# Appendix B

## Traffic and Transport Impact Assessment Report

**Agreement No. CE 79/2023 (GE)**

**Underground Quarrying at Tsing Yi North –
Investigation, Design and Construction**

**Traffic and Transport Impact Assessment Report (Final)
(Ref. B20b-04)**

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# 1 INTRODUCTION

## 1.1 Project Background

1.1.1 Rock, principally as aggregates in concrete, is the most predominately used construction material for buildings and infrastructure developments in Hong Kong. Local quarries, where rock is sourced for such uses, are strategically important to the construction industry in Hong Kong. Apart from extraction of virgin rock, surplus rock generated from local construction projects can be processed and recycled at quarries for beneficial reuse. In addition, the quarries are suitable sites for housing manufacturing plants of rock-derived construction materials such as ready-mixed concrete and asphalt. Historically, rock has been quarried in Hong Kong by way of surface quarrying – open/pit extraction at the ground surface. By doing this, the quarries have been operating as self-financing business entities rather than government-funded facilities.

1.1.2 Currently, Lam Tei Quarry (LTQ) at Tuen Mun is the only active local quarry, for which the current quarry contract is scheduled for completion in 2025. Recognising the importance of local quarries in minimizing the risk of irregularities in the supply of imported rock, the Government has been searching for suitable sites to set up new surface quarries in order to maintain local rock supply, with a view to having at least one new quarry to dovetail with the closure of Lam Tei Quarry.

1.1.3 Apart from rock materials, Hong Kong is also desperately in need of developable land to meet socio-economic needs. Creating spaces in underground rock caverns is one of the solutions in boosting land supply in the medium to long terms. To create land in this manner, the cavern formation will not only generate a large amount of good quality rock, but this process is also a source of rock materials which could be an integral part of the local rock supply in future. This is the underlying concept of the initiative of underground quarry-cum-cavern development, which is unprecedented in Hong Kong. There are, nevertheless, successful examples of this approach in other countries, e.g. Switzerland, Norway and the United States of America, where the entire operation combining quarrying and subsequent uses of the cavern spaces created (e.g. cold storage, data centres, warehousing and recreational complexes) is confirmed to be commercially viable.

1.1.4 Preliminary reviews under the Strategic Cavern Study identified the prospect of this concept and thereby proposed it as one of the initiatives under the long-term strategy for cavern developments in Hong Kong. Accordingly, in November 2018, when formulating the local quarry strategy for maintaining the local rock supply, the Government also recognized this initiative as a potential long-term solution that is complementary to new surface quarries. In other words, underground quarrying in Hong Kong is being pursued as a dual-benefit policy initiative contributing to enhanced land supply and sustainable use of local rock resources.

1.1.5 In 2017, CEDD commissioned the Underground Quarry Study to evaluate the feasibility of this initiative, covering various aspects including technical acceptability, statutory and regulatory requirements, business model analyses and implementation mechanisms. Based on the results of a systematic territory-wide site search, the hillside at Tsing Yi North, which is one of the 48 Strategic Cavern Areas (SCVAs) as delineated in the Cavern Master Plan (CMP) jointly promulgated by CEDD and PlanD in 2017, was recommended to take forward.

1.1.6 In 2019, the CEDD and PlanD jointly commissioned the Pilot Planning and Engineering Study on Development of Selected Strategic Cavern Areas – Feasibility Study (“Pilot Study”) to enable the Government to earmark sites for cavern development and to facilitate the implementation of cavern development. The study findings concluded that it is worthwhile launching a scheme of underground quarrying at Tsing Yi North. It is envisioned as an integral part of the long-term local quarry strategy. Shortage of rock import from the mainland China due to lockdown arising from COVID-19 outbreak in early 2020 caused substantial impacts across the construction industry in Hong Kong, heightening the importance of local quarries in the supply chain. To enhance crisis preparedness, it is timely to proceed with the scheme, along with other quarry related initiatives to maintain local rock supply.

1.1.7 Following the commencement of the IDC assignment for developing and designing the pilot underground quarry at Lam Tei, Tuen Mun in 2021, CEDD launched an IDC assignment for developing a new underground quarry at Tsing Yi North in 2023.

1.1.8 To implement the proposed underground quarry-cum-cavern development at Tsing Yi North, it is necessary to conduct a site-specific investigation and design for the scheme, building on the work completed under the Underground Quarry Study and the pilot study.

1.1.9 This Assignment aims to complete all the tasks necessary and sufficient to undertake the assignments including statutory procedures, public consultation, detailed technical assessments, broad design for potential facilities, formulation of implementation arrangement etc. at the investigation, design and early construction stages, in order to enable commencement of the underground quarrying tentatively targeted in 2027. These include various impact assessments, reference design of caverns and the underground quarrying-related activities (e.g. the materials processing/manufacturing plants and their operations) coordinated or implemented by the Government, business case analyses, implementation strategy and procurement arrangements. Consultation within the Government and with public and relevant stakeholders/industry players will also be carried out.

1.1.10 This Assignment will also look into any works potentially required by the quarry operators during the operation stage of the proposed underground quarrying. Given its pilot nature, the underground quarrying operation will be subject to the prevailing and/or new implementation mechanisms such as contract form, site supervision and any independent audits required. These will be examined and tailor-designed under this Assignment. Depending on the findings, it may call for work or tasks for which the Government may procure consultancy services separately during the operation stage.

1.1.11 AECOM Asia Co. Ltd. has been commissioned by the Civil Engineering and Development Department (CEDD) on 13 June 2024 to undertake Agreement No. CE 79/2023 (GE) – Underground Quarrying at Tsing Yi North – Investigation, Design and Construction. It is targeted to commence construction in Year 2027.

## 1.2 Objectives of the Traffic and Transport Impact Assessment

1.2.1 According to Clause 6.15.1 of the Brief, a detailed Traffic and Transport Impact Assessment (TTIA) shall be carried out for the Development, with a view to forecasting future traffic and transport demand, identifying any adverse impacts on the existing, committed and planned road networks in the vicinity during construction and operation stages, and proposing improvement measures at the problematic areas identified, examining the adequacy of the existing and planned transport system, and the requirement for new road connections, capacity improvements or enhancement arising from quarrying and the ancillary operations.

1.2.2 The objectives of the TTIA are as follows:

a) to review the findings and conclusions from the preliminary traffic and transport impact assessment (PTTIA) under the Underground Quarry Study such as temporary traffic arrangement, permanent changes (e.g. new roads, road diversions, road improvements, etc.) and mitigation/improvement measures for the Tsing Yi North Underground Quarry (TYNUQ);

b) to identify the elements of the community, existing traffic characteristics, possible interfacing projects, known transport proposals and future developments adjacent to TYNUQ which may also affect the surrounding traffic conditions during the span of the operation of the TYNUQ.

c) to incorporate any suggestions and address concerns from the relevant stakeholders/public obtained during the public consultation exercise;

d) to review and propose any necessary road widening and/or improvement measures in order to mitigate any traffic and transport impact on the existing/committed/planned road networks arising from the development and operation of the quarry with the consideration of other cumulative traffic effect from other planned/committed projects in the vicinity of the site;

e) to review whether there are other alternative access routes and propose such alternatives, if applicable, which may be in form of roads or new access road to be

constructed by-passing heavily trafficked roads/areas, residential areas, in order to avoid or minimise the traffic and transport impact arising during the development and operation of the quarry;

f) to introduce a structured and systematic approach to identify, assess and mitigate potential adverse traffic and transport impacts, which might arise from the development and operation of the quarry;

g) to identify, assess and specify methods, measures and standards to be included in the reference design of the quarry and its subsequent operation, which are necessary to mitigate these impacts and reduce them to acceptable levels;

h) to propose and implement suitable traffic diversion, temporary traffic arrangement schemes and other mitigation/improvement measures to accommodate the additional traffic flow at the time of development and operation of the quarry so that any adverse traffic and transport impacts can be kept minimum and mitigated to acceptable levels;

i) to enable an agreement in principle to be reached amongst the relevant government departments on the traffic diversion and arrangement schemes and road improvement proposal(s) for the development and operation of the quarry;

j) to identify the anticipated public transport demand raised from the site and suggest transport mode for those demand, and needs for public transport facilities; and

k) to demonstrate all mitigation/improvement measures to be introduced.

## 1.3 Purpose of this Report

1.3.1 The main purpose of this Traffic and Transport Impact Assessment (TTIA) Report is to assess the traffic impact to the nearby road network within the proposed area of influence (AOI) due to the proposed development, and the structure of this Report is outlined below.

## 1.4 Purpose of this Report

1.4.1 This Report is organized into 7 sections including this introductory section:-

- Section 1 - outlines the background, and sets out the objectives, purpose and structure of this Report;
- Section 2 - reviews the existing traffic conditions within the area of influence including the site location, junction and road link capacity assessment;
- Section 3 - describes the development proposal, requirements of parking and loading/unloading provision and public transport arrangement;
- Section 4 - presents the approach, methodology and results of vehicular traffic demand forecasts, and junction and road link capacity assessment for the scenario of “Without” and “With” the proposed development for the design year during operation stage;
- Section 5 - presents the sensitivity test scenario for alternative site access arrangements during operation stage;
- Section 6 - presents the potential construction traffic impact due to the proposed development and traffic management measures to minimize the construction traffic impact if necessary; and
- Section 7 - presents the summary of findings.

## 1.5 Nomenclature and Abbreviations

1.5.1 The following table lists out the abbreviations for expressions adopted in this Report.

**Table 1.1 Abbreviations Adopted in this Report**

| Abbreviation | Full Expression |
|---|---|
| AOI | Area of Influence |
| ATC | Annual Traffic Census |
| BDTM | Base District Traffic Model |
| CEDD | Civil Engineering and Development Department |
| DEVB | Development Bureau |
| DFC | Design Flow/Capacity |
| FS | Feasibility Study |
| FSD | Fire Services Department |
| GIU | General Industrial Use |
| GMB | Green Minibus |
| GV | Goods Vehicle |
| HD | Housing Department |
| HKPSG | Hong Kong Planning Standards and Guidelines |
| HKSAR | Hong Kong Special Administrative Region |
| J/O | Junction |
| LATM | Local Area Traffic Model |
| L/UL | Loading/Unloading |
| NKW | Ngau Kok Wan |
| TPDEM | Territorial Population and Employment Data Matrix |
| TTIA | Traffic and Transport Impact Assessment |
| NMDS | Northern Metropolis Development Strategy |
| NWTYI | North West Tsing Yi Interchange |
| PCU | Passenger Car Units |
| PlanD | Planning Department |
| PLB | Public Light Bus |
| PT | Public Transport |
| PV | Private Vehicle |
| RC | Reserve Capacity |
| STM | Strategic Transport Model |
| TD | Transport Department |
| TFPD | Task Force Planning Dataset |
| TKSR | Tam Kon Shan Road |
| TPDM | Transport Planning and Design Manual |
| TPU | Tertiary Planning Unit |
| TGS2006 | Trip Generation Survey 2006 |
| TTA | Temporary Traffic Arrangement |
| TYNCR | Tsing Yi North Coastal Road |
| VC | Volume-to-Capacity Ratio |
| VOC | Vehicle Operating Cost |
| VOT | Value of Time |
| WENT | West New Territories |

# 2 EXISTING TRAFFIC CONDITIONS

## 2.1 Existing Road Network

2.1.1 The Site is located in the northwest of Tsing Yi. It is bounded by Tsing Yi North Coastal Road (TYNCR) to the north, North West Tsing Yi Interchange (NWTYI) to the west, MTR Airport Express and Tung Chung Line to the south, and near Tam Kon Shan Interchange to the east. The existing road network surrounding the Site is shown in **Figure 2.1** and the existing junction layouts are illustrated from **Figure 2.2** to **Figure 2.4**.

2.1.2 Tsing Ma Bridge is a dual-3 expressway connecting the Cheung Tsing Highway to the east and Lantau Link to the west. This expressway is currently acting as the major corridor connecting the western end of Tsing Yi Island and Ma Wan / Lantau Island.

2.1.3 Tsing Long Highway (including Ting Kau Bridge) is a dual-3 expressway connecting Cheung Tsing Highway to the south and Tai Lam Tunnel to the north. It acts as the major north-south corridor connecting Tsing Yi Island and Shum Tseng via Ting Kau Bridge.

2.1.4 Cheung Tsing Highway is a dual 1/2 expressway near Tsing Yi Road West with increasing of traffic lanes after merging with Tsing Sha Highway which become a dual-4/5 carriageway near NWTYI to the west. It is an important corridor for the middle and southern parts of Tsing Yi Island connecting Kwai Chung via Cheung Tsing Tunnel and Lai Chi Kok via Nam Wan Tunnel to the east.

2.1.5 Tsing Yi North Coastal Road is a dual-2 district distributor connecting Tsing Tsuen Road to the east and Tsing Long Highway to the west. It serves as an important east west corridor for the northern part of Tsing Yi Island.

2.1.6 Tam Kon Shan Road (TKSR) is currently a single-2 carriageway and is classified as local distributor without stopping restrictions along the south side of the carriageway between the roundabout at the western end of the road and the slip road to TYNCR. Parking and loading/unloading activities of concrete trucks and heavy vehicles were observed.

2.1.7 Fung Shue Wo Road is in general a dual-2 local distributor connecting TKSR to the west and Tsing Yi Heung Sze Wui Road to the east which mainly serve the residential developments and schools along the carriageway.

2.1.8 Tsing Yi Road West is a single-4 district distributor (except for sections with central reserve near Fung Shue Wo Road, Ching Hong Road and Tsing Yi Road) which is a major north-south corridor stretching Fung Shue Wo Road to the north and Tsing Yi Road to the south in the middle of Tsing Yi Island.

2.1.9 Ching Hong Road is classified as a local distributor. It is a single-2 carriageway at the western section between Tsing Yi Road West and Ching Hong Road and becomes a dual-2 carriageway between Ching Hong Road and Tsing Yi Road at the eastern section of the road.

## 2.2 Area of Influence and Traffic Surveys

2.2.1 The proposed Area of Influence (AOI) of the development Site covers the surrounding road network with major road links connected to the development, as shown in **Figure 2.1**. With reference made to the Pilot Study within the proposed AOI, all key junctions (except free-flow junctions) and road links are included for assessment along the major ingress and egress routes from/to the site during operation phase, as shown in **Table 2.1** and **Table 2.2.**

**Table 2.1 Identified Study Junctions**

| Index | Junction | Type |
|---|---|---|
| J1 | North West Tsing Yi Interchange (NWTYI) Roundabout | Roundabout |
| J2 | NWTYI / unnamed access road near Lantau Link Visitors Centre | Priority |
| J3 | Slip Road from Tsing Yi North Coastal Road / Tam Kon Shan Road | Roundabout |
| J4 | Tam Kon Shan Road / Slip Road to Tsing Yi North Coastal Road | Priority |
| J5 | Tam Kon Shan Interchange | Roundabout |
| J6 | Fung Shue Wo Road / Tsing Yi Road West | Signal |

| Index | Junction | Type |
|---|---|---|
| J7 | Liu To Road / Tsing Yi Road West | Signal |
| J8 | Ching Hong Road / Tsing Yi Road West | Signal |
| J9 | Ching Hong Road / Chung Mei Road | Signal |
| J10 | Cheung Tsing Highway / Tsing Yi Road West | Signal |
| J11 | Sai Tso Wan Road / Tsing Yi Road West / Tsing Yi Road | Signal |

**Table 2.2 Identified Study Road Links**

| Link Name | Direction | Capacity (pcu/hr) |
|---|---|---|
| L1 – Tsing Ma Bridge | EB | 6,100 |
| | WB | 6,100 |
| L2 – Ting Kau Bridge | NB | 6,100 |
| | SB | 6,100 |
| L3 - Unnamed access road near Lantau Link Visitors Centre | NB | 500 |
| | SB | 500 |
| L4 – Tam Kon Shan Road | EB | 900 |
| | WB | 900 |
| L5 - Slip Road Connecting Tsing Yi North Coastal Road westbound to Tam Kon Shan Road | WB | 1,800 |
| L6 - Slip Road Connecting Tam Kon Shan Road to Tsing Yi North Coastal Road eastbound | EB | 1,800 |
| L7 – Tsing Yi North Coastal Road | EB | 5,600 |
| | WB | 3,600 |
| L8 – Cheung Tsing Tunnel | EB | 5,400 |
| | WB | 5,400 |
| L9 – Nam Wan Tunnel | EB | 5,400 |
| | WB | 5,400 |
| L10 – Fung Shue Wo Road between Tam Kon Shan Interchange and Tsing Yi Road West | NB | 3,050 |
| | SB | 4,850 |
| L11 - Tsing Yi Road West between Fung Shue Wo Road and Ching Hong Road | NB | 3,050 |
| | SB | 3,050 |
| L12 - Tsing Yi Road West between Cheung Tsing Highway and Ching Hong Road | NB | 2,800 |
| | SB | 2,800 |
| L13 – Ching Hong Road between Tsing Yi Road West and Chung Mei Road | EB | 920 |
| | WB | 920 |
| L14 - Sai Tso Wan Road between Tsing Yi Road West and local access for Yiu Lian Dockyards Limited | EB | 1,250 |
| | WB | 1,250 |
| LL1 - NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Ma Bridge westbound | WB | 4,000 |
| LL2 - NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Yi Administration Building northbound | NB | 1,800 |
| LL3 - NWTYI – Slip Road connecting Cheung Tsing Highway northbound to Tsing Yi Administration Building northbound | NB | 1,800 |
| LL4 - NWTYI – Slip Road connecting Tsing Ma Bridge eastbound near Wok Tai Wan | NB | 1,800 |
| LL5 - NWTYI – Slip Road connecting Tsing Yi Administration Building and unnamed access road near Lantau Link Visitors Centre | NB | 1,700 |

| Link Name | Direction | Capacity (pcu/hr) |
|---|---|---|
| LL6 - NWTYI – Slip Road connecting Tsing Sha Highway northbound to Tsing Long Highway northbound | NB | 6,100 |
| LL7 – NWTYI – Slip Road connecting unnamed access road near Lantau Link Visitors Centre to Tsing Yi North Coastal Road eastbound | NB | 3,600 |
| LL8 - Slip Road connecting Tsing Yi North Coastal Road eastbound and westbound | SB | 1,800 |
| LL9 - NWTYI – Tsing Long Highway southbound | SB | 1,900 |
| LL10 - NWTYI - Slip Road connecting LL9 to LL1 | SB | 3,600 |
| LL11 - NWTYI – Slip Road connecting Tsing Long Highway southbound to LL1 and LL12 | SB | 6,100 |
| LL12 - NWTYI – Slip Road connecting LL11 to LL2 and LL13 | SB | 1,900 |
| LL13 - NWTYI – Slip Road connecting LL12 to Cheung Tsing Highway southbound | SB | 1,900 |
| LL 14(a) - Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 |
| LL 14(b) - Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 |
| LL 14(c) - Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | SB | 4,000 |
| LL 14(d) - Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | SB | 8,200 |

2.2.2 Classified vehicular counts were conducted at road links and/or classified vehicular turning movement counts were carried out at junctions, in which both the above two types of vehicular counts were recorded in 15-minute interval. The volume of different types of vehicles recorded during the surveys were converted into passenger car unit (pcu) factors which are stipulated in Volume 2 of Transport Planning and Design Manual (TPDM) for traffic model development and assessment purposes. The highest consecutive 15-minute hourly pcu volumes were adopted as the peak hour traffic flows.

2.2.3 In order to identify the survey periods, a pilot site survey was conducted from 07:00 to 20:00 on 11 March 2025. Tsing Tuen Road (near Maritime Square) and Tsing Yi Road West (near Liu To Road) were selected as the locations for the pilot site survey since these locations connect both the strategic and local road network and also connect all the proposed study junctions and road links within the AOI.

2.2.4 Based on the results of the pilot site survey, an hourly traffic flow variation is produced in the below table throughout the survey period.

**Table 2.3 Results of Pilot Site Survey**

| Time | 2025 Observed Traffic Flows (pcu/hr) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Tsing Tsuen Road (near Maritime Square) | | | Tsing Yi Road West (near Liu To Road) | | | Tsing Tsuen Road and Tsing Yi Road West |
| | EB | WB | Total | NB | SB | Total | Grand Total |
| 0700 – 0800 | 2,154 | 2,051 | 4,205 | 965 | 785 | 1,750 | 5,955 |
| 0715 – 0815 | 2,397 | 2,238 | 4,635 | **1,007** | 836 | 1,843 | 6,478 |
| 0730 – 0830 | 2,300 | **2,429** | 4,729 | 1,003 | **863** | **1,866** | **6,595** |
| 0745 – 0845 | 2,316 | 2,348 | 4,664 | 925 | 792 | 1,717 | 6,381 |
| 0800 – 0900 | **2,399** | 2,382 | **4,781** | 909 | 741 | 1,650 | 6,431 |
| 0815 – 0915 | 2,366 | 2,255 | 4,621 | 846 | 715 | 1,561 | 6,182 |
| 0830 – 0930 | 2,359 | 2,171 | 4,530 | 857 | 673 | 1,530 | 6,060 |
| 0845 – 0945 | 2,281 | 2,066 | 4,347 | 874 | 646 | 1,520 | 5,867 |
| 0900 – 1000 | 2,003 | 2,011 | 4,014 | 834 | 602 | 1,436 | 5,450 |

| Time | 2025 Observed Traffic Flows (pcu/hr) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Tsing Tsuen Road (near Maritime Square) | | | Tsing Yi Road West (near Liu To Road) | | | Tsing Tsuen Road and Tsing Yi Road West |
| | EB | WB | Total | NB | SB | Total | Grand Total |
| 0915 – 1015 | 1,889 | 2,040 | 3,929 | 819 | 587 | 1,406 | 5,335 |
| 0930 – 1030 | 1,915 | 2,018 | 3,933 | 794 | 565 | 1,359 | 5,292 |
| 0945 – 1045 | 1,892 | 2,026 | 3,918 | 756 | 530 | 1,286 | 5,204 |
| 1000 – 1100 | 1,921 | 2,022 | 3,943 | 731 | 555 | 1,286 | 5,229 |
| 1015 – 1115 | 1,926 | 2,014 | 3,940 | 709 | 556 | 1,265 | 5,205 |
| 1030 – 1130 | 1,978 | 1,996 | 3,974 | 701 | 593 | 1,294 | 5,268 |
| 1045 – 1145 | 1,960 | 1,925 | 3,885 | 723 | 608 | 1,331 | 5,216 |
| 1100 – 1200 | 1,997 | **2,025** | **4,022** | 731 | 570 | 1,301 | **5,323** |
| 1115 – 1215 | **2,040** | 1,875 | 3,915 | 753 | 563 | 1,316 | 5,231 |
| 1130 – 1230 | 1,886 | 1,872 | 3,758 | 764 | 534 | 1,298 | 5,056 |
| 1145 – 1245 | 1,792 | 1,853 | 3,645 | **771** | 500 | 1,271 | 4,916 |
| 1200 – 1300 | 1,727 | 1,859 | 3,586 | 751 | 550 | 1,301 | 4,887 |
| 1215 – 1315 | 1,604 | 1,838 | 3,442 | 735 | 597 | 1,332 | 4,774 |
| 1230 – 1330 | 1,669 | 1,852 | 3,521 | 694 | 645 | **1,339** | 4,860 |
| 1245 – 1345 | 1,751 | 1,862 | 3,613 | 639 | **654** | 1,293 | 4,906 |
| 1300 – 1400 | 1,705 | 1,856 | 3,561 | 632 | 624 | 1,256 | 4,817 |
| 1315 – 1415 | 1,675 | 1,857 | 3,532 | 585 | 624 | 1,209 | 4,741 |
| 1330 – 1430 | 1,658 | 1,815 | 3,473 | 601 | 598 | 1,199 | 4,672 |
| 1345 – 1445 | 1,748 | 1,808 | 3,556 | 623 | 581 | 1,204 | 4,760 |
| 1400 – 1500 | 1,831 | 1,843 | 3,674 | 615 | 594 | 1,209 | 4,883 |
| 1415 – 1515 | 1,779 | 1,853 | 3,632 | 663 | 599 | 1,262 | 4,894 |
| 1430 – 1530 | 1,753 | 1,876 | 3,629 | 700 | 621 | 1,321 | 4,950 |
| 1445 – 1545 | 1,681 | 1,852 | 3,533 | 708 | 605 | 1,313 | 4,846 |
| 1500 – 1600 | 1,732 | 1,854 | 3,586 | 736 | 599 | 1,335 | 4,921 |
| 1515 – 1615 | 1,873 | 1,848 | 3,721 | 781 | 585 | 1,366 | 5,087 |
| 1530 – 1630 | 1,964 | 1,839 | 3,803 | 768 | 625 | 1,393 | 5,196 |
| 1545 – 1645 | 2,065 | 1,876 | 3,941 | 814 | 625 | 1,439 | 5,380 |
| 1600 – 1700 | 2,086 | 1,843 | 3,929 | 809 | 626 | 1,435 | 5,364 |
| 1615 – 1715 | 2,090 | 1,875 | 3,965 | 803 | 641 | 1,444 | 5,409 |
| 1630 – 1730 | 2,241 | 1,886 | 4,127 | 803 | 601 | 1,404 | 5,531 |
| 1645 – 1745 | 2,256 | 1,897 | 4,153 | 805 | 614 | 1,419 | 5,572 |
| 1700 – 1800 | 2,257 | **1,899** | **4,156** | **810** | 637 | **1,447** | **5,603** |
| 1715 – 1815 | **2,258** | 1,875 | 4,133 | 790 | 645 | 1,435 | 5,568 |
| 1730 – 1830 | 2,127 | 1,862 | 3,989 | 784 | 656 | 1,440 | 5,429 |
| 1745 – 1845 | 2,141 | 1,822 | 3,963 | 771 | 653 | 1,424 | 5,387 |
| 1800 – 1900 | 2,151 | 1,805 | 3,956 | 765 | **660** | 1,425 | 5,381 |
| 1815 – 1915 | 2,064 | 1,803 | 3,867 | 764 | 654 | 1,418 | 5,285 |
| 1830 – 1930 | 1,962 | 1,745 | 3,707 | 747 | 648 | 1,395 | 5,102 |
| 1845 – 1945 | 1,746 | 1,749 | 3,495 | 693 | 643 | 1,336 | 4,831 |
| 1900 – 2000 | 1,668 | 1,645 | 3,313 | 644 | 640 | 1,284 | 4,597 |

2.2.5 As shown in the above table, the AM peak, logistic peak and PM peak of Tsing Tsuen Road and Tsing Yi Road West range between 07:15 – 09:00, 11:00 – 13:45 and 17:00 – 19:00 respectively.

2.2.6 Supplemented with the findings of the survey results from the pilot site survey, vehicular traffic count surveys were conducted in April 2025 from 07:15 to 09:15, 11:00 to 14:00 and 17:00 to 19:00 on normal weekday(s). The locations of vehicular traffic count survey are the same as the location of study junctions and road links in **Figure 2.1**. The survey results indicated that the AM peak hour is between 07:30 and 08:30, the logistic peak hour is between 11:15 and 12:15 and the PM peak hour is between 17:00 and 18:00.

## 2.3 Assessment of Study Junctions and Road Links for Existing Year 2025

2.3.1 This TIA includes assessment of existing junction and road link performance by means of capacity analysis.

2.3.2 The performances of road links are evaluated with the volume to capacity ratio (V/C). The V/C ratio compares the peak hour flow of a road link with its design flows, with a V/C ratio up to 0.3 represents free-flow conditions. A V/C ratio between 0.3 and 0.5 means an easy flow conditions, with travel speeds close to free-flow speed. V/C ratio between 0.5 and 0.75 represents generally easy flow condition, with the travel speeds of the road link begins to be restricted by the traffic conditions. V/C ratio between 0.75 and 1.0 means well used flow conditions, with travel speeds reduced by increasing traffic volumes. V/C ratio between 1.0 and 1.2 means unstable flow conditions, with travel speeds substantially reduced and are highly variable and unpredictable. For new roads, it should be designed to attain the target performance at the design years with V/C <=0.85 wherever possible to allow adequate spare capacities catering for fluctuations during peak hours, natural growth of traffic demand and further developments in future years.

2.3.3 The performance of a signalised road junction is indicated by its reserve capacity (RC). A positive RC indicates that the junction is operating with spare capacity. A negative RC indicates that the junction is overloaded, resulting in traffic queues and longer delay time. For new junctions, a minimum provision of 25% RC should be provided wherever possible. For existing junctions, it is desirable to achieve an RC of ≥ 15% as far as possible.

2.3.4 The performance of a roundabout and a priority junction is indicated by the design flow/capacity (DFC) ratio. A DFC ratio less than 1.0 indicates that the junction is operating within design capacity, while 0.85 is the acceptance criteria of DFC. A DFC ratio greater than 1.0 indicates that the junction is overloaded, resulting in traffic queues and longer delay time to the minor arm traffic. For existing roundabout and priority junction, DFC of ≤ 0.85 should be provided whenever possible, which indicates that queuing would theoretically be avoided in 85% of cases. For new roundabout and priority junction, DFC of ≤ 0.75 should be provided.

2.3.5 The study junctions and road links have been identified (**Figure 2.1** refers) and the existing performance of study junctions and road links were assessed based on the junction flow diagrams in **Figure 2.5**. The results are presented in **Table 2.4** and **Table 2.5** below and the details of the junction calculations are presented in **Appendix A**.

**Table 2.4 Junction Capacity Assessment for Existing Year (2025)**

| Index | Junction | Type | RC/DFC | | |
|---|---|---|---|---|---|
| | | | AM Peak | PM Peak | Logistic Peak |
| J1 | North West Tsing Yi Interchange (NWTYI) Roundabout | Roundabout | 0.42 | 0.37 | 0.39 |
| J2 | NWTYI / unnamed access road near Lantau Link Visitors Centre | Priority | 0.26 | 0.32 | 0.31 |
| J3 | Slip Road from Tsing Yi North Coastal Road / Tam Kon Shan Road | Roundabout | 0.18 | 0.17 | 0.14 |
| J4 | Tam Kon Shan Road / Slip Road to Tsing Yi North Coastal Road | Priority | 0.20 | 0.21 | 0.13 |
| J5 | Tam Kon Shan Interchange | Roundabout | 0.59 | 0.59 | 0.47 |
| J6 | Fung Shue Wo Road / Tsing Yi Road West | Signal | **11%** | **13%** | 40% |
| J7 | Liu To Road / Tsing Yi Road West | Signal | 28% | 30% | 55% |

| Index | Junction | Type | RC/DFC | | |
|---|---|---|---|---|---|
| | | | AM Peak | PM Peak | Logistic Peak |
| J8 | Ching Hong Road / Tsing Yi Road West | Signal | 69% | 95% | 86% |
| J9 | Ching Hong Road / Chung Mei Road | Signal | >100% | >100% | >100% |
| J10 | Cheung Tsing Highway / Tsing Yi Road West | Signal | 64% | 66% | 51% |
| J11 | Sai Tso Wan Road / Tsing Yi Road West / Tsing Yi Road | Signal | 47% | 69% | 49% |

2.3.6 The results in **Table 2.4** above show that the performance of all the study junctions is currently operating within sufficient capacity (i.e. RC≥15%, DFC≤0.85) during AM, logistic peak and PM peak hours on weekday, expect J6 during the commuting peak periods.

**Table 2.5 Road Link Capacity Assessment for Existing Year (2025)**

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| L1 | Tsing Ma Bridge | EB | 6,100 | 3,370 | 0.55 | 4,460 | 0.73 | 3,780 | 0.62 |
| | | WB | 6,100 | 4,445 | 0.73 | 3,175 | 0.52 | 3,430 | 0.56 |
| L2 | Ting Kau Bridge | NB | 6,100 | 3,160 | 0.52 | 4,690 | 0.77 | 3,735 | 0.61 |
| | | SB | 6,100 | 6,840 | **1.12** | 3,650 | 0.60 | 5,190 | 0.85 |
| L3 | Unnamed access road near Lantau Link Visitors Centre | NB | 500 | 195 | 0.39 | 190 | 0.38 | 275 | 0.55 |
| | | SB | 500 | 125 | 0.25 | 140 | 0.28 | 140 | 0.28 |
| L4 | Tam Kon Shan Road | EB | 900 | 325 | 0.36 | 335 | 0.37 | 190 | 0.21 |
| | | WB | 900 | 105 | 0.12 | 105 | 0.12 | 65 | 0.07 |
| L5 | Slip Road Connecting Tsing Yi North Coastal Road westbound to Tam Kon Shan Road | WB | 1,800 | 220 | 0.12 | 195 | 0.11 | 170 | 0.09 |
| L6 | Slip Road Connecting Tam Kon Shan Road to Tsing Yi North Coastal Road eastbound | EB | 1,800 | 155 | 0.09 | 170 | 0.09 | 100 | 0.06 |
| L7 | Tsing Yi North Coastal Road | EB | 5,600 | 1,200 | 0.21 | 1,115 | 0.20 | 1,230 | 0.22 |
| | | WB | 3,600 | 1,600 | 0.44 | 1,045 | 0.29 | 1,175 | 0.33 |
| L8 | Cheung Tsing Tunnel | EB | 5,400 | 4,360 | 0.81 | 3,540 | 0.66 | 3,325 | 0.62 |
| | | WB | 5,400 | 2,930 | 0.54 | 2,930 | 0.54 | 2,360 | 0.44 |
| L9 | Nam Wan Tunnel | EB | 5,400 | 2,910 | 0.54 | 1,755 | 0.33 | 2,985 | 0.55 |
| | | WB | 5,400 | 1,795 | 0.33 | 2,345 | 0.43 | 2,565 | 0.48 |
| L10 | Fung Shue Wo Road between Tam Kon Shan Interchange and Tsing Yi Road West | NB | 3,050 | 1,360 | 0.45 | 1,365 | 0.45 | 1,095 | 0.36 |
| | | SB | 4,850 | 1,230 | 0.25 | 1,010 | 0.21 | 885 | 0.18 |
| L11 | Tsing Yi Road West between Fung Shue Wo Road and Ching Hong Road | NB | 3,050 | 1,000 | 0.33 | 945 | 0.31 | 760 | 0.25 |
| | | SB | 3,050 | 805 | 0.26 | 710 | 0.23 | 570 | 0.19 |
| L12 | Tsing Yi Road West between Cheung Tsing Highway and Ching Hong Road | NB | 2,800 | 675 | 0.24 | 715 | 0.26 | 715 | 0.26 |
| | | SB | 2,800 | 750 | 0.27 | 570 | 0.20 | 590 | 0.21 |
| L13 | Ching Hong Road between Tsing Yi Road West and Chung Mei Road | EB | 920 | 615 | 0.67 | 510 | 0.55 | 575 | 0.63 |
| | | WB | 920 | 625 | 0.68 | 550 | 0.60 | 530 | 0.58 |
| L14 | Sai Tso Wan Road between Tsing Yi Road West and local | EB | 1,250 | 490 | 0.39 | 615 | 0.49 | 805 | 0.64 |
| | | WB | 1,250 | 790 | 0.63 | 575 | 0.46 | 710 | 0.57 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| | access for Yiu Lian Dockyards Limited | | | | | | | | |
| LL1 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Ma Bridge westbound | WB | 4,000 | 1,865 | 0.47 | 1,315 | 0.33 | 1,260 | 0.32 |
| LL2 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Yi Administration Building northbound | NB | 1,800 | 545 | 0.30 | 450 | 0.25 | 365 | 0.20 |
| LL3 | NWTYI – Slip Road connecting Cheung Tsing Highway northbound to Tsing Yi Administration Building northbound | NB | 1,800 | 565 | 0.31 | 65 | 0.04 | 230 | 0.13 |
| LL4 | NWTYI – Slip Road connecting Tsing Ma Bridge eastbound near Wok Tai Wan | NB | 1,800 | 1,030 | 0.57 | 1,120 | 0.62 | 1,110 | 0.62 |
| LL5 | NWTYI – Slip Road connecting Tsing Yi Administration Building and unnamed access road near Lantau Link Visitors Centre | NB | 1,700 | 370 | 0.22 | 330 | 0.19 | 365 | 0.21 |
| LL6 | NWTYI – Slip Road connecting Tsing Sha Highway northbound to Tsing Long Highway northbound | NB | 6,100 | 2,985 | 0.49 | 4,285 | 0.70 | 3,515 | 0.58 |
| LL7 | NWTYI – Slip Road connecting unnamed access road near Lantau Link Visitors Centre to Tsing Yi North Coastal Road eastbound | NB | 3,600 | 1,300 | 0.36 | 1,380 | 0.38 | 1,340 | 0.37 |
| LL8 | Slip Road connecting Tsing Yi North Coastal Road eastbound and westbound | SB | 1,800 | 260 | 0.14 | 435 | 0.24 | 215 | 0.12 |
| LL9 | NWTYI – Tsing Long Highway southbound | SB | 1,900 | 1,035 | 0.54 | 600 | 0.32 | 690 | 0.36 |
| LL10 | NWTYI - Slip Road connecting LL9 to LL1 | SB | 3,600 | 1,635 | 0.45 | 1,285 | 0.36 | 1,220 | 0.34 |
| LL11 | NWTYI – Slip Road connecting Tsing Long Highway southbound to LL1 and LL12 | SB | 6,100 | 2,670 | 0.44 | 1,890 | 0.31 | 1,905 | 0.31 |
| LL12 | NWTYI – Slip Road connecting LL11 to LL2 and LL13 | SB | 1,900 | 805 | 0.42 | 575 | 0.30 | 650 | 0.34 |
| LL13 | NWTYI – Slip Road connecting LL12 to Cheung Tsing Highway southbound | SB | 1,900 | 260 | 0.14 | 125 | 0.07 | 285 | 0.15 |
| LL14 | (a) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 4,340 | 0.53 | 4,975 | 0.61 | 4,295 | 0.52 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| | (b) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 1,180 | 0.30 | 1,130 | 0.28 | 1,435 | 0.36 |
| | (c) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 1,135 | 0.28 | 1,540 | 0.39 | 1,265 | 0.32 |
| | (d) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 7,095 | 0.87 | 4,570 | 0.56 | 5,975 | 0.73 |

2.3.7 The assessment results in the above table show that the performance of all study road links are currently operating within its capacity, with the exception of Ting Kau Bridge southbound (L2) during AM peak hour, which indicates that this road link operates in unstable flow condition on weekday AM peak (v/c ratio between 1.0 and 1.2).

# 3 DEVELOPMENT PROPOSAL

## 3.1 Development Parameters

3.1.1 The Pilot Planning and Engineering Study on Development of Selected Strategic Cavern Areas – Feasibility Study (FS) was commissioned by CEDD and PlanD in 2019. The pilot study findings concluded that it is worthwhile launching a scheme of underground quarrying at Tsing Yi North and it is envisioned as an integral part of the long-term local quarry strategy. The preliminary layout of the proposed underground quarrying-cum-cavern development is shown in **Figure 3.1**.

3.1.2 Below table summarizes the proposed development parameter of the Site.

**Table 3.1 Proposed Development Parameters**

| Parameter | Description |
|---|---|
| Estimated Population during Operation Phase | Approximate 100 persons |
| Target Commission Year | 2028(1) |
| Operation Hour | Case 1<br>• Concrete Production (500m$^3$/hr): 07:00 to 19:00<br>• Asphalt Production (208t/hr): 24 hours<br><br>Case 2<br>• Concrete Production (550m$^3$/hr): 07:00 to 19:00<br>• Concrete Production (50m$^3$/hr): 19:01 to 06:59<br>• No Asphalt Production<br><br>Case 1 and Case 2 are anticipated. Since the hourly development traffic generated under Case 1 is more than Case 2, Case 1 is put forward in the impact assessment. |

Remark:
(1) Tunnel to TKSR portal is anticipated to be commenced by 2031 tentatively

## 3.2 Site Assess Arrangement

3.2.1 The Site would only be accessible by private vehicles, as illustrated in **Figure 3.1**. Since the tunnel to TKSR portal and the Site access road connecting NWTYI would not permit pedestrians access, all staff and visitors would be required to access the Site solely by private vehicles during both construction and operation phases. As such, the impact on the existing public transport operations is not anticipated.

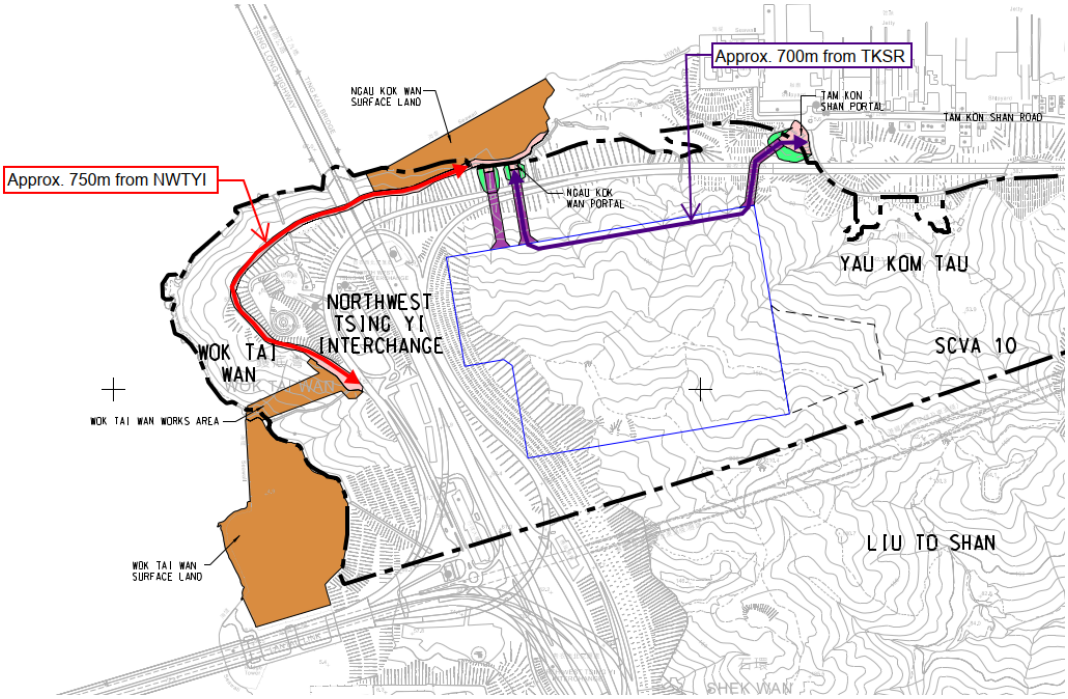
3.2.2 Concerning the junction at NWTYI (J2) where the site access connects to (Ngau Kok Wan portal), it is anticipated that the site traffic entering or leaving the unnamed access road would interfere with the traffic on the mainline of NWTYI. To mitigate this impact, a Temporary Traffic Arrangement (TTA) has been proposed at the intersection of the unnamed access road and NWTYI, as presented in **Figure 3.2**. “No objection in principle with conditions” on the schematic TTA at NWTYI access has been sought from TD and no adverse comments from other stakeholder. The contractor shall take these conditions into account and address any issues raised in the subsequent construction/operation phase. In addition, the TTA shall be modified after the tunnel to TKSR portal is implemented to facilitate the one-way outbound arrangement at the NKW (Ngau Kok Wan) portal, subject to the contractor’s operational need, if necessary.

3.2.3 Subsequent to the implementation of the tunnel to TKSR portal at the northeast of the Site in 2031, site access would be provided to the south of the existing roundabout (J3) at the western end of TKSR. The vehicular access, in term of run-in, leading to the tunnel to TKSR portal is proposed to be located at the off-slip of Tsing Yi North Coastal Road (TYNCR) WB. Furthermore, to further disperse the traffic demand generated by the development onto the nearby road network, the access near TKSR would serve ingress only, as the TKSR portal would operate as a one-way inbound route for private cars and goods vehicles accessing the Site. Meanwhile, the unnamed access road at NWTYI would also be converted into a one-way

outbound road, with all development traffic entering via the TKSR portal and exiting via the NKW portal. Consequently, development traffic would no longer be permitted to access the Site via the NKW portal. The proposed run-in located at the off-slip of TYNCR WB is shown in **Figure 3.3**. The run-in would be operated under a TTA during construction and operation phases after the implementation of tunnel to TKSR portal, as presented in **Figure 3.3** and **Figure 3.4**. "No objection in principle" on the schematic TTA at TYNCR access has been sought from TD and no adverse comments from other stakeholder. Nevertheless, the detailed design of the TTA would subject to further investigation in subsequent construction/operation phases.

3.2.4 Given that there are approx. 750m and 700m (including tunnel section) of internal access road adjoining the NKW portal and TKSR portal respectively (see in-text drawing below), which could accommodate vehicle waiting and queuing without disrupting development operations, it is deemed that any traffic queues from the Site extending to the public road (i.e. NWTYI and TKSR) is not anticipated.

**Drawing 1 Possible Vehicle Waiting and Queuing Area**



## 3.3 Trip generation and Attraction of Proposed Underground Quarrying Site

3.3.1 The anticipated trip generation and attraction assumptions on the proposed Underground Quarrying Site is presented in **Table 3.2**.

**Table 3.2 Trip Generations and Attractions**

| Vehicle Type | Trip End (in pcu/hr)(4) | | | | | |
|---|---|---|---|---|---|---|
| | AM Peak | | PM Peak | | Logistic Peak | |
| | Gen. | Att. | Gen. | Att. | Gen. | Att. |
| HGV-Concrete Truck(1) | 125 | 125 | 125 | 125 | 125 | 125 |
| HGV-Asphalt Truck(2) | 40 | 40 | 40 | 40 | 40 | 40 |
| Private Car | 4 | 4 | 4 | 4 | 4 | 4 |
| LGV | 3 | 3 | 3 | 3 | 3 | 3 |
| HGV-Others(3)/Shuttle Service | 5 | 5 | 5 | 5 | 5 | 5 |
| Total | 177 | 177 | 177 | 177 | 177 | 177 |

Remark:
(1) Assuming the peak production of concrete of 5 production lines is 500m$^3$/hr and 10 trucks (assumed carrying capacity is 10m$^3$ per truck) per production line per hour. (e.g.5x10x2.5=125pcu/hr)
(2) Assuming the peak production of asphalt is 208 t/hr and carrying capacity of 13 tonnes per truck. (e.g.208/13x2.5=40pcu/hr)
(3) To facilitate operation such as tanker and waste disposal truck
(4) PCU factor of 2.5 is adopted for Truck and HGV, 1.5 is adopted for LGV and 1.0 is adopted for private car.

3.3.2 Given that barging point is available at the site, it has been considered that the majority of raw materials for concrete and asphalt production (e.g. aggregates and cement etc.), will be delivered to the site by barge under normal operation. As such, the marine delivery could help reduce the vehicular traffic burden on the road.

3.3.3 It has been coordinated with the existing occupant of Ngau Kok Wan - Relocation of Sha Tin Sewage Treatment Works to Cavern Project that their existing rock processing facilities at Ngau Kok Wan would cease operation and they will hand over the site to this project upon commencement of the construction of TYNUQ. Consequently, no operational traffic from the existing facilities is anticipated during the construction and operation phases of this project.

## 3.4 Routing for Proposed Underground Quarrying Site Traffic

***Routing for Operational Traffic in 2028-2031***

***(before the implementation of tunnel at TKSR portal)***

3.4.1 The end-users of the rock products are distributed across various regions of Hong Kong, including Hong Kong Island, Kowloon, New Territories and Lantau Island. For the purpose of assessment, the traffic routings proposed for travel to these regions are detailed in the table below. As the tunnel to TKSR portal would be implemented in phases, operational traffic would continue to use the site access at NWTYI until the commissioning of the tunnel at TKSR portal.

**Table 3.3 Routing for Operational Traffic in 2028-2031**

| Route | Outbound Traffic | Inbound Traffic |
|---|---|---|
| Route A1 (Tsing Ma Bridge Bound) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Tsing Ma Bridge WB | Tsing Ma Bridge EB → NWTYI NB → Site Access at NWTYI |
| Route A2 (Ting Kau Bridge) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Ting Kau Bridge NB | Ting Kau Bridge SB → NWTYI SB → NWTYI NB → Site Access at NWTYI |
| Route A3 (Tsing Tsuen Road) | Site Access at NWTYI → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tsing Tsuen Road EB | Tsing Tsuen Road WB → Tam Kon Shan Interchange Flyover WB → TYNCR WB → NWTYI SB → NWTYI NB → Site Access at NWTYI |
| Route A4 (Cheung Tsing Tunnel / Nam Wan Tunnel) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Cheung Tsing Highway SB→ Cheung Tsing Tunnel EB | Cheung Tsing Tunnel WB / Nam Wan Tunnel WB → Cheung Tsing Highway NB→ NWTYI NB → Site Access at NWTYI |

3.4.2 Routings for the operational traffic in 2028-2031 are also presented in **Figure 3.5** to **Figure 3.8**.

3.4.3 In addition, the percentage split and trip generation of the proposed Underground Quarrying Site presented in **Table 3.4** are adopted for the operation phase of design year 2031 before the implementation of TKSR portal.

**Table 3.4 Trip Generation and Percentage Split of Traffic Operation Traffic in 2028-2031**

| Route | Outbound Traffic | | Inbound Traffic | |
|---|---|---|---|---|
| | Traffic Flow in peak (in pcu/hr) | Split of Route (in %) | Traffic Flow in peak (in pcu/hr) | Split of Route (in %) |
| Route A1 (Tsing Ma Bridge Bound) | 18 | 10% | 18 | 10% |
| Route A2 (Ting Kau Bridge) | 106 | 60% | 106 | 60% |
| Route A3 (Tsing Tsuen Road) | 35 | 20% | 35 | 20% |
| Route A4 (Cheung Tsing Tunnel / Nam Wan Tunnel) | 18 | 10% | 18 | 10% |

***Routing for Operation Traffic in 2031 and onward***

***(After the implementation of tunnel to TKSR portal)***

3.4.4 Following the implementation of the tunnel to TKSR portal, ingress traffic would be directed to the off-slip of TYNCR WB for access, while the egress would be maintained at TYNCR. In addition, inbound of Routes B1, B2 and B4 shall be prohibited during AM and PM peaks (i.e. 07:00 to 09:30 and 17:00 to 19:00) to mitigate further deterioration of traffic conditions at Tam Kon Shan Interchange, which experiences heavy traffic during the commuting peak traffic periods. Under this restriction, inbound traffic from Tsing Ma Bridge, Ting Kau Bridge and Cheung Tsing Tunnel / Nam Wan Tunnel shall be rerouted via Tsuen Kam Interchange, Texaco Road, Tsing Tsuen Road flyover and Tsing Yi North Coastal Road flyover to access the site. The proposed routing details are presented in the following table.

**Table 3.5 Routing for Operational Traffic from 2031 and onwards**

| Route | Outbound Traffic | Inbound Traffic |
|---|---|---|
| Route B1 (Tsing Ma Bridge Bound) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Tsing Ma Bridge WB | Tsing Ma Bridge EB → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tam Kon Shan Interchange → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR |
| Route B2 (Ting Kau Bridge) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Ting Kau Bridge NB | Ting Kau Bridge SB → NWTYI SB → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tam Kon Shan Interchange → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR |
| Route B3 (Tsing Tsuen Road) | Site Access at NWTYI → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tsing Tsuen Road EB | Tsing Tsuen Road WB → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR |

| Route | Outbound Traffic | Inbound Traffic |
|---|---|---|
| Route B4 (Cheung Tsing Tunnel / Nam Wan Tunnel) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Cheung Tsing Highway SB→ Cheung Tsing Tunnel EB | Cheung Tsing Tunnel / Nam Wan Tunnel → Cheung Tsing Highway → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tam Kon Shan Interchange → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR |

3.4.5 Routings for the operation traffic from 2031 and onwards are also presented in **Figure 3.9** to **Figure 3.12**.

3.4.6 In addition, the percentage split and traffic demand of the proposed Underground Quarrying Site traffic presented in **Table 3.6** and **Table 3.7** are adopted for design year 2031 after the implementation of TKSR access.

**Table 3.6 Trip Generation and Percentage Split of Traffic from 2031 and onwards (AM peak and PM peak)**

| Route | Outbound Traffic | | Inbound Traffic | |
|---|---|---|---|---|
| | Traffic Flow (in pcu/hr) | Split of Route (in %) | Traffic Flow (in pcu/hr) | Split of Route (in %) |
| Route B1 (Tsing Ma Bridge Bound)[1] | 18 | 10% | 0 | 0 |
| Route B2 (Ting Kau Bridge) [1] | 106 | 60% | 0 | 0 |
| Route B3 (Tsing Tsuen Road) | 35 | 20% | 177 | 100% |
| Route B4 (Cheung Tsing Tunnel / Nam Wan Tunnel) [1] | 18 | 10% | 0 | 0 |

Remark:
(1) Prohibition for inbound is proposed during AM and PM peaks, with the assumption that the traffic demand of the corresponding routes would be zero during these periods

**Table 3.7 Trip Generation and Percentage Split of Traffic from 2031 and onwards (outside AM and PM peaks)**

| Route | Outbound Traffic | | Inbound Traffic | |
|---|---|---|---|---|
| | Traffic Flow (in pcu/hr) | Split of Route (in %) | Traffic Flow (in pcu/hr) | Split of Route (in %) |
| Route B1 (Tsing Ma Bridge Bound) | 18 | 10% | 18 | 10% |
| Route B2 (Ting Kau Bridge) | 106 | 60% | 106 | 60% |
| Route B3 (Tsing Tsuen Road) | 35 | 20% | 35 | 20% |
| Route B4 (Cheung Tsing Tunnel / Nam Wan Tunnel) | 18 | 10% | 18 | 10% |

## 3.5 Traffic Management Plan to the Site Traffic

3.5.1 The Traffic Management Plan and traffic control proposals shall be prepared and submitted by the Contractor to minimize traffic impacts during both construction and operation phases.

3.5.2 The Contractor shall prepare and submit swept path analysis at critical turning locations to demonstrate sufficient space for vehicles maneuvering of the types of vehicles allowed within the development in the Traffic Management Plan.

3.5.3 In response to the public concern about traffic conditions at Tam Kon Shan Interchange and Tsuen Tsing Interchange during peak hours, site traffic should be prohibited from accessing the Site via Tam Kon Shan Interchange and Tsuen Tsing Interchange during AM and PM peaks (i.e. 07:00 to 09:30 and 17:00 to 19:00). Site traffic would be rerouted to Tsuen Kam Interchange, Texaco Road, Tsing Tsuen Road flyover and Tsing Yi North Coastal Road flyover. The details of the routing arrangement are provided in **Section 3.4**.

3.5.4 The percentage split of site traffic during construction and operation phases (presented in **Table 3.4** and **Table 3.6**) should be reviewed regularly by the Contractor. Traffic distributions and diversions involving Tsing Ma Bridge, Ting Kau Bridge, Tsing Tsuen Road and Cheung Tsing Tunnel / Nam Wan Tunnel should be monitored and adjusted based on prevailing traffic conditions. The Contractor shall monitor (i.e. GPS tracking, on-site random checking etc.) site traffic in real time and ensure strict adherence to the designated ingress and egress routes.

3.5.5 The Contractor shall submit a detailed Traffic Management Plan and traffic control proposals during construction/operation phases for review and approval. The Traffic Management Plan shall contain traffic control proposals on operation procedure, real-time positioning, site traffic queue and junction restriction measures.

## 3.6 Contingency Plan for Facilities Failure and Associated Mitigation Measures

3.6.1 The Contractor shall prepare a Contingency Plan for facilities failure, together with mitigation measures to minimize disruption and ensure safety. During the failure, excess site traffic shall be diverted to temporary waiting areas to maintain a controlled and efficient flow of operations.

3.6.2 The plan shall include the following elements:

- Activation criteria and procedures for the contingency plan
- Temporary reassignment procedures for excess site traffic
- Safety and traffic management measures, including traffic rerouting, continuous monitoring and communication protocols
- Maintenance and repair response procedures
- Evaluation of consequences and mitigation measures
- Recovery procedures and resume normal operations

## 3.7 Non-Conformance, Incident Investigation and Auditing Mechanism for Traffic Management Plan and Traffic Control Requirements

3.7.1 The Contractor shall establish procedures to manage non-conformance, investigate incidents and conduct audits to ensure continuous compliance with the Traffic Management Plan and Contingency Plan.

Non-Conformance Management

3.7.2 Any deviation from established procedures shall be treated as a non-conformance and documented immediately using a standardized report form. The control center shall review reports, assign corrective actions, and ensure recurring issues are addressed through procedural updates or additional staff training.

3.7.3 Enforcement measures shall be applied for significant non-conformances or traffic violations to strengthen compliance and deter recurrence. In-house measures may include fines, contract penalty clauses, and other disciplinary actions as appropriate.

3.7.4 The enforcement mechanism leaves no ambiguity about the consequences of non-compliance and encourages all personnel and contractors to adhere strictly to the traffic rules in place.

Incident Investigation

3.7.5 In the event of an incident (e.g. near-miss, collision, or other safety-related events), the investigation process shall be initiated without delay. The investigation shall include immediate response, data collection, root cause analysis, implementation of corrective actions, and reporting.

Auditing Mechanism

**3.7.6** Regular audits shall be conducted to ensure ongoing compliance and continuous improvement. Audit activities shall include scheduled audits, random inspections, audit reporting, feedback loops, and enforcement reviews.

## 3.8 Provision of Parking and Loading/Unloading Facilities

3.8.1 In consideration of ancillary parking and loading / unloading (L/UL) spaces, it should be in general provided as much as possible unless deemed infeasible by site constraints. In Hong Kong Planning Standards and Guidelines (HKPSG), there is no parking standard specifically for quarrying. Therefore, the proposed provision of ancillary parking and loading/unloading facilities on the Site referred to the standards for Industrial Use (I) under General Industrial Use (GIU).

3.8.2 **Table 3.8** and **Figure 3.13** summarize the required number of parking and L/UL spaces with respect to the GFA 8,520 $m^2$ of the Site at Ngau Kok Wan.

**Table 3.8 Provision of Parking and Loading/Unloading Facilities**

| Parking and L/UL Facilities | Standard(1) | Required Number of Parking and L/UL Provision | Proposed Number of Parking and L/UL Provision |
|---|---|---|---|
| **Quarrying with concrete batching and asphalt production** | | | |
| **Parking Facilities** | | | |
| Motorcycle | - | Nil | 5(2) |
| Private Car (PC) | 1 space per 1000 - 1200m² GFA | 8-10 | 10 |
| Light Goods Vehicle (LGV)[2] | 1 goods vehicle bay per 700-900m2 GFA, 50% of which should be for parking of goods vehicles | 4-5 | 5 |
| Heavy Goods Vehicle (HGV)(3) | | 2-3 | 3 |
| **L/UL Facilities** | | | |
| Goods Vehicle | 1 goods vehicle bay per 700-900m2 GFA, 50% of which should be for parking of goods vehicles | 6-7 | 7 |
| Container Vehicle Loading / Unloading Bay | 1 container vehicle loading/unloading bay with turning circle of 11.6m outer radius should be provided for a site with dimensions not less than 45m x 40m | 1 | 1 |

Remark:
(1) Parking standard refers to Industrial Use (I) under General Industrial Use (GIU) in Chapter 8, HKPSG (January 2024 Edition)
(2) Additional provisions of motorcycle parking due to the remote location of the Site
(3) Goods vehicle parking and loading/unloading provision is divided into 65% light goods vehicle and 35% medium/heavy goods vehicle

3.8.3 In addition to the above, parking and loading/unloading facilities for employee shuttle services (i.e. coach) are offered within the Site for delivery of an estimated 100 workers. With the above arrangement, no significant impact is anticipated on public transport services.

## 3.9 Public Transport Arrangement

3.9.1 Currently, only one GMB route (i.e. 88A) serves the area within a 500m catchment of the Site, operating from 09:00 to 19:00 on normal weekdays with additional morning service from 06:30 to 09:00. Since pedestrian access to the Site would not be permitted and employee shuttle services are anticipated to be provided, PT service is not considered necessary for the development. Nevertheless, the details and arrangement of shuttle services for employees are subject to operational needs of the contractor.

# 4 TRAFFIC IMPACT ASSESSMENT DURING OPERATION PHASE

## 4.1 Design Year

4.1.1 The commission year of the development is tentatively targeted in Year 2028. With reference to TD's TIA Guidelines of Department Circular 1/2011, the design year for the traffic forecast is proposed to be set at least 3 years after the planned commission of the development. Therefore, the proposed design year is 2031 for the TTIA.

## 4.2 Assessment Scenario

4.2.1 In view of the development nature (i.e. quarry), it is proposed the assessment scenario consists of AM peak, logistic peak and PM peak on normal Weekday, including:-

- Reference Case (without the proposed development);
- **Design Case Scenario A** (with the proposed development, before implementation of the tunnel to TKSR portal); and
- **Design Case Scenario B** (with the proposed development, after implementation of the tunnel to TKSR portal)

## 4.3 Vehicular Traffic Demand Forecasts

4.3.1 With reference to Clause 6.15 of the Brief, a traffic model has been developed. In order to produce robust traffic forecasts that would be responsive to dynamic changes in future land use and infrastructure development, a two-tier modelling approach is proposed. The two-tier model structure comprises a Strategic Transport Model (STM) in the upper tier and a Local Area Traffic Model (LATM) in the lower tier. The upper tier STM follows a 4-stage multi-modal modelling process to produce the vehicular cordoned matrices for input into the lower tier LATM.

*Model Structure and Coverage*

*Strategic Transport Model (STM)*

4.3.2 AECOM's in-house STM (in EMME platform) that covers the entire Hong Kong Special Administrative Region (HKSAR) has been applied. This model has the architecture of a conventional 4-stage transport model that involves the four basic stages of Trip Generation, Trip Distribution, Modal Split and Assignment.

4.3.3 For this Study, the STM incorporated the Task Force Planning Dataset (TFPD) consolidated by TD complying the proposed township developments under the Northern Metropolis Development Strategy (NMDS) and Kau Yi Chau Artificial Island development. The STM was validated to year 2023 traffic conditions based on Annual Traffic Census (ATC) 2023 for forecasting different scenarios in different design years. For future year traffic forecasting, the planning data, highway and railway network assumptions and other strategic planning assumptions were incorporated into the STM.

*Local Area Traffic Model (LATM)*

4.3.4 The latest NTW2 2019 Base District Traffic Model (BDTM) was adopted as a starting point to develop a modified LATM for this project. The zoning system primarily adopted the BDTM zoning system, but suitably adjusted and refined to reflect the newly planned developments in the vicinity. Subject to the model validation results and specific local requirements, the zoning system within the AOI was reviewed and refined to better replicate the local traffic movements and to improve the accuracy of the modelled results within the AOI. The traffic route choice patterns and any congestion or access issues in the relevant area were accounted for in the traffic assignment process.

4.3.5 The LATM was developed to validate the traffic conditions in base year and forecast the traffic conditions in design years representing the morning peak (AM) and afternoon peak (PM) in relation to the proposed AOI.

4.3.6 It is worth noting that BDTM only models traffic conditions in AM peak and PM peak on Weekday and therefore LATM also model AM peak and PM peak only. In this connection, the traffic forecast for logistic peak was estimated by growth factor method based on the traffic growth of the study road links from LATM.

*Base Year Modelling Development*

4.3.7 The STM was validated to year 2023 conditions as base year on the latest available input data, including land use and planning data, transport infrastructure, road network assumptions, socio-economic data, and other transport policy assumptions. For LATM development, year of traffic surveys (i.e. 2025) was adopted as the base year. The overall process for developing the base year model involves the following key steps:

- Collection of relevant data;
- Validation of the STM for the year 2023;
- Model run of the STM for the base year to obtain vehicular cordoned matrices for the LATM;
- Aggregation of the cordoned matrices into two vehicle classes, i.e. private vehicles and goods vehicles, for LATM;
- Disaggregation of matrices from STM zoning system (i.e. same as PDZ system) to LATM zoning system;
- Update and refinement of LATM Network; and
- Validation of the LATM for the base year.

*Design Year Modelling Development*

4.3.8 The STM was run to project the future transport demand for design years. Similarly, the initial vehicular cordoned matrices were prepared for inputted to LATM. The main tasks are summarized as follows:

- Updating STM highway and railway networks for design years by incorporating committed/planned new highway and railway infrastructure;
- Preparation and full STM runs for design years;
- Checking of STM assignments and results including whether it has selected the reasonable route choice and whether the amount of traffic volume on the major road links is within a reasonable range between various modelled scenarios;
- Preparation of vehicular cordoned matrices from the respective design years of STMs for derivation of zone-to-zone traffic changes by user class (PV and GV) between base / design years;
- Application of “changes” derived above to the validated LATM base year/design year matrices;
- Preparation of LATM highway networks for design years by incorporating committed/planned new highway infrastructure and local traffic improvement schemes; and
- Checking of LATM traffic assignments and results.

*Model Validation Criteria*

*Strategic Transport Model (STM)*

4.3.9 The base year STM has been validated to year 2023 observed vehicular flows across the major Annual Traffic Census (ATC) screenlines for the AM and PM peak periods as well as daily basis, see **Appendix C**. The validation of STM covers the ATC screenlines as listed below:

- Hong Kong External Cordon
- Hong Kong Internal Cordon
- Kowloon External Cordon
- Tsing Yi External Cordon
- Lantau External Cordon
- Shatin External Cordon
- Ma On Shan External Cordon
- TKO External Cordon
- Screenline A-A
- Screenline C-C
- Screenline F-F
- Screenline G-G
- Screenline H-H
- Screenline I-I
- Screenline K-K
- Screenline R-R
- Screenline S-S
- Screenline T-T
- Screenline Y-Y
- Cross Harbour

4.3.10 The 2023 validation data was based on the ATC traffic count data. The ATC count data provides breakdowns of total vehicle flows by direction, by hour and by vehicle classification. The validation guidelines for the STM are shown in **Table 4.1**.

**Table 4.1 Validation Guidelines for Strategic Transport Model**

| Validation Parameter at Screenline | Mean Error | | 80% Error(1) | | Max Error | |
|---|---|---|---|---|---|---|
| | 1-way | 2-way | 1-way | 2-way | 1-way | 2-way |
| Daily Total Vehicles | N/A(2) | 3% | N/A(2) | 8% | N/A(2) | 15% |
| AM Peak Total Vehicles | 10% | 5% | 15% | 10% | 30% | 20% |
| AM Peak Car | 15% | 10% | 25% | 15% | 50% | 30% |
| AM Peak Taxi | 15% | 10% | 25% | 15% | 50% | 30% |
| AM Peak GV(3) | 15% | 10% | 25% | 15% | 50% | 30% |
| PM Peak Total Vehicles | 10% | 5% | 15% | 10% | 30% | 20% |
| PM Peak Car | 15% | 10% | 25% | 15% | 50% | 30% |
| PM Peak Taxi | 15% | 10% | 25% | 15% | 50% | 30% |
| PM Peak GV(3) | 15% | 10% | 25% | 15% | 50% | 30% |

Remark:
(1) - "80% error" - the difference of observed and synthesized volume of each screen line should be achieved within the specified value. The number of successful screen lines should achieve 80% of total number of screenline.
(2) - N/A stands for "not applicable"
(3) - GV include Light Van, Light Goods Vehicle, Medium Goods Vehicle, Heavy Goods Vehicle and Tractor Unit.

4.3.11 The STM synthesized PT passenger flows were also compared against major PT passenger statistics available to check that the model reasonably represents the overall trip generation and modal choice characteristics within the AOI. The validation guidelines for total daily boarding by broad PT mode and passenger screen line flows are shown in **Table 4.2** and **Table 4.3**.

**Table 4.2 Validation Guidelines for Total Daily Boarding by Broad PT Mode**

| Public Transport Mode | Maximum Allowable Variation |
|---|---|
| Heavy Rail | ±20% |
| Light Rail Transit / Tram | ±20% |
| Bus (Franchised Bus and Residential Coach Service) | ±20% |
| PLB (RMB and GMB) | ±20% |
| Ferry | ±20% |
| **Total PT** | **±20%** |

**Table 4.3 Validation Guidelines for Passenger Screen line Flows**

| Daily Screenline Flows | Mean Error | 80% Error(1) | Maximum Error |
|---|---|---|---|
| Rail | ±8% | ±10% | ±20% |
| Bus | ±5% | ±15% | ±30% |
| PLB | ±10% | ±25% | ±50% |
| PT | ±3% | ±8% | ±15% |

Note:
(1) - "80% error" - the difference of observed and synthesized volume of each screen line should be achieved within the specified value. The number of successful screen lines should achieve 80% of total number of screenline.

4.3.12 The 2023 validation performance of STM has been presented in the following **Tables 4.4** to **4.6**. It shows that the STM has fulfilled the validation criteria as specified in **Table 4.1** to **Table 4.3**. Detailed validation results of STM are presented in **Appendix C**.

**Table 4.4 STM Validation Performance**

| Validation Parameter at Screenline | Mean Error | | 80% Error | | Max Error | |
|---|---|---|---|---|---|---|
| | 1-way(1) | 2-way(1) | 1-way(2) | 2-way(2) | 1-way(3) | 2-way(3) |
| Daily Total Vehicles | | 1% | | 85% | | 13% |
| AM Peak Total Vehicles | 3% | 3% | 88% | 90% | 18% | 14% |
| AM Peak Car | 3% | 3% | 98% | 100% | 31% | 15% |
| AM Peak Taxi | 8% | 7% | 93% | 80% | 34% | 29% |
| AM Peak GV | 4% | 3% | 98% | 90% | 33% | 17% |
| PM Peak Total Vehicles | 3% | 3% | 95% | 90% | 21% | 12% |
| PM Peak Car | 5% | 4% | 98% | 100% | 28% | 13% |
| PM Peak Taxi | 6% | 5% | 93% | 90% | 29% | 25% |
| PM Peak GV | 5% | 4% | 93% | 80% | 34% | 25% |

Note:
(1) The numbers presented represent the mean difference between observed and synthesized screenline volumes.
(2) The numbers presented represent the percentages of screenlines satisfying the respective criteria.
(3) The numbers presented represent the maximum difference between observed and synthesized screenline volumes.

**Table 4.5 Validation Performance for Total Daily Boarding by Broad PT Mode**

| Public Transport Mode | Daily Boardings (1,000) | | | |
|---|---|---|---|---|
| | Observed | Modelled | Mod/Obs | Accepted |
| Rail | 4,918 | 4,944 | 1.01 | Y |
| LRT/ Tram | 580 | 638 | 1.10 | Y |
| Ferry | 113 | 121 | 1.07 | Y |
| PLB | 1,540 | 1,659 | 1.08 | Y |
| Bus | 4,297 | 4,438 | 1.03 | Y |
| Total PT | 11,448 | 11,800 | 1.03 | Y |

**Table 4.6 Validation Performance for Passenger Screen Line Flows**

| Parameters | Daily Validation Performance | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Mean Error | | | 80% Error | | | Maximum Error | | |
| | Target | (Mod-Obs)/Obs | Accepted? | Target | (Mod-Obs)/Obs | Accepted? | Target | (Mod-Obs)/Obs | Accepted? |
| Daily Rail Passengers | ±8% | +1% | Y | ±10% | 95% | Y | ±20 | +11% | Y |
| Daily Bus Passengers | ±5% | +4% | Y | ±15% | 85% | Y | ±30 | +21% | Y |
| Daily PLB Passengers | ±10% | +5% | Y | ±25% | 90% | Y | ±50 | +28% | Y |
| Daily Total Passengers | ±3% | +1% | Y | ±8% | 85% | Y | ±15 | +10% | Y |

Note:
(1) The numbers presented represent the percentages of screenlines satisfying the respective criteria.

*Local Area Traffic Model (LATM)*

4.3.13 The LATM serves to facilitate the detailed traffic forecasts and assessments in the proposed AOI to be carried out under this Assignment. Hence, the base year LATM has to be validated against the observed traffic data comprising screenlines, road link and junction flows within AOI in two distinctive AM and PM peak hours.

4.3.14 The LATM validation guidelines adopted the same as the BDTM, as set out in **Table 4.7**. A combination of percentage difference and Geoffrey E. Havers (GEH) statistics is suggested for use to assess model validation. Validation summary is presented in **Table 4.8** and detailed results are attached in **Appendix C**.

**Table 4.7 Validation Guidelines for Local Area Traffic Model**

| Validation Criteria | Validation Target |
|---|---|
| 1. Screenline Link Flows | 85% within ± 10%<br>100% within ± 20% |
| 2. All Count Locations (including key road links and key junction entry/exit arm flows) | GEH of 5 or less on 85% of links<br>GEH of 10 or less on 100% of links |

4.3.15 Recognizing that percentage difference between the observed and modelled link flows only assesses relative error and can often be misleading due to numbers of relatively small magnitude, the GEH statistic is primarily employed to assess validation. GEH is a modified form of chi-square statistic defined as:

$$\sqrt{\frac{(V_2 - V_1)^2}{\frac{1}{2}(V_1 + V_2)}}$$

where V1 and V2 are the observed and modelled flows on a specific link. It is used in order to reflect importance of a difference based on the total volume on a link. If percentages alone are examined, then there is a risk of very large percentage differences in small flow volumes appearing important when they are not. Use of the GEH statistic would remove this risk by reducing the significance of relatively large percentage differences between two small numbers.

**Table 4.8 Validation Summary for Local Area Traffic Model**

| Validation Criteria | Target Values | Percentage satisfying the Criteria | |
|---|---|---|---|
| | | AM Peak | PM Peak |
| | | Total (PV + GV +PT) (1) | |
| Percentage Difference between Observed and Modelled Screenline Link Flows | | | |
| % of links within ± 10% | 85% | 100% | 99% |
| % of links within ± 20% | 100% | 100% | 100% |
| Percentage of GEH Statistics for key road links and key junction entry/exit arm flows | | | |
| % of links with GEH 5 or less | 85% | 100% | 99% |
| % of links with GEH 10 or less | 100% | 100% | 100% |

Note:
(1) PV stands for private vehicles, GV stands for goods vehicles, PT stands for public transport services.

*Planning Data Assumptions*

4.3.16 The TFPD was taken as the basis of the territorial planning data assumptions in the various design years for this Study. The TFPD has considered the major committed/planned developments near the development including:

- Public Housing Development at Ching Hong Road North;
- Public Housing Development at Tsing Yi Road West.

4.3.17 Apart from the above, advice has been sought from PlanD for the other committed/planned developments within and near the AOI (i.e. not included in the TFPD) as listed below, to facilitate a conservative forecast of traffic flows for 2031 design year.

- Agreement No. CE 85/2017 (GE) – Technical Study on the Potential Quarry Sites at Tsing Yi Southwest – Feasibility Study (commissioned by CEDD)
- Agreement No. CE 14/2016 (CE) – Study on Multi-Storey Complex for Container Storage and Cargo Handling in Tsing Yi – Feasibility Study (commissioned by CEDD)
- Agreement No. CE WQ/216/22 – Traffic Impact Assessment (TIA) (Proposed Advanced Construction Industry Building commissioned by Development Bureau (DEVB))
- Agreement No. FSD/ DLS/22 (70) – Traffic Impact Assessment (TIA) (Proposed Government Dangerous Goods Warehouse and a Government Owned Rental Dangerous Goods Warehouse to the Fire Services Department (FSD) commissioned by FSD)

*Trip Generation/Attraction*

4.3.18 The trip generation/attraction of planned/committed developments not included in the TFPD within and near the AOI followed TIA/traffic study reports of each project. In case such reports are not available, the additional traffic flows were estimated from the trip rates in TPDM, BDTM or Trip Generation Survey 2006 (TGS2006) by TD.

4.3.19 For the development itself, the main operation traffic of the Tsing Yi North Underground Quarry was suggested to be estimated by considering the hourly maximum daily production capacity of the ancillary operation and the capacity of truck (e.g. concrete truck and dump truck for concrete batching facilities and asphalt production facilities respectively).

4.3.20 Apart from the above, other operation traffic (e.g. private cars and light goods vehicles) was considered with reference to quarry site(s) with similar nature in terms of production scale and number of staff (e.g. Lam Tei Underground Quarry).

*Planned and Committed Road and Rail Infrastructure Projects in the Vicinity Highway Project*

4.3.21 The highway network assumptions adopted are shown in **Table 4.9** below.

**Table 4.9 Road Network Assumptions**

| Road Network Assumptions (in addition to 2023 network) | Configuration | To be Incorporated in Transport Model of Design Year in |
|---|---|---|
| ***Kowloon*** | | |
| Route 6 – Central Kowloon Route | D3 | 2031 |
| Route 6 – Trunk Road T2 (Kai Tak – Cha Kwo Ling Link) | D2 | 2031 |
| ***New Territories*** | | |
| Widening of section of Lin Ma Hang Road between Tsung Yuen Ha and Lin Ma Hang | S2 | 2031 |
| Widening of Castle Peak Road (Castle Peak Bay Section) | D2 | 2031 |
| Widening of Fuk Hang Tsuen Road | S2 | 2031 |
| Improvement of Fan Kam Road | S2 | 2031 |
| Widening of Tai Po Road (Sha Tin Section) | D3 | 2031 |
| Fanling Bypass Eastern Section (under Fanling North NDA) | D2 | 2031 |
| Flyover from Kwai Tsing Interchange Up Ramp to Kwai Chung Road | S1 | 2031 |
| Upgrading of remaining sections of Kam Tin Road and Lam Kam Road | S2 | 2031 |
| North Lantau Road P1 (Tung Chung east to Tai Ho Section) | D2 | 2031 |
| Revised Trunk Road T4 in Sha Tin | D2 | 2031 |
| Dualling of Hiram's Highway between Marina Cove and Sai Kung Town (Hiram's Highway Improvement Stage 2) | D2 | 2031 |
| Fanling Bypass Western Section (under Fanling North NDA) | S2 | 2031 |
| Improvement of Tai Tau Leng Roundabout and Fanling Highway (Kwu Tung Section) | D4 | 2031 |
| North-South Link(s) as Alternative to So Kwun Po (Kai Leng) Roundabout | S1 | 2031 |
| Slip Road connecting Lok Ma Chau Road to Fanling Highway Eastbound | S1 | 2031 |
| Flyover connecting Lok Ma Chau Road to San Tin Highway Westbound | S1 | 2031 |
| Road P2 for Kwu Tung North New Development Area | D2 | 2031 |
| Road D2 for Kwu Tung North New Development Area | S4/S2 | 2031 |
| Road D3 for Kwu Tung North New Development Area | S4/S2 | 2031 |
| Road Improvement Works in Hung Shui Kiu New Development Area | Various | 2031 |
| Road Improvement Works in Yuen Long South Development | Various | 2031 |
| Widening of T6 Bridge of Tate's Cairn Highway | D3 | 2031 |
| Lantau Road P1 between Tai Ho Interchange and Sunny Bay | D2 | 2031 |

*Railway Project*

4.3.22 The railway network assumptions adopted are shown in **Table 4.10** below.

**Table 4.10 Railway Network Assumptions**

| Railway network assumptions (in addition to 2023 network) | To be Incorporated in Transport Model of Design Year in |
|---|---|
| Northern Link (NOL) Phase 1 Kwu Tung (KTU) Station | 2031 |
| Tung Chung Line (TCL) Extension | 2031 |
| Oyster Bay (OYB) Station | 2031 |
| Hung Shui Kiu (HSK) Station | 2031 |
| Tuen Mun South (TMS) Extension | 2031 |

*Traffic Growth of Study Road Link*

4.3.23 As discussed in **para. 4.3.6**, the traffic forecast for logistic peak was estimated using the growth factor method based on the traffic growth of the study road links from LATM. The forecasted traffic flows of study road links for the design year 2031 are extracted from LATM and presented in the following table.

**Table 4.11 Growth Factor of Study Road Links**

| Link Index | Link Name | Direction | AM Peak | | | PM Peak | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2025 Obs(1) | 2031 Mod(1) | Grow Factor | 2025 Obs(1) | 2031 Mod(1) | Grow Factor |
| | | | Flow (pcu/hr) | | p.a. | Flow (pcu/hr) | | p.a. |
| L1 | Tsing Ma Bridge | EB | 3,370 | 4,560 | +5.2% | 4,460 | 6,285 | +5.9% |
| | | WB | 4,445 | 6,370 | +6.2% | 3,175 | 4,855 | +7.3% |
| L2 | Ting Kau Bridge | NB | 3,160 | 4,480 | +6.0% | 4,690 | 5,660 | +3.2% |
| | | SB | 6,840 | 7,175 | +0.8% | 3,650 | 4,325 | +2.9% |
| L3 | Unnamed access road near Lantau Link Visitors Centre | NB | 195 | 0 | - | 190 | 0 | - |
| | | SB | 125 | 0 | - | 140 | 0 | - |
| L4 | Tam Kon Shan Road | EB | 325 | 450 | +5.6% | 335 | 460 | +5.4% |
| | | WB | 105 | 105 | 0% | 105 | 105 | 0% |
| L5 | Slip Road Connecting Tsing Yi North Coastal Road westbound to Tam Kon Shan Road | WB | 220 | 345 | +7.8% | 195 | 320 | +8.6% |
| L6 | Slip Road Connecting Tam Kon Shan Road to Tsing Yi North Coastal Road eastbound | EB | 155 | 280 | +10.4% | 170 | 295 | +9.6% |
| L7 | Tsing Yi North Coastal Road | EB | 1,200 | 1,435 | +3.0% | 1,115 | 1,385 | +3.7% |
| | | WB | 1,600 | 2,435 | +7.3% | 1,045 | 1,420 | +5.2% |
| L8 | Cheung Tsing Tunnel | EB | 4,360 | 4,940 | +2.1% | 3,540 | 4,375 | +3.6% |
| | | WB | 2,930 | 3,545 | +3.2% | 2,930 | 3,645 | +3.7% |
| L9 | Nam Wan Tunnel | EB | 2,910 | 3,935 | +5.2% | 1,755 | 3,005 | +9.2% |
| | | WB | 1,795 | 3,765 | +13.1% | 2,345 | 3,745 | +8.1% |
| L10 | Fung Shue Wo Road between Tam Kon Shan Interchange and Tsing Yi Road West | NB | 1,360 | 1,330 | -0.4% | 1,365 | 1,375 | +0.1% |
| | | SB | 1,230 | 1,275 | +0.6% | 1,010 | 970 | -0.7% |
| L11 | Tsing Yi Road West between Fung Shue Wo Road and Ching Hong Road | NB | 1,000 | 1,005 | +0.1% | 945 | 950 | +0.1% |
| | | SB | 805 | 825 | +0.4% | 710 | 660 | -1.2% |

| Link Index | Link Name | Direction | AM Peak | | | PM Peak | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2025 Obs(1) | 2031 Mod(1) | Grow Factor | 2025 Obs(1) | 2031 Mod(1) | Grow Factor |
| | | | Flow (pcu/hr) | | p.a. | Flow (pcu/hr) | | p.a. |
| L12 | Tsing Yi Road West between Cheung Tsing Highway and Ching Hong Road | NB | 675 | 660 | -0.4% | 715 | 720 | +0.1% |
| | | SB | 750 | 805 | +1.2% | 570 | 560 | -0.3% |
| L13 | Ching Hong Road between Tsing Yi Road West and Chung Mei Road | EB | 615 | 625 | +0.3% | 510 | 515 | +0.2% |
| | | WB | 625 | 685 | +1.5% | 550 | 570 | +0.6% |
| L14 | Sai Tso Wan Road between Tsing Yi Road West and local access for Yiu Lian Dockyards Limited | EB | 490 | 470 | -0.7% | 615 | 585 | -0.8% |
| | | WB | 790 | 780 | -0.2% | 575 | 570 | -0.2% |
| **Total Traffic Flow** | | | 42,075 | 52,280 | +3.7% | 37,405 | 47,355 | +4.0% |

Remark:
(1) – "Obs" denotes as observed flow, while "Mod" demotes as modelled flow extracted from LATM

4.3.24 **Table 4.11** details the growth factors for the study road links during the AM and PM peak periods respectively based on the LATM. The data reveal variable annual growth rates among the links. Collectively, the overall annual growth rate indicates an increase of 3.7% and 4.0% for AM and PM peak periods respectively.

4.3.25 Apart from the traffic growth of the study road links from LATM in AM and PM peak periods, reference has also been made to the TFPD to establish the growth rate. The average annual growth rates in terms of population and employment from 2019 to 2031 are tabulated in **Table 4.12**.

**Table 4.12 Population and Employment of PDZ within AOI in TFPD**

| PDZ | Projection Year | | | | | |
|---|---|---|---|---|---|---|
| | 2019 | | 2026 | | 2031 | |
| | Population | Employment | Population | Employment | Population | Employment |
| 152 | 25,450 | 2,200 | 25,400 | 2,300 | 25,427 | 3,377 |
| 153 | 37,250 | 7,950 | 35,500 | 7,400 | 34,392 | 7,236 |
| 155 | 50 | 3,250 | 50 | 2,600 | 52 | 2,103 |
| 359 | 3,050 | 600 | 2,700 | 650 | 2,307 | 542 |
| 428 | 50,400 | 5,350 | 49,750 | 5,500 | 50,016 | 7,177 |
| 450 | 33,450 | 5,850 | 34,750 | 5,600 | 35,126 | 6,293 |
| **Total** | **149,650** | **25,200** | **148,150** | **24,050** | **147,320** | **26,728** |
| **Annual Growth Rate** | | | From 2019 to 2026: -0.22% | | From 2026 to 2031: +0.21% | |

4.3.26 As shown in **Table 4.12**, the projection planning data in TFPD suggest that the annual growth rates between 2019 and 2026 is -0.22% and between 2026 and 2031 is +0.21%.

4.3.27 For a conservative approach, it is recommended that a growth factor of +4.0% be applied to the logistic peak traffic flows observed in 2025 to forecast the corresponding flows for the 2031 design year.

4.3.28 Results of traffic forecast for the scenario of "Without" and "With" the proposed development are shown from **Figure 4.1** to **Figure 4.5** respectively.

*Planned / Committed Traffic Improvement Scheme*

4.3.29 The reference scenarios also considered the planned/ committed local traffic improvement schemes within the Study Area. The planned/ committed traffic improvement scheme is listed below whilst the scheme layout plan is provided in **Appendix D**.

- J6 - Fung Shue Wo Road / Tsing Yi Road West under Infrastructure Works for Public Housing developments at Ching Hong Road North, Tsing Yi

4.3.30 The above-mentioned traffic improvement scheme was included in the traffic impact assessment and the results are summarized in the following section.

## 4.4 Assessment of Study Junctions and Road Links for Design Year 2031

4.4.1 To gauge the traffic impact due to the development, performance of the study junctions and road links is assessed for design year 2031 according to the criteria from **paragraphs 2.3.2** to **2.3.4**. The results are summarized from **Table 4.13** to **Table 4.18** below.

**Table 4.13 Junction Capacity Assessment for Design Year (2031) – Reference Case**

| Index | Junction | Type | RC/DFC | | |
|---|---|---|---|---|---|
| | | | AM Peak | PM Peak | Logis Peak |
| J1 | North West Tsing Yi Interchange (NWTYI) Roundabout | Roundabout | 0.36 | 0.30 | 0.36 |
| J2 | NWTYI / unnamed access road near Lantau Link Visitors Centre | Priority | -(1) | -(1) | -(1) |
| J3 | Slip Road from Tsing Yi North Coastal Road / Tam Kon Shan Road | Roundabout | 0.29 | 0.27 | 0.18 |
| J4 | Tam Kon Shan Road / Slip Road to Tsing Yi North Coastal Road | Priority | 0.20 | 0.22 | 0.17 |
| J5 | Tam Kon Shan Interchange | Roundabout | 0.64 | 0.58 | 0.64 |
| J6(2) | Fung Shue Wo Road / Tsing Yi Road West | Signal | 42% | 50% | 44% |
| J7 | Liu To Road / Tsing Yi Road West | Signal | 30% | 34% | 21% |
| J8 | Ching Hong Road / Tsing Yi Road West | Signal | 63% | 91% | 46% |
| J9 | Ching Hong Road / Chung Mei Road | Signal | 91% | >100% | 87% |
| J10 | Cheung Tsing Highway / Tsing Yi Road West | Signal | 64% | 64% | 19% |
| J11 | Sai Tso Wan Road / Tsing Yi Road West / Tsing Yi Road | Signal | 52% | 73% | 17% |

Remark:
(1) Existing rock processing facilities at Ngau Kok Wan would cease operation and the related traffic will no longer exist.
(2) Taking into account the proposed junction improvement works under other projects.

**Table 4.14 Road Link Capacity Assessment for Design Year (2031) - Reference Case**

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| L1 | Tsing Ma Bridge | EB | 6,100 | 4,560 | 0.75 | 6,285 | **1.03** | 4,620 | 0.76 |
| | | WB | 6,100 | 6,370 | **1.04** | 4,855 | 0.80 | 4,350 | 0.71 |
| L2 | Ting Kau Bridge | NB | 6,100 | 4,480 | 0.73 | 5,660 | 0.93 | 4,740 | 0.78 |
| | | SB | 6,100 | 7,175 | **1.18** | 4,325 | 0.71 | 6,405 | **1.05** |
| L3 | Unnamed access road near Lantau Link Visitors Centre | NB | 500 | -(1) | -(1) | -(1) | -(1) | 0 | 0.00 |
| | | SB | 500 | -(1) | -(1) | -(1) | -(1) | 0 | 0.00 |
| L4 | Tam Kon Shan Road | EB | 900 | 450 | 0.50 | 460 | 0.51 | 240 | 0.27 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| | | WB | 900 | 105 | 0.12 | 105 | 0.12 | 80 | 0.09 |
| L5 | Slip Road Connecting Tsing Yi North Coastal Road westbound to Tam Kon Shan Road | WB | 1,800 | 345 | 0.19 | 320 | 0.18 | 220 | 0.12 |
| L6 | Slip Road Connecting Tam Kon Shan Road to Tsing Yi North Coastal Road eastbound | EB | 1,800 | 280 | 0.16 | 295 | 0.16 | 130 | 0.07 |
| L7 | Tsing Yi North Coastal Road | EB | 5,600 | 1,435 | 0.26 | 1,385 | 0.25 | 1,385 | 0.25 |
| | | WB | 3,600 | 2,435 | 0.68 | 1,420 | 0.39 | 1,490 | 0.41 |
| L8 | Cheung Tsing Tunnel | EB | 5,400 | 4,940 | 0.91 | 4,375 | 0.81 | 4,220 | 0.78 |
| | | WB | 5,400 | 3,545 | 0.66 | 3,645 | 0.68 | 2,990 | 0.55 |
| L9 | Nam Wan Tunnel | EB | 5,400 | 3,935 | 0.73 | 3,005 | 0.56 | 3,785 | 0.70 |
| | | WB | 5,400 | 3,765 | 0.70 | 3,745 | 0.69 | 3,250 | 0.60 |
| L10 | Fung Shue Wo Road between Tam Kon Shan Interchange and Tsing Yi Road West | NB | 3,050 | 1,330 | 0.44 | 1,375 | 0.45 | 1,390 | 0.46 |
| | | SB | 4,850 | 1,275 | 0.26 | 970 | 0.20 | 1,120 | 0.23 |
| L11 | Tsing Yi Road West between Fung Shue Wo Road and Ching Hong Road | NB | 3,050 | 1,005 | 0.33 | 950 | 0.31 | 965 | 0.32 |
| | | SB | 3,050 | 825 | 0.27 | 660 | 0.22 | 720 | 0.24 |
| L12 | Tsing Yi Road West between Cheung Tsing Highway and Ching Hong Road | NB | 2,800 | 660 | 0.24 | 720 | 0.26 | 910 | 0.33 |
| | | SB | 2,800 | 805 | 0.29 | 560 | 0.20 | 745 | 0.27 |
| L13 | Ching Hong Road between Tsing Yi Road West and Chung Mei Road | EB | 920 | 625 | 0.68 | 515 | 0.56 | 730 | 0.79 |
| | | WB | 920 | 685 | 0.74 | 570 | 0.62 | 675 | 0.73 |
| L14 | Sai Tso Wan Road between Tsing Yi Road West and local access for Yiu Lian Dockyards Limited | EB | 1,250 | 470 | 0.38 | 585 | 0.47 | 1,020 | 0.82 |
| | | WB | 1,250 | 780 | 0.62 | 570 | 0.46 | 900 | 0.72 |
| LL1 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Ma Bridge westbound | WB | 4,000 | 2,560 | 0.64 | 1,660 | 0.42 | 1,665 | 0.42 |
| LL2 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Yi Administration Building northbound | NB | 1,800 | 335 | 0.19 | 340 | 0.19 | 210 | 0.12 |
| LL3 | NWTYI – Slip Road connecting Cheung Tsing Highway northbound to Tsing Yi Administration Building northbound | NB | 1,800 | 165 | 0.09 | 65 | 0.04 | 290 | 0.16 |
| LL4 | NWTYI – Slip Road connecting Tsing Ma Bridge eastbound near Wok Tai Wan | NB | 1,800 | 1,100 | 0.61 | 1,275 | 0.71 | 1,240 | 0.69 |
| LL5 | NWTYI – Slip Road connecting Tsing Yi Administration Building and unnamed access road | NB | 1,700 | 330 | 0.19 | 240 | 0.14 | 285 | 0.17 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| | near Lantau Link Visitors Centre | | | | | | | | |
| LL6 | NWTYI – Slip Road connecting Tsing Sha Highway northbound to Tsing Long Highway northbound | NB | 6,100 | 4,230 | 0.69 | 5,020 | 0.82 | 4,460 | 0.73 |
| LL7 | NWTYI – Slip Road connecting unnamed access road near Lantau Link Visitors Centre to Tsing Yi North Coastal Road eastbound | NB | 3,600 | 1,400 | 0.39 | 1,500 | 0.42 | 1,525 | 0.42 |
| LL8 | Slip Road connecting Tsing Yi North Coastal Road eastbound and westbound | SB | 1,800 | 250 | 0.14 | 415 | 0.23 | 270 | 0.15 |
| LL9 | NWTYI – Tsing Long Highway southbound | SB | 1,900 | 1,040 | 0.55 | 615 | 0.32 | 695 | 0.37 |
| LL10 | NWTYI - Slip Road connecting LL9 to LL1 | SB | 3,600 | 2,330 | 0.65 | 1,520 | 0.42 | 1,545 | 0.43 |
| LL11 | NWTYI – Slip Road connecting Tsing Long Highway southbound to LL1 and LL12 | SB | 6,100 | 3,370 | 0.55 | 2,130 | 0.35 | 2,235 | 0.37 |
| LL12 | NWTYI – Slip Road connecting LL11 to LL2 and LL13 | SB | 1,900 | 810 | 0.43 | 470 | 0.25 | 575 | 0.30 |
| LL13 | NWTYI – Slip Road connecting LL12 to Cheung Tsing Highway southbound | SB | 1,900 | 475 | 0.25 | 130 | 0.07 | 360 | 0.19 |
| LL14 | (a) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 5,755 | 0.70 | 6,070 | 0.74 | 5,445 | 0.66 |
| | (b) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 2,405 | 0.60 | 2,120 | 0.53 | 1,820 | 0.46 |
| | (c) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 1,915 | 0.48 | 2,550 | 0.64 | 1,605 | 0.40 |
| | (d) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 7,900 | 0.96 | 5,660 | 0.69 | 7,575 | 0.92 |

Remark:
(1) Existing rock processing facilities at Ngau Kok Wan would cease operation and the related traffic will no longer exist.

## Design Case Scenario A

**Table 4.15 Junction Capacity Assessment for Design Year (2031) – Design Case Scenario A**

| Index | Junction | Type | RC/DFC | | |
|---|---|---|---|---|---|
| | | | AM Peak[3] | PM Peak[3] | Logis Peak |
| J1 | North West Tsing Yi Interchange (NWTYI) Roundabout | Roundabout | 0.55 | 0.49 | 0.56 |

| Index | Junction | Type | RC/DFC | | |
|---|---|---|---|---|---|
| | | | AM Peak(3) | PM Peak(3) | Logis Peak |
| J2 | NWTYI / unnamed access road near Lantau Link Visitors Centre | Priority | 0.42 | 0.49 | 0.48 |
| J3 | Slip Road from Tsing Yi North Coastal Road / Tam Kon Shan Road | Roundabout | 0.29 | 0.27 | 0.18 |
| J4 | Tam Kon Shan Road / Slip Road to Tsing Yi North Coastal Road | Priority | 0.20 | 0.22 | 0.17 |
| J5 | Tam Kon Shan Interchange | Roundabout | 0.64 | 0.58 | 0.64 |
| J6(2) | Fung Shue Wo Road / Tsing Yi Road West | Signal | 42% | 50% | 44% |
| J7 | Liu To Road / Tsing Yi Road West | Signal | 30% | 34% | 21% |
| J8 | Ching Hong Road / Tsing Yi Road West | Signal | 63% | 91% | 46% |
| J9 | Ching Hong Road / Chung Mei Road | Signal | 91% | >100% | 87% |
| J10 | Cheung Tsing Highway / Tsing Yi Road West | Signal | 64% | 64% | 19% |
| J11 | Sai Tso Wan Road / Tsing Yi Road West / Tsing Yi Road | Signal | 52% | 73% | 17% |

Remark:
(1) Existing rock processing facilities at Ngau Kok Wan would cease operation and the related traffic will no longer exist.
(2) Taking into account the proposed junction improvement works under other projects.
(3) Taking into account the restriction to site traffic accessing Tam Kon Shan Interchange and Tsuen Tsing Interchange during AM and PM peaks

**Table 4.16 Road Link Capacity Assessment for Design Year (2031) – Design Case Scenario A**

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak(1) | | PM Peak(1) | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| L1 | Tsing Ma Bridge | EB | 6,100 | 4,575 | 0.75 | 6,305 | **1.03** | 4,640 | 0.76 |
| | | WB | 6,100 | 6,385 | **1.05** | 4,870 | 0.80 | 4,365 | 0.72 |
| L2 | Ting Kau Bridge | NB | 6,100 | 4,585 | 0.75 | 5,765 | 0.95 | 4,845 | 0.79 |
| | | SB | 6,100 | 7,285 | **1.19** | 4,430 | 0.73 | 6,510 | **1.07** |
| L3 | Unnamed access road near Lantau Link Visitors Centre | NB | 500 | 175 | 0.35 | 175 | 0.35 | 175 | 0.35 |
| | | SB | 500 | 175 | 0.35 | 175 | 0.35 | 175 | 0.35 |
| L4 | Tam Kon Shan Road | EB | 900 | 450 | 0.50 | 460 | 0.51 | 240 | 0.27 |
| | | WB | 900 | 105 | 0.12 | 105 | 0.12 | 80 | 0.09 |
| L5 | Slip Road Connecting Tsing Yi North Coastal Road westbound to Tam Kon Shan Road | WB | 1,800 | 345 | 0.19 | 320 | 0.18 | 220 | 0.12 |
| L6 | Slip Road Connecting Tam Kon Shan Road to Tsing Yi North Coastal Road eastbound | EB | 1,800 | 280 | 0.16 | 295 | 0.16 | 130 | 0.07 |
| L7 | Tsing Yi North Coastal Road | EB | 5,600 | 1,470 | 0.26 | 1,420 | 0.25 | 1,420 | 0.25 |
| | | WB | 3,600 | 2,470 | 0.69 | 1,455 | 0.40 | 1,525 | 0.42 |
| L8 | Cheung Tsing Tunnel | EB | 5,400 | 4,960 | 0.92 | 4,395 | 0.81 | 4,235 | 0.78 |
| | | WB | 5,400 | 3,555 | 0.66 | 3,655 | 0.68 | 3,000 | 0.56 |
| L9 | Nam Wan Tunnel | EB | 5,400 | 3,935 | 0.73 | 3,005 | 0.56 | 3,785 | 0.70 |
| | | WB | 5,400 | 3,775 | 0.70 | 3,755 | 0.70 | 3,260 | 0.60 |
| L10 | Fung Shue Wo Road between Tam Kon Shan Interchange and Tsing Yi Road West | NB | 3,050 | 1,330 | 0.44 | 1,375 | 0.45 | 1,390 | 0.46 |
| | | SB | 4,850 | 1,275 | 0.26 | 970 | 0.20 | 1,120 | 0.23 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak(1) | | PM Peak(1) | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| L11 | Tsing Yi Road West between Fung Shue Wo Road and Ching Hong Road | NB | 3,050 | 1,005 | 0.33 | 950 | 0.31 | 965 | 0.32 |
| | | SB | 3,050 | 825 | 0.27 | 660 | 0.22 | 720 | 0.24 |
| L12 | Tsing Yi Road West between Cheung Tsing Highway and Ching Hong Road | NB | 2,800 | 660 | 0.24 | 720 | 0.26 | 910 | 0.33 |
| | | SB | 2,800 | 805 | 0.29 | 560 | 0.20 | 745 | 0.27 |
| L13 | Ching Hong Road between Tsing Yi Road West and Chung Mei Road | EB | 920 | 625 | 0.68 | 515 | 0.56 | 730 | 0.79 |
| | | WB | 920 | 685 | 0.74 | 570 | 0.62 | 675 | 0.73 |
| L14 | Sai Tso Wan Road between Tsing Yi Road West and local access for Yiu Lian Dockyards Limited | EB | 1,250 | 470 | 0.38 | 585 | 0.47 | 1,020 | 0.82 |
| | | WB | 1,250 | 780 | 0.62 | 570 | 0.46 | 900 | 0.72 |
| LL1 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Ma Bridge westbound | WB | 4,000 | 2,580 | 0.65 | 1,680 | 0.42 | 1,680 | 0.42 |
| LL2 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Yi Administration Building northbound | NB | 1,800 | 585 | 0.33 | 590 | 0.33 | 460 | 0.26 |
| LL3 | NWTYI – Slip Road connecting Cheung Tsing Highway northbound to Tsing Yi Administration Building northbound | NB | 1,800 | 180 | 0.10 | 85 | 0.05 | 305 | 0.17 |
| LL4 | NWTYI – Slip Road connecting Tsing Ma Bridge eastbound near Wok Tai Wan | NB | 1,800 | 1,120 | 0.62 | 1,295 | 0.72 | 1,255 | 0.70 |
| LL5 | NWTYI – Slip Road connecting Tsing Yi Administration Building and unnamed access road near Lantau Link Visitors Centre | NB | 1,700 | 485 | 0.29 | 400 | 0.24 | 445 | 0.26 |
| LL6 | NWTYI – Slip Road connecting Tsing Sha Highway northbound to Tsing Long Highway northbound | NB | 6,100 | 4,335 | 0.71 | 5,125 | 0.84 | 4,565 | 0.75 |
| LL7 | NWTYI – Slip Road connecting unnamed access road near Lantau Link Visitors Centre to Tsing Yi North Coastal Road eastbound | NB | 3,600 | 1,580 | 0.44 | 1,675 | 0.47 | 1,700 | 0.47 |
| LL8 | Slip Road connecting Tsing Yi North Coastal Road eastbound and westbound | SB | 1,800 | 395 | 0.22 | 555 | 0.31 | 410 | 0.23 |
| LL9 | NWTYI – Tsing Long Highway southbound | SB | 1,900 | 1,150 | 0.61 | 720 | 0.38 | 800 | 0.42 |
| LL10 | NWTYI - Slip Road connecting LL9 to LL1 | SB | 3,600 | 2,505 | 0.70 | 1,695 | 0.47 | 1,720 | 0.48 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak(1) | | PM Peak(1) | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| LL11 | NWTYI – Slip Road connecting Tsing Long Highway southbound to LL1 and LL12 | SB | 6,100 | 3,655 | 0.60 | 2,415 | 0.40 | 2,520 | 0.41 |
| LL12 | NWTYI – Slip Road connecting LL11 to LL2 and LL13 | SB | 1,900 | 1,075 | 0.57 | 735 | 0.39 | 840 | 0.44 |
| LL13 | NWTYI – Slip Road connecting LL12 to Cheung Tsing Highway southbound | SB | 1,900 | 490 | 0.26 | 150 | 0.08 | 380 | 0.20 |
| LL14 | (a) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 5,770 | 0.70 | 6,090 | 0.74 | 5,460 | 0.67 |
| | (b) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 2,405 | 0.60 | 2,120 | 0.53 | 1,820 | 0.46 |
| | (c) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 1,915 | 0.48 | 2,550 | 0.64 | 1,605 | 0.40 |
| | (d) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 7,920 | 0.97 | 5,675 | 0.69 | 7,590 | 0.93 |

Remark:

(1) Taking into account the restriction to site traffic accessing Tam Kon Shan Interchange and Tsuen Tsing Interchange during AM and PM peaks.

## Design Case Scenario B

**Table 4.17 Junction Capacity Assessment for Design Year (2031) – Design Case Scenario B**

| Index | Junction | Type | RC/DFC | | |
|---|---|---|---|---|---|
| | | | AM Peak(3) | PM Peak(3) | Logis Peak |
| J1 | North West Tsing Yi Interchange (NWTYI) Roundabout | Roundabout | 0.44 | 0.37 | 0.53 |
| J2 | NWTYI / unnamed access road near Lantau Link Visitors Centre | Priority | 0.40 | 0.46 | 0.45 |
| J3 | Slip Road from Tsing Yi North Coastal Road / Tam Kon Shan Road | Roundabout | 0.29 | 0.27 | 0.18 |
| J4 | Tam Kon Shan Road / Slip Road to Tsing Yi North Coastal Road | Priority | 0.20 | 0.22 | 0.17 |
| J5 | Tam Kon Shan Interchange | Roundabout | 0.64 | 0.58 | 0.75 |
| J6(2) | Fung Shue Wo Road / Tsing Yi Road West | Signal | 42% | 50% | 44% |
| J7 | Liu To Road / Tsing Yi Road West | Signal | 30% | 34% | 21% |
| J8 | Ching Hong Road / Tsing Yi Road West | Signal | 63% | 91% | 46% |
| J9 | Ching Hong Road / Chung Mei Road | Signal | 91% | >100% | 87% |
| J10 | Cheung Tsing Highway / Tsing Yi Road West | Signal | 64% | 64% | 19% |
| J11 | Sai Tso Wan Road / Tsing Yi Road West / Tsing Yi Road | Signal | 52% | 73% | 17% |

Remark:
(1) Existing rock processing facilities at Ngau Kok Wan would cease operation and the related traffic will no longer exist.
(2) Taking into account the proposed junction improvement works under other projects.
(3) Taking into account the restriction to site traffic accessing Tam Kon Shan Interchange and Tsuen Tsing Interchange during AM and PM peaks.

**Table 4.18 Road Link Capacity Assessment for Design Year (2031) – Design Case Scenario B**

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak(1) | | PM Peak(1) | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| L1 | Tsing Ma Bridge | EB | 6,100 | 4,560 | 0.75 | 6,285 | **1.03** | 4,640 | 0.76 |
| | | WB | 6,100 | 6,385 | **1.05** | 4,870 | 0.80 | 4,365 | 0.72 |
| L2 | Ting Kau Bridge | NB | 6,100 | 4,585 | 0.75 | 5,765 | 0.95 | 4,845 | 0.79 |
| | | SB | 6,100 | 7,175 | **1.18** | 4,325 | 0.71 | 6,510 | **1.07** |
| L3 | Unnamed access road near Lantau Link Visitors Centre | SB | 500 | 175 | 0.35 | 175 | 0.35 | 175 | 0.35 |
| L4 | Tam Kon Shan Road | EB | 900 | 450 | 0.50 | 460 | 0.51 | 240 | 0.27 |
| | | WB | 900 | 105 | 0.12 | 105 | 0.12 | 80 | 0.09 |
| L5 | Slip Road Connecting Tsing Yi North Coastal Road westbound to Tam Kon Shan Road | WB | 1,800 | 525 | 0.29 | 500 | 0.28 | 395 | 0.22 |
| L6 | Slip Road Connecting Tam Kon Shan Road to Tsing Yi North Coastal Road eastbound | EB | 1,800 | 280 | 0.16 | 295 | 0.16 | 130 | 0.07 |
| L7 | Tsing Yi North Coastal Road | EB | 5,600 | 1,470 | 0.26 | 1,420 | 0.25 | 1,560 | 0.28 |
| | | WB | 3,600 | 2,610 | 0.73 | 1,600 | 0.44 | 1,670 | 0.46 |
| L8 | Cheung Tsing Tunnel | EB | 5,400 | 4,960 | 0.92 | 4,395 | 0.81 | 4,235 | 0.78 |
| | | WB | 5,400 | 3,545 | 0.66 | 3,645 | 0.68 | 3,000 | 0.56 |
| L9 | Nam Wan Tunnel | EB | 5,400 | 3,935 | 0.73 | 3,005 | 0.56 | 3,785 | 0.70 |
| | | WB | 5,400 | 3,765 | 0.70 | 3,745 | 0.69 | 3,260 | 0.60 |
| L10 | Fung Shue Wo Road between Tam Kon Shan Interchange and Tsing Yi Road West | NB | 3,050 | 1,330 | 0.44 | 1,375 | 0.45 | 1,390 | 0.46 |
| | | SB | 4,850 | 1,275 | 0.26 | 970 | 0.20 | 1,120 | 0.23 |
| L11 | Tsing Yi Road West between Fung Shue Wo Road and Ching Hong Road | NB | 3,050 | 1,005 | 0.33 | 950 | 0.31 | 965 | 0.32 |
| | | SB | 3,050 | 825 | 0.27 | 660 | 0.22 | 720 | 0.24 |
| L12 | Tsing Yi Road West between Cheung Tsing Highway and Ching Hong Road | NB | 2,800 | 660 | 0.24 | 720 | 0.26 | 910 | 0.33 |
| | | SB | 2,800 | 805 | 0.29 | 560 | 0.20 | 745 | 0.27 |
| L13 | Ching Hong Road between Tsing Yi Road West and Chung Mei Road | EB | 920 | 625 | 0.68 | 515 | 0.56 | 730 | 0.79 |
| | | WB | 920 | 685 | 0.74 | 570 | 0.62 | 675 | 0.73 |
| L14 | Sai Tso Wan Road between Tsing Yi Road West and local access | EB | 1,250 | 470 | 0.38 | 585 | 0.47 | 1,020 | 0.82 |
| | | WB | 1,250 | 780 | 0.62 | 570 | 0.46 | 900 | 0.72 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak(1) | | PM Peak(1) | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| | for Yiu Lian Dockyards Limited | | | | | | | | |
| LL1 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Ma Bridge westbound | WB | 4,000 | 2,580 | 0.65 | 1,680 | 0.42 | 1,680 | 0.42 |
| LL2 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Yi Administration Building northbound | NB | 1,800 | 440 | 0.24 | 445 | 0.25 | 425 | 0.24 |
| LL3 | NWTYI – Slip Road connecting Cheung Tsing Highway northbound to Tsing Yi Administration Building northbound | NB | 1,800 | 165 | 0.09 | 65 | 0.04 | 305 | 0.17 |
| LL4 | NWTYI – Slip Road connecting Tsing Ma Bridge eastbound near Wok Tai Wan | NB | 1,800 | 1,100 | 0.61 | 1,275 | 0.71 | 1,255 | 0.70 |
| LL5 | NWTYI – Slip Road connecting Tsing Yi Administration Building and unnamed access road near Lantau Link Visitors Centre | NB | 1,700 | 330 | 0.19 | 240 | 0.14 | 410 | 0.24 |
| LL6 | NWTYI – Slip Road connecting Tsing Sha Highway northbound to Tsing Long Highway northbound | NB | 6,100 | 4,335 | 0.71 | 5,125 | 0.84 | 4,565 | 0.75 |
| LL7 | NWTYI – Slip Road connecting unnamed access road near Lantau Link Visitors Centre to Tsing Yi North Coastal Road eastbound | NB | 3,600 | 1,580 | 0.44 | 1,675 | 0.47 | 1,845 | 0.51 |
| LL8 | Slip Road connecting Tsing Yi North Coastal Road eastbound and westbound | SB | 1,800 | 395 | 0.22 | 555 | 0.31 | 410 | 0.23 |
| LL9 | NWTYI – Tsing Long Highway southbound | SB | 1,900 | 1,040 | 0.55 | 615 | 0.32 | 800 | 0.42 |
| LL10 | NWTYI - Slip Road connecting LL9 to LL1 | SB | 3,600 | 2,470 | 0.69 | 1,660 | 0.46 | 1,685 | 0.47 |
| LL11 | NWTYI – Slip Road connecting Tsing Long Highway southbound to LL1 and LL12 | SB | 6,100 | 3,515 | 0.58 | 2,275 | 0.37 | 2,485 | 0.41 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak(1) | | PM Peak(1) | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| LL12 | NWTYI – Slip Road connecting LL11 to LL2 and LL13 | SB | 1,900 | 935 | 0.49 | 595 | 0.31 | 805 | 0.42 |
| LL13 | NWTYI – Slip Road connecting LL12 to Cheung Tsing Highway southbound | SB | 1,900 | 490 | 0.26 | 150 | 0.08 | 380 | 0.20 |
| LL14 | (a) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 5,755 | 0.70 | 6,070 | 0.74 | 5,460 | 0.67 |
| | (b) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 2,405 | 0.60 | 2,120 | 0.53 | 1,820 | 0.46 |
| | (c) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 1,915 | 0.48 | 2,550 | 0.64 | 1,605 | 0.40 |
| | (d) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 7,920 | 0.97 | 5,675 | 0.69 | 7,590 | 0.93 |

Remark:

(1) Taking into account the restriction to site traffic accessing Tam Kon Shan Interchange and Tsuen Tsing Interchange during AM and PM peaks.

4.4.2 The results in **Table 4.13** to **Table 4.18** above show that the performance of all study junctions and road links in Scenarios A and B would operate within capacity during AM, PM and logistic peak hours on weekdays for design year 2031, with the exceptions of Tsing Ma Bridge (L1) eastbound during PM peak hour, westbound during AM peak hour and Ting Kau Bridge southbound (L2) during both AM and logistic peak hours. Nevertheless, it is considered the traffic impact induced by the development at the concerned road links is insignificant since the change of V/C ratio is minimal (i.e. at most 0.02 increase of V/C ratio) and the road links would still operate with V/C ratio below 1.2. In addition, it is anticipated that the completion of Tsing Lung Bridge and Tsing Yi - Lantau Link would further improve the traffic conditions at L1 and L2. The details of the junction capacity calculation can be found in **Appendix A**.

4.4.3 Since the traffic impact on J1 and J5 is considered to be most significant due to the location close to the access of the Site, the anticipated traffic queue at the approach arms of J1 and J5 were analysed. The extent of the queues for the commuting peaks and logistic peak under scenarios of 2031 reference, 2031 design case Scenario A and 2031 design case Scenario B are presented in **Table 4.19** to **4.22**.

**Table 4.19 Queue Length Analysis for NWTYI Roundabout (J1) – Design Case Scenario A**

| Junction Arm | Approx. Buffer Distance (1) | Year 2031 (Reference Case) | | | Year 2031 (Design Case Scenario A) | | |
|---|---|---|---|---|---|---|---|
| | | Average Queue Length (meter) | | | | | |
| | | AM | PM | Log | AM | PM | Log |
| NWTYI SB | 145m | 0(2) | 0(2) | 0(2) | 0(2) | 0(2) | 0(2) |
| NWTYI NB | 70m | 4 | 3 | 4 | 8 | 6 | 8 |

Notes:
(1) Buffer distance refers to road distance to the upstream junction / mainline.
(2) The average queuing length is negligible.

**Table 4.20 Queue Length Analysis for NWTYI Roundabout (J1) – Design Case Scenario B**

| Junction Arm | Approx. Buffer Distance (1) | Year 2031 (Reference Case) | | | Year 2031 (Design Case Scenario B) | | |
|---|---|---|---|---|---|---|---|
| | | Average Queue Length (meter) | | | | | |
| | | AM | PM | Log | AM | PM | Log |
| NWTYI SB | 145m | 0(2) | 0(2) | 0(2) | 0(2) | 0(2) | 0(2) |
| NWTYI NB | 70m | 4 | 3 | 4 | 5 | 7 | 4 |

Notes:
(1) Buffer distance refers to road distance to the upstream junction / mainline.
(2) The average queuing length is negligible.

**Table 4.21 Queue Length Analysis for Tam Kon Shan Interchange (J5)–Design Case Scenario A**

| Junction Arm | Approx. Buffer Distance (1) | Year 2031 (Reference Case) | | | Year 2031 (Design Case Scenario A) | | |
|---|---|---|---|---|---|---|---|
| | | Average Queue Length (meter) | | | | | |
| | | AM | PM | Log | AM | PM | Log |
| Tan Kon Shan Road SB | 100m | 7 | 4 | 8 | 7 | 4 | 8 |
| Tsing King Road SB | 165m | 6 | 4 | 5 | 6 | 4 | 5 |
| TYNCR WB | 260m | 4 | 3 | 6 | 4 | 3 | 6 |
| Fung Shue Wo Road NB | 180m | 9 | 9 | 11 | 9 | 9 | 11 |
| TYNCR EB | 135m | 11 | 5 | 8 | 11 | 5 | 8 |

Notes:
(1) Buffer distance refers to road distance to the upstream junction / mainline.

**Table 4.22 Queue Length Analysis for Tam Kon Shan Interchange (J5)–Design Case Scenario B**

| Junction Arm | Approx. Buffer Distance (1) | Year 2031 (Reference Case) | | | Year 2031 (Design Case Scenario B) | | |
|---|---|---|---|---|---|---|---|
| | | Average Queue Length (meter) | | | | | |
| | | AM | PM | Log | AM | PM | Log |
| Tan Kon Shan Road SB | 100m | 7 | 4 | 8 | 7 | 4 | 8 |
| Tsing King Road SB | 165m | 6 | 4 | 5 | 6 | 4 | 6 |
| TYNCR WB | 260m | 4 | 3 | 6 | 4 | 3 | 6 |

| Junction Arm | Approx. Buffer Distance (1) | Year 2031 (Reference Case) | | | Year 2031 (Design Case Scenario B) | | |
|---|---|---|---|---|---|---|---|
| | | Average Queue Length (meter) | | | | | |
| | | AM | PM | Log | AM | PM | Log |
| Fung Shue Wo Road NB | 180m | 9 | 9 | 11 | 9 | 9 | 12 |
| TYNCR EB | 135m | 11 | 5 | 8 | 11 | 5 | 18 |

Notes:
(1) Buffer distance refers to road distance to the upstream junction / mainline.

4.4.4 Based on the above, there is a low chance of traffic tailing back to the upstream junctions during both commuting peak and logistic peak hours at J1 and J5 in design case scenarios.

# 5 SENSITIVITY TEST SCENARIO

## 5.1 Alternative Site Access Arrangements

5.1.1 As noted in **para. 3.2.3**, the proposed site access would be relocated from NWTYI to the slip road of TYNCR near the existing TKSR roundabout (J3) once the tunnel to the TKSR portal is implemented in 2031 tentatively. Concurrently, the unnamed access road at NWTYI would be converted into a one-way outbound road, requiring all development traffic to reroute to the TKSR portal to enter the Site.

5.1.2 Relocating vehicular access to the TKSR portal forces inbound traffic from Tsing Ma Bridge, Ting Kau Bridge and Cheung Tsing Tunnel / Nam Wan Tunnel to detour. Outside of AM and PM peak periods, these traffic must route via Tsing Yi North Coastal Road and turn around at Tam Kon Shan Interchange before reaching the TKSR portal. Moreover, during the commuting peaks, inbound traffic from these bounds shall be rerouted to Tsuen Kam Interchange, Texaco Road, Tsing Tsuen Road flyover and Tsing Yi North Coastal Road flyover due to proposed access restriction for site traffic at Tam Kon Shan Interchange and Tsuen Tsing Interchange. While these routings (under Design Case Scenario B) are technically acceptable regarding road link and junction performances as presented in **Section 4.4**, the longer travel distance may reduce operational efficiency. Therefore, subject to the contractor's operational needs, an alternative site access arrangement in operation phase is explored. This alternative maintains both ingress and egress at the NKW portal, even after the tunnel leading to TKSR portal is implemented, to minimize the traffic detours.

5.1.3 A sensitivity test scenario was developed to evaluate traffic conditions using this alternative site access arrangement for the design year 2031.

5.1.4 Under this alternative site access arrangement, the ingress and egress at NWTYI would remain open and the new run-in near TKSR roundabout would operate simultaneously to further disperse traffic demand. The anticipated routing details are summarized in **Table 5.1** below.

**Table 5.5.1 Routing for Alternative Site Access Arrangement**

| Route | Outbound Traffic | Inbound Traffic | Reference Figure |
|---|---|---|---|
| Route A1 (Tsing Ma Bridge Bound) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Tsing Ma Bridge WB | Tsing Ma Bridge EB → NWTYI NB → Site Access at NWTYI | Figure 3.1 |
| Route A2 (Ting Kau Bridge) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Ting Kau Bridge NB | Ting Kau Bridge SB → NWTYI SB → NWTYI NB → Site Access at NWTYI | Figure 3.2 |
| Route B3 (Tsing Tsuen Road) | Site Access at NWTYI → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tsing Tsuen Road EB | Tsing Tsuen Road WB → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR | Figure 3.11 |
| Route A4 (Cheung Tsing Tunnel / Nam Wan Tunnel) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Cheung Tsing Highway SB → Cheung Tsing Tunnel EB | Cheung Tsing Tunnel WB / Nam Wan Tunnel WB → Cheung Tsing Highway NB → NWTYI NB → Site Access at NWTYI | Figure 3.4 |

5.1.5 As shown in **Table 5.1,** the alternative access routings are primarily based on Design Case Scenario A. Because the NKW portal provides shorter ingress routes, traffic from Tsing Ma Bridge, Ting Kau Bridge and Cheung Tsing Tunnel / Nam Wan Tunnel bounds would likely utilize the NKW portal for accessing the Site (Route A1, Route A2 and Route A4). Nevertheless, traffic from Tsing Tsuen Road benefits from a more direct path via the TKSR portal, therefore, it is anticipated to use the TKSR portal access and its associated route (Route B3).

5.1.6 Trip generation and percentage splits for each route remain identical to Design Cases Scenarios A and B, as the end-user origins/destinations and total traffic volumes are unchanged. These assumptions are detailed in **Table 5.2**.

**Table 5.5.2 Trip Generation and Percentage Split of Routing for Alternative Site Access Arrangement**

| Route | Outbound Traffic | | Inbound Traffic | |
|---|---|---|---|---|
| | Traffic Flow in peak (in pcu/hr) | Split of Route (in %) | Traffic Flow in peak (in pcu/hr) | Split of Route (in %) |
| Route A1 (Tsing Ma Bridge Bound) | 18 | 10% | 18 | 10% |
| Route A2 (Ting Kau Bridge) | 106 | 60% | 106 | 60% |
| Route B3 (Tsing Tsuen Road) | 35 | 20% | 35 | 20% |
| Route A4 (Cheung Tsing Tunnel / Nam Wan Tunnel) | 18 | 10% | 18 | 10% |

5.1.7 Compared to Design Case Scenario A, the only routing deviation is inbound traffic from Tsing Tsuen Road. This traffic will shift to Route B3 (entering via the TKSR portal run-in) instead of using Route A3 (entering via the NKW portal). Routes and traffic volumes for all other approaches (Routes A1, A2 and A4) remain exactly as modeled in Design Case Scenario A. Thus, the traffic impact of this sensitivity test can be evaluated solely by swapping Route A3 for Route B3.

5.1.8 Shifting Tsing Tsuen Road bound traffic to Route B3 eliminates its need to traverse NWTYI and NWTYI Roundabout (J1), providing direct access from TYNCR instead. This could reduce traffic loads at NWTYI and its roundabout, positively impacting their performance. Since all other routes (Routes A1, A2 and A4) are unchanged, no other assessed junctions or road links from Design Case Scenario A would be affected.

5.1.9 Based on this analysis, the alternative access arrangement will not degrade traffic conditions at any study junctions or road links compared to Design Case Scenario A.

5.1.10 Nevertheless, in order to address public concerns regarding congestion, peak period access restrictions (i.e. 07:00 to 09:30 and 17:00 to 19:00) for development traffic at Tam Kon Shan and Tsuen Tsing Interchanges should be maintained under this alternative site access arrangement.

5.1.11 Consistent with the arrangements in **Section 3.4**, the Contractor shall regularly review site traffic percentage splits. Traffic distributions and diversion across Tsing Ma Bridge, Ting Kau Bridge, Tsing Tsuen Road and Cheung Tsing Tunnel / Nam Wan Tunnel should be monitored and adjusted based on prevailing traffic conditions. These proposed routing arrangements should be explicitly detailed in the Traffic Management Plan and traffic control proposals for review and approval.

# 6 CONSTRUCTION TRAFFIC IMPACT ASSESSMENT

## 6.1 Peak Construction Year and Estimation of Construction Traffic

6.1.1 Construction vehicles are expected to travel to the development via the unnamed local access road and NWTYI during the construction phase. To be conservative, peak construction year (i.e. 2028) was adopted for subsequent road links and junction capacity assessment.

6.1.2 With reference to the construction works and preliminary construction programme, the estimation of construction traffic during the peak construction year (i.e. 2028) is shown in **Table 6.1** below.

**Table 6.1 Estimation of Construction Traffic**

| Construction Traffic Routings | Number of Vehicles | |
|---|---|---|
| | Generation | Attraction |
| Via Tsing Ma Bridge | 2 | 2 |
| Via Ting Kau Bridge | 2 | 2 |
| Via Tsing Tsuen Road | 4 | 4 |

Remark:
(1) Assuming 25% of traffic to/from Tuen Mun Area 38 Fill Bank or NENT via Tsing Ma Bridge
(2) Assuming 25% of traffic to/from Tuen Mun Area 38 Fill Bank or NENT via Ting Kau Bridge
(3) Assuming 50% of excavated material from TKS Portal Site Formation

6.1.3 Based on the latest information, it is proposed that the excavated materials would generally be transported to North East New Territories (NENT) Landfill and Tuen Mun Area 38 Fill Bank via Lantau Link, Tsing Long Highway and Tsing Tsuen Road. Construction materials (e.g. concrete and steel) are also assumed using Lantau Link, Tsing Long Highway and Tsing Tsuen Road to be transported to the Site.

6.1.4 As for vehicular traffic demand forecast for construction traffic impact assessment, it is expected that future traffic condition (i.e. 2028) of local road network surrounding the development would not explicate dynamic changes due to no major transport infrastructure works is anticipated to be completed within and near Tsing Yi. Therefore, the background traffic forecasts for 2028 design year were derived by applying a traffic growth rate to the surveyed traffic flows, excluding PT flows which considered to be operated on the same schedule, to project the traffic flows for reference case scenario (i.e. without construction traffic). With reference to the population and employment projection of TFPD, a total growth rate of 1.51% (from 11,771,500 in Year 2025 to 11,949,800 in Year 2028) is proposed. Construction traffic was then be assigned on top of the reference traffic flows according to the routings in **Table 5.1** to produce the traffic flows for design case scenario (i.e. with construction traffic).

## 6.2 Assessment of Study Junctions and Road Links for Design Year 2028

6.2.1 To gauge the construction traffic impact due to the development, performance of the concerned junctions and road links along the construction traffic routings has been assessed for peak construction year 2028 according to the criteria from **paragraphs 2.3.2** to **2.3.4**.

6.2.2 Assessment results of junctions and road links along the construction traffic routings are presented in **Tables 6.2** to **6.5** below.

**Table 6.2 Junction Capacity Assessment for Design Year (2028) – Reference Case (Without Construction Traffic)**

| Index | Junction | Type | RC/DFC | | |
|---|---|---|---|---|---|
| | | | AM Peak | PM Peak | Logis Peak |
| J1 | North West Tsing Yi Interchange (NWTYI) Roundabout | Roundabout | 0.36 | 0.32 | 0.29 |
| J2 | NWTYI / unnamed access road near Lantau Link Visitors Centre | Priority | -(1) | -(1) | -(1) |
| J3 | Slip Road from Tsing Yi North Coastal Road / Tam Kon Shan Road | Roundabout | 0.19 | 0.17 | 0.14 |
| J4 | Tam Kon Shan Road / Slip Road to Tsing Yi North Coastal Road | Priority | 0.20 | 0.22 | 0.13 |

Remark:
(1) Existing rock processing facilities at Ngau Kok Wan would cease operation and the related traffic will no longer exist.

**Table 6.3 Road Link Capacity Assessment for Design Year (2028) – Reference Case (Without Construction Traffic)**

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| L1 | Tsing Ma Bridge | EB | 6,100 | 3,300 | 0.54 | 4,415 | 0.72 | 3,700 | 0.61 |
| | | WB | 6,100 | 4,505 | 0.74 | 3,195 | 0.52 | 3,480 | 0.57 |
| L2 | Ting Kau Bridge | NB | 6,100 | 3,205 | 0.53 | 4,760 | 0.78 | 3,790 | 0.62 |
| | | SB | 6,100 | 6,865 | **1.13** | 3,630 | 0.60 | 5,125 | 0.84 |
| L3 | Unnamed access road near Lantau Link Visitors Centre | NB | 500 | -(1) | -(1) | -(1) | -(1) | -(1) | -(1) |
| | | SB | 500 | -(1) | -(1) | -(1) | -(1) | -(1) | -(1) |
| L4 | Tam Kon Shan Road | EB | 900 | 330 | 0.37 | 340 | 0.38 | 195 | 0.22 |
| | | WB | 900 | 110 | 0.12 | 105 | 0.12 | 65 | 0.07 |
| L5 | Slip Road Connecting Tsing Yi North Coastal Road westbound to Tam Kon Shan Road | WB | 1,800 | 225 | 0.13 | 200 | 0.11 | 175 | 0.10 |
| L6 | Slip Road Connecting Tam Kon Shan Road to Tsing Yi North Coastal Road eastbound | EB | 1,800 | 160 | 0.09 | 175 | 0.10 | 100 | 0.06 |
| L7 | Tsing Yi North Coastal Road | EB | 5,600 | 1,100 | 0.20 | 1,020 | 0.18 | 1,105 | 0.20 |
| | | WB | 3,600 | 1,625 | 0.45 | 1,065 | 0.30 | 1,195 | 0.33 |
| LL1 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Ma Bridge westbound | WB | 4,000 | 2,025 | 0.51 | 1,320 | 0.33 | 1,330 | 0.33 |
| LL2 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Yi Administration Building northbound | NB | 1,800 | 335 | 0.19 | 365 | 0.20 | 170 | 0.09 |
| LL3 | NWTYI – Slip Road connecting Cheung Tsing Highway northbound to Tsing Yi | NB | 1,800 | 165 | 0.09 | 70 | 0.04 | 230 | 0.13 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak | | PM Peak | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| | Administration Building northbound | | | | | | | | |
| LL4 | NWTYI – Slip Road connecting Tsing Ma Bridge eastbound near Wok Tai Wan | NB | 1,800 | 930 | 0.52 | 1,025 | 0.57 | 990 | 0.55 |
| LL5 | NWTYI – Slip Road connecting Tsing Yi Administration Building and unnamed access road near Lantau Link Visitors Centre | NB | 1,700 | 300 | 0.18 | 255 | 0.15 | 230 | 0.14 |
| LL6 | NWTYI – Slip Road connecting Tsing Sha Highway northbound to Tsing Long Highway northbound | NB | 6,100 | 3,030 | 0.50 | 4,350 | 0.71 | 3,570 | 0.59 |
| LL7 | NWTYI – Slip Road connecting unnamed access road near Lantau Link Visitors Centre to Tsing Yi North Coastal Road eastbound | NB | 3,600 | 1,195 | 0.33 | 1,260 | 0.35 | 1,220 | 0.34 |
| LL8 | Slip Road connecting Tsing Yi North Coastal Road eastbound and westbound | SB | 1,800 | 255 | 0.14 | 415 | 0.23 | 215 | 0.12 |
| LL9 | NWTYI – Tsing Long Highway southbound | SB | 1,900 | 970 | 0.51 | 535 | 0.28 | 555 | 0.29 |
| LL10 | NWTYI - Slip Road connecting LL9 to LL1 | SB | 3,600 | 1,650 | 0.46 | 1,280 | 0.36 | 1,235 | 0.34 |
| LL11 | NWTYI – Slip Road connecting Tsing Long Highway southbound to LL1 and LL12 | SB | 6,100 | 2,625 | 0.43 | 1,815 | 0.30 | 1,790 | 0.29 |
| LL12 | NWTYI – Slip Road connecting LL11 to LL2 and LL13 | SB | 1,900 | 600 | 0.32 | 495 | 0.26 | 460 | 0.24 |
| LL13 | NWTYI – Slip Road connecting LL12 to Cheung Tsing Highway southbound | SB | 1,900 | 260 | 0.14 | 130 | 0.07 | 290 | 0.15 |
| LL14 | (a) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 4,405 | 0.54 | 5,050 | 0.62 | 4,360 | 0.53 |
| | (b) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 1,200 | 0.30 | 1,145 | 0.29 | 1,455 | 0.36 |
| | (c) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 1,155 | 0.29 | 1,565 | 0.39 | 1,285 | 0.32 |
| | (d) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 7,205 | 0.88 | 4,635 | 0.57 | 6,065 | 0.74 |

Remark:

**(1)** Existing rock processing facilities at Ngau Kok Wan would cease operation and the related traffic will no longer exist

**Table 6.4 Junction Capacity Assessment for Design Year (2028) – Design Case (With Construction Traffic)**

| Index | Junction | Type | RC/DFC | | |
|---|---|---|---|---|---|
| | | | AM Peak(1) | PM Peak(1) | Logis Peak |
| J1 | North West Tsing Yi Interchange (NWTYI) Roundabout | Roundabout | 0.37 | 0.32 | 0.30 |
| J2 | NWTYI / unnamed access road near Lantau Link Visitors Centre | Priority | 0.02 | 0.02 | 0.02 |
| J3 | Slip Road from Tsing Yi North Coastal Road / Tam Kon Shan Road | Roundabout | 0.20 | 0.18 | 0.15 |
| J4 | Tam Kon Shan Road / Slip Road to Tsing Yi North Coastal Road | Priority | 0.22 | 0.23 | 0.14 |

Remark:
(1) Taking into account the restriction to site traffic accessing Tam Kon Shan Interchange and Tsuen Tsing Interchange during AM and PM peaks.

**Table 6.5 Road Link Capacity Assessment for Design Year (2028) – Design Case (With Construction Traffic)**

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak(1) | | PM Peak(1) | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| L1 | Tsing Ma Bridge | EB | 6,100 | 3,305 | 0.54 | 4,420 | 0.72 | 3,705 | 0.61 |
| | | WB | 6,100 | 4,510 | 0.74 | 3,200 | 0.52 | 3,485 | 0.57 |
| L2 | Ting Kau Bridge | NB | 6,100 | 3,210 | 0.53 | 4,765 | 0.78 | 3,795 | 0.62 |
| | | SB | 6,100 | 6,870 | **1.13** | 3,635 | 0.60 | 5,130 | 0.84 |
| L3 | Unnamed access road near Lantau Link Visitors Centre | NB | 500 | 10 | 0.02 | 10 | 0.02 | 10 | 0.02 |
| | | SB | 500 | 10 | 0.02 | 10 | 0.02 | 10 | 0.02 |
| L4 | Tam Kon Shan Road | EB | 900 | 340 | 0.38 | 350 | 0.39 | 205 | 0.23 |
| | | WB | 900 | 110 | 0.12 | 105 | 0.12 | 65 | 0.07 |
| L5 | Slip Road Connecting Tsing Yi North Coastal Road westbound to Tam Kon Shan Road | WB | 1,800 | 235 | 0.13 | 210 | 0.12 | 185 | 0.10 |
| L6 | Slip Road Connecting Tam Kon Shan Road to Tsing Yi North Coastal Road eastbound | EB | 1,800 | 170 | 0.09 | 185 | 0.10 | 110 | 0.06 |
| L7 | Tsing Yi North Coastal Road | EB | 5,600 | 1,110 | 0.20 | 1,030 | 0.18 | 1,115 | 0.20 |
| | | WB | 3,600 | 1,635 | 0.45 | 1,075 | 0.30 | 1,205 | 0.33 |
| LL1 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Ma Bridge westbound | WB | 4,000 | 2,030 | 0.51 | 1,325 | 0.33 | 1,335 | 0.33 |
| LL2 | NWTYI – Slip Road connecting Tsing Long Highway southbound to Tsing Yi Administration Building northbound | NB | 1,800 | 345 | 0.19 | 375 | 0.21 | 180 | 0.10 |
| LL3 | NWTYI – Slip Road connecting Cheung Tsing Highway northbound to | NB | 1,800 | 165 | 0.09 | 70 | 0.04 | 230 | 0.13 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak(1) | | PM Peak(1) | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| | Tsing Yi Administration Building northbound | | | | | | | | |
| LL4 | NWTYI – Slip Road connecting Tsing Ma Bridge eastbound near Wok Tai Wan | NB | 1,800 | 935 | 0.52 | 1,030 | 0.57 | 995 | 0.55 |
| LL5 | NWTYI – Slip Road connecting Tsing Yi Administration Building and unnamed access road near Lantau Link Visitors Centre | NB | 1,700 | 305 | 0.18 | 260 | 0.15 | 235 | 0.14 |
| LL6 | NWTYI – Slip Road connecting Tsing Sha Highway northbound to Tsing Long Highway northbound | NB | 6,100 | 3,035 | 0.50 | 4,355 | 0.71 | 3,575 | 0.59 |
| LL7 | NWTYI – Slip Road connecting unnamed access road near Lantau Link Visitors Centre to Tsing Yi North Coastal Road eastbound | NB | 3,600 | 1,205 | 0.33 | 1,270 | 0.35 | 1,230 | 0.34 |
| LL8 | Slip Road connecting Tsing Yi North Coastal Road eastbound and westbound | SB | 1,800 | 265 | 0.15 | 425 | 0.24 | 225 | 0.13 |
| LL9 | NWTYI – Tsing Long Highway southbound | SB | 1,900 | 975 | 0.51 | 540 | 0.28 | 560 | 0.29 |
| LL10 | NWTYI - Slip Road connecting LL9 to LL1 | SB | 3,600 | 1,660 | 0.46 | 1,290 | 0.36 | 1,245 | 0.35 |
| LL11 | NWTYI – Slip Road connecting Tsing Long Highway southbound to LL1 and LL12 | SB | 6,100 | 2,640 | 0.43 | 1,830 | 0.30 | 1,805 | 0.30 |
| LL12 | NWTYI – Slip Road connecting LL11 to LL2 and LL13 | SB | 1,900 | 610 | 0.33 | 505 | 0.27 | 470 | 0.25 |
| LL13 | NWTYI – Slip Road connecting LL12 to Cheung Tsing Highway southbound | SB | 1,900 | 260 | 0.14 | 130 | 0.07 | 290 | 0.15 |
| LL14 | (a) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 4,405 | 0.54 | 5,050 | 0.62 | 4,360 | 0.53 |
| | (b) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 1,200 | 0.30 | 1,145 | 0.29 | 1,455 | 0.36 |
| | (c) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – farside carriageway | NB | 4,000 | 1,155 | 0.29 | 1,565 | 0.39 | 1,285 | 0.32 |

| Link Index | Link Name | Direction | Capacity (pcu/hr) | V/C Ratio | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | AM Peak(1) | | PM Peak(1) | | Logistic Peak | |
| | | | | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio | Flow (pcu/hr) | v/c ratio |
| | (d) Cheung Tsing Highway between Tsing Ma Bridge and Cheung Tsing Tunnel – nearside carriageway | NB | 8,200 | 7,205 | 0.88 | 4,635 | 0.57 | 6,065 | 0.74 |

Remark:

(1) Taking into account the restriction to site traffic accessing Tam Kon Shan Interchange and Tsuen Tsing Interchange during AM and PM peaks.

6.2.3 The results in **Table 6.2** to **Table 6.5** above show that the performance of all study junctions and road links along construction traffic routings would be operating within capacity during AM, PM and logistic peak hours on normal weekdays for construction peak year 2028, with the exception of Ting Kau Bridge southbound (L2) during AM peak. Nevertheless, it is considered the traffic impact induced by the construction traffic at the concerned road link is insignificant given that the V/C ratio remains unchanged or shows only a negligible difference compared to the reference case scenario.

# 7 MITIGATION MEASURES ON TRAFFIC IMPACT

## 7.1 Proposed Site Access Arrangement and Traffic Management Measure

7.1.1 The commission year of the development is tentatively targeted in Year 2028. With reference to TD's TIA Guidelines of Department Circular 1/2011, the design year for the traffic forecast is proposed to be set at least 3 years after the planned commission of the development. Therefore, the proposed design year is 2031 for the TTIA.

7.1.2 In view of the development nature (i.e. quarry), it is proposed that the assessment scenario consists of AM peak, logistic peak and PM peak on normal Weekday, including:-

- **Reference Case** (without the proposed development);
- **Design Case Scenario A** (with the proposed development, before implementation of the tunnel to TKSR portal); and
- **Design Case Scenario B** (with the proposed development, after implementation of the tunnel to TKSR portal)

7.1.3 Regarding the site access arrangement, before the commissioning of the tunnel to Tam Kon Shan Road (TKSR) portal, site traffic would use the unnamed access road at North West Tsing Yi Interchange (NWTYI) for both ingress and egress. The proposed run-in/out located at NWTYI is shown in **Figure 3.2**.

7.1.4 As stated in **para. 3.2.3**, upon the implementation of the tunnel to TKSR portal at the northeast of the Site in 2031, site access would be provided to the south of the existing roundabout (J3) at the western end of TKSR. The vehicular access, in term of run-in, leading to the tunnel to TKSR portal is proposed to be located at the off-slip of TYNCR WB. Furthermore, to further disperse the traffic demand generated by the development onto the nearby road network, the access near TKSR would serve ingress only, as the TKSR portal would operate as a one-way inbound route for vehicles accessing the Site. Meanwhile, the unnamed access road at NWTYI would also be converted into a one-way outbound road, with all development traffic entering via the TKSR portal and exiting via the NKW portal. The proposed run-in located at the off-slip of TYNCR WB is shown in **Figure 3.3**.

7.1.5 In response to the public concern about traffic conditions at Tam Kon Shan Interchange and Tsuen Tsing Interchange during peak hours, site traffic should be prohibited from accessing the Site via Tam Kon Shan Interchange and Tsuen Tsing Interchange during AM and PM peaks (i.e. 07:00 to 09:30 and 17:00 to 19:00).

7.1.6 Relocating vehicular access to the TKSR portal forces inbound traffic from Tsing Ma Bridge, Ting Kau Bridge and Cheung Tsing Tunnel / Nam Wan Tunnel to detour. Outside of AM and PM peak periods, these traffic must route via Tsing Yi North Coastal Road and turn around at Tam Kon Shan Interchange before reaching the TKSR portal. Moreover, during the commuting peaks, inbound traffic from these bounds shall be rerouted to Tsuen Kam Interchange, Texaco Road, Tsing Tsuen Road flyover and Tsing Yi North Coastal Road flyover due to proposed access restriction for site traffic at Tam Kon Shan Interchange and Tsuen Tsing Interchange. While these routings (under Design Case Scenario B) are technically acceptable regarding road link and junction performances, the longer travel distance may reduce operational efficiency. Therefore, subject to the contractor's operational needs, an alternative site access arrangement in operation phase is explored. Under this alternative site access arrangement as detailed in **Section 5**, the ingress and egress at NWTYI would remain open and the new run-in at off-slip of TYNCR WB for ingress would operate simultaneously to further disperse traffic demand.

**Table 7.1 Summary of Site Access Arrangements for Operational Traffic**

| Site Access Location | Before 2031(1) | After 2031(1) | |
|---|---|---|---|
| | | Proposed | Alternative |
| Unnamed access road at North West Tsing Yi Interchange (NWTYI) | Ingress and Egress | Egress Only | Ingress and Egress |
| Off-slip of TYNCR WB | - | Ingress Only | Ingress Only |

Remark:
(1) Tunnel to TKSR portal is anticipated to be commissioned by 2031 tentatively

7.1.7 Site observations indicated that the western section of TKSR mainly serves industrial developments alongside, carrying a significant proportion of heavy vehicles. This condition is anticipated to continue through future design years. The proposed site access arrangement for operational traffic at the off-slip of TYNCR WB (ingress only) demonstrated that traffic generated by the Site **will not traverse TKSR and the adjacent roundabout (J3)** at its western end, thereby preventing further deterioration on traffic conditions on TKSR.

7.1.8 In addition, given that there are approx. 750m and 700m (including tunnel section) of internal access road adjoining the NKW portal and TKSR portal respectively, which could accommodate vehicle waiting and queuing without disrupting development operations, it is deemed that any traffic queues from the Site extending to the public road is not anticipated.

7.1.9 Routings for the operation traffic are presented in **Figure 3.5** to **Figure 3.12**. Detailed routing arrangements for site traffic are set out below:

***Routing for Operational Traffic in 2028-2031***

***(Before the implementation of tunnel at TKSR portal)***

7.1.10 As the tunnel to TKSR portal would be implemented in phases, operational traffic would continue to use the site access at NWTYI until the commissioning of the tunnel at TKSR portal.

**Table 7.2 Routing for Operational Traffic in 2028-2031**

| Route | Outbound Traffic | Inbound Traffic |
|---|---|---|
| Route A1 (Tsing Ma Bridge Bound) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Tsing Ma Bridge WB | Tsing Ma Bridge EB → NWTYI NB → Site Access at NWTYI |
| Route A2 (Ting Kau Bridge) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Ting Kau Bridge NB | Ting Kau Bridge SB → NWTYI SB → NWTYI NB → Site Access at NWTYI |
| Route A3 (Tsing Tsuen Road) | Site Access at NWTYI → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tsing Tsuen Road EB | Tsing Tsuen Road WB → Tam Kon Shan Interchange Flyover WB → TYNCR WB → NWTYI SB → NWTYI NB → Site Access at NWTYI |
| Route A4 (Cheung Tsing Tunnel / Nam Wan Tunnel) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Cheung Tsing Highway SB→ Cheung Tsing Tunnel EB | Cheung Tsing Tunnel WB / Nam Wan Tunnel WB → Cheung Tsing Highway NB→ NWTYI NB → Site Access at NWTYI |

***Routing for Operational Traffic in 2031 and onward***

***(After the implementation of tunnel to TKSR portal)***

7.1.11 Following the implementation of the tunnel to TKSR portal, ingress traffic would be directed to the off-slip of TYNCR WB for access, while the egress would be maintained at TYNCR. In addition, **inbound of Routes B1, B2 and B4 shall be prohibited during AM and PM peaks (i.e. 07:00 to 09:30 and 17:00 to 19:00)** to mitigate further deterioration of traffic conditions at Tam Kon Shan Interchange, which experiences heavy traffic during the commuting peak traffic periods. Under this restriction, inbound traffic from Tsing Ma Bridge, Ting Kau Bridge and Cheung Tsing Tunnel / Nam Wan Tunnel shall be rerouted via Tsuen Kam Interchange, Texaco Road, Tsing Tsuen Road flyover and Tsing Yi North Coastal Road flyover to access the site. The proposed routing details are presented in the following table.

**Table 7.3 Routing for Operational Traffic from 2031 and onwards**

| Route | Outbound Traffic | Inbound Traffic |
|---|---|---|
| Route B1 (Tsing Ma Bridge Bound) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Tsing Ma Bridge WB | Tsing Ma Bridge EB → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tam Kon Shan Interchange → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR |
| Route B2 (Ting Kau Bridge) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Ting Kau Bridge NB | Ting Kau Bridge SB → NWTYI SB → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tam Kon Shan Interchange → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR |
| Route B3 (Tsing Tsuen Road) | Site Access at NWTYI → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tsing Tsuen Road EB | Tsing Tsuen Road WB → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR |
| Route B4 (Cheung Tsing Tunnel / Nam Wan Tunnel) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Cheung Tsing Highway SB→ Cheung Tsing Tunnel EB | Cheung Tsing Tunnel / Nam Wan Tunnel → Cheung Tsing Highway → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tam Kon Shan Interchange → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR |

***Alternative Routing for Operational Traffic in 2031 and onward***

***(After the implementation of tunnel to TKSR portal)***

7.1.12 The alternative access routings are primarily based on Design Case Scenario A. Because the NKW portal provides shorter ingress routes, traffic from Tsing Ma Bridge, Ting Kau Bridge and Cheung Tsing Tunnel / Nam Wan Tunnel bounds would likely utilize the NKW portal for accessing the Site (Route A1, Route A2 and Route A4). Nevertheless, traffic from Tsing Tsuen Road benefits from a more direct path via the TKSR portal, therefore, it is anticipated to use the TKSR portal access and its associated route (Route B3).

**Table 7.4 Routing for Alternative Site Access Arrangement**

| Route | Outbound Traffic | Inbound Traffic | Reference Figure |
|---|---|---|---|
| Route A1 (Tsing Ma Bridge Bound) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Tsing Ma Bridge WB | Tsing Ma Bridge EB → NWTYI NB → Site Access at NWTYI | Figure 3.1 |
| Route A2 (Ting Kau Bridge) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Ting Kau Bridge NB | Ting Kau Bridge SB → NWTYI SB → NWTYI NB → Site Access at NWTYI | Figure 3.2 |
| Route B3 (Tsing Tsuen Road) | Site Access at NWTYI → NWTYI NB → TYNCR EB → Tam Kon Shan Interchange Flyover EB → Tsing Tsuen Road EB | Tsing Tsuen Road WB → Tam Kon Shan Interchange Flyover WB → TYNCR WB → Slip Road to TKSR → Site Access at the off-slip of TYNCR | Figure 3.11 |
| Route A4 (Cheung Tsing Tunnel / Nam Wan Tunnel) | Site Access at NWTYI → NWTYI NB → NWTYI SB → Cheung Tsing Highway SB → Cheung Tsing Tunnel EB | Cheung Tsing Tunnel WB / Nam Wan Tunnel WB → Cheung Tsing Highway NB → NWTYI NB → Site Access at NWTYI | Figure 3.4 |

7.1.13 Based on the proposed site access arrangements and traffic management measures abovementioned, V/C ratios on TKSR and TYNCR have been assessed to determine the traffic impact of the development. The results are summarised below in **Table 7.5** and detailed calculations can be found in **Tables 4.14**, **4.16**, and **4.18**.

**Table 7.5 Road Link Capacity Assessment**

| Link Index | Link Name | Direction | V/C Ratio(1) | | |
|---|---|---|---|---|---|
| | | | 2031 Reference Case | 2031 Design Case Scenario A | 2031 Design Case Scenario B |
| L4 | Tam Kon Shan Road | EB | 0.50 (0.51) [0.27] | 0.50 (0.51) [0.27] | 0.50 (0.51) [0.27] |
| | | WB | 0.12 (0.12) [0.09] | 0.12 (0.12) [0.09] | 0.12 (0.12) [0.09] |
| L5 | Slip Road Connecting Tsing Yi North Coastal Road westbound to Tam Kon Shan Road | WB | 0.19 (0.18) [0.12] | 0.19 (0.18) [0.12] | 0.29 (0.28) [0.22] |
| L7 | Tsing Yi North Coastal Road | EB | 0.26 (0.25) [0.25] | 0.26 (0.25) [0.25] | 0.26 (0.25) [0.28] |
| | | WB | 0.68 (0.39) [0.41] | 0.69 (0.40) [0.42] | 0.73 (0.44) [0.46] |

Notes:
(1) V/C ratios are presented in AM peak (PM peak) [Logistic Peak]

7.1.14 The results illustrated that the road link performance of TKSR and TYNCR in Scenarios A and B would operate within capacity during AM, PM and logistic peak hours on weekdays for design year 2031. Given that development traffic will not use TKSR under both Scenarios A and B, traffic conditions on TKSR would be maintained at the reference case scenario level.

7.1.15 Regarding the alternative site access arrangement, shifting Tsing Tsuen Road bound traffic to Route B3 eliminates its need to traverse NWTYI and NWTYI Roundabout (J1), providing direct access from TYNCR instead. This could reduce traffic loads at NWTYI and its roundabout, positively impacting their performance. Since all other routes (Routes A1, A2 and A4) are unchanged, no other assessed junctions or road links from Scenario A would be affected. In view of that, the alternative access arrangement will not degrade traffic conditions at any study junctions or road links compared to Scenario A.

7.1.16 As mentioned in **para. 4.4.2**, the V/C ratio of Tsing Ma Bridge (L1) eastbound during PM peak hour, westbound during AM peak hour and Ting Kau Bridge southbound (L2) during both AM and logistic peak hours is anticipated to exceed 1.0. Nevertheless, it is considered the traffic impact induced by the development at the concerned road links is insignificant since the change of V/C ratio is minimal (i.e. at most 0.02 increase of V/C ratio) and the road links would still operate with V/C ratio below 1.2. In addition, as parallel routes to Tsing Ma Bridge and Ting Kau Bridge would be constructed under the planned Route 11 and Tsing Yi–Lantau Link projects (i.e. Tsing Lung Bridge and Tsing Yi-Lantau Link), traffic conditions at L1 and L2 are anticipated to improve further upon its completion.

***Construction Traffic***

7.1.17 During the construction phase of tunnel to TKSR portal (i.e. before completion of tunnel to TKSR portal), the corresponding construction vehicle would inevitably travel to TKSR EB to leave the site from the site access at off-slip of TYNCR WB. Nevertheless, it is considered that the traffic impact induced by the construction traffic at the concerned road link and associated junction is insignificant given that the V/C ratio and RC remain unchanged, showing only a negligible difference compared to the reference case scenario. The results can be found in **Table 6.2** to **Table 6.5**.

## 7.2 Traffic Management Plan to the Site Traffic and Contingency Plan

7.2.1 The Traffic Management Plan and traffic control proposals shall be prepared and submitted by the Contractor to minimize traffic impacts during both construction and operation phases. The Contractor shall submit a detailed Traffic Management Plan and traffic control proposals during construction/operation phases for review and approval. The Traffic Management Plan shall contain traffic control proposals on operation procedure, real-time positioning, site traffic queue and junction restriction measures.

7.2.2 The Contractor shall prepare a Contingency Plan for facilities failure, together with mitigation measures to minimize disruption and ensure safety. During the failure, excess site traffic shall be diverted to temporary waiting areas to maintain a controlled and efficient flow of operations.

7.2.3 The plan shall include the following elements:

- Activation criteria and procedures for the contingency plan
- Temporary reassignment procedures for excess site traffic
- Safety and traffic management measures, including traffic rerouting, continuous monitoring and communication protocols
- Maintenance and repair response procedures
- Evaluation of consequences and mitigation measures
- Recovery procedures and resume normal operations

# 8 SUMMARY OF FINDINGS

8.1.1 This Assignment presents the findings of a Traffic and Transport Impact Assessment (TTIA) for the proposed underground quarry at Tsing Yi North.

8.1.2 The operation hour of the proposed development is anticipated to have two cases. Case 1 comprises concrete production at a rate of 500 m³/hr from 07:00 to 19:00 and asphalt production at a rate of 208 t/hr on a 24-hour basis. Case 2 comprises concrete production at a rate of 550 m³/hr from 07:00 to 19:00, followed by concrete production at a rate of 50 m³/hr from 19:01 to 06:59, with no asphalt production all day. Both case 1 and case 2 are anticipated operational scenarios. As the hourly development traffic generated under case 1 is higher than that under case 2, case 1 has been adopted for the impact assessment.

8.1.3 Given that barging point is available at the site, it has been considered that the majority of raw materials for concrete and asphalt production (e.g. aggregates and cement etc.), will be delivered to the site by barge under normal operation. As such, the marine delivery could help reduce the vehicular traffic burden on the road.

8.1.4 At present, the performance of all the study junctions and road links are currently operating within sufficient capacity during AM, PM and logistic peak hours on weekdays, with the exception of J/O Fung Shue Wo Road / Tsing Yi Road West (J6) and Ting Kau Bridge southbound (L2). The V/C ratio between 1.0 to 1.2 indicates that L2 SB operates in unstable flow condition during AM peak hour on weekday.

8.1.5 The proposed development would be an underground quarry. Vehicular access to the portal area would be provided at NWTYI or the off-slip of TYNCR WB which is considered acceptable from traffic engineering point of view in terms of location and access arrangement.

8.1.6 Since there are no parking standards specifically for quarrying in HKPSG, the provision of the ancillary parking and L/UL facilities is proposed to follow the requirements for Industrial Use development stipulated in HKPSG (January 2024 Edition) with respect to GFA of 8,520m$^2$ at Ngau Kok Wan site.

8.1.7 Since the tunnel to TKSR portal and the Site access road connecting NWTYI would not permit pedestrians access, all staffs and visitors would be required to access the Site solely by private vehicles during both construction and operation phases. As such, the impact on the existing public transport operations is not anticipated.

8.1.8 A TTA has been proposed at the intersection of the unnamed access road and NWTYI to facilitate the development traffic entering and leaving the Site. In addition, the proposed run-in leading to TKSR portal will be relocated to the off-slip of TYNCR WB after the implementation of the tunnel to TKSR portal. Meanwhile, the unnamed access road at NWTYI would be converted into a one-way outbound road, with all development traffic entering via the TKSR portal and exiting via the NKW portal. Following the implementation of the tunnel to TKSR portal, development traffic would be directed to the off-slip of TYNCR WB for access.

8.1.9 To mitigate further deterioration of traffic conditions at Tam Kon Shan Interchange and Tsuen Tsing Interchange, the site traffic would be prohibited from traveling through Tam Kon Shan Interchange and Tsuen Tsing Interchange during AM and PM peaks (i.e. 07:00 to 09:30 and 17:00 to 19:00).

8.1.10 The Traffic Management Plan and traffic control proposals shall be prepared to minimize traffic impacts during both construction and operation phases. The contractor shall submit a detailed Traffic Management Plan, Contingency Plan, and Non-Conformance, Incident Investigation and Auditing Mechanism during construction/operation phases to TD for review and approval.

8.1.11 Future year traffic conditions have been forecasted for the scenario of “With” and “Without” the development during operation and construction phases. The traffic forecast results have been used for the assessment of the traffic impacts arising from the development of the Site.

8.1.12 During operation phase, the performance of all the study junctions and road links would be operating within capacity during AM and PM peak hours on Weekday for design year 2031, with the exceptions of Tsing Ma Bridge (L1) eastbound during PM peak hour, westbound during AM peak hour and Ting Kau Bridge southbound (L2) during both AM and logistic peak hours.

8.1.13 Nevertheless, it is considered the traffic impact induced by the development at the concerned road links is insignificant since the change of V/C ratio is minimal (i.e. at most 0.02 increase

of V/C ratio) and the road links would still operate with V/C ratio below 1.2. In addition, it is anticipated that the completion of Tsing Yi - Lantau Link would further improve the traffic conditions at Tsing Ma Bridge and Ting Kau Bridge.

8.1.14 The results of queue length assessment illustrated that there is a low chance of traffic tailing back to the upstream junctions during both commuting peak and logistic peak hours at J1 and J5 in design case scenarios.

8.1.15 Subject to the contractor's operational needs, alternative site access arrangement was explored to further minimize traffic detours due to the relocation of vehicular access to the TKSR portal upon the implementation of tunnel leading to the TKSR portal. Under this alternative arrangement, the ingress and egress at NWTYI would remain open, while the new run-in near TKSR roundabout would operate simultaneously to disperse the development traffic.

8.1.16 The sensitivity test scenario for the alternative site access arrangement demonstrated that, compared to Design Case Scenario A, the only routing deviation is inbound traffic from Tsing Tsuen Road. This traffic will shift to Route B3 (entering via the TKSR portal run-in) instead of using Route A3 (entering via the NKW portal). Hence, this arrangement could reduce traffic loads at NWTYI and its roundabout. Since all other routes are unchanged, the alternative access arrangement will not degrade traffic conditions at any study junctions or road links compared to Design Case Scenario A.

8.1.17 Construction vehicles are expected to travel to the Site during the construction phase. The performance of all junctions and road links along construction traffic routings would be operating within capacity during AM, PM and logistic peak hours on normal weekdays for construction peak year 2028, with the exception of Ting Kau Bridge southbound (L2) during AM peak. Nevertheless, it is considered the traffic impact induced by the construction traffic at the concerned road links are insignificant given that the V/C ratio remains unchanged compared to the reference case scenario.

8.1.18 In view of the minimal effect on the critical road links and sufficient capacity of all other study junctions and road links during both the operation and construction phases of the proposed underground quarry at Tsing Yi North, the traffic impact is considered insignificant. In this regard, the proposed development is acceptable from a traffic perspective.

# Figures

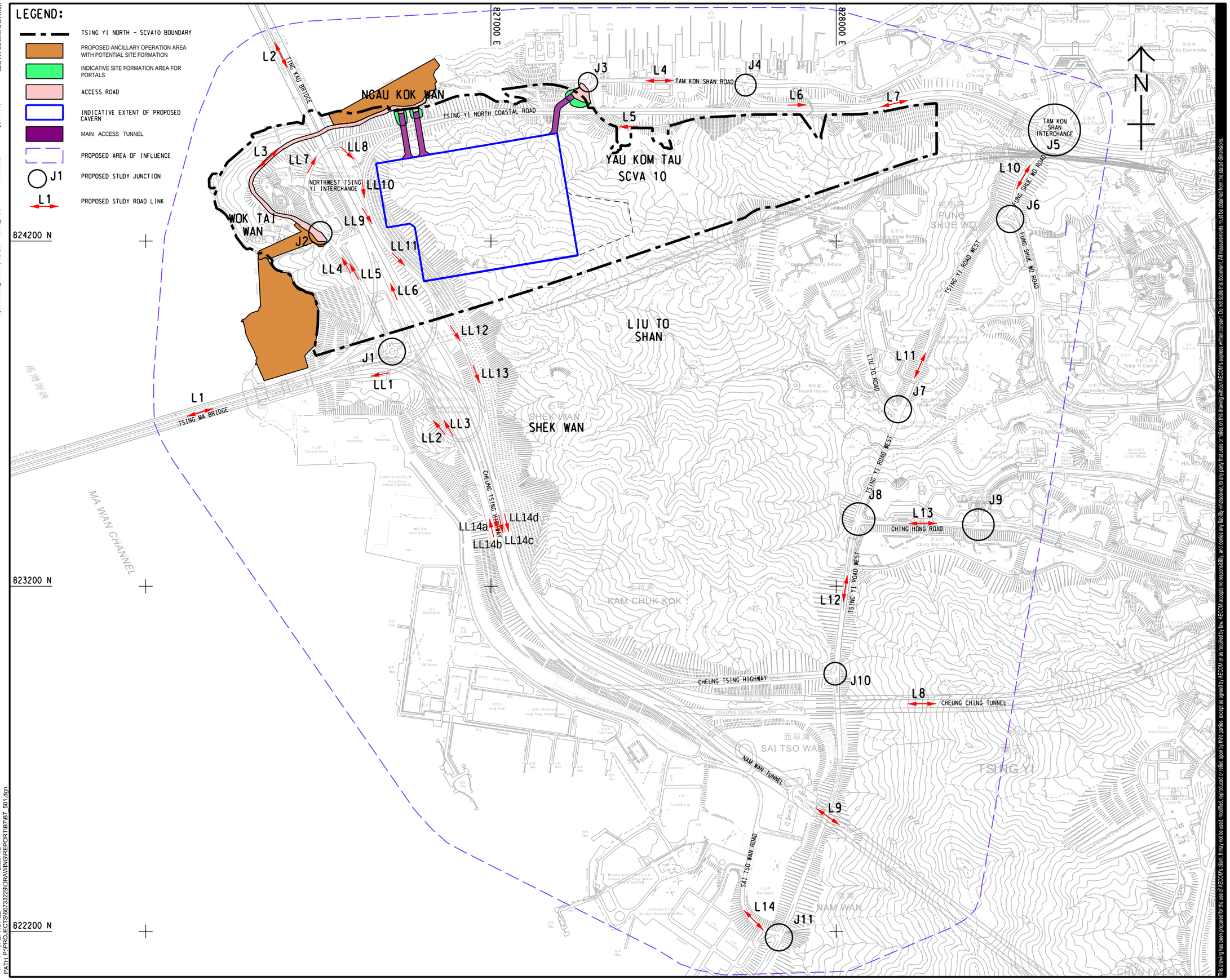
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Designer:

Project Management Initials:




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UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

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STATUS
狀態

SCALE 比例
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DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60733229

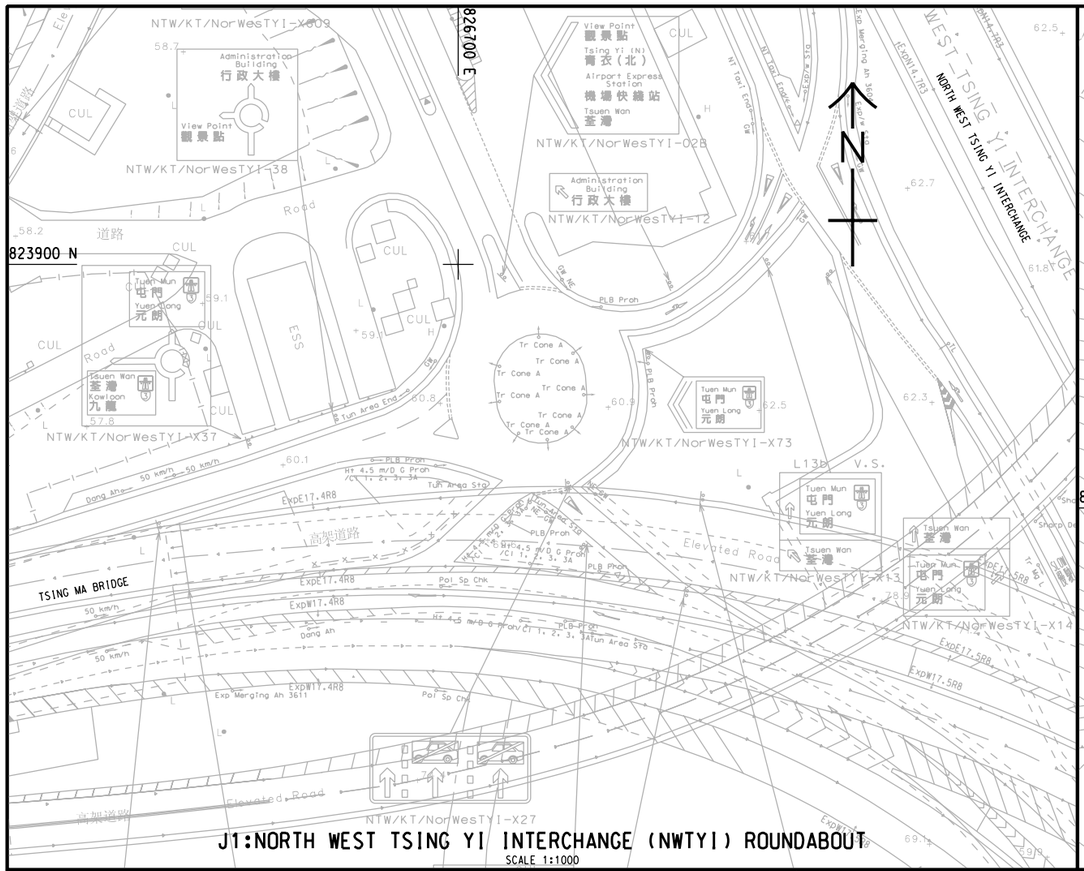
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CE 79/2023 (GE)

SHEET TITLE
圖紙名稱
LOCATION OF STUDY JUNCTIONS AND ROAD LINKS

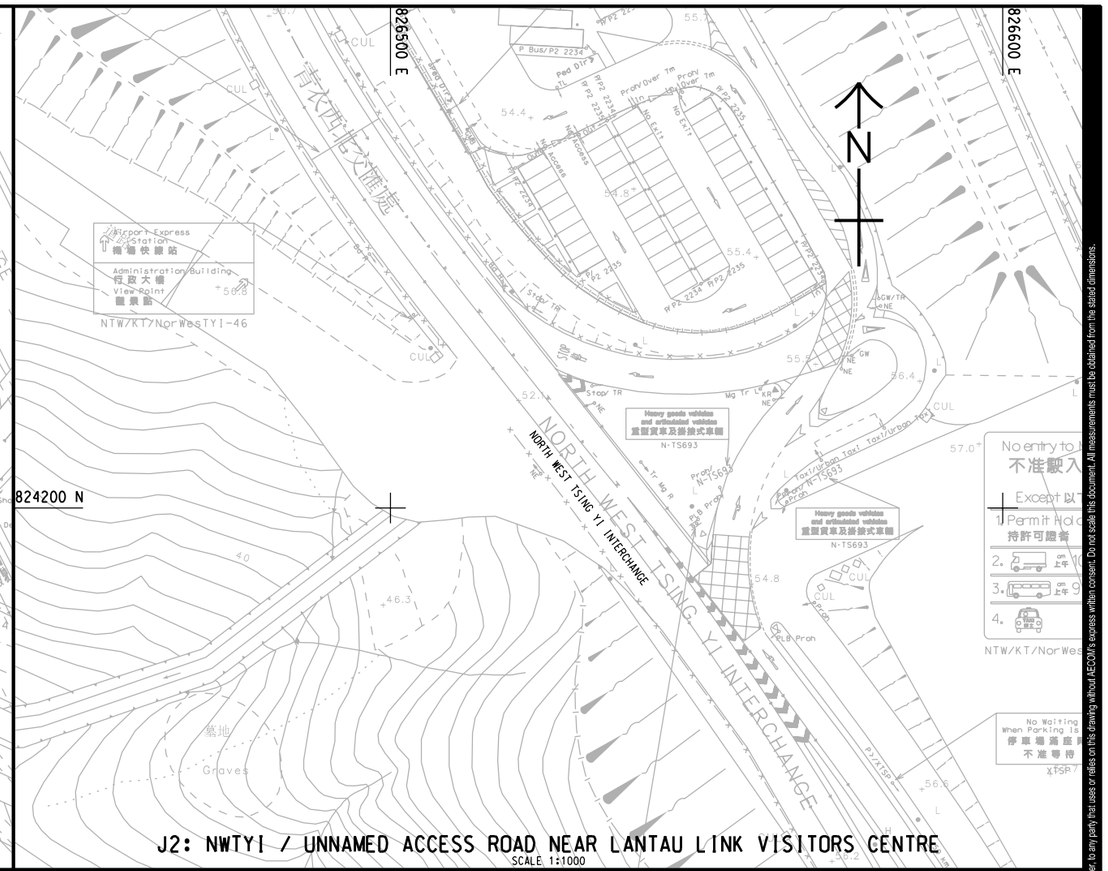
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60733229/A20/Figure 2.1

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

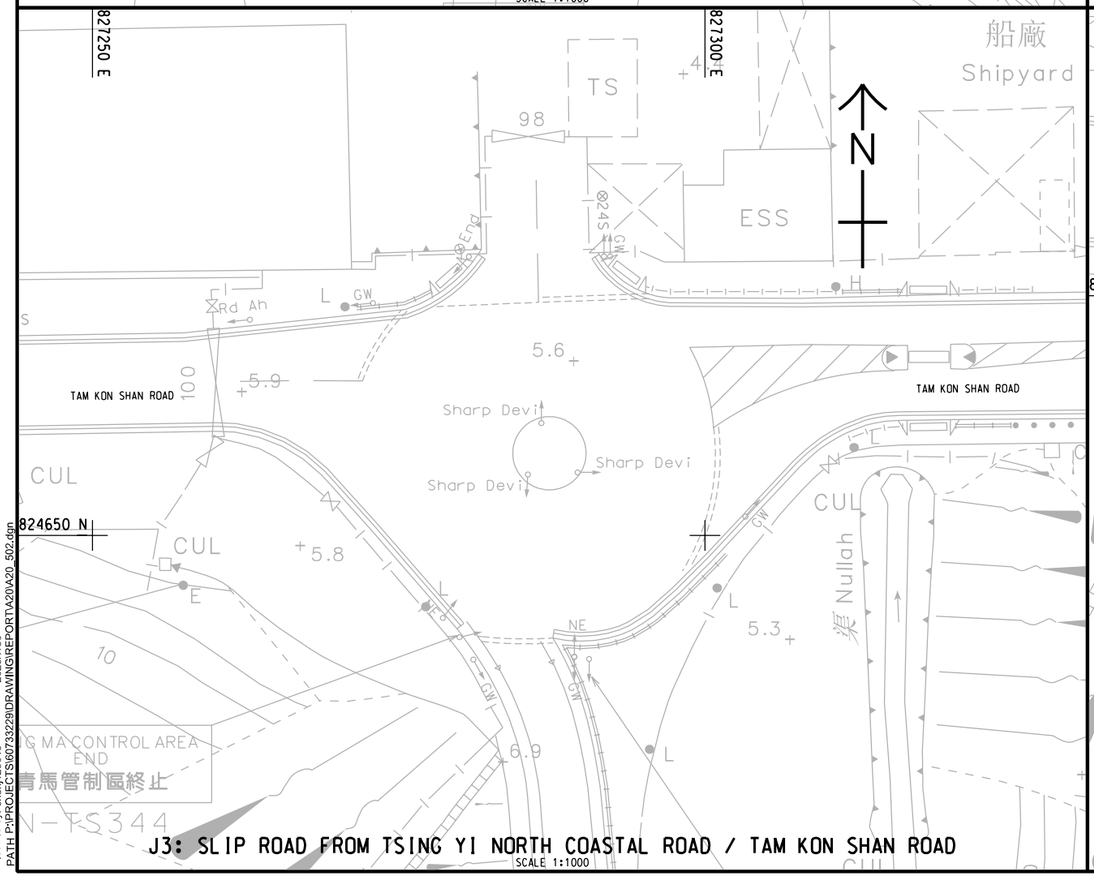
J1:NORTH WEST TSING YI INTERCHANGE (NWTYI) ROUNDABOUT
SCALE 1:1000



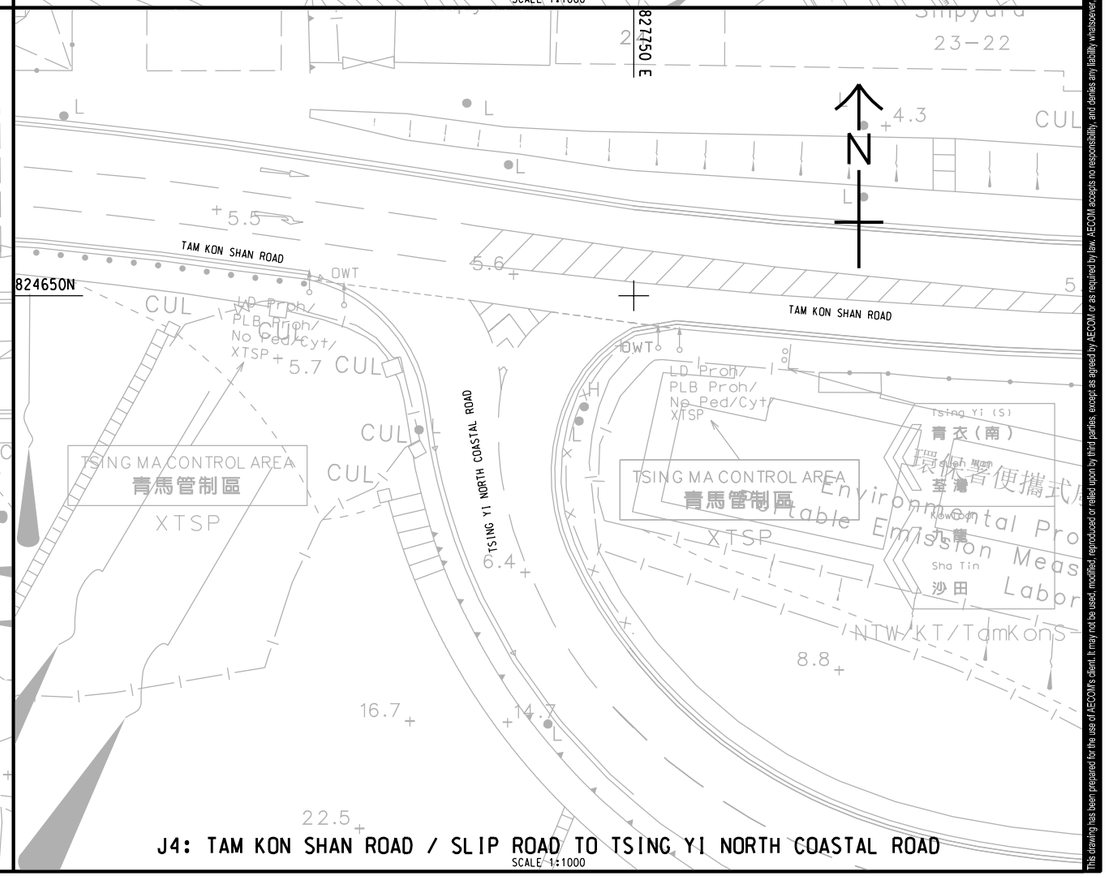

J2: NWTYI / UNNAMED ACCESS ROAD NEAR LANTAU LINK VISITORS CENTRE
SCALE 1:1000




J3: SLIP ROAD FROM TSING YI NORTH COASTAL ROAD / TAM KON SHAN ROAD
SCALE 1:1000




J4: TAM KON SHAN ROAD / SLIP ROAD TO TSING YI NORTH COASTAL ROAD
SCALE 1:1000




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階段

| SCALE 比例 | DIMENSION UNIT 尺寸單位 |
|---|---|
| A3 AS SHOWN | METRES |

KEY PLAN
索引圖




| PROJECT NO. 項目編號 | AGREEMENT NO. 協議編號 |
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| 60733229 | CE 79/2023 (GE) |

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圖紙名稱

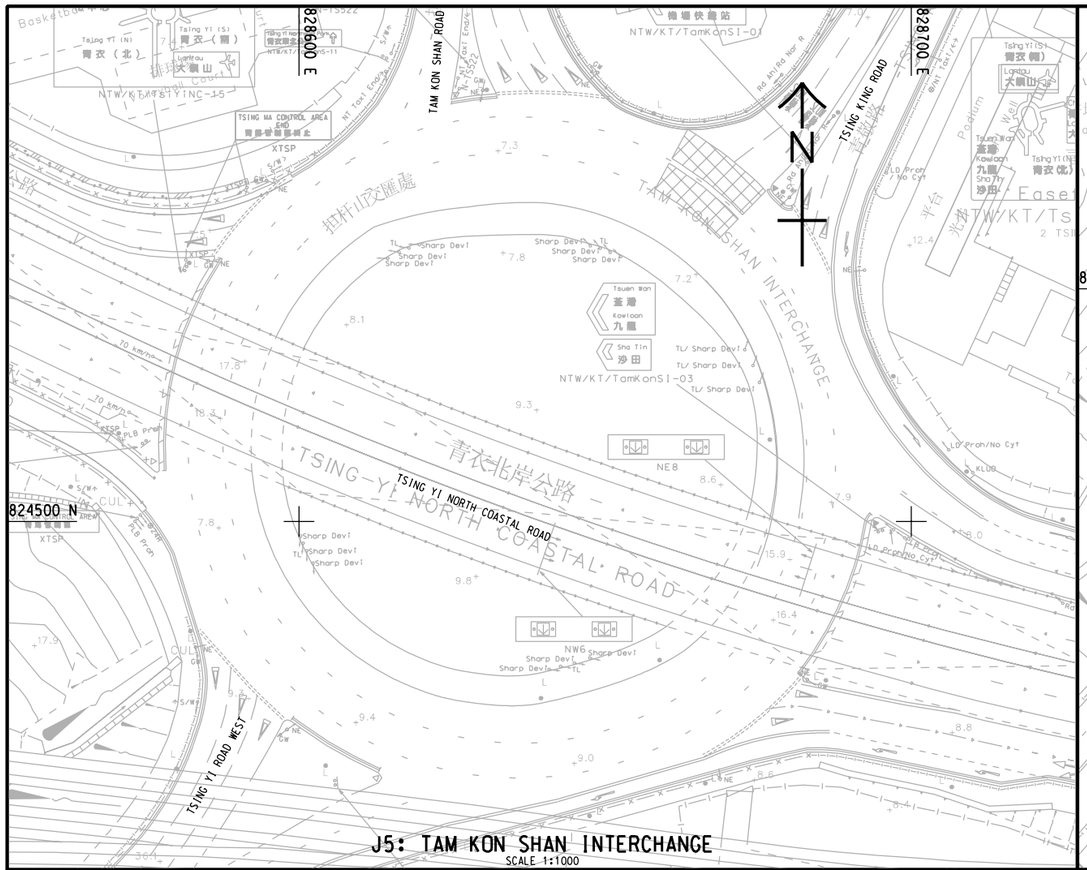
EXISTING JUNCTION LAYOUTS

Sheet 1 of 3

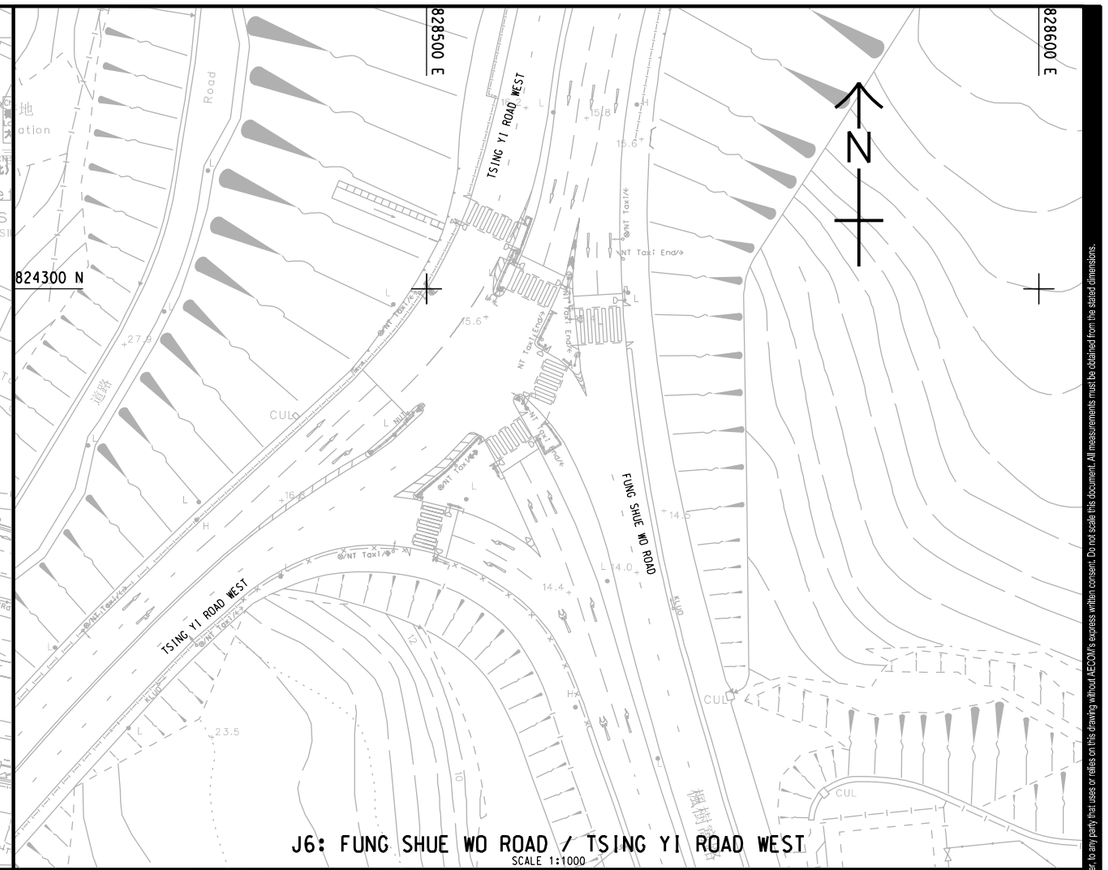
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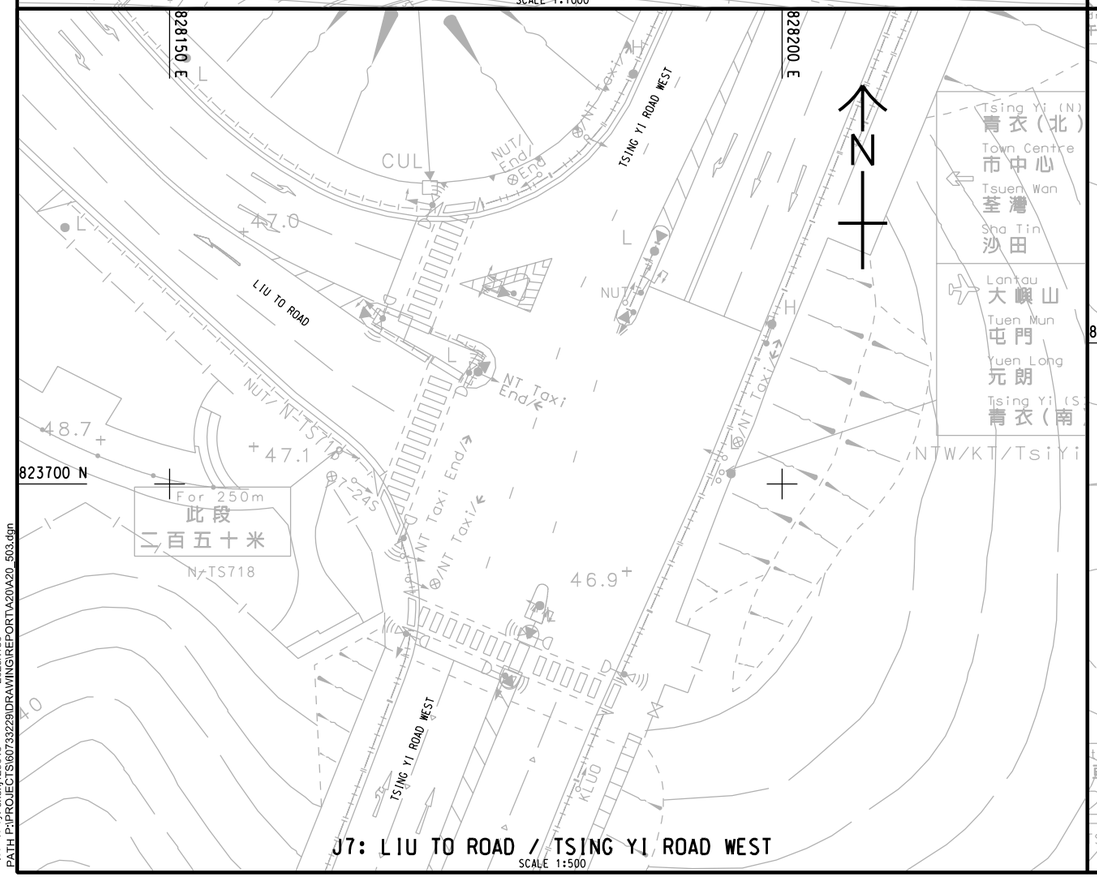
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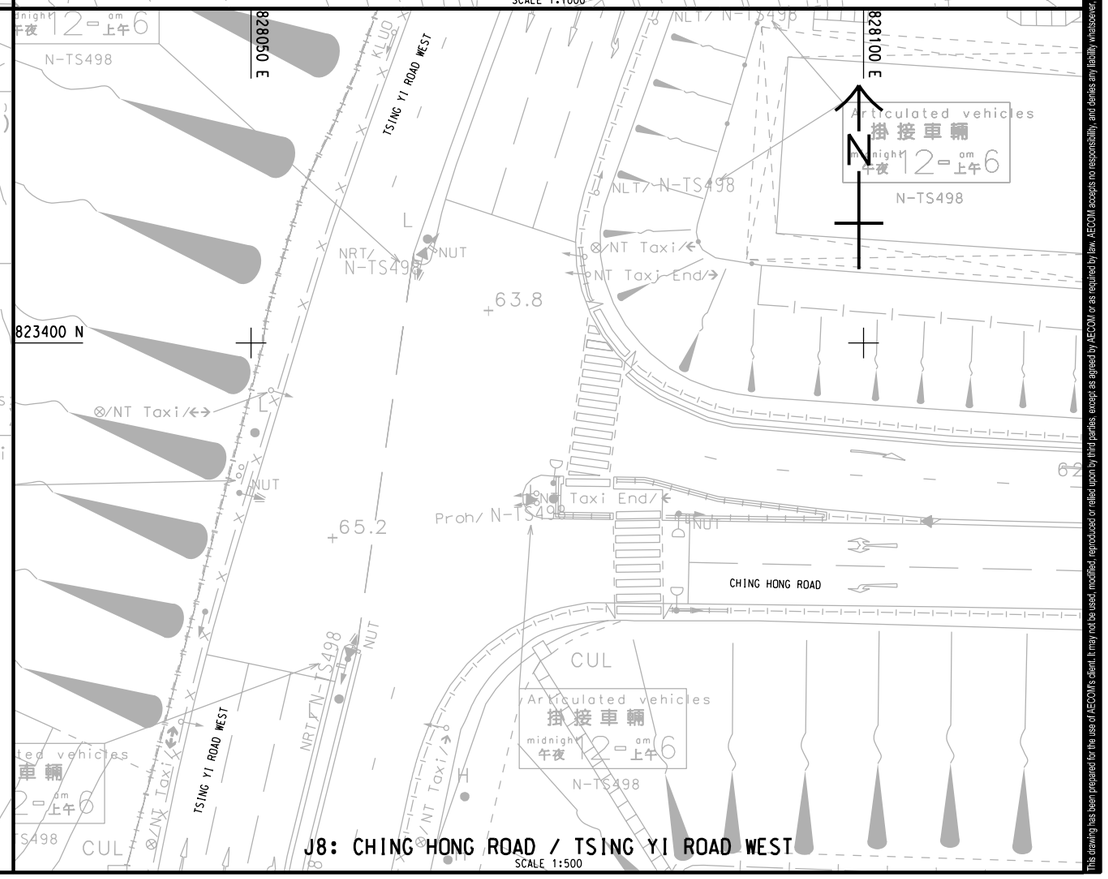

J5: TAM KON SHAN INTERCHANGE
SCALE 1:1000




J6: FUNG SHUE WO ROAD / TSING YI ROAD WEST
SCALE 1:1000




J7: LIU TO ROAD / TSING YI ROAD WEST
SCALE 1:500




J8: CHING HONG ROAD / TSING YI ROAD WEST
SCALE 1:500

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STATUS
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| SCALE 比例 | DIMENSION UNIT 尺寸單位 |
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| A3 AS SHOWN | METRES |

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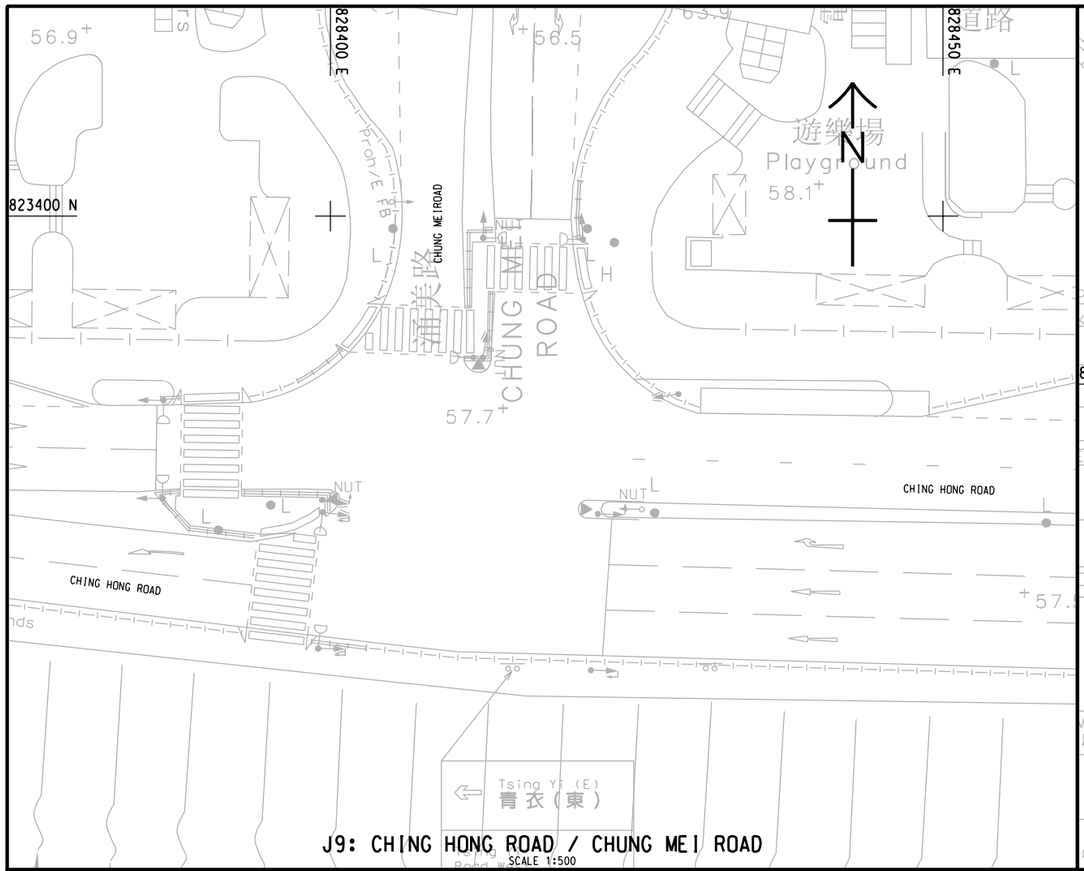
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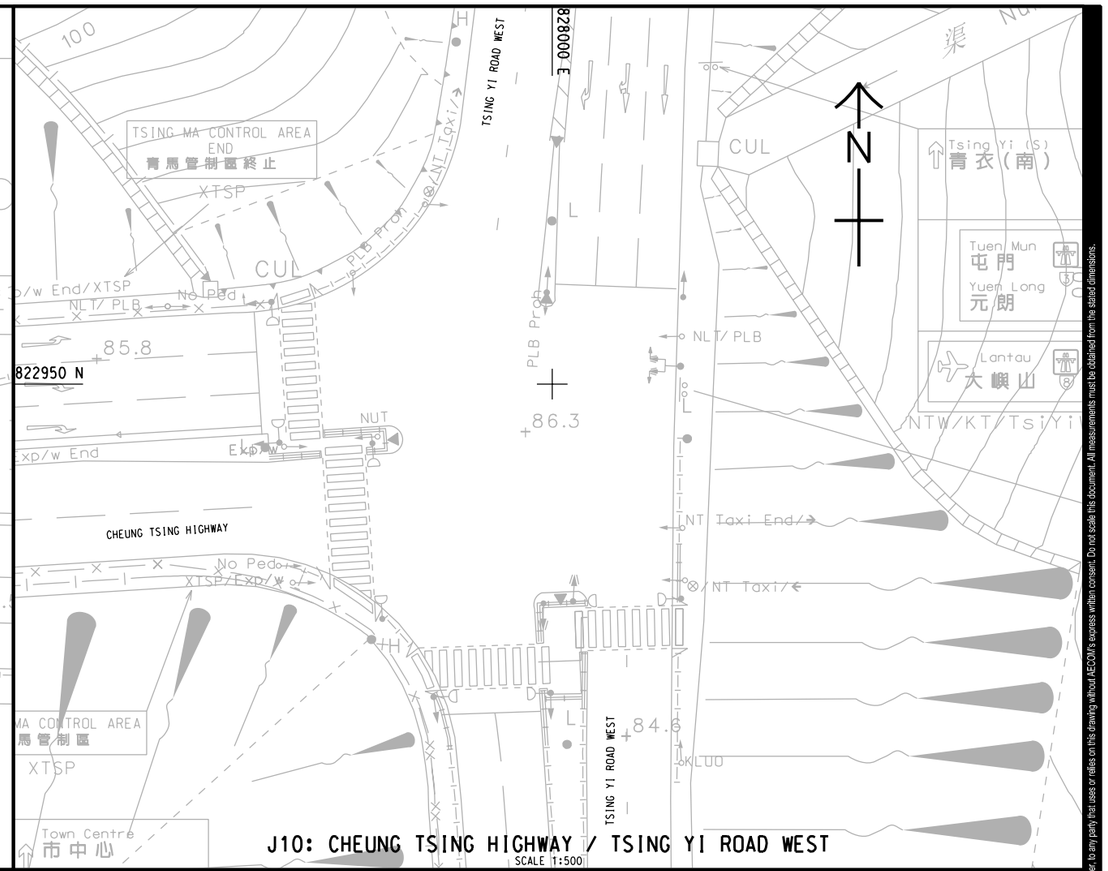


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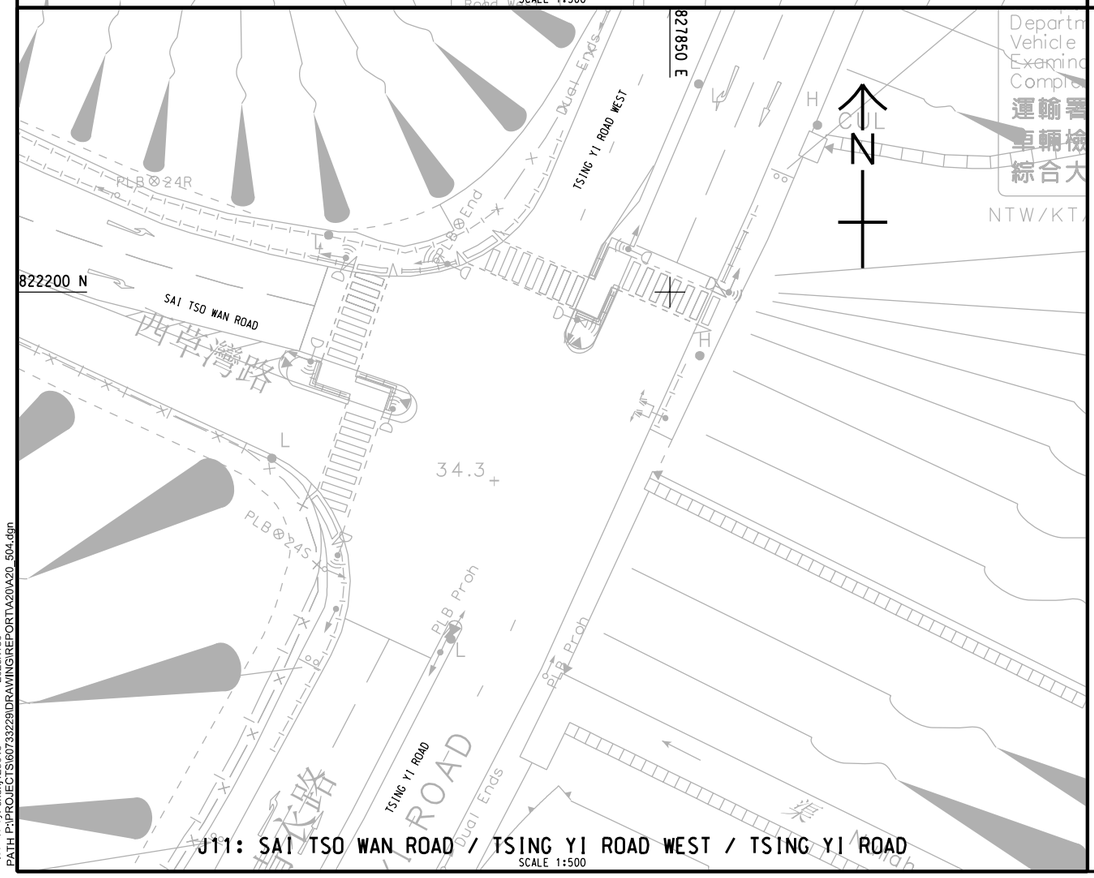
60733229/A20/Figure 2.3




J9: CHING HONG ROAD / CHUNG MEI ROAD
SCALE 1:500




J10: CHEUNG TSING HIGHWAY / TSING YI ROAD WEST
SCALE 1:500




J11: SAI TSO WAN ROAD / TSING YI ROAD WEST / TSING YI ROAD
SCALE 1:500

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階段

SCALE
比例
A3 AS SHOWN

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60733229

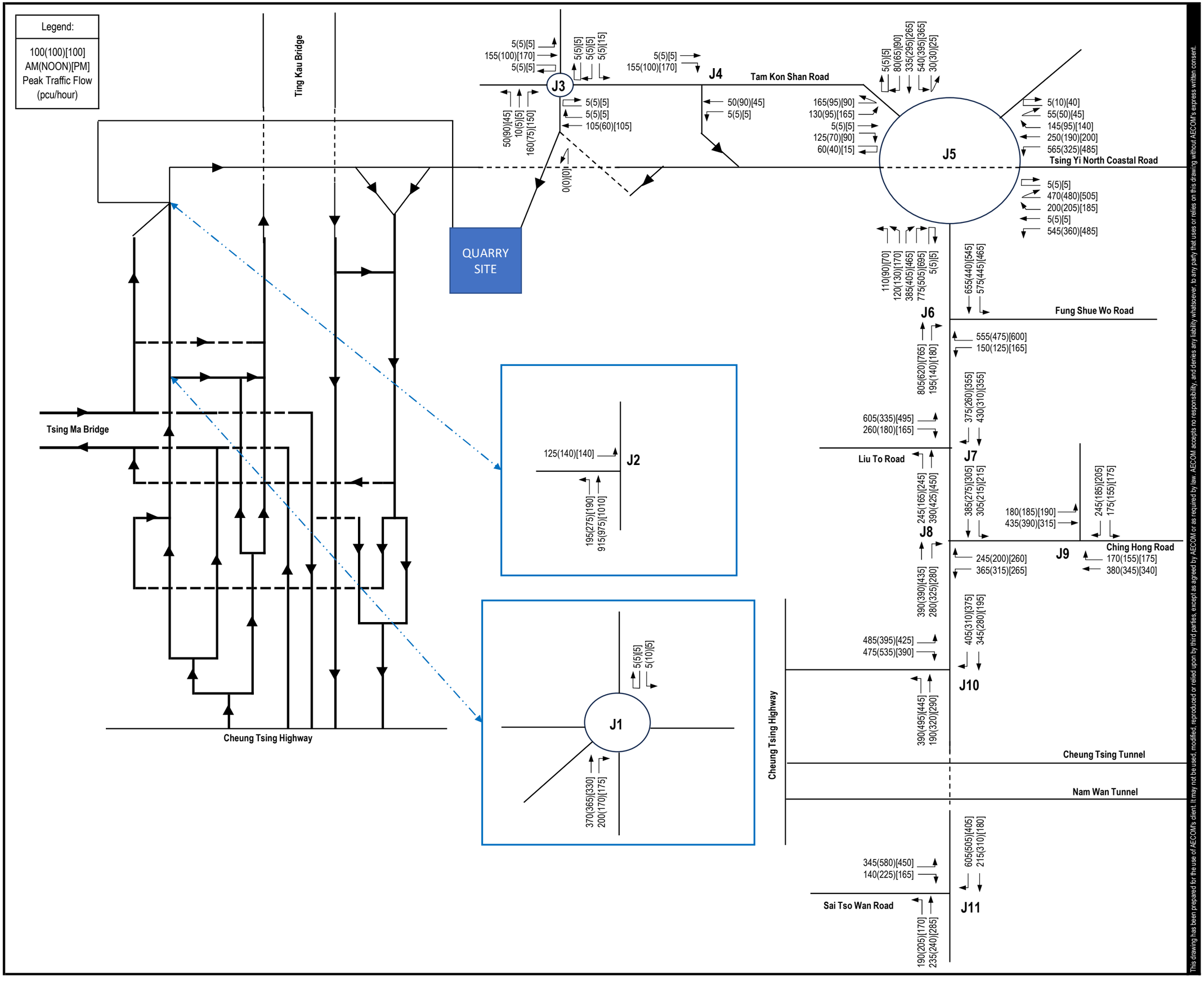
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CE 79/2023 (GE)

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圖紙名稱
EXISTING JUNCTION LAYOUTS

Sheet 3 of 3

SHEET NUMBER
圖紙編號
60733229/A20/Figure 2.4

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**ISSUE/REVISION**

**STATUS**

**SCALE** **DIMENSION UNIT**
Not to Scale

**KEY PLAN**

**PROJECT NO.** **CONTRACT NO.**
60733229 CE 79/2023 (GE)

**SHEET TITLE**
2025 OBSERVED TRAFFIC FLOWS

**SHEET NUMBER**
60733229/A20/Figure 2.5

826100 E

827100 E

828100 E

825200 N

824200 N

823200 N

N

LEGEND:

- TSING YI NORTH – SCVA10 BOUNDARY
- PROPOSED ANCILLARY OPERATION AREA WITH POTENTIAL SITE FORMATION
- INDICATIVE SITE FORMATION AREA FOR PORTALS
- MAIN ACCESS TUNNEL
- ACCESS ROAD
- INDICATIVE EXTENT OF PROPOSED CAVERN
- POTENTIAL CAVERN EXPANSION

NGAU KOK WAN SURFACE LAND

NGAU KOK WAN PORTAL

TAM KON SHAN PORTAL

TAM KON SHAN ROAD

YAU KOM TAU

NORTHWEST TSING YI INTERCHANGE

WOK TAI WAN

WOK TAI WAN WORKS AREA

WOK TAI WAN SURFACE LAND

SCVA 10

FUNG SHUE WO

LIU TO SHAN

SHEK WAN

KAM CHUK KOK

TSING MA BRIDGE

CHEUNG TSING HIGHWAY

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

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STATUS
狀況

SCALE 比例: A3 1 : 10000

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60733229

AGREEMENT NO. 協議編號: CE 79/2023 (GE)

SHEET TITLE
圖紙名稱

PRELIMINARY CAVERN LAYOUT

SHEET NUMBER
圖紙編號

60733229/A20/Figure 3.1

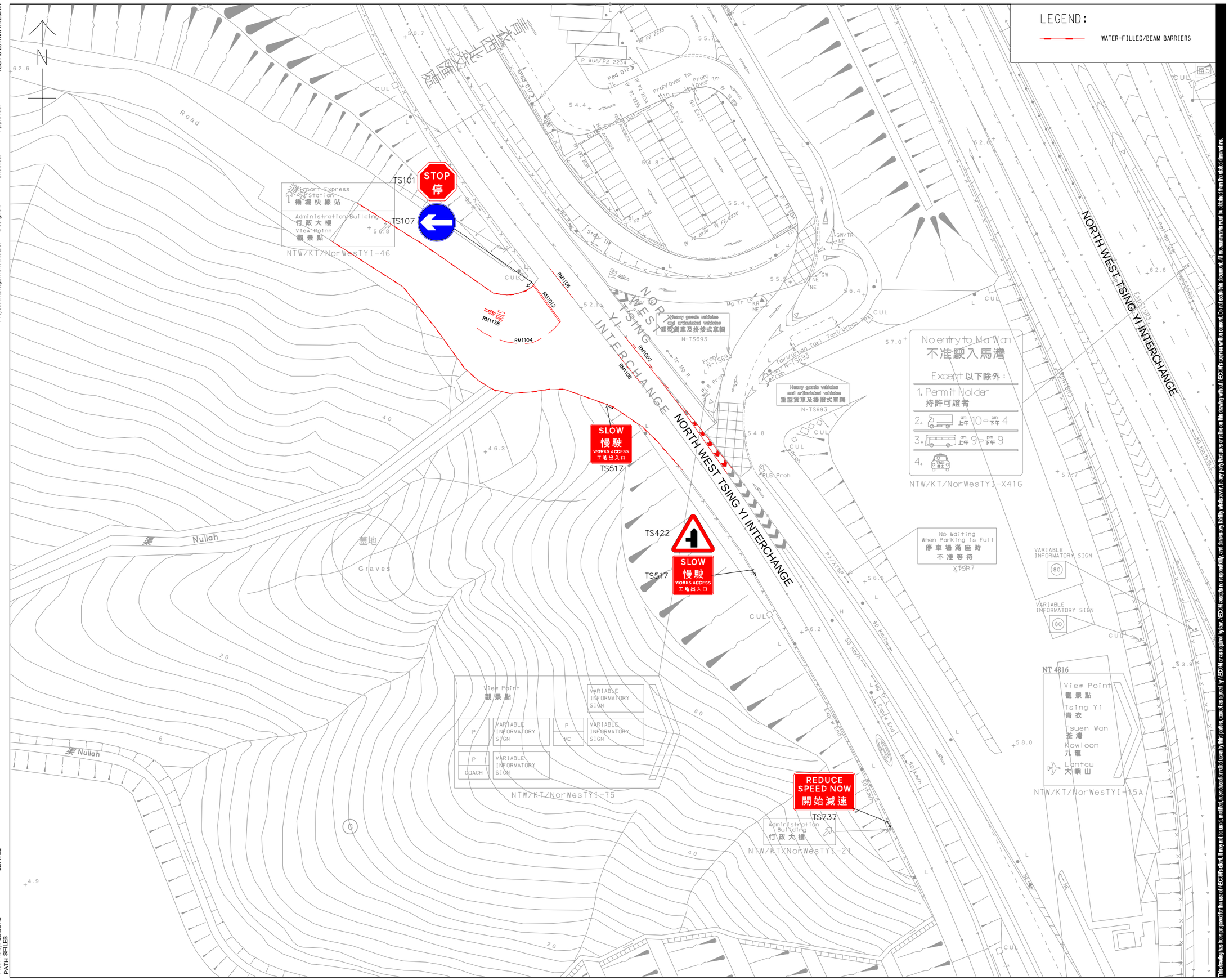
ISO A3 297mm x 420mm

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狀況

SCALE
比例

A3 1 : 800

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60733229

AGREEMENT NO.
協議編號

CE 79/2023 (GE)

SHEET TITLE
圖紙名稱

TEMPORY TRAFFIC ARRANGMENT FOR SITE ACCESS AT J/O NWTYI / UNNAMED ACCESS ROAD NEAR LANTAU LINK VISITORS CENTRE (J2)

SHEET NUMBER
圖紙編號

60733229/A20/Figure 3.2

ISO A3 297mm x 420mm

Approved:

Checked:

Designer:

Project Management Initials:

LEGEND:

PROPOSED RUN-IN/OUT

TAM KON SHAN ROAD

担杆山路

TSING MA CONTROL AREA END
青馬管制區終止
N-TS344

TS101 STOP 停

TS107

34m

14.0m

RM1138 STOP

RM1102

RM1104

TUNNEL TO TKS PORTAL

To Tsing Yi Town Centre
往青衣市中心
1km

NTW/KL TSIYINC-G11

TS517 SLOW 慢駛 WORKS ACCESS 工地出入口

高架道路

TSING YI NORTH COASTAL ROAD

青衣北岸公路

CH. 16 +00.00

CH. 15 +00.00

CH. 14 +00.00

70 km/h/RLC

Elevated Road

TSING YI NORTH COASTAL ROAD

TS422 SLOW 慢駛 WORKS ACCESS 工地出入口

TS517

REDUCE SPEED NOW 開始減速

TS737

8 am - 11 pm
由上午六時至下午十一時
At other times
其他時間則准泊車
N-TS931

船廠 Shipyard

工場 Workshop

Nullah

Sharp Devil

CUL

TS

ESS

SWEPT PATH ANALYSIS FOR of 11m LONG VEHICLE

$DATE$

$PLTDRIVE$
Plot File by: $USER$
PATH: $FILE$

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DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
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PROJECT NO. 項目編號
60733229

AGREEMENT NO. 協議編號
CE 79/2023 (GE)

SHEET TITLE
圖紙名稱

TEMPORY TRAFFIC ARRANGEMENT FOR SITE ACCESS AT SLIP ROAD FROM TSING YI NORTH COASTAL ROAD (CONSTRUCTION PHASE OF TUNNEL TO TKSR PORTAL)

SHEET NUMBER
圖紙編號

60733229/A20/Figure 3.3

ISO A3 297mm x 420mm

Approved:

Checked:

Designer:

Project Management Initials:

LEGEND:

PROPOSED RUN-IN

TAM KON SHAN ROAD

担杆山路

TSING MA CONTROL AREA END 青馬管制區終止 N-TS344

N-TS931

8 am - 11 pm 由上午八時至下午十一時 At other times 其他時間禁止泊車

TS115

34m

8.0m

WATER FILLED BARRIER

SLOW 慢駛 WORKS ACCESS 工地出入口

TS517

TS422

TS737

REDUCE SPEED NOW 開始減速

TUNNEL TO TKS PORTAL

Tsing Yi Town Centre 青衣市中心

1km

TSING YI NORTH COASTAL ROAD

Elevated Road

高架道路

青衣北岸公路

TSING YI NORTH COASTAL ROAD

船廠 Shipyard

工場 Workshop

Nullah

Sharp Devil

CH. 16 +00.00

CH. 15 +00.00

CH. 14 +00.00

70 km/h/RLC

SWEPT PATH ANALYSIS FOR of 16m LONG VEHICLE

$DATE$

$PLTDRV$
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PATH $FILE$

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PROJECT 項目

UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT 業主

土木工程拓展署 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

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STATUS 狀況

SCALE 比例

A3 1 : 800

DIMENSION UNIT 尺寸單位

METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號

60733229

AGREEMENT NO. 協議編號

CE 79/2023 (GE)

SHEET TITLE 圖紙名稱

TEMPORY TRAFFIC ARRANGEMENT FOR SITE ACCESS AT SLIP ROAD FROM TSING YI NORTH COASTAL ROAD (AFTER THE IMPLEMENTATION OF TUNNEL TO TKSR PORTAL)

SHEET NUMBER 圖紙編號

60733229/A20/Figure 3.4

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

## LEGEND:

- TSING YI NORTH – SCVA10 BOUNDARY
- PROPOSED ANCILLARY OPERATION AREA WITH POTENTIAL SITE FORMATION
- INDICATIVE SITE FORMATION AREA FOR PORTALS
- ACCESS ROAD
- INDICATIVE EXTENT OF PROPOSED CAVERN
- MAIN ACCESS TUNNEL
- **VEHICULAR INGRESS (ROUTE A1)**
- VEHICULAR EGRESS (ROUTE A1)

827000 E

828000 E

824200 N

823200 N

822200 N

NGAU KOK WAN

TSING KAU BRIDGE

TSING YI NORTH COASTAL ROAD

TAM KON SHAN ROAD

TAM KON SHAN INTERCHANGE

YAU KOM TAU SCVA 10

NORTHWEST TSING YI INTERCHANGE

WOK TAI WAN

FUNG SHUE WO ROAD

TSING YI ROAD WEST

LIU TO SHAN

LIU TO ROAD

SHEK WAN

TSING MA BRIDGE

CHEUNG TSING HIGHWAY

CHING HONG ROAD

MA WAN CHANNEL

KAM CHUK KOK

CHEUNG CHING TUNNEL

SAI TSO WAN

NAM WAN TUNNEL

SAI TSO WAN ROAD

TSING YI

NAM WAN

CHUN FAI CHOK

N

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**PROJECT**
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UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

**CLIENT**
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Civil Engineering and Development Department

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| | | | |

**STATUS**
階段

**SCALE** 比例: A3 1 : 10000

**DIMENSION UNIT** 尺寸單位: METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號: 60733229

**AGREEMENT NO.** 協議編號: CE 79/2023 (GE)

**SHEET TITLE**
圖紙名稱

SITE ACCESS ARRANGEMENT (ROUTE A1)

**SHEET NUMBER**
圖紙編號

60733229/A20/Figure 3.5

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

## LEGEND:

- TSING YI NORTH – SCVA10 BOUNDARY
- PROPOSED ANCILLARY OPERATION AREA WITH POTENTIAL SITE FORMATION
- INDICATIVE SITE FORMATION AREA FOR PORTALS
- ACCESS ROAD
- INDICATIVE EXTENT OF PROPOSED CAVERN
- MAIN ACCESS TUNNEL
- **VEHICULAR INGRESS (ROUTE A2)**
- VEHICULAR EGRESS (ROUTE A2)

827000 E

828000 E

824200 N

823200 N

822200 N

N

NGAU KOK WAN

TSING KAU BRIDGE

TAM KON SHAN ROAD

TSING YI NORTH COASTAL ROAD

TAM KON SHAN INTERCHANGE

YAU KOM TAU SCVA 10

NORTHWEST TSING YI INTERCHANGE

WOK TAI WAN

FUNG SHUE WO ROAD

TSING YI ROAD WEST

LIU TO SHAN

LIU TO ROAD

SHEK WAN

TSING MA BRIDGE

MA WAN CHANNEL

CHEUNG TSING HIGHWAY

CHING HONG ROAD

KAM CHUK KOK

CHEUNG CHING TUNNEL

SAI TSO WAN

NAM WAN TUNNEL

SAI TSO WAN ROAD

TSING YI

NAM WAN

CHUN FAI CHOK

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**PROJECT**
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UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

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**STATUS**
階段

**SCALE** 比例: A3 1 : 10000

**DIMENSION UNIT** 尺寸單位: METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號: 60733229

**AGREEMENT NO.** 協議編號: CE 79/2023 (GE)

**SHEET TITLE**
圖紙名稱

SITE ACCESS ARRANGEMENT (ROUTE A2)

**SHEET NUMBER**
圖紙編號

60733229/A20/Figure 3.6

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

## LEGEND:

- TSING YI NORTH – SCVA10 BOUNDARY
- PROPOSED ANCILLARY OPERATION AREA WITH POTENTIAL SITE FORMATION
- INDICATIVE SITE FORMATION AREA FOR PORTALS
- ACCESS ROAD
- INDICATIVE EXTENT OF PROPOSED CAVERN
- MAIN ACCESS TUNNEL
- **VEHICULAR INGRESS (ROUTE A3)**
- VEHICULAR EGRESS (ROUTE A3)

827000 E

828000 E

824200 N

823200 N

822200 N

NGAU KOK WAN

TSING KAU BRIDGE

TAM KON SHAN ROAD

TSING YI NORTH COASTAL ROAD

TAM KON SHAN INTERCHANGE

YAU KOM TAU SCVA 10

NORTHWEST TSING YI INTERCHANGE

WOK TAI WAN

FUNG SHUE WO

FUNG SHUE WO ROAD

TSING YI ROAD WEST

LIU TO SHAN

LIU TO ROAD

TSING MA BRIDGE

SHEK WAN

CHEUNG TSING HIGHWAY

CHING HONG ROAD

MA WAN CHANNEL

KAM CHUK KOK

CHEUNG CHING TUNNEL

SAI TSO WAN

NAM WAN TUNNEL

SAI TSO WAN ROAD

TSING YI

NAM WAN

CHUN FAI CHOK

N

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**PROJECT**
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UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

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**STATUS**
階段

**SCALE** 比例 — **DIMENSION UNIT** 尺寸單位

A3 1 : 10000 — METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號 — **AGREEMENT NO.** 協議編號

60733229 — CE 79/2023 (GE)

**SHEET TITLE**
圖紙名稱

SITE ACCESS ARRANGEMENT (ROUTE A3)

**SHEET NUMBER**
圖紙編號

60733229/A20/Figure 3.7

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

## LEGEND:

- TSING YI NORTH – SCVA10 BOUNDARY
- PROPOSED ANCILLARY OPERATION AREA WITH POTENTIAL SITE FORMATION
- INDICATIVE SITE FORMATION AREA FOR PORTALS
- ACCESS ROAD
- INDICATIVE EXTENT OF PROPOSED CAVERN
- MAIN ACCESS TUNNEL
- **VEHICULAR INGRESS (ROUTE A4)**
- VEHICULAR EGRESS (ROUTE A4)

827000 E

828000 E

824200 N

823200 N

822200 N

NGAU KOK WAN

TSING KAU BRIDGE

TAM KON SHAN ROAD

TSING YI NORTH COASTAL ROAD

YAU KOM TAU SCVA 10

TAM KON SHAN INTERCHANGE

NORTHWEST TSING YI INTERCHANGE

WOK TAI WAN

FUNG SHUE WO ROAD

TSING YI ROAD WEST

LIU TO SHAN

LIU TO ROAD

TSING MA BRIDGE

SHEK WAN

CHING HONG ROAD

MA WAN CHANNEL

CHEUNG TSING HIGHWAY

KAM CHUK KOK

CHEUNG CHING TUNNEL

SAI TSO WAN

TSING YI

NAM WAN TUNNEL

SAI TSO WAN ROAD

NAM WAN

CHUN FALOK

N

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**PROJECT**
項目

UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

**CLIENT**
業主

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**STATUS**
階段

**SCALE** 比例
A3 1 : 10000

**DIMENSION UNIT** 尺寸單位
METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號
60733229

**AGREEMENT NO.** 協議編號
CE 79/2023 (GE)

**SHEET TITLE**
圖紙名稱

SITE ACCESS ARRANGEMENT (ROUTE A4)

**SHEET NUMBER**
圖紙編號

60733229/A20/Figure 3.8

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

## LEGEND:

- TSING YI NORTH – SCVA10 BOUNDARY
- PROPOSED ANCILLARY OPERATION AREA WITH POTENTIAL SITE FORMATION
- INDICATIVE SITE FORMATION AREA FOR PORTALS
- ACCESS ROAD
- INDICATIVE EXTENT OF PROPOSED CAVERN
- MAIN ACCESS TUNNEL
- **VEHICULAR INGRESS (ROUTE B1)**
- VEHICULAR EGRESS (ROUTE B1)

**NOTE:**

**The use of Inbound Routes B1, B2 and B4, together with Tusen Tsing Interchange, is prohibited during AM and PM peak periods (i.e. 07:00 to 09:30 and 17:00 to 19:00)**

824200 N

823200 N

822200 N

827000 E

828000 E

N

NGAU KOK WAN

TSING KAU BRIDGE

TSING YI NORTH COASTAL ROAD

TAM KON SHAN ROAD

TAM KON SHAN INTERCHANGE

NORTHWEST TSING YI INTERCHANGE

YAU KOM TAU SCVA 10

WOK TAI WAN

FUNG SHUE WO ROAD

TSING YI ROAD WEST

LIU TO SHAN

LIU TO ROAD

TSING MA BRIDGE

SHEK WAN

CHEUNG TSING HIGHWAY

CHING HONG ROAD

MA WAN CHANNEL

KAM CHUK KOK

CHEUNG TSING TUNNEL

SAI TSO WAN

NAM WAN TUNNEL

SAI TSO WAN ROAD

TSING YI

NAM WAN

CHUN FAI CHOK

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**PROJECT**
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UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

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**STATUS**
階段

**SCALE** 比例 — **DIMENSION UNIT** 尺寸單位

A3 1 : 10000 — METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號 — **AGREEMENT NO.** 協議編號

60733229 — CE 79/2023 (GE)

**SHEET TITLE**
圖紙名稱

SITE ACCESS ARRANGEMENT (ROUTE B1)

**SHEET NUMBER**
圖紙編號

60733229/A20/Figure 3.9

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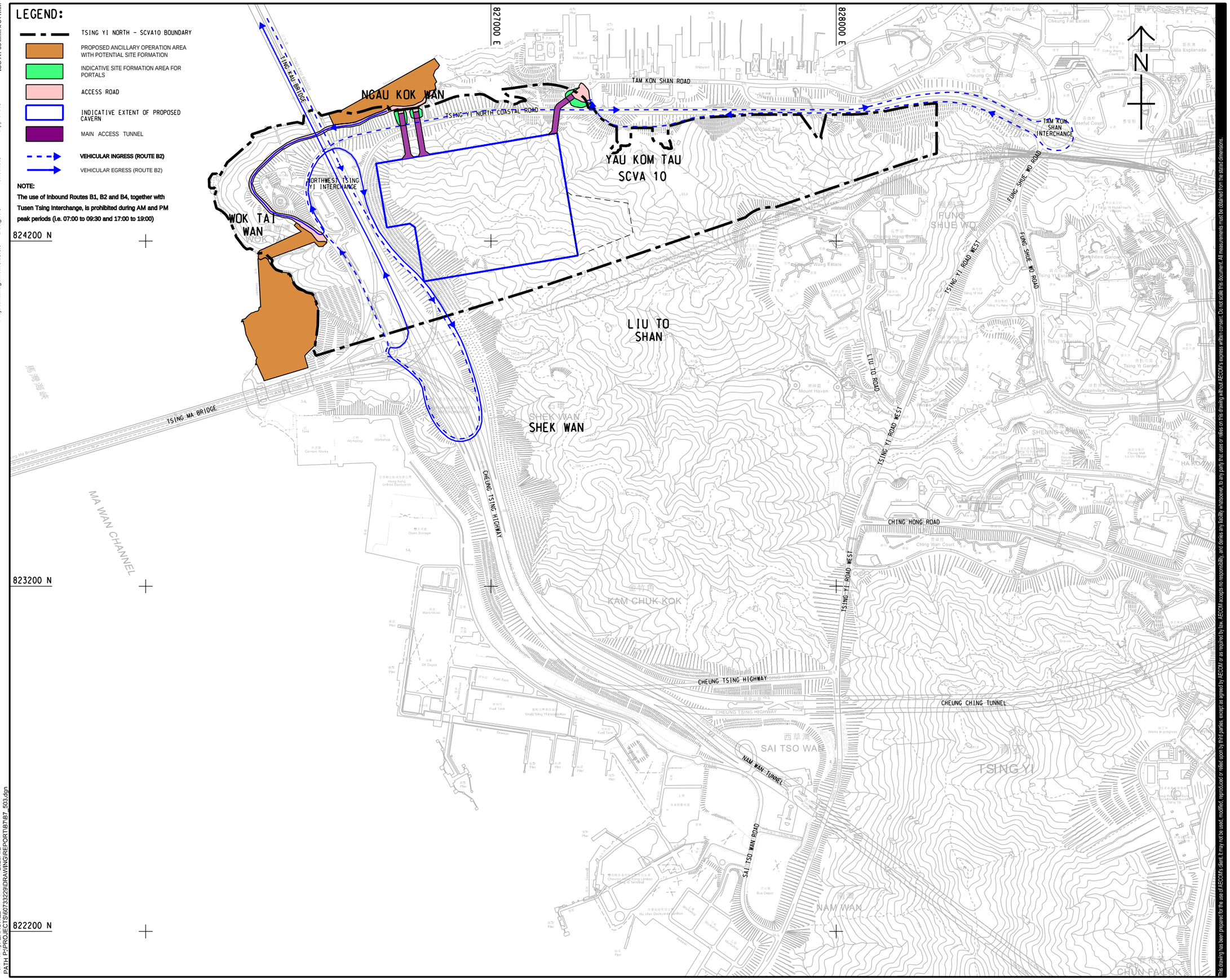
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:




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**PROJECT**
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UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

**CLIENT**
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**STATUS**
階段

**SCALE** 比例: A3 1 : 10000

**DIMENSION UNIT** 尺寸單位: METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號: 60733229

**AGREEMENT NO.** 協議編號: CE 79/2023 (GE)

**SHEET TITLE**
圖紙名稱

SITE ACCESS ARRANGEMENT (ROUTE B2)

**SHEET NUMBER**
圖紙編號

60733229/A20/Figure 3.10

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

## LEGEND:

- TSING YI NORTH – SCVA10 BOUNDARY
- PROPOSED ANCILLARY OPERATION AREA WITH POTENTIAL SITE FORMATION
- INDICATIVE SITE FORMATION AREA FOR PORTALS
- ACCESS ROAD
- INDICATIVE EXTENT OF PROPOSED CAVERN
- MAIN ACCESS TUNNEL
- **VEHICULAR INGRESS (ROUTE B3)**
- VEHICULAR EGRESS (ROUTE B3)

**NOTE:**

**The use of Inbound Routes B1, B2 and B4, together with Tusen Tsing Interchange, is prohibited during AM and PM peak periods (i.e. 07:00 to 09:30 and 17:00 to 19:00)**

824200 N

823200 N

822200 N

827000 E

828000 E

N

NGAU KOK WAN

WOK TAI WAN

TSING KAU BRIDGE

TSING YI NORTH COASTAL ROAD

TAM KON SHAN ROAD

NORTHWEST TSING YI INTERCHANGE

TAM KON SHAN INTERCHANGE

YAU KOM TAU SCVA 10

FUNG SHUE WO ROAD

TSING YI ROAD WEST

LIU TO SHAN

LIU TO ROAD

SHEK WAN

TSING MA BRIDGE

MA WAN CHANNEL

CHEUNG TSING HIGHWAY

CHING HONG ROAD

KAM CHUK KOK

CHEUNG CHING TUNNEL

SAI TSO WAN

NAM WAN TUNNEL

SAI TSO WAN ROAD

TSING YI

NAM WAN

CHUN FAI CHOK

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**PROJECT**
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**STATUS**
階段

**SCALE** 比例: A3 1 : 10000

**DIMENSION UNIT** 尺寸單位: METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號: 60733229

**AGREEMENT NO.** 協議編號: CE 79/2023 (GE)

**SHEET TITLE**
圖紙名稱

SITE ACCESS ARRANGEMENT (ROUTE B3)

**SHEET NUMBER**
圖紙編號

60733229/A20/Figure 3.11

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

## LEGEND:

- TSING YI NORTH – SCVA10 BOUNDARY
- PROPOSED ANCILLARY OPERATION AREA WITH POTENTIAL SITE FORMATION
- INDICATIVE SITE FORMATION AREA FOR PORTALS
- ACCESS ROAD
- INDICATIVE EXTENT OF PROPOSED CAVERN
- MAIN ACCESS TUNNEL
- **VEHICULAR INGRESS (ROUTE B4)**
- VEHICULAR EGRESS (ROUTE B4)

**NOTE:**

**The use of Inbound Routes B1, B2 and B4, together with Tusen Tsing Interchange, is prohibited during AM and PM peak periods (i.e. 07:00 to 09:30 and 17:00 to 19:00)**

824200 N

823200 N

822200 N

827000 E

828000 E

NGAU KOK WAN

TSING KAU BRIDGE

TSING YI NORTH COASTAL ROAD

TAM KON SHAN ROAD

TAM KON SHAN INTERCHANGE

NORTHWEST TSING YI INTERCHANGE

YAU KOM TAU SCVA 10

WOK TAI WAN

FUNG SHUE WO ROAD

TSING YI ROAD WEST

LIU TO SHAN

LIU TO ROAD

SHEK WAN

TSING MA BRIDGE

CHING HONG ROAD

MA WAN CHANNEL

CHEUNG TSING HIGHWAY

KAM CHUK KOK

CHEUNG CHING TUNNEL

SAI TSO WAN

NAM WAN TUNNEL

SAI TSO WAN ROAD

TSING YI

NAM WAN

CHUN FALOK

N

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**STATUS**
階段

**SCALE** 比例: A3 1 : 10000

**DIMENSION UNIT** 尺寸單位: METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號: 60733229

**AGREEMENT NO.** 協議編號: CE 79/2023 (GE)

**SHEET TITLE**
圖紙名稱

SITE ACCESS ARRANGEMENT (ROUTE B4)

**SHEET NUMBER**
圖紙編號

60733229/A20/Figure 3.12

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826600 E

826700 E

824700 N

824600 N

N

## LEGEND:

PARKING FACILITIES
- MOTORCYCLE
- PRIVATE CAR (PC)
- LIGHT GOODS VEHICLE (LGV)
- HEAVY GOODS VEHICLE (HGV)

LOADING/UNLOADING FACILITIES
- GOODS VEHICLE (GV)
- CONTAINER VEHICLE (CV)

- INDICATIVE AREA FOR CONCRETE BATCHING OPERATIONS
- PROPOSED PORTAL SITE FORMATION AREA
- ACCESS ROAD
- INDICATIVE AREA FOR ASPHALT PRODUCTION OR CONCRETE BATCHING OPERATIONS
- INDICATIVE STRUCTURE
- INDICATIVE INTERNAL CIRCULATION
- INDICATIVE AREA FOR ROCK PROCESSING OPERATIONS
- INDICATIVE RETAINING STRUCTURE
- PROPOSED MAIN ACCESS TUNNEL
- INDICATIVE CONVEYOR BELT SYSTEM

* THE SCHEMATIC LAYOUT ARRANGEMENTS OF THE ANCILLARY OPERATIONS AND PARKING FACILITIES AT NGAU KOK WAN SURFACE LAND ARE INDICATIVE ONLY, SUBJECT TO THE CONTRACTOR'S DESIGN IN THE CONSTRUCTION / OPERATION PHASES.

INDICATIVE ARRANGEMENT OF ROCK CRUSHING COMPLEX (R1), INCLUDING SILOS, LOADING AND UNLOADING SPACES (MAX. +40mPD HIGH)

ROCK PROCESSING OPERATIONS (MAX. 35m OR +40mPD HIGH)

INDICATIVE ARRANGEMENT OF CONCRETE BATCHING COMPLEX (C1), INCLUDING SILOS, LOADING AND UNLOADING SPACES (MAX. +40mPD HIGH)

INDICATIVE ARRANGEMENT OF CONCRETE BATCHING COMPLEX (C1), INCLUDING SILOS, LOADING AND UNLOADING SPACES (MAX. +40mPD HIGH)

CONCRETE BATCHING OPERATIONS (MAX. 35m OR +40mPD HIGH)

ASPHALT PRODUCTION OR CONCRETE BATCHING OPERATIONS (MAX. 35m OR +40mPD HIGH)

INDICATIVE ARRANGEMENT OF ASPHALT/CONCRETE PRODUCTION COMPLEX (A1), INCLUDING SILOS, LOADING AND UNLOADING SPACES (MAX. +40mPD HIGH)

RETAINING WALL (APPROX. 20m HIGH)

RETAINING WALL (APPROX. 10m HIGH)

NGAU KOK WAN PORTAL

MAIN ACCESS TUNNEL OF 10m (H) x 16m (W)

TSING YI NORTH COASTAL ROAD

Elevated Road

Nullah

Sea wall

HGV (1-3)

GV-L/UL (1)

PC (1-8)

PC (9-10)

MOTOR (1-5)

LGV(1)

GV-L/UL (5-6)

LGV(2)

LGV(3)

LGV(4)

LGV(5)

GV-L/UL (7)

GV-L/UL (2-4)

GV-L/UL (1)

R1

C1

A1

AECOM

**PROJECT**
項目

UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

**CLIENT**
業主

土木工程拓展署
Civil Engineering and Development Department

**CONSULTANT**
工程顧問公司

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**ISSUE/REVISION**
修訂

| I/R 修訂 | DATE 日期 | DESCRIPTION 內容說明 | CHK. 核對 |
|---|---|---|---|
| | | | |

**STATUS**
階段

**SCALE** 比例
A3 1 : 1000

**DIMENSION UNIT** 尺寸單位
METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號
60733229

**AGREEMENT NO.** 協議編號
CE 79/2023 (GE)

**SHEET TITLE**
圖紙名稱

INDICATIVE LAYOUT AT NGAU KOK WAN PORTAL

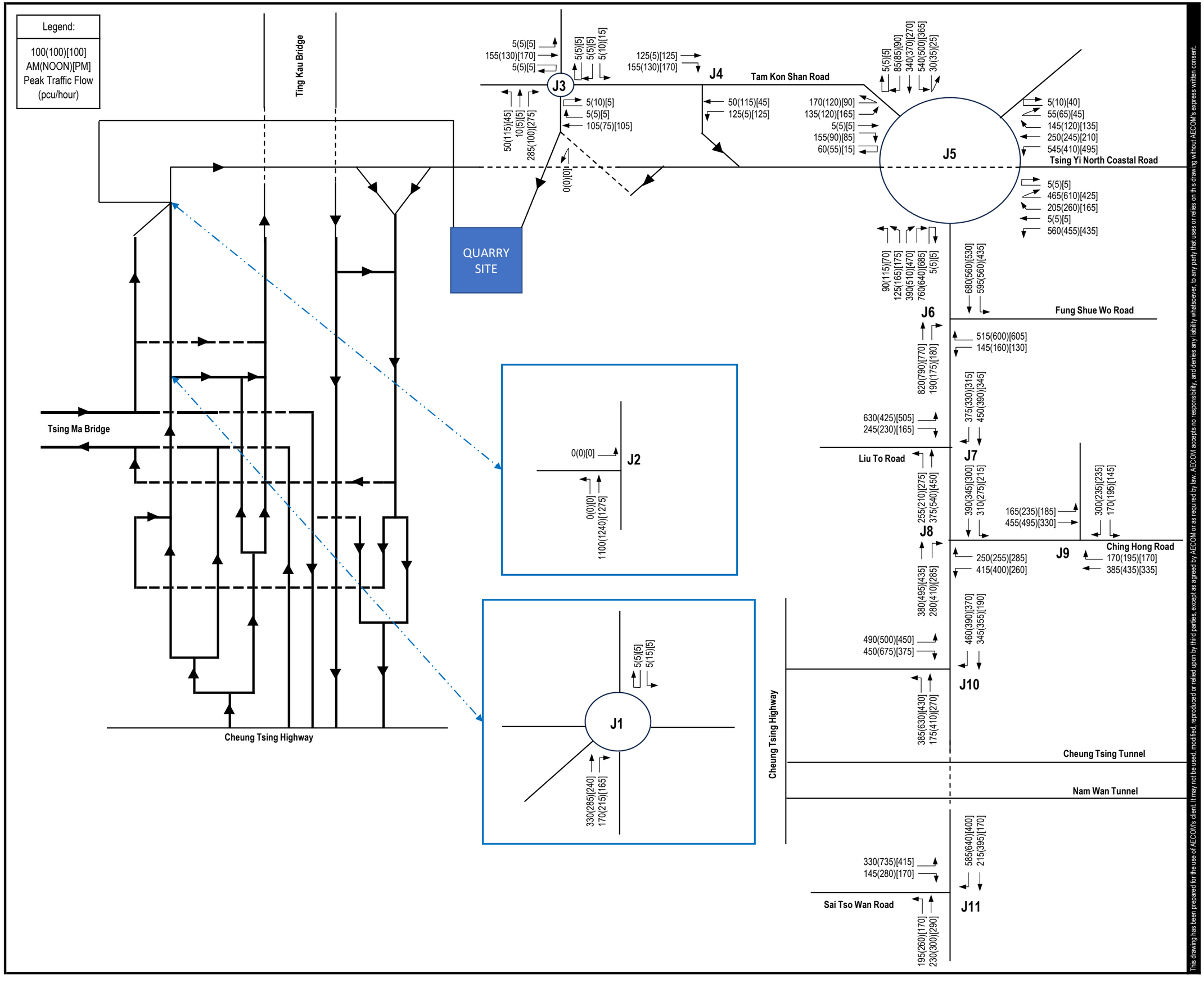
**SHEET NUMBER**
圖紙編號

60733229/A20/Figure 3.13

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

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10/8/2026
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**PROJECT**
UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

**CLIENT**
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**CONSULTANT**
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**ISSUE/REVISION**

**STATUS**

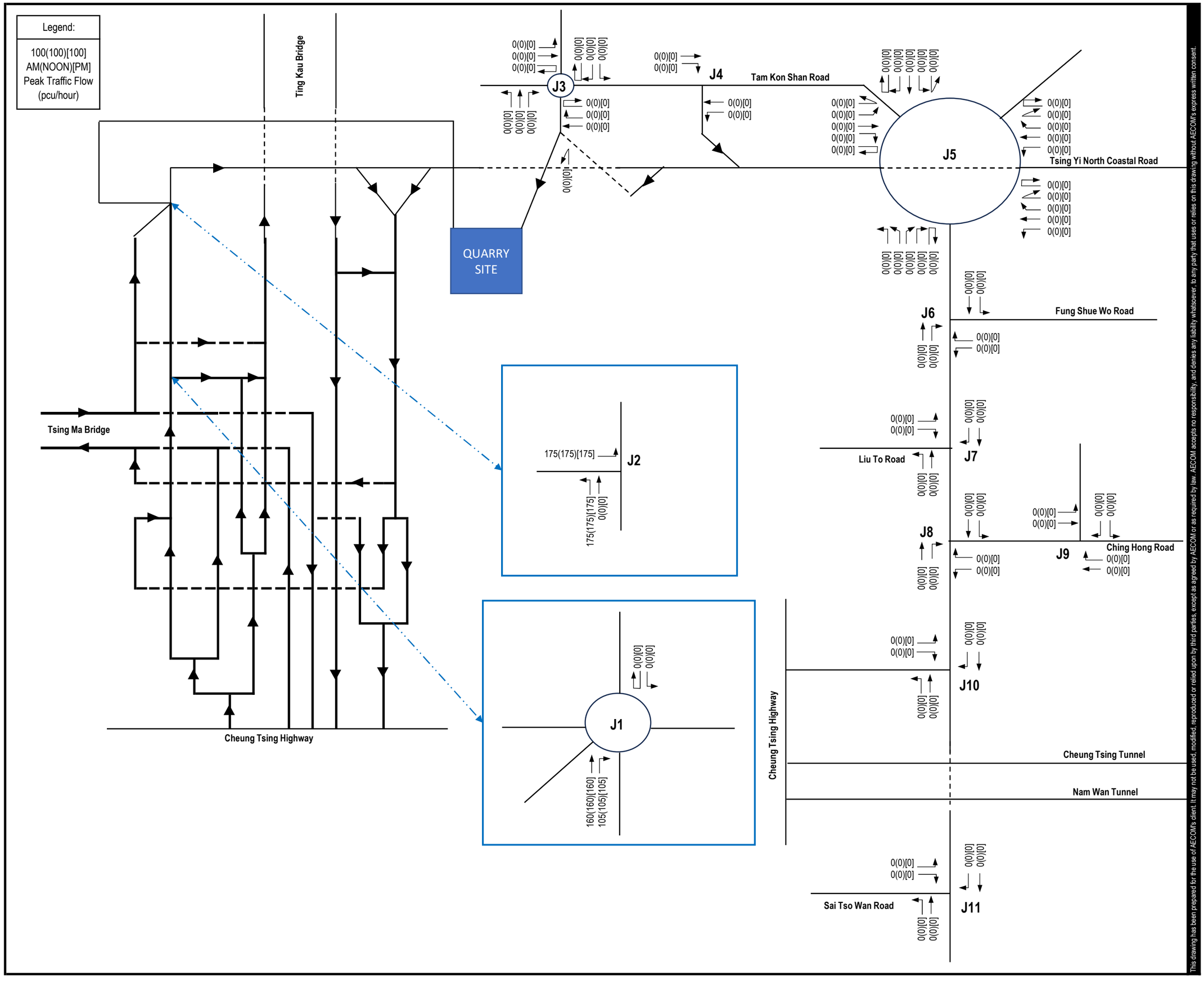
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**KEY PLAN**

**PROJECT NO.** **CONTRACT NO.**
60733229 CE 79/2023 (GE)

**SHEET TITLE**
2031 REFERENCE SCENARIO TRAFFIC FLOWS

**SHEET NUMBER**
60733229/A20/Figure 4.1




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**CONSULTANT**
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**SUB-CONSULTANTS**

**ISSUE/REVISION**

**STATUS**

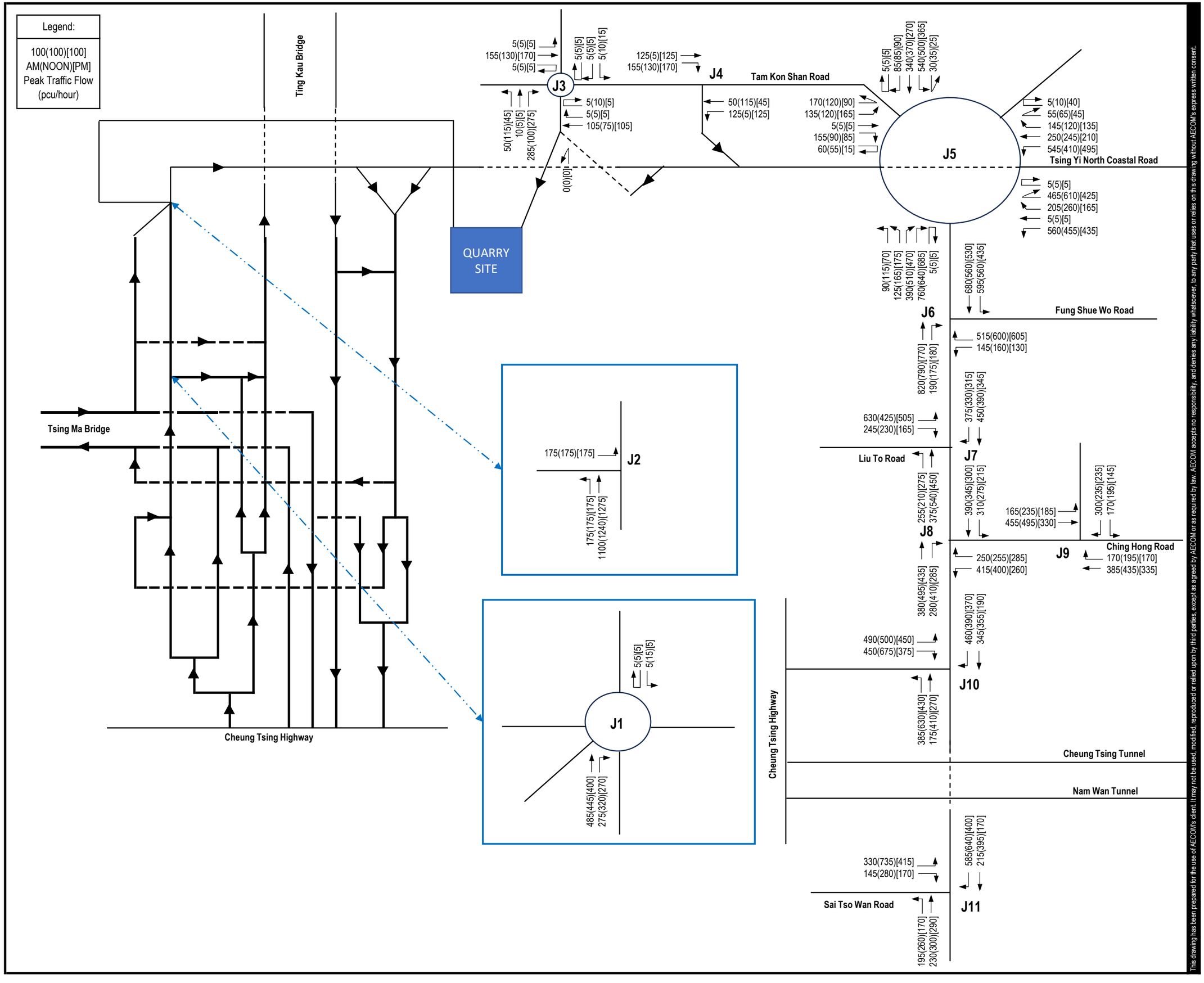
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**KEY PLAN**

**PROJECT NO.** 60733229
**CONTRACT NO.** CE 79/2023 (GE)

**SHEET TITLE**
2031 DEVELOPMENT TRAFFIC FLOWS – SCENARION A (BEFORE IMPLEMENTATION OF TUNNEL TO TKSR PORTAL)

**SHEET NUMBER**
60733229/A20/Figure 4.2




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**PROJECT**
UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

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**STATUS**

**SCALE** **DIMENSION UNIT**
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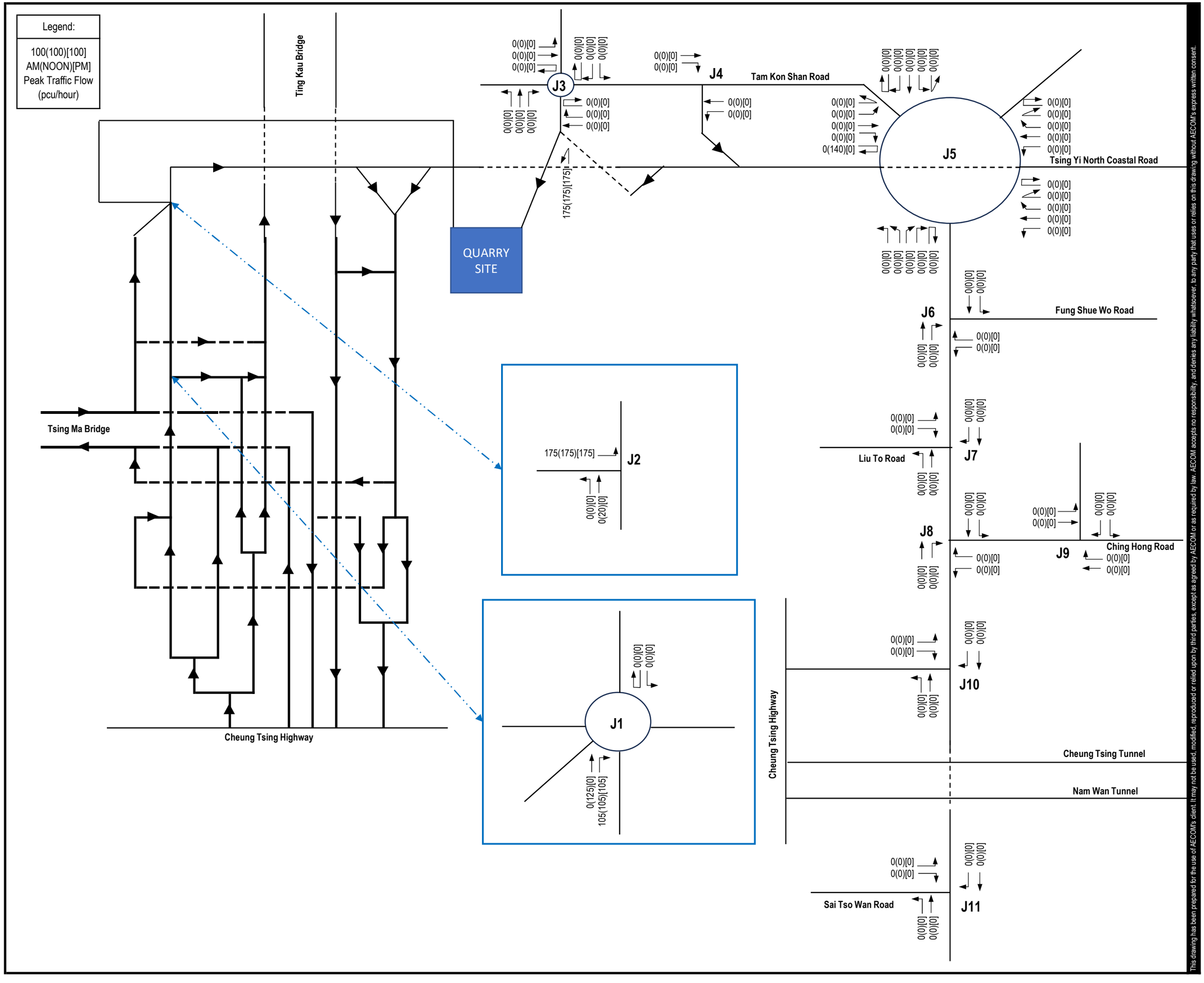
**KEY PLAN**

**PROJECT NO.** **CONTRACT NO.**
60733229 CE 79/2023 (GE)

**SHEET TITLE**
2031 DESIGN SCENARIO TRAFFIC FLOWS – SCENARION A (BEFORE IMPLEMENTATION OF TUNNEL TO TKSR PORTAL)

**SHEET NUMBER**
60733229/A20/Figure 4.3

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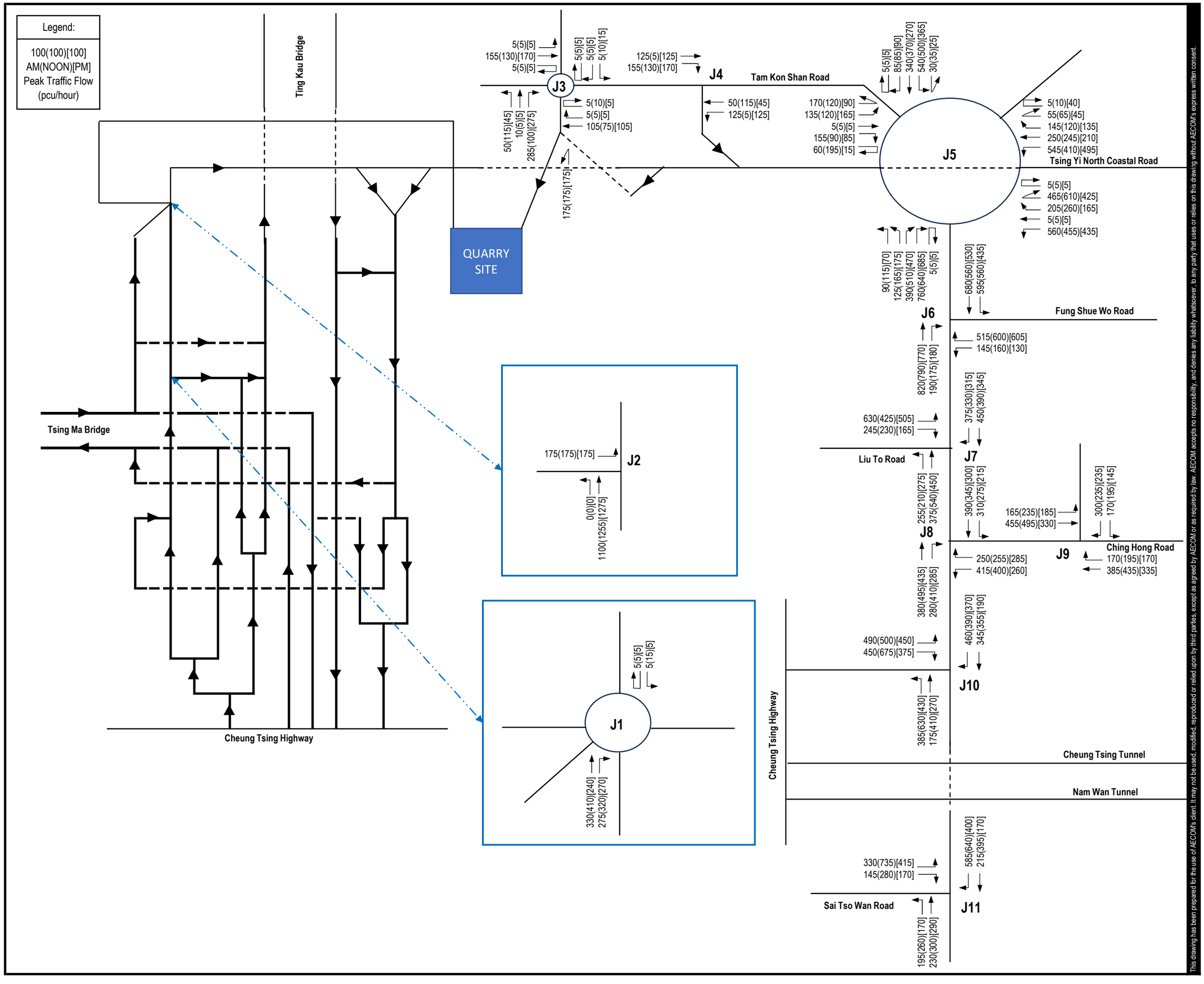
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**DIMENSION UNIT**

**KEY PLAN**

**PROJECT NO.** 60733229
**CONTRACT NO.** CE 79/2023 (GE)

**SHEET TITLE**
2031 DEVELOPMENT TRAFFIC FLOWS – SCENARION B (AFTER IMPLEMENTATION OF TUNNEL TO TKSR PORTAL)

**SHEET NUMBER**
60733229/A20/Figure 4.4




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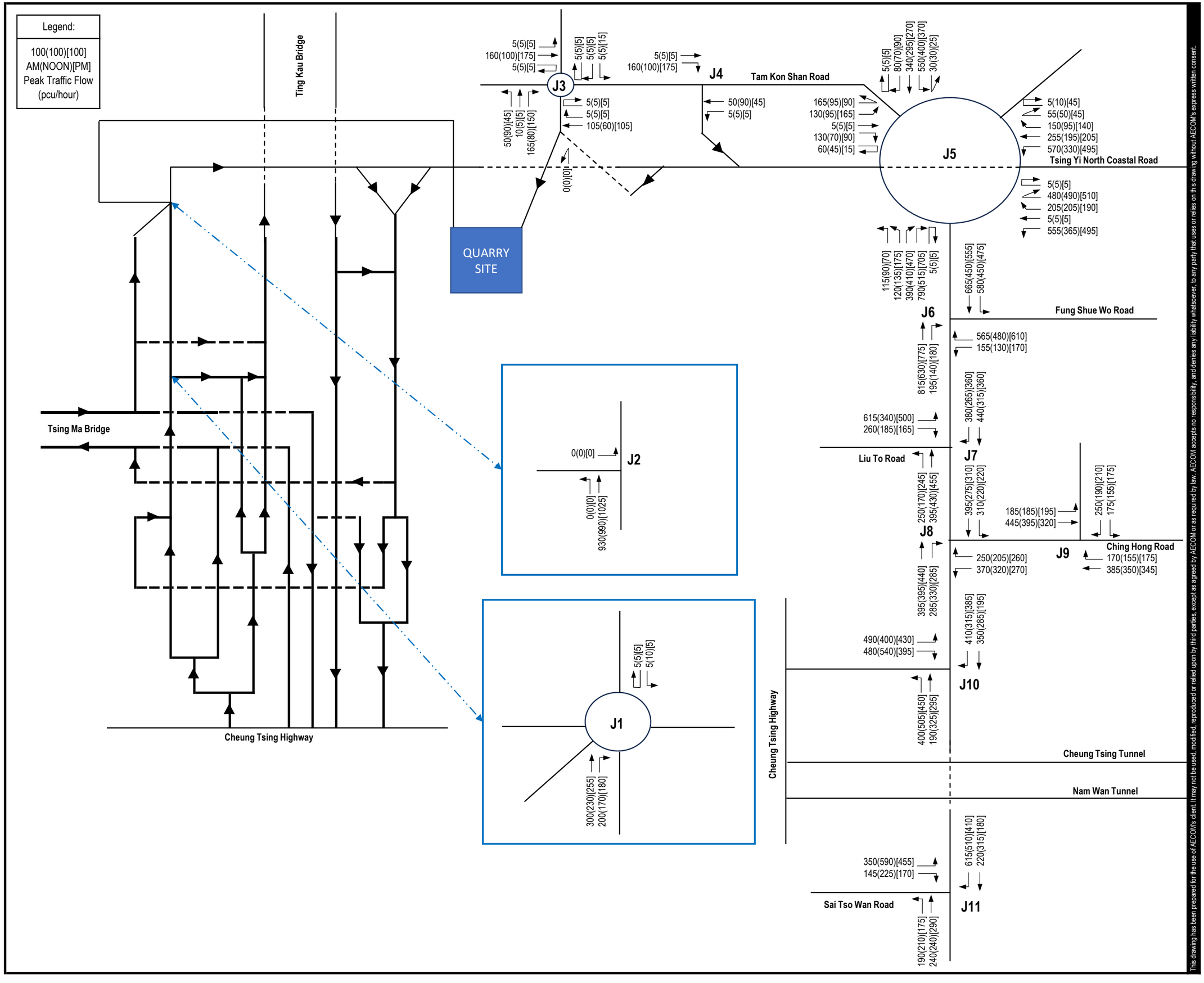
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**KEY PLAN**

**PROJECT NO.** **CONTRACT NO.**
60733229 CE 79/2023 (GE)

**SHEET TITLE**
2031 DESIGN SCENARIO TRAFFIC FLOWS – SCENARION B (AFTER IMPLEMENTATION OF TUNNEL TO TKSR PORTA)

**SHEET NUMBER**
60733229/A20/Figure 4.5




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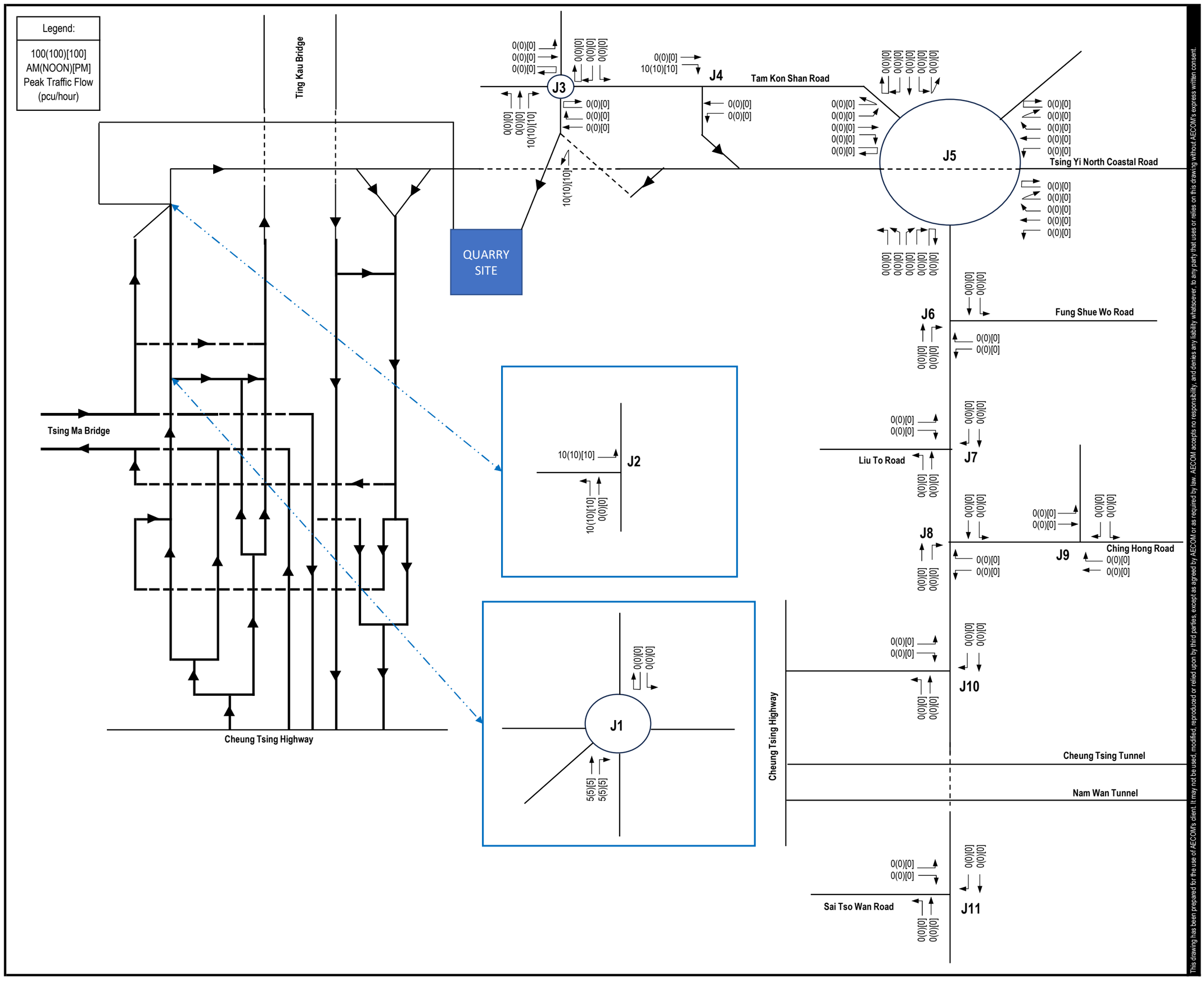
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**KEY PLAN**

**PROJECT NO.** **CONTRACT NO.**
60733229 CE 79/2023 (GE)

**SHEET TITLE**
2028 REFERENCE SCENARIO TRAFFIC FLOWS (WITHOUT CONSTRUCTION TRAFFIC)

**SHEET NUMBER**
60733229/A20/Figure 5.1




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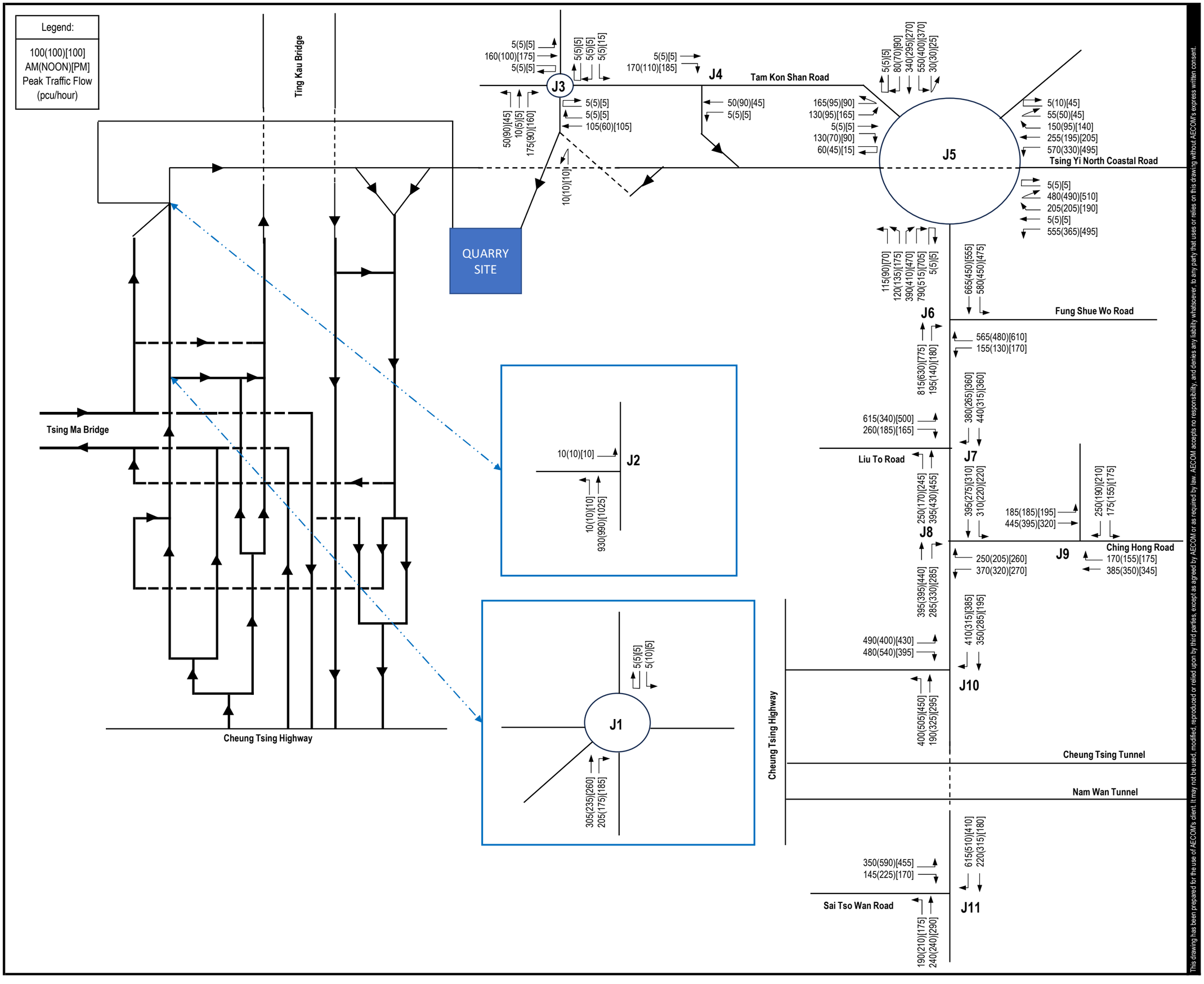
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**KEY PLAN**

**PROJECT NO.** **CONTRACT NO.**
60733229 CE 79/2023 (GE)

**SHEET TITLE**
2028 CONSTRUCTION TRAFFIC FLOWS

**SHEET NUMBER**
60733229/A20/Figure 5.2




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**PROJECT**
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**KEY PLAN**

**PROJECT NO.** **CONTRACT NO.**
60733229 CE 79/2023 (GE)

**SHEET TITLE**
2028 DESIGN SCENARIO TRAFFIC FLOWS (WITH CONSTRUCTION TRAFFIC)

**SHEET NUMBER**
60733229/A20/Figure 5.3

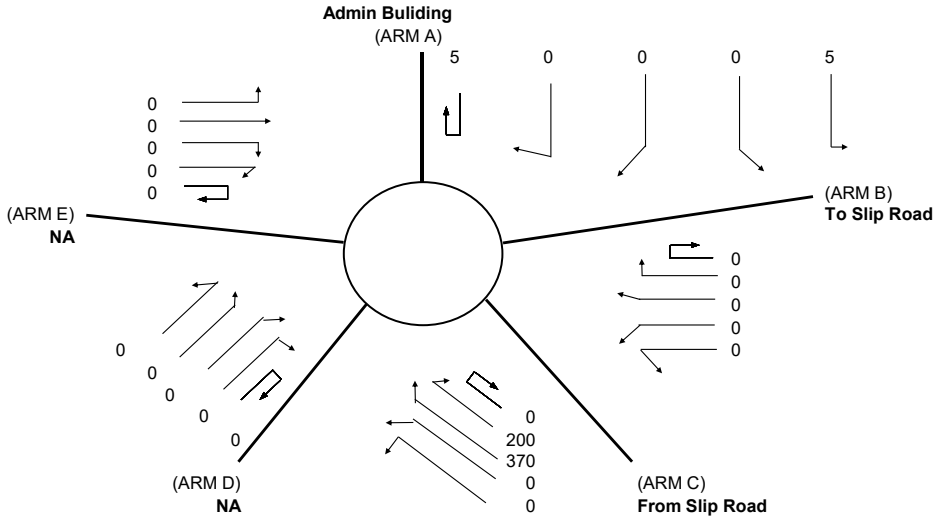
# Appendices

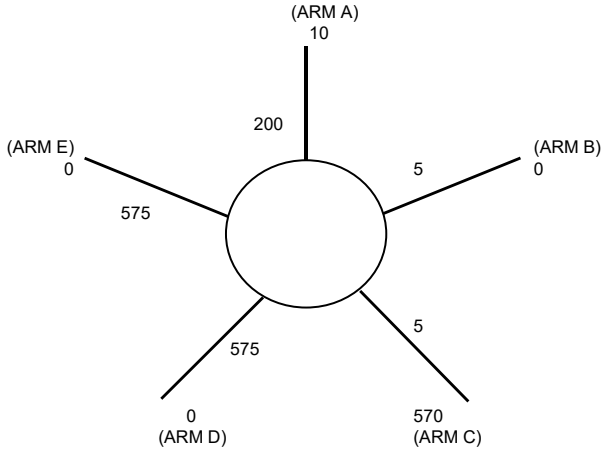
# Appendix A
# Junction Capacity Calculation Spreadsheets

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2025 Survey Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 570 | | |
| Qc= Circulating flow across entry (pcu/h) | 200 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1078 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.42 | | |

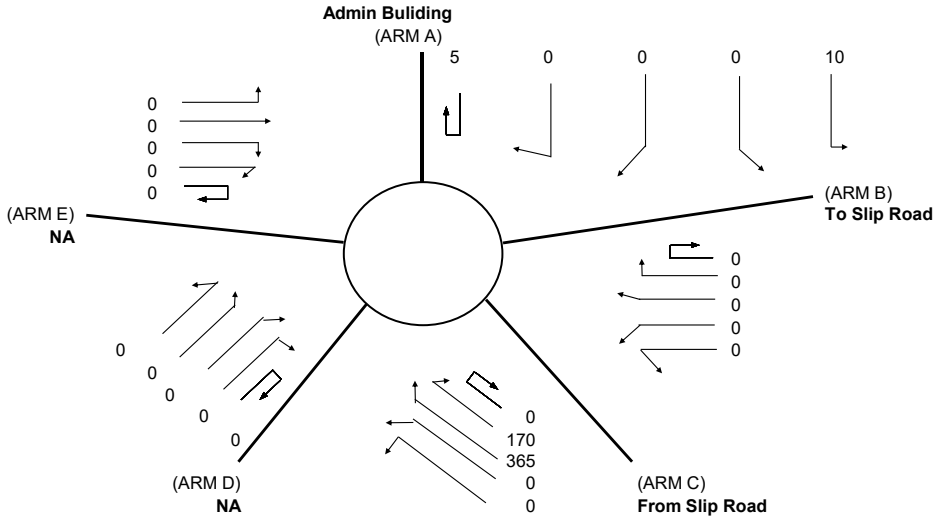
TOTAL ENTRY FLOWS = 580 PCU

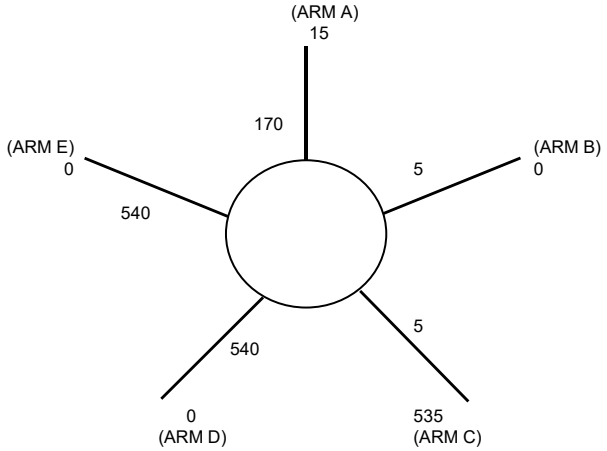
**CRITICAL DFC = 0.42**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2025 Survey Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 15 | | 535 | | |
| Qc= Circulating flow across entry (pcu/h) | 170 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1095 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.39 | | |

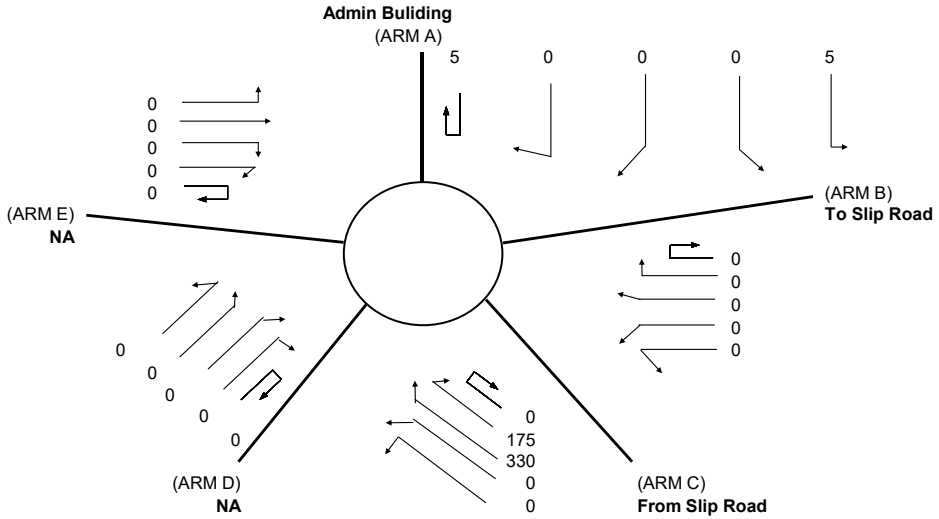
TOTAL ENTRY FLOWS = 550 PCU

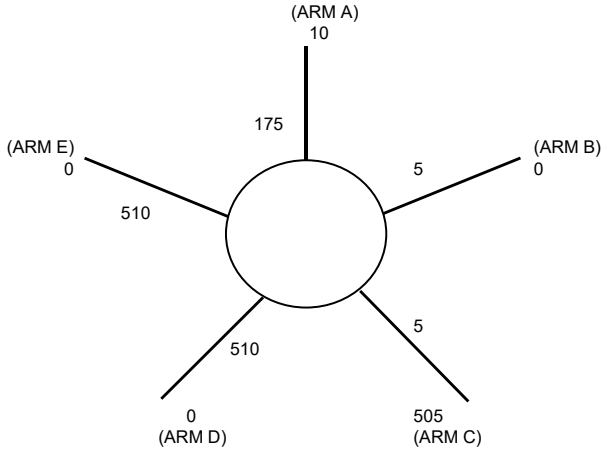
**CRITICAL DFC = 0.39**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2025 Survey Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 505 | | |
| Qc= Circulating flow across entry (pcu/h) | 175 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1092 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.37 | | |

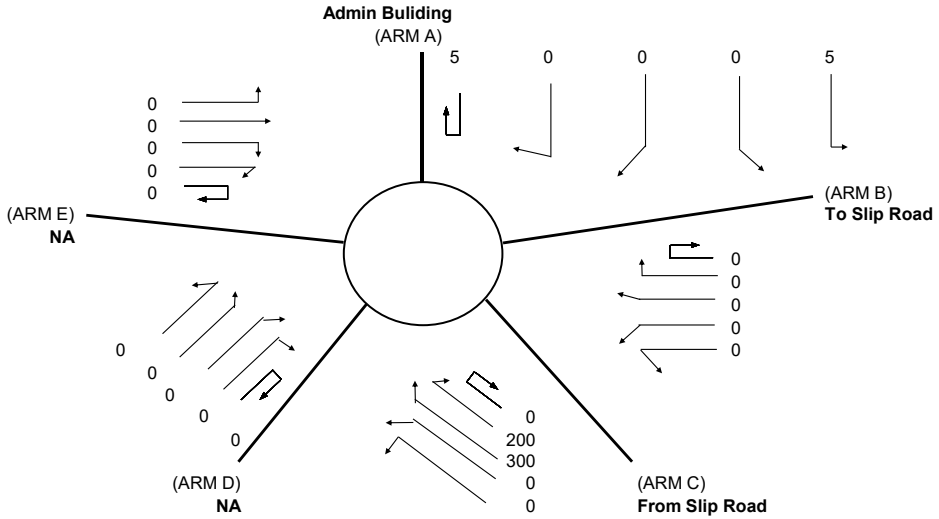
TOTAL ENTRY FLOWS = 515 PCU

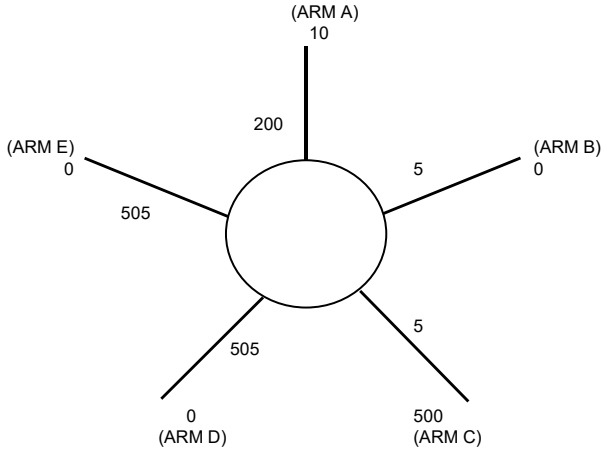
**CRITICAL DFC = 0.37**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2028 Reference Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 500 | | |
| Qc= Circulating flow across entry (pcu/h) | 200 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1078 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.36 | | |

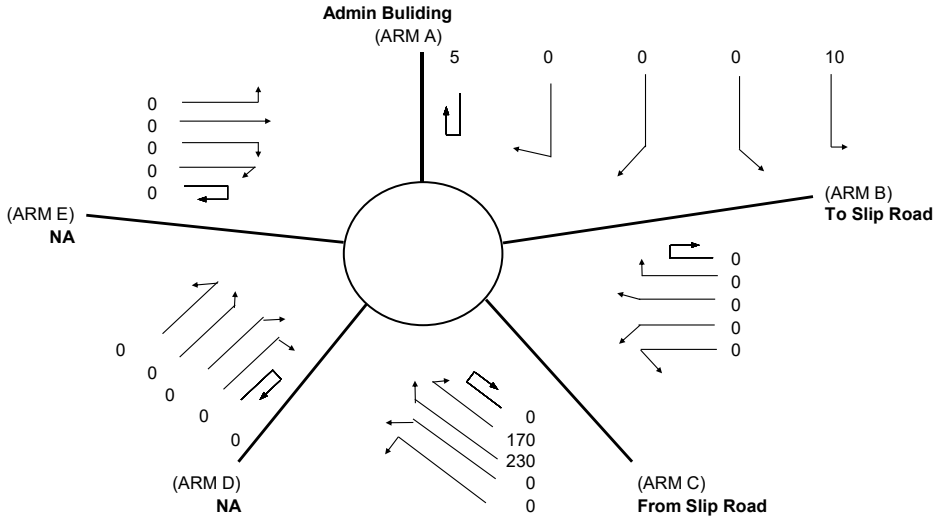
TOTAL ENTRY FLOWS = 510 PCU

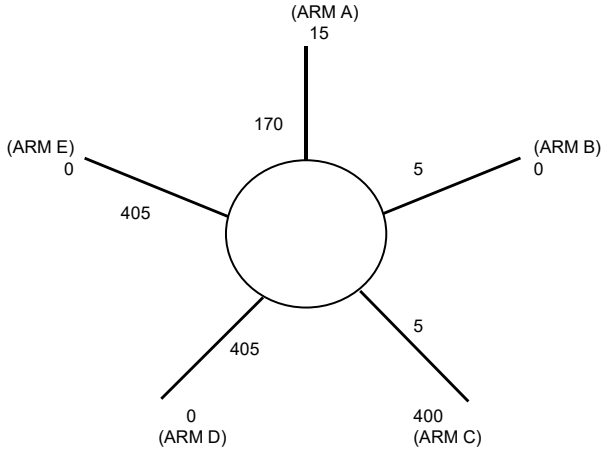
**CRITICAL DFC = 0.36**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2028 Reference Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 15 | | 400 | | |
| Qc= Circulating flow across entry (pcu/h) | 170 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1095 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.29 | | |

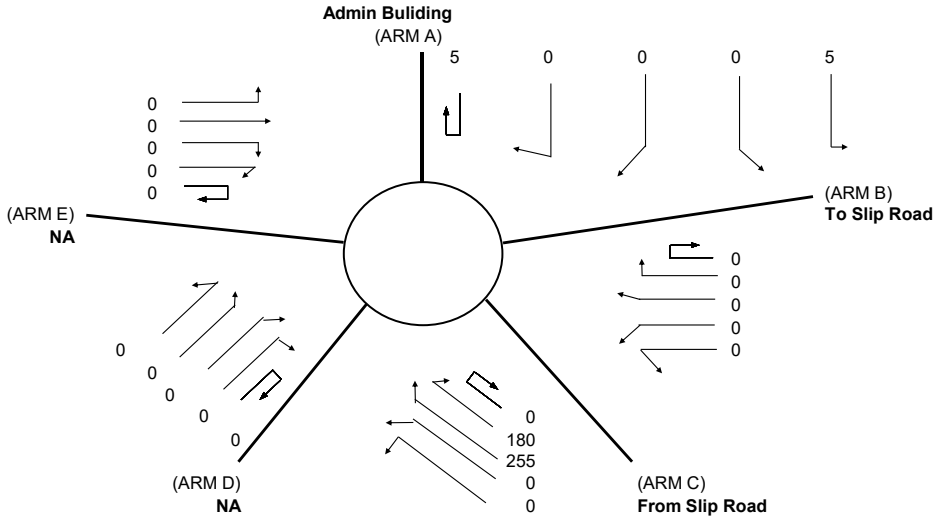
TOTAL ENTRY FLOWS = 415 PCU

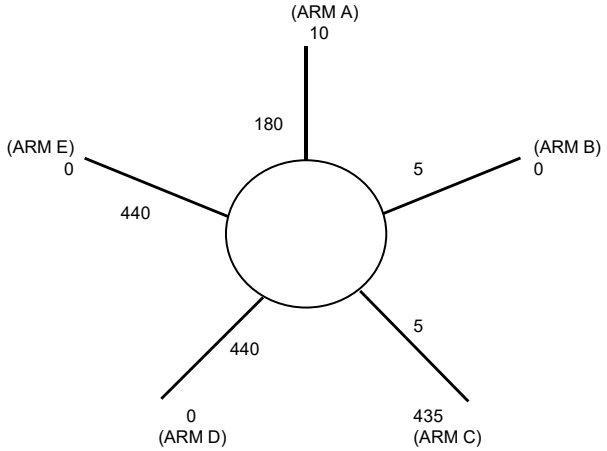
**CRITICAL DFC = 0.29**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2028 Reference Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 435 | | |
| Qc= Circulating flow across entry (pcu/h) | 180 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1090 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.32 | | |

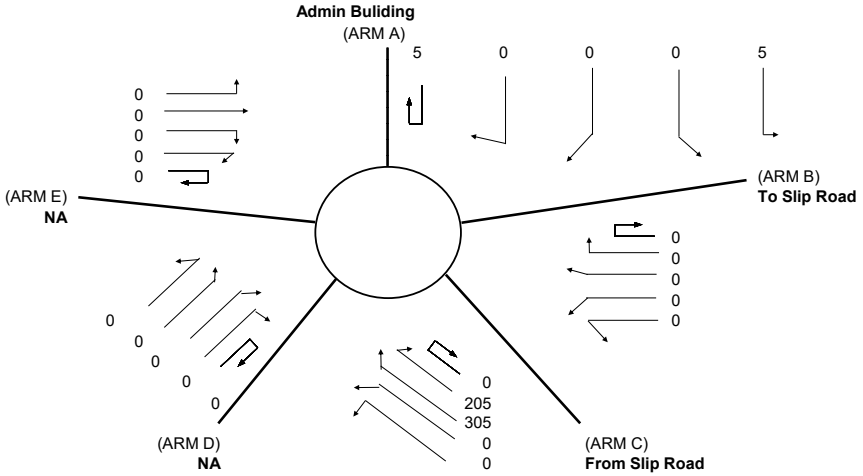
TOTAL ENTRY FLOWS = 445 PCU

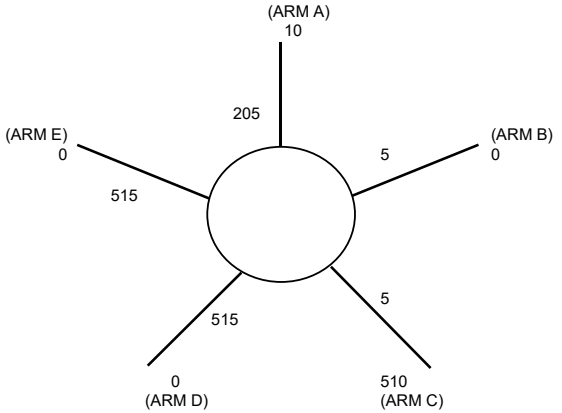
**CRITICAL DFC = 0.32**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2028 Design Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



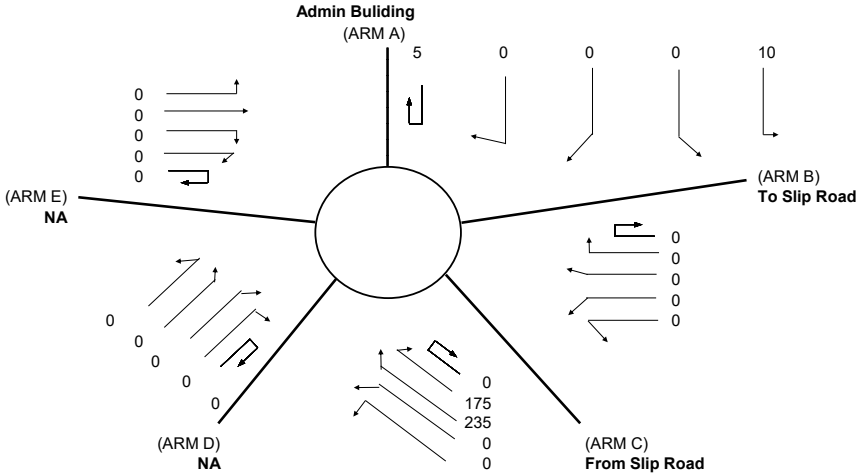

| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 510 | | |
| Qc= Circulating flow across entry (pcu/h) | 205 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1075 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.37 | | |

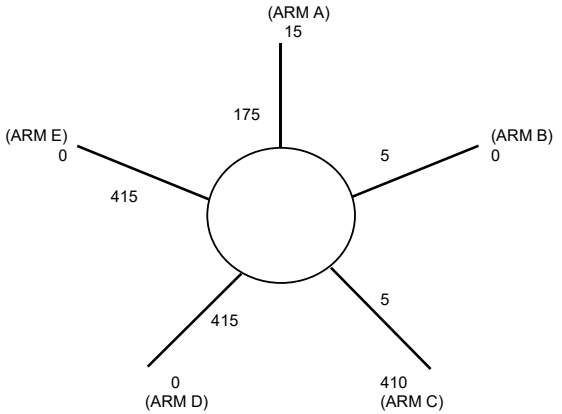
TOTAL ENTRY FLOWS = 520 PCU

**CRITICAL DFC = 0.37**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2028 Design Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 15 | | 410 | | |
| Qc= Circulating flow across entry (pcu/h) | 175 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1092 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.30 | | |

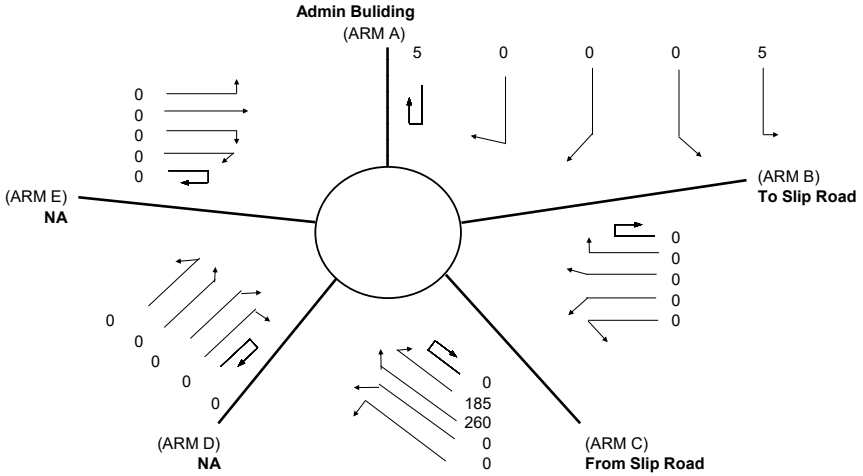
TOTAL ENTRY FLOWS = 425 PCU

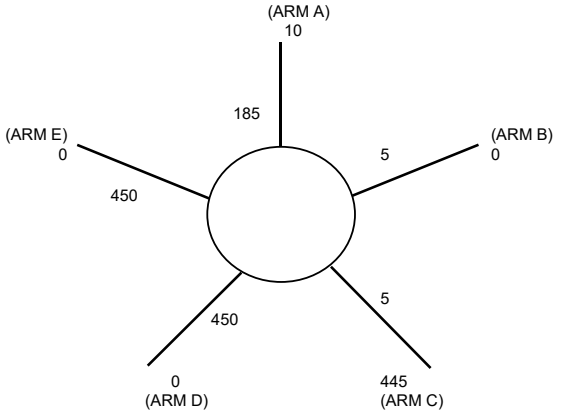
**CRITICAL DFC = 0.30**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2028 Design Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 445 | | |
| Qc= Circulating flow across entry (pcu/h) | 185 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1087 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.32 | | |

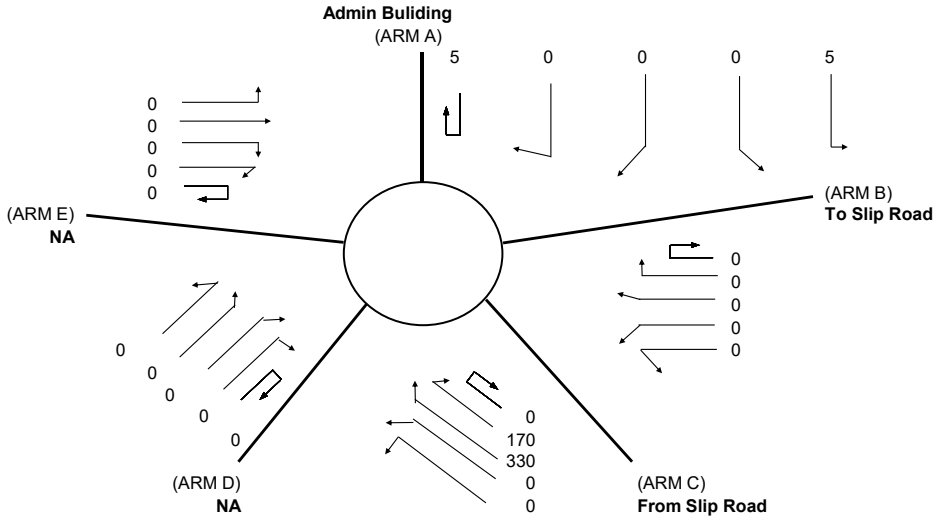
TOTAL ENTRY FLOWS = 455 PCU

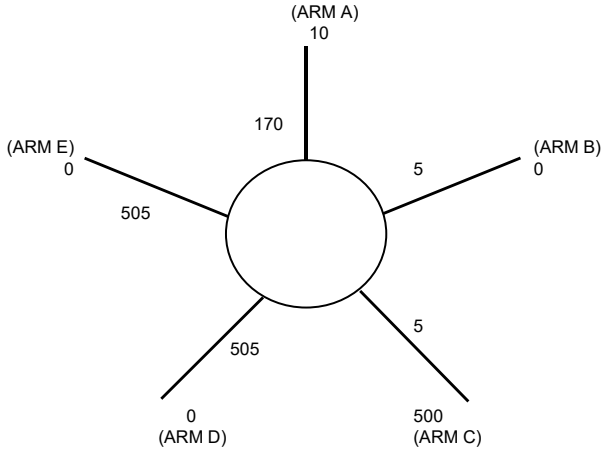
**CRITICAL DFC = 0.32**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2031 Reference Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 500 | | |
| Qc= Circulating flow across entry (pcu/h) | 170 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1095 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.36 | | |

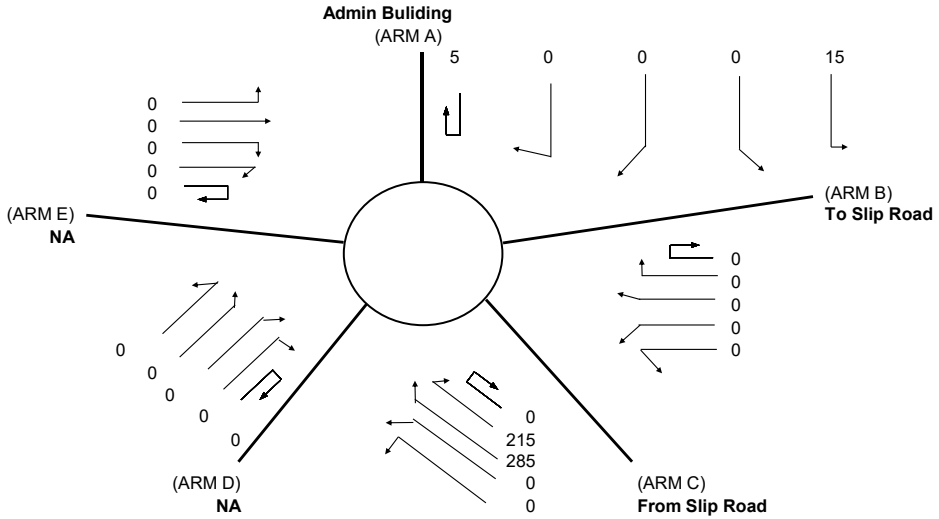
TOTAL ENTRY FLOWS = 510 PCU

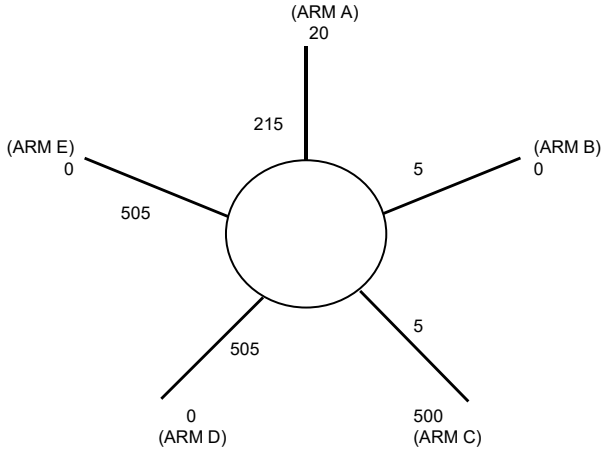
**CRITICAL DFC = 0.36**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2031 Reference Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 20 | | 500 | | |
| Qc= Circulating flow across entry (pcu/h) | 215 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1069 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | | 0.36 | | |

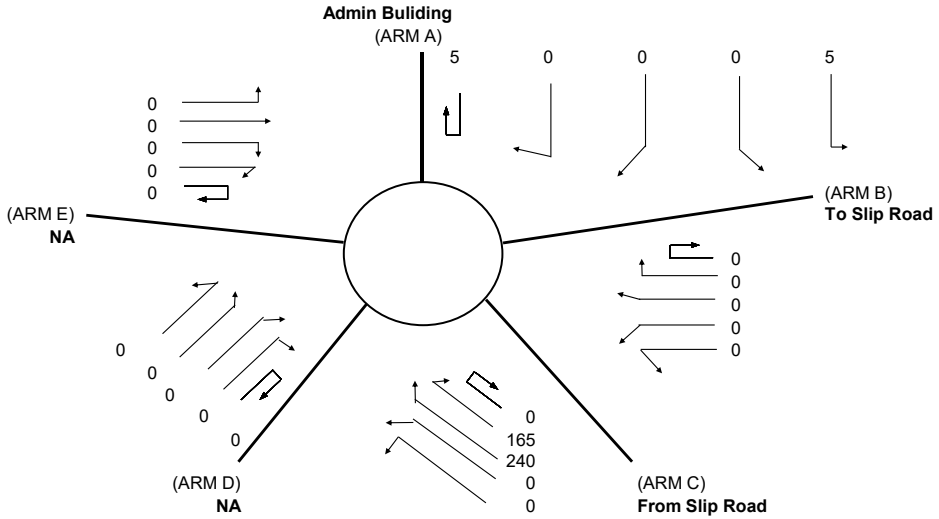
TOTAL ENTRY FLOWS = 520 PCU

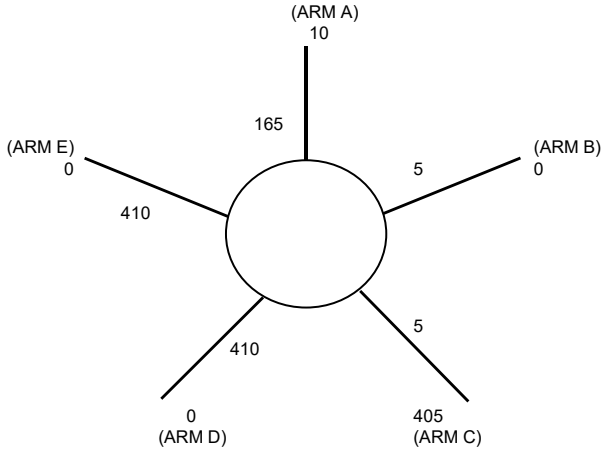
**CRITICAL DFC = 0.36**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2031 Reference Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 405 | | |
| Qc= Circulating flow across entry (pcu/h) | 165 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1098 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.30 | | |

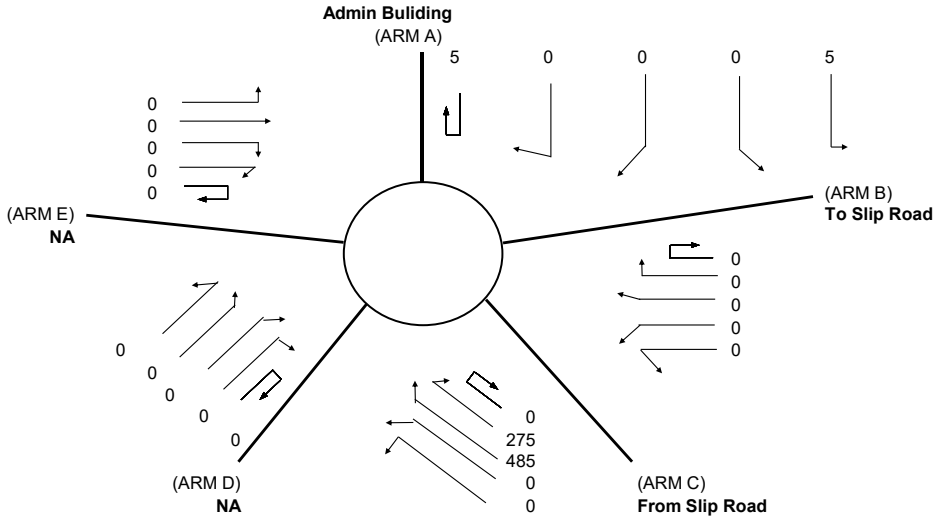
TOTAL ENTRY FLOWS = 415 PCU

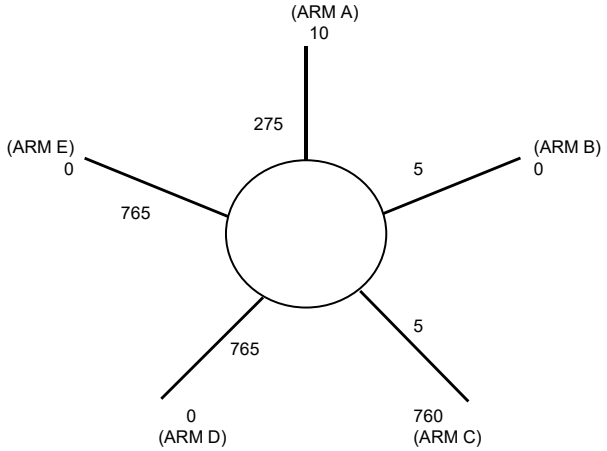
**CRITICAL DFC = 0.30**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2031 Scenario A AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 760 | | |
| Qc= Circulating flow across entry (pcu/h) | 275 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1035 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.55 | | |

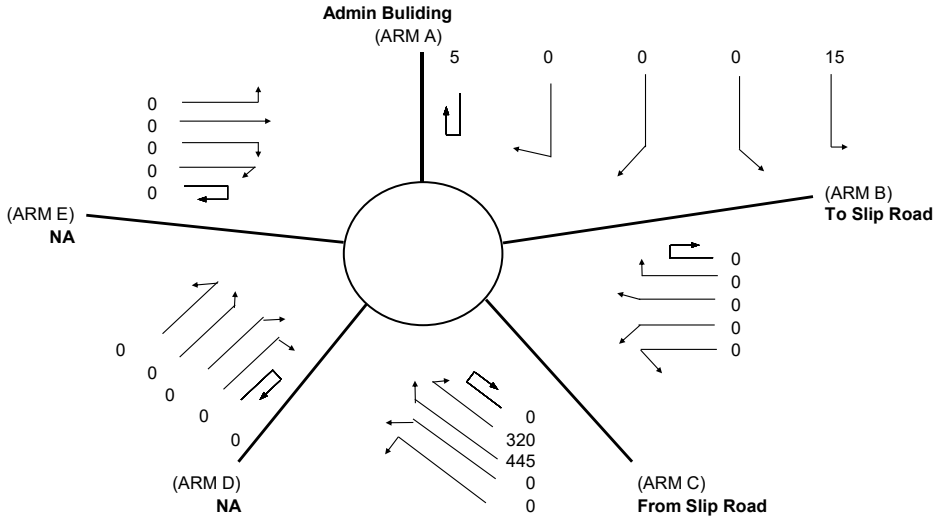
TOTAL ENTRY FLOWS = 770 PCU

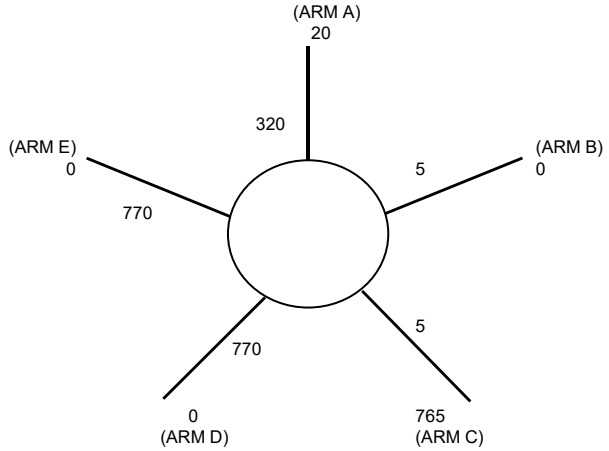
**CRITICAL DFC = 0.55**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2031 Scenario A NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 20 | | 765 | | |
| Qc= Circulating flow across entry (pcu/h) | 320 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1009 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | | 0.56 | | |

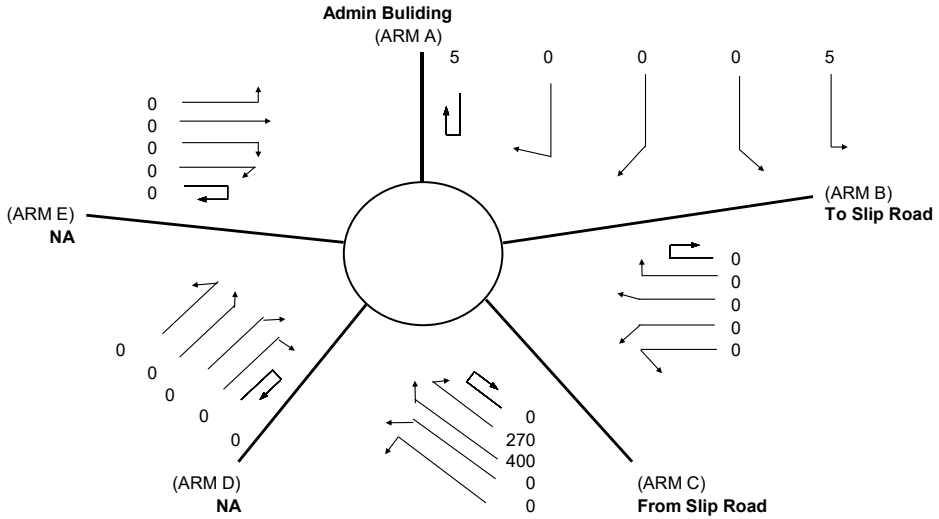
TOTAL ENTRY FLOWS = 785 PCU

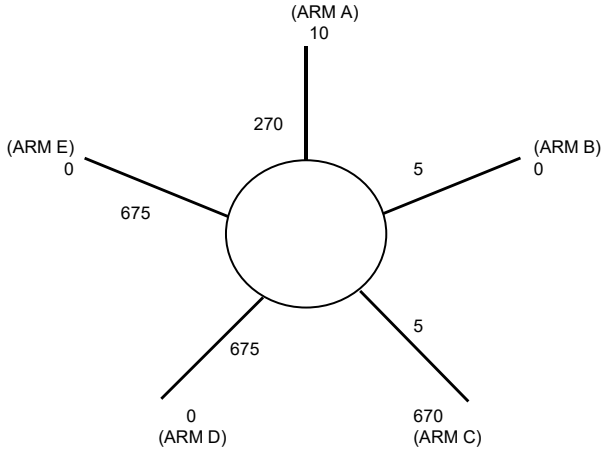
**CRITICAL DFC = 0.56**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2031 Scenario A PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 670 | | |
| Qc= Circulating flow across entry (pcu/h) | 270 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1037 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.49 | | |

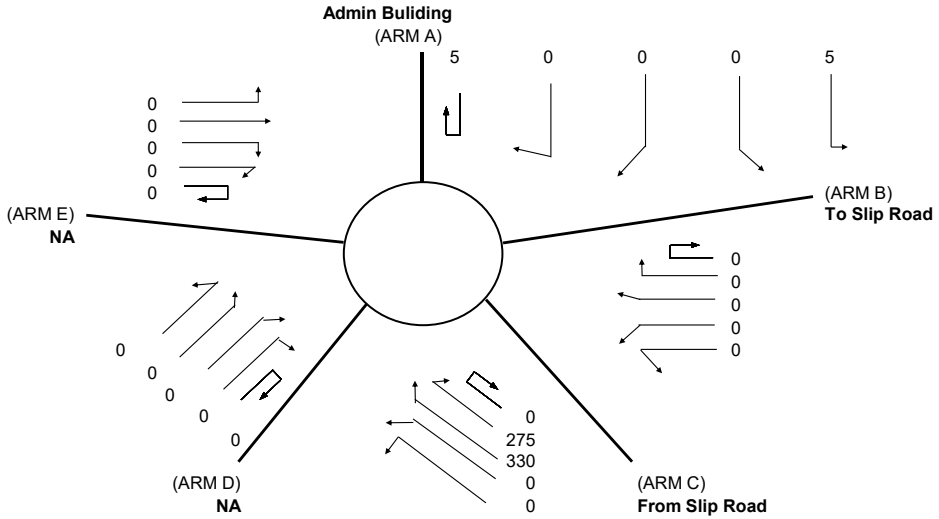
TOTAL ENTRY FLOWS = 680 PCU

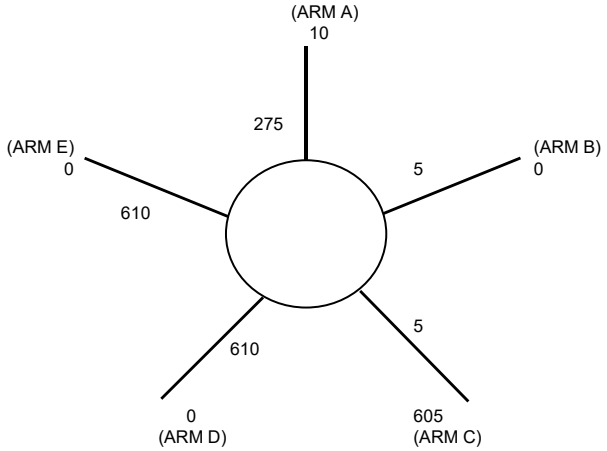
**CRITICAL DFC = 0.49**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2031 Scenario B AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 605 | | |
| Qc= Circulating flow across entry (pcu/h) | 275 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1035 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.44 | | |

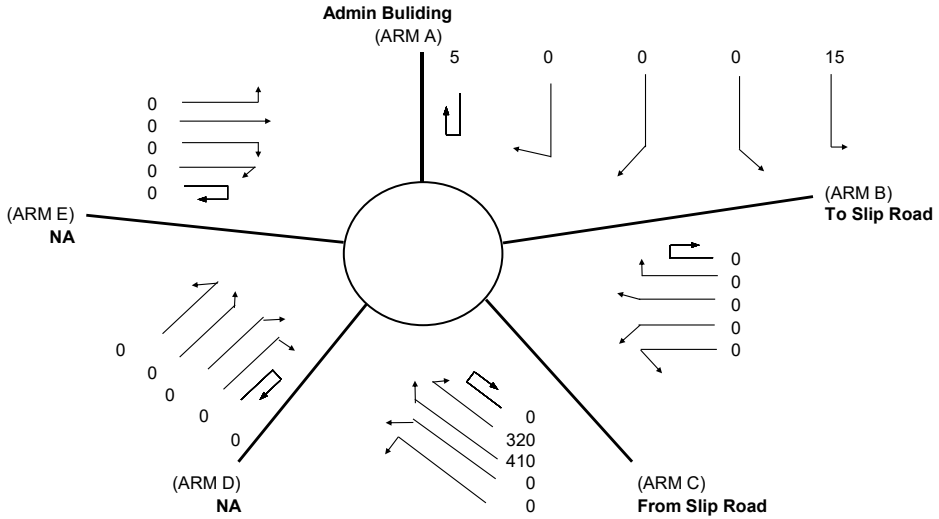
TOTAL ENTRY FLOWS = 615 PCU

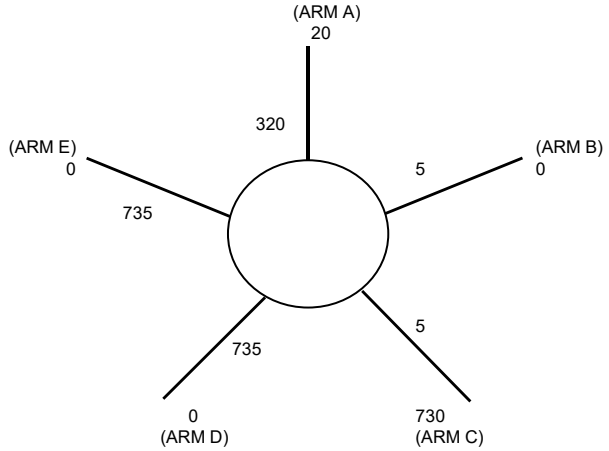
**CRITICAL DFC = 0.44**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2031 Scenario B NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 20 | | 730 | | |
| Qc= Circulating flow across entry (pcu/h) | 320 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1009 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | | 0.53 | | |

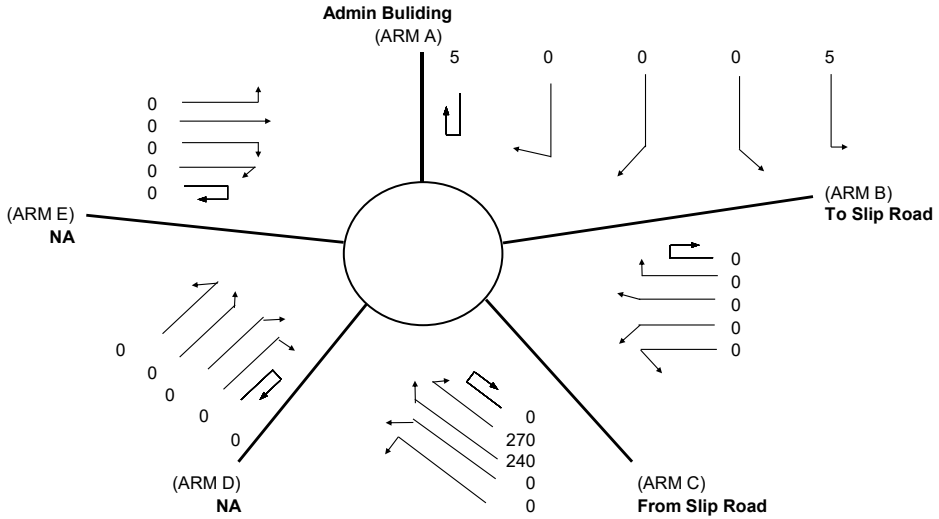
TOTAL ENTRY FLOWS = 750 PCU

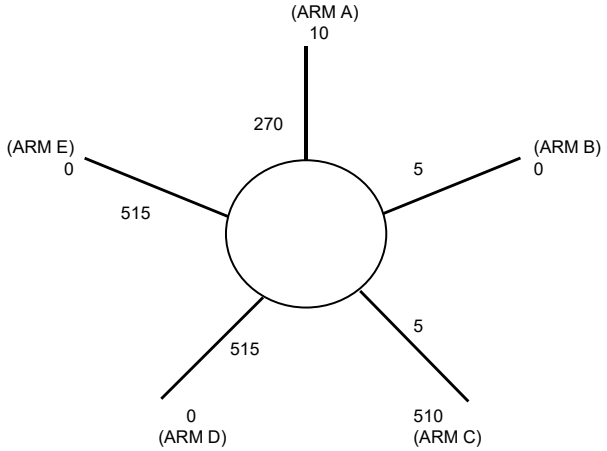
**CRITICAL DFC = 0.53**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J1 - North West Tsing Yi Interchange | Scenario | 2031 Scenario B PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | | C | | |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 3.65 | | 4.20 | | |
| E = Entry width (m) | 3.65 | | 4.20 | | |
| L = Effective length of flare (m) | 1.00 | | 1.00 | | |
| R = Entry radius (m) | 25.00 | | 25.00 | | |
| D = Inscribed circle diameter (m) | 31.00 | | 31.00 | | |
| A = Entry angle (degree) | 10.00 | | 10.00 | | |
| Q = Entry flow (pcu/h) | 10 | | 510 | | |
| Qc= Circulating flow across entry (pcu/h) | 270 | | 5 | | |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.00 | | 0.00 | | |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 1.08 | | 1.08 | | |
| X2= V + ((E-V)/(1+2S)) | 3.65 | | 4.20 | | |
| M = EXP((D-60)/10) | 0.06 | | 0.06 | | |
| F = 303*X2 | 1106 | | 1273 | | |
| Td= 1+(0.5/(1+M)) | 1.47 | | 1.47 | | |
| Fc= 0.21*Td(1+0.2*X2) | 0.54 | | 0.57 | | |
| Qe= K(F-Fc*Qc) | 1037 | | 1370 | | |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | | 0.37 | | |

TOTAL ENTRY FLOWS = 520 PCU

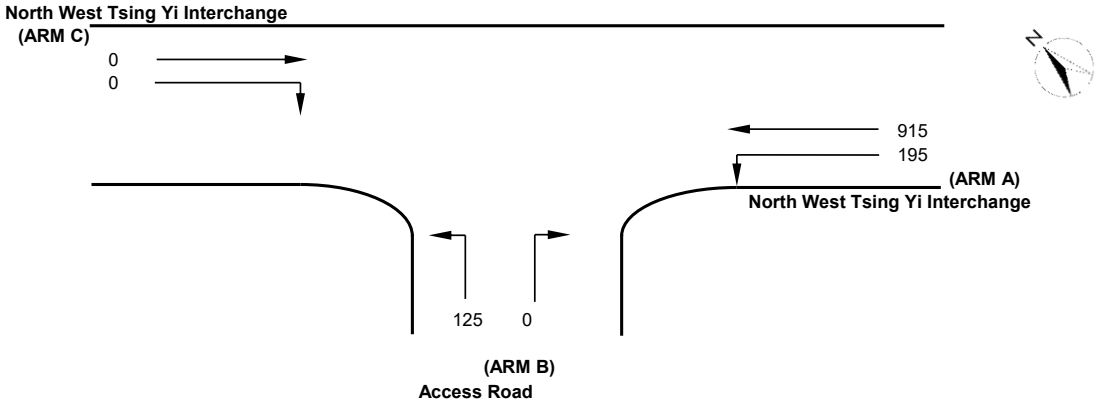
**CRITICAL DFC = 0.37**

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2025 Survey Case AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 195 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 915 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 125 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 168 |
| Q b-c | = | 477 |
| Q c-b | = | 232 |
| Q b-ac | = | 477 |

**CRITICAL DFC = 0.26**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

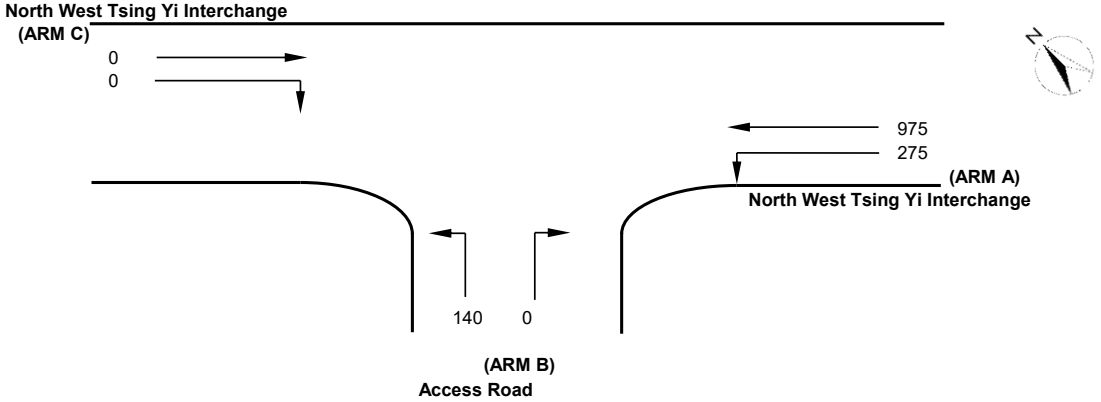
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.26 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.26 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2025 Survey Case NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 275 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 975 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 140 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 153 |
| Q b-c | = | 445 |
| Q c-b | = | 207 |
| Q b-ac | = | 445 |

**CRITICAL DFC = 0.31**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

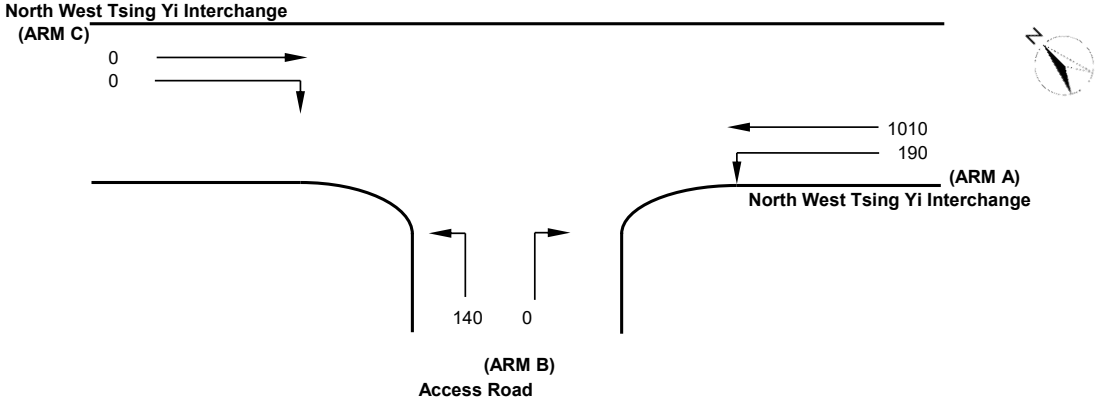
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.31 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.31 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2025 Survey Case PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 190 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 1010 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 140 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 153 |
| Q b-c | = | 444 |
| Q c-b | = | 216 |
| Q b-ac | = | 444 |

**CRITICAL DFC = 0.32**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

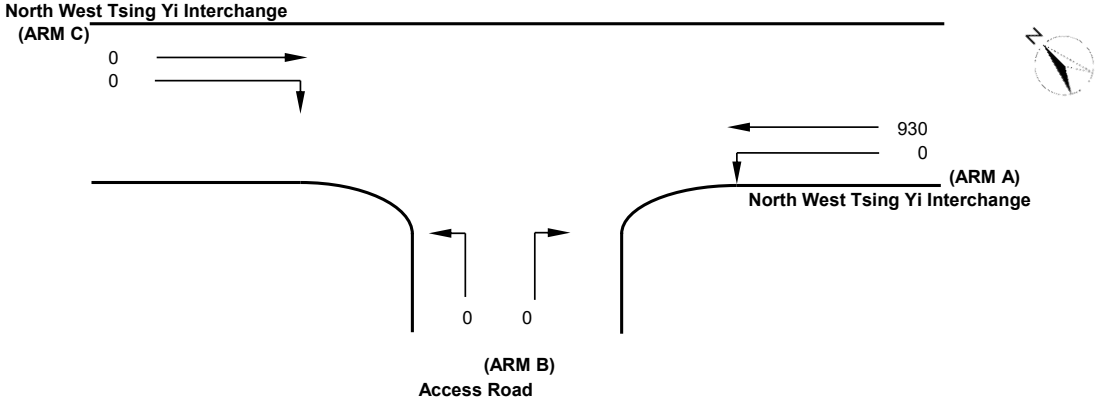
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.32 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.32 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2028 Reference Case AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 0 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 930 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 179 |
| Q b-c | = | 498 |
| Q c-b | = | 266 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.00**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

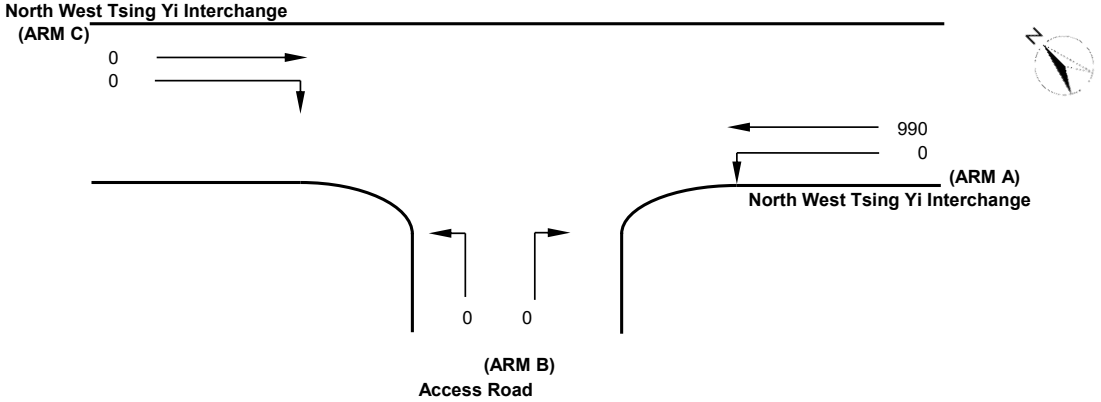
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2028 Reference Case NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 0 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 990 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 169 |
| Q b-c | = | 477 |
| Q c-b | = | 255 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.00**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

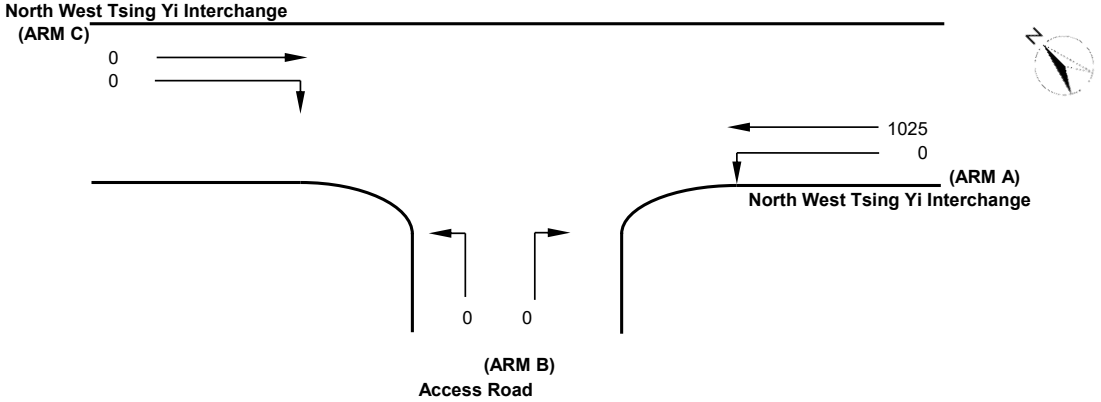
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2028 Reference Case PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 0 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 1025 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 163 |
| Q b-c | = | 465 |
| Q c-b | = | 248 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.00**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

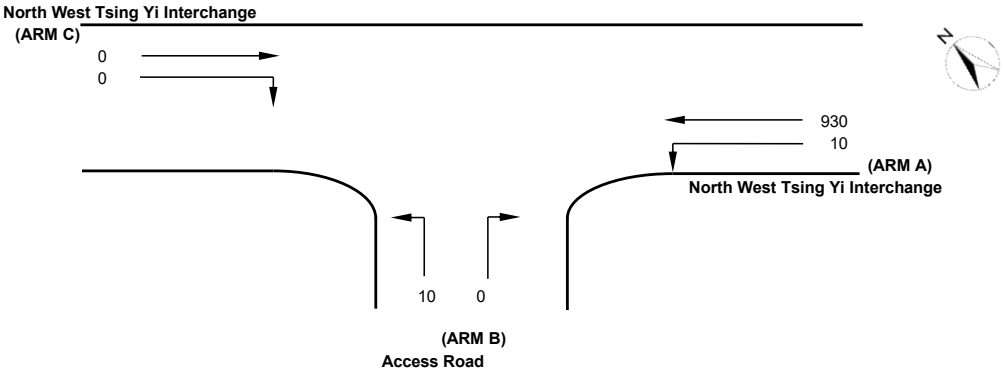
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2028 Design Case AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Oct 2026 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

J2

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 10 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 930 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 10 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 178 |
| Q b-c | = | 497 |
| Q c-b | = | 264 |
| Q b-ac | = | 497 |

**CRITICAL DFC = 0.02**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

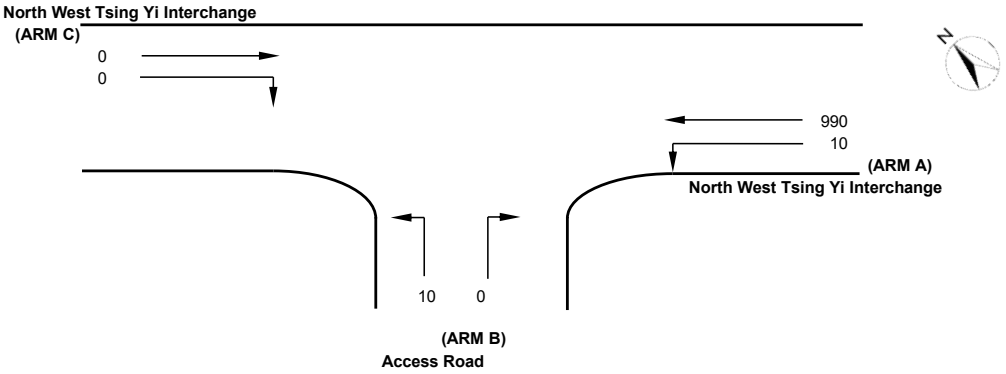
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.02 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.02 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2028 Design Case NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Oct 2026 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

J2

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 4.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 10 | (pcu/hour) |
| q a-c | = | 990 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 0.00 | (metres) |
| Vr c-b | = | 0 | (metres) |
| q c-a | = | 0 | (pcu/hour) |
| q c-b | = | 0 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 4.70 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 120 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 10 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 168 |
| Q b-c | = | 476 |
| Q c-b | = | 253 |
| Q b-ac | = | 476 |

**CRITICAL DFC = 0.02**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

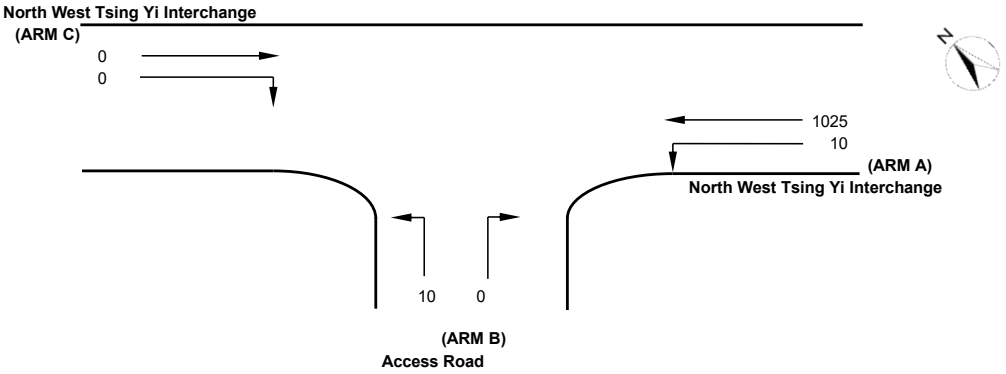
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.02 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.02 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2028 Design Case PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Oct 2026 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 10 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 1025 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 10 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 162 |
| Q b-c | = | 464 |
| Q c-b | = | 246 |
| Q b-ac | = | 464 |

**CRITICAL DFC = 0.02**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

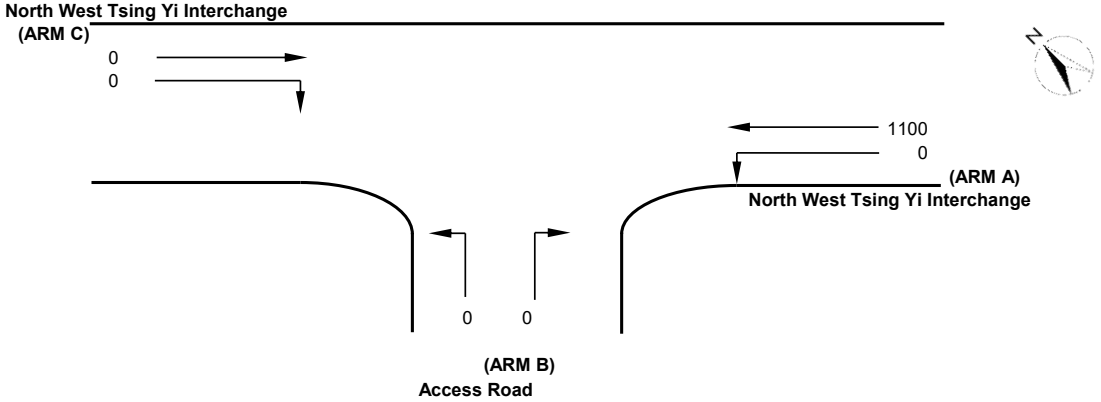
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.02 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.02 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2031 Reference Case AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 0 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 1100 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 150 |
| Q b-c | = | 439 |
| Q c-b | = | 234 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.00**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

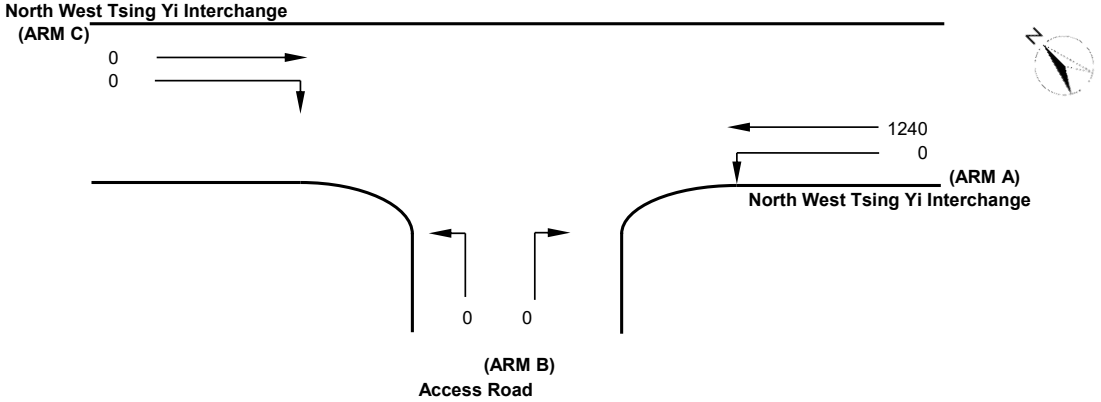
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2031 Reference Case NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 0 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 1240 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 127 |
| Q b-c | = | 391 |
| Q c-b | = | 209 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.00**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

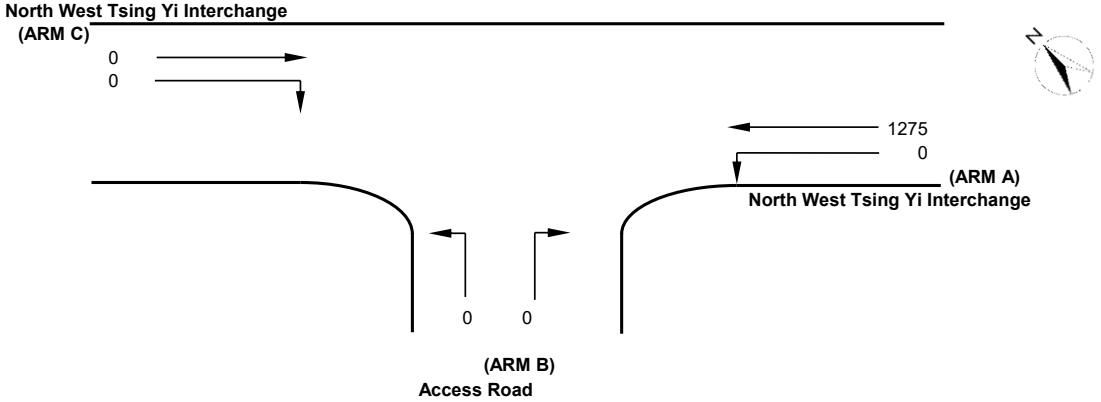
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2031 Reference Case PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 0 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 1275 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 121 |
| Q b-c | = | 379 |
| Q c-b | = | 202 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.00**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

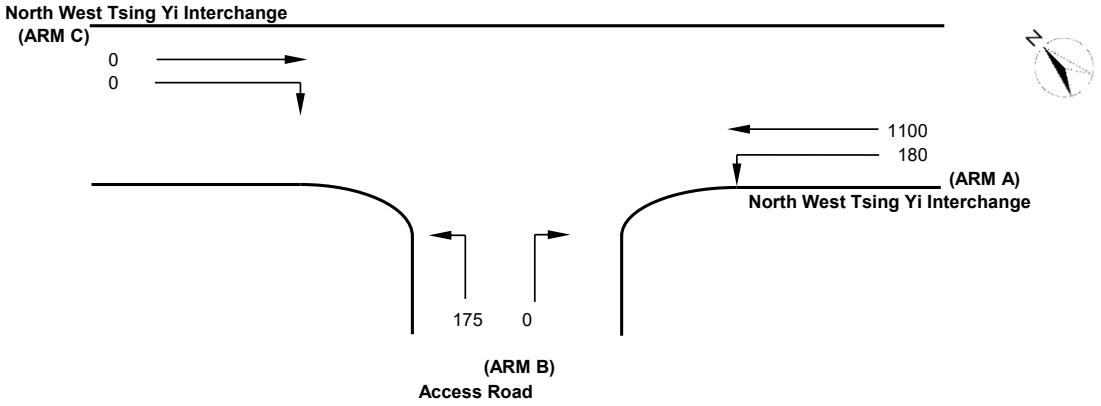
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2031 Scenario A AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 4.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 180 | (pcu/hour) |
| q a-c | = | 1100 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 0.00 | (metres) |
| Vr c-b | = | 0 | (metres) |
| q c-a | = | 0 | (pcu/hour) |
| q c-b | = | 0 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 4.70 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 120 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 175 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 138 |
| Q b-c | = | 415 |
| Q c-b | = | 201 |
| Q b-ac | = | 415 |

**CRITICAL DFC = 0.42**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

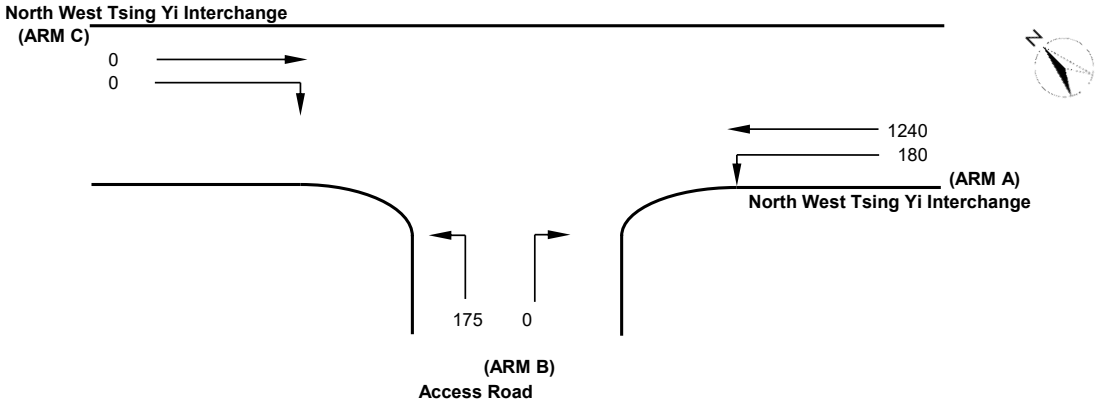
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.42 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.42 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2031 Scenario A NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 180 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 1240 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 175 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 115 |
| Q b-c | = | 367 |
| Q c-b | = | 175 |
| Q b-ac | = | 367 |

**CRITICAL DFC = 0.48**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

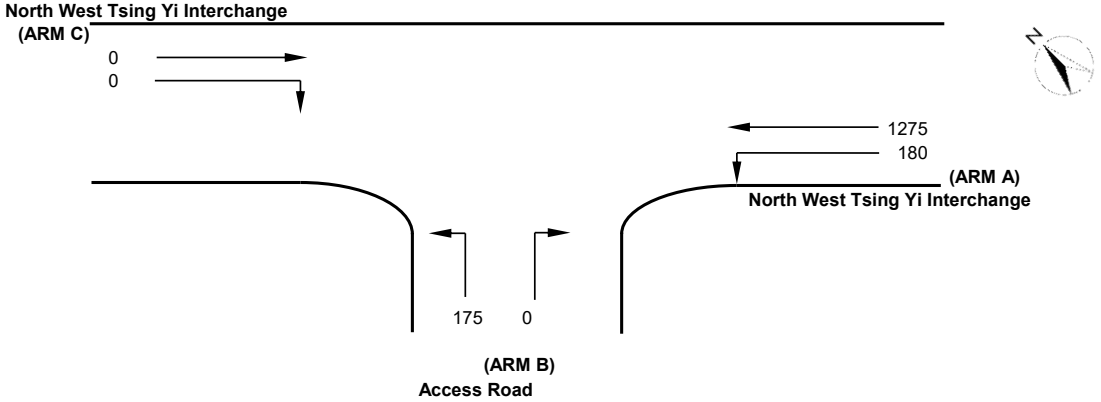
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.48 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.48 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2031 Scenario A PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

J2

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | | *MAJOR ROAD (ARM C)* | | | | *MINOR ROAD (ARM B)* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 | (metres) | W c-b | = | 0.00 | (metres) | W b-a | = | 0.00 | (metres) |
| W cr | = | 0.00 | (metres) | Vr c-b | = | 0 | (metres) | W b-c | = | 4.70 | (metres) |
| q a-b | = | 180 | (pcu/hour) | q c-a | = | 0 | (pcu/hour) | Vl b-a | = | 0 | (metres) |
| q a-c | = | 1275 | (pcu/hour) | q c-b | = | 0 | (pcu/hour) | Vr b-a | = | 0 | (metres) |
| | | | | | | | | Vr b-c | = | 120 | (metres) |
| | | | | | | | | q b-a | = | 0 | (pcu/hour) |
| | | | | | | | | q b-c | = | 175 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 109 |
| Q b-c | = | 354 |
| Q c-b | = | 169 |
| Q b-ac | = | 354 |

**CRITICAL DFC = 0.49**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

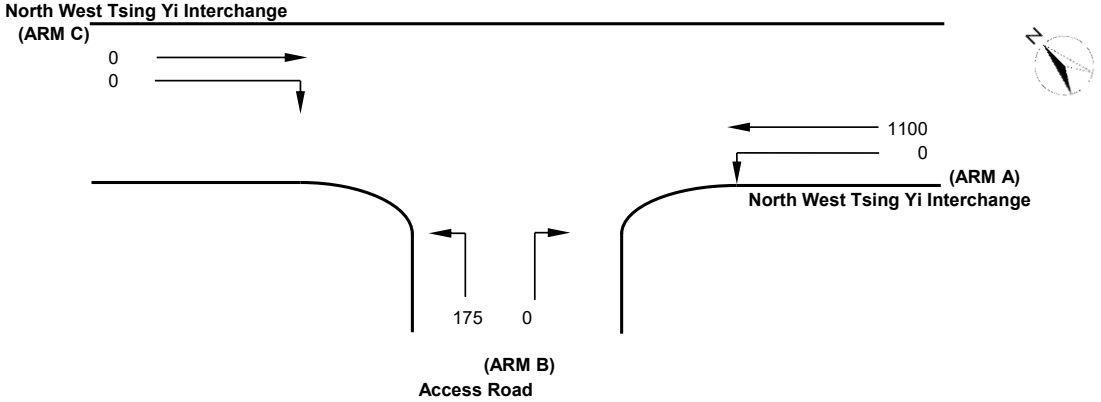
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.49 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.49 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2031 Scenario B AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 4.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 0 | (pcu/hour) |
| q a-c | = | 1100 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 0.00 | (metres) |
| Vr c-b | = | 0 | (metres) |
| q c-a | = | 0 | (pcu/hour) |
| q c-b | = | 0 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 4.70 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 120 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 175 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 150 |
| Q b-c | = | 439 |
| Q c-b | = | 234 |
| Q b-ac | = | 439 |

**CRITICAL DFC = 0.40**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

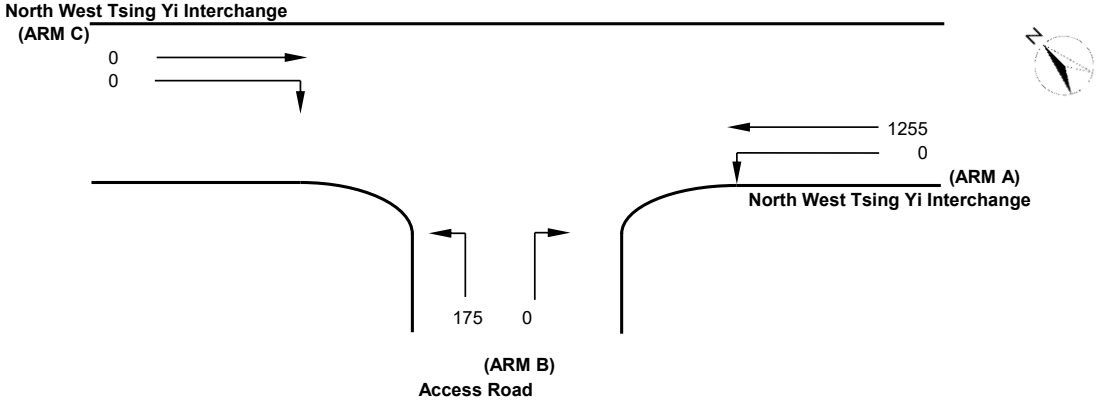
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.40 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.40 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2031 Scenario B NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 0 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 1255 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 175 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 124 |
| Q b-c | = | 386 |
| Q c-b | = | 206 |
| Q b-ac | = | 386 |

**CRITICAL DFC = 0.45**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

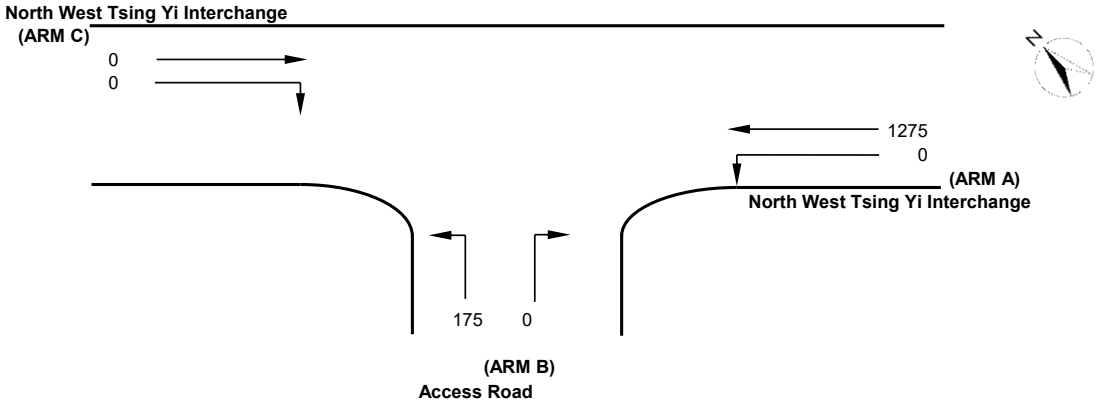
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.45 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.45 |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J2 - North West Tsing Yi Interchange / Access Road | 2031 Scenario B PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J2




NOTES : ( GEOMETRIC INPUT DATA )

J2

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 4.00 (metres) | W c-b | = | 0.00 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 0 (metres) | W b-c | = | 4.70 (metres) |
| q a-b | = | 0 (pcu/hour) | q c-a | = | 0 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 1275 (pcu/hour) | q c-b | = | 0 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 120 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 175 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 1.10 |
| F | = | 0.59 |
| Y | = | 0.86 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 121 |
| Q b-c | = | 379 |
| Q c-b | = | 202 |
| Q b-ac | = | 379 |

**CRITICAL DFC = 0.46**

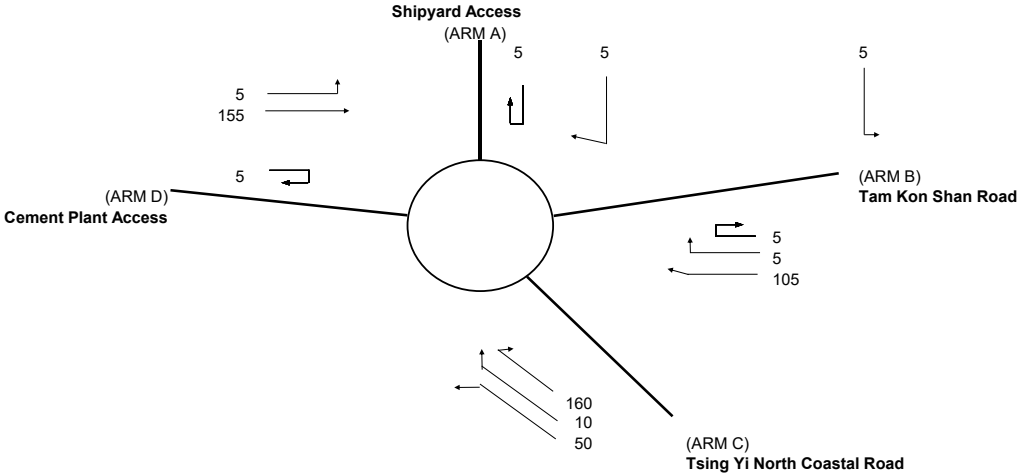
**COMPARISION OF DESIGN FLOW TO CAPACITY :**

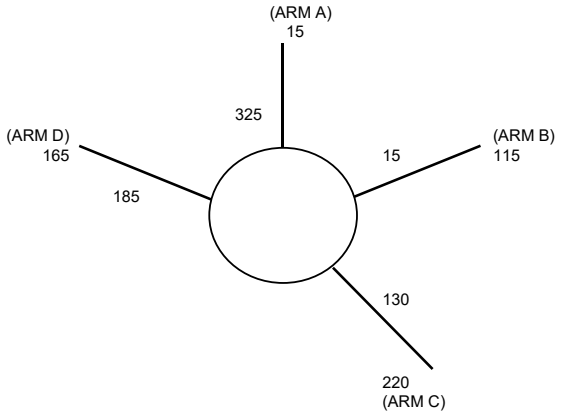
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.46 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.46 |

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2025 Survey Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



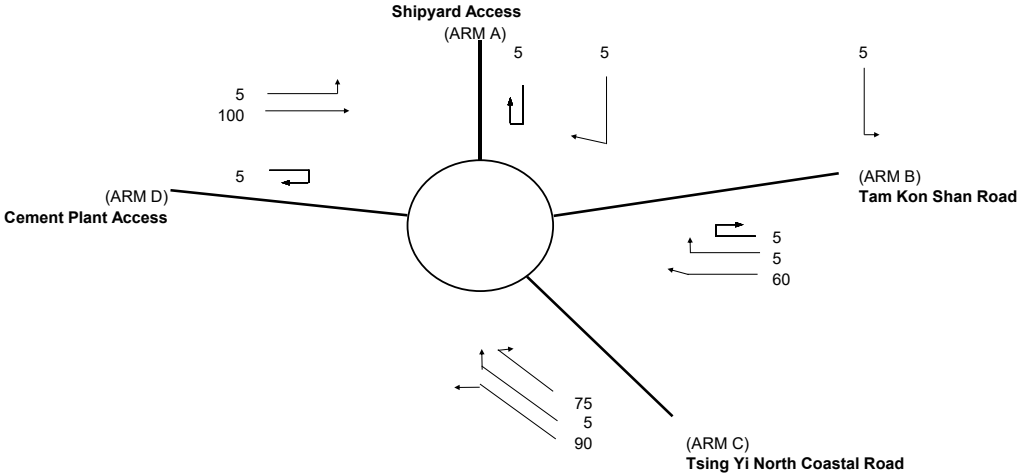

| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 15 | 115 | 220 | 165 |
| Qc= Circulating flow across entry (pcu/h) | 325 | 15 | 130 | 185 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1265 | 1781 | 1196 | 1345 |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | 0.06 | 0.18 | 0.12 |

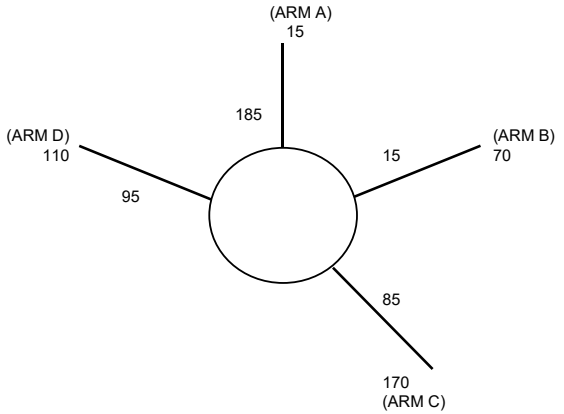
TOTAL ENTRY FLOWS = 515 PCU

**CRITICAL DFC = 0.18**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2025 Survey Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



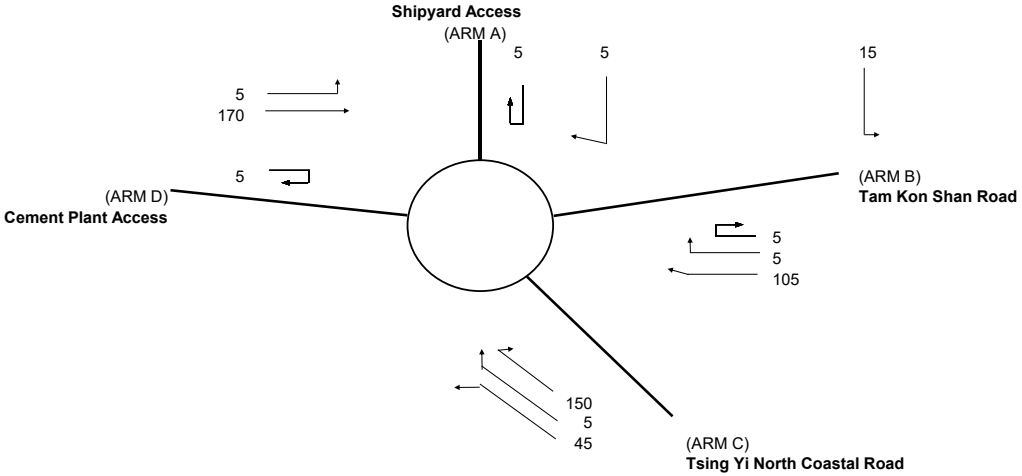

| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 15 | 70 | 170 | 110 |
| Qc= Circulating flow across entry (pcu/h) | 185 | 15 | 85 | 95 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1348 | 1781 | 1223 | 1400 |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | 0.04 | 0.14 | 0.08 |

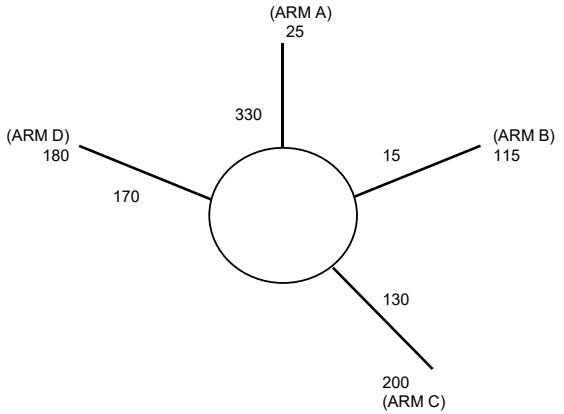
TOTAL ENTRY FLOWS = 365 PCU

**CRITICAL DFC = 0.14**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2025 Survey Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



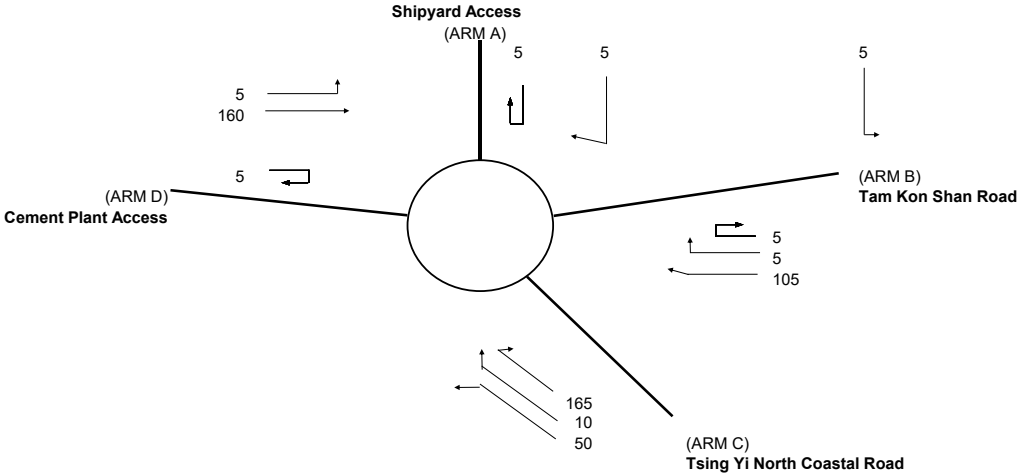

| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 25 | 115 | 200 | 180 |
| Qc= Circulating flow across entry (pcu/h) | 330 | 15 | 130 | 170 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1262 | 1781 | 1196 | 1354 |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | 0.06 | 0.17 | 0.13 |

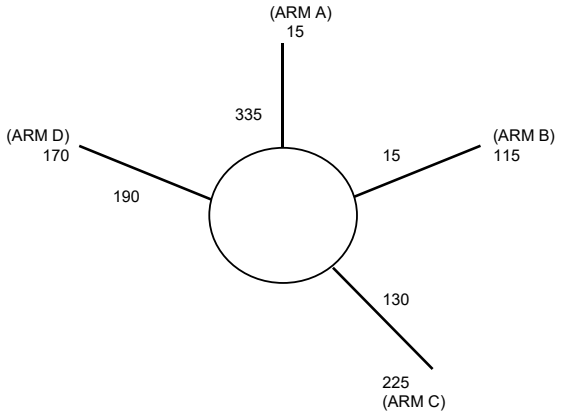
TOTAL ENTRY FLOWS = 520 PCU

**CRITICAL DFC = 0.17**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2028 Reference Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 15 | 115 | 225 | 170 |
| Qc= Circulating flow across entry (pcu/h) | 335 | 15 | 130 | 190 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1259 | 1781 | 1196 | 1341 |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | 0.06 | 0.19 | 0.13 |

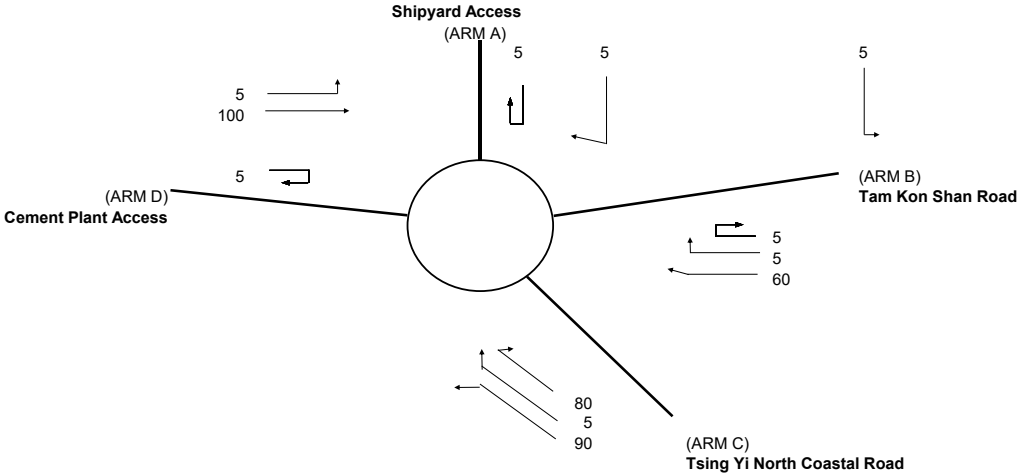
TOTAL ENTRY FLOWS = 525 PCU

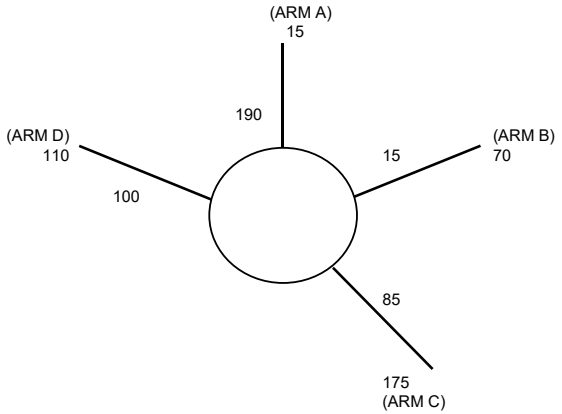
**CRITICAL DFC = 0.19**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2028 Reference Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 15 | 70 | 175 | 110 |
| Qc= Circulating flow across entry (pcu/h) | 190 | 15 | 85 | 100 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1345 | 1781 | 1223 | 1397 |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | 0.04 | 0.14 | 0.08 |

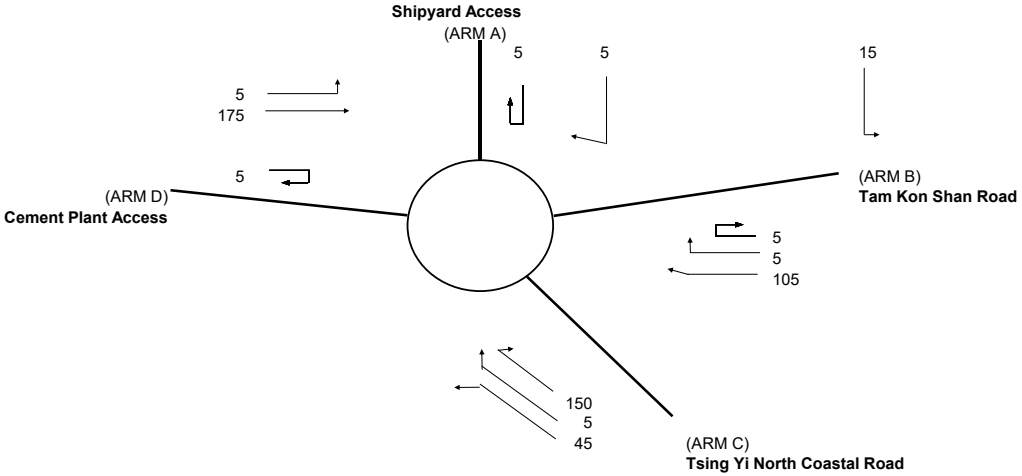
TOTAL ENTRY FLOWS = 370 PCU

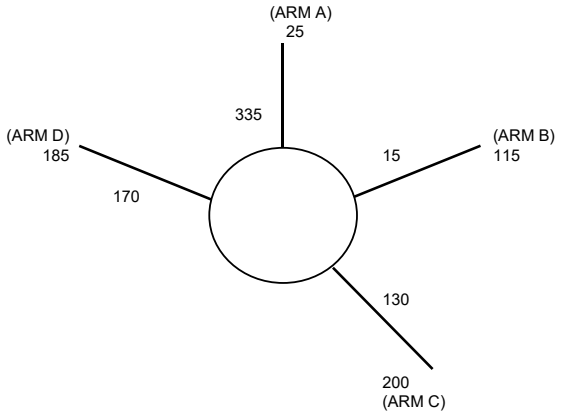
**CRITICAL DFC = 0.14**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2028 Reference Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



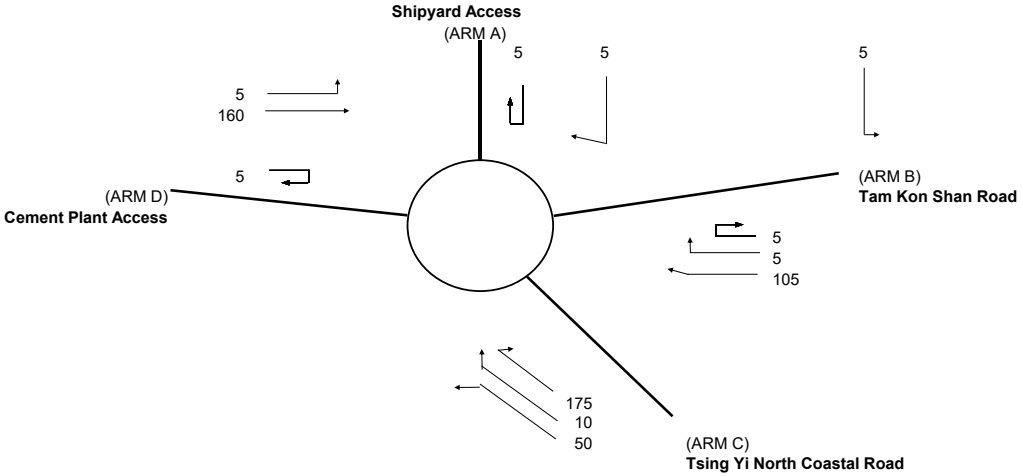

| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 25 | 115 | 200 | 185 |
| Qc= Circulating flow across entry (pcu/h) | 335 | 15 | 130 | 170 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1259 | 1781 | 1196 | 1354 |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | 0.06 | 0.17 | 0.14 |

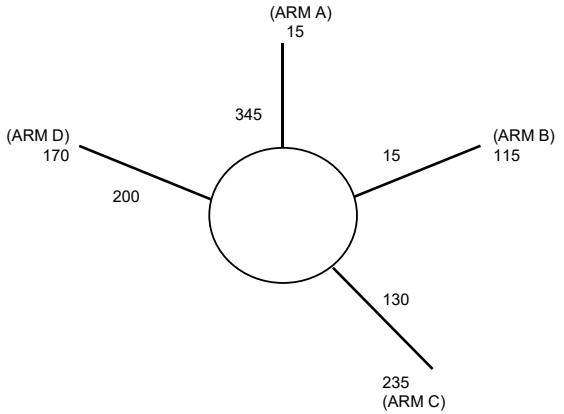
TOTAL ENTRY FLOWS = 525 PCU

**CRITICAL DFC = 0.17**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2028 Design Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



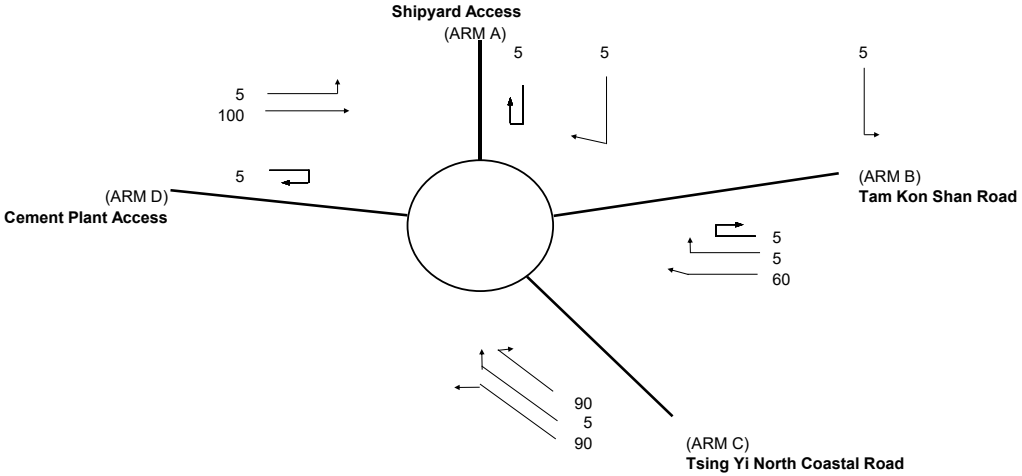

| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 15 | 115 | 235 | 170 |
| Qc= Circulating flow across entry (pcu/h) | 345 | 15 | 130 | 200 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1253 | 1781 | 1196 | 1335 |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | 0.06 | 0.20 | 0.13 |

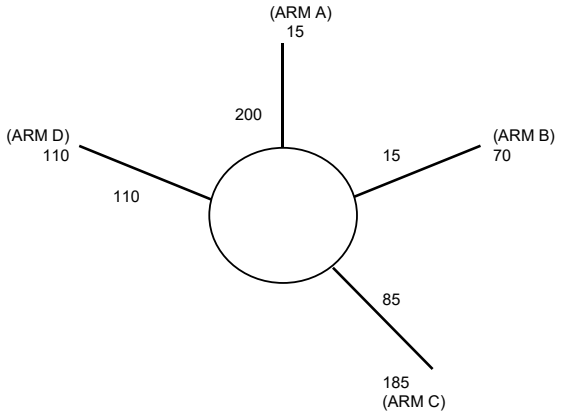
TOTAL ENTRY FLOWS = 535 PCU

**CRITICAL DFC = 0.20**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2028 Design Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 15 | 70 | 185 | 110 |
| Qc= Circulating flow across entry (pcu/h) | 200 | 15 | 85 | 110 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1339 | 1781 | 1223 | 1391 |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | 0.04 | 0.15 | 0.08 |

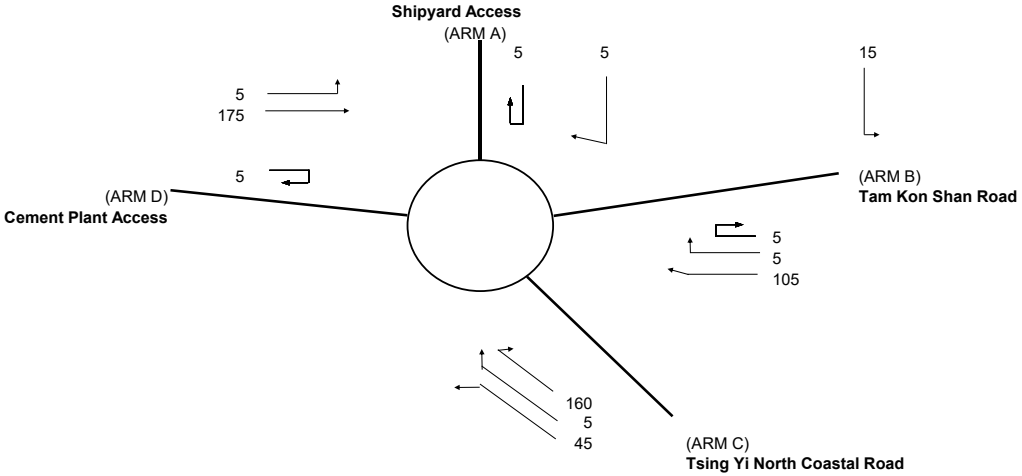
TOTAL ENTRY FLOWS = 380 PCU

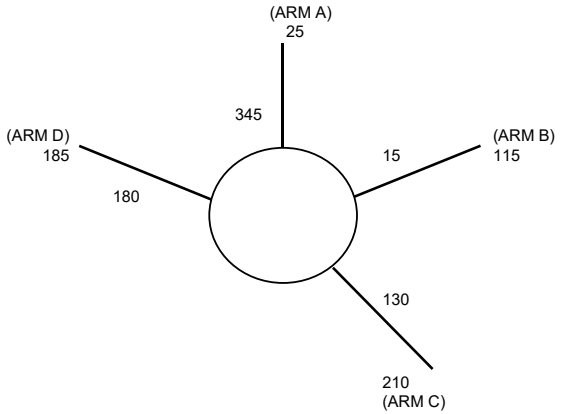
**CRITICAL DFC = 0.15**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2028 Design Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 25 | 115 | 210 | 185 |
| Qc= Circulating flow across entry (pcu/h) | 345 | 15 | 130 | 180 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1253 | 1781 | 1196 | 1348 |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | 0.06 | 0.18 | 0.14 |

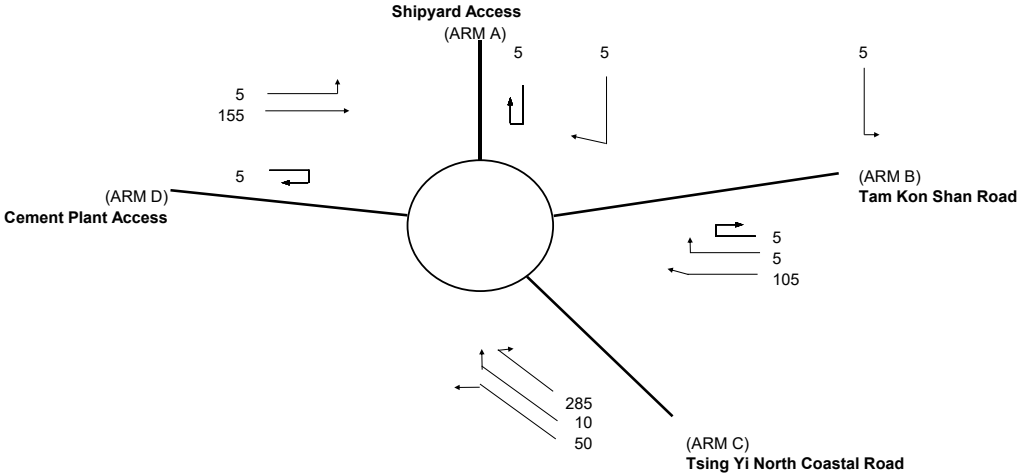
TOTAL ENTRY FLOWS = 535 PCU

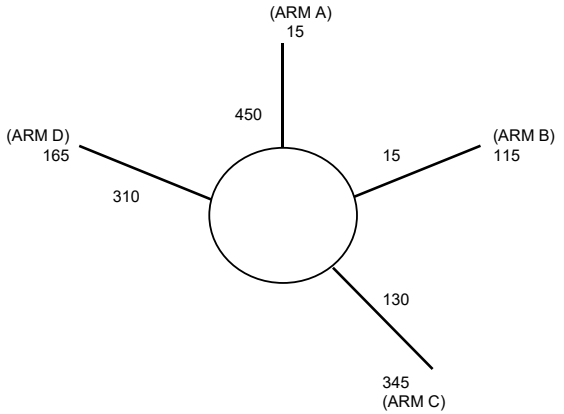
**CRITICAL DFC = 0.18**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2031 Reference Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



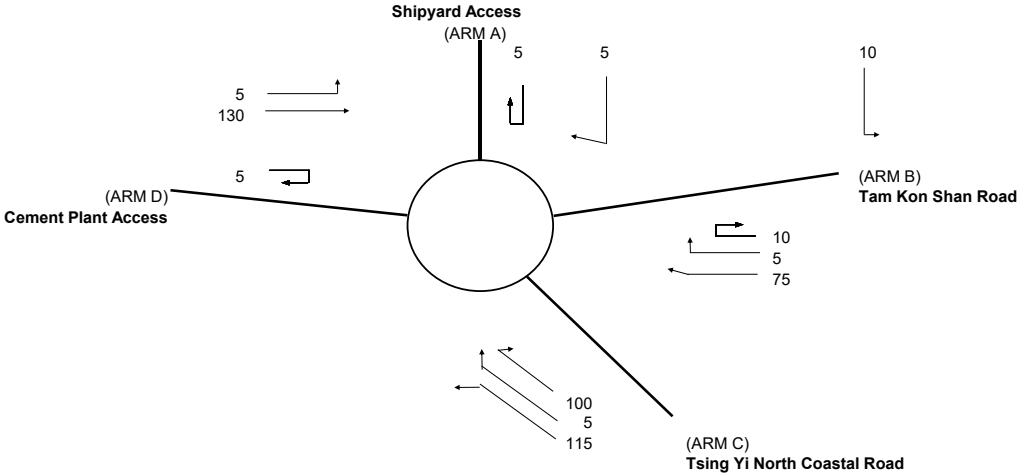

| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 15 | 115 | 345 | 165 |
| Qc= Circulating flow across entry (pcu/h) | 450 | 15 | 130 | 310 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1191 | 1781 | 1196 | 1268 |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | 0.06 | 0.29 | 0.13 |

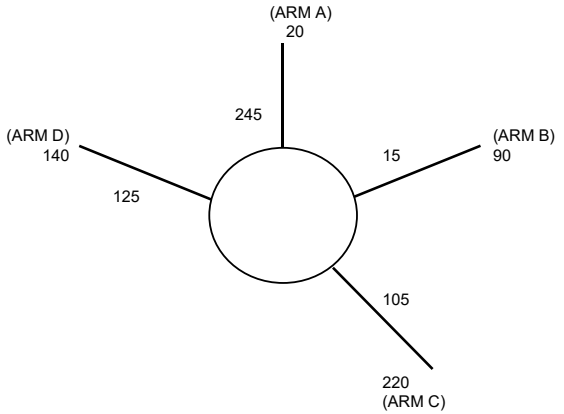
TOTAL ENTRY FLOWS = 640 PCU

**CRITICAL DFC = 0.29**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2031 Reference Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 20 | 90 | 220 | 140 |
| Qc= Circulating flow across entry (pcu/h) | 245 | 15 | 105 | 125 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1313 | 1781 | 1211 | 1381 |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | 0.05 | 0.18 | 0.10 |

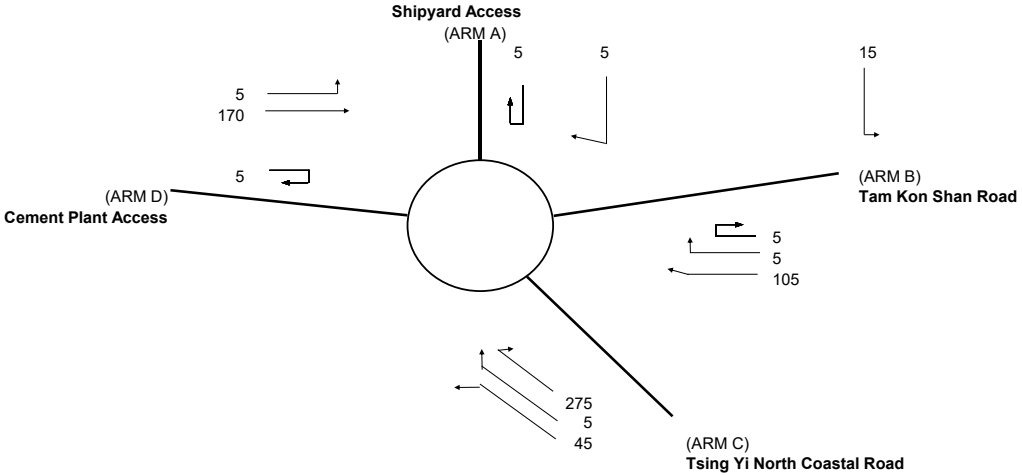
TOTAL ENTRY FLOWS = 470 PCU

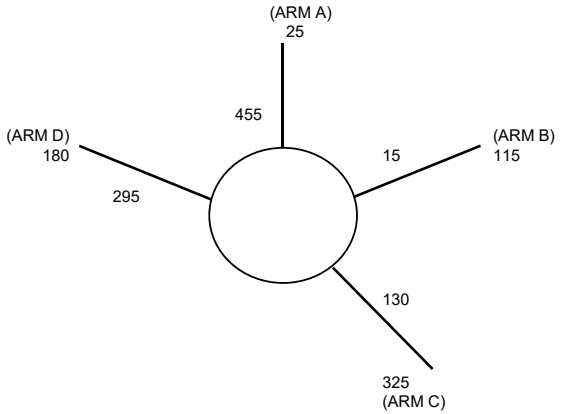
**CRITICAL DFC = 0.18**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2031 Reference Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 25 | 115 | 325 | 180 |
| Qc= Circulating flow across entry (pcu/h) | 455 | 15 | 130 | 295 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1188 | 1781 | 1196 | 1277 |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | 0.06 | 0.27 | 0.14 |

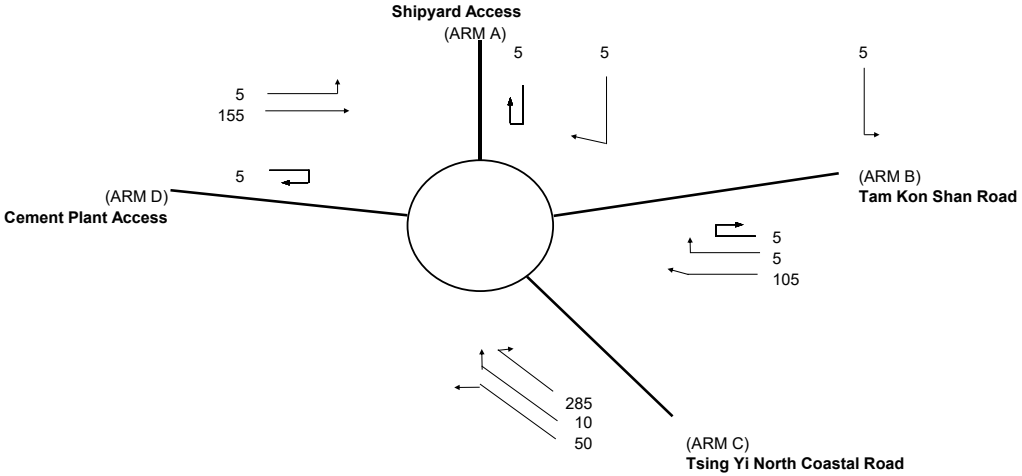
TOTAL ENTRY FLOWS = 645 PCU

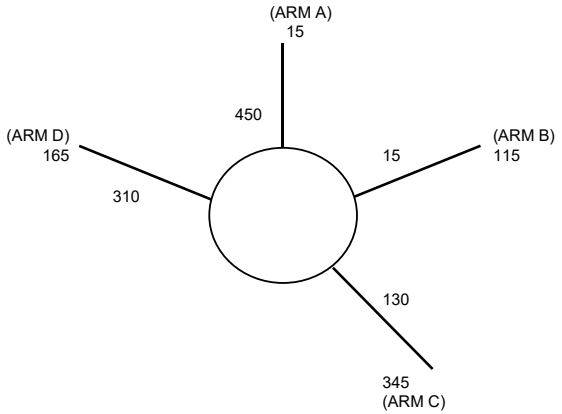
**CRITICAL DFC = 0.27**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2031 Scenario A AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



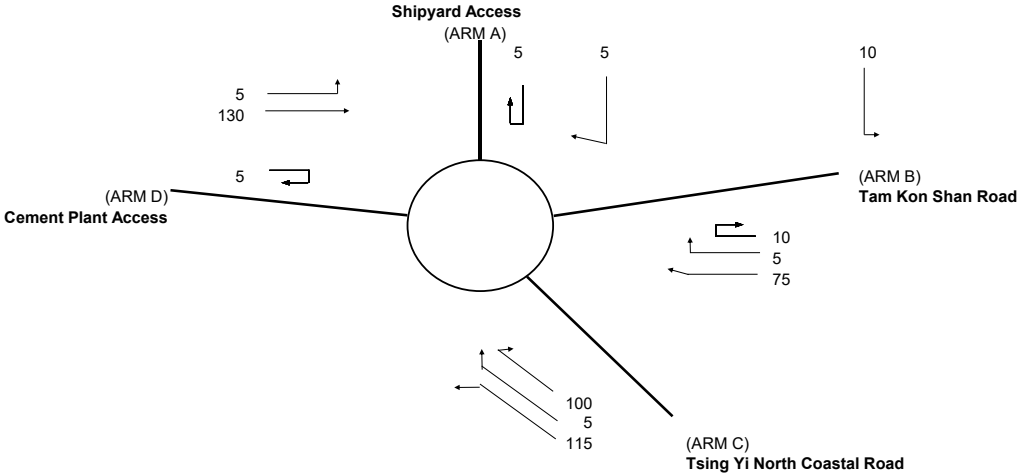

| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 15 | 115 | 345 | 165 |
| Qc= Circulating flow across entry (pcu/h) | 450 | 15 | 130 | 310 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1191 | 1781 | 1196 | 1268 |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | 0.06 | 0.29 | 0.13 |

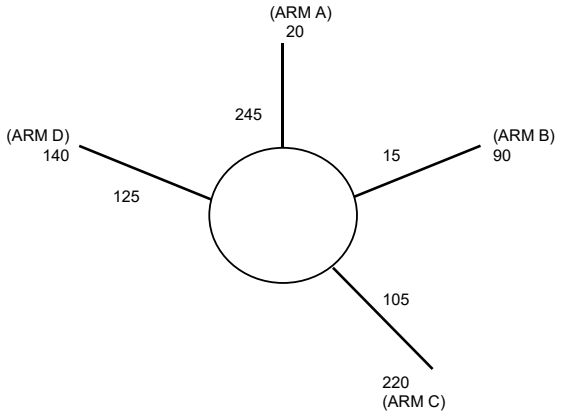
TOTAL ENTRY FLOWS = 640 PCU

**CRITICAL DFC = 0.29**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2031 Scenario A NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 20 | 90 | 220 | 140 |
| Qc= Circulating flow across entry (pcu/h) | 245 | 15 | 105 | 125 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1313 | 1781 | 1211 | 1381 |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | 0.05 | 0.18 | 0.10 |

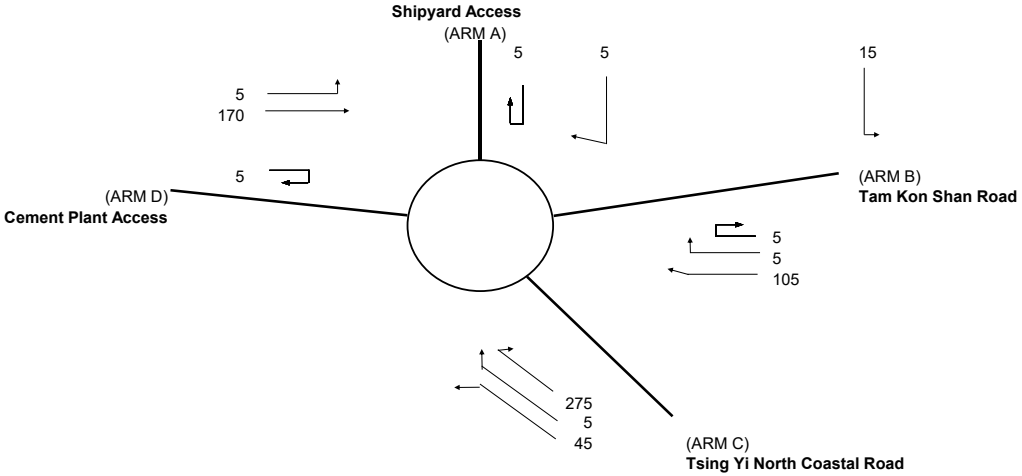
TOTAL ENTRY FLOWS = 470 PCU

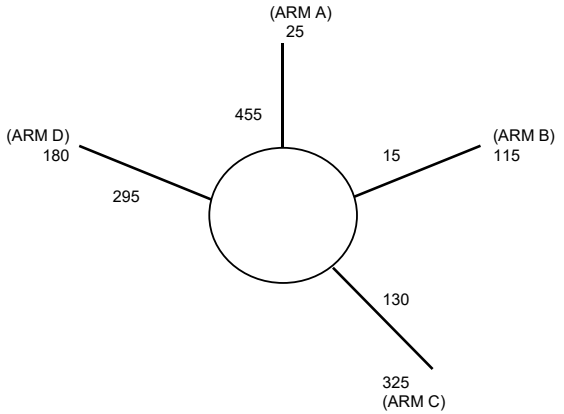
**CRITICAL DFC = 0.18**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2031 Scenario A PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



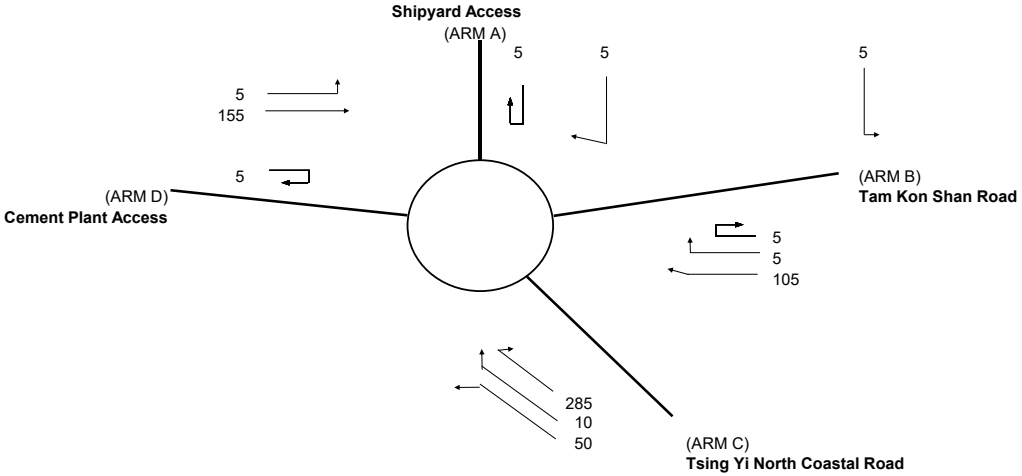

| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 25 | 115 | 325 | 180 |
| Qc= Circulating flow across entry (pcu/h) | 455 | 15 | 130 | 295 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1188 | 1781 | 1196 | 1277 |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | 0.06 | 0.27 | 0.14 |

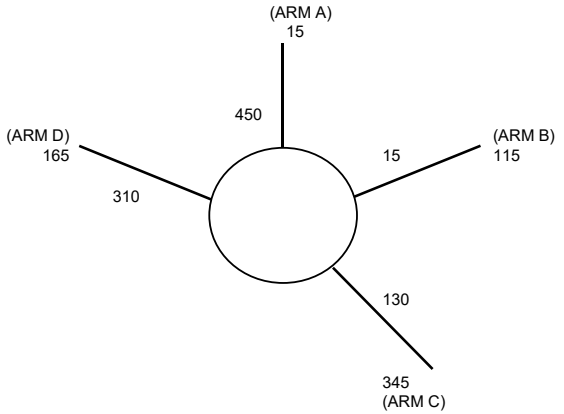
TOTAL ENTRY FLOWS = 645 PCU

**CRITICAL DFC = 0.27**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2031 Scenario B AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |



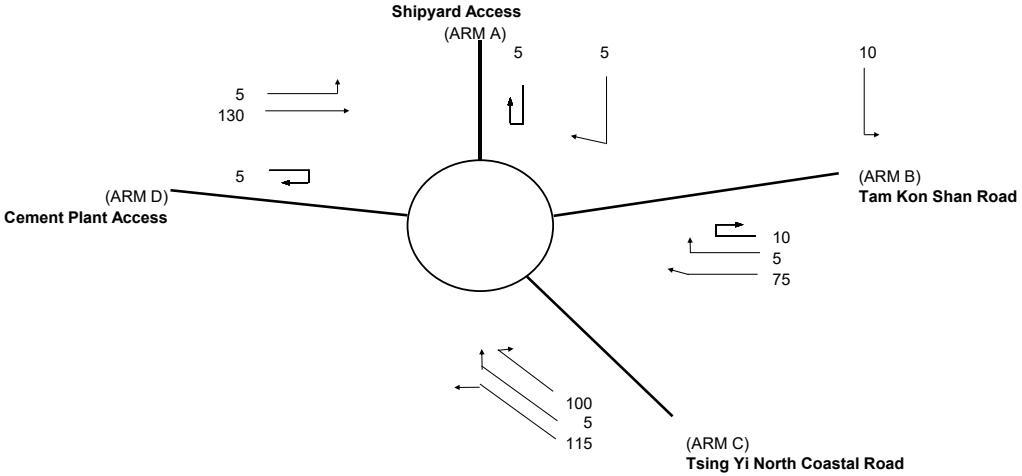

| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 15 | 115 | 345 | 165 |
| Qc= Circulating flow across entry (pcu/h) | 450 | 15 | 130 | 310 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1191 | 1781 | 1196 | 1268 |
| DFC = Design flow/Capacity = Q/Qe | 0.01 | 0.06 | 0.29 | 0.13 |

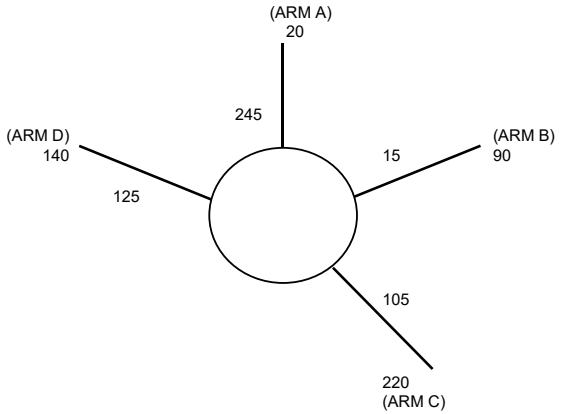
TOTAL ENTRY FLOWS = 640 PCU

**CRITICAL DFC = 0.29**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2031 Scenario B NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 20 | 90 | 220 | 140 |
| Qc= Circulating flow across entry (pcu/h) | 245 | 15 | 105 | 125 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1313 | 1781 | 1211 | 1381 |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | 0.05 | 0.18 | 0.10 |

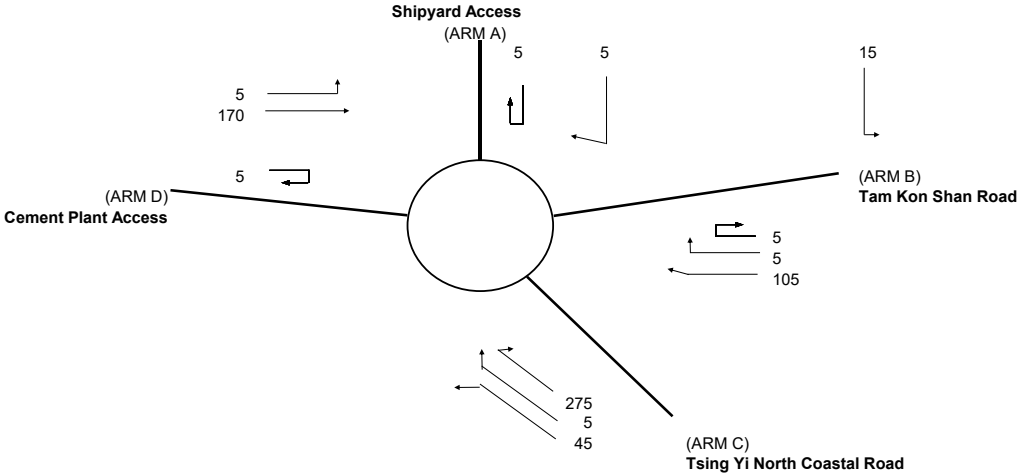
TOTAL ENTRY FLOWS = 470 PCU

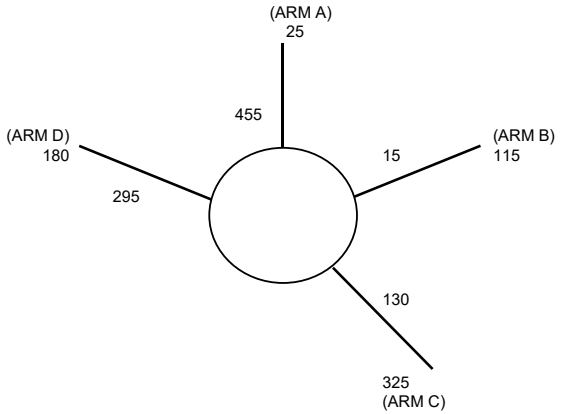
**CRITICAL DFC = 0.18**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J3 - Tsing Yi North Coastal Road / Tam Kon Shan Road | Scenario | 2031 Scenario B PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Oct 2026 |




| ARM | A | B | C | D |
|---|---|---|---|---|
| INPUT PARAMETERS: | | | | |
| V = Approach half width (m) | 4.20 | 4.10 | 4.00 | 4.00 |
| E = Entry width (m) | 6.20 | 7.20 | 4.00 | 5.35 |
| L = Effective length of flare (m) | 5.00 | 10.00 | 10.00 | 5.00 |
| R = Entry radius (m) | 7.20 | 290.00 | 29.00 | 11.90 |
| D = Inscribed circle diameter (m) | 29.00 | 29.00 | 29.00 | 29.00 |
| A = Entry angle (degree) | 20.00 | 30.00 | 20.00 | 15.00 |
| Q = Entry flow (pcu/h) | 25 | 115 | 325 | 180 |
| Qc= Circulating flow across entry (pcu/h) | 455 | 15 | 130 | 295 |
| OUTPUT PARAMETERS: | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.64 | 0.50 | 0.00 | 0.43 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.95 | 1.05 | 1.05 | 1.02 |
| X2= V + ((E-V)/(1+2S)) | 5.08 | 5.66 | 4.00 | 4.72 |
| M = EXP((D-60)/10) | 0.05 | 0.05 | 0.05 | 0.05 |
| F = 303*X2 | 1538 | 1714 | 1212 | 1431 |
| Td= 1+(0.5/(1+M)) | 1.48 | 1.48 | 1.48 | 1.48 |
| Fc= 0.21*Td(1+0.2*X2) | 0.63 | 0.66 | 0.56 | 0.60 |
| Qe= K(F-Fc*Qc) | 1188 | 1781 | 1196 | 1277 |
| DFC = Design flow/Capacity = Q/Qe | 0.02 | 0.06 | 0.27 | 0.14 |

TOTAL ENTRY FLOWS = 645 PCU

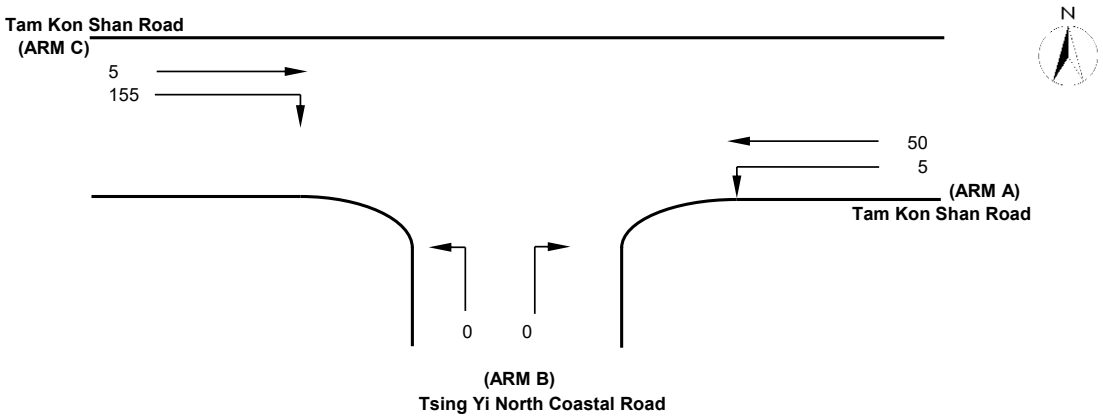
**CRITICAL DFC = 0.27**

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2025 Survey Case AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) |
| q a-c | = | 50 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 5 | (pcu/hour) |
| q c-b | = | 155 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 299 |
| Q b-c | = | 429 |
| Q c-b | = | 791 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.20**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

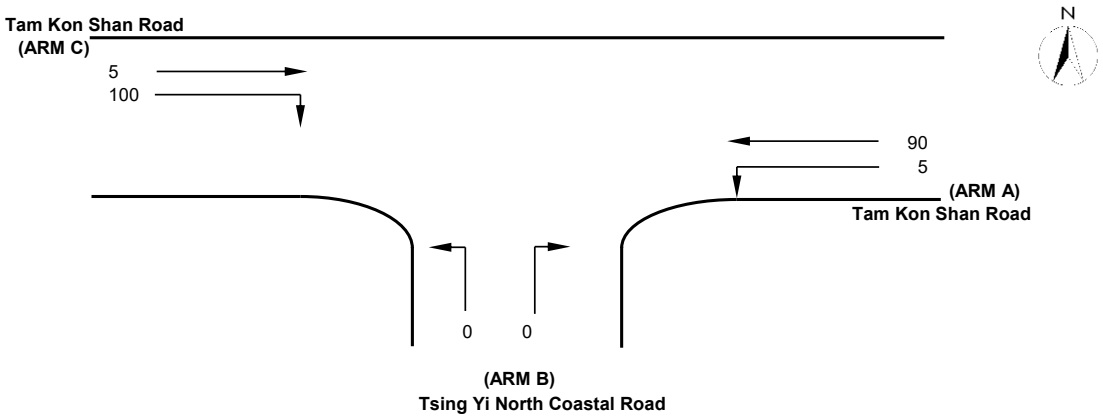
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.20 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2025 Survey Case NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 10.00 (metres) | W c-b | = | 3.30 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 250 (metres) | W b-c | = | 0.00 (metres) |
| q a-b | = | 5 (pcu/hour) | q c-a | = | 5 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 90 (pcu/hour) | q c-b | = | 100 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 0 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 304 |
| Q b-c | = | 424 |
| Q c-b | = | 780 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.13**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

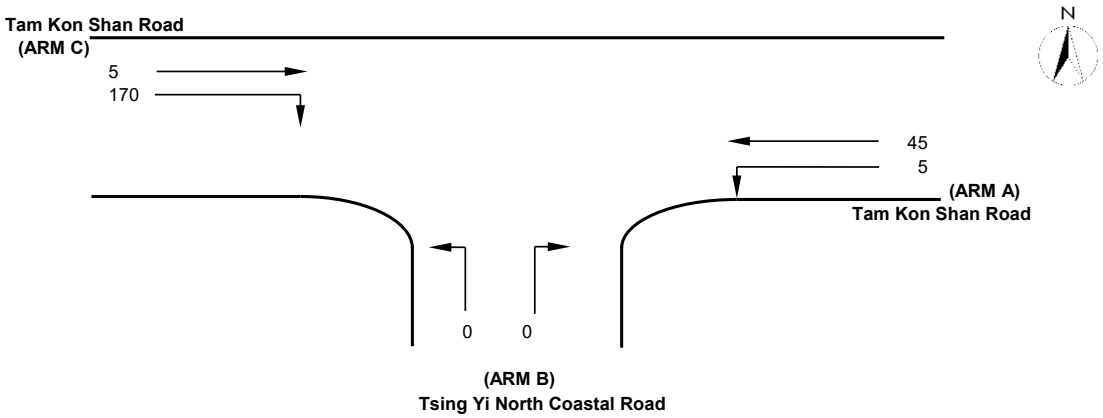
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.13 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2025 Survey Case PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) |
| q a-c | = | 45 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 5 | (pcu/hour) |
| q c-b | = | 170 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 297 |
| Q b-c | = | 430 |
| Q c-b | = | 792 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.21**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

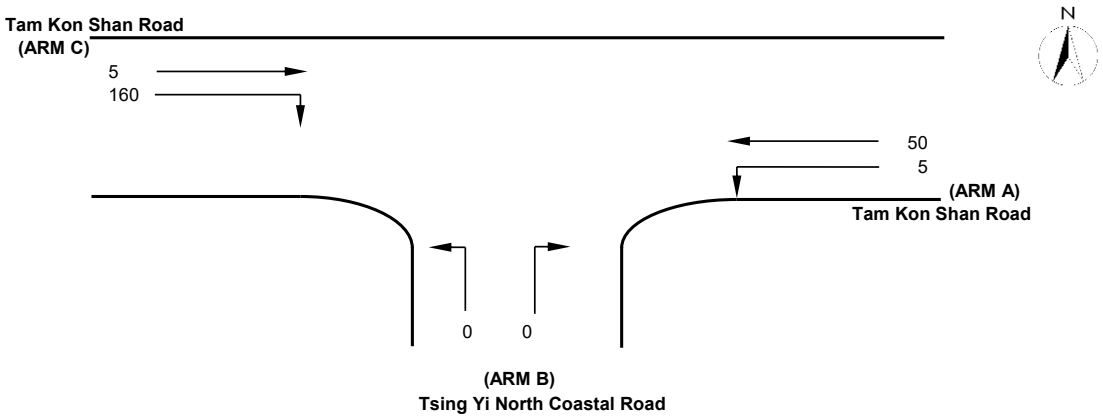
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.21 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2028 Reference Case AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | | *MAJOR ROAD (ARM C)* | | | | *MINOR ROAD (ARM B)* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| W | = | 10.00 | (metres) | W c-b | = | 3.30 | (metres) | W b-a | = | 0.00 | (metres) |
| W cr | = | 0.00 | (metres) | Vr c-b | = | 250 | (metres) | W b-c | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) | q c-a | = | 5 | (pcu/hour) | Vl b-a | = | 0 | (metres) |
| q a-c | = | 50 | (pcu/hour) | q c-b | = | 160 | (pcu/hour) | Vr b-a | = | 0 | (metres) |
| | | | | | | | | Vr b-c | = | 0 | (metres) |
| | | | | | | | | q b-a | = | 0 | (pcu/hour) |
| | | | | | | | | q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 298 |
| Q b-c | = | 429 |
| Q c-b | = | 791 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.20**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

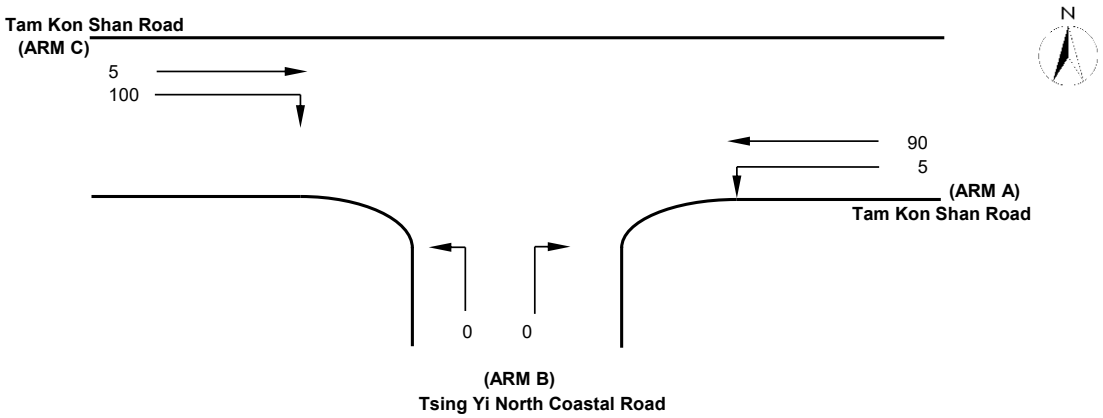
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.20 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2028 Reference Case NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | | *MAJOR ROAD (ARM C)* | | | | *MINOR ROAD (ARM B)* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| W | = | 10.00 | (metres) | W c-b | = | 3.30 | (metres) | W b-a | = | 0.00 | (metres) |
| W cr | = | 0.00 | (metres) | Vr c-b | = | 250 | (metres) | W b-c | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) | q c-a | = | 5 | (pcu/hour) | Vl b-a | = | 0 | (metres) |
| q a-c | = | 90 | (pcu/hour) | q c-b | = | 100 | (pcu/hour) | Vr b-a | = | 0 | (metres) |
| | | | | | | | | Vr b-c | = | 0 | (metres) |
| | | | | | | | | q b-a | = | 0 | (pcu/hour) |
| | | | | | | | | q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 304 |
| Q b-c | = | 424 |
| Q c-b | = | 780 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.13**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

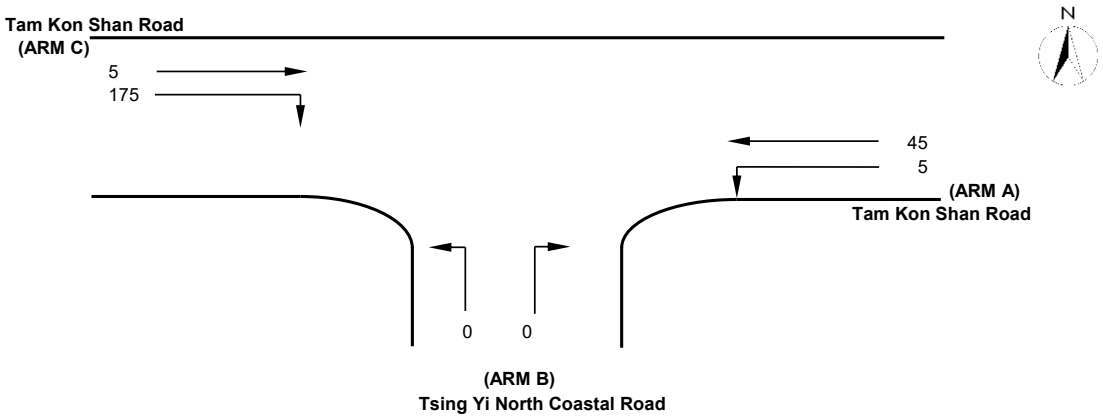
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.13 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2028 Reference Case PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) |
| q a-c | = | 45 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 5 | (pcu/hour) |
| q c-b | = | 175 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 296 |
| Q b-c | = | 430 |
| Q c-b | = | 792 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.22**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

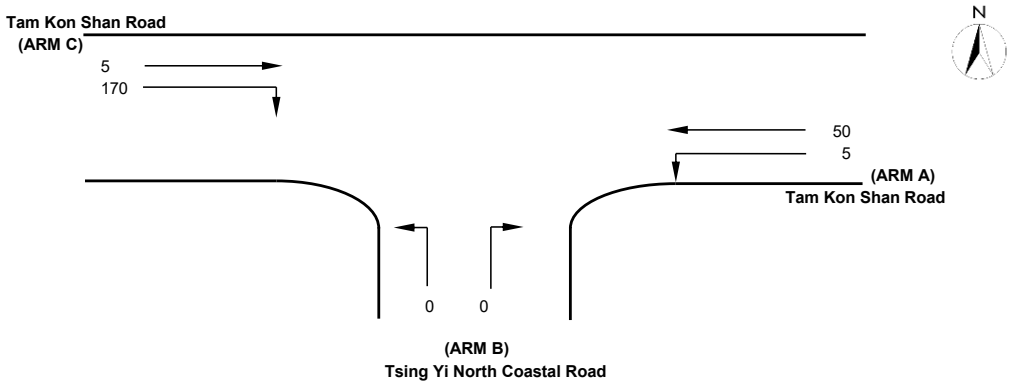
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.22 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2028 Design Case AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Oct 2026 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) |
| q a-c | = | 50 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 5 | (pcu/hour) |
| q c-b | = | 170 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 296 |
| Q b-c | = | 429 |
| Q c-b | = | 791 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.22**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

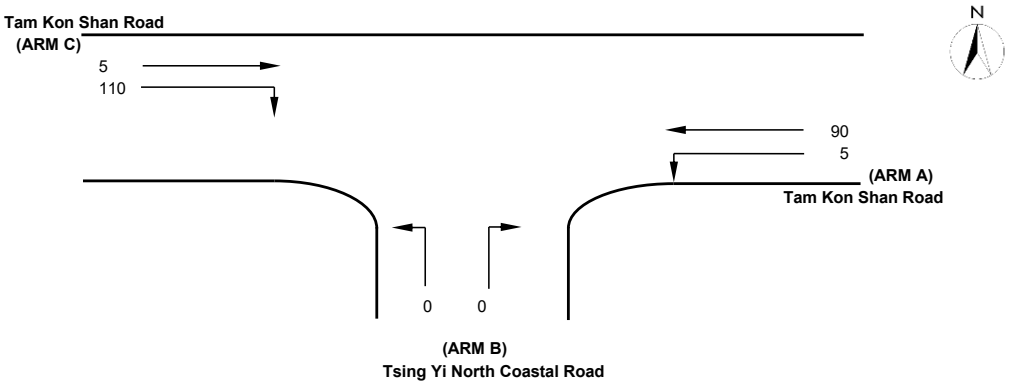
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.22 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2028 Design Case NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Oct 2026 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) |
| q a-c | = | 90 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 5 | (pcu/hour) |
| q c-b | = | 110 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 302 |
| Q b-c | = | 424 |
| Q c-b | = | 780 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.14**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

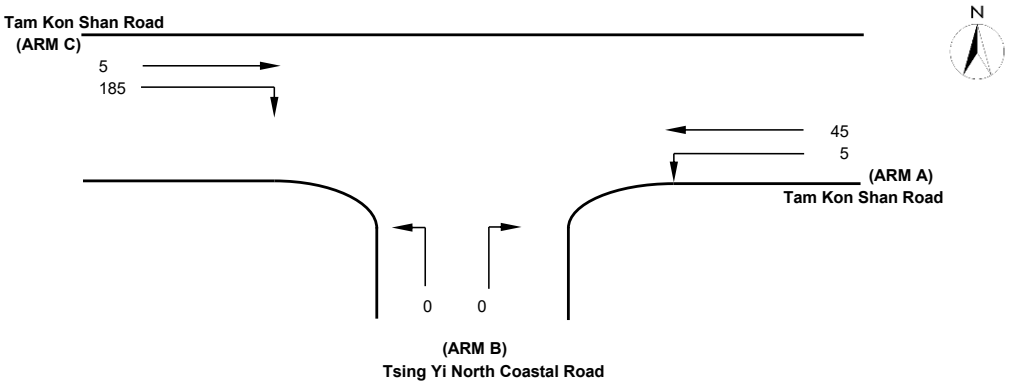
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.14 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2028 Design Case PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Oct 2026 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) |
| q a-c | = | 45 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 5 | (pcu/hour) |
| q c-b | = | 185 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 294 |
| Q b-c | = | 430 |
| Q c-b | = | 792 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.23**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

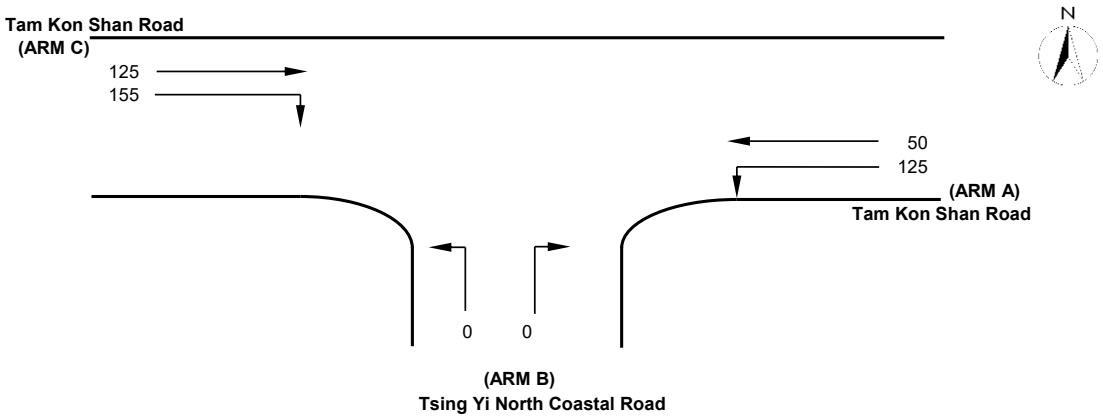
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.23 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2031 Reference Case AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 10.00 (metres) | W c-b | = | 3.30 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 250 (metres) | W b-c | = | 0.00 (metres) |
| q a-b | = | 125 (pcu/hour) | q c-a | = | 125 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 50 (pcu/hour) | q c-b | = | 155 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 0 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 284 |
| Q b-c | = | 423 |
| Q c-b | = | 760 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.20**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

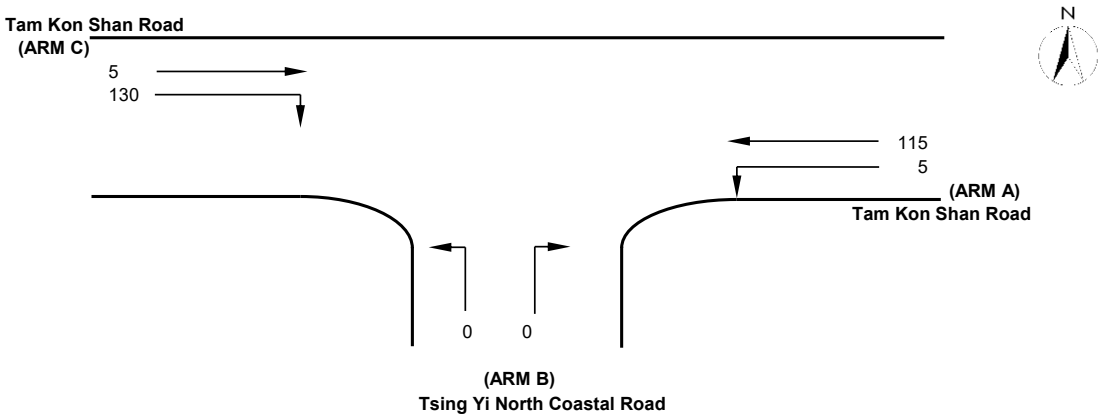
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.20 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2031 Reference Case NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) |
| q a-c | = | 115 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 5 | (pcu/hour) |
| q c-b | = | 130 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 295 |
| Q b-c | = | 420 |
| Q c-b | = | 774 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.17**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

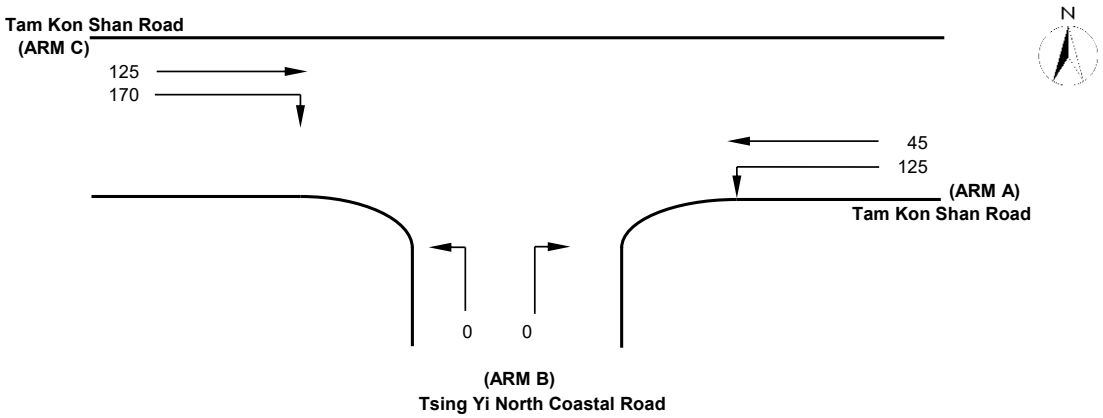
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.17 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2031 Reference Case PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 10.00 (metres) | W c-b | = | 3.30 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 250 (metres) | W b-c | = | 0.00 (metres) |
| q a-b | = | 125 (pcu/hour) | q c-a | = | 125 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 45 (pcu/hour) | q c-b | = | 170 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 0 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 281 |
| Q b-c | = | 423 |
| Q c-b | = | 761 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.22**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

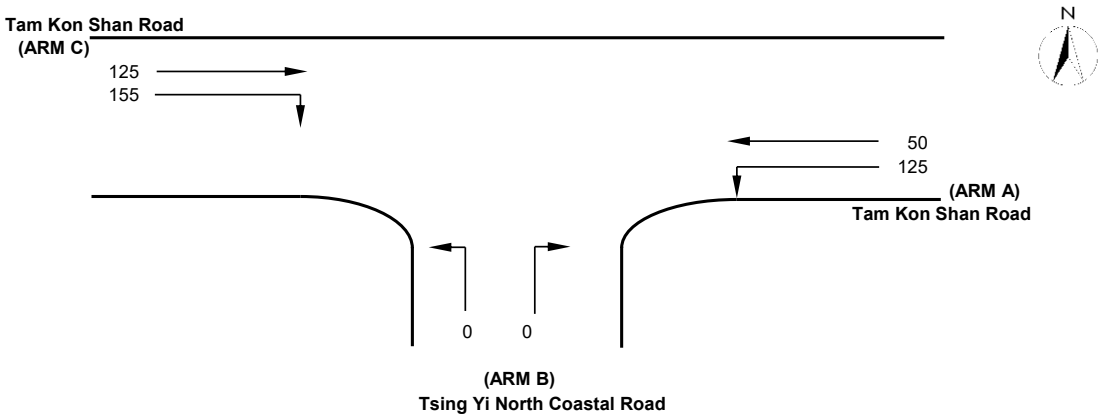
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.22 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2031 Scenario A AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 125 | (pcu/hour) |
| q a-c | = | 50 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 125 | (pcu/hour) |
| q c-b | = | 155 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 284 |
| Q b-c | = | 423 |
| Q c-b | = | 760 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.20**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

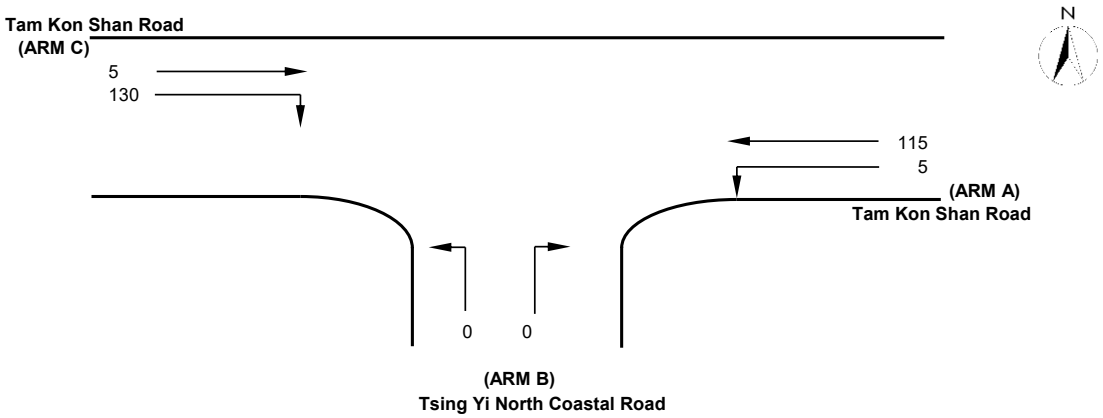
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.20 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2031 Scenario A NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) |
| q a-c | = | 115 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 5 | (pcu/hour) |
| q c-b | = | 130 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 295 |
| Q b-c | = | 420 |
| Q c-b | = | 774 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.17**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

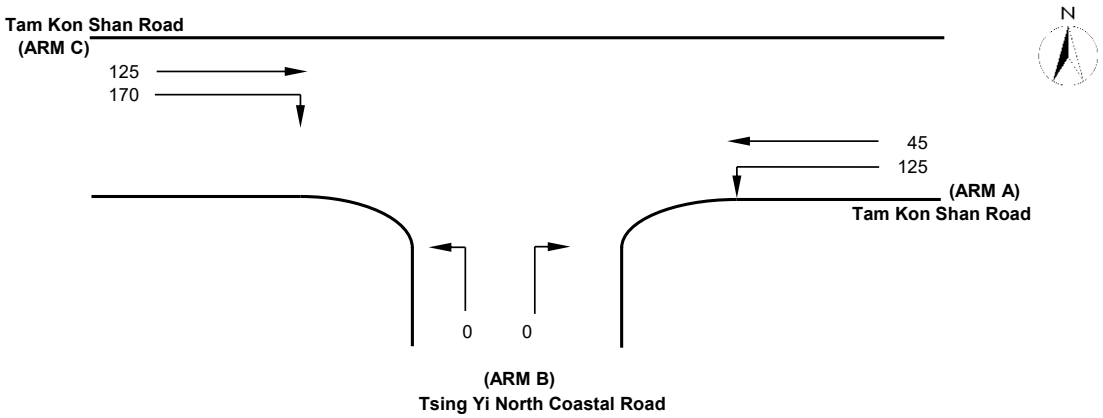
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.17 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2031 Scenario A PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

| *MAJOR ROAD (ARM A)* | | | *MAJOR ROAD (ARM C)* | | | *MINOR ROAD (ARM B)* | | |
|---|---|---|---|---|---|---|---|---|
| W | = | 10.00 (metres) | W c-b | = | 3.30 (metres) | W b-a | = | 0.00 (metres) |
| W cr | = | 0.00 (metres) | Vr c-b | = | 250 (metres) | W b-c | = | 0.00 (metres) |
| q a-b | = | 125 (pcu/hour) | q c-a | = | 125 (pcu/hour) | Vl b-a | = | 0 (metres) |
| q a-c | = | 45 (pcu/hour) | q c-b | = | 170 (pcu/hour) | Vr b-a | = | 0 (metres) |
| | | | | | | Vr b-c | = | 0 (metres) |
| | | | | | | q b-a | = | 0 (pcu/hour) |
| | | | | | | q b-c | = | 0 (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 281 |
| Q b-c | = | 423 |
| Q c-b | = | 761 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.22**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

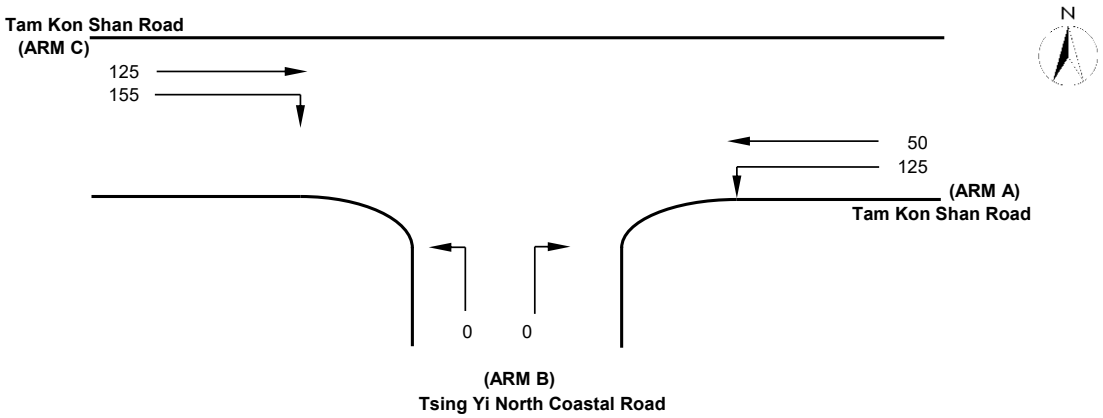
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.22 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2031 Scenario B AM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 125 | (pcu/hour) |
| q a-c | = | 50 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 125 | (pcu/hour) |
| q c-b | = | 155 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 284 |
| Q b-c | = | 423 |
| Q c-b | = | 760 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.20**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

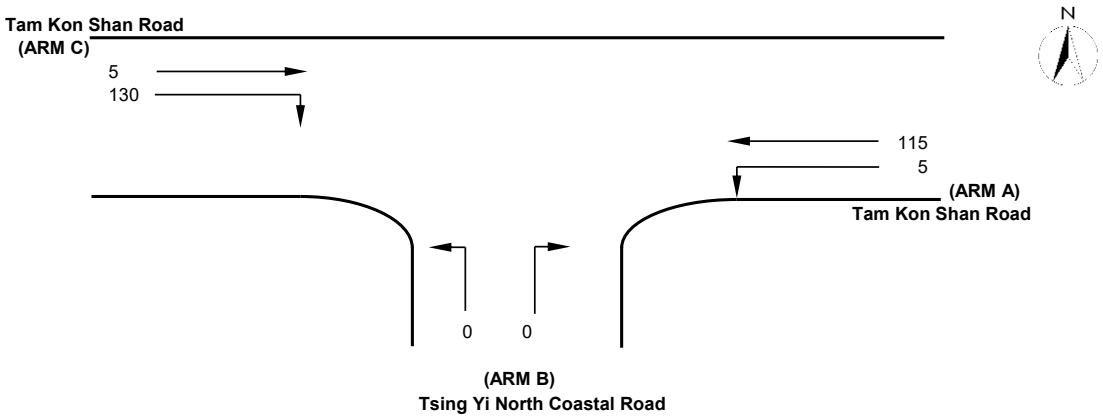
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.20 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2031 Scenario B NN | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 5 | (pcu/hour) |
| q a-c | = | 115 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 5 | (pcu/hour) |
| q c-b | = | 130 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 295 |
| Q b-c | = | 420 |
| Q c-b | = | 774 |
| Q b-ac | = | #DIV/0! |

**CRITICAL DFC = 0.17**

**COMPARISION OF DESIGN FLOW TO CAPACITY :**

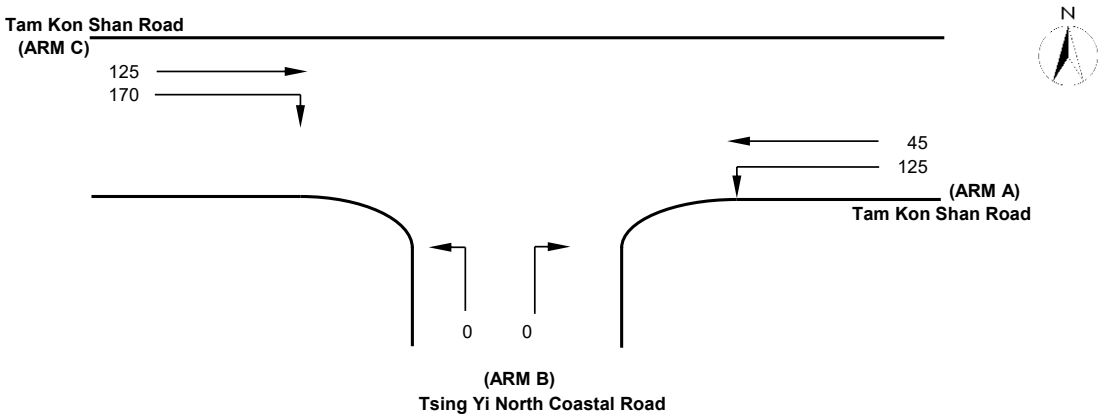
| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.17 |
| DFC b-ac | = | #DIV/0! |

# PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

| Junction J4 - Tam Kon Shan Road / Tsing Yi North Coastal Road | 2031 Scenario B PM | Designed By : MKC | Checked By : LC | Job No. : 60733229 | Date : Nov 2025 |
|---|---|---|---|---|---|

J4




NOTES : ( GEOMETRIC INPUT DATA )

J4

| | |
|---|---|
| W | = Major Road Width (6.4 - 20.0) |
| W cr | = Central Reserve width (1.2 - 9.0, kerbed central reserve only) |
| W b-a | = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70) |
| W b-c | = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70) |
| W c-b | = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70) |
| Vl b-a | = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0) |
| Vr b-a | = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0) |
| Vr b-c | = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0) |
| Vr c-b | = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0) |
| D | = Stream-specific B-A |
| E | = Stream-specific B-C |
| F | = Stream-specific C-B |
| Y | = (1-0.0345W) |

**GEOMETRIC DETAILS:**

*MAJOR ROAD (ARM A)*

| | | | |
|---|---|---|---|
| W | = | 10.00 | (metres) |
| W cr | = | 0.00 | (metres) |
| q a-b | = | 125 | (pcu/hour) |
| q a-c | = | 45 | (pcu/hour) |

*MAJOR ROAD (ARM C)*

| | | | |
|---|---|---|---|
| W c-b | = | 3.30 | (metres) |
| Vr c-b | = | 250 | (metres) |
| q c-a | = | 125 | (pcu/hour) |
| q c-b | = | 170 | (pcu/hour) |

*MINOR ROAD (ARM B)*

| | | | |
|---|---|---|---|
| W b-a | = | 0.00 | (metres) |
| W b-c | = | 0.00 | (metres) |
| Vl b-a | = | 0 | (metres) |
| Vr b-a | = | 0 | (metres) |
| Vr b-c | = | 0 | (metres) |
| q b-a | = | 0 | (pcu/hour) |
| q b-c | = | 0 | (pcu/hour) |

**GEOMETRIC FACTORS :**

| | | |
|---|---|---|
| D | = | 0.53 |
| E | = | 0.59 |
| F | = | 1.08 |
| Y | = | 0.66 |

**THE CAPACITY OF MOVEMENT :**

| | | |
|---|---|---|
| Q b-a | = | 281 |
| Q b-c | = | 423 |
| Q c-b | = | 761 |
| Q b-ac | = | #DIV/0! |

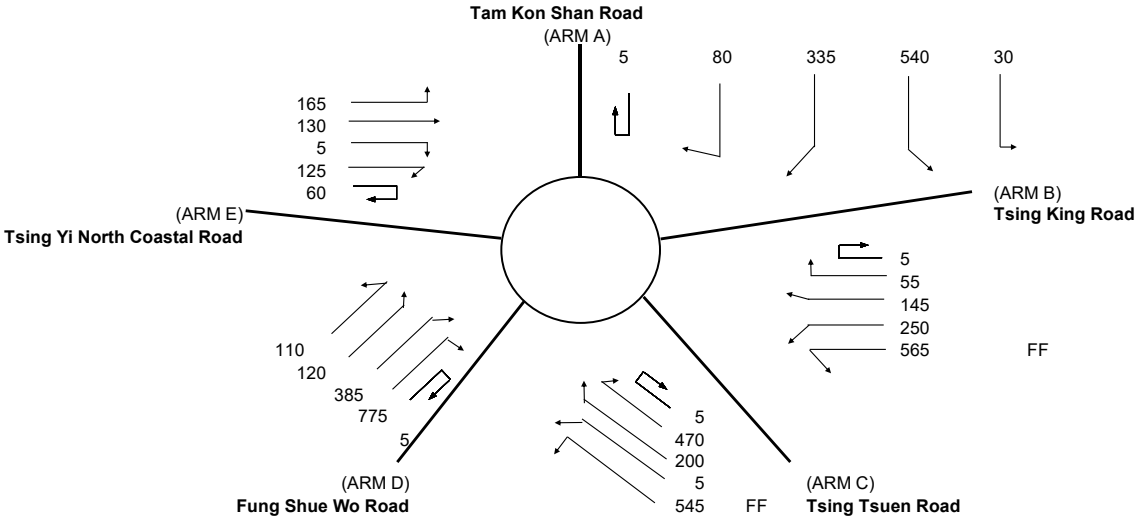
**CRITICAL DFC = 0.22**

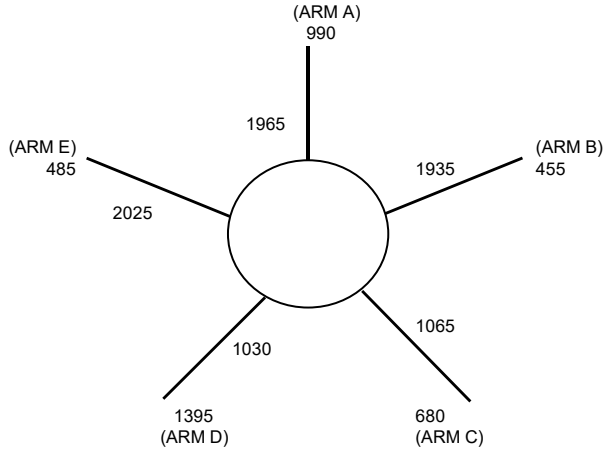
**COMPARISION OF DESIGN FLOW TO CAPACITY :**

| | | |
|---|---|---|
| DFC b-a | = | 0.00 |
| DFC b-c | = | 0.00 |
| DFC c-b | = | 0.22 |
| DFC b-ac | = | #DIV/0! |

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2025 Survey Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 990 | 455 | 680 | 1395 | 485 |
| Qc= Circulating flow across entry (pcu/h) | 1965 | 1935 | 1065 | 1030 | 2025 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1897 | 904 | 1898 | 2377 | 824 |
| DFC = Design flow/Capacity = Q/Qe | 0.52 | 0.50 | 0.36 | 0.59 | 0.59 |

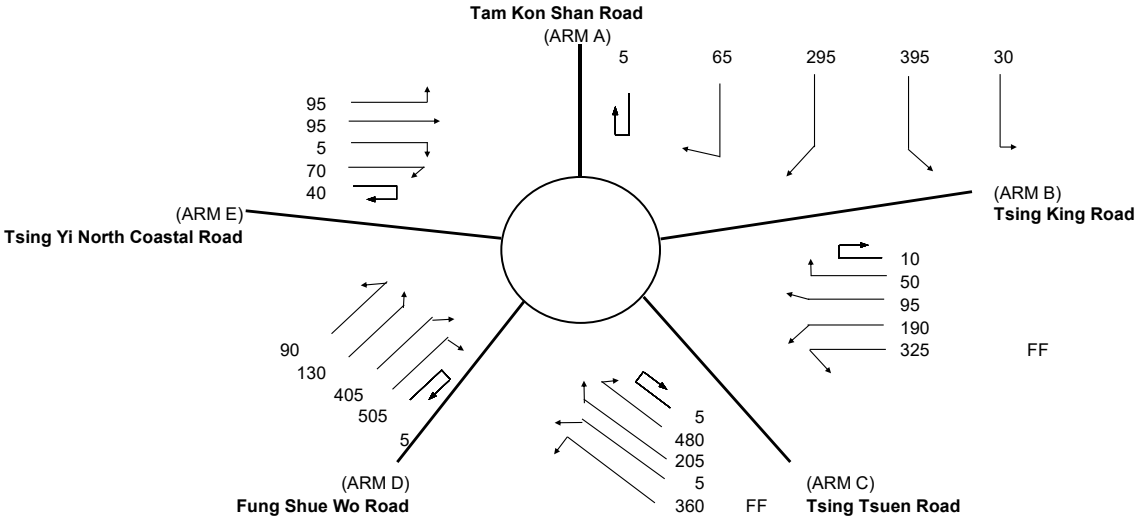
TOTAL ENTRY FLOWS = 4005 PCU

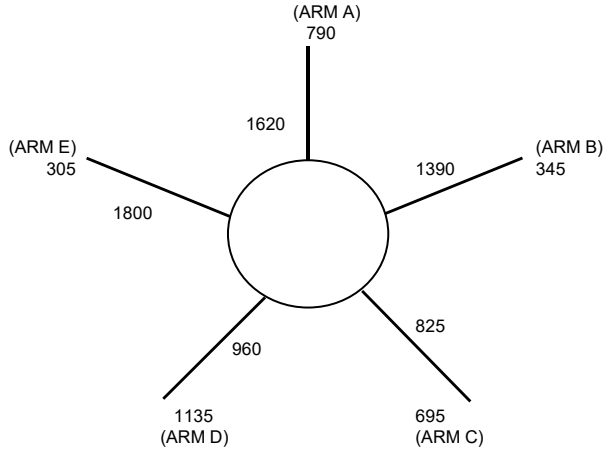
**CRITICAL DFC = 0.59**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2025 Survey Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |



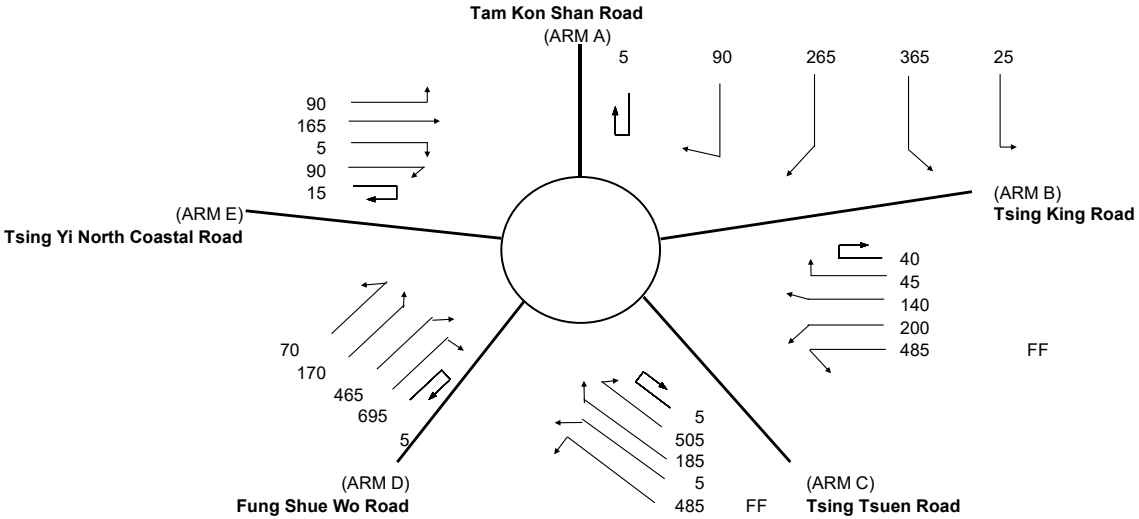

| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 790 | 345 | 695 | 1135 | 305 |
| Qc= Circulating flow across entry (pcu/h) | 1620 | 1390 | 825 | 960 | 1800 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 2120 | 1156 | 2038 | 2421 | 928 |
| DFC = Design flow/Capacity = Q/Qe | 0.37 | 0.30 | 0.34 | 0.47 | 0.33 |

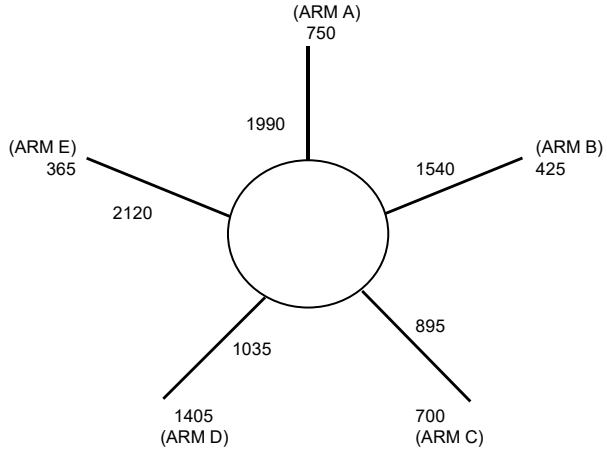
TOTAL ENTRY FLOWS = 3270 PCU

**CRITICAL DFC = 0.47**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2025 Survey Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |



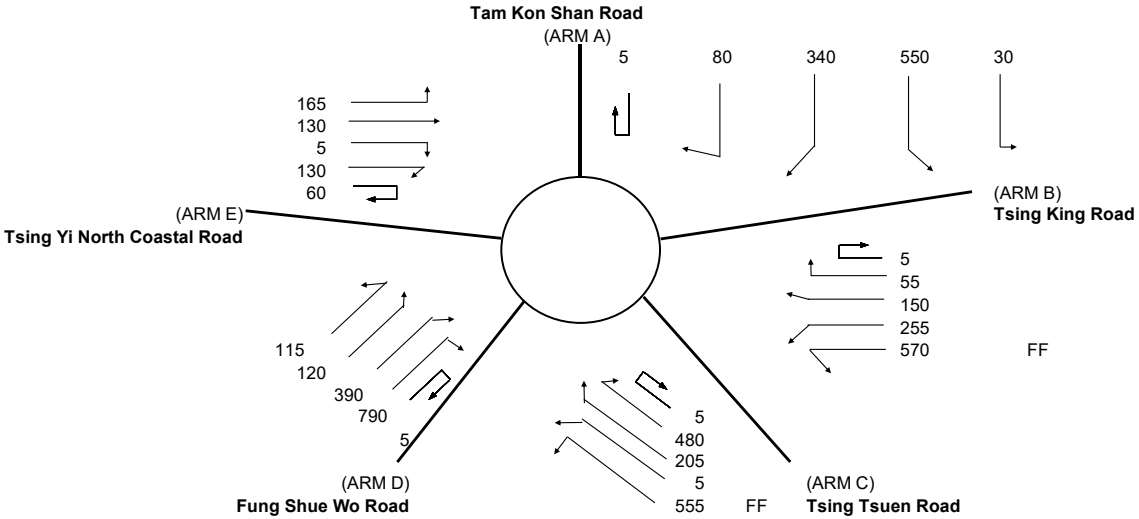

| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 750 | 425 | 700 | 1405 | 365 |
| Qc= Circulating flow across entry (pcu/h) | 1990 | 1540 | 895 | 1035 | 2120 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1881 | 1087 | 1997 | 2374 | 780 |
| DFC = Design flow/Capacity = Q/Qe | 0.40 | 0.39 | 0.35 | 0.59 | 0.47 |

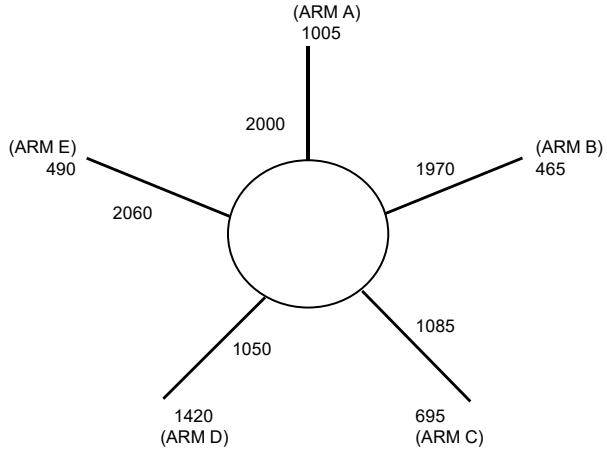
TOTAL ENTRY FLOWS = 3645 PCU

**CRITICAL DFC = 0.59**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2028 Reference Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 1005 | 465 | 695 | 1420 | 490 |
| Qc= Circulating flow across entry (pcu/h) | 2000 | 1970 | 1085 | 1050 | 2060 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1875 | 888 | 1887 | 2365 | 808 |
| DFC = Design flow/Capacity = Q/Qe | 0.54 | 0.52 | 0.37 | 0.60 | 0.61 |

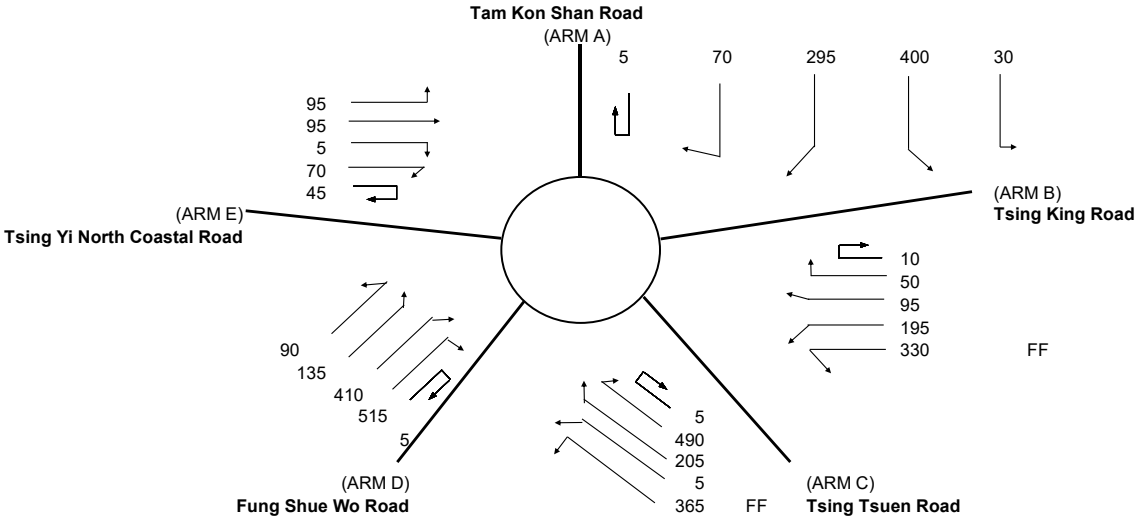
TOTAL ENTRY FLOWS = 4075 PCU

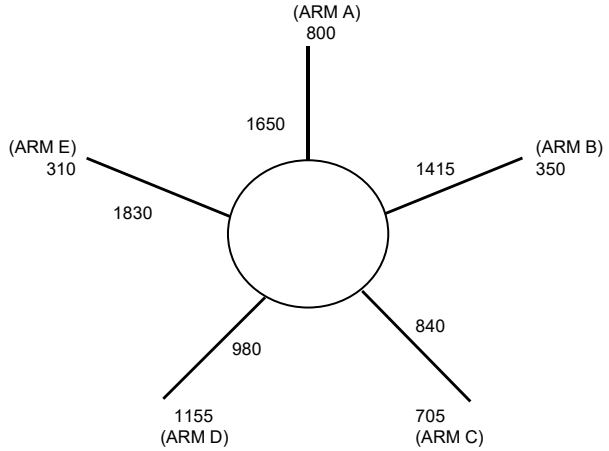
**CRITICAL DFC = 0.61**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2028 Reference Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 800 | 350 | 705 | 1155 | 310 |
| Qc= Circulating flow across entry (pcu/h) | 1650 | 1415 | 840 | 980 | 1830 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 2101 | 1144 | 2029 | 2408 | 914 |
| DFC = Design flow/Capacity = Q/Qe | 0.38 | 0.31 | 0.35 | 0.48 | 0.34 |

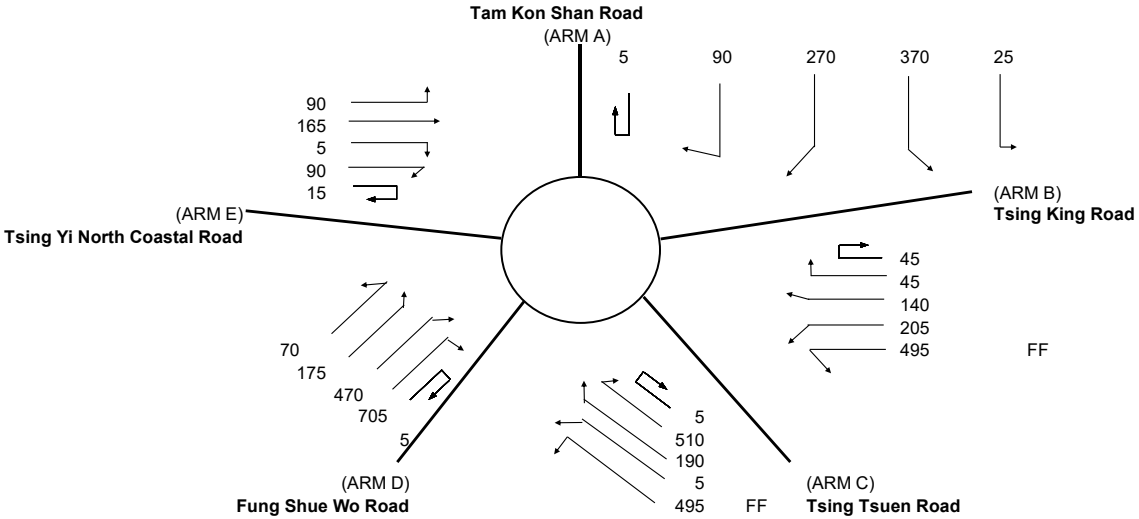
TOTAL ENTRY FLOWS = 3320 PCU

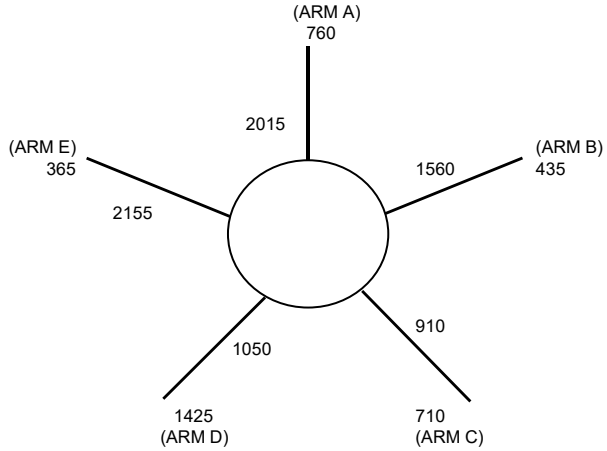
**CRITICAL DFC = 0.48**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2028 Reference Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |



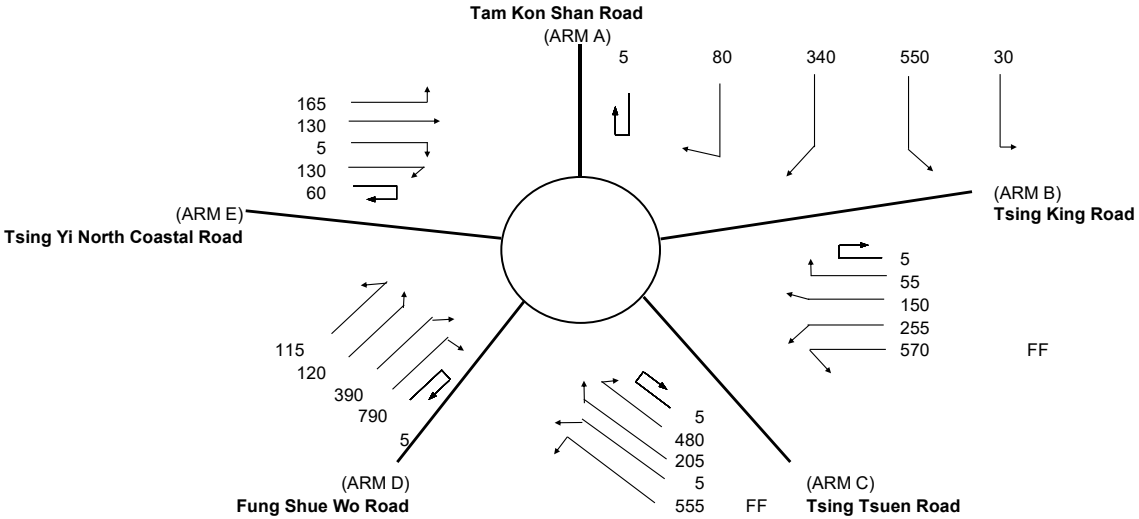

| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 760 | 435 | 710 | 1425 | 365 |
| Qc= Circulating flow across entry (pcu/h) | 2015 | 1560 | 910 | 1050 | 2155 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1865 | 1077 | 1988 | 2365 | 764 |
| DFC = Design flow/Capacity = Q/Qe | 0.41 | 0.40 | 0.36 | 0.60 | 0.48 |

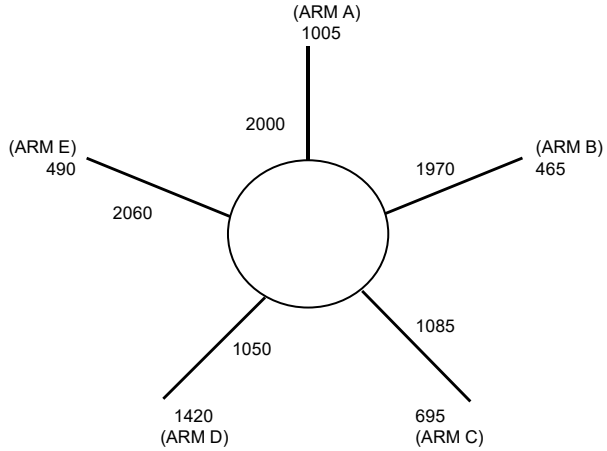
TOTAL ENTRY FLOWS = 3695 PCU

**CRITICAL DFC = 0.60**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2028 Design Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |



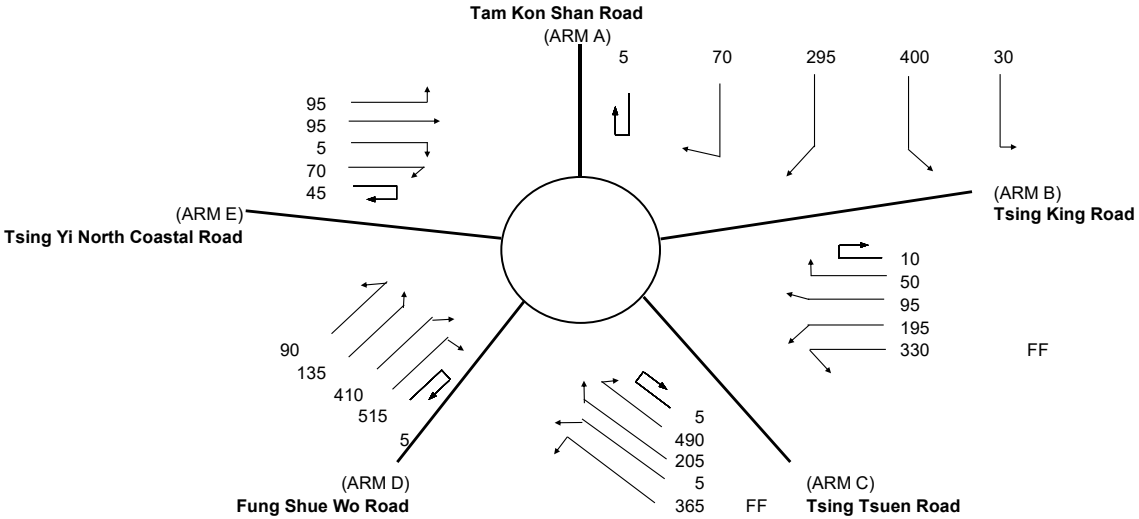

| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 1005 | 465 | 695 | 1420 | 490 |
| Qc= Circulating flow across entry (pcu/h) | 2000 | 1970 | 1085 | 1050 | 2060 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1875 | 888 | 1887 | 2365 | 808 |
| DFC = Design flow/Capacity = Q/Qe | 0.54 | 0.52 | 0.37 | 0.60 | 0.61 |

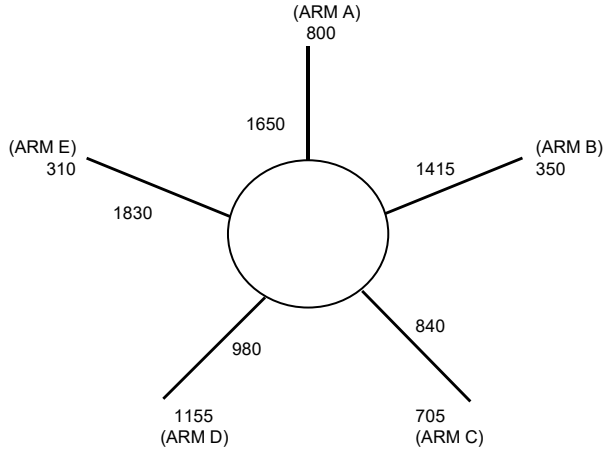
TOTAL ENTRY FLOWS = 4075 PCU

**CRITICAL DFC = 0.61**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2028 Design Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 800 | 350 | 705 | 1155 | 310 |
| Qc= Circulating flow across entry (pcu/h) | 1650 | 1415 | 840 | 980 | 1830 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 2101 | 1144 | 2029 | 2408 | 914 |
| DFC = Design flow/Capacity = Q/Qe | 0.38 | 0.31 | 0.35 | 0.48 | 0.34 |

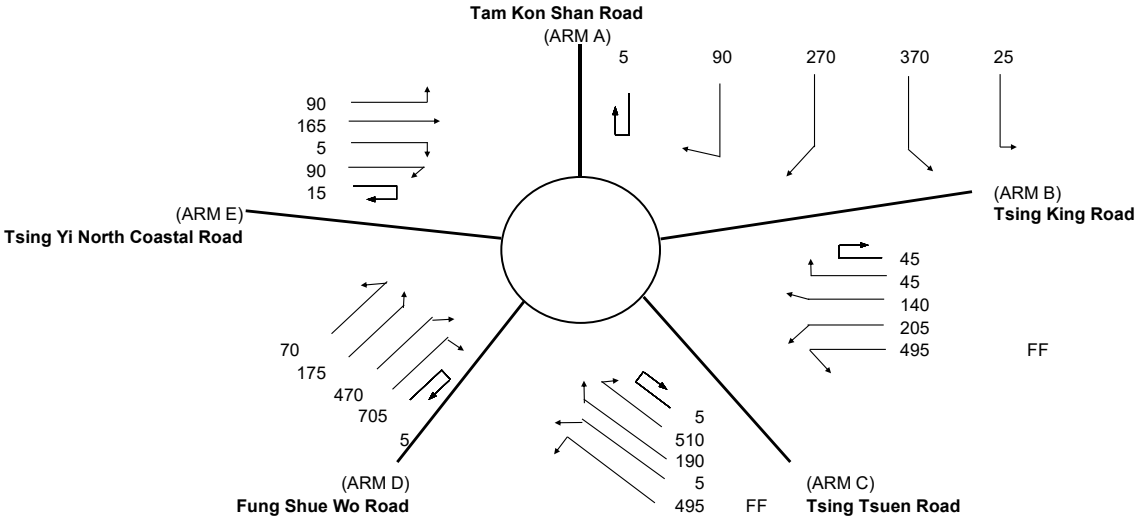
TOTAL ENTRY FLOWS = 3320 PCU

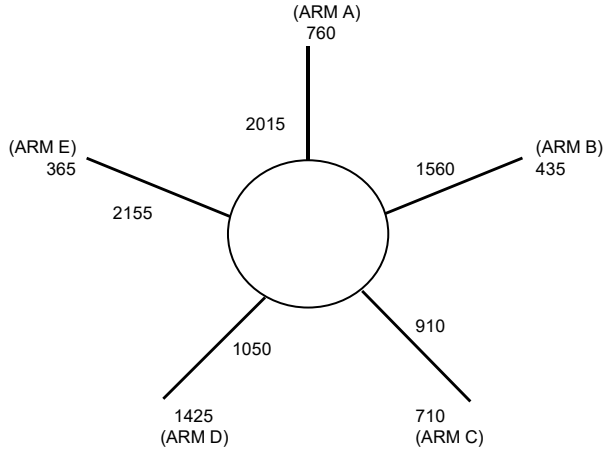
**CRITICAL DFC = 0.48**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2028 Design Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |



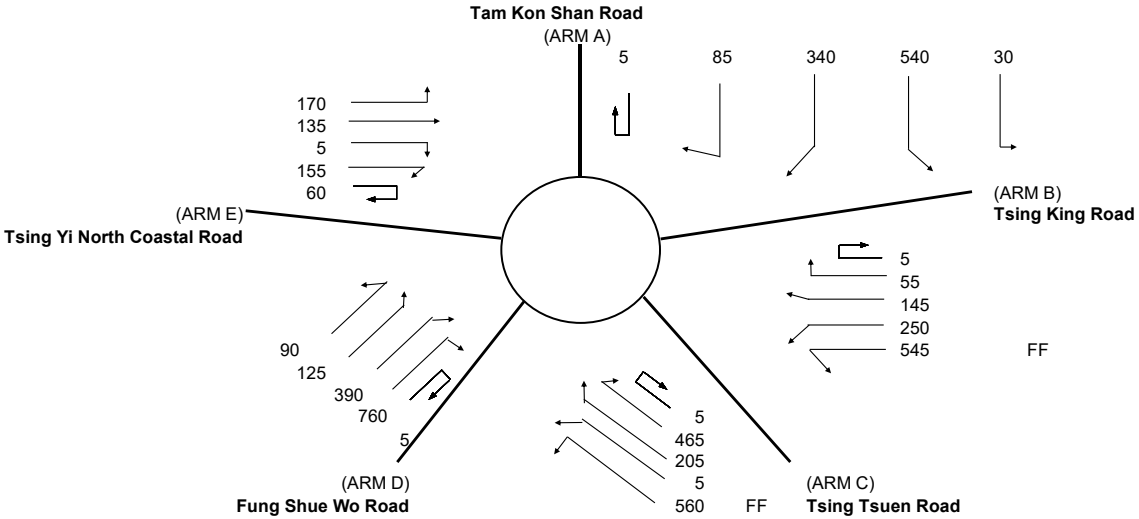

| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 760 | 435 | 710 | 1425 | 365 |
| Qc= Circulating flow across entry (pcu/h) | 2015 | 1560 | 910 | 1050 | 2155 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1865 | 1077 | 1988 | 2365 | 764 |
| DFC = Design flow/Capacity = Q/Qe | 0.41 | 0.40 | 0.36 | 0.60 | 0.48 |

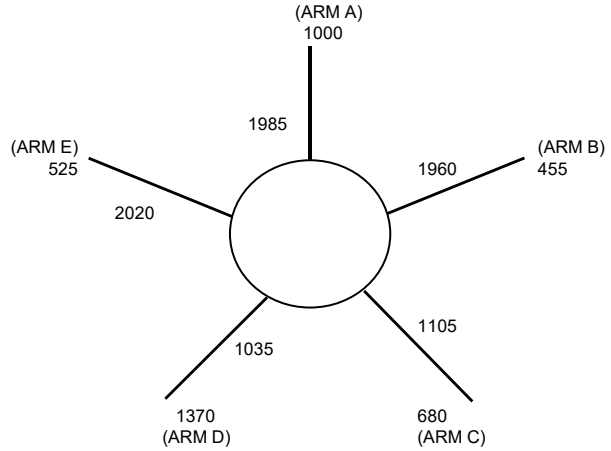
TOTAL ENTRY FLOWS = 3695 PCU

**CRITICAL DFC = 0.60**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2031 Reference Case AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 1000 | 455 | 680 | 1370 | 525 |
| Qc= Circulating flow across entry (pcu/h) | 1985 | 1960 | 1105 | 1035 | 2020 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1884 | 892 | 1875 | 2374 | 826 |
| DFC = Design flow/Capacity = Q/Qe | 0.53 | 0.51 | 0.36 | 0.58 | 0.64 |

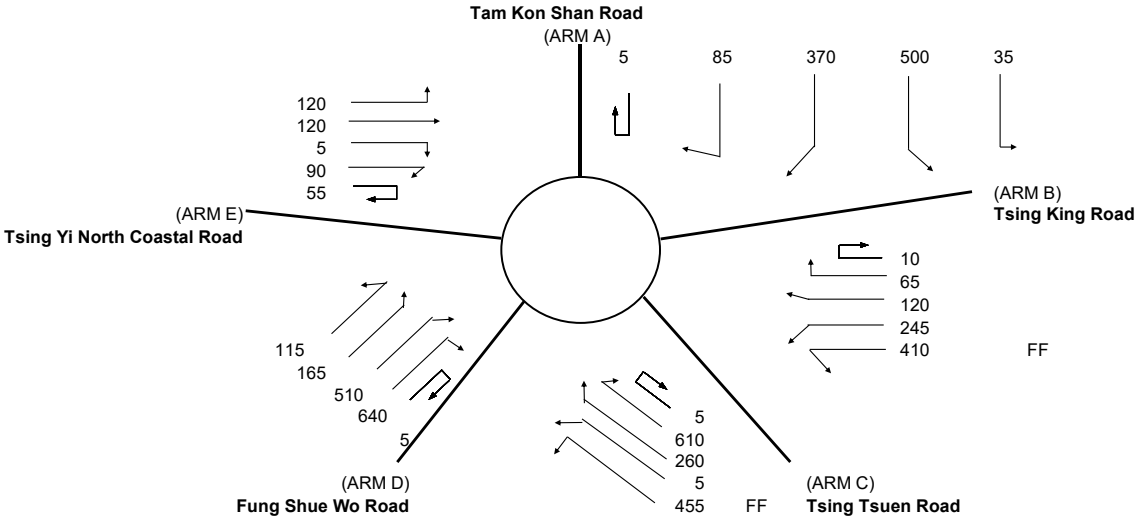
TOTAL ENTRY FLOWS = 4030 PCU

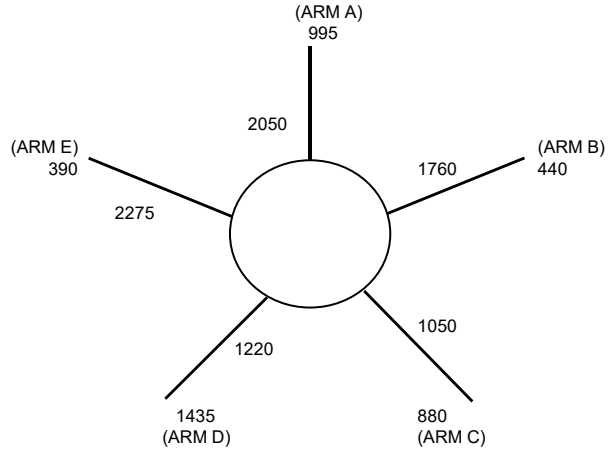
**CRITICAL DFC = 0.64**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2031 Reference Case NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 995 | 440 | 880 | 1435 | 390 |
| Qc= Circulating flow across entry (pcu/h) | 2050 | 1760 | 1050 | 1220 | 2275 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1842 | 985 | 1907 | 2258 | 708 |
| DFC = Design flow/Capacity = Q/Qe | 0.54 | 0.45 | 0.46 | 0.64 | 0.55 |

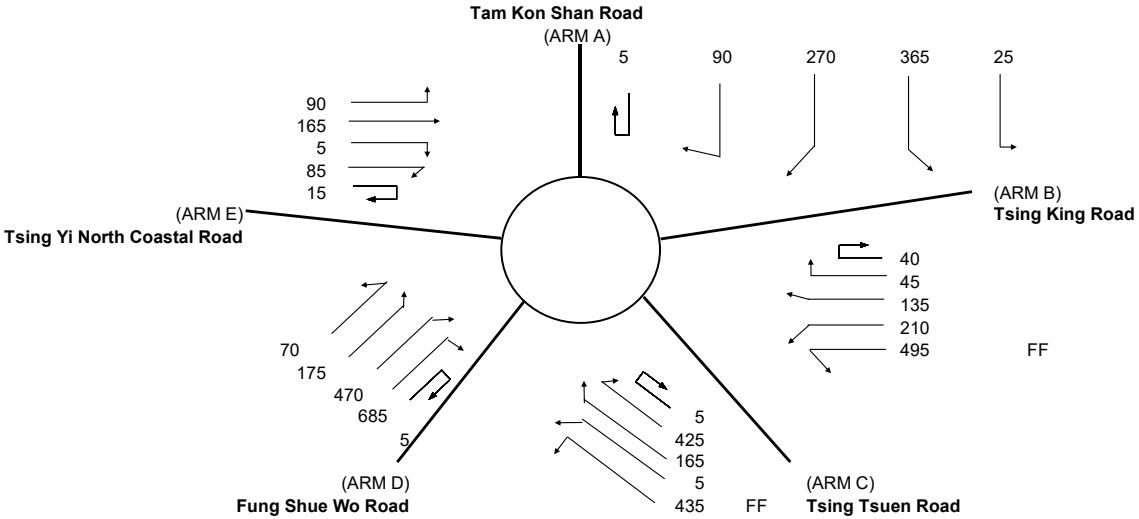
TOTAL ENTRY FLOWS = 4140 PCU

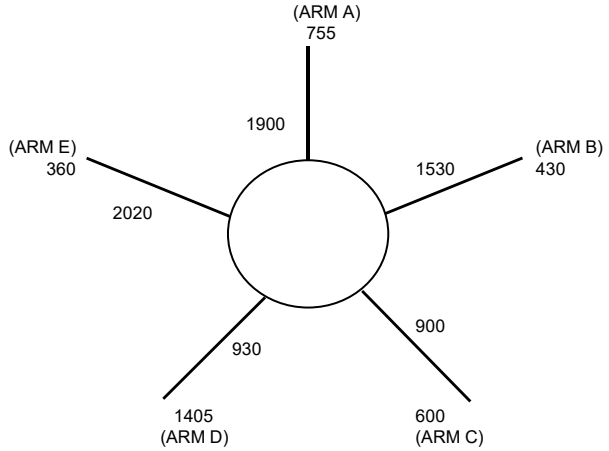
**CRITICAL DFC = 0.64**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2031 Reference Case PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |



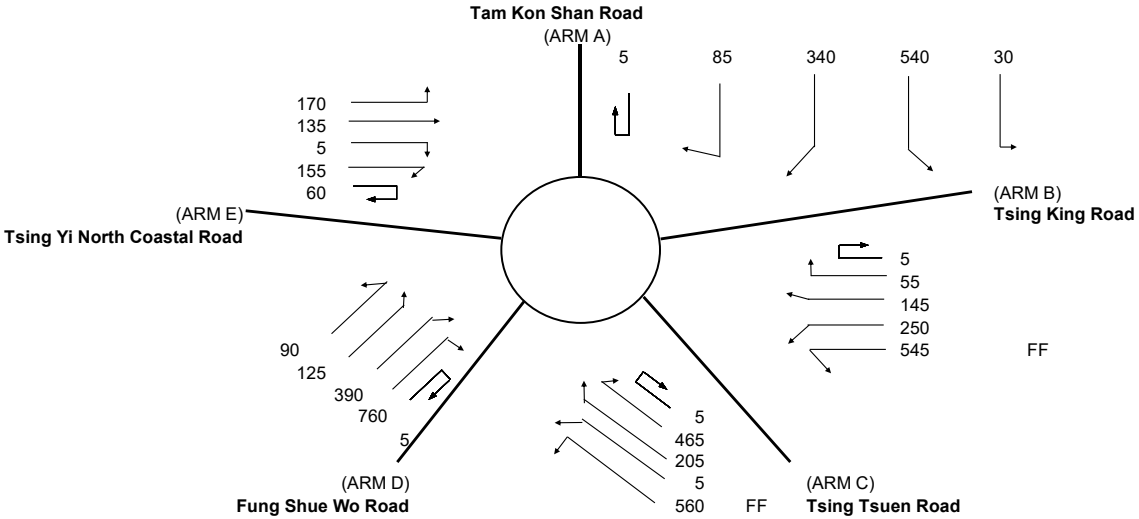

| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 755 | 430 | 600 | 1405 | 360 |
| Qc= Circulating flow across entry (pcu/h) | 1900 | 1530 | 900 | 930 | 2020 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1939 | 1091 | 1994 | 2440 | 826 |
| DFC = Design flow/Capacity = Q/Qe | 0.39 | 0.39 | 0.30 | 0.58 | 0.44 |

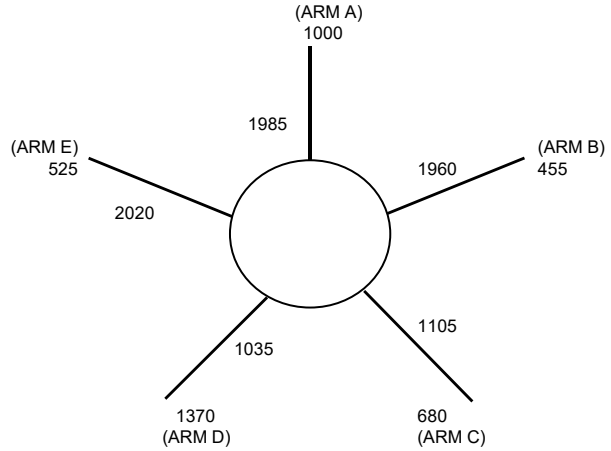
TOTAL ENTRY FLOWS = 3550 PCU

**CRITICAL DFC = 0.58**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2031 Scenario A AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 1000 | 455 | 680 | 1370 | 525 |
| Qc= Circulating flow across entry (pcu/h) | 1985 | 1960 | 1105 | 1035 | 2020 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1884 | 892 | 1875 | 2374 | 826 |
| DFC = Design flow/Capacity = Q/Qe | 0.53 | 0.51 | 0.36 | 0.58 | 0.64 |

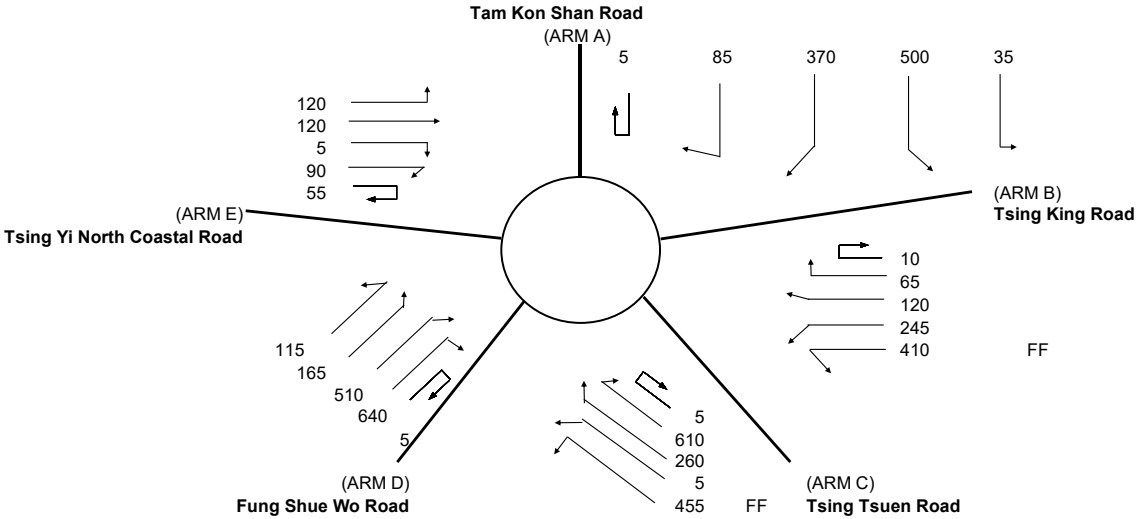
TOTAL ENTRY FLOWS = 4030 PCU

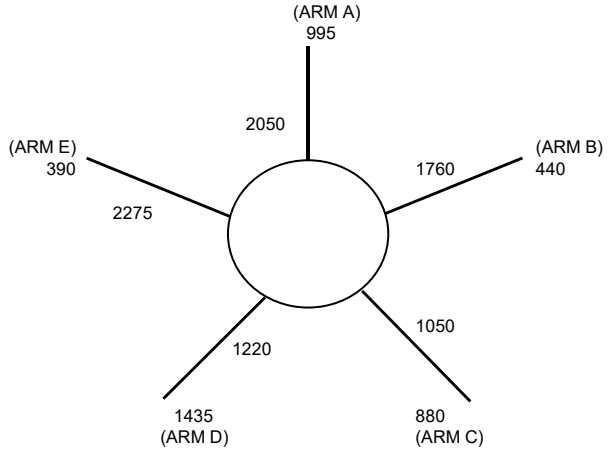
**CRITICAL DFC = 0.64**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2031 Scenario A NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |



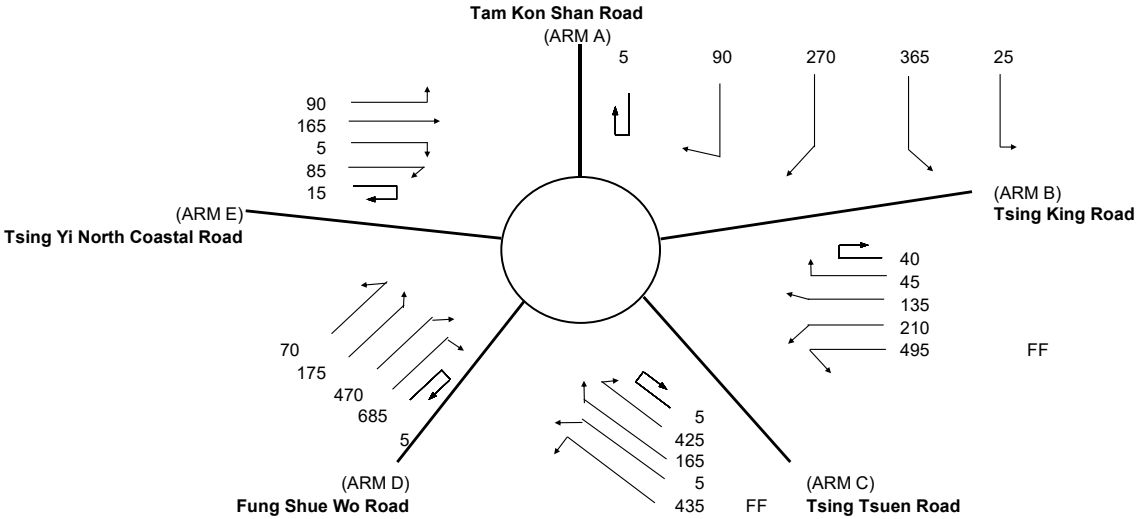

| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 995 | 440 | 880 | 1435 | 390 |
| Qc= Circulating flow across entry (pcu/h) | 2050 | 1760 | 1050 | 1220 | 2275 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1842 | 985 | 1907 | 2258 | 708 |
| DFC = Design flow/Capacity = Q/Qe | 0.54 | 0.45 | 0.46 | 0.64 | 0.55 |

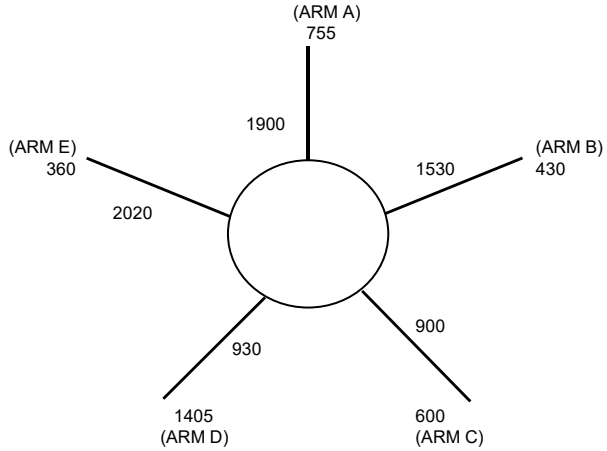
TOTAL ENTRY FLOWS = 4140 PCU

**CRITICAL DFC = 0.64**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2031 Scenario A PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |



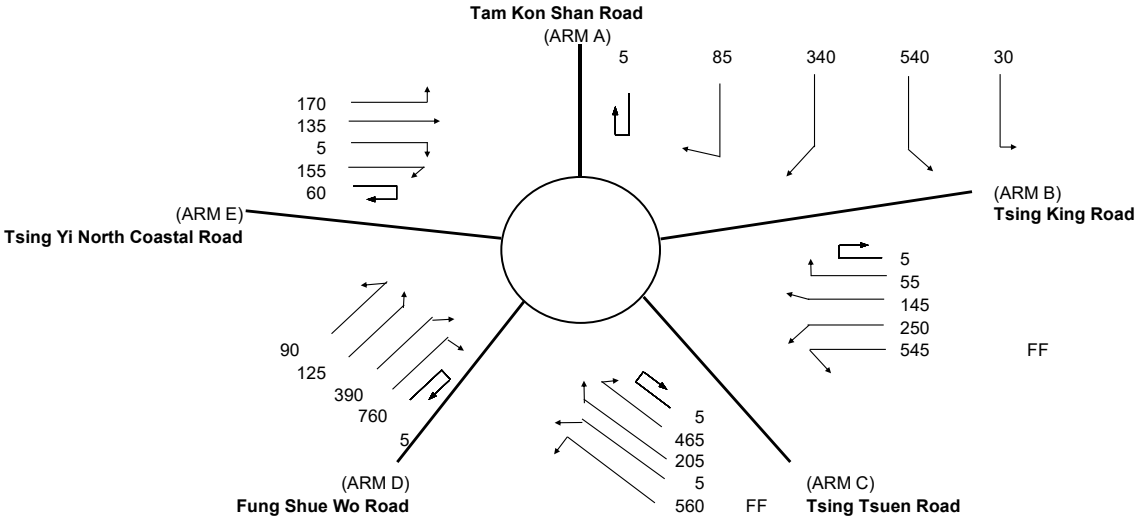

| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 755 | 430 | 600 | 1405 | 360 |
| Qc= Circulating flow across entry (pcu/h) | 1900 | 1530 | 900 | 930 | 2020 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1939 | 1091 | 1994 | 2440 | 826 |
| DFC = Design flow/Capacity = Q/Qe | 0.39 | 0.39 | 0.30 | 0.58 | 0.44 |

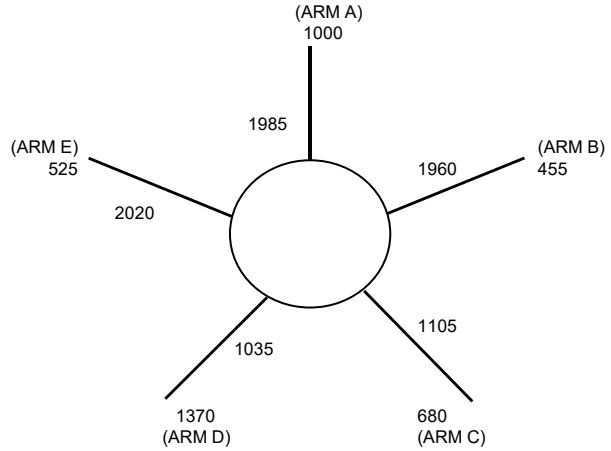
TOTAL ENTRY FLOWS = 3550 PCU

**CRITICAL DFC = 0.58**

**ROUNDABOUT CAPACITY CALCULATION** **AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2031 Scenario B AM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 1000 | 455 | 680 | 1370 | 525 |
| Qc= Circulating flow across entry (pcu/h) | 1985 | 1960 | 1105 | 1035 | 2020 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1884 | 892 | 1875 | 2374 | 826 |
| DFC = Design flow/Capacity = Q/Qe | 0.53 | 0.51 | 0.36 | 0.58 | 0.64 |

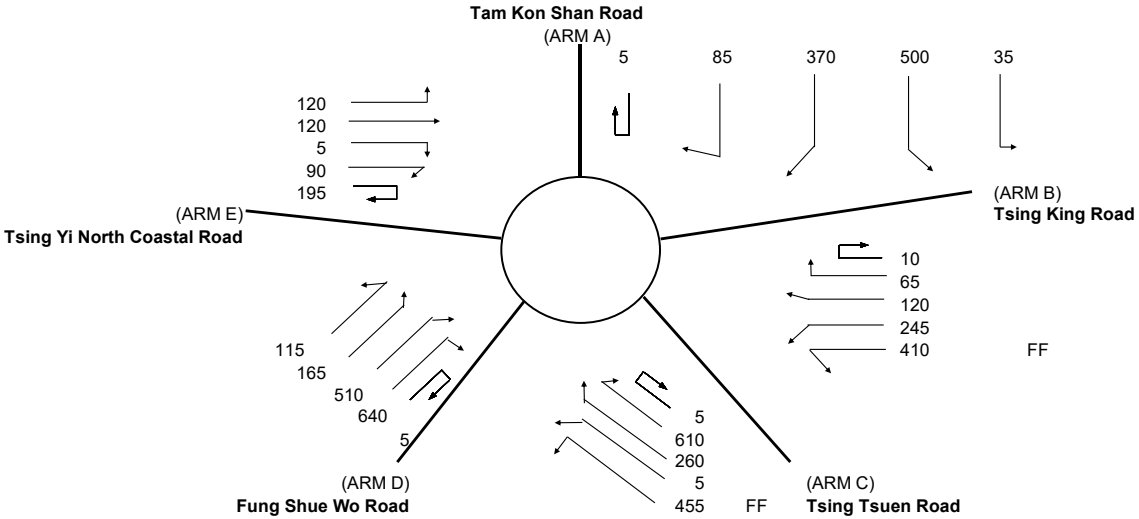
TOTAL ENTRY FLOWS = 4030 PCU

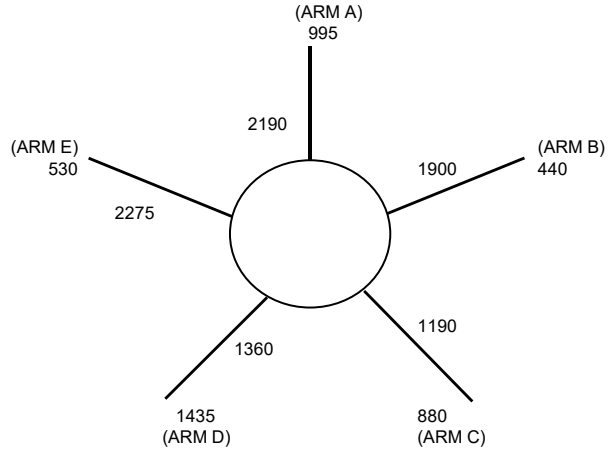
**CRITICAL DFC = 0.64**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2031 Scenario B NN | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 995 | 440 | 880 | 1435 | 530 |
| Qc= Circulating flow across entry (pcu/h) | 2190 | 1900 | 1190 | 1360 | 2275 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1752 | 920 | 1826 | 2171 | 708 |
| DFC = Design flow/Capacity = Q/Qe | 0.57 | 0.48 | 0.48 | 0.66 | 0.75 |

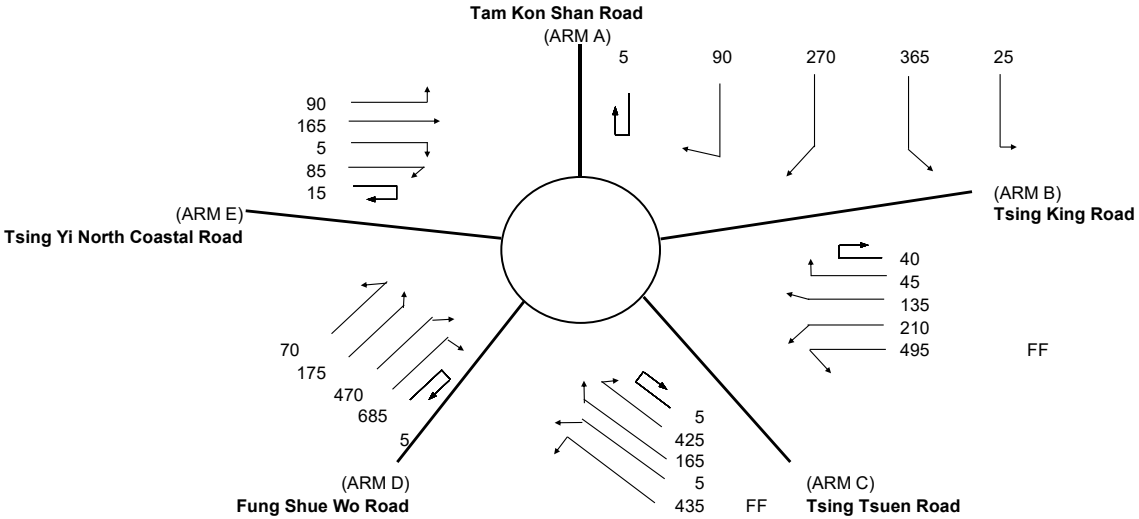
TOTAL ENTRY FLOWS = 4280 PCU

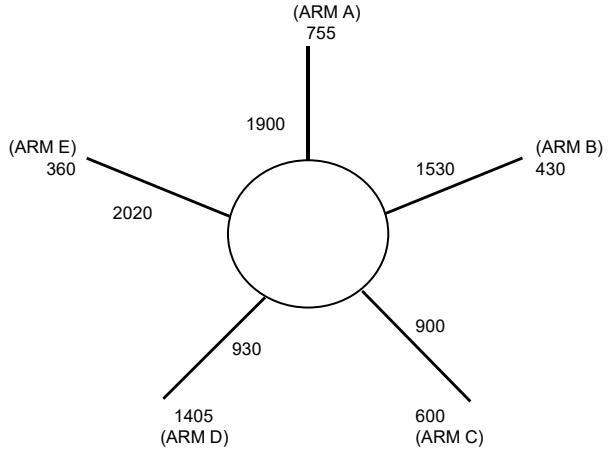
**CRITICAL DFC = 0.75**

## ROUNDABOUT CAPACITY CALCULATION

**AECOM**

| Junction | J5 - Tam Kon Shan Interchange | Scenario | 2031 Scenario B PM | Project No. | Prepared By | Checked By | Date |
|---|---|---|---|---|---|---|---|
| | | | | 60733229 | MKC | LC | Nov 2025 |




| ARM | A | B | C | D | E |
|---|---|---|---|---|---|
| INPUT PARAMETERS: | | | | | |
| V = Approach half width (m) | 6.70 | 3.65 | 7.40 | 7.70 | 4.00 |
| E = Entry width (m) | 14.25 | 7.70 | 8.25 | 13.75 | 6.35 |
| L = Effective length of flare (m) | 26.60 | 15.90 | 0.70 | 13.80 | 15.70 |
| R = Entry radius (m) | 33.00 | 38.00 | 45.00 | 20.00 | 35.00 |
| D = Inscribed circle diameter (m) | 114.00 | 114.00 | 114.00 | 114.00 | 114.00 |
| A = Entry angle (degree) | 41.00 | 34.00 | 10.00 | 37.00 | 24.00 |
| Q = Entry flow (pcu/h) | 755 | 430 | 600 | 1405 | 360 |
| Qc= Circulating flow across entry (pcu/h) | 1900 | 1530 | 900 | 930 | 2020 |
| OUTPUT PARAMETERS: | | | | | |
| S = Sharpness of flare = 1.6(E-V)/L | 0.45 | 0.41 | 1.94 | 0.70 | 0.24 |
| K = 1-0.00347(A-30)-0.978(1/R-0.05) | 0.98 | 1.01 | 1.10 | 0.98 | 1.04 |
| X2= V + ((E-V)/(1+2S)) | 10.66 | 5.88 | 7.57 | 10.22 | 5.59 |
| M = EXP((D-60)/10) | 221.41 | 221.41 | 221.41 | 221.41 | 221.41 |
| F = 303*X2 | 3229 | 1782 | 2295 | 3096 | 1693 |
| Td= 1+(0.5/(1+M)) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fc= 0.21*Td(1+0.2*X2) | 0.66 | 0.46 | 0.53 | 0.64 | 0.45 |
| Qe= K(F-Fc*Qc) | 1939 | 1091 | 1994 | 2440 | 826 |
| DFC = Design flow/Capacity = Q/Qe | 0.39 | 0.39 | 0.30 | 0.58 | 0.44 |

TOTAL ENTRY FLOWS = 3550 PCU

**CRITICAL DFC = 0.58**

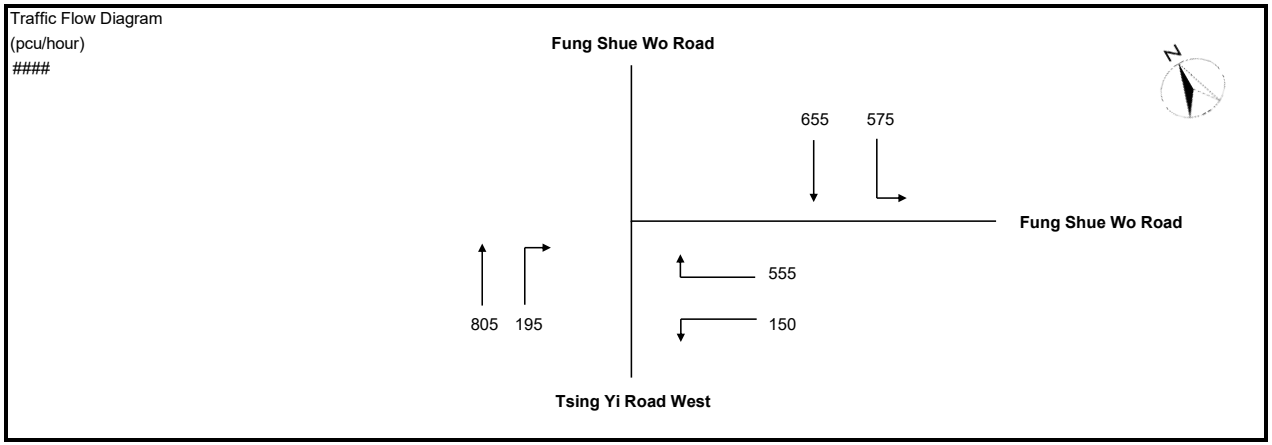
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2025 Survey Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

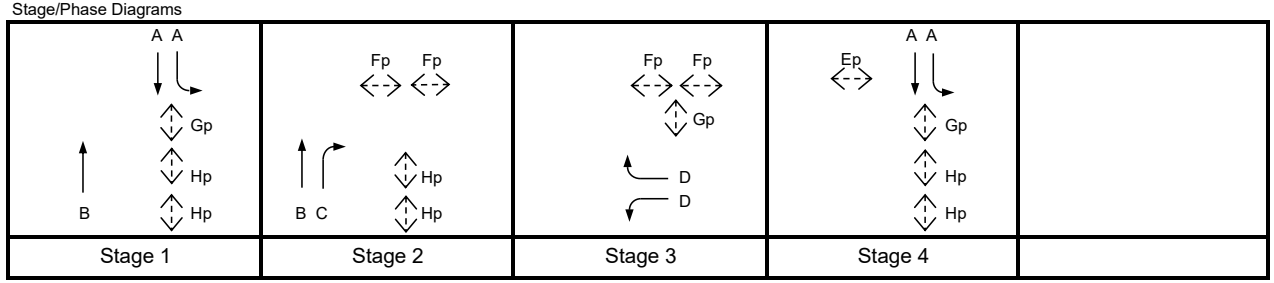
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.582 | |
| Lost time | L = | 28 | sec |
| Total Flow | = | 2,935 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 112 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 67 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.690 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 18.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 79 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.720 | |

Stage/Phase Diagrams




I/G = 5 I/G = 10 I/G = 8 G = 5 I/G = 2

**Critical Case : B,D,Ep**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 11%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | B | 1,2 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 805 | | 805 | | | 1956 | 0.412 | 0.412 |
| ↱ | C | 2 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | | 195 | 195 | | 100% | 1926 | 0.101 | |
| ↑ | D | 3 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 180 | 2018.5 | 150 | | 209 | 359 | 42% | 58% | 2108 | 0.170 | 0.170 |
| ↱ | D | 3 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 346 | 346 | | 100% | 2030 | 0.170 | |
| ↳ | A | 1,4 | 4.015 | 1 | 150 | | | 1 | | 0 | 54 | 2016.5 | 575 | | | 575 | 100% | | 2050 | 0.280 | |
| ↓ | A | 1,4 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 655 | | 655 | | | 4301 | 0.152 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |
| | Fp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Gp | 1,3,4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Hp | 1,2,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

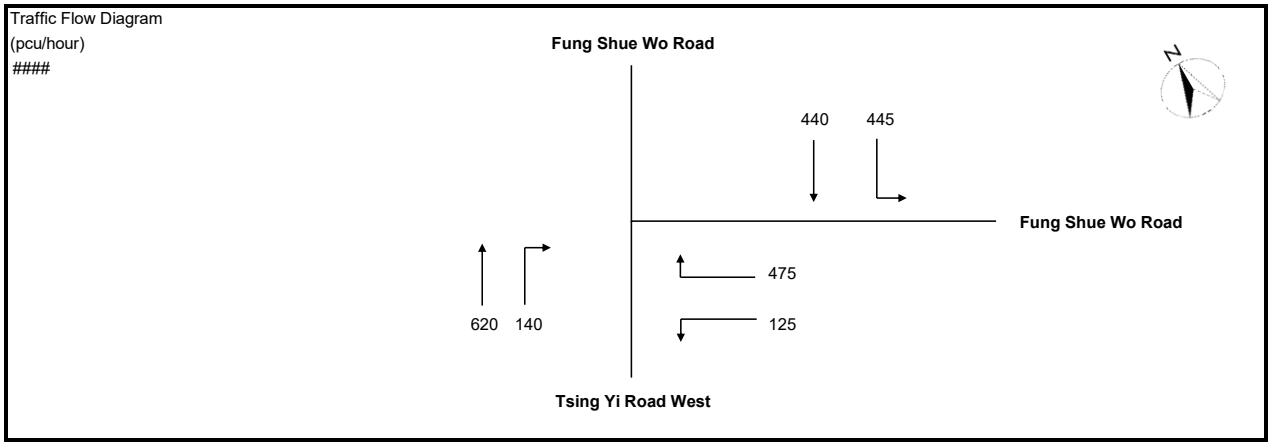
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2025 Survey Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

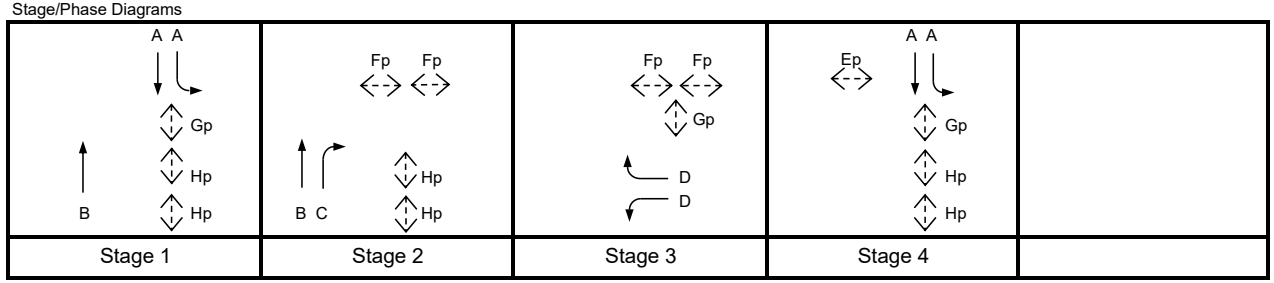
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.462 | |
| Lost time | L = | 28 | sec |
| Total Flow | = | 2,245 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 87 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 52 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.690 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 49.4 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 58 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.720 | |

Stage/Phase Diagrams




I/G = 5 I/G = 10 I/G = 8 G = 5 I/G = 2

**Critical Case : B,D,Ep**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | B | 1,2 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 620 | | 620 | | | 1956 | 0.317 | 0.317 |
| ↱ | C | 2 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | | 140 | 140 | | 100% | 1926 | 0.073 | |
| ↑ ↱ | D | 3 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 180 | 2018.5 | 125 | | 181 | 306 | 41% | 59% | 2108 | 0.145 | |
| ↱ | D | 3 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 294 | 294 | | 100% | 2030 | 0.145 | 0.145 |
| ↳ | A | 1,4 | 4.015 | 1 | 150 | | | 1 | | 0 | 54 | 2016.5 | 445 | | | 445 | 100% | | 2050 | 0.217 | |
| ↓ | A | 1,4 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 440 | | 440 | | | 4301 | 0.102 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |
| | Fp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Gp | 1,3,4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Hp | 1,2,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

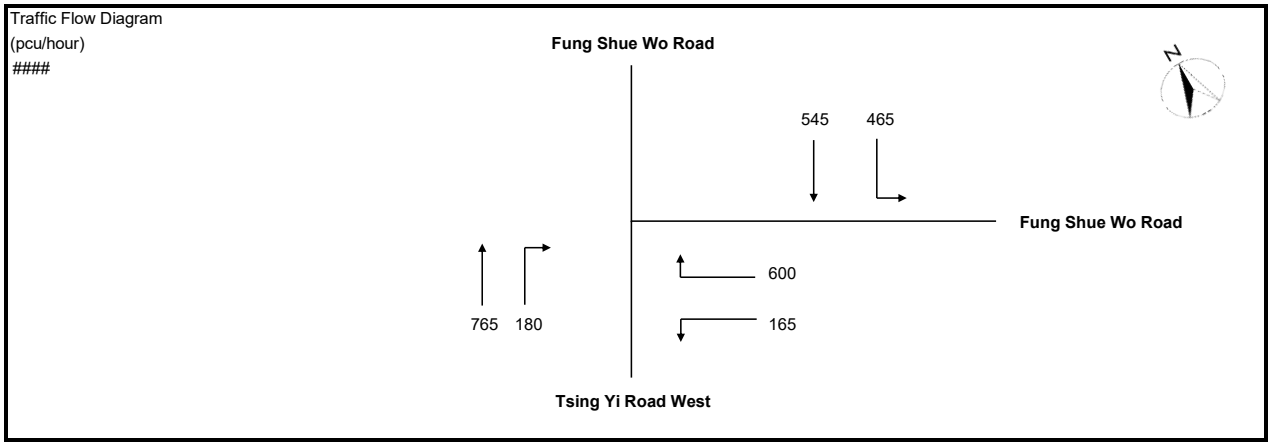
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2025 Survey Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

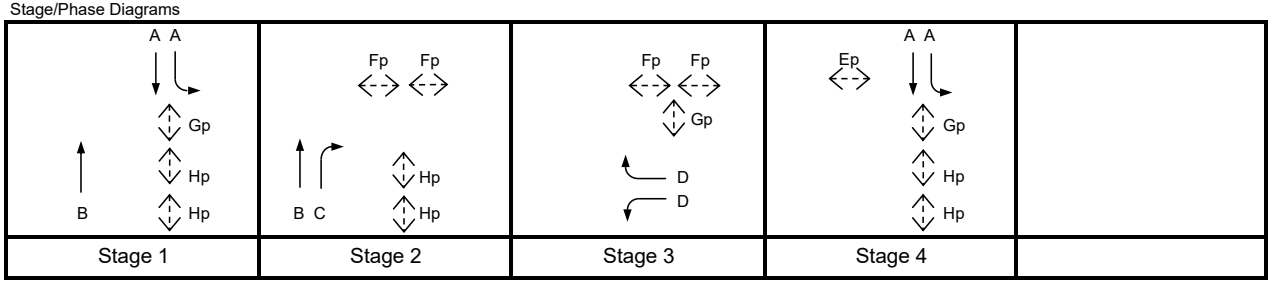
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.576 | |
| Lost time | L = | 28 | sec |
| Total Flow | = | 2,720 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 111 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 66 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.690 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 19.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 78 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.720 | |

Stage/Phase Diagrams




I/G = 5 I/G = 10 I/G = 8 G = 5 I/G = 2

**Critical Case : B,D,Ep**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 13%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | B | 1,2 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 765 | | 765 | | | 1956 | 0.391 | 0.391 |
| ↱ | C | 2 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | | 180 | 180 | | 100% | 1926 | 0.093 | |
| ↑ ↓ | D | 3 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 180 | 2018.5 | 165 | | 225 | 390 | 42% | 58% | 2108 | 0.185 | 0.185 |
| ↱ | D | 3 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 375 | 375 | | 100% | 2030 | 0.185 | |
| ↳ | A | 1,4 | 4.015 | 1 | 150 | | | 1 | | 0 | 54 | 2016.5 | 465 | | | 465 | 100% | | 2050 | 0.227 | |
| ↓ | A | 1,4 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 545 | | 545 | | | 4301 | 0.127 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |
| | Fp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Gp | 1,3,4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Hp | 1,2,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

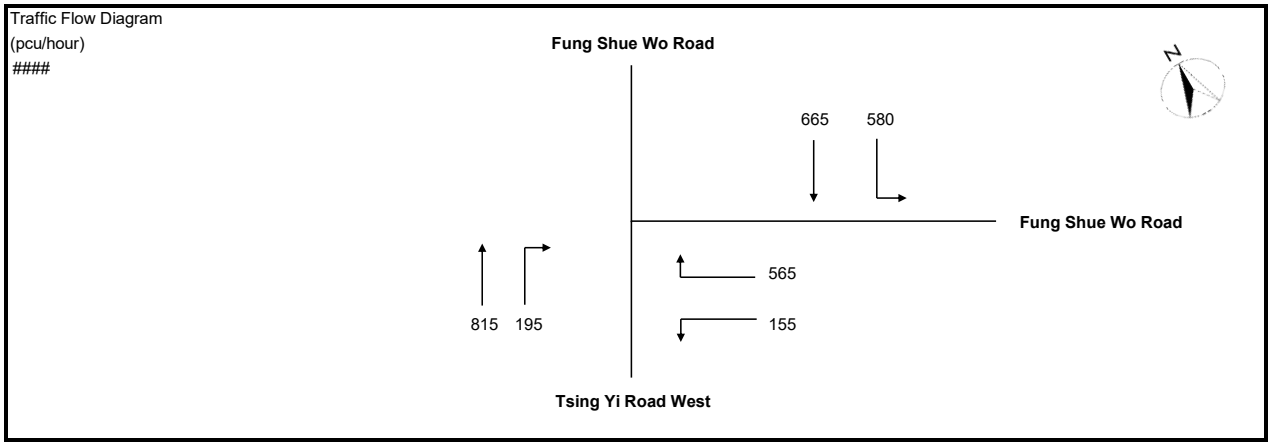
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2028 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

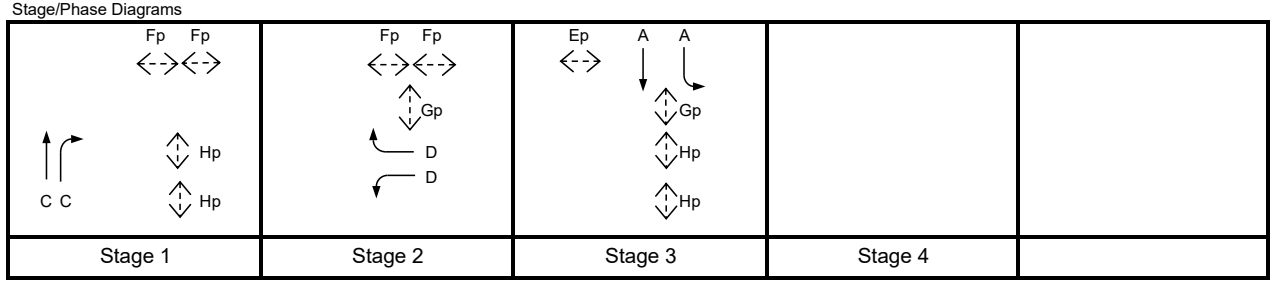
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.583 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,975 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 55 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 29 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 38.9 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 34 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 496 | | 496 | | | 1956 | 0.254 | 0.254 |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 319 | 195 | 514 | | 38% | 2028 | 0.254 | |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 155 | | 209 | 364 | 43% | 57% | 2079 | 0.175 | 0.175 |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 356 | 356 | | 100% | 2030 | 0.175 | |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 580 | | | 580 | 100% | | 4132 | 0.140 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 665 | | 665 | | | 4301 | 0.155 | 0.155 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

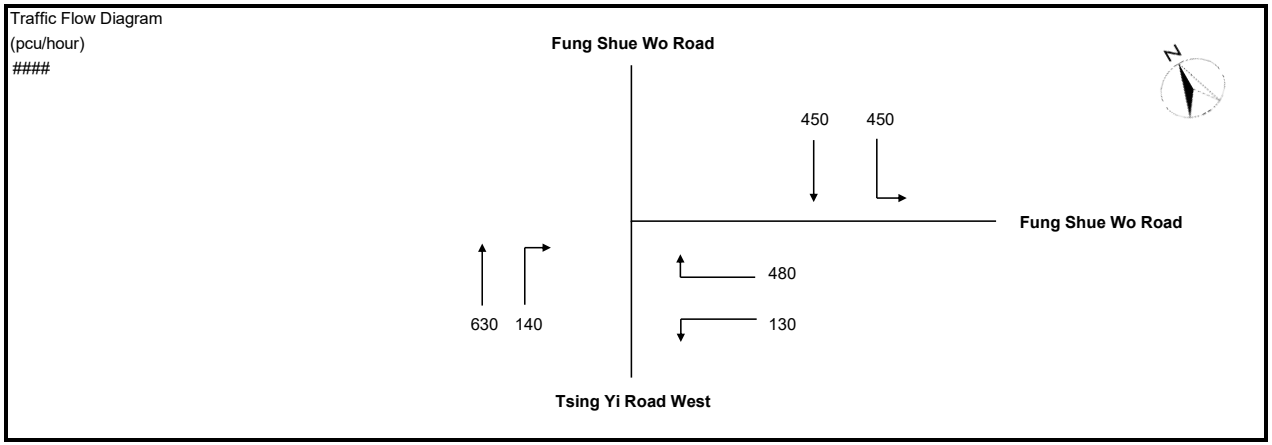
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2028 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

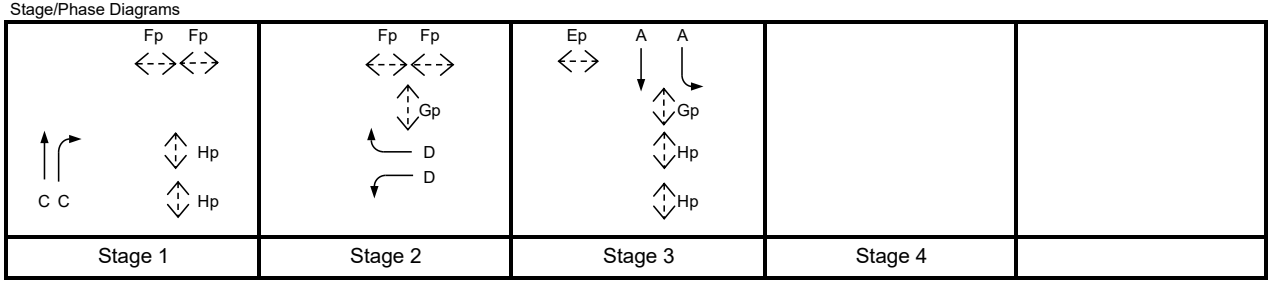
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.450 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,280 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 79.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 3 I/G = 2

**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 80%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 378 | | 378 | | | 1956 | 0.193 | |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 252 | 140 | 392 | | 36% | 2032 | 0.193 | 0.193 |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 130 | | 179 | 309 | 42% | 58% | 2079 | 0.148 | 0.148 |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 301 | 301 | | 100% | 2030 | 0.148 | |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 450 | | | 450 | 100% | | 4132 | 0.109 | 0.109 |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 450 | | 450 | | | 4301 | 0.105 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

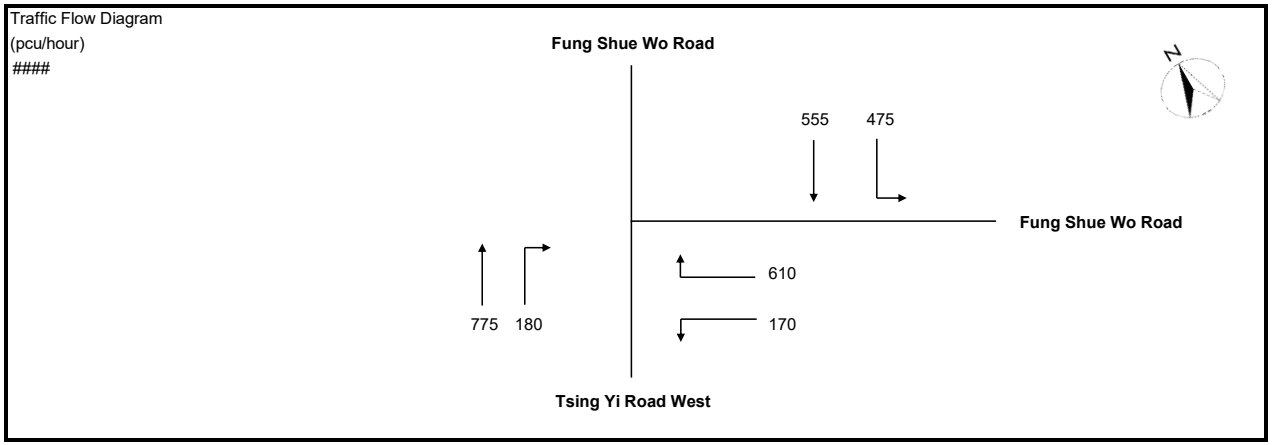
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2028 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

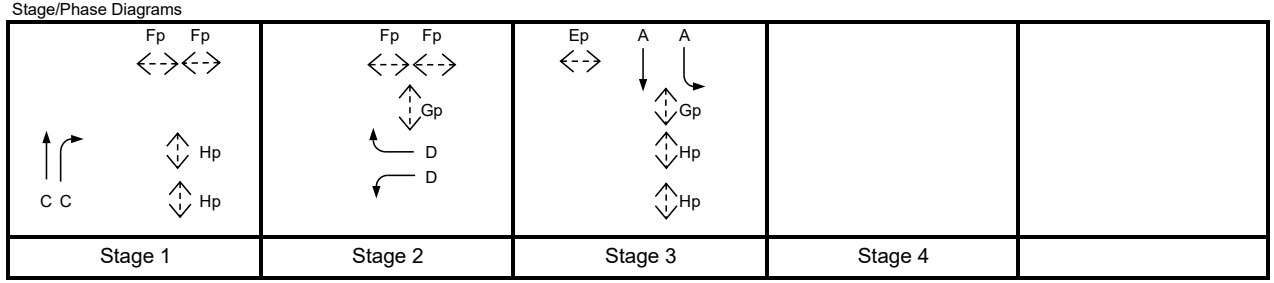
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.558 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,765 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 52 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 45.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 32 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 3 I/G = 2

**Critical Case : C,D,A**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 469 | | 469 | | | 1956 | 0.240 | 0.240 |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 306 | 180 | 486 | | 37% | 2030 | 0.240 | |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 170 | | 225 | 395 | 43% | 57% | 2079 | 0.190 | 0.190 |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 385 | 385 | | 100% | 2030 | 0.190 | |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 475 | | | 475 | 100% | | 4132 | 0.115 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 555 | | 555 | | | 4301 | 0.129 | 0.129 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

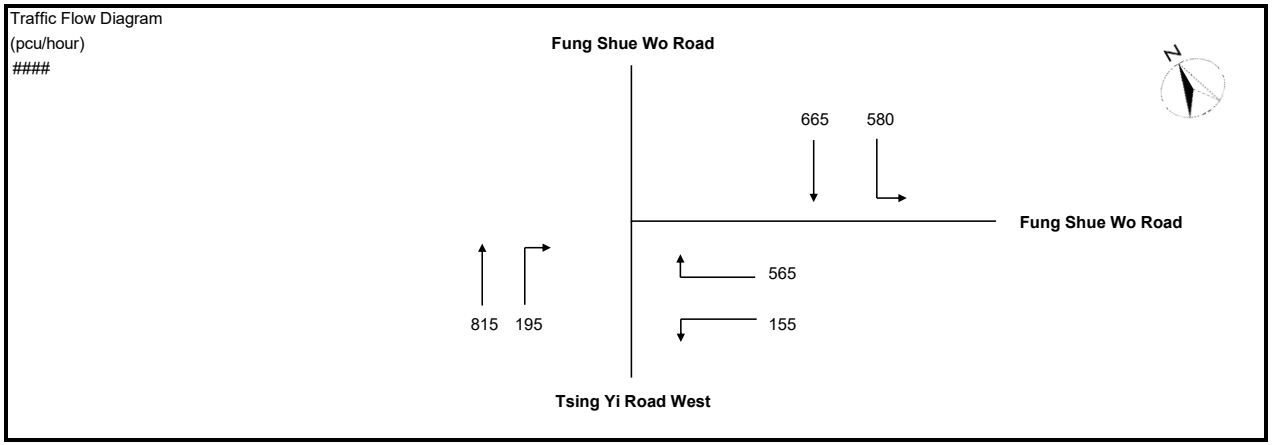
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2028 Design Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

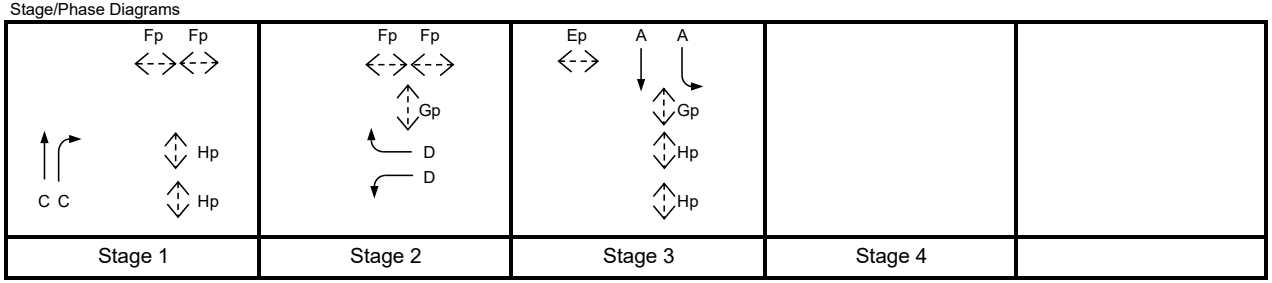
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.583 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,975 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 55 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 29 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 38.9 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 34 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 496 | | 496 | | | 1956 | 0.254 | 0.254 |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 319 | 195 | 514 | | 38% | 2028 | 0.254 | |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 155 | | 209 | 364 | 43% | 57% | 2079 | 0.175 | 0.175 |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 356 | 356 | | 100% | 2030 | 0.175 | |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 580 | | | 580 | 100% | | 4132 | 0.140 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 665 | | 665 | | | 4301 | 0.155 | 0.155 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

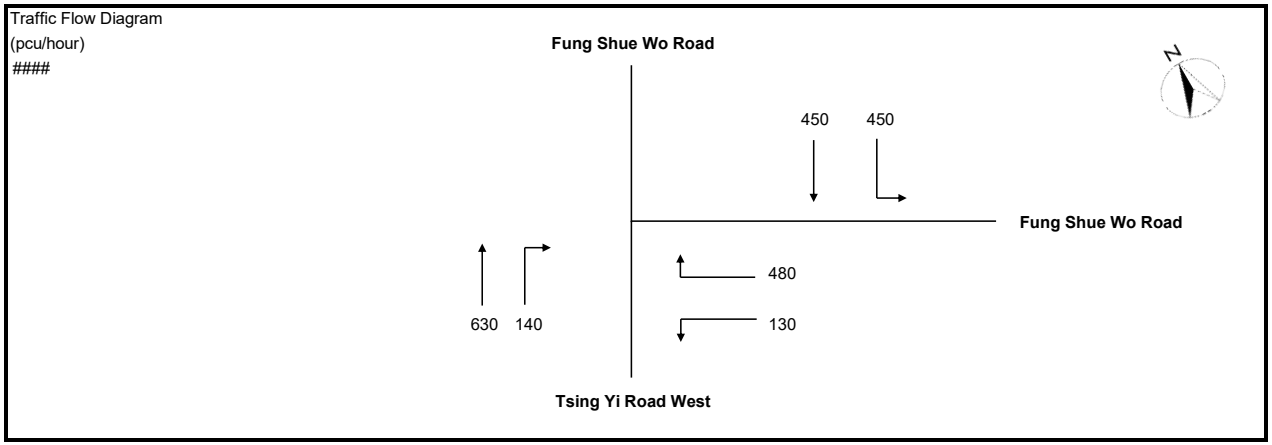
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2028 Design Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

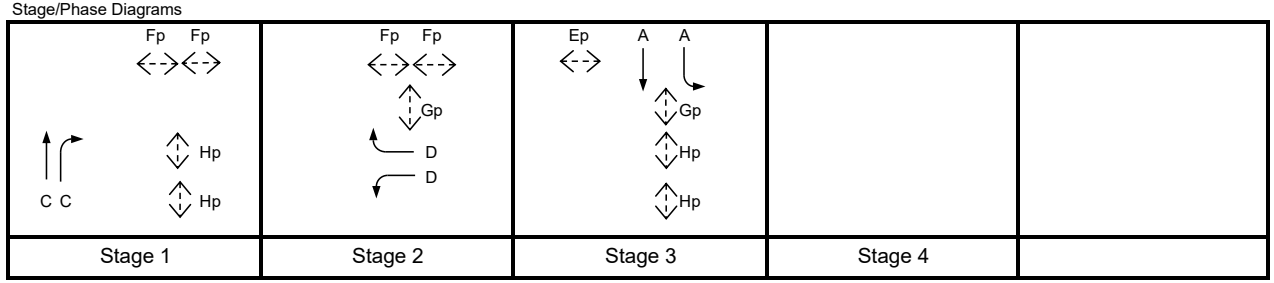
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.450 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,280 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 79.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 80%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 378 | | 378 | | | 1956 | 0.193 | |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 252 | 140 | 392 | | 36% | 2032 | 0.193 | 0.193 |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 130 | | 179 | 309 | 42% | 58% | 2079 | 0.148 | 0.148 |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 301 | 301 | | 100% | 2030 | 0.148 | |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 450 | | | 450 | 100% | | 4132 | 0.109 | 0.109 |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 450 | | 450 | | | 4301 | 0.105 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

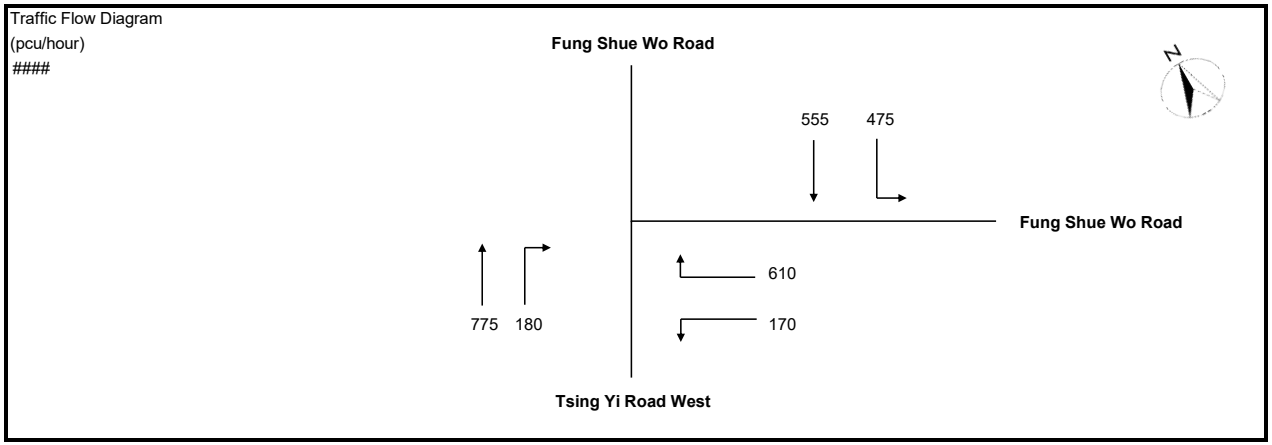
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2028 Design Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

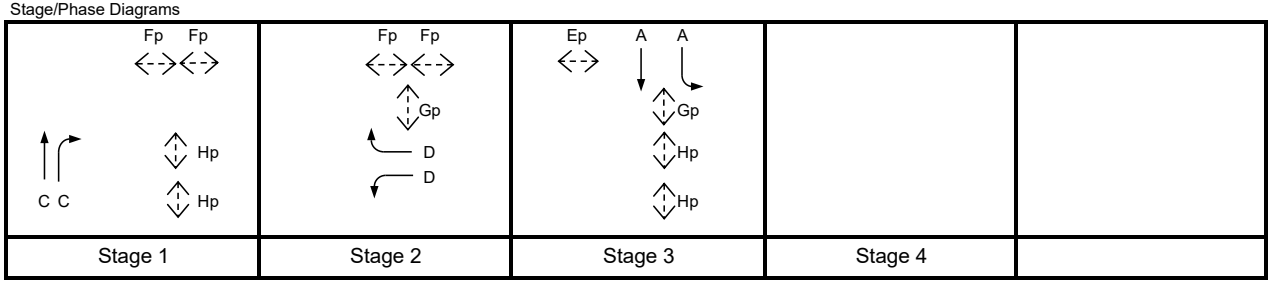
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.558 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,765 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 52 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 45.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 32 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 469 | | 469 | | | 1956 | 0.240 | 0.240 |
| ↑↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 306 | 180 | 486 | | 37% | 2030 | 0.240 | |
| ↑↓ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 170 | | 225 | 395 | 43% | 57% | 2079 | 0.190 | 0.190 |
| ↑ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 385 | 385 | | 100% | 2030 | 0.190 | |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 475 | | | 475 | 100% | | 4132 | 0.115 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 555 | | 555 | | | 4301 | 0.129 | 0.129 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

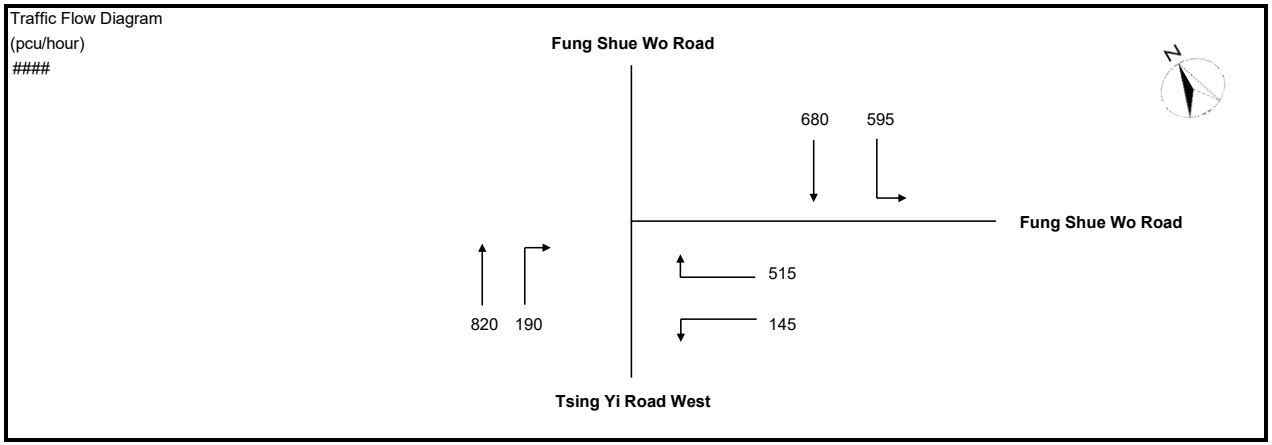
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2031 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

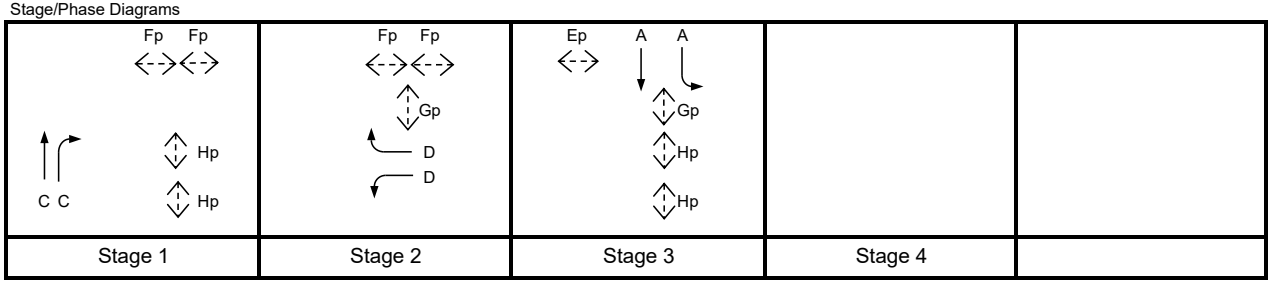
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.572 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,945 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 54 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 28 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 41.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 33 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 42%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 496 | | 496 | | | 1956 | 0.253 | 0.253 |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 324 | 190 | 514 | | 37% | 2030 | 0.253 | |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 145 | | 189 | 334 | 43% | 57% | 2079 | 0.161 | |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 326 | 326 | | 100% | 2030 | 0.161 | 0.161 |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 595 | | | 595 | 100% | | 4132 | 0.144 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 680 | | 680 | | | 4301 | 0.158 | 0.158 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

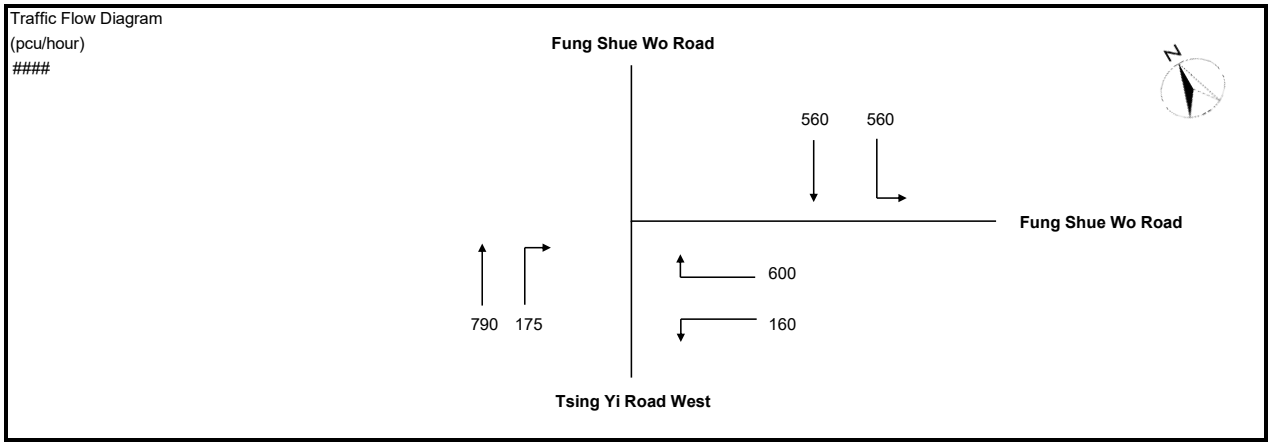
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2031 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

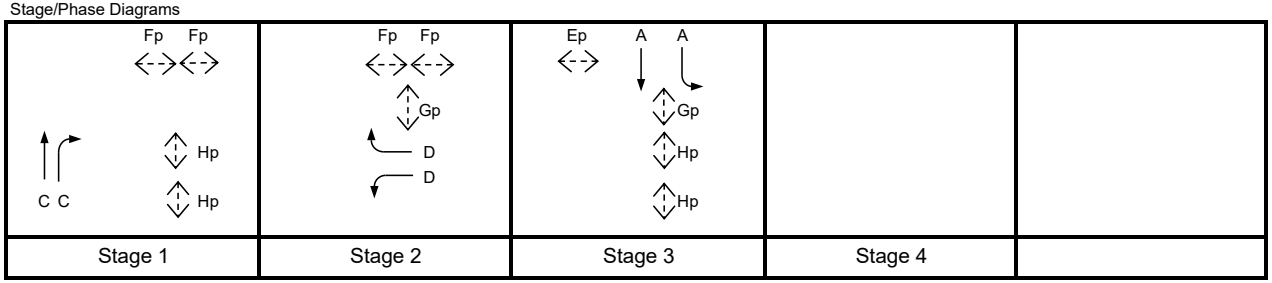
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.562 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,845 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 53 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 44.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 32 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 3 I/G = 2

**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 44%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 473 | | 473 | | | 1956 | 0.242 | 0.242 |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 317 | 175 | 492 | | 36% | 2032 | 0.242 | |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 160 | | 225 | 385 | 42% | 58% | 2079 | 0.185 | |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 375 | 375 | | 100% | 2030 | 0.185 | 0.185 |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 560 | | | 560 | 100% | | 4132 | 0.136 | 0.136 |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 560 | | 560 | | | 4301 | 0.130 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

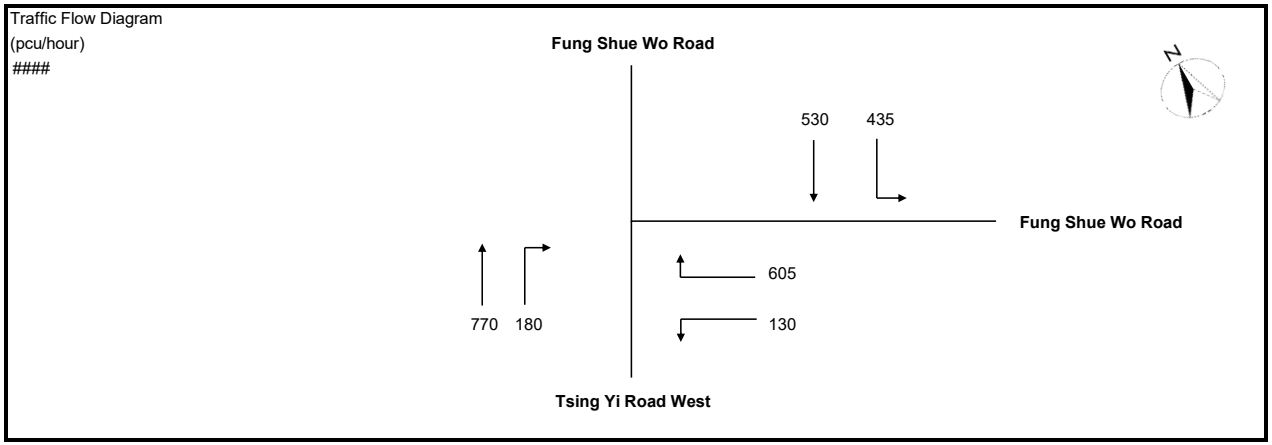
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2031 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

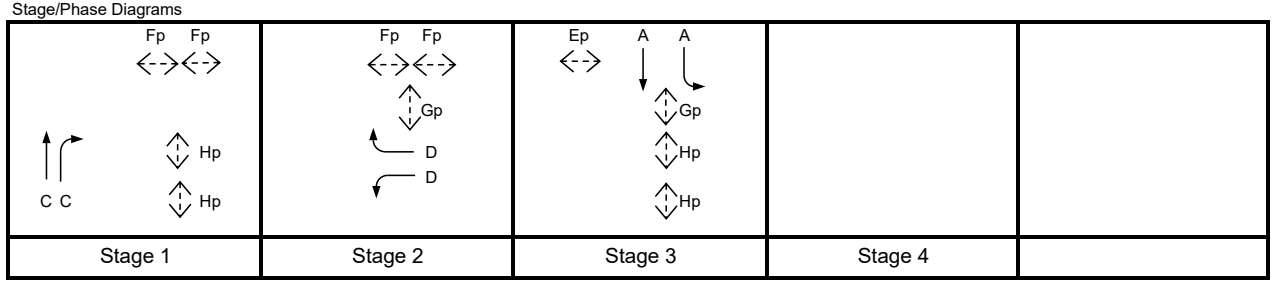
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.540 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,650 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 50 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 26 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 49.9 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 30 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 50%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 466 | | 466 | | | 1956 | 0.238 | |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 304 | 180 | 484 | | 37% | 2029 | 0.238 | 0.238 |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 130 | | 242 | 372 | 35% | 65% | 2079 | 0.179 | 0.179 |
| ↑ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 363 | 363 | | 100% | 2030 | 0.179 | |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 435 | | | 435 | 100% | | 4132 | 0.105 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 530 | | 530 | | | 4301 | 0.123 | 0.123 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

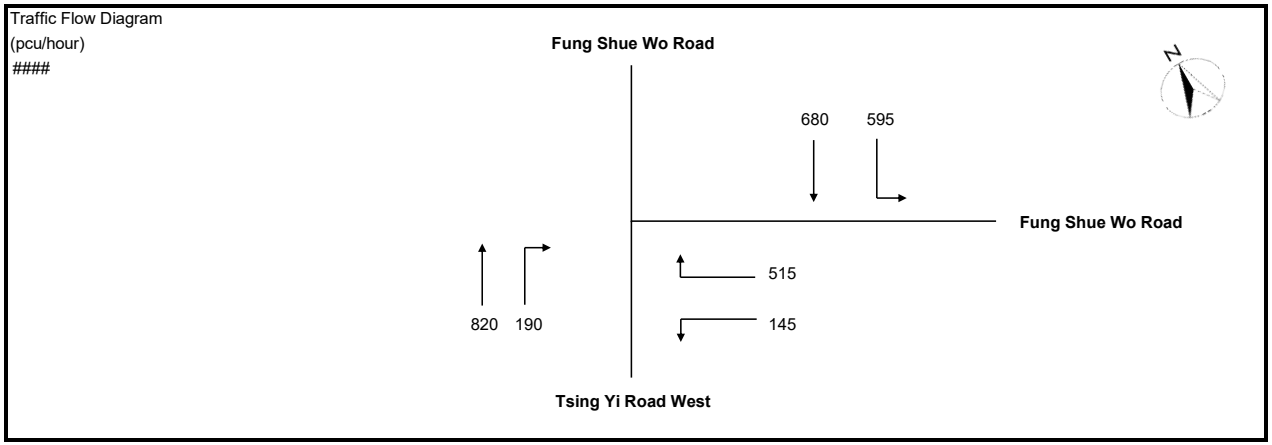
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2031 Scenario A AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

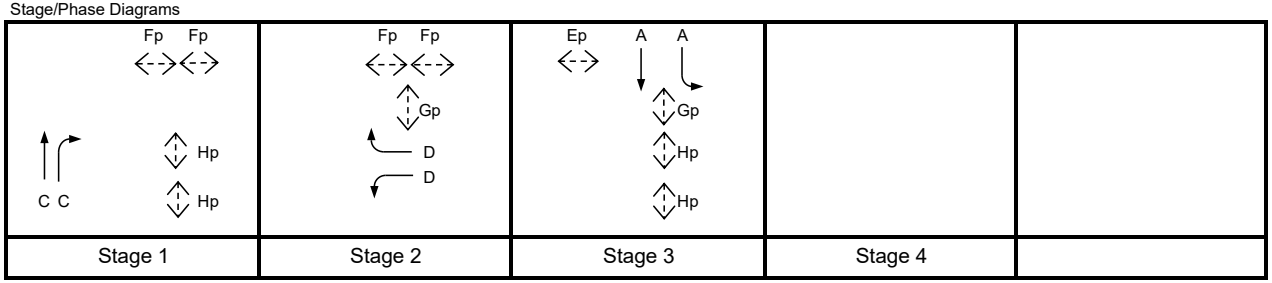
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.572 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,945 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 54 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 28 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 41.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 33 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 42%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 496 | | 496 | | | 1956 | 0.253 | 0.253 |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 324 | 190 | 514 | | 37% | 2030 | 0.253 | |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 145 | | 189 | 334 | 43% | 57% | 2079 | 0.161 | |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 326 | 326 | | 100% | 2030 | 0.161 | 0.161 |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 595 | | | 595 | 100% | | 4132 | 0.144 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 680 | | 680 | | | 4301 | 0.158 | 0.158 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | | |
| Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | | |
| Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | | |
| Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | | |

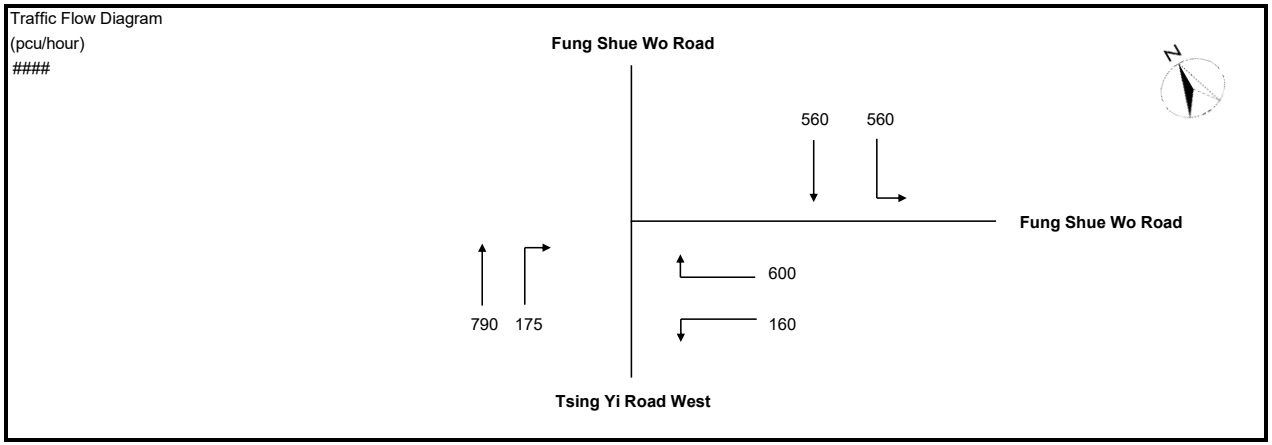
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2031 Scenario A NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

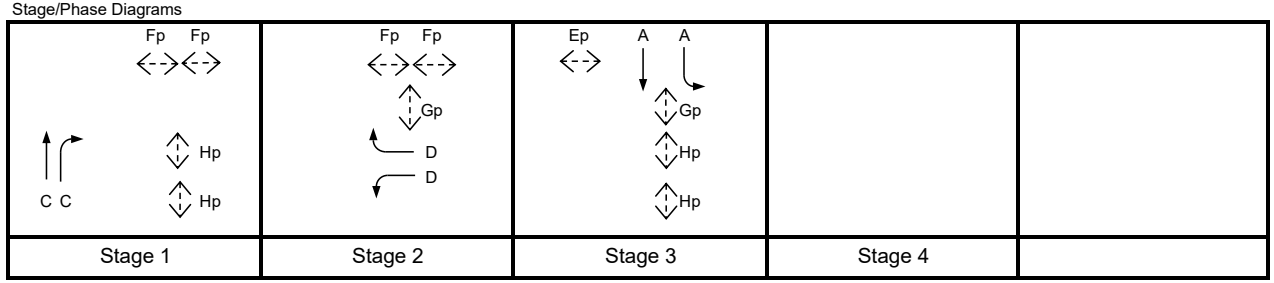
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.562 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,845 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 53 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 44.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 32 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 3 I/G = 2

**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 44%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 473 | | 473 | | | 1956 | 0.242 | 0.242 |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 317 | 175 | 492 | | 36% | 2032 | 0.242 | |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 160 | | 225 | 385 | 42% | 58% | 2079 | 0.185 | |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 375 | 375 | | 100% | 2030 | 0.185 | 0.185 |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 560 | | | 560 | 100% | | 4132 | 0.136 | 0.136 |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 560 | | 560 | | | 4301 | 0.130 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

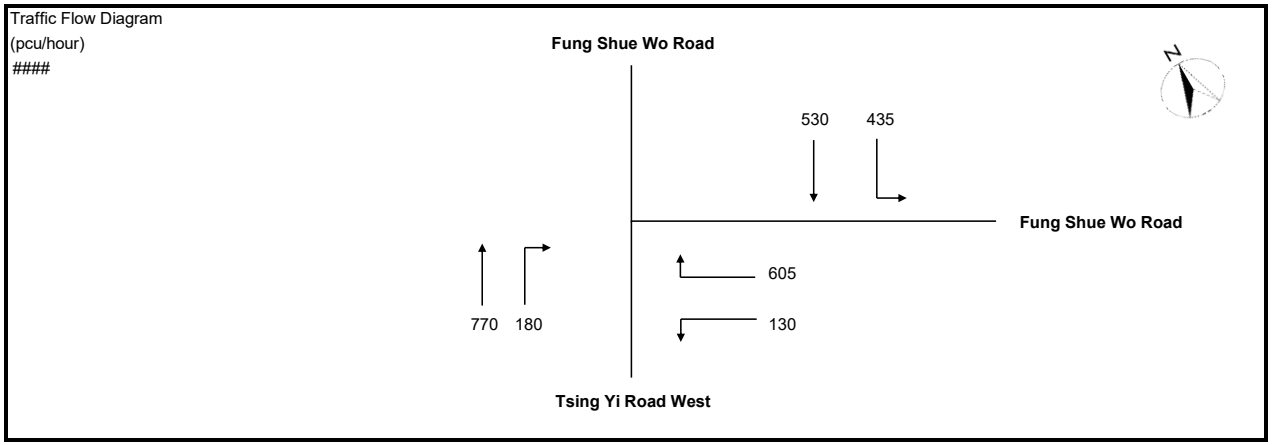
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2031 Scenario A PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

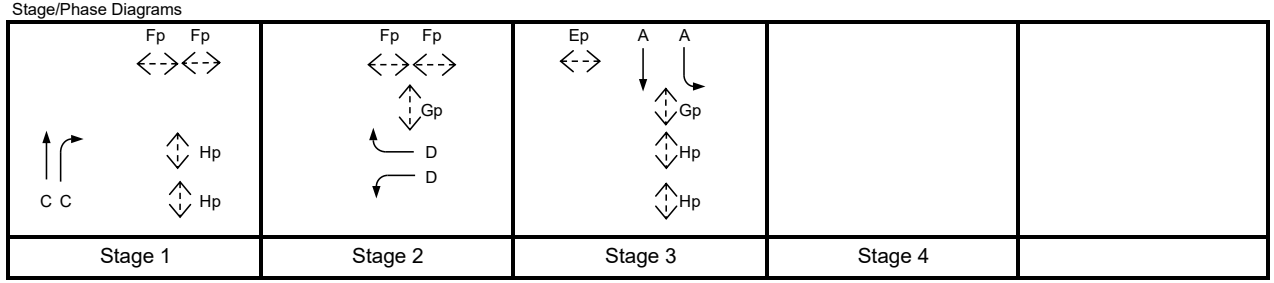
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.540 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,650 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 50 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 26 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 49.9 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 30 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 50%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 466 | | 466 | | | 1956 | 0.238 | |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 304 | 180 | 484 | | 37% | 2029 | 0.238 | 0.238 |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 130 | | 242 | 372 | 35% | 65% | 2079 | 0.179 | 0.179 |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 363 | 363 | | 100% | 2030 | 0.179 | |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 435 | | | 435 | 100% | | 4132 | 0.105 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 530 | | 530 | | | 4301 | 0.123 | 0.123 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | |

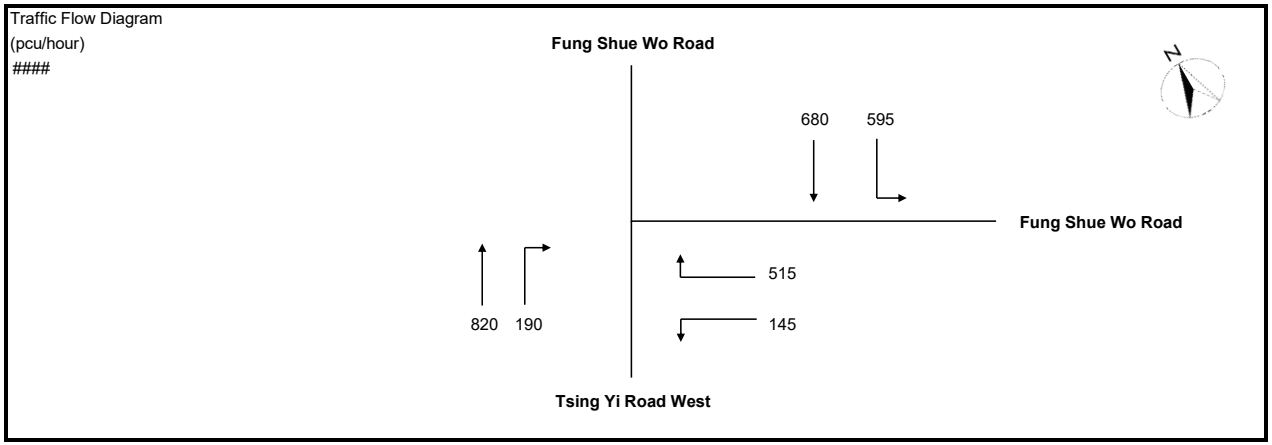
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2031 Scenario B AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

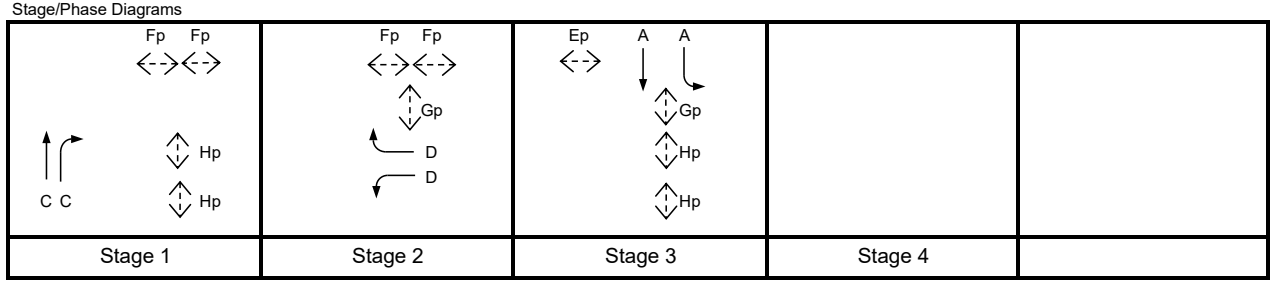
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.572 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,945 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 54 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 28 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.810 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 41.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 33 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 42%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 496 | | 496 | | | 1956 | 0.253 | 0.253 |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 324 | 190 | 514 | | 37% | 2030 | 0.253 | |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 145 | | 189 | 334 | 43% | 57% | 2079 | 0.161 | |
| ↱ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 326 | 326 | | 100% | 2030 | 0.161 | 0.161 |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 595 | | | 595 | 100% | | 4132 | 0.144 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 680 | | 680 | | | 4301 | 0.158 | 0.158 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | | |
| Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | | |
| Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | | |
| Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | | |

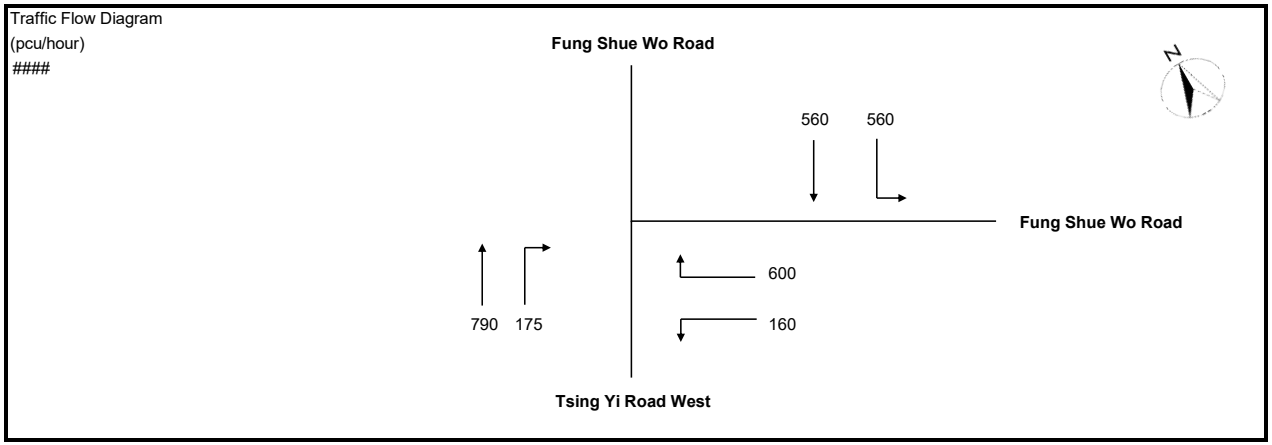
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2031 Scenario B NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

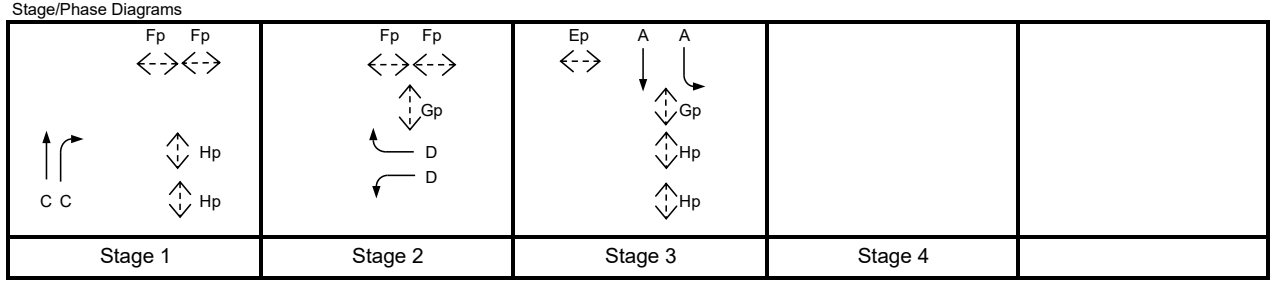
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.562 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,845 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 53 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 44.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 32 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 3 I/G = 2

**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 44%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 473 | | 473 | | | 1956 | 0.242 | 0.242 |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 317 | 175 | 492 | | 36% | 2032 | 0.242 | |
| ↰↓ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 160 | | 225 | 385 | 42% | 58% | 2079 | 0.185 | |
| ↰ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 375 | 375 | | 100% | 2030 | 0.185 | 0.185 |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 560 | | | 560 | 100% | | 4132 | 0.136 | 0.136 |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 560 | | 560 | | | 4301 | 0.130 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

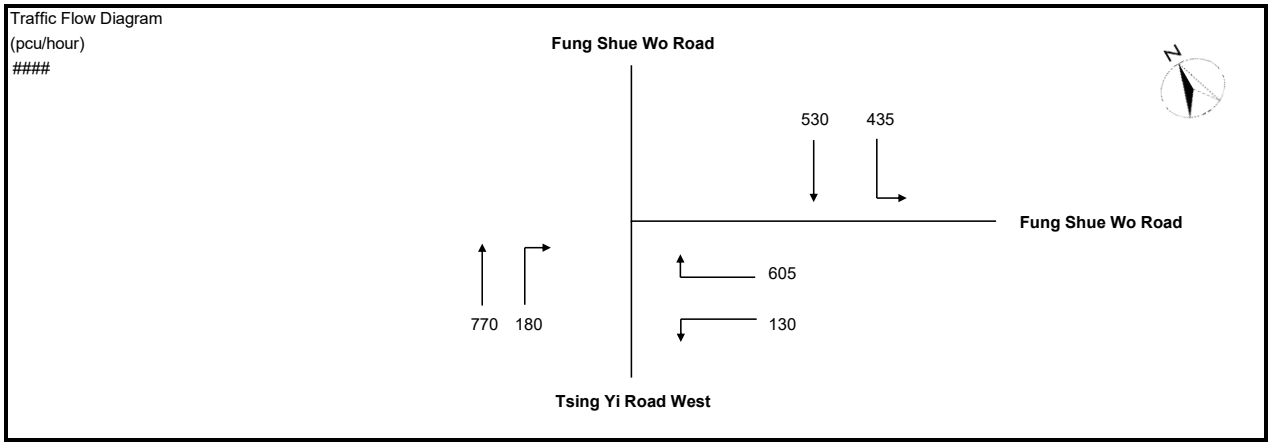
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J6 - Tsing Yi Road West / Fung Shue Wo Road | 2031 Scenario B PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J6

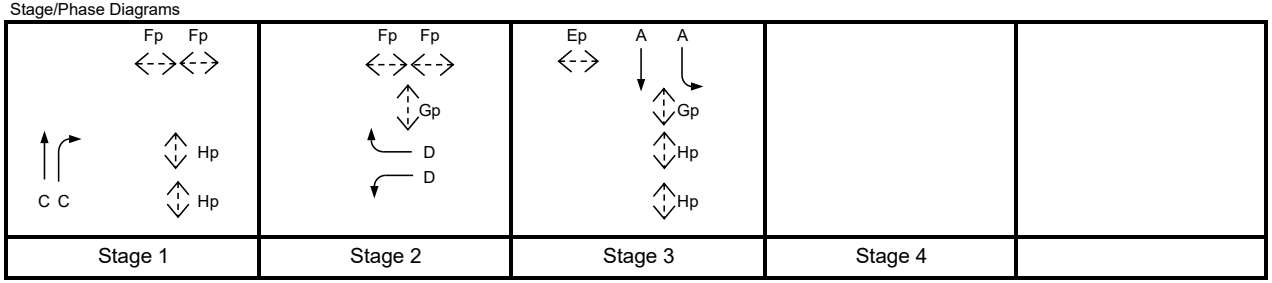
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.540 | |
| Lost time | L = | 12 | sec |
| Total Flow | = | 2,650 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 50 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 26 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.810 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 49.9 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 30 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.900 | |

Stage/Phase Diagrams




**Critical Case : C,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 50%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ↑ | C | 1 | 3.410 | 1 | | | | 1 | | 0 | | 1956 | | 466 | | 466 | | | 1956 | 0.238 | |
| ↱ | C | 1 | 3.410 | 1 | | 17 | 0 | 0 | | 0 | | 2096 | | 304 | 180 | 484 | | 37% | 2029 | 0.238 | 0.238 |
| ↑ | D | 2 | 4.035 | 1 | 35 | 35 | 0 | 1 | | 0 | 150 | 2018.5 | 130 | | 242 | 372 | 35% | 65% | 2079 | 0.179 | 0.179 |
| ↑ | D | 2 | 3.615 | 1 | | 35 | 0 | 0 | | 0 | | 2116.5 | | | 363 | 363 | | 100% | 2030 | 0.179 | |
| ↳ | A | 3 | 4.015 | 2 | 150 | | | 1 | | 0 | | 4173 | 435 | | | 435 | 100% | | 4132 | 0.105 | |
| ↓ | A | 3 | 3.955 | 2 | | | | 0 | | 0 | | 4301 | | 530 | | 530 | | | 4301 | 0.123 | 0.123 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Gp | 2,3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Hp | 1,3 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

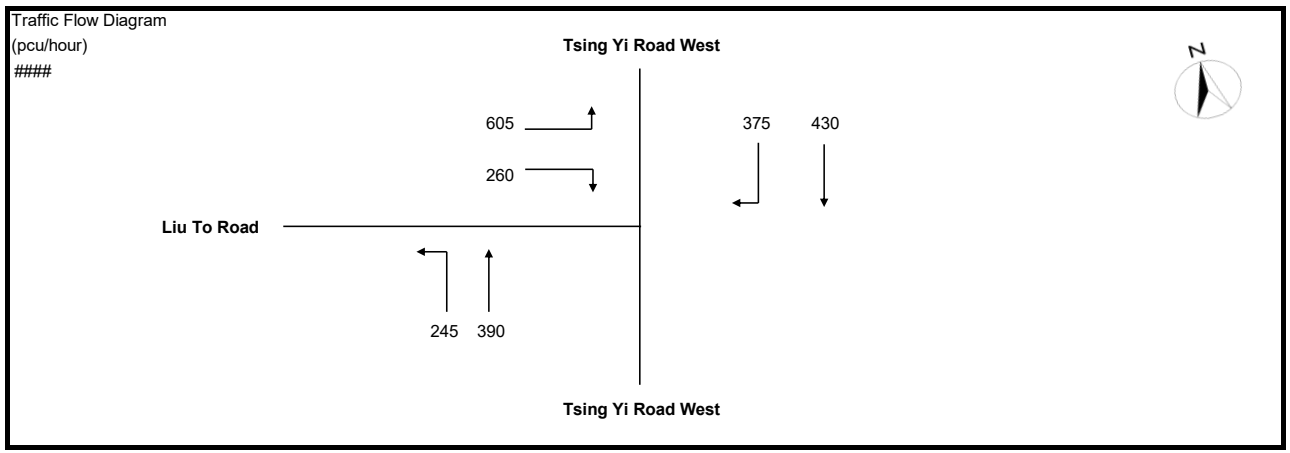
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2025 Survey Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

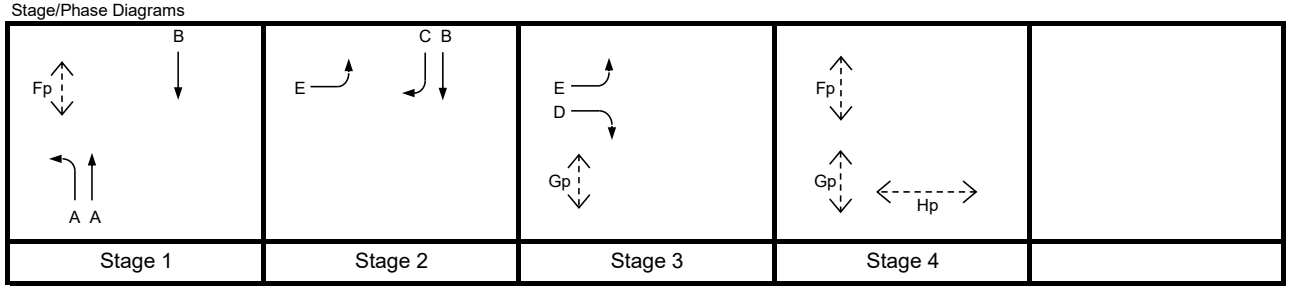
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.498 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,305 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 123 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 76 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 23.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 85 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.708 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 605 | | | 605 | 100% | | 1845 | 0.328 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 260 | 260 | | 100% | 1961 | 0.133 | 0.133 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 245 | 43 | | 288 | 85% | | 1793 | 0.161 | 0.161 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 347 | | 347 | | | 2161 | 0.161 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 430 | | 430 | | | 4028 | 0.107 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 375 | 375 | | 100% | 1834 | 0.204 | 0.204 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

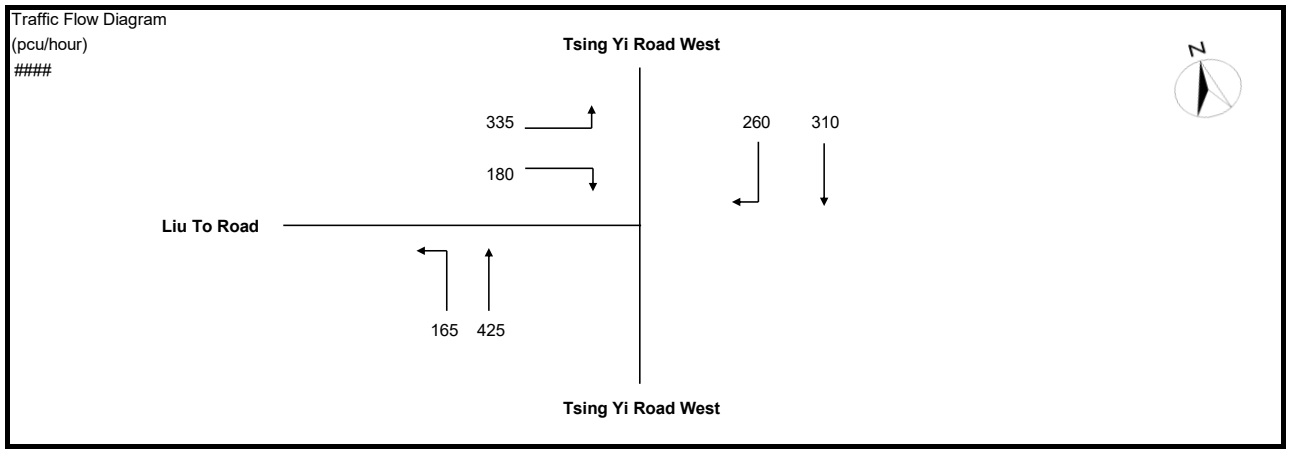
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2025 Survey Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

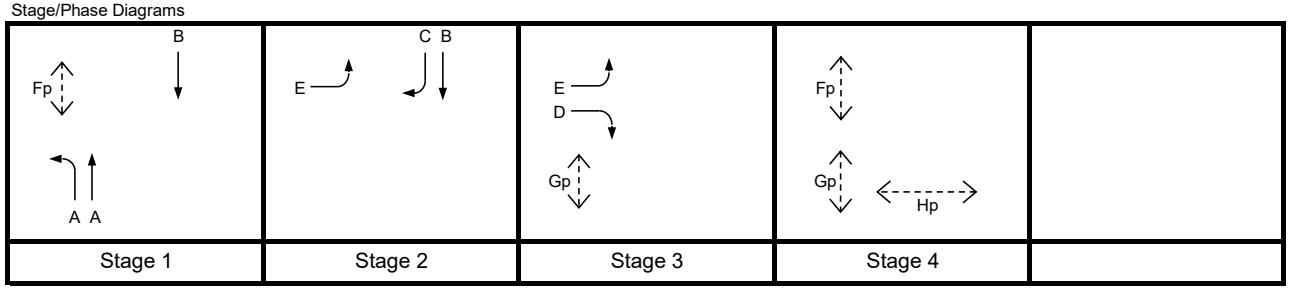
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.381 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 1,675 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 100 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 61 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 61.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 66 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 55%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 335 | | | 335 | 100% | | 1845 | 0.182 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 180 | 180 | | 100% | 1961 | 0.092 | 0.092 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 165 | 106 | | 271 | 61% | | 1834 | 0.148 | |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 319 | | 319 | | | 2161 | 0.148 | 0.148 |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 310 | | 310 | | | 4028 | 0.077 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 260 | 260 | | 100% | 1834 | 0.142 | 0.142 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

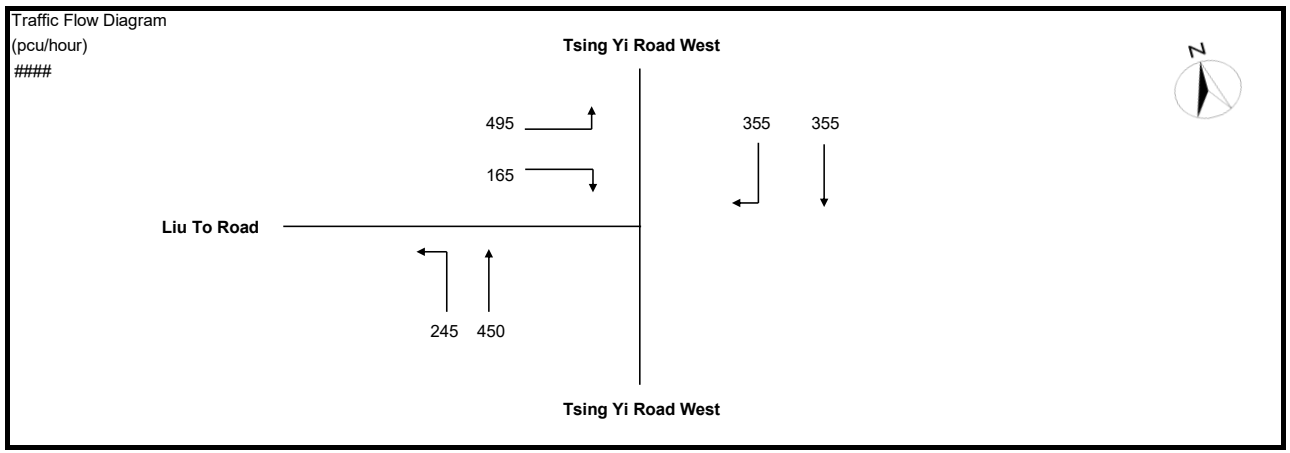
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2025 Survey Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

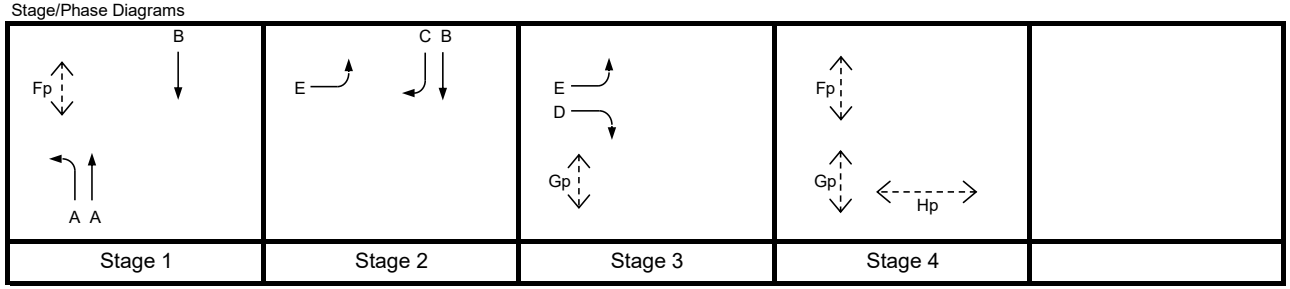
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.453 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,065 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 113 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 69 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 35.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 76 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 495 | | | 495 | 100% | | 1845 | 0.268 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 165 | 165 | | 100% | 1961 | 0.084 | 0.084 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 245 | 71 | | 316 | 77% | | 1806 | 0.175 | 0.175 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 379 | | 379 | | | 2161 | 0.175 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 355 | | 355 | | | 4028 | 0.088 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 355 | 355 | | 100% | 1834 | 0.194 | 0.194 |

| Pedestrain Crossing | | GM | | FGM | | Total | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | |
| Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | |
| Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | * |

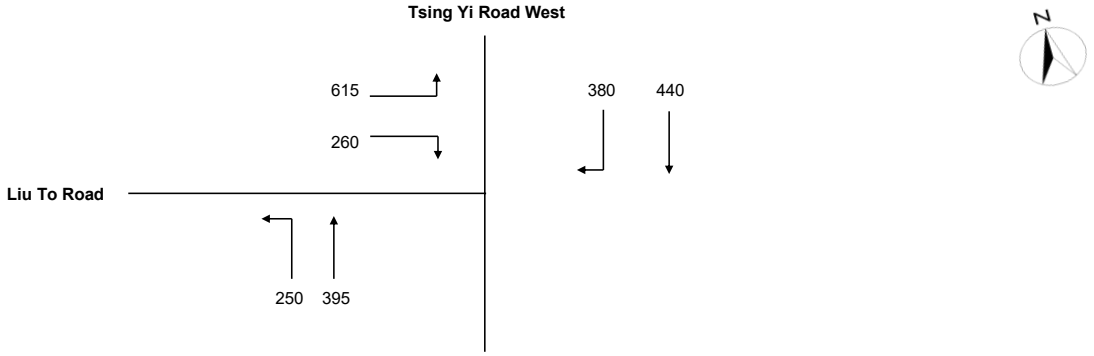
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2028 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

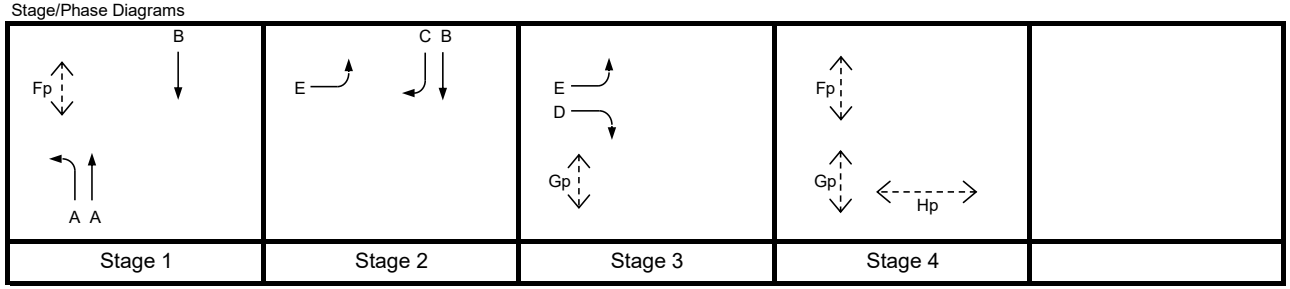
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.503 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,340 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 125 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 76 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 22.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 86 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.708 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 27%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 615 | | | 615 | 100% | | 1845 | 0.333 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 260 | 260 | | 100% | 1961 | 0.133 | 0.133 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 250 | 42 | | 292 | 85% | | 1793 | 0.163 | 0.163 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 353 | | 353 | | | 2161 | 0.163 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 440 | | 440 | | | 4028 | 0.109 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 380 | 380 | | 100% | 1834 | 0.207 | 0.207 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

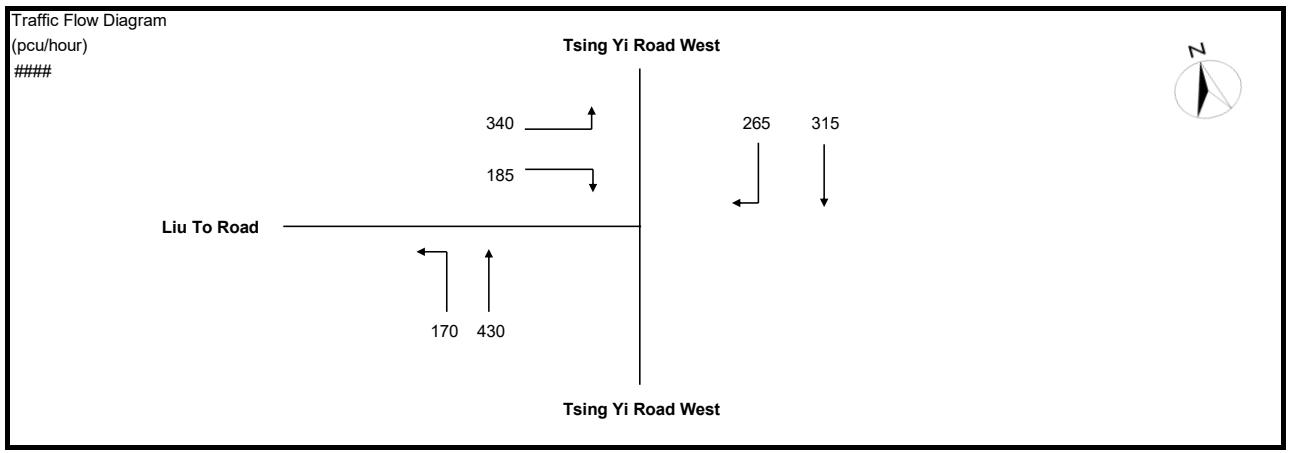
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2028 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

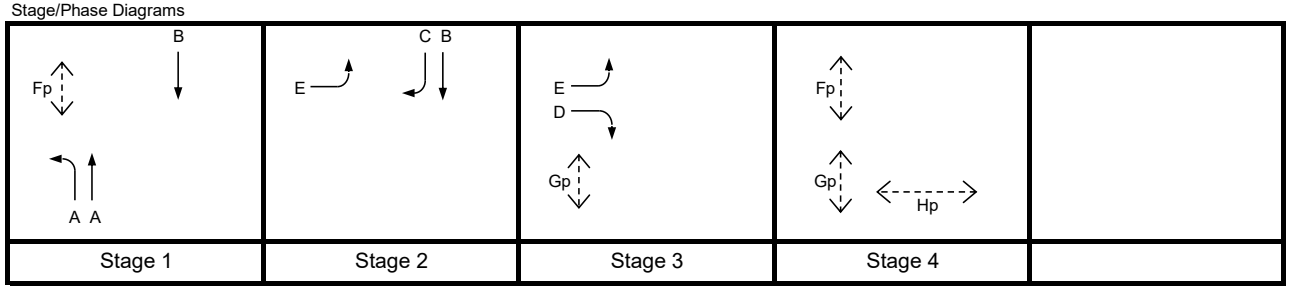
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.389 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 1,705 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 101 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 62 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 58.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 67 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.655 | |

Stage/Phase Diagrams




I/G = 7 I/G = 5 I/G = 11 G = 5 I/G = 11 2

**Critical Case : A,C,D,Hp**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 51%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 340 | | | 340 | 100% | | 1845 | 0.184 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 185 | 185 | | 100% | 1961 | 0.094 | 0.094 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 170 | 105 | | 275 | 62% | | 1833 | 0.150 | 0.150 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 325 | | 325 | | | 2161 | 0.150 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 315 | | 315 | | | 4028 | 0.078 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 265 | 265 | | 100% | 1834 | 0.144 | 0.144 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

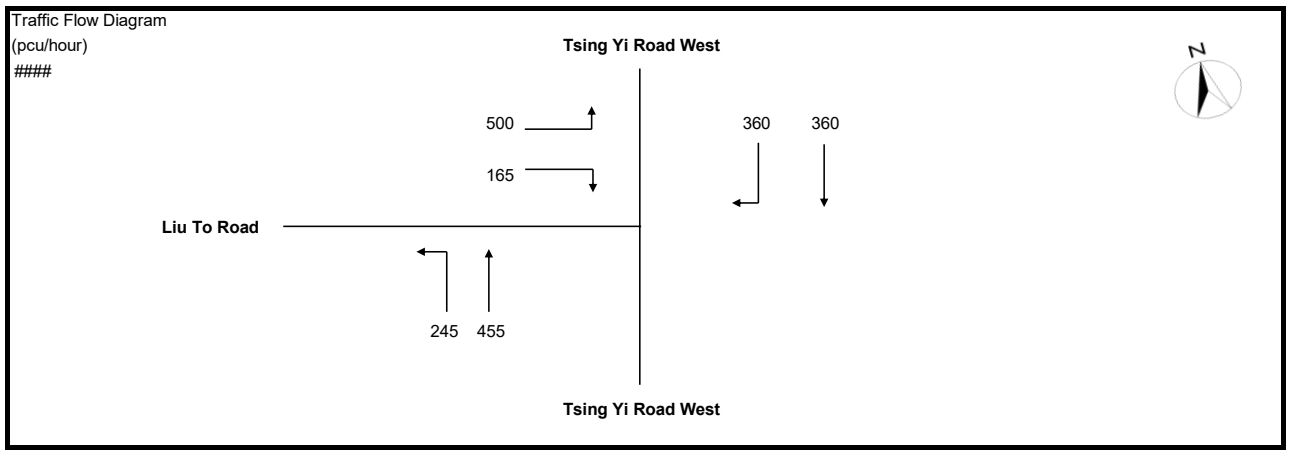
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2028 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

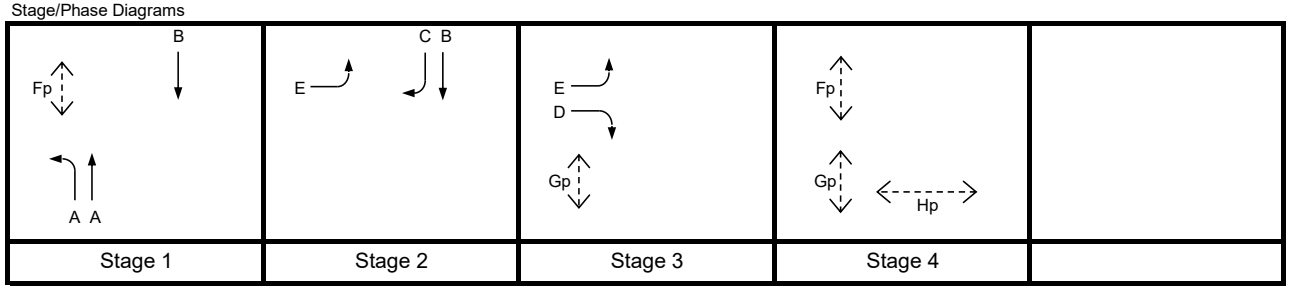
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.457 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,085 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ | = | 114 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 70 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 34.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 77 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 500 | | | 500 | 100% | | 1845 | 0.271 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 165 | 165 | | 100% | 1961 | 0.084 | 0.084 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 245 | 74 | | 319 | 77% | | 1807 | 0.176 | 0.176 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 381 | | 381 | | | 2161 | 0.176 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 360 | | 360 | | | 4028 | 0.089 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 360 | 360 | | 100% | 1834 | 0.196 | 0.196 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

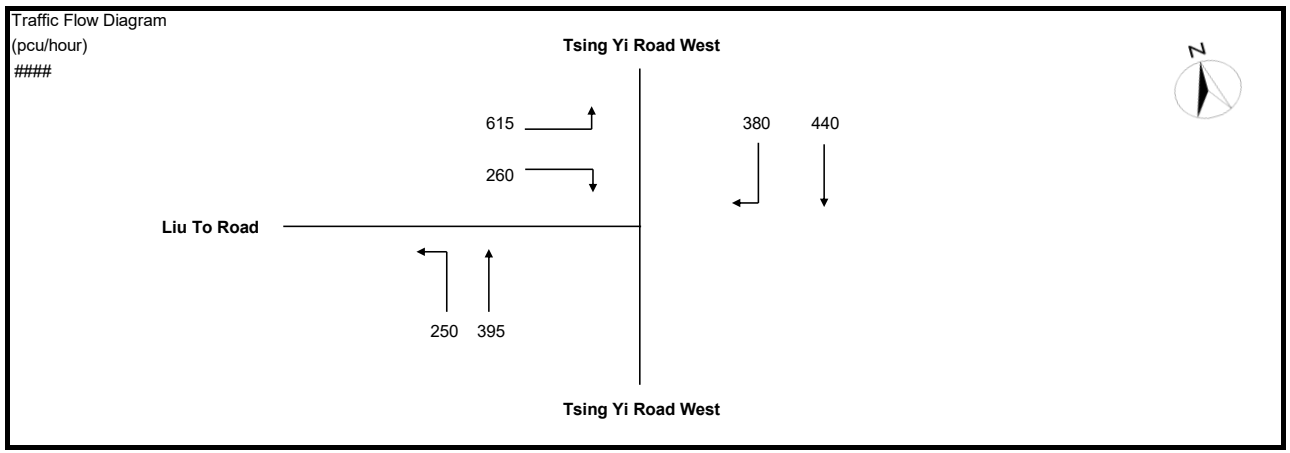
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2028 Design Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

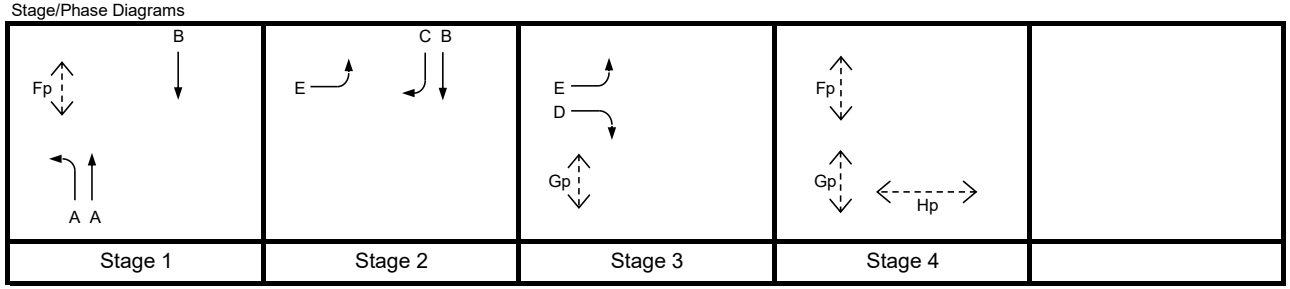
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.503 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,340 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 125 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 76 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 22.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 86 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.708 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 27%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 615 | | | 615 | 100% | | 1845 | 0.333 | |
| | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 260 | 260 | | 100% | 1961 | 0.133 | 0.133 |
| | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 250 | 42 | | 292 | 85% | | 1793 | 0.163 | 0.163 |
| | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 353 | | 353 | | | 2161 | 0.163 | |
| | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 440 | | 440 | | | 4028 | 0.109 | |
| | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 380 | 380 | | 100% | 1834 | 0.207 | 0.207 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

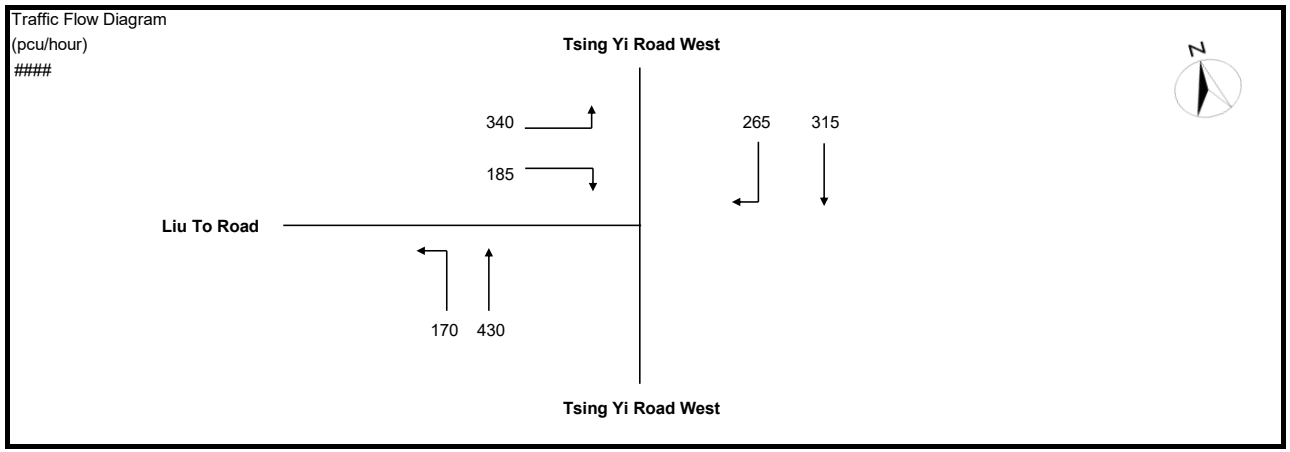
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2028 Design Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

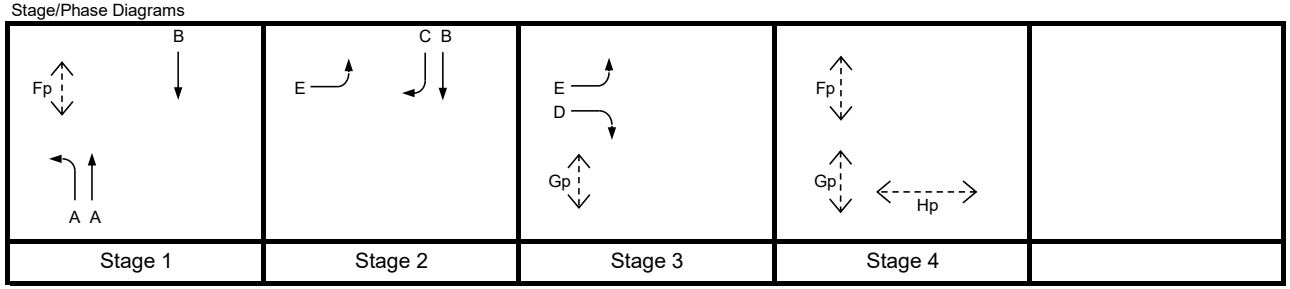
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.389 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 1,705 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 101 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 62 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 58.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 67 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 51%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 340 | | | 340 | 100% | | 1845 | 0.184 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 185 | 185 | | 100% | 1961 | 0.094 | 0.094 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 170 | 105 | | 275 | 62% | | 1833 | 0.150 | 0.150 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 325 | | 325 | | | 2161 | 0.150 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 315 | | 315 | | | 4028 | 0.078 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 265 | 265 | | 100% | 1834 | 0.144 | 0.144 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

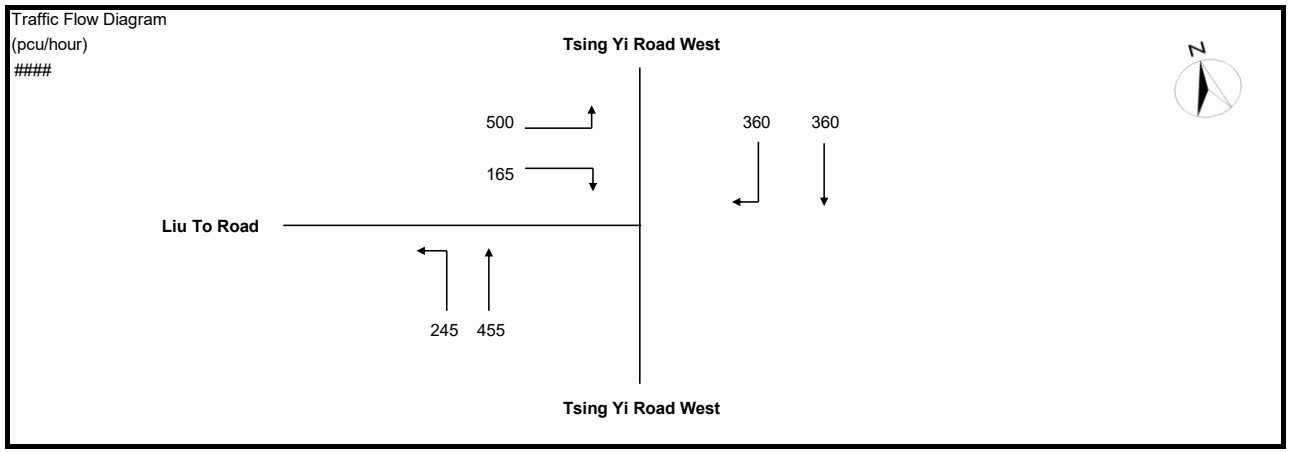
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2028 Design Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

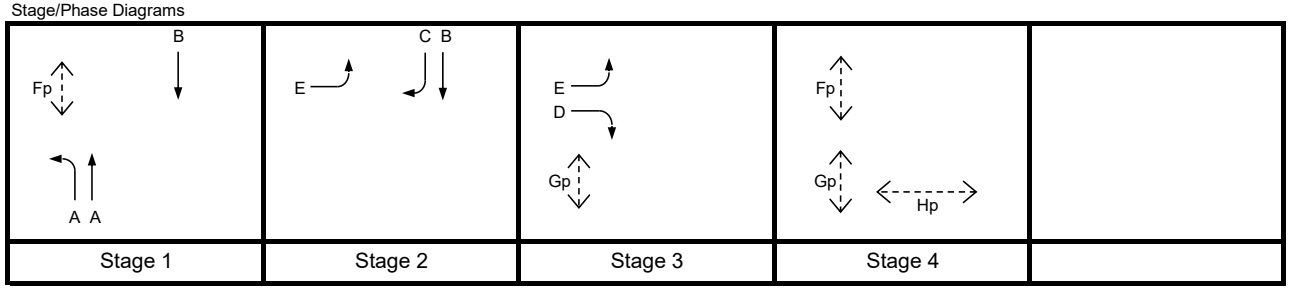
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.457 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,085 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ | = | 114 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 70 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 34.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 77 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 500 | | | 500 | 100% | | 1845 | 0.271 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 165 | 165 | | 100% | 1961 | 0.084 | 0.084 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 245 | 74 | | 319 | 77% | | 1807 | 0.176 | 0.176 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 381 | | 381 | | | 2161 | 0.176 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 360 | | 360 | | | 4028 | 0.089 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 360 | 360 | | 100% | 1834 | 0.196 | 0.196 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

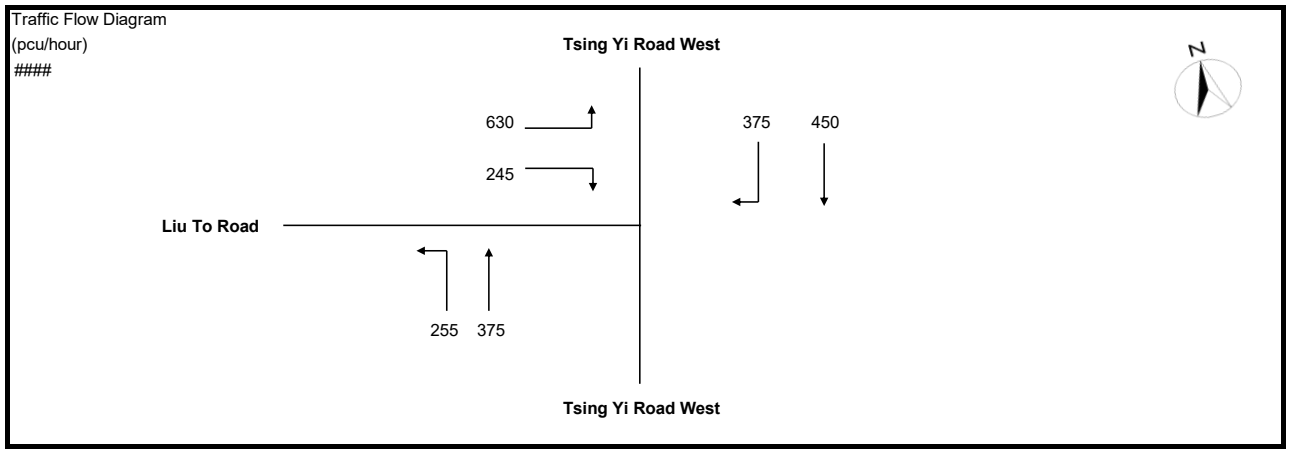
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2031 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

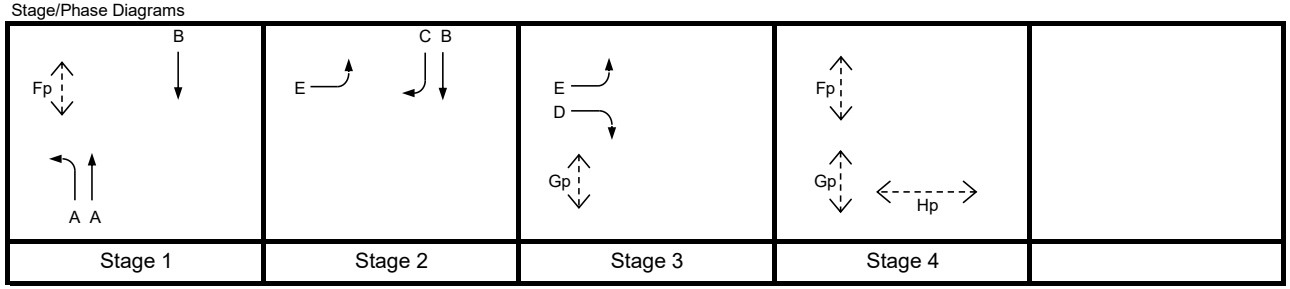
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.489 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,330 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 121 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 74 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 25.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 83 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.708 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 630 | | | 630 | 100% | | 1845 | 0.341 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 245 | 245 | | 100% | 1961 | 0.125 | 0.125 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 255 | 30 | | 285 | 89% | | 1786 | 0.160 | 0.160 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 345 | | 345 | | | 2161 | 0.160 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 450 | | 450 | | | 4028 | 0.112 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 375 | 375 | | 100% | 1834 | 0.204 | 0.204 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

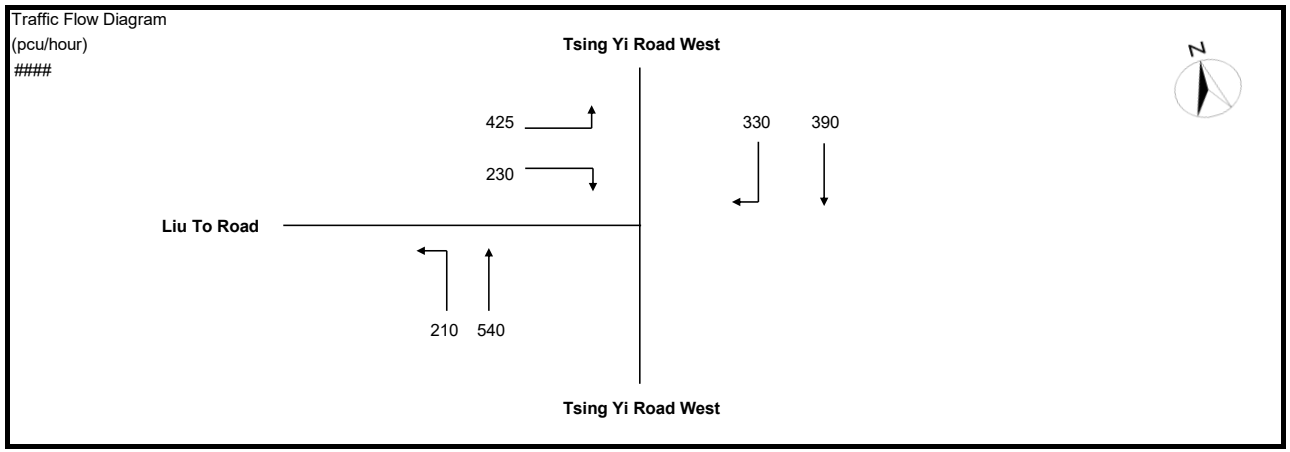
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2031 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

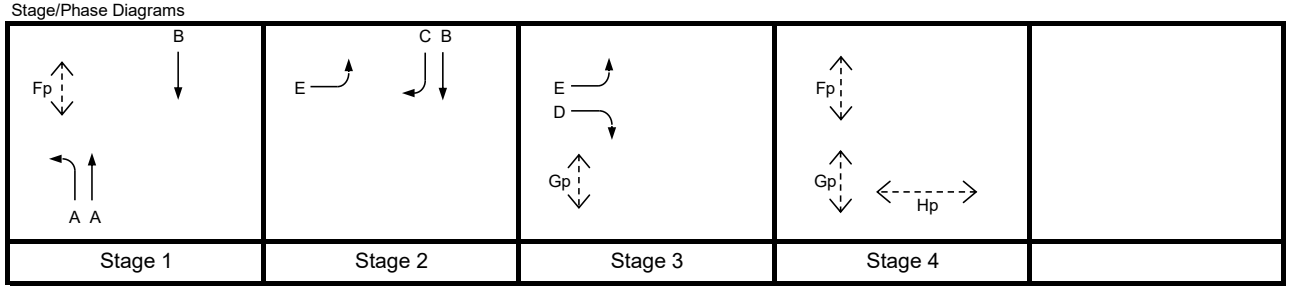
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.485 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,125 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 120 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 74 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 26.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 82 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 425 | | | 425 | 100% | | 1845 | 0.230 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 230 | 230 | | 100% | 1961 | 0.117 | 0.117 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 210 | 134 | | 344 | 61% | | 1834 | 0.188 | |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 406 | | 406 | | | 2161 | 0.188 | 0.188 |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 390 | | 390 | | | 4028 | 0.097 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 330 | 330 | | 100% | 1834 | 0.180 | 0.180 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

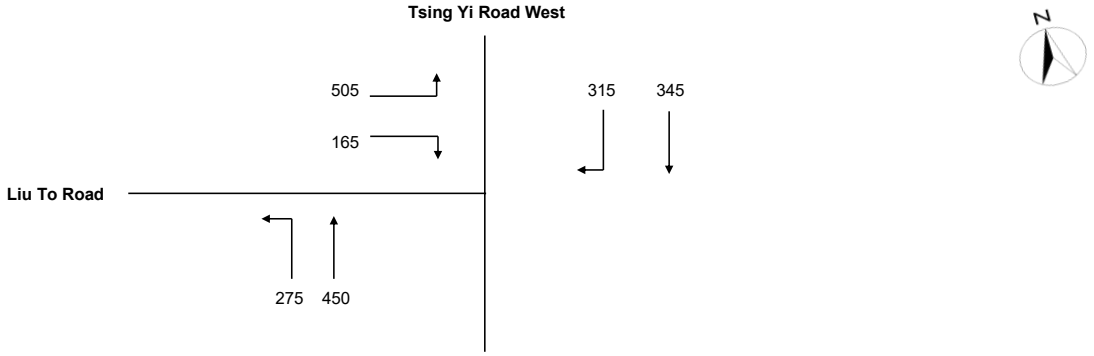
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2031 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

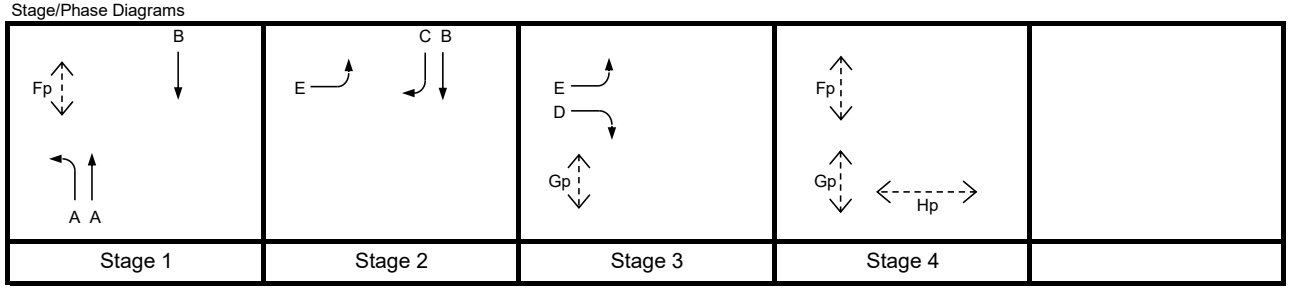
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.439 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,055 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 111 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 68 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 40.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 74 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 505 | | | 505 | 100% | | 1845 | 0.274 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 165 | 165 | | 100% | 1961 | 0.084 | 0.084 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 275 | 54 | | 329 | 84% | | 1796 | 0.183 | 0.183 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 396 | | 396 | | | 2161 | 0.183 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 345 | | 345 | | | 4028 | 0.086 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 315 | 315 | | 100% | 1834 | 0.172 | 0.172 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

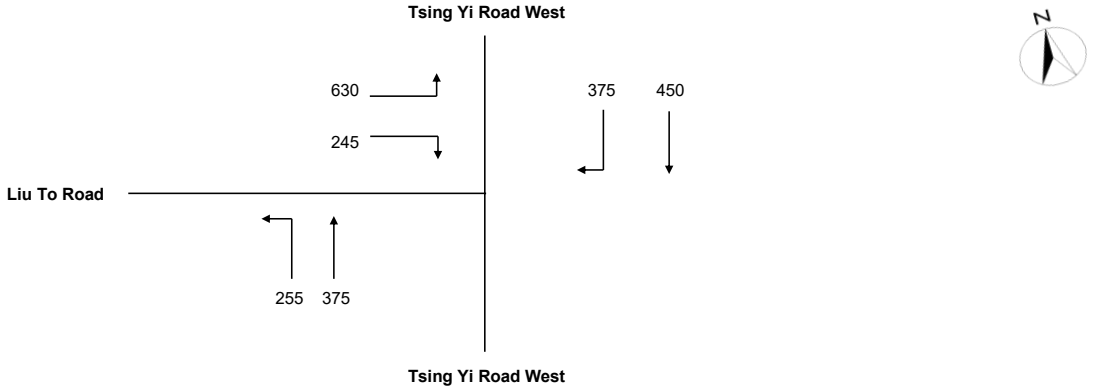
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2031 Scenario A AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

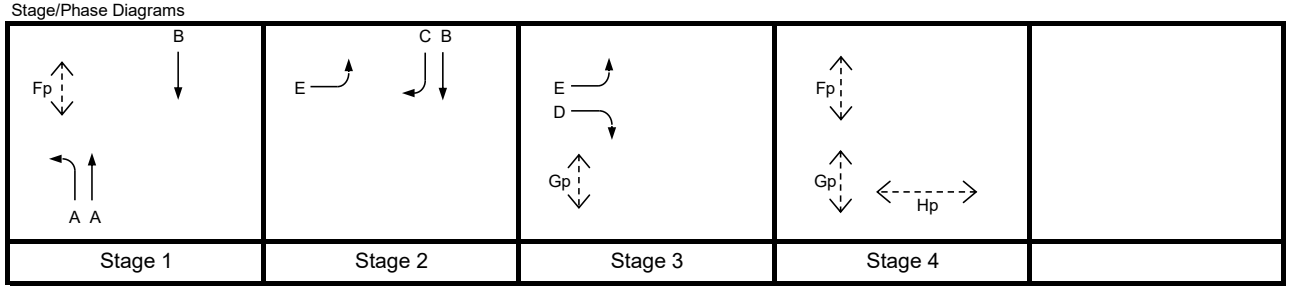
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.489 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,330 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 121 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 74 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 25.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 83 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.708 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 630 | | | 630 | 100% | | 1845 | 0.341 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 245 | 245 | | 100% | 1961 | 0.125 | 0.125 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 255 | 30 | | 285 | 89% | | 1786 | 0.160 | 0.160 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 345 | | 345 | | | 2161 | 0.160 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 450 | | 450 | | | 4028 | 0.112 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 375 | 375 | | 100% | 1834 | 0.204 | 0.204 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

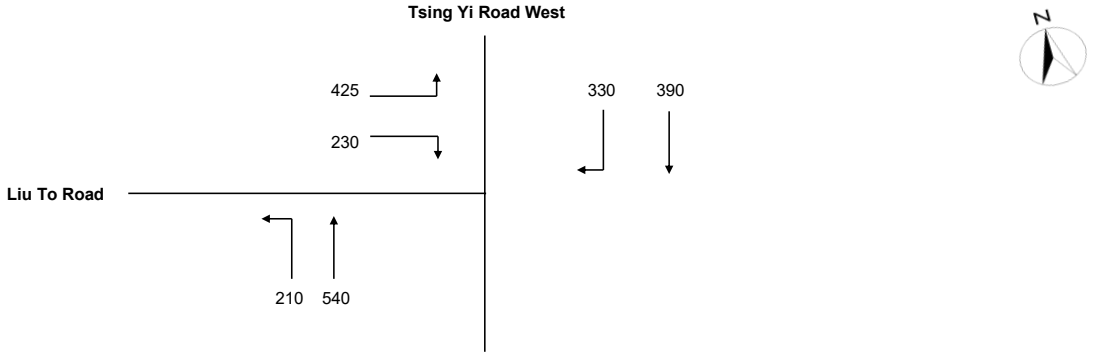
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2031 Scenario A NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

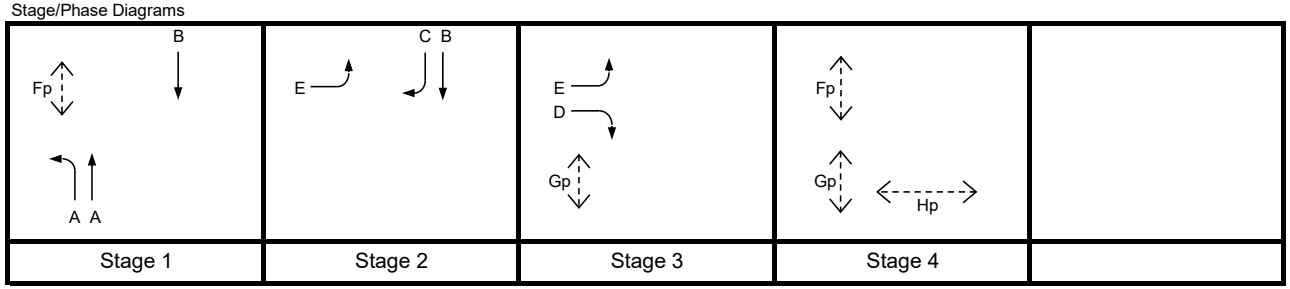
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.485 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,125 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ | = | 120 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 74 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 26.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 82 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 425 | | | 425 | 100% | | 1845 | 0.230 | |
| | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 230 | 230 | | 100% | 1961 | 0.117 | 0.117 |
| | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 210 | 134 | | 344 | 61% | | 1834 | 0.188 | |
| | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 406 | | 406 | | | 2161 | 0.188 | 0.188 |
| | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 390 | | 390 | | | 4028 | 0.097 | |
| | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 330 | 330 | | 100% | 1834 | 0.180 | 0.180 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

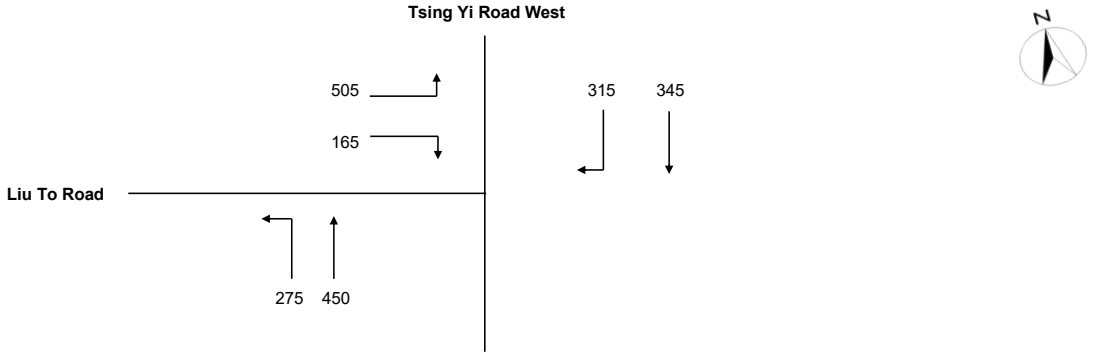
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2031 Scenario A PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

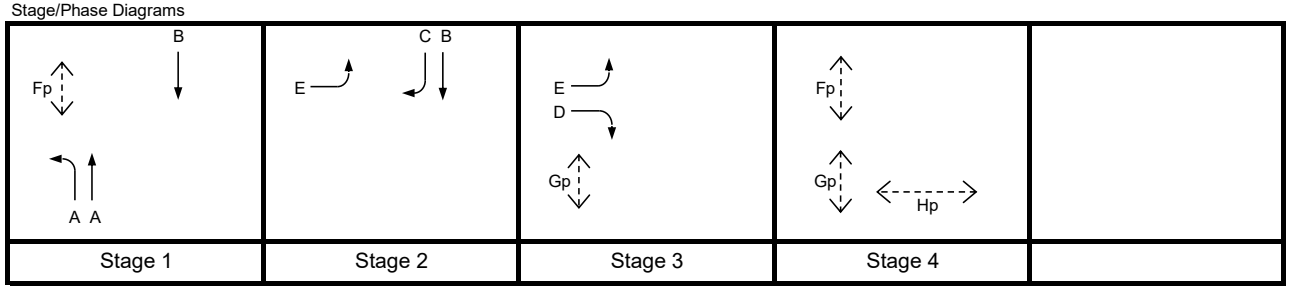
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.439 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,055 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 111 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 68 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 40.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 74 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 505 | | | 505 | 100% | | 1845 | 0.274 | |
| | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 165 | 165 | | 100% | 1961 | 0.084 | 0.084 |
| | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 275 | 54 | | 329 | 84% | | 1796 | 0.183 | 0.183 |
| | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 396 | | 396 | | | 2161 | 0.183 | |
| | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 345 | | 345 | | | 4028 | 0.086 | |
| | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 315 | 315 | | 100% | 1834 | 0.172 | 0.172 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

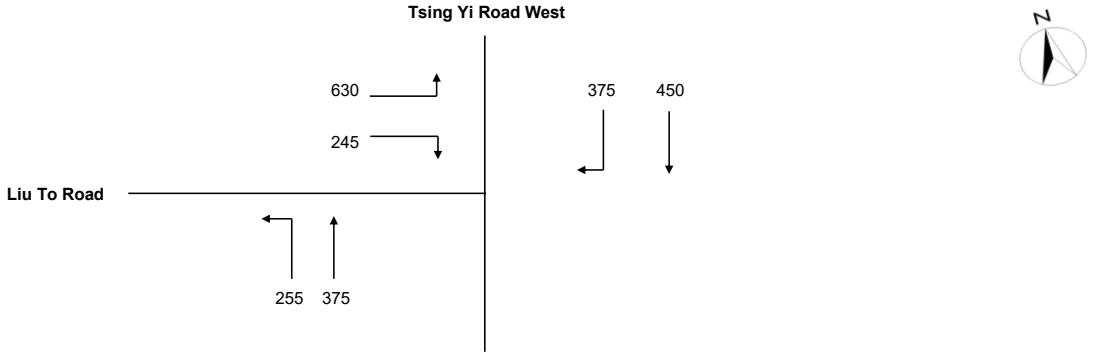
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2031 Scenario B AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

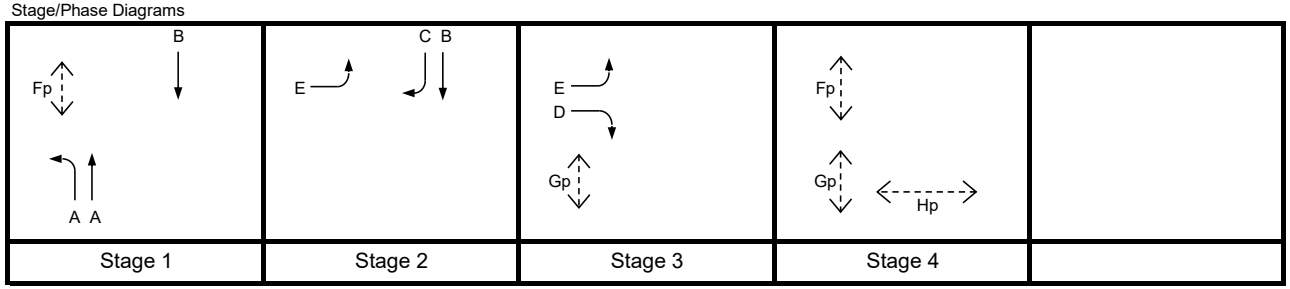
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.489 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,330 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 121 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 74 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 25.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 83 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.708 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 630 | | | 630 | 100% | | 1845 | 0.341 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 245 | 245 | | 100% | 1961 | 0.125 | 0.125 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 255 | 30 | | 285 | 89% | | 1786 | 0.160 | 0.160 |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 345 | | 345 | | | 2161 | 0.160 | |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 450 | | 450 | | | 4028 | 0.112 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 375 | 375 | | 100% | 1834 | 0.204 | 0.204 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

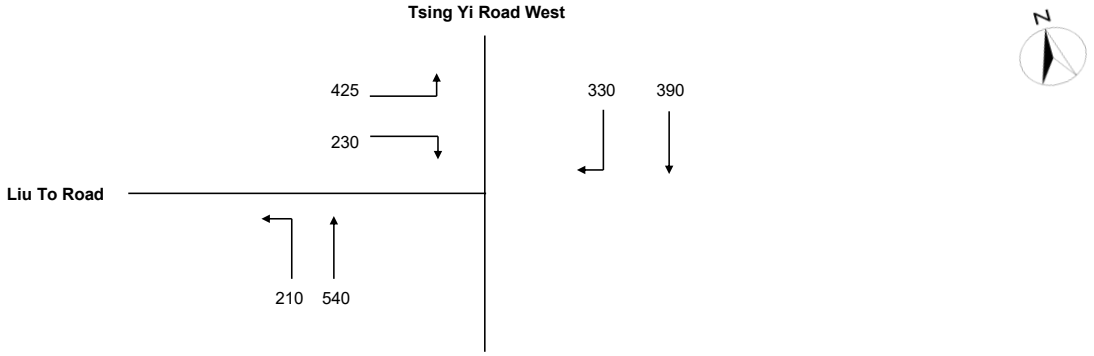
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2031 Scenario B NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

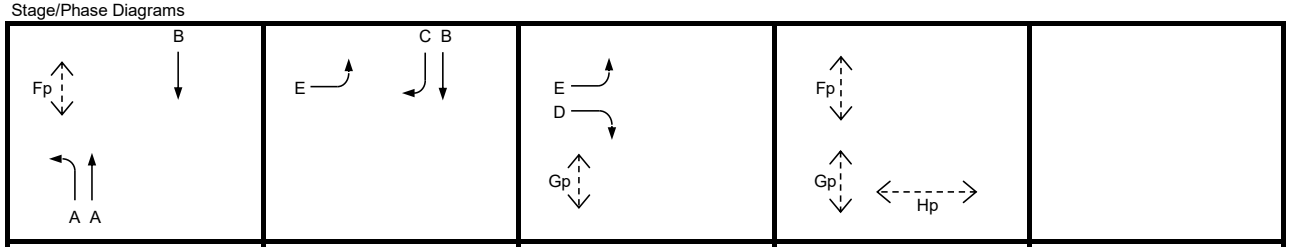
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.485 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,125 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ | = | 120 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 74 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.615 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 26.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 82 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E | 2,3 | 3.840 | 1 | 18 | | | 1 | | 0 | | 1999 | 425 | | | 425 | 100% | | 1845 | 0.230 | |
| D | D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 230 | 230 | | 100% | 1961 | 0.117 | 0.117 |
| A | A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 210 | 134 | | 344 | 61% | | 1834 | 0.188 | |
| A | A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 406 | | 406 | | | 2161 | 0.188 | 0.188 |
| B | B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 390 | | 390 | | | 4028 | 0.097 | |
| C | C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 330 | 330 | | 100% | 1834 | 0.180 | 0.180 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | * |

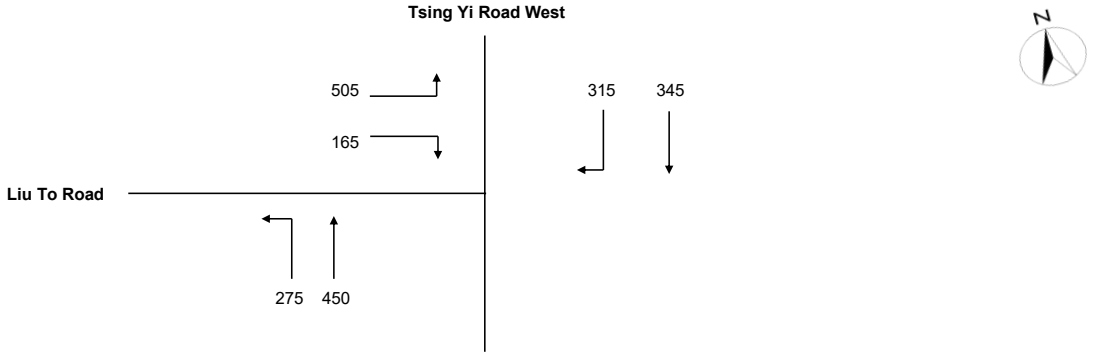
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J7 - Liu To Road / Tsing Yi Road West | 2031 Scenario B PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J7

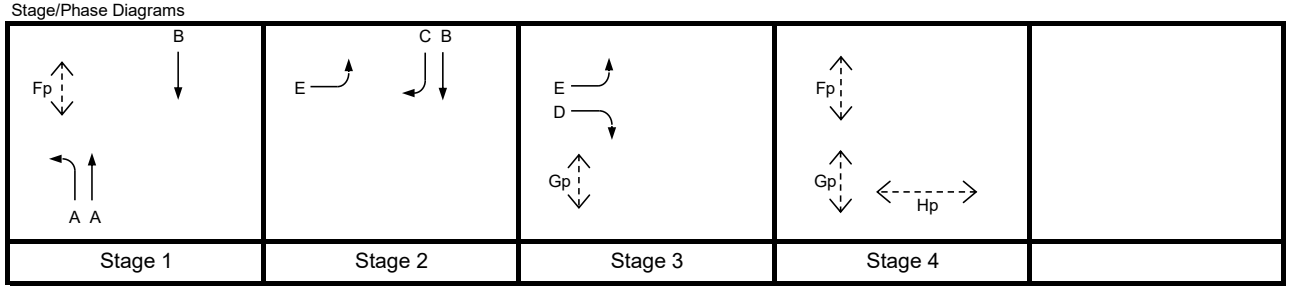
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.439 | |
| Lost time | L = | 38 | sec |
| Total Flow | = | 2,055 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 111 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 68 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.615 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 40.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 74 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.655 | |

Stage/Phase Diagrams




**Critical Case : A,C,D,Hp**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | 2,3 | 3.840 | 1 | 18 | | 1 | | | 0 | | 1999 | 505 | | | 505 | 100% | | 1845 | 0.274 | |
| D | 3 | 3.790 | 1 | | 17 | 0 | 0 | | 0 | | 2134 | | | 165 | 165 | | 100% | 1961 | 0.084 | 0.084 |
| A | 1 | 3.310 | 1 | 15 | | | 1 | | 0 | | 1946 | 275 | 54 | | 329 | 84% | | 1796 | 0.183 | 0.183 |
| A | 1 | 4.060 | 1 | | | | 0 | | 0 | | 2161 | | 396 | | 396 | | | 2161 | 0.183 | |
| B | 1,2 | 3.290 | 2 | | | | 1 | | 0 | | 4028 | | 345 | | 345 | | | 4028 | 0.086 | |
| C | 2 | 3.290 | 1 | | 11 | 0 | 0 | | 0 | | 2084 | | | 315 | 315 | | 100% | 1834 | 0.172 | 0.172 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | |
| | Gp | 3,4 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | |
| | Hp | 4 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | * |

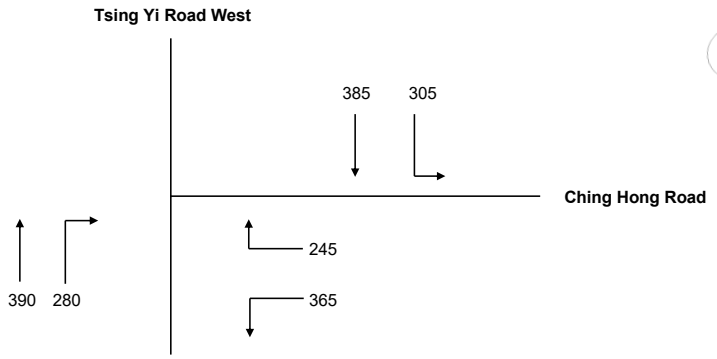
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2025 Survey Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

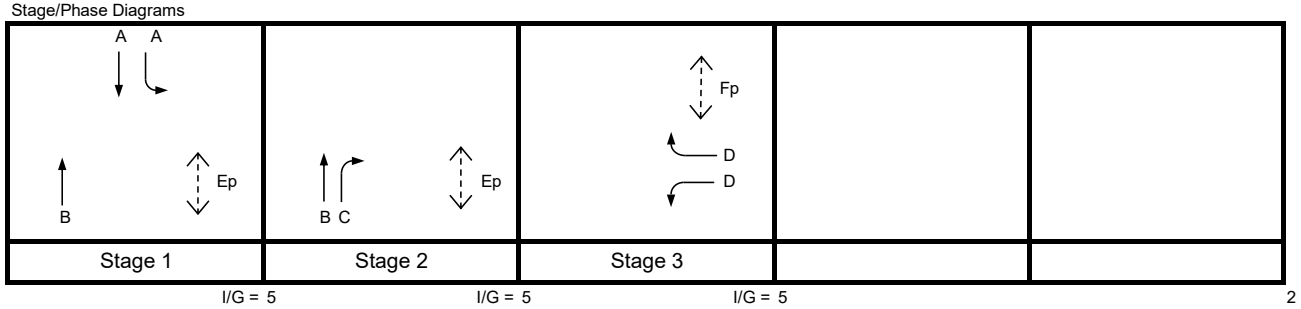
J8

Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | | N = 3 | |
| Cycle time | | C = 130 | sec |
| Sum(y) | | Y = 0.476 | |
| Lost time | | L = 14 | sec |
| Total Flow | | = 1,970 | pcu |
| Optimum Cycle $C_o$ | = (1.5×L+5)/(1-Y) | = 50 | sec |
| Min. Cycle Time $C_m$ | = L/(1-Y) | = 27 | sec |
| $Y_{ult}$ | = 0.9-0.0075×L | = 0.795 | |
| R.C.$_{ult}$ | = ($Y_{ult}$-Y)/Yx100% | = 67.0 | % |
| Practical Cycle Time $C_p$ | = 0.9×L/(0.9-Y) | = 30 | sec |
| $Y_{max}$ | = 1-L/C | = 0.892 | |

Stage/Phase Diagrams




**Critical Case : A,C,D**

**R.C.(C) = (0.9x$Y_{max}$-Y)/Yx100% = 69%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 390 | | 390 | | | 4072 | 0.096 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 280 | 280 | | 100% | 1989 | 0.141 | 0.141 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 294 | | | 294 | 100% | | 1795 | 0.164 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 71 | | 245 | 316 | 22% | 78% | 1930 | 0.164 | 0.164 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 305 | | | 305 | 100% | | 1779 | 0.171 | 0.171 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 385 | | 385 | | | 4259 | 0.090 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

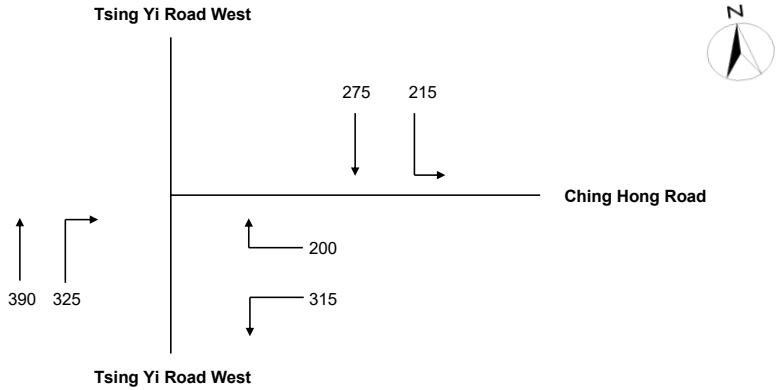
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2025 Survey Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

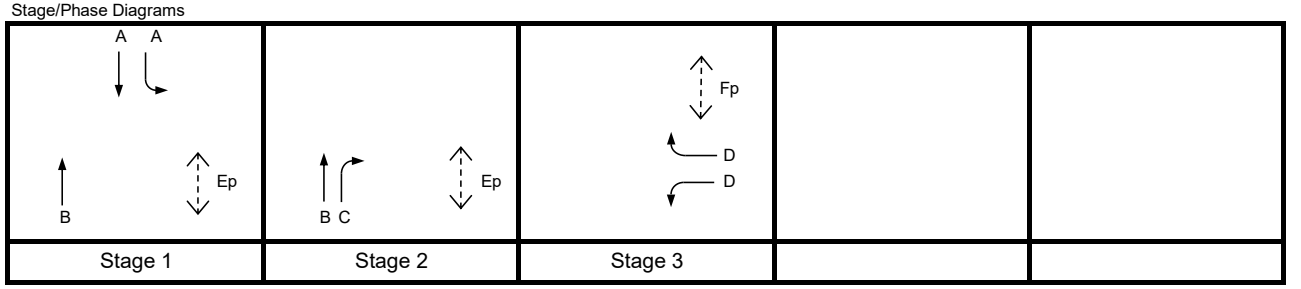
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.423 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 1,720 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 45 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 24 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 88.2 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 26 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 86%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 390 | | 390 | | | 4072 | 0.096 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 325 | 325 | | 100% | 1989 | 0.163 | 0.163 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 248 | | | 248 | 100% | | 1795 | 0.138 | 0.138 |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 67 | | 200 | 267 | 25% | 75% | 1930 | 0.138 | |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 215 | | | 215 | 100% | | 1779 | 0.121 | 0.121 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 275 | | 275 | | | 4259 | 0.065 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

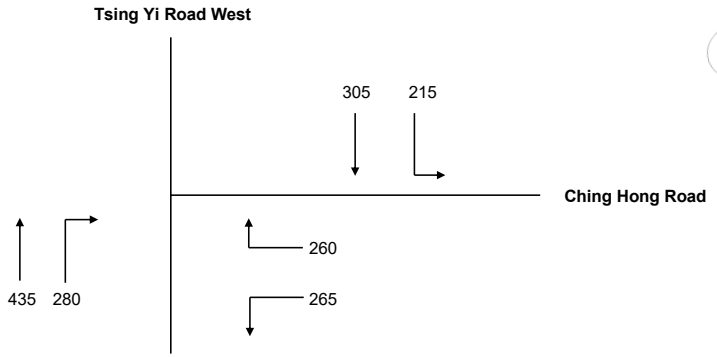
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2025 Survey Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

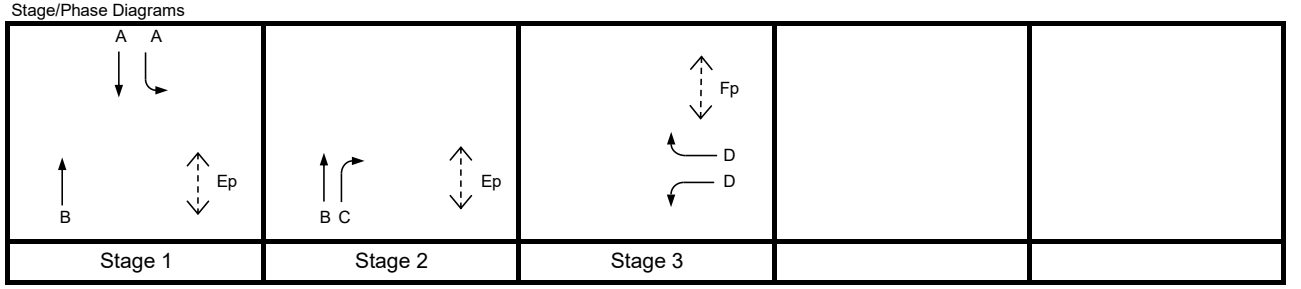
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.403 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 1,760 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 44 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 23 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 97.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 25 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 95%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 435 | | 435 | | | 4072 | 0.107 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 280 | 280 | | 100% | 1989 | 0.141 | 0.141 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 253 | | | 253 | 100% | | 1795 | 0.141 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 12 | | 260 | 272 | 4% | 96% | 1932 | 0.141 | 0.141 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 215 | | | 215 | 100% | | 1779 | 0.121 | 0.121 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 305 | | 305 | | | 4259 | 0.072 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

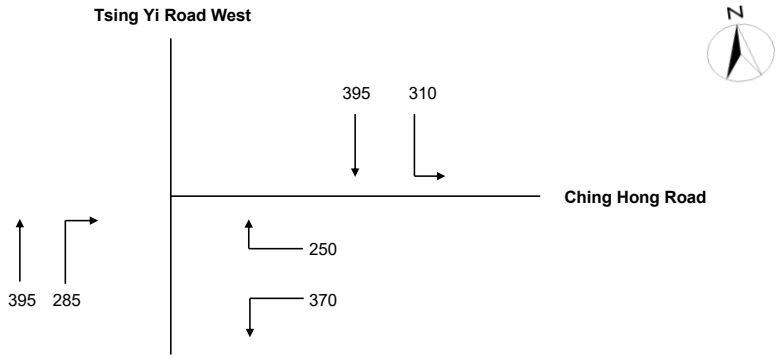
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2028 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

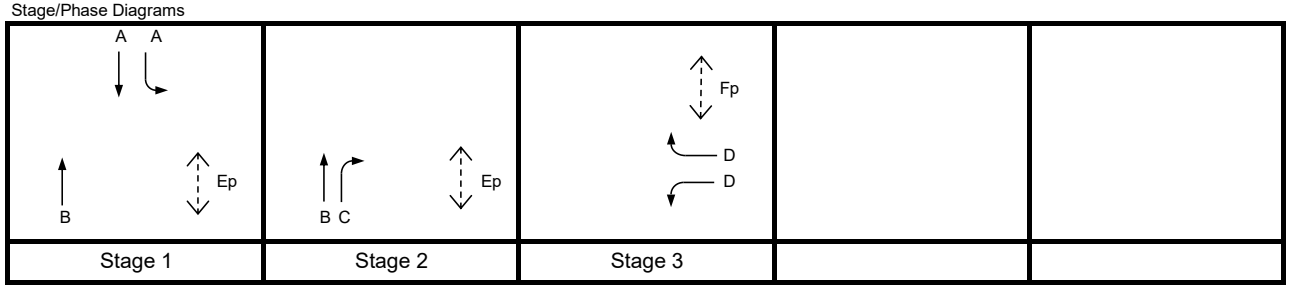
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.484 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 2,005 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 50 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 64.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 30 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.892 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 66%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 395 | | 395 | | | 4072 | 0.097 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 285 | 285 | | 100% | 1989 | 0.143 | 0.143 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 299 | | | 299 | 100% | | 1795 | 0.166 | 0.166 |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 71 | | 250 | 321 | 22% | 78% | 1930 | 0.166 | |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 310 | | | 310 | 100% | | 1779 | 0.174 | 0.174 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 395 | | 395 | | | 4259 | 0.093 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

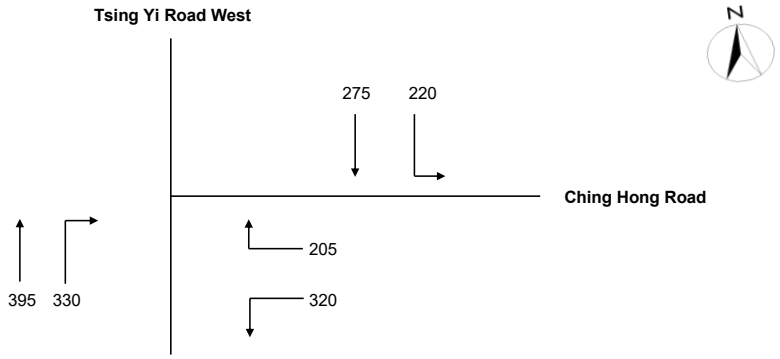
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2028 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

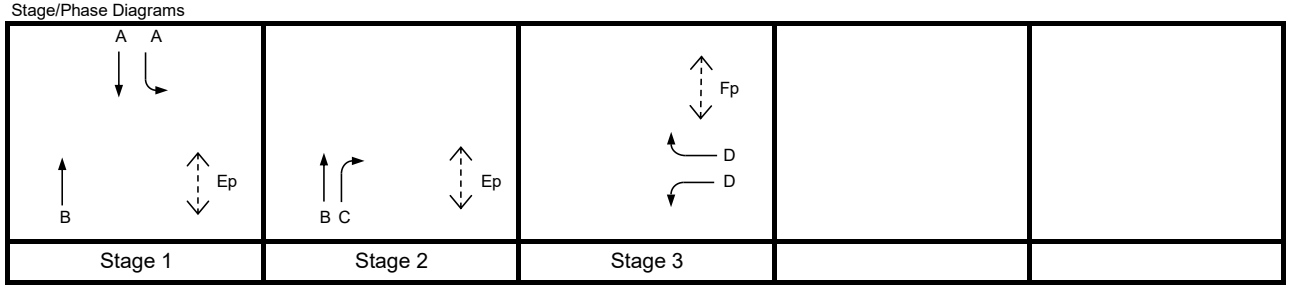
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.431 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 1,745 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 46 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 25 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 84.7 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 27 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**$R.C._{(C)} = (0.9xY_{max}-Y)/Yx100\% =$ 82%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 395 | | 395 | | | 4072 | 0.097 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 330 | 330 | | 100% | 1989 | 0.166 | 0.166 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 253 | | | 253 | 100% | | 1795 | 0.141 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 67 | | 205 | 272 | 25% | 75% | 1930 | 0.141 | 0.141 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 220 | | | 220 | 100% | | 1779 | 0.124 | 0.124 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 275 | | 275 | | | 4259 | 0.065 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

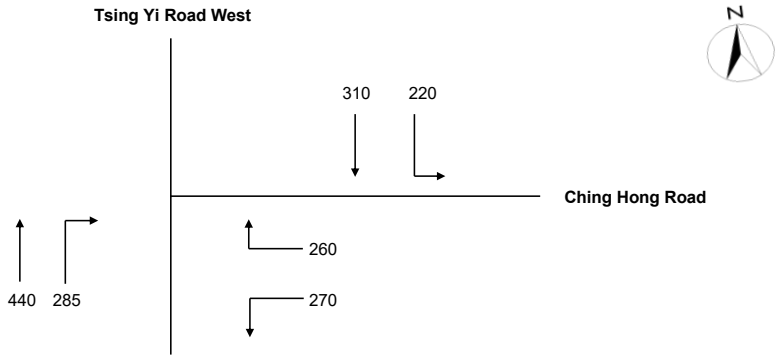
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2028 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

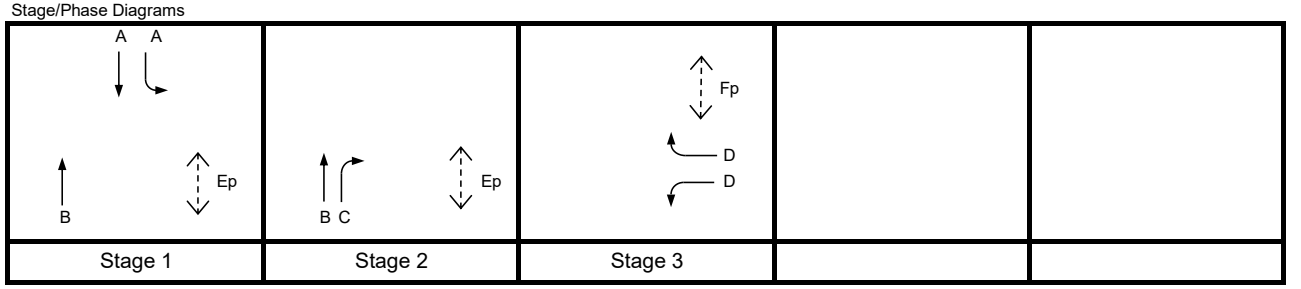
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.409 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 1,785 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 44 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 24 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 94.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 26 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 92%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 440 | | 440 | | | 4072 | 0.108 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 285 | 285 | | 100% | 1989 | 0.143 | 0.143 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 255 | | | 255 | 100% | | 1795 | 0.142 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 15 | | 260 | 275 | 5% | 95% | 1932 | 0.142 | 0.142 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 220 | | | 220 | 100% | | 1779 | 0.124 | 0.124 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 310 | | 310 | | | 4259 | 0.073 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

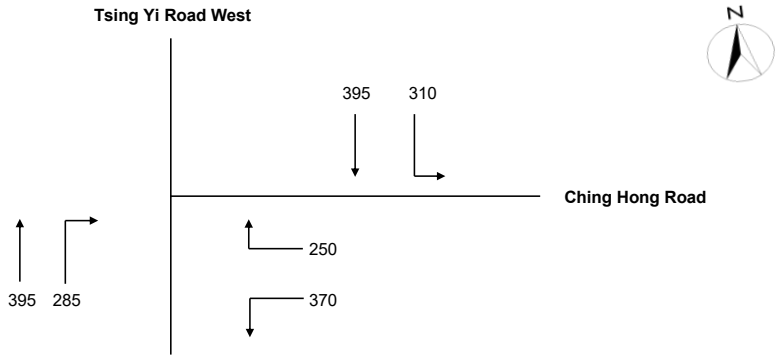
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2028 Design Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

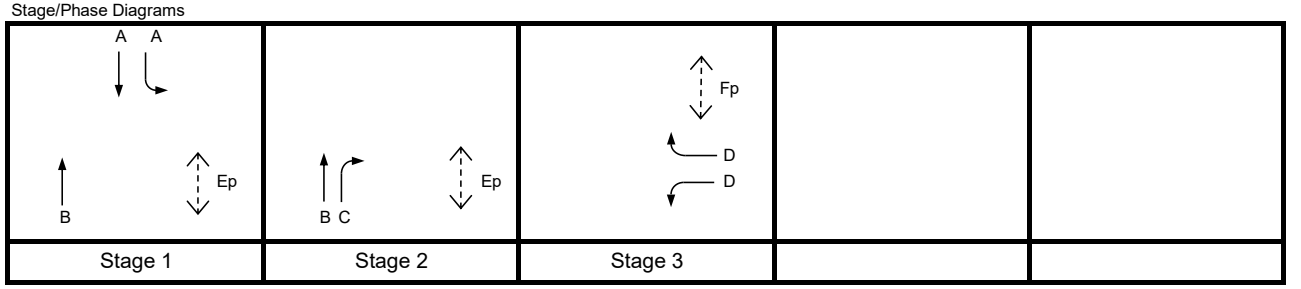
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.484 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 2,005 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 50 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 64.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 30 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.892 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 66%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 395 | | 395 | | | 4072 | 0.097 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 285 | 285 | | 100% | 1989 | 0.143 | 0.143 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 299 | | | 299 | 100% | | 1795 | 0.166 | 0.166 |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 71 | | 250 | 321 | 22% | 78% | 1930 | 0.166 | |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 310 | | | 310 | 100% | | 1779 | 0.174 | 0.174 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 395 | | 395 | | | 4259 | 0.093 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

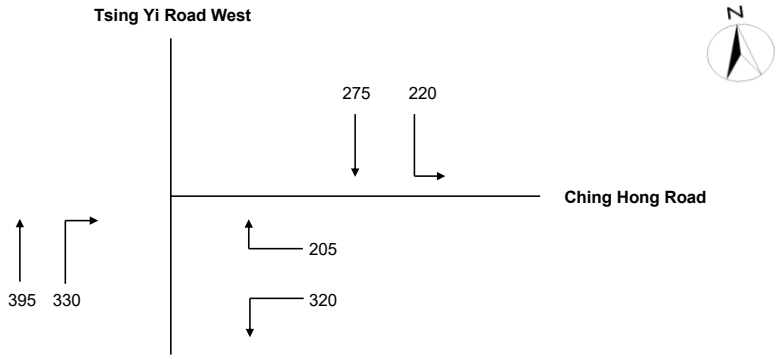
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2028 Design Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

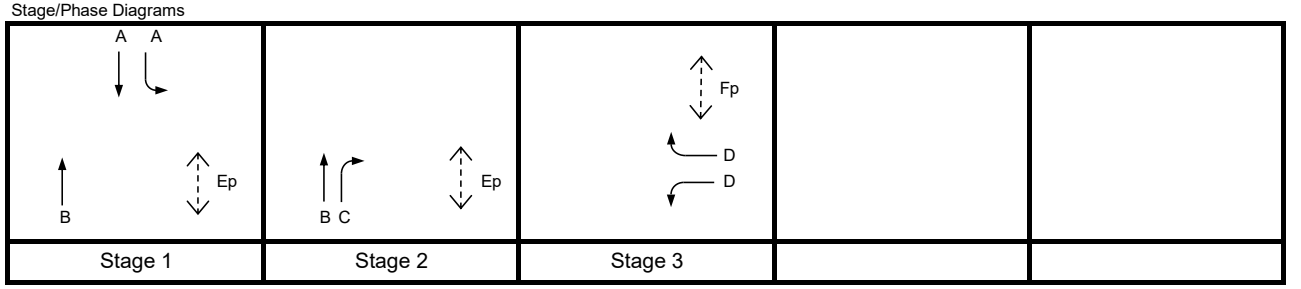
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.431 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 1,745 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ | = | 46 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 25 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 84.7 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 27 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.873 | |

Stage/Phase Diagrams




**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 82%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 395 | | 395 | | | 4072 | 0.097 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 330 | 330 | | 100% | 1989 | 0.166 | 0.166 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 253 | | | 253 | 100% | | 1795 | 0.141 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 67 | | 205 | 272 | 25% | 75% | 1930 | 0.141 | 0.141 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 220 | | | 220 | 100% | | 1779 | 0.124 | 0.124 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 275 | | 275 | | | 4259 | 0.065 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

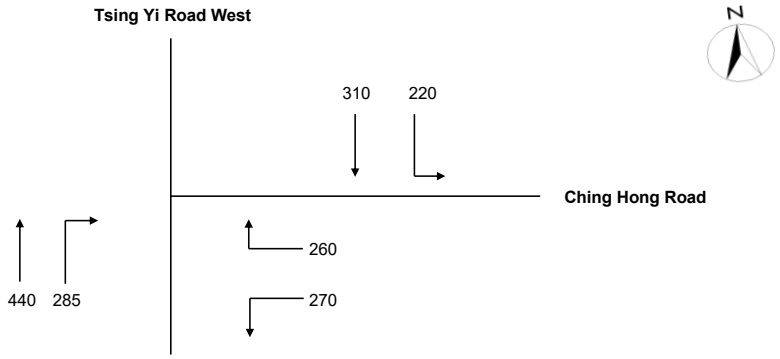
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2028 Design Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

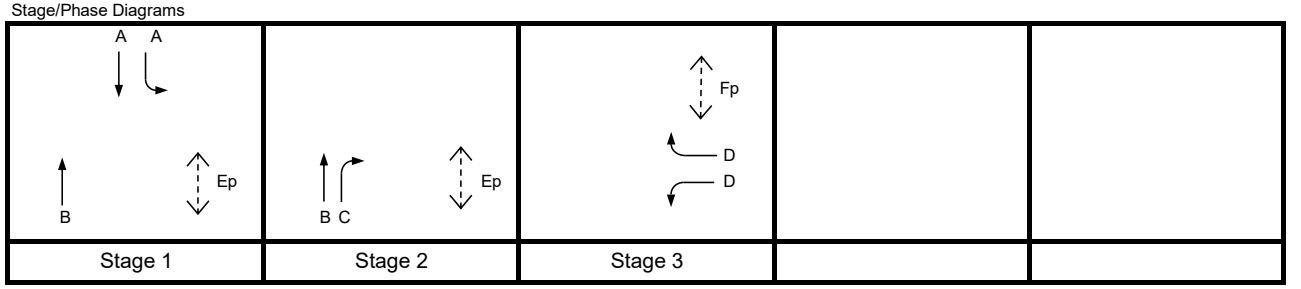
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.409 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 1,785 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 44 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 24 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 94.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 26 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 92%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 440 | | 440 | | | 4072 | 0.108 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 285 | 285 | | 100% | 1989 | 0.143 | 0.143 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 255 | | | 255 | 100% | | 1795 | 0.142 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 15 | | 260 | 275 | 5% | 95% | 1932 | 0.142 | 0.142 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 220 | | | 220 | 100% | | 1779 | 0.124 | 0.124 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 310 | | 310 | | | 4259 | 0.073 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

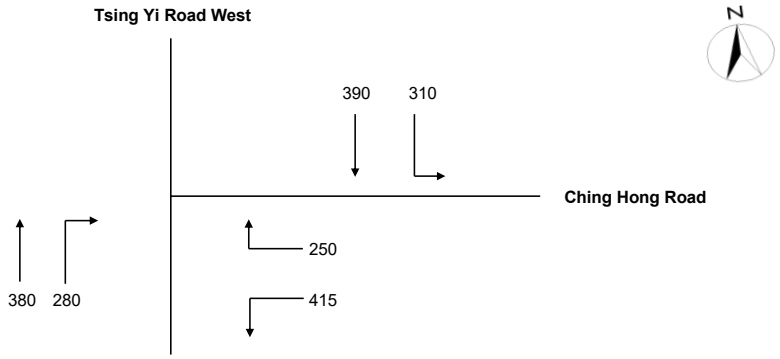
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2031 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

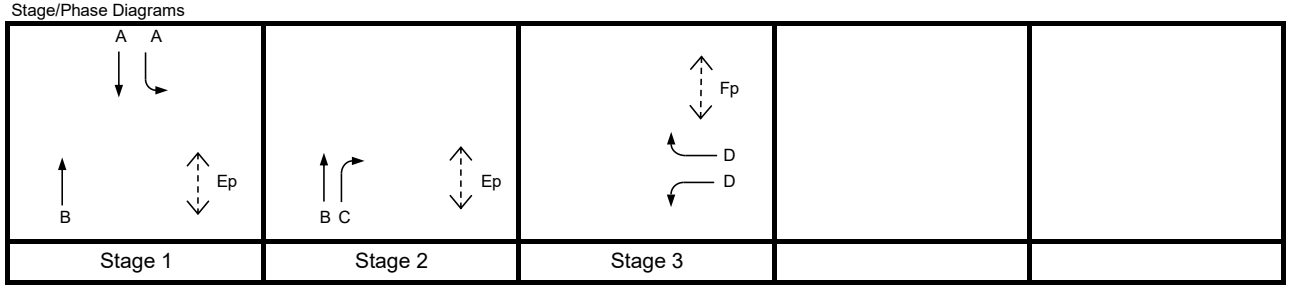
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.494 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 2,025 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 51 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 28 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 61.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 31 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.892 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 63%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 380 | | 380 | | | 4072 | 0.093 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 280 | 280 | | 100% | 1989 | 0.141 | 0.141 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 320 | | | 320 | 100% | | 1795 | 0.179 | 0.179 |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 95 | | 250 | 345 | 27% | 73% | 1930 | 0.179 | |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 310 | | | 310 | 100% | | 1779 | 0.174 | 0.174 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 390 | | 390 | | | 4259 | 0.092 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

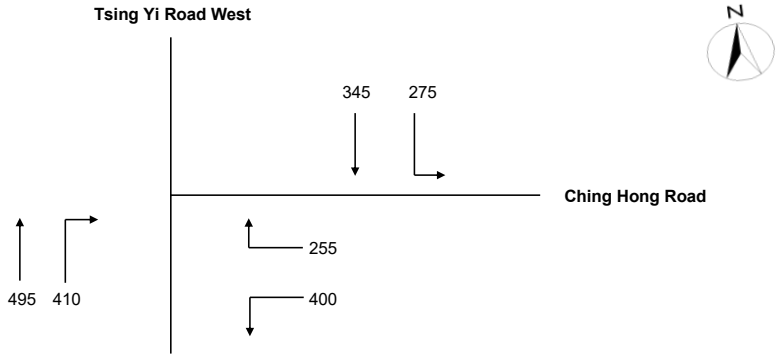
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2031 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

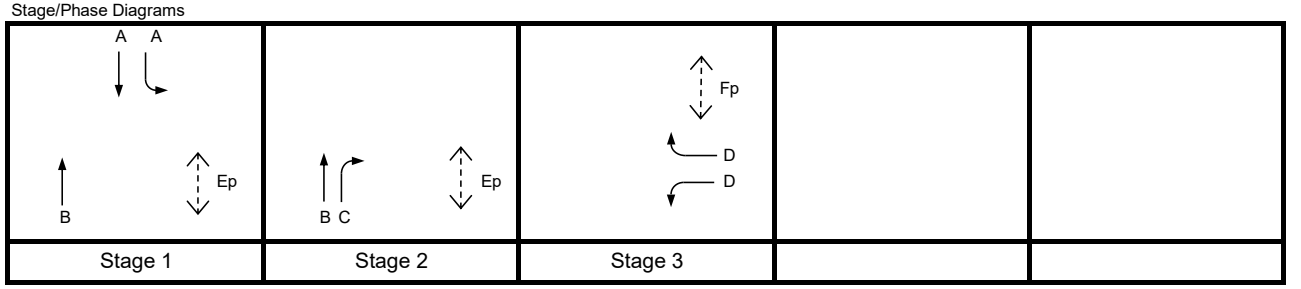
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.537 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 2,180 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 56 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 30 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 48.2 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 35 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 495 | | 495 | | | 4072 | 0.122 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 410 | 410 | | 100% | 1989 | 0.206 | 0.206 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 316 | | | 316 | 100% | | 1795 | 0.176 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 84 | | 255 | 339 | 25% | 75% | 1930 | 0.176 | 0.176 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 275 | | | 275 | 100% | | 1779 | 0.155 | 0.155 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 345 | | 345 | | | 4259 | 0.081 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

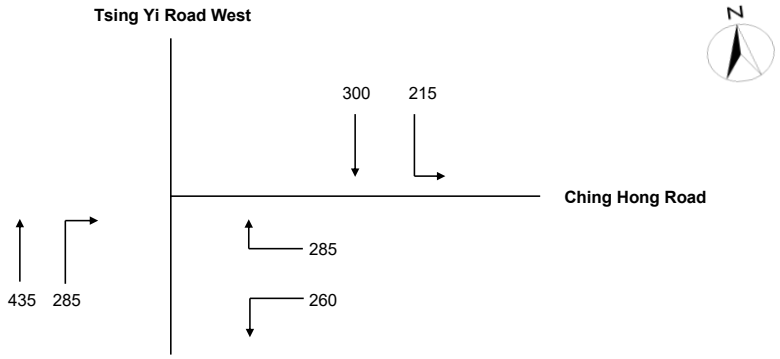
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2031 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

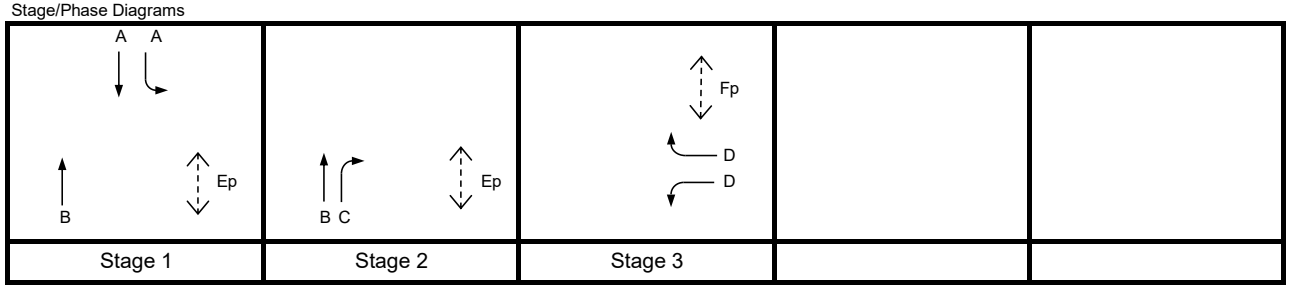
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.412 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 1,780 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 44 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 24 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 93.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 26 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 91%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 435 | | 435 | | | 4072 | 0.107 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 285 | 285 | | 100% | 1989 | 0.143 | 0.143 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 260 | | | 260 | 100% | | 1795 | 0.145 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 0 | | 285 | 285 | 0% | 100% | 1932 | 0.148 | 0.148 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 215 | | | 215 | 100% | | 1779 | 0.121 | 0.121 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 300 | | 300 | | | 4259 | 0.070 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

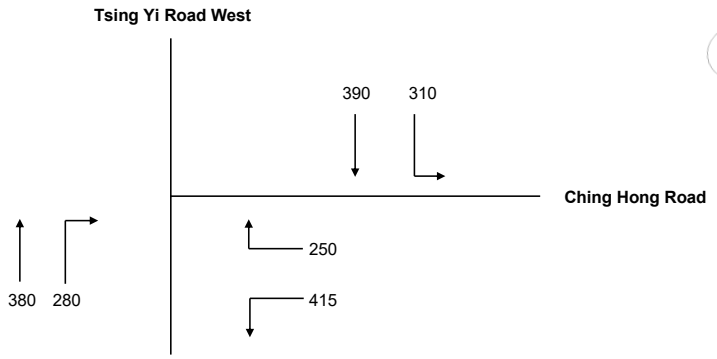
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2031 Scenario A AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

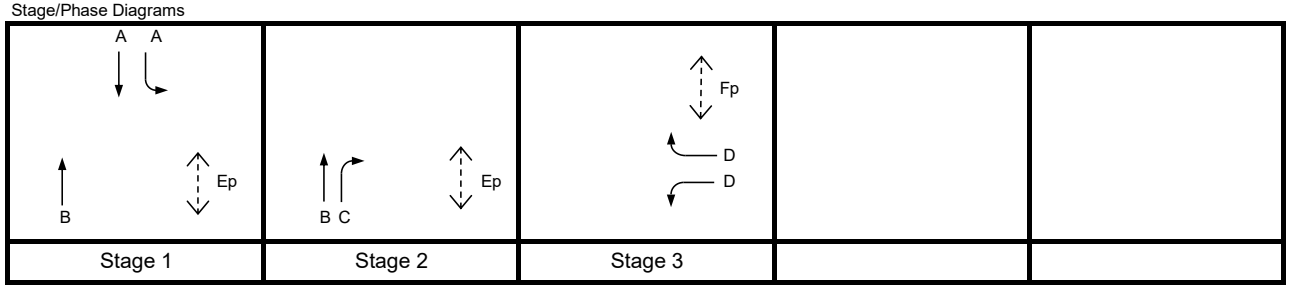
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.494 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 2,025 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ | = | 51 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 28 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 61.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 31 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.892 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 63%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 380 | | 380 | | | 4072 | 0.093 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 280 | 280 | | 100% | 1989 | 0.141 | 0.141 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 320 | | | 320 | 100% | | 1795 | 0.179 | 0.179 |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 95 | | 250 | 345 | 27% | 73% | 1930 | 0.179 | |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 310 | | | 310 | 100% | | 1779 | 0.174 | 0.174 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 390 | | 390 | | | 4259 | 0.092 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

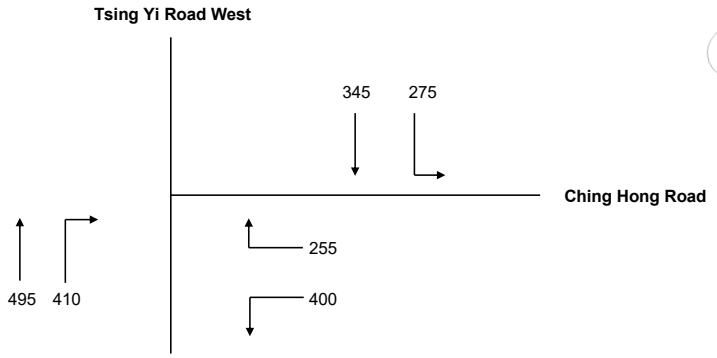
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2031 Scenario A NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

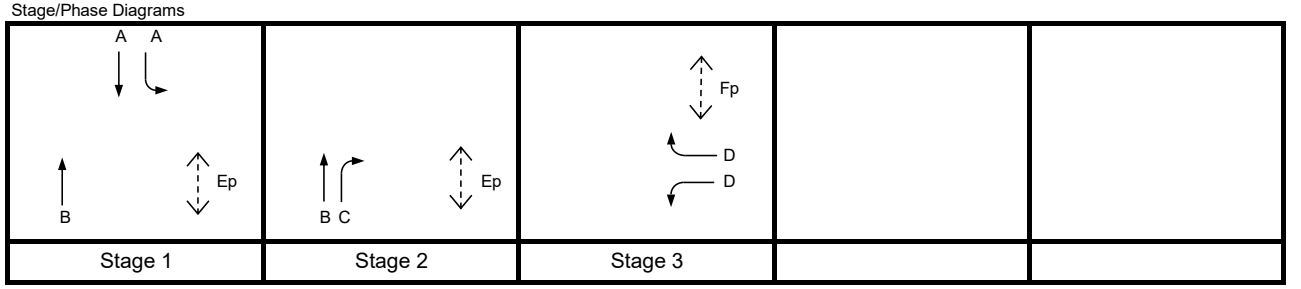
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.537 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 2,180 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 56 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 30 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 48.2 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 35 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 495 | | 495 | | | 4072 | 0.122 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 410 | 410 | | 100% | 1989 | 0.206 | 0.206 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 316 | | | 316 | 100% | | 1795 | 0.176 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 84 | | 255 | 339 | 25% | 75% | 1930 | 0.176 | 0.176 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 275 | | | 275 | 100% | | 1779 | 0.155 | 0.155 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 345 | | 345 | | | 4259 | 0.081 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

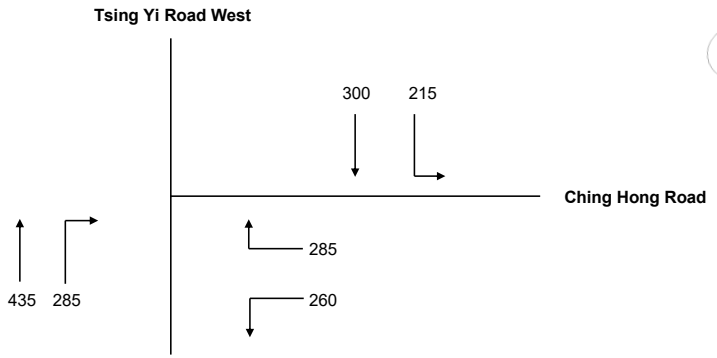
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2031 Scenario A PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

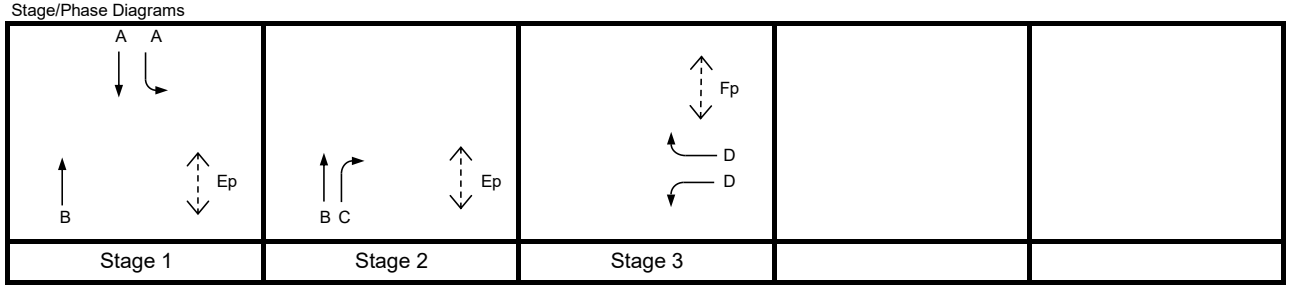
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.412 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 1,780 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 44 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 24 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 93.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 26 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 91%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 435 | | 435 | | | 4072 | 0.107 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 285 | 285 | | 100% | 1989 | 0.143 | 0.143 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 260 | | | 260 | 100% | | 1795 | 0.145 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 0 | | 285 | 285 | 0% | 100% | 1932 | 0.148 | 0.148 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 215 | | | 215 | 100% | | 1779 | 0.121 | 0.121 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 300 | | 300 | | | 4259 | 0.070 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

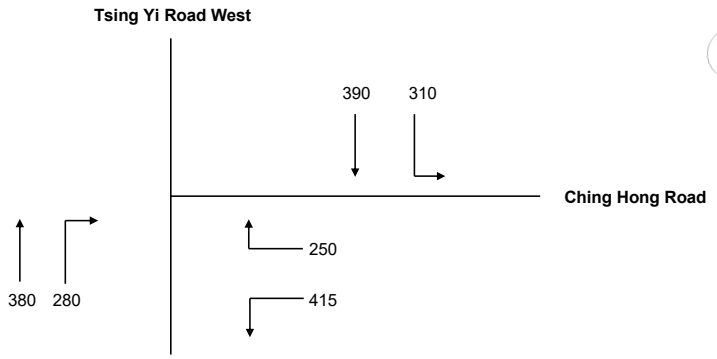
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2031 Scenario B AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

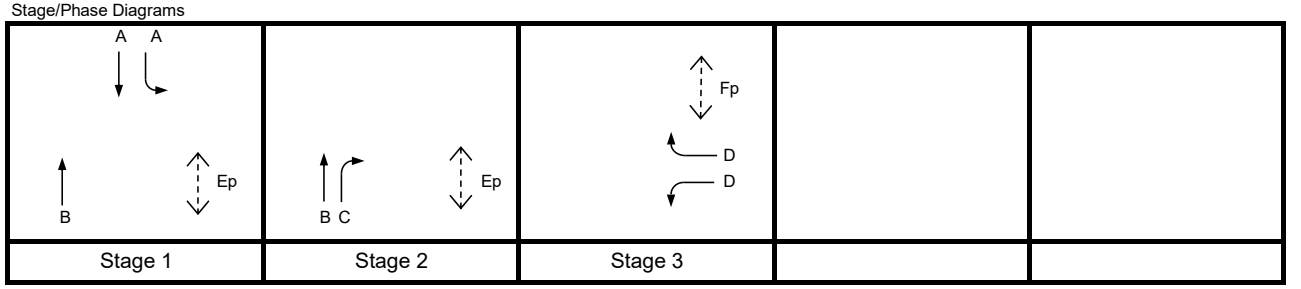
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 130 | sec |
| Sum(y) | Y = | 0.494 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 2,025 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 51 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 28 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 61.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 31 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.892 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 63%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 380 | | 380 | | | 4072 | 0.093 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 280 | 280 | | 100% | 1989 | 0.141 | 0.141 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 320 | | | 320 | 100% | | 1795 | 0.179 | 0.179 |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 95 | | 250 | 345 | 27% | 73% | 1930 | 0.179 | |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 310 | | | 310 | 100% | | 1779 | 0.174 | 0.174 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 390 | | 390 | | | 4259 | 0.092 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

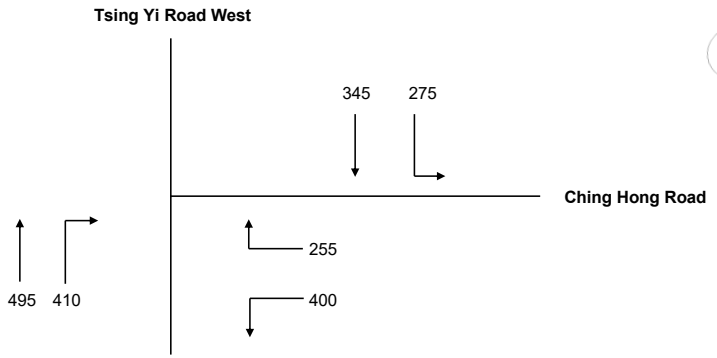
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2031 Scenario B NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

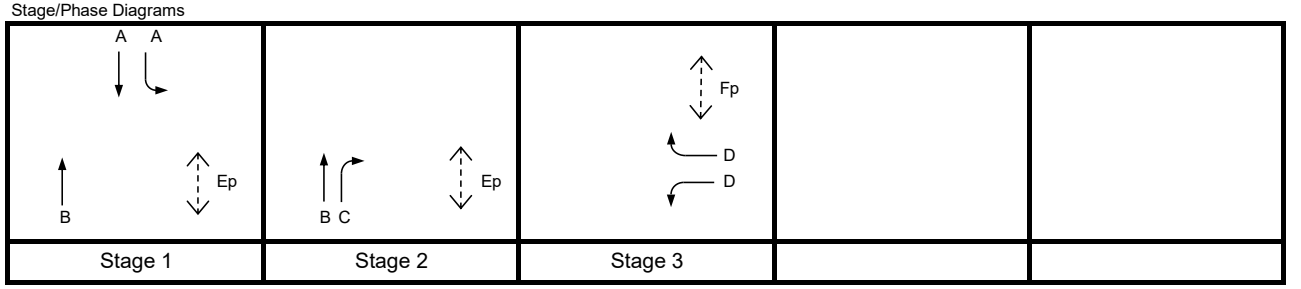
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.537 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 2,180 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 56 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 30 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 48.2 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 35 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




**Critical Case : A,C,D**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 495 | | 495 | | | 4072 | 0.122 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 410 | 410 | | 100% | 1989 | 0.206 | 0.206 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 316 | | | 316 | 100% | | 1795 | 0.176 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 84 | | 255 | 339 | 25% | 75% | 1930 | 0.176 | 0.176 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 275 | | | 275 | 100% | | 1779 | 0.155 | 0.155 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 345 | | 345 | | | 4259 | 0.081 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

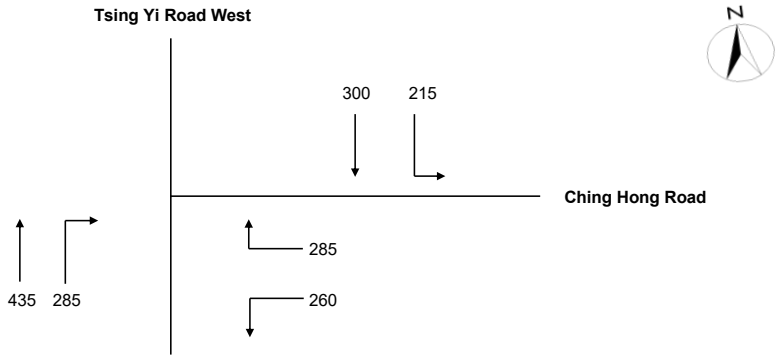
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J8 - Tsing Yi Road West / Ching Hong Road | 2031 Scenario B PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J8

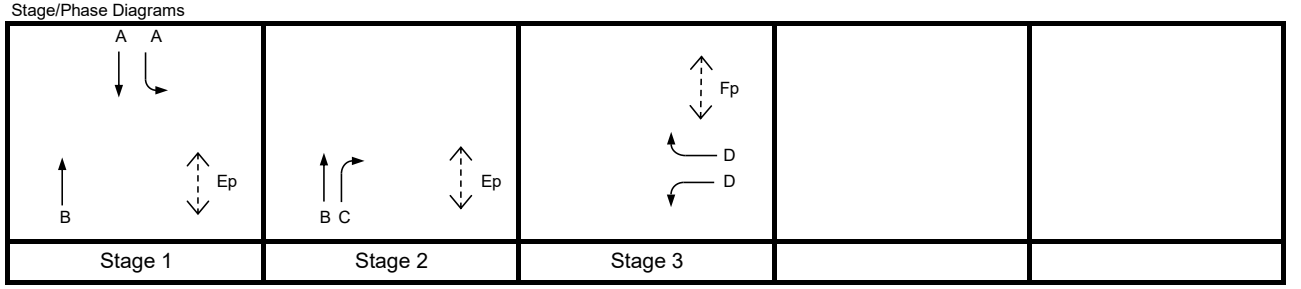
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.412 | |
| Lost time | L = | 14 | sec |
| Total Flow | = | 1,780 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 44 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 24 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.795 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 93.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 26 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.873 | |

Stage/Phase Diagrams




I/G = 5 I/G = 5 I/G = 5 2

**Critical Case : A,C,D**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 91%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | 1,2 | 3.510 | 2 | | | | 1 | | 0 | | 4072 | | 435 | | 435 | | | 4072 | 0.107 | |
| | C | 2 | 3.700 | 1 | | 22 | 0 | 0 | | 0 | | 2125 | | | 285 | 285 | | 100% | 1989 | 0.143 | 0.143 |
| | D | 3 | 3.380 | 1 | 17 | | | 1 | | 0 | | 1953 | 260 | | | 260 | 100% | | 1795 | 0.145 | |
| | D | 3 | 3.380 | 1 | 17 | 18 | 0 | 0 | | 0 | | 2093 | 0 | | 285 | 285 | 0% | 100% | 1932 | 0.148 | 0.148 |
| | A | 1 | 3.690 | 1 | 13 | | | 1 | | 0 | | 1984 | 215 | | | 215 | 100% | | 1779 | 0.121 | 0.121 |
| | A | 1 | 3.745 | 2 | | | | 0 | | 0 | | 4259 | | 300 | | 300 | | | 4259 | 0.070 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 11 | + | 8 | = | 19 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 13 | = | 18 | sec | | | | | | | | | | | | |

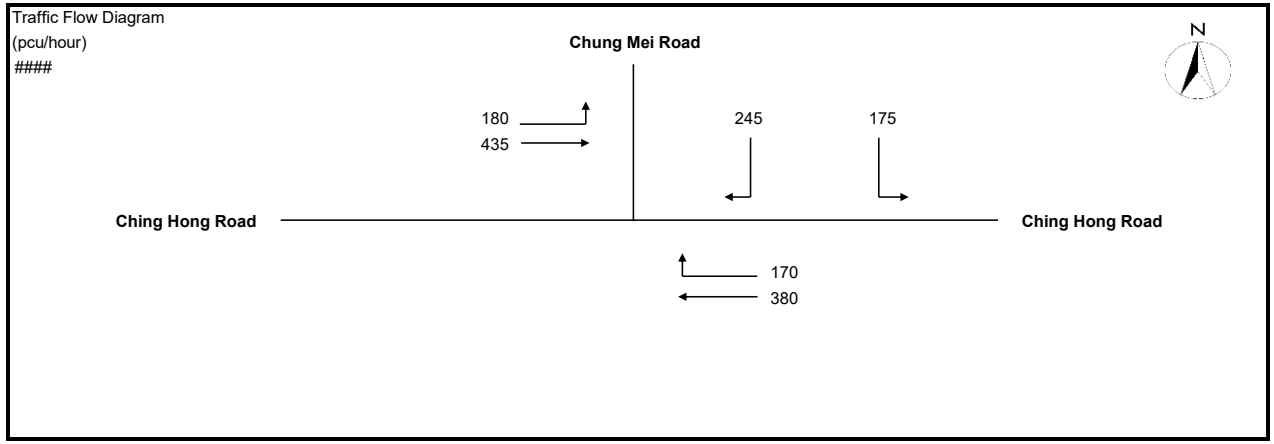
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2025 Survey Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

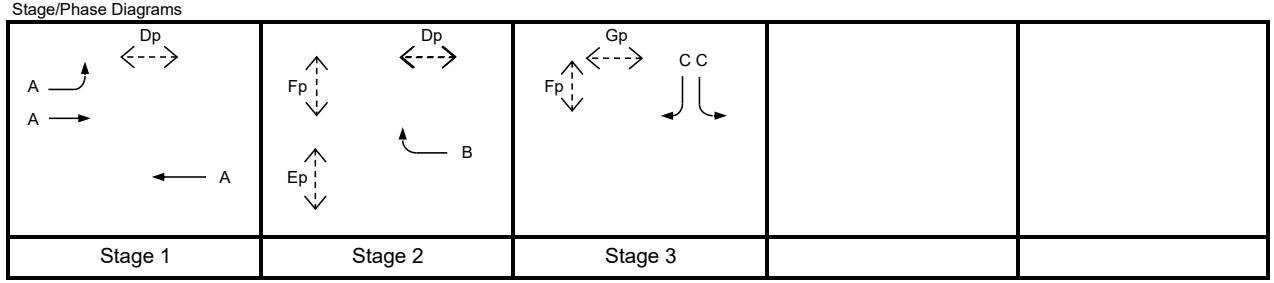
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.371 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,585 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 44 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 24 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 112.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 26 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 106%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ⇧⇨ | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 180 | 109 | | 289 | 62% | | 1855 | 0.156 | 0.156 |
| ⇨ | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 326 | | 326 | | | 2087 | 0.156 | |
| ⇦ | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 380 | | 380 | | | 4116 | 0.092 | |
| ⇧⇦ | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 170 | 170 | | 100% | 1946 | 0.087 | 0.087 |
| ⇩⇨ | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 175 | | | 175 | 100% | | 1724 | 0.101 | |
| ⇩⇦ | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 245 | 245 | | 100% | 1914 | 0.128 | 0.128 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

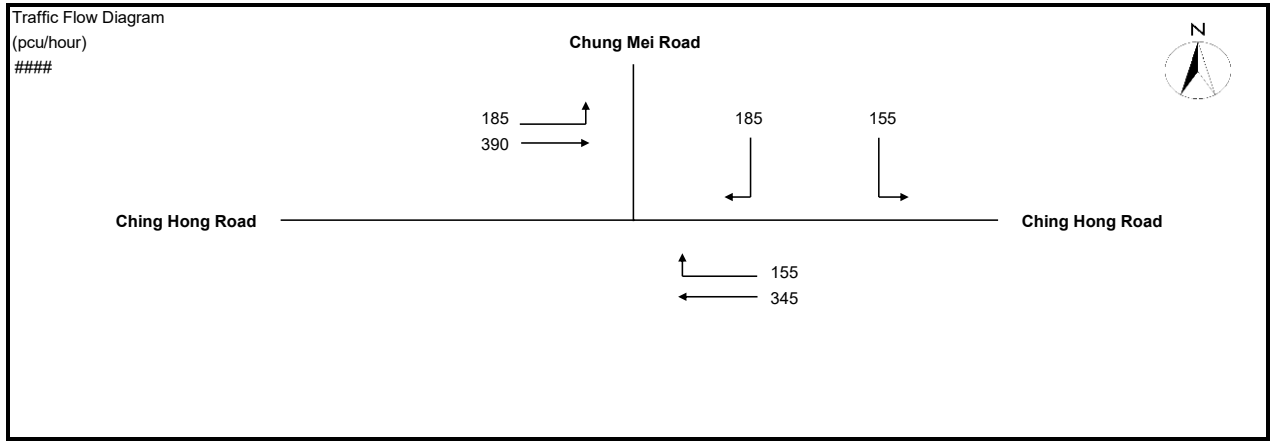
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2025 Survey Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

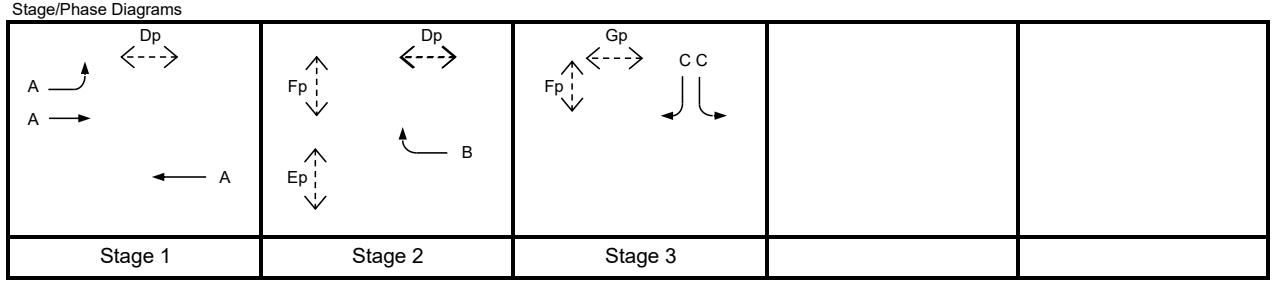
J9

Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.323 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,415 | pcu |
| Optimum Cycle $C_o$ = (1.5×L+5)/(1-Y) | = | 41 | sec |
| Min. Cycle Time $C_m$ = L/(1-Y) | = | 22 | sec |
| $Y_{ult}$ = 0.9-0.0075×L | = | 0.788 | |
| $R.C._{ult}$ = $(Y_{ult}-Y)/Y \times 100\%$ | = | 144.1 | % |
| Practical Cycle Time $C_p$ = 0.9×L/(0.9-Y) | = | 23 | sec |
| $Y_{max}$ = 1-L/C | = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) = $(0.9 \times Y_{max}-Y)/Y \times 100\%$ = 137%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 185 | 85 | | 270 | 69% | | 1844 | 0.146 | 0.146 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 305 | | 305 | | | 2087 | 0.146 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 345 | | 345 | | | 4116 | 0.084 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 155 | 155 | | 100% | 1946 | 0.080 | 0.080 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 155 | | | 155 | 100% | | 1724 | 0.090 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 185 | 185 | | 100% | 1914 | 0.097 | 0.097 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

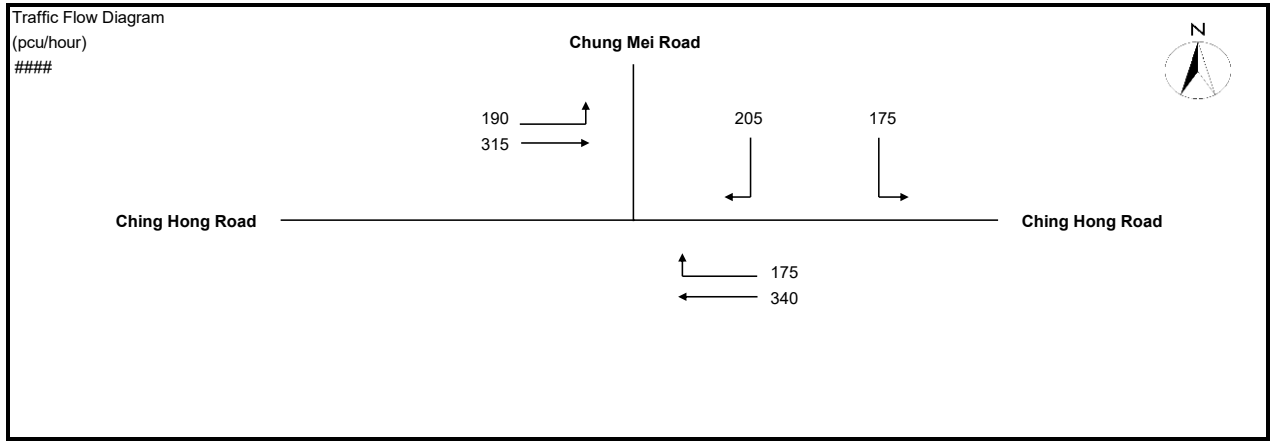
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2025 Survey Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

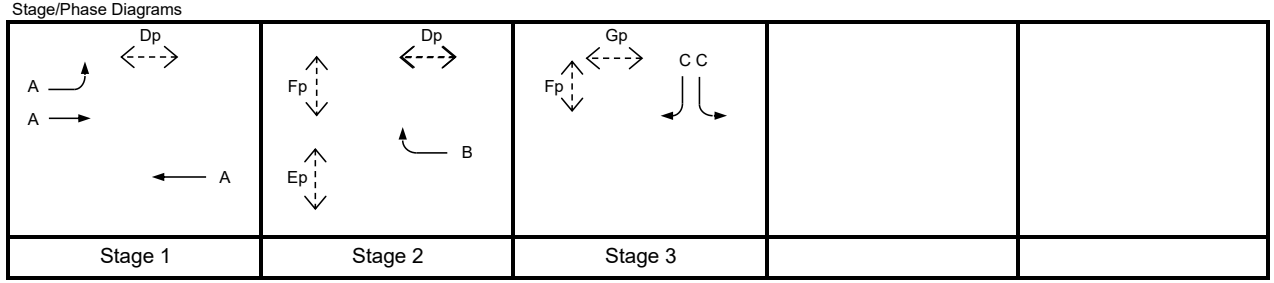
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.326 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,400 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 41 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 141.4 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.857 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 136%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 190 | 45 | | 235 | 81% | | 1821 | 0.129 | 0.129 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 270 | | 270 | | | 2087 | 0.129 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 340 | | 340 | | | 4116 | 0.083 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 175 | 175 | | 100% | 1946 | 0.090 | 0.090 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 175 | | | 175 | 100% | | 1724 | 0.101 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 205 | 205 | | 100% | 1914 | 0.107 | 0.107 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

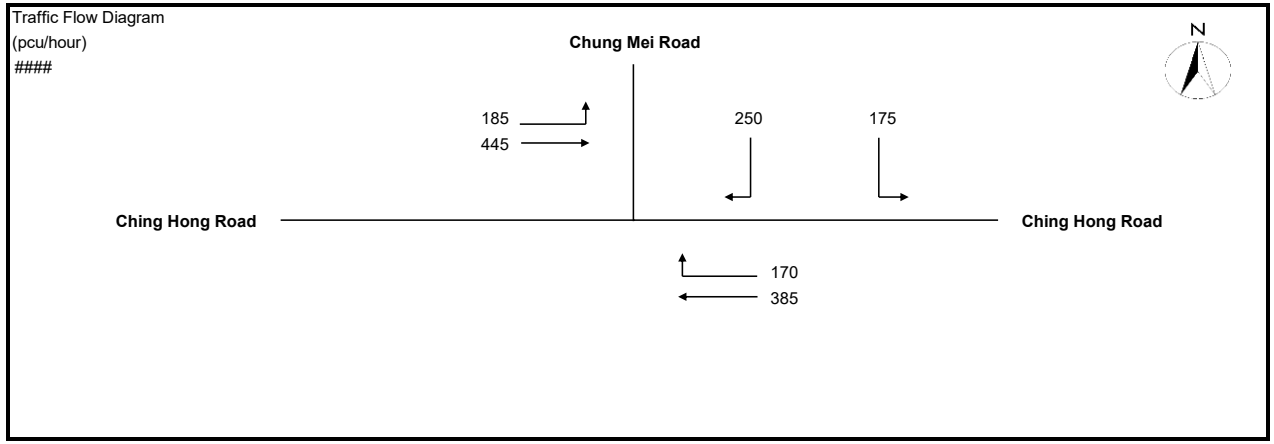
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2028 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

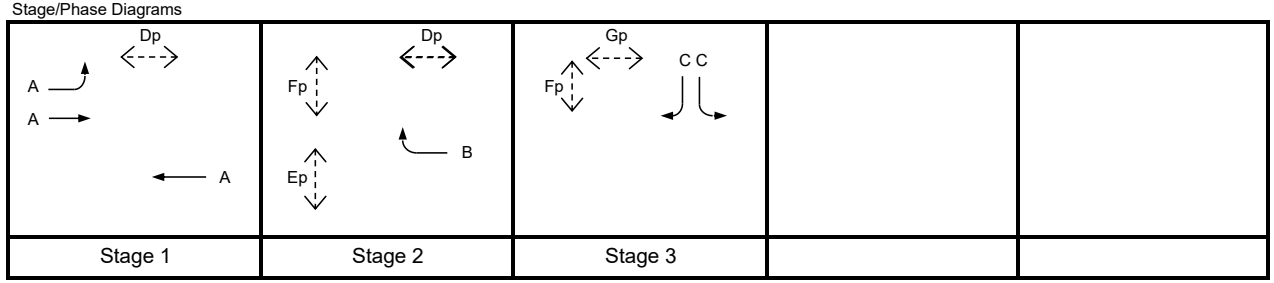
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.378 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,610 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 44 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 24 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 108.4 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 26 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 102%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 185 | 111 | | 296 | 62% | | 1855 | 0.160 | 0.160 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 334 | | 334 | | | 2087 | 0.160 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 385 | | 385 | | | 4116 | 0.094 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 170 | 170 | | 100% | 1946 | 0.087 | 0.087 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 175 | | | 175 | 100% | | 1724 | 0.101 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 250 | 250 | | 100% | 1914 | 0.131 | 0.131 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |

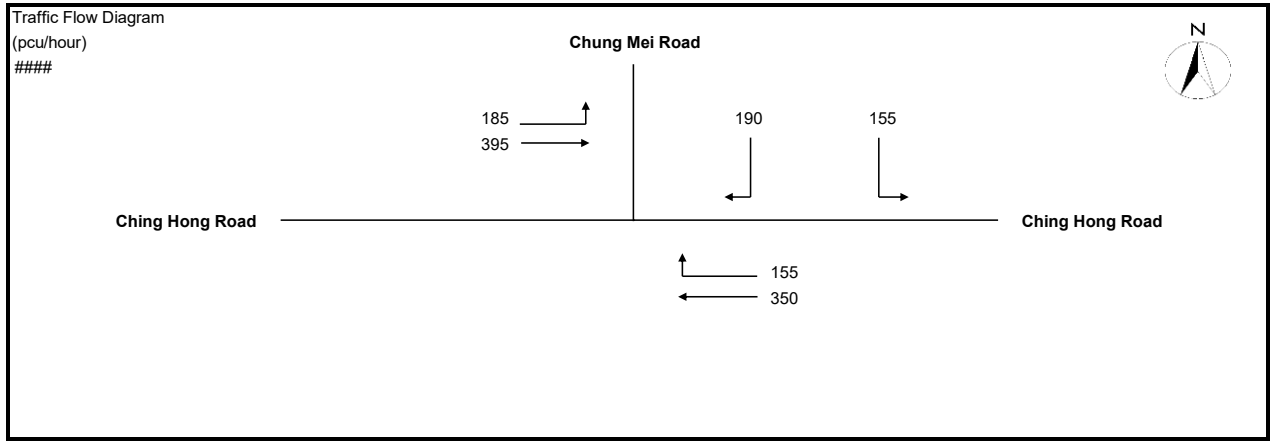
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2028 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

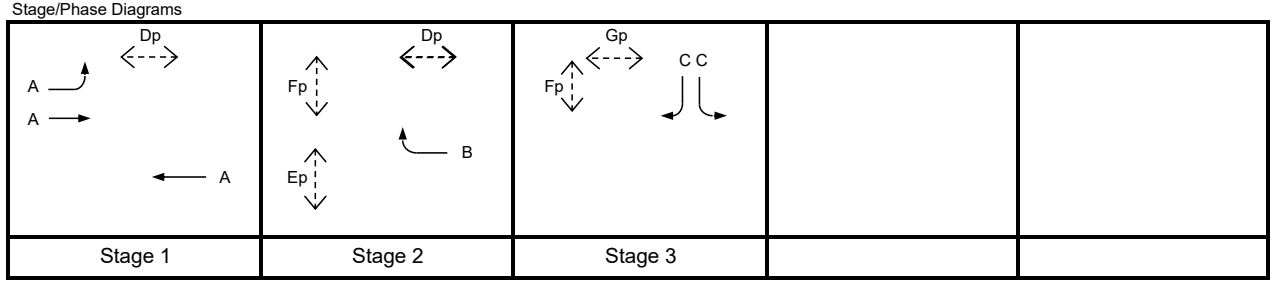
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.326 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,430 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 41 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 141.2 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 134%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 185 | 87 | | 272 | 68% | | 1845 | 0.148 | 0.148 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 308 | | 308 | | | 2087 | 0.148 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 350 | | 350 | | | 4116 | 0.085 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 155 | 155 | | 100% | 1946 | 0.080 | 0.080 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 155 | | | 155 | 100% | | 1724 | 0.090 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 190 | 190 | | 100% | 1914 | 0.099 | 0.099 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

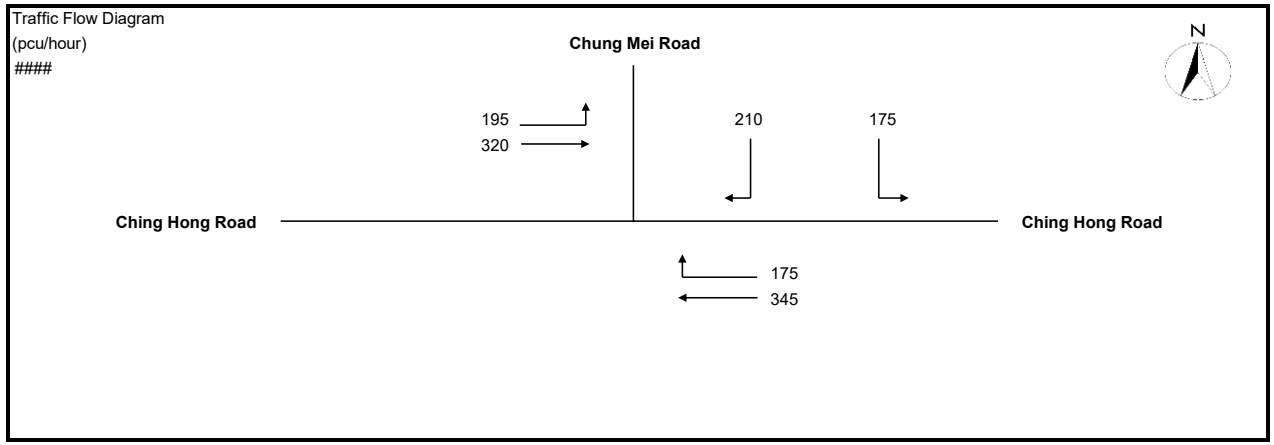
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2028 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

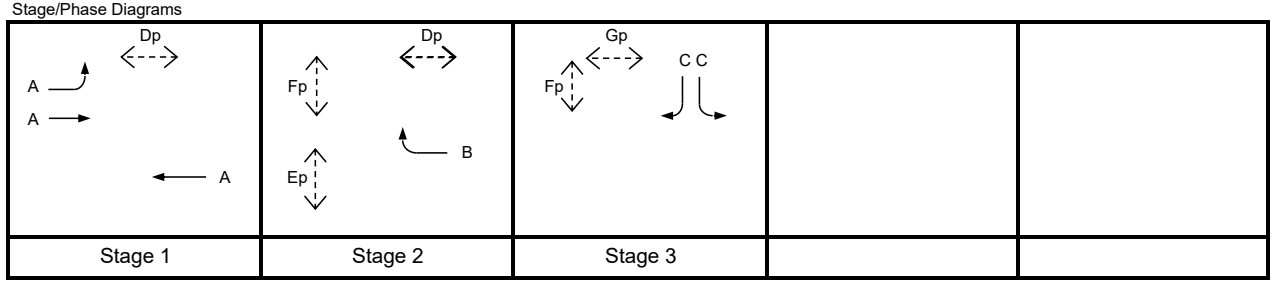
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.331 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,420 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 41 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 137.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.857 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 133%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 195 | 45 | | 240 | 81% | | 1820 | 0.132 | 0.132 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 275 | | 275 | | | 2087 | 0.132 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 345 | | 345 | | | 4116 | 0.084 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 175 | 175 | | 100% | 1946 | 0.090 | 0.090 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 175 | | | 175 | 100% | | 1724 | 0.101 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 210 | 210 | | 100% | 1914 | 0.110 | 0.110 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

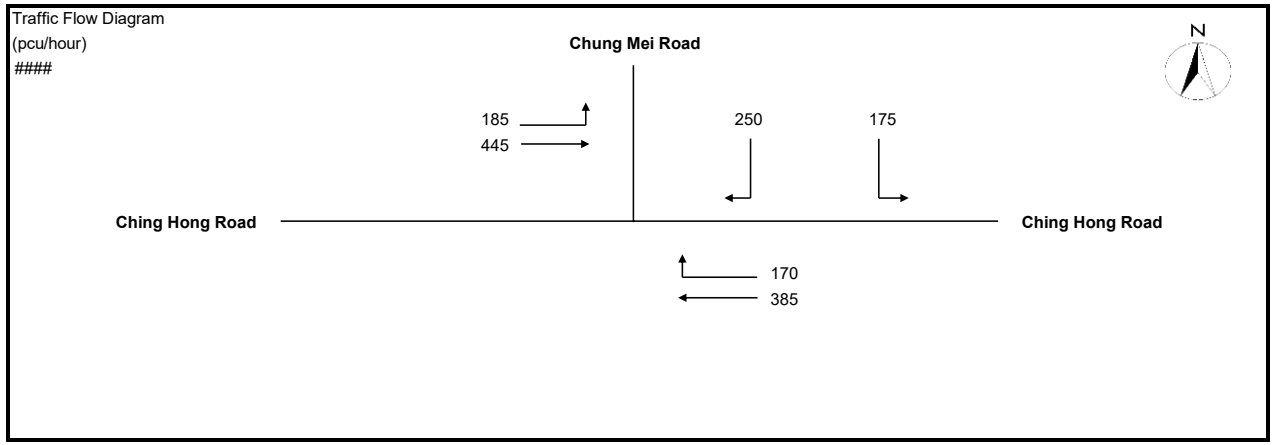
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2028 Design Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

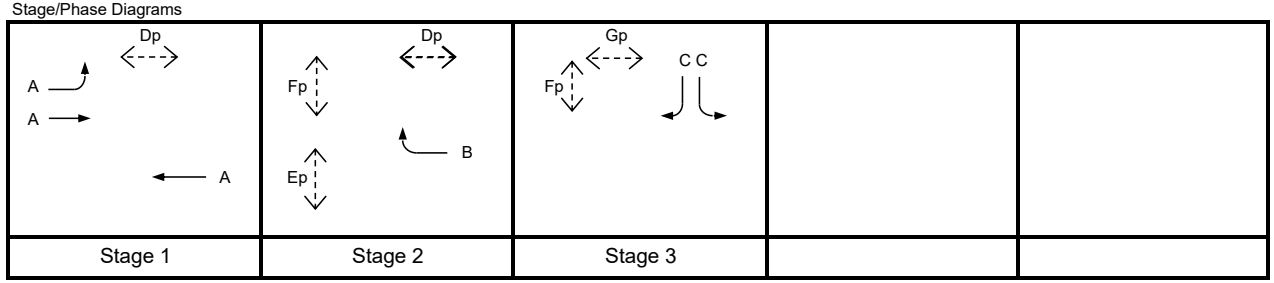
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.378 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,610 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 44 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 24 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 108.4 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 26 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 102%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 185 | 111 | | 296 | 62% | | 1855 | 0.160 | 0.160 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 334 | | 334 | | | 2087 | 0.160 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 385 | | 385 | | | 4116 | 0.094 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 170 | 170 | | 100% | 1946 | 0.087 | 0.087 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 175 | | | 175 | 100% | | 1724 | 0.101 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 250 | 250 | | 100% | 1914 | 0.131 | 0.131 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |

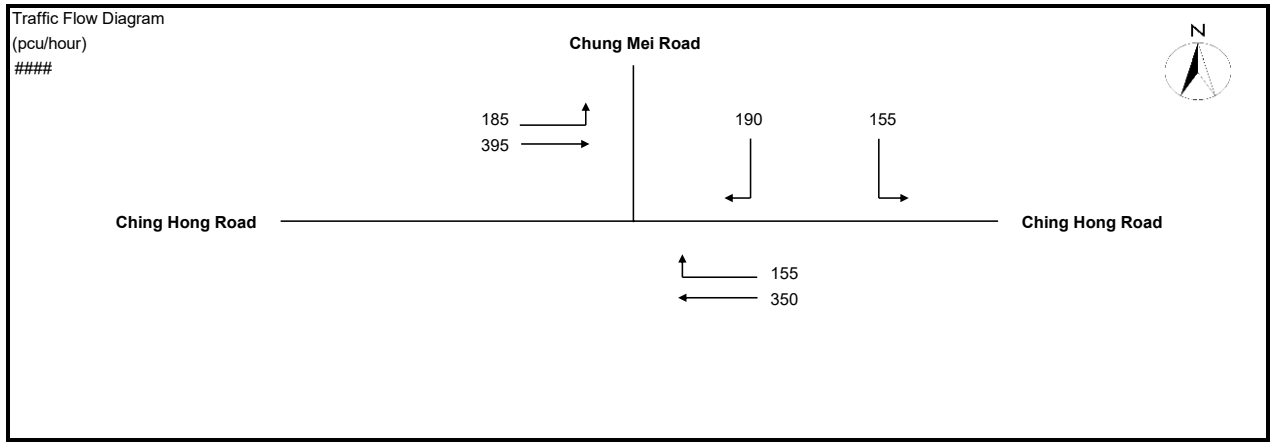
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2028 Design Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

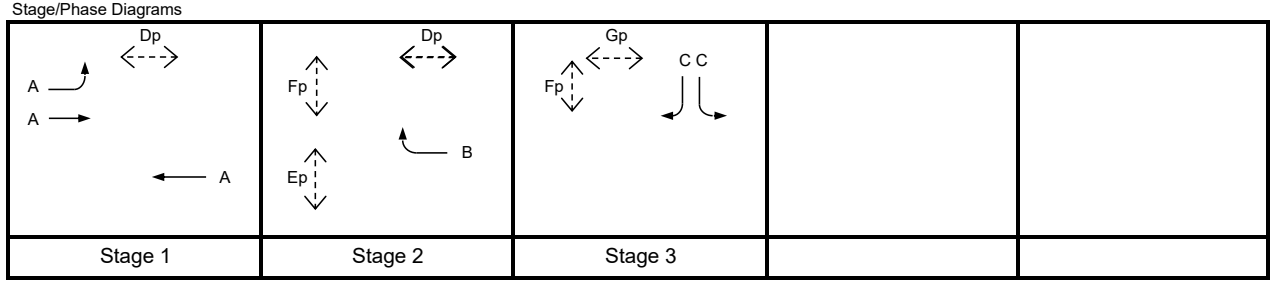
J9

Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.326 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,430 | pcu |
| Optimum Cycle $C_o$ = (1.5×L+5)/(1-Y) | = | 41 | sec |
| Min. Cycle Time $C_m$ = L/(1-Y) | = | 22 | sec |
| $Y_{ult}$ = 0.9-0.0075×L | = | 0.788 | |
| $R.C._{ult}$ = $(Y_{ult}-Y)/Y \times 100\%$ | = | 141.2 | % |
| Practical Cycle Time $C_p$ = 0.9×L/(0.9-Y) | = | 24 | sec |
| $Y_{max}$ = 1-L/C | = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) = $(0.9 \times Y_{max}-Y)/Y \times 100\%$ = 134%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 185 | 87 | | 272 | 68% | | 1845 | 0.148 | 0.148 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 308 | | 308 | | | 2087 | 0.148 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 350 | | 350 | | | 4116 | 0.085 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 155 | 155 | | 100% | 1946 | 0.080 | 0.080 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 155 | | | 155 | 100% | | 1724 | 0.090 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 190 | 190 | | 100% | 1914 | 0.099 | 0.099 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

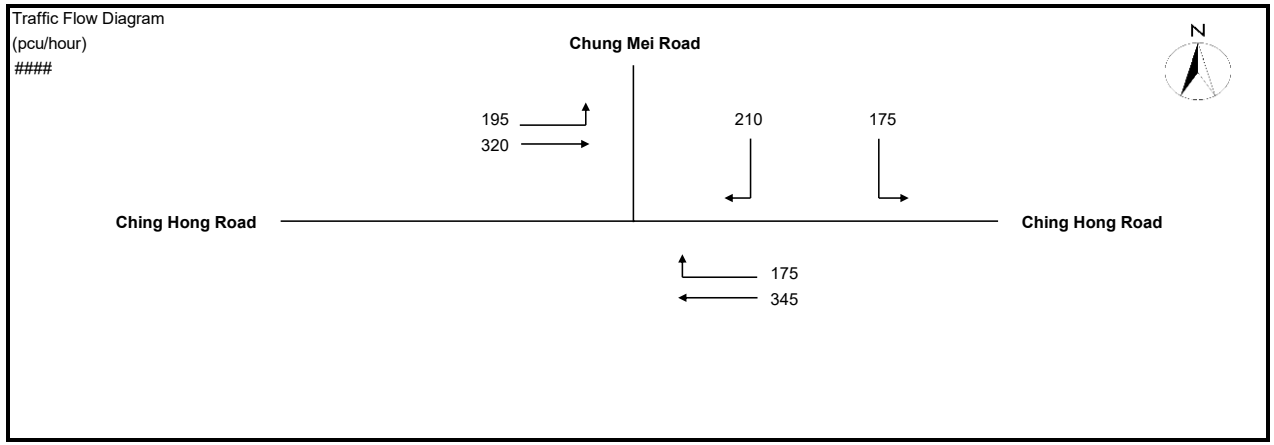
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2028 Design Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

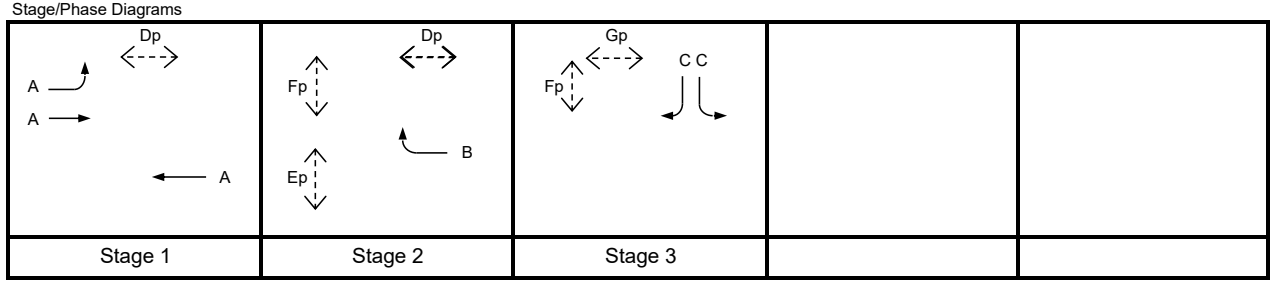
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.331 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,420 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 41 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 137.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.857 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 133%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 195 | 45 | | 240 | 81% | | 1820 | 0.132 | 0.132 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 275 | | 275 | | | 2087 | 0.132 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 345 | | 345 | | | 4116 | 0.084 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 175 | 175 | | 100% | 1946 | 0.090 | 0.090 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 175 | | | 175 | 100% | | 1724 | 0.101 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 210 | 210 | | 100% | 1914 | 0.110 | 0.110 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

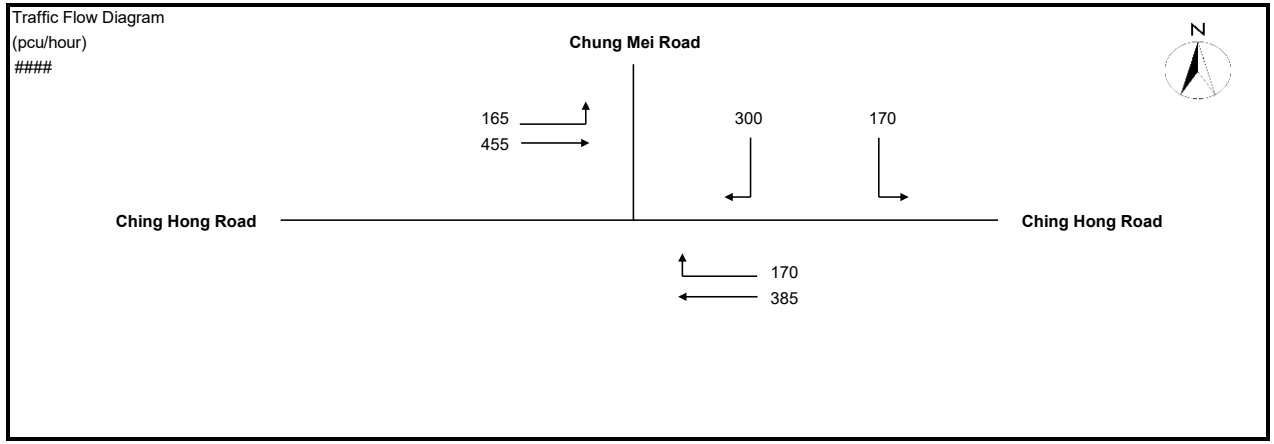
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2031 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

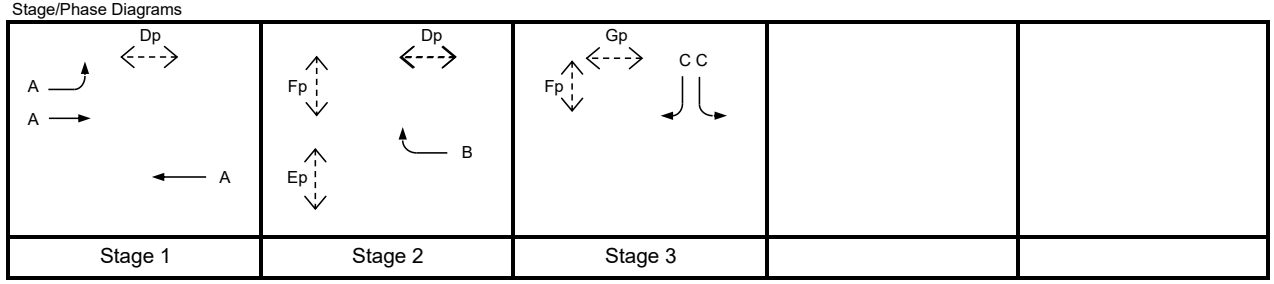
J9

Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.401 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,645 | pcu |
| Optimum Cycle $C_o$ = $(1.5 \times L+5)/(1-Y)$ | = | 46 | sec |
| Min. Cycle Time $C_m$ = $L/(1-Y)$ | = | 25 | sec |
| $Y_{ult}$ = $0.9-0.0075 \times L$ | = | 0.788 | |
| $R.C._{ult}$ = $(Y_{ult}-Y)/Y \times 100\%$ | = | 96.4 | % |
| Practical Cycle Time $C_p$ = $0.9 \times L/(0.9-Y)$ | = | 27 | sec |
| $Y_{max}$ = $1-L/C$ | = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) = $(0.9 \times Y_{max}-Y)/Y \times 100\%$ = 91%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 165 | 128 | | 293 | 56% | | 1866 | 0.157 | 0.157 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 327 | | 327 | | | 2087 | 0.157 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 385 | | 385 | | | 4116 | 0.094 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 170 | 170 | | 100% | 1946 | 0.087 | 0.087 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 170 | | | 170 | 100% | | 1724 | 0.099 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 300 | 300 | | 100% | 1914 | 0.157 | 0.157 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

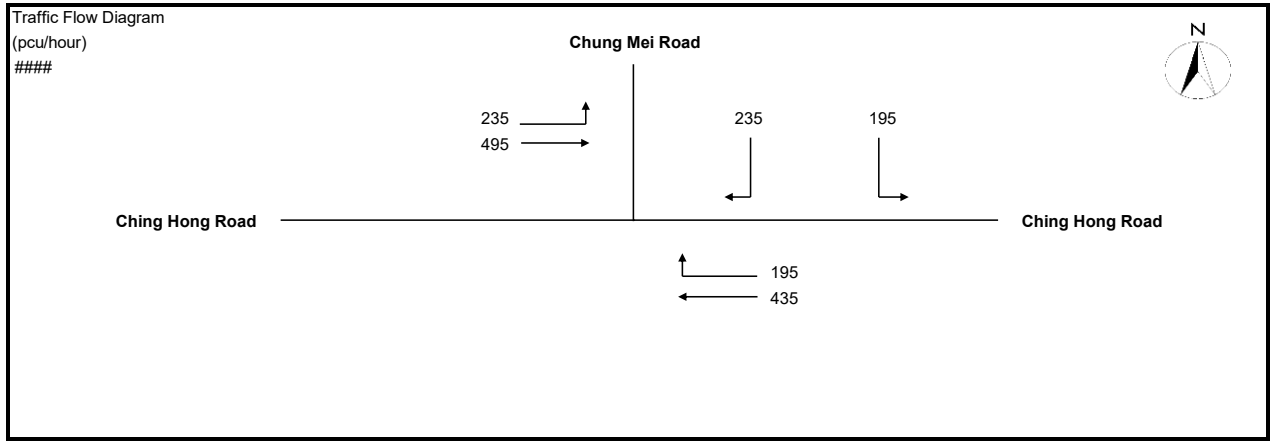
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2031 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

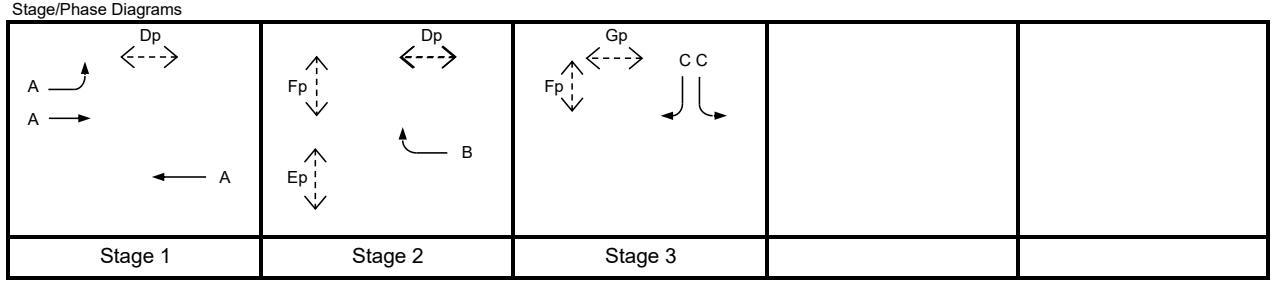
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.409 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,790 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 47 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 25 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 92.7 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 27 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 87%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 235 | 107 | | 342 | 69% | | 1843 | 0.186 | |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 388 | | 388 | | | 2087 | 0.186 | 0.186 |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 435 | | 435 | | | 4116 | 0.106 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 195 | 195 | | 100% | 1946 | 0.100 | 0.100 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 195 | | | 195 | 100% | | 1724 | 0.113 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 235 | 235 | | 100% | 1914 | 0.123 | 0.123 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

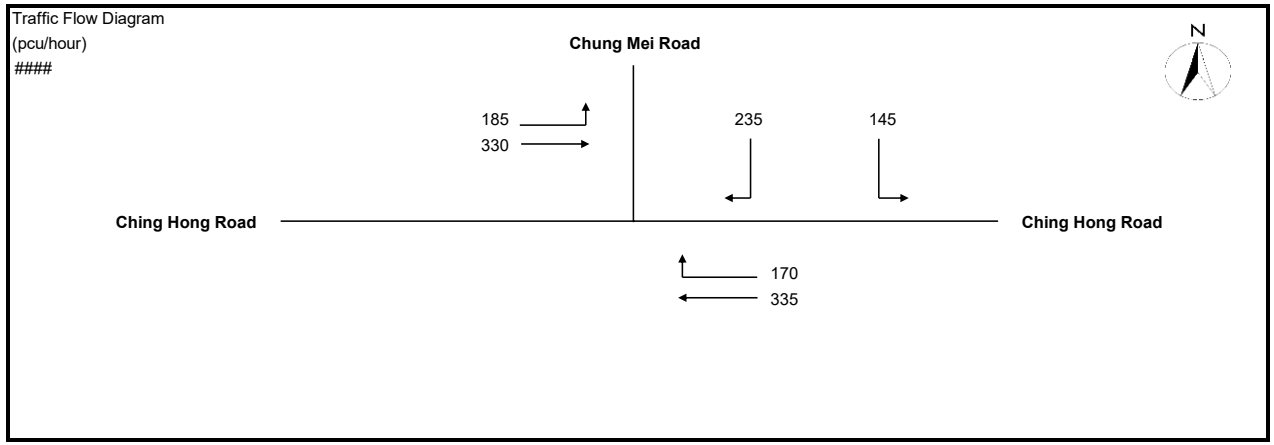
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2031 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

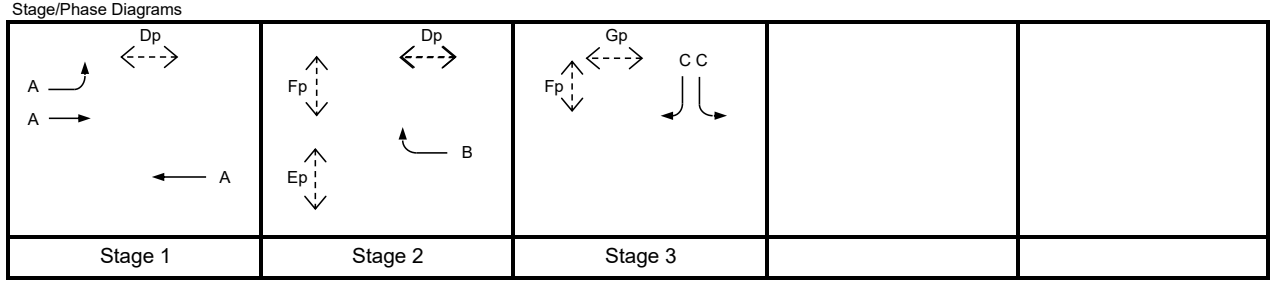
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.342 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,400 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 23 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 130.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.857 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Y \times 100\%$ = 126%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 185 | 55 | | 240 | 77% | | 1828 | 0.132 | 0.132 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 275 | | 275 | | | 2087 | 0.132 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 335 | | 335 | | | 4116 | 0.081 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 170 | 170 | | 100% | 1946 | 0.087 | 0.087 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 145 | | | 145 | 100% | | 1724 | 0.084 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 235 | 235 | | 100% | 1914 | 0.123 | 0.123 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |

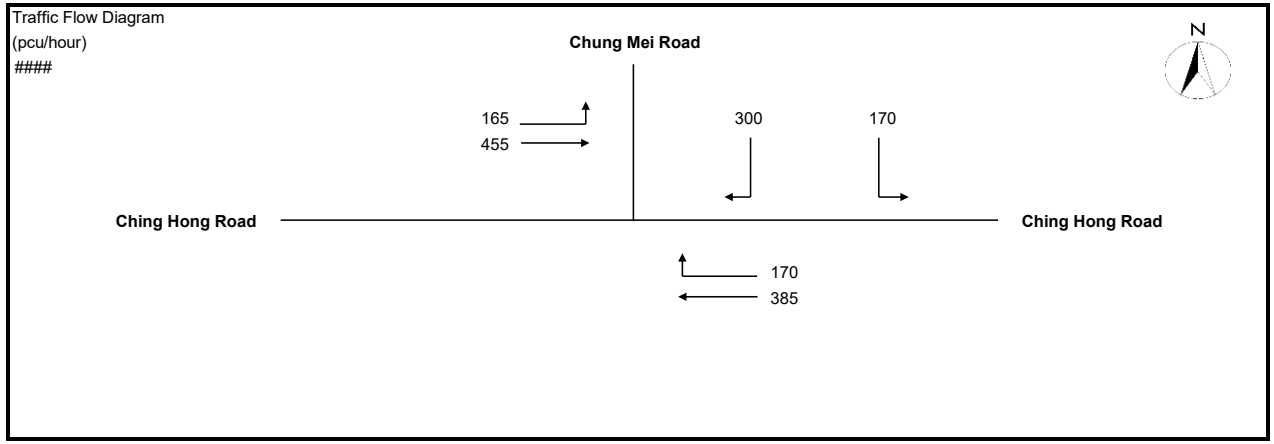
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2031 Scenario A AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

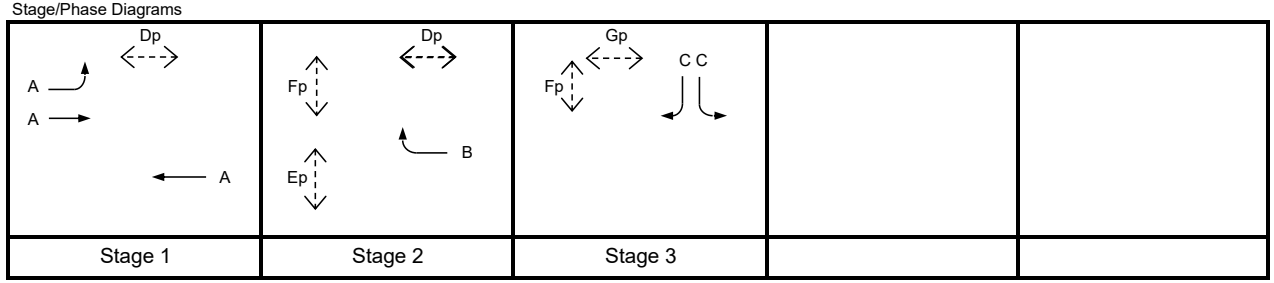
J9

Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.401 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,645 | pcu |
| Optimum Cycle $C_o$ = $(1.5 \times L+5)/(1-Y)$ | = | 46 | sec |
| Min. Cycle Time $C_m$ = $L/(1-Y)$ | = | 25 | sec |
| $Y_{ult}$ = $0.9-0.0075 \times L$ | = | 0.788 | |
| $R.C._{ult}$ = $(Y_{ult}-Y)/Y \times 100\%$ | = | 96.4 | % |
| Practical Cycle Time $C_p$ = $0.9 \times L/(0.9-Y)$ | = | 27 | sec |
| $Y_{max}$ = $1-L/C$ | = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) = $(0.9 \times Y_{max}-Y)/Y \times 100\%$ = 91%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 165 | 128 | | 293 | 56% | | 1866 | 0.157 | 0.157 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 327 | | 327 | | | 2087 | 0.157 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 385 | | 385 | | | 4116 | 0.094 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 170 | 170 | | 100% | 1946 | 0.087 | 0.087 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 170 | | | 170 | 100% | | 1724 | 0.099 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 300 | 300 | | 100% | 1914 | 0.157 | 0.157 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

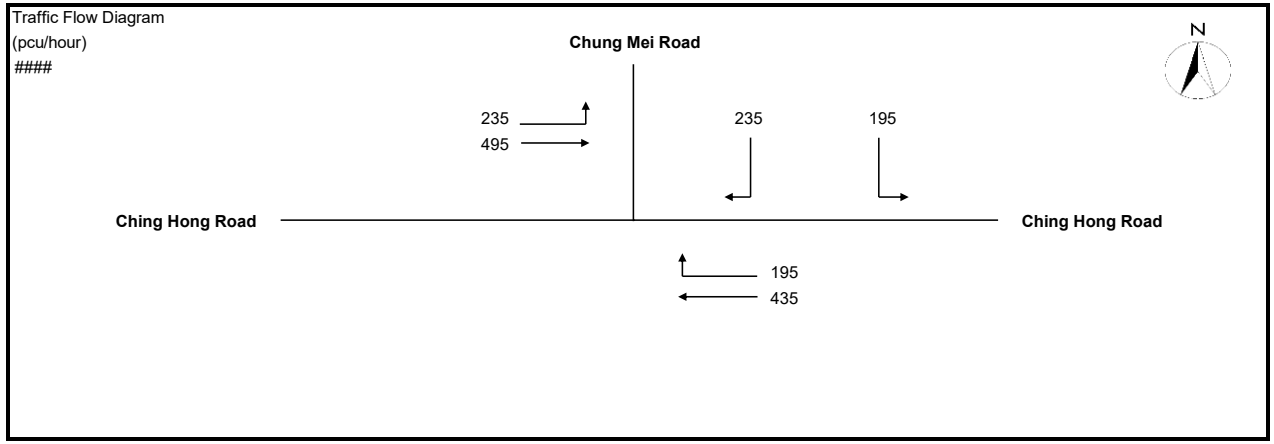
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2031 Scenario A NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

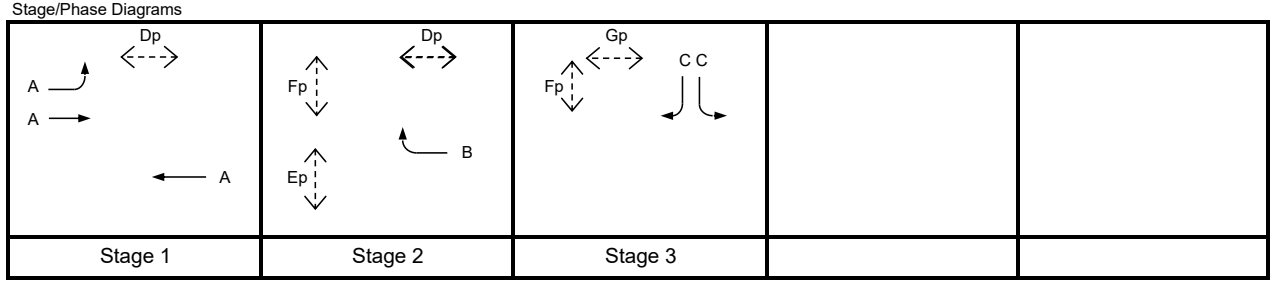
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.409 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,790 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 47 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 25 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 92.7 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 27 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 87%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 235 | 107 | | 342 | 69% | | 1843 | 0.186 | |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 388 | | 388 | | | 2087 | 0.186 | 0.186 |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 435 | | 435 | | | 4116 | 0.106 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 195 | 195 | | 100% | 1946 | 0.100 | 0.100 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 195 | | | 195 | 100% | | 1724 | 0.113 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 235 | 235 | | 100% | 1914 | 0.123 | 0.123 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |

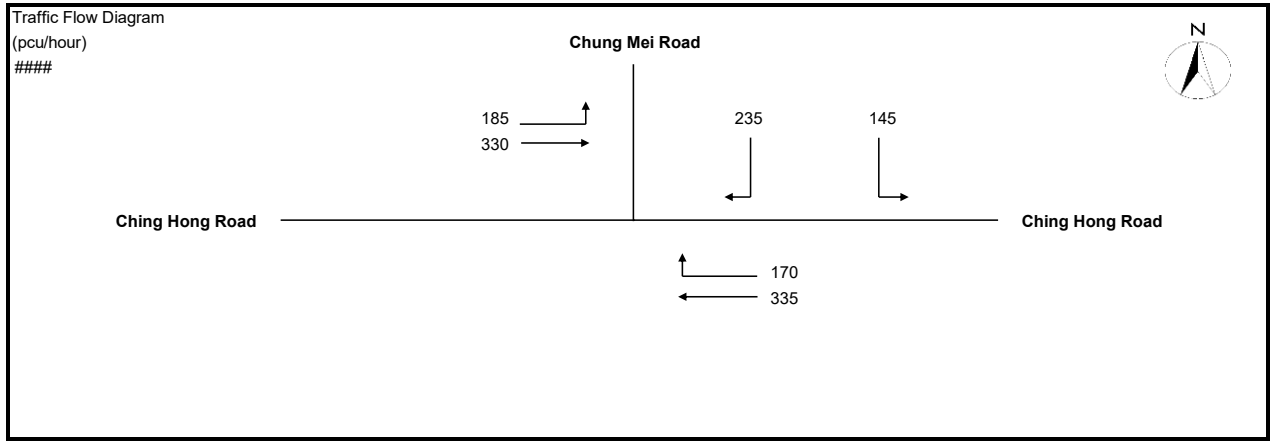
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2031 Scenario A PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

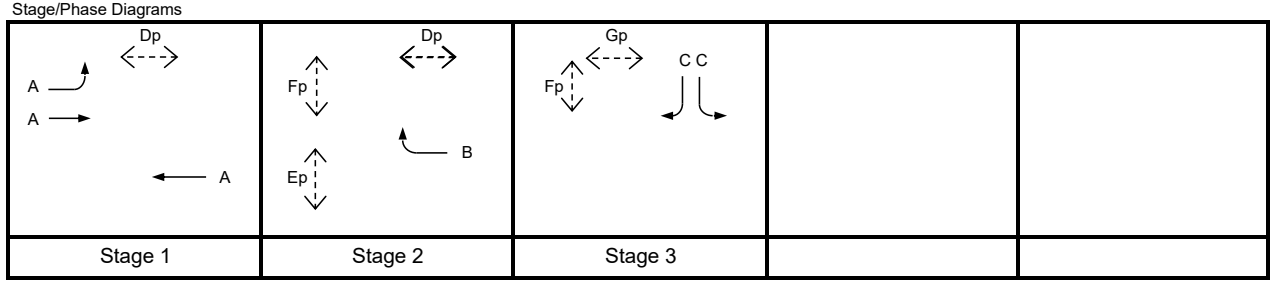
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.342 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,400 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 23 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 130.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.857 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 126%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 185 | 55 | | 240 | 77% | | 1828 | 0.132 | 0.132 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 275 | | 275 | | | 2087 | 0.132 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 335 | | 335 | | | 4116 | 0.081 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 170 | 170 | | 100% | 1946 | 0.087 | 0.087 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 145 | | | 145 | 100% | | 1724 | 0.084 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 235 | 235 | | 100% | 1914 | 0.123 | 0.123 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |

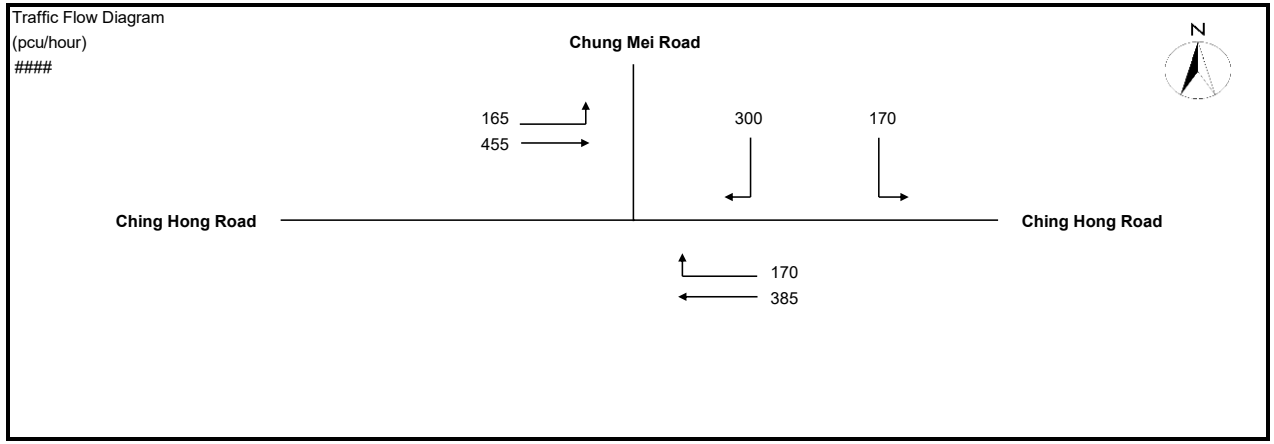
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2031 Scenario B AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

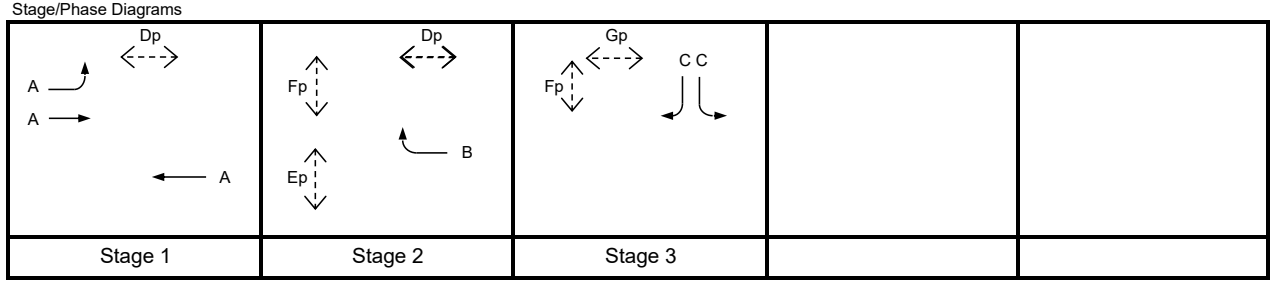
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.401 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,645 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 46 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 25 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 96.4 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 27 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 91%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 165 | 128 | | 293 | 56% | | 1866 | 0.157 | 0.157 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 327 | | 327 | | | 2087 | 0.157 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 385 | | 385 | | | 4116 | 0.094 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 170 | 170 | | 100% | 1946 | 0.087 | 0.087 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 170 | | | 170 | 100% | | 1724 | 0.099 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 300 | 300 | | 100% | 1914 | 0.157 | 0.157 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | |

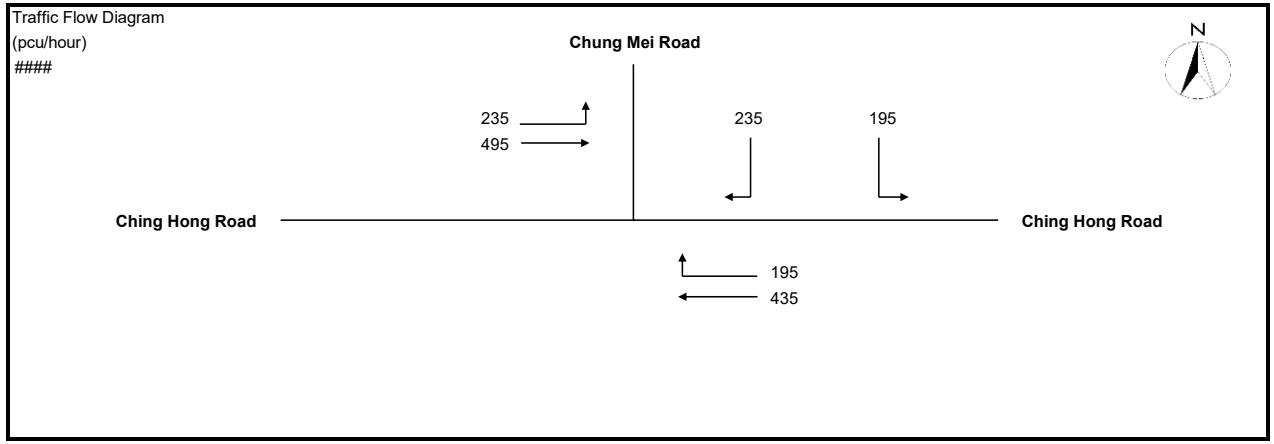
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2031 Scenario B NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

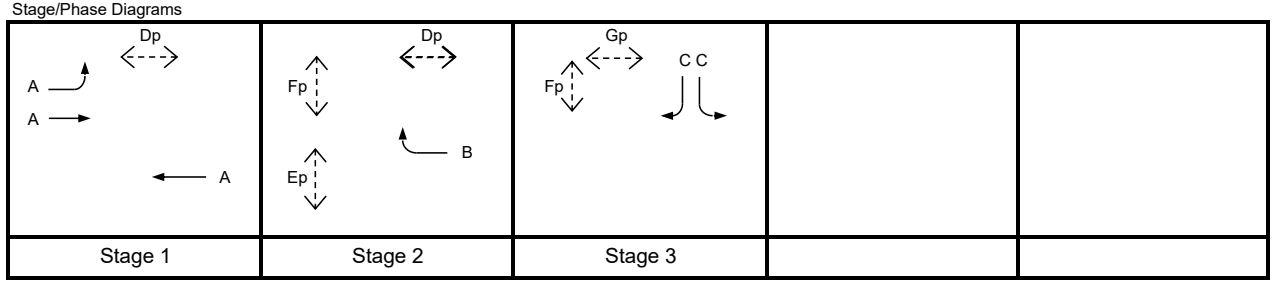
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.409 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,790 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 47 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 25 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 92.7 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 27 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.850 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 87%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 235 | 107 | | 342 | 69% | | 1843 | 0.186 | |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 388 | | 388 | | | 2087 | 0.186 | 0.186 |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 435 | | 435 | | | 4116 | 0.106 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 195 | 195 | | 100% | 1946 | 0.100 | 0.100 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 195 | | | 195 | 100% | | 1724 | 0.113 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 235 | 235 | | 100% | 1914 | 0.123 | 0.123 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |

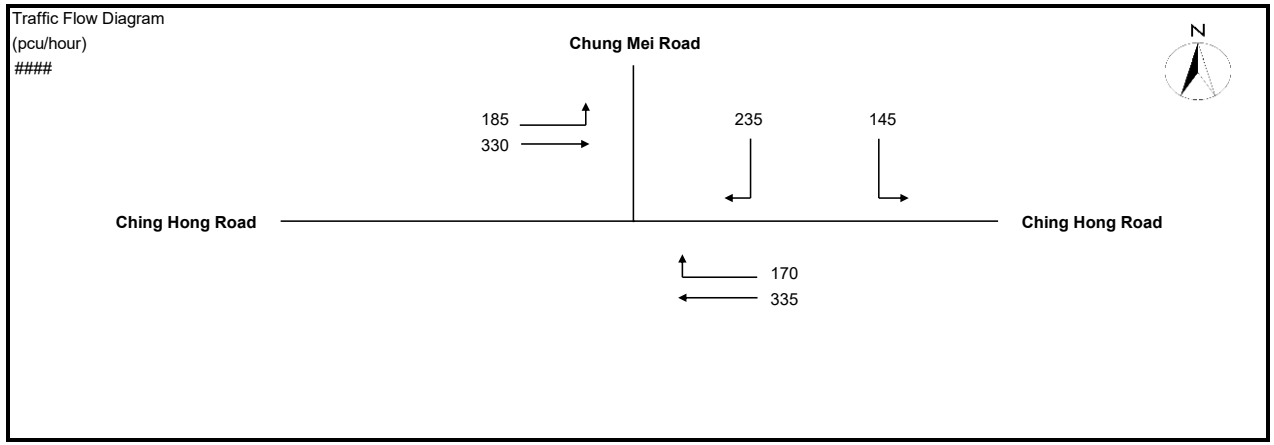
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J9 - Ching Hong Road / Chung Mei Road | 2031 Scenario B PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J9

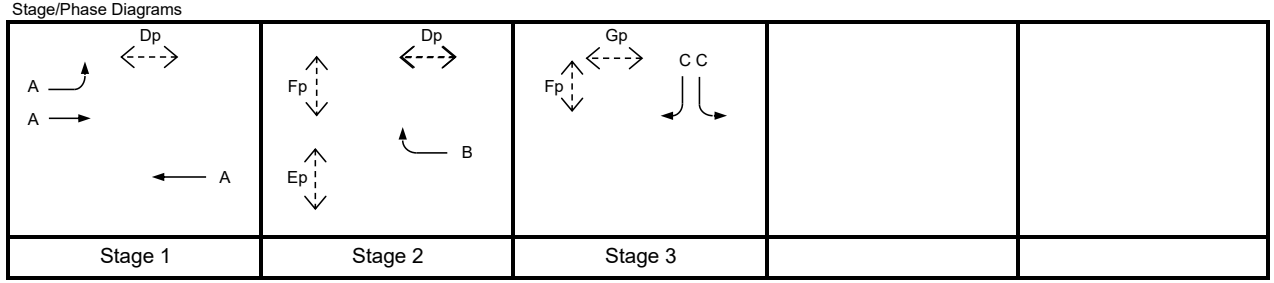
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.342 | |
| Lost time | L = | 15 | sec |
| Total Flow | = | 1,400 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 23 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.788 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 130.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.857 | |

Stage/Phase Diagrams




**Critical Case : A,B,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Y \times 100\%$ = 126%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 1 | 3.640 | 1 | 14 | | | 1 | | 0 | | 1979 | 185 | 55 | | 240 | 77% | | 1828 | 0.132 | 0.132 |
| | A | 1 | 3.320 | 1 | | | | 0 | | 0 | | 2087 | | 275 | | 275 | | | 2087 | 0.132 | |
| | A | 1 | 3.730 | 2 | | | | 1 | | 0 | | 4116 | | 335 | | 335 | | | 4116 | 0.081 | |
| | B | 2 | 3.730 | 1 | | 16 | 0 | 0 | | 0 | | 2128 | | | 170 | 170 | | 100% | 1946 | 0.087 | 0.087 |
| | C | 3 | 3.250 | 1 | 12 | | | 1 | | 0 | | 1940 | 145 | | | 145 | 100% | | 1724 | 0.084 | |
| | C | 3 | 2.960 | 1 | | 21 | 0 | 0 | | 0 | | 2051 | | | 235 | 235 | | 100% | 1914 | 0.123 | 0.123 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Dp | 1,2 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| | Ep | 2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 2,3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| | Gp | 3 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |

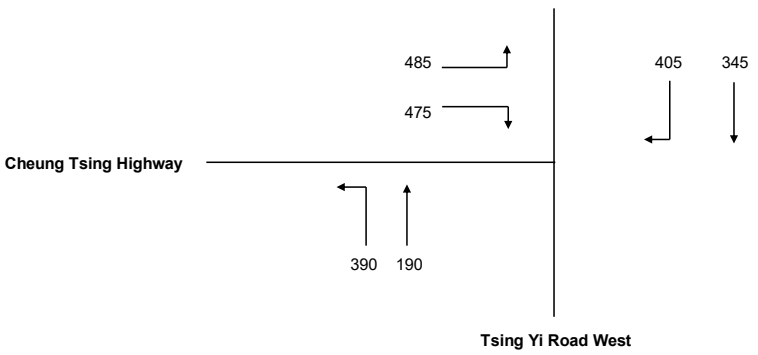
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2025 Survey Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

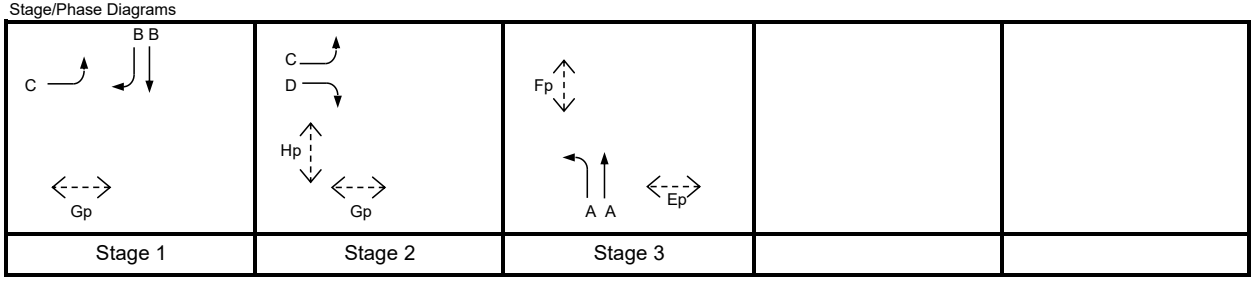
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.488 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,290 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 21 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 67.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.890 | |

Stage/Phase Diagrams




I/G = 6 I/G = 3 I/G = 4

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Y \times 100\%$ = 64%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 485 | | | 485 | 100% | | 1793 | 0.271 | 0.271 |
| D | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 475 | 475 | | 100% | 3799 | 0.125 | |
| A | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 390 | 0 | | 390 | 100% | | 1794 | 0.217 | 0.217 |
| A | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 190 | | 190 | | | 2131 | 0.089 | |
| B | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 251 | | 251 | | | 1963 | 0.128 | |
| B | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 94 | 161 | 254 | | 63% | 1986 | 0.128 | |
| B | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 244 | 244 | | 100% | 1906 | 0.128 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

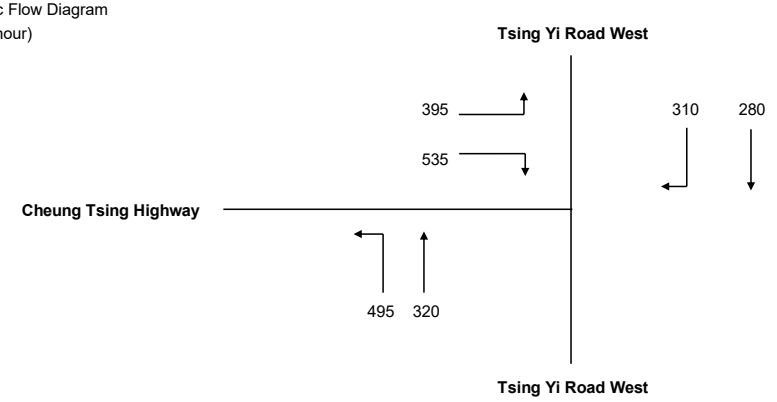
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2025 Survey Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

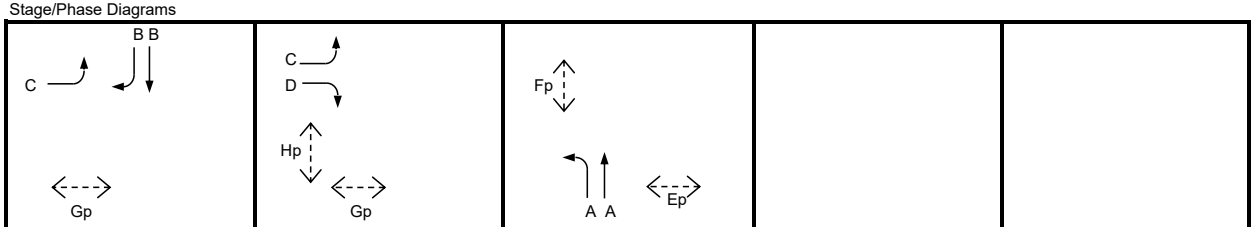
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.517 | |
| Lost time | L = | 13 | sec |
| Total Flow | = | 2,335 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 51 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.803 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 55.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 31 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.870 | |

Stage/Phase Diagrams




**Critical Case : B,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 51%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 395 | | | 395 | 100% | | 1793 | 0.220 | |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 535 | 535 | | 100% | 3799 | 0.141 | 0.141 |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 495 | 0 | | 495 | 100% | | 1794 | 0.276 | 0.276 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 320 | | 320 | | | 2131 | 0.150 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 198 | | 198 | | | 1963 | 0.101 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 82 | 118 | 201 | | 59% | 1992 | 0.101 | 0.101 |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 192 | 192 | | 100% | 1906 | 0.101 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |

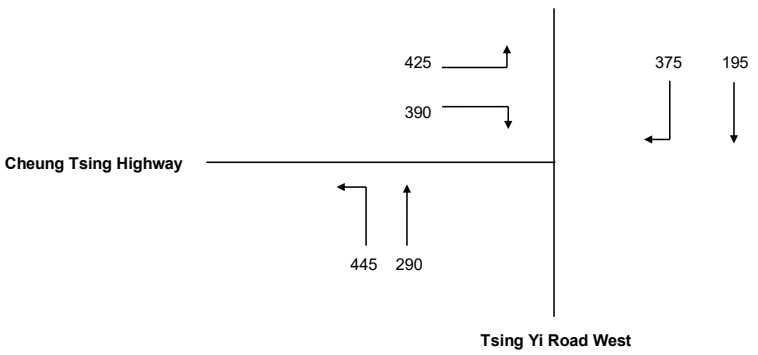
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2025 Survey Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

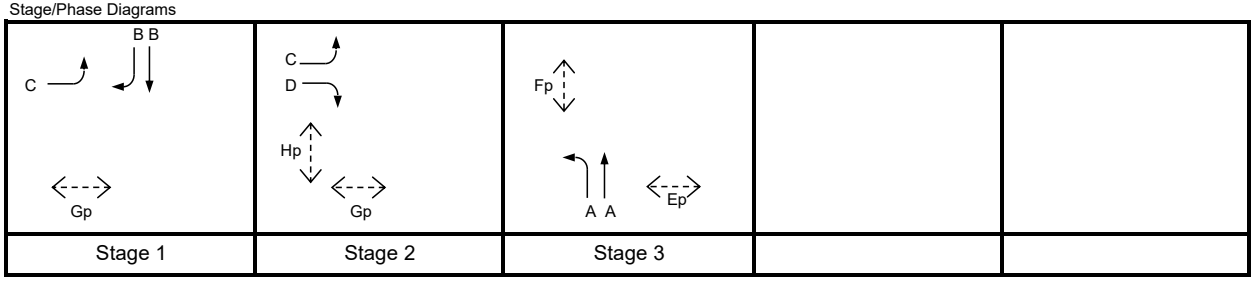
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.485 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,120 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 21 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 68.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.895 | |

Stage/Phase Diagrams




I/G = 6 I/G = 3 I/G = 4

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 66%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 425 | | | 425 | 100% | | 1793 | 0.237 | 0.237 |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 390 | 390 | | 100% | 3799 | 0.103 | |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 445 | 0 | | 445 | 100% | | 1794 | 0.248 | 0.248 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 290 | | 290 | | | 2131 | 0.136 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 193 | | 193 | | | 1963 | 0.098 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 2 | 188 | 190 | | 99% | 1934 | 0.098 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 187 | 187 | | 100% | 1906 | 0.098 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

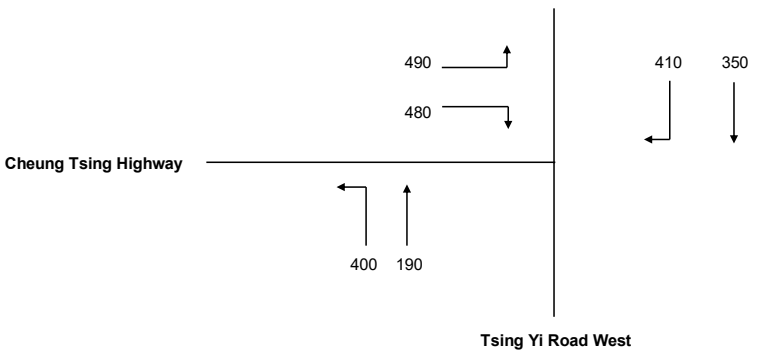
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2028 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

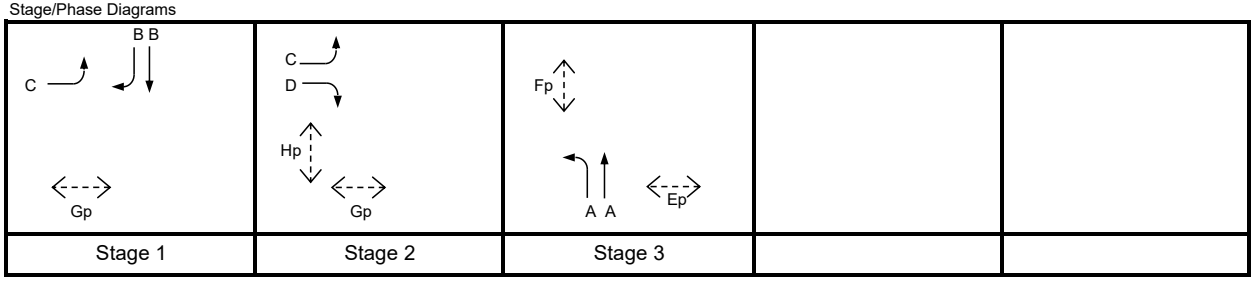
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.496 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,320 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 43 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 64.7 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 25 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.890 | |

Stage/Phase Diagrams




I/G = 6 I/G = 3 I/G = 4

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 61%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 490 | | | 490 | 100% | | 1793 | 0.273 | 0.273 |
| D | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 480 | 480 | | 100% | 3799 | 0.126 | |
| A | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 400 | 0 | | 400 | 100% | | 1794 | 0.223 | 0.223 |
| A | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 190 | | 190 | | | 2131 | 0.089 | |
| B | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 255 | | 255 | | | 1963 | 0.130 | |
| B | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 95 | 163 | 258 | | 63% | 1986 | 0.130 | |
| B | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 247 | 247 | | 100% | 1906 | 0.130 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

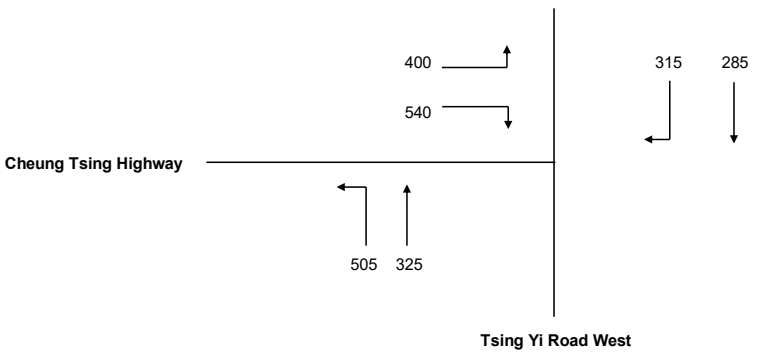
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2028 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

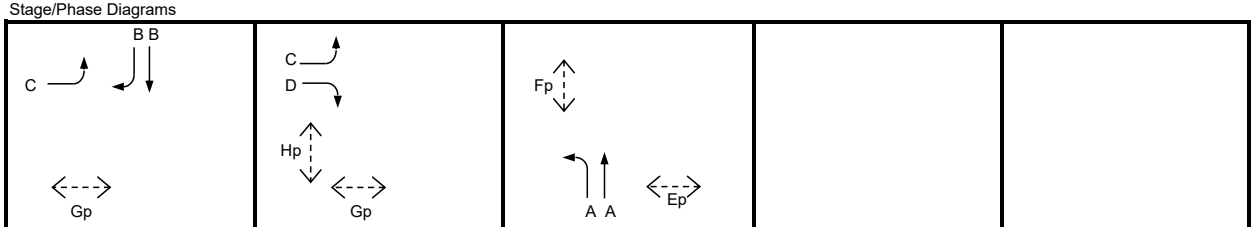
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.526 | |
| Lost time | L = | 13 | sec |
| Total Flow | = | 2,370 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 52 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.803 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 52.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 31 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.870 | |

Stage/Phase Diagrams




I/G = 5 I/G = 6 I/G = 3 2

**Critical Case : B,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Y \times 100\%$ = 49%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 400 | | | 400 | 100% | | 1793 | 0.223 | |
| D | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 540 | 540 | | 100% | 3799 | 0.142 | 0.142 |
| A | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 505 | 0 | | 505 | 100% | | 1794 | 0.282 | 0.282 |
| A | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 325 | | 325 | | | 2131 | 0.153 | |
| B | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 201 | | 201 | | | 1963 | 0.102 | 0.102 |
| B | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 84 | 120 | 204 | | 59% | 1993 | 0.102 | |
| B | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 195 | 195 | | 100% | 1906 | 0.102 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |

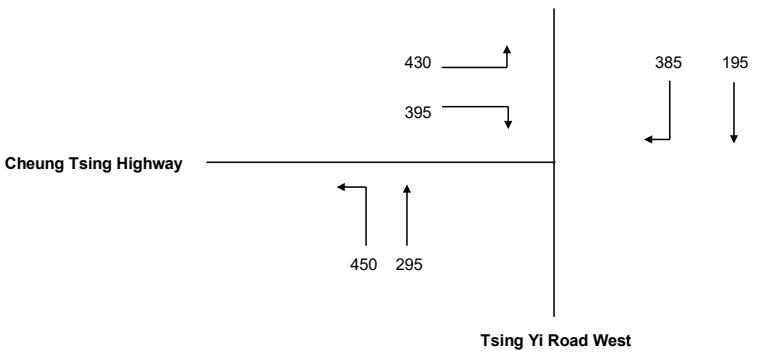
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2028 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

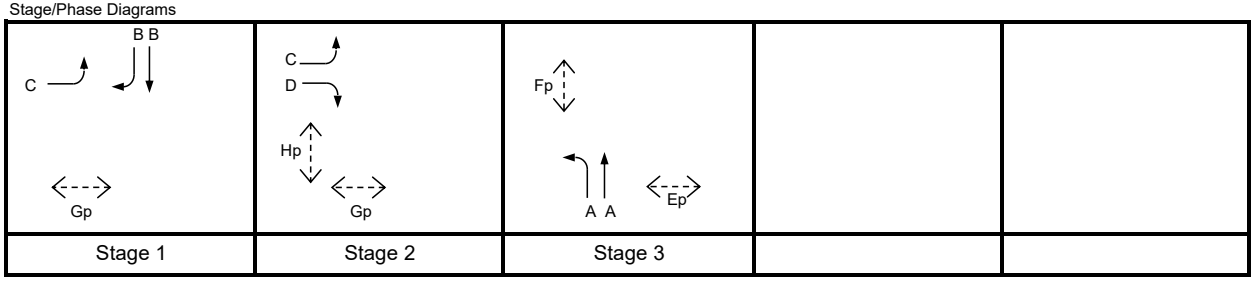
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.491 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,150 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 66.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.895 | |

Stage/Phase Diagrams




I/G = 6 I/G = 3 I/G = 4

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Y \times 100\%$ = 64%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 430 | | | 430 | 100% | | 1793 | 0.240 | 0.240 |
| D | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 395 | 395 | | 100% | 3799 | 0.104 | |
| A | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 450 | 0 | | 450 | 100% | | 1794 | 0.251 | 0.251 |
| A | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 295 | | 295 | | | 2131 | 0.138 | |
| B | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 195 | | 195 | | | 1963 | 0.099 | |
| B | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 0 | 194 | 194 | | 100% | 1932 | 0.100 | |
| B | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 191 | 191 | | 100% | 1906 | 0.100 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

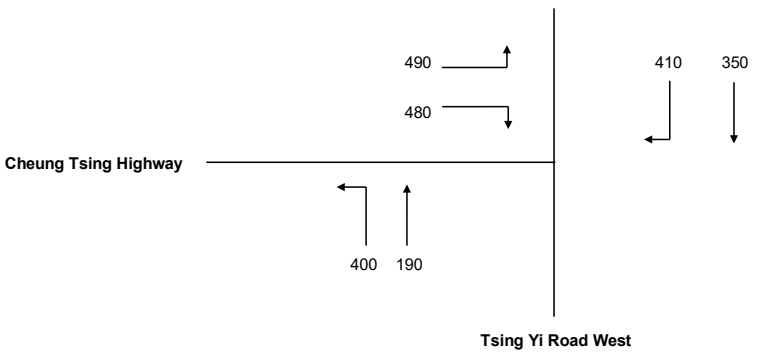
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2028 Design Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

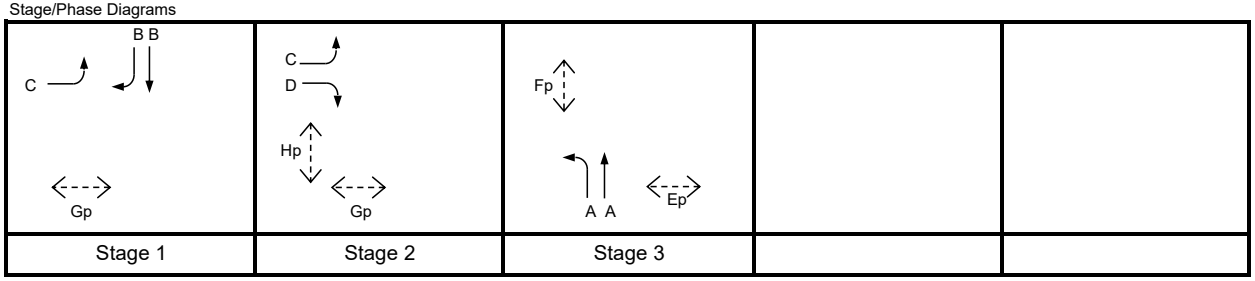
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.496 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,320 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 43 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 64.7 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 25 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.890 | |

Stage/Phase Diagrams




| Stage 1 | Stage 2 | Stage 3 | | |
|---|---|---|---|---|
| I/G = 6 | I/G = 3 | I/G = | | 4 |

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 61%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 490 | | | 490 | 100% | | 1793 | 0.273 | 0.273 |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 480 | 480 | | 100% | 3799 | 0.126 | |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 400 | 0 | | 400 | 100% | | 1794 | 0.223 | 0.223 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 190 | | 190 | | | 2131 | 0.089 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 255 | | 255 | | | 1963 | 0.130 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 95 | 163 | 258 | | 63% | 1986 | 0.130 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 247 | 247 | | 100% | 1906 | 0.130 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

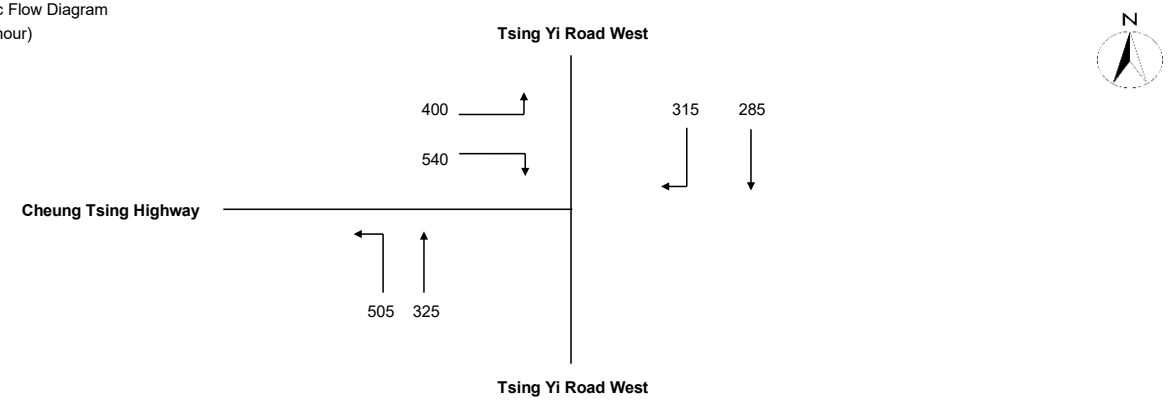
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2028 Design Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

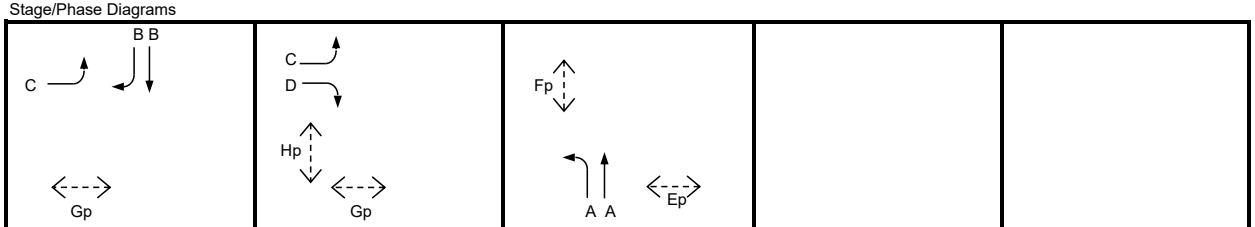
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.526 | |
| Lost time | L = | 13 | sec |
| Total Flow | = | 2,370 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 52 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 27 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.803 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 52.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 31 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.870 | |

Stage/Phase Diagrams




I/G = 5 I/G = 6 I/G = 3 2

**Critical Case : B,D,A**

**R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 49%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 400 | | | 400 | 100% | | 1793 | 0.223 | |
| D | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 540 | 540 | | 100% | 3799 | 0.142 | 0.142 |
| A | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 505 | 0 | | 505 | 100% | | 1794 | 0.282 | 0.282 |
| A | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 325 | | 325 | | | 2131 | 0.153 | |
| B | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 201 | | 201 | | | 1963 | 0.102 | 0.102 |
| B | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 84 | 120 | 204 | | 59% | 1993 | 0.102 | |
| B | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 195 | 195 | | 100% | 1906 | 0.102 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

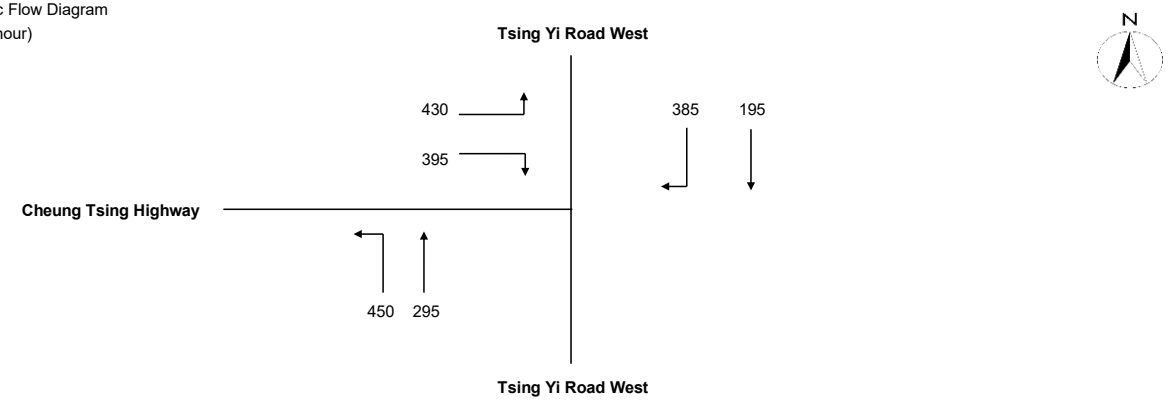
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2028 Design Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

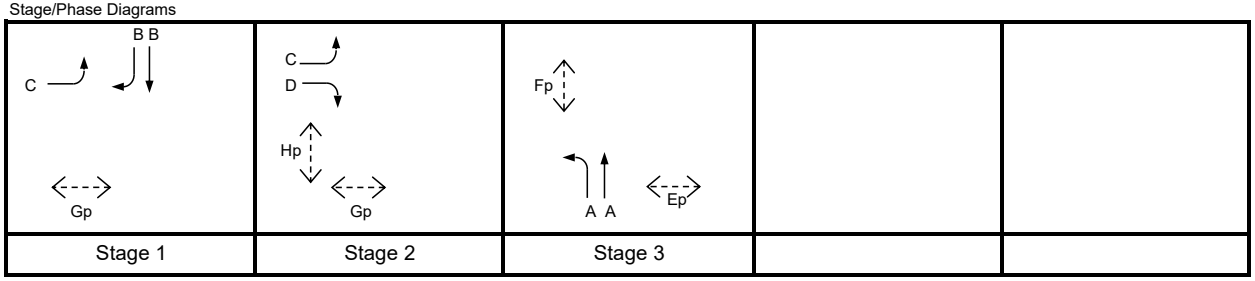
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.491 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,150 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ | = | 66.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.895 | |

Stage/Phase Diagrams




| Stage 1 | Stage 2 | Stage 3 | | |
|---|---|---|---|---|
| I/G = 6 | I/G = 3 | I/G = | | 4 |

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 64%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 430 | | | 430 | 100% | | 1793 | 0.240 | 0.240 |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 395 | 395 | | 100% | 3799 | 0.104 | |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 450 | 0 | | 450 | 100% | | 1794 | 0.251 | 0.251 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 295 | | 295 | | | 2131 | 0.138 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 195 | | 195 | | | 1963 | 0.099 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 0 | 194 | 194 | | 100% | 1932 | 0.100 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 191 | 191 | | 100% | 1906 | 0.100 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |

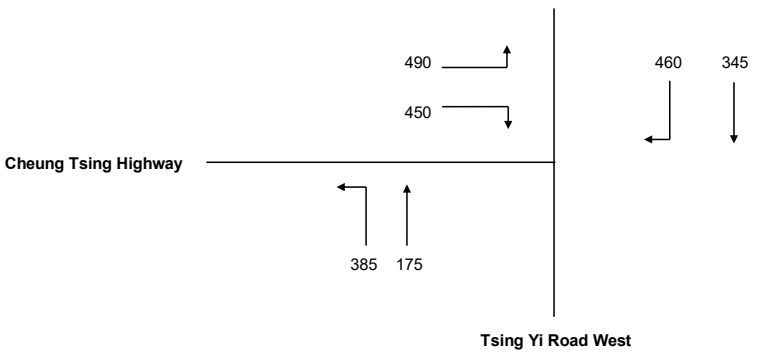
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2031 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

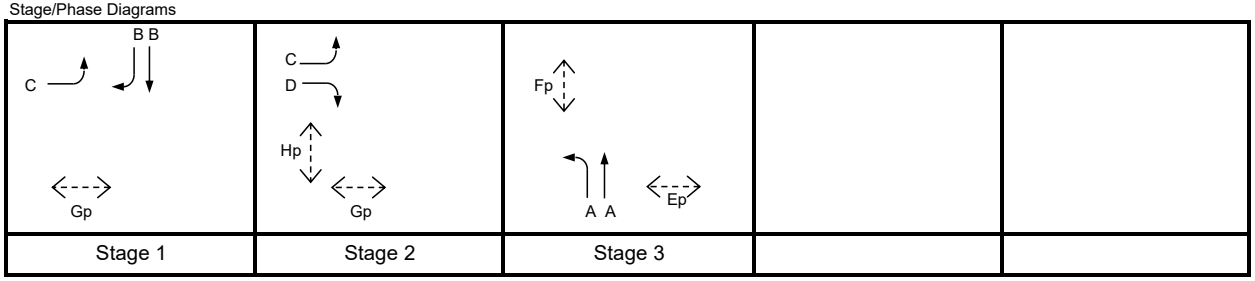
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.488 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,305 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 21 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 67.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.890 | |

Stage/Phase Diagrams




I/G = 6 I/G = 3 I/G = 4

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 64%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 490 | | | 490 | 100% | | 1793 | 0.273 | 0.273 |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 450 | 450 | | 100% | 3799 | 0.118 | |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 385 | 0 | | 385 | 100% | | 1794 | 0.215 | 0.215 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 175 | | 175 | | | 2131 | 0.082 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 271 | | 271 | | | 1963 | 0.138 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 74 | 197 | 272 | | 73% | 1972 | 0.138 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 263 | 263 | | 100% | 1906 | 0.138 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

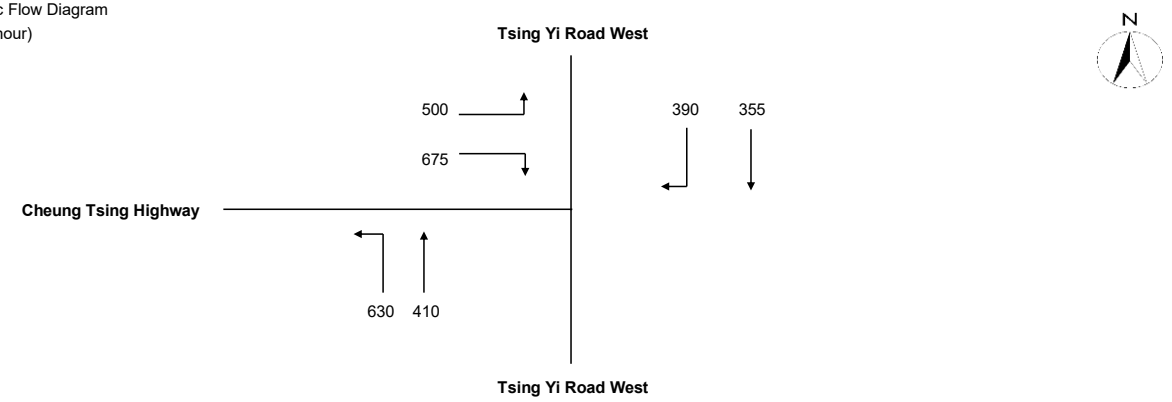
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2031 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

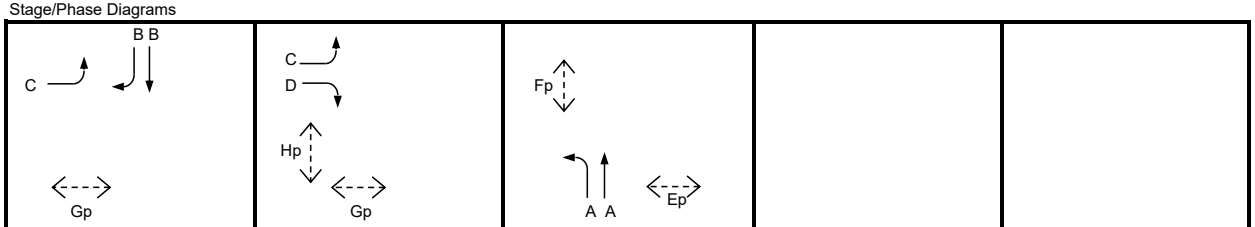
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.656 | |
| Lost time | L = | 13 | sec |
| Total Flow | = | 2,960 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 71 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 38 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.803 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 22.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 48 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.870 | |

Stage/Phase Diagrams




I/G = 5 I/G = 6 I/G = 3 2

**Critical Case : B,D,A**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 500 | | | 500 | 100% | | 1793 | 0.279 | |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 675 | 675 | | 100% | 3799 | 0.178 | 0.178 |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 630 | 0 | | 630 | 100% | | 1794 | 0.351 | 0.351 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 410 | | 410 | | | 2131 | 0.192 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 249 | | 249 | | | 1963 | 0.127 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 106 | 148 | 253 | | 58% | 1993 | 0.127 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 242 | 242 | | 100% | 1906 | 0.127 | 0.127 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | |

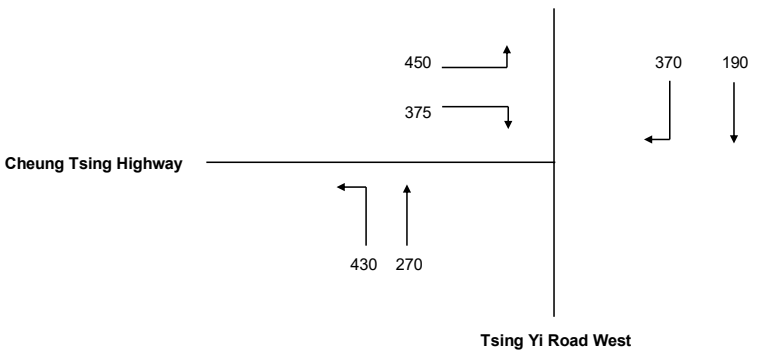
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2031 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

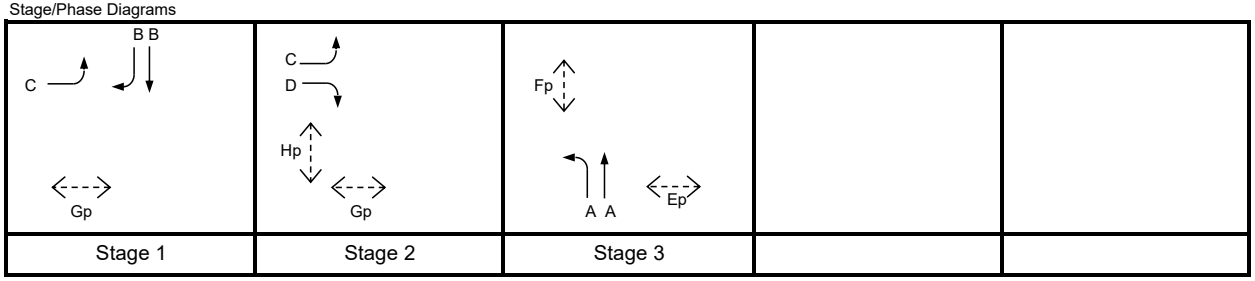
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.491 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,085 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 66.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.895 | |

Stage/Phase Diagrams




I/G = 6 I/G = 3 I/G = 4

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 64%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 450 | | | 450 | 100% | | 1793 | 0.251 | 0.251 |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 375 | 375 | | 100% | 3799 | 0.099 | |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 430 | 0 | | 430 | 100% | | 1794 | 0.240 | 0.240 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 270 | | 270 | | | 2131 | 0.127 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 189 | | 189 | | | 1963 | 0.097 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 1 | 186 | 187 | | 100% | 1933 | 0.097 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 184 | 184 | | 100% | 1906 | 0.097 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

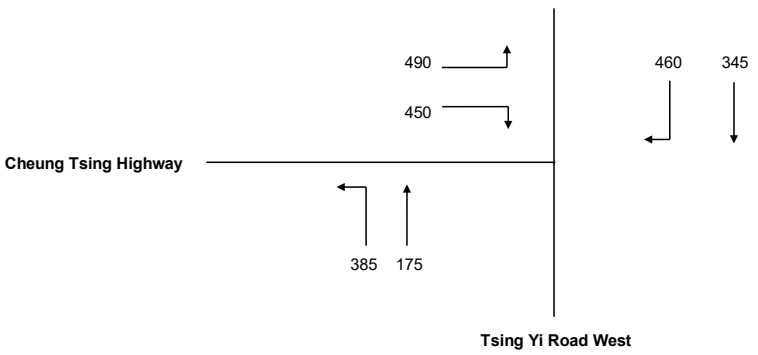
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2031 Scenario A AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

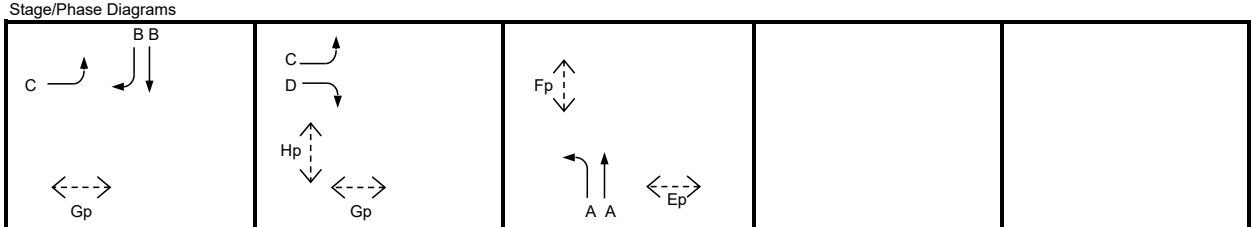
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.488 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,305 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 21 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 67.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.890 | |

Stage/Phase Diagrams




| Stage 1 | Stage 2 | Stage 3 | | |
|---|---|---|---|---|
| I/G = 6 | I/G = 3 | I/G = | | 4 |

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 64%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 490 | | | 490 | 100% | | 1793 | 0.273 | 0.273 |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 450 | 450 | | 100% | 3799 | 0.118 | |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 385 | 0 | | 385 | 100% | | 1794 | 0.215 | 0.215 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 175 | | 175 | | | 2131 | 0.082 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 271 | | 271 | | | 1963 | 0.138 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 74 | 197 | 272 | | 73% | 1972 | 0.138 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 263 | 263 | | 100% | 1906 | 0.138 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

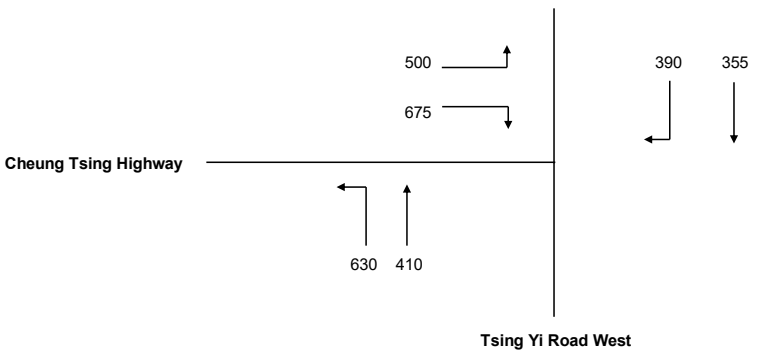
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2031 Scenario A NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

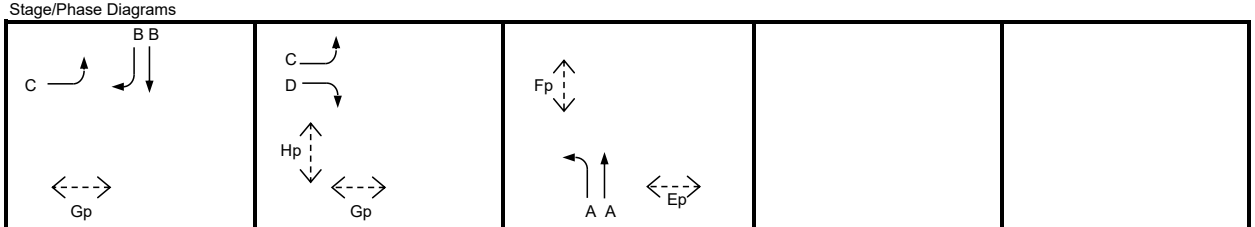
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.656 | |
| Lost time | L = | 13 | sec |
| Total Flow | = | 2,960 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 71 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 38 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.803 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 22.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 48 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.870 | |

Stage/Phase Diagrams




**Critical Case : B,D,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Y \times 100\%$ = 19%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 500 | | | 500 | 100% | | 1793 | 0.279 | |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 675 | 675 | | 100% | 3799 | 0.178 | 0.178 |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 630 | 0 | | 630 | 100% | | 1794 | 0.351 | 0.351 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 410 | | 410 | | | 2131 | 0.192 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 249 | | 249 | | | 1963 | 0.127 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 106 | 148 | 253 | | 58% | 1993 | 0.127 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 242 | 242 | | 100% | 1906 | 0.127 | 0.127 |

| Pedestrain Crossing | | | GM | | FGM | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | |

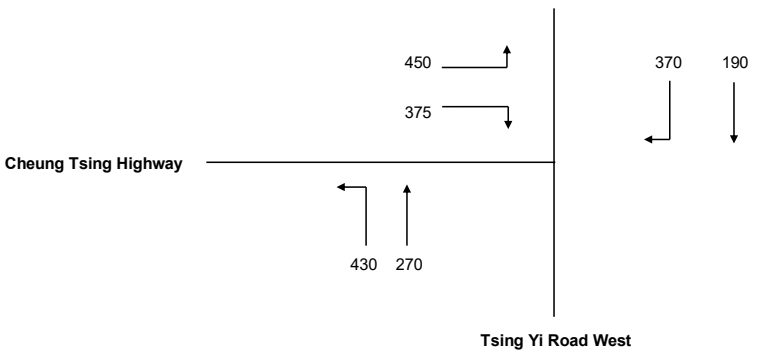
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2031 Scenario A PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

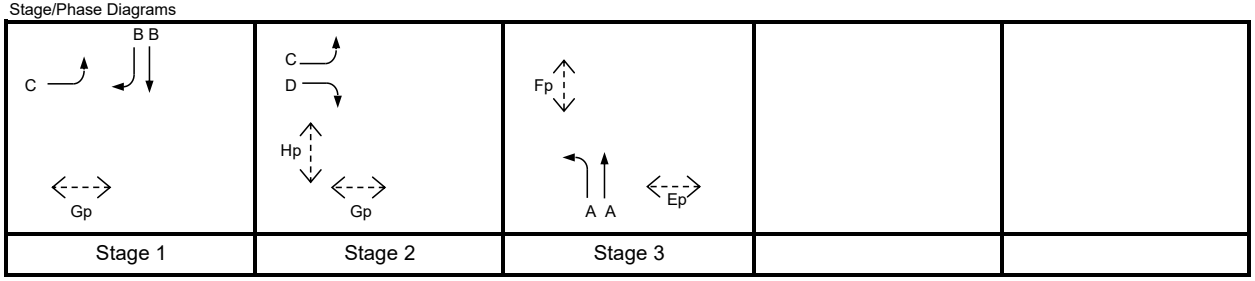
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.491 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,085 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ | = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 22 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ | = | 66.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.895 | |

Stage/Phase Diagrams




| Stage 1 | Stage 2 | Stage 3 | | |
|---|---|---|---|---|
| I/G = 6 | I/G = 3 | I/G = | | 4 |

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 64%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 450 | | | 450 | 100% | | 1793 | 0.251 | 0.251 |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 375 | 375 | | 100% | 3799 | 0.099 | |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 430 | 0 | | 430 | 100% | | 1794 | 0.240 | 0.240 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 270 | | 270 | | | 2131 | 0.127 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 189 | | 189 | | | 1963 | 0.097 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 1 | 186 | 187 | | 100% | 1933 | 0.097 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 184 | 184 | | 100% | 1906 | 0.097 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

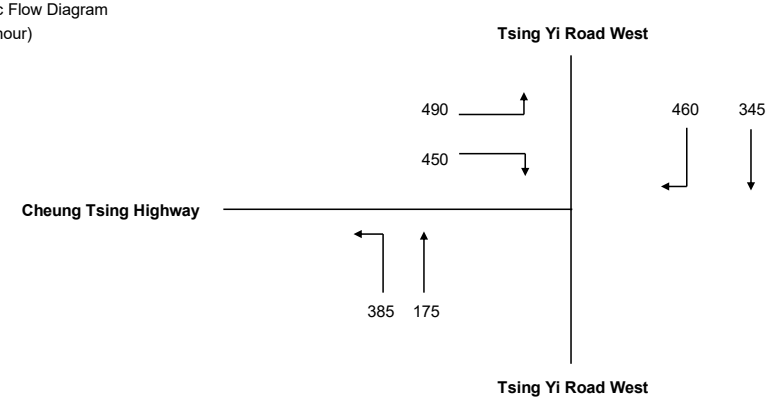
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2031 Scenario B AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

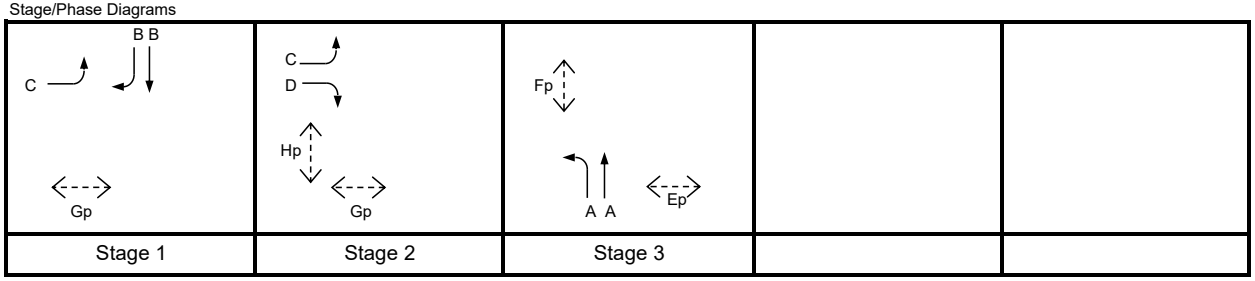
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.488 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,305 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 42 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 21 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.818 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 67.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 24 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.890 | |

Stage/Phase Diagrams




I/G = 6 I/G = 3 I/G = 4

**Critical Case : C,A**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\% =$ 64%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 490 | | | 490 | 100% | | 1793 | 0.273 | 0.273 |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 450 | 450 | | 100% | 3799 | 0.118 | |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 385 | 0 | | 385 | 100% | | 1794 | 0.215 | 0.215 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 175 | | 175 | | | 2131 | 0.082 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 271 | | 271 | | | 1963 | 0.138 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 74 | 197 | 272 | | 73% | 1972 | 0.138 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 263 | 263 | | 100% | 1906 | 0.138 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

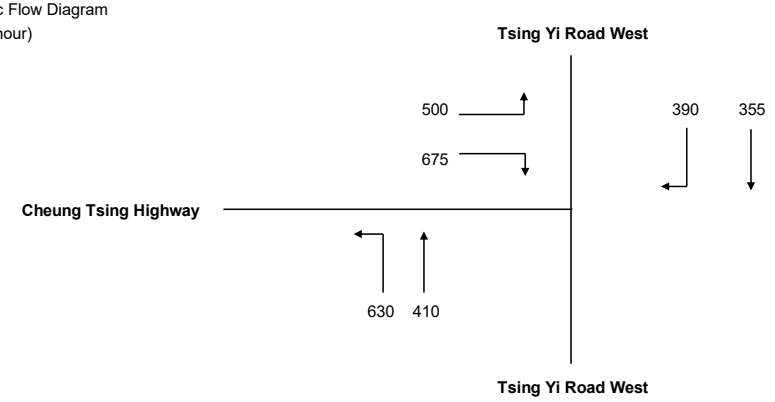
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2031 Scenario B NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

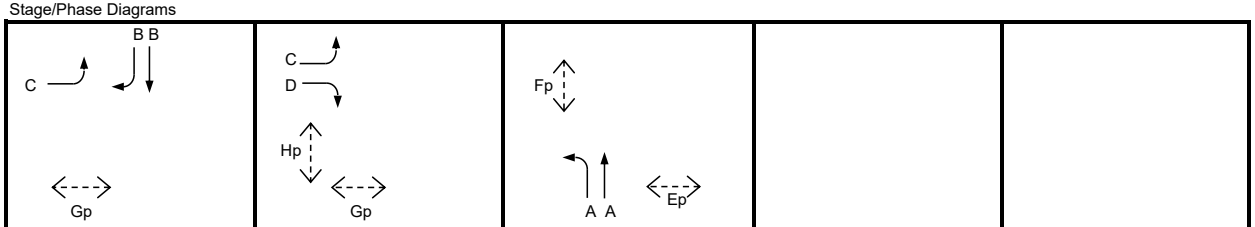
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 100 | sec |
| Sum(y) | Y = | 0.656 | |
| Lost time | L = | 13 | sec |
| Total Flow | = | 2,960 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 71 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 38 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.803 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 22.3 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 48 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.870 | |

Stage/Phase Diagrams




I/G = 5 I/G = 6 I/G = 3 2

**Critical Case : B,D,A**

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

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 500 | | | 500 | 100% | | 1793 | 0.279 | |
| | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 675 | 675 | | 100% | 3799 | 0.178 | 0.178 |
| | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 630 | 0 | | 630 | 100% | | 1794 | 0.351 | 0.351 |
| | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 410 | | 410 | | | 2131 | 0.192 | |
| | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 249 | | 249 | | | 1963 | 0.127 | |
| | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 106 | 148 | 253 | | 58% | 1993 | 0.127 | |
| | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 242 | 242 | | 100% | 1906 | 0.127 | 0.127 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | |
| | Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |

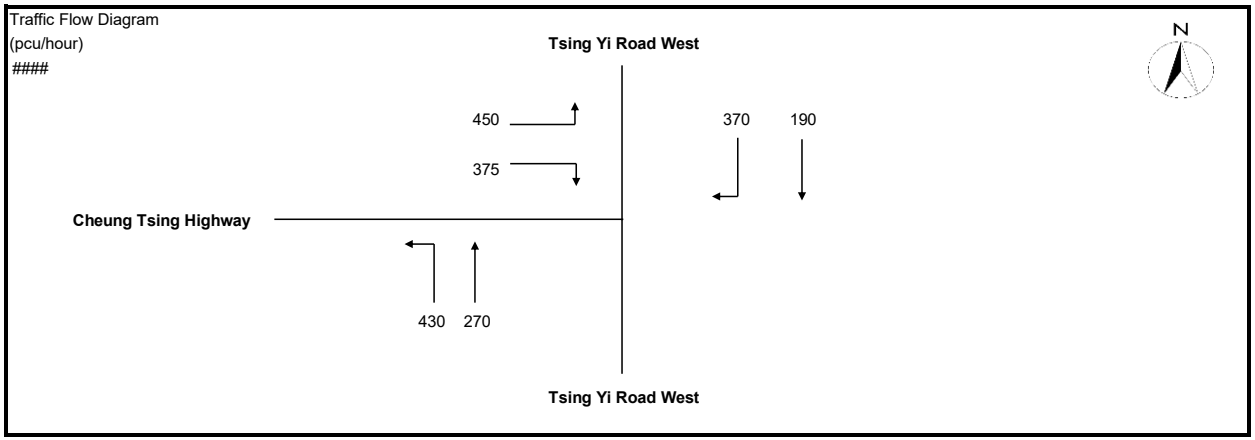
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J10 - Cheung Tsing Highway / Tsing Yi Road West | 2031 Scenario B PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J10

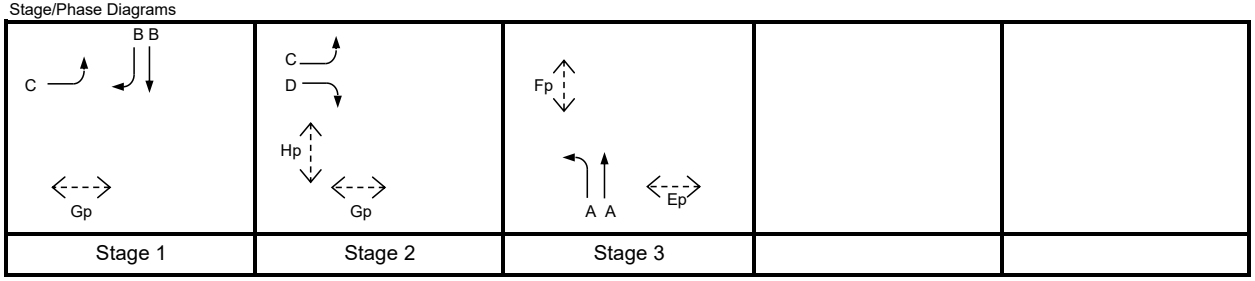
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 3 | |
| Cycle time | C = | 105 | sec |
| Sum(y) | Y = | 0.491 | |
| Lost time | L = | 11 | sec |
| Total Flow | = | 2,085 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ = (1.5×L+5)/(1-Y) = | | 42 | sec |
| Min. Cycle Time $C_m$ = L/(1-Y) = | | 22 | sec |
| $Y_{ult}$ = 0.9-0.0075×L = | | 0.818 | |
| $R.C._{ult}$ = $(Y_{ult}-Y)/Yx100\%$ = | | 66.6 | % |
| Practical Cycle Time $C_p$ = 0.9×L/(0.9-Y) = | | 24 | sec |
| $Y_{max}$ = 1-L/C = | | 0.895 | |

Stage/Phase Diagrams




I/G = 6 I/G = 3 I/G = 4

**Critical Case : C,A**

**R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 64%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | C | 1,2 | 3.270 | 1 | 18 | | | 1 | | 0 | | 1942 | 450 | | | 450 | 100% | | 1793 | 0.251 | 0.251 |
| D | D | 2 | 3.030 | 2 | | 18 | 0 | 0 | | 0 | | 4116 | | | 375 | 375 | | 100% | 3799 | 0.099 | |
| A | A | 3 | 3.710 | 1 | 14 | | | 1 | | 0 | | 1986 | 430 | 0 | | 430 | 100% | | 1794 | 0.240 | 0.240 |
| A | A | 3 | 3.760 | 1 | | | | 0 | | 0 | | 2131 | | 270 | | 270 | | | 2131 | 0.127 | |
| B | B | 1 | 3.480 | 1 | | | | 1 | | 0 | | 1963 | | 189 | | 189 | | | 1963 | 0.097 | |
| B | B | 1 | 3.300 | 1 | | 19 | 0 | | | 0 | | 2085 | | 1 | 186 | 187 | | 100% | 1933 | 0.097 | |
| B | B | 1 | 3.300 | 1 | | 16 | 0 | 0 | | 0 | | 2085 | | | 184 | 184 | | 100% | 1906 | 0.097 | |

| Pedestrain Crossing | | | GM | | FGM | | Total | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ep | 3 | min. | 5 | + | 6 | = | 11 | sec | | | |
| Fp | 3 | min. | 5 | + | 10 | = | 15 | sec | | | |
| Gp | 1,2 | min. | 5 | + | 9 | = | 14 | sec | | | |
| Hp | 2 | min. | 5 | + | 10 | = | 15 | sec | | | |

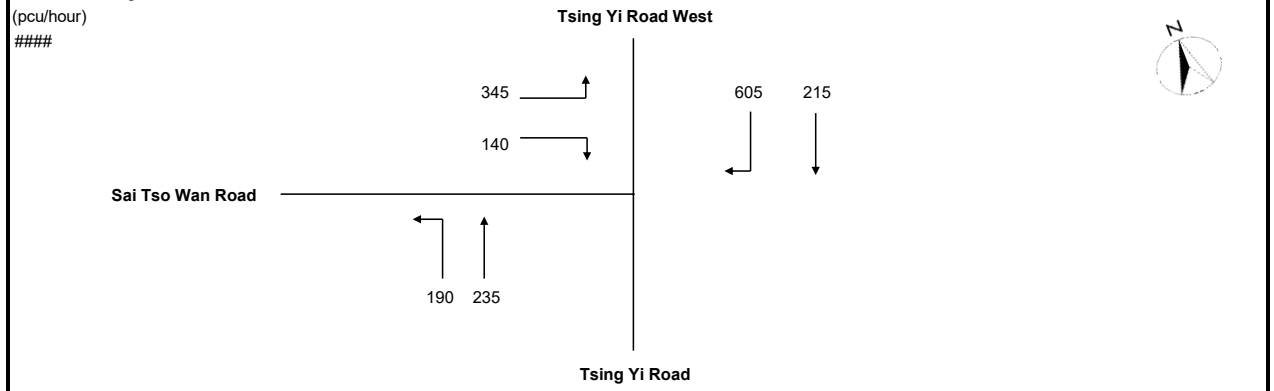
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2025 Survey Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

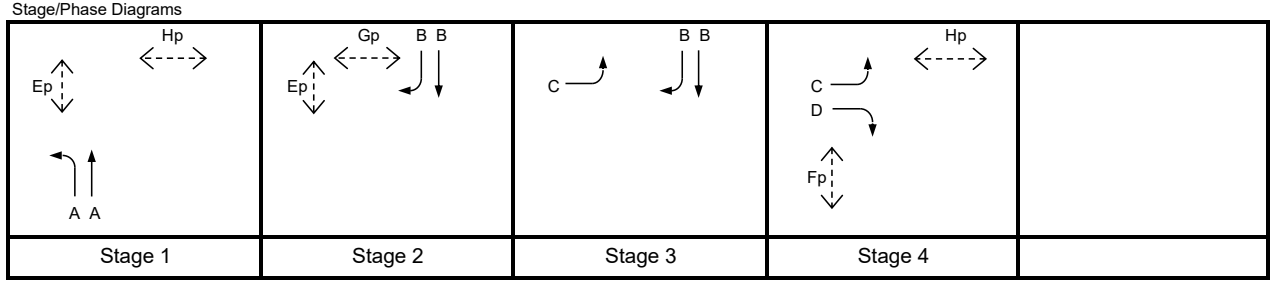
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.423 | |
| Lost time | L = | 37 | sec |
| Total Flow | = | 1,730 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 105 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 64 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.623 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 47.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 70 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.692 | |

Stage/Phase Diagrams




I/G = 10 I/G = 10 I/G = 12 G = 5 I/G = 2

**Critical Case : A,B,Fp**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 47%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 345 | | | 345 | 100% | | 1776 | 0.194 | |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 140 | 140 | | 100% | 1937 | 0.072 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 190 | | | 190 | 100% | | 1805 | 0.105 | |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 235 | | 235 | | | 2130 | 0.110 | 0.110 |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 215 | | 215 | | | 1972 | 0.109 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 605 | 605 | | 100% | 1933 | 0.313 | 0.313 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | * |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

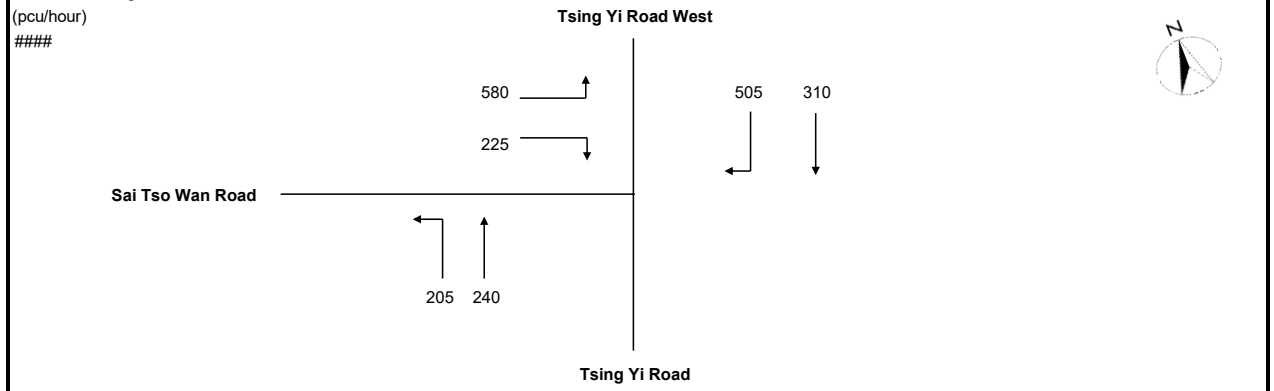
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2025 Survey Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

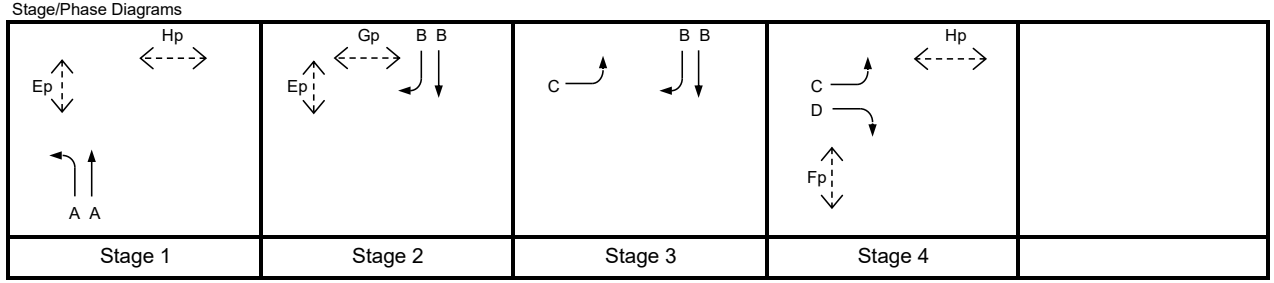
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.440 | |
| Lost time | L = | 30 | sec |
| Total Flow | = | 2,065 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 89 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 54 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.675 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 53.4 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 59 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.727 | |

Stage/Phase Diagrams




I/G = 8 G = 5 I/G = 12 I/G = 5 I/G = 2

**Critical Case : A,Gp,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 49%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 580 | | | 580 | 100% | | 1776 | 0.327 | 0.327 |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 225 | 225 | | 100% | 1937 | 0.116 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 205 | | | 205 | 100% | | 1805 | 0.114 | 0.114 |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 240 | | 240 | | | 2130 | 0.113 | |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 310 | | 310 | | | 1972 | 0.157 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 505 | 505 | | 100% | 1933 | 0.261 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | * |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

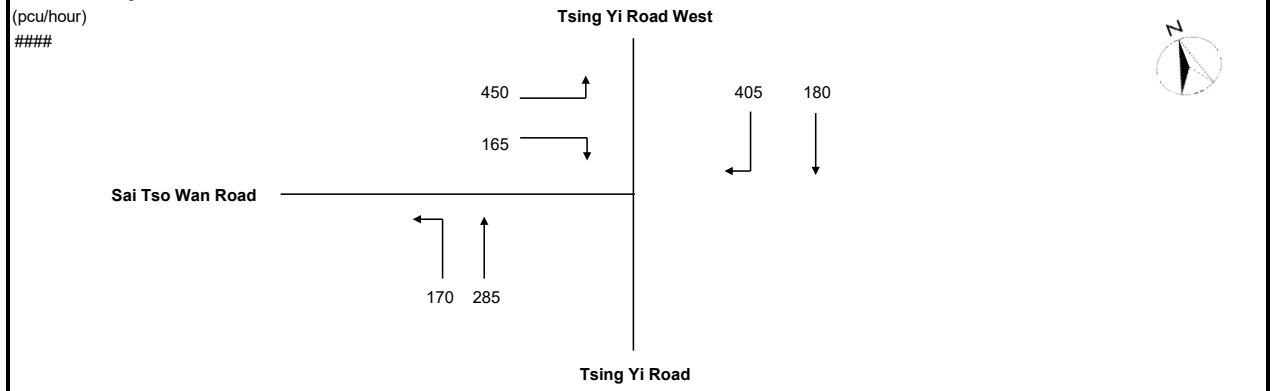
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2025 Survey Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

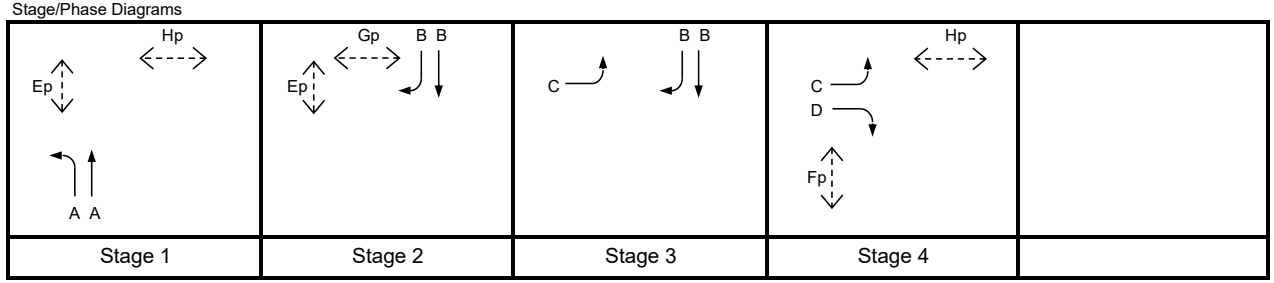
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.387 | |
| Lost time | L = | 30 | sec |
| Total Flow | = | 1,655 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 82 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 49 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.675 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 74.4 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 53 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.727 | |

Stage/Phase Diagrams




I/G = 8 G = 5 I/G = 12 I/G = 5 I/G = 2

**Critical Case : A,Gp,C**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 69%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 450 | | | 450 | 100% | | 1776 | 0.253 | 0.253 |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 165 | 165 | | 100% | 1937 | 0.085 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 170 | | | 170 | 100% | | 1805 | 0.094 | |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 285 | | 285 | | | 2130 | 0.134 | 0.134 |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 180 | | 180 | | | 1972 | 0.091 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 405 | 405 | | 100% | 1933 | 0.210 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | * |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

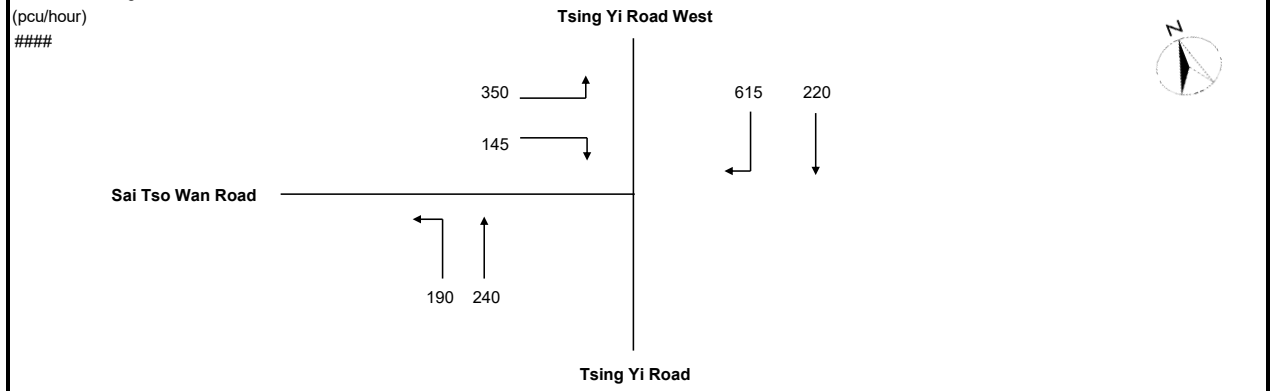
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2028 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

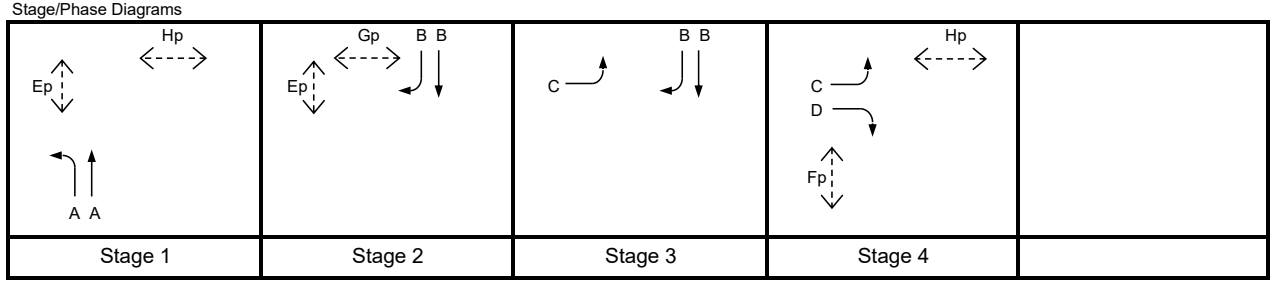
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.431 | |
| Lost time | L = | 37 | sec |
| Total Flow | = | 1,760 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 106 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 65 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.623 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 44.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 71 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.692 | |

Stage/Phase Diagrams




I/G = 10 I/G = 10 I/G = 12 G = 5 I/G = 2

**Critical Case : A,B,Fp**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 44%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 350 | | | 350 | 100% | | 1776 | 0.197 | |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 145 | 145 | | 100% | 1937 | 0.075 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 190 | | | 190 | 100% | | 1805 | 0.105 | |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 240 | | 240 | | | 2130 | 0.113 | 0.113 |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 220 | | 220 | | | 1972 | 0.112 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 615 | 615 | | 100% | 1933 | 0.318 | 0.318 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | * |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

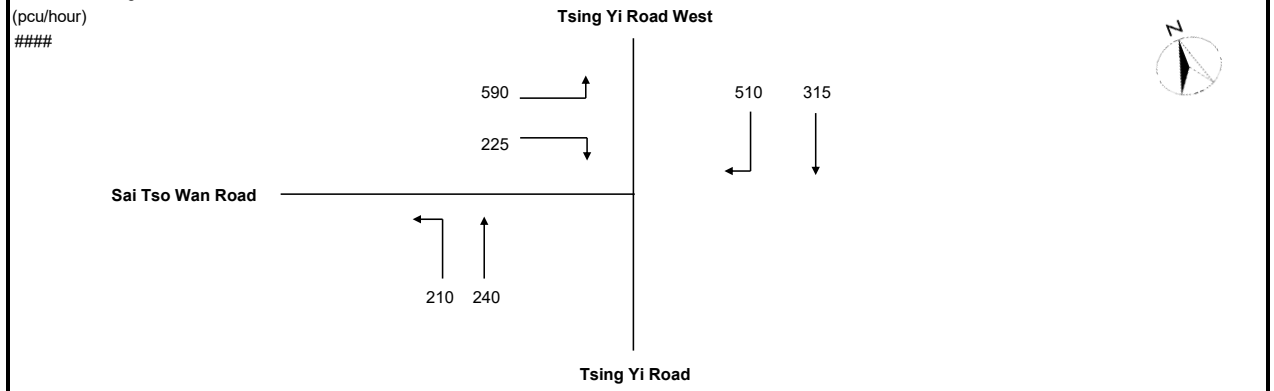
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2028 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

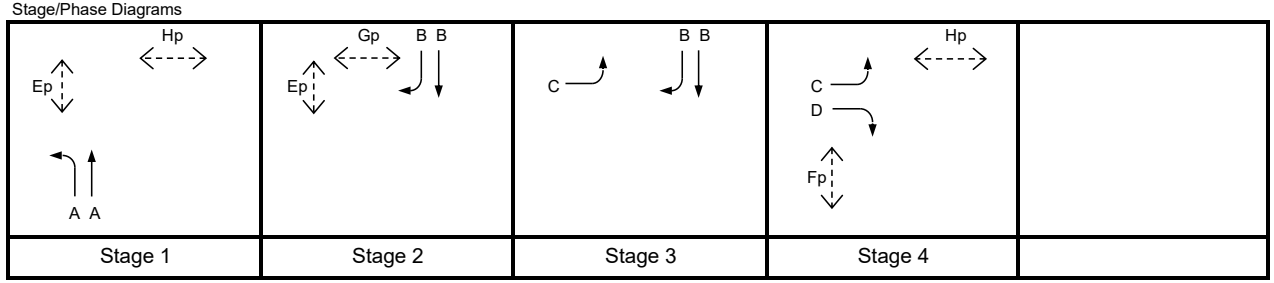
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.448 | |
| Lost time | L = | 30 | sec |
| Total Flow | = | 2,090 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 91 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 54 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.675 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ | = | 50.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 60 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.727 | |

Stage/Phase Diagrams




I/G = 8 G = 5 I/G = 12 I/G = 5 I/G = 2

**Critical Case : A,Gp,C**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 46%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 590 | | | 590 | 100% | | 1776 | 0.332 | 0.332 |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 225 | 225 | | 100% | 1937 | 0.116 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 210 | | | 210 | 100% | | 1805 | 0.116 | 0.116 |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 240 | | 240 | | | 2130 | 0.113 | |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 315 | | 315 | | | 1972 | 0.160 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 510 | 510 | | 100% | 1933 | 0.264 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | * |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

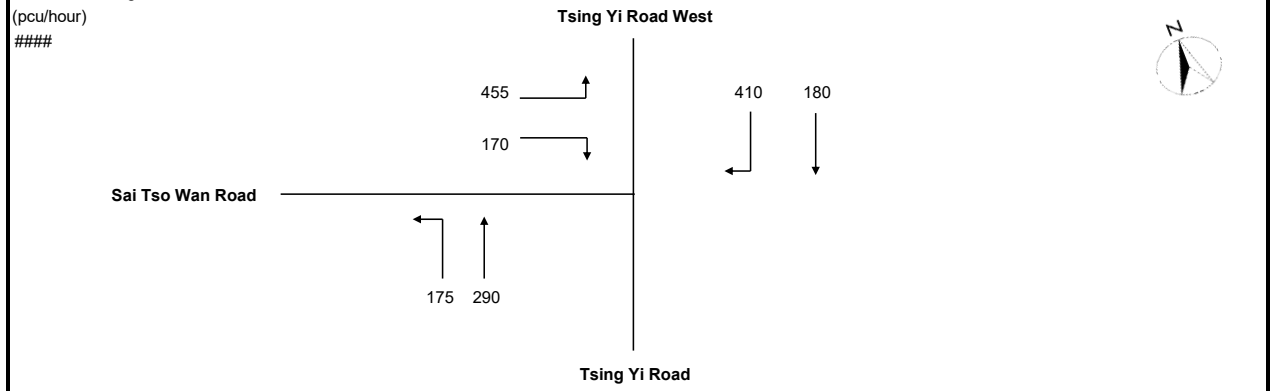
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2028 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

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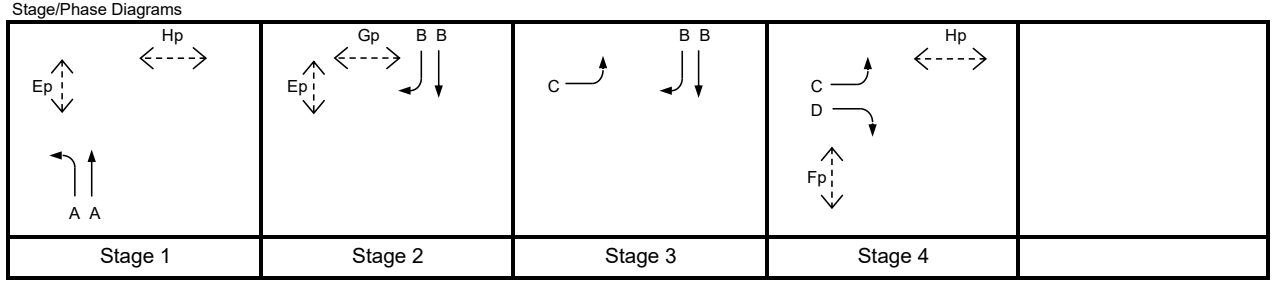
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.392 | |
| Lost time | L = | 30 | sec |
| Total Flow | = | 1,680 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 82 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 49 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.675 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 72.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 53 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.727 | |

Stage/Phase Diagrams




I/G = 8 G = 5 I/G = 12 I/G = 5 I/G = 2

**Critical Case : A,Gp,C**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 67%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 455 | | | 455 | 100% | | 1776 | 0.256 | 0.256 |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 170 | 170 | | 100% | 1937 | 0.088 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 175 | | | 175 | 100% | | 1805 | 0.097 | |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 290 | | 290 | | | 2130 | 0.136 | 0.136 |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 180 | | 180 | | | 1972 | 0.091 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 410 | 410 | | 100% | 1933 | 0.212 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | * |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

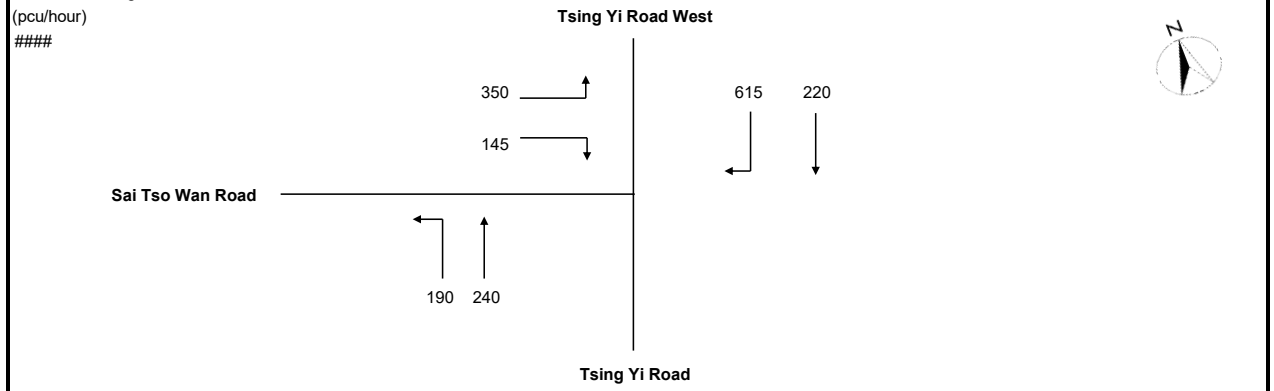
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2028 Design Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

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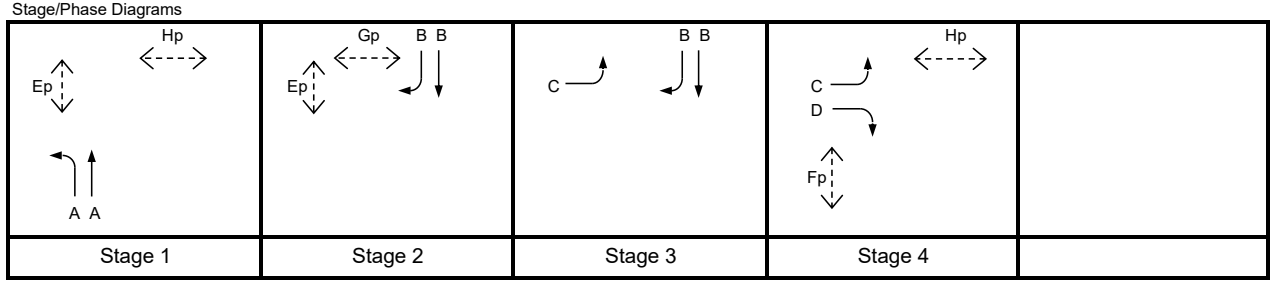
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.431 | |
| Lost time | L = | 37 | sec |
| Total Flow | = | 1,760 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 106 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 65 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.623 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ | = | 44.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 71 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.692 | |

Stage/Phase Diagrams




**Critical Case : A,B,Fp**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 44%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 350 | | | 350 | 100% | | 1776 | 0.197 | |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 145 | 145 | | 100% | 1937 | 0.075 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 190 | | | 190 | 100% | | 1805 | 0.105 | |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 240 | | 240 | | | 2130 | 0.113 | 0.113 |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 220 | | 220 | | | 1972 | 0.112 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 615 | 615 | | 100% | 1933 | 0.318 | 0.318 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | * |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

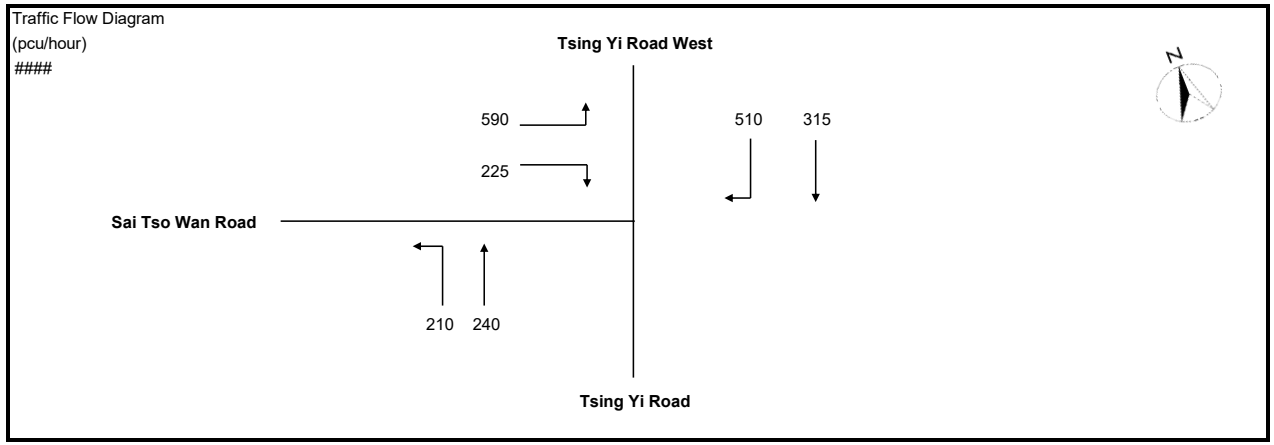
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2028 Design Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

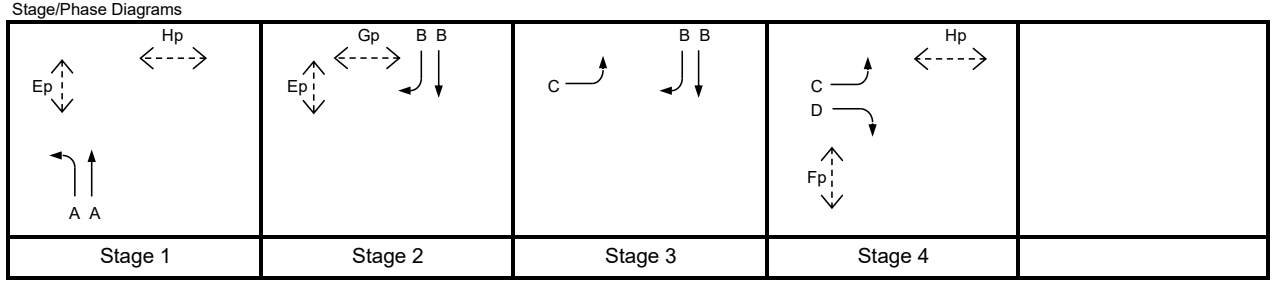
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.448 | |
| Lost time | L = | 30 | sec |
| Total Flow | = | 2,090 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 91 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 54 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.675 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 50.5 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 60 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.727 | |

Stage/Phase Diagrams




I/G = 8 G = 5 I/G = 12 I/G = 5 I/G = 2

**Critical Case : A,Gp,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Y \times 100\%$ = 46%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 590 | | | 590 | 100% | | 1776 | 0.332 | 0.332 |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 225 | 225 | | 100% | 1937 | 0.116 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 210 | | | 210 | 100% | | 1805 | 0.116 | 0.116 |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 240 | | 240 | | | 2130 | 0.113 | |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 315 | | 315 | | | 1972 | 0.160 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 510 | 510 | | 100% | 1933 | 0.264 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | * |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

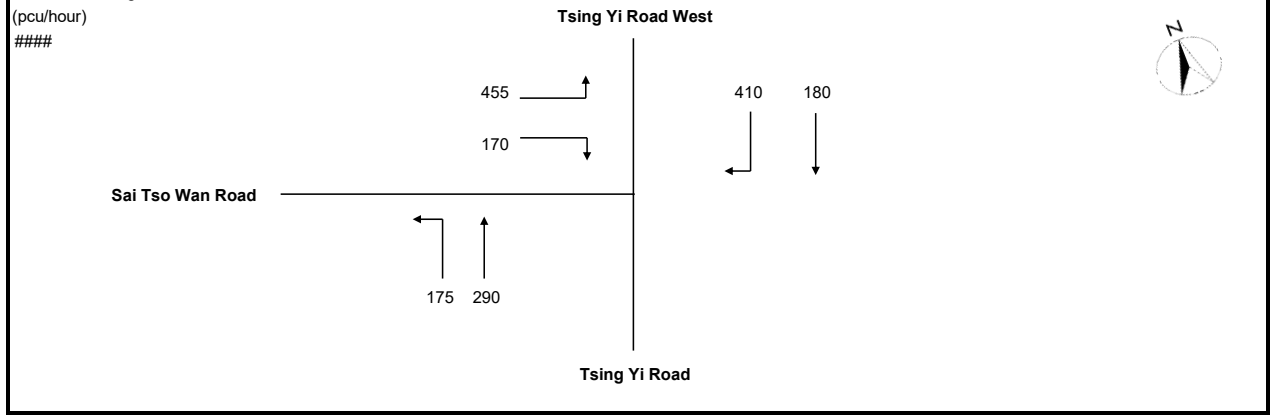
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2028 Design Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

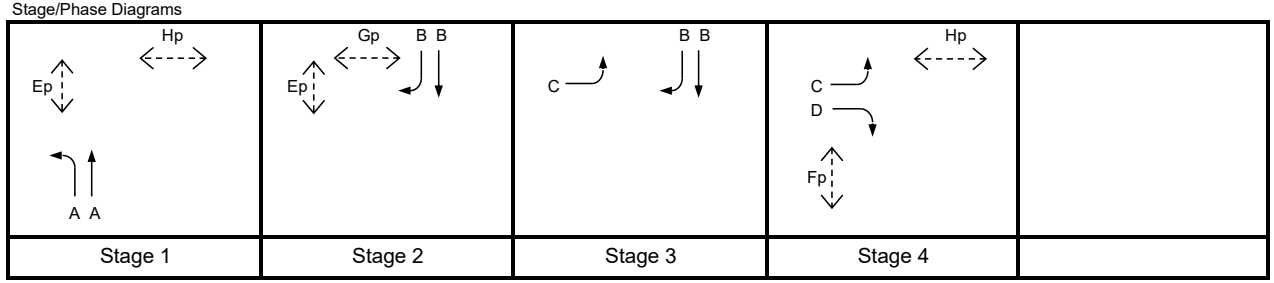
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.392 | |
| Lost time | L = | 30 | sec |
| Total Flow | = | 1,680 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 82 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 49 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.675 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 72.1 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 53 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.727 | |

Stage/Phase Diagrams




I/G = 8 G = 5 I/G = 12 I/G = 5 I/G = 2

**Critical Case : A,Gp,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 67%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 455 | | | 455 | 100% | | 1776 | 0.256 | 0.256 |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 170 | 170 | | 100% | 1937 | 0.088 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 175 | | | 175 | 100% | | 1805 | 0.097 | |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 290 | | 290 | | | 2130 | 0.136 | 0.136 |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 180 | | 180 | | | 1972 | 0.091 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 410 | 410 | | 100% | 1933 | 0.212 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | * |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

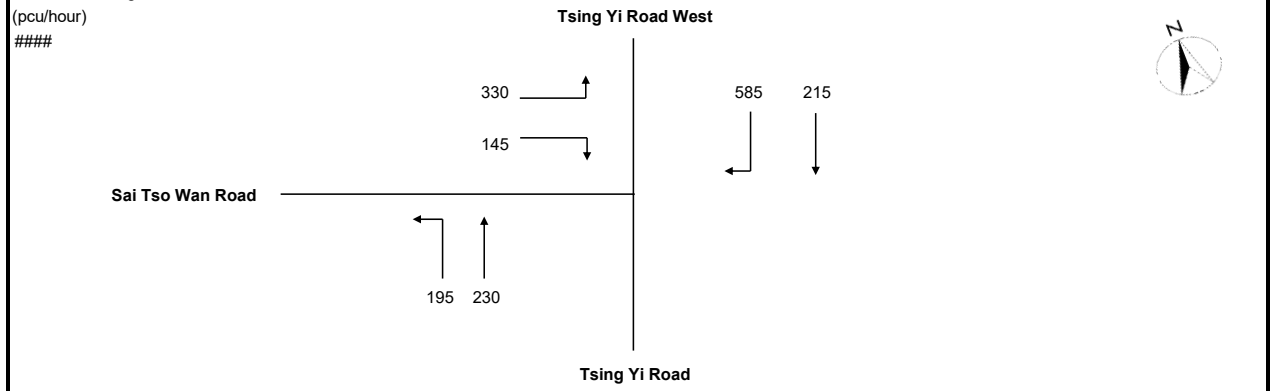
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2031 Reference Case AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

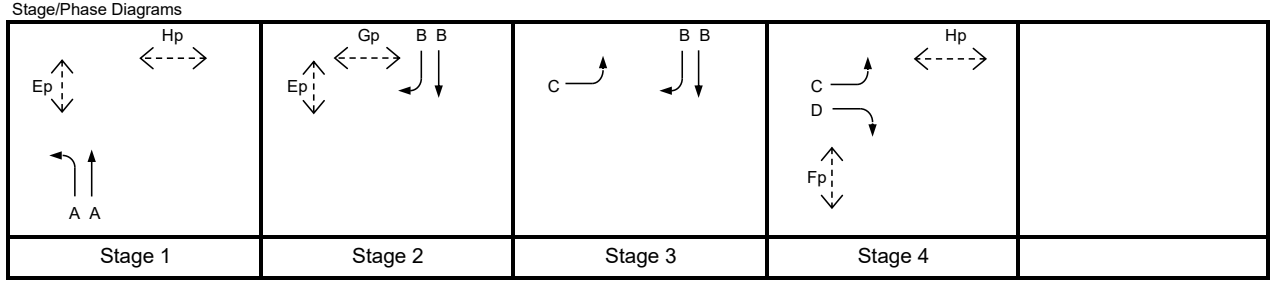
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.411 | |
| Lost time | L = | 37 | sec |
| Total Flow | = | 1,700 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 103 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 63 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.623 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 51.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 68 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.692 | |

Stage/Phase Diagrams




I/G = 10 I/G = 10 I/G = 12 G = 5 I/G = 2

**Critical Case : A,B,Fp**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 52%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 330 | | | 330 | 100% | | 1776 | 0.186 | |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 145 | 145 | | 100% | 1937 | 0.075 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 195 | | | 195 | 100% | | 1805 | 0.108 | 0.108 |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 230 | | 230 | | | 2130 | 0.108 | |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 215 | | 215 | | | 1972 | 0.109 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 585 | 585 | | 100% | 1933 | 0.303 | 0.303 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | * |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

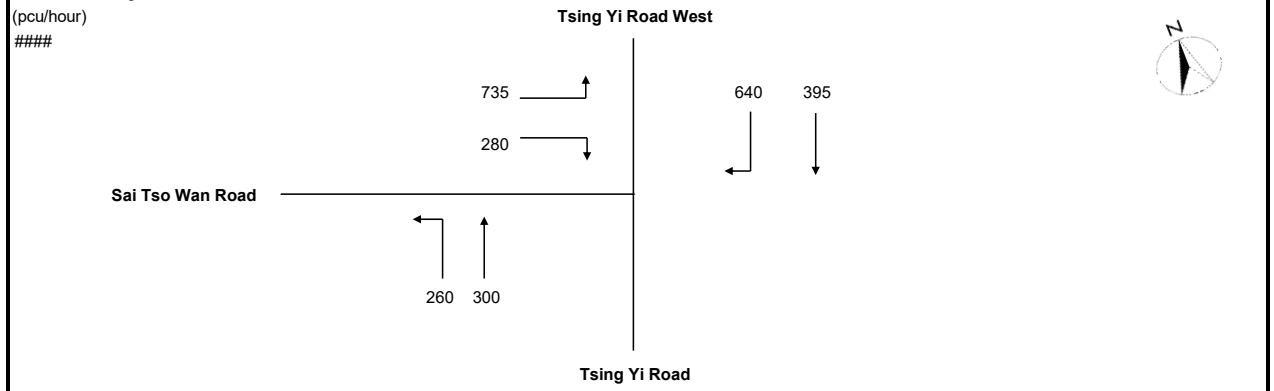
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2031 Reference Case NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

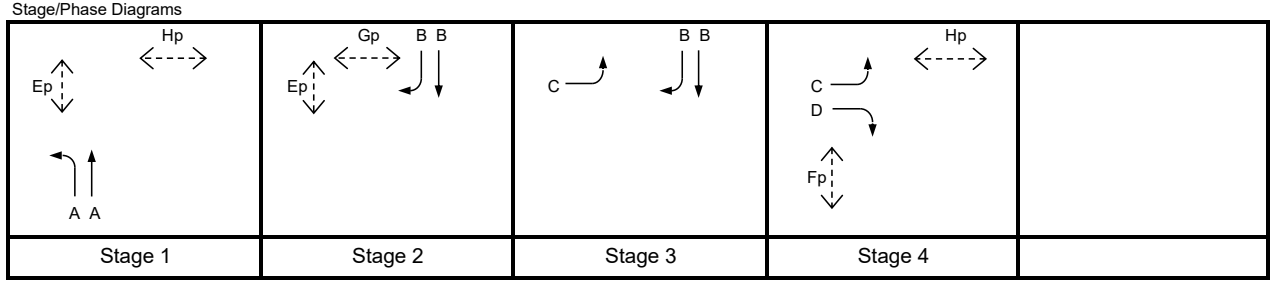
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.558 | |
| Lost time | L = | 30 | sec |
| Total Flow | = | 2,610 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 113 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 68 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.675 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 21.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 79 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.727 | |

Stage/Phase Diagrams




I/G = 8 G = 5 I/G = 12 I/G = 5 I/G = 2

**Critical Case : A,Gp,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 17%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 735 | | | 735 | 100% | | 1776 | 0.414 | 0.414 |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 280 | 280 | | 100% | 1937 | 0.145 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 260 | | | 260 | 100% | | 1805 | 0.144 | 0.144 |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 300 | | 300 | | | 2130 | 0.141 | |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 395 | | 395 | | | 1972 | 0.200 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 640 | 640 | | 100% | 1933 | 0.331 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | * |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

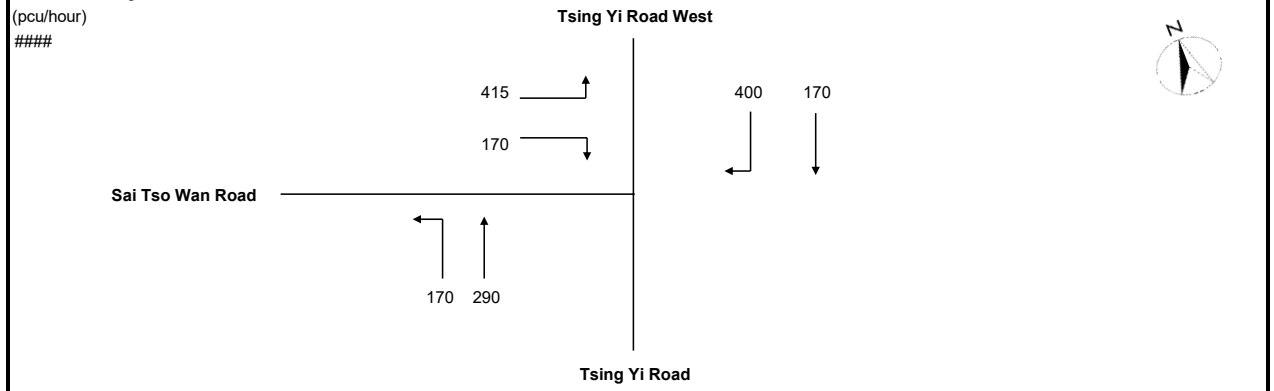
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2031 Reference Case PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

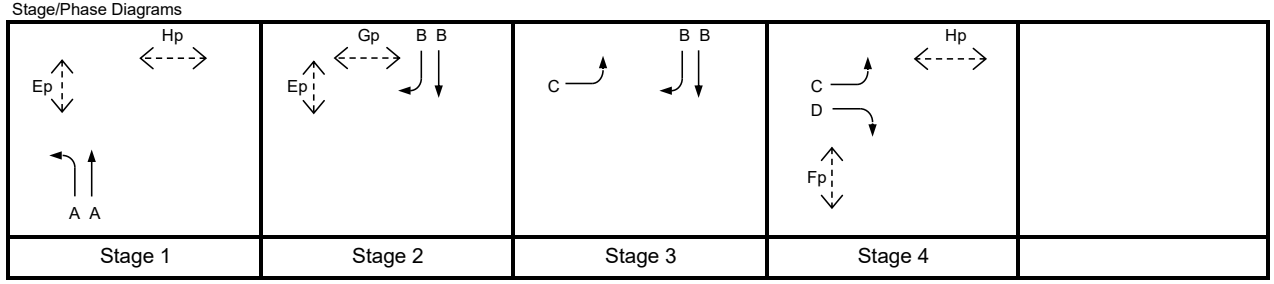
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.431 | |
| Lost time | L = | 19 | sec |
| Total Flow | = | 1,615 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 59 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 33 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.758 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ | = | 75.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 36 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.827 | |

Stage/Phase Diagrams




**Critical Case : A,B,D**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 73%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 415 | | | 415 | 100% | | 1776 | 0.234 | |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 170 | 170 | | 100% | 1937 | 0.088 | 0.088 |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 170 | | | 170 | 100% | | 1805 | 0.094 | |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 290 | | 290 | | | 2130 | 0.136 | 0.136 |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 170 | | 170 | | | 1972 | 0.086 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 400 | 400 | | 100% | 1933 | 0.207 | 0.207 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

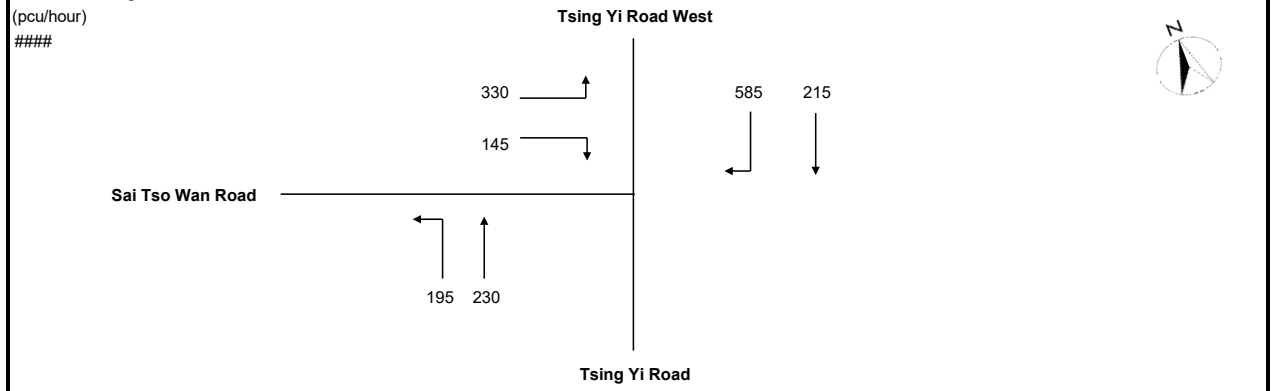
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2031 Scenario A AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

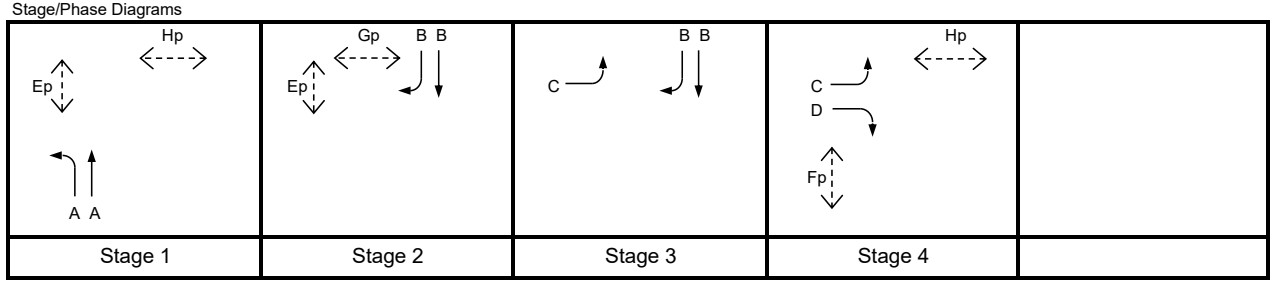
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.411 | |
| Lost time | L = | 37 | sec |
| Total Flow | = | 1,700 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 103 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 63 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.623 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 51.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 68 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.692 | |

Stage/Phase Diagrams




I/G = 10 I/G = 10 I/G = 12 G = 5 I/G = 2

**Critical Case : A,B,Fp**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 52%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 330 | | | 330 | 100% | | 1776 | 0.186 | |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 145 | 145 | | 100% | 1937 | 0.075 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 195 | | | 195 | 100% | | 1805 | 0.108 | 0.108 |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 230 | | 230 | | | 2130 | 0.108 | |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 215 | | 215 | | | 1972 | 0.109 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 585 | 585 | | 100% | 1933 | 0.303 | 0.303 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | * |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

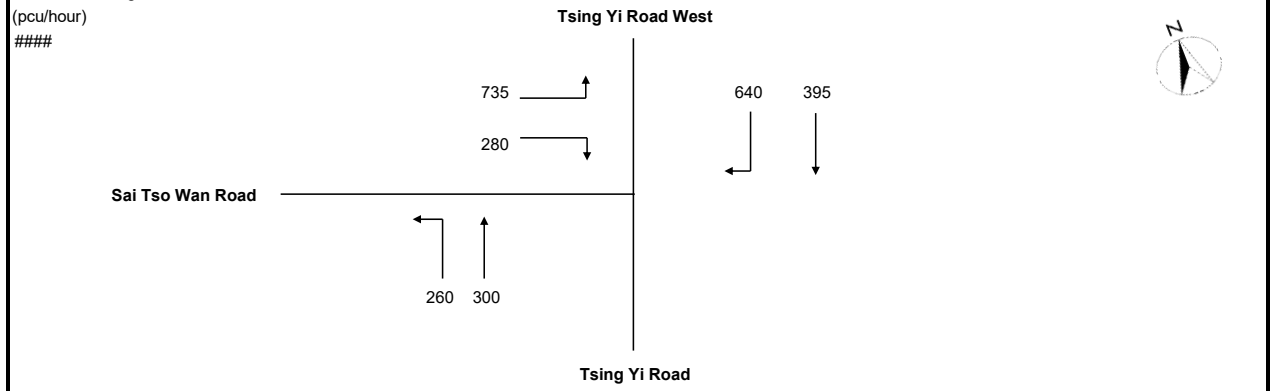
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2031 Scenario A NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

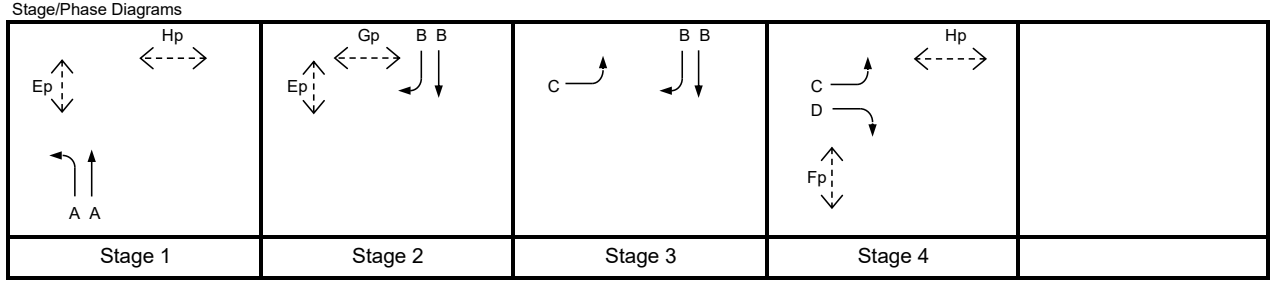
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.558 | |
| Lost time | L = | 30 | sec |
| Total Flow | = | 2,610 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 113 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 68 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.675 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Yx100\%$ = | 21.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 79 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.727 | |

Stage/Phase Diagrams




I/G = 8 G = 5 I/G = 12 I/G = 5 I/G = 2

**Critical Case : A,Gp,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 17%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 735 | | | 735 | 100% | | 1776 | 0.414 | 0.414 |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 280 | 280 | | 100% | 1937 | 0.145 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 260 | | | 260 | 100% | | 1805 | 0.144 | 0.144 |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 300 | | 300 | | | 2130 | 0.141 | |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 395 | | 395 | | | 1972 | 0.200 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 640 | 640 | | 100% | 1933 | 0.331 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | * |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

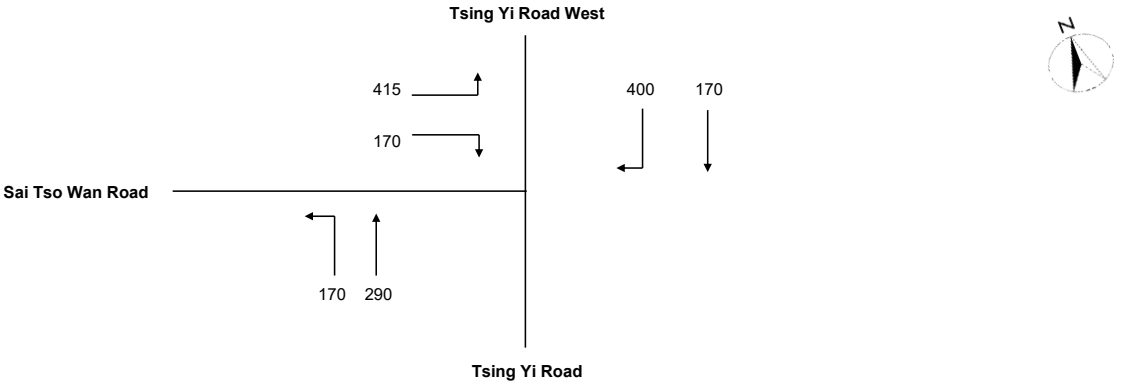
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2031 Scenario A PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

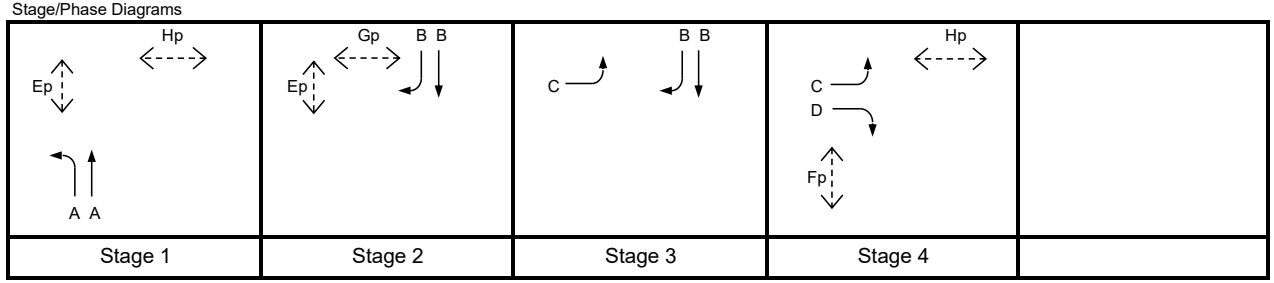
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.431 | |
| Lost time | L = | 19 | sec |
| Total Flow | = | 1,615 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 59 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 33 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.758 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ | = | 75.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 36 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.827 | |

Stage/Phase Diagrams




**Critical Case : A,B,D**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 73%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 415 | | | 415 | 100% | | 1776 | 0.234 | |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 170 | 170 | | 100% | 1937 | 0.088 | 0.088 |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 170 | | | 170 | 100% | | 1805 | 0.094 | |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 290 | | 290 | | | 2130 | 0.136 | 0.136 |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 170 | | 170 | | | 1972 | 0.086 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 400 | 400 | | 100% | 1933 | 0.207 | 0.207 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

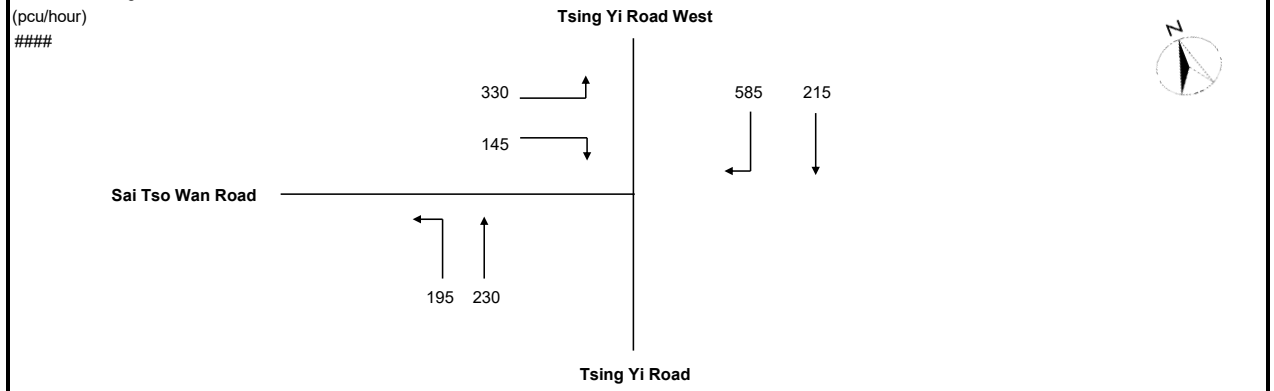
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2031 Scenario B AM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

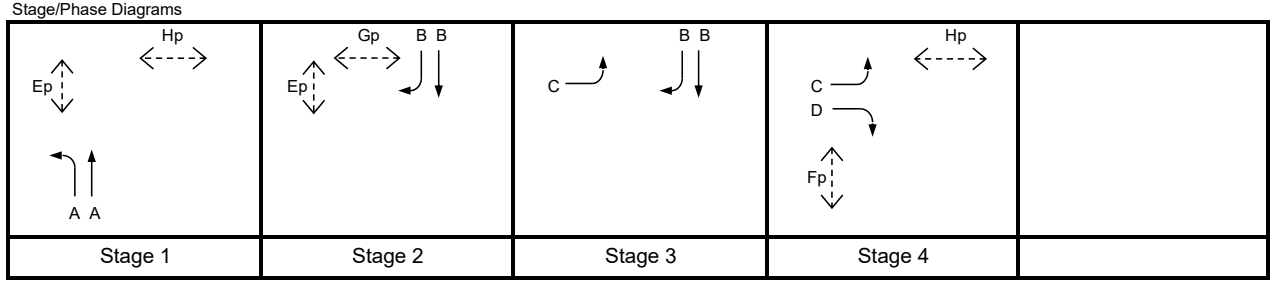
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 120 | sec |
| Sum(y) | Y = | 0.411 | |
| Lost time | L = | 37 | sec |
| Total Flow | = | 1,700 | pcu |

| | | | |
|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 103 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 63 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.623 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 51.6 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 68 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.692 | |

Stage/Phase Diagrams




I/G = 10 I/G = 10 I/G = 12 G = 5 I/G = 2

**Critical Case : A,B,Fp**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 52%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 330 | | | 330 | 100% | | 1776 | 0.186 | |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 145 | 145 | | 100% | 1937 | 0.075 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 195 | | | 195 | 100% | | 1805 | 0.108 | 0.108 |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 230 | | 230 | | | 2130 | 0.108 | |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 215 | | 215 | | | 1972 | 0.109 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 585 | 585 | | 100% | 1933 | 0.303 | 0.303 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | * |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

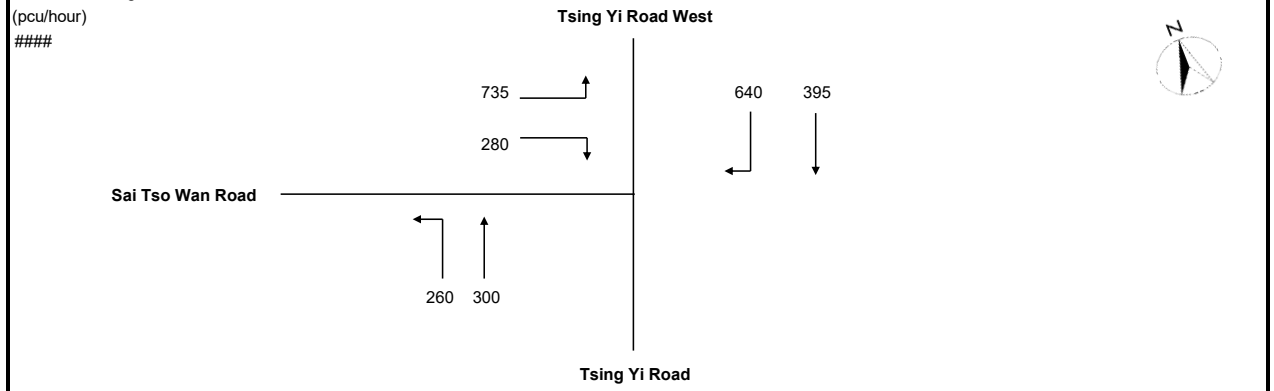
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2031 Scenario B NN | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

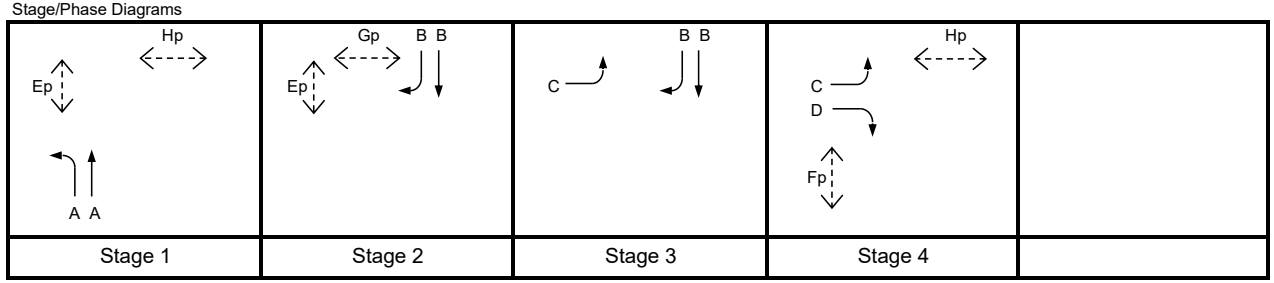
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.558 | |
| Lost time | L = | 30 | sec |
| Total Flow | = | 2,610 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | | 113 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ | = | 68 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ | = | 0.675 | |
| $R.C._{.ult}$ | $= (Y_{ult}-Y)/Yx100\%$ | = | 21.0 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ | = | 79 | sec |
| $Y_{max}$ | $= 1-L/C$ | = | 0.727 | |

Stage/Phase Diagrams




I/G = 8 G = 5 I/G = 12 I/G = 5 I/G = 2

**Critical Case : A,Gp,C**

**R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 17%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 735 | | | 735 | 100% | | 1776 | 0.414 | 0.414 |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 280 | 280 | | 100% | 1937 | 0.145 | |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 260 | | | 260 | 100% | | 1805 | 0.144 | 0.144 |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 300 | | 300 | | | 2130 | 0.141 | |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 395 | | 395 | | | 1972 | 0.200 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 640 | 640 | | 100% | 1933 | 0.331 | |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | * |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

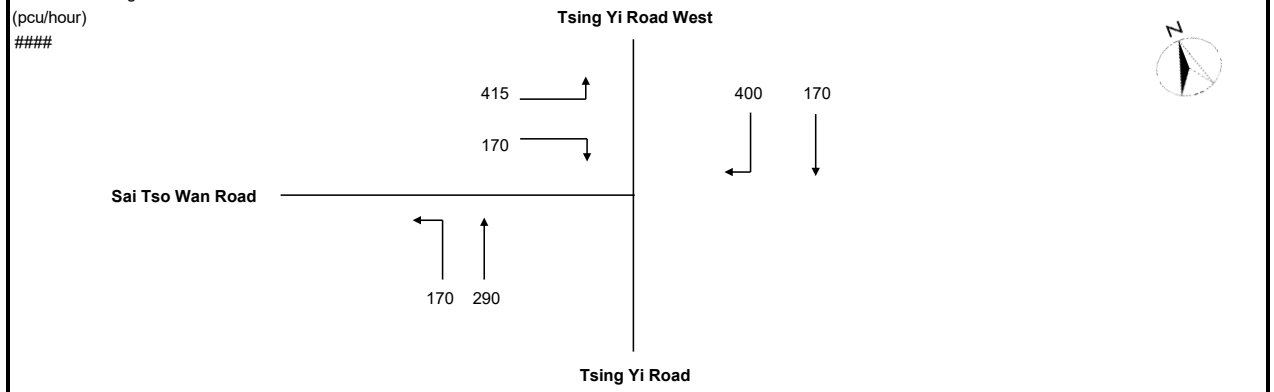
# JUNCTION CAPACITY CALCULATION

AECOM

| Junction J11 - Sai Tso Wan Road / Tsing Yi Road / Tsing Yi Road West | 2031 Scenario B PM | DESIGN: PCH | CHECK: MKC | JOB NO: 60733229 | DATE: Nov 2025 |
|---|---|---|---|---|---|

J11

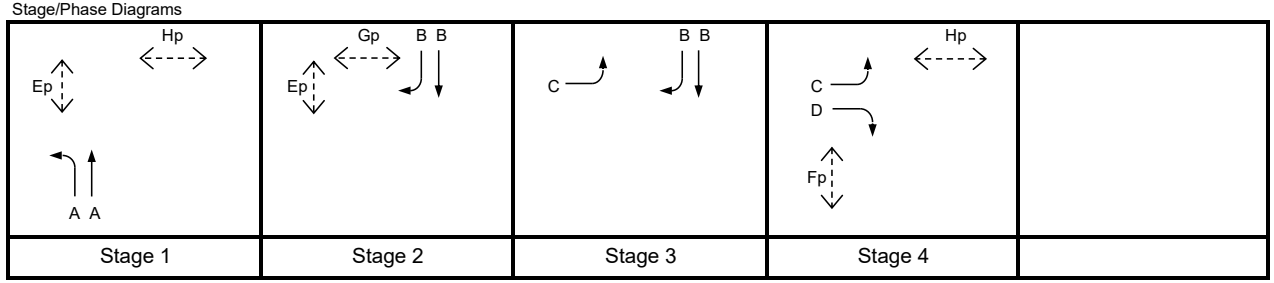
Traffic Flow Diagram
(pcu/hour)
####




| | | | |
|---|---|---|---|
| No. of stages per cycle | N = | 4 | |
| Cycle time | C = | 110 | sec |
| Sum(y) | Y = | 0.431 | |
| Lost time | L = | 19 | sec |
| Total Flow | = | 1,615 | pcu |

| | | | | |
|---|---|---|---|---|
| Optimum Cycle $C_o$ | $= (1.5 \times L+5)/(1-Y)$ = | 59 | sec |
| Min. Cycle Time $C_m$ | $= L/(1-Y)$ = | 33 | sec |
| $Y_{ult}$ | $= 0.9-0.0075 \times L$ = | 0.758 | |
| $R.C._{ult}$ | $= (Y_{ult}-Y)/Y \times 100\%$ = | 75.8 | % |
| Practical Cycle Time $C_p$ | $= 0.9 \times L/(0.9-Y)$ = | 36 | sec |
| $Y_{max}$ | $= 1-L/C$ = | 0.827 | |

Stage/Phase Diagrams




**Critical Case : A,B,D**

**R.C.(C) $= (0.9 \times Y_{max}-Y)/Y \times 100\%$ = 73%**

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) LEFT | RADIUS (m) RIGHT | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) LEFT | FLOW (pcu/hr) STRAIGHT AHEAD | FLOW (pcu/hr) RIGHT | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) LEFT | PROPORTION OF TURNING VEHICLES (%) RIGHT | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR *y* | CRITICAL *y* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | 3,4 | 3.390 | 1 | 15 | | | 1 | | 0 | | 1954 | 415 | | | 415 | 100% | | 1776 | 0.234 | |
| | D | 4 | 3.890 | 1 | | 14 | 0 | 0 | | 0 | | 2144 | | | 170 | 170 | | 100% | 1937 | 0.088 | 0.088 |
| | A | 1 | 3.980 | 1 | 13 | | | 1 | | 0 | | 2013 | 170 | | | 170 | 100% | | 1805 | 0.094 | |
| | A | 1 | 3.750 | 1 | | | | 0 | | 0 | | 2130 | | 290 | | 290 | | | 2130 | 0.136 | 0.136 |
| | B | 2,3 | 3.570 | 1 | | | | 1 | | 0 | | 1972 | | 170 | | 170 | | | 1972 | 0.086 | |
| | B | 2,3 | 3.590 | 1 | | 16 | 0 | 0 | | 0 | | 2114 | | | 400 | 400 | | 100% | 1933 | 0.207 | 0.207 |
| Pedestrain Crossing | | | | GM | | FGM | | Total | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 5 | + | 8 | = | 13 | sec | | | | | | | | | | | | |
| | Fp | 4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | |
| | Gp | 2 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | |
| | Hp | 1,4 | min. | 5 | + | 7 | = | 12 | sec | | | | | | | | | | | | |

# Appendix C
# Traffic Model Validation Results

Validation Result at Screenlines (Daily)

| Screenline | Bound | Car | | | Taxi | | | SPB + PT | | | GV | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs |
| Hong Kong External Cordon | N/B | 42,600 | 42,900 | 1.01 | 15,400 | 14,600 | 0.95 | 8,500 | 8,600 | 1.01 | 10,200 | 9,000 | 0.89 | 76,600 | 75,100 | 0.98 |
| | S/B | 41,500 | 39,500 | 0.95 | 15,600 | 13,800 | 0.88 | 8,700 | 9,000 | 1.04 | 10,500 | 9,400 | 0.89 | 76,400 | 71,700 | 0.94 |
| | 2-way Total | 84,100 | 82,400 | 0.98 | 31,000 | 28,400 | 0.92 | 17,200 | 17,600 | 1.03 | 20,700 | 18,400 | 0.89 | 153,000 | 146,800 | 0.96 |
| Hong Kong Internal Cordon | I/B | 123,500 | 118,200 | 0.96 | 72,900 | 74,400 | 1.02 | 19,200 | 17,900 | 0.93 | 28,800 | 30,500 | 1.06 | 244,500 | 241,000 | 0.99 |
| | O/B | 124,600 | 112,600 | 0.90 | 72,000 | 72,100 | 1.00 | 18,200 | 18,000 | 0.99 | 27,000 | 30,300 | 1.12 | 241,900 | 233,100 | 0.96 |
| | 2-way Total | 248,200 | 230,800 | 0.93 | 145,000 | 146,500 | 1.01 | 37,400 | 35,900 | 0.96 | 55,900 | 60,800 | 1.09 | 486,400 | 474,000 | 0.97 |
| Kowloon External Cordon | N/B | 193,500 | 191,000 | 0.99 | 65,100 | 61,500 | 0.95 | 28,600 | 32,100 | 1.12 | 93,700 | 97,200 | 1.04 | 380,900 | 381,800 | 1.00 |
| | S/B | 202,000 | 199,200 | 0.99 | 61,400 | 61,700 | 1.01 | 27,200 | 32,500 | 1.20 | 87,600 | 93,400 | 1.07 | 378,100 | 386,900 | 1.02 |
| | 2-way Total | 395,500 | 390,200 | 0.99 | 126,500 | 123,300 | 0.97 | 55,800 | 64,600 | 1.16 | 181,300 | 190,600 | 1.05 | 759,000 | 768,700 | 1.01 |
| Tsing Yi External Cordon | I/B | 98,900 | 98,500 | 1.00 | 35,200 | 36,100 | 1.03 | 16,300 | 18,100 | 1.11 | 52,800 | 55,300 | 1.05 | 203,300 | 208,000 | 1.02 |
| | O/B | 100,700 | 100,400 | 1.00 | 36,400 | 37,000 | 1.02 | 16,600 | 18,300 | 1.10 | 53,700 | 55,300 | 1.03 | 207,400 | 210,900 | 1.02 |
| | 2-way Total | 199,600 | 198,800 | 1.00 | 71,600 | 73,100 | 1.02 | 32,900 | 36,400 | 1.11 | 106,600 | 110,700 | 1.04 | 410,700 | 419,000 | 1.02 |
| Lantau External Cordon | I/B | 26,000 | 23,800 | 0.91 | 12,400 | 13,000 | 1.05 | 3,500 | 4,100 | 1.15 | 13,200 | 14,000 | 1.06 | 55,200 | 54,900 | 1.00 |
| | O/B | 26,200 | 24,600 | 0.94 | 13,400 | 12,900 | 0.96 | 3,300 | 4,100 | 1.22 | 13,000 | 14,000 | 1.08 | 56,000 | 55,500 | 0.99 |
| | 2-way Total | 52,300 | 48,300 | 0.93 | 25,800 | 25,900 | 1.00 | 6,900 | 8,200 | 1.19 | 26,200 | 28,000 | 1.07 | 111,200 | 110,500 | 0.99 |
| Shatin External Cordon | O/B | 162,600 | 162,100 | 1.00 | 35,000 | 34,000 | 0.97 | 21,200 | 23,600 | 1.11 | 65,100 | 69,600 | 1.07 | 283,900 | 289,300 | 1.02 |
| | I/B | 163,000 | 161,900 | 0.99 | 34,700 | 34,500 | 0.99 | 21,400 | 21,700 | 1.02 | 64,300 | 69,500 | 1.08 | 283,500 | 287,700 | 1.01 |
| | 2-way Total | 325,600 | 324,100 | 1.00 | 69,700 | 68,500 | 0.98 | 42,600 | 45,300 | 1.06 | 129,400 | 139,100 | 1.08 | 567,400 | 577,000 | 1.02 |
| Ma On Shan External Cordon | O/B | 37,200 | 33,300 | 0.90 | 7,800 | 6,000 | 0.77 | 6,400 | 5,400 | 0.84 | 10,000 | 8,800 | 0.88 | 61,400 | 53,500 | 0.87 |
| | I/B | 33,700 | 31,800 | 0.95 | 8,100 | 5,600 | 0.68 | 7,000 | 7,000 | 1.00 | 11,300 | 9,800 | 0.86 | 60,100 | 54,200 | 0.90 |
| | 2-way Total | 70,800 | 65,100 | 0.92 | 15,900 | 11,600 | 0.73 | 13,500 | 12,500 | 0.92 | 21,300 | 18,600 | 0.87 | 121,500 | 107,800 | 0.89 |
| TKO External Cordon | O/B | 47,600 | 44,000 | 0.92 | 14,500 | 12,100 | 0.83 | 7,000 | 6,100 | 0.87 | 13,300 | 13,700 | 1.03 | 82,300 | 75,900 | 0.92 |
| | I/B | 48,200 | 41,700 | 0.86 | 15,600 | 11,900 | 0.76 | 7,900 | 6,700 | 0.84 | 15,800 | 15,600 | 0.99 | 87,500 | 75,800 | 0.87 |
| | 2-way Total | 95,800 | 85,600 | 0.89 | 30,100 | 24,000 | 0.80 | 14,900 | 12,800 | 0.86 | 29,100 | 29,300 | 1.01 | 169,800 | 151,700 | 0.89 |
| Screenline A-A | E/B | 133,600 | 127,400 | 0.95 | 63,700 | 53,200 | 0.84 | 23,700 | 22,600 | 0.95 | 48,800 | 51,100 | 1.05 | 269,800 | 254,300 | 0.94 |
| | W/B | 132,700 | 120,300 | 0.91 | 58,700 | 51,600 | 0.88 | 23,500 | 22,200 | 0.94 | 45,800 | 48,500 | 1.06 | 260,800 | 242,600 | 0.93 |
| | 2-way Total | 266,300 | 247,700 | 0.93 | 122,400 | 104,800 | 0.86 | 47,200 | 44,800 | 0.95 | 94,700 | 99,600 | 1.05 | 530,600 | 496,900 | 0.94 |
| Screenline C-C | N/B | 141,800 | 134,300 | 0.95 | 67,600 | 61,600 | 0.91 | 26,200 | 24,300 | 0.93 | 50,800 | 59,600 | 1.17 | 286,400 | 279,900 | 0.98 |
| | S/B | 146,900 | 136,600 | 0.93 | 67,600 | 63,400 | 0.94 | 26,700 | 25,500 | 0.95 | 53,700 | 61,400 | 1.14 | 294,900 | 287,000 | 0.97 |
| | 2-way Total | 288,700 | 271,000 | 0.94 | 135,200 | 125,100 | 0.92 | 52,900 | 49,800 | 0.94 | 104,500 | 121,100 | 1.16 | 581,300 | 566,900 | 0.98 |
| Screenline F-F | E/B | 68,100 | 63,800 | 0.94 | 37,300 | 36,900 | 0.99 | 10,600 | 9,400 | 0.89 | 15,600 | 15,800 | 1.01 | 131,600 | 126,000 | 0.96 |
| | W/B | 68,300 | 66,100 | 0.97 | 38,700 | 39,900 | 1.03 | 11,400 | 8,800 | 0.77 | 16,900 | 17,100 | 1.01 | 135,300 | 131,900 | 0.97 |
| | 2-way Total | 136,400 | 129,900 | 0.95 | 76,000 | 76,800 | 1.01 | 21,900 | 18,200 | 0.83 | 32,500 | 32,900 | 1.01 | 266,900 | 257,800 | 0.97 |
| Screenline G-G | E/B | 55,600 | 59,000 | 1.06 | 28,600 | 29,100 | 1.02 | 9,400 | 10,100 | 1.08 | 15,800 | 15,700 | 0.99 | 109,400 | 113,900 | 1.04 |
| | W/B | 61,300 | 64,200 | 1.05 | 31,500 | 30,800 | 0.98 | 9,900 | 8,600 | 0.87 | 15,700 | 14,000 | 0.89 | 118,400 | 117,600 | 0.99 |
| | 2-way Total | 116,900 | 123,300 | 1.05 | 60,100 | 59,800 | 1.00 | 19,300 | 18,700 | 0.97 | 31,500 | 29,700 | 0.94 | 227,700 | 231,500 | 1.02 |
| Screenline H-H | D/B | 9,500 | 8,600 | 0.90 | 2,900 | 2,500 | 0.88 | 1,200 | 900 | 0.69 | 1,300 | 1,200 | 0.93 | 14,900 | 13,200 | 0.88 |
| | U/B | 9,800 | 7,700 | 0.79 | 2,800 | 2,800 | 0.99 | 800 | 1,000 | 1.21 | 1,300 | 1,200 | 0.95 | 14,800 | 12,800 | 0.86 |
| | 2-way Total | 19,300 | 16,300 | 0.84 | 5,700 | 5,300 | 0.94 | 2,100 | 1,900 | 0.90 | 2,600 | 2,400 | 0.94 | 29,700 | 25,900 | 0.87 |
| Screenline I-I | N/B | 17,300 | 18,400 | 1.06 | 7,900 | 7,400 | 0.94 | 4,000 | 3,400 | 0.86 | 8,200 | 8,100 | 0.98 | 37,400 | 37,300 | 1.00 |
| | S/B | 16,800 | 16,200 | 0.97 | 8,400 | 6,900 | 0.82 | 4,400 | 3,700 | 0.84 | 9,200 | 8,600 | 0.93 | 38,800 | 35,300 | 0.91 |
| | 2-way Total | 34,100 | 34,600 | 1.02 | 16,300 | 14,300 | 0.88 | 8,400 | 7,100 | 0.85 | 17,400 | 16,600 | 0.96 | 76,100 | 72,600 | 0.95 |
| Screenline K-K | E/B | 95,400 | 97,300 | 1.02 | 37,200 | 33,900 | 0.91 | 19,800 | 19,400 | 0.98 | 41,200 | 42,500 | 1.03 | 193,600 | 193,100 | 1.00 |
| | W/B | 92,900 | 94,600 | 1.02 | 38,500 | 32,600 | 0.85 | 19,300 | 18,900 | 0.98 | 39,300 | 41,400 | 1.05 | 190,000 | 187,500 | 0.99 |
| | 2-way Total | 188,200 | 191,900 | 1.02 | 75,700 | 66,500 | 0.88 | 39,100 | 38,300 | 0.98 | 80,500 | 83,900 | 1.04 | 383,600 | 380,600 | 0.99 |
| Screenline R-R | N/B | 104,400 | 102,200 | 0.98 | 17,300 | 17,500 | 1.01 | 14,300 | 15,200 | 1.07 | 58,400 | 58,300 | 1.00 | 194,400 | 193,200 | 0.99 |
| | S/B | 110,300 | 104,000 | 0.94 | 17,100 | 18,400 | 1.08 | 13,900 | 14,800 | 1.06 | 54,000 | 55,800 | 1.03 | 195,200 | 193,000 | 0.99 |
| | 2-way Total | 214,700 | 206,200 | 0.96 | 34,400 | 35,900 | 1.04 | 28,200 | 30,000 | 1.06 | 112,300 | 114,100 | 1.02 | 389,600 | 386,200 | 0.99 |
| Screenline S-S | E/B | 90,400 | 88,200 | 0.98 | 14,900 | 15,800 | 1.06 | 13,100 | 15,100 | 1.15 | 51,200 | 59,400 | 1.16 | 169,600 | 178,600 | 1.05 |
| | W/B | 88,000 | 84,900 | 0.97 | 15,000 | 15,000 | 1.00 | 13,700 | 15,500 | 1.14 | 53,500 | 58,700 | 1.10 | 170,100 | 174,200 | 1.02 |
| | 2-way Total | 178,400 | 173,200 | 0.97 | 29,900 | 30,800 | 1.03 | 26,800 | 30,700 | 1.14 | 104,700 | 118,100 | 1.13 | 339,700 | 352,700 | 1.04 |
| Screenline T-T | N/B | 72,500 | 70,500 | 0.97 | 11,400 | 10,800 | 0.95 | 8,300 | 8,300 | 1.00 | 45,000 | 45,900 | 1.02 | 137,300 | 135,500 | 0.99 |
| | S/B | 74,400 | 71,100 | 0.96 | 11,000 | 11,200 | 1.02 | 8,200 | 8,700 | 1.06 | 43,300 | 44,100 | 1.02 | 136,800 | 135,100 | 0.99 |
| | 2-way Total | 146,900 | 141,600 | 0.96 | 22,400 | 22,000 | 0.98 | 16,500 | 17,000 | 1.03 | 88,300 | 90,000 | 1.02 | 274,100 | 270,600 | 0.99 |
| Screenline Y-Y | E/B | 37,300 | 36,000 | 0.97 | 8,700 | 8,100 | 0.94 | 4,000 | 3,800 | 0.95 | 28,500 | 28,000 | 0.98 | 78,500 | 76,000 | 0.97 |
| | W/B | 38,100 | 36,900 | 0.97 | 9,000 | 8,000 | 0.88 | 4,200 | 3,700 | 0.88 | 26,700 | 26,500 | 0.99 | 78,000 | 75,100 | 0.96 |
| | 2-way Total | 75,400 | 72,900 | 0.97 | 17,700 | 16,100 | 0.91 | 8,200 | 7,500 | 0.92 | 55,200 | 54,500 | 0.99 | 156,500 | 151,100 | 0.97 |
| Cross Harbour Screenline | N/B | 75,300 | 71,500 | 0.95 | 23,000 | 27,200 | 1.18 | 8,900 | 10,100 | 1.14 | 23,600 | 25,000 | 1.06 | 130,900 | 133,900 | 1.02 |
| | S/B | 75,000 | 73,500 | 0.98 | 22,400 | 25,300 | 1.13 | 8,700 | 10,100 | 1.15 | 24,700 | 26,000 | 1.05 | 130,900 | 134,800 | 1.03 |
| | 2-way Total | 150,300 | 145,000 | 0.97 | 45,400 | 52,400 | 1.15 | 17,700 | 20,200 | 1.14 | 48,400 | 51,000 | 1.05 | 261,700 | 268,600 | 1.03 |
| Total | NB/EB/IB/DB | 1,630,600 | 1,587,100 | 0.97 | 580,000 | 555,600 | 0.96 | 255,900 | 259,000 | 1.01 | 678,600 | 711,700 | 1.05 | 3,145,200 | 3,113,400 | 0.99 |
| | SB/WB/OB/UB | 1,656,700 | 1,591,800 | 0.96 | 576,800 | 555,400 | 0.96 | 253,400 | 258,400 | 1.02 | 664,500 | 697,900 | 1.05 | 3,151,400 | 3,103,500 | 0.98 |
| | 2-way Total | 3,287,300 | 3,178,900 | 0.97 | 1,156,800 | 1,111,000 | 0.96 | 509,300 | 517,400 | 1.02 | 1,343,000 | 1,409,600 | 1.05 | 6,296,500 | 6,216,900 | 0.99 |

Validation Result at Screenlines (AM Peak)

| Screenline | Bound | Car | | | Taxi | | | SPB + PT | | | GV | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs |
| Hong Kong External Cordon | N/B | 3,500 | 3,500 | 0.99 | 1,100 | 900 | 0.81 | 800 | 800 | 1.00 | 600 | 500 | 0.95 | 6,000 | 5,700 | 0.96 |
| | S/B | 3,000 | 3,100 | 1.03 | 1,000 | 1,000 | 0.98 | 800 | 700 | 0.97 | 700 | 600 | 0.86 | 5,400 | 5,400 | 0.99 |
| | 2-way Total | 6,500 | 6,500 | 1.01 | 2,100 | 1,900 | 0.89 | 1,600 | 1,600 | 0.98 | 1,200 | 1,100 | 0.90 | 11,400 | 11,100 | 0.97 |
| Hong Kong Internal Cordon | I/B | 8,300 | 8,500 | 1.02 | 5,300 | 5,400 | 1.01 | 2,000 | 1,700 | 0.85 | 2,200 | 1,900 | 0.88 | 17,900 | 17,600 | 0.98 |
| | O/B | 7,600 | 6,300 | 0.83 | 5,200 | 4,500 | 0.86 | 1,900 | 1,600 | 0.86 | 1,900 | 1,700 | 0.89 | 16,600 | 14,100 | 0.85 |
| | 2-way Total | 15,900 | 14,800 | 0.93 | 10,600 | 9,900 | 0.94 | 3,900 | 3,300 | 0.85 | 4,100 | 3,600 | 0.88 | 34,500 | 31,700 | 0.92 |
| Kowloon External Cordon | N/B | 10,700 | 10,600 | 0.99 | 4,400 | 4,100 | 0.93 | 2,100 | 2,200 | 1.03 | 5,500 | 5,900 | 1.08 | 22,800 | 22,800 | 1.00 |
| | S/B | 19,800 | 19,600 | 0.99 | 4,700 | 4,800 | 1.02 | 2,700 | 3,000 | 1.13 | 7,200 | 7,900 | 1.09 | 34,400 | 35,400 | 1.03 |
| | 2-way Total | 30,500 | 30,200 | 0.99 | 9,100 | 8,900 | 0.98 | 4,800 | 5,200 | 1.09 | 12,700 | 13,900 | 1.09 | 57,200 | 58,200 | 1.02 |
| Tsing Yi External Cordon | I/B | 7,300 | 7,000 | 0.97 | 2,400 | 2,300 | 0.97 | 1,300 | 1,400 | 1.10 | 3,400 | 3,600 | 1.06 | 14,300 | 14,300 | 1.00 |
| | O/B | 7,700 | 7,600 | 1.00 | 2,700 | 2,600 | 0.96 | 1,300 | 1,500 | 1.13 | 3,600 | 3,600 | 0.99 | 15,200 | 15,300 | 1.00 |
| | 2-way Total | 14,900 | 14,700 | 0.98 | 5,100 | 4,900 | 0.96 | 2,600 | 2,900 | 1.12 | 7,000 | 7,200 | 1.03 | 29,500 | 29,600 | 1.00 |
| Lantau External Cordon | I/B | 2,500 | 2,000 | 0.83 | 800 | 900 | 1.11 | 300 | 300 | 1.21 | 900 | 1,100 | 1.17 | 4,500 | 4,300 | 0.97 |
| | O/B | 1,400 | 1,400 | 0.98 | 900 | 1,000 | 1.04 | 200 | 200 | 1.02 | 600 | 600 | 1.08 | 3,200 | 3,200 | 1.02 |
| | 2-way Total | 3,900 | 3,400 | 0.89 | 1,800 | 1,900 | 1.07 | 500 | 500 | 1.13 | 1,500 | 1,700 | 1.14 | 7,600 | 7,600 | 0.99 |
| Shatin External Cordon | O/B | 13,800 | 13,800 | 1.00 | 2,500 | 2,500 | 1.01 | 1,900 | 1,900 | 1.00 | 4,700 | 5,100 | 1.09 | 22,900 | 23,400 | 1.02 |
| | I/B | 13,200 | 13,900 | 1.05 | 2,500 | 2,300 | 0.90 | 1,900 | 1,700 | 0.94 | 4,200 | 4,600 | 1.10 | 21,800 | 22,500 | 1.03 |
| | 2-way Total | 27,100 | 27,700 | 1.02 | 5,000 | 4,800 | 0.96 | 3,700 | 3,600 | 0.97 | 8,900 | 9,700 | 1.10 | 44,700 | 45,900 | 1.03 |
| Ma On Shan External Cordon | O/B | 4,000 | 4,000 | 1.00 | 500 | 400 | 0.77 | 600 | 500 | 0.90 | 700 | 600 | 0.90 | 5,800 | 5,500 | 0.96 |
| | I/B | 2,300 | 2,000 | 0.88 | 600 | 400 | 0.66 | 500 | 500 | 0.90 | 600 | 500 | 0.76 | 4,100 | 3,400 | 0.83 |
| | 2-way Total | 6,300 | 6,000 | 0.96 | 1,100 | 800 | 0.71 | 1,100 | 1,000 | 0.90 | 1,300 | 1,100 | 0.83 | 9,800 | 8,900 | 0.91 |
| TKO External Cordon | O/B | 4,200 | 3,600 | 0.85 | 900 | 800 | 0.94 | 700 | 600 | 0.92 | 800 | 800 | 0.99 | 6,500 | 5,800 | 0.89 |
| | I/B | 3,000 | 2,600 | 0.85 | 1,000 | 700 | 0.66 | 600 | 600 | 1.01 | 900 | 700 | 0.83 | 5,400 | 4,500 | 0.83 |
| | 2-way Total | 7,200 | 6,100 | 0.85 | 1,900 | 1,500 | 0.79 | 1,200 | 1,200 | 0.96 | 1,700 | 1,500 | 0.91 | 12,000 | 10,300 | 0.86 |
| Screenline A-A | E/B | 8,200 | 8,400 | 1.02 | 3,800 | 2,900 | 0.77 | 1,900 | 1,700 | 0.87 | 3,000 | 3,100 | 1.04 | 16,900 | 16,100 | 0.95 |
| | W/B | 9,100 | 8,600 | 0.95 | 3,200 | 2,600 | 0.80 | 1,900 | 1,700 | 0.88 | 2,900 | 2,800 | 0.96 | 17,100 | 15,700 | 0.92 |
| | 2-way Total | 17,200 | 17,000 | 0.99 | 6,900 | 5,500 | 0.79 | 3,900 | 3,400 | 0.87 | 5,900 | 5,900 | 1.00 | 33,900 | 31,800 | 0.94 |
| Screenline C-C | N/B | 7,800 | 7,300 | 0.94 | 3,700 | 3,000 | 0.81 | 2,000 | 1,600 | 0.79 | 2,700 | 2,700 | 0.97 | 16,200 | 14,500 | 0.90 |
| | S/B | 9,500 | 10,300 | 1.09 | 3,600 | 3,600 | 0.99 | 2,300 | 2,100 | 0.92 | 3,900 | 3,800 | 0.99 | 19,200 | 19,800 | 1.03 |
| | 2-way Total | 17,200 | 17,600 | 1.02 | 7,300 | 6,600 | 0.90 | 4,300 | 3,700 | 0.86 | 6,600 | 6,500 | 0.98 | 35,400 | 34,300 | 0.97 |
| Screenline F-F | E/B | 4,600 | 4,000 | 0.86 | 2,700 | 2,400 | 0.88 | 1,200 | 900 | 0.79 | 1,100 | 700 | 0.67 | 9,700 | 8,100 | 0.84 |
| | W/B | 4,400 | 4,000 | 0.91 | 2,900 | 2,600 | 0.91 | 1,100 | 700 | 0.68 | 1,100 | 1,200 | 1.01 | 9,600 | 8,600 | 0.89 |
| | 2-way Total | 9,100 | 8,000 | 0.88 | 5,600 | 5,000 | 0.90 | 2,300 | 1,700 | 0.74 | 2,200 | 1,900 | 0.84 | 19,200 | 16,600 | 0.86 |
| Screenline G-G | E/B | 3,600 | 3,600 | 1.01 | 1,900 | 1,700 | 0.88 | 900 | 800 | 0.84 | 900 | 800 | 0.83 | 7,400 | 6,800 | 0.93 |
| | W/B | 4,500 | 4,400 | 0.97 | 2,100 | 1,800 | 0.87 | 900 | 800 | 0.86 | 1,000 | 1,100 | 1.12 | 8,500 | 8,100 | 0.95 |
| | 2-way Total | 8,000 | 8,000 | 0.99 | 4,000 | 3,500 | 0.87 | 1,800 | 1,600 | 0.85 | 1,900 | 1,900 | 0.98 | 15,800 | 14,900 | 0.94 |
| Screenline H-H | D/B | 700 | 800 | 1.20 | 300 | 200 | 0.87 | 100 | 100 | 1.08 | 100 | 100 | 0.84 | 1,200 | 1,300 | 1.09 |
| | U/B | 700 | 500 | 0.69 | 300 | 200 | 0.81 | 100 | 100 | 1.84 | 100 | 100 | 1.15 | 1,200 | 900 | 0.82 |
| | 2-way Total | 1,400 | 1,300 | 0.94 | 500 | 500 | 0.84 | 200 | 300 | 1.40 | 200 | 200 | 0.99 | 2,300 | 2,200 | 0.96 |
| Screenline I-I | N/B | 1,400 | 1,400 | 1.01 | 500 | 500 | 1.00 | 400 | 300 | 0.84 | 600 | 500 | 0.98 | 2,900 | 2,800 | 0.98 |
| | S/B | 1,200 | 1,100 | 0.90 | 500 | 400 | 0.78 | 400 | 300 | 0.84 | 600 | 600 | 0.97 | 2,700 | 2,400 | 0.89 |
| | 2-way Total | 2,600 | 2,500 | 0.96 | 1,100 | 1,000 | 0.89 | 700 | 600 | 0.84 | 1,200 | 1,100 | 0.97 | 5,500 | 5,200 | 0.94 |
| Screenline K-K | E/B | 7,000 | 6,900 | 0.98 | 2,400 | 2,300 | 0.94 | 1,600 | 1,600 | 0.95 | 2,500 | 2,500 | 1.00 | 13,600 | 13,200 | 0.97 |
| | W/B | 6,900 | 6,300 | 0.92 | 2,500 | 2,300 | 0.93 | 1,600 | 1,500 | 0.95 | 2,400 | 2,700 | 1.14 | 13,400 | 12,900 | 0.96 |
| | 2-way Total | 13,900 | 13,200 | 0.95 | 4,900 | 4,600 | 0.93 | 3,300 | 3,100 | 0.95 | 4,900 | 5,200 | 1.07 | 27,000 | 26,100 | 0.97 |
| Screenline R-R | N/B | 5,800 | 5,400 | 0.95 | 1,100 | 1,100 | 1.02 | 1,000 | 900 | 0.88 | 3,400 | 3,200 | 0.95 | 11,200 | 10,600 | 0.95 |
| | S/B | 11,500 | 10,800 | 0.94 | 1,300 | 1,200 | 0.92 | 1,300 | 1,400 | 1.07 | 4,300 | 4,400 | 1.02 | 18,400 | 17,800 | 0.97 |
| | 2-way Total | 17,200 | 16,200 | 0.94 | 2,400 | 2,300 | 0.96 | 2,300 | 2,300 | 0.99 | 7,600 | 7,600 | 0.99 | 29,600 | 28,400 | 0.96 |
| Screenline S-S | E/B | 8,300 | 8,200 | 0.98 | 1,200 | 1,300 | 1.12 | 1,200 | 1,400 | 1.15 | 4,000 | 4,600 | 1.13 | 14,800 | 15,500 | 1.05 |
| | W/B | 5,000 | 5,100 | 1.03 | 1,000 | 1,100 | 1.13 | 1,000 | 900 | 0.89 | 3,100 | 3,600 | 1.15 | 10,000 | 10,700 | 1.06 |
| | 2-way Total | 13,300 | 13,300 | 1.00 | 2,100 | 2,400 | 1.12 | 2,200 | 2,300 | 1.03 | 7,200 | 8,200 | 1.14 | 24,800 | 26,100 | 1.05 |
| Screenline T-T | N/B | 5,300 | 4,900 | 0.92 | 900 | 900 | 1.05 | 700 | 600 | 0.93 | 3,100 | 3,100 | 1.00 | 10,000 | 9,500 | 0.95 |
| | S/B | 5,700 | 5,900 | 1.03 | 800 | 800 | 1.04 | 700 | 700 | 1.02 | 3,000 | 3,100 | 1.06 | 10,100 | 10,500 | 1.04 |
| | 2-way Total | 11,000 | 10,700 | 0.98 | 1,600 | 1,700 | 1.04 | 1,400 | 1,300 | 0.97 | 6,000 | 6,200 | 1.03 | 20,100 | 20,000 | 1.00 |
| Screenline Y-Y | E/B | 2,400 | 2,200 | 0.89 | 600 | 500 | 0.90 | 400 | 300 | 0.90 | 1,800 | 1,800 | 0.99 | 5,200 | 4,800 | 0.92 |
| | W/B | 2,900 | 3,300 | 1.12 | 500 | 500 | 1.04 | 300 | 300 | 0.91 | 1,900 | 2,000 | 1.02 | 5,600 | 6,000 | 1.07 |
| | 2-way Total | 5,300 | 5,400 | 1.01 | 1,000 | 1,000 | 0.97 | 700 | 600 | 0.91 | 3,700 | 3,800 | 1.00 | 10,800 | 10,800 | 1.00 |
| Cross Harbour Screenline | N/B | 4,400 | 4,300 | 0.98 | 1,100 | 1,400 | 1.27 | 800 | 700 | 0.88 | 1,100 | 1,200 | 1.11 | 7,400 | 7,600 | 1.03 |
| | S/B | 6,600 | 6,200 | 0.94 | 1,500 | 1,400 | 0.91 | 1,000 | 1,000 | 0.94 | 2,200 | 2,300 | 1.04 | 11,300 | 10,900 | 0.96 |
| | 2-way Total | 11,000 | 10,600 | 0.96 | 2,600 | 2,800 | 1.06 | 1,800 | 1,600 | 0.92 | 3,300 | 3,500 | 1.06 | 18,700 | 18,500 | 0.99 |
| Total | NB/EB/IB/DB | 110,400 | 107,600 | 0.97 | 38,300 | 35,300 | 0.92 | 21,600 | 20,100 | 0.93 | 42,600 | 43,100 | 1.01 | 212,900 | 206,100 | 0.97 |
| | SB/WB/OB/UB | 129,300 | 125,800 | 0.97 | 38,600 | 36,100 | 0.94 | 22,500 | 21,600 | 0.96 | 46,600 | 48,600 | 1.04 | 237,000 | 232,100 | 0.98 |
| | 2-way Total | 239,600 | 233,500 | 0.97 | 77,000 | 71,400 | 0.93 | 44,100 | 41,700 | 0.94 | 89,200 | 91,700 | 1.03 | 449,900 | 438,200 | 0.97 |

Validation Result at Screenlines (PM Peak)

| Screenline | Bound | Car | | | Taxi | | | SPB + PT | | | GV | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs | Obs | Mod | Mod/ Obs |
| Hong Kong External Cordon | N/B | 3,300 | 3,100 | 0.95 | 1,000 | 800 | 0.88 | 500 | 500 | 1.02 | 400 | 300 | 0.71 | 5,100 | 4,800 | 0.93 |
| | S/B | 3,000 | 3,000 | 1.00 | 1,000 | 900 | 0.90 | 400 | 500 | 1.16 | 300 | 200 | 0.86 | 4,700 | 4,600 | 0.99 |
| | 2-way Total | 6,300 | 6,100 | 0.97 | 2,000 | 1,700 | 0.89 | 900 | 1,000 | 1.09 | 600 | 500 | 0.77 | 9,800 | 9,400 | 0.96 |
| Hong Kong Internal Cordon | I/B | 9,300 | 8,700 | 0.94 | 4,600 | 4,400 | 0.95 | 1,200 | 1,100 | 0.90 | 800 | 800 | 1.03 | 15,900 | 15,000 | 0.94 |
| | O/B | 10,400 | 10,000 | 0.96 | 4,800 | 4,600 | 0.97 | 1,200 | 1,100 | 0.92 | 700 | 800 | 1.09 | 17,100 | 16,500 | 0.97 |
| | 2-way Total | 19,700 | 18,700 | 0.95 | 9,400 | 9,000 | 0.96 | 2,400 | 2,200 | 0.91 | 1,500 | 1,600 | 1.06 | 33,000 | 31,500 | 0.95 |
| Kowloon External Cordon | N/B | 18,700 | 17,500 | 0.93 | 3,600 | 3,400 | 0.95 | 2,000 | 2,200 | 1.08 | 4,900 | 4,700 | 0.97 | 29,200 | 27,800 | 0.95 |
| | S/B | 15,400 | 15,200 | 0.99 | 3,600 | 3,500 | 0.96 | 1,800 | 1,800 | 0.98 | 3,200 | 3,500 | 1.09 | 24,000 | 24,100 | 1.00 |
| | 2-way Total | 34,100 | 32,700 | 0.96 | 7,200 | 6,800 | 0.95 | 3,900 | 4,000 | 1.03 | 8,100 | 8,300 | 1.02 | 53,200 | 51,800 | 0.97 |
| Tsing Yi External Cordon | I/B | 8,300 | 8,300 | 1.00 | 2,000 | 2,200 | 1.10 | 1,200 | 1,300 | 1.09 | 2,400 | 2,300 | 0.94 | 13,900 | 14,100 | 1.01 |
| | O/B | 8,200 | 8,300 | 1.01 | 2,200 | 2,300 | 1.06 | 1,200 | 1,300 | 1.14 | 2,300 | 2,000 | 0.88 | 13,900 | 13,900 | 1.01 |
| | 2-way Total | 16,500 | 16,600 | 1.01 | 4,200 | 4,500 | 1.08 | 2,400 | 2,700 | 1.11 | 4,700 | 4,300 | 0.91 | 27,700 | 28,000 | 1.01 |
| Lantau External Cordon | I/B | 1,500 | 1,300 | 0.84 | 700 | 700 | 1.00 | 200 | 200 | 1.27 | 500 | 500 | 1.03 | 2,900 | 2,700 | 0.94 |
| | O/B | 2,700 | 2,500 | 0.93 | 800 | 700 | 0.91 | 300 | 400 | 1.07 | 700 | 600 | 0.90 | 4,500 | 4,100 | 0.93 |
| | 2-way Total | 4,200 | 3,800 | 0.89 | 1,500 | 1,400 | 0.95 | 500 | 600 | 1.14 | 1,200 | 1,100 | 0.95 | 7,400 | 6,900 | 0.93 |
| Shatin External Cordon | O/B | 13,700 | 14,200 | 1.04 | 2,100 | 2,100 | 1.01 | 1,400 | 1,400 | 1.01 | 2,800 | 3,000 | 1.08 | 19,900 | 20,800 | 1.04 |
| | I/B | 15,300 | 14,500 | 0.95 | 2,000 | 2,000 | 1.01 | 1,500 | 1,300 | 0.86 | 3,100 | 3,200 | 1.05 | 21,800 | 21,000 | 0.96 |
| | 2-way Total | 28,900 | 28,700 | 0.99 | 4,100 | 4,100 | 1.01 | 2,900 | 2,700 | 0.94 | 5,900 | 6,300 | 1.07 | 41,700 | 41,800 | 1.00 |
| Ma On Shan External Cordon | O/B | 2,600 | 2,200 | 0.84 | 500 | 400 | 0.84 | 400 | 300 | 0.73 | 400 | 400 | 0.88 | 4,000 | 3,300 | 0.83 |
| | I/B | 3,200 | 3,300 | 1.04 | 500 | 500 | 1.05 | 400 | 400 | 0.99 | 600 | 600 | 0.93 | 4,700 | 4,800 | 1.02 |
| | 2-way Total | 5,800 | 5,500 | 0.95 | 1,000 | 900 | 0.94 | 900 | 700 | 0.86 | 1,000 | 900 | 0.91 | 8,700 | 8,100 | 0.93 |
| TKO External Cordon | O/B | 3,600 | 3,300 | 0.91 | 800 | 700 | 0.91 | 500 | 400 | 0.85 | 600 | 600 | 0.95 | 5,500 | 5,000 | 0.91 |
| | I/B | 4,000 | 3,400 | 0.86 | 1,000 | 800 | 0.86 | 500 | 500 | 0.89 | 800 | 700 | 0.89 | 6,300 | 5,400 | 0.86 |
| | 2-way Total | 7,600 | 6,700 | 0.88 | 1,800 | 1,600 | 0.88 | 1,000 | 900 | 0.87 | 1,400 | 1,300 | 0.92 | 11,800 | 10,400 | 0.88 |
| Screenline A-A | E/B | 10,700 | 10,500 | 0.98 | 3,400 | 3,100 | 0.92 | 1,300 | 1,200 | 0.91 | 2,100 | 2,000 | 0.95 | 17,500 | 16,900 | 0.96 |
| | W/B | 10,800 | 10,000 | 0.93 | 3,400 | 2,900 | 0.85 | 1,300 | 1,200 | 0.95 | 1,700 | 1,800 | 1.05 | 17,200 | 16,000 | 0.93 |
| | 2-way Total | 21,500 | 20,500 | 0.95 | 6,800 | 6,000 | 0.89 | 2,600 | 2,400 | 0.93 | 3,800 | 3,800 | 1.00 | 34,700 | 32,800 | 0.94 |
| Screenline C-C | N/B | 11,600 | 11,300 | 0.97 | 3,500 | 3,100 | 0.87 | 1,500 | 1,500 | 1.03 | 1,900 | 2,500 | 1.34 | 18,500 | 18,400 | 0.99 |
| | S/B | 11,600 | 11,400 | 0.99 | 4,100 | 3,900 | 0.95 | 1,300 | 1,200 | 0.93 | 1,700 | 2,000 | 1.15 | 18,700 | 18,500 | 0.99 |
| | 2-way Total | 23,200 | 22,700 | 0.98 | 7,600 | 6,900 | 0.91 | 2,800 | 2,800 | 0.98 | 3,600 | 4,500 | 1.25 | 37,200 | 36,900 | 0.99 |
| Screenline F-F | E/B | 5,700 | 4,900 | 0.85 | 2,500 | 2,200 | 0.89 | 600 | 500 | 0.81 | 400 | 500 | 1.10 | 9,300 | 8,000 | 0.87 |
| | W/B | 5,300 | 5,100 | 0.97 | 2,500 | 2,400 | 0.93 | 800 | 500 | 0.70 | 500 | 400 | 0.84 | 9,100 | 8,500 | 0.93 |
| | 2-way Total | 11,000 | 10,000 | 0.91 | 5,000 | 4,600 | 0.91 | 1,400 | 1,000 | 0.75 | 900 | 900 | 0.96 | 18,400 | 16,500 | 0.90 |
| Screenline G-G | E/B | 4,300 | 4,700 | 1.09 | 1,600 | 1,600 | 1.04 | 500 | 500 | 1.03 | 500 | 500 | 0.98 | 6,900 | 7,400 | 1.06 |
| | W/B | 4,600 | 4,300 | 0.92 | 1,900 | 1,800 | 0.96 | 600 | 400 | 0.75 | 600 | 500 | 0.92 | 7,700 | 7,100 | 0.92 |
| | 2-way Total | 9,000 | 9,000 | 1.00 | 3,500 | 3,500 | 0.99 | 1,100 | 900 | 0.88 | 1,100 | 1,000 | 0.95 | 14,600 | 14,400 | 0.99 |
| Screenline H-H | D/B | 900 | 600 | 0.72 | 200 | 200 | 0.90 | 100 | 100 | 1.22 | 50 | 50 | 1.23 | 1,200 | 900 | 0.79 |
| | U/B | 900 | 900 | 1.03 | 200 | 200 | 1.27 | 50 | 100 | 1.22 | 50 | 50 | 0.72 | 1,100 | 1,200 | 1.07 |
| | 2-way Total | 1,700 | 1,500 | 0.87 | 400 | 400 | 1.07 | 100 | 100 | 1.22 | 100 | 100 | 1.00 | 2,300 | 2,100 | 0.93 |
| Screenline I-I | N/B | 1,500 | 1,400 | 0.93 | 500 | 400 | 0.81 | 200 | 200 | 0.76 | 300 | 300 | 1.11 | 2,500 | 2,300 | 0.91 |
| | S/B | 1,200 | 1,300 | 1.04 | 500 | 300 | 0.71 | 200 | 200 | 0.76 | 400 | 300 | 0.83 | 2,300 | 2,100 | 0.91 |
| | 2-way Total | 2,800 | 2,700 | 0.98 | 900 | 700 | 0.76 | 500 | 300 | 0.76 | 600 | 600 | 0.94 | 4,800 | 4,300 | 0.91 |
| Screenline K-K | E/B | 7,500 | 7,300 | 0.97 | 2,100 | 1,600 | 0.76 | 1,200 | 1,100 | 0.88 | 1,700 | 1,700 | 1.04 | 12,500 | 11,700 | 0.94 |
| | W/B | 8,100 | 8,200 | 1.01 | 2,200 | 1,600 | 0.74 | 1,300 | 1,200 | 0.88 | 1,700 | 1,700 | 0.99 | 13,300 | 12,700 | 0.95 |
| | 2-way Total | 15,600 | 15,500 | 0.99 | 4,300 | 3,300 | 0.75 | 2,600 | 2,200 | 0.88 | 3,400 | 3,400 | 1.01 | 25,800 | 24,400 | 0.94 |
| Screenline R-R | N/B | 10,500 | 9,900 | 0.95 | 1,000 | 1,100 | 1.10 | 1,200 | 1,300 | 1.05 | 3,000 | 3,300 | 1.09 | 15,800 | 15,600 | 0.99 |
| | S/B | 8,400 | 7,700 | 0.91 | 1,100 | 1,100 | 1.05 | 1,000 | 800 | 0.77 | 2,000 | 2,000 | 1.00 | 12,400 | 11,500 | 0.93 |
| | 2-way Total | 18,900 | 17,600 | 0.93 | 2,100 | 2,200 | 1.08 | 2,200 | 2,000 | 0.93 | 5,100 | 5,300 | 1.05 | 28,200 | 27,200 | 0.96 |
| Screenline S-S | E/B | 6,900 | 6,600 | 0.95 | 1,000 | 1,300 | 1.24 | 900 | 800 | 0.90 | 1,900 | 2,100 | 1.10 | 10,800 | 10,800 | 1.00 |
| | W/B | 8,700 | 8,100 | 0.93 | 900 | 900 | 0.98 | 1,200 | 1,300 | 1.15 | 2,600 | 3,300 | 1.23 | 13,400 | 13,600 | 1.01 |
| | 2-way Total | 15,600 | 14,600 | 0.94 | 2,000 | 2,200 | 1.11 | 2,100 | 2,200 | 1.04 | 4,600 | 5,400 | 1.18 | 24,200 | 24,400 | 1.01 |
| Screenline T-T | N/B | 6,600 | 6,300 | 0.95 | 800 | 900 | 1.05 | 500 | 600 | 1.04 | 2,200 | 2,200 | 0.96 | 10,200 | 9,800 | 0.96 |
| | S/B | 6,500 | 6,000 | 0.92 | 700 | 700 | 1.00 | 500 | 600 | 1.13 | 1,900 | 2,000 | 1.07 | 9,600 | 9,300 | 0.97 |
| | 2-way Total | 13,100 | 12,200 | 0.93 | 1,500 | 1,600 | 1.03 | 1,000 | 1,100 | 1.08 | 4,100 | 4,200 | 1.01 | 19,800 | 19,100 | 0.97 |
| Screenline Y-Y | E/B | 3,600 | 3,400 | 0.96 | 500 | 500 | 0.90 | 300 | 300 | 0.93 | 1,500 | 1,500 | 1.04 | 5,900 | 5,700 | 0.97 |
| | W/B | 3,200 | 3,000 | 0.95 | 600 | 500 | 0.86 | 300 | 200 | 0.88 | 1,100 | 1,200 | 1.09 | 5,100 | 4,900 | 0.97 |
| | 2-way Total | 6,800 | 6,500 | 0.96 | 1,100 | 1,000 | 0.88 | 600 | 500 | 0.91 | 2,500 | 2,700 | 1.06 | 11,000 | 10,600 | 0.97 |
| Cross Harbour Screenline | N/B | 7,100 | 6,900 | 0.97 | 1,200 | 1,200 | 1.04 | 800 | 800 | 1.04 | 1,100 | 1,300 | 1.14 | 10,100 | 10,100 | 1.00 |
| | S/B | 5,700 | 5,500 | 0.98 | 1,400 | 1,300 | 0.98 | 600 | 500 | 0.81 | 700 | 800 | 1.19 | 8,300 | 8,100 | 0.98 |
| | 2-way Total | 12,800 | 12,400 | 0.97 | 2,500 | 2,600 | 1.01 | 1,300 | 1,200 | 0.94 | 1,800 | 2,100 | 1.16 | 18,400 | 18,300 | 0.99 |
| Total | NB/EB/IB/DB | 140,600 | 133,900 | 0.95 | 33,500 | 32,000 | 0.95 | 16,700 | 16,300 | 0.98 | 30,000 | 30,900 | 1.03 | 220,900 | 213,200 | 0.97 |
| | SB/WB/OB/UB | 134,300 | 130,100 | 0.97 | 35,200 | 33,100 | 0.94 | 16,400 | 15,500 | 0.94 | 25,900 | 27,200 | 1.05 | 211,800 | 205,800 | 0.97 |
| | 2-way Total | 274,900 | 264,000 | 0.96 | 68,700 | 65,000 | 0.95 | 33,100 | 31,800 | 0.96 | 55,900 | 58,100 | 1.04 | 432,700 | 418,900 | 0.97 |

Passengers Screenline Validation Summary

| Screenline | Bound | Daily Total Rail Passenger | | | Daily Total Bus Passenger | | | Daily Total PLB Passenger | | | Daily Total PT Passenger | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Obs | Mod | Mod/Obs | Obs | Mod | Mod/Obs | Obs | Mod | Mod/Obs | Obs | Mod | Mod/Obs |
| Hong Kong External Cordon | N/B | 74,400 | 82,400 | 1.11 | 89,600 | 88,300 | 0.99 | 29,400 | 33,000 | 1.12 | 193,400 | 203,600 | 1.05 |
| | S/B | 70,800 | 79,400 | 1.12 | 75,300 | 79,600 | 1.06 | 35,200 | 29,900 | 0.85 | 181,400 | 188,900 | 1.04 |
| | **2-way Total** | **145,200** | **161,800** | **1.11** | **164,900** | **167,800** | **1.02** | **64,600** | **62,900** | **0.97** | **374,700** | **392,600** | **1.05** |
| Hong Kong Internal Cordon | I/B | 1,069,000 | 1,086,500 | 1.02 | 249,300 | 237,900 | 0.95 | 23,000 | 16,400 | 0.71 | 1,341,300 | 1,340,800 | 1.00 |
| | O/B | 1,080,100 | 1,065,400 | 0.99 | 250,400 | 237,300 | 0.95 | 19,200 | 16,100 | 0.84 | 1,349,700 | 1,318,900 | 0.98 |
| | **2-way Total** | **2,149,100** | **2,151,900** | **1.00** | **499,700** | **475,200** | **0.95** | **42,200** | **32,500** | **0.77** | **2,691,000** | **2,659,700** | **0.99** |
| Kowloon External Cordon | N/B | 1,025,100 | 955,100 | 0.93 | 492,200 | 381,200 | 0.77 | 55,100 | 49,600 | 0.90 | 1,572,400 | 1,386,000 | 0.88 |
| | S/B | 1,053,700 | 1,002,000 | 0.95 | 446,100 | 416,800 | 0.93 | 50,400 | 55,200 | 1.10 | 1,550,200 | 1,474,000 | 0.95 |
| | **2-way Total** | **2,078,900** | **1,957,100** | **0.94** | **938,300** | **798,000** | **0.85** | **105,500** | **104,900** | **0.99** | **3,122,700** | **2,859,900** | **0.92** |
| Tsing Yi External Cordon | I/B | 214,200 | 219,200 | 1.02 | 348,300 | 337,100 | 0.97 | 20,800 | 23,900 | 1.15 | 583,200 | 580,100 | 0.99 |
| | O/B | 214,000 | 223,900 | 1.05 | 336,700 | 345,900 | 1.03 | 31,200 | 23,500 | 0.75 | 581,900 | 593,300 | 1.02 |
| | **2-way Total** | **428,100** | **443,100** | **1.03** | **685,000** | **683,000** | **1.00** | **52,000** | **47,300** | **0.91** | **1,165,100** | **1,173,500** | **1.01** |
| Lantau External Cordon | I/B | 89,100 | 93,600 | 1.05 | 81,300 | 80,600 | 0.99 | 0 | 0 | 1.00 | 170,400 | 174,200 | 1.02 |
| | O/B | 90,700 | 97,700 | 1.08 | 72,300 | 80,700 | 1.12 | 0 | 0 | 1.00 | 163,100 | 178,400 | 1.09 |
| | **2-way Total** | **179,800** | **191,300** | **1.06** | **153,600** | **161,300** | **1.05** | **0** | **0** | **1.00** | **333,400** | **352,600** | **1.06** |
| Shatin External Cordon | O/B | 644,300 | 640,000 | 0.99 | 356,400 | 319,200 | 0.90 | 44,000 | 36,200 | 0.82 | 1,044,700 | 995,400 | 0.95 |
| | I/B | 641,300 | 626,200 | 0.98 | 371,400 | 296,400 | 0.80 | 37,600 | 28,600 | 0.76 | 1,050,200 | 951,200 | 0.91 |
| | **2-way Total** | **1,285,500** | **1,266,200** | **0.98** | **727,800** | **615,600** | **0.85** | **81,500** | **64,800** | **0.79** | **2,094,900** | **1,946,600** | **0.93** |
| Ma On Shan External Cordon | O/B | 67,700 | 64,900 | 0.96 | 66,800 | 75,700 | 1.13 | 20,800 | 21,200 | 1.02 | 155,300 | 161,900 | 1.04 |
| | I/B | 64,700 | 66,600 | 1.03 | 70,500 | 90,900 | 1.29 | 27,000 | 29,600 | 1.10 | 162,300 | 187,100 | 1.15 |
| | **2-way Total** | **132,400** | **131,500** | **0.99** | **137,400** | **166,600** | **1.21** | **47,800** | **50,900** | **1.06** | **317,600** | **349,000** | **1.10** |
| TKO External Cordon | O/B | 217,400 | 203,400 | 0.94 | 50,700 | 58,200 | 1.15 | 29,800 | 26,000 | 0.87 | 298,000 | 287,600 | 0.97 |
| | I/B | 210,000 | 189,900 | 0.90 | 61,200 | 54,600 | 0.89 | 30,400 | 27,400 | 0.90 | 301,600 | 271,900 | 0.90 |
| | **2-way Total** | **427,400** | **393,300** | **0.92** | **111,900** | **112,800** | **1.01** | **60,200** | **53,400** | **0.89** | **599,500** | **559,400** | **0.93** |
| Screenline A-A | E/B | 711,800 | 732,600 | 1.03 | 309,800 | 305,700 | 0.99 | 67,600 | 66,800 | 0.99 | 1,089,100 | 1,105,100 | 1.01 |
| | W/B | 740,200 | 755,700 | 1.02 | 274,700 | 286,200 | 1.04 | 59,500 | 61,100 | 1.03 | 1,074,400 | 1,103,000 | 1.03 |
| | **2-way Total** | **1,452,000** | **1,488,300** | **1.03** | **584,500** | **591,900** | **1.01** | **127,000** | **127,900** | **1.01** | **2,163,500** | **2,208,100** | **1.02** |
| Screenline C-C | N/B | 912,600 | 963,000 | 1.06 | 348,200 | 335,200 | 0.96 | 44,000 | 46,200 | 1.05 | 1,304,800 | 1,344,400 | 1.03 |
| | S/B | 933,800 | 1,003,900 | 1.08 | 317,000 | 347,700 | 1.10 | 45,500 | 47,300 | 1.04 | 1,296,300 | 1,398,900 | 1.08 |
| | **2-way Total** | **1,846,500** | **1,966,900** | **1.07** | **665,100** | **682,900** | **1.03** | **89,500** | **93,500** | **1.04** | **2,601,100** | **2,743,300** | **1.05** |
| Screenline F-F | E/B | 497,800 | 494,000 | 0.99 | 122,800 | 153,300 | 1.25 | 5,500 | 7,100 | 1.29 | 626,100 | 654,400 | 1.05 |
| | W/B | 486,500 | 535,900 | 1.10 | 175,300 | 165,000 | 0.94 | 10,800 | 8,400 | 0.77 | 672,500 | 709,300 | 1.05 |
| | **2-way Total** | **984,300** | **1,029,900** | **1.05** | **298,100** | **318,300** | **1.07** | **16,300** | **15,500** | **0.95** | **1,298,600** | **1,363,700** | **1.05** |
| Screenline G-G | E/B | 278,600 | 262,900 | 0.94 | 157,900 | 139,300 | 0.88 | 4,200 | 4,200 | 1.02 | 440,600 | 406,400 | 0.92 |
| | W/B | 284,700 | 277,700 | 0.98 | 173,700 | 147,200 | 0.85 | 5,700 | 4,200 | 0.74 | 464,100 | 429,100 | 0.92 |
| | **2-way Total** | **563,300** | **540,600** | **0.96** | **331,600** | **286,500** | **0.86** | **9,800** | **8,500** | **0.86** | **904,700** | **835,500** | **0.92** |
| Screenline H-H | D/B | 0 | 0 | 1.00 | 2,600 | 2,700 | 1.01 | 1,700 | 1,100 | 0.66 | 4,300 | 3,800 | 0.88 |
| | U/B | 0 | 0 | 1.00 | 3,200 | 3,400 | 1.06 | 1,600 | 1,500 | 0.94 | 4,800 | 4,900 | 1.02 |
| | **2-way Total** | **0** | **0** | **1.00** | **5,800** | **6,000** | **1.04** | **3,200** | **2,600** | **0.80** | **9,100** | **8,600** | **0.95** |
| Screenline I-I | N/B | 65,200 | 65,700 | 1.01 | 57,500 | 69,900 | 1.22 | 7,400 | 7,300 | 0.98 | 130,100 | 143,000 | 1.10 |
| | S/B | 61,700 | 66,400 | 1.08 | 69,500 | 61,900 | 0.89 | 7,200 | 6,700 | 0.93 | 138,500 | 135,000 | 0.97 |
| | **2-way Total** | **126,900** | **132,100** | **1.04** | **127,000** | **131,800** | **1.04** | **14,700** | **14,000** | **0.96** | **268,600** | **277,900** | **1.03** |
| Screenline K-K | E/B | 243,700 | 257,600 | 1.06 | 293,100 | 268,900 | 0.92 | 78,900 | 73,400 | 0.93 | 615,700 | 599,800 | 0.97 |
| | W/B | 243,300 | 252,200 | 1.04 | 276,100 | 271,800 | 0.98 | 63,900 | 69,500 | 1.09 | 583,300 | 593,500 | 1.02 |
| | **2-way Total** | **487,000** | **509,800** | **1.05** | **569,200** | **540,600** | **0.95** | **142,800** | **142,900** | **1.00** | **1,199,000** | **1,193,300** | **1.00** |
| Screenline R-R | N/B | 370,100 | 377,800 | 1.02 | 326,600 | 329,000 | 1.01 | 20,600 | 18,200 | 0.88 | 717,300 | 725,000 | 1.01 |
| | S/B | 385,500 | 416,300 | 1.08 | 333,700 | 335,300 | 1.01 | 21,300 | 22,100 | 1.04 | 740,400 | 773,800 | 1.05 |
| | **2-way Total** | **755,600** | **794,100** | **1.05** | **660,300** | **664,300** | **1.01** | **41,900** | **40,300** | **0.96** | **1,457,800** | **1,498,800** | **1.03** |
| Screenline S-S | E/B | 165,400 | 193,100 | 1.17 | 297,600 | 293,300 | 0.99 | 37,700 | 30,700 | 0.81 | 500,700 | 517,100 | 1.03 |
| | W/B | 156,700 | 155,100 | 0.99 | 300,800 | 289,200 | 0.96 | 33,100 | 31,000 | 0.94 | 490,700 | 475,300 | 0.97 |
| | **2-way Total** | **322,100** | **348,200** | **1.08** | **598,400** | **582,500** | **0.97** | **70,800** | **61,700** | **0.87** | **991,400** | **992,400** | **1.00** |
| Screenline T-T | N/B | 183,900 | 181,800 | 0.99 | 77,900 | 74,400 | 0.96 | 32,800 | 30,100 | 0.92 | 294,600 | 286,400 | 0.97 |
| | S/B | 185,500 | 178,000 | 0.96 | 76,000 | 94,600 | 1.25 | 28,000 | 34,000 | 1.21 | 289,400 | 306,600 | 1.06 |
| | **2-way Total** | **369,300** | **359,800** | **0.97** | **153,800** | **169,000** | **1.10** | **60,800** | **64,100** | **1.05** | **584,000** | **593,000** | **1.02** |
| Screenline Y-Y | E/B | 94,300 | 90,900 | 0.96 | 24,600 | 24,300 | 0.99 | 12,900 | 9,600 | 0.74 | 131,800 | 124,800 | 0.95 |
| | W/B | 89,500 | 75,500 | 0.84 | 26,800 | 25,500 | 0.95 | 12,100 | 8,900 | 0.74 | 128,500 | 109,900 | 0.86 |
| | **2-way Total** | **183,800** | **166,400** | **0.91** | **51,500** | **49,800** | **0.97** | **25,000** | **18,500** | **0.74** | **260,300** | **234,700** | **0.90** |
| Cross Harbour Screenline | N/B | 722,800 | 708,400 | 0.98 | 224,500 | 183,900 | 0.82 | 6,000 | 3,800 | 0.63 | 953,300 | 896,100 | 0.94 |
| | S/B | 725,100 | 752,200 | 1.04 | 231,700 | 189,200 | 0.82 | 4,200 | 3,500 | 0.84 | 960,900 | 945,000 | 0.98 |
| | **2-way Total** | **1,447,800** | **1,460,600** | **1.01** | **456,100** | **373,200** | **0.82** | **10,200** | **7,300** | **0.72** | **1,914,200** | **1,841,100** | **0.96** |
| Total | NB/EB/IB/DB | 7,633,900 | 7,647,200 | 1.00 | 4,006,800 | 3,747,000 | 0.94 | 542,600 | 507,000 | 0.93 | 12,183,200 | 11,901,100 | 0.98 |
| | SB/WB/OB/UB | 7,731,300 | 7,845,800 | 1.01 | 3,913,200 | 3,830,300 | 0.98 | 523,500 | 506,400 | 0.97 | 12,168,000 | 12,182,500 | 1.00 |
| | **2-way Total** | **15,365,200** | **15,493,000** | **1.01** | **7,920,000** | **7,577,300** | **0.96** | **1,066,100** | **1,013,400** | **0.95** | **24,351,200** | **24,083,700** | **0.99** |

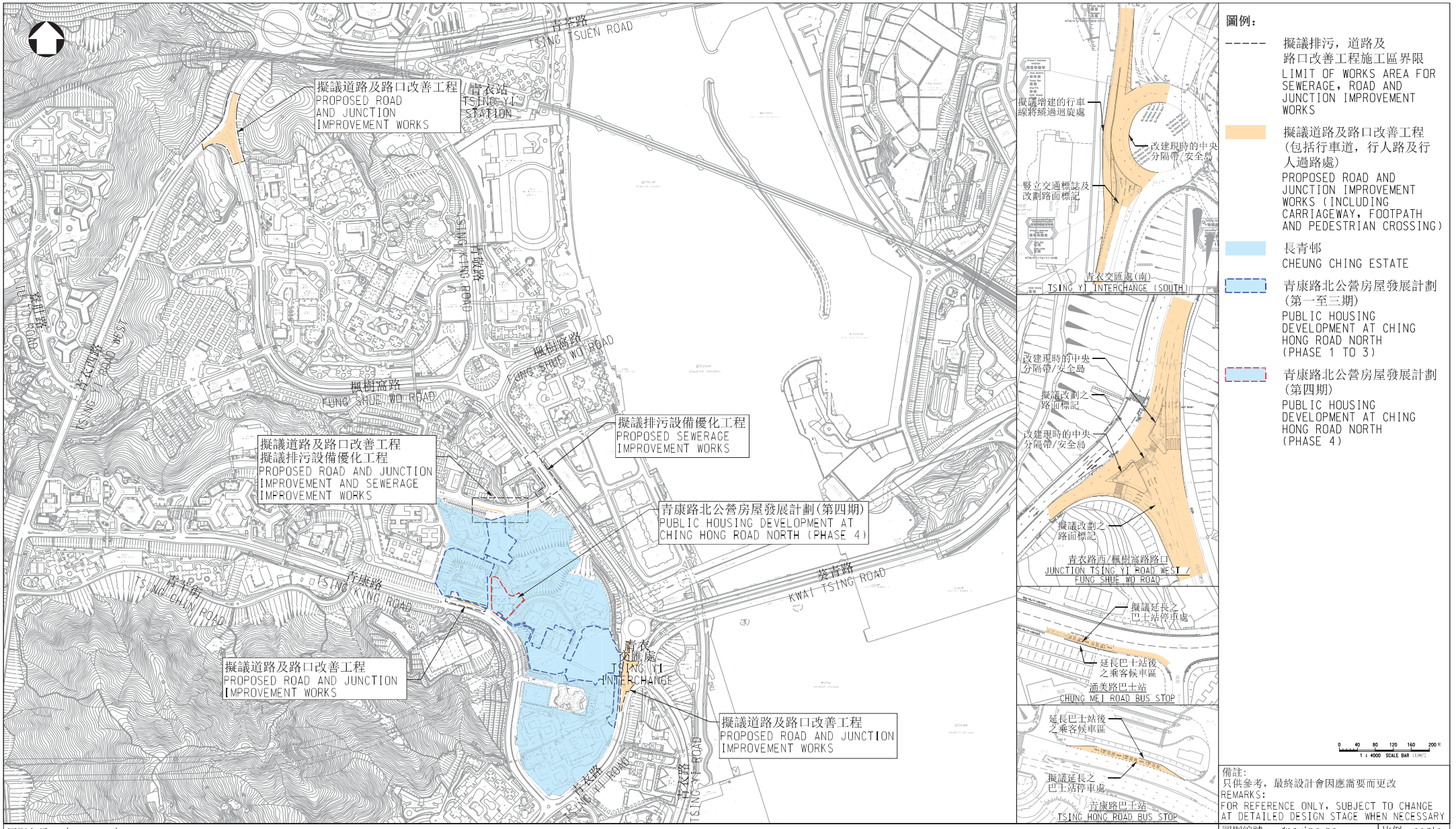
**Appendix C - Local Area Traffic Model Validation Result**

| | | AM | | | | PM | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | **OBS** | **MOD** | **MOD/OBS** | **GEH** | **OBS** | **MOD** | **MOD/OBS** | **GEH** |
| ***J1 - North West Tsing Yi Interchange (NWTYI) Roundabout** | | | | | | | | | |
| * Adminstraion Building | SB | 5 | 5 | 1.00 | 0 | 5 | 5 | 1.00 | 0 |
| * Cheung Tsing Highway | NB | 570 | 570 | 1.00 | 0 | 505 | 490 | 0.97 | 1 |
| **ENTRY ARM - TOTAL** | | **575** | **575** | **1.00** | **0** | **510** | **495** | **0.97** | **1** |
| * Adminstraion Building | NB | 370 | 365 | 0.99 | 0 | 330 | 315 | 0.95 | 1 |
| * Adminstraion Building | EB | 205 | 210 | 1.02 | 0 | 180 | 180 | 1.00 | 0 |
| **EXIT ARM - TOTAL** | | **575** | **575** | **1.00** | **0** | **510** | **495** | **0.97** | **1** |
| | | | | | | | | | |
| *** J2 - NWTYI / unnamed access road near Lantau Link Visitors Centre** | | | | | | | | | |
| * North West Tsing Yi Interchange | NB | 1105 | 1120 | 1.01 | 0 | 1195 | 1200 | 1.00 | 0 |
| * Unnamed access road near Lantau Link Visitors Centre | EB | 125 | 125 | 1.00 | 0 | 140 | 140 | 1.00 | 0 |
| **ENTRY ARM - TOTAL** | | **1230** | **1245** | **1.01** | **0** | **1335** | **1340** | **1.00** | **0** |
| * North West Tsing Yi Interchange | NB | 1035 | 1055 | 1.02 | 1 | 1150 | 1160 | 1.01 | 0 |
| * Unnamed access road near Lantau Link Visitors Centre | WB | 195 | 190 | 0.97 | 0 | 190 | 180 | 0.95 | 1 |
| **EXIT ARM - TOTAL** | | **1230** | **1245** | **1.01** | **0** | **1340** | **1340** | **1.00** | **0** |
| | | | | | | | | | |
| *** J3 - Slip Road from Tsing Yi North Coastal Road / Tam Kon Shan Road** | | | | | | | | | |
| * Tsing Yi North Coastal Road | NB | 220 | 220 | 1.00 | 0 | 195 | 190 | 0.97 | 0 |
| * Tam Kon Shan Road | EB | 155 | 155 | 1.00 | 0 | 170 | 165 | 0.97 | 0 |
| * Shipyard | SB | 5 | 5 | 1.00 | 0 | 15 | 15 | 1.00 | 0 |
| * Tam Kon Shan Road | WB | 105 | 105 | 1.00 | 0 | 105 | 105 | 1.00 | 0 |
| **ENTRY ARM - TOTAL** | | **485** | **485** | **1.00** | **0** | **485** | **475** | **0.98** | **0** |
| * Tam Kon Shan Road | WB | 155 | 155 | 1.00 | 0 | 150 | 150 | 1.00 | 0 |
| * Shipyard | NB | 10 | 10 | 1.00 | 0 | 5 | 5 | 1.00 | 0 |
| * Tam Kon Shan Road | EB | 325 | 320 | 0.98 | 0 | 335 | 325 | 0.97 | 1 |
| **EXIT ARM - TOTAL** | | **490** | **485** | **0.99** | **0** | **490** | **480** | **0.98** | **0** |
| | | | | | | | | | |
| *** J4 - Tam Kon Shan Road/Slip Road to Tsing Yi North Coastal Road** | | | | | | | | | |
| * Tam Kon Shan Road | EB | 155 | 155 | 1.00 | 0 | 170 | 165 | 0.97 | 0 |
| * Tam Kon Shan Road | WB | 50 | 50 | 1.00 | 0 | 45 | 45 | 1.00 | 0 |
| **ENTRY ARM - TOTAL** | | **205** | **205** | **1.00** | **0** | **215** | **210** | **0.98** | **0** |
| * Slip Road to Tsing Yi North Coastal Road | SB | 155 | 155 | 1.00 | 0 | 170 | 165 | 0.97 | 0 |
| * Tam Kon Shan Road | WB | 50 | 50 | 1.00 | 0 | 45 | 45 | 1.00 | 0 |
| * Tam Kon Shan Road | EB | 5 | 5 | 1.00 | 0 | 5 | 5 | 1.00 | 0 |
| **EXIT ARM - TOTAL** | | **210** | **210** | **1.00** | **0** | **220** | **215** | **0.98** | **0** |
| | | | | | | | | | |
| *** J5 - Tam Kon Shan Interchange** | | | | | | | | | |
| * Fung Shue Wo Road | NB | 1390 | 1385 | 1.00 | 0 | 1395 | 1400 | 1.00 | 0 |
| * Tsing Yi North Coastal Road | EB | 480 | 490 | 1.02 | 0 | 360 | 355 | 0.99 | 0 |
| * Tam Kon Shan Road | SEB | 990 | 970 | 0.98 | 1 | 750 | 755 | 1.01 | 0 |
| * Tsing King Road | SB | 1020 | 1045 | 1.02 | 1 | 915 | 910 | 0.99 | 0 |
| * Tsing Yi North Coastal Road | WB | 1220 | 1235 | 1.01 | 0 | 1180 | 1190 | 1.01 | 0 |
| **ENTRY ARM - TOTAL** | | **5100** | **5125** | **1.00** | **0** | **4600** | **4610** | **1.00** | **0** |
| * Fung Shue Wo Road | SB | 1260 | 1275 | 1.01 | 0 | 1040 | 1045 | 1.00 | 0 |
| * Tsing Yi North Coastal Road | WB | 400 | 400 | 1.00 | 0 | 315 | 320 | 1.02 | 0 |
| * Tam Kon Shan Road | NWB | 545 | 550 | 1.01 | 0 | 495 | 495 | 1.00 | 0 |
| * Tsing King Road | NB | 1015 | 1025 | 1.01 | 0 | 1200 | 1195 | 1.00 | 0 |
| * Tsing Yi North Coastal Road | EB | 1880 | 1875 | 1.00 | 0 | 1545 | 1555 | 1.01 | 0 |
| **EXIT ARM - TOTAL** | | **5100** | **5125** | **1.00** | **0** | **4595** | **4610** | **1.00** | **0** |
| | | | | | | | | | |
| *** J6 - Fung Shue Wo Road/Tsing Yi Road West** | | | | | | | | | |
| * Tsing Yi Road West | NB | 1000 | 990 | 0.99 | 0 | 945 | 960 | 1.02 | 0 |
| * Fung Shue Wo Road | WB | 705 | 705 | 1.00 | 0 | 765 | 770 | 1.01 | 0 |
| * Fung Shue Wo Road | SB | 1230 | 1245 | 1.01 | 0 | 1010 | 1015 | 1.00 | 0 |
| **ENTRY ARM - TOTAL** | | **2935** | **2940** | **1.00** | **0** | **2720** | **2745** | **1.01** | **0** |
| * Tsing Yi Road West | SB | 805 | 820 | 1.02 | 1 | 710 | 730 | 1.03 | 1 |
| * Fung Shue Wo Road | EB | 765 | 765 | 1.00 | 0 | 645 | 640 | 0.99 | 0 |
| * Fung Shue Wo Road | NB | 1360 | 1355 | 1.00 | 0 | 1365 | 1370 | 1.00 | 0 |
| **EXIT ARM - TOTAL** | | **2930** | **2940** | **1.00** | **0** | **2720** | **2740** | **1.01** | **0** |

| | | AM | | | | PM | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | OBS | MOD | MOD/OBS | GEH | OBS | MOD | MOD/OBS | GEH |
| *** J7 - Liu To Road / Tsing Yi Road West** | | | | | | | | | |
| * Tsing Yi Road West | SB | 805 | 820 | 1.02 | 1 | 710 | 730 | 1.03 | 1 |
| * Liu To Road | EB | 865 | 855 | 0.99 | 0 | 660 | 660 | 1.00 | 0 |
| * Tsing Yi Road West | NB | 635 | 650 | 1.02 | 1 | 695 | 715 | 1.03 | 1 |
| **ENTRY ARM - TOTAL** | | **2305** | **2325** | **1.01** | **0** | **2065** | **2105** | **1.02** | **1** |
| * Tsing Yi Road West | NB | 1000 | 990 | 0.99 | 0 | 945 | 960 | 1.02 | 0 |
| * Liu To Road | WB | 620 | 630 | 1.02 | 0 | 595 | 615 | 1.03 | 1 |
| * Tsing Yi Road West | SB | 690 | 705 | 1.02 | 1 | 520 | 530 | 1.02 | 0 |
| **EXIT ARM - TOTAL** | | **2310** | **2325** | **1.01** | **0** | **2060** | **2105** | **1.02** | **1** |
| | | | | | | | | | |
| *** J8 - Tsing Yi Road West/Ching Hong Road** | | | | | | | | | |
| * Tsing Yi Road West | NB | 675 | 680 | 1.01 | 0 | 715 | 730 | 1.02 | 1 |
| * Tsing Yi Road West | SB | 690 | 705 | 1.02 | 1 | 520 | 530 | 1.02 | 0 |
| * Ching Hong Road | WB | 610 | 630 | 1.03 | 1 | 525 | 535 | 1.02 | 0 |
| **ENTRY ARM - TOTAL** | | **1975** | **2015** | **1.02** | **1** | **1760** | **1795** | **1.02** | **1** |
| * Tsing Yi Road West | SB | 750 | 770 | 1.03 | 1 | 570 | 585 | 1.03 | 1 |
| * Tsing Yi Road West | NB | 635 | 650 | 1.02 | 1 | 695 | 715 | 1.03 | 1 |
| * Ching Hong Road | EB | 585 | 595 | 1.02 | 0 | 495 | 500 | 1.01 | 0 |
| **EXIT ARM - TOTAL** | | **1970** | **2015** | **1.02** | **1** | **1760** | **1800** | **1.02** | **1** |
| | | | | | | | | | |
| *** J9 - Ching Hong Road / Chung Mei Road** | | | | | | | | | |
| * Ching Hong Road | EB | 615 | 625 | 1.02 | 0 | 510 | 515 | 1.01 | 0 |
| * Ching Hong Road | WB | 550 | 560 | 1.02 | 0 | 515 | 515 | 1.00 | 0 |
| * Chung Mei Road | SB | 415 | 425 | 1.02 | 0 | 380 | 385 | 1.01 | 0 |
| **ENTRY ARM - TOTAL** | | **1580** | **1610** | **1.02** | **1** | **1405** | **1415** | **1.01** | **0** |
| * Ching Hong Road | EB | 610 | 615 | 1.01 | 0 | 490 | 495 | 1.01 | 0 |
| * Ching Hong Road | WB | 625 | 645 | 1.03 | 1 | 550 | 560 | 1.02 | 0 |
| * Chung Mei Road | NB | 350 | 350 | 1.00 | 0 | 365 | 365 | 1.00 | 0 |
| **EXIT ARM - TOTAL** | | **1585** | **1610** | **1.02** | **1** | **1405** | **1420** | **1.01** | **0** |
| | | | | | | | | | |
| *** J10 - Tsing Yi Road West/Cheung Tsing Highway** | | | | | | | | | |
| * Tsing Yi Road West | NB | 580 | 595 | 1.03 | 1 | 735 | 740 | 1.01 | 0 |
| * Cheung Tsing Highway | EB | 960 | 950 | 0.99 | 0 | 815 | 840 | 1.03 | 1 |
| * Tsing Yi Road West | SB | 750 | 770 | 1.03 | 1 | 570 | 585 | 1.03 | 1 |
| **ENTRY ARM - TOTAL** | | **2290** | **2315** | **1.01** | **1** | **2120** | **2165** | **1.02** | **1** |
| * Tsing Yi Road West | SB | 820 | 820 | 1.00 | 0 | 585 | 605 | 1.03 | 1 |
| * Cheung Tsing Highway | WB | 800 | 810 | 1.01 | 0 | 825 | 830 | 1.01 | 0 |
| * Tsing Yi Road West | NB | 675 | 680 | 1.01 | 0 | 715 | 730 | 1.02 | 1 |
| **EXIT ARM - TOTAL** | | **2295** | **2310** | **1.01** | **0** | **2125** | **2165** | **1.02** | **1** |
| | | | | | | | | | |
| *** J11 - Sai Tso Wan Road / Tsing Yi Road West / Tsing Yi Road** | | | | | | | | | |
| * Tsing Yi Road West | SB | 820 | 820 | 1.00 | 0 | 585 | 605 | 1.03 | 1 |
| * Sai Tso Wan Road | EB | 490 | 500 | 1.02 | 0 | 615 | 610 | 0.99 | 0 |
| * Tsing Yi Road | NB | 420 | 425 | 1.01 | 0 | 455 | 475 | 1.04 | 1 |
| **ENTRY ARM - TOTAL** | | **1730** | **1745** | **1.01** | **0** | **1655** | **1690** | **1.02** | **1** |
| * Tsing Yi Road West | NB | 580 | 595 | 1.03 | 1 | 735 | 740 | 1.01 | 0 |
| * Sai Tso Wan Road | WB | 790 | 780 | 0.99 | 0 | 575 | 595 | 1.03 | 1 |
| * Tsing Yi Road | SB | 355 | 370 | 1.04 | 1 | 345 | 355 | 1.03 | 1 |
| **EXIT ARM - TOTAL** | | **1725** | **1745** | **1.01** | **0** | **1655** | **1690** | **1.02** | **1** |

| | | AM | | | | PM | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | OBS | MOD | MOD/OBS | GEH | OBS | MOD | MOD/OBS | GEH |
| *** L1 - Lantau Link** | | | | | | | | | |
| * Lantau Link | EB | 3370 | 3345 | 0.99 | 0 | 4460 | 4430 | 0.99 | 0 |
| * Lantau Link | WB | 4445 | 4380 | 0.99 | 1 | 3175 | 3185 | 1.00 | 0 |
| *** L2 - Ting Kau Bridge** | | | | | | | | | |
| * Ting Kau Bridge | NB | 3160 | 3060 | 0.97 | 2 | 4690 | 4645 | 0.99 | 1 |
| * Ting Kau Bridge | SB | 6840 | 6635 | 0.97 | 2 | 3650 | 3650 | 1.00 | 0 |
| *** L3 - Unnamed access road near Lantau Link Visitors Centre** | | | | | | | | | |
| * Unnamed access road near Lantau Link Visitors Centre | NB | 195 | 190 | 0.97 | 0 | 190 | 180 | 0.95 | 1 |
| * Unnamed access road near Lantau Link Visitors Centre | SB | 125 | 125 | 1.00 | 0 | 140 | 140 | 1.00 | 0 |
| *** L4 - Tam Kon Shan Road** | | | | | | | | | |
| * Tam Kon Shan Road | EB | 325 | 320 | 0.98 | 0 | 335 | 325 | 0.97 | 1 |
| * Tam Kon Shan Road | WB | 105 | 105 | 1.00 | 0 | 105 | 105 | 1.00 | 0 |
| *** L5 - Slip Road from Tsing Yi North Coastal Road** | | | | | | | | | |
| * Slip Road from Tsing Yi North Coastal Road | WB | 220 | 220 | 1.00 | 0 | 195 | 190 | 0.97 | 0 |
| *** L6 - Slip Road to Tsing Yi North Coastal Road** | | | | | | | | | |
| * Slip Road to Tsing Yi North Coastal Road | EB | 155 | 155 | 1.00 | 0 | 170 | 165 | 0.97 | 0 |
| *** L7 - Tsing Yi North Coastal Road** | | | | | | | | | |
| * Tsing Yi North Coastal Road | EB | 1200 | 1180 | 0.98 | 1 | 1115 | 1135 | 1.02 | 1 |
| * Tsing Yi North Coastal Road | WB | 1600 | 1630 | 1.02 | 1 | 1045 | 1010 | 0.97 | 1 |
| *** L8 - Cheung Tsing Tunnel** | | | | | | | | | |
| * Cheung Tsing Tunnel | EB | 4360 | 4340 | 1.00 | 0 | 3540 | 3615 | 1.02 | 1 |
| * Cheung Tsing Tunnel | WB | 2930 | 2970 | 1.01 | 1 | 2930 | 2980 | 1.02 | 1 |
| *** L9 - Nam Wan Tunnel** | | | | | | | | | |
| * Nam Wan Tunnel | EB | 2910 | 2805 | 0.96 | 2 | 1755 | 1550 | 0.88 | 5 |
| * Nam Wan Tunnel | WB | 1795 | 1630 | 0.91 | 4 | 2345 | 2225 | 0.95 | 3 |
| *** L10 - Fung Shue Wo Road between Tam Kon Shan Interchange and Tsing Yi Road West** | | | | | | | | | |
| * Fung Shue Wo Road | NB | 1360 | 1355 | 1.00 | 0 | 1365 | 1370 | 1.00 | 0 |
| * Fung Shue Wo Road | SB | 1230 | 1245 | 1.01 | 0 | 1010 | 1015 | 1.00 | 0 |
| *** L11 - Tsing Yi Road West between Fung Shue Wo Road and Ching Hong Road** | | | | | | | | | |
| * Tsing Yi Road West | NB | 1000 | 990 | 0.99 | 0 | 945 | 960 | 1.02 | 0 |
| * Tsing Yi Road West | SB | 805 | 820 | 1.02 | 1 | 710 | 730 | 1.03 | 1 |
| *** L12 - Tsing Yi Road West between Cheung Tsing Highway and Ching Hong Road** | | | | | | | | | |
| * Tsing Yi Road West | NB | 675 | 680 | 1.01 | 0 | 715 | 730 | 1.02 | 1 |
| * Tsing Yi Road West | SB | 750 | 770 | 1.03 | 1 | 570 | 585 | 1.03 | 1 |
| *** L13 – Ching Hong Road** | | | | | | | | | |
| * Ching Hong Road | EB | 585 | 595 | 1.02 | 0 | 495 | 500 | 1.01 | 0 |
| * Ching Hong Road | WB | 610 | 630 | 1.03 | 1 | 525 | 535 | 1.02 | 0 |
| *** L14 - Sai Tso Wan Road** | | | | | | | | | |
| * Sai Tso Wan Road | EB | 490 | 500 | 1.02 | 0 | 616 | 612 | 0.99 | 0 |
| * Sai Tso Wan Road | WB | 790 | 780 | 0.99 | 0 | 577 | 597 | 1.04 | 1 |

# Appendix D
# Planned or Committed Junction Improvement Scheme




備註:
只供參考，最終設計會因應需要而更改
REMARKS:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE WHEN NECESSARY

圖則名稱 drawing title

# 工務計劃項目第B839號 PWP ITEM NO. B839

# 附件四 - 青康路北公營房屋發展計劃的基礎設施工程概念平面圖

# ANNEX 4 - INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENTS AT CHING HONG ROAD NORTH, TSING YI - LAYOUT PLAN

圖則編號 drawing no.
圖則一

比例 scale
1:4000

辦事處 OFFICE
南拓展處
SOUTH DEVELOPMENT OFFICE

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Date : 18/03/2024
Filename : F:\422555-Hong Kong\6.0-BIM\02_WIP\02_Tsing Yi\01_CV\REPORT\TTIA (CHRN)\20230102\Figure 2.1-1.dgn