST					Job Number: J7342		
Scenario:		Without Pr	oposed Te	mporary C	concrete Bate	ching Plan	ıt			_	J04 - P.	4
Design Ye	ear:	2030	De	signed By	: MCY	С	hecked By:	WCH		Date:	21 Janu	ary 2025
AM (09) F	Peak											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	98	349	276						723	26		
From B	433	8	144						585	374		
From C	145	18	0						163	539		
From D												
From E												
From F												
From G												
From H												
Total	676	375	420						1471			
PM (19) P	'eak	Te D	Ta C		ТаГ	ТаГ	Ta C	Tall	Tatal	a	1	
Arm	TOA	10 B	100	10 D	IOE	10 F	10 G	10 H	Total	Y <sub>c</sub>		
From A	122	480	188						790	58		
From B	363	6	83						452	310		
From C	223	52	0						275	491		
From D												
From E												
From F												
From G												
From H	708	538	271						1517			
Total	100	000	211						1017			
Legend					Geometric	Paramet	ers					
Arm	Road	(in clockwise	e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
A	Kam Tin I	Road (EB)			From A	6.0	3.5	100.0	5.5	27	60	0.7
В	Lam Kam	Road WB)			From B	6.0	3.5	25.0	8.0	27	60	0.5
c	Route Tw	isk (NB)			From C	7.0	3.5	65.0	12.0	27	35	0.5
D		( )			From D							
Е					From E							
F					From F							
G					From G							
н					From H							
Predictive	e Equatior	n Q <sub>E</sub> = K(F -	f <sub>c</sub> q <sub>c</sub> )			Limitatio	n					
Q <sub>E</sub>	Entry Cap	pacity				е	Entry Wid	th		4.0 - 15.0	m	
q <sub>c</sub>	Circulatin	g Flow acros	ss the Entry	/		v	Approach	Half Width		2.0 - 7.3 m	1	
К	= 1-0.003	47(∅-30)-0.	978[(1/r)-0	05]		r	Entry Rad	ius		6.0 - 100.0	) m	
F	$= 303x_2$	(1 0 0 \				L	Effective L	ength of Fl	are	1.0 - 100.0	) m	
t <sub>c</sub>	$= 0.210t_{D}$	(1+0.2x <sub>2</sub> )				D	Inscribed	Circle Diam	eter	15 - 100 m	1	
τ <sub>D</sub>	= 1+0.5/(	1+M)				Ø	Entry Ang	le		10° - 60°		
М	= exp[(D-	60)/10]			[	S	Sharpness	s of Flare		0.0 - 3.0		
x <sub>2</sub>	= v+(e-v)/	(1+2S)										
S	= 1.6(e-v)	)/L										
Ratio-of-I	Flow to Ca	pacity (RFC	;)									
			•		-	£			Entry	/ Flow	RI	-C
Arm	X <sub>2</sub>	M	ι <sub>D</sub>	K	+	í <sub>c</sub>	AM(09)	PM(19)	AM(09)	PIM(19)	AM(09)	PM(19)
From A	4.519	0.037	1.482	0.935	1369	0.593	1266	1248	723	790	0.571	0.633
From B	4.750	0.037	1.482	0.906	1439	0.607	1098	1133	585	452	0.533	0.399
From C	5.310	0.035	1.483	1.017	1609	0.642	1284	1315	163	275	0.127	0.209
⊢rom D												
⊢rom E												
From F												
From G												
riulli H												

Junction:		Kam Tin R	Road / Lam	Kam Road	/ Route Tv	visk				Jo	b Number:	J7342
Scenario:		With Prop	osed Temp	orary Cond	crete Batch	ing Plant					J04 - P.	5
Design Ye	ear:	2030	. De	signed By:	MCY	- 0	hecked By:	WCH	-	Date:	21 Janu	ary 2025
AM(08) P	EAK											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	183	349	274						806	27		
From B	451	8	150						609	457		
From C	125	19	0						144	642		
From D	-									-		
From F												
From F												
From G												
From L												
Total	750	376	121						1550			
TULAI	759	370	424						1009			
PM (17) P	Peak											
Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From A	239	464	177						880	31		
From B	345	6	82						433	416		
From C	187	25	0						212	590		
From D												
From E												
From F												
From G												
From H												
Total	771	495	259						1525			
Legend					Geometri	c Paramet	ers					
Arm	Road (	in clockwise	e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø (°)	S
А	Kam Tin F	Road (EB)			From A	6.0	3.5	100.0	5.5	27	60	0.7
В	Lam Kam	Road WB)			From B	6.0	3.5	25.0	8.0	27	60	0.5
С	Route Twi	sk (NB)			From C	7.0	3.5	65.0	12.0	27	35	0.5
D	0				From D							
E					From E							
F					From F							
G					From G							
н					From H							
Prodictiv	o Equation	0 = K/E	fa)			Limitatia	-					
Q <sub>E</sub>	Entry Can	acity	'c <b>4</b> c/		1		Entry Widt	th		40-150	m	1
~ <u>⊢</u>	Circulating	n Flow acros	es the Entry	,		v	Approach	Half Width		20 - 73 m	)	
90 14		$47(\propto 20)$ 0	070[(4/=) 0	051		v				2.0 - 7.5 1	1	
K E	= 1-0.0034 = 303×-	+ <i>r</i> (∞-30)-0.	ອາດ[(1/r)-0.	looj			Entry Radi	ongth of T	are	0.0 - 100.0	) m	
f	= 0.210 + 1	1+0 2v \							al c	15 100.0	,	
'c +		······································							IELEI	10 - 100 m	I	
۲ <sub>D</sub>	= 1+0.5/(1	+IVI)				Ø	Entry Angi	ie		10" - 60"		
M	= exp[(D-6	50)/10] (1:00)				S	Sharpness	s of Flare		0.0 - 3.0		
A2	= v+(e-v)/(	(1+25)										
5	= 1.6(e-v)/	(L			1							
Ratio-of-I	Flow to Ca	pacity (RFC	C)									
							Q <sub>E</sub>		Entry Flow	/	RFC	
Arm	X <sub>2</sub>	M	t <sub>D</sub>	K	F	t <sub>c</sub>	AM(08)	PM (17)	AM(08)	PM (17)	AM(08)	PM (17)
From A	4.519	0.037	1.482	0.935	1369	0.593	1265	1263	806	880	0.637	0.697
From B	4.750	0.037	1.482	0.906	1439	0.607	1052	1075	609	433	0.579	0.403
From C	5.310	0.035	1.483	1.017	1609	0.642	1216	1250	144	212	0.118	0.170
From D												
From E												
From F												
From G												
From H												

Somalari         With Propagate Temporary Concrete Batching Plant         Jud. P. 6           Obsign Verr         2030         Designed By:         MCY         Checked By:         WCH         Date:         21 dmanual 2020           Am         To A         To A <thto a<="" th="">         To A         To A</thto>	Junction:		Kam Tin R	oad / Lam	Kam Road	/ Route TV	WIST				Jo	b Number:	J7342
Design Year:         2030         Designed By:         MCY         Checked By:         WCH         Date         21 January 2025           AM (0) P=J         Am         To A         To B         To C         To D         To E         To F         To G         To H         Total         9           From A         193         369         276         Fors         518         40           From B         433         8         144         585         460         554         400           From D         1155         18         0         Fors         1660	Scenario:		With Propo	osed Temp	orary Conc	rete Batch	ing Plant					J04 - P.	6
Arm         To A         To B         To C         To D         To F         To F         To G         To H         To H         To H         Set           From B         433         8         144         585         469         163         634           From B         433         8         144         585         469         163         634           From C         145         18         0         -         1560         -         -           From F         -         -         1560         -         -         1560         -           From A         771         375         420         -         -         1560         -           Prom A         162         480         188         -         -         433         58           From A         162         480         188         -         -         433         53           From B         36         6         35         -         -         483         58           From F         -         -         -         1957         -         -         -           Area         Tre Road (m clockwise order)         - <td< td=""><td>Design Ye</td><td>ear:</td><td>2030</td><td>De</td><td>signed By:</td><td>MCY</td><td>_ C</td><td>hecked By:</td><td>WCH</td><td></td><td>Date:</td><td>21 Janu</td><td>ary 2025</td></td<>	Design Ye	ear:	2030	De	signed By:	MCY	_ C	hecked By:	WCH		Date:	21 Janu	ary 2025
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	AM (00) E	)ook											
Arm         Road (n dockwase order) From B         Arm         Road (n dockwase order) Road (n dockwase order)         Second (n dockwase order)         Second (n dockwase order)         Second (n dockwase order)         Road (n dockwase orde)         Road (n dockwase order)	Arm	To A	To B	To C	To D	To F	To F	To G	To H	Total	q <sub>c</sub>		
Tron B         433         8         144         585         499           From C         145         18         0         163         634           From C         145         18         0         163         634           From F         -         -         -         -         -           From F         -         -         -         -         -           From H         -         -         -         -         -         -           From A         To A         To B         To C         To D         To D         To B         -	From A	193	349	276						818	26		
Prom C         145         18         0           From D         185         18         0           From D         -	From B	433	8	144						585	469		
Prom D From P From F         No         O         O         O           Prom F From F         -	From C	145	18	0						163	634		
From B From B From G From H         Iso         Iso           PM (19) Posk         1560         1           PM (19) Posk         1560         1           Amm         To A         To B         To C         To F         To A         1560           PM (19) Posk         1         42         188         1         43         53           From A         162         480         188         45         350         58           From A         162         480         188         45         350         58           From B         63         6         83         58         452         350           From D         From A         1557         -         -         457         50         0.7           From B         6.0         3.5         100.0         5.5         27         60         0.7           From A         Kam Road (in clockwise order)         -         -         1957         -         -           A         Kam Road WB)         From A         6.0         3.5         20.0         0.7         -         -         -         -         -         -         -         -         -         - </td <td>From D</td> <td></td> <td>10</td> <td>Ū</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>004</td> <td></td> <td></td>	From D		10	Ū							004		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	From E												
Arm         Trill         T	From E												
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	From G												
Total         771         375         420         1566           PM (19) Pesk         To A         To B         To C         To D         To E         To F         To G         To H         Total         4           Arm         To A         To B         To C         To D         To E         To F         To G         To H         Total         4           From A         162         480         188         803         6         35         350         275         531           From B         363         6         83         271         1557         1	From H												
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Total	771	375	420						1566			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Total		010	120						1000	1		
$ \begin{array}{ c c c c c c } \hline Amma & Io A & Io B & Io C & Io D & Io E & Io F & Io G & Io H & Iotal & q. \\ \hline From A & 162 & 480 & 188 & & & & & & & & & & & & & & & & &$	PM (19) P	Peak											
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q <sub>c</sub>		
From B         363         6         83         4452         350           From C         223         52         0         275         531           From D         7700         1557         1557         1557           From F         748         538         271         1557         1557           Legend         1557           A         Kam Tin Road (EB)         A         6.0         3.5         100.0         5.5         27         60         0.7           B         Lam Kam Road WB)         From A         6.0         3.5         100.0         5.5         27         60         0.5           C         Route Twisk (NB)         From A         6.0         3.5         25.0         8.0         27         60         0.5           Form D         From B         6.0         3.5         25.0         8.0         27         60         0.5           Form D         From B         6.0         3.5         25.0         8.0         27         60         0.5           From D         From B         From D         From D         From B         6.0         3.5         0.50         12.0         27 <td>From A</td> <td>162</td> <td>480</td> <td>188</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>830</td> <td>58</td> <td></td> <td></td>	From A	162	480	188						830	58		
From C         223         52         0         275         531           From D         From F         275         531         275         531           From E         748         538         271         1557         1           Commentation of the second	From B	363	6	83						452	350		
From D From F From F From G         X         Total         748         538         271         1557           Lagend         Comentic         Same Commentation	From C	223	52	0						275	531		
From F From G From H       748       538       271       1557         Legend       Mark 1000000000000000000000000000000000000	From D												
From From G From H         748         538         271         1557           Isome G From H           Total         748         538         271         1557           Legend         Isome G From A         Isome C           Arm         Road (n clockwise order)         A         Kam Tin Road (EB)         S         26         0.7         S           B         Lam Kam Road WB)         C         Route Twisk (NB)         0.0         3.5         25.0         8.0         2.7         60         0.5           C         Route Twisk (NB)         D         From B         6.0         3.5         25.0         8.0         2.7         80         0.5           From F         From G         From F         0.0         1.5         T         0.5         T         0.5         T         0.5         T         0.5         T         0.5         T         0.5         F         0.5         T         0.5         T         0.5         T         0.5         T         0.5         T         0.5         T         T         T	From E												
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	From F												
From H         Image: Constraint of the system of the	From G												
Total         T48         538         271         1557           Legend         A         Kam Tin Road (ic clockwise order)         A         Kam Tin Road (EB)         E         A         M         Cond (in clockwise order)         A         A         Kam Tin Road (EB)         Form A         6.0         3.5         100.0         5.5         27         60         0.7           B         Lam Kan Road WB)         E         Form B         6.0         3.5         100.0         5.5         27         60         0.5           D         E         Form A         6.0         3.5         25.0         8.0         27         60         0.5           From B         Form B         6.0         3.5         25.0         8.0         27         35         0.5           From B         Form F         From B         Form H          20         27         35         0.5           From F         From F         From B         Form H         20         7.3 m         10.5         10.0 m         2.7         35         0.5           For = 0.210 (c) (10.2 x_2)         Form H         Entry Width         2.0 - 7.3 m         2.7         3.0         2.7         3.0	From H												
Geometric Parameters           Arm         Road (in clockwise order)         Arm         e (m)         v (m)         r (m)         L (m)         D (m) $@$ (?)         S           B         Lam Kam Road (EB)         From A         6.0         3.5         100.0         5.5         27         60         0.7           B         Lam Kam Road (WB)         From B         6.0         3.5         25.0         8.0         27         60         0.5           D         E         From B         6.0         3.5         25.0         8.0         27         60         0.5           From B         From C         From C         7.0         3.5         65.0         12.0         27         35         0.5           From F         From F         From F         From F         From F         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         10000         100000         100000         100000         100000         100000         100000         100000         100000         100000         100000         1000000         100000         1000000	Total	748	538	271						1557			
$\begin{array}{ c c c c c c } \hline Arm & Road (in clockwise order) \\ \hline Arm & Kam Tin Road (EB) \\ \hline B & Lam Kam Road (WB) \\ \hline C & Route Twisk (NB) \\ \hline D & \\ F \\ G & \\ \hline H \\ \hline \end{array} \\ \hline \end{array} \\ \hline \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Legend					Geometri	c Paramet	ers					
A         Kam Tin Road (EB)         From A $6.0$ $3.5$ $100.0$ $5.5$ $21.0$ $2$	Arm	Road (	in clockwise	e order)		Arm	e (m)	v (m)	r (m)	L (m)	D (m)	Ø(°)	S
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	A	Kam Tin F	Road (EB)			From A	6.0	3.5	100.0	5.5	27	60	0.7
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	В	Lam Kam	Road WB)			From B	6.0	3.5	25.0	8.0	27	60	0.5
$ \begin{array}{ c c c c c c } \hline Prom P \\ F \\ G \\ H \\ \hline Predictive Equation Q_E = K(F - f_c q_c) \\ \hline From F \\ From G \\ H \\ \hline \\ \hline$	С	Route Twi	sk (NB)			From C	7.0	3.5	65.0	12.0	27	35	0.5
$ \begin{array}{ c c c c c } \hline F & F & F & F & F & F & F & F & F & F$	D		( )			From D							
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Е					From E							
G       H       From G       From G       From G         Qe       Entry Capacity       Imitation       4.0 - 15.0 m       1.0 - 10.0 m         Qe       Circulating Flow across the Entry       V       Approach Half Width       2.0 - 7.3 m       1.0 - 100.0 m         F       = 303x2       6.0 - 100.0 m       1.0 - 100.0 m       1.0 - 100.0 m       1.0 - 100.0 m         F       = 303x2       1.0 - 10.5/(1+M)       0.0 - 5.00 m       0.0 - 3.0 m       0.0 - 3.0 m         to       = 1 + 0.5/(1+M)       0.0 - 10.0 (10 m)       0.0 - 10.0 m       0.0 - 3.0 m       0.0 - 3.0 m         x2       = v+(e-v)/(1+2S)       S       S - 1.6(e-v)/L       0.0 - 3.0 m       0.0 - 3.0 m         Retroof-Flow to Capacity (RFC)         Ration of the second	F					From F							
H       From H         Predictive Equation $Q_E = K(F - f_c q_c)$ Emitation         Q_E       Entry Capacity       4.0 - 15.0 m         q_c       Circulating Flow across the Entry       *         K       = 1-0.00347(0^-30)-0.978[(1/r)-0.05]       *         F       = 303x_2       6.0 - 100.0 m         f_c       = 0.210b_0(1+0.2x_2)       *         t_0       = 1+0.5/(1+M)       *       *         M       = cept[(D-60)/10]       *       *         x_2       = v+(e-v)/(1+2S)       *       *         S       = 1.6(e-v)/L       *       *         Q_E       Entry Angle       10° - 60°         S       *       *       *         S       = 1.6(e-v)/L       *       *       *         State of the second s	G					From G							
Image: Second	Н					From H							
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Prodictiv	o Equation	0 = K/E -	fa)			Limitatia	-					
q <sub>c</sub> Circulating Flow across the Entry       v       Approach Half Width       2.0 - 7.3 m         k       = 1-0.00347(∅-30)-0.978[(1/r)-0.05]       F       = 303x <sub>2</sub> 6.0 - 100.0 m         f <sub>c</sub> = 0.210t <sub>b</sub> (1+0.2x <sub>2</sub> )       10° - 60°       5       Sharpnest       50° - 60°         k       = exp[(D-60)/10]       5       Sharpnest of Flare       0.0 - 3.0       5         x <sub>2</sub> = v+(e-v)/(1+2S)       S       Sharpnest of Flare       0.0 - 3.0       5         Sharpnest of Flare       0.0 - 3.0         Ratio-of-Flow to Capacity (RFC)         Ratio-of-Flow to Capacity (RFC)         From A       4.519       0.037       1.482       0.935       1369       0.593       1266       1248       818       830       0.646       0.665         From B       4.750       0.037       1.482       0.906       1439       0.607       1046       1111       585       452       0.559       0.407         From B       4.750       0.035       1.483       1.017       1609       0.642       1222       1289       163       275       0.133       0.213         From B       From G       From G       I.483	Q	Entry Can	acity	'cYc/		1	e	Entry Widt	th		40-150	m	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	q <sub>c</sub>	Circulating	1 Flow acros	ss the Entry	,		v	Approach	Half Width		20-73m	1	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ĸ	= 1_0 003/	17(Ø_30)_0	078[(1/r)_0	051			Entry Radi			60 100 0	) m	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	F	$= 303x_2$	+/ (© 00) 0.	010[(111) 0.	00]		l i	Effective I	ength of Fl	are	1 0 - 100 0	) m	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	f <sub>c</sub>	= 0.210t <sub>D</sub> (	1+0.2x <sub>2</sub> )				D	Inscribed (	Circle Diam	eter	15 - 100 m	1	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	t <sub>D</sub>	= 1+0.5/(1	+M)				Ø	Entry Anal	e		10° - 60°		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	м	= exp[(D-6	, 50)/101				s	Sharpness	s of Flare		0.0 - 3.0		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	x <sub>2</sub>	= v+(e-v)/	(1+2S)										1
Ratio-of-Flow to Capacity (RFC)           Arm         X2         M         to         K         F         fc         AM(09)         PM(19)         AM(09)         AM(09)         PM(19)         AM(09)         AM(09)         PM(19)         AM(09)         AM(09)         PM(19)         AM(09)         AM(09)         AM(09)         AM(09)         AM(07)         Colspan="2">Colspan="2">Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspa="2"Colspa="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colsp	S	= 1.6(e-v)/	/L										
Ratio-of-Flow to Capacity (RFC)           Arm         x2         M         to         K         F         fc         AM(09)         PM(19)         AM(09)         PM(19						-							
Arm       X2       M       to       K       F       fc       AM(09)       PM(19)       AM(09)       PM(19)       AM(09)       PM(19)         From A       4.519       0.037       1.482       0.935       1369       0.593       1266       1248       818       830       0.646       0.665         From B       4.750       0.037       1.482       0.906       1439       0.607       1046       1111       585       452       0.559       0.407         From C       5.310       0.035       1.483       1.017       1609       0.642       1222       1289       163       275       0.133       0.213         From D       From F       From F       F	Ratio-of-I	Flow to Cap	pacity (RFC	;)					)	Entry	/ Flow	R	FC
From A         4.519         0.037         1.482         0.935         1369         0.593         1266         1248         818         830         0.646         0.665           From B         4.750         0.037         1.482         0.906         1439         0.607         1046         1111         585         452         0.559         0.407           From C         5.310         0.035         1.483         1.017         1609         0.642         1222         1289         163         275         0.133         0.213           From D         From F         From F         Image: Constraint of the second sec	Arm	x <sub>2</sub>	М	t <sub>D</sub>	К	F	f <sub>c</sub>	AM(09)	PM(19)	AM(09)	PM(19)	AM(09)	PM(19)
From B       4.750       0.037       1.482       0.906       1439       0.607       1046       1111       585       452       0.559       0.407         From C       5.310       0.035       1.483       1.017       1609       0.642       1222       1289       163       275       0.133       0.213         From D       From F       From F       From G       From G       From H	From A	4.519	0.037	1.482	0.935	1369	0.593	1266	1248	818	830	0.646	0.665
From C       5.310       0.035       1.483       1.017       1609       0.642       1222       1289       163       275       0.133       0.213         From D       From E       From F       Image: Constraint of the constrated of the constraint of the constraint of the constraint of the	From B	4.750	0.037	1.482	0.906	1439	0.607	1046	1111	585	452	0.559	0.407
From D       From E         From F       From G         From H       From H	From C	5.310	0.035	1.483	1.017	1609	0.642	1222	1289	163	275	0.133	0.213
From E     From F       From G     From H	From D												
From F From G From H	From E												
From G From H	From F												
From H	From G												
	From H												

Appendix C – Swept Path Analyses











:\JOB\J7300-J7349\J7342\(2025 01) TIA\_R2\Fig 3.3 & SP1XX Rev A.dwg



UOB\J7300-J7349\J7342\(2025 01) TIA\_R2\Fig 3.3 & SP1XX Rev A.dwg







.UOB\J7300-J7349\J7342\(2025 01) TIA\_R2\Fig 3.3 & SP1XX Rev A.dwg



















