LC Paper No. PWSC31/17-18(02)

LegCo Question

RE: Integrated Basement for West Kowloon Cultural District (WKCD)

(Written Reply)

Asked by:	Replied by:
Hon CHU Hoi-dick	Home Affairs Bureau Civil Engineering and Development Department West Kowloon Cultural District Authority

(Enquiry 1)

1. Airport Express

Question:
Would the Administration please provide documents to further elaborate the protection works for the Airport Express as mentioned in paragraph 3(d) of PWSC(2017-18)12, to allow this Sub-committee to understand the actual expenditure breakdown and project risks?

Reply:
The protection works for the Airport Express Tunnels (AET) located at Zone 3B of the Integrated Basement (IB) mainly cover the enabling works above and on both sides of AET to support the topside developments. The works mainly include the construction of seven pre-stressed concrete long span beams with a total length of about 332 metres. The layout of the said beam structures is at **Annex 1**.

The estimated cost breakdown of the protection works for AET at IB Zone 3B is as follows:

Main item	Estimated cost (in September 2016 prices)
Pre-stressed concrete	About $170 million
Formwork and steel reinforcement	About $68 million

We have all along been maintaining close communication with the MTR Corporation Limited (MTRCL) on the IB works. We will closely monitor the impact of the works concerned on AET during construction by various means, including the use of round-the-clock automatic monitoring systems inside the tunnels to provide real-time settlement data. In addition, upon discussions with MTRCL and the relevant departments, we have formulated the necessary measures in response to settlements to ensure structural safety of the tunnel during construction.

2. Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) Factor

Question:

(1) Would the Administration please advise whether IB will only be commissioned until completion of IB in all zones (including Zones 2A, 2B and 2C)?

Reply:

Currently, MTRCL mainly occupies IB Zones 2A, 2B and 2C of the WKCD site as temporary works areas for the Hong Kong Section of the XRL project. In designing IB Zones 3A and 3B and their topside developments, we have taken into account the need for phased developments of WKCD to ensure that the various zones of IB and their topside developments can operate independently and interface well with the developments at neighbouring zones. Hence, IB Zones 3A and 3B and their topside developments can be operated upon their completion without the need to complete the whole IB.

Question:

(2) Would the Administration please advise the anticipated completion dates of IB at Zones 2A, 2B, 2C, 3A, 3B, as well as their topside developments?

Reply:

<table>
<tr><td rowspan="2">Zones of IB</td><td rowspan="2">Anticipated completion date of IB</td><td colspan="2">Topside development</td></tr>
<tr><td>Anticipated commissioning date of arts and cultural facilities</td><td>Anticipated commissioning date of hotel/office/residential developments</td></tr>
<tr><td>3A</td><td>Q1 2019</td><td>End of 2019</td><td>Not applicable</td></tr>
<tr><td>3B</td><td>Around 2021</td><td>2021/22</td><td>Under review</td></tr>
<tr><td>2A</td><td colspan="3" rowspan="3">The consultants engaged by the West Kowloon Cultural District Authority (WKCDA) are currently devising a phased implementation programme and carrying out preliminary designs for IB Zones 2A, 2B and 2C and their topside developments. Preliminary design for Zones 2A, 2B and 2C is targeted to be substantially completed by end of 2018 while detailed design for Zone 2A is targeted to be substantially completed by end of 2019. Therefore, the completion dates of construction works are yet to be confirmed.</td></tr>
<tr><td>2B</td></tr>
<tr><td>2C</td></tr>
</table>

Question:

(3) Would the Administration please advise for how long the above-mentioned works have been delayed by the XRL works?

Reply:

WKCDA plans to develop the arts and cultural facilities in phases, with developments currently focus on Xiqu Centre in the east and M+, Artist Square Development Area, Art Park and the Hong Kong Palace Museum in the west. Hence, the XRL project has not delayed the construction of the above-mentioned IB works. According to MTRCL's latest assessment, in light of the current construction progress, the target completion date of the XRL project in the third quarter of 2018 remains unchanged.

Question:

(4) Has WKCDA considered or will it consider making claims to MTRCL in case of any losses resulting from such a delay?

Reply:

According to MTRCL's latest assessment, in light of the current construction progress, the target completion date of the XRL project in the third quarter of 2018 remains unchanged. We have all along been in close communication and co-ordination with MTRCL on the handover arrangements of the WKCD work sites with a view to minimising the impact on the WKCD project.

3. Traffic and vehicular flow

Question:

(1) Would the Administration please provide the full text of the Traffic Impact Assessment (TIA) report regarding the project (for the whole IB)?

Reply:

The TIA report prepared by WKCDA for the planning application of minor relaxation of the development intensity of the WKCD site is at **Annex 2**.

Question:

(2) Would the Administration please advise the hourly vehicular capacity and anticipated traffic flow of the underground road of the whole IB?

Reply:

According to the above-mentioned TIA report, the maximum two-way traffic flow of different sections of the underground road in IB ranges from about 800 to 2 200 passenger car units (PCUs) per hour, representing about 31% and 48% of the vehicle capacity of the respective road sections.

Question:

(3) Would the Administration please advise the types of vehicles, such as taxis, using such roads and whether there would be any entry restrictions? Please also advise if there are any charges on use of the roads, and if yes, what would be the anticipated charging levels? How much income would it bring to WKCDA annually (if applicable)?

Reply:

The underground road in IB is a public road which is free of charge for use by all types of vehicles except designated dangerous goods vehicles.

Question:

(4) Would the Administration please advise the respective proportions of the building users at Zones 2A, 2B, 2C, 3A and 3B in the anticipated inbound and outbound traffic flow?

Reply:

According to the TIA report, upon completion of the whole WKCD in around 2031, the total maximum traffic flow generated from Zones 2A, 2B, 2C, 3A and 3B would be around 3 300 PCUs per hour, representing about 73% of the overall traffic generation from WKCD. WKCDA does not have any breakdown of the traffic flow for individual zones.

Question:

(5) Would the Administration please advise the numbers and locations of the parking spaces, anticipated charge level, as well as anticipated annual income to be generated for WKCDA (if applicable)?

Reply:

According to the TIA report, the quantity and location of parking spaces of WKCD are listed in the table below. WKCDA is yet to determine the parking charges and the annual income generated.

Location of parking spaces	Estimated opening dates of WKCD facilities			
	2018	2019	2022	After 2022
	Xiqu Centre and part of the Art Park	M+ and remaining part of the Art Park	Lyric Theatre Complex and Hong Kong Palace Museum	Exhibition Centre and IB at Zones 1A, 2A, 2B and 2C
Temporary carpark of Xiqu Centre[1]	56	56	56	
Underground carpark at the Art Park adjacent to M+[2]	209	209	209	209
M+ underground carpark in Zone 3A[2]		156	156	156
Lyric Theatre Complex underground carpark in Zone 3B[3]			230	230
Hong Kong Palace Museum[3]			46	46
Exhibition Centre and at IB[4] Zones 1A, 2A, 2B and 2C				About 1 560
Total number of parking spaces	265	421	697	About 2 200[5]

[1] Temporary carpark will be cancelled after permanent carparks are in place.

[2] Provision of parking spaces is based on the approved general building plans (GBP) of related projects.

[3] Based on the latest estimation of WKCDA.

[4] The timetable for implementation of Exhibition Centre, IB at Zones 1A, 2A, 2B and 2C will be reviewed at a suitable juncture. The total number of parking spaces will be reviewed based on the latest project development parameters.

[5] WKCDA assumes that the total number of parking spaces is about 2 200. The actual number of parking spaces will be confirmed after completion of the detailed design of the whole project with various factors taken into consideration.

4. Expenditures and overall financial arrangements in earlier stages

Question:

(1) Would the Administration please advise whether the $15.7 billion funding for facility construction, out of the $21.6 billion funding approved in 2008, was fully spent? Please provide a breakdown of the actual expenditure.

Reply:

Of the $21.6 billion one-off upfront endowment, the budget for the planning, design and construction of facilities is $15.7 billion. According to the information provided by WKCDA, as at 31 March 2017, the total committed contracts on capital projects were approximately $11.7 billion, and the actual expenditure incurred was $4.4 billion.

Question:

(2) Further to the last question, it was mentioned in paragraph 3 of LC paper no. CB(1)560/16-17(02) that the apportioned interest income of $2.1 billion would also be used to cover the construction costs of the Batch 1 and Batch 2 facilities. Please provide a breakdown of the actual expenditure.

Reply:

In March 2013, WKCDA decided to allocate the associated investment return of $2.1 billion from the $21.6 billion one-off upfront endowment to the reserved fund for the design and construction of facilities. Together with the assigned $15.7 billion from the one-off upfront endowment for the design and construction of facilities, a total of $17.8 billion will be used to cover construction costs of the Batch 1 and most of Batch 2 facilities of WKCD.

Question:

(3) Would the Administration please clearly explain the uses of the "apportioned interest income" of $2.1 billion (my understanding is that such an income refers to the investment income from the use of public money)? Does WKCDA enjoy full discretion over its uses without the need to give an account to the Government or LegCo?

Reply:

Based on the Government's funding application to the Legislative Council (LegCo) (LegCo Paper No. PWSC(2008-09)31) in 2008, WKCDA will be required to manage

the one-off upfront endowment (including investment of funds) to ensure that sufficient funds be available to cover the cash flow requirements for the development of the WKCD project. As reported to the Joint Subcommittee to Monitor the Implementation of the West Kowloon Cultural District Project (Joint Subcommittee) in 2013, the design and construction costs of Batch 1 and most of Batch 2 facilities as well as other related facilities can be covered by the $2.1 billion investment returns plus the $15.7 billion from the one-off upfront endowment budgeted for the design and construction of the WKCDA facilities. WKCDA will adopt a pragmatic approach to implement the WKCD project and regularly report the latest financial situation to the Joint Subcommittee.

Question:

(4) Further to the above questions, would the Administration please advise whether the $1.3 billion funding for planning and management paid to WKCDA, out of the $21.6 billion funding approved in 2008, was fully spent? Please provide a breakdown of the actual expenditure.

Reply:

Due to the time taken for conducting the three-stage public engagement exercises from 2009 to 2011 for the preparation of the WKCD Development Plan, and the phased development of WKCDA facilities announced in 2013 in the planning and project management stage of WKCD, the development timeframe for the entire WKCD project has been considerably extended (under the original plan, the arts and cultural facilities would be completed in two phases, most of which would be commissioned in 2014-15). Therefore, WKCDA has to establish a team supported by experienced professionals to plan and co-ordinate the subject task. Such extra expenditure was not envisaged in the funding application submitted to LegCo in mid-2008. Based on the information provided by WKCDA, the accumulated net expenditure on planning and project management was $1.8 billion by the end of the 2016-17 financial year, which was covered by the $1.3 billion of the one-off upfront endowment so earmarked and the investment return ($0.5 billion).

Question:

(5) Would the Administration please advise the construction cost of the Batch 3 facilities? What would be the anticipated income of WKCDA (of which an indicative range may be provided) by means of the enhanced financial arrangement?

Reply:

As estimated by WKCDA, a capital funding of about $11.7 billion (in 2016 prices) would be required for completing Batch 3 core arts and cultural facilities (excluding the Musical Theatre and the Exhibition Centre to be funded by private sector investment), the two remaining black box theatres in Batch 2 facilities as well as the remaining other arts and cultural facilities, retail/dining/entertainment facilities and public open spaces. WKCDA's share of rental income to be generated from the development right of hotel/office/residential developments is subject to the market response to individual development packages, the exact amount to be received cannot be confirmed at this stage.

Question:

(6) Would the Administration please give an account of the setting criteria of the management costs of $60 million reimbursed to WKCDA, as well as the actual expenditure breakdown (the number of management staff or details of other expenditure items, etc.)?

Reply:

In light of the implementation programme of the proposed entrusted works and the workload involved in managing such works, the Government proposed to reimburse WKCDA the actual in-house management cost incurred with a cap at $60.3 million (in September 2016 prices), which will be stipulated in the future entrustment agreement. It is anticipated by WKCDA that the necessary in-house management manpower will be equivalent to nine professional personnel, including project managers, engineers and quantity surveyors, at the peak of the works. WKCDA will also have to provide accounting, personnel, legal and other aspects of support.

Question:

(7) Would the Administration please brief this Sub-committee on the works progress of the IB at Zone 3A, as well as provide the details of the costs incurred and their breakdown, for ease of comparing to previous funding papers?

Reply:

The Government has entrusted WKCDA to carry out the first and second stages of works in relation to the IB at Zone 3A. The entrusted works for the first stage was substantially completed. As for the second stage of the entrusted works for IB Zone 3A, about 70% was completed as at end of August 2017.

5. Works implementation programme

Question:

It was stated in paragraph 17 of PWSC(2017-18) that it would take as long as eight years to implement the works concerned, for which a provision of over $600 million was made in respect of price adjustments. Would the Administration please provide the works implementation programme for reference?

Reply:

In accordance with paragraph 4 of PWSC(2017-18)12, the proposed works was expected to be substantially completed in phases by around 2021. Please refer to **Annex 3** for details of the implementation programme for Stage 3 construction works of IB for WKCD.

6. Nature of contract

Question:

Would the Administration and WKCDA please give a briefing on nature of the contracts to be signed with contractors?

Reply:

A sample of the standard contract document of WKCDA is at **Annex 4** for Members' reference.

LegCo Question

RE: Integrated Basement for West Kowloon Cultural District (WKCD)

(Written Reply)

Asked by:	Replied by:
Hon CHU Hoi-dick	Home Affairs Bureau Civil Engineering and Development Department West Kowloon Cultural District Authority

(Enquiry 2)

1. Follow-up on the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) and WKCD

Question:

(1) In connection with overlapping of the Integrated Basement (IB) of WKCD and part of the XRL Terminal, would the Administration please further advise whether the MTR Corporation Limited (MTRCL) and West Kowloon Cultural District Authority (WKCDA) have signed agreements? If so, please provide the full texts of such agreements.

Reply:

Currently, MTRCL mainly occupies IB Zones 2A, 2B and 2C of the WKCD sites as temporary works area for the Hong Kong Section of the XRL project. Although there is no contractual agreement between MTRCL and WKCDA on the overlapping of construction works areas, both parties have all along been in close communication on the arrangement for the progressive handover of the work sites.

2. Outdated environmental impact assessment (EIA)

Question:

(1) A statutory EIA report was carried out for the WKCD development in 2013. Would the Administration please advise whether Chapter 4 of the Executive Summary, titled "Summary of the Key EIA Findings for Underpass Road", is still applicable to the current IB project? If there are differences between the EIA assumptions made at that time and now, what are they then?

Reply:

In November 2013, the EIA report for the WKCD development (covering the underground road) was approved under the Environmental Impact Assessment Ordinance (EIAO), and an environmental permit (EP) was obtained for the construction and operation of the underground road. While there have been amendments to the alignment of part of the underground road in IB Zones 2A and 3A, the current valid EP in respect of the underground road has already covered such amendments.

Question:

(2) Would the Administration please give a clear account of the differences between the estimated vehicular flow of IB at that time and at present time?

Reply:

As mentioned in the reply to question 2(1) above, an EP was obtained for the construction and operation of the underground road in WKCD under the EIAO in November 2013. WKCDA has subsequently updated the estimated traffic flow of the underground road when submitting the planning application for minor relaxation of the development intensity of the WKCD site to the Town Planning Board in 2014, which was about 10% higher than the estimates made in 2013. The current valid EP for the underground road has already covered the updated traffic flow.

Question:

(3) As regards the estimated air pollution level mentioned in the said chapter, the levels of both respirable suspended particulates and nitrogen dioxide would have exceeded the criteria of the Air Quality Objectives (AQOs) in 2014. Would the Administration please advise what mitigation measures were taken then and how the air quality level would become after mitigation? Please also advise on whether the current mitigation measures have been enhanced or increased, as well as the respective justifications.

Reply:

The EIA report for the WKCD development was approved under the EIAO in November 2013. The findings of the EIA indicated that, upon implementation of the mitigation measures suggested in the EIA report (including frequent watering of the sites and provision of wheel-washing facilities during construction), the air quality level of WKCD (including the IB project) during construction and operation could meet the AQOs prevailing at the time when the EIA report was approved.

Question:

(4) Further to the question raised by Dr Hon WONG Pik-wan at the Meeting, would the Administration please provide documents to illustrate the current arrangements in respect of ventilation and air purification in IB?

Reply:

The underground road in IB is located at Level B1. The proposed locations of the ventilation system, air intake and exhaust points for the underground road are at **Annex 5**. The findings of the EIA for the WKCD development submitted by WKCDA indicated that, upon implementation of the mitigation measures suggested in the EIA report, the air quality impact during construction and operation would comply with the statutory requirements applicable at the time the EIA report was approved, it was therefore unnecessary to implement further air quality mitigation measures such as installation of air purification facilities. The EIA report and information on relevant air quality assessment can be downloaded from the Environmental Protection Department's website (http://www.epd.gov.hk/eia/register/report/eiareport/eia_2152013/index.htm).

3. Follow-up on the overall financial arrangement

Question:

Further to the question raised by Hon LAW Kwun-chung in the Meeting, would the Administration please provide a breakdown of the actual expenditure in relation to the table of the Enclosure 3 to PWSC(2008-09)31?

Reply:

WKCD is a large-scale project. Over the past 10 years, the project has been deepened and optimised continuously based upon the various requirements of public consultation, planning, design and operation, including the Town Planning Board's approved planning application for minor relaxation of the development intensity of the WKCD site, and the development of arts and cultural facilities in three phases in view of the actual circumstances and the need for organic growth. As such, the current project parameters and development of WKCD are different from the cost elements as detailed in the LegCo Paper No. PWSC(2008-09)31 and its related Enclosure 3 submitted to LegCo by the Administration in 2008. It is not appropriate to compare the expenditure of each cost element in the table of Enclosure 3 with the existing circumstances. Nevertheless, the one-off upfront endowment of $21.6 billion allocated to the four cost elements[6] is basically in accordance with those covered in the LegCo Paper No. PWSC(2008-09)31 and the related Enclosure 3.

Since 2013, WKCDA and its Board Chairman has been regularly reporting the latest financial situation of WKCDA to the Joint Subcommittee. The last one was done in February 2017. At the end of the 2016-17 financial year, the balance of the one-off upfront endowment was $20 billion.

[6] According to Enclosure 3 of PWSC(2008-09)31, the estimated capital cost covers the following four elements: (i) planning, design and construction of facilities; (ii) collection costs and related cost for M+; (iii) major repair and renovation of the facilities; and (iv) planning of WKCD and project management.

4. Follow-up on traffic

Question:

(1) Further to the question raised by Hon CHAN Chi-chuen at the Meeting and my earlier letter, would the Administration please provide a more detailed vehicular flow map for the whole IB (together with the locations of all parking spaces in the fringe areas of WKCD and throughout the area), as well as the relevant data.

Reply:

For details of the connection of the underground road at Level B1 of IB Zones 3A and 3B for WKCD, please refer to **Annex 6**. The preliminary design of the underground road in IB Zones 2A, 2B and 2C is in progress, and details of the preliminary connection with the Level B2 car park is also at **Annex 6**. For the anticipated traffic flow, locations and relevant data of parking spaces of the entire WKCD, please refer to the replies to questions 3(2) and 3(5) under Enquiry 1.

Question:

(2) Mrs Betty FUNG, Permanent Secretary for Home Affairs, briefed the Meeting on the concept of the Automated People Mover (APM) System and latest developments of the programme since 2008. Would the Administration please advise the details of the new programme, such as the operation mode and area, alignments, roles of the Government and WKCDA, APM train models, passenger capacity, charge level, internal rate of return, etc.?

I particularly note that it was mentioned in Enclosure 3 to PWSC(2008-09)31 the expenditure on the APM System would be $600 million. Would the Administration please update such an expenditure item and advise whether it is still borne by WKCDA as planned?

Reply:

To enhance the East-West connectivity of WKCD, WKCDA considers launching autonomous vehicle as a mean of transport for the District. WKCDA is currently testing the use of autonomous vehicle (with brand name “NAVYA” and model “Arma”) in the temporary Nursery Park to confirm its effective performance under all circumstances and different weather conditions. Upon completion of testing and obtained approval of relevant government departments, WKCDA will make

recommendations on the mode of operation, area of operation and routings, passenger volume, fares, internal rate of return, etc. for the autonomous vehicle. The original budgeted expenditure for "automated people mover system" is part of the $15.7 billion of the one-off upfront endowment budgeted for the design and construction of facilities. The expenditure for the procurement of autonomous vehicle will be charged under the said budget.

Question:

(3) Would the Administration please give a clear account of the ownership of various parts of IB (including underground levels of the buildings), as well as advise whether the traffic regulations applicable to IB are the same as those for general roads.

Reply:

Apart from the underground road in IB which is a public road owned by the Government, ownership of the remaining parts of IB and its topside developments belongs to WKCDA.

There is no difference between the traffic regulations to be adopted for the underground road and other public roads.

5. Process of change in decision

Question:

(1) Further to the question raised by Hon YIU Chung-yim at the Meeting, would the Administration please advise whether it is necessary to follow the procurement or tender regulations when entrusting the IB works to WKCDA.

Reply:

The proposed entrustment of the proposed works to WKCDA, which has been approved by the WKCDA Board and reported to the Joint Subcommittee before funding application, follows the Government's established procedures and requirements. As for the entrusted construction works of IB to WKCDA, WKCDA will also follow its established procurement procedures and regulations.

Question:

(2) Several decisions regarding the construction of the IB have already been changed, including:

(a) From the paper clearly stating that there was no intention to pay the WKCDA project management costs to the current payment of $60 million in respect of the IB project;

(b) From the construction cost of IB originally to be shared by the Government and WKCDA to such a cost to be wholly borne by the Government;

(c) From the works to be managed by the Government on its own to such management work to be entrusted to WKCDA.

Would the Administration please give a clear account of such three decision making processes, including the departments, personnel, dates and procedures concerned, together with the meeting paper? If not, please provide clear reasons for that.

Reply:

(a) In early 2015, the Government discussed with WKCDA the proposed entrustment of the first and second stages of the IB works at WKCD. Given that the proposed entrusted works only accounted for a small proportion of the works to be undertaken by WKCDA concurrently (including the M+ works), the in-house resources deployed for the management of the M+ works should be able to cover the management of the entrusted works as well. It was therefore stated in the funding proposal submitted to the Finance Committee (FC) in July 2015 that there was no intention to pay WKCDA the project management cost for the first and second stages of the IB works (FC PWSC(2015-16)30 is at **Annex 7**) and WKCDA also agreed on such proposal. Upon FC's approval of the funding proposal (including the arrangement under which the first and second stages of the IB works would be entrusted to WKCDA without the need to pay any in-house management cost), the Government and WKCDA signed an entrustment agreement on the first and second stages of the IB works to put into effect such proposal.

The Government has subsequently discussed with WKCDA the proposed entrustment of the third stage of the IB works. Having taken into account the scale and complexity of the third stage of the IB works, WKCDA considered that in-house resources deployed for the delivery of the Lyric Theatre Complex should

no longer be able to cover the management of the proposed entrusted works at the same time. Under careful consideration, the Government has agreed to include the proposed payment of the related in-house management cost, capped at a sum of $60.3 million (in September 2016 prices), in the funding application for the third stage of the IB works, to facilitate WKCDA to hire additional manpower for managing the proposed entrusted works. Subject to FC's approval, the Government and WKCDA will sign an entrustment agreement in respect of the third stage of the IB works, under which the in-house management costs will be capped.

(b) As mentioned in the LegCo Paper No. CB(2)1492/12-13(02) (at **Annex 8**), submitted by the Administration to the Joint Subcommittee in July 2013, the Development Plan (DP) for WKCD was prepared based on Foster + Partners' "City Park" Conceptual Plan. The proposed IB therein was an integral part of the DP, and an essential design feature to meet the statutory minimum requirement for provision of 23 hectares of public open spaces as specified in the South West Kowloon Outline Zoning Plan. Acknowledging that the IB was not covered in the $21.6 billion endowment fund approved in 2008, and was one of the major factors for project cost escalation, the Government was prepared to fully fund the capital works of the main IB as general enabling works to facilitate the development of the whole WKCD project, subject to funding approval by LegCo, to allow WKCDA's endowment fund to be used for the construction of arts and cultural facilities. The Government consulted the Public Works Subcommittee (PWSC) on the first stage of design and advance works for IB, as well as the second stage of design, site investigation and construction works for IB on 16 June 2015. The proposals were endorsed by PWSC, for which the funding was approved by FC on 10 July 2015. The works are currently underway.

(c) In view of the exceptionally high degree of integration amongst the various facilities in IB and the critical interfacing issues such as overlapping work sites, construction work sequences and methodologies, and major programming interdependence among the proposed works, the Government proposed to entrust to WKCDA the implementation of the IB construction works to be carried out concurrently with the construction works of other WKCDA facilities in IB. It would be impractical for WKCDA to construct the other WKCDA facilities in IB, while the Government separately undertakes the construction of the proposed works in IB which are located within the same sites. The Government therefore considers it necessary and cost effective to entrust to WKCDA the implementation

of the proposed IB works in conjunction with the implementation of other WKCDA facilities in IB. Although the Government plans to entrust the third stage of the IB works to WKCDA, the Civil Engineering and Development Department will be responsible for taking the entire IB project forward. The proposed entrustment of the proposed works is in line with the Government's established procedures and requirements.

6. Sharing the risk of cost overruns

Question:

Would the Administration please advise how the risk will be shared among the Government, WKCDA and sub-contractors in case of cost overruns of the IB works? Please provide documents as corroboration.

Reply:

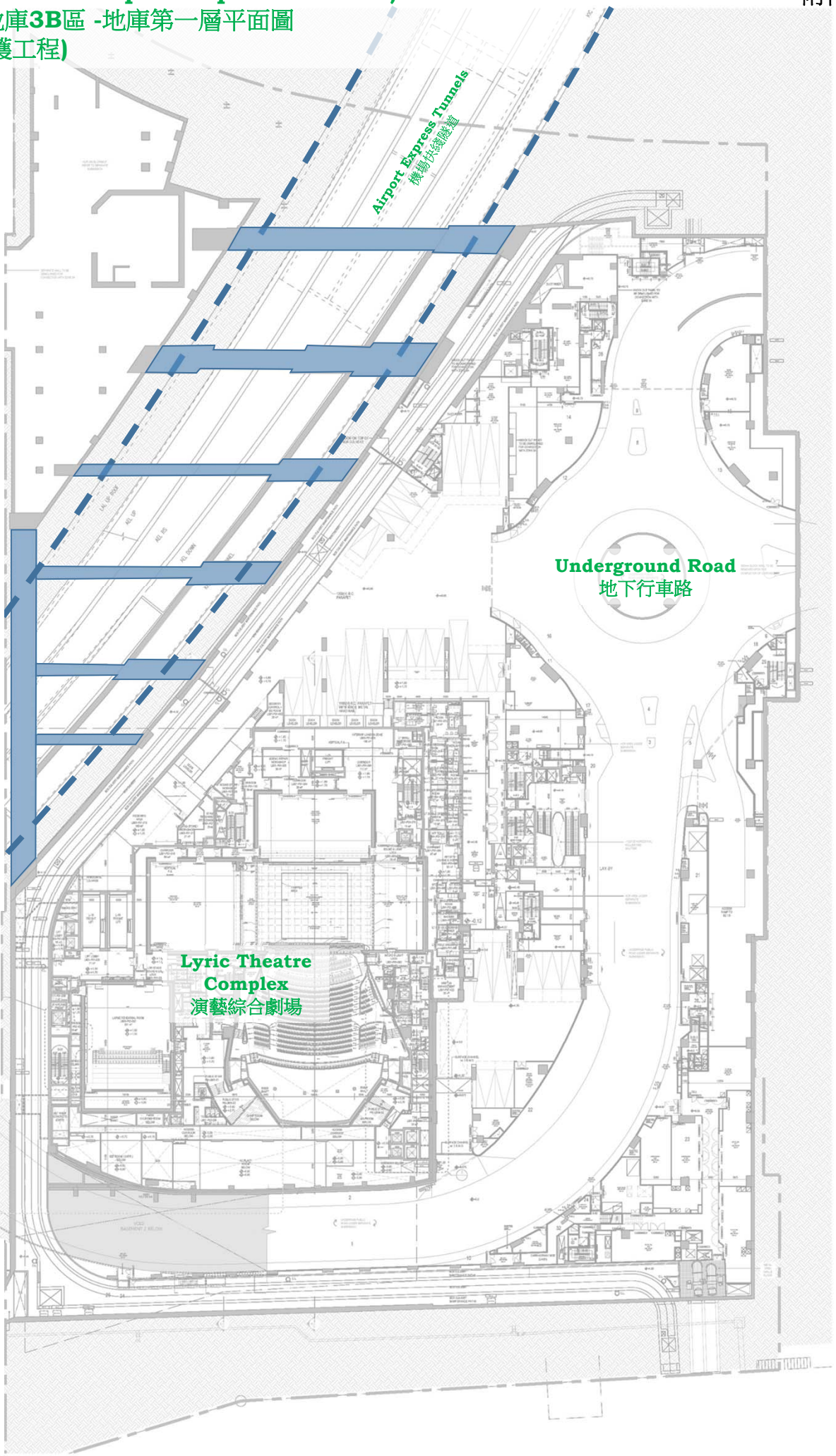
In case of cost overruns of the IB works, we shall closely examine the causes to determine who shall be held responsible. In May 2016, we submitted to the Joint Subcommittee a summary of the main provisions on the risk sharing and cost control in the entrustment agreement signed between the Government and WKCDA (Part (a) of and Appendix I to LC Paper No. CB (2)1585/15-16(01)(See **Annex 9**)). The contracts signed between WKCDA and their contractors also have provisions stipulating the risk sharing and responsibility between WKCDA and their contractors.

November 2017

WKCD Integrated Basement in Zone 3B – B1 Level Plan (Protection Works for Airport Express Tunnels)

西九文化區綜合地庫3B區 -地庫第一層平面圖 (機場快綫隧道保護工程)

Annex 1
附件一



Long span beam of proposed protection works for Airport Express Tunnels
擬議機場快綫隧道保護工程的長跨樑

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION

OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS

FOR WEST KOWLOON CULTURAL DISTRICT, HONG KONG

Appendix A

Traffic Impact Assessment

WEST KOWLOON CULTURAL DISTRICT

TRAFFIC IMPACT ASSESSMENT

IDENTIFICATION TABLE	
Client/Project owner	West Kowloon Cultural District Authority
Project	West Kowloon Cultural District – S16 Application
Study	Traffic Impact Assessment
Type of document	Final Report
Date	16/1/2015
File name	TIA report (ver_14)
Reference number	I:\2815601 revised s16\report\tia 20150116\tia report (ver_14).doc

APPROVAL						
Version	**Name**		**Position**	**Signature**	**Date**	**Modifications**
2	Author	Steven Ho	Divisional Director		16/1/2015	
	Checked by	Francis Sootoo	Director		16/1/2015	
	Approved by	Francis Sootoo	Director		16/1/2015	

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1. INTRODUCTION

1.1 Background

1.1.1 In year 2009, the West Kowloon Cultural District Authority (WKCDA), a statutory body of the Government of the Hong Kong Special Administrative Region (HKSAR) appointed Consultants to provide professional services with respect to assisting WKCDA to provide a Development Plan (DP) for the West Kowloon Cultural District (WKCD).

1.1.2 The DP, after consideration by the Town Planning Board, was approved by the Chief Executive in Council in 2013. Under the DP Study, the approved overall GFA of WKCD is 740,350m^2. For better land utilization, the plot ratio of WKCD is proposed to be increased. The overall GFA of WKCD would be increased by 15% to 851,400m^2.

1.1.3 The purpose of this Traffic Impact Assessment (TIA) report is to assess the traffic impacts (due to 15% GFA increased) in support of the minor relaxation of development restrictions stipulated in the DP.

1.2 Structure of This Technical Report

1.2.1 Following this introductory chapter, this report has the following contents:

- **Chapter 2** – Planning Context: describes the regional context of WKCD and its relationship with the adjacent areas of South Kowloon and the major sites in the West Kowloon Reclamation Area (WKRA).
- **Chapter 3** – Transport Context: provides an overview of the role of the WKRA as a gateway and hub for Mainland travel to Hong Kong and the Harbour Area; and summarizes the railway, public transport and road network development plans for the WKRA and Territory-wide.
- **Chapter 4** – West Kowloon Cultural District: provides a summary of the updated development parameters of WKCD on the Current Scheme (i.e. 15% increase in GFA). The internal traffic and transport facilities, including vehicular access points, circulation system, car park and servicing facilities would be discussed.
- **Chapter 5** – Operational Traffic Impact Assessments: presents the WKRA traffic forecasts for the Reference Case of the 2 key operation design years: 2020 and 2031 and assesses the traffic impact of the 2-phase occupation of the proposed development scheme based on the longer term road network requirements put forward for WKRA in relation to WKCD.
- **Chapter 6** – Construction Traffic Assessments: assesses the traffic impact during construction of WKCD at the two critical construction stages: Batch 1 (2015 & 2020) and Batches 2+3 (2031).
- **Chapter 7** – Public Transport Facility Planning: formulates public transport plan for the WKCD that is integrated with the railway and public transport network in South Kowloon.
- **Chapter 8** – Pedestrians: discusses the pedestrian network and connections to neighbouring area.
- **Chapter 9** – Summary: provides a summary of the car parking & L/UL provisions and the operation/construction traffic impact assessment under the Current Scheme.

2. PLANNING CONTEXT

2.1 Regional Context

2.1.1 The overall WKRA was reclaimed between 1990. The 40ha WKCD is located on the southern portion, which was originally planned to be extended to Kowloon Point (see **Figure 2.1**).

2.1.2 The WKRA will be the location of strategic land uses which have international, regional and territory-wide functions and therefore require a full hierarchy of transport facilities. The Airport Express Line (AEL) and Cross Boundary Coach Terminus (CBCT) at Kowloon Station (KOW), the China Ferry Terminal (CFT), the Austin Station (AUS) and the West Kowloon Terminus (WKT) serve overseas and Mainland travellers who will experience the WKRA as their arrival point in the city, which will give them their first impression of Hong Kong.

2.1.3 The WKRA adjoins the densely developed Yaumatei, Jordan and Tsim Sha Tsui, which are being redeveloped and rejuvenated and form important residential, commercial, entertainment and tourism areas. The development grain and associated road network hierarchy of these long established areas are much finer than that planned for WKRA. The integration and interconnection in planning, functional and transport terms is an important aspect of the transport planning for the WKRA especially for pedestrians in order to create a seamless extension from old to new areas.

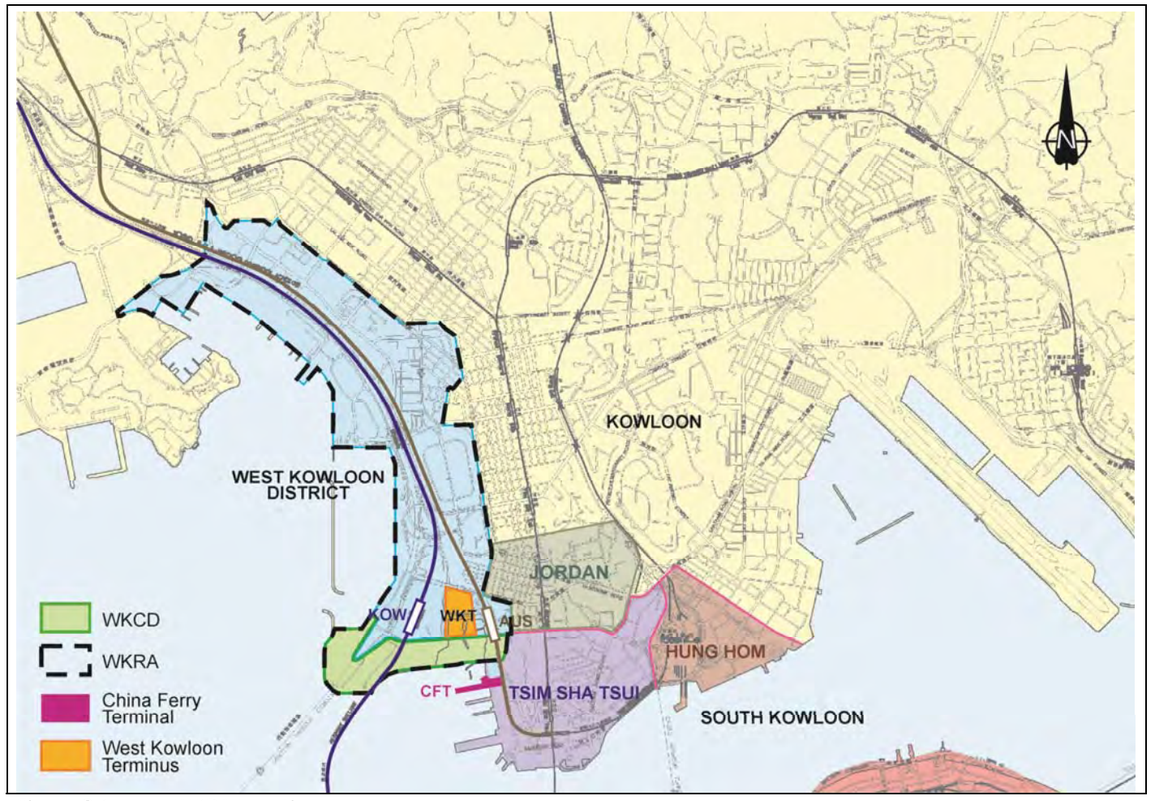


Figure 2.1 WKRA Location

2.2 West Kowloon Reclamation Area (WKRA)

2.2.1 WKRA (area bounded by Jordan Road, Canton Road and Austin Road) comprises four major development zones (see **Figure 2.2**):

- West Kowloon Cultural District (WKCD)
- West Kowloon Terminus (WKT)
- Kowloon Station and Union Square Development (KUD)
- Austin Station and Development (AUS)

2.2.2 Based on 2006-based Territorial Population & Employment Data Matrices, the future development schedules for the WKRA are summarized in **Tables 2.1** to **2.3**. The WKRA will accommodate a forecast 58,000 population and 39,000 employment places, nearly all of which will be located within 800m of WKCD (see **Figure 2.3**).

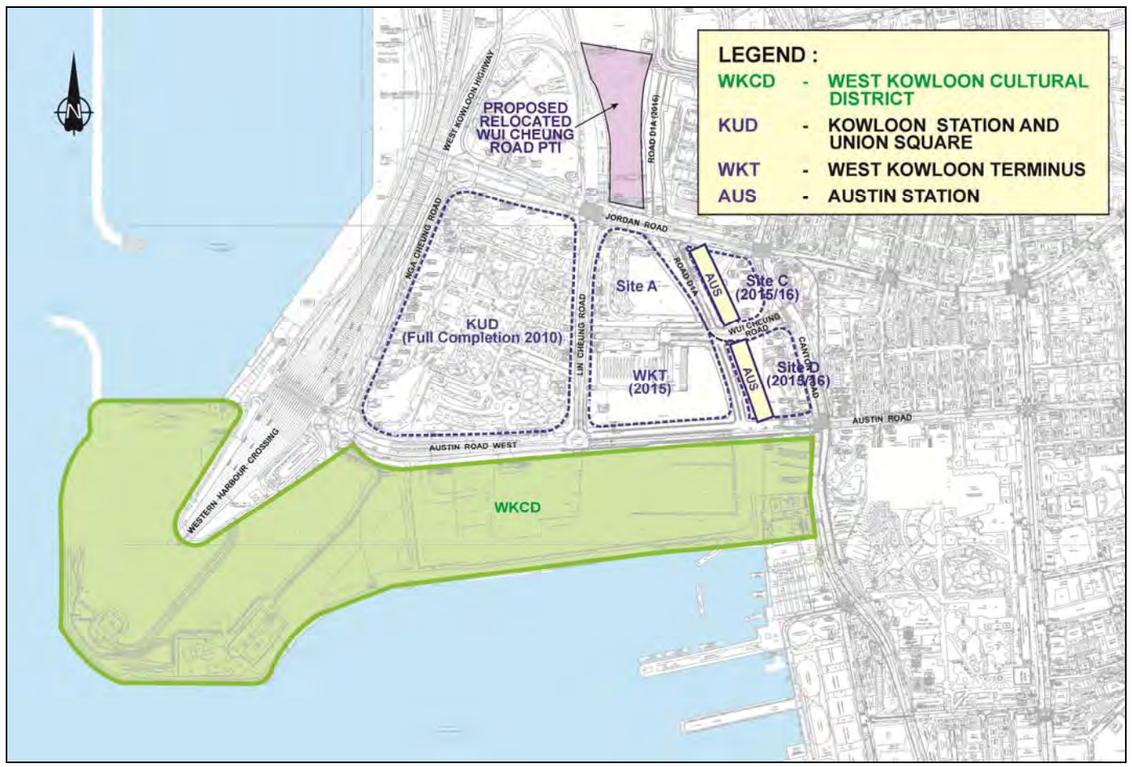


Figure 2.2WKRA Development Sites

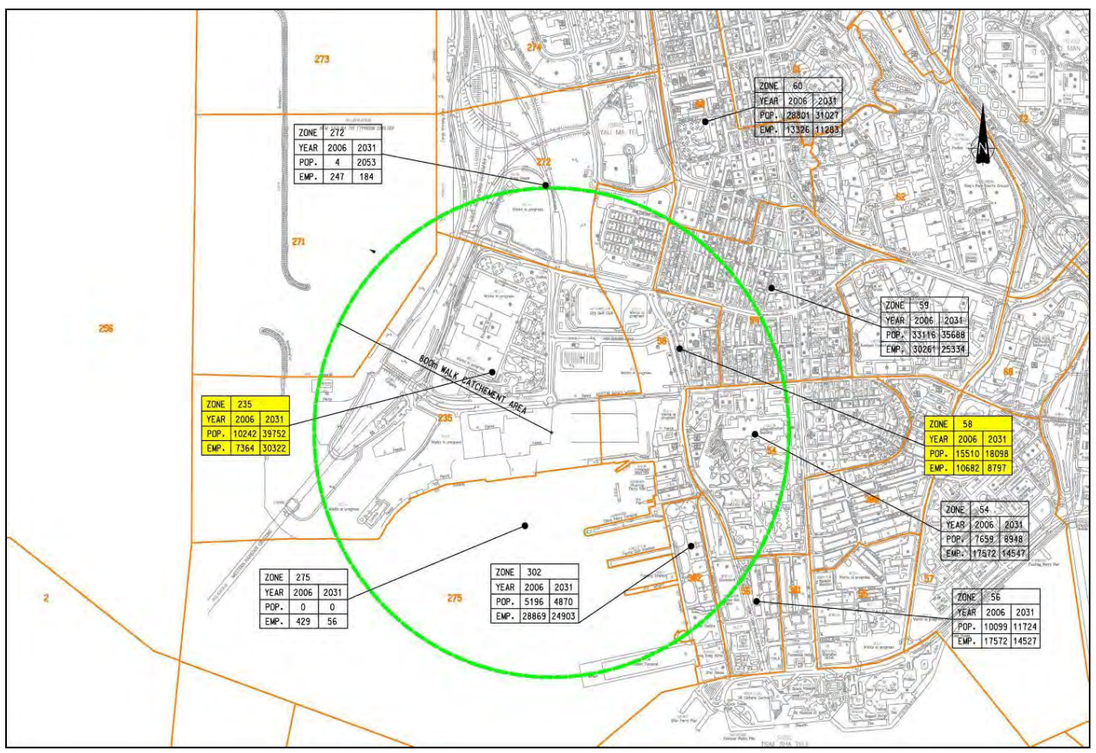


Figure 2.3 District Planning Data

2.3 West Kowloon Cultural District (WKCD)

2.3.1 In addition to the primary focus of arts and cultural facilities and activities, residential, office, and retail developments will be located at WKCD. The planning schedule for the WKCD is discussed in more detail in **Chapter 4**.

2.3.2 The entertainment and event facilities will generate large flows of people and vehicles in the evenings and at weekends and will need specific planning. The volumes through the working day will be more modest and include large numbers of pedestrians visiting the sites and participating in activities.

Table 2.1 Development Context of WKCD

Total GFA (in m^2)	Development Mix (GFA in m^2)						
	Core Arts & Cultural Facilities	Other Arts & Cultural Facilities	GIC	Residential	Commercial		
					Retail, Dining & Entertainment	Office	Hotel
851,400	252,240 (30%)	85,098 (1) (10%)	9,080 (1%)	170,280 (20%)	138,362 (16%)	131,940 (15%)	64,400 (8%)

Remark: (1) includes 14,300m^2 Arts Education Facilities, 31,460m^2 Hostel and 39,338m^2 other remaining OACF. As mentioned in below section 5.4, all OACF are assumed as office in the current TIA for conservative approach.

2.4 West Kowloon Terminus (WKT)

2.4.1 An integrated railway and property development is planned for the WKT site. The plot ratio, mix and disposition have been studied by MTRC and approved by TPB. The latest planning assumptions include the following land uses (GFA): office of 264,600m^2; and retail of 29,400m^2. The retail areas in WKT will be linked by grade separated pedestrian connections to Elements retail zone at Kowloon Station Development (KUD) and to AUS station, forming an extensive and continuous circulation system. The office towers and principal retail entrances will be served by driveways separated from the WKT facilities to avoid cross interference between WKT traffic and development traffic.

2.5 Kowloon Station Development (KUD)

2.5.1 The airspace development over Kowloon Station includes residential, retail, office, hotel, and service apartment land-uses (see **Table 2.2**). The site was developed in conjunction with the AEL and Tung Chung Line (TCL) stations. At present KUD is an isolated island of urban development. The WKT will bridge and connect KUD to the urban areas to the east, and WKCD to the south creating a continuous corridor for people movement. The Elements shopping centre generates large vehicular flows at weekends and the ICC has generated a major increase in commuter traffic.

Table 2.2 Development Context of Kowloon Station Properties (KUD)

	Residential	Retail	Office	Hotel	Serviced Apartment
GFA (in m^2)	608,003	82,417	231,474	167,420	
Unit (in Flat/Room)	5,809	---	---	996	606

Source:Final Report, Sep 2009, TD 54/2008 - West Kowloon Reclamation Development Traffic Study.

2.6 Austin Station Development (AUS)

2.6.1 Sites C and D (AUS) are planned to be residential zones. The development schedules of Sites C and D are summarised in **Table 2.3**. The residential GFA is planned for a total of 1,266 residential flats. It is expected that there will be parking spaces of about 450 spaces. The road access to the sites will be via Wui Cheung Road and Austin Road West (AURW). The sites will be linked to the western side of Canton Road (CAR) by subways, footbridges and at grade crossings.

Table 2.3 Development Context of Austin Station Properties (AUS)

Site	Residential (in units)
C	575
D	691
Total	1,266

Source:2011 GBP submission for AUS Sites C & D

3. TRANSPORT CONTEXT

3.1 WKRA Gateway and Intermodal Hub

3.1.1 The WKRA will become the major gateway to Hong Kong and the harbour area (See **Figure 3.1**).

- Kowloon Station: AEL currently serving passengers of Hong Kong International Airport (HKIA) and TCL currently serving 26,000 domestic passengers per day;
- China Ferry Terminal: currently serving 30,000 ferry passengers per day for Mainland and Macau travel;
- Austin Station: EWL (West Rail) services linking to the East Rail Boundary train services to Lo Wu and Lok Ma Chau at Hung Hom and in the longer term East Kowloon via the future Shatin-Central Link (SCL);
- West Kowloon Terminus: Long Haul and Pearl River Delta (PRD) shuttle High Speed Rail services serving up to 200,000 passengers per day in the long term.

3.1.2 These international and cross boundary facilities will require seamless transfer to domestic rail and a wide range of road-based modes and pedestrian links, including to WKCD which will be the most immediately accessible destination.

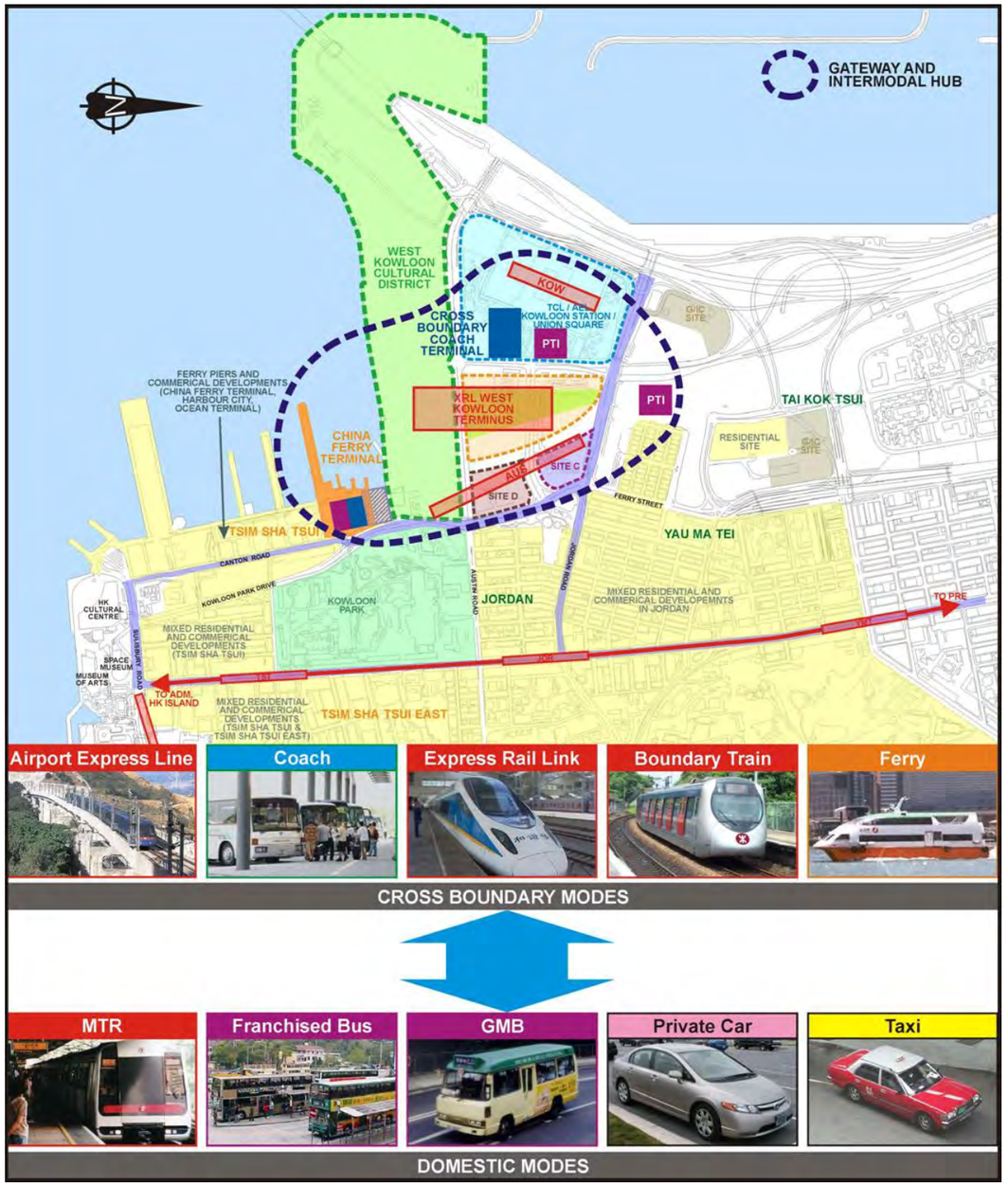


Figure 3.1 Territory Gateway and Intermodal Hub

3.2 Railway Network Development

3.2.1 Planned railway developments for Hong Kong are illustrated in **Figure 3.2** and the planned opening years are listed in **Table 3.1**. The existing KOW on the AEL and TCL already provides connections to Hong Kong Island, West Kowloon, Lantau and the airport. The WKRA has been served by West Rail since 2009 when the Kowloon Southern Link (KSL) was completed providing connections to the East Rail corridor. An underground station is provided at AUS to the immediate north of WKCD. The East-West Line will link with West Rail and extend the direct rail catchment into East Kowloon.

Table 3.1 Rail Network Development Programme – Planning Assumptions

By 2011	Kowloon Southern Link (KSL), opened in 2009
	Tseung Kwan O South Station (TKS), opened in 2009
By 2016	West Island Line, open in 2014
	Express Rail Link (XRL), open in 2015
	South Island Line (East) (SIL (E)), open in 2015
	Kwun Tong Line Extension (KTE), open in 2015
By 2021	East West Line (EWL), open in 2018
	North South Line (NSL), open in 2020
Under review by RDS2U Study	Northern Link (NOL)
	South Island Line (West) (SIL (W))
	North Hong Kong Island Line (NIL)

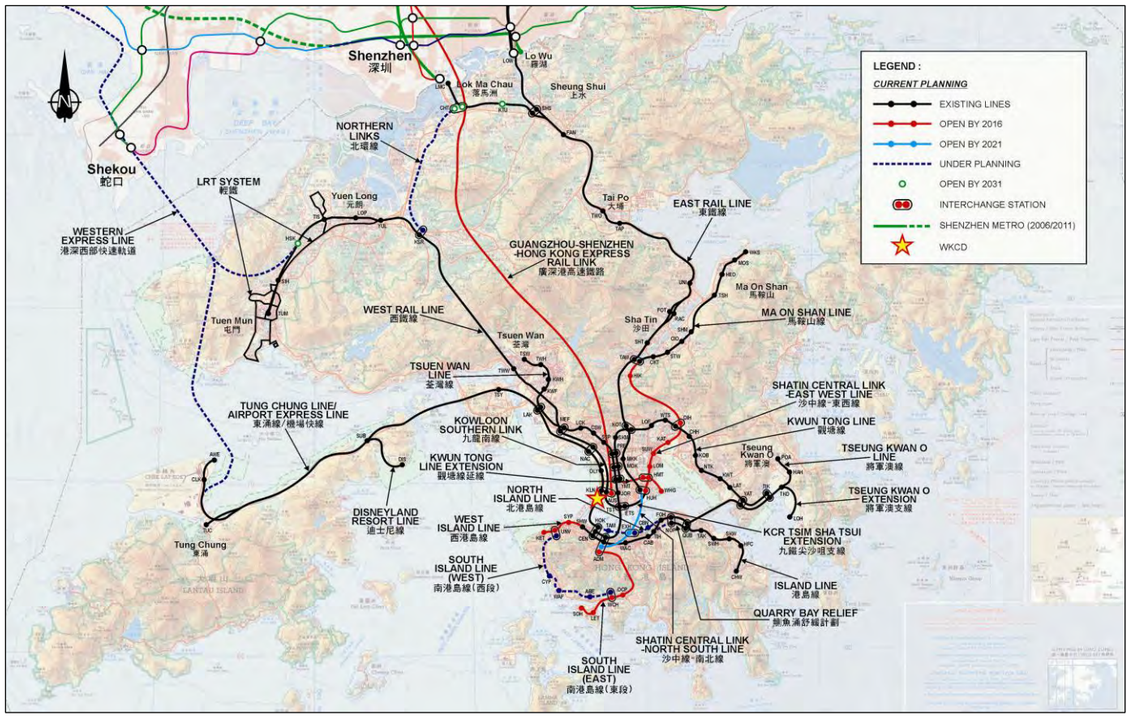


Figure 3.2 Railway Network Development

3.3 Strategic Road Network Development

3.3.1 The strategic road plans for Hong Kong are illustrated in **Figure 3.3**. The key routes of direct relevance to the WKRA are as follows:

- Route 8: Shatin – North West Kowloon (opened in 2009): dual 3 lane trunk road creating a new corridor between northeast New Territories and West Kowloon and cross harbour.
- Central Kowloon Route (CKR): Dual 2 lane tunnel route linking the West Kowloon Highway (WKH)/Western Harbour Tunnel (WHT) with South East Kowloon and via Route T2 with East Kowloon planned for 2021.
- Central and Wanchai Bypass (CWB): Dual 3 lane route relieving the congested east – west routes on Hong Kong Island planned for 2017.

3.3.2 The CKR and CWB will complete a strategic network in the harbour area offering multiple route choices across the harbour. In combination with Route 8, this should result in additional usage of the WHT and relief of the surface street system across Central Kowloon. The external traffic patterns will change for WKRA with an increase in traffic to/from the WHT/WKH/CKR direction via Lin Cheung Road (LCR) and Nga Cheung Road (NGR).

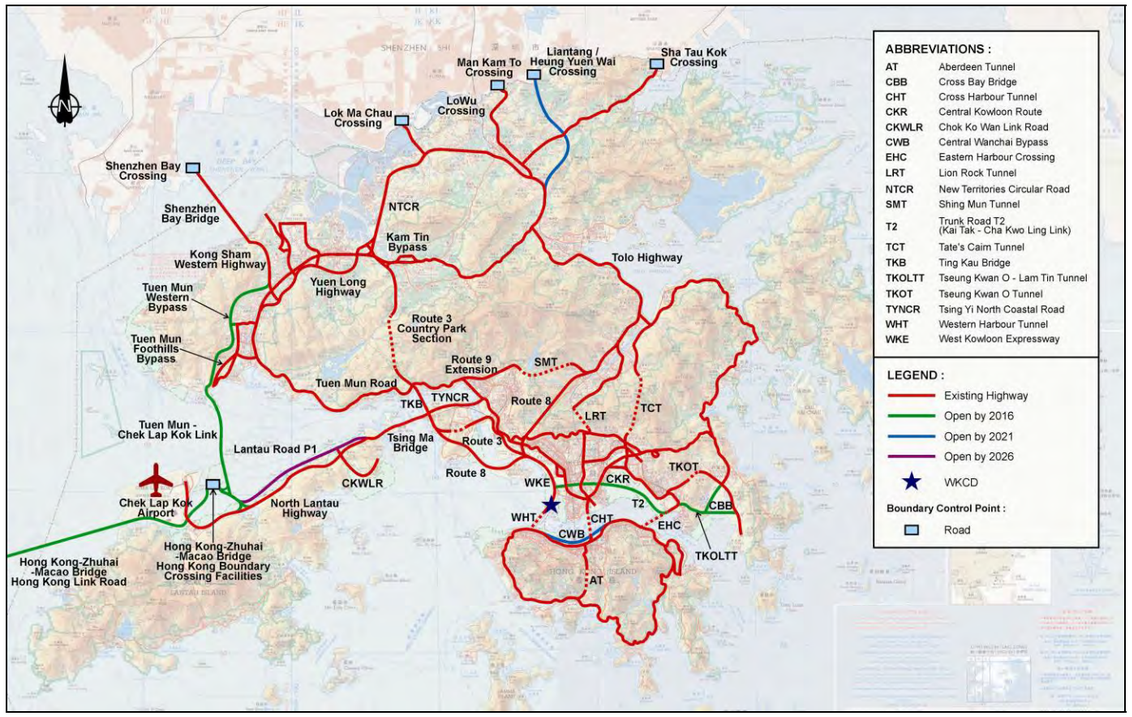


Figure 3.3 Strategic Highway Network Development

3.4 Traffic Characteristics in West Kowloon Reclamation Area

3.4.1 WKRA (area bounded by Jordan Road, Canton Road and Austin Road) will accommodate three main types of traffic streams: (i) through traffic; (ii) inter district traffic and (iii) local circulation. Today, the through traffic comprises the main flow (about 80%) and is largely traffic between Tsim Sha Tsui/Jordan and WKH/LCR/WHT. Queues form in the peak periods along WCR/CAR, largely due to the limited capacity of the street system in Jordan and Tsim Sha Tsui. Traffic to/from WKRA to adjacent districts is limited at present because only KOW and KUD have been developed. WKCD, WKT, Sites C and D will form a huge increment in development and will generate large traffic flows to adjacent districts and territory-wide.

3.5 Transport Network Development by WKT and WKRDTS

3.5.1 A core objective for the traffic planning studies of West Kowloon Reclamation Development Traffic Study (WKRDTS) and WKT undertaken by TD and MTRC, respectively is to develop a hierarchical road network which segregates through district and local traffic streams. The transport plan devised from WKRDTS has been revised and evolved in conjunction with the ongoing detailed planning of WKT. The latest committed/planned road network in WKRA (area bounded by Jordan Road, Canton Road an Austin Road) includes the road schemes tabulated in **Table 3.2** and illustrated in **Figure 3.4**. The planned/proposed improved layouts and method of control of the affected junctions tabled below are enclosed in **Annex A**.

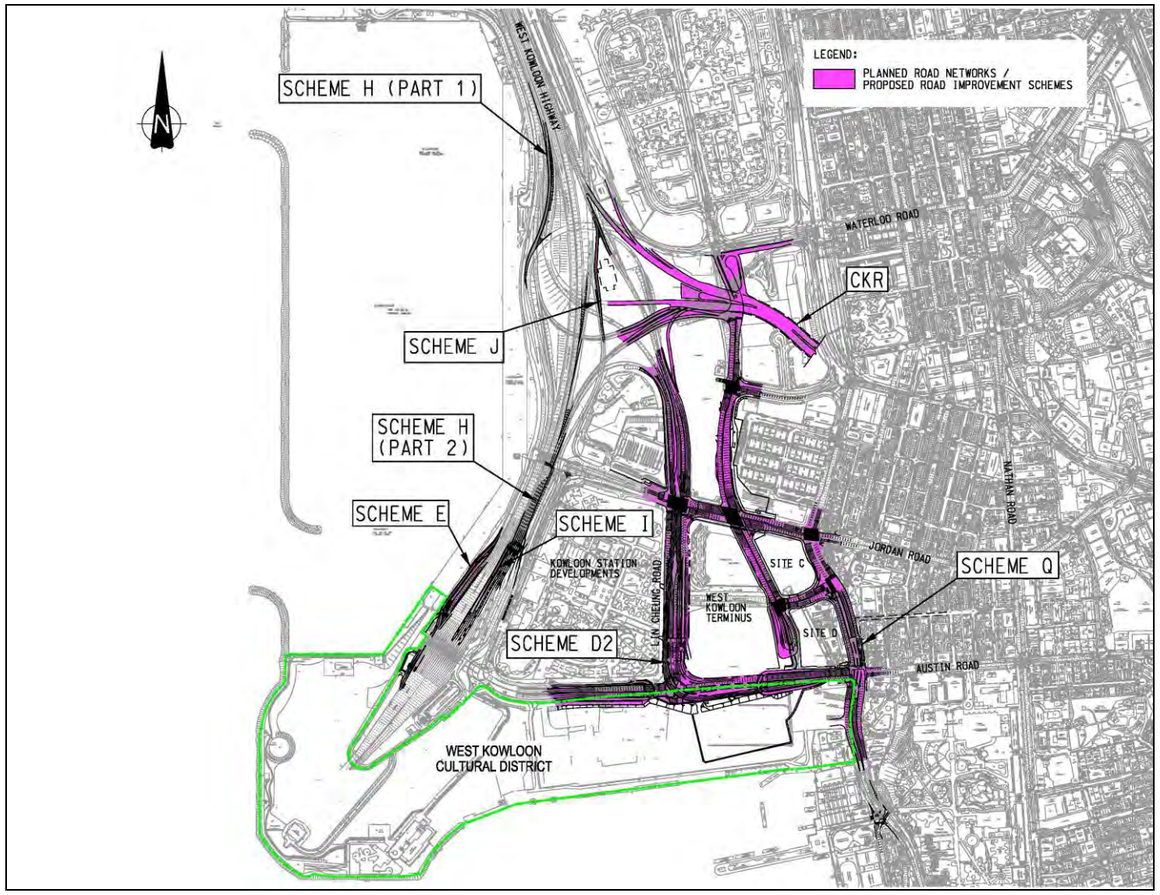


Figure 3.4 Planned/Committed Traffic Schemes in WKRA

Table 3.2 Road Network Development Programme – Planning Assumptions

Traffic Scheme		In Place by
Core Scheme & Additional Scheme (developed by WKRDTS)		
D2	Lin Cheung Road-Austin Road West Underpass	2015
E	New road link and widening of existing bus-only ramp from Western Harbour Tunnel Northbound to elevated Jordan Road Eastbound	completed
H (Part 1)	New connection from Hoi Po Road to West Kowloon Highway Northbound	2015
H (Part 2)	Upgrading Nga Cheung Road	After 2023
I	New link road from elevated Nga Cheung Road to Western Harbour Tunnel	2015
J	West Kowloon Highway southbound link to at-grade Nga Cheung Road	2015
Q	Canton Road Underpass (Ultimate)	2020 (tentative) and subject to the relocation of TST Fire Station
Q	Canton Road /Austin Road /Austin Road West Road Widening Scheme (Interim)	2015
Junction Improvement Scheme (developed by WKRDTS) (1)		
J8	Jordan Road/Nga Cheung Road (Elevated)	2015
J11	Lin Cheung Road/Jordan Road (Part of Scheme D2)	2015
J12	Canton Road/Jordan Road/Ferry Street	2015
J15	Canton Road/Wui Cheung Road	2014/2015
J17	Lin Cheung Road/Austin Road West (Part of Scheme D2)	2015
J18	Canton Road/Austin Road/Austin Road West (Widening Scheme)	2015
J18	Canton Road/Austin Road/Austin Road West (Scheme Q)	2020 (tentative) and subject to the relocation of TST Fire station
J39	Road D1A(N)/Yan Cheung Road/Hoi Wang Road	2016
J40	Road D1A(N)/Jordan Road/Road D1A(S)	2015
Traffic Scheme (developed by others)		
--	Central Kowloon Route connecting to the Yau Ma Tei Interchange	2021
J14	Formation of Road D1A(N) and Road D1A(S), and Dualling of Wui Man Road	2015
J41	Austin Road West/Wui Man Road (Part of Scheme D2)	2015

Remark: (1) WKRDTS = West Kowloon Reclamation Development Traffic Study

3.6 Road Based Public Transport

3.6.1 The WKRA is well-served by public transport, with the following services and facilities in close proximity (see Figure 3.5 & Figure 3.6). The Jordan PTI (previously at Wui Cheung Road has been temporarily relocated to To Wah Road during the construction of WKT) is to be permanently relocated to Site B immediately north of Jordan Road opposite to WKT (Site A). The permanent PTI will be commissioned in conjunction with XRL/WKT in 2015. The principal elements of the road-based public transport are as follows:

Franchised Bus

- Kowloon Station/Union Square PTI - 8, 11, 110, 203E, 215X, 259B, 261B, 270A, 281A and 296D
- Jordan PTI (permanently at Site B) - 36B, 42A, 46, 60X, 63X, 68X, 69X, 81, 95
- China Ferry Terminal PTI – 3C, 14, 238X, 238P, 238S and 270A
- Cross-Boundary Coach Terminus at Kowloon Station
- Roadside bus stops - along CAR, JOR and AURW
- Bus-Bus interchange (BBI) at WHT Toll Plaza

Green Mini Bus

- Kowloon Station/Union Square PTI - 26, 74, 74S, 77M
- Roadside GMB stops - along CAR, JOR, AURW and Road D1

Taxi

- Taxi stands at KOW, CFT PTI and WKT

Non-franchised Bus

- AEL shuttles at KOW
- XBCT at CFT PTI
- XBCT at KOW

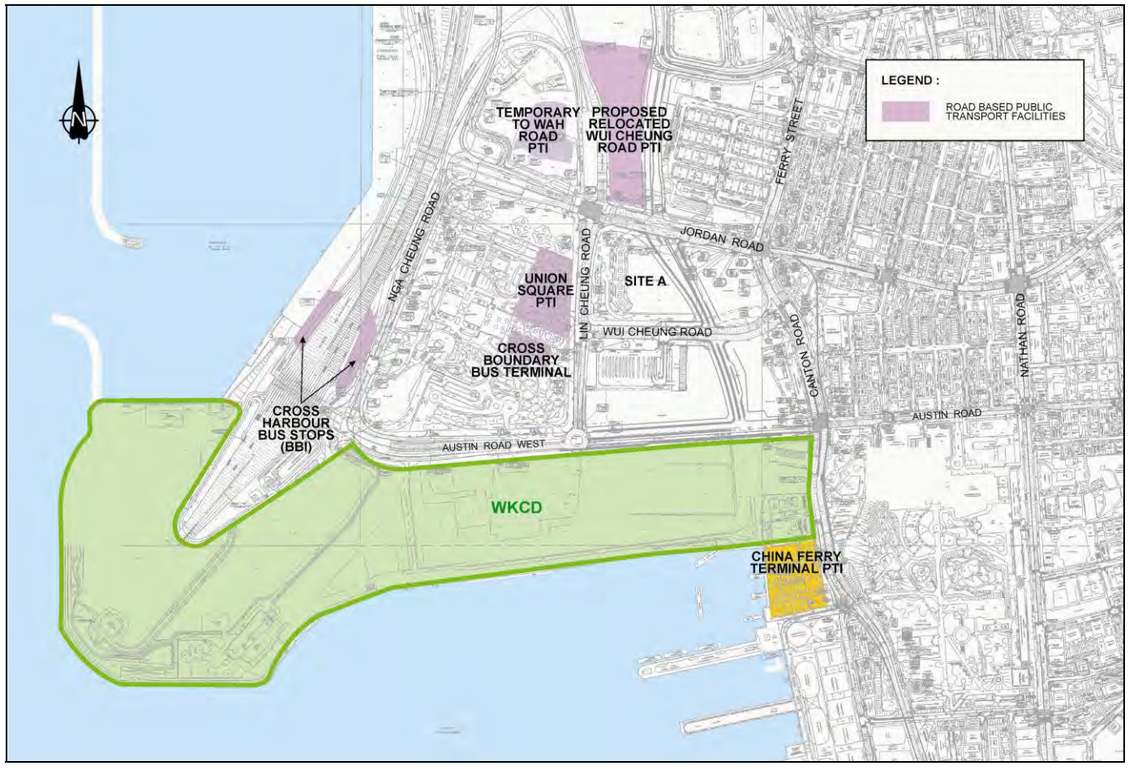


Figure 3.5 Surrounding Road Based Public Transport Facilities



Figure 3.6 Details of Bus/GMB Routes

3.6.2 The details of the bus/GMB services at the 3 current PTI are presented on **Table 3.3**.

Table 3.3 Details of Bus/GMB Services at Existing PTIs

PTI	Mode	Route No.	Destination	Frequency (mins)
KOW PTI	Bus	8	KOW PTI <-> Star Ferry	8
	Bus	11	KOW PTI <-> Diamond Hill Station	8
	Bus	110	KOW PTI <-> Shau Kei Wan	15
	Bus	203E	KOW PTI <-> Choi Hung	10
	Bus	215X	KOW PTI <-> Lam Tin (Kwong Tin Estate)	4
	Bus	259B	KOW PTI <-> Tuen Mun Pier Head	0720, 0733, 0745, 1740, 1800, 1820
	Bus	261B	KOW PTI <-> Sam Shing Bus Terminus	0735
	Bus	270A	KOW PTI <-> Sheung Shui	9
	Bus	281A	KOW PTI <-> Kwong Yuen	5
	Bus	296D	KOW PTI <-> Sheung Tak	10
	GMB	26	KOW PTI <-> Tokwawan	4
	GMB	74	KOW PTI <-> Mongkok	6
	GMB	77M	KOW PTI <-> TST East	10
Temporary Jordan PTI (To Wah Road)	Bus	36B	Temporary Jordan PTI <-> Lei Muk Shue Public Transport Interchange	9
	Bus	42A	Temporary Jordan PTI <-> Cheung Hang	4
	Bus	46	Temporary Jordan PTI <-> Lai Yiu	15
	Bus	60X	Temporary Jordan PTI <-> Tuen Mun Central	4
	Bus	63X	Temporary Jordan PTI <-> Hung Shui Kiu (Tin Sam Road)	15
	Bus	68X	Temporary Jordan PTI <-> Hung Shi Kiu (Hung Yuen Road)	6
	Bus	69X	Temporary Jordan PTI <-> Tin Shui Estate	10
	Bus	81	Temporary Jordan PTI <-> Wo Che	6
	Bus	95	Temporary Jordan PTI <-> Tsui Lam	12
CFT PTI	Bus	3C	CFT PTI <-> Tsz Wan Shan (North)	9
	Bus	14	CFT PTI <-> Yau Tong	10
	Bus	238P, 238X	CFT PTI <-> Riviera Gardens	9
	Bus	238S	CFT PTI <-> Riviera Gardens	0805
	Bus	270A (special)	CFT PTI <-> Sheung Shui Bus Terminus	0640, 0700, 0720, 0740, 0800, 0820 (to CFT PTI) 1800, 1830 (to Sheung Shui)

3.7 Future Pedestrian Network

3.7.1 Upon completion of the WKT, the pedestrian network in WKRA (area bounded by Jordan Road, Canton Road an Austin Road), in particular those interconnecting KOW, WKT and AUS, will be comprehensive and multi-levelled (see **Figure 3.7**).

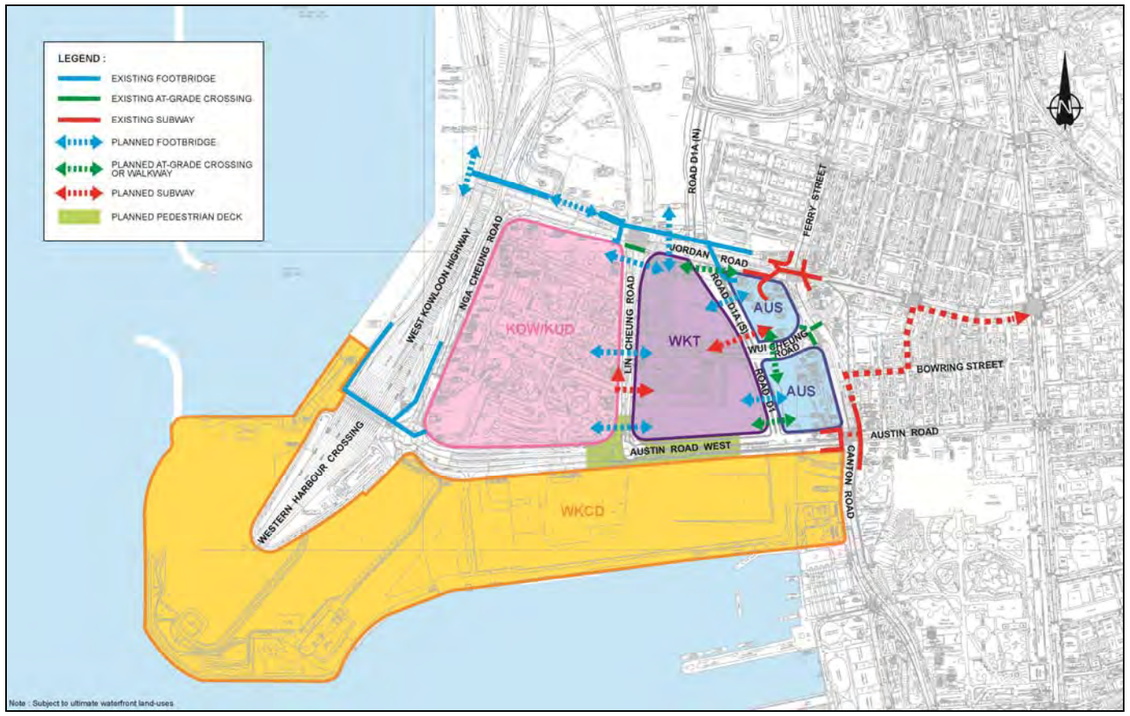


Figure 3.7 Pedestrian Facilities in WKRA

3.7.2 At footbridge level, all key buildings in the vicinity of KUD, WKT and AUS will be fully interlinked:

- 3 planned footbridges between KUD and WKT at retail level (approx. 13-14mPD).
- 2 planned footbridges between WKT and AUS.
- 2 existing footbridges connecting KUD and AUS to the existing Jordan Road footbridge system north of Jordan Road.
- 1 new connection from WKT to FB14 will be established providing all-weather pedestrian linkage to the future Jordan PTI.
- 1 existing footbridge linking the western end of Austin Road West with the WHT bus stops.

3.7.3 At ground level:

- A planned mega pedestrian deck system will be created to link up WKT, KUD and WKCD, creating a clear and pedestrian friendly/mobility unrestricted walking and leisure environment, and will form the central public focal point with district and territorial significance.
- A planned at grade traffic free passageway at southern end cul-de-sac of Wui Man Road between AUS and WKT.
- Existing and planned at grade pedestrian crossings at junction of Canton Road/Wui Cheung Road, across Wui Cheung Road at junction of Wui Cheung Road/Wui Man Road and across Road D1A(S) at junction of Road D1A(S)/Jordan Road.

- Footpath on both sides of each public road.

3.7.4 At underground level:

- 1 planned subway over the Lin Cheung Road – Austin Road Underpass connecting KOW street level and WKT concourse level.
- 1 planned subway across Wui Man Road connecting WKT arrival hall and AUS concourse level.
- 2 existing subways across Canton Road at the junctions with Jordan Road and Austin Road.

3.7.5 Further details of the future proposed footbridges/subways for WKCD are presented in Chapter 8.

3.8 Ferry Services

3.8.1 At the present time there are no ferry routes serving WKRA following closure of the Jordan Road ferry terminal in the 1990s. The Star Ferry services at Kowloon Point are the nearest ferry routes.

4. WEST KOWLOON CULTURAL DISTRICT

4.1 Introduction

4.1.1 This chapter provides a summary of the updated planning parameters and transport facilities for WKCD. **Table 4.1** gives the overall development context of WKCD. The previous approved planning parameters extracted from DP are also shown in **Table 4.1** for comparison purpose.

Table 4.1 Development Context of WKCD

	Total GFA (in m^2)	Development Mix (GFA in m^2)						
		Core Arts & Cultural Facilities	Other Arts & Cultural Facilities	GIC	Residential	Commercial		
						Retail, Dining & Entertainment	Office	Hotel
Approved	740,350	252,240 (34%)	40,098 (5%)	7,900 (1%)	148,070 (20%)	121,312 (16%)	114,730 (15%)	56,000 (8%)
Current	851,400	252,240 (30%)	85,098 (10%)	9,080 (1%)	170,280 (20%)	138,362 (16%)	131,940 (15%)	64,400 (8%)

4.2 Development Schedule and Phasing

4.2.1 The updated development schedule of WKCD in the Current Scheme is summarised in **Table 4.2** below.

4.2.2 Based on the proposed development schedule of WKCD, **Table 4.3** summarises the GFA of CACF, OACF, government, institution and community (GIC) facilities, RDE, Office, Residential and Hotel.

Table 4.2 Proposed Development Schedule of WKCD

Batch	Operation Year	Land Uses	Seating Capacity (seats)	GFA (m^2)	No. of Units
Batch 1	Before 2020	Xiqu Centre	1,700	20,790	-
		Outdoor Amphitheatre	5,000[(1)]	-	-
		Lyric Theatre	1,200	12,710	-
		M+	-	61,950	-
		Free Space (with Music Box)	600	4,070	-
		Others Arts & Cultural Facilities (OACF)	-	41,847	-
		GIC Facilities	-	3,400	-
		Retail, Pining and Entertainment (RDE)	-	45,108	-
		Office	-	38,000	-
		Residential	-	12,695	209
		Batch 1 total	**8,500**	**240,570**	**209**
Batches 2+3	After 2020	Medium Theatre I	600	7,715	-
		Music Centre (Concert Hall, Recital Hall and Education Facility)	2,100	17,420	-
		Musical Theatre	2,000	16,605	-
		Mega Performance Venue	18,000 [(2)]	64,545	-
		Exhibition Centre	-	12,500	-
		Medium Theatre II /Centre for Contemporary Performance (3 Blackboxes and Education Facility)	1,400	14,075	-
		Great Theatre	1,600	19,860	-
		OACF	-	43,251	-
		GIC	-	5,680	-
		RDE	-	93,254	-
		Office	-	93,940	-
		Residential	-	157,584	2,598
		Hotel	-	64,400	1,073
		Batches 2+3 Total	**25,700**	**610,830**	**3,671**
		Batches 1+2+3 Total	**34,200**	**851,400**	**3,880**

Remarks: (1) Outdoor Theatre (500 seats + 4500 standing area).
(2) Mega Performance Venue (15,000 seats + 3,000 standing area).

Table 4.3 Summary of Proposed Development Schedule of WKCD

Batch	Land Uses	Seating Capacity (seats)	GFA (m^2)	No. of Units
Batch 1	CACF	8,500	99,520	-
	OACF	-	41,847	-
	GIC	-	3,400	-
	RDE	-	45,108	-
	Office	-	38,000	-
	Residential	-	12,695	209
	Hotel	-	0	-
Batches 2+3	CACF	25,700	152,720	-
	OACF	-	43,251	-
	GIC	-	5,680	-
	RDE	-	93,254	-
	Office	-	93,940	-
	Residential	-	157,584	2,598
	Hotel	-	64,400	1,073
Batches 1+2+3	CACF	34,200	252,240	-
	OACF	-	85,098	-
	GIC	-	9,080	-
	RDE	-	138,362	-
	Office	-	131,940	-
	Residential	-	170,279	2,807
	Hotel	-	64,400	1,073

4.3 Vehicular Accesses

4.3.1 The proposals maintain connections 1 to 6 put forward to Transport Department in order to provide direct and delay free access to WKCD. An additional access/egress (the 7th access) spanning over the WHT toll booths and connect to the elevated junction of Nga Cheung Road/Austin Road West is put forward to provide a second access for the MPV and EC. Under normal conditions, the link can be used by general traffic. The additional link provides flexibility for event and to enhance the accessibility and robustness of the arrangements including post event traffic dispersal for serving the MPV and second emergency vehicle route. Access 7 connecting with the WKH/WHT is excluded from the technical analysis at this stage, thereby representing a conservative approach. **Table 4.4** summarises the vehicular access points for WKCD (see **Figure 4.1**).

Table 4.4 Vehicular Access Points for WKCD

Access	Name	Location	Type	Junction Type	At Level	Completion Year
1.	Canton Road Access (At-Grade)	Canton Road	Ingress/Egress	Left In/Left Out Priority Junction (see Figure A17 in Annex A)	+4.0mPD	After 2020
2.	East Gate	Austin Road West (opposite to WKT)	Drop-off Lay-by (1)	-	+5.0mPD to +8.3mPD	2018
3.	Lin Cheung Road Access (Underground)	Junction Lin Cheung Road/Austin Road West	Ingress/Egress	All Movements Signalised Junction (see Figure A10 in Annex A)	+0.6mPD	2020-2022
4.	West Gate	Austin Road West (opposite to ICC)	Drop-off Lay-by (1)	-	+7.2mPD	2018
5.	Nga Cheung Road Access (At-Grade)	Junction Nga Cheung Road/Austin Road West (At-Grade)	Ingress/Egress	Roundabout (see Figure A9 in Annex A)	+5.5mPD	2015
6.	Nga Cheung Road Access (Elevated)	Junction Nga Cheung Road/Austin Road West (Elevated)	Ingress/Egress	Roundabout (see Figure A16 in Annex A)	+14.0mPD	After 2020
7.	Austin Road Bridge (Elevated)	Junction Nga Cheung Road/Austin Road (Elevated)	Ingress/Egress	Roundabout (see Figure A16 in Annex A)	+14.0mPD	After 2020

(1) East Gate and West Gate will primarily be used by public transport only (including taxi, coach and franchised buses)

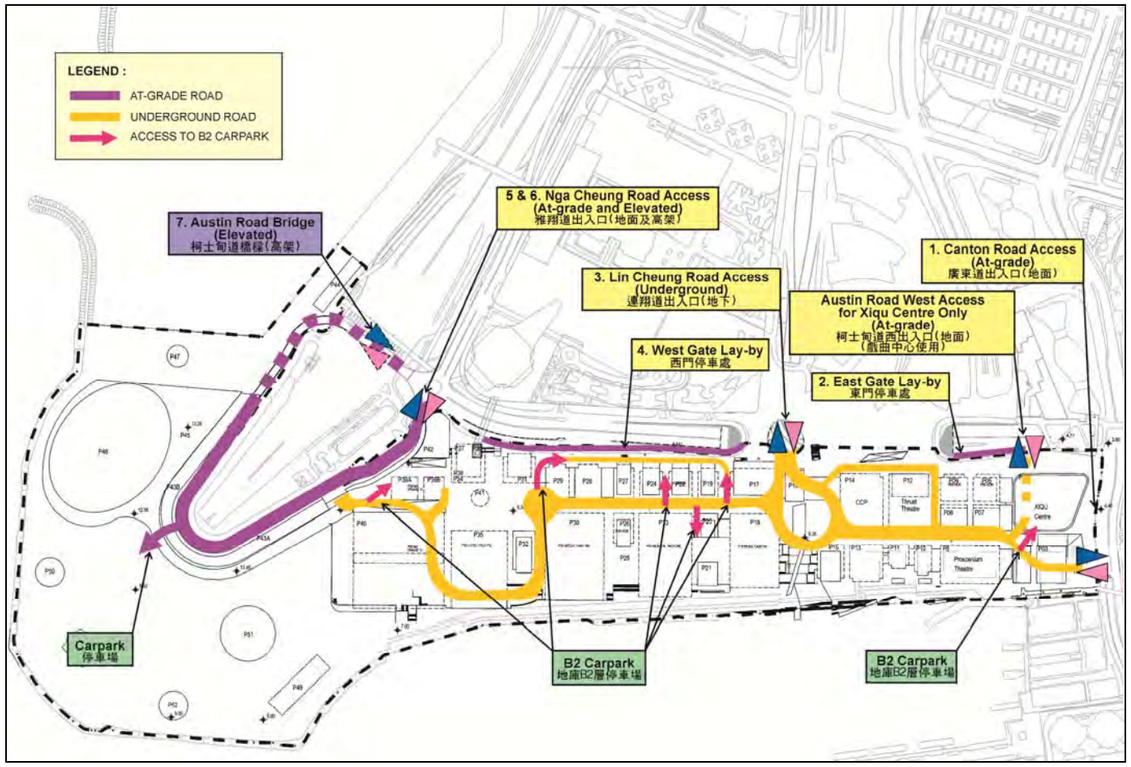


Figure 4.1 Proposed Vehicular Access Points for WKCD

4.3.2 Prior to the relocation of Tsim Sha Tsui Fire Station, the planned Canton Road Access (i.e. Access 1) is blocked by the Fire Station, an interim vehicular access (left in/left out priority junction, see **Figure A18** in **Annex A**) at Austin Road West was introduced to temporarily replace the Canton Road access. This interim access, which is aligned within the site premises of Parcel 01 - Xiqu Centre was subsequently amended as a private building access to serve Xiqu Centre traffic only and would not be a through road connecting with the basement driveway.

4.4 Internal Road System

4.4.1 A core objective for WKCD is to create a people dominated traffic free environment at ground level, extending the concepts put forward by WKRDTS and the WKT design studies. Accordingly surface roads are restricted to the northern perimeter of WKCD and the main east-west distributor road is located underground at Basement 1 level at +0.6mPD.

Internal Road Network - Ultimate

4.4.2 The ground floor, Basement 1 circulation, Basement 2 car park layout plans of the proposed internal road network within WKCD are shown in **Figure 4.2Figure 4.3 and Figure 4.4**respectively.

4.4.3 Referring to **Figure 4.3**, the details of the roads can be defined as follows:

- Section I: The basement road linking up the Canton Road entrance (at level +5mPD) and the central Lin Cheung Road entrance (at level +0.6mPD) is a 10.3m standard wide single 2 lane carriageway. A full highway standard clear headroom of 5.1m is allowed for this road section. Service roads are provided either side to loading/unloading facilities.
  The central Lin Cheung Road entrance (at level +0.6mPD) is designed as a curved free flow road link with 30m inner radius. A bus only link permits buses and other designated vehicles to travel eastbound from Section II (see below) to Section I of the Basement Driveway. The junction is specifically designed such that traffic coming from the underground Lin Cheung Road Access can go into the internal circulation system of WKCD without delay. More importantly this is to avoid vehicles from stopline in front of a roundabout tailing back to the critical Lin Cheung Road/Austin Road West junction.

- Section II: The Basement Driveway (at level +0.6mPD) continues as a 6.75m standard dual 2 lane road east-west to an internal roundabout of 45m in diameter. A full highway standard clear headroom of 5.1m is allowed for this road section. Pick up/drop off laybys are provided along the Basement Driveway. In addition, a service road is also provided and connects to the roundabout and runs along the northern perimeter of the site linking to servicing areas for residential/office and RDE above. The Basement Driveway also provides access to the extensive carpark at Basement 2 (at level -5mPD to -10mPD).

- Section III: The main Driveway routes south and then west beneath and around the Lyric Theatre and M+ sites rising to clear the TCL/AEL tunnels and connect to the Great Park Driveway at level +5mPD. This is a 10.3m standard wide single 2 lane carriageway and a minimum clear headroom of 5.1m will be provided at this road section over the TCL/AEL tunnel. Laybys and servicing accesses are provided along the Driveway serving M+.

- Section IV: The main internal spine road continues as the Great Park Drive at level +5mPD around the perimeter of the WHT tunnel entrance, ultimately connecting to the proposed WHT tunnel plaza Bridge linking back to the Nga Cheung Road/Austin Road West elevated roundabout. This Great Park Drive provide accesses to the servicing zones and carpark of MPV/EC.

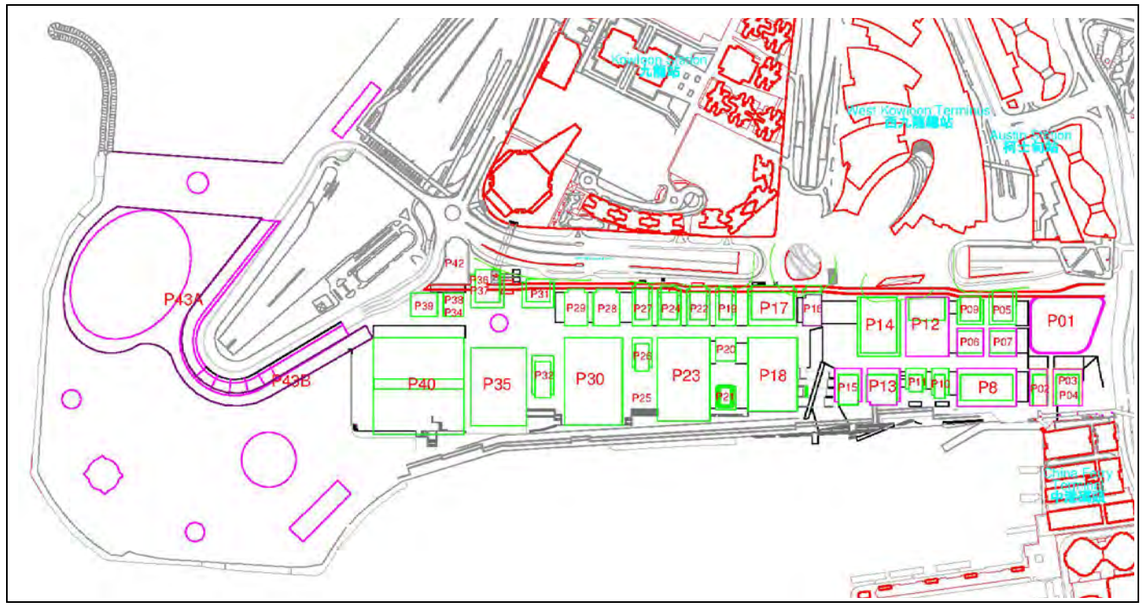


Figure 4.2 Level +9.35mPD Layout Plan – Ground Floor (Ultimate)

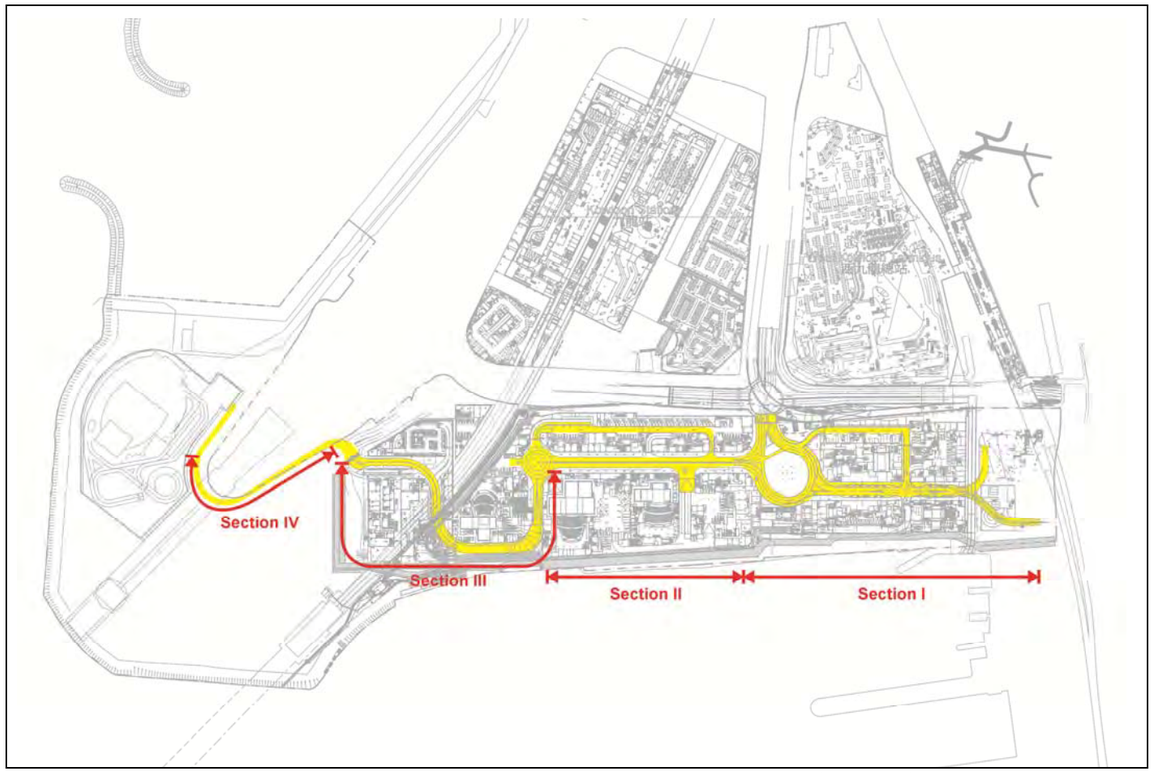


Figure 4.3 Level +0.6mPD to +1.65mPD Layout Plan – Basement 1 Circulation (Ultimate)

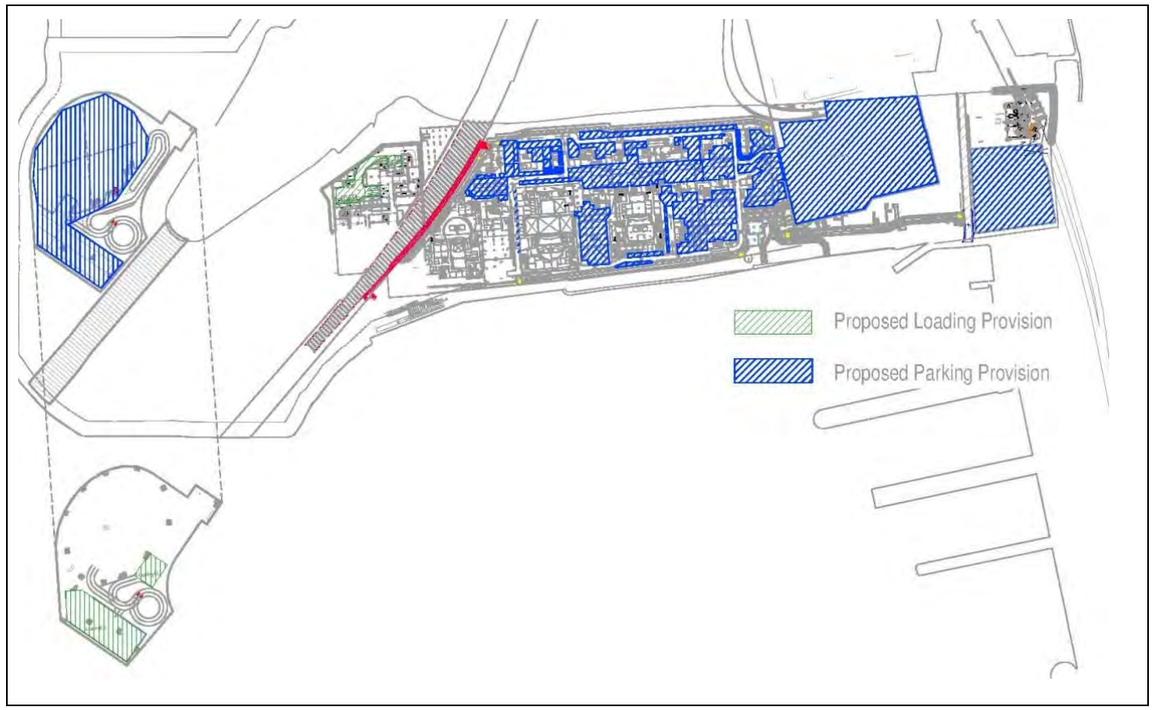


Figure 4.4 Level -5.0mPD to -10mPD Layout Plan – Basement 2 Car Park (Ultimate)

Internal Road Network - Ultimate and Prior to Relocation of Tsim Sha Tsui Fire Station

4.4.4 As mentioned before, the Canton Road Access will only be realised after relocation of the Tsim Sha Tsui Fire Station, while the interim vehicular access at Austin Road West is planned to be the private development access of Xiqu Centre. Hence, an interim traffic arrangement at the eastern end of the basement driveway has been put forward by Xiqu Centre's project team, as shown in **Figure 4.5**. With the relocation of Fire Station and formation of permanent Canton Road Access and subject to detailed design and approval of the relevant departments, the private development access at Austin Road West for Xiqu Centre would be closed off permanently and the access to Xiqu Centre will be through the basement driveway.

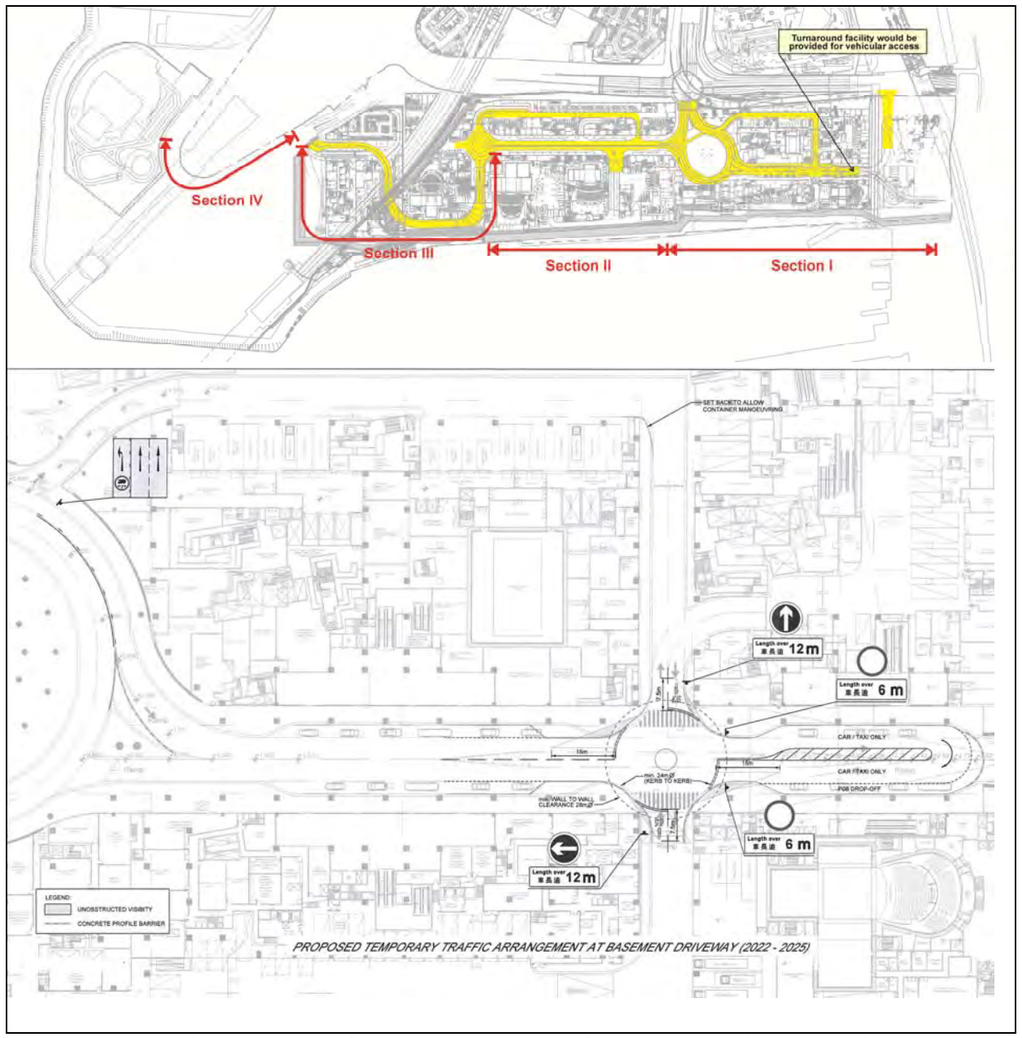


Figure 4.5Proposed Arrangement of Basement Driveway Before Canton Road Access in Place

4.4.5 **Traffic Calming Measures** Under normal circumstances, the road network within WKCD should primarily serve only the traffic to/from WKCD, rather than act as a bypass route. There are accesses to/from carpark/ loading/ unloading areas located along the Basement Driveway. In addition, laybys are provided at the two sides of the Basement Driveway for passenger picking up/dropping off activities. From a traffic view point, it is proposed to impose traffic calming measures (such as traffic signs, road markings and speed tables etc.) in WKCD road network to slow down vehicles speed and enhance safety. The design of the traffic calming measures would be carried out at the detailed design stage.

4.4.6 **Dangerous Goods Vehicles (DGV)** Dangerous Goods Vehicles should not be allowed to use the basement roads from fire safety point of view. Dangerous goods vehicles serving the site (if required) would follow the EVA routes at podium level. The exact operational details would be studied and agreed with Fire Services Department in the detailed design stage.

Internal Road Network – Interim By 2020

4.4.7 Only Road Section III on level B1 of the common basement will be completed in Phase 1 (by 2020 and prior to the completion of entire integrated basement) to provide access to M+ car park and loading docks of Lyric Theatre and M+, as shown in **Figure 4.6.**

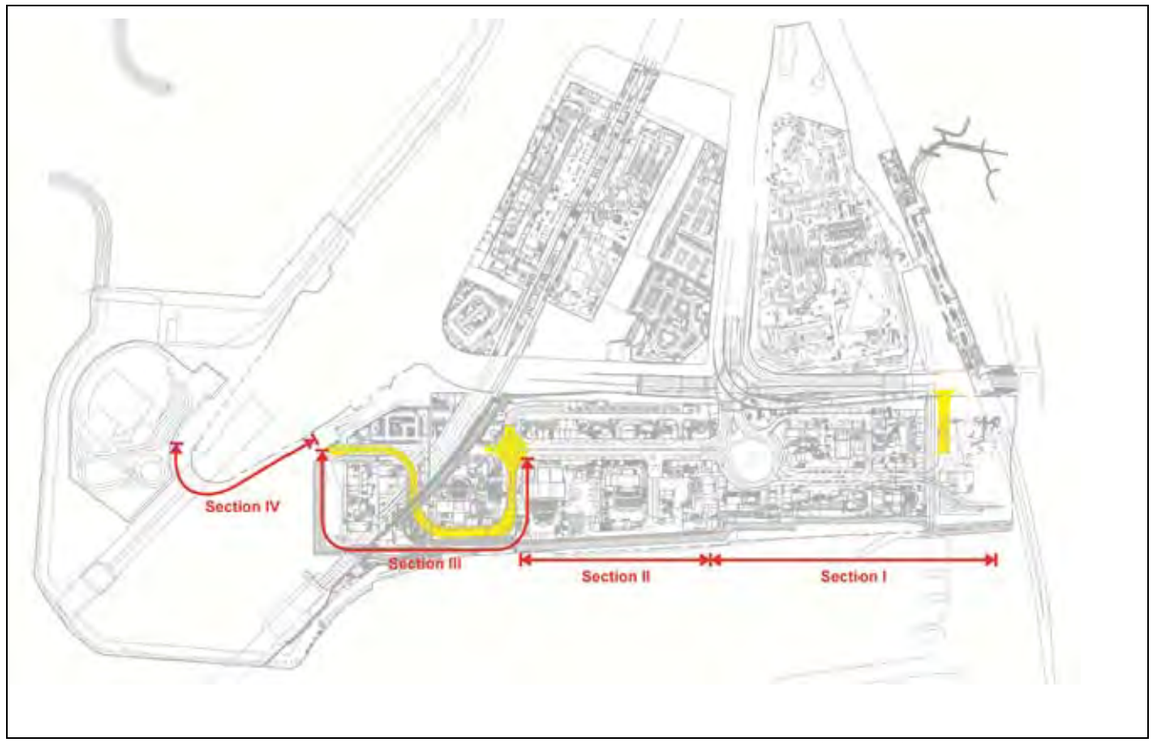


Figure 4.6 Level +0.6mPD to +1.65mPD Layout Plan – Basement 1 Circulation (Phase 1)

4.5 Car Parking

4.5.1 Car parking is located at Basement 2 at level -5mPD to -10mPD, which can be zoned to provide direct access to the arts & cultural facilities and activity areas above. The car park entrances are located along the Basement Driveway. For MPV/EC, the required car park is located at basement level under MPV.

4.5.2 For residential, office, hotel, and RDE, the car parking provision was calculated by reference to the new standards stated in the Hong Kong Planning Standards and Guidelines (HKPSG) published by Planning Department promulgated on 28 February 2012. The OACF and GIC facilities was referenced to the "Office" type of HKPSG whilst there is no standard for calculating the car parking spaces required for arts venues in HKPSG. A working paper on Car Parking Strategy with details the various venue parameters, assumptions and methodologies about the calculation of car parking spaces required for arts venues was submitted to TD on 13 July 2011 and accepted together with the first MLP submission. (see **Annex C** for the Car Parking Strategy paper and its **Attachment C1** for assumptions and calculation on car parking).

4.5.3 The parking and servicing facilities requirement calculation was detailed and fine-tuned in the Master Register submission for WKCD in July 2013, when a notional scheme for the topside developments and a control plan were developed. The key assumptions that carried forward from the Master Register to current S16 application includes: 1. VIP and staff parking of CACF are not sharable with visitors, 2. All car parking spaces in WKCD are divided into 2 main car park areas, one is at Xiqu Centre + zone 2B + M+ whilst the other is at MPV/EC, there is no sharing between the 2 car park areas due to the physical distance between them. In addition, motorcycle parking spaces would be provided at the rate of 5% of the total provision for carparking spaces by reference to the standards stated in HKPSG. Taking into account the close proximity of MTRC Stations and PTI facilities, the carparking provision is set at the lowest end of the range. **Table 4.5** summarises the carparking requirements.

Car Park Sharing Proposal

4.5.4 During the development of DP for WKCD, it was found that there were more constraints than expected in the underground levels of WKCD. A proposal for sharing car park spaces by different user types during different times of day was investigated in order to allow more efficient utilization.

4.5.5 The WKCD would be developed as one whole district consisting parcels of land providing primarily arts and cultural facilities with a complimentary mix of other land use including residential, office and retail developments throughout. In accordance with the Statement of Intent in the HKPSG, flexibility, within and beyond the car park standard ranges, can be considered to meet special circumstances:

a. proximity to and quality of pedestrian access linking railway stations and other major public transport interchanges (WKCD is well served by 3 railways (KOW, AUS and WKT) and bus PTI (CFT, KOW and WHT), which are highly accessible on foot with the comprehensive pedestrian network committed/ planned/ proposed for WKCD to provide maximum permeability on elevated/ ground/ underground levels.).

b. Where different types of development (e.g. residential development, community facilities) are included on the same site, the appropriate standards should be applied cumulatively; some reduction may be permitted, however, when it is evident that demand will occur substantially at different times. (WKCD has office use where the peak parking demand occurs in weekday daytime, whilst on the other hand, the peak parking demand of Performance Venue and RDE occur in nighttime and weekdays).

c. WKCDA will be the overall manager/ coordinator of the WKCD. WKCDA will be in full control of the sharable parking spaces in WKCD.

4.5.6 All the above make sharing of car parking spaces between the different land uses within WKCD possible and implementable. A working paper investigating the possibility of sharing car parks in WKCD was submitted to Transport Department in previous DP submission (see Annex C). The car park sharing proposal includes:

- Sharing among Performing Arts (PA) Venues (Depending on the programming strategy for the performance, some PA venues may not have the shows at the same night. It was assumed for calculating car parking requirements that in aggregate the venues would have 80% maximum attendance.)
- Sharing with OACF and Office in WKCD (Assume 50% of office car park could be used after office hours)
- Sharing with Office in West Kowloon Terminus (Assume 50% of office car park could be used after office hours)

4.5.7 Whilst in this current minor relaxation/ increase in plot ratio proposal, the current planned integrated basement (B1 level for loading/unloading and B2 for car parking) would be unable to accommodate the increased parking and servicing requirements and the above sharing proposal had been further investigated to optimize the overall provisions by (i) ascertaining the above assumption which 50% of office/ OACF car park can be used, as well as (ii) expanding the sharing of office/ OACF car parks from only PA venues to RDE. It was considered that the same sharing concept as adopted in the DP stage was feasible and can be further optimized if an average demand profile were to be acquired through surveys of established developments with similar nature in Hong Kong. The latest methodology elaborated on the principle that the peak demands generated by different land uses would occur at different times throughout a day. A series of traffic surveys to determine the hourly car park demand of weekdays and weekends for various land uses were undertaken. And the weighted average demand profile curves of office, RDE and PA venue uses measured from the survey were then superimposed together to ascertain the combined parking demands as well as the current refined car park optimisation strategy. In order to provide a very conservative parking demand analysis, the peak of the surveyed demand profile of each type of land use, which less than the HKPSG requirement for all land use type under surveyed, were factored up such that the peak demands equate with the current HKPSG requirement. A sensitivity test was also undertaken to study the effect of extending the car park peak demand period for office, RDE and PA venue use. A higher combined peak period was calculated with office peak parking demand extended one hour later while peak parking demands for RDE and PA venue extended one hour earlier. A working paper of the car park optimization is enclosed in **Annex D**.

4.5.8 Based on the above car parking sharing proposals, **Table 4.6** summarises the carpark requirements for design year 2020 (Batch 1 development) & 2031 of full development of WKCD.

Table 4.5 Car Parking Facilities for WKCD

Development Batch	Operation Year	Land Uses		Development Parcel	Seating Capacity (seats)	GFA (m^2)	No. of Units	Visitors Parking No.	Staff Parking No.	VIP Visitors Parking No.	VIP Artists Parking No.	Total
1	2020	CACF [1]	Xiqu Centre	P01	1,700	20,790	--	45	4	2	2	53
			Lyric Theatre	P35	1,200	12,710	--	65	2	0	0	67
			M+	P39, P40	--	61,950	--	97	48	5	0	150
			Outdoor Theatre	P50	5,000	4,070	--	95	0	0	0	95
			Free Space	P51	600		--	11	4	0	0	15
		OACF [2]		P01, P35, P43A, P51	--	41,847	--	169	0	0	0	169
		GIC		P42	--	3,400	--	0	0	0	0	0
		Office [3]		P31, P34, P36, P37, P38	--	38,000	--	134	0	0	0	134
		RDE [4]		P01, P31, P32, P34 – P40, P43A, P50	--	45,108	--	137	0	0	0	137
		Residential [6]		P32	--	12,695	224	12	0	0	0	12
		Development Batch 1 Total:			**8,500**	**240,570**	**224**	**765**	**58**	**7**	**2**	**832**
2	After 2020	CACF [1]	Proscenium Theatre/ Medium Theatre I	P08	600	7,715	--	32	2	0	0	34
			Thrust Theatre/ Medium Theatre II	P12	600	14,075	--	23	2	0	0	25
			Centre for Contemporary Performance	P12	800		--	15	6	0	0	21
		Office [3]		P08	--	7,870	--	28	0	0	0	28
		RDE [4]		P08, P12	--	6,432	--	21	0	0	0	21
		Development Batch 2 Total:			**2,000**	**36,092**	**--**	**119**	**10**	**0**	**0**	**129**
3	After 2020	CACF [1]	Music Centre	P18	2,100	17,420	--	113	6	2	2	123
			Musical Theatre	P23	2,000	16,605	--	108	4	2	2	116
			Great Theatre	P30	1,600	19,860	--	86	4	2	2	94
			Mega Performance Venue	P46	18,000	64,545	--	346	3	20	4	373
			Exhibition Centre	P47	--	12,500	--	114	5	2	0	121
		OACF [2]		P06, P07, P14, P17, P19, P20, P22, P27, P28, P29	--	43,251	--	165	0	0	0	165
		GIC		P19, P22	--	5,680	--	0	0	0	0	0
		Office [3]		P02, P03, P04, P17, P14, P19, P22, P26,	--	86,070	--	303	0	0	0	303
		RDE [4]		P02 - P07, P09 - P11, P13 - P24, P26 - P30, P52, Basement Edge	--	86,823	--	303	0	0	0	303
		Hotel [5]		P23, P43B,	--	64,400	1,073	11	0	0	0	11
		Residential [6]		P02, P05, P09 - P11, P13, P15, P16, P21, P24, P27 - P29	--	157,585	2,583	276	0	0	0	276
		Development Batch 3 Total:			**23,700**	**574,739**	**3,656**	**1,825**	**22**	**28**	**10**	**1,884**
All Total:					**34,200**	**851,400**	**3,880**	**2,709**	**90**	**35**	**12**	**2,845**

Note:

(1) The car parking provision of Core Arts and Cultural Facilities is derived under the assumptions and methodology given in the "Assumptions and Methodology for Deriving Car Parking Provision in WKCD" (see **Annex C – Attachment C1**).

(2) It is assumed the type of development of these venues is "Office" and therefore the car parking provision of these developments is derived from HKPSG Ch.8-Table 11-Section 3-Office (1st 15,000m^2 GFA, 1 space per 150-200m^2 GFA, above 15,000m^2 GFA, 1 space per 200-300m^2 GFA).

(3) Office: Ref. HKPSG Ch.8-Table 11-Section 3-Office (1st 15,000m^2 GFA, 1 space per 150-200m^2 GFA, above 15,000m^2, 1 space per 200-300m^2 GFA).

(4) Retail: Ref. HKPSG Ch.8-Table 11-Section 3-Retail (1 space per 200-300m^2 GFA).

(5) Hotel: Hotel averaged room size is 60m^2. The car parking provision is then calculated by reference to HKPSG Ch.8-Table 11-Section 3-Hotel (1 space per 100 rooms).

(6) Residential: Adopt new parking standard for residential

(7) Car parking provision is set at the lowest end provision of the HKPSG

Table 4.6 Car Parking Facilities for WKCD (With Sharing Proposal)

Phase		Car Parking Requirement			
		CACF/OACF Facilities	RDE	HOR	Total Parking No.
Approved DP					
All Total	Without Sharing	1,482	398	1,005	2,885
	With Sharing	**727**	**398**	**1,005**	**2,130**
Current Scheme					
DZ 1, 2A, 2B & 3A Total	Without Sharing	883	416	755	2,055
	With Sharing	385	393	731	1,509
DZ 3A & 4 Total	Without Sharing	737	45	8	790
	With Sharing	613	45	8	666
All Total	Without Sharing	1,620	461	764	2,845
	With Sharing	**998**	**438**	**739**	**2,175**
	Proposed Provision	**998 – 1,620**	**438 – 461**	**739 - 764**	**2,175 – 2,845**

Development Phase					Car Parking Requirement	
Scenario (1)	Year	Dev. Batch	Development In Place	WKT Office Car Park Available for Sharing?		
1	2020	1	Xiqu Centre	X	79	725 – 857
			Remaining Batch 1	X	646 – 778	
2	2020	1	Xiqu Centre	√	18 – 79	664 – 857
			Remaining Batch 1	X	646 – 778	
3	After 2020	1 & 2	Xiqu, Proscenium, Thrust, CCP	√	66 – 208	696 – 986
			Remaining of Batches 1 & 2	X	630 – 778	
4	After 2020	1 & 2	Batches 1 & 2	√	696 – 986	696 – 986
5	After 2020	1 - 3	DZ 1, 2A, 2B & 3A	√	1,509 – 2,055	2,175 – 2,845
			DZ 3A & 4	--	666 – 790	

(1)

Scenario	Committed Car Park In Place				
	Xiqu	M+	Zone 2B	MPV	WKT office
1	√	√			
2	√	√			√
3	√	√			√
4	√	√	√		√
5	√	√	√	√	√

4.6 Loading/Unloading & Pick up/Drop off Facilities

Loading/Unloading Facilities

4.6.1 The loading/unloading facilities for PA venues are located at Basement 1 at level +0.6mPD, which can provide direct access to the stages of PA venues. For MPV, the loading/unloading facilities are located at ground level at +5mPD, which is in the same level of the stage of MPV. For EC, the loading/unloading facilities are located at basement level and in the same level of the exhibition area.

4.6.2 The residential, office, hotel, retail and RDE provisions were calculated by referencing to the standards stated in HKPSG. The requirement of goods vehicles servicing facilities for CACF was recommended by the Consultant's Cultural & Museum Specialist Advisors. Based on the proposed development schedule of WKCD as given in **Table 4.2** summarises the loading/unloading facilities requirements. According to the HKPSG, large comprehensive development should adopt the low side of the loading/ unloading provision due to greater economy of scale. In view of huge number of loading/ unloading bays required for RDE/office, the lower end of the range has been adopted.

Loading/ Unloading Sharing Proposal

4.6.3 The loading bay recommendations of CACF in DP is based on the "Theatre Consultant's" experience and practice in the United States and it is studied totally independently with the loading requirements under HKPSG of Office and RDE uses in the same parcel/development package, and was assumed that there would be separate loading docks for different land use and they are operated separately. However, the design of the integrated basement for WKCD combined the loading docks for all the uses (CACF/ RDE/ OACF/ Office) within the same land parcel/ development package into one and will be managed by one facility management. Under this assumption the loading bays of CACF, RDE and OACF/ Office can be shared amongst various users. Also, the delivery activities of PA venues carry a rather different pattern (normally deliver in the morning to prepare for performances in evening and removal in middle of the night after the show) from conventional delivery of Office and RDE throughout the daytime. Hence, as there is a possible sharing of the goods vehicle loading/ unloading facility between various land uses in the development package, the overall provision can be reduced.

4.6.4 A goods vehicle loading/ unloading sharing proposal between PA venue/ RDE/ Office/ RDE similar to the car park sharing proposal has been put forward to optimize the provision and hence reduce the spatial requirement in the already tightly constrained basement level (see **Annex D**).

4.6.5 **Table 4.8** summarises the optimized servicing requirements of the current development scheme.

Table 4.7 Loading/Unloading Facilities for WKCD

Land Uses			Articulated Lorry (16m x 3.5m)	Semi Trailer (11m x 3.5m)	Rigid Lorry (11m x 3.5m)	Total
CACF	P01	Xiqu Centre	1	1	1	3
	P08	Proscenium/Medium Theatre I	2	-	1	3
	P12	Thrust/Medium Theatre II	-	2	1	3
		Centre for Contemporary Performance (CCP)	-	2	1	3
	P18	Music Centre	1	1	1	3
	P23	Musical Theatre	3	-	1	4
	P30	Great Theatre	3	-	1	4
	P35	Lyric Theatre	2	-	1	3
	P39, P40	M+	4	2	2	8
	P46	Mega Performance Venue	5	-	2	7
	P47	Exhibition Centre	6	-	2	8
	P50	Outdoor Amphitheatre	-	-	-	-
	P51	Free Space	-	1	1	2
		CACF Total:	**27**	**9**	**15**	**51**
OACF (85,098 GFA)[1][6]			-	-	34	34
Office (131,940m^2 GFA)[2][6]			-	-	47	47[6]
RDE (138,363m^2 GFA)[3][6]			-	-	126	126[6]
Hotel (1,073 rooms)[4]			-	-	6	6
Residential (2,807 units)[5]			-	-	8	8
Non CACF Total:			**-**	**-**	**221**	**221**
WKCD Total:			**27**	**9**	**236**	**272**

Note:

(1) It is assumed that the type of these development is "Office" and therefore the loading/unloading facilities provision of these development is derived from HKPSG Ch.8-Table 11-Section 3-Office (1 space per 2000-3000m^2 GFA).
(2) Source: HKPSG Ch8-Table 11- Section 3-Office (1 space per 2000-3000m2 GFA)
(3) Source: HKPSG Ch8-Table 11- Section 3-Retail (1 space per 800-1200m^2 GFA)
(4) Source: HKPSG Ch8-Table 11- Section 3-Hotel (0.5-1 space per 100 rooms)
(5) Source: HKPSG Ch8-Table 11- Section 3-Private Housing (1 space per 800 units /1 space per block)
(6) Goods vehicle provision for OACF, Office and RDE is divided into 65% LGV and 35% HGV

Table 4.8 Loading/Unloading Facilities for WKCD (by Development Parcel)

DZ	Package	Parcels	Land Use of +15% GFA				GV Servicing Requirement		
			CACF	OACF	Office	RDE	DP Without Optimization	+15% GFA Without Optimization	+15% GFA With Optimization
1, 2A, 2B & 3A	00	P41				X	0	0	0
	01	P01 (Xiqu)	X	X		X	11	9	9 (1)
	02	P02, P03, P04			X	X	8	12	12
	03	P05, P06, P07, P09		X		X	12	17	17
	04	P08 (Proscenium)	X		X	X	6	9	**8**
	05	P10, P11, P13, P15				X	17	12	12
		P16, P17		X	X	X	8	20	20
	06	P12 (Thrust), (CCP)	X			X	11	9	**24**
	07	P14		X	X	X	6	21	
	08	P18 (Music)	X			X	9	7	**6**
	09	P19, P22		X	X	X	6	11	11
		P24, P27		X		X	7	4	4
	10	P20		X		X	2	3	3
	11	P21				X	2	2	2
	12	P23 (Musical), P25	X		X	X	10	10	**9**
	13	P26			X	X	4	6	6
	14	P28, P29		X		X	7	6	6
	15	P30 (Great)	X			X	9	10	**9**
	16	P31			X	X	7	9	9
	17	P32				X	3	5	5
	18	P34, P36, P37, P38			X	X	13	14	14
	19	P35 (Lyric)	X	X		X	7	11	**11**
	20	P39, P40 (M+)	X			X	14	18	18
	25	P42					0	0	0
3B & 4	21	P46 (MPV), P47	X				18	15	**15**
	22	P43A, P43B, P44		X		X	16	19	19
	23	P50, (Outdoor Theatre), P51 (Freespace), P48, P49, P52 – P56	X	X		X	6	8	**7**
	24	P33, P41, Basement Edge				X	0	5	5
						Total:	**220**	**272**	**261**
								261 - 272	

Various development packages highlighted with the same colour share the same loading dock
(1) Possible reduction in loading/ unloading facilities will be undertaken by the Designer of Xiqu Centre separately.

Pick-up/Drop-off Facilities

4.6.6 Convenient access to the CACF is provided by laybys directly in front of the entrances along the basement roads (at level +0.6mPD and -5mPD) and along the northern periphery on the southern side of Austin Road West.

4.6.7 For MPV/EC, laybys are provided near MPV at level +5mPD. (The details of bus laybys are discussed in **Chapter 7**). In addition, laybys are also provided at basement 1 & 2 at level -2.1mPD and -9.2mPD) under the MPV.

4.6.8 The requirement for passenger pick-up/ drop-off facilities for the CACF in WKCD have been estimated from the seating capacity/ GFA, modal split of the visitors, vehicle occupancy rates and dwell time. The requirement of VIP visitors/ artists laybys were recommended by the Consultant's Cultural & Museum Specialist Advisors. Based on the current proposed development schedule of WKCD, **Table 4.9** summarises the pick-up/ drop-off facilities requirements. The provision for pick-up/ drop-off laybys (including those for taxi stands) at various locations in WKCD (see **Figure 4.7 - Figure 4.8**) are summarized below. With this layby provisions, the demand of pick-up/ drop-off facilities for WKCD as given in **Table 4.9** could be met.

Development Zone	Level	Location	Length (m) [1]			
			Car/ Taxi PU/ DO + Coach Drop-Off		Franchised Public Transport [3]	
2A	At-Grade	East Gate [2]	0m	1,000m	40m	280m
	B1	Northerly kerb	95m		--	
		Southerly kerb	95m		--	
2B	At-Grade	West Gate [2]	190m		110m	
	B1	Northerly kerb	105m		--	
		Southerly kerb	150m		--	
		Near Lyric Theatre	20m		--	
3A	B1	Near M+	144m		--	
4	At-Grade	Near MPV	200m		130m	

(1) The above kerb length provisions at East Gate and West Gate is according to advice from the Public Infrastructure Works Consultancy in July 2014

(2) The East Gate and West Gate lay-bys are used by public transport including taxi, coach, bus and minibus

(3) The assignment of kerb length for public transport is subject to the Traffic Operation Study to be commissioned by WKCDA

Table 4.9 Pick-up/Drop-off Facilities for WKCD

	Land Uses	Pick-up/Drop-off Layby				
		Car Pick-up/Drop-off & Taxi Drop-off Layby (7mx3m)	Taxi Pick-up Layby (7mx3m)	VIP Visitors Pick-up/ Drop-off Layby (7mx3m)	VIP Artists Pick-up/ Drop-off Layby (7mx3m)	Coach Drop-off Layby (15mx3m)
CACF	Xiqu Centre	1	1	3	-	1
	Proscenium Theatre	1	1	2	1	1
	Proscenium Thrust Theatre	1	1	2	1	1
	Centre for Contemporary Performance (CCP)	1	1	-	-	1
	Music Centre	2	2	4	2	1
	Musical Theatre	2	2	4	2	1
	Great Theatre	2	2	4	2	1
	Lyric Theatre	1	1	2	1	1
	M+	4	8	1	-	4
	Mega Performance Venue	6	7	5	2	2
	Exhibition Centre	6	4	2	-	6
	Outdoor Amphitheatre	2	-	-	-	-
	Free Space	1	1	-	-	1
	CACF Subtotal	30	31	29	11	21
Non-CACF	OACF (85,098 GFA) [1]	5	-	-	-	-
	Office (131,940m^2 GFA) [1]	7	-	-	-	-
	RDE (138,363m^2 GFA)	7	-	-	-	-
	Residential (2,807 units)	2	-	-	-	-
	Hotel (1,073 rooms) [2]	6	-	-	-	3-4
	Non-CACF Subtotal	27	-	-	-	3-4
	WKCD Total:	57	31	29	11	24-25
		~400m	~220m	~200m	~80m	~375m
		~1,000m (excludes VIP facilities) or ~1,280m (all)				

Note:

(1) OACF/ Office – HKPSG requirement of 1 lay-by for every 20,000m^2, or part thereof, of gross floor area

(2) Hotel – HKPSG requirement of min

Hotel Type	Car/ taxi lay-by	Coach lay-by
<300 rooms	2	1
300-599 rooms	3	2-3
599-899 rooms	4	2-3
>899 rooms	4	3

(3) The assumed occupancy rates are: 3 persons/car, 2.1 persons/taxi except MPV, 2.5 persons/taxi for MPV and 35 persons/coach.

(4) The assumed dwell times for drop off are: 0.5mins/car, 0.5mins/taxi and 5 mins/coach.

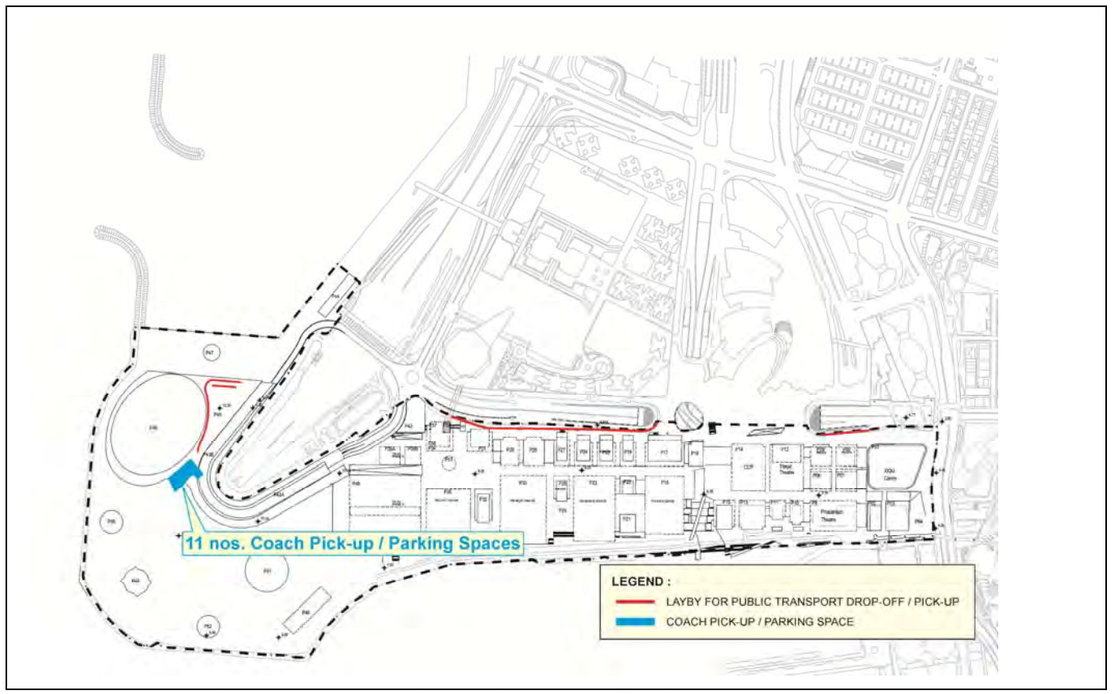


Figure 4.7 Level +9.35mPD Layout Plan – Pick-up/Drop-off Laybys

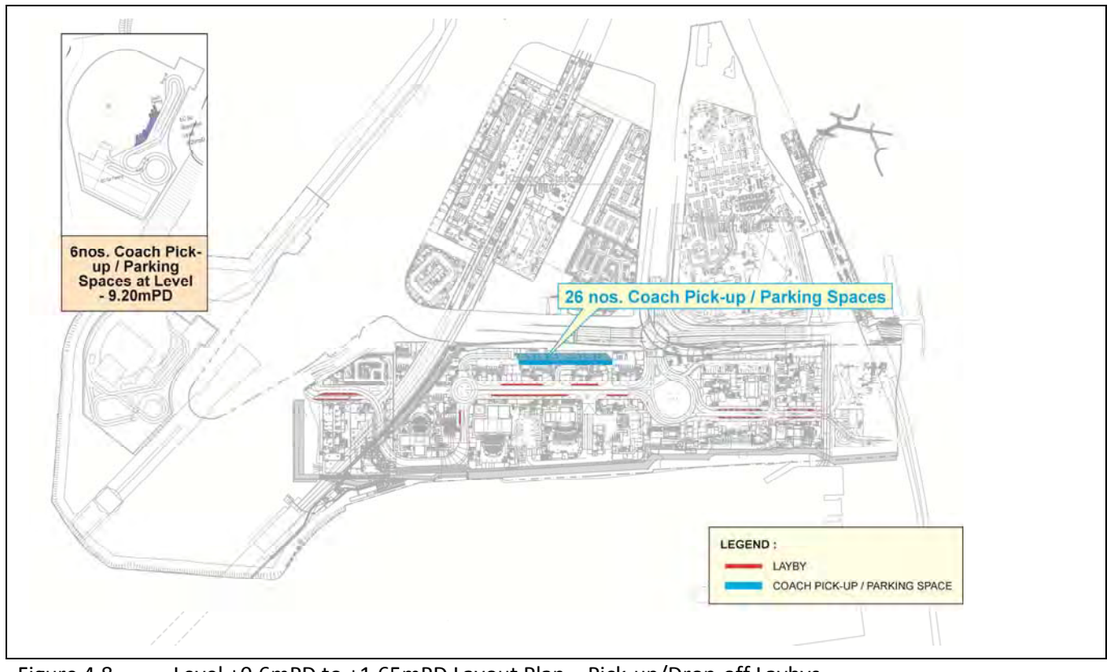


Figure 4.8 Level +0.6mPD to +1.65mPD Layout Plan – Pick-up/Drop-off Laybys

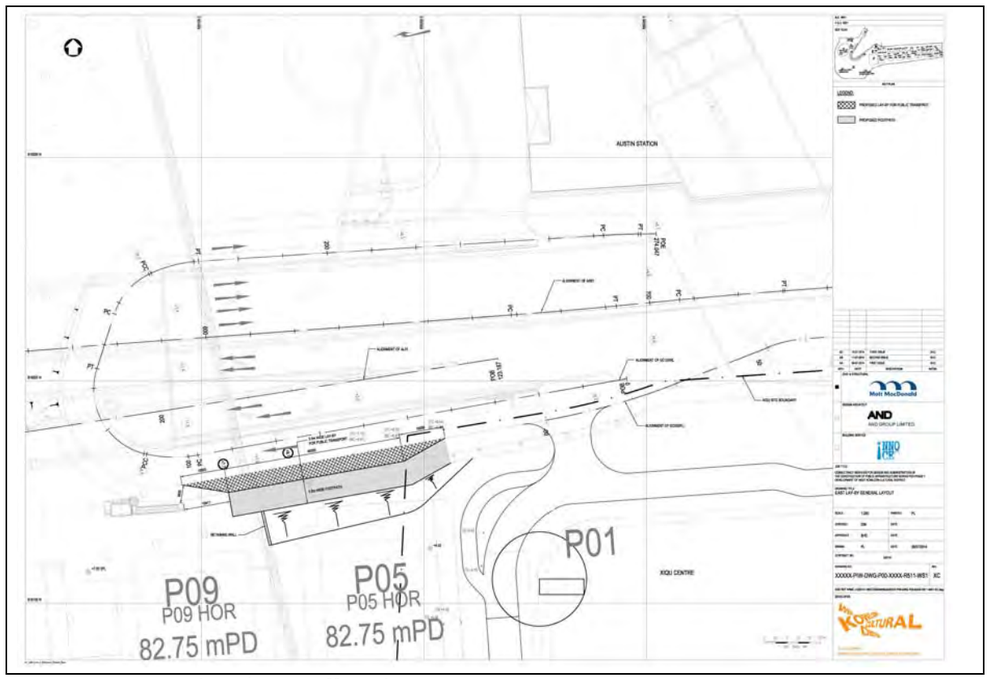


Figure 4.9 Pick-up/ Drop-off Lay-by at East Gate

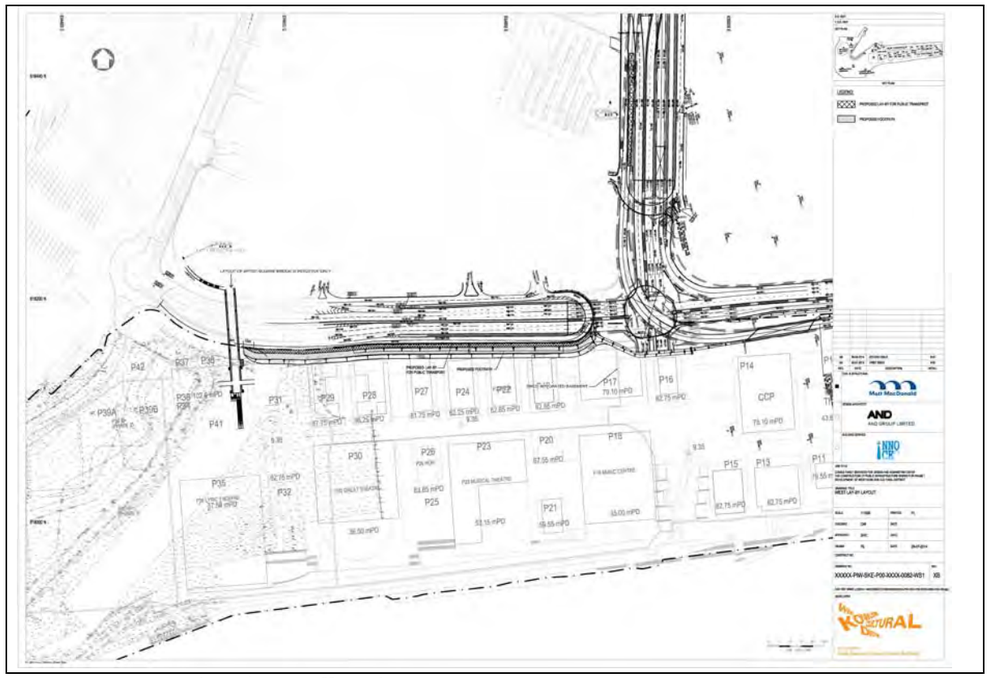


Figure 4.10 Pick-up/Drop-off Lay-by at West Gate

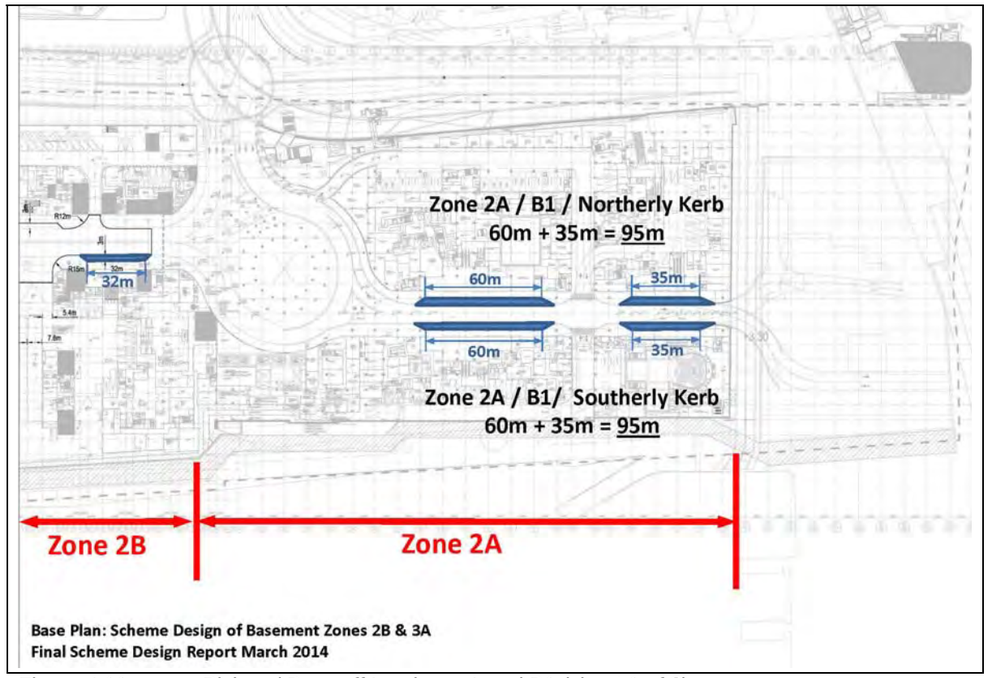


Figure 4.11 Pick-up/ Drop-off Lay-by on Level B1 (sheet 1 of 2)

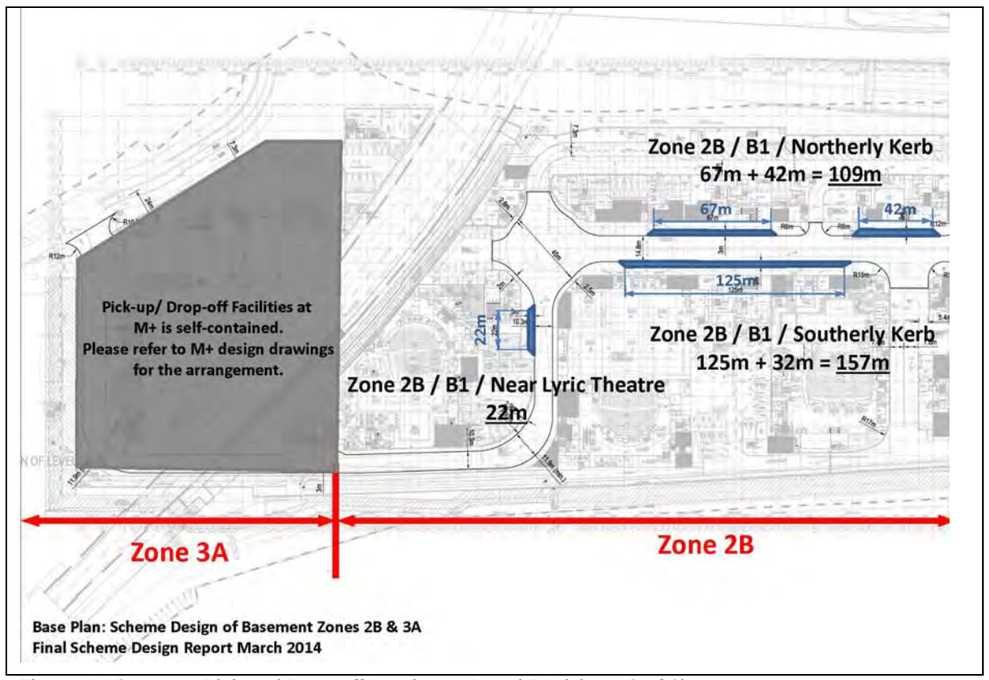


Figure 4.12 Pick-up/ Drop-off Lay-by on Level B1 (sheet 2 of 2)

4.6.9 As advised by the Consultant's Cultural & Museum Specialist Advisors, the number of pick up/ drop off coach laybys required for VA venue likes M+ and Exhibition Centre are 4 nos. and 6 nos. respectively, additional coach pick-up bay are not required. For the MPV, the requirement for pick up coach laybys was estimated from the seating capacity, modal split of visitors and coach occupancy rate (i.e. 35 persons/coach). About 15 mins. waiting time was assumed for coaches picking up passengers after the shows end. an estimated 11 nos. coach spaces are required for MPV. For all other venues, the requirement for pick up coach laybys was estimated from the seating capacity, modal split of visitors and coach occupancy rate. Similarly, about 15-20 mins. waiting time was assumed for coaches picking up passengers after the shows, based on the dispersal time of 30 mins. after the shows end, 12-14 nos. coach pick-up bays are required for all other venues.

Table 4.10Coach Pick-up Facility Requirement for WKCD Core Arts & Cultural Facilities

CACF Facilities	Coach Pick-up Facility (12mx3.5m)
Xiqu Centre	1 - 2
Proscenium Theatre	1
Proscenium Thrust Theatre	1
Centre for Contemporary Performance (CCP)	1
Music Centre	1
Musical Theatre	1
Great Theatre	1
Lyric Theatre	1
M+	0
Zones 1, 2A, 2B & 3A Sub-total:	**8 - 9**
Mega Performance Venue	11
Exhibition Centre	0
Outdoor Amphitheatre	3 - 4
Free Space	1
Zones 3B & 4 Sub-total:	**15 - 16**
WKCD Total	**23 - 25**

4.6.10 In conclusion, a pick-up area for coaches/ tour buses is provided at level +0.6mPD (see **Figure 4.8**). A total of 26 nos. of coach spaces are provided for picking up passengers for M+/ other venues, and tourists not relating or destining to any CACF in WKCD and also for short-term parking. In addition, a total of 17 nos. of coach spaces are also provided near MPV/Basement under MPV (see **Figure 4.7** and **Figure 4.8**) for use of both MPV & EC. The proposed bus laybys and taxi stand locations/ arrangement in WKCD are discussed in **Chapter 7**.

5. OPERATIONAL TRAFFIC IMPACT ASSESSMENTS

5.1 Design Years

5.1.1 The key event years for the WKCD have been identified as follows:

- Critical Construction Stage for Batch 1 (2015 and 2020);
- Batch 1 Operation (2020);
- Critical Construction Stage for Batches 2+3 (2031);
- Full/Batches 1+2+3 Operation (2031) (with and without Canton Road Access).

5.1.2 The benchmark year 2020 is the first full year of operation of Batch 1 while the year 2031 represents the fully operational year of the whole WKCD site (i.e. Batches 1+2+3). The traffic situations during the construction periods of Batch 1 (2015 and 2020) and Batches 2+3 (say 2031) have been investigated as part of the Construction Traffic Impact Assessments (Discussed in **Chapter 6**) which take into account the on-going works in the WKRA as a whole.

5.2 Traffic Forecasting Procedures

5.2.1 The Consultant's traffic specialist has developed a "SATURN" local area model for West Kowloon, i.e. West Kowloon Reclamation Traffic Model (WKRTM), under the TD 54/2008 WKRDTS. The WKRTM has been properly calibrated and validated under the TD54/2008 Study and had been fine-tuned and adopted for XRL WKT project for MTRC. The model has been further updated to include deferral of CKR to year 2021, changes in development parameters of AUS property development and to incorporate the trip volumes under the WKCD Development Schedule & Phasing. The updated model was used to provide the traffic predictions for the previous WKCD TIA Study. Recently the Government have issued out a new set of planning data (2011-Based TPEDM dataset). The ultimate population and employment data assumed under 2011-Based TPEDM for WKRA have been compared against the 2006-Based TPEDM dataset adopted in the previous WKCD TIA. Total population and employment data for WKRA assumed under 2011-Based TPEDM is some 93,000 whilst that assumed under 2006-Based TPEDM is 97,000. Therefore, it is considered that there is no substantial change in planning data between the two datasets. Hence the traffic model developed in previous TIA was adopted and updated with trip volumes under the latest WKCD Development schedule (i.e. 15% increase in GFA) to ensure compatibility with the previous WKCD TIA Study.

5.2.2 **Table 5.1** summarises the design years and peak periods for both Operational and Construction Traffic Impact Assessments.

Table 5.1 Design Years and Peak Periods for Vehicular Traffic Analysis

Scenario	For Traffic Assessment	
	Design Year	Peak Period
Critical Construction Stage for Batch 1	2015 & 2020	Normal Weekday Commuting AM & PM Peaks
Batch 1 Operation	2020	
Critical Construction Stage for Batches 2+3	2031	
Full/Batches 1+2+3 Operation	2031	

5.3 Reference Traffic Forecasts

5.3.1 Reference traffic forecasts have been prepared based on current and planned road networks for the WKRA tabulated in **Section 3.5**. This takes into account the planned new developments (except WKCD) set out in **Chapter 2** and are consistent with WKRDTS undertaken by TD.

5.3.2 The key infrastructures and developments at nearby areas/districts for the two adopted design years (i.e. 2020 & 2031) are listed as follows:

Design Year 2020
○ West Island Line
○ Express Rail Link (XRL)
○ South Island Line (East)
○ Kwun Tong Line Extension
○ Central and Wanchai Bypass
○ Lin Cheung Road – Austin Road West Underpass (D2)
○ New connection from Hoi Po Road to West Kowloon Highway Northbound (H) (Part 1)
○ New link road from elevated Nga Cheung Road to Western Harbour Tunnel (I)
○ West Kowloon Highway southbound link to at-grade Nga Cheung Road (J)
○ Canton Road/Austin Road/Austin Road West (Interim Widening Scheme) (Q)
○ Kai Tak Development
○ Austin Station Development
○ West Kowloon Terminus Station Development
Design Year 2031
○ Upgrading Nga Cheung Road (H) (Part 2)
○ Shatin to Central Link (East-West Line) (1)
○ Shatin to Central Link (North-South Line) (1)
○ Central Kowloon Route
○ Canton Road Underpass (Q)

Remark: (1) The "Shatin to Central Link" have not been assumed in Design Year 2020 for conservative approach.

5.4 Development Traffic Generation Estimates

5.4.1 The trip rates recommended in WKRDTS have been reviewed and adopted for this Assignment. The adopted traffic generation rates are summarised in **Table 5.2**. Based on the proposed development schedule of WKCD as given in **Table 4.2**, **Table 5.3** summarises the overall traffic generations for both Batches 1, 2 & 3.

Table 5.2 Summary of Adopted Traffic Generation Rates

Batch	Operation Year	Land Uses	Unit	Traffic Generation Rates			
				AM Peak (0830 – 0930)		Weekday PM (1745 – 1845)	
				Gen.	Att.	Gen.	Att.
1	2020	Xiqu Centre (Main Theatre, Tea House and Education Facility)	pcu/hr/10 seats	---	---	0.274	0.548
		Outdoor Amphitheatre	pcu/hr/10 seats	---	---	0.066	0.133
		Lyric Theatre	pcu/hr/10 seats	---	---	0.247	0.494
		M+	pcu/hr/100m^2	---	---	0.256	0.298
		OACF[(2)]	pcu/hr/100m^2	0.26	0.298	0.189	0.19
		RDE	pcu/hr/100m^2	0.073	0.157	0.464	0.435
		Office	pcu/hr/100m^2	0.26	0.298	0.189	0.19
		Residential[(1)]	pcu/hr/unit	0.072	0.043	0.029	0.037
		Free Space (with Music Box)	pcu/hr/10 seats	---	---	0.216	0.432
2+3	2031	Medium Theatre I	pcu/hr/10 seats	---	---	0.274	0.548
		Music Centre (Concert Hall, Recital Hall and Education Facility)	pcu/hr/10 seats	---	---	0.247	0.494
		Musical Theatre	pcu/hr/10 seats	---	---	0.247	0.494
		Mega Performance Venue	pcu/hr/10 seats	---	---	0.066	0.133
		Exhibition Centre	pcu/hr/100m^2	0.173	0.565	0.843	0.616
		Medium Theatre II /Centre for Contemporary Performance (3 Blackboxes and Education Facility)	pcu/hr/10 seats	---	---	0.274	0.548
		Great Theatre	pcu/hr/10 seats	---	---	0.247	0.494
		OACF	pcu/hr/100m^2	0.26	0.298	0.189	0.19
		RDE	pcu/hr/100m^2	0.073	0.157	0.464	0.435
		Office	pcu/hr/100m^2	0.26	0.298	0.189	0.19
		Residential [(1)]	pcu/hr/unit	0.072	0.043	0.029	0.037
		Hotel	pcu/hr/unit	0.138	0.134	0.169	0.156

Sources: Based on TD 54/2008 WKRDTS.

Remark: (1) Based on TPDM (flat size of 60m^2).

(2) All OACF are assumed as Office for conservative approach.

Table 5.3 Development Traffic Generations

Batch	Operation Year	Land Uses	Seating Capacity (seats)	GFA (m^2)	No. of Units	Traffic Generations (in pcu/hr)			
						AM Peak (0830 – 0930)		Weekday PM (1745 – 1845)	
						Gen.	Att.	Gen.	Att.
1	2020	Xiqu Centre	1,700	20,790	-	17[(1)]	17[(1)]	47	93
		Outdoor Amphitheatre[(2)]	5,000	-	-			33	67
		Lyric Theatre	1,200	12,710	-			30	59
		M+	-	61,950	-	0	0	158	184
		Free Space (with Music Box)	600	4,070	-	5	5	13	26
		OACF	-	41,847	-	109	125	79	80
		RDE	-	45,108	-	33	71	209	196
		Office	-	38,000	-	99	113	72	72
		Residential	-	12,695	209	15	9	6	8
		GIC	-	3,400	-	0	0	0	0
		BATCH 1 TOTAL:	**8,500**	**240,570**	**209**	**278**	**340**	**647**	**785**
2+3	2031	Medium Theatre I	600	7,715	-	68	68	22	44
		Music Centre (Concert Hall, Recital Hall and Education Facility)	2,100	17,420	-			52	104
		Musical Theatre	2,000	16,605	-			49	99
		Mega Performance Venue	18000	64,545	-			119	239
		Exhibition Centre	-	12,500	-	22	71	105	77
		Medium Theatre II /Centre for Contemporary Performance (3 Blackboxes and Education Facility)	1,400	14,075	-	5 [(1)]	5 [(1)]	38	76
		Great Theatre	1,600	19,860	-	5 [(1)]	5 [(1)]	40	79
		OACF	-	43,251	-	112	129	82	82
		RDE	-	93,254	-	68	146	433	406
		Office	-	93,940	-	252	289	183	184
		Residential	-	157,584	2,598	187	110	74	96
		Hotel	-	64,400	1,073	148	144	181	167
		GIC	-	5,680	-	0	0	0	0
		BATCHES 2+3 TOTAL:	**25,700**	**610,830**	**3,671**	**867**	**967**	**1,378**	**1,653**
		BATCHES 1+2+3 TOTAL:	**34,200**	**851,400**	**3,880**	**1,145**	**1,307**	**2,025**	**2,438**

Note:

(1) negligible generation for seated PV in morning commuter peak, nominal assumption of 100pcu/hr for all seated PV

(2) outdoor theatre/piazza with 5,000 capacity included

5.4.2 **Table 5.4** compares the estimated trips generated to/from WKCD under the Approved Scheme (i.e. 740,350m^2 GFA) and the Current Scheme (i.e. 851,400m^2 GFA)

Table 5.4 Development Traffic Generations (Comparsion between Approval Scheme & Current Scheme)

Batch	Scheme	Traffic Generation					
		AM Peak			PM Peak		
		Gen.	Att.	Total	Gen.	Att.	Total
1	Approved Scheme (A)	845	1,023	1,868	1,569	1,906	3,475
	Current Scheme (B)	278	340	618	647	785	1,432
	(B) – (A)	-567	-683	-1,250	-922	-1,121	-2,043
1+2+3	Approved Scheme (A)	944	1,068	2,012	1,853	2,262	4,115
	Current Scheme (B)	1,145	1,307	2,452	2,025	2,438	4,463
	(B) – (A)	201	239	440	172	176	348

5.4.3 As shown in **Table 5.4**, as compared with the Approval Scheme, the Current Scheme would generate much lesser traffic in year 2020 (i.e. Batch 1) according to the current WKCD development programme. For ultimate situation (i.e. Batches 1, 2 & 3), as compared with the Approval Scheme, the increase on the traffic generations under the Current Scheme would be about 440 and 350 pcus (two-way) in the AM and PM peak hours respectively.

5.4.4 The development traffic is assumed to be distributed to the adjacent highway network in accordance with directional splits stated in WKRDTS, as shown in **Figure 5.1 and Figure 5.2,** respectively for inbound and outbound trips. As mentioned in **Section 4.3 (Vehicular Access)**, the Canton Road Access would not be formed in Batch 1 due to the Fire Station. For Batches 2 & 3, there would be two scenarios – with and without Canton Road Access for the traffic impact assessment.

5.5 Design Traffic Forecasts

5.5.1 The design traffic flows on the surrounding road network for the two identified operational years have been derived by adding the development traffic flows onto the corresponding Reference traffic flows. The 2020 resultant traffic flows is shown in **Figure 5.3**. The 2031 resultant traffic flows (with and without Canton Road Access) are shown in **Figure 5.4 and Figure 5.5.** The traffic flows (with full completion of whole WKCD site) for the internal road network within WKCD in year 2031 (with and without Canton Road Access) are shown in **Figure 5.6 and Figure 5.7.**

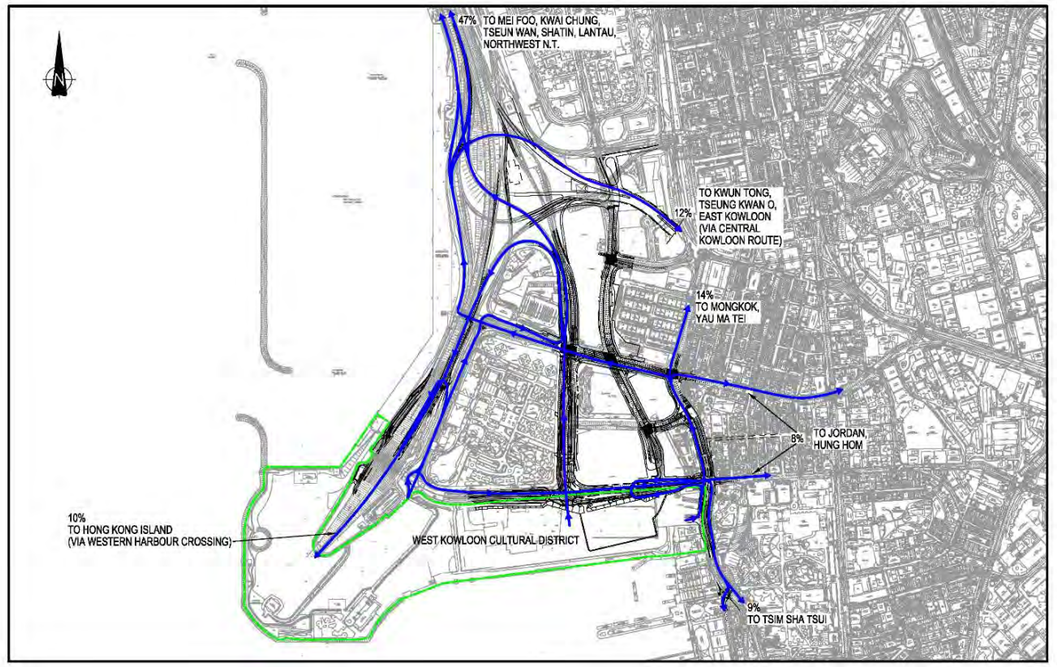


Figure 5.1 Directional Split of WKCD Outbound Vehicular Trips

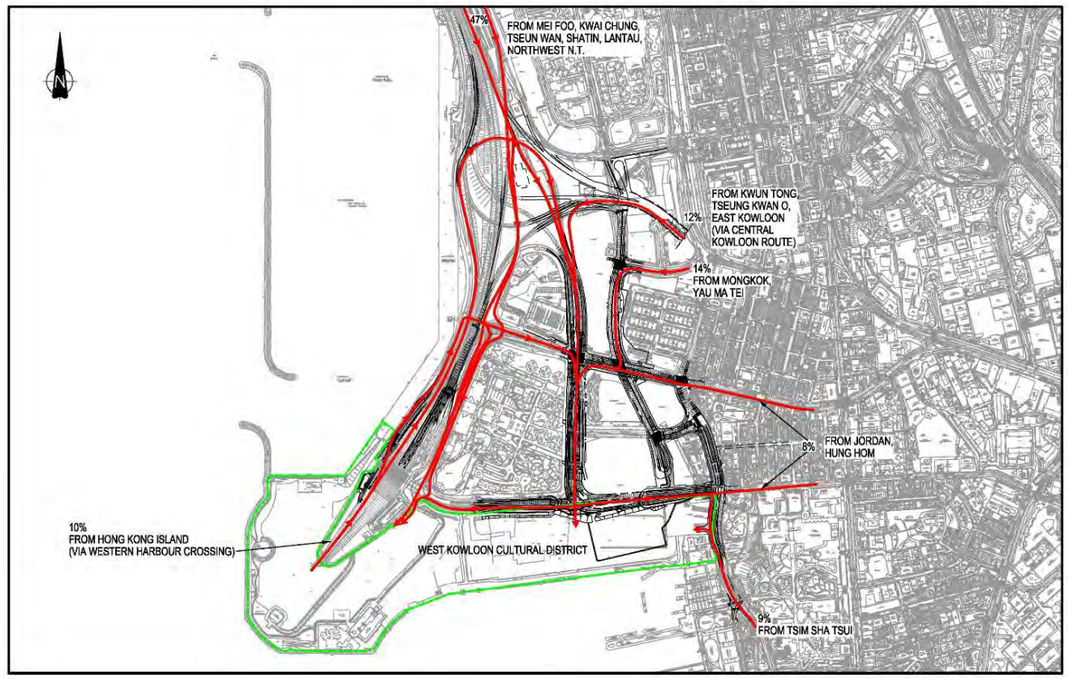


Figure 5.2 Directional Split of WKCD Inbound Vehicular Trips

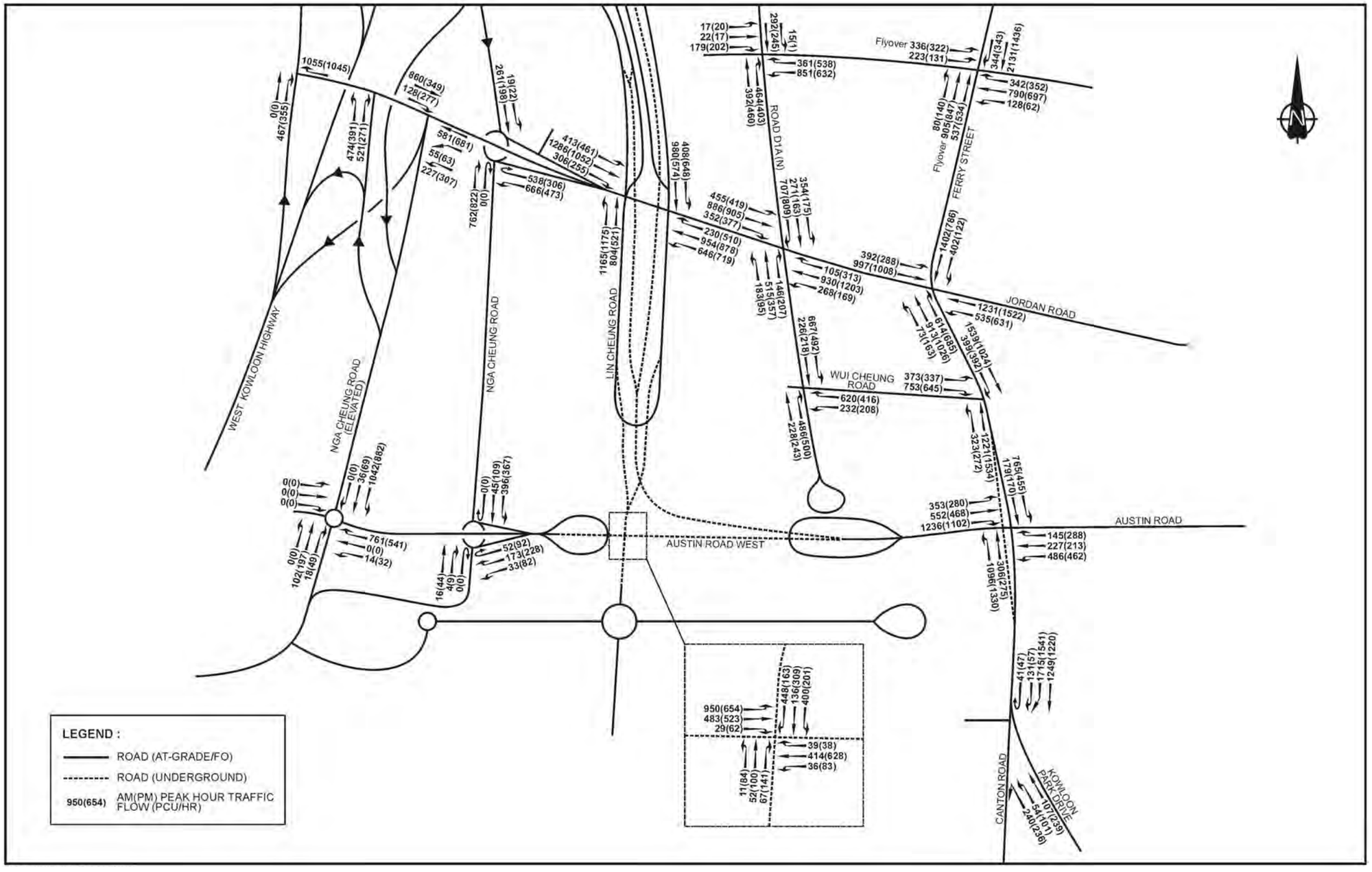


Figure 5.3 Design Traffic Forecasts for 2020- Full Batch 1

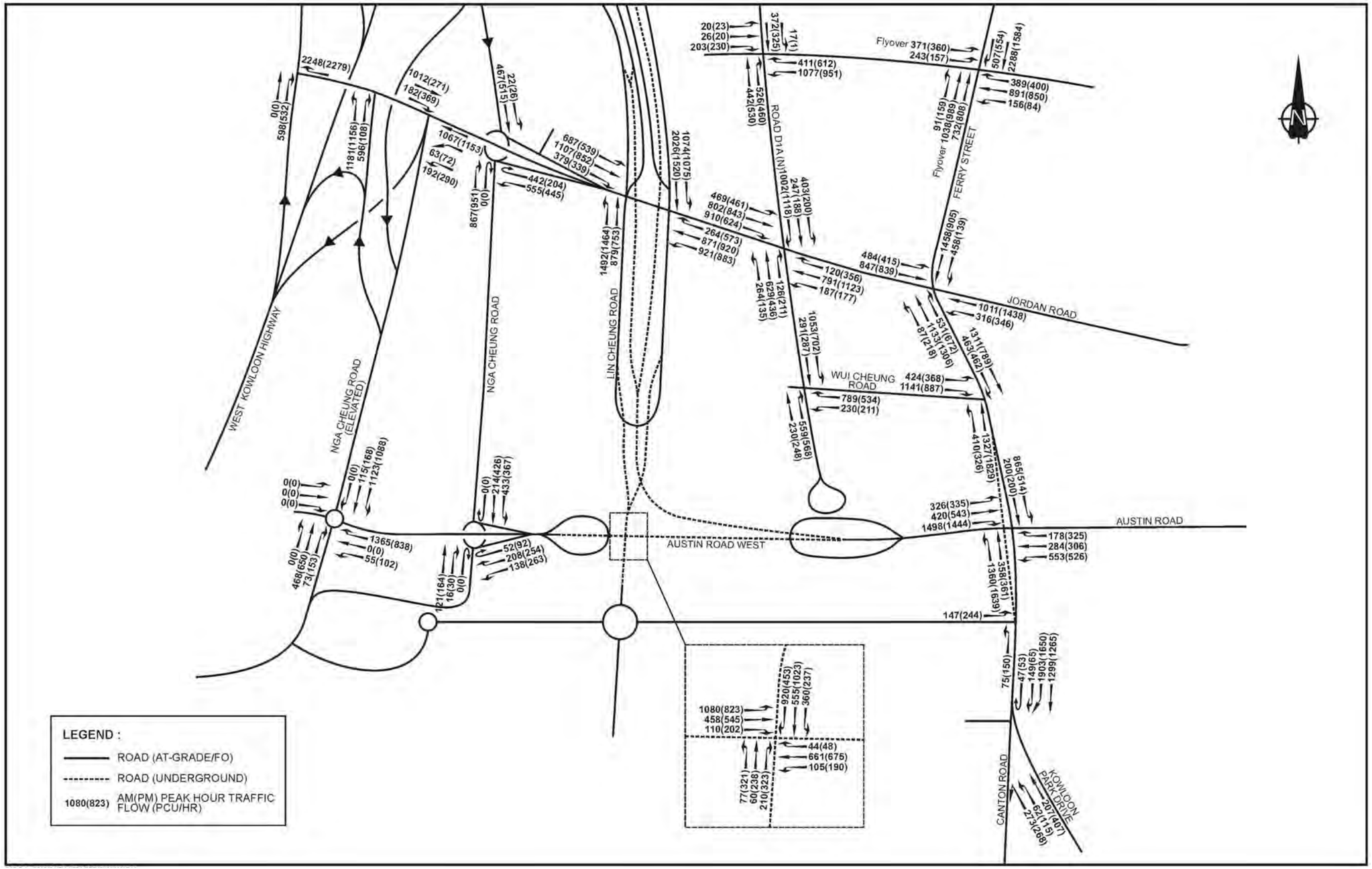


Figure 5.4 Design Traffic Forecasts for 2031 – Full Batches 1+2+3 (with Canton Road Access)

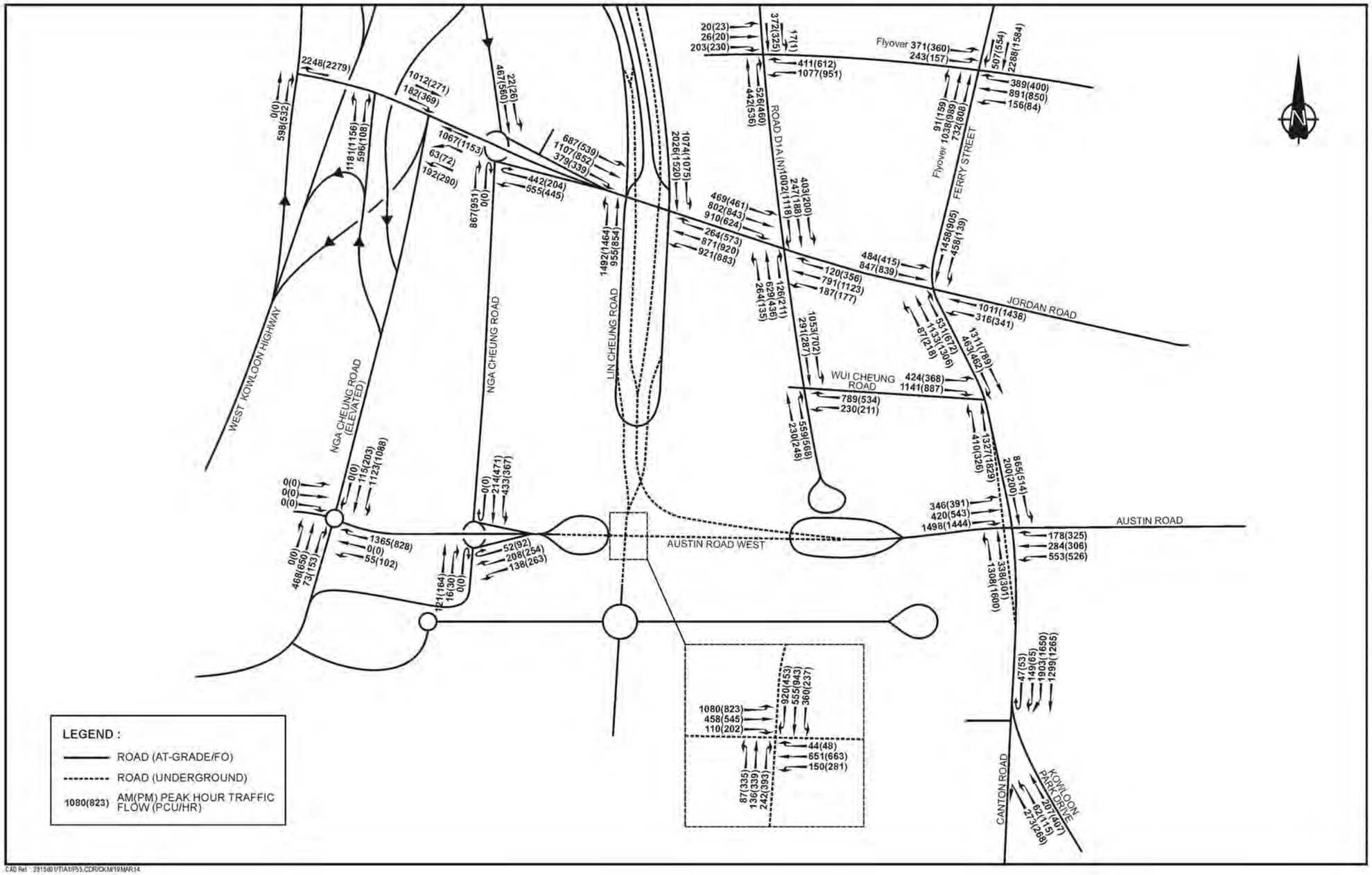


Figure 5.5 Design Traffic Forecasts for 2031 – Full Batches 1+2+3 (without Canton Road Access)

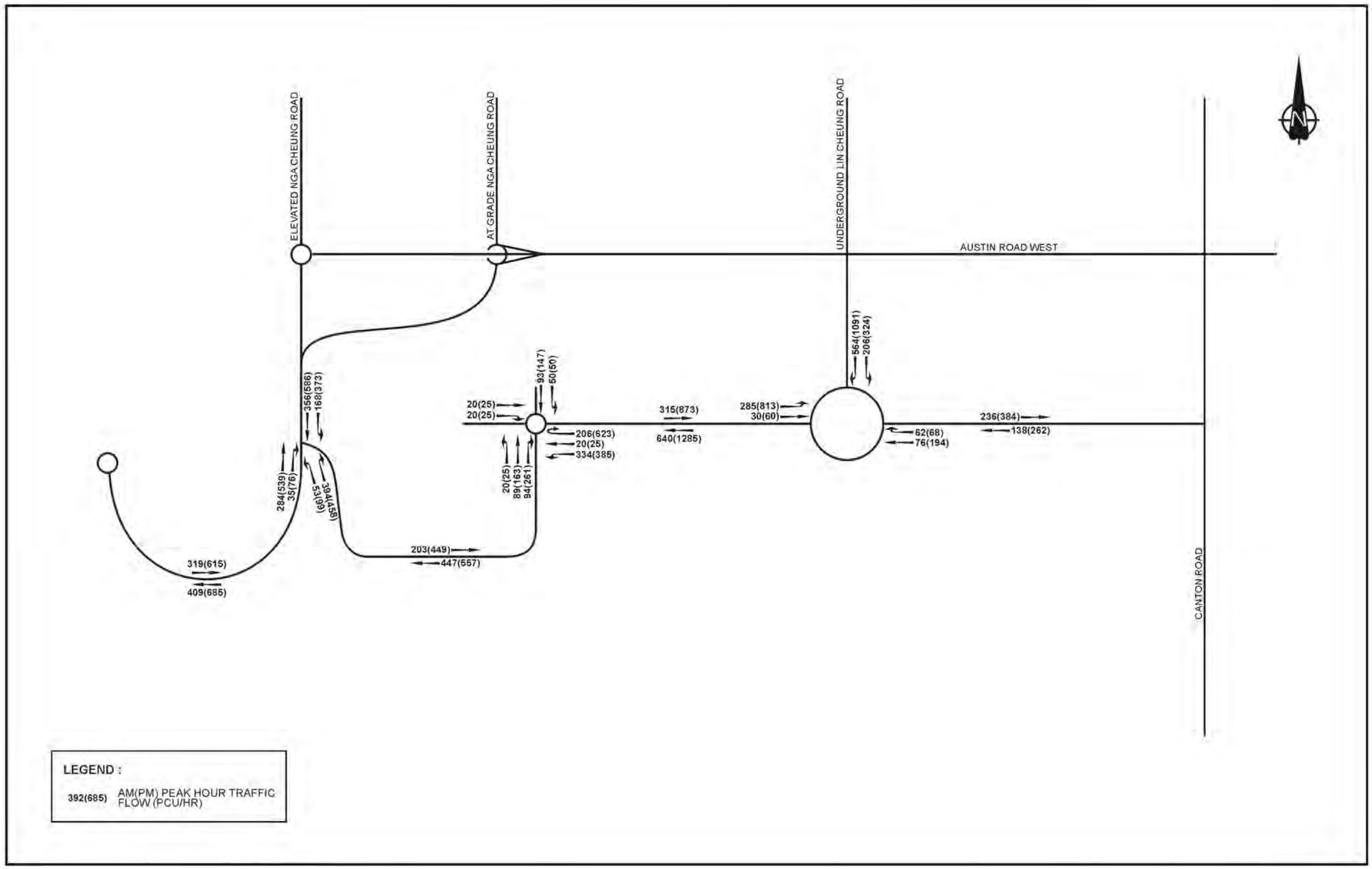


Figure 5.6 Design Traffic Forecasts (Internal Road Network) for 2031 – Full Batches 1+2+3 (with Canton Road Access)

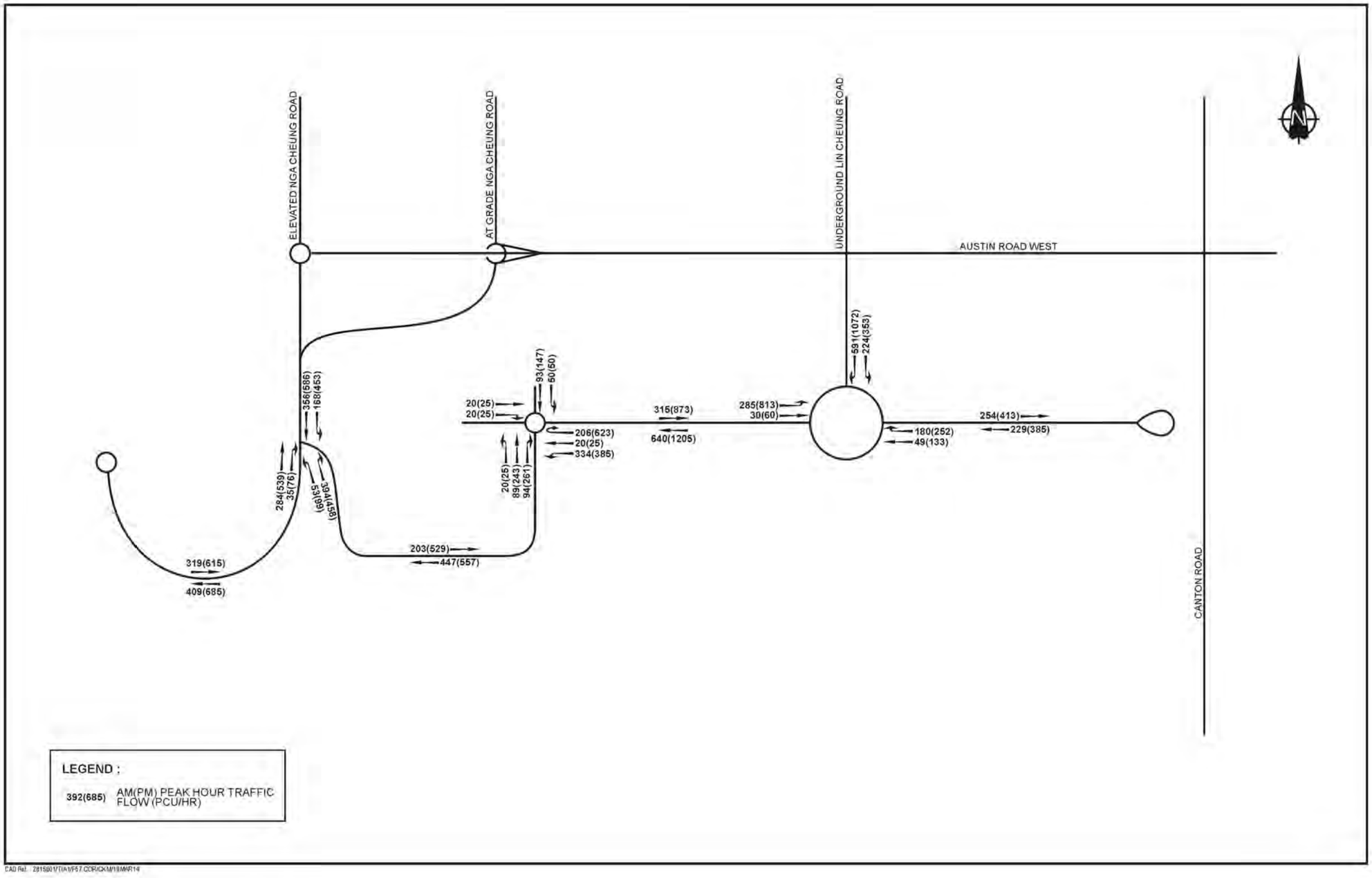


Figure 5.7 Design Traffic Forecasts (Internal Road Network) for 2031 – Full Batches 1+2+3 (without Canton Road Access)

5.6 Operational Traffic Analysis

5.6.1 **Table 5.5** summarises the operational performance for identified key junctions (see **Figure 5.8**). In all cases, all key junctions are forecast to operate within capacity in all design years. For junction YCR/Ferry St/Kansu St (J5), it operates close to its capacity in year 2031. Nevertheless, the said junction is located far away from WKCD and the impact of WKCD traffic on the said junction is minimal. For junction LCR/JOR (J11), it would operate with reserve capacity of 8% in year 2031 AM peak period (without Canton Road Access). With the Canton Road Access, the said junction performance can be improved back to 10% in year 2031 AM peak period. For junction LCR/AURW (J17), it would operate with reserve capacity of 6% in year 2031 PM peak period (without Canton Road Access). With the Canton Road Access, the said junction performance can be improved back to 10% in year 2031 PM peak period.

Table 5.5 Junction Assessments for Operating Years 2020 and 2031

Junction		Jcn Type [(1)]	Reserve Capacity or RFC [(2)]					
			Batch 1		Batches 1+2+3			
			2020		2031			
			AM	PM	Without Canton Road Access		With Canton Road Acces	
					AM	PM	AM	PM
J5	YCR/Ferry St/Kansu St	S	12%	45%	1%	2%	1%	2%
J7	JOR/Hoi Po Rd [(3)]	S	95%	112%	10%	11%	10%	11%
J8	JOR/NCR (Elevated) [(3)]	S	46%	83%	22%	38%	22%	38%
J9	JOR/NCR (At Grade)	R	0.70	0.53	0.89	0.90	0.89	0.83
J11	LCR/JOR	S	25%	43%	8%	19%	10%	23%
J12	JOR/Ferry St	S	13%	25%	28%	31%	28%	31%
J14	WCR/WMR	S	92%	103%	59%	77%	59%	77%
J15	CAR/WCR (w/o CAR underpass)	S	54%	46%	26%	20%	26%	20%
J15	CAR/WCR (with CAR underpass)	S	-	-	25%	12%	25%	12%
J16	AURW/NCR (At-Grade)	R	0.21	0.23	0.31	0.41	0.31	0.39
J17	LCR/AURW	S	111%	92%	11%	6%	15%	10%
J18	CAR/AUR/AURW (w/o CAR underpass)	S	29%	42%	16%	18%	16%	17%
J18	CAR/AUR/AURW (with CAR underpass)	S	-	-	37%	31%	35%	29%
J20	CAR/Kowloon Park Drive	S	23%	26%	18%	21%	18%	21%
J39	YCR/Rd D1A(N)/Hoi Wang Rd	S	39%	79%	11%	23%	11%	23%
J40	JOR/Rd D1A(S)/Rd D1A(N)	S	40%	23%	13%	10%	13%	10%
WK1	AURW/NCR (Elevated)	R	0.53	0.48	0.88	0.84	0.88	0.84
WK2	CAR Entrance	P	-	-	-	-	0.38	0.63

Note:
(1) S – Signal Controlled Junction; R – Roundabout; P – Priority Controlled Junction
(2) Expressed in Reserve Capacity for signal controlled junction, Expressed in Ratio of Flow to Capacity (RFC) for roundabout and Priority controlled junction
(3) Based on cycle time increased to 90 sec

5.6.2 **Figure 5.9** shows the identified key road sections and junctions within WKCD. Based on the 2031 traffic flows for WKCD internal road network as shown in **Figures 5.6** and **5.7**, **Tables 5.6** and **5.7** summarise the operational performance for the identified key road sections and junctions. All key road sections and junctions within WKCD are forecast to operate within capacity.

Table 5.6 Road Link Assessments on WKCD Internal Road Network for Operating Year 2031

Road Link[(1)]	Direction	Capacity (C) (pcus/hr)	2031 Traffic Flow (V) (pcu/hr)				V/C Ratio			
			Without Canton Road Access		With Canton Road Access		Without Canton Road Access		With Canton Road Access	
			AM	PM	AM	PM	AM	PM	AM	PM
Basement Road (Section I) (10.3m wide single 2 lane carriageway)	EB	1300	254	413	236	384	0.20	0.32	0.18	0.30
	WB	1300	229	385	138	262	0.18	0.30	0.11	0.20
Basement Road (Section II) (6.75m dual 2 lane carriageway)	EB	2300	315	873	315	873	0.14	0.38	0.14	0.38
	WB	2300	640	1205	640	1285	0.28	0.52	0.28	0.56
Basement Road (Section III) (10.3m wide single 2 lane carriageway)	EB	1300	203	529	203	449	0.16	0.41	0.16	0.35
	WB	1300	447	557	447	557	0.34	0.43	0.34	0.43
At-grade Road (Section IV) (6.75m dual 2 lane carriageway)	NB	2300	319	615	319	615	0.14	0.27	0.14	0.27
	SB	2300	409	685	409	685	0.18	0.30	0.18	0.30

Note:
(1) Locations refer to Figure 5.9.

Table 5.7 Junction Assessments on WKCD Internal Road Network for Operating Year 2031

Junction	Jcn Type [(1)]	2031 Reserve Capacity or RFC			
		Without Canton Road Access		With Canton Road Access	
		AM	PM	AM	PM
WK3	R	0.23	0.34	0.14	0.35
WK4	R	0.35	0.66	0.35	0.66
WK5	S	112%	42%	112%	48%

Note:
(1) S – Signal controlled Junction: R – Roundabout; P – Priority Controlled Junction
(2) Expressed in Reserve Capacity for signal controlled junction, expressed in Ratio of Flow to Capacity (RFC) for roundabout and priority controlled junction.

5.6.3 A working paper of the dispersal situation for WKCD during the shows end on weekends is enclosed in **Annex E**. Based on the assessment results, it is concluded that the dispersal situation for WKCD during the shows end is acceptable from traffic view point.

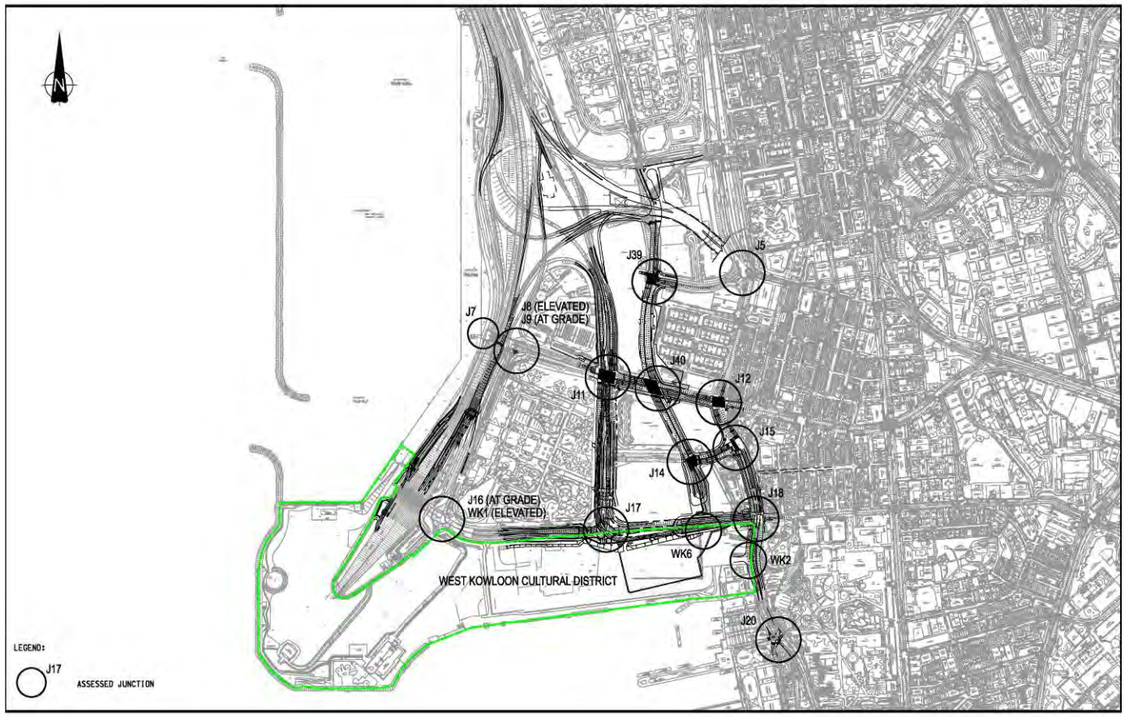


Figure 5.8 Key Junctions in WKRA and environs

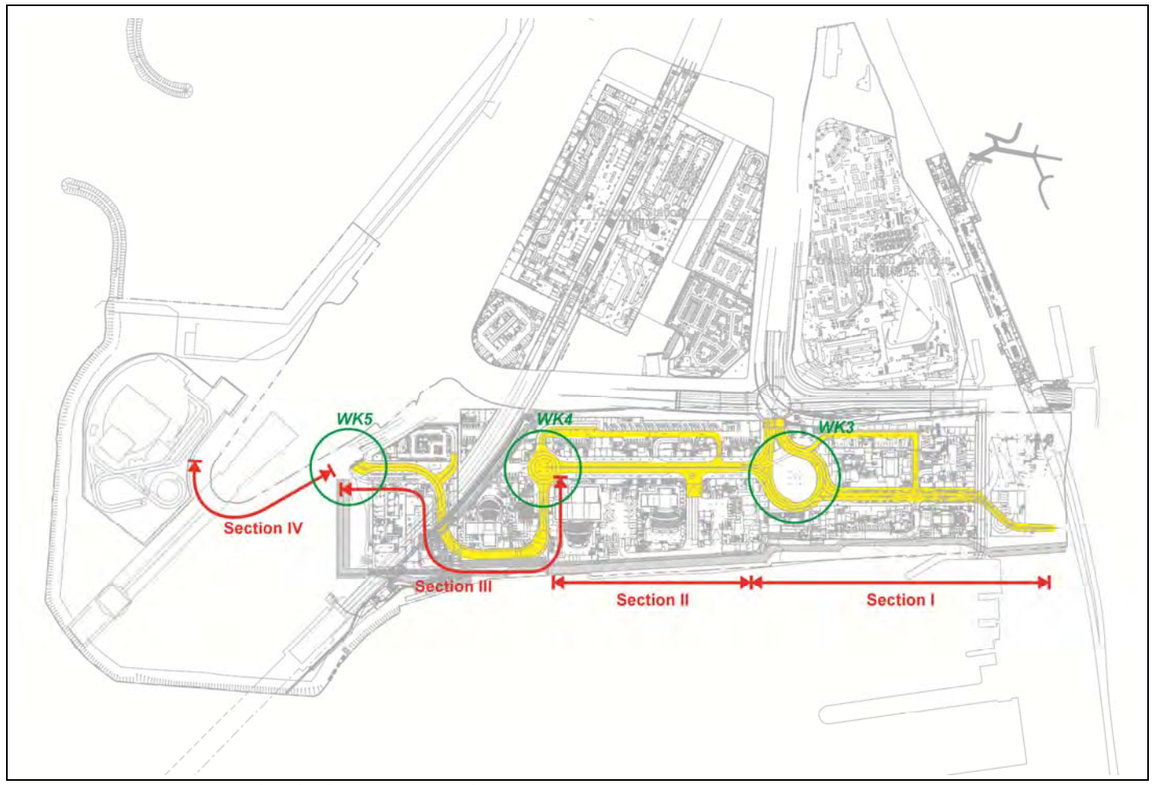


Figure 5.9 Key Road Links & Junctions within WKCD

6. CONSTRUCTION TRAFFIC IMPACT ASSESSMENTS

6.1 Introduction

6.1.1 This chapter presents and assesses the feasibility of the proposed construction of different batches of WKCD from a traffic point of view. In particular, the construction traffic affecting the transport facilities has been examined.

6.1.2 During the construction of the civil and building works for WKCD Batch 1, which has been scheduled to commence by 2014/2015 and complete by 2020, there are (i) on-going road works in the vicinity, (ii) temporary road diversions to be implemented by WKT at different times and (iii) construction/occupation of adjacent new developments which interact with WKCD construction. All of these need to be considered to quantify the cumulative impact on the surrounding transport network.

6.2 Construction Phasing

6.2.1 The construction works for WKCD are planned to be divided into 2 phases and the master phasing programme of key venues; RDE, hotel, office and residential facilities are tabulated in **Table 6.1.**

6.3 Interfacing Project and Surrounding Temporary Traffic Management Schemes

6.3.1 The WKT will significantly interface with WKCD because the site area as well as the construction period of the two projects overlap. A portion of the WKT will encroach into the underground strata of WKCD and the committed core traffic scheme D2, i.e. the LCR-AURW underpass, will encroach into the strata between +8.0mPD to -12mPD.

6.3.2 There are other construction projects in WKRA which will be undertaken in parallel with WKCD, namely the (i) AUS developments, Central Kowloon Route and Widening of Gascoigne Road Flyover. The AUS development is located immediately opposite to the east end of WKCD but construction would be mainly carried out in situ, the work areas of the above highway projects are more than 600m from WKCD, hence, they would not have significant interfaces with WKCD.

6.3.3 Temporary traffic diversion schemes had been developed for the WKRA by MTRC to facilitate the construction of WKT and LCR-AURW underpass. By early year 2015, apart from Xiqu Centre, M+, Lyric Theatre would also staretd their construction works and would be the critical before the completion of LCR-AURW Underpass. As consulted with MTRC, the key temporary road diversion schemes in early 2015 include (i) diverting Lin Cheung Road (North) SB to align with Road D1A(S) at JOR; (ii) diverting AURW, between CAR and access ramp to elevated NCR, southwards to make space available for constructing the LCR-AURW underpass; (iii) Jordan Road will be shifted back to its original alignment; (iv) Road D1A(S) northbound will be closed for construction works between Jordan Road and Wui Cheung Road; (v) The junction of Wui Cheung Road/Wui Man Road/Road D1A(S) (J14) will be operated as a free-flow junction; and (vi) Wui Man Road will connect to Austin Road West to the south at Junction J41, whilst Austin Road West westbound will be operated as free-flow at this junction. See **Figure 6.1** for the key TTMS proposed by WKT.

6.3.4 The key infrastructures and developments at nearby areas/districts under construction for the three adopted design years (i.e. 2015, 2020 & 2031) are listed as follows:

Design Year 2015

- WKT Project
- AUS development

Design Year 2020

- Central Kowloon Route
- Widening of Gascoigne Road Flyover

Table 6.1 Construction Phasing of WKCD

Batch	Operation Year	Land Uses	GFA (m^2)	Parcel
1	2020	Xiqu Centre (Main Theatre, Tea House and Education Facility)	-	1
		Outdoor Amphitheatre	-	-
		Lyric Theatre	-	35
		M+	-	39, 40
		OACF	-	1, 35, 43A, 51
		GIC	-	42
		RDE	-	1, 31, 32, 34, 35, 36, 37, 38, 39, 40, 43A, 50, 51
		Office	-	31, 34, 36, 37, 38
		Residential	-	32
		Batch 1 Total	**240,570**	-
2+3	2031	Music Centre (Concert Hall, Recital Hall and Education Facility)	-	18
		Musical Theatre	-	23
		Mega Performance Venue	-	46
		Exhibition Centre	-	47
		Medium Theatre II /Centre for Contemporary Performance (3 Blackboxes and Education Facility)	-	12, 14
		Great Theatre	-	30
		OACF	-	6, 7, 14, 20, 16, 17, 19, 22, 24, 27, 28, 29
		GIC	-	22, 44
		RDE	-	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 52, Basement Edge
		Office	-	2, 3, 5, 8, 14, 15, 17
		Residential	-	9, 10, 11, 13, 21, 16, 19, 22, 24, 26, 27, 28, 29
		Hotel	-	23, 43B
		Batches 2+3 Total	**610,830**	-
Batches 1+2+3 TOTAL			**851,400**	-

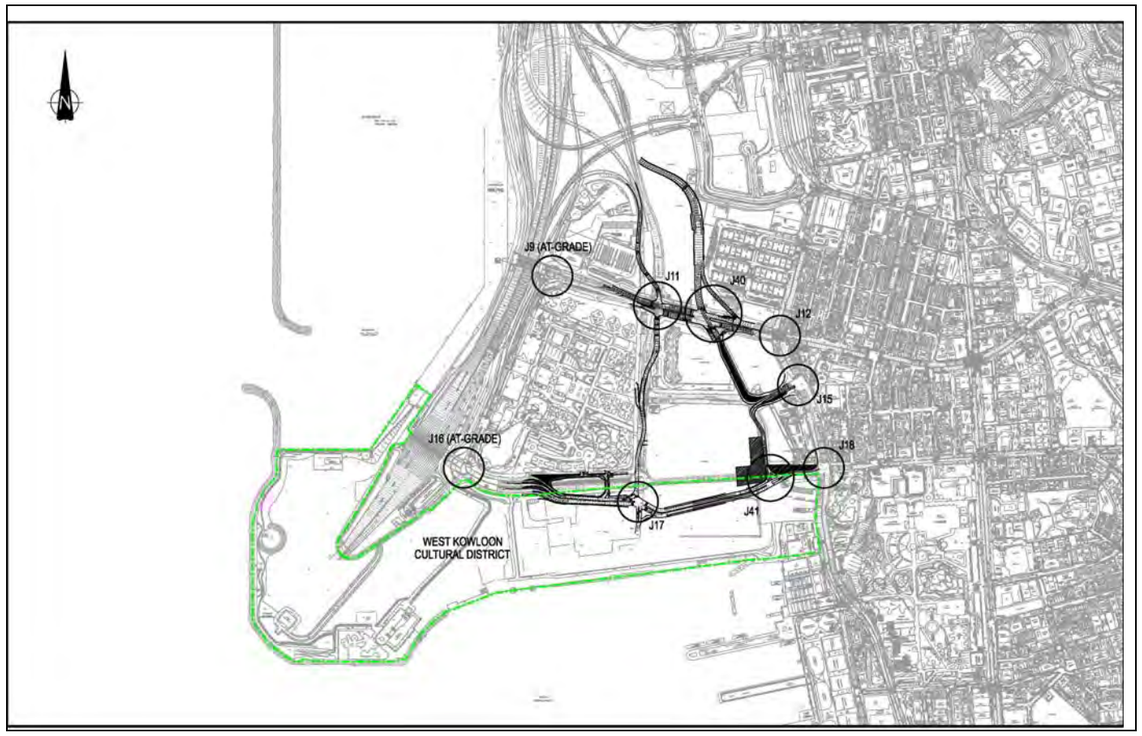


Figure 6.1 Key TTMS for WKT Construction
Source : C801 Express Rail Link – Detailed Design for WKT, CTIA Report, Aug 2009

6.4 Construction Traffic Estimates

6.4.1 The total volume of spoil material to be disposed is estimated to be about 0.51Mm^3 for Batch 1 construction. Most of the excavation works would be carried out during the early stage of the construction and is anticipated to be in year 2014/2015. The spoil material could be reused on-site or disposed of at fill bank (e.g. Tuen Mun Area 38). For a "worst case" traffic analysis, the assessment has assumed all spoil material would be transported using road based transport towards Tuen Mun Area 38. However, marine routes should be utilised as far as possible. For Batches 2 & 3, the total volume of spoil material to be disposed is estimated to be about 1.33Mm^3. Most of the excavation works would be carried out during the early stage of the construction and is anticipated to be in 2031. (see **Table 6.2**).

6.4.2 The Condition of EP does not cover barging point but cover batching plant. In the Schedule 2 EIA (for WKCD basement road and flyover), it has assumed WKCDA will erect a batching plant at the western end of the site. It helps to minimise the air impact to the adjacent residential developments and to minimise the construction traffic mileage; also where some of the raw materials could be delivered to the plant through marine access. However, all concrete has been assumed to be delivered from external batching plants for "worst case" traffic assessment. The anticipated demand for concrete truck generation are summarised in **Table 6.3**.

Table 6.2 Spoil Truck Generation Estimate

Batch	Spoil Generation			Spoil Truck Generation	
	Total Volume (m^3)	Daily Volume (m^3)	Hourly Volume (m^3)	In truck/hr	In pcu/hr
1	0.51Mm^3	1,646	150	25	56
2+3	1.33 Mm^3	4,252	387	65	146

Note:
(1)Assume 26 working days per month
(2)Assume 11 work hours per day
(3)Assume 6m3 spoil truck
(4)pcu factor 2.25 for spoil truck assumed

Table 6.3 Concrete Truck Generation Estimate

Batch	Total GFA To be Built (1) (m^2)	Volume of Bldg To be Built (Mm^3)	Concrete Truck Generation Rates (truck/m^3 bldg to be built)	Concrete Truck Generation	
				In truck/hr	In pcu/hr
1	240,570	1.418	0.05	21	47
2+3	610,830	2.902	0.05	42	95

Note:
(1)Excluding open space
(2)Assume 10m floor to floor level for CAFC and 3m for others
(3)Assume 26 working days per month
(4)Assume 11 work hours per day
(5)pcu factor 2.25 for concrete truck assumed

6.4.3 As shown in **Table 6.2** and **Table 6.3**, there would be only marginal increase in traffic during construction (even assuming all using road based transport). In addition, as compared with WKCD development traffic, the construction traffic generated during construction is minimal.

6.5 Construction Access and Construction Traffic Distribution

6.5.1 During Batch 1 construction, there will be construction works along AURW for WKT and LCR-AURW underpass, so the construction access point for WKCD should be along AURW. Xiqu Centre construction traffic would be via AURW while the remaining (such as M+, Lyric Centre) would be through the at-grade roundabout at NCR/AURW junction. See **Figure 6.2** for the Batch 1 construction access point location and construction traffic distribution.

6.5.2 The LCR-AURW underpass will be commissioned in 2015. Therefore the construction traffic of latter Batch 1 (beyond 2015) and Batches 2+3 construction would be through junction of NCR/AURW and through the depressed junction of LCR/AURW. See **Figure 6.3 and Figure 6.4** for the construction access and traffic routing upon commissioning of the LCR-AURW underpass.

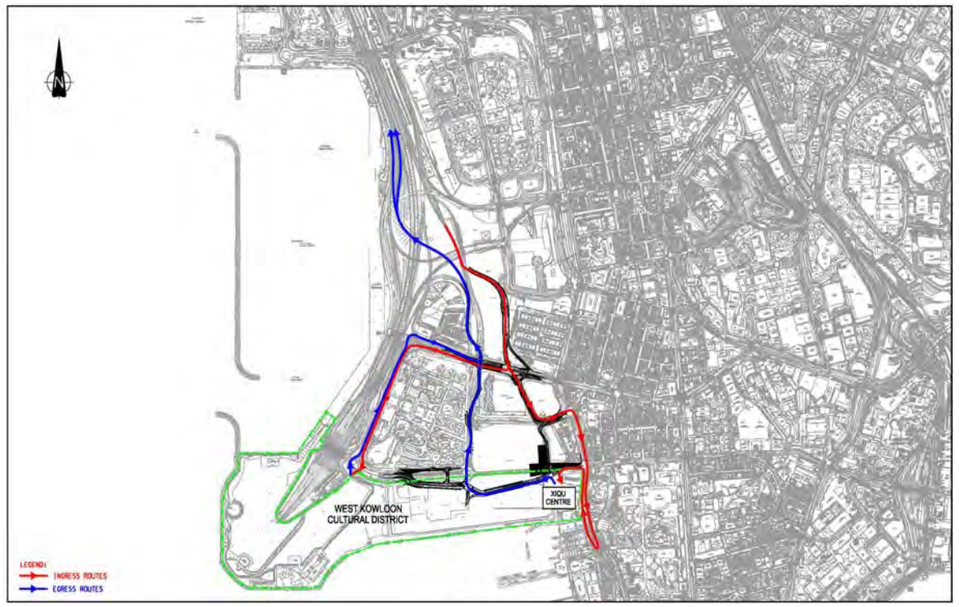


Figure 6.2 Construction Access Points and Traffic Routing for Batch 1 Construction – Under WKT Key TTMS

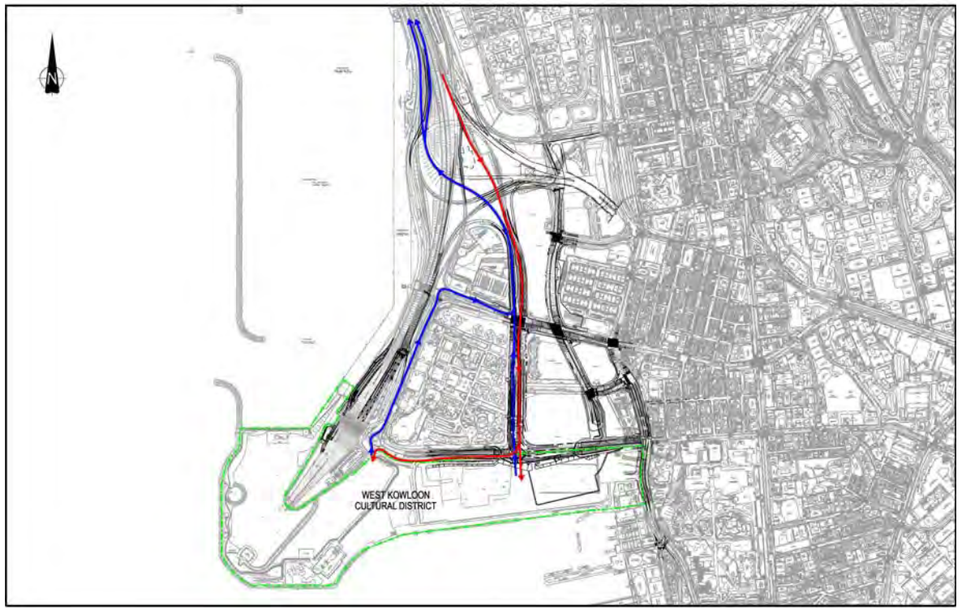


Figure 6.3 Construction Access Points and Traffic Routing for Batch 1 Construction Upon Commissioning of LCR-AURW Underpass

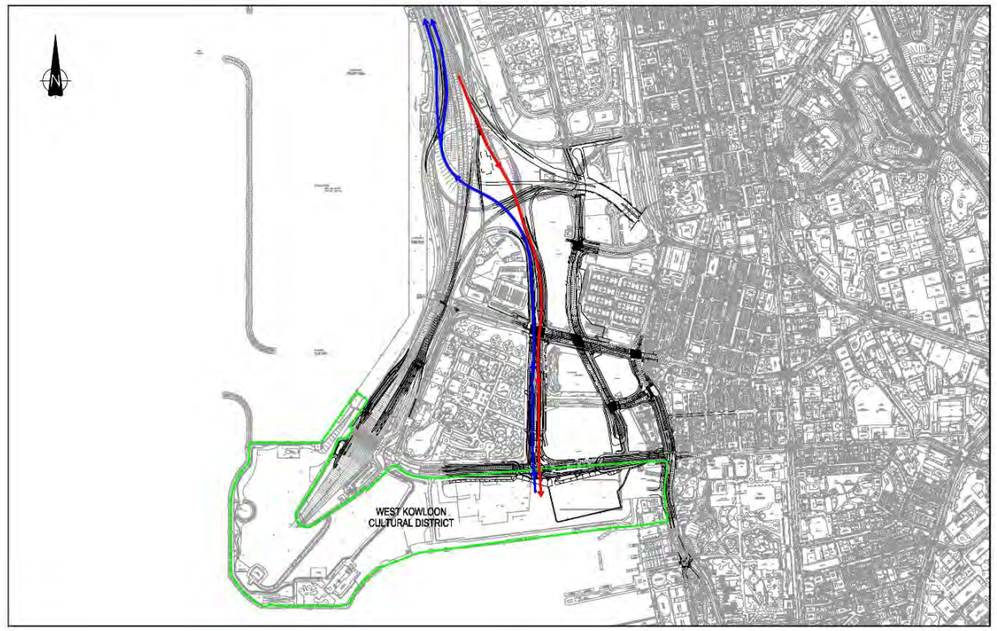


Figure 6.4 Construction Access Points and Traffic Routing for Batches 2+3 Construction Upon Commissioning of LCR-AURW Underpass

6.6 Traffic Forecasts

6.6.1 The 2015 Reference case traffic forecasts have been prepared using the traffic model described in **Section 5.2**, taking into the account the adjacent land uses and characteristics, the current and planned networks of the WKRA, and more specifically, the temporary traffic diversion schemes to be implemented by WKT project in year 2015. The models are compatible with the traffic model being applied for the WKT study on temporary traffic arrangements.

6.6.2 The 2020 and 2031 reference traffic forecasts (with WKCD Batch 1 developments) form the base used for assessing Batch 1 construction traffic impact in year 2020 and Batches 2+3 construction traffic impact in year 2031.

6.6.3 The construction traffic flows estimated in **Table 6.2** and **T able 6.3** have then been assigned to the road network according to the routings shown in **Figure 6.2 to 6.4**.

6.6.4 The design traffic forecasts (i.e. with WKCD construction works) have been determined by summing the construction traffic volume to the reference forecast flows, and are shown in **Figure 6.5 and Figure 6.6** for Batch 1 construction and in **Figure 6.7** for Batches 2+3 construction.

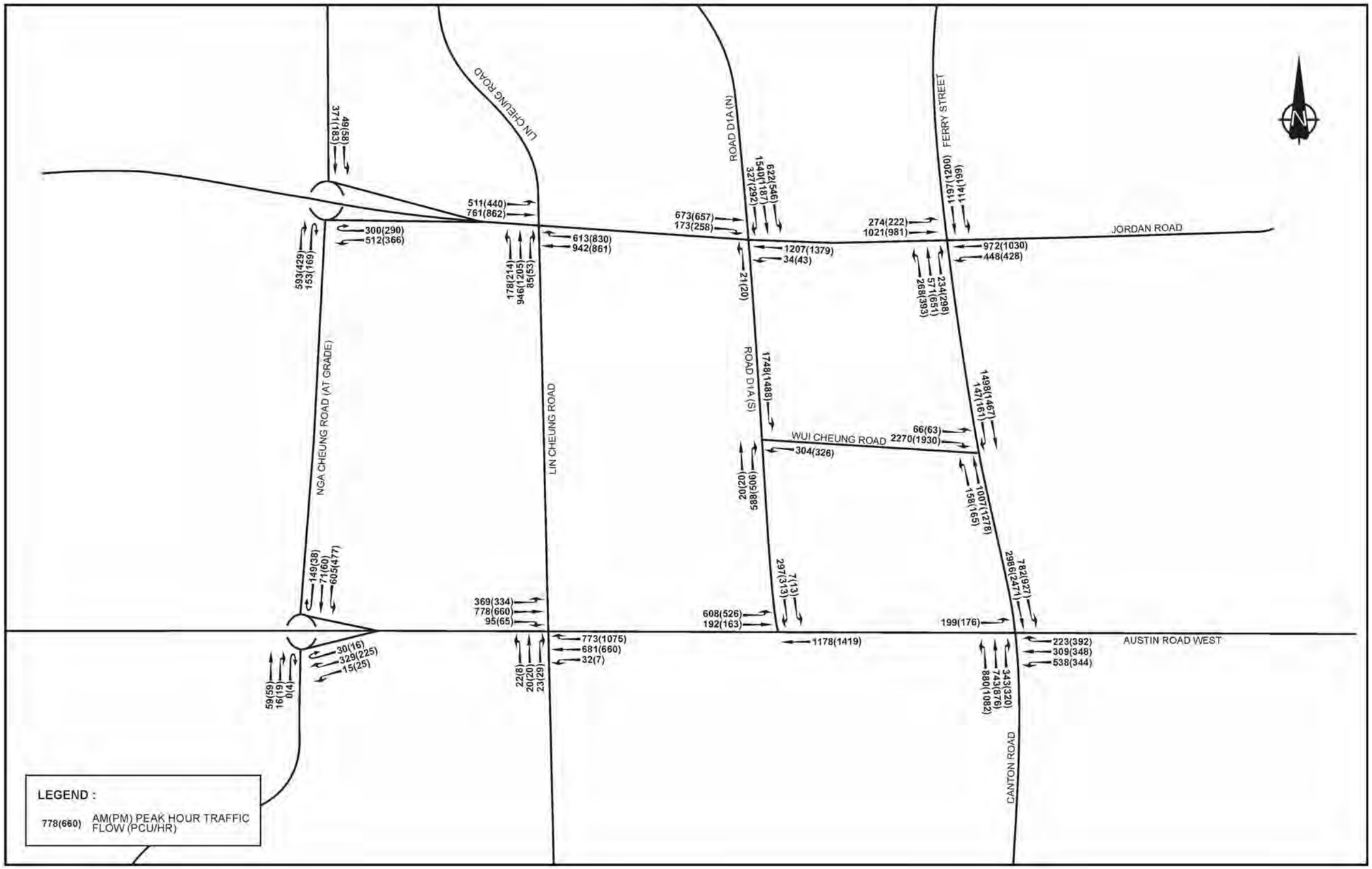


Figure 6.5 2015 Design Traffic Forecasts for Batch 1 Construction – Under WKT Key TTM

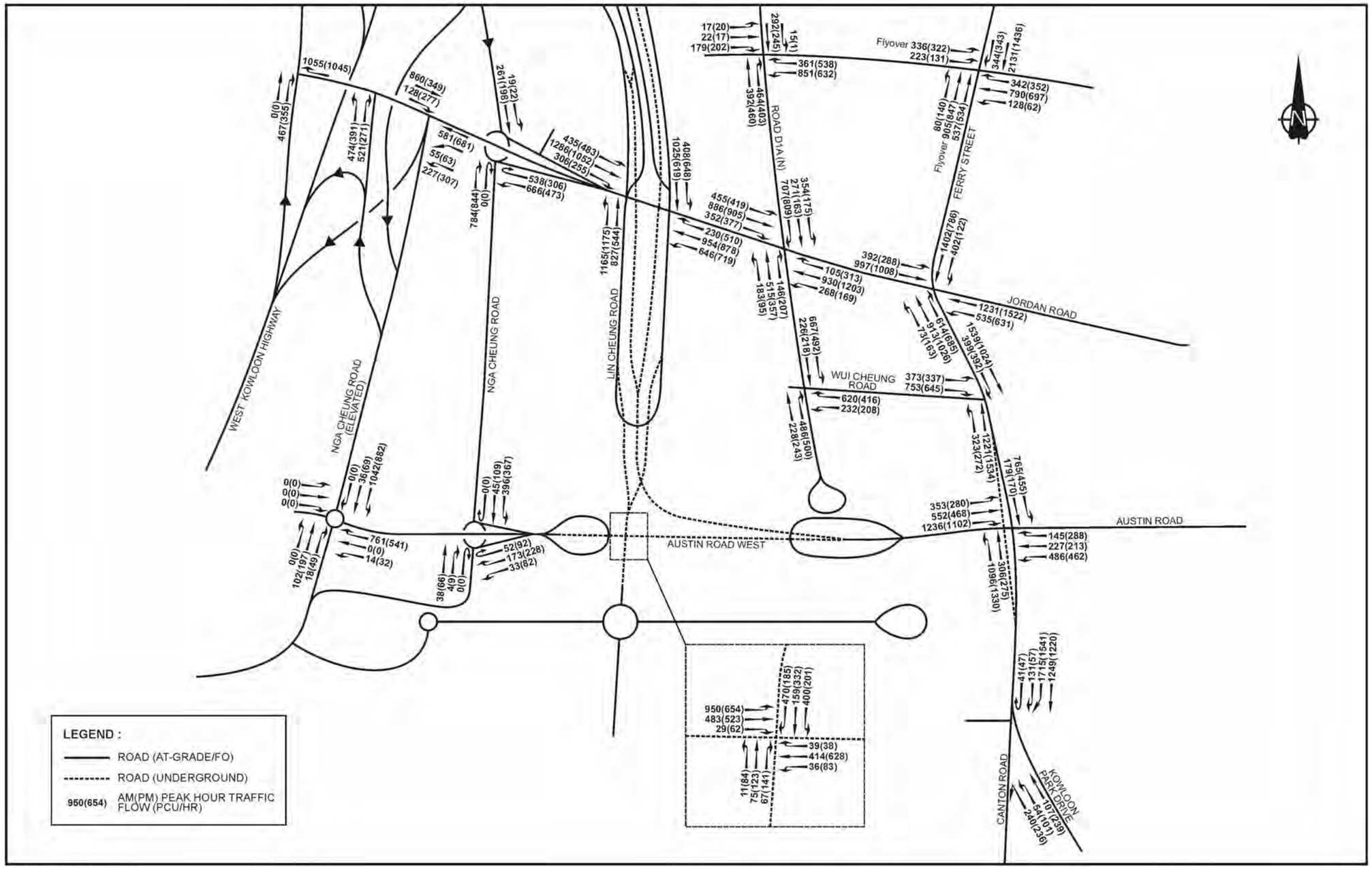


Figure 6.6 2020 Design Traffic Forecasts for Batch 1 Construction

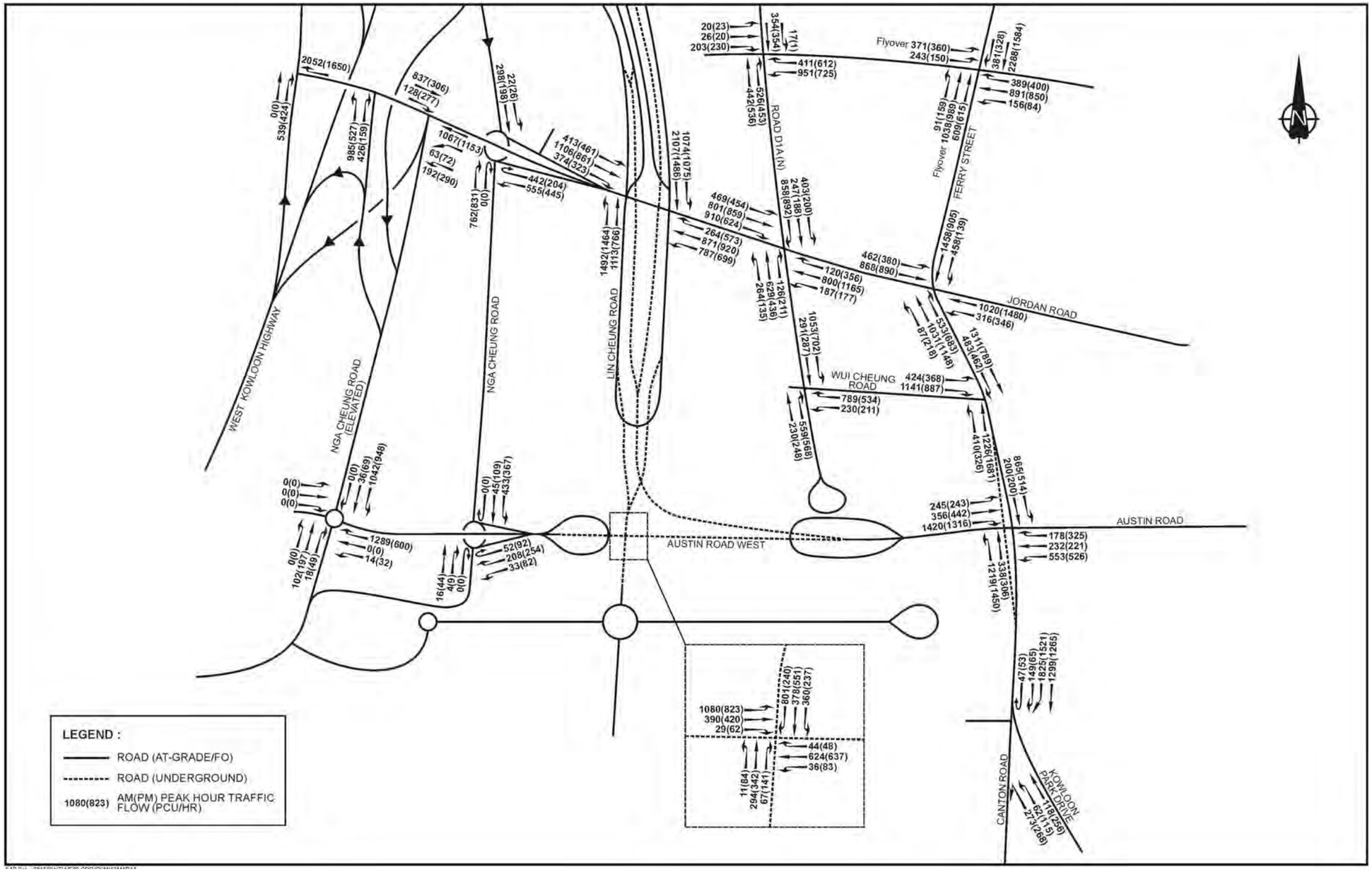


Figure 6.7 2031 Design Traffic Forecasts for Batches 2+3 Construction

6.7 Construction Traffic Impact Assessment

6.7.1 **Table 6.4** summarises the operational performance for identified key junctions (see **Figure 6.1**), which are susceptible to construction traffic of WKCD. The construction TIA assume all spoil and concrete to be delivered via road-based transport for "worse case" scenario. **Table 6.4** reveals that only junctions CAR/WCR (J15) and CAR/AUR/AURW (J18) would be slightly overloaded in year 2015. By year 2015, impact of WKCD construction traffic on these two junctions is minimal and only the ingress construction traffic (less than 10 pcus/hr) of Xiqu Centre have to route via these 2 junctions (see **Figure 6.2)**. The traffic impacts to these 2 junctions is minimal. Nevertheless, under the CE44 Road Improvement Works in West Kowloon Reclamation Development", interim traffic scheme, in a configuration similar to the final layouts, would be implemented in junction Canton Road/Austin Road/Austin Road West shortly. This interim traffic scheme will improve the traffic situation. There are no traffic diversions required specifically for WKCD during the construction stage. However, marine routes should be utilised as far as possible.

Table 6.4Junction Reserve Capacity Assessment for Critical Construction Years

Junction		Jcn Type (1)	Reserve Capacity or RFC (2)					
			Batch 1		Batch 1		Batches 2+3	
			2015 (3)		2020 (4)		2031 (4)	
			WKT TTMS		---		---	
			AM	PM	AM	PM	AM	PM
J9	JOR/NCR	R	0.47	0.37	0.70	0.54	0.59	0.51
J11	LCR/JOR	S	12%	7%	23%	41%	11%	29%
J12	JOR/Ferry St	S	24%	30%	13%	25%	28%	31%
J14	WCR/WMR	S	-	-	92%	103%	59%	77%
J15	CAR/WCR	S	-1%	-1%	54%	46%	27%	24%
J16	NCR/AURW (At-grade)	R	0.32	0.22	0.21	0.23	0.23	0.23
J17	LCR/AURW	S	11%	7%	103%	86%	31%	46%
J18	CAR/AUR/AURW (2015 Layout)	S	-3%	-2%	-	-	-	-
J18	CAR/AUR/AURW (with widening)	S	-	-	29%	42%	20%	27%
J18	CAR/AUR/AURW (with CAR Underpass)	S	-	-	-	-	42%	43%
J20	CAR/Kowloon Park Drive	S	-	-	23%	26%	18%	32%
J40	JOR/Rd D1A(S)/Rd D1A(N)	S	25%	34%	40%	23%	17%	15%
J41	AURW/WMR	S	64%	75%	-	-	-	-

Note:
(1) S – Signal Controlled Junction
R – Roundabout
P – Priority Controlled Junction
(2) Expressed in Reserve Capacity for signal controlled junction
Expressed in Ratio of Flow to Capacity (RFC) for roundabout and Priority controlled junction
(3) Batch 1 construction (2015) - Layout of assessed junctions according to the updated TTMS proposed by WKT.
(4) Batch 1 construction (2020) and Batches 2+3 construction (2031) – Layout of assessed junctions according to the Core schemes, junction improvements and Additional Schemes recommended in WKRDTS.

7. PUBLIC TRANSPORT

7.1 Introduction

7.1.1 This chapter presents the public transport strategy for WKCD, which is embedded in the comprehensive public transport network of the WKRA planned over the past twenty years under a series of government and related projects.

7.1.2 As discussed in **Chapter 2**, the over-arching objective of the transport strategy for the WKRA as a whole is to create a people-dominated urban environment which gives priority to pedestrians and public transport and maximizes traffic free areas. The existing and planned public transport serving WKRA is illustrated in **Figure 7.1**.

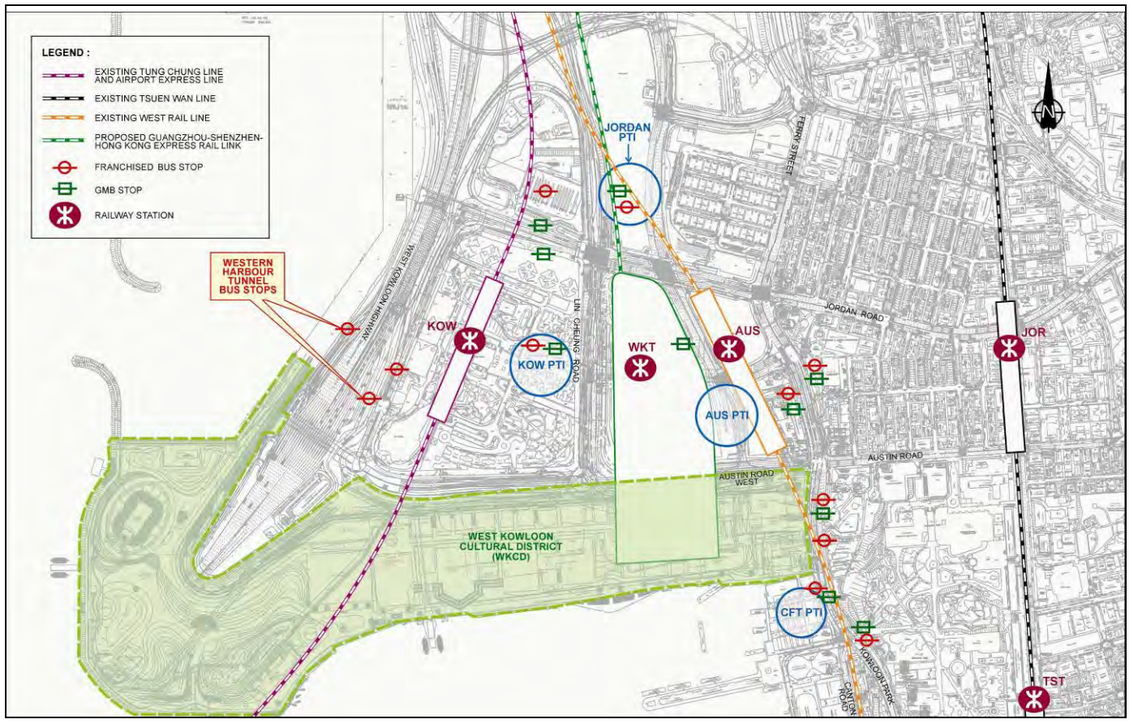


Figure 7.1 Existing and Planned Public Transport in the WKRA and Environs

7.1.3 WKCD will be served directly by three rail corridors:

- Airport Railway: AEL and the domestic TCL of MTR, both calling at KOW.
- East – West Line (EWL): which links the northwest New Territories/West Kowloon/South Kowloon/East Kowloon/Shatin New Town/Ma On Shan with trains calling at AUS.
- XRL (open in 2015): Terminal for Hong Kong – Mainland High Speed Rail services comprising express shuttles to Futian/Longua/Humen/Guangzhou and long distance services to major cities on the Mainland high speed rail network.

7.1.4 The three stations serving WKRA will be interconnected by pedestrian subways, at grade traffic free corridors and at podium level elevated links via commercial zones. They offer comprehensive links to the Territory for WKCD either directly or via interchange with other railway lines. A key objective is to provide convenient links to the railway stations from all parts of WKCD via walking, with mechanical assistance from travellators and other transport modes.

7.1.5 The MTR Tsuen Wan Line (TWL) serves the Nathan Road Corridor with JOR and TST stations, 500-600m distant from the eastern periphery of WKCD. Options for connecting WKCD to the TWL are put forward for consideration and include pedestrian links, travellators and buses.

7.1.6 The public transport terminals and interchanges (PTIs) serving WKRA are also illustrated in Error! Reference source not found.. Some 9 bus routes and 3 GMB routes terminate at the Kowloon Station PTI providing links to East and North Kowloon, Sheung Shui and Tuen Mun. The temporary Jordan terminal (with 9 bus routes) on To Wah Road will be replaced by a new permanent PTI at Site B on Road D1A (N) upon completion of construction of the WKT. A PTI is also incorporated into the China Ferry Pier Terminal with 4 bus routes to/from East Kowloon and Tsuen Wan.

International and Cross Boundary Hub

7.1.7 WKCD is located near to a comprehensive range of cross boundary links and services (See **Figure 7.2** and **7.3**). The existing AEL at KOW provides a 20 minute journey to/from the HKIA and offers intown check-in facilities. A cross boundary coach station is also provided at West Kowloon offering links to Shenzhen Airport and Shenzhen Bay.

7.1.8 The China Ferry Pier is the terminal for fast ferry services to Macau, Shenzhen, Zhuhai and a number of Pearl River Delta cities and is used by some 30,000 travellers per weekday. Whilst, as noted above, the WKT will be the terminal for all high speed rail services linking into the Mainland network which is planned to exceed 12,000km by 2020. The WKT is being designed to accommodate up to 200,000 passengers per day of which 30-40% will be Mainland or overseas visitors.

7.1.9 This cluster of international and cross boundary links make WKRA a multi-modal hub which will attract many overseas and Mainland visitors and become an activity gateway to Hong Kong.

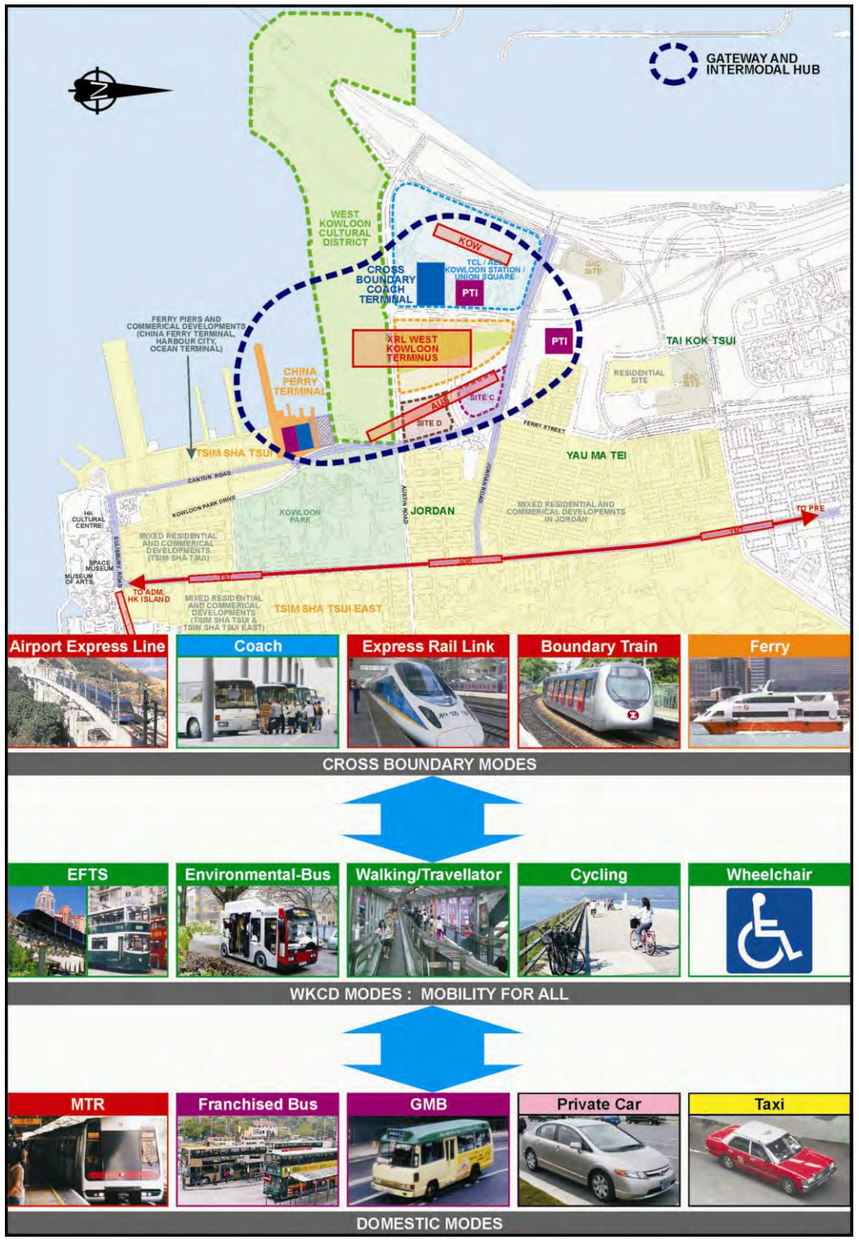


Figure 7.2 International and Cross Boundary Transport Facilities

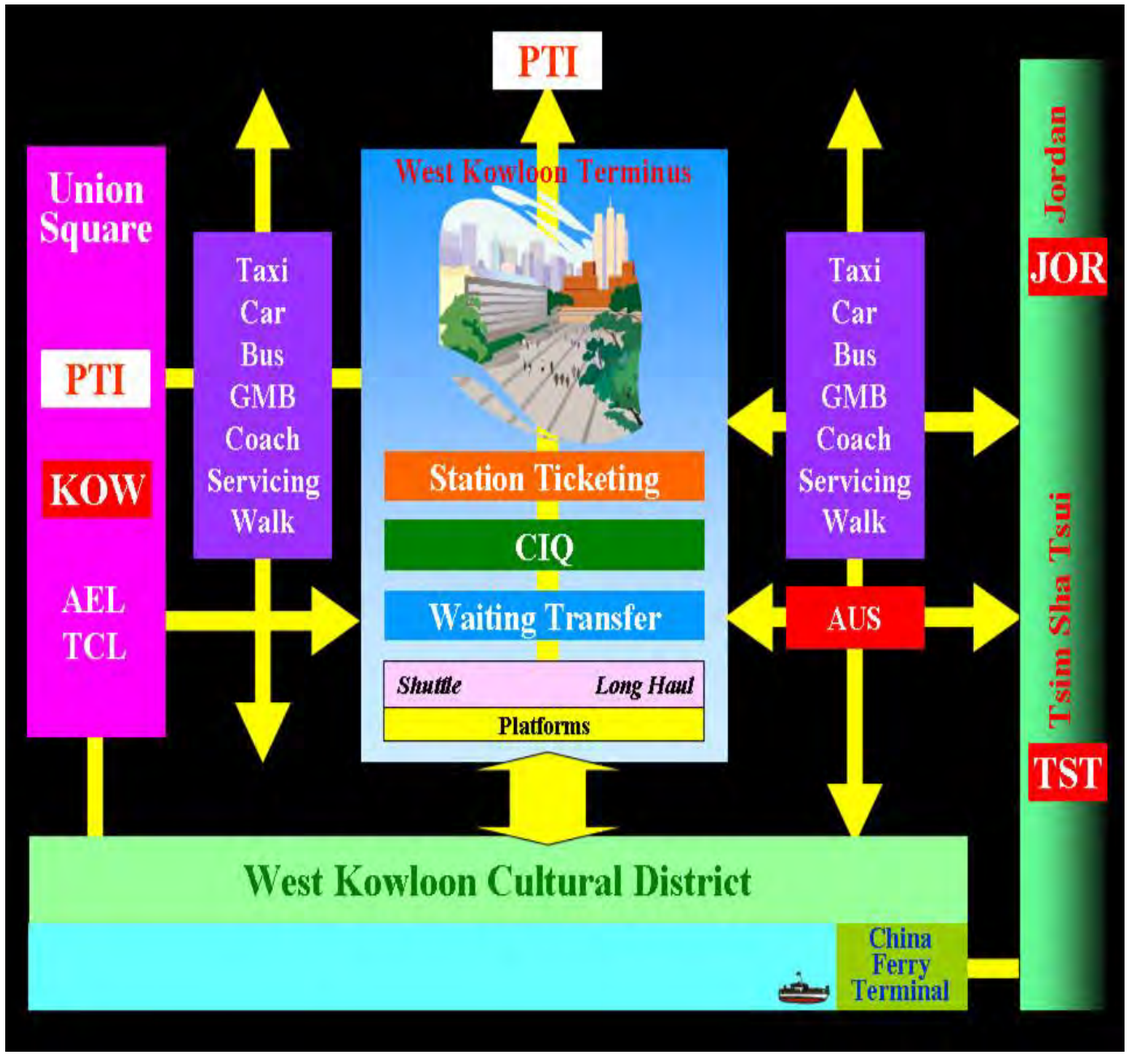


Figure 7.3 The WKRA Multi-modal Hub

7.2 Development of Public Transport Strategy

Objectives and Opportunities for WKCD

7.2.1 The public transport plan must meet a range of specific objectives by providing the following:

- Easy access to the cross boundary terminal facilities
- Easy access to the domestic railways, ferries and road-based public transport.
- Convenient links into the neighbouring areas of Tsim Sha Tsui and Jordan
- Traffic free circulation and connections with adjacent developments and activity areas
- Environmentally friendly and pollution free travel
- Safe and secure movement for all mobility groups
- Legible and comprehensive traveller information and way finding for visitors and residents

Network structure

7.2.2 WKCD is 1.4km wide east-west and 200-300m deep north-south (**Figure 7.4**). The distances from the waterfront to the main railway stations are typically 250m to up to 2km to reach all stations, covering a range from acceptable walking distances of 400-500m to beyond normal access distances for public transport. A combination of enhanced walking facilities (travellators, escalators) and local scale public transport (shuttle buses) have been investigated. The following paragraphs present a review of the options considered and the basis for the proposed strategy.

Functional Hierarchy

7.2.3 A functional hierarchy was developed for the circulation of travellers within WKCD, the WKRA and adjacent areas. **Figure 7.5** illustrates people movements are classified by the following functions:

- Strategic: A to B movements to access/egress external modes (e.g. MTR) or for point to point movement in WKCD. Travellers wish to have direct and convenient links with no intermediate diversions or delays. The Mid-Levels escalator is an example of type when used by commuters or for example WKCD visitors wishing to go straight from the TCL to the theatre.
- Local: for movements inside WKCD between activity areas that people wish to be direct and convenient, for example going from dinner at an RDE location near the M+ and then attending a performance at the MPV.

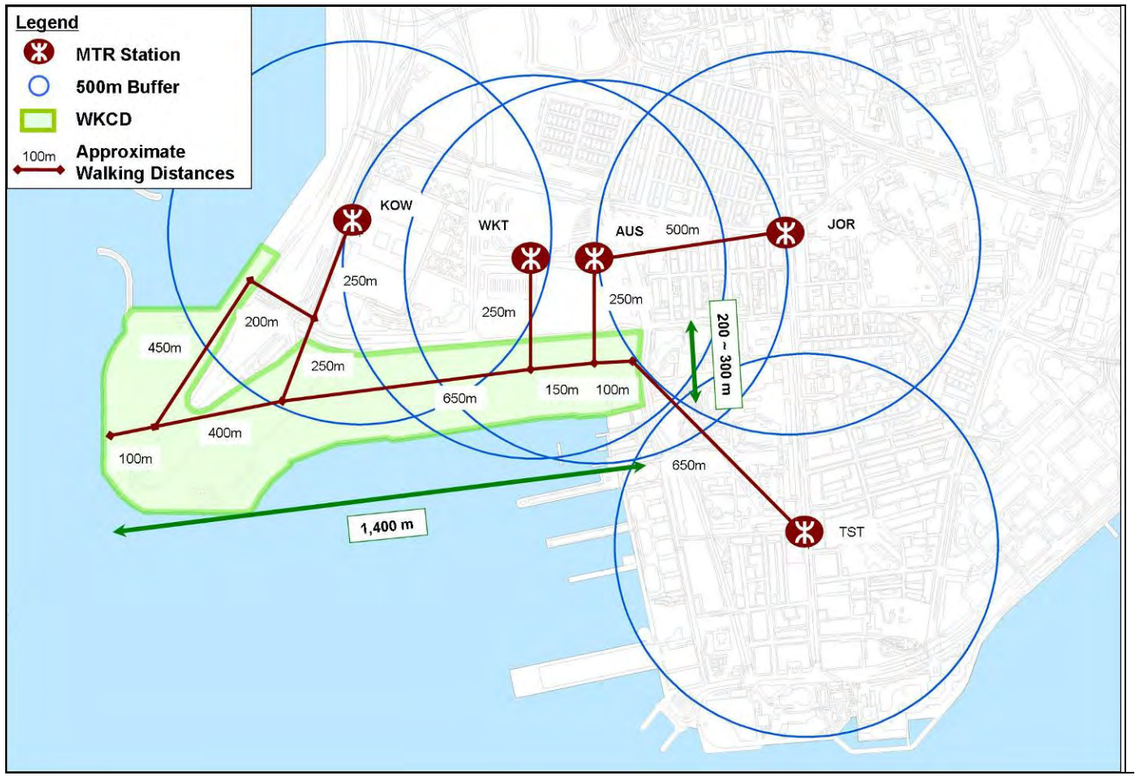


Figure 7.4 WKCD Connectivity Map

- Leisure: sightseeing along the waterfront, taking in the street life, window shopping along the Avenue, not seeking the quickest route but requiring a safe and pleasant environment.
- Activity: corridors or areas reserved for activities such as cycling or jogging which require a measure of segregation for practical and safety reasons.
- Passive: areas off the main circulation for ambling or resting where the environment is of most importance such as piazzas or in the park areas.

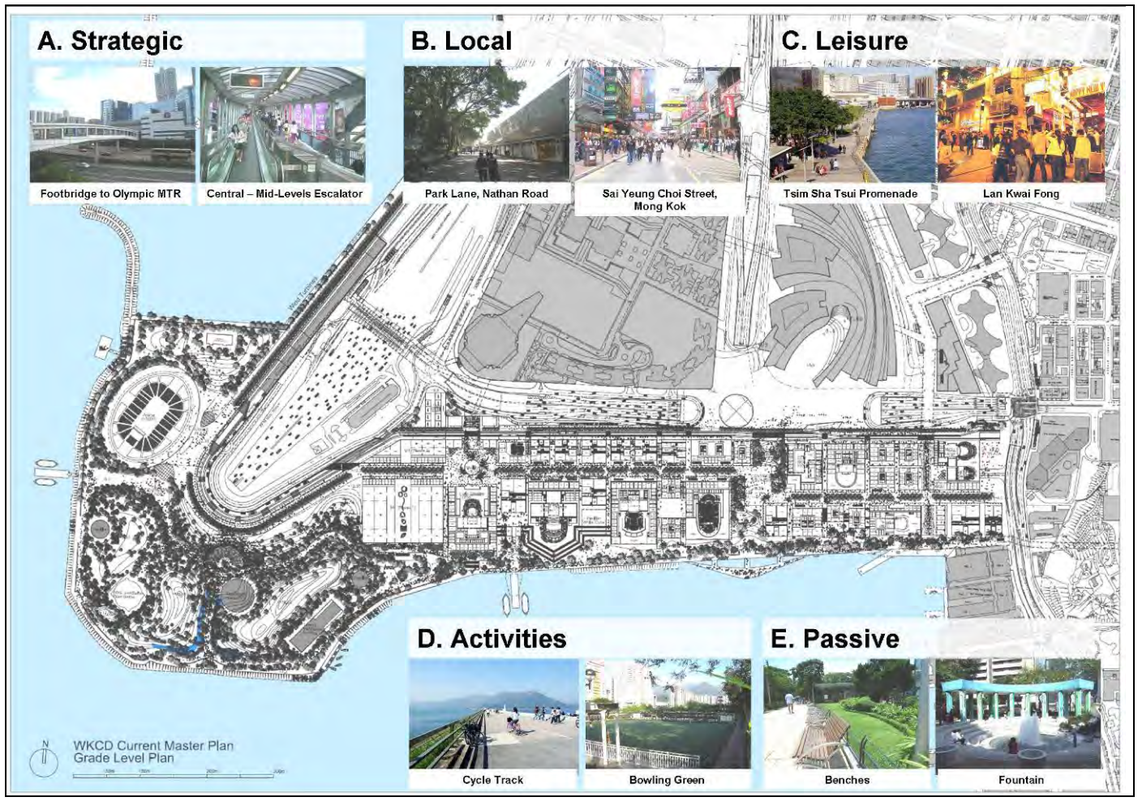


Figure 7.5 Hierarchy of People Movement Links

7.3 Preliminary Demand Estimates

7.3.1 The travel demands for visitors, residents and employees at the WKCD were prepared using the Consultant's public transport modelling procedures applied for similar studies for the Government and MTRC in the Territory and West Kowloon. The following steps were applied in the forecasting process:

- Total travel demands estimate – based on attendance estimates prepared by the Consultant for the various main performance venues, OACF, RDE, office and residential. Estimates for RDE, office and residential were cross-checked with corresponding Territory trip rates.
- Major Modal Split – For CACF and OACF, the modal split was based on empirical data sourced in WKRTS. For the typical RDE, office and residential, modal split was based on Territory data based on MVCTS models.
- Public Transport Demand – Sub-modal split estimated using the Consultant's Public Transport Models providing rail, road-based, coach and ferry demands.
- Route Choice – PT Assignment Model to allocate demands to railway and bus services.

7.3.2 The average daily attendance is summarised in **Table 7.1**. The average daily attendance for the various CACF, commercial and residential developments is estimated to be 46,000 in Batch 1 that increases to 136,000 in Batches 1+2+3.

Table 7.1 WKCD Average Daily Attendance (1-way)

Land Uses	WKCD Average Daily Attendance (1-way)	
	Batch 1	Batches 1+2+3
CACF	8,344	38,774
OACF	5,187	10,805
GIC	27	71
RDE	19,047	59,079
Office	1,452	5,474
Residential	662	8,383
Hotel	-	2,022
Park	11,381	11,381
Total	**46,100**	**135,959**

Note:
(1) Figures are numbers of person attending the venue or development type.
(2) Figures on Park based on recent survey at Kowloon Park.

7.3.3 The external travel demands by mode are summarised in **Table 7.2**. In line with the objective of promoting sustainable transport, the majority, 84%, of travel to/from WKCD is forecast to be by public transport, rail or road-based or walking. Railway is forecast to be used by nearly half of all visitors. Private car and taxi account for less than 20% of travel. Taken into consideration the low passenger demand on water transport, ferry services will not be recommended.

Table 7.2 WKCD Average Daily External Travel Demand by Mode (2-way)

External Transport Modes	Average Daily (1) Person Trips (2-way)			
	Batch 1		Batches 1+2+3	
	Person Trips	Modal Split (%)	Person Trips	Modal Split (%)
Private Car	5,480	7%	17,104	8%
Taxi	6,759	9%	20,845	9%
Coach	5,733	8%	14,347	7%
Bus /GMB	13,441	18%	40,218	18%
Water Transport for visitor or leisure activities	744	1%	2,176	1%
Railway	29,055	40%	90,941	42%
Walk	12,553	17%	31,904	15%
Total	**73,760**	**100%**	**217,534**	**100%**

Note:
(1) The average daily person trips are two-way and estimated as the attendance number *2 *0.8, where 20% of trips are assumed to be between developments within the WKCD.

7.3.4 The forecast evening peak travel demands for the average day and weekend are summarised in **Table 7.3**. The evening peak is the busiest period with the mix of people departing or coming home after the working day and those arriving for the evening entertainment and leisure. These estimates are based on the assumption that 50% of patrons to the WKCD in the evening will arrive in the peak hour and the CACF will be 60% full in aggregate on a weekday and 80% full at weekends. The weekday two-way flow accounts to around 30,000 persons/hour and 42,000 persons/hour at weekends.

Table 7.3 WKCD External Public Transport Peak Travel Demand (2-way) (1)

External Transport Modes	PM Peak Hourly (2) Person Trips (2-way)			
	Weekday		Weekend	
	Person Trips	Modal Split (%)	Person Trips	Modal Split (%)
Private Car	2,585	8%	3,488	8%
Taxi	3,027	10%	4,085	10%
Coach	2,278	8%	3,079	7%
Bus /GMB	5,984	19%	8,082	19%
Water Transport	174	1%	235	1%
Railway	13,167	43%	17,783	43%
Walk	3,349	11%	4,844	12%
Total	30,565	100%	41,596	100%

Note: (1) External trips to/from WKCD; excludes wholly internal movements.

(2) Peak hour trip ends derived from WKR DTS trip rates (TD54/2008) and seating capacity, which assumes aggregate occupancy of all venues of 60% weekday and 80% weekend.

7.3.5 The railway flows are estimated to be 13,000 persons/hour on weekdays and nearly 18,000 persons/hour at weekends. These volumes are spread across the TCL, WKT, AUS and also JOR and TST stations and can be accommodated in capacity terms. The road-based public transport volumes are estimated to be 6,000 persons/hour on weekdays and 8,000 on weekends. Existing bus services will need to be increased in frequency plus some new routes added to meet new demands in particular at MPV.

7.4 Environmentally Friendly Bus Network

7.4.1 The bus network development will be phased to meet the evolving needs of the WKCD. The principal bus service types (see **Figure 7.6**) forming the network are as follows:

- Internal: E-bus along the Basement Driveway /Great Park Drive spine serving internal travel movements.
- District: Bus services to provide an integrated network with the adjacent activity areas in South Kowloon.
- External: Conventional franchised bus services passing WKCD and/or terminating in the WKRA.

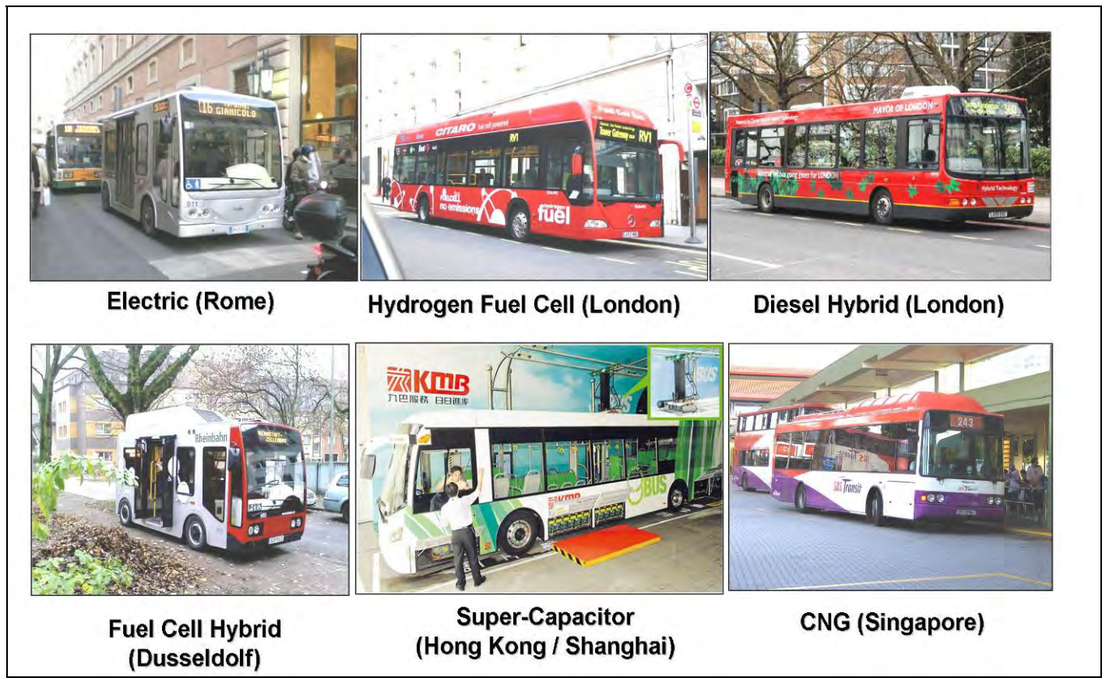


Figure 7.6 EFTS Bus Types

7.4.2 The roadways permitting bus circulation in WKCD are illustrated in **Figure 7.7** and possible external routes and interchanges nodes in **Figure 7.8**. Austin Road will provide the corridor for District and External bus services travelling east-west serving (1) the East Gate 'U' turn at the eastern end of WKCD and (2) the proposed bus bays adjacent to the Austin Road/Nga Cheung Road roundabouts at the West Gate from where services can extend via the Great Park Drive or the WHT overpass to the MPV.

7.4.3 Two routes will serve the WKCD for local movement in Batch 1. The Internal E-bus (Route 1) service is based on single deck environmentally friendly vehicles (e.g. hybrid, battery, capacitor) running from Xiqu Theatre in the east via the Basement Driveway to the Pier, to M+ and onwards via Great Park Drive to the MPV. This service will provide connectivity at basement level and connections closer to the waterfront and piers.

7.4.4 A Peripheral Service (Route 2) will supplement the Internal Route. This will run from either Star Ferry or CFT (depending on availability) via Canton Road, Austin Road, Great Park Drive to the Arena.

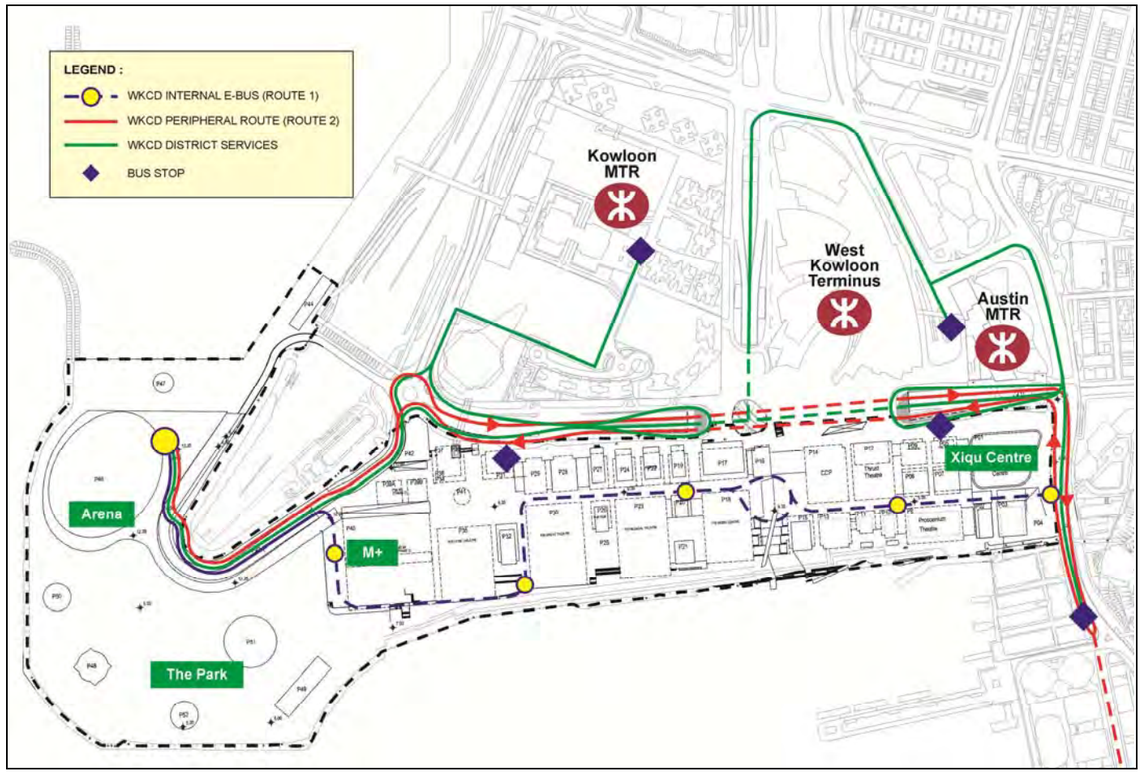


Figure 7.7 Possible Bus Circulation around WKCD

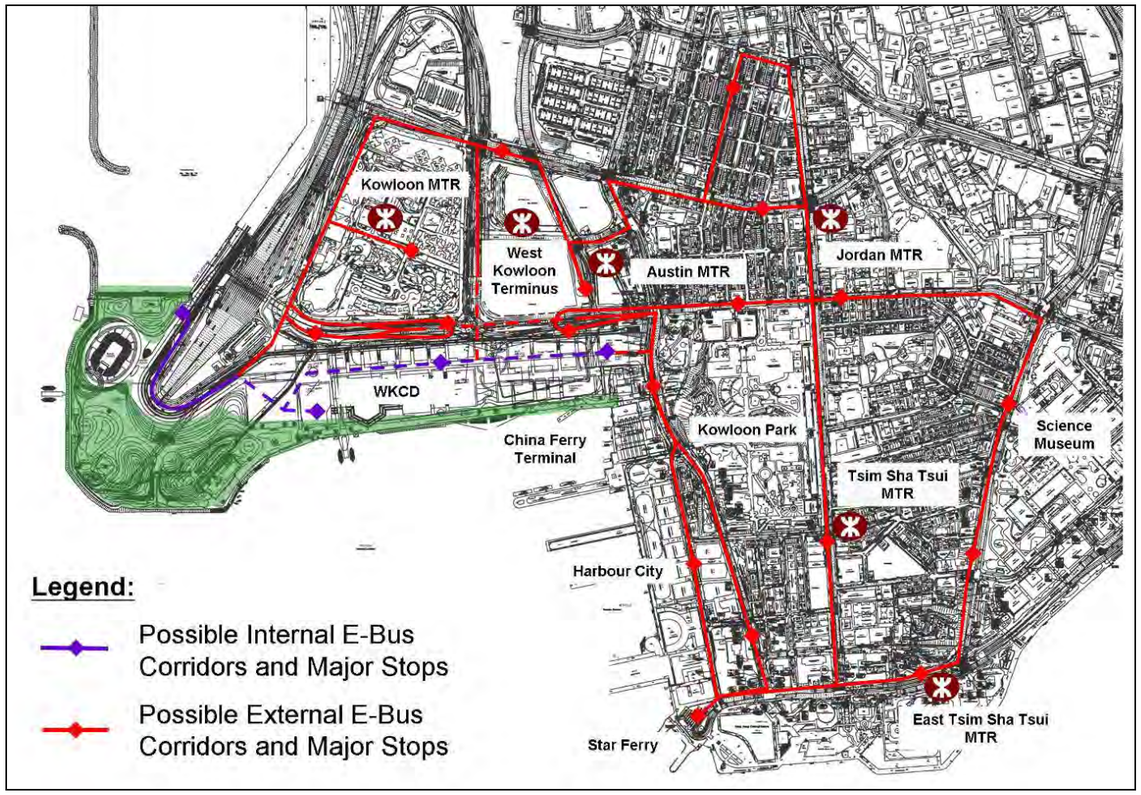


Figure 7.8 Possible E-Bus Network in South Kowloon

7.4.5 District E-Buses (or ordinary buses in the interim) form an easy to implement option for the establishment of a South Kowloon collector/distributor network and would require little or no special traffic management. The network could potentially be integrated with bus services for KOW, WKT, AUS and CFT and run further south to Star Ferry, Nathan Road, Salisbury Road and Chatham Road (see **Figure 7.8**).

7.4.6 The proposed coverage of External bus services is illustrated in **Figure 7.9**. These may be adjusted to call at the stops in the loop roads along Austin Road. In addition, a laybys are provided at the Arena which can be used for special or recreational services to meet the varying demands at the MPV and EC. The need for a regular service can be considered when the programmes are better developed at the MPV and EC. Consideration could be given to new routes to East Kowloon via CKR and to Shatin via Route 8 to take advantage of these new road corridors where no direct rail links exist. In addition a service linking across Central Kowloon via Yau Ma Tei/Mong Kok to Kai Tak would provide direct links to areas not directly served by rail. These could be potential full time routes or operate as holiday/weekend services. As discussed below termini space could be made available at the bus layby at the MPV or at the West Gate bus layby.

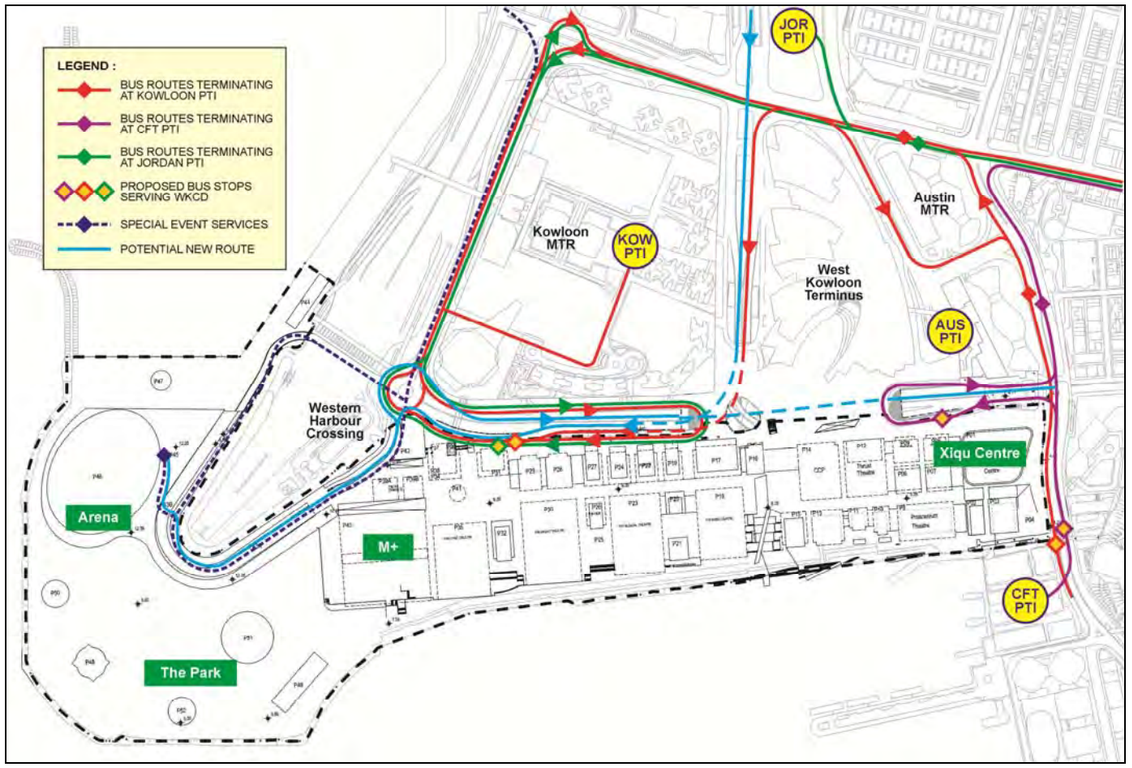


Figure 7.9 External Bus Routes

7.4.7 The detailed service patterns and routeings should be developed when the plans and activities are further defined. At this stage the plan offers flexibility in service operations by identifying roadways and terminals for bus services which can meet the varying demands of WKCD. The details and operation arrangement of the E-bus service would be further studied in the detailed design stage. Potential core services could include:

WKCD - Internal E-bus (Route 1 in **Figure 7.7**)

Xiqu Theatre – Basement Driveway – Pier – M+ – Arena

District: WKCD – District (Route 2 in **Figure 7.7**)

Star Ferry/CFT – Xiqu Theatre – Austin Road – Austin Road West – Great Park Drive – Arena

District: South Kowloon

KOW PTI – Austin Road West PTI – WKT/AUS PTI – Austin Road – Chatham Road – Tsim Sha Tsui East

7.4.8 External Services:

Frequency Improvements:

Route No.	Destination
8	KOW PTI <-> Star Ferry
11	KOW PTI <-> Diamond Hill Station
110	Tsim Sha Tsui East (Mody Road) <-> Shau Kei Wan
203E	KOW PTI <-> Choi Hung
215X	KOW PTI <-> Lam Tin (Kwong Tin Estate)
259B	KOW PTI <-> Tuen Mun Pier Head
261B	KOW PTI <-> Sam Shing Bus Terminus
270P	KOW PTI <-> Sheung Shui
281A	KOW PTI <-> Kwong Yuen
296D	KOW PTI <-> Sheung Tak
36B	Temporary Jordan PTI <-> Lei Muk Shue Public Transport Interchange
42A	Temporary Jordan PTI <-> Cheung Hang
46	Temporary Jordan PTI <-> Lai Yiu
60X	Temporary Jordan PTI <-> Tuen Mun Central
63X	Temporary Jordan PTI <-> Hung Shui Kiu (Tin Sam Road)
68X	Temporary Jordan PTI <-> Hung Shi Kiu (Hung Yuen Road)
69X	Temporary Jordan PTI <-> Tin Shui Estate
81	Temporary Jordan PTI <-> Wo Che
95	Temporary Jordan PTI <-> Tsui Lam
3C	CFT PTI <-> Tsz Wan Shan (North)
14	CFT PTI <-> Yau Tong
238P, 238X	CFT PTI <-> Riviera Gardens

New Routes:

WKCD – East Kowloon via CKR

WKCD – Central Kowloon

WKCD – Shatin via Route 8

7.4.9 The detailed planning and routing of the District and External bus services needs to be integrated with broader bus network plans for West Kowloon in relation to WKT and WKCD. The WKCD road network and terminal facilities provide flexibility in future bus network development.

7.5 Proposed Bus Layby

7.5.1 Three bus laybys are proposed for the WKCD. One of the bus laybys is located near MPV at level +5mPD while another two are located along the northern periphery on the southern side of Austin Road West (i.e. East & West Gate) at level +7.2mPD (see **Figure 7.10**).

7.5.2 **Figure 7.11** shows the proposed layout near MPV. The provided facilities include:

- Layby for general (private car/taxi/coach) pick-up/drop-off activities & E-bus bus stop (~100m). This layby can also accommodate franchised services to be provided during holidays and after events at MPV.
- Taxi stand including taxi queuing area (~100m)
- 7-8 nos. of stacking spaces for buses (~130m)
- 11 nos. of coach parking spaces for MPV

7.5.3 The proposed layby (i.e. **Figure 7.11**) is indicative only. The whole layout design will be subject to the design of MPV in future. In addition, the proposed linear-shaped bus layby at the western end of Austin Road West consists of two extended bus laybys which can be used by passing or terminating services. At the western section the bus bay (~70m) serves buses coming from underground Austin Road West while at the eastern section bus bay (~40m) serves buses coming around the "U" turn loop of Austin Road West. A bus layby (~40m) is also provided at the eastern "U" turn loop of Austin Road West.

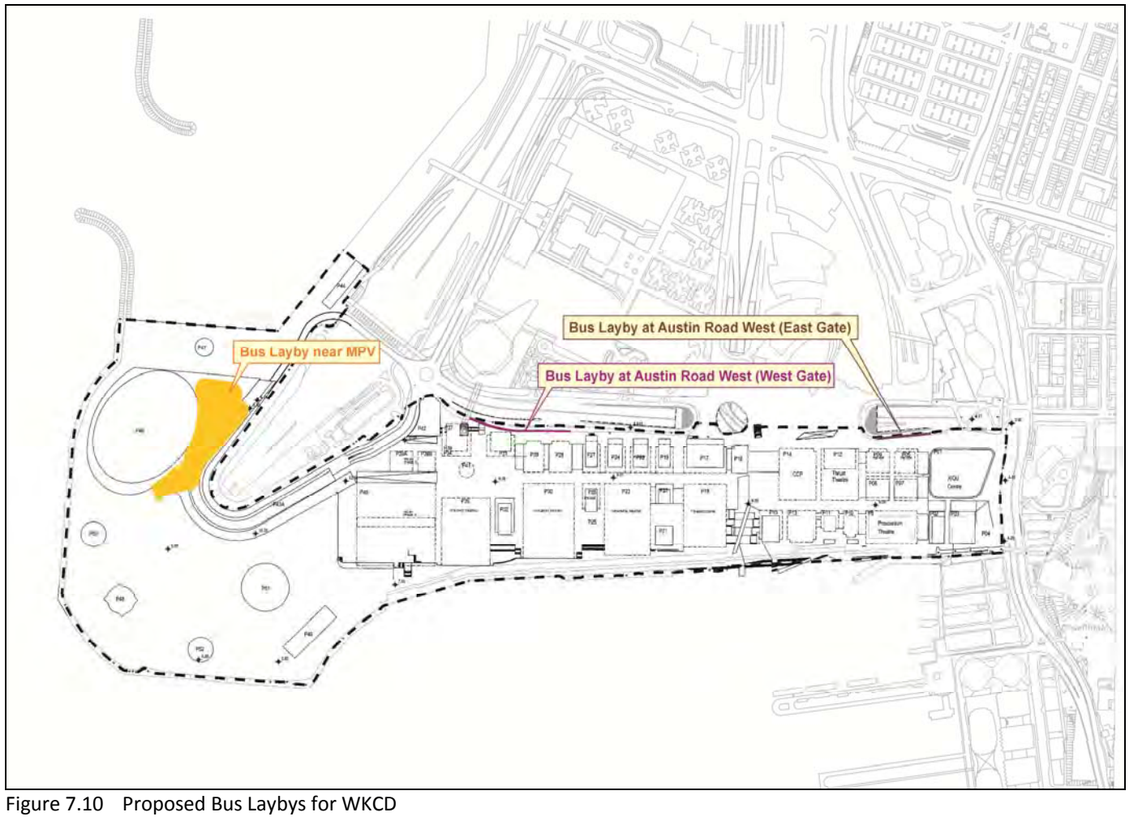


Figure 7.10 Proposed Bus Laybys for WKCD

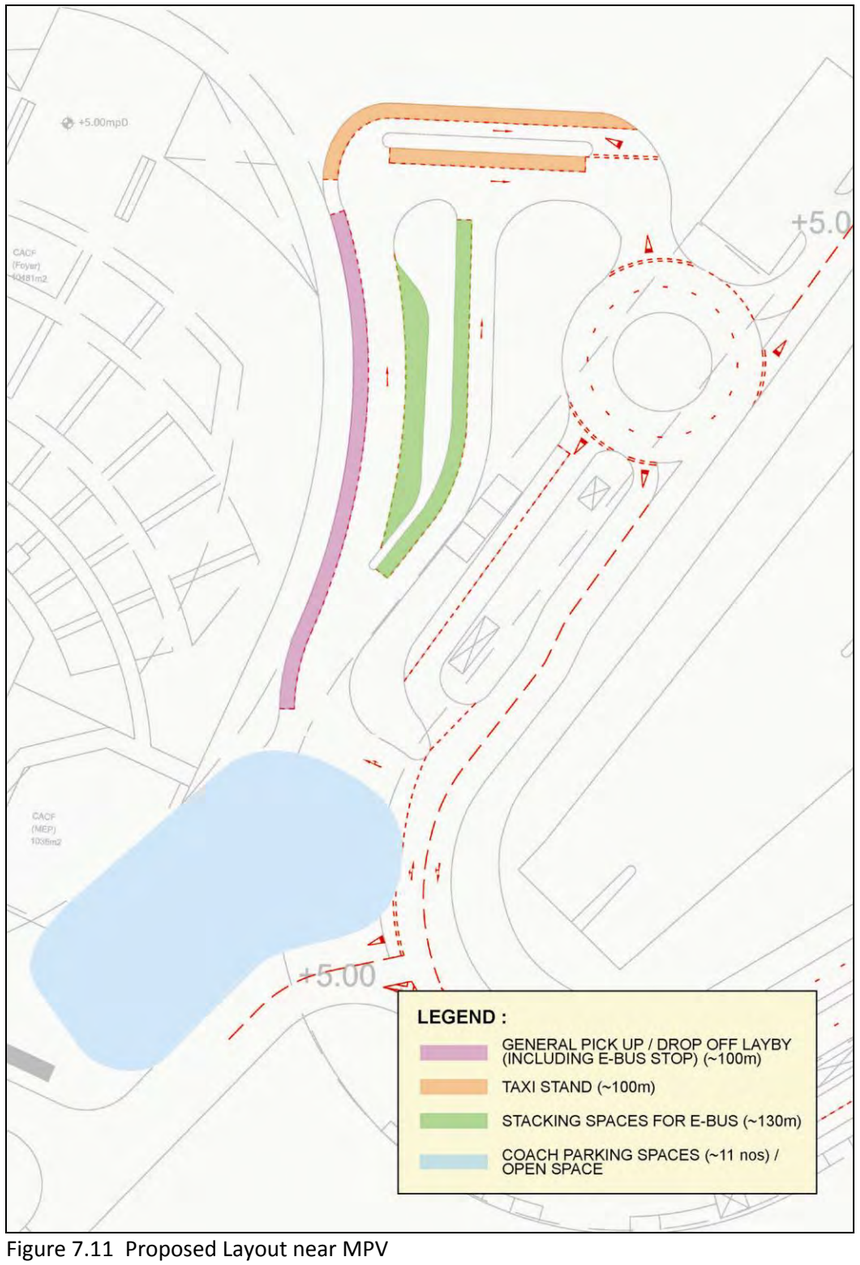


Figure 7.11 Proposed Layout near MPV

8. PEDESTRIANS

8.1 Pedestrian Network

8.1.1 The pedestrian network serving strategic movements is formed by a number of WKCD external connections (see **Figure 8.1**). These connections are discussed below in order from the west to the east.

Existing

WHT Bridge - Existing Footbridge across WHT Toll Plaza: This will provide direct connection from MPV/EC into WHT bus stops and at-grade Nga Cheung Road.

Austin Road/Canton Road Subways: Existing subway across Canton Road is about 6.5m wide while the subway across Austin Road is only about 3.5m wide. At the junction of Austin Road subway and Canton Road subway, this links up with Austin Station Concourse via escalator/staircase/lift. In conjunction with the proposed Canton Road underpass scheme, the existing subway will be reconstructed and further improved.

Planned

- KOW Deck: A ground level connection via the pedestrian zone over the suppressed Austin Road.
- WKT Deck: A pedestrian ground level deck over Austin Road connecting WKCD and plaza in front of WKT and AUS Station.

Proposed

- Anchorage Bridge: This will be formed as a footbridge linking the TCL concourse at KOW to the northern tip of WKCD. The bridge will provide direct connection into the Elements shopping zone with direct vertical linkage to the AEL check-in area and TCL platform below (subject to agreement with stakeholders, future demand and detailed design).
- Artist Square Bridge - Elements West Connection: A footbridge connecting from ICC/Elements to WKCD leading to the Artists Square.
- Extension of Existing Austin Road Subway: An additional adit for pedestrian connecting AUS Station to Xiqu Theatre. The existing ramp leading to existing Austin Road subway may possibly be demolished. New escalators/lifts will be provided from Austin Station concourse bring pedestrians back to Existing Austin Road Subway and the ground level of WKCD. The exact details will be further studied in the preliminary design.
- Austin Station Landscape Deck Connection: A landscape deck (at level +11.78) is planned across Austin Road West to provide noise protection for Sites C & D above Austin Station. It is proposed to convert this landscape deck to serve as pedestrian corridor to WKCD and to link into AUS station at the upper level. (This proposal serves only as possible future connection and subject to future demand)
- China Ferry Terminal Bridge: A footbridge connection linked to China HK City and WKCD ground level. Before the relocation of Fire Station, pedestrians can access via this connection, the retail mall of China HK City and existing footbridge across Canton Road to/from Kowloon Park.
- Kowloon Park Bridge: With the relocation of Fire Station, a new footbridge connection is proposed across Canton Road linking WKCD directly to Kowloon Park. (This proposal serves only as possible future connection and subject to future demand)

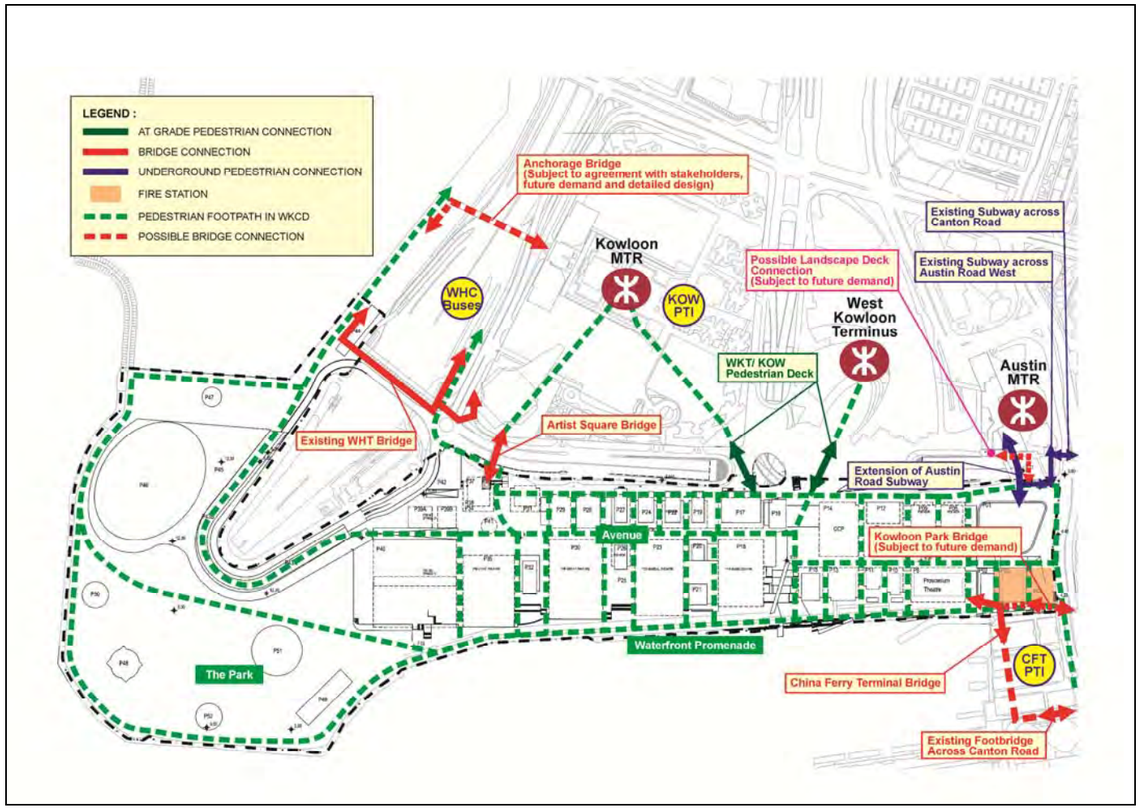


Figure 8.1 Pedestrian Network

8.1.2 The strategic pedestrian network has been comprehensively designed in such a way that traveller access/egress through each and every transport mode will find a convenient external pedestrian connection to use.

8.1.3 Rail users will take different routes depending on the line and station they use. TCL/AEL passengers can alternatively use the Anchorage Bridge, ICC Bride, or the Kowloon Station Deck to access WKCD. WKT passengers will probably use the WKT Deck or the subway link at Arrival Level under Austin Road. AUS passengers will use the subway under Austin Road. The TWL TST station passengers can access WKCD through the China Ferry Terminal Bridge/existing footbridge access Canton Road.

8.1.4 Franchised bus and GMB passengers have a variety of pedestrian connections to use. WHT northbound bus passengers and WHT southbound passengers can enter directly at grade to WKCD or via the existing footbridge over the WHT toll plaza. Passengers using the bus routes serving KOW PTI and WKT can make use of KOW Deck and WKT Deck to access WKCD respectively. Bus passengers arriving at the bus bays along Austin Road will access WKCD directly thus skipping the external pedestrian connections.

8.1.5 Passengers arriving by coach, E-bus and car/taxi can access WKCD directly through their designated drop-off bays, thereby also skipping the external pedestrian connections.

8.1.6 Visitors from neighbouring districts accessing WKCD by walking can also make use of all the above-described pedestrian connections to Jordan district and the Kowloon Park Connection to Tsim Sha Tsui district.

8.2 Pedestrian Facility Capacities

8.2.1 The pedestrian volumes will vary substantially throughout WKCD from major surge volumes after performances at the MPV, Outdoor Theatre/Piazza or Grand Theatres, to busy circulation in the Avenue, to more modest flows at the Waterfront and in the Great Park. In addition mega-events such as fireworks will bring huge crowds requiring special crowd management and transport arrangements.

8.2.2 As advised by Consultant's Cultural Specialist Advisors, the 80% average attendance is the figure adopted in the Market Analysis of the Performance Arts Venues of WKCD. As a benchmark, this is close to the 79% of average historic attendance of hirer's events at other venues in Hong Kong in the past. This number is likely to apply to the site overall whenever all venues are in simultaneous use (i.e. on most weekends and possibly some public holiday periods).

8.2.3 Based on this 80% attendance of all CACF venues together with pedestrian volumes generated by the RDE developments, it was estimated that a total of about 33,000 pedestrians (two-way) (see **Table 8.1**) would be generated/attracted to/from WKCD during the shows end on weekends.

Table 8.1 WKCD Pedestrian Demand During Dispersal Situation on Weekend

WKCD	2031 Pedestrian Flows (peds/30 mins)
Mega Performance Venue (18,000 seats)	14,400
Great Theatre (1,600 seats)	1,280
Musical Theatre (2,000 seats)	1,600
Medium Theatre I (800 seats)	640
Medium Theatre II (600 seats)	480
Lyric Theatre (1,200 seats)	960
Centre for Contemporary Performance (1,000 seats)	800
Free Space (600 seats)	480
Music Centre (2,100 seats)	1,680
Xiqu Centre (1,400 seats in Phase 1 & 1,700 seats in Phase 2)	1,360
Outdoor Amphitheatre (500 seats + 4,500 standing area)	4,000
Exhibition Centre (peak hour attendance = 1,440)	1,152
M+ (peak hour attendance = 1,923)	1,538
RDE Development (138,362m^2 GFA)	3,002
Total	**33,372**

8.2.4 Pedestrian forecasts for the footbridge connections were prepared using the Consultant's family of forecasting models comprising:

- MVCTS – for forecasting Territory-wide travel by all major modes (rail, bus, GMB, ferry, car, taxi, coach)
- MVPTM Model – for forecasting ridership of public transport modes, principally the detailed market shares between rail and road-based services
- MVRail – for forecasting detailed rail passenger routings by station.

8.2.5 These models are endorsed for application on government and MTRC projects and the versions applied were validated for 2009 for on-going railway and road studies. The latest planning datasets (TPEDM 2006 based) and input assumptions used have been supplemented by the detailed planning schedules for WKRA and WKCD.

8.2.6 In brief, the estimation of the pedestrian demands includes the following steps.

- Define a detailed zoning system representing the individual facilities and activity areas and a pedestrian network model within WKCD, WKRA and to TST and JOR MTR stations.
- Determine external means of access to WKCD – e.g. MTR station, PTI, bus stop, walk, car park using MVCTS/MVPT (see below modal split).

	Private Car/Taxi/Coach	Kowloon Station/Kowloon Station PTI	Austin Station	WKT Terminus	Western Harbour Crossing Bus Laybys	WKCD Bus Laybys	Walk to TST/Jordan District
WKCD Development	27%	38%	10%	1%	11%	5%	8%

- Assign travellers to pedestrian routes between WKCD and external travel mode.

8.2.7 **Figure 8.2** shows the 2031 forecasted pedestrian flows on various footbridges during the dispersal situation. For pedestrian facility sizing it was assumed that the peak surges would be accommodated within 30 minutes. Level of Service C was adopted as the design criteria for assessing walkway widths. A dead space of 0.5m was assumed to side walls. Based on the 2031 forecasted pedestrian flows in various footbridges, the operational performance of existing/planned footbridges/subways were assessed and summarised in **Table 8.2**.

Table 8.2 2031 Operational Performance of Existing/Planned Pedestrian Facilities

Existing/Planned Pedestrian Facilities	2031 Forecasted Pedestrian Flows (peds/30 mins)	Actual Clear Width (m)	Effective Clear Width (m)	2031 Pedestrian Flow Rates (peds/metre/min)	LOS (Level of Service	Volume/ Capacity Vatio (V/C)[4]
Existing Footbridge Across WHC	2,000	5.5	3.5[2]	19	B	0.38
Planned KoW Deck	1,300	20	19[3]	2.3	A	0.05
Planned WKT Deck	1,500	20[1]	19[3]	2.6	A	0.05
Existing Subway across Canton Road	2,100	6.5	5.5[3]	12.7	A	0.25
Existing Subway across Austin Road West	1,600	3.5	2.5[3]	21.3	B	0.43
Existing Footbridge across Canton Road	1,300	4	3[3]	14.4	A	0.29

Remark: (1) Width more than 20m
(2) Taken into consideration the column in the middle, minus 2m dead space
(3) Minus 1m dead space
(4) Based on capacity of 50 peds/metre/min as stated in TPDM

8.2.8 As stated in TPDM Vol.2, Clause 3.7.7.6, the capacity of footbridges/ subways is 50 peds/metre/min. For the proposed pedestrian facilities, the minimum width of footbridges/ subways required for purely circulatory purpose is as follows:

Proposed Pedestrian Facilities	2031 Forecasted Pedestrians Flows (peds/30 mins)	Minimum Effective Clear Width for Circulatory Purpose (m)	Minimum Actual Width for Circulatory Purpose [1] (m)	Recommended Minimum Actual Width (m)
Proposed Anchorage Bridge	6,000	4.0	5.0	7.1[2]
Proposed ICC Bridge	4,000	2.7	3.7	7.5[3]
Extension of Existing Austin Road Subway	3,500	2.3	4.0[4]	4.6[2]
Proposed China Ferry Terminal Bridge	1,300	0.9	3.0[4]	3.5[2]

Remarks: (1) Effective Clear Width plus 1m dead space.
(2) The recommended actual width is wider than the calculated minimum for circulation. The wider width is aiming to allow 1. greenings and 2. extra width for easy passage of visitors particularly with pram and luggage, etc.
(3) Match with 6.5m effective clear width of internal walkways within Elements and account for possible delay of the implementation of Anchorage Bridge.
(4) Min. effective width of footbridges is 2m and of subways is 3m according to Table 3.7.7.2, TPDM Vol 2, Chapter 3.

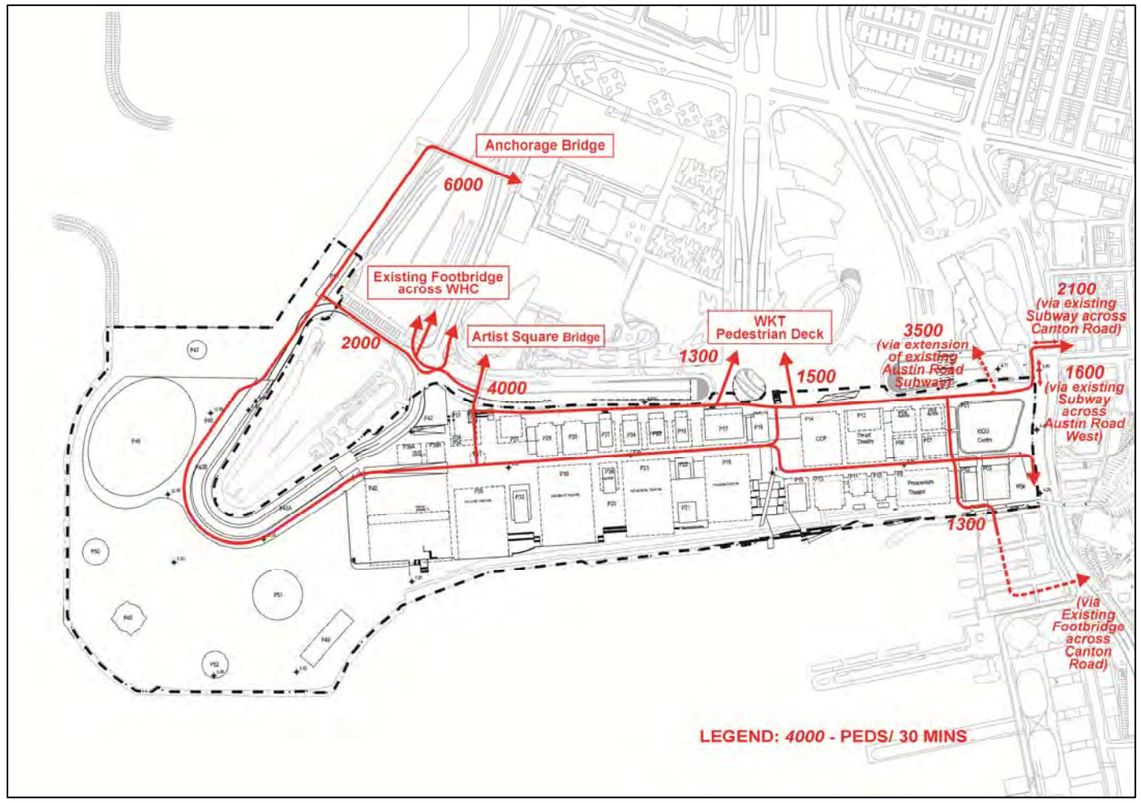


Figure 8.2 2031 Forecasted Pedestrian Flows During Dispersal Situation

9. SUMMARY

9.1 Car Parking & Loading/Unloading Provision Under Current Amendment Scheme

9.1.1 A comprehensive car parking and goods vehicle servicing utilization survey has been undertaken to ascertain the car sharing proposal adopted in the approved DP and to optimize the provision of the goods vehicle loading/ unloading facilities for WKCD. And the comparative requirements are summarised below.

9.2 Operational & Construction Traffic Impact Assessment

9.2.1 As shown in **Table 5.4**, as compared with the Approval Scheme, the Current Scheme would generate much lesser traffic in year 2020 (i.e. Batch I) according to the current WKCD development programme. For ultimate situation (i.e. Batches 1, 2 & 3), as compared with the Approval Scheme, the increase on the traffic generations under the Current Scheme would be about 440 and 350 pcus (two-way) in the AM and PM peak hours respectively.

9.2.2 The operational performance of identified key junctions in the surrounding road network has been assessed in both Batch 1 and Batches 2 & 3. With the planned road network in West Kowloon taken into consideration, all key junctions are forecasted to operate within capacity in both design years 2020 and 2031.

9.2.3 As compared with the WKCD development traffic, the construction traffic generated during construction is minimal. Based on the construction traffic impact analysis, the construction-related traffic generated during construction of WKCD can be accommodated on the adjacent road network, taking account of the interface with the arrangements planned for the WKT and Lin Cheung Road/Austin Road works. There are no traffic diversions required specifically for WKCD during the construction stage. However, marine routes should be utilised as far as possible.

Car Parking Provision

Scenario		Car Parking Requirement			
		CACF/OACF Facilities	RDE	HOR	Total
Approved DP	Without Sharing	1,482	398	1,005	2,885
	With Sharing	**727**	**398**	**1,005**	**2,130**
Current Scheme	Without Sharing	1,620	461	764	2,874
	With Sharing	**998**	**338**	**739**	**2,016**
	Proposed Provision	**998 – 1,620**	**438 - 461**	**739 - 764**	**2,175 – 2,845**

Goods vehicle Loading/ Unloading Provision

DZ	Package	Parcels	GV Servicing Requirement	
			Approved DP	Current Scheme
1, 2A, 2B & 3A	00	P41	0	0
	01	P01 (Xiqu)	11	9
	02	P02, P03, P04	8	12
	03	P05, P06, P07, P09	12	17
	04	P08 (Proscenium)	6	8 - 9
	05	P10, P11, P13, P15	17	12
		P16, P17	8	20
	06	P12 (Thrust), (CCP)	11	24 – 30
	07	P14	6	
	08	P18 (Music)	9	6 – 7
	09	P19, P22	6	11
		P24, P27	7	4
	10	P20	2	3
	11	P21	2	2
	12	P23 (Musical), P25	10	9 – 10
	13	P26	4	6
	14	P28, P29	7	6
	15	P30 (Great)	9	9 – 10
	16	P31	7	9
	17	P32	3	5
	18	P34, P36, P37, P38	13	14
	19	P35 (Lyric)	7	11
	20	P39, P40 (M+)	14	18
	25	P42	0	0
3B & 4	21	P46 (MPV), P47	18	15
	22	P34A, P34B, P44	16	19
	23	P50, (Outdoor Amphitheatre), P51 (Freespace), P48, P49, P52 – P56	6	7 – 8
	24	P33, P41, Basement Edge	0	5
		Total:	**220**	**261 - 272**

Annex A Junction Layout

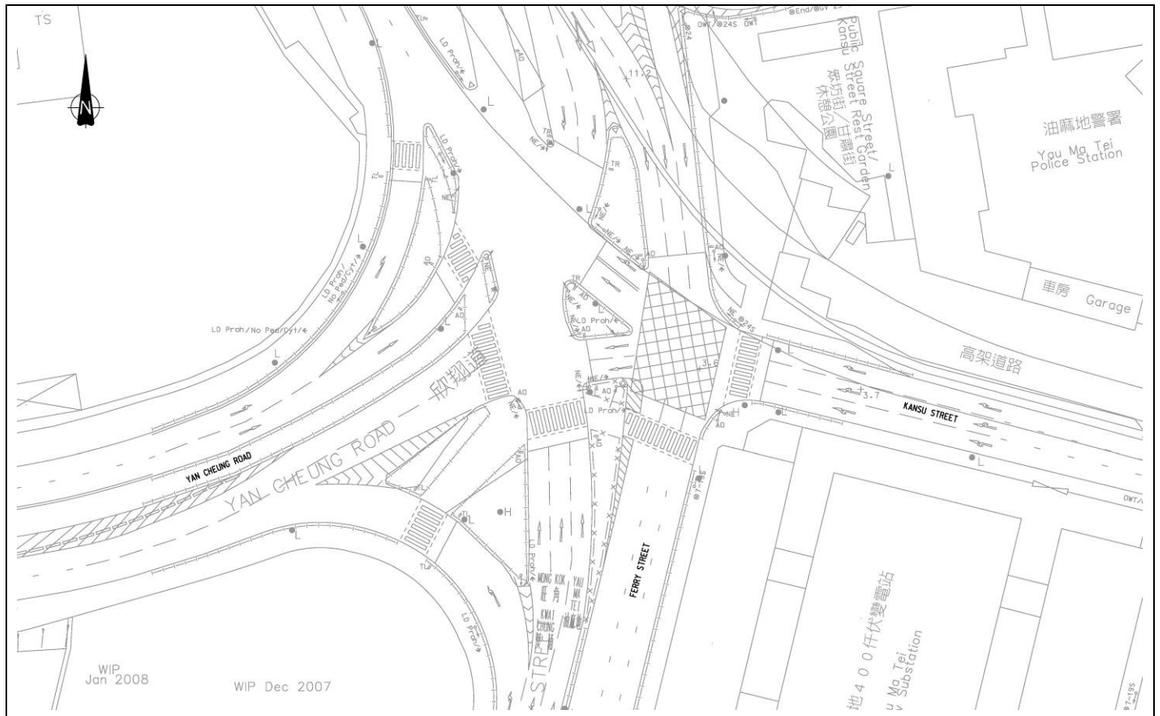


Figure A1 Existing Junction Layout of Yan Cheung Road/Ferry Street/Kansu Street (J5)

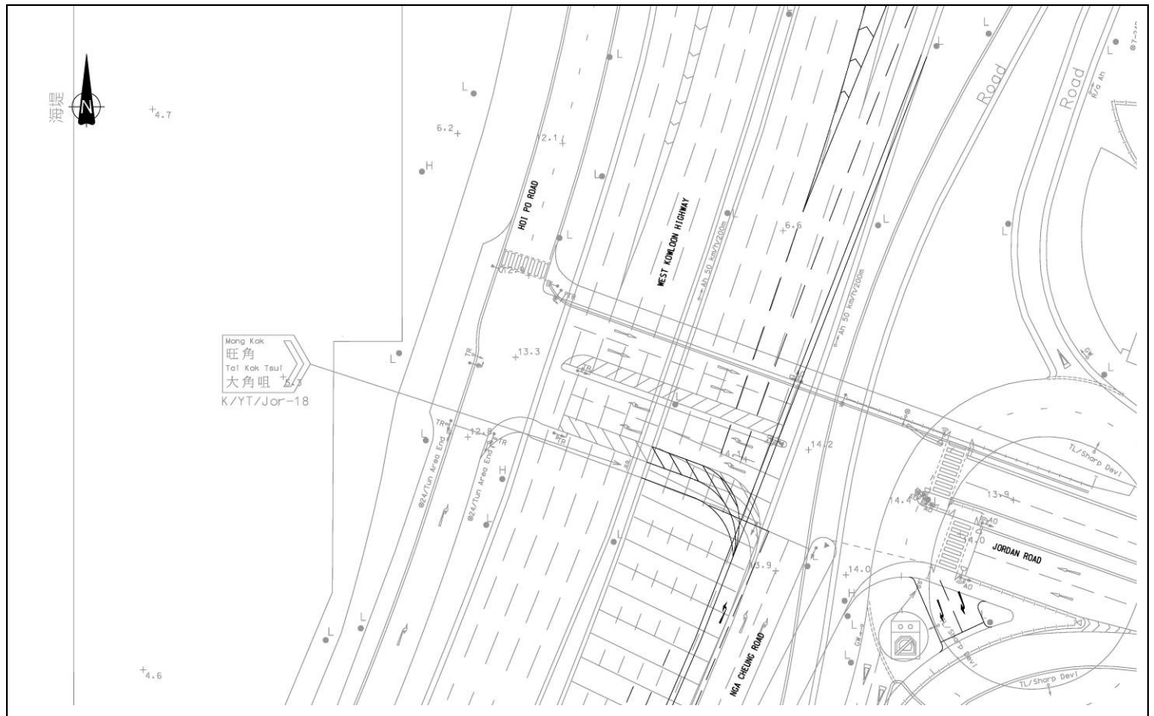


Figure A2 Existing Junction Layout of Jordan Road/Hoi Po Road (J7)

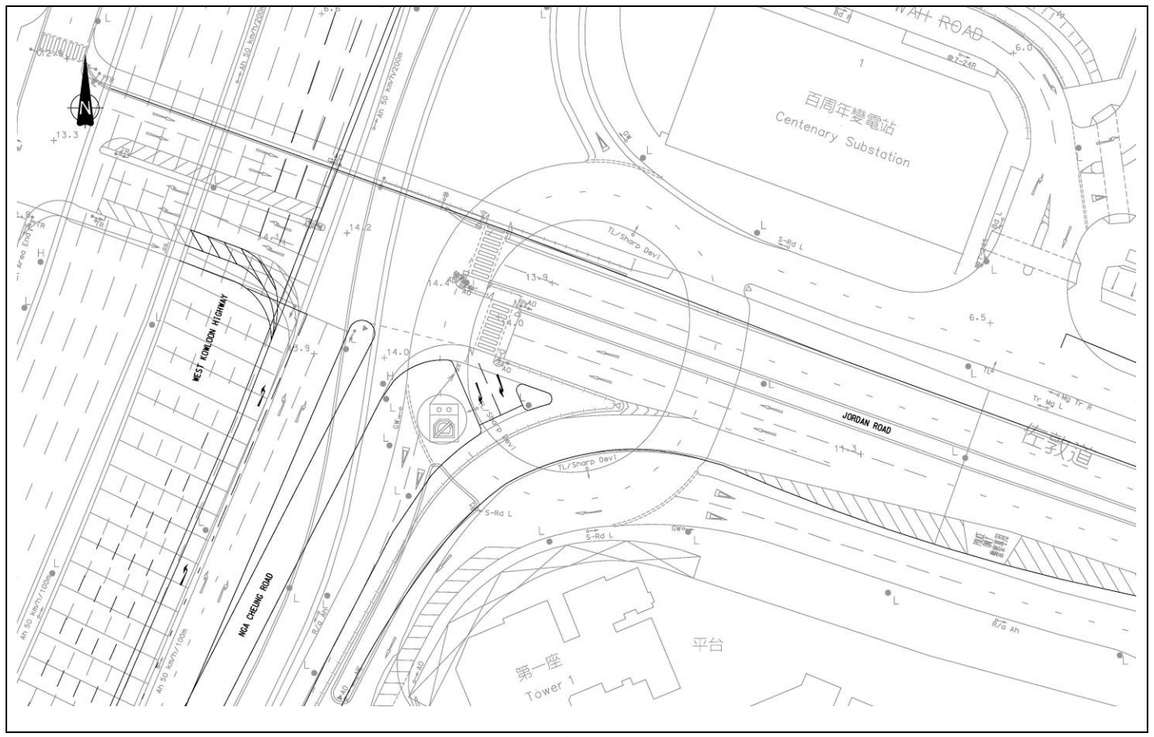


Figure A3 Planned Junction Layout of Jordan Road/Nga Cheung Road (Elevated) (J8)

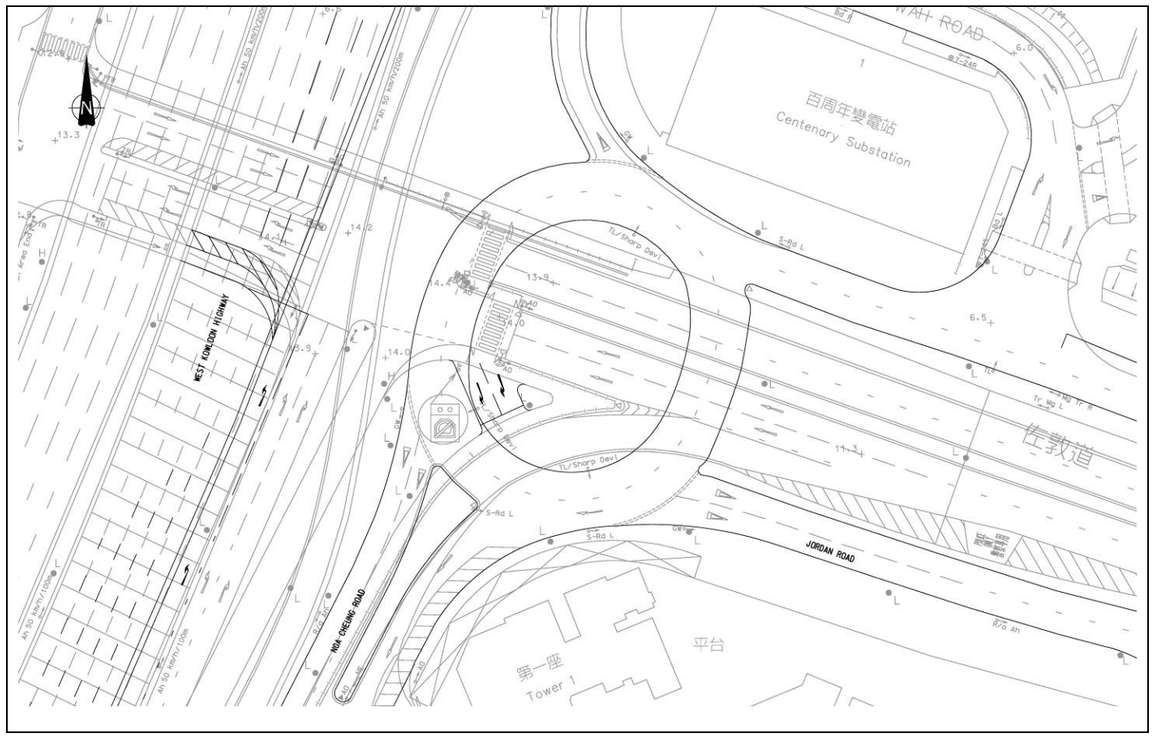


Figure A4 Existing Junction Layout of Jordan Road/Nga Cheung Road (At-grade) (J9)

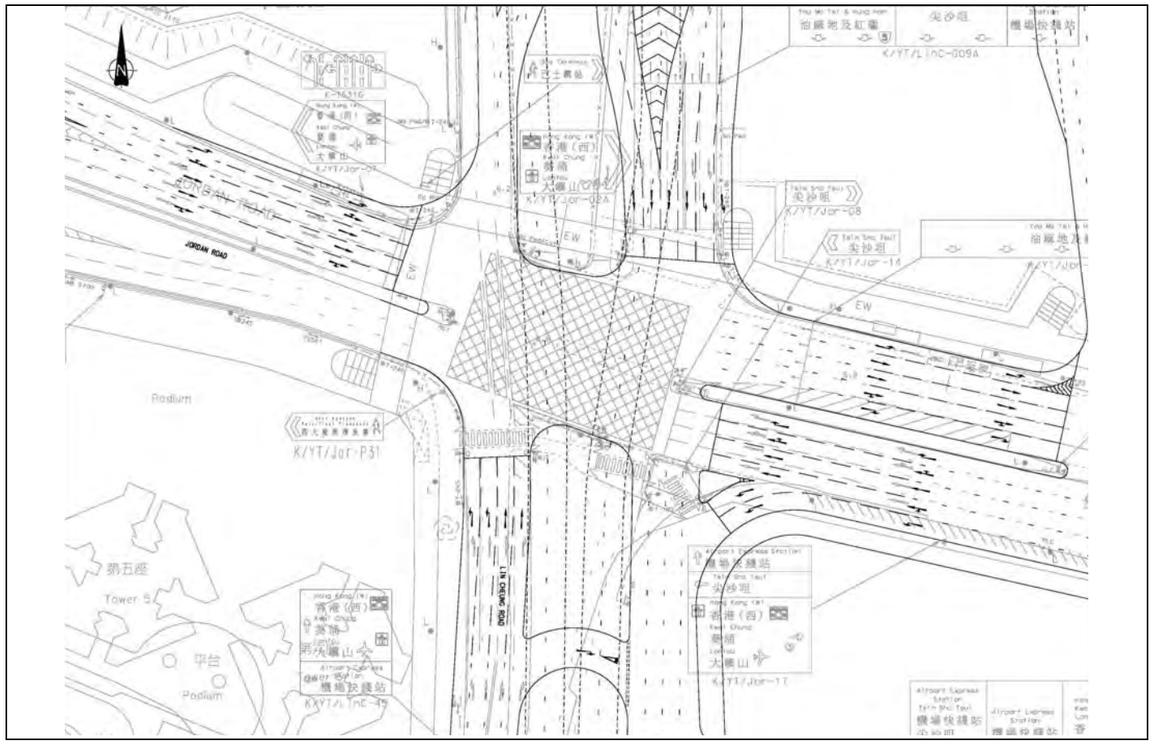


Figure A5 Planned Junction Layout of Lin Cheung Road/Jordan Road (J11)

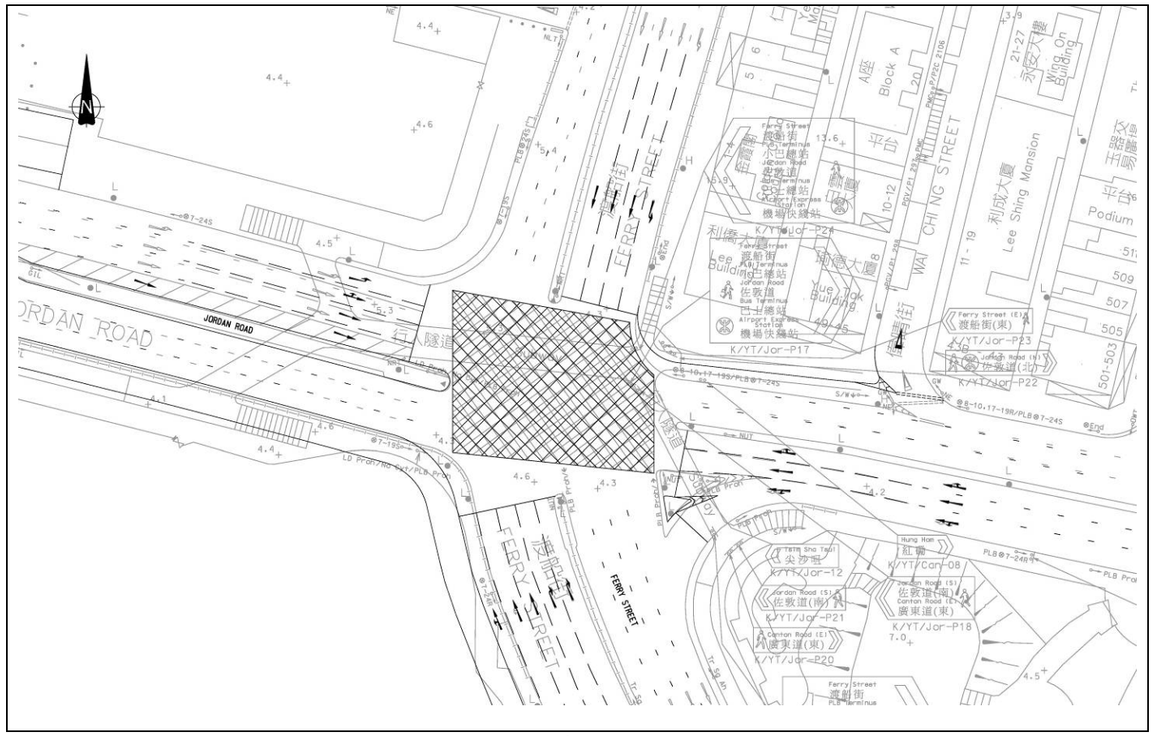


Figure A6 Planned Junction Layout of Jordan Road/Ferry Street (J12)

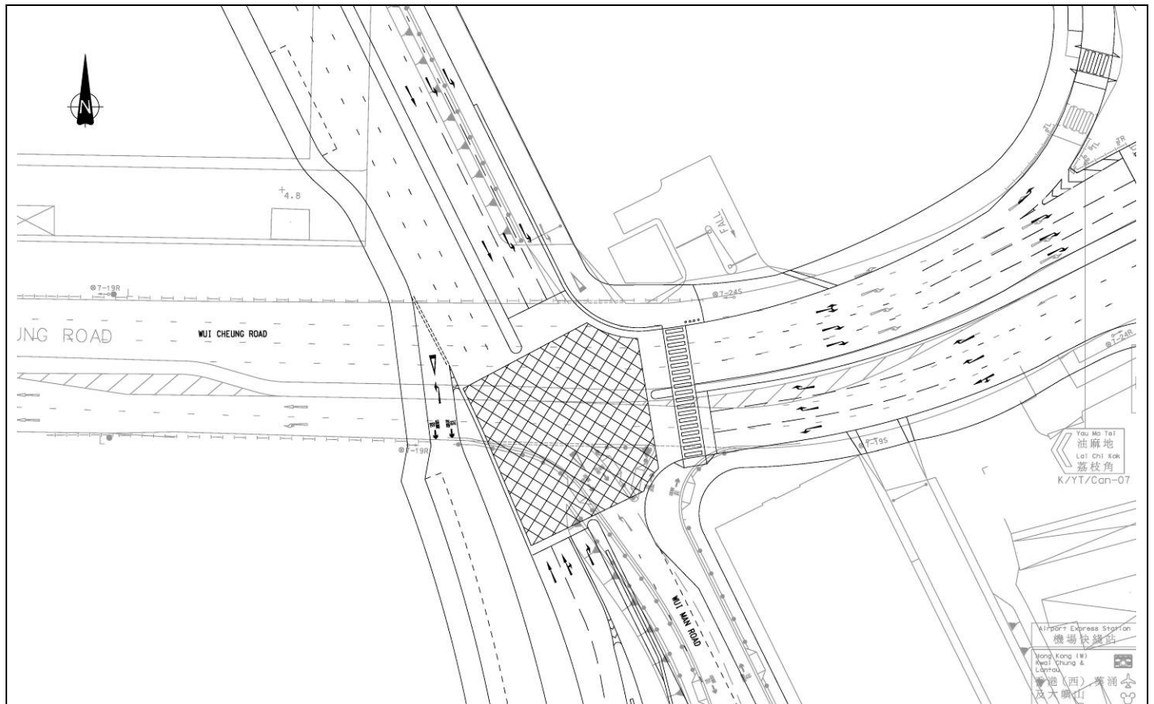


Figure A7 Planned Junction Layout of Wui Cheung Road/Wui Man Road (J14)

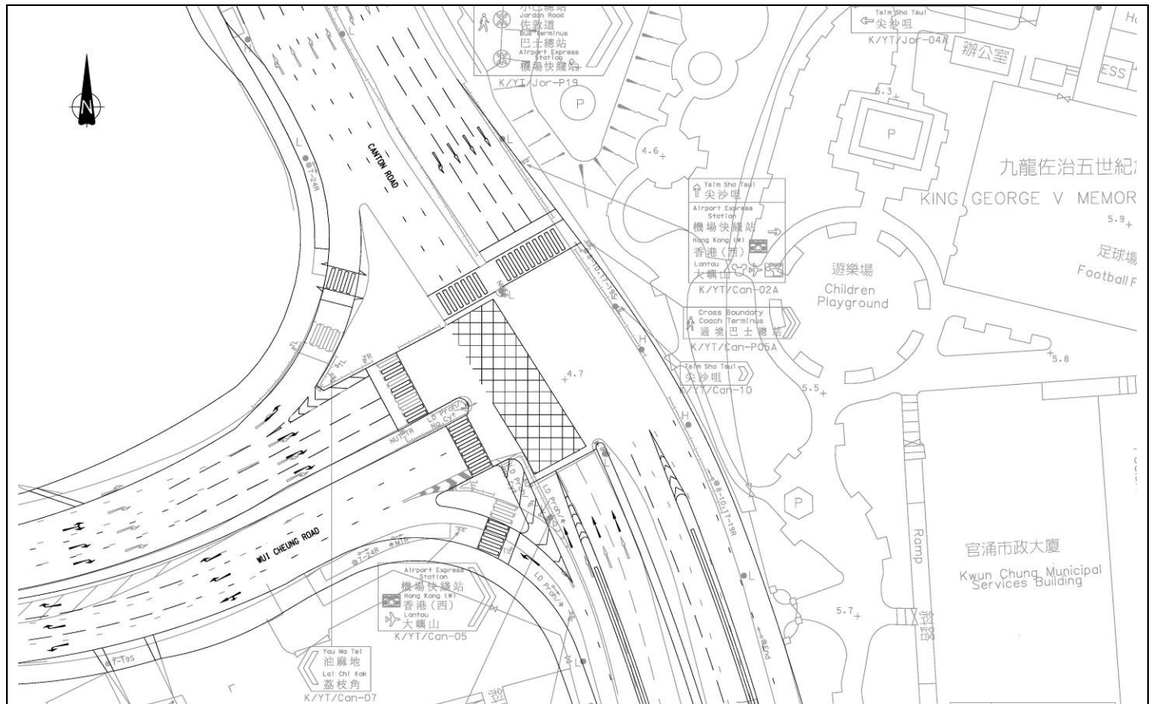


Figure A8 Planned Junction Layout of Canton Road/Wui Cheung Road with Underpass (J15)

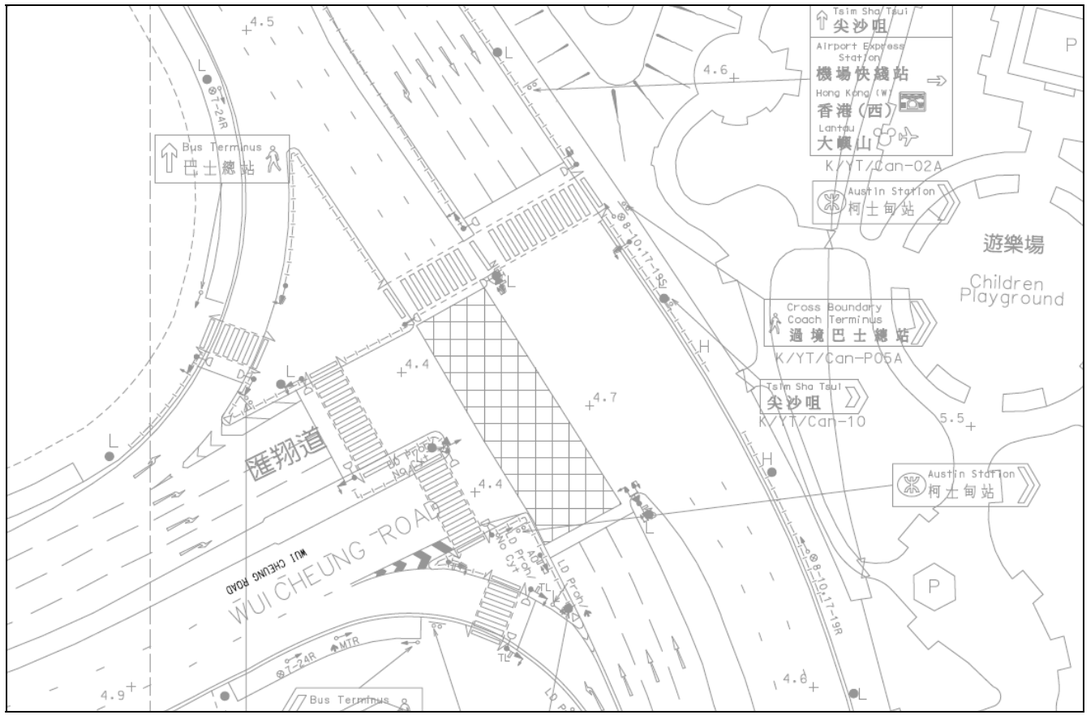


Figure A9 Planned Junction Layout of Canton Road/Wui Cheung Road without Underpass (J15A)

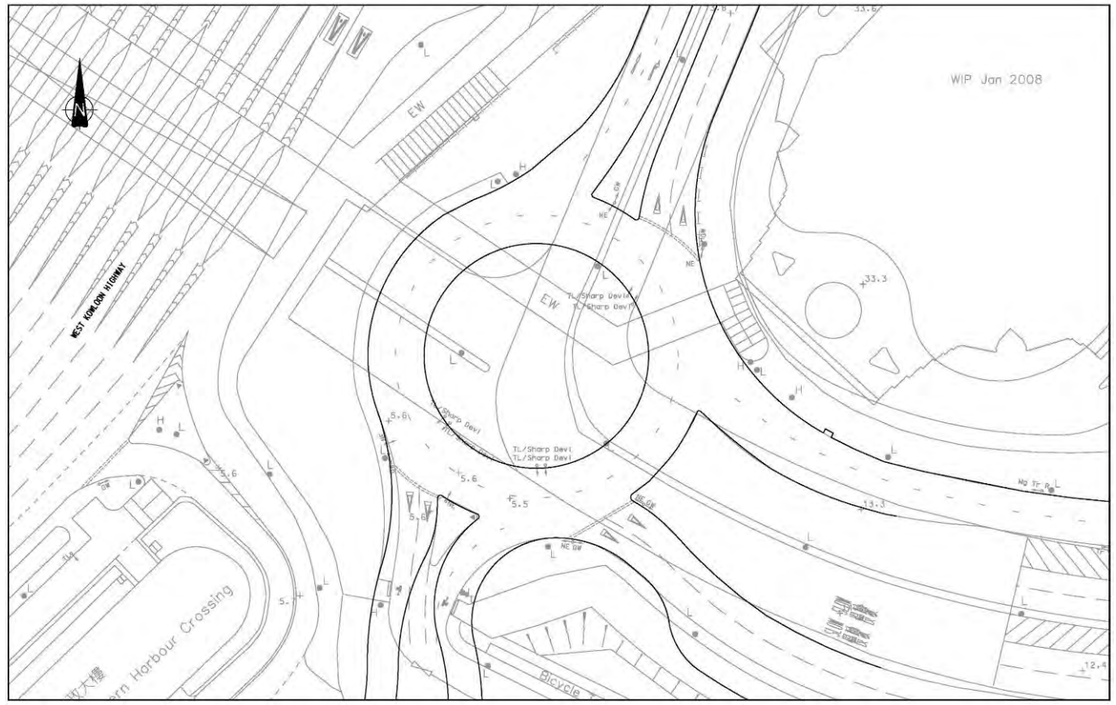


Figure A10 Proposed Junction Layout of Austin Road West/Nga Cheung Road (At-Grade) Access to WKCD (J16)

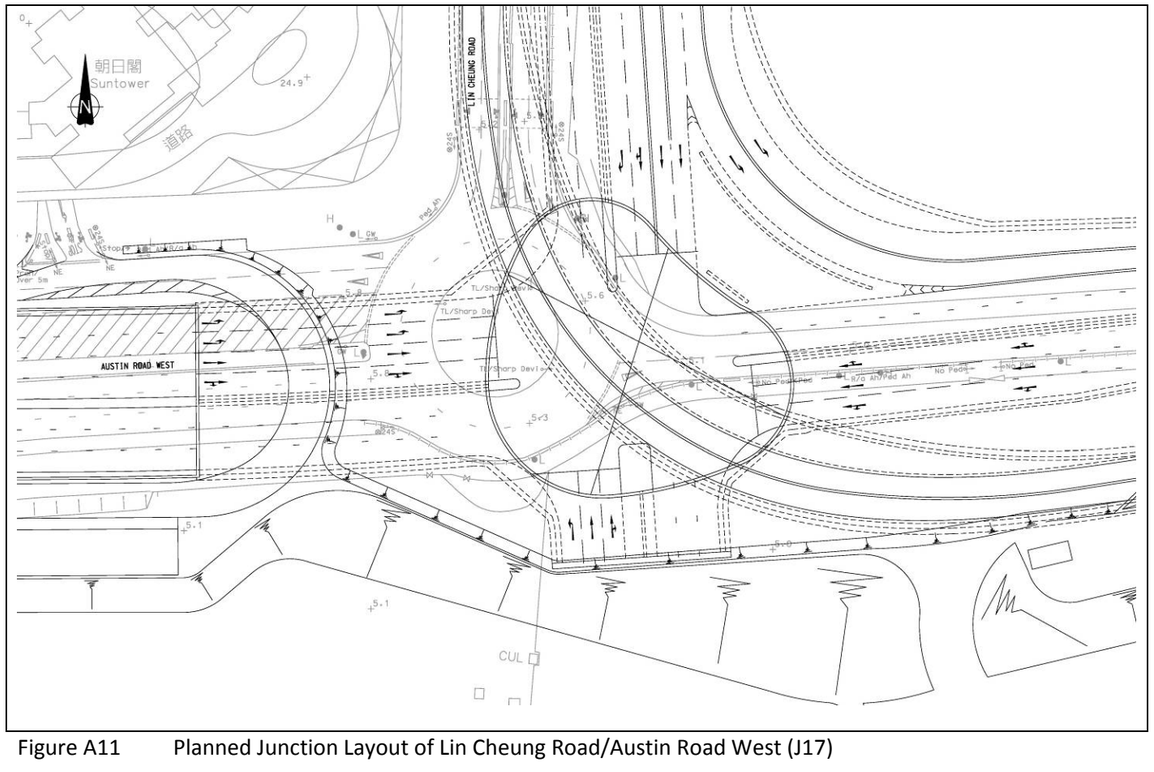


Figure A11 Planned Junction Layout of Lin Cheung Road/Austin Road West (J17)

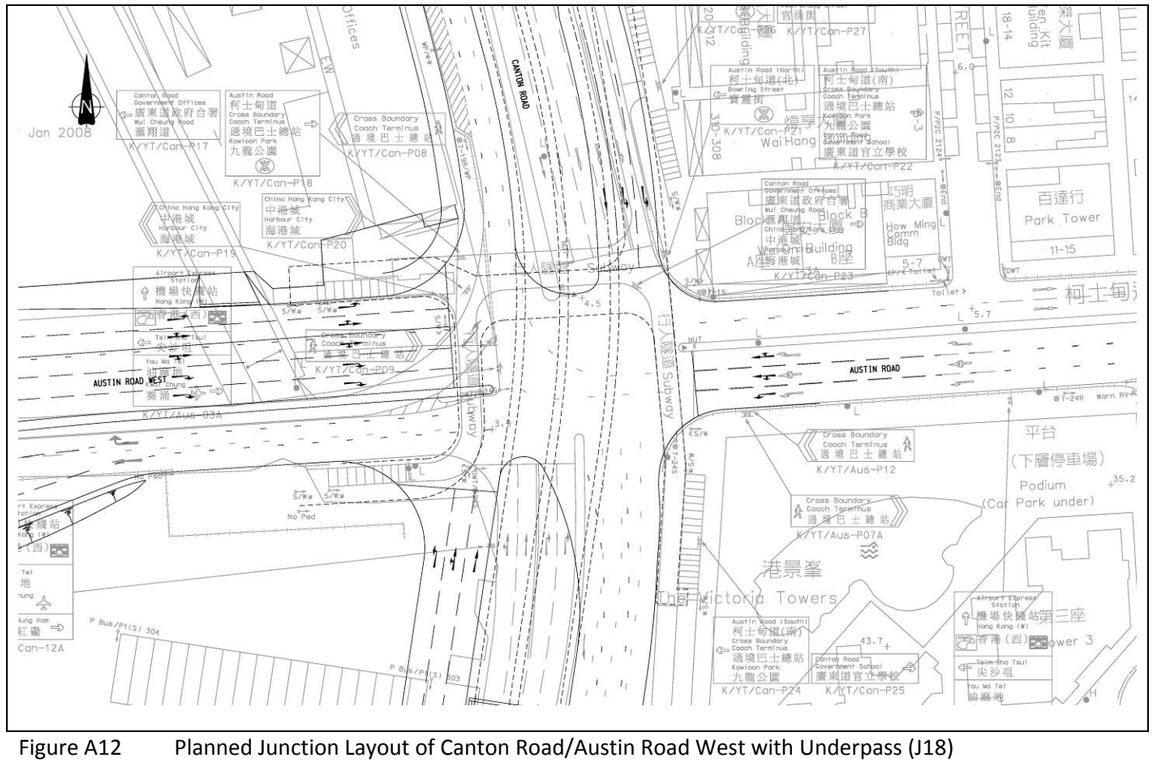


Figure A12 Planned Junction Layout of Canton Road/Austin Road West with Underpass (J18)

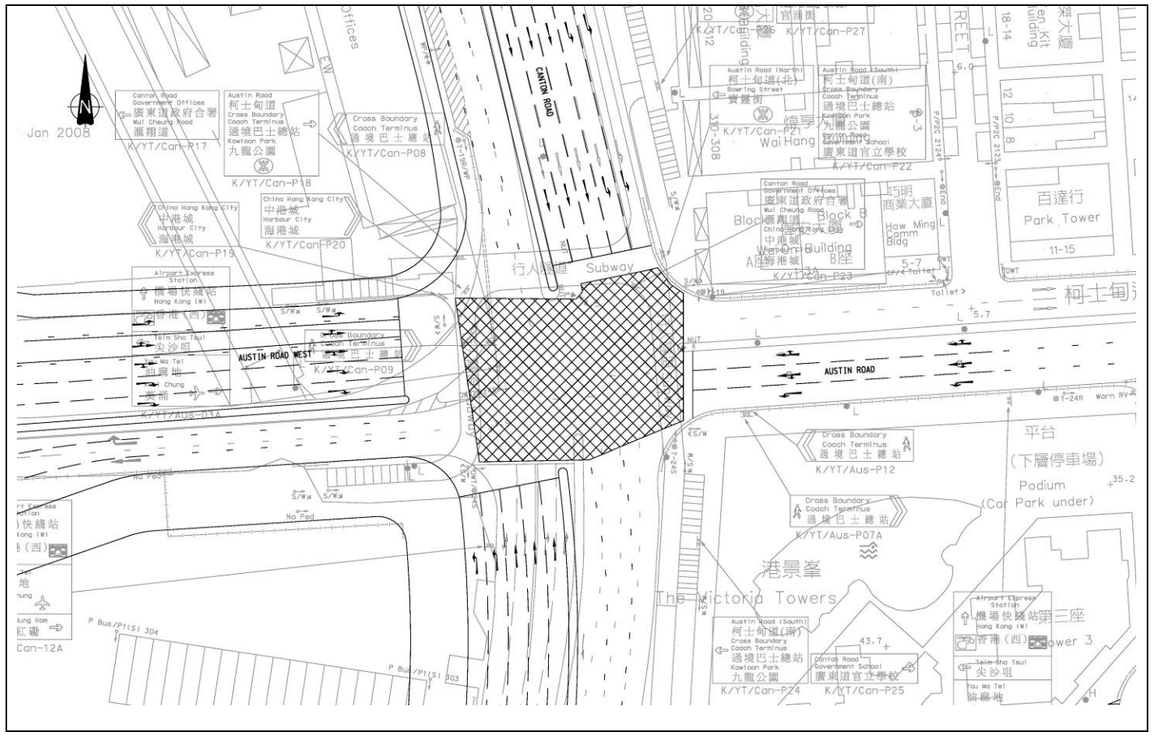


Figure A13 Planned Junction Layout of Canton Road/Austin Road West without Underpass (J18A)

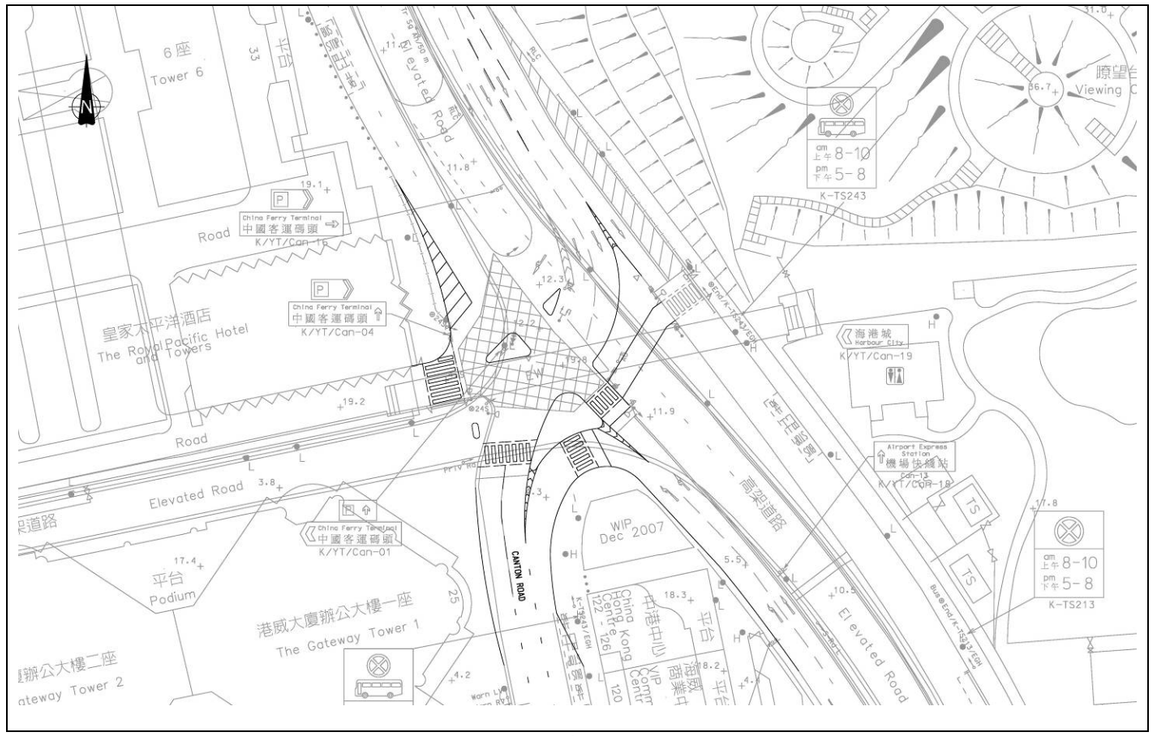


Figure A14 Planned Junction Layout of Canton Road/Kowloon Park Drive (J20)

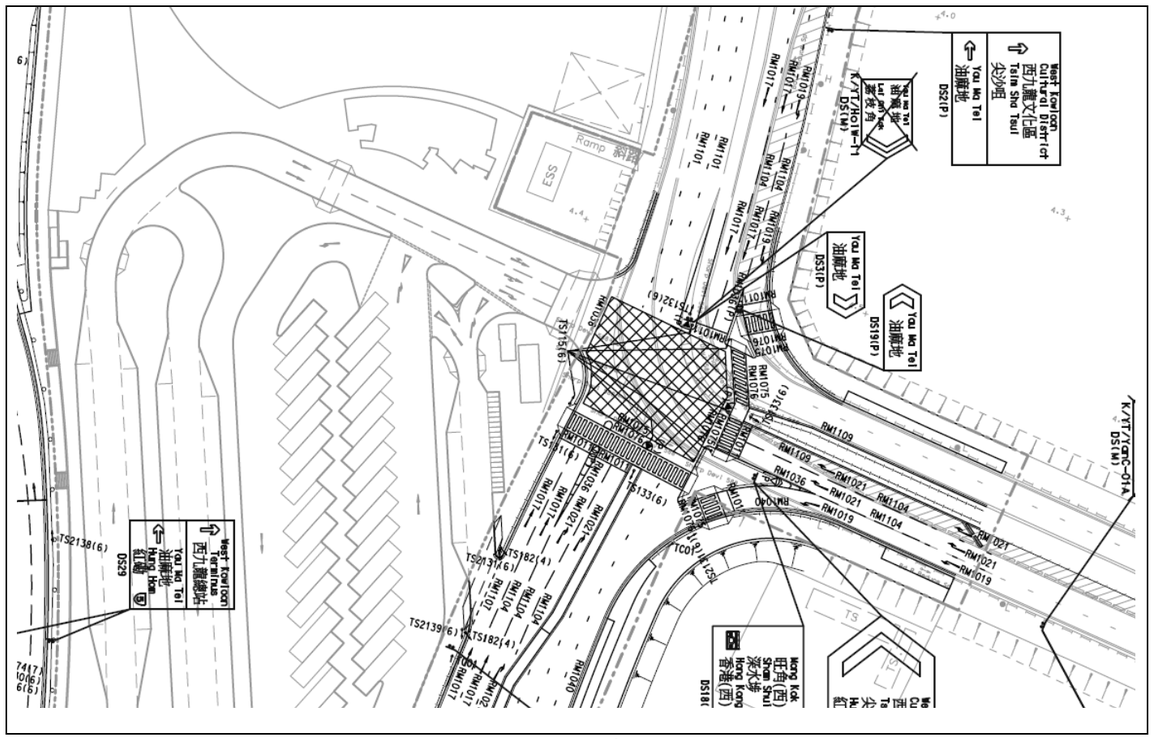


Figure A15 Planned Junction Layout of Yan Cheung Road/Road D1A(N) (J39)

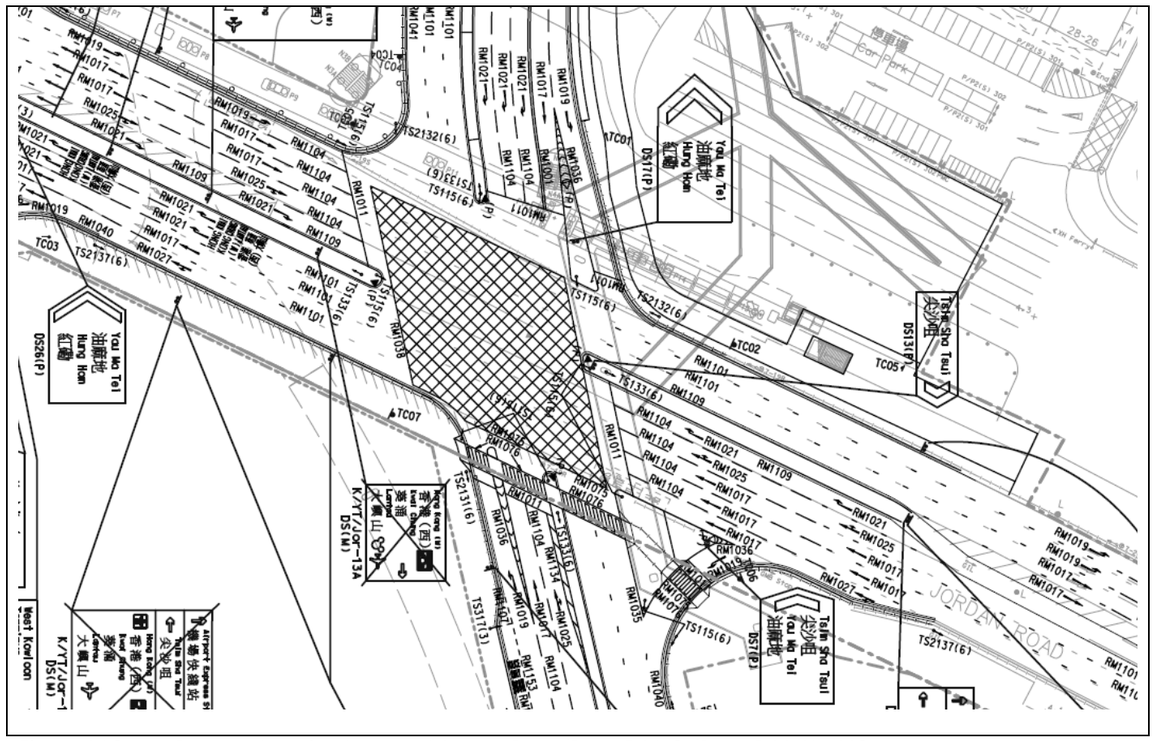


Figure A16 Planned Junction Layout of Jordan Road/Road D1A(S)/Road D1A(N) (J40)

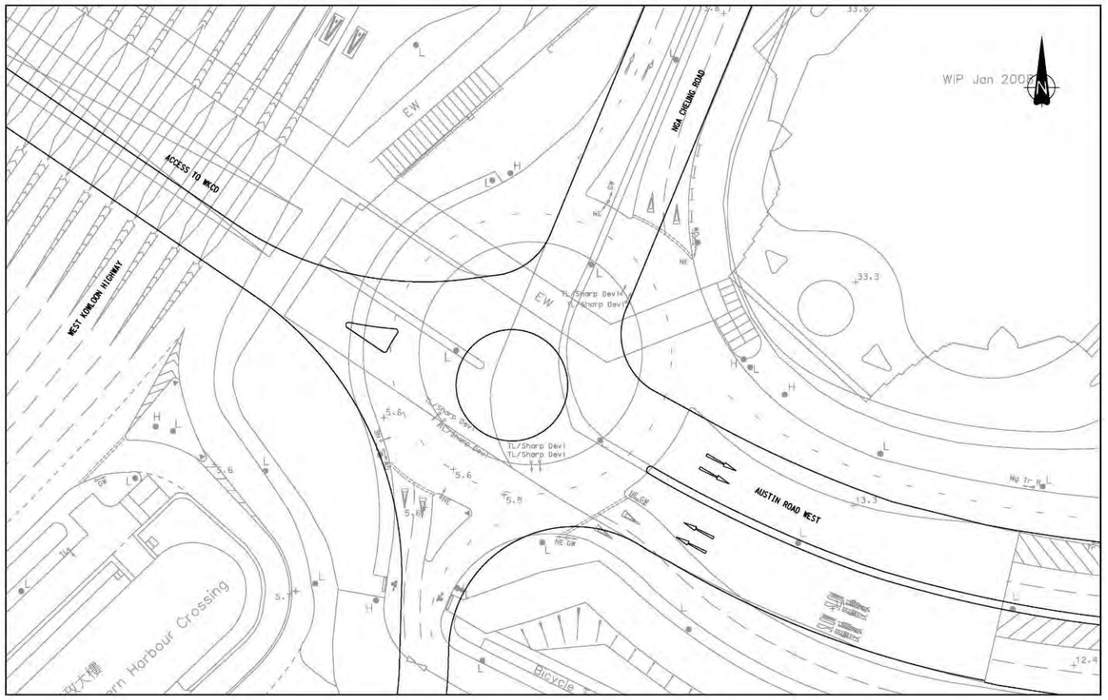


Figure A17 Proposed Junction Layout of Austin Road West/Nga Cheung Road (Elevated)Access to WKCD (WK1)

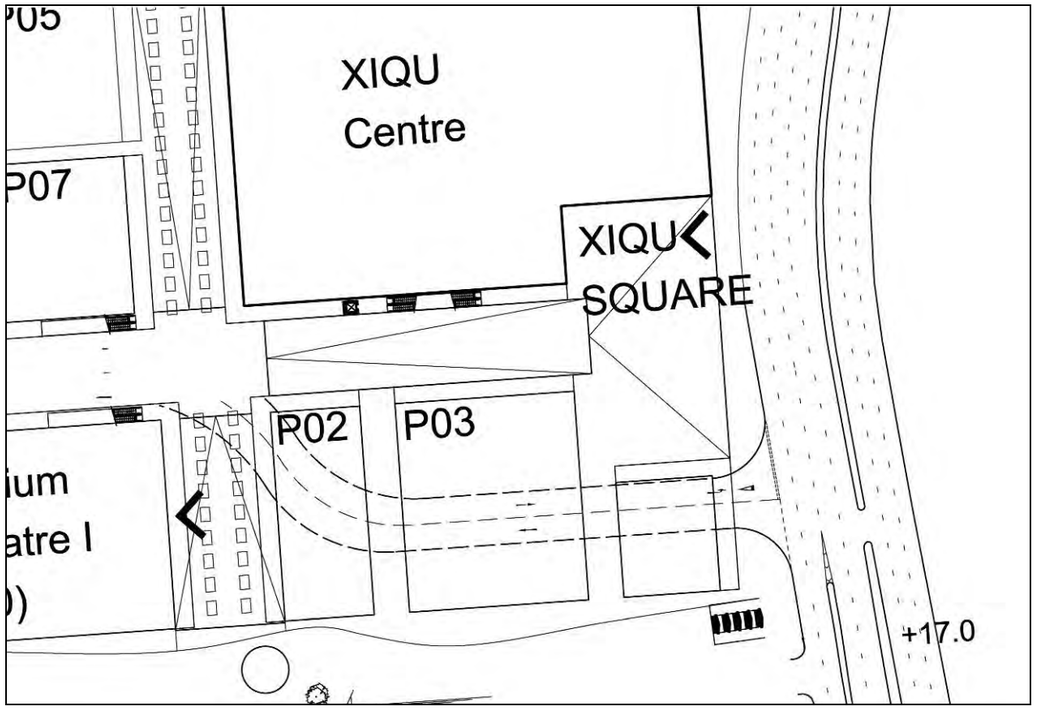


Figure A18 Proposed Junction Layout of Canton Road Access to WKCD (WK2)

Annex B Signal Calculation

Junction Assessment for Operational TIA

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Yan Cheung Rd / Ferry St / Kansu St — Design Year: 2020

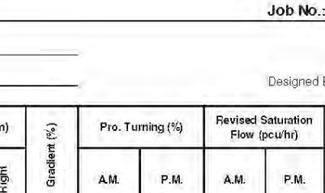
Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Kansu St (WB)		A	1	3.300		45				1880	1880	342	0.182		352	0.187	
		A	1	3.300		50		0%	0%	2085	2085	482	0.231	0.231	396	0.190	
		A	1	3.300	15			29%	17%	1890	1910	436	0.231		363	0.190	0.190
Ferry St (NB)		B	2	3.500	30			17%	30%	1950	1935	473	0.243		473	0.244	
		B	2	3.500						2105	2105	512	0.243		514	0.244	
		B	2	3.650						2120	2120	537	0.253		534	0.252	0.252
Ferry St (SB)		B	2	3.500						1965	1965	678	0.345		457	0.233	
		B	2	3.500						2105	2105	727	0.345	0.345	489	0.232	
		B	2	3.500						2105	2105	726	0.345		490	0.233	
		D	3	3.650		50				2060	2060	172	0.083		172	0.083	0.083
		D	3	3.650		45				2050	2050	172	0.084		171	0.083	
Yan Cheung Rd (EB)		E	3	3.500	50					1910	1910	162	0.085		155	0.081	
		E	3	3.500	55					2050	2050	174	0.085		167	0.081	
		D	3	4.000	60					2100	2100	223	0.106	0.106	131	0.062	

Pedestrian Crossing	Fp	1,2	MIN GREEN + FLASH =	5	+	6	=	11	seconds
	Gp	1,3	MIN GREEN + FLASH =	5	+	10	=	15	seconds
	Hp	2	MIN GREEN + FLASH =	5	+	14	=	19	seconds
	Ip	2,3	MIN GREEN + FLASH =	5	+	13	=	18	seconds
	Jp	3	MIN GREEN + FLASH =	5	+	12	=	17	seconds

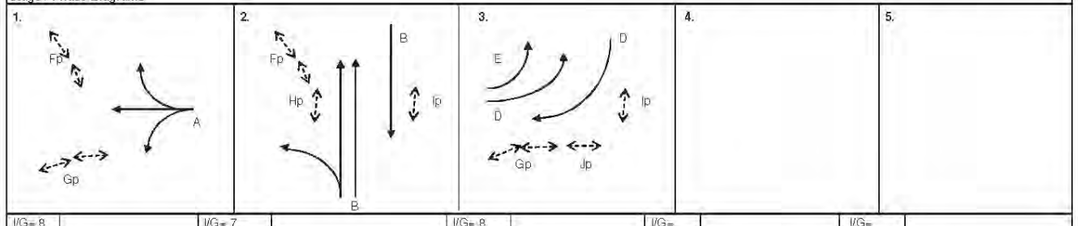
Notes:

Traffic Flow (pcu/hr)



Group	A,B,E	A,B,D	Group	A,B,E	A,B,D
y	0.661	0.683	y	0.523	0.525
L (sec)	19	20	L (sec)	19	20
C (sec)	130	130	C (sec)	130	130
y pract.	0.768	0.762	y pract.	0.768	0.762
R.C. (%)	16%	12%	R.C. (%)	47%	45%

Stage / Phase Diagrams



I/G= 8		I/G= 7		I/G= 8		I/G=	
I/G= 8		I/G= 7		I/G= 8		I/G=	

Date: March, 2014 — Junction: Yan Cheung Rd / Ferry St / Kansu St — J5

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

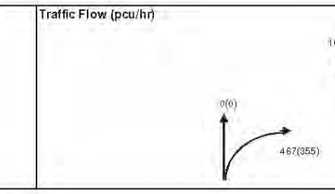
Junction: Jordan Road / Hoi Po Road — Design Year: 2020

Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Road (WB)		A	1	3.500		25				1855	1855	513	0.277	0.277	508	0.274	0.274
		A	1	3.500		20				1960	1960	542	0.277		537	0.274	
Hoi Po Road (NB)		B	2	3.500		25		100%	100%	1855	1855	227	0.122		173	0.093	0.093
		B	2	3.500		20				1960	1960	240	0.122	0.122	182	0.093	

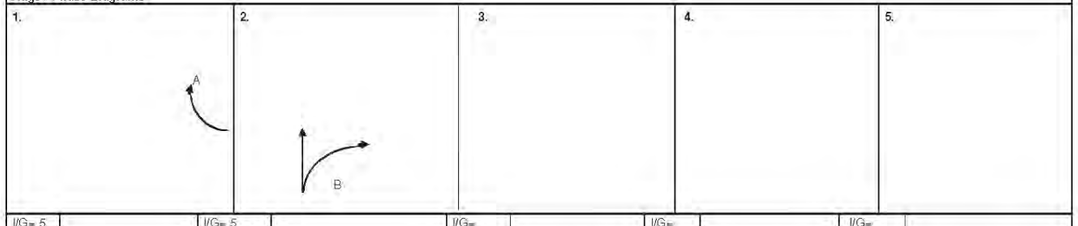
Notes:

Traffic Flow (pcu/hr)



Group		A,B	Group		A,B,..
y		0.399	y		0.367
L (sec)		8	L (sec)		8
C (sec)		60	C (sec)		60
y pract.		0.780	y pract.		0.780
R.C. (%)		95%	R.C. (%)		112%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G=		I/G=	
I/G= 5		I/G= 5		I/G=		I/G=	

Date: March, 2014 — Junction: Jordan Road / Hoi Po Road — J7

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

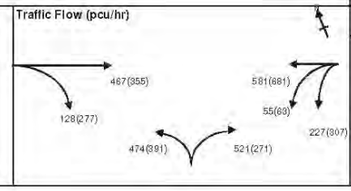
Junction: Jordan Rd (elevated) / Nga Cheung Rd (elevated) — Design Year: 2020

Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Nga Cheung Road (elevated) NB	↰	C1	1,2	3.500	20					1830	1830	474	0.259		391	0.214	
	↱	C2	2	3.500		25				1855	1855	521	0.281	0.281	271	0.146	0.146
Jordan Rd EB	→	A	1,3	3.500						1965	1965	467	0.238		355	0.181	
	↓	B	1	3.500		25				1985	1985	64	0.032		139	0.070	
	→	B	1	3.500		20				1960	1960	64	0.033		138	0.070	0.070
Jordan Rd WB	↰	D	2,3	3.500	20					1830	1830	109	0.060		147	0.080	
	↰	D	2,3	3.500	25					1985	1985	118	0.060		160	0.080	
	↰	E	3	3.500	20			17%	17%	2080	2080	316	0.152		370	0.178	0.178
	←	E	3	3.500						2105	2105	320	0.152	0.152	374	0.178	

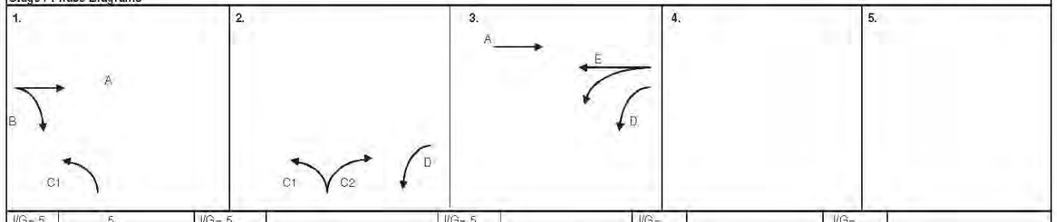
Notes:

Traffic Flow (pcu/hr)



Group	A,C2	B,C2,E	Group	C1,E$_{rt}$	B,C2,E$_{rt}$
y	0.519	0.433	y	0.392	0.394
L (sec)	8	18	L (sec)	8	12
C (sec)	60	60	C (sec)	60	60
y pract.	0.780	0.630	y pract.	0.780	0.720
R.C. (%)	50%	46%	R.C. (%)	99%	83%

Stage / Phase Diagrams



I/G= 5	5	I/G= 5		I/G= 5		I/G=	I/G=
I/G= 5		I/G= 5		I/G= 5		I/G=	I/G=

Date: March, 2014 — **Junction:** Jordan Rd (elevated) / Nga Cheung Rd — J8

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Lin Cheung Rd / Jordan Road — Design Year: 2020

Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

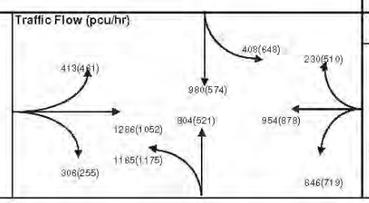
Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd EB	↰	F	2	3.500	20					1830	1830	363	0.198	0.198	321	0.175	
	↰→	F	2	3.500	25			12%	39%	2090	2055	414	0.198		360	0.175	
	→	F	2	3.500						2105	2105	417	0.198		368	0.175	
	→	F	2	3.500						2105	2105	417	0.198		369	0.175	
	↱	F	2	3.500		20		78%	73%	1990	1995	394	0.198		350	0.175	0.175
Jordan Rd WB	↰	E	3	3.500	15					1915	1915	377	0.197		406	0.212	
	↰	E	3	3.500	20			68%	74%	2000	1995	394	0.197		423	0.212	0.212
	←	E	3	3.500						2105	2105	414	0.197		446	0.212	
	↰	E	3	3.500		35		0%	26%	2105	2080	415	0.197	0.197	438	0.211	
	↱	E	3	3.500		30				1870	1870	230	0.123		394	0.211	
Lin Cheung Rd (NB)	↰	A	1,2	3.500	20					1830	1830	559	0.305		564	0.308	
	↰	A	1,2	3.500	25					1985	1985	606	0.305		611	0.308	
	↑	B	1	3.500						2105	2105	402	0.191	0.191	261	0.124	0.124
	↑	B	1	3.500						2105	2105	402	0.191		260	0.124	
Lin Cheung Rd (SB) *	↳	C	1,3	3.500	20					1830	1830	150	0.082		390	0.213	
	↓	D	1	3.500						2105	2105	245	0.116		144	0.068	
	↓	D	1	3.500						2105	2105	245	0.116		144	0.068	
	↓	D	1	3.500						2105	2105	245	0.116		144	0.068	
	↓	D	1	3.500						2105	2105	245	0.116		144	0.068	

Pedestrian Crossing	Gp	1,2	MIN GREEN + FLASH =	5	+	12	=	17	
	Hp	3	MIN GREEN + FLASH =	5	+	11	=	16	
	Ip	3	MIN GREEN + FLASH =	5	+	7	=	12	

Notes:

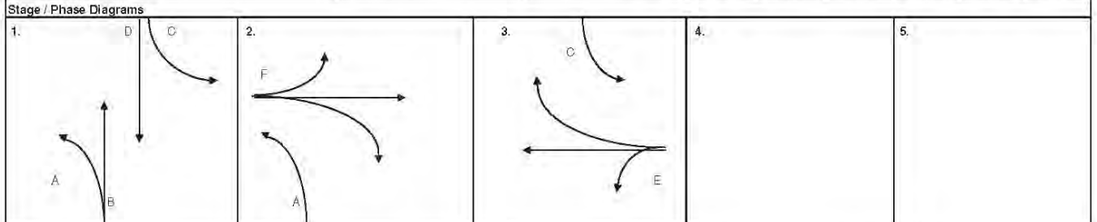
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	D,F,E	B,F,E	Group	D,F,E$_{rt}$	B,F,E$_{rt}$
y	0.512	0.586	y	0.456	0.511
L (sec)	20	24	L (sec)	20	24
C (sec)	130	130	C (sec)	130	130
y pract.	0.762	0.734	y pract.	0.762	0.734
R.C. (%)	49%	25%	R.C. (%)	67%	43%

Stage / Phase Diagrams



I/G= 6		I/G= 8		I/G= 13		I/G=	I/G=
I/G= 6		I/G= 8		I/G= 13		I/G=	I/G=

Date: March, 2014 — **Junction:** Lin Cheung Rd / Jordan Road — J11

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Ferry Street — Design Year: 2020

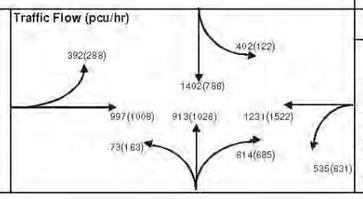
Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd WB		A	3	3.500	15			100%	98%	1785	1790	535	0.300	0.300	642	0.359	
		A	3	3.500						2105	2105	616	0.292		755	0.359	0.359
		A	3	3.500						2105	2105	616	0.292		755	0.359	
Jordan Rd (EB)	*	C	3	3.500	15					1785	1785	317	0.178		287	0.161	
	*	C	3	3.500	18			20%	0%	2070	2105	367	0.177		338	0.161	
	*	C	3	3.500						2105	2105	373	0.177		339	0.161	
Ferry St (NB)	*	F	1,2	3.500	15			19%	33%	1930	1900	394	0.204		487	0.256	
	*	F	1,2	3.500						2105	2105	430	0.204		540	0.257	
		G	2	3.500		25				1985	1985	309	0.156	0.156	345	0.174	0.174
		G	2	3.500		20				1960	1960	305	0.156		340	0.174	
Ferry St (SB)		D	1	3.500	15					1785	1785	402	0.225		122	0.068	
	*	D	1	3.500						2105	2105	544	0.258	0.258	236	0.112	0.112
	*	D	1	3.500						2105	2105	544	0.258		236	0.112	

Notes:

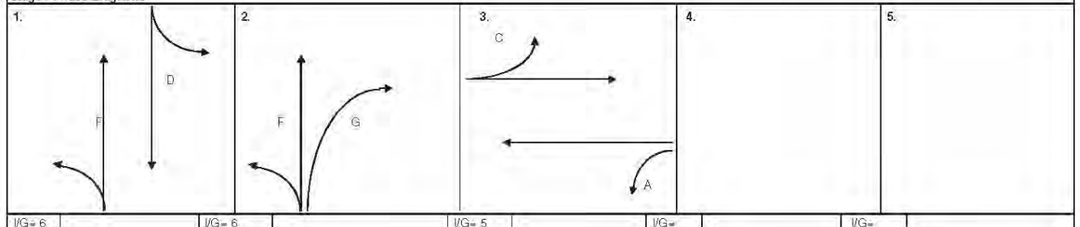
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach

Traffic Flow (pcu/hr)



Group	D,G,C	D,G,A	Group	F,A$_{in}$	D,G,A$_{in}$
y	0.592	0.714	y	0.615	0.645
L (sec)	14	14	L (sec)	10	14
C (sec)	130	130	C (sec)	130	130
y pract.	0.803	0.803	y pract.	0.831	0.803
R.C. (%)	36%	13%	R.C. (%)	35%	25%

Stage / Phase Diagrams



I/G= 6		I/G= 6		I/G= 5		I/G=	
I/G= 6		I/G= 6		I/G= 5		I/G=	

Date: March, 2014 — Junction: Jordan Road / Ferry Street — J12

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

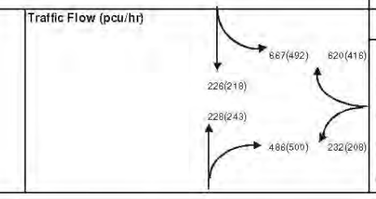
Junction: Wui Cheung Road / Road D1 — Design Year: 2020

Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Wui Cheung Rd WB		E	1,2	3.500		25				1985	1985	312	0.157	0.157	209	0.105	
		E	1,2	3.500		20				1960	1960	308	0.157		207	0.106	
		E	1,2	3.500	20					1830	1830	232	0.127		208	0.114	0.114
Road D1 SB		C	2,3	3.500	25					1855	1855	324	0.175		239	0.129	
		C	2,3	3.500	20					1960	1960	343	0.175		253	0.129	
		D	3	3.500						1965	1965	226	0.115	0.115	218	0.111	0.111
Road D1 NB		A	4	3.500						1965	1965	221	0.112		210	0.107	
		A	4	3.500		30		97%	85%	2010	2020	225	0.112		215	0.106	
		A	4	3.500		25				1985	1985	268	0.135	0.135	318	0.160	0.160
Pedestrian Crossing		Hp	1	MIN GREEN + FLASH =	5	+	10	=	15								
		Ip	3,4	MIN GREEN + FLASH =	5	+	9	=	14								

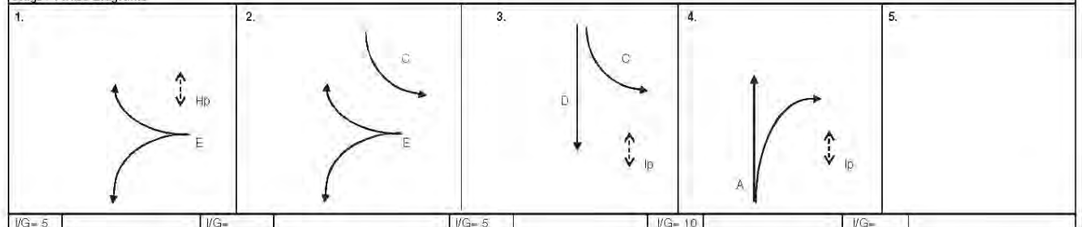
Notes:

Traffic Flow (pcu/hr)



Group	Hp,C,A	E,D,A	Group	Hp,C,A$_{in}$	E,D,A$_{in}$
y	0.310	0.407	y	0.289	0.385
L (sec)	23	17	L (sec)	23	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.741	0.782	y pract.	0.741	0.782
R.C. (%)	139%	92%	R.C. (%)	156%	103%

Stage / Phase Diagrams



I/G= 5		I/G=		I/G= 5		I/G= 10	
I/G= 5		I/G=		I/G= 5		I/G= 10	

Date: March, 2014 — Junction: Wui Cheung Road / Road D1 — J14

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Canton Road / Wui Cheung Road — Design Year: 2020

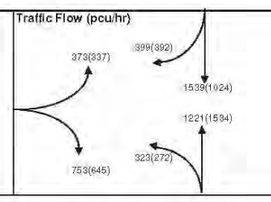
Description: Operation (Batch 1) (Without Canton Road Underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (SB)	↓	A	1,2	3.500						1965	1965	490	0.249		326	0.166	
	↓	A	1,2	3.500						2105	2105	525	0.249		349	0.166	
	↓	A	1,2	3.500						2105	2105	525	0.249		349	0.166	
	↓	F	2	3.500		15				1915	1915	399	0.208	0.208	392	0.205	0.205
Canton Rd (NB)	↑	B	1	3.500						2105	2105	407	0.193	0.193	511	0.243	0.243
	↑	B	1	3.500						2105	2105	407	0.193		511	0.243	
	↑	B	1	3.500						2105	2105	407	0.193		511	0.243	
	↑	C	1,3	3.500	10					1710	1710	323	0.189		272	0.159	
Wui Cheung Rd (EB)	↑	D	2,3	3.500	10					1710	1710	373	0.218		337	0.197	
	↓	E	3	3.500		25				1985	1985	255	0.128	0.128	218	0.110	0.110
	↓	E	3	3.500		20				1960	1960	252	0.128		216	0.110	
	↓	E	3	3.500		15				1915	1915	246	0.128		211	0.110	

Pedestrian Crossing	Gp	1	MIN GREEN + FLASH =	5	+	5	=	10
	Hp	1,2	MIN GREEN + FLASH =	5	+	10	=	15
	Ip	1,3	MIN GREEN + FLASH =	5	+	9	=	14
	Jp	2	MIN GREEN + FLASH =	5	+	5	=	10
	Kp	3	MIN GREEN + FLASH =	13	+	12	=	25

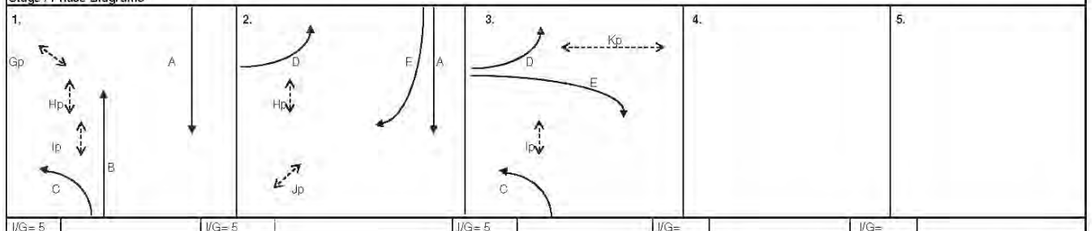
Notes:

Traffic Flow (pcu/hr)



Group	B,D	B,F,E	Group	B,D,,	B,F,E,,
y	0.411	0.530	y	0.440	0.558
L (sec)	11	12	L (sec)	11	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.824	0.817	y pract.	0.824	0.817
R.C. (%)	100%	54%	R.C. (%)	87%	46%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G= 5	
I/G= 5		I/G= 5		I/G= 5	

I/G=	
I/G=	
Date:	March, 2014

I/G=	
I/G=	
Junction:	Canton Road / Wui Cheung Road J15

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

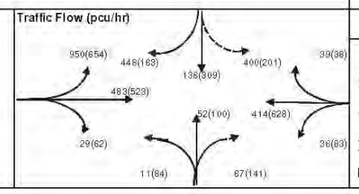
Junction: Lin Cheung Road / Austin Road West — Design Year: 2020

Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Austin Road EB	↓→	E	1,2	3.500	15					1785	1785	453	0.254		312	0.175	
	↓→	E	1,2	3.500	20					1960	1960	497	0.254		342	0.175	
	→	B	2	3.500						2105	2105	257	0.122	0.122	294	0.140	0.140
	→	B	2	3.500		30		11%	21%	2095	2085	255	0.122		291	0.140	
Austin Road WB	←	D	4	3.500	15			23%	36%	1920	1900	154	0.080		233	0.123	
	↑←	D	4	3.500						2105	2105	169	0.080		259	0.123	
	↑←	D	4	3.500		25		23%	15%	2075	2085	166	0.080	0.080	257	0.123	0.123
Lin Cheung Road NB	↱	F	2,3	3.500	15					1785	1785	11	0.006		84	0.047	
	↑	C	3	3.500						1965	1965	52	0.026		100	0.051	
	↑	C	3	3.500		30		100%	100%	2005	2005	67	0.033	0.033	141	0.070	0.070
Lin Cheung Road SB	↓	A	1	3.500						1965	1965	37	0.019		89	0.045	
	↓	A	1	3.500						2105	2105	40	0.019		96	0.046	
	↓	A	1	3.500		25		78%	21%	2010	2080	271	0.135		156	0.075	
	↓	A	1	3.500		20				1745	1745	236	0.135	0.135	131	0.075	0.075

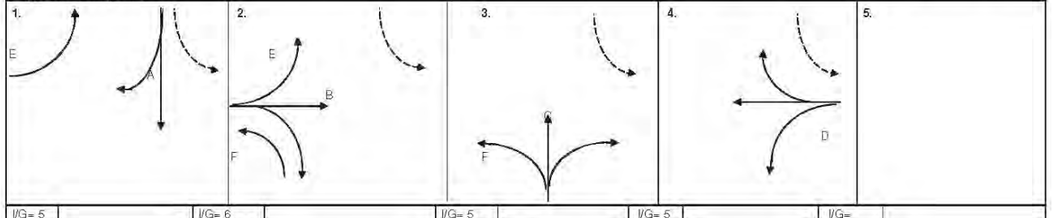
Notes:

Traffic Flow (pcu/hr)



Group	E,C,D	A,B,C,D	Group	E,C,D,,	A,B,C,D,
y	0.367	0.371	y	0.368	0.408
L (sec)	13	17	L (sec)	13	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.810	0.782	y pract.	0.810	0.782
R.C. (%)	121%	111%	R.C. (%)	120%	92%

Stage / Phase Diagrams



I/G= 5		I/G= 6		I/G= 5	
I/G= 5		I/G= 6		I/G= 5	

I/G= 5	
I/G= 5	
Date:	March, 2014

I/G=	
I/G=	
Junction:	Lin Cheung Road / Austin Road West J17

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

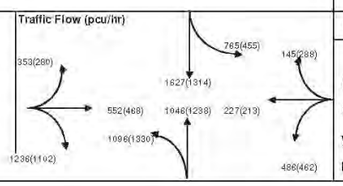
Junction: Canton Road / Austin Road — Design Year: 2020

Description: Operation (Batch 1) (without underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (NB)		C	1,2	3.500	15					1785	1785	522	0.292		634	0.355	
		C	1,2	3.500	20					1960	1960	574	0.293		696	0.355	
		D	1	3.500						2105	2105	349	0.166		413	0.196	
		D	1	3.500						2105	2105	348	0.165		412	0.196	
		D	1	3.500						2105	2105	349	0.166		413	0.196	
Canton Rd (SB)		A	1,3	3.500	10					1710	1710	361	0.211		215	0.126	
		A	1,3	3.500	15					1915	1915	404	0.211		240	0.125	
		B	1	3.500						2105	2105	542	0.257		438	0.208	0.208
		B	1	3.500						2105	2105	543	0.258	0.258	438	0.208	
		B	1	3.500						2105	2105	542	0.257		438	0.208	
Austin Road (WB)		E	3	3.300	10					1690	1690	260	0.154	0.154	292	0.173	
		E	3	3.000	15			77%	50%	1910	1955	293	0.153		338	0.173	0.173
		E	3	3.000		20		48%	86%	1985	1930	305	0.154		333	0.173	
Austin Road (EB)		F	2	3.500	10					1710	1710	353	0.206		280	0.164	
		F	2	3.500	15			0%	0%	2105	2105	470	0.223	0.223	413	0.196	0.196
		F	2	3.500		25		82%	86%	2005	2000	445	0.222		390	0.195	
		F	2	3.500		22				1970	1970	438	0.222		385	0.195	
		F	2	3.500		20				1960	1960	435	0.222		382	0.195	

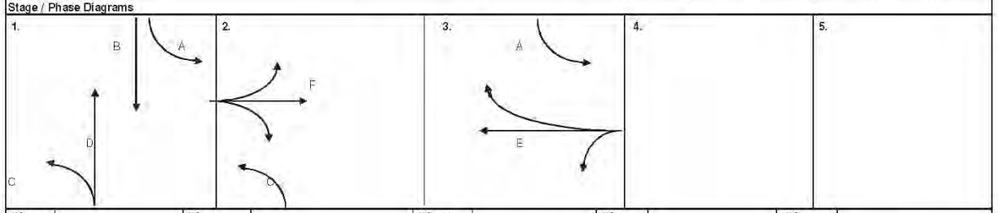
Notes:

Traffic Flow (pcu/hr)



Group	D,F,E	B,F,E	Group	D,F,E$_{rt}$	B,F,E$_{rt}$
y	0.543	0.635	y	0.565	0.577
L (sec)	12	12	L (sec)	12	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.817	0.817	y pract.	0.817	0.817
R.C. (%)	50%	29%	R.C. (%)	45%	42%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G= 5		I/G=		I/G=	
I/G= 5		I/G= 5		I/G= 5		I/G=		I/G=	

Date: March, 2014 — Junction: Canton Road / Austin Road — J18

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

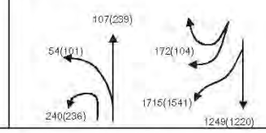
Junction: Canton Road / Kowloon Park Drive — Design Year: 2020

Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

Approach	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	(%) uphill Gradient	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Road SB		C	2	3.500		10				1830	1830	172	0.094		104	0.057	
Canton Road SB		B	1,2	3.500		30				2005	2005	856	0.427		770	0.384	
		B	1,2	3.500		32				2010	2010	859	0.427		771	0.384	
		A	1,2,3	3.300						1945	1945	1249	0.642	0.642	1220	0.627	0.627
Kowloon Park Drive NB		E	3,4	3.000	10					1665	1665	240	0.144		236	0.142	
		D	3,4	3.000	15			34%	30%	1990	1995	161	0.081		340	0.170	
PED CROSSING		Fp	1,2	MIN GREEN + FLASH			5	+	5	=	10						
		Gp	1	MIN GREEN + FLASH			5	+	8	=	13						
		Hp	3,4	MIN GREEN + FLASH			5	+	9	=	14						
		Ip	1,2	MIN GREEN + FLASH			5	+	9	=	14						
		Jp	4	MIN GREEN + FLASH			5	+	6	=	11						

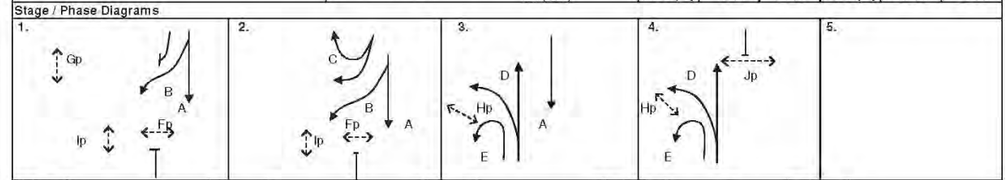
Notes:

Traffic Flow (pcu/hr)



Group	B,E	A,Jp	Group	B,D$_{l}$	A,Jp$_{rt}$
y	0.571	0.642	y	0.554	0.627
L (sec)	10	16	L (sec)	10	16
C (sec)	130	130	C (sec)	130	130
y pract.	0.831	0.789	y pract.	0.831	0.789
R.C. (%)	45%	23%	R.C. (%)	50%	26%

Stage / Phase Diagrams



I/G= 3		I/G=		I/G=		I/G= 3	11	I/G=	
I/G= 3		I/G=		I/G=		I/G= 3	11	I/G=	

Date: March, 2014 — Junction: Canton Road / Kowloon Park Driv — J20

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Yan Cheung Rd/ Road D1A(N) / Hoi Wang Rd — Design Year: 2020

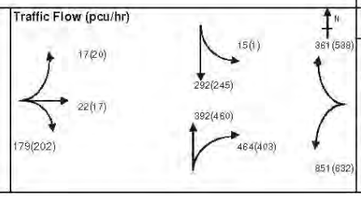
Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Road D1 (NB)		A	1,2	3.500						1965	1965	189	0.096		222	0.113	
		A	1,2	3.500						2105	2105	203	0.096		238	0.113	
	*	B	2	3.500		25				1985	1985	309	0.156		248	0.125	
Yan Cheung Rd (WB)		D	3	3.500		20				1960	1960	179	0.091		267	0.136	
		D	3	3.500		25				1985	1985	182	0.092		271	0.137	
		C	2,3	3.500	35					1885	1885	851	0.451	0.451	632	0.335	0.335
Hoi Wang Rd (SB)		E	1	3.300	30					1850	1850	15	0.008		1	0.001	
		E	1	3.500						2105	2105	146	0.069		123	0.058	
		E	1	3.500						2105	2105	146	0.069		123	0.058	
PTI (EB)		F	4	3.500	15			44%	54%	1885	1865	39	0.021		37	0.020	
		F	4	3.500		30		100%	100%	2005	2005	90	0.045	0.045	102	0.051	0.051
		F	4	3.500		25				1985	1985	89	0.045		100	0.050	
Pedestrian Crossing		Gp	3	MIN GREEN + FLASH =			16	+	7	=	23	seconds					
Pedestrian Crossing		Hp	1,4	MIN GREEN + FLASH =			5	+	5	=	10	seconds					
Pedestrian Crossing		Ip	1	MIN GREEN + FLASH =			11	+	7	=	18	seconds					
Pedestrian Crossing		Jp	2,3,4	MIN GREEN + FLASH =			5	+	5	=	10	seconds					
Pedestrian Crossing		Kp	1,2,3	MIN GREEN + FLASH =			5	+	6	=	11	seconds					

Notes:

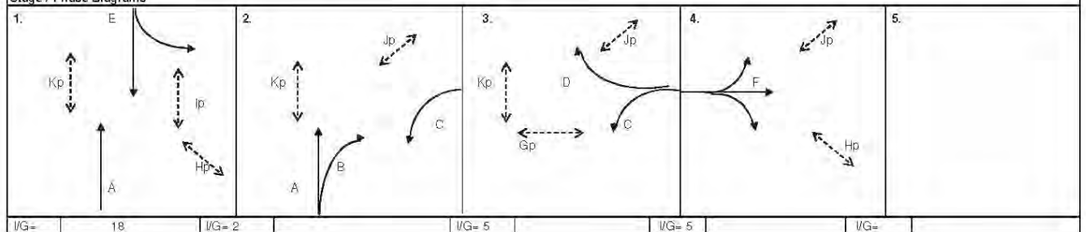
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	E,B,D,F	Ip,C,F	Group	Ip,B,D,F	Ib,C,F
y	0.362	0.496	y	0.312	0.386
L (sec)	17	28	L (sec)	35	28
C (sec)	120	120	C (sec)	120	120
y pract.	0.773	0.690	y pract.	0.638	0.690
R.C. (%)	114%	39%	R.C. (%)	104%	79%

Stage / Phase Diagrams



I/G=	18	I/G= 2		I/G= 5		I/G= 5	I/G=
I/G=	18	I/G= 2		I/G= 5		I/G= 5	I/G=

Date: 41710 — Junction: Yan Cheung Rd/ Road D1A(N) / Hoi Wa — J39

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Road D1 — Design Year: 2020

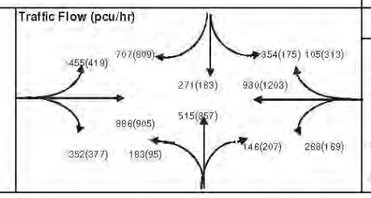
Description: Operation (Batch 1) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Road D1 NB		C	2	3.500	30					1870	1870	183	0.098		95	0.051	
		C	2	3.500	35			0%	0%	2105	2105	227	0.108		181	0.086	
		C	2	3.000						2055	2055	221	0.108		176	0.086	
		C	2	3.000		25		69%	100%	1975	1940	213	0.108	0.108	207	0.107	0.107
Road D1 SB		G	3,4	3.500	20					1830	1830	354	0.193		175	0.096	
		B	4	3.500						2105	2105	256	0.122		163	0.077	
		B	4	3.500		25		94%	100%	1995	1985	243	0.122		271	0.137	
		B	4	3.500		22				1970	1970	240	0.122		270	0.137	0.137
		B	4	3.500		20				1960	1960	239	0.122	0.122	268	0.137	
Jordan Road EB		H	1,4	3.500	15					1785	1785	455	0.255		419	0.235	
		A	1	3.500						2105	2105	315	0.150	0.150	326	0.155	
		A	1	3.500						2105	2105	314	0.149		326	0.155	
		A	1	3.500		28		18%	22%	2085	2080	312	0.150		323	0.155	0.155
		A	1	3.500		25				1985	1985	297	0.150		307	0.155	
Jordan Road WB	*	D	3	3.500	15			0%	0%	1965	1965	298	0.151	0.151	395	0.201	0.201
	*	D	3	3.500						2105	2105	317	0.151		423	0.201	
	*	D	3	3.500		30		0%	9%	2105	2095	317	0.151		421	0.201	
Pedestrian Crossing		Fp	1,2,4	MIN GREEN + FLASH =			5	+	12	=	17						
		EP	3	MIN GREEN + FLASH =			15	+	14	=	29						

Notes:

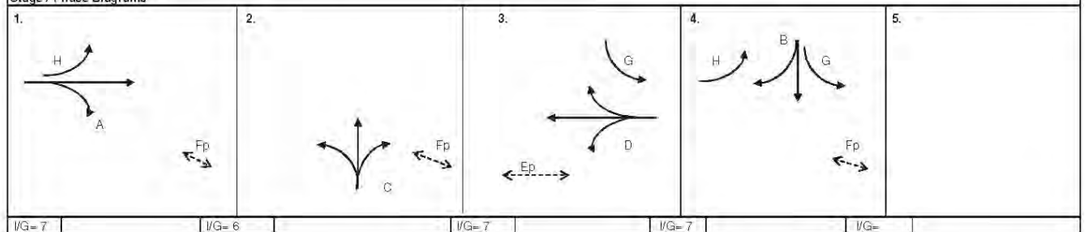
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	C,D,H	A,C,D,B	Group	C,D,H1	A,C,D,B1
y	0.513	0.530	y	0.542	0.600
L (sec)	22	23	L (sec)	22	23
C (sec)	130	130	C (sec)	130	130
y pract.	0.748	0.741	y pract.	0.748	0.741
R.C. (%)	46%	40%	R.C. (%)	38%	23%

Stage / Phase Diagrams



I/G=	7	I/G=	6	I/G=	7	I/G=	7
I/G=	7	I/G=	6	I/G=	7	I/G=	7

Date: March, 2014 — Junction: Jordan Road / Road D1 — J40

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Yan Cheung Rd / Ferry St / Kansu St — Design Year: 2031

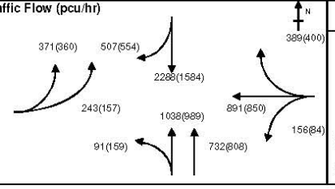
Description: Operation (Batch 1+2+3) without Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Kansu St		A	1	3.300		45				1880	1880	389	0.207		400	0.213	
(WB)		A	1	3.300		50		0%	0%	2085	2085	550	0.264	0.264	488	0.234	0.234
		A	1	3.300	15			31%	19%	1885	1910	497	0.264		446	0.234	
Ferry St		B	2	3.500	30			17%	29%	1950	1935	543	0.278		550	0.284	
(NB)		B	2	3.500						2105	2105	586	0.278		598	0.284	
		B	2	3.650						2120	2120	732	0.345		808	0.381	0.381
Ferry St		B	2	3.500						1965	1965	728	0.370		504	0.256	
(SB)		B	2	3.500						2105	2105	780	0.371	0.371	540	0.257	
		B	2	3.500						2105	2105	780	0.371		540	0.257	
		D	3	3.650		50				2060	2060	254	0.123		278	0.135	0.135
		D	3	3.650		45				2050	2050	253	0.123	0.123	276	0.135	
Yan Cheung Rd		E	3	3.500	50					1910	1910	179	0.094		174	0.091	
(EB)		E	3	3.500	55					2050	2050	192	0.094		186	0.091	
		D	3	4.000	60					2100	2100	243	0.116		157	0.075	

Pedestrian Crossing	Fp	1,2	MIN GREEN + FLASH =	5	+	6	=	11	seconds
	Gp	1,3	MIN GREEN + FLASH =	5	+	10	=	15	seconds
	Hp	2	MIN GREEN + FLASH =	5	+	14	=	19	seconds
	Ip	2,3	MIN GREEN + FLASH =	5	+	13	=	18	seconds
	Jp	3	MIN GREEN + FLASH =	5	+	12	=	17	seconds

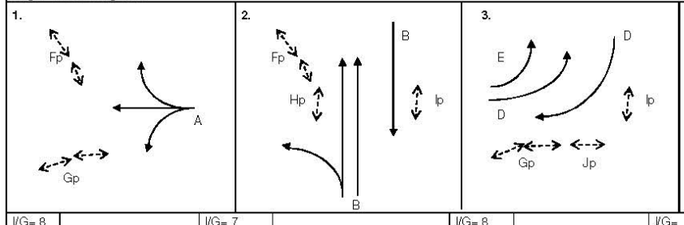
Notes:

Traffic Flow (pcu/hr)



Group	A,B,E	A,B,D	Group	A,B,E	A,B,D
y	0.728	0.758	y	0.706	0.750
L (sec)	19	20	L (sec)	19	20
C (sec)	130	130	C (sec)	130	130
y pract.	0.768	0.762	y pract.	0.768	0.762
R.C. (%)	6%	1%	R.C. (%)	9%	2%

Stage / Phase Diagrams



I/G= 8		I/G= 7		I/G= 8		I/G=	I/G=
I/G= 8		I/G= 7		I/G= 8		I/G=	I/G=

Date: March, 2014 — **Junction:** Yan Cheung Rd / Ferry St / Kansu St — J5

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

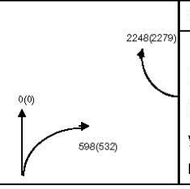
Junction: Jordan Road / Hoi Po Road — Design Year: 2031

Description: Operation (Batch 1+2+3) without Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Road		A	1	3.500		25				1855	1855	1093	0.589	0.589	1108	0.597	0.597
(WB)		A	1	3.500		20				1960	1960	1155	0.589		1171	0.597	
Hoi Po Road		B	2	3.500		25		100%	100%	1855	1855	291	0.157	0.157	259	0.140	0.140
(NB)		B	2	3.500		20				1960	1960	307	0.157		273	0.139	

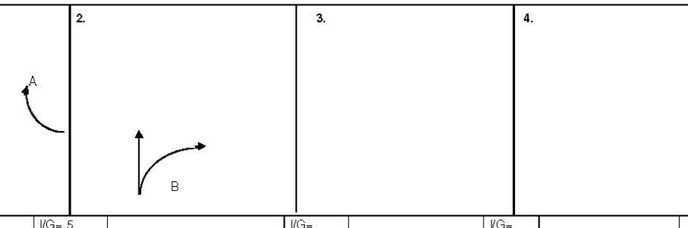
Notes:

Traffic Flow (pcu/hr)



Group		A,B	Group		A,B,,,
y		0.746	y		0.737
L (sec)		8	L (sec)		8
C (sec)		90	C (sec)		90
y pract.		0.820	y pract.		0.820
R.C. (%)		10%	R.C. (%)		11%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G=		I/G=	I/G=
I/G= 5		I/G= 5		I/G=		I/G=	I/G=

Date: March, 2014 — **Junction:** Jordan Road / Hoi Po Road — J7

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

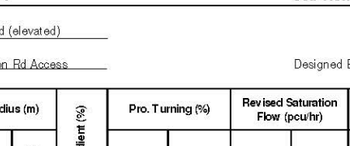
Junction: Jordan Rd (elevated) / Nga Cheung Rd (elevated) — Design Year: 2031

Description: Operation (Batch 1+2+3) without Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Nga Cheung Rd (elevated) NB	↰	C1	1,2	3.500	20					1830	1830	567	0.310		555	0.303	0.303
	↰	C1	1,2	3.500	25					1985	1985	614	0.309		601	0.303	
	↱	C2	2	3.500		25				1855	1855	596	0.321	0.321	108	0.058	
Jordan Rd EB	→	A	1,3	3.500						1965	1965	598	0.304		532	0.271	
	↳	B	1	3.500		25				1985	1985	92	0.046		186	0.094	
	↳	B	1	3.500		20				1960	1960	90	0.046		183	0.093	
Jordan Rd WB	↰	D	2,3	3.500	20					1830	1830	92	0.050		139	0.076	
	↰	D	2,3	3.500	25					1985	1985	100	0.050		151	0.076	
	↰	E	3	3.500	20			11%	12%	2085	2085	563	0.270	0.270	610	0.293	0.293
	←	E	3	3.500						2105	2105	567	0.269		615	0.292	

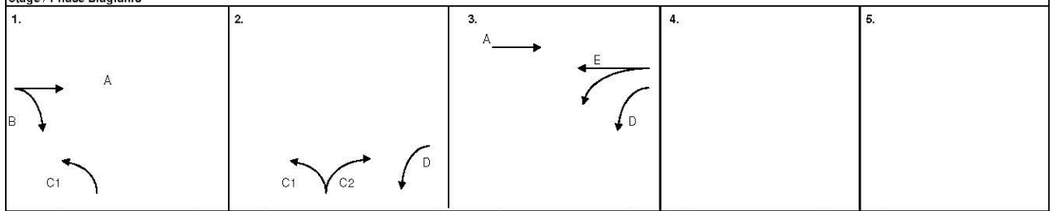
Notes:

Traffic Flow (pcu/hr)



Group	A,C2	B,C2,E	Group	B,C2,E,,	C1,E,,,
y	0.626	0.591	y	0.444	0.596
L (sec)	8	18	L (sec)	12	8
C (sec)	90	90	C (sec)	90	90
y pract.	0.820	0.720	y pract.	0.780	0.820
R.C. (%)	31%	22%	R.C. (%)	75%	38%

Stage / Phase Diagrams



I/G= 5	5	I/G= 5		I/G= 5		I/G=		I/G=	
I/G= 5		I/G=		I/G= 5		I/G=		I/G=	

Date: March, 2014 — **Junction:** Jordan Rd (elevated) / Nga Cheung Rd — J8

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Lin Cheung Rd / Jordan Road — Design Year: 2031

Description: Operation (Batch 1+2+3) without Canton Rd Access — Designed By: TYC — Checked By: STH

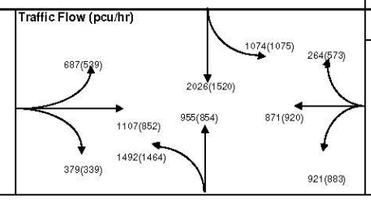
Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd EB	↰	F	2	3.500	20					1830	1830	396	0.216	0.216	315	0.172	
	↰→	F	2	3.500	25			67%	64%	2025	2025	437	0.216		349	0.172	
	→	F	2	3.500						2105	2105	456	0.217		363	0.172	
	→	F	2	3.500						2105	2105	456	0.217		364	0.173	
	↱→	F	2	3.500		20		89%	100%	1975	1960	428	0.217		339	0.173	0.173
Jordan Rd WB	↰	E	3	3.500	15					1915	1915	455	0.238		455	0.238	
	↰	E	3	3.500	20			100%	92%	1960	1970	466	0.238	0.238	467	0.237	
	←	E	3	3.500						2105	2105	436	0.207		500	0.238	
	↱	E	3	3.500		35		0%	24%	2105	2085	435	0.207		503	0.241	0.241
	↱	E	3	3.500		30				1870	1870	264	0.141		451	0.241	
Lin Cheung Rd (NB)	↰	A	1,2	3.500	20					1830	1830	716	0.391		702	0.384	
	↰→	A	1,2	3.500	25					1985	1985	776	0.391		762	0.384	
	→	B	1	3.500						2105	2105	478	0.227	0.227	427	0.203	0.203
	→	B	1	3.500						2105	2105	477	0.227		427	0.203	
Lin Cheung Rd (SB) *	↳	C	1,3	3.500	20					1830	1830	816	0.446		817	0.446	
	↓	D	1	3.500						2105	2105	507	0.241		380	0.181	
	↓	D	1	3.500						2105	2105	507	0.241		380	0.181	
	↓	D	1	3.500						2105	2105	507	0.241		380	0.181	
	↓	D	1	3.500						2105	2105	507	0.241		380	0.181	

Pedestrian Crossing	Gp	1,2	MIN GREEN + FLASH =	5	+	12	=	17		
	Hp	3	MIN GREEN + FLASH =	5	+	11	=	16		
	Ip	3	MIN GREEN + FLASH =	5	+	7	=	12		

Notes:

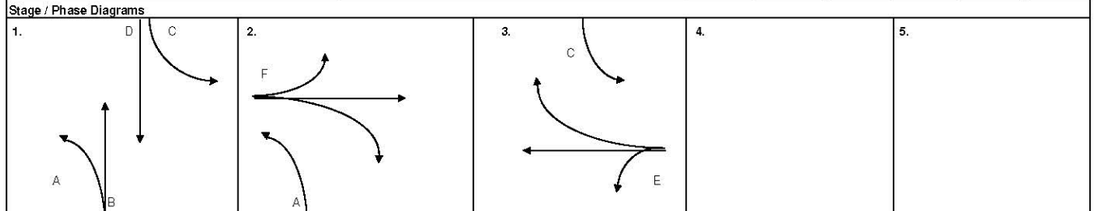
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	D,F,E	B,F,E	Group	D,F,E,,	B,F,E,,
y	0.695	0.681	y	0.595	0.617
L (sec)	20	24	L (sec)	20	24
C (sec)	130	130	C (sec)	130	130
y pract.	0.762	0.734	y pract.	0.762	0.734
R.C. (%)	10%	8%	R.C. (%)	28%	19%

Stage / Phase Diagrams



I/G= 6		I/G= 8		I/G= 13		I/G=		I/G=	
I/G= 6		I/G= 8		I/G= 13		I/G=		I/G=	

Date: March, 2014 — **Junction:** Lin Cheung Rd / Jordan Road — J11

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Ferry Street — Design Year: 2031

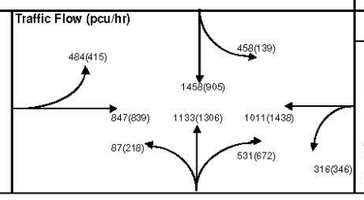
Description: Operation (Batch 1+2+3) without Canton Road Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd		A	3	3.500	15			79%	64%	1820	1850	401	0.220	0.220	544	0.294	
WB		A	3	3.500						2105	2105	463	0.220		620	0.295	0.295
		A	3	3.500						2105	2105	463	0.220		620	0.295	
Jordan Rd	*	C	3	3.500	15					1785	1785	302	0.169		278	0.156	
(EB)	*	C	3	3.500	18			53%	43%	2015	2030	341	0.169		316	0.156	
	*	C	3	3.500						2105	2105	356	0.169		328	0.156	
Ferry St	*	F	1,2	3.500	15			17%	34%	1930	1900	506	0.262		646	0.340	
(NB)	*	F	1,2	3.500						2105	2105	552	0.262		716	0.340	0.340
		G	2	3.500		25				1985	1985	267	0.135	0.135	338	0.170	
		G	2	3.500		20				1960	1960	264	0.135		334	0.170	
Ferry St		D	1	3.500	15					1785	1785	458	0.257		139	0.078	
(SB)	*	D	1	3.500						2105	2105	572	0.272	0.272	296	0.141	
	*	D	1	3.500						2105	2105	572	0.272		295	0.140	

Notes:

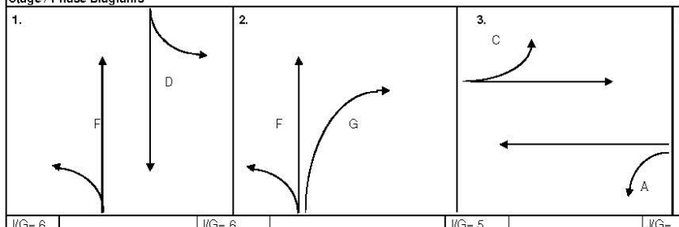
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach

Traffic Flow (pcu/hr)



Group	D,G,C	D,G,A	Group	D,G,A$_{II}$	F,A$_{III}$
y	0.576	0.627	y	0.605	0.635
L (sec)	14	14	L (sec)	14	10
C (sec)	130	130	C (sec)	130	130
y pract.	0.803	0.803	y pract.	0.803	0.831
R.C. (%)	40%	28%	R.C. (%)	33%	31%

Stage / Phase Diagrams



I/G= 6		I/G= 6		I/G= 5		I/G=	
I/G=		I/G= 5		I/G= 7		I/G=	

Date: March, 2014 — **Junction:** Jordan Road / Ferry Street — J12

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

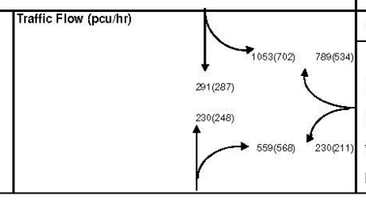
Junction: Wui Cheung Road / Road D1 — Design Year: 2031

Description: Operation (Batch 1+2+3) without Canton Road Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Wui Cheung Rd		E	1,2	3.500		25				1985	1985	397	0.200	0.200	269	0.136	0.136
WB		E	1,2	3.500		20				1960	1960	392	0.200		265	0.135	
		E	1,2	3.500	20					1830	1830	230	0.126		211	0.115	
Road D1		C	2,3	3.500	25					1855	1855	512	0.276		341	0.184	
SB		C	2,3	3.500	20					1960	1960	541	0.276		361	0.184	
		D	3	3.500						1965	1965	291	0.148	0.148	287	0.146	0.146
Road D1		A	4	3.500						1965	1965	230	0.117		246	0.125	
NB		A	4	3.500		30		100%	99%	2005	2005	291	0.145	0.145	252	0.126	
		A	4	3.500		25				1985	1985	268	0.135		318	0.160	0.160
Pedestrian Crossing		Hp	1	MIN GREEN + FLASH =			5	+	10	=	15						
		Ip	3,4	MIN GREEN + FLASH =			5	+	9	=	14						

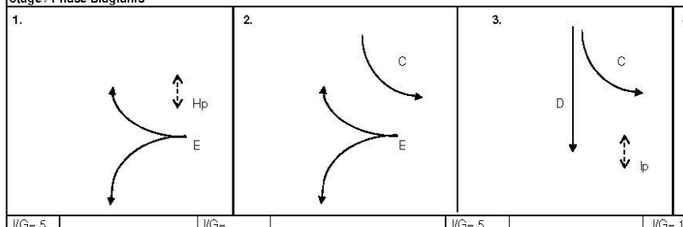
Notes:

Traffic Flow (pcu/hr)



Group	Hp,C,A	E,D,A	Group	Hp,C,A$_{II}$	E,D,A$_{II}$
y	0.421	0.493	y	0.344	0.442
L (sec)	23	17	L (sec)	23	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.741	0.782	y pract.	0.741	0.782
R.C. (%)	76%	59%	R.C. (%)	115%	77%

Stage / Phase Diagrams



I/G= 5		I/G=		I/G= 5		I/G= 10		I/G=	
I/G= 5		I/G=		I/G= 5		I/G= 10		I/G=	

Date: March, 2014 — **Junction:** Wui Cheung Road / Road D1 — J14

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Canton Road / Wui Cheung Road — Design Year: 2031

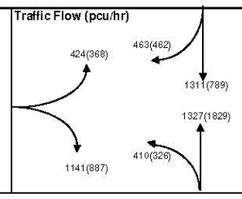
Description: Operation (Batch 1+2+3) without Canton Road Access (Without Underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (SB)	↓	A	1,2	3.500						1965	1965	417	0.212		251	0.128	
	↓	A	1,2	3.500						2105	2105	447	0.212		269	0.128	
	↓	A	1,2	3.500						2105	2105	447	0.212		269	0.128	
	↓	F	2	3.500		15				1915	1915	463	0.242	0.242	462	0.241	0.241
Canton Rd (NB)	↑	B	1	3.500						2105	2105	442	0.210	0.210	610	0.290	0.290
	↑	B	1	3.500						2105	2105	442	0.210		610	0.290	
	↑	B	1	3.500						2105	2105	442	0.210		610	0.290	
	↑	C	1,3	3.500	10					1710	1710	410	0.240		326	0.191	
Wui Cheung Rd (EB)	↱	D	2,3	3.500	10					1710	1710	424	0.248		368	0.215	
	↴	E	3	3.500		25				1985	1985	386	0.195	0.195	300	0.151	0.151
	↴	E	3	3.500		20				1960	1960	382	0.195		297	0.151	
	↴	E	3	3.500		15				1915	1915	373	0.195		290	0.151	

Pedestrian Crossing									
	Gp	1	MIN GREEN + FLASH =	5	+	5	=	10	
	Hp	1,2	MIN GREEN + FLASH =	5	+	10	=	15	
	Ip	1,3	MIN GREEN + FLASH =	5	+	9	=	14	
	Jp	2	MIN GREEN + FLASH =	5	+	5	=	10	
	Kp	3	MIN GREEN + FLASH =	13	+	12	=	25	

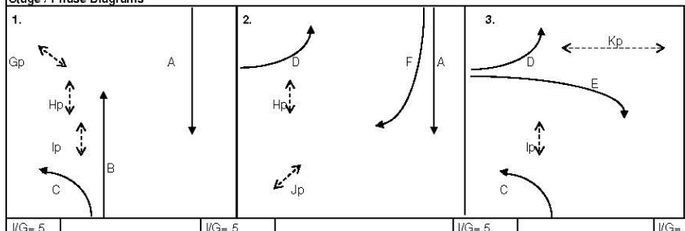
Notes:

Traffic Flow (pcu/hr)



Group	C,F	B,F,E	Group	B,D$_m$	B,F,E$_n$
y	0.482	0.647	y	0.505	0.682
L (sec)	12	12	L (sec)	11	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.817	0.817	y pract.	0.824	0.817
R.C. (%)	70%	26%	R.C. (%)	63%	20%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G= 5		I/G=		I/G=	
I/G= 5		I/G= 5		I/G= 5		I/G=		I/G=	

Date: March, 2014 — Junction: Canton Road / Wui Cheung Road — J15

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Canton Road / Wui Cheung Road — Design Year: 2031

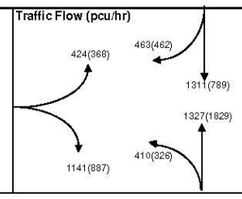
Description: Operation (Batch 1+2+3) without Canton Road Access (with Underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (SB)	↓	A	1,2	3.500						1965	1965	417	0.212		251	0.128	
	↓	A	1,2	3.500						2105	2105	447	0.212		269	0.128	
	↓	A	1,2	3.500						2105	2105	447	0.212		269	0.128	
	↓	F	2	3.500		15				1915	1915	463	0.242	0.242	462	0.241	0.241
Canton Rd (NB)	↑	B	1	3.500						2105	2105	438	0.208		567	0.269	
	↑	B	1	3.500						2105	2105	437	0.208		566	0.269	
	↑	B	1	3.300						2085	2085	452	0.217	0.217	696	0.334	0.334
	↑	C	1,3	3.500	10					1710	1710	410	0.240		326	0.191	
Wui Cheung Rd (EB)	↱	D	2,3	3.500	10					1710	1710	424	0.248		368	0.215	
	↴	E	3	3.500		25				1985	1985	386	0.195	0.195	300	0.151	0.151
	↴	E	3	3.500		20				1960	1960	382	0.195		297	0.151	
	↴	E	3	3.500		15				1915	1915	373	0.195		290	0.151	

Pedestrian Crossing									
	Gp	1	MIN GREEN + FLASH =	5	+	5	=	10	
	Hp	1,2	MIN GREEN + FLASH =	5	+	10	=	15	
	Ip	1,3	MIN GREEN + FLASH =	5	+	9	=	14	
	Jp	2	MIN GREEN + FLASH =	5	+	5	=	10	
	Kp	3	MIN GREEN + FLASH =	13	+	12	=	25	

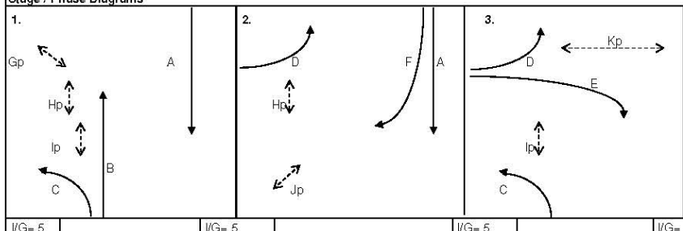
Notes:

Traffic Flow (pcu/hr)



Group	B,D	B,F,E	Group	B,D$_m$	B,F,E$_n$
y	0.465	0.653	y	0.549	0.726
L (sec)	11	12	L (sec)	11	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.824	0.817	y pract.	0.824	0.817
R.C. (%)	77%	25%	R.C. (%)	50%	12%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G= 5		I/G=		I/G=	
I/G= 5		I/G= 5		I/G= 5		I/G=		I/G=	

Date: March, 2014 — Junction: Canton Road / Wui Cheung Road — J15

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

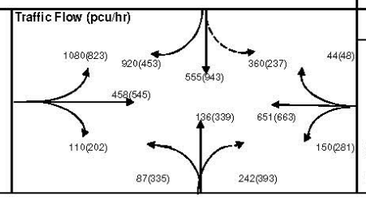
Junction: Lin Cheung Road / Austin Road West — Design Year: 2031

Description: Operation (Batch 1+2+3) without Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Austin Road EB		E	1,2	3.500	15					1785	1785	515	0.288		392	0.220	
		E	1,2	3.500	20					1960	1960	565	0.288		431	0.220	
		B	2	3.500						2105	2105	287	0.136	0.136	379	0.180	0.180
		B	2	3.500		30		39%	55%	2065	2050	281	0.136		368	0.180	
Austin Road WB		D	4	3.500	15			58%	94%	1860	1795	260	0.140		297	0.166	0.166
		D	4	3.500						2105	2105	294	0.140		349	0.166	
		D	4	3.500		25		15%	14%	2085	2090	291	0.140	0.140	346	0.165	
Lin Cheung Road NB		F	2,3	3.500	15					1785	1785	87	0.049		335	0.188	
		C	3	3.500						1965	1965	136	0.069		339	0.173	
		C	3	3.500		30		100%	100%	2005	2005	242	0.121	0.121	393	0.196	0.196
Lin Cheung Road SB		A	1	3.500						1965	1965	152	0.077		307	0.156	
		A	1	3.500						2105	2105	163	0.077		329	0.156	
		A	1	3.500		25		62%	26%	2030	2075	624	0.307	0.307	413	0.199	0.199
		A	1	3.500		20				1745	1745	536	0.307		347	0.199	

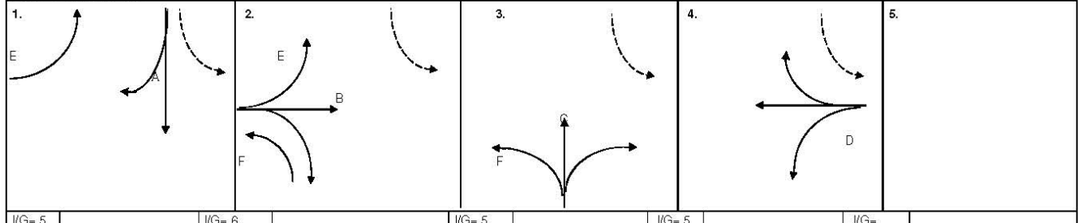
Notes:

Traffic Flow (pcu/hr)



Group	E,C,D	A,B,C,D	Group	E,C,D$_{II}$	A,B,C,D$_{II}$
y	0.549	0.704	y	0.581	0.741
L (sec)	13	17	L (sec)	13	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.810	0.782	y pract.	0.810	0.782
R.C. (%)	48%	11%	R.C. (%)	39%	6%

Stage / Phase Diagrams



I/G= 5		I/G= 6		I/G= 5		I/G= 5		I/G=	
I/G= 5		I/G= 6		I/G= 5		I/G= 5		I/G=	

Date: March, 2014 — **Junction:** Lin Cheung Road / Austin Road West — J17

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

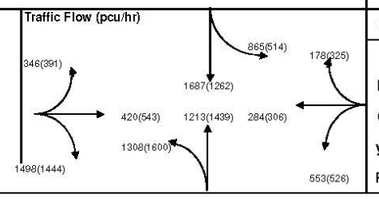
Junction: Canton Road / Austin Road — Design Year: 2031

Description: Operation (Batch 1+2+3) without Canton Rd Access (without underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (NB)		C	1,2	3.500	15					1785	1785	623	0.349		763	0.427	
		C	1,2	3.500	20					1960	1960	685	0.349		837	0.427	
		D	1	3.500						2105	2105	404	0.192		480	0.228	0.228
		D	1	3.500						2105	2105	405	0.192		479	0.228	
		D	1	3.500						2105	2105	404	0.192		480	0.228	
Canton Rd (SB)		A	1,3	3.500	10					1710	1710	408	0.239		242	0.142	
		A	1,3	3.500	15					1915	1915	457	0.239		272	0.142	
		B	1	3.500						2105	2105	562	0.267		421	0.200	
		B	1	3.500						2105	2105	563	0.267	0.267	420	0.200	
		B	1	3.500						2105	2105	562	0.267		421	0.200	
Austin Road (WB)		E	3	3.300	10					1690	1690	307	0.182		349	0.207	
		E	3	3.000	15			71%	43%	1920	1970	348	0.181		408	0.207	0.207
		E	3	3.000		20		49%	81%	1980	1935	360	0.182	0.182	400	0.207	
Austin Road (EB)		F	2	3.500	10					1710	1710	342	0.200		391	0.229	
		F	2	3.500	15			1%	0%	2105	2105	420	0.200		538	0.256	0.256
		F	2	3.500		25		99%	99%	1985	1985	504	0.254		486	0.245	
		F	2	3.500		22				1970	1970	501	0.254	0.254	483	0.245	
		F	2	3.500		20				1960	1960	497	0.254		480	0.245	

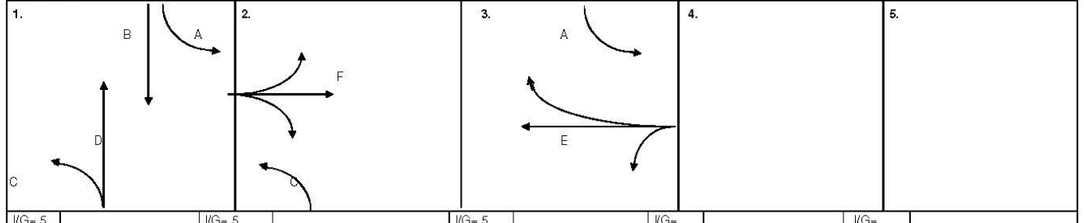
Notes:

Traffic Flow (pcu/hr)



Group	D,F,E	B,F,E	Group	B,F,E$_{II}$	D,F,E$_{II}$
y	0.629	0.704	y	0.663	0.691
L (sec)	12	12	L (sec)	12	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.817	0.817	y pract.	0.817	0.817
R.C. (%)	30%	16%	R.C. (%)	23%	18%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G= 5		I/G=		I/G=	
I/G= 5		I/G= 5		I/G= 5		I/G=		I/G=	

Date: March, 2014 — **Junction:** Canton Road / Austin Road — J18

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

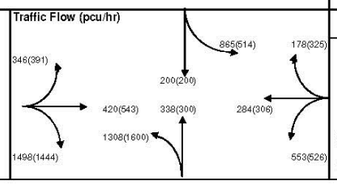
Junction: Canton Road / Austin Road — Design Year: 2031

Description: Operation (Batch 1+2+3) without Canton Rd Access (with underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (NB)		C	1,2	3.500	15					1785	1785	623	0.349		763	0.427	0.427
		C	1,2	3.500	20					1960	1960	685	0.349		837	0.427	
		D	1	3.500						2105	2105	338	0.161	0.161	300	0.143	
Canton Rd (SB)		A	1,3	3.500	10					1710	1710	408	0.239		242	0.142	
		A	1,3	3.500	15					1915	1915	457	0.239		272	0.142	
		B	1	3.500						2105	2105	200	0.095		200	0.095	
Austin Road (WB)		E	3	3.300	10					1690	1690	307	0.182		349	0.207	
		E	3	3.000	15			71%	43%	1920	1970	348	0.181		408	0.207	0.207
		E	3	3.000		20		49%	81%	1980	1935	360	0.182	0.182	400	0.207	
Austin Road (EB)		F	2	3.500	10					1710	1710	342	0.200		391	0.229	
		F	2	3.500	15			1%	0%	2105	2105	420	0.200		538	0.256	
		F	2	3.500		25		99%	99%	1985	1985	504	0.254		486	0.245	
		F	2	3.500		22				1970	1970	501	0.254	0.254	483	0.245	
		F	2	3.500		20				1960	1960	497	0.254		480	0.245	

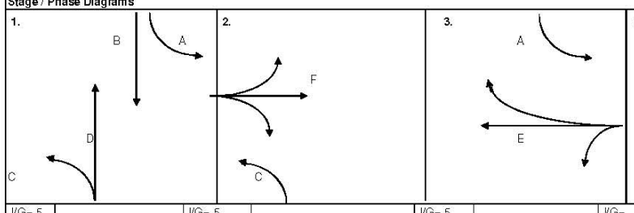
Notes:

Traffic Flow (pcu/hr)



Group	B,F,E	D,F,E	Group	D,F,E$_{II}$	C,E$_{III}$
y	0.531	0.597	y	0.605	0.635
L (sec)	12	12	L (sec)	12	10
C (sec)	130	130	C (sec)	130	130
y pract.	0.817	0.817	y pract.	0.817	0.831
R.C. (%)	54%	37%	R.C. (%)	35%	31%

Stage / Phase Diagrams



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

I/G=		I/G=	
I/G=		I/G=	
Date: March, 2014		**Junction:** Canton Road / Austin Road	J18

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Canton Road / Kowloon Park Drive — Design Year: 2031

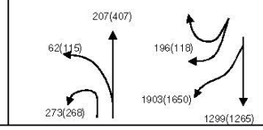
Description: Operation (Batch 1+2+3) without Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	(%) uphill Gradient	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Road SB		C	2	3.500		10				1830	1830	196	0.107		118	0.064	
Canton Road SB		B	1,2	3.500		30				2005	2005	950	0.474		824	0.411	
		B	1,2	3.500		32				2010	2010	953	0.474		826	0.411	
		A	1,2,3	3.300						1945	1945	1299	0.668	0.668	1265	0.650	0.650
Kowloon Park Drive NB		E	3,4	3.000	10					1665	1665	273	0.164		268	0.161	
		D	3,4	3.000	15			23%	22%	2010	2010	269	0.134		522	0.260	

PED CROSSING	Fp	1,2	MIN GREEN + FLASH	5	+	5	=	10		
	Gp	1	MIN GREEN + FLASH	5	+	8	=	13		
	Hp	3,4	MIN GREEN + FLASH	5	+	9	=	14		
	Ip	1,2	MIN GREEN + FLASH	5	+	9	=	14		
	Jp	4	MIN GREEN + FLASH	5	+	6	=	11	*	*

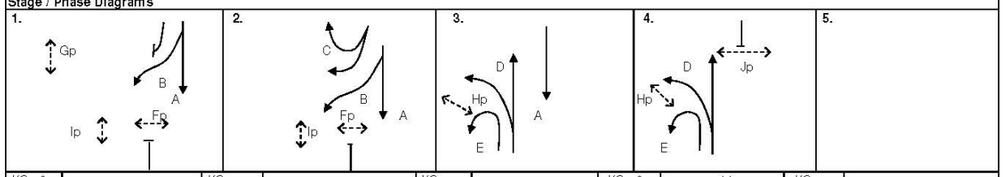
Notes:

Traffic Flow (pcu/hr)



Group	B,E	A,Jp	Group	B,D,	A,Jp,,
y	0.638	0.668	y	0.671	0.650
L (sec)	10	16	L (sec)	10	16
C (sec)	130	130	C (sec)	130	130
y pract.	0.831	0.789	y pract.	0.831	0.789
R.C. (%)	30%	18%	R.C. (%)	24%	21%

Stage / Phase Diagrams



I/G= 3		I/G=		I/G=		I/G= 3	11
I/G= 3		I/G=		I/G=		I/G= 3	11

I/G=	
I/G=	
Date: March, 2014	**Junction:** Canton Road / Kowloon Park Driv J20

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Yan Cheung Rd/ Road D1A(N) / Hoi Wang Rd — Design Year: 2031

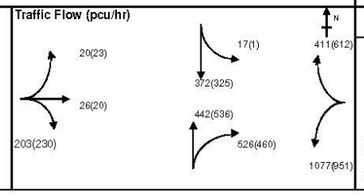
Description: Operation (Batch 1+2+3) without Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Road D1		A	1,2	3.500						1965	1965	213	0.109		259	0.132	
(NB)		A	1,2	3.500						2105	2105	229	0.109		277	0.132	
		B	2	3.500		25				1985	1985	371	0.187		305	0.154	
Yan Cheung Rd		D	3	3.500		20				1960	1960	204	0.104		304	0.155	
(WB)		D	3	3.500		25				1985	1985	207	0.104		308	0.155	
		C	2,3	3.500	35					1885	1885	1077	0.571	0.571	951	0.505	0.505
Hoi Wang Rd		E	1	3.300	30					1850	1850	17	0.009		1	0.001	
(SB)		E	1	3.500						2105	2105	186	0.088		163	0.077	
		E	1	3.500						2105	2105	186	0.088		163	0.077	
PTI		F	4	3.500	15			43%	53%	1885	1865	46	0.024		43	0.023	
(EB)		F	4	3.500		30		100%	100%	2005	2005	102	0.051		116	0.058	0.058
		F	4	3.500		25				1985	1985	101	0.051	0.051	114	0.057	
Pedestrian Crossing		Gp	3	MIN GREEN + FLASH =			16	+	7	=	23	seconds					
Pedestrian Crossing		Hp	1,4	MIN GREEN + FLASH =			5	+	5	=	10	seconds					
Pedestrian Crossing		Ip	1	MIN GREEN + FLASH =			11	+	7	=	18	seconds					
Pedestrian Crossing		Jp	2,3,4	MIN GREEN + FLASH =			5	+	5	=	10	seconds					
Pedestrian Crossing		Kp	1,2,3	MIN GREEN + FLASH =			5	+	6	=	11	seconds					

Notes:

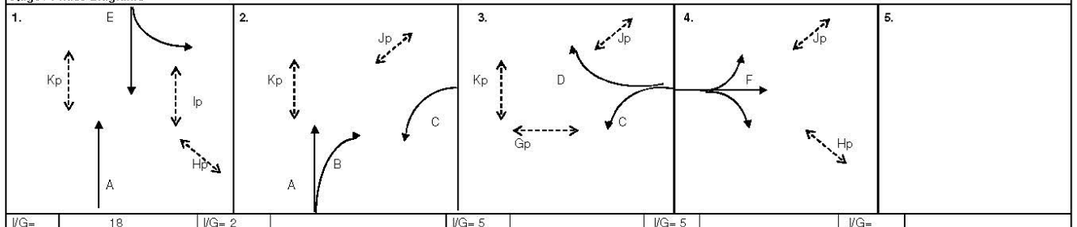
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	E,B,D,F	Ip,C,F	Group	Ip,B,D,F	Ip,C,F
y	0.430	0.622	y	0.367	0.562
L (sec)	17	28	L (sec)	35	28
C (sec)	120	120	C (sec)	120	120
y pract.	0.773	0.690	y pract.	0.638	0.690
R.C. (%)	79%	11%	R.C. (%)	74%	23%

Stage / Phase Diagrams



I/G=	18	I/G= 2		I/G= 5		I/G= 5	I/G=
I/G=	18	I/G= 2		I/G= 5		I/G= 5	I/G=

Date: 41711 — Junction: Yan Cheung Rd/ Road D1A(N) / Hoi Wa — I39

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Road D1 — Design Year: 2031

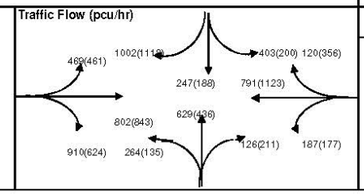
Description: Operation (Batch 1+2+3) without Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Road D1		C	2	3.500	30					1870	1870	238	0.127		135	0.072	
NB		C	2	3.500	35			10%	0%	2095	2105	266	0.127		221	0.105	
		C	2	3.000						2055	2055	261	0.127		215	0.105	
		C	2	3.000		25		50%	100%	1995	1940	254	0.127	0.127	211	0.109	0.109
Road D1		G	3,4	3.500	20					1830	1830	403	0.220		200	0.109	
SB		B	4	3.500						2105	2105	247	0.117		188	0.089	
		B	4	3.500		25		100%	100%	1985	1985	338	0.170	0.170	375	0.189	
		B	4	3.500		22				1970	1970	333	0.169		372	0.189	
		B	4	3.500		20				1960	1960	331	0.169		371	0.189	0.189
Jordan Road		H	1,4	3.500	15					1785	1785	469	0.263		461	0.258	
EB		A	1	3.500						2105	2105	401	0.190		376	0.179	0.179
		A	1	3.500						2105	2105	401	0.190		376	0.179	
		A	1	3.500		28		100%	75%	2000	2025	456	0.228		361	0.178	
		A	1	3.500		25				1985	1985	454	0.229	0.229	354	0.178	
Jordan Road		D	3	3.500	15			0%	0%	1965	1965	252	0.128		384	0.195	0.195
WB		D	3	3.500						2105	2105	269	0.128		411	0.195	
		D	3	3.500		30		0%	19%	2105	2085	270	0.128	0.128	407	0.195	
Pedestrian Crossing		Fp	1,2,4	MIN GREEN + FLASH =			5	+	12	=	17						
		EP	3	MIN GREEN + FLASH =			15	+	14	=	29						

Notes:

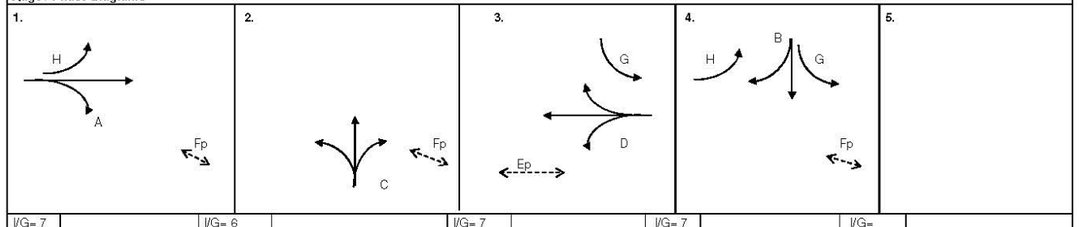
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	A,C,G	A,C,D,B	Group	C,D,H$_1$,	A,C,D,B$_1$
y	0.576	0.655	y	0.562	0.672
L (sec)	16	23	L (sec)	22	23
C (sec)	130	130	C (sec)	130	130
y pract.	0.789	0.741	y pract.	0.748	0.741
R.C. (%)	37%	13%	R.C. (%)	33%	10%

Stage / Phase Diagrams



I/G=	7	I/G=	6	I/G=	7	I/G=	7
I/G=	7	I/G=	6	I/G=	7	I/G=	7

Date: March, 2014 — Junction: Jordan Road / Road D1 — I40

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Yan Cheung Rd / Ferry St / Kansu St — Design Year: 2031

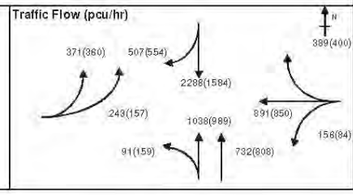
Description: Operation (Batch 1+2+3) Canton Road Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Kansu St (WB)	←	A	1	3.300		45		0%	0%	1880	1880	389	0.207		400	0.213	
	↰	A	1	3.300		50		0%	0%	2085	2085	550	0.264	0.264	488	0.234	0.234
	↰↑	A	1	3.300	15			31%	19%	1885	1910	497	0.264		446	0.234	
Ferry St (NB)	↰↑	B	2	3.500	30			17%	29%	1950	1935	543	0.278		550	0.284	
	↑	B	2	3.500						2105	2105	586	0.278		598	0.284	
	↑	B	2	3.650						2120	2120	732	0.345		808	0.381	0.381
Ferry St (SB)	↓	B	2	3.500						1965	1965	728	0.370		504	0.256	
	↓	B	2	3.500						2105	2105	780	0.371	0.371	540	0.257	
	↓	B	2	3.500						2105	2105	780	0.371		540	0.257	
	↲	D	3	3.650		50				2060	2060	254	0.123		278	0.135	0.135
	↲	D	3	3.650		45				2050	2050	253	0.123	0.123	276	0.135	
Yan Cheung Rd (EB)	↳	E	3	3.500	50					1910	1910	179	0.094		174	0.091	
	↳	E	3	3.500	55					2050	2050	192	0.094		186	0.091	
	→	D	3	4.000	60					2100	2100	243	0.116		157	0.075	

Pedestrian Crossing									
	Fp	1,2	MIN GREEN + FLASH =	5	+	6	=	11	seconds
	Gp	1,3	MIN GREEN + FLASH =	5	+	10	=	15	seconds
	Hp	2	MIN GREEN + FLASH =	5	+	14	=	19	seconds
	Ip	2,3	MIN GREEN + FLASH =	5	+	13	=	18	seconds
	Jp	3	MIN GREEN + FLASH =	5	+	12	=	17	seconds

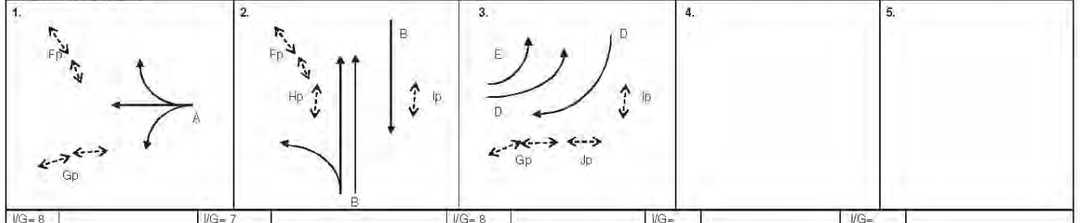
Notes:

Traffic Flow (pcu/hr)



Group	A,B,E	A,B,D	Group	A,B,E	A,B,D
y	0.728	0.758	y	0.706	0.750
L (sec)	19	20	L (sec)	19	20
C (sec)	130	130	C (sec)	130	130
y pract.	0.768	0.762	y pract.	0.768	0.762
R.C. (%)	6%	1%	R.C. (%)	9%	2%

Stage / Phase Diagrams



I/G= 8		I/G= 7		I/G= 8		I/G=	
I/G= 8		I/G= 7		I/G= 8		I/G=	

I/G=	
I/G=	

Date: March, 2014 — **Junction:** Yan Cheung Rd / Ferry St / Kansu St (J5)

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

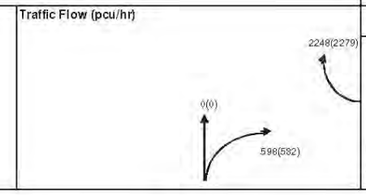
Junction: Jordan Road / Hoi Po Road — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Road (WB)	←	A	1	3.500		25				1855	1855	1093	0.589	0.589	1108	0.597	0.597
	←	A	1	3.500		20				1960	1960	1155	0.589		1171	0.597	
Hoi Po Road (NB)	↱→	B	2	3.500		25		100%	100%	1855	1855	291	0.157	0.157	259	0.140	0.140
	→	B	2	3.500		20				1960	1960	307	0.157		273	0.139	

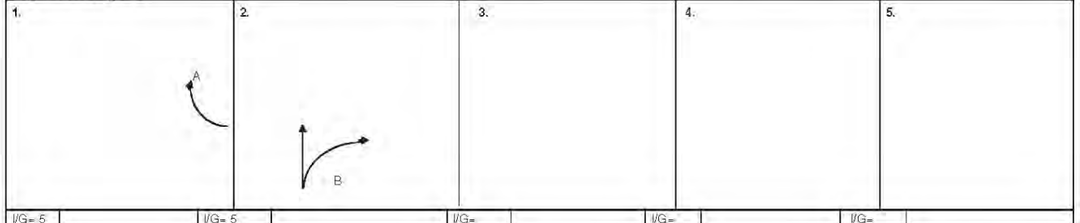
Notes:

Traffic Flow (pcu/hr)



Group		A,B	Group		A,B,..
y		0.746	y		0.737
L (sec)		8	L (sec)		8
C (sec)		90	C (sec)		90
y pract.		0.820	y pract.		0.820
R.C. (%)		10%	R.C. (%)		11%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G=		I/G=	
I/G= 5		I/G= 5		I/G=		I/G=	

Date: March, 2014 — **Junction:** Jordan Road / Hoi Po Road (J7)

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

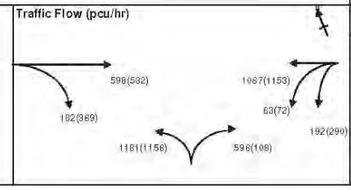
Junction: Jordan Rd (elevated) / Nga Cheung Rd (elevated) — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Nga Cheung Rd (elevated) NB		C1	1,2	3.500	20					1830	1830	567	0.310		555	0.303	0.303
		C1	1,2	3.500	25					1985	1985	614	0.309		601	0.303	
		C2	2	3.500		25				1855	1855	596	0.321	0.321	108	0.058	
Jordan Rd EB		A	1,3	3.500						1965	1965	598	0.304		532	0.271	
		B	1	3.500		25				1985	1985	92	0.046		186	0.094	
		B	1	3.500		20				1960	1960	90	0.046		183	0.093	
Jordan Rd WB		D	2,3	3.500	20					1830	1830	92	0.050		139	0.076	
		D	2,3	3.500	25					1985	1985	100	0.050		151	0.076	
		E	3	3.500	20			11%	12%	2085	2085	563	0.270	0.270	610	0.293	0.293
		E	3	3.500						2105	2105	567	0.269		615	0.292	

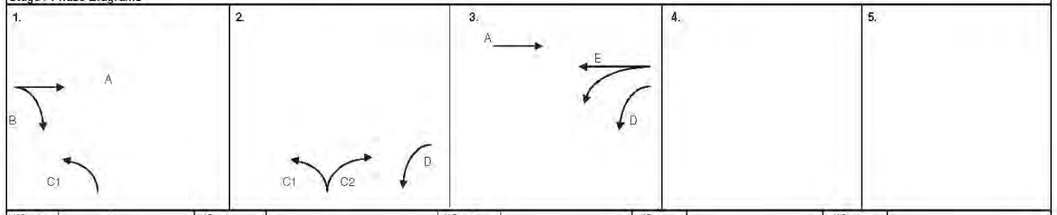
Notes:

Traffic Flow (pcu/hr)



Group	A,C2	B,C2,E	Group	B,C2,E$_{1,2}$	C1,E$_{1,2}$
y	0.626	0.591	y	0.444	0.596
L (sec)	8	18	L (sec)	12	8
C (sec)	90	90	C (sec)	90	90
y pract.	0.820	0.720	y pract.	0.780	0.820
R.C. (%)	31%	22%	R.C. (%)	75%	38%

Stage / Phase Diagrams



I/G= 5	5	I/G= 5		I/G= 5		I/G=	
I/G= 5		I/G=		I/G= 5		I/G=	

Date: March, 2014 — Junction: Jordan Rd (elevated) / Nga Cheung Rd — J8

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Lin Cheung Rd / Jordan Road — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Rd Access — Designed By: TYC — Checked By: STH

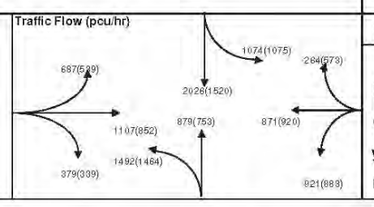
Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd EB		F	2	3.500	20					1830	1830	398	0.217	0.217	319	0.174	
		F	2	3.500	25			66%	62%	2025	2030	440	0.217		354	0.174	0.174
		F	2	3.500						2105	2105	454	0.216		359	0.171	
		F	2	3.500						2105	2105	455	0.216		359	0.171	
		F	2	3.500		20		89%	100%	1975	1960	426	0.216		339	0.173	
Jordan Rd WB		E	3	3.500	15					1915	1915	455	0.238		455	0.238	
		E	3	3.500	20			100%	92%	1960	1970	466	0.238	0.238	467	0.237	
		E	3	3.500						2105	2105	436	0.207		500	0.238	
		E	3	3.500		35		0%	24%	2105	2085	435	0.207		503	0.241	0.241
		E	3	3.500		30				1870	1870	264	0.141		451	0.241	
Lin Cheung Rd (NB)		A	1,2	3.500	20					1830	1830	716	0.391		702	0.384	
		A	1,2	3.500	25					1985	1985	776	0.391		762	0.384	
		B	1	3.500						2105	2105	440	0.209		377	0.179	0.179
		B	1	3.500						2105	2105	439	0.209		376	0.179	
Lin Cheung Rd (SB)	*	C	1,3	3.500	20					1830	1830	816	0.446		817	0.448	
		D	1	3.500						2105	2105	507	0.241	0.241	380	0.181	
		D	1	3.500						2105	2105	507	0.241		380	0.181	
		D	1	3.500						2105	2105	507	0.241		380	0.181	
		D	1	3.500						2105	2105	507	0.241		380	0.181	

Pedestrian Crossing:	Gp	1,2	MIN GREEN + FLASH =	5	+	12	=	17	
	Hp	3	MIN GREEN + FLASH =	5	+	11	=	16	
	Ip	3	MIN GREEN + FLASH =	5	+	7	=	12	

Notes:

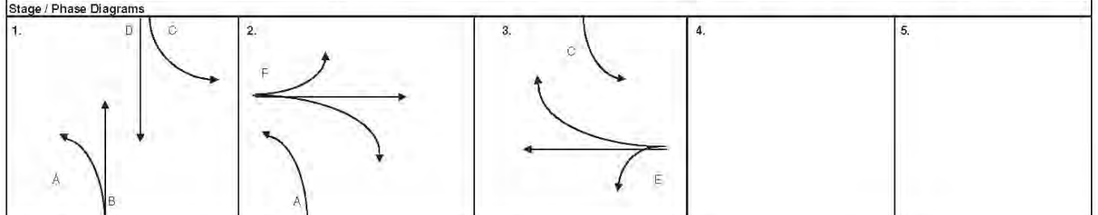
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	B,F,E	D,F,E	Group	D,F,E$_{1,2}$	B,F,E$_{1,2}$
y	0.664	0.696	y	0.596	0.595
L (sec)	24	20	L (sec)	20	24
C (sec)	130	130	C (sec)	130	130
y pract.	0.734	0.762	y pract.	0.762	0.734
R.C. (%)	10%	10%	R.C. (%)	28%	23%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G= 13		I/G=	
I/G= 6		I/G= 8		I/G= 13		I/G=	

Date: March, 2014 — Junction: Lin Cheung Rd / Jordan Road — J11

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Ferry Street — Design Year: 2031

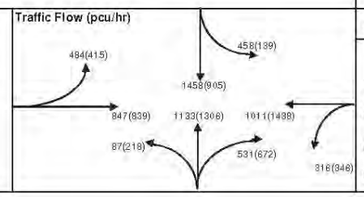
Description: Operation (Batch 1+2+3) with Canton Road Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd WB		A	3	3.500	15			79%	64%	1820	1850	401	0.220	0.220	544	0.294	
		A	3	3.500						2105	2105	463	0.220		620	0.295	0.295
		A	3	3.500						2105	2105	463	0.220		620	0.295	
Jordan Rd (EB)	*	C	3	3.500	15					1785	1785	302	0.169		278	0.156	
	*	C	3	3.500	18			53%	43%	2015	2030	341	0.169		316	0.156	
	*	C	3	3.500						2105	2105	356	0.169		328	0.156	
Ferry St (NB)	*	F	1,2	3.500	15			17%	34%	1930	1900	506	0.262		646	0.340	
	*	F	1,2	3.500						2105	2105	552	0.262		716	0.340	0.340
		G	2	3.500		25				1985	1985	267	0.135	0.135	338	0.170	
		G	2	3.500		20				1960	1960	264	0.135		334	0.170	
Ferry St (SB)		D	1	3.500	15					1785	1785	458	0.257		139	0.078	
	*	D	1	3.500						2105	2105	572	0.272	0.272	296	0.141	
	*	D	1	3.500						2105	2105	572	0.272		295	0.140	

Notes:

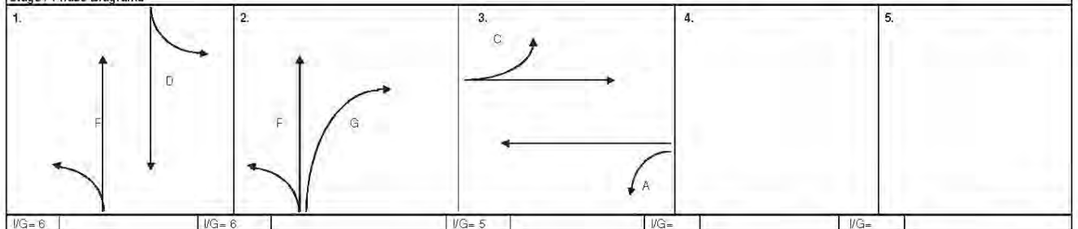
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach

Traffic Flow (pcu/hr)



Group	D,G,C	D,G,A	Group	D,G,A$_{H}$	F,A$_{H}$,$_{H}$
y	0.576	0.627	y	0.605	0.635
L (sec)	14	14	L (sec)	14	10
C (sec)	130	130	C (sec)	130	130
y pract.	0.803	0.803	y pract.	0.803	0.831
R.C. (%)	40%	28%	R.C. (%)	33%	31%

Stage / Phase Diagrams



I/G= 6		I/G= 6		I/G= 5	
I/G=		I/G= 5		I/G= 7	

I/G=		I/G=	
I/G=		I/G=	

Date: March, 2014 — Junction: Jordan Road / Ferry Street — J12

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

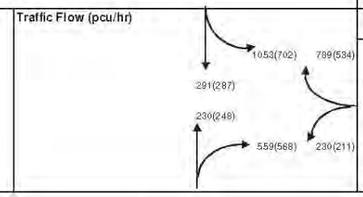
Junction: Wui Cheung Road / Road D1 — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Road Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Wui Cheung Rd WB		E	1,2	3.500		25				1985	1985	397	0.200	0.200	269	0.136	0.136
		E	1,2	3.500		20				1960	1960	392	0.200		265	0.135	
		E	1,2	3.500	20					1830	1830	230	0.126		211	0.115	
Road D1 SB		C	2,3	3.500	25					1855	1855	512	0.276		341	0.184	
		C	2,3	3.500	20					1960	1960	541	0.276		361	0.184	
		D	3	3.500						1965	1965	291	0.148	0.148	287	0.146	0.146
Road D1 NB		A	4	3.500						1965	1965	230	0.117		246	0.125	
		A	4	3.500		30		100%	99%	2005	2005	291	0.145	0.145	252	0.126	
		A	4	3.500		25				1985	1985	268	0.135		318	0.160	0.160
Pedestrian Crossing		Hp	1	MIN GREEN + FLASH =	5	+	10	=	15								
		Ip	3,4	MIN GREEN + FLASH =	5	+	9	=	14								

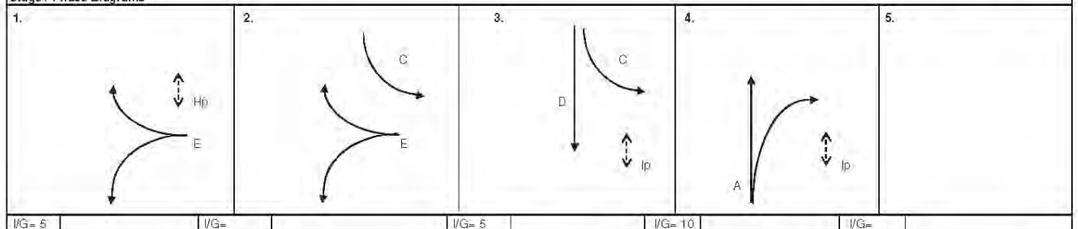
Notes:

Traffic Flow (pcu/hr)



Group	Hp,G,A	E,D,A	Group	Hp,G,A$_{H}$	E,D,A$_{H}$
y	0.421	0.493	y	0.344	0.442
L (sec)	23	17	L (sec)	23	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.741	0.782	y pract.	0.741	0.782
R.C. (%)	76%	59%	R.C. (%)	115%	77%

Stage / Phase Diagrams



I/G= 5		I/G=		I/G= 5	
I/G= 5		I/G=		I/G= 5	

I/G= 10		I/G=	
I/G= 10		I/G=	

Date: March, 2014 — Junction: Wui Cheung Road / Road D1 — J14

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

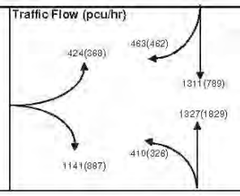
Junction: Canton Road / Wui Cheung Road — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Road Access (Without Underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (SB)	↓	A	1,2	3.500						1965	1965	417	0.212		251	0.128	
	↓	A	1,2	3.500						2105	2105	447	0.212		269	0.128	
	↓	A	1,2	3.500						2105	2105	447	0.212		269	0.128	
	↓	F	2	3.500		15				1915	1915	463	0.242	0.242	462	0.241	0.241
Canton Rd (NB)	↑	B	1	3.500						2105	2105	442	0.210	0.210	610	0.290	0.290
	↑	B	1	3.500						2105	2105	442	0.210		610	0.290	
	↑	B	1	3.500						2105	2105	442	0.210		610	0.290	
	↰	C	1,3	3.500	10					1710	1710	410	0.240		326	0.191	
Wui Cheung Rd (EB)	↰	D	2,3	3.500	10					1710	1710	424	0.248		368	0.215	
	↱↓	E	3	3.500		25				1985	1985	386	0.195	0.195	300	0.151	0.151
	↱↓	E	3	3.500		20				1960	1960	382	0.195		297	0.151	
	↱↓	E	3	3.500		15				1915	1915	373	0.195		290	0.151	
Pedestrian Crossing	Gp	1	MIN GREEN + FLASH =				5	+	5	=	10						
	Hp	1,2	MIN GREEN + FLASH =				5	+	10	=	15						
	Ip	1,3	MIN GREEN + FLASH =				5	+	9	=	14						
	Jp	2	MIN GREEN + FLASH =				5	+	5	=	10						
	Kp	3	MIN GREEN + FLASH =				13	+	12	=	25						

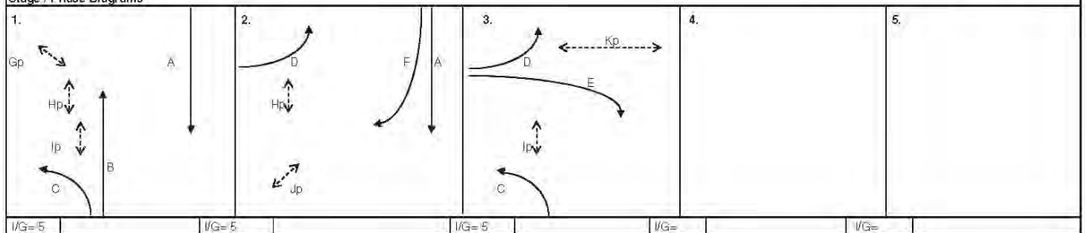
Notes:

Traffic Flow (pcu/hr)



Group	C,F	B,F,E	Group	B,D$_{rs}$	B,F,E$_{rs}$
y	0.482	0.647	y	0.505	0.682
L (sec)	12	12	L (sec)	11	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.817	0.817	y pract.	0.824	0.817
R.C. (%)	70%	26%	R.C. (%)	63%	20%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G=	I/G=
I/G= 5		I/G= 5		I/G=	I/G=

Date: March, 2014 — Junction: Canton Road / Wui Cheung Road — J15

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

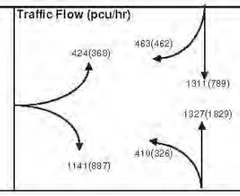
Junction: Canton Road / Wui Cheung Road — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Road Access (with Underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (SB)	↓	A	1,2	3.500						1965	1965	417	0.212		251	0.128	
	↓	A	1,2	3.500						2105	2105	447	0.212		269	0.128	
	↓	A	1,2	3.500						2105	2105	447	0.212		269	0.128	
	↓	F	2	3.500		15				1915	1915	463	0.242	0.242	462	0.241	0.241
Canton Rd (NB)	↑	B	1	3.500						2105	2105	438	0.208		587	0.289	
	↑	B	1	3.500						2105	2105	437	0.208		586	0.289	
	↑	B	1	3.300						2085	2085	452	0.217	0.217	696	0.334	0.334
	↰	C	1,3	3.500	10					1710	1710	410	0.240		326	0.191	
Wui Cheung Rd (EB)	↰	D	2,3	3.500	10					1710	1710	424	0.248		368	0.215	
	↱↓	E	3	3.500		25				1985	1985	386	0.195	0.195	300	0.151	0.151
	↱↓	E	3	3.500		20				1960	1960	382	0.195		297	0.151	
	↱↓	E	3	3.500		15				1915	1915	373	0.195		290	0.151	
Pedestrian Crossing	Gp	1	MIN GREEN + FLASH =				5	+	5	=	10						
	Hp	1,2	MIN GREEN + FLASH =				5	+	10	=	15						
	Ip	1,3	MIN GREEN + FLASH =				5	+	9	=	14						
	Jp	2	MIN GREEN + FLASH =				5	+	5	=	10						
	Kp	3	MIN GREEN + FLASH =				13	+	12	=	25						

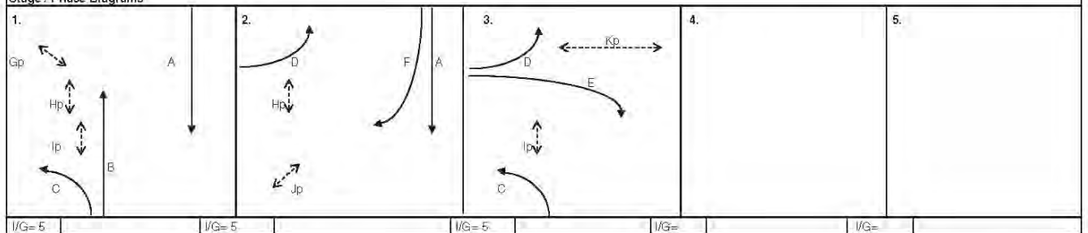
Notes:

Traffic Flow (pcu/hr)



Group	B,D	B,F,E	Group	B,D$_{rs}$	B,F,E$_{rs}$
y	0.465	0.653	y	0.549	0.726
L (sec)	11	12	L (sec)	11	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.824	0.817	y pract.	0.824	0.817
R.C. (%)	77%	25%	R.C. (%)	50%	12%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G=	I/G=
I/G= 5		I/G= 5		I/G=	I/G=

Date: March, 2014 — Junction: Canton Road / Wui Cheung Road — J15

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

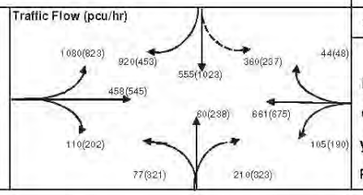
Junction: Lin Cheung Road / Austin Road West — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Austin Road EB		E	1,2	3.500	15					1785	1785	515	0.288		392	0.220	
		E	1,2	3.500	20					1960	1960	565	0.288		431	0.220	
		B	2	3.500						2105	2105	287	0.136	0.136	379	0.180	0.180
		B	2	3.500		30		39%	55%	2065	2050	281	0.136		368	0.180	
Austin Road WB		D	4	3.500	15			42%	68%	1885	1840	251	0.133	0.133	278	0.151	
		D	4	3.500						2105	2105	281	0.133		319	0.151	
		D	4	3.500		25		16%	15%	2085	2085	278	0.133		316	0.151	0.151
Lin Cheung Road NB		F	2,3	3.500	15					1785	1785	77	0.043		321	0.180	
		C	3	3.500						1965	1965	60	0.031		238	0.121	
		C	3	3.500		30		100%	100%	2005	2005	210	0.105	0.105	323	0.161	0.161
Lin Cheung Road SB		A	1	3.500						1965	1965	152	0.077		307	0.156	
		A	1	3.500						2105	2105	163	0.077		329	0.156	
		A	1	3.500		25		62%	15%	2030	2085	624	0.307	0.307	457	0.219	
		A	1	3.500		20				1745	1745	536	0.307		383	0.219	0.219

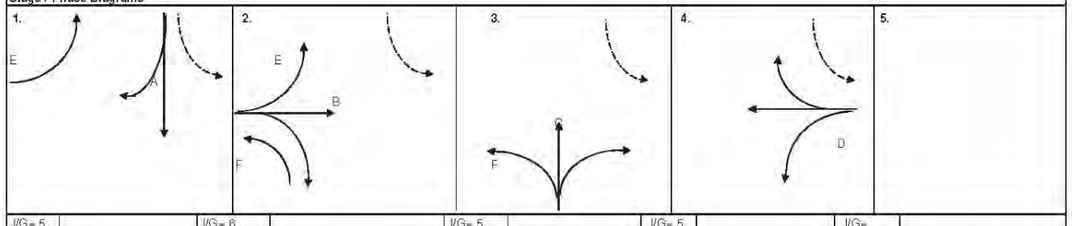
Notes:

Traffic Flow (pcu/hr)



Group	E,C,D	A,B,C,D	Group	E,G,D,,	A,B,C,D,
y	0.527	0.682	y	0.532	0.712
L (sec)	13	17	L (sec)	13	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.810	0.782	y pract.	0.810	0.782
R.C. (%)	54%	15%	R.C. (%)	52%	10%

Stage / Phase Diagrams



I/G= 5	I/G= 6	I/G= 5	I/G= 5	I/G=
I/G= 5	I/G= 6	I/G= 5	I/G= 5	I/G=

Date: March, 2014 — Junction: Lin Cheung Road / Austin Road West — J17

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

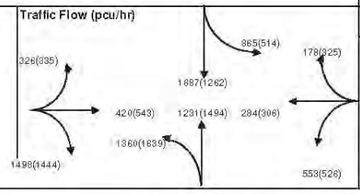
Junction: Canton Road / Austin Road — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Rd Access (without underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (NB)		C	1,2	3.500	15					1785	1785	648	0.363		781	0.438	
		C	1,2	3.500	20					1960	1960	712	0.363		858	0.438	
		D	1	3.500						2105	2105	410	0.195		498	0.237	0.237
		D	1	3.500						2105	2105	411	0.195		498	0.237	
		D	1	3.500						2105	2105	410	0.195		498	0.237	
Canton Rd (SB)		A	1,3	3.500	10					1710	1710	408	0.239		242	0.142	
		A	1,3	3.500	15					1915	1915	457	0.239		272	0.142	
		B	1	3.500						2105	2105	562	0.267		421	0.200	
		B	1	3.500						2105	2105	563	0.267	0.267	420	0.200	
		B	1	3.500						2105	2105	562	0.267		421	0.200	
Austin Road (WB)		E	3	3.300	10					1690	1690	307	0.182		349	0.207	
		E	3	3.000	15			71%	43%	1920	1970	348	0.181		408	0.207	0.207
		E	3	3.000		20		49%	81%	1980	1935	360	0.182	0.182	400	0.207	
Austin Road (EB)		F	2	3.500	10					1710	1710	326	0.191		335	0.196	
		F	2	3.500	15			0%	0%	2105	2105	416	0.198		538	0.256	0.256
		F	2	3.500		25		99%	99%	1985	1985	504	0.254		486	0.245	
		F	2	3.500		22				1970	1970	501	0.254	0.254	483	0.245	
		F	2	3.500		20				1960	1960	497	0.254		480	0.245	

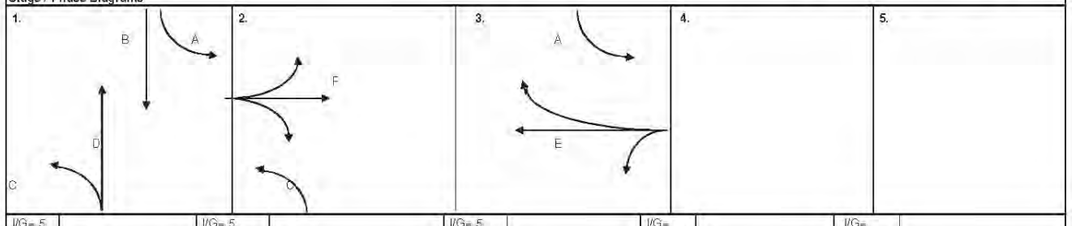
Notes:

Traffic Flow (pcu/hr)



Group	D,F,E	B,F,E	Group	B,F,E,,	D,F,E,,
y	0.631	0.704	y	0.663	0.699
L (sec)	12	12	L (sec)	12	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.817	0.817	y pract.	0.817	0.817
R.C. (%)	29%	16%	R.C. (%)	23%	17%

Stage / Phase Diagrams



I/G= 5	I/G= 5	I/G= 5	I/G=	I/G=
I/G= 5	I/G= 5	I/G= 5	I/G=	I/G=

Date: March, 2014 — Junction: Canton Road / Austin Road — J18

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

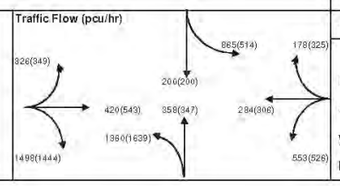
Junction: Canton Road / Austin Road — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Rd Access (with underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (NB)		C	1,2	3.500	15					1785	1785	648	0.363		781	0.438	
		C	1,2	3.500	20					1960	1960	712	0.363		858	0.438	0.438
		D	1	3.500						2105	2105	358	0.170	0.170	347	0.165	
Canton Rd (SB)		A	1,3	3.500	10					1710	1710	408	0.239		242	0.142	
		A	1,3	3.500	15					1915	1915	457	0.239		272	0.142	
		B	1	3.500						2105	2105	200	0.095		200	0.095	
Austin Road (WB)		E	3	3.300	10					1690	1690	307	0.182		349	0.207	
		E	3	3.000	15			71%	43%	1920	1970	348	0.181		408	0.207	0.207
		E	3	3.000		20		49%	81%	1960	1935	360	0.182	0.182	400	0.207	
Austin Road (EB)		F	2	3.500	10					1710	1710	326	0.191		349	0.204	
		F	2	3.500	15			0%	0%	2105	2105	416	0.198		538	0.256	
		F	2	3.500		25		99%	99%	1985	1985	504	0.254		486	0.245	
		F	2	3.500		22				1970	1970	501	0.254	0.254	483	0.245	
		F	2	3.500		20				1960	1960	497	0.254		480	0.245	

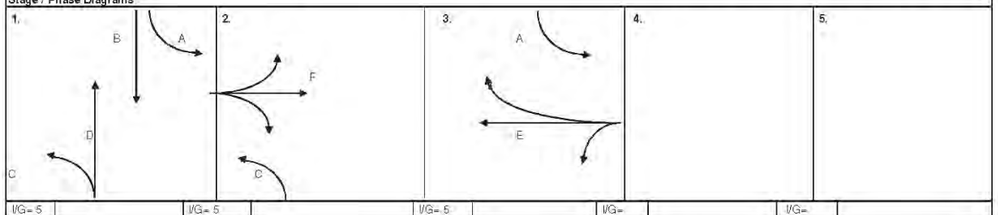
Notes:

Traffic Flow (pcu/hr)



Group	C,E	D,F,E	Group	D,F,E$_{H}$	C,E$_{M}$
y	0.545	0.606	y	0.628	0.645
L (sec)	10	12	L (sec)	12	10
C (sec)	130	130	C (sec)	130	130
y pract.	0.831	0.817	y pract.	0.817	0.831
R.C. (%)	52%	35%	R.C. (%)	30%	29%

Stage / Phase Diagrams



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

I/G=		I/G=	
I/G=		I/G=	
Date: March, 2014		Junction: Canton Road / Austin Road	J18

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

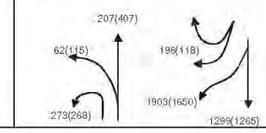
Junction: Canton Road / Kowloon Park Drive — Design Year: 2031

Description: Operation (Batch 1+2+3) with Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	(%) uphill Gradient	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Road SB		C	2	3.500		10				1830	1830	196	0.107		118	0.064	
Canton Road SB		B	1,2	3.500		30				2005	2005	950	0.474		824	0.411	
		B	1,2	3.500		32				2010	2010	953	0.474		826	0.411	
		A	1,2,3	3.300						1945	1945	1299	0.668	0.668	1265	0.650	0.650
Kowloon Park Drive NB		E	3,4	3.000	10					1665	1665	273	0.164		268	0.161	
		D	3,4	3.000	15			23%	22%	2010	2010	269	0.134		522	0.260	
PED CROSSING		Fp	1,2	MIN GREEN + FLASH	5	+	5	=	10								
		Gp	1	MIN GREEN + FLASH	5	+	8	=	13								
		Hp	3,4	MIN GREEN + FLASH	5	+	9	=	14								
		Ip	1,2	MIN GREEN + FLASH	5	+	9	=	14								
		Jp	4	MIN GREEN + FLASH	5	+	6	=	11								

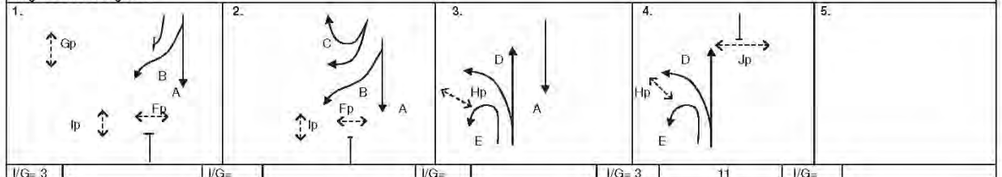
Notes:

Traffic Flow (pcu/hr)



Group	B,E	A,Jp	Group	B,D$_{L}$	A,Jp$_{H}$
y	0.638	0.668	y	0.671	0.650
L (sec)	10	16	L (sec)	10	16
C (sec)	130	130	C (sec)	130	130
y pract.	0.831	0.789	y pract.	0.831	0.789
R.C. (%)	30%	18%	R.C. (%)	24%	21%

Stage / Phase Diagrams



I/G= 3		I/G=		I/G=		I/G=	
I/G= 3		I/G=		I/G=		I/G=	

I/G= 3	11	I/G=	
I/G= 3	11	I/G=	
Date: March, 2014		Junction: Canton Road / Kowloon Park Driv	J20

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Yan Cheung Rd/ Road D1A(N) / Hoi Wang Rd — Design Year: 2031

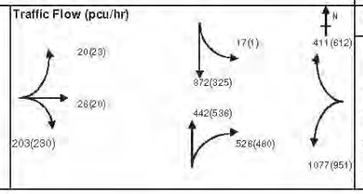
Description: Operation (Batch 1+2+3) with Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Road D1		A	1,2	3.500						1965	1965	213	0.109		259	0.132	
(NB)		A	1,2	3.500						2105	2105	229	0.109		277	0.132	
*		B	2	3.500		25				1985	1985	371	0.187		305	0.154	
Yan Cheung Rd		D	3	3.500		20				1960	1960	204	0.104		304	0.155	
(WB)		D	3	3.500		25				1985	1985	207	0.104		308	0.155	
		C	2,3	3.500	35					1885	1885	1077	0.571	0.571	951	0.505	0.505
Hoi Wang Rd		E	1	3.300	30					1850	1850	17	0.009		1	0.001	
(SB)		E	1	3.500						2105	2105	186	0.088		163	0.077	
		E	1	3.500						2105	2105	186	0.088		163	0.077	
PTI		F	4	3.500	15			43%	53%	1885	1865	46	0.024		43	0.023	
(EB)		F	4	3.500		30		100%	100%	2005	2005	102	0.051		116	0.058	0.058
		F	4	3.500		25				1985	1985	101	0.051	0.051	114	0.057	
Pedestrian Crossing		Gp	3	MIN GREEN + FLASH =			16	+ 7	= 23	seconds							
Pedestrian Crossing		Hp	1,4	MIN GREEN + FLASH =			5	+ 5	= 10	seconds							
Pedestrian Crossing		Ip	1	MIN GREEN + FLASH =			11	+ 7	= 18	seconds				*			*
Pedestrian Crossing		Jp	2,3,4	MIN GREEN + FLASH =			5	+ 5	= 10	seconds							
Pedestrian Crossing		Kp	1,2,3	MIN GREEN + FLASH =			5	+ 6	= 11	seconds							

Notes:

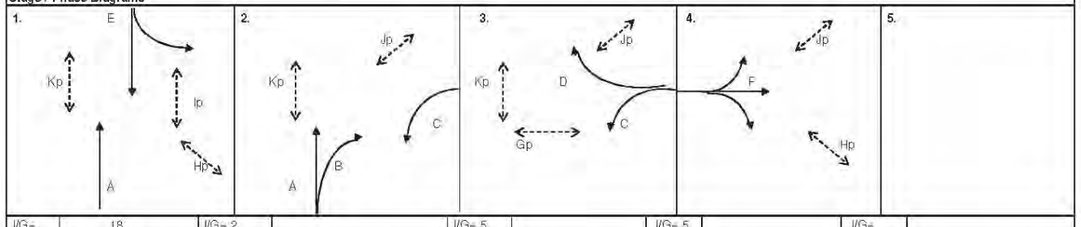
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	E,B,D,F	Ip,C,F	Group	Ip,B,D,F	Ip,C,F
y	0.430	0.622	y	0.367	0.562
L (sec)	17	28	L (sec)	35	28
C (sec)	120	120	C (sec)	120	120
y pract.	0.773	0.690	y pract.	0.638	0.690
R.C. (%)	79%	11%	R.C. (%)	74%	23%

Stage / Phase Diagrams



I/G=	18	I/G= 2		I/G= 5		I/G= 5	
I/G=	18	I/G= 2		I/G= 5		I/G= 5	

I/G=	
I/G=	

Date: 41710 — **Junction:** Yan Cheung Rd/ Road D1A(N) / Hoi Wa (3S)

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Road D1 — Design Year: 2031

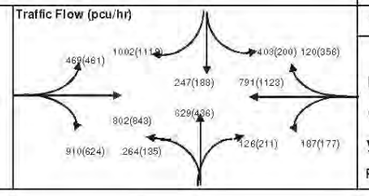
Description: Operation (Batch 1+2+3) with Canton Rd Access — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Road D1		C	2	3.500	30					1870	1870	238	0.127		135	0.072	
NB		C	2	3.500	35			10%	0%	2095	2105	266	0.127		221	0.105	
		C	2	3.000						2055	2055	261	0.127		215	0.105	
		C	2	3.000		25		50%	100%	1995	1940	254	0.127	0.127	211	0.109	0.109
Road D1		G	3,4	3.500	20					1830	1830	403	0.220		200	0.109	
SB		B	4	3.500						2105	2105	247	0.117		188	0.089	
		B	4	3.500		25		100%	100%	1985	1985	338	0.170	0.170	375	0.189	
		B	4	3.500		22				1970	1970	333	0.169		372	0.189	
		B	4	3.500		20				1960	1960	331	0.169		371	0.189	0.189
Jordan Road		H	1,4	3.500	15					1785	1785	469	0.263		461	0.258	
EB		A	1	3.500						2105	2105	401	0.190		376	0.179	0.179
		A	1	3.500						2105	2105	401	0.190		376	0.179	
		A	1	3.500		28		100%	75%	2000	2025	456	0.228		361	0.178	
		A	1	3.500		25				1985	1985	454	0.229	0.229	354	0.178	
Jordan Road	*	D	3	3.500	15			0%	0%	1965	1965	252	0.128		384	0.195	0.195
WB		D	3	3.500						2105	2105	269	0.128		411	0.195	
	*	D	3	3.500		30		0%	19%	2105	2085	270	0.128	0.128	407	0.195	
Pedestrian Crossing		Fp	1,2,4	MIN GREEN + FLASH =			5	+ 12	= 17								
		EP	3	MIN GREEN + FLASH =			15	+ 14	= 29								

Notes:

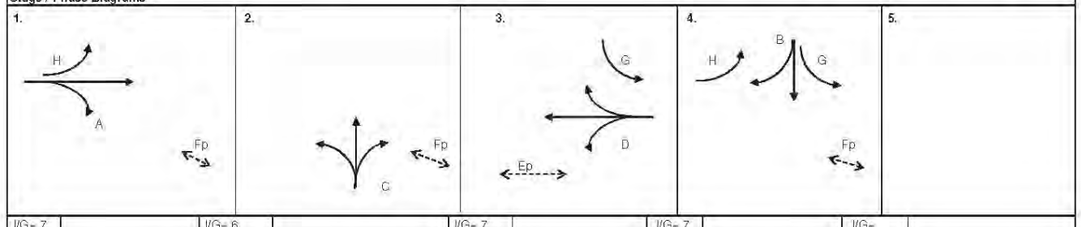
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	A,C,G	A,G,D,B	Group	C,D,H,,	A,C,D,B,
y	0.576	0.655	y	0.562	0.672
L (sec)	16	23	L (sec)	22	23
C (sec)	130	130	C (sec)	130	130
y pract.	0.789	0.741	y pract.	0.748	0.741
R.C. (%)	37%	13%	R.C. (%)	33%	10%

Stage / Phase Diagrams



I/G= 7		I/G= 6		I/G= 7		I/G= 7	
I/G= 7		I/G= 6		I/G= 7		I/G= 7	

I/G=	
I/G=	

Date: March ,2014 — **Junction:** Jordan Road / Road D1 (J4D)

Junction Assessment for Construction TIA

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601 — MVA HONG KONG LIMITED

Junction: Lin Cheung Rd / Jordan Road — Design Year: 2015

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Jordan Rd (EB)		A	1	3.500	10					1710	1710	331	0.194		322	0.188	
		A	1	3.500	15			30%	20%	3065	3095	593	0.193		583	0.188	
		A	1	3.500						2105	2105	408	0.194	0.194	397	0.189	0.189
Jordan Rd (WB)		C	3	3.500						1700	1700	421	0.248	0.248	385	0.226	0.226
		C	3	3.500						2105	2105	521	0.248		476	0.226	
		C	3	3.500	20					1960	1960	307	0.157		415	0.212	
		C	3	3.500	20					1960	1960	306	0.156		415	0.212	
Lin Cheung Rd (NB)		B	2	3.500	10					1710	1710	178	0.104		214	0.125	
		B	2	3.500						2105	2105	520	0.247	0.247	632	0.300	
		B	2	3.500		15		17%	8%	2070	2085	511	0.247		626	0.300	0.300

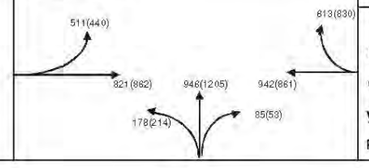
Pedestrian Crossing Dp 1,2 MIN GREEN + FLASH = 5 + 12 = 17

Notes:

Flow Adjustment Factor:

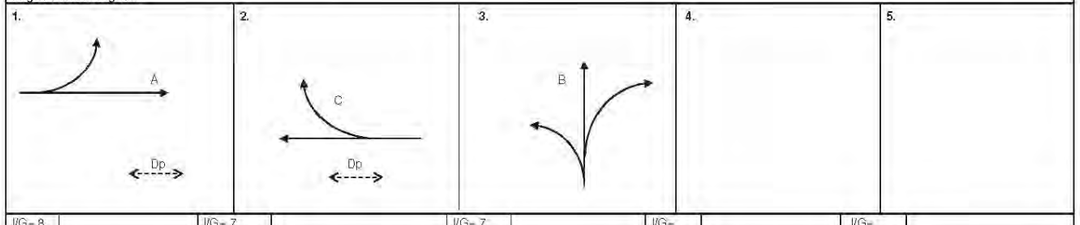
AM: Phase A (ahead) =1.08 (Q83)

Traffic Flow (pcu/hr)



Group		A,C,B	Group		A,C,B
y		0.689	y		0.715
L (sec)		19	L (sec)		19
C (sec)		130	C (sec)		130
y pract.		0.768	y pract.		0.768
R.C. (%)		12%	R.C. (%)		7%

Stage / Phase Diagrams



I/G= 8	I/G= 7	I/G= 7	I/G=	I/G=	
I/G= 8	I/G= 7	I/G= 7	I/G=	I/G=	

Date: MAR, 2014 — Junction: Lin Cheung Rd / Jordan Road — J11

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601 — MVA HONG KONG LIMITED

Junction: Jordan Road / Ferry Street — Design Year: 2015

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd (WB)		E	3	3.300						2085	2085	486	0.233		515	0.247	0.247
		E	3	3.300						2085	2085	486	0.233		515	0.247	
		D	2,3	3.300	15					1770	1770	448	0.253		428	0.242	
Jordan Rd (EB)		F	3	3.300	10					1690	1690	274	0.162		222	0.131	
		F	3	3.300						2085	2085	511	0.245	0.245	491	0.235	
		F	3	3.300						2085	2085	511	0.245		491	0.235	
Canton Rd (NB)		B	1,2	3.300	15			69%	81%	1820	1800	391	0.215		484	0.269	
		B	1,2	3.300						2085	2085	448	0.215		560	0.269	
		C	2	3.300		25				1965	1965	188	0.096	0.096	225	0.114	0.114
		C	2	3.300		20				1940	1940	186	0.096		222	0.114	
Ferry St (SB)		G	1	3.300	10					1690	1690	114	0.067		199	0.118	
		G	1	3.300						2085	2085	567	0.272	0.272	472	0.226	0.226
		G	1	3.300						2085	2085	567	0.272		472	0.226	
		G	1	3.300						2085	2085	567	0.272		472	0.226	

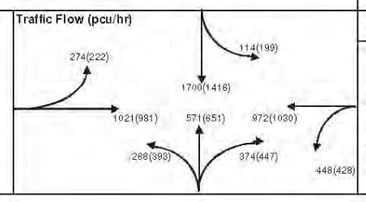
Notes:

Flow Adjustment Factor:

AM: Phase G=1.42 (Q31); C=1.60 (Q33) F=1.00 (Q34)

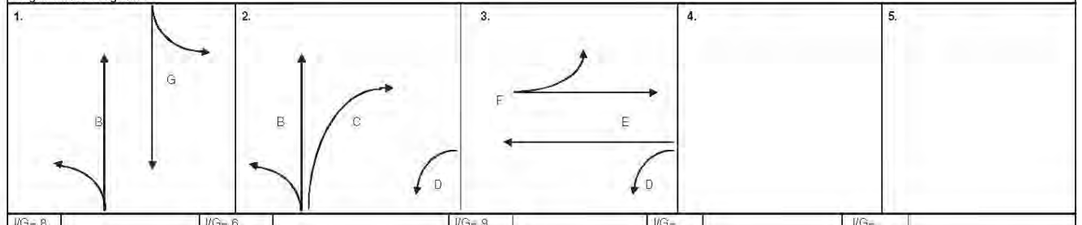
PM: Phase G=1.18 (Q31); C=1.50 (Q33) F=1.00 (Q34)

Traffic Flow (pcu/hr)



Group		G,C,E	G,C,F	Group		G,C,F_{11}	G,C,E_{11}
y		0.601	0.612	y		0.576	0.588
L (sec)		20	20	L (sec)		20	20
C (sec)		130	130	C (sec)		130	130
y pract.		0.762	0.762	y pract.		0.762	0.762
R.C. (%)		27%	24%	R.C. (%)		32%	30%

Stage / Phase Diagrams



I/G= 8	I/G= 6	I/G= 9	I/G=	I/G=	
I/G= 8	I/G= 6	I/G= 9	I/G=	I/G=	

Date: March, 2014 — Junction: Jordan Road / Ferry Street — J12

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601 — MVA HONG KONG LIMITED

Junction: Canton Road / Wui Cheung Road — Design Year: 2015

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (SB)	↓	A	1,2	3.300						1945	1945	552	0.284		607	0.312	
	↓	A	1,2	3.300						2085	2085	593	0.284	0.284	650	0.312	
	↓	A	1,2	3.300						2085	2085	592	0.284		651	0.312	0.312
	↓	F	2	3.300		15				1895	1895	147	0.078		161	0.085	
Canton Rd (NB)	↑	B	1	3.300						2085	2085	336	0.161		426	0.204	
	↑	B	1	3.300						2085	2085	336	0.161		426	0.204	
	↑	B	1	3.300						2085	2085	336	0.161		426	0.204	
	↰	C	1,3	3.300	10					1690	1690	158	0.093		165	0.098	
Wui Cheung Rd (EB)	↱	D	2,3	3.300	10					1690	1690	66	0.039		63	0.037	
	↘	E	3	3.300		25				1965	1965	1073	0.546	0.546	1017	0.517	0.517
	↘	E	3	3.300		20				1940	1940	1059	0.546		1004	0.517	
	↘	E	3	3.300		17				1915	1915	1046	0.546		991	0.517	
Pedestrian Crossing		Gp	1	MIN GREEN + FLASH =			5	+	6	=	11						
		Hp	1,2	MIN GREEN + FLASH =			5	+	10	=	15						
		Ip	1,3	MIN GREEN + FLASH =			5	+	9	=	14						
		Jp	2	MIN GREEN + FLASH =			5	+	5	=	10						
		Kp	3	MIN GREEN + FLASH =			13	+	14	=	27						

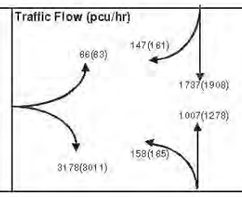
Notes:

Flow Adjustment Factor:

AM: Phase A = 1.16 (Q21); Phase E = 1.40 (Q23)

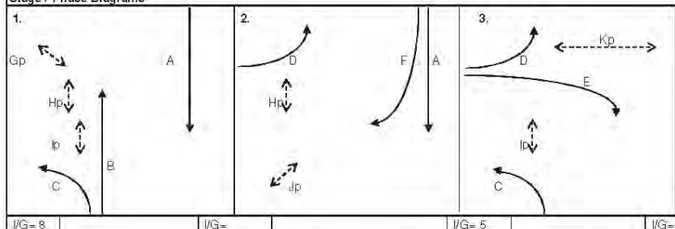
PM: Phase A = 1.30 (Q21); Phase E = 1.56 (Q23)

Traffic Flow (pcu/hr)



Group	B,F,E	A,E	Group	B,F,E,,	A,E,,,
y	0.785	0.830	y	0.807	0.830
L (sec)	13	11	L (sec)	13	11
C (sec)	130	130	C (sec)	130	130
y pract.	0.810	0.824	y pract.	0.810	0.824
R.C. (%)	3%	-1%	R.C. (%)	0%	-1%

Stage / Phase Diagrams



I/G= 8		I/G=		I/G= 5		I/G=		I/G=	
I/G= 8		I/G=		I/G= 5		I/G=		I/G=	

Date: March, 2014 — Junction: Canton Road / Wui Cheung Road — J15

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601 — MVA HONG KONG LIMITED

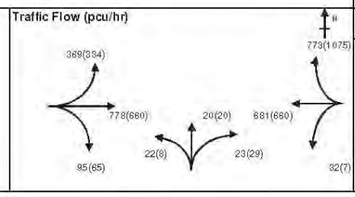
Junction: Lin Cheung Road / Austin Road West (With Modified Lane Configurations) — Design Year: 2015

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM	Pro. Turning (%) PM	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Lin Cheung Road (NB)	↰	C	3	3.500	20	20		34% / 35%	14% / 51%	1870	1875	65	0.035		57	0.030	
Austin Road West (WB)	↱	B	2	3.500	20	25		4% / 4%	1% / 23%	1955	1935	742	0.380		866	0.448	0.448
	↑	B	2	3.500		20				1960	1960	744	0.380	0.380	876	0.447	
Austin Road West (EB)	↰	A	1	3.500	20			58%	62%	2175	2170	636	0.292	0.292	541	0.249	0.249
	↱	A	1	3.500		15		16%	13%	2075	2080	606	0.292		518	0.249	
Pedestrian Crossing		Dp	2,3	MIN GREEN + FLASH =			5	+	7	=	12						
		Ep	2,3	MIN GREEN + FLASH =			5	+	5	=	10						
		Fp	1	MIN GREEN + FLASH =			5	+	7	=	12						
		Gp	2	MIN GREEN + FLASH =			5	+	6	=	11						
		Hp	1,3	MIN GREEN + FLASH =			5	+	7	=	12						
		Ip	3	MIN GREEN + FLASH =			5	+	6	=	11						
		Jp	1,2	MIN GREEN + FLASH =			5	+	5	=	10						
		Kp	1	MIN GREEN + FLASH =			5	+	7	=	12						

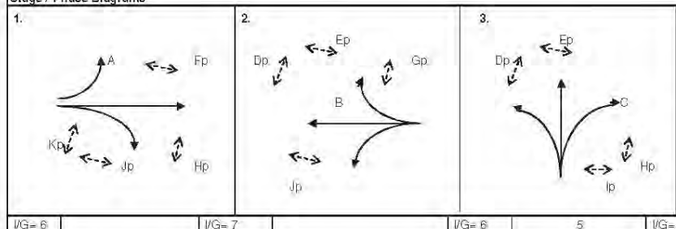
Notes:

Traffic Flow (pcu/hr)



Group	Fp,B,C	A,B,C	Group	Fp,B,C	A,B,C
y	0.414	0.672	y	0.478	0.697
L (sec)	28	22	L (sec)	28	22
C (sec)	130	130	C (sec)	130	130
y pract.	0.706	0.748	y pract.	0.706	0.748
R.C. (%)	70%	11%	R.C. (%)	48%	7%

Stage / Phase Diagrams



I/G= 6		I/G= 7		I/G= 6	5	I/G=		I/G=	
I/G= 6		I/G= 7		I/G= 6	5	I/G=		I/G=	

Date: MAR, 2014 — Junction: Lin Cheung Road / Austin Road West (— J17

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601 — MVA HONG KONG LIMITED

Junction: Canton Road / Austin Road — Design Year: 2015

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (NB)		B	1,2	3.300	10			100%	100%	1690	1690	880	0.521		1082	0.640	0.640
		B	1,2	3.300						2085	2085	743	0.356		876	0.420	
		C	2	3.300		25				1965	1965	173	0.088	0.088	161	0.082	
		C	2	3.300		20				1940	1940	170	0.088		159	0.082	
Canton Rd (SB)		E	1,3	3.300	10					1690	1690	1251	0.740	0.740	1232	0.729	
		A	1	3.300						2085	2085	995	0.477		824	0.395	
		A	1	3.300						2085	2085	995	0.477		824	0.395	
		A	1	3.300						2085	2085	995	0.477		824	0.395	
Austin Road (WB)		D	3	3.300		15				1895	1895	223	0.118		358	0.189	
		D	3	3.300	20	20		32% / 0%	2% / 9%	2035	2070	453	0.223		391	0.189	
		D	3	3.300	15					1770	1770	394	0.223		335	0.189	0.189

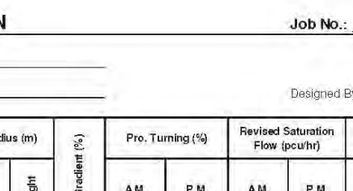
Notes:

Flow Adjustment Factor:

AM: Phase A = 1.00 (Q11A); Phase E = 1.60 (Q11B)

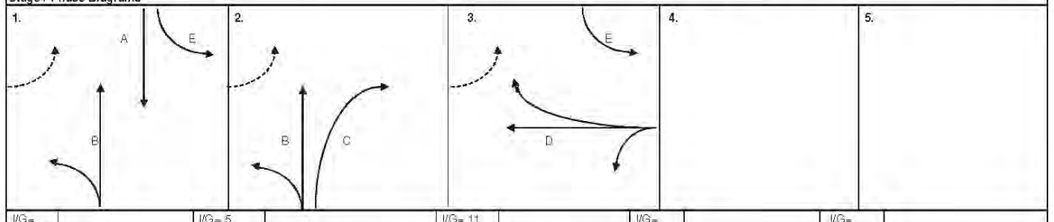
PM: Phase A = 1.00 (Q11A); Phase E = 1.93 (Q11B)

Traffic Flow (pcu/hr)



Group	A,C,D	E,C	Group	E_1C_{11}	B_1D_{11}
y	0.788	0.828	y	0.811	0.830
L (sec)	14	14	L (sec)	14	13
C (sec)	130	130	C (sec)	130	130
y pract.	0.803	0.803	y pract.	0.803	0.810
R.C. (%)	2%	-3%	R.C. (%)	-1%	-2%

Stage / Phase Diagrams



I/G=		I/G= 5		I/G= 11	
I/G= 8		I/G=		I/G= 7	
I/G=		I/G=		I/G=	
I/G=		I/G=		I/G=	

Date: March, 2014 — Junction: Canton Road / Austin Road — J16

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601 — MVA HONG KONG LIMITED

Junction: Jordan Road / Road D1A(S) / Lin Cheung Road SB — Design Year: 2015

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd (EB)		C	2,3	3.300						1945	1945	325	0.167		412	0.212	
		C	2,3	3.300						2085	2085	348	0.167		442	0.212	
		D	3	3.300		40				2010	2010	87	0.043	0.043	129	0.064	0.064
		D	3	3.300		40				2010	2010	87	0.043		129	0.064	
Road D1 (NB)		E	3	3.300	30					1850	1850	10	0.005		10	0.005	
		E	3	3.300	30					1985	1985	11	0.006		10	0.005	
Jordan Rd (WB)		B	2	3.300						1875	1875	402	0.215	0.215	483	0.257	0.257
		B	2	3.300						1875	1875	402	0.215		483	0.257	
		B	2	3.300						1875	1875	402	0.215		483	0.257	
		F	2	3.300	15					1590	1590	34	0.021		43	0.027	
Lin Cheung Rd (SB)		A	1	3.500		15				1785	1785	327	0.183		292	0.164	
		A	1	3.500						2105	2105	739	0.351	0.351	522	0.248	
		A	1	3.500						2105	2105	739	0.351		522	0.248	
		A	1	3.500						1055	1055	370	0.351		261	0.248	0.248
		A	1	3.500	15					1915	1915	329	0.172		288	0.151	
		A	1	3.500	10					1710	1710	293	0.172		258	0.151	

Pedestrian Crossing									
	Gp	1,3	MIN GREEN + FLASH =	5	+	8	=	13
	Hp	2	MIN GREEN + FLASH =	5	+	12	=	17
	Ip	1,2	MIN GREEN + FLASH =	5	+	10	=	15

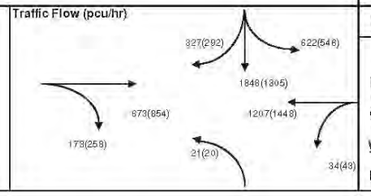
Notes:

Flow Adjustment Factor:

AM: Phase A=1.20 (Q61); C=1.00 (Q62); B=1.00 (Q63)

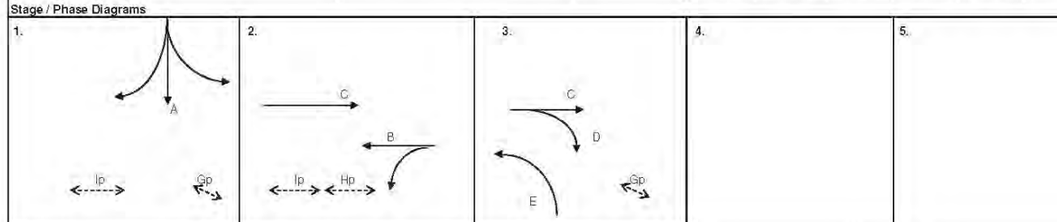
PM: Phase A=1.10 (Q61); C=1.30 (Q62); B=1.05 (Q63)

Traffic Flow (pcu/hr)



Group	A,B,E	A,B,D	Group	A,B,E_{11}	A,B,D_{11}
y	0.566	0.609	y	0.505	0.569
L (sec)	26	20	L (sec)	26	20
C (sec)	130	130	C (sec)	130	130
y pract.	0.720	0.762	y pract.	0.720	0.762
R.C. (%)	27%	25%	R.C. (%)	42%	34%

Stage / Phase Diagrams



I/G= 8		I/G= 8		I/G= 7	
I/G= 8		I/G= 8		I/G= 7	
I/G=		I/G=		I/G=	
I/G=		I/G=		I/G=	

Date: March, 2014 — Junction: Jordan Road / Road D1A(S) / Lin Cheu — J40

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601 **MVA HONG KONG LIMITED**

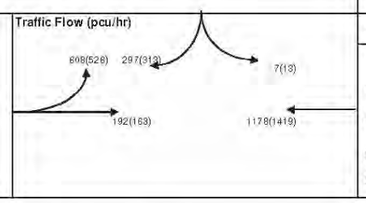
Junction: Wui Man Road / Austin Road West (Free-flow for AURW WB ahead movement) Design Year: 2015

Description: Construction Designed By: TYC Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Austin Rd W (EB)	↑	B	1	3.500	20					1830	1830	608	0.332	0.332	526	0.287	0.287
	→	B	1	3.500						2105	2105	192	0.091		163	0.077	
Wui Man Road (SB)	↓	C	2	4.000	15	15		2% / 98%	4% / 96%	1830	1830	304	0.166	0.166	326	0.178	0.178
Austin Rd W (WB)	←	Free	1	3.500						1965	1965	1178	0.599		1419	0.722	
Pedestrian Crossing		Dp	3	MIN GREEN + FLASH =			5	+	7	=	12						
		Ep	1,3	MIN GREEN + FLASH =			5	+	11	=	16						
		Fp	2,3	MIN GREEN + FLASH =			5	+	10	=	15						

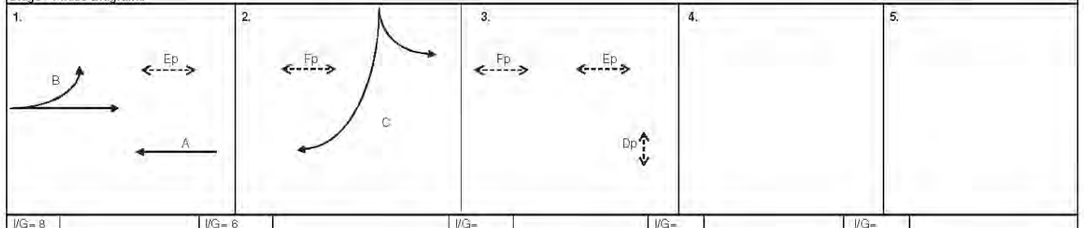
Notes:

Traffic Flow (pcu/hr)



Group		B_1C	Group		B_2C_{m}
y		0.498	y		0.466
L (sec)		12	L (sec)		12
C (sec)		130	C (sec)		130
y pract.		0.817	y pract.		0.817
R.C. (%)		64%	R.C. (%)		75%

Stage / Phase Diagrams



I/G= 8		I/G= 6		I/G=		I/G=	
I/G= 8		I/G= 6		I/G=		I/G=	

Date: March, 2014 **Junction:** Wui Man Road / Austin Road West (Fre... J41

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Lin Cheung Rd / Jordan Road — Design Year: 2020

Description: Construction — Designed By: TYC — Checked By: STH

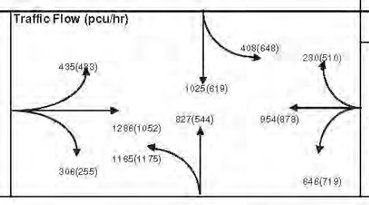
Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd EB		F	2	3.500	20					1830	1830	367	0.201		326	0.178	0.178
		F	2	3.500	25			16%	43%	2085	2050	419	0.201	0.201	365	0.178	
		F	2	3.500						2105	2105	421	0.200		372	0.177	
		F	2	3.500						2105	2105	422	0.200		373	0.177	
		F	2	3.500		20		77%	72%	1990	1995	398	0.200		354	0.177	
Jordan Rd WB		E	3	3.500	15					1915	1915	377	0.197		405	0.211	
		E	3	3.500	20			68%	75%	2000	1995	394	0.197		421	0.211	
		E	3	3.500						2105	2105	414	0.197		445	0.211	
		E	3	3.500		35		0%	26%	2105	2080	415	0.197	0.197	440	0.212	
		E	3	3.500		30				1870	1870	230	0.123		396	0.212	0.212
Lin Cheung Rd (NB)		A	1,2	3.500	20					1830	1830	559	0.305		564	0.308	
		A	1,2	3.500	25					1985	1985	606	0.305		611	0.308	
		B	1	3.500						2105	2105	414	0.197	0.197	272	0.129	0.129
		B	1	3.500						2105	2105	413	0.196		272	0.129	
Lin Cheung Rd (SB)	*	C	1,3	3.500	20					1830	1830	150	0.082		390	0.213	
		D	1	3.500						2105	2105	256	0.122		155	0.074	
		D	1	3.500						2105	2105	256	0.122		155	0.074	
		D	1	3.500						2105	2105	256	0.122		155	0.074	
		D	1	3.500						2105	2105	256	0.122		155	0.074	

Pedestrian Crossing	Gp	1,2	MIN GREEN + FLASH =	5	+	12	= 17
	Hp	3	MIN GREEN + FLASH =	5	+	11	= 16
	Ip	3	MIN GREEN + FLASH =	5	+	7	= 12

Notes:

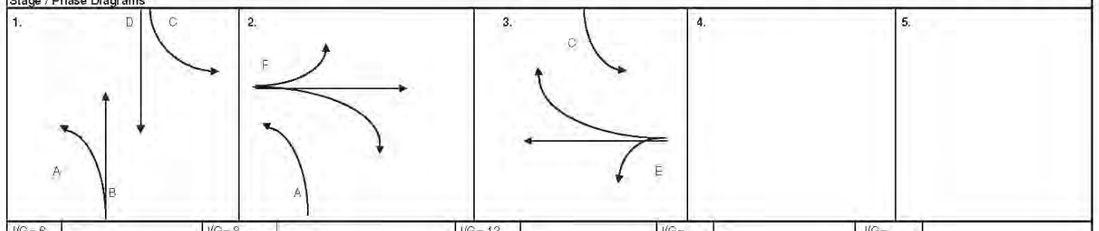
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach

Traffic Flow (pcu/hr)



Group	D,F,E	B,F,E	Group	D,F,E$_{H}$	B,F,E$_{H}$
y	0.520	0.595	y	0.463	0.519
L (sec)	20	24	L (sec)	20	24
C (sec)	130	130	C (sec)	130	130
y pract.	0.762	0.734	y pract.	0.762	0.734
R.C. (%)	46%	23%	R.C. (%)	64%	41%

Stage / Phase Diagrams



I/G= 6		I/G= 8		I/G= 13	
I/G= 6		I/G= 8		I/G= 13	

I/G=		I/G=	
I/G=		I/G=	

Date: March, 2014 — **Junction:** Lin Cheung Rd / Jordan Road — J11

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Ferry Street — Design Year: 2020

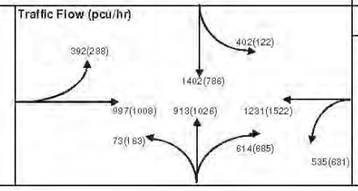
Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd WB		A	3	3.500	15			100%	98%	1785	1790	535	0.300	0.300	642	0.359	
		A	3	3.500						2105	2105	616	0.292		755	0.359	0.359
		A	3	3.500						2105	2105	616	0.292		755	0.359	
Jordan Rd (EB)	*	C	3	3.500	15					1785	1785	317	0.178		287	0.161	
	*	C	3	3.500	18			20%	0%	2070	2105	367	0.177		338	0.161	
	*	C	3	3.500						2105	2105	373	0.177		339	0.161	
Ferry St (NB)	*	F	1,2	3.500	15			19%	33%	1930	1900	394	0.204		487	0.256	
	*	F	1,2	3.500						2105	2105	430	0.204		540	0.257	
		G	2	3.500		25				1985	1985	309	0.156	0.156	345	0.174	0.174
		G	2	3.500		20				1960	1960	305	0.156		340	0.174	
Ferry St (SB)		D	1	3.500	15					1785	1785	402	0.225		122	0.068	
	*	D	1	3.500						2105	2105	544	0.258	0.258	236	0.112	0.112
	*	D	1	3.500						2105	2105	544	0.258		236	0.112	

Notes:

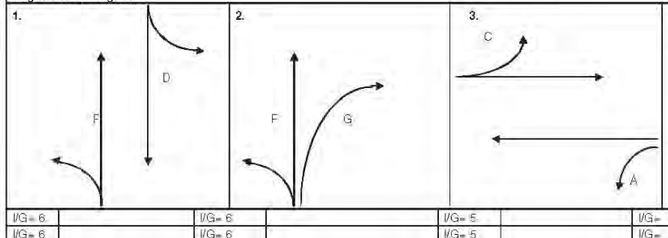
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach

Traffic Flow (pcu/hr)



Group	D,G,C	D,G,A	Group	F,A$_{H}$	D,G,A$_{H}$
y	0.592	0.714	y	0.615	0.645
L (sec)	14	14	L (sec)	10	14
C (sec)	130	130	C (sec)	130	130
y pract.	0.803	0.803	y pract.	0.831	0.803
R.C. (%)	36%	13%	R.C. (%)	35%	25%

Stage / Phase Diagrams



I/G= 6		I/G= 6		I/G= 5	
I/G= 6		I/G= 6		I/G= 5	

I/G=		I/G=	
I/G=		I/G=	

Date: March, 2014 — **Junction:** Jordan Road / Ferry Street — J12

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

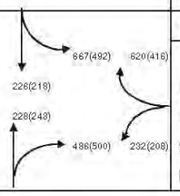
Junction: Wui Cheung Road / Road D1 — Design Year: 2020

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Wui Cheung Rd WB		E	1,2	3.500		25				1985	1985	312	0.157	0.157	209	0.105	
		E	1,2	3.500		20				1960	1960	308	0.157		207	0.106	
		E	1,2	3.500	20					1930	1830	232	0.127		208	0.114	0.114
Road D1 SB		C	2,3	3.500	25					1855	1855	324	0.175		239	0.129	
		C	2,3	3.500	20					1960	1960	343	0.175		253	0.129	
		D	3	3.500						1965	1965	226	0.115	0.115	218	0.111	0.111
Road D1 NB		A	4	3.500						1965	1965	221	0.112		210	0.107	
		A	4	3.500		30		97%	85%	2010	2020	225	0.112		215	0.106	
		A	4	3.500		25				1985	1985	268	0.135	0.135	318	0.160	0.160
Pedestrian Crossing		Hp	1	MIN GREEN + FLASH =			5	+	10	=	15						
		Ip	3,4	MIN GREEN + FLASH =			5	+	9	=	14						

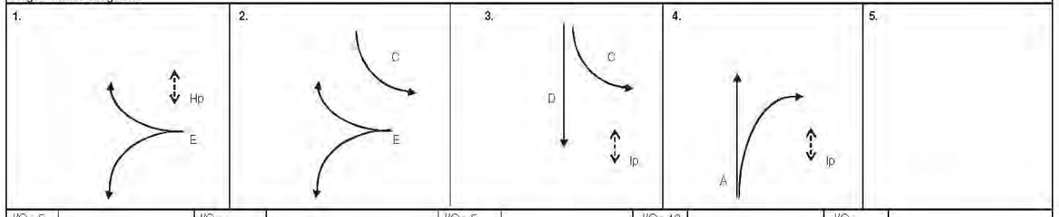
Notes:

Traffic Flow (pcu/hr)



Group	Hp,C,A	E,D,A	Group	Hp,C,A,,	E,D,A,,
y	0.310	0.407	y	0.289	0.385
L (sec)	23	17	L (sec)	23	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.741	0.782	y pract.	0.741	0.782
R.C. (%)	139%	92%	R.C. (%)	156%	103%

Stage / Phase Diagrams



I/G= 5	I/G=	I/G= 5	I/G= 10	I/G=	
I/G= 5	I/G=	I/G= 5	I/G= 10	I/G=	

Date: March, 2014 — Junction: Wui Cheung Road / Road D1 — J14

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

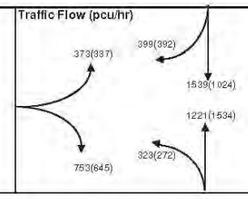
Junction: Canton Road / Wui Cheung Road — Design Year: 2020

Description: Construction (Without Canton Road Underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (SB)		A	1,2	3.500						1965	1965	490	0.249		326	0.166	
		A	1,2	3.500						2105	2105	525	0.249		349	0.166	
		A	1,2	3.500						2105	2105	525	0.249		349	0.166	
		F	2	3.500		15				1915	1915	399	0.208	0.208	392	0.205	0.205
Canton Rd (NB)		B	1	3.500						2105	2105	407	0.193	0.193	511	0.243	0.243
		B	1	3.500						2105	2105	407	0.193		511	0.243	
		B	1	3.500						2105	2105	407	0.193		511	0.243	
		C	1,3	3.500	10					1710	1710	323	0.189		272	0.159	
Wui Cheung Rd (EB)		D	2,3	3.500	10					1710	1710	373	0.218		337	0.197	
		E	3	3.500		25				1985	1985	255	0.128	0.128	218	0.110	0.110
		E	3	3.500		20				1960	1960	252	0.128		216	0.110	
		E	3	3.500		15				1915	1915	246	0.128		211	0.110	
Pedestrian Crossing		Gp	1	MIN GREEN + FLASH =			5	+	5	=	10						
		Hp	1,2	MIN GREEN + FLASH =			5	+	10	=	15						
		Ip	1,3	MIN GREEN + FLASH =			5	+	9	=	14						
		Jp	2	MIN GREEN + FLASH =			5	+	5	=	10						
		Kp	3	MIN GREEN + FLASH =			13	+	12	=	25						

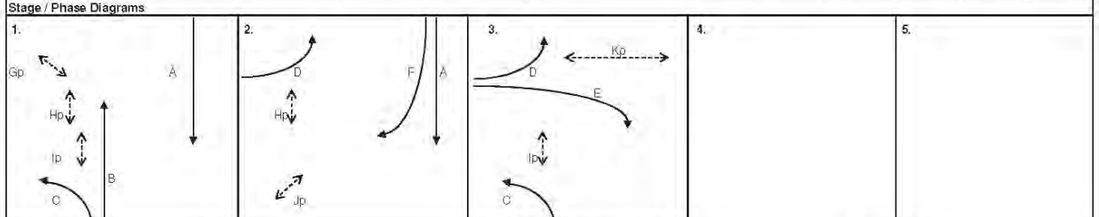
Notes:

Traffic Flow (pcu/hr)



Group	B,D	B,F,E	Group	B,D,,,	B,F,E,,
y	0.411	0.530	y	0.440	0.558
L (sec)	11	12	L (sec)	11	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.824	0.817	y pract.	0.824	0.817
R.C. (%)	100%	54%	R.C. (%)	87%	46%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G= 5	I/G=
I/G= 5		I/G= 5		I/G= 5	I/G=

Date: March, 2014 — Junction: Canton Road / Wui Cheung Road — J15

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

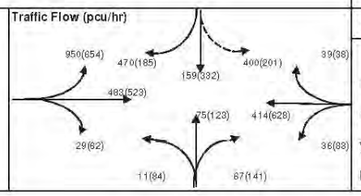
Junction: Lin Cheung Road / Austin Road West — Design Year: 2020

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Austin Road EB		E	1,2	3.500	15					1785	1785	453	0.254		312	0.175	
		E	1,2	3.500	20					1960	1960	497	0.254		342	0.175	
		B	2	3.500						2105	2105	257	0.122	0.122	294	0.140	0.140
		B	2	3.500		30		11%	21%	2095	2085	255	0.122		291	0.140	
Austin Road WB		D	4	3.500	15			23%	36%	1920	1900	154	0.080		233	0.123	
		D	4	3.500						2105	2105	169	0.080		259	0.123	
		D	4	3.500		25		23%	15%	2075	2085	166	0.080	0.080	257	0.123	0.123
Lin Cheung Road NB		F	2,3	3.500	15					1785	1785	11	0.006		84	0.047	
		C	3	3.500						1965	1965	70	0.036		123	0.063	
		C	3	3.500		30		93%	100%	2010	2005	72	0.036	0.036	141	0.070	0.070
Lin Cheung Road SB		A	1	3.500						1965	1965	37	0.019		89	0.045	
		A	1	3.500						2105	2105	40	0.019		96	0.046	
		A	1	3.500		25		72%	19%	2015	2080	296	0.147	0.147	181	0.087	0.087
		A	1	3.500		20				1745	1745	256	0.147		151	0.087	

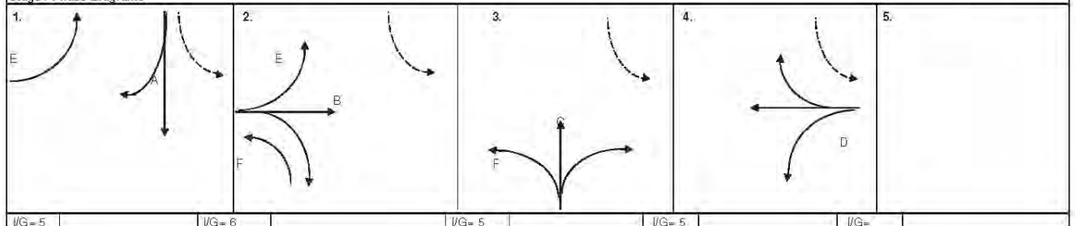
Notes:

Traffic Flow (pcu/hr)



Group	E,C,D	A,B,C,D	Group	E,C,D$_{rl}$	A,B,C,D$_{rl}$
y	0.370	0.385	y	0.368	0.420
L (sec)	13	17	L (sec)	13	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.810	0.782	y pract.	0.810	0.782
R.C. (%)	119%	103%	R.C. (%)	120%	86%

Stage / Phase Diagrams



I/G= 5	I/G= 6	I/G= 5	I/G= 5	I/G=
I/G= 5	I/G= 6	I/G= 5	I/G= 5	I/G=

Date: March, 2014 — Junction: Lin Cheung Road / Austin Road West — J17

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

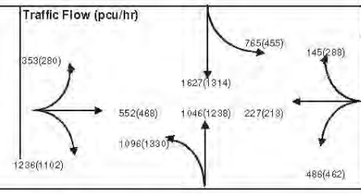
Junction: Canton Road / Austin Road — Design Year: 2020

Description: Construction (without underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (NB)		C	1,2	3.500	15					1785	1785	522	0.292		634	0.355	
		C	1,2	3.500	20					1960	1960	574	0.293		696	0.355	
		D	1	3.500						2105	2105	349	0.166		413	0.196	
		D	1	3.500						2105	2105	348	0.165		412	0.196	
		D	1	3.500						2105	2105	349	0.166		413	0.196	
Canton Rd (SB)		A	1,3	3.500	10					1710	1710	361	0.211		215	0.126	
		A	1,3	3.500	15					1915	1915	404	0.211		240	0.125	
		B	1	3.500						2105	2105	542	0.257		438	0.208	0.208
		B	1	3.500						2105	2105	543	0.258	0.258	438	0.208	
		B	1	3.500						2105	2105	542	0.257		438	0.208	
Austin Road (WB)		E	3	3.300	10					1690	1690	260	0.154	0.154	292	0.173	
		E	3	3.000	15			77%	50%	1910	1955	293	0.153		338	0.173	0.173
		E	3	3.000		20		48%	86%	1985	1930	305	0.154		333	0.173	
Austin Road (EB)		F	2	3.500	10					1710	1710	353	0.206		280	0.164	
		F	2	3.500	15			0%	0%	2105	2105	467	0.222		409	0.194	
		F	2	3.500		25		81%	85%	2010	2005	446	0.222		391	0.195	
		F	2	3.500		22				1970	1970	439	0.223	0.223	386	0.196	0.196
		F	2	3.500		20				1960	1960	436	0.222		384	0.196	

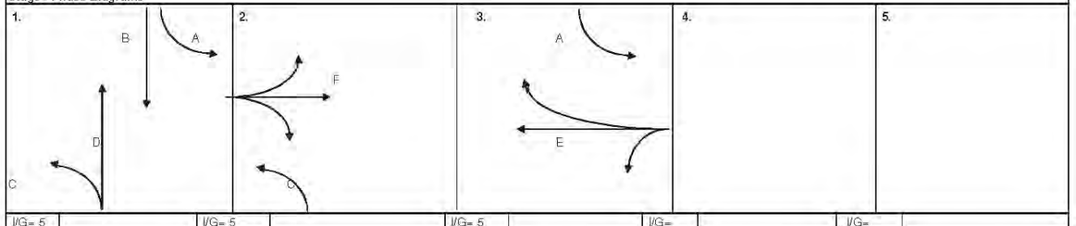
Notes:

Traffic Flow (pcu/hr)



Group	D,F,E	B,F,E	Group	D,F,E$_{rl}$	B,F,E$_{rl}$
y	0.542	0.635	y	0.565	0.577
L (sec)	12	12	L (sec)	12	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.817	0.817	y pract.	0.817	0.817
R.C. (%)	51%	29%	R.C. (%)	45%	42%

Stage / Phase Diagrams



I/G= 5	I/G= 5	I/G= 5	I/G=	I/G=
I/G= 5	I/G= 5	I/G= 5	I/G=	I/G=

Date: March, 2014 — Junction: Canton Road / Austin Road — J18

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

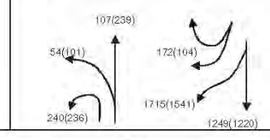
Junction: Canton Road / Kowloon Park Drive — Design Year: 2020

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	(%) uphill Gradient	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Road SB		C	2	3.500		10				1830	1830	172	0.094		104	0.057	
Canton Road SB		B	1,2	3.500		30				2005	2005	856	0.427		770	0.384	
		B	1,2	3.500		32				2010	2010	859	0.427		771	0.384	
		A	1,2,3	3.300						1945	1945	1249	0.642	0.642	1220	0.627	0.627
Kowloon Park Drive NB		E	3,4	3.000	10					1665	1665	240	0.144		236	0.142	
		D	3,4	3.000	15			34%	30%	1990	1995	161	0.081		340	0.170	
PED CROSSING		Fp	1,2	MIN GREEN + FLASH	5	+	5	=	10								
		Gp	1	MIN GREEN + FLASH	5	+	8	=	13								
		Hp	3,4	MIN GREEN + FLASH	5	+	9	=	14								
		Ip	1,2	MIN GREEN + FLASH	5	+	9	=	14								
		Jp	4	MIN GREEN + FLASH	5	+	6	=	11								

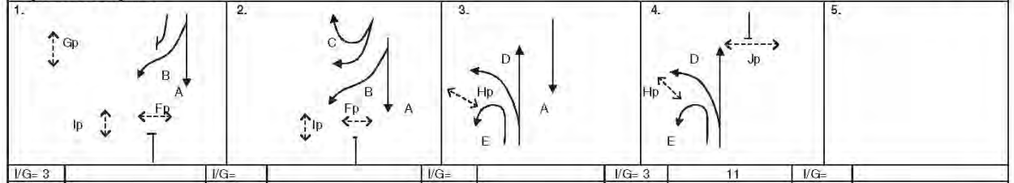
Notes:

Traffic Flow (pcu/hr)



Group	B,E	A,Jp	Group	B,D,	A,Jp,,
y	0.571	0.642	y	0.554	0.627
L (sec)	10	16	L (sec)	10	16
C (sec)	130	130	C (sec)	130	130
y pract.	0.831	0.789	y pract.	0.831	0.789
R.C. (%)	45%	23%	R.C. (%)	50%	26%

Stage / Phase Diagrams



I/G= 3		I/G=		I/G=	I/G= 3	11	I/G=
I/G= 3		I/G=		I/G=	I/G= 3	11	I/G=

Date: March, 2014 — Junction: Canton Road / Kowloon Park Driv — i20

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Road D1 — Design Year: 2020

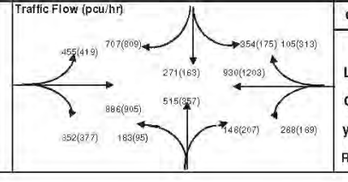
Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Road D1		C	2	3.500	30					1870	1870	183	0.098		95	0.051	
NB		C	2	3.500	35			0%	0%	2105	2105	227	0.108		181	0.086	
		C	2	3.000						2055	2055	221	0.108		176	0.086	
		C	2	3.000		25		69%	100%	1975	1940	213	0.108	0.108	207	0.107	0.107
Road D1		G	3,4	3.500	20					1930	1930	354	0.193		175	0.096	
SB		B	4	3.500						2105	2105	256	0.122		163	0.077	
		B	4	3.500		25		94%	100%	1995	1985	243	0.122		272	0.137	0.137
		B	4	3.500		22				1970	1970	240	0.122		269	0.137	
		B	4	3.500		20				1960	1960	239	0.122	0.122	268	0.137	
Jordan Road EB		H	1,4	3.500	15					1785	1785	455	0.255		419	0.235	
		A	1	3.500						2105	2105	315	0.150	0.150	326	0.155	
		A	1	3.500						2105	2105	314	0.149		326	0.155	
		A	1	3.500		28		18%	22%	2085	2080	312	0.150		323	0.155	0.155
		A	1	3.500		25				1985	1985	297	0.150		307	0.155	
Jordan Road WB		D	3	3.500	15			0%	0%	1965	1965	296	0.151	0.151	395	0.201	0.201
		D	3	3.500						2105	2105	317	0.151		423	0.201	
		D	3	3.500		30		0%	9%	2105	2095	317	0.151		421	0.201	
Pedestrian Crossing		Fp	1,2,4	MIN GREEN + FLASH =	5	+	12	=	17								
		EP	3	MIN GREEN + FLASH =	15	+	14	=	29								

Notes:

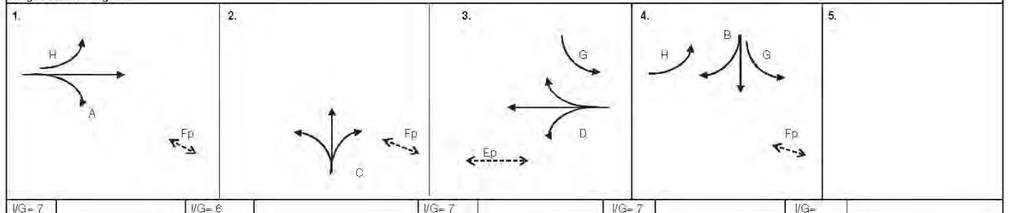
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	C,D,H	A,C,D,B	Group	C,D,H,,	A,C,D,B,,
y	0.513	0.530	y	0.542	0.600
L (sec)	22	23	L (sec)	22	23
C (sec)	130	130	C (sec)	130	130
y pract.	0.748	0.741	y pract.	0.748	0.741
R.C. (%)	46%	40%	R.C. (%)	38%	23%

Stage / Phase Diagrams



I/G= 7		I/G= 6		I/G= 7	I/G= 7		I/G=
I/G= 7		I/G= 6		I/G= 7	I/G= 7		I/G=

Date: March, 2014 — Junction: Jordan Road / Road D1 — j40

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Lin Cheung Rd / Jordan Road — Design Year: 2031

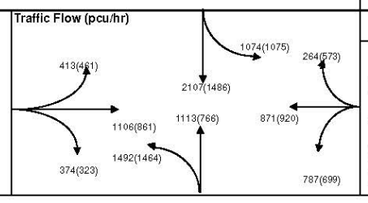
Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd EB		F	2	3.500	20					1830	1830	342	0.187		299	0.163	
		F	2	3.500	25			18%	49%	2080	2045	389	0.187		334	0.163	
		F	2	3.500						2105	2105	394	0.187		344	0.163	
		F	2	3.500						2105	2105	394	0.187		345	0.164	
		F	2	3.500		20		100%	100%	1960	1960	374	0.191	0.191	323	0.165	0.165
Jordan Rd WB		E	3	3.500	15					1915	1915	393	0.205		420	0.219	
		E	3	3.500	20			98%	63%	1960	2010	401	0.205		440	0.219	
		E	3	3.500						2105	2105	432	0.205	0.205	461	0.219	
		E	3	3.500		35		0%	35%	2105	2075	432	0.205		458	0.221	
		E	3	3.500		30				1870	1870	264	0.141		413	0.221	0.221
Lin Cheung Rd (NB)		A	1,2	3.500	20					1830	1830	716	0.391		702	0.384	
		A	1,2	3.500	25					1985	1985	776	0.391		762	0.384	
		B	1	3.500						2105	2105	557	0.265	0.265	383	0.182	0.182
		B	1	3.500						2105	2105	556	0.264		383	0.182	
Lin Cheung Rd (SB)	*	C	1,3	3.500	20					1830	1830	816	0.446		817	0.446	
		D	1	3.500						2105	2105	527	0.250		372	0.176	
		D	1	3.500						2105	2105	527	0.250		372	0.176	
		D	1	3.500						2105	2105	527	0.250		372	0.176	
		D	1	3.500						2105	2105	527	0.250		372	0.176	
Pedestrian Crossing		Gp	1,2	MIN GREEN + FLASH =	5	+	12	=	17								
		Hp	3	MIN GREEN + FLASH =	5	+	11	=	16								
		Ip	3	MIN GREEN + FLASH =	5	+	7	=	12								

Notes:

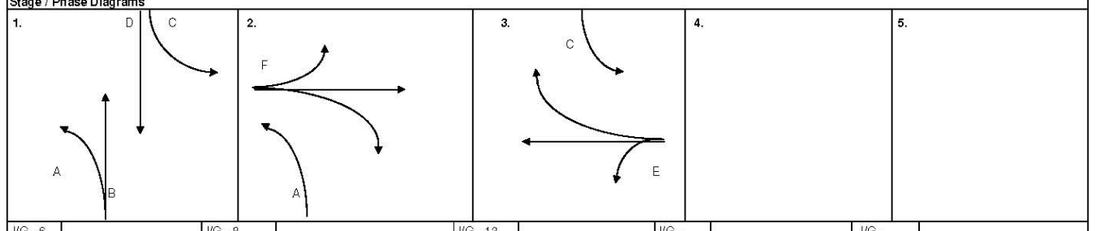
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	D,F,E	B,F,E	Group	C,F,,,	B,F,E,,
y	0.646	0.661	y	0.611	0.568
L (sec)	20	24	L (sec)	13	24
C (sec)	130	130	C (sec)	130	130
y pract.	0.762	0.734	y pract.	0.810	0.734
R.C. (%)	18%	11%	R.C. (%)	33%	29%

Stage / Phase Diagrams



I/G= 6		I/G= 8		I/G= 13	
I/G= 6		I/G= 8		I/G= 13	

I/G=	I/G=
I/G=	I/G=

Date: March, 2014 — **Junction:** Lin Cheung Rd / Jordan Road — J11

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Ferry Street — Design Year: 2031

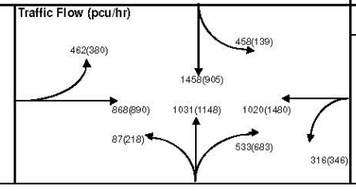
Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Jordan Rd WB		A	3	3.500	15			78%	62%	1820	1850	404	0.222	0.222	557	0.301	0.301
		A	3	3.500						2105	2105	466	0.221		634	0.301	
		A	3	3.500						2105	2105	466	0.221		634	0.301	
Jordan Rd (EB)	*	C	3	3.500	15					1785	1785	301	0.169		282	0.158	
	*	C	3	3.500	18			47%	30%	2025	2055	342	0.169		324	0.158	
	*	C	3	3.500						2105	2105	355	0.169		332	0.158	
Ferry St (NB)	*	F	1,2	3.500	15			19%	38%	1930	1895	457	0.237		570	0.301	
	*	F	1,2	3.500						2105	2105	499	0.237		634	0.301	
		G	2	3.500		25				1985	1985	268	0.135	0.135	344	0.173	0.173
		G	2	3.500		20				1960	1960	265	0.135		339	0.173	
Ferry St (SB)		D	1	3.500	15					1785	1785	458	0.257		139	0.078	
	*	D	1	3.500						2105	2105	572	0.272	0.272	296	0.141	0.141
	*	D	1	3.500						2105	2105	572	0.272		295	0.140	

Notes:

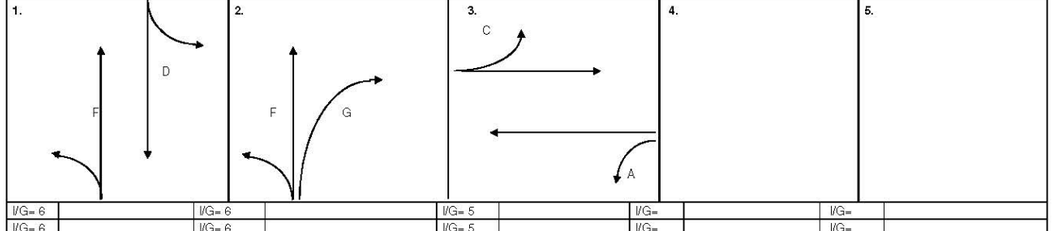
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach

Traffic Flow (pcu/hr)



Group	D,G,C	D,G,A	Group	F,A,,,	D,G,A,,
y	0.576	0.629	y	0.603	0.615
L (sec)	14	14	L (sec)	10	14
C (sec)	130	130	C (sec)	130	130
y pract.	0.803	0.803	y pract.	0.831	0.803
R.C. (%)	39%	28%	R.C. (%)	38%	31%

Stage / Phase Diagrams



I/G= 6		I/G= 6		I/G= 5	
I/G= 6		I/G= 6		I/G= 5	

I/G=	I/G=
I/G=	I/G=

Date: March, 2014 — **Junction:** Jordan Road / Ferry Street — J12

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

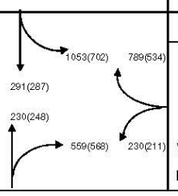
Junction: Wui Cheung Road / Road D1 — Design Year: 2031

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Wui Cheung Rd		E	1,2	3.500		25				1965	1965	397	0.200	0.200	269	0.136	0.136
WB		E	1,2	3.500		20				1960	1960	392	0.200		265	0.135	
		E	1,2	3.500	20					1830	1830	230	0.126		211	0.115	
Road D1		C	2,3	3.500	25					1855	1855	512	0.276		341	0.184	
SB		C	2,3	3.500	20					1960	1960	541	0.276		361	0.184	
		D	3	3.500						1965	1965	291	0.148	0.148	287	0.146	0.146
Road D1		A	4	3.500						1965	1965	230	0.117		246	0.125	
NB		A	4	3.500		30		100%	99%	2005	2005	291	0.145	0.145	252	0.126	
		A	4	3.500		25				1985	1985	268	0.135		318	0.160	0.160
Pedestrian Crossing		Hp	1	MIN GREEN + FLASH =			5	+	10	=	15						
		Ip	3,4	MIN GREEN + FLASH =			5	+	9	=	14						

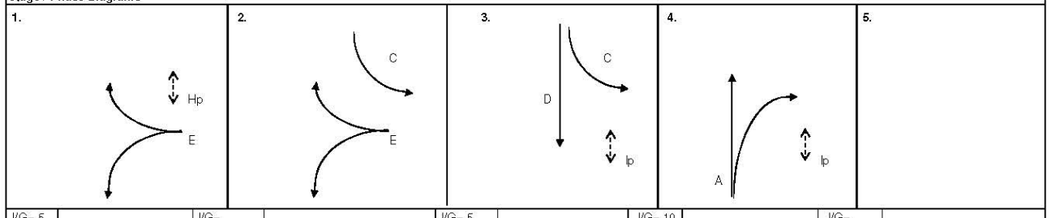
Notes:

Traffic Flow (pcu/hr)



Group	Hp,C,A	E,D,A	Group	Hp,C,A$_{rt}$	E,D,A$_{rt}$
y	0.421	0.493	y	0.344	0.442
L (sec)	23	17	L (sec)	23	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.741	0.782	y pract.	0.741	0.782
R.C. (%)	76%	59%	R.C. (%)	115%	77%

Stage / Phase Diagrams



I/G= 5		I/G=		I/G= 5		I/G= 10	I/G=
I/G= 5		I/G=		I/G= 5		I/G= 10	I/G=

Date: March, 2014 — **Junction:** Wui Cheung Road / Road D1 — J14

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

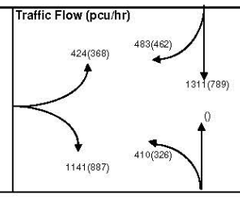
Junction: Canton Road / Wui Cheung Road — Design Year: 2031

Description: Construction (Without Canton Road Underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd		A	1,2	3.500						1965	1965	417	0.212		251	0.128	
(SB)		A	1,2	3.500						2105	2105	447	0.212		269	0.128	
		A	1,2	3.500						2105	2105	447	0.212		269	0.128	
		F	2	3.500		15				1915	1915	483	0.252	0.252	462	0.241	0.241
Canton Rd		B	1	3.500						2105	2105	409	0.194	0.194	560	0.266	0.266
(NB)		B	1	3.500						2105	2105	409	0.194		560	0.266	
		B	1	3.500						2105	2105	409	0.194		560	0.266	
		C	1,3	3.500	10					1710	1710	410	0.240		326	0.191	
Wui Cheung Rd		D	2,3	3.500	10					1710	1710	424	0.248		368	0.215	
(EB)		E	3	3.500		25				1985	1985	386	0.195	0.195	300	0.151	0.151
		E	3	3.500		20				1960	1960	382	0.195		297	0.151	
		E	3	3.500		15				1915	1915	373	0.195		290	0.151	
Pedestrian Crossing		Gp	1	MIN GREEN + FLASH =			5	+	5	=	10						
		Hp	1,2	MIN GREEN + FLASH =			5	+	10	=	15						
		Ip	1,3	MIN GREEN + FLASH =			5	+	9	=	14						
		Jp	2	MIN GREEN + FLASH =			5	+	5	=	10						
		Kp	3	MIN GREEN + FLASH =			13	+	12	=	25						

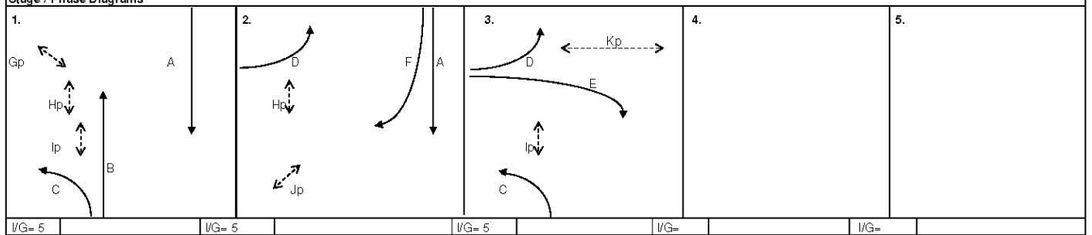
Notes:

Traffic Flow (pcu/hr)



Group	B,D	B,F,E	Group	B,D$_{rt}$	B,F,E$_{rt}$
y	0.442	0.641	y	0.481	0.659
L (sec)	11	12	L (sec)	11	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.824	0.817	y pract.	0.824	0.817
R.C. (%)	86%	27%	R.C. (%)	71%	24%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G= 5		I/G=	I/G=
I/G= 5		I/G= 5		I/G= 5		I/G=	I/G=

Date: March, 2014 — **Junction:** Canton Road / Wui Cheung Road — J15

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

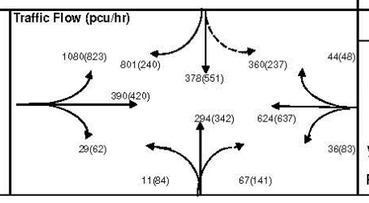
Junction: Lin Cheung Road / Austin Road West — Design Year: 2031

Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Austin Road EB		E	1,2	3.500	15					1785	1785	515	0.288		392	0.220	
		E	1,2	3.500	20					1960	1960	565	0.288		431	0.220	
		B	2	3.500						2105	2105	210	0.100		243	0.115	0.115
		B	2	3.500		30		14%	26%	2090	2080	209	0.100	0.100	239	0.115	
Austin Road WB		D	4	3.500	15			16%	35%	1935	1900	222	0.115		240	0.126	
		D	4	3.500						2105	2105	242	0.115		266	0.126	
		D	4	3.500		25		18%	18%	2080	2080	239	0.115	0.115	263	0.126	0.126
Lin Cheung Road NB		F	2,3	3.500	15					1785	1785	11	0.006		84	0.047	
		C	3	3.500						1965	1965	176	0.090	0.090	237	0.121	0.121
		C	3	3.500		30		36%	57%	2070	2045	185	0.089		246	0.120	
Lin Cheung Road SB		A	1	3.500						1965	1965	37	0.019		89	0.045	
		A	1	3.500						2105	2105	40	0.019		96	0.046	
		A	1	3.500		25		49%	0%	2045	2105	595	0.291	0.291	366	0.174	0.174
		A	1	3.500		20				1745	1745	507	0.291		240	0.138	

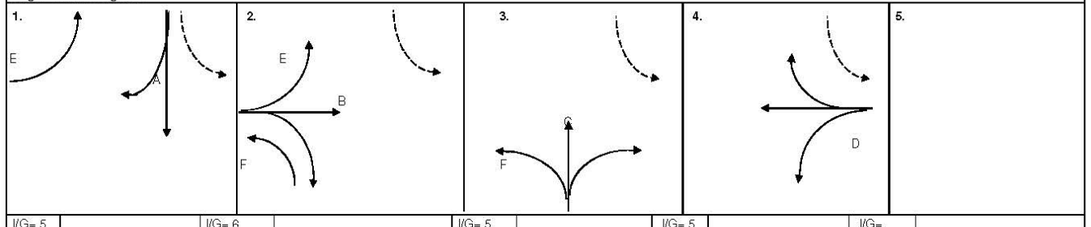
Notes:

Traffic Flow (pcu/hr)



Group	E,C,D	A,B,C,D	Group	E,C,D,,	A,B,C,D,,
y	0.493	0.596	y	0.467	0.536
L (sec)	13	17	L (sec)	13	17
C (sec)	130	130	C (sec)	130	130
y pract.	0.810	0.782	y pract.	0.810	0.782
R.C. (%)	64%	31%	R.C. (%)	74%	46%

Stage / Phase Diagrams



I/G= 5		I/G= 6		I/G= 5	
I/G= 5		I/G= 6		I/G= 5	

I/G= 5		I/G=	
I/G= 5		I/G=	

Date: March, 2014 — **Junction:** Lin Cheung Road / Austin Road West — J17

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

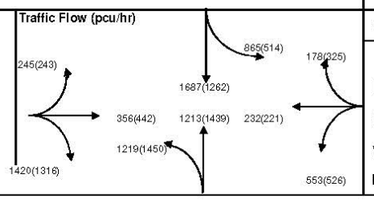
Junction: Canton Road / Austin Road — Design Year: 2031

Description: Construction (without underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (NB)		C	1,2	3.500	15					1785	1785	581	0.325		691	0.387	
		C	1,2	3.500	20					1960	1960	638	0.326		759	0.387	
		D	1	3.500						2105	2105	404	0.192		480	0.228	0.228
		D	1	3.500						2105	2105	405	0.192		479	0.228	
		D	1	3.500						2105	2105	404	0.192		480	0.228	
Canton Rd (SB)		A	1,3	3.500	10					1710	1710	408	0.239		242	0.142	
		A	1,3	3.500	15					1915	1915	457	0.239		272	0.142	
		B	1	3.500						2105	2105	562	0.267		421	0.200	
		B	1	3.500						2105	2105	563	0.267	0.267	420	0.200	
		B	1	3.500						2105	2105	562	0.267		421	0.200	
Austin Road (WB)		E	3	3.300	10					1690	1690	292	0.173	0.173	325	0.192	
		E	3	3.000	15			79%	53%	1905	1950	329	0.173		376	0.193	0.193
		E	3	3.000		20		52%	88%	1980	1930	342	0.173		371	0.192	
Austin Road (EB)		F	2	3.500	10					1710	1710	245	0.143		243	0.142	
		F	2	3.500	15			0%	0%	2105	2105	351	0.167		439	0.209	
		F	2	3.500		25		99%	99%	1985	1985	478	0.241		442	0.223	
		F	2	3.500		22				1970	1970	475	0.241	0.241	440	0.223	0.223
		F	2	3.500		20				1960	1960	472	0.241		437	0.223	

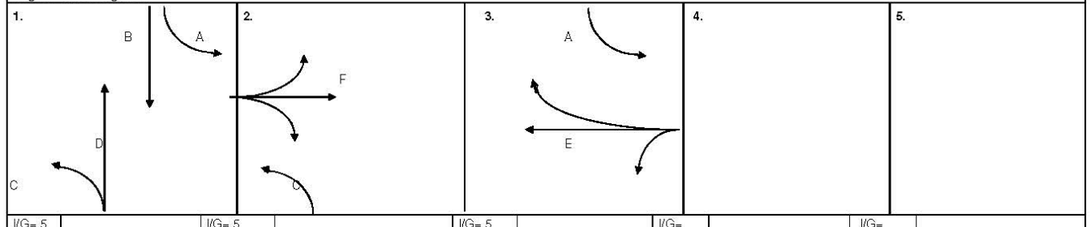
Notes:

Traffic Flow (pcu/hr)



Group	D,F,E	B,F,E	Group	B,F,E,,	D,F,E,,
y	0.606	0.681	y	0.616	0.644
L (sec)	12	12	L (sec)	12	12
C (sec)	130	130	C (sec)	130	130
y pract.	0.817	0.817	y pract.	0.817	0.817
R.C. (%)	35%	20%	R.C. (%)	33%	27%

Stage / Phase Diagrams



I/G= 5		I/G= 5		I/G= 5	
I/G= 5		I/G= 5		I/G= 5	

I/G=		I/G=	
I/G=		I/G=	

Date: March, 2014 — **Junction:** Canton Road / Austin Road — J18

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

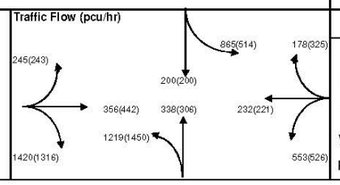
Junction: Canton Road / Austin Road — Design Year: 2031

Description: Construction (with underpass) — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Rd (NB)		C	1,2	3.500	15					1785	1785	581	0.325		691	0.387	
		C	1,2	3.500	20					1960	1960	638	0.326		759	0.387	0.387
		D	1	3.500						2105	2105	338	0.161	0.161	306	0.145	
Canton Rd (SB)		A	1,3	3.500	10					1710	1710	408	0.239		242	0.142	
		A	1,3	3.500	15					1915	1915	457	0.239		272	0.142	
		B	1	3.500						2105	2105	200	0.095		200	0.095	
Austin Road (WB)		E	3	3.300	10					1690	1690	292	0.173	0.173	325	0.192	
		E	3	3.000	15			79%	53%	1905	1950	329	0.173		376	0.193	0.193
		E	3	3.000		20		52%	88%	1980	1930	342	0.173		371	0.192	
Austin Road (EB)		F	2	3.500	10					1710	1710	245	0.143		243	0.142	
		F	2	3.500	15			0%	0%	2105	2105	351	0.167		439	0.209	
		F	2	3.500		25		99%	99%	1985	1985	478	0.241		442	0.223	
		F	2	3.500		22				1970	1970	475	0.241	0.241	440	0.223	
		F	2	3.500		20				1960	1960	472	0.241		437	0.223	

Notes:

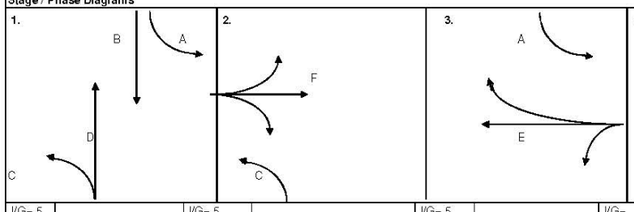
Traffic Flow (pcu/hr)



Group	B,F,E	D,F,E
y	0.509	0.574
L (sec)	12	12
C (sec)	130	130
y pract.	0.817	0.817
R.C. (%)	61%	42%

Group	D,F,E$_{rt}$	C,E$_{rt}$
y	0.562	0.580
L (sec)	12	10
C (sec)	130	130
y pract.	0.817	0.831
R.C. (%)	45%	43%

Stage / Phase Diagrams



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

Date: March, 2014 — **Junction:** Canton Road / Austin Road — J18

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Canton Road / Kowloon Park Drive — Design Year: 2031

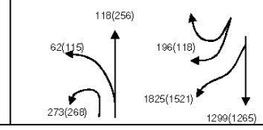
Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	(%) uphill Gradient	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Canton Road SB		C	2	3.500		10				1830	1830	196	0.107		118	0.064	
Canton Road SB		B	1,2	3.500		30				2005	2005	911	0.455		760	0.379	
		B	1,2	3.500		32				2010	2010	914	0.455		761	0.379	
		A	1,2,3	3.300						1945	1945	1299	0.668	0.668	1265	0.650	0.650
Kowloon Park Drive NB		E	3,4	3.000	10					1665	1665	273	0.164		268	0.161	
		D	3,4	3.000	15			34%	31%	1985	1995	180	0.091		371	0.186	

PED CROSSING	Fp	1,2	MIN GREEN + FLASH :	5	+	5	=	10		
	Gp	1	MIN GREEN + FLASH :	5	+	8	=	13		
	Hp	3,4	MIN GREEN + FLASH :	5	+	9	=	14		
	Ip	1,2	MIN GREEN + FLASH :	5	+	9	=	14		
	Jp	4	MIN GREEN + FLASH :	5	+	6	=	11	*	*

Notes:

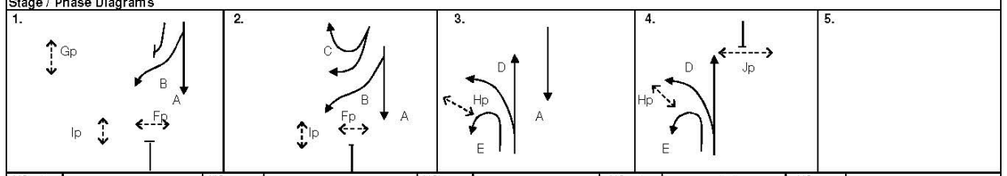
Traffic Flow (pcu/hr)



Group	B,E	A,Jp
y	0.619	0.668
L (sec)	10	16
C (sec)	130	130
y pract.	0.831	0.789
R.C. (%)	34%	18%

Group	B,D,	A,Jp,,
y	0.565	0.650
L (sec)	10	16
C (sec)	130	130
y pract.	0.831	0.789
R.C. (%)	47%	21%

Stage / Phase Diagrams



I/G= 3		I/G=		I/G=		I/G= 3	11
I/G= 3		I/G=		I/G=		I/G= 3	11

I/G=		
I/G=		

Date: March, 2014 — **Junction:** Canton Road / Kowloon Park Driv — J20

TRAFFIC SIGNALS CALCULATION

Job No.: C2815601

Junction: Jordan Road / Road D1 — Design Year: 2031

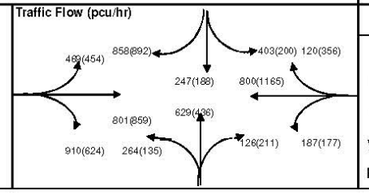
Description: Construction — Designed By: TYC — Checked By: STH

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Road D1		C	2	3.500	30					1870	1870	238	0.127		135	0.072	
NB		C	2	3.500	35			10%	0%	2095	2105	266	0.127		221	0.105	
		C	2	3.000						2055	2055	261	0.127		215	0.105	
		C	2	3.000		25		50%	100%	1995	1940	254	0.127	0.127	211	0.109	0.109
Road D1		G	3,4	3.500	20					1830	1830	403	0.220		200	0.109	
SB		B	4	3.500						2105	2105	247	0.117		188	0.089	
		B	4	3.500		25		100%	100%	1985	1985	287	0.145		300	0.151	0.151
		B	4	3.500		22				1970	1970	286	0.145		297	0.151	
		B	4	3.500		20				1960	1960	285	0.145	0.145	295	0.151	
Jordan Road		H	1,4	3.500	15					1785	1785	469	0.263		454	0.254	
EB		A	1	3.500						2105	2105	401	0.190		380	0.181	0.181
		A	1	3.500						2105	2105	400	0.190		380	0.181	
		A	1	3.500		28		100%	73%	2000	2025	456	0.228		365	0.180	
		A	1	3.500		25				1985	1985	454	0.229	0.229	358	0.180	
Jordan Road		D	3	3.500	15			0%	0%	1965	1965	255	0.130	0.130	397	0.202	
WB		D	3	3.500						2105	2105	272	0.129		426	0.202	0.202
		D	3	3.500		30		0%	19%	2105	2085	273	0.130		421	0.202	
Pedestrian Crossing		Fp	1,2,4	MIN GREEN + FLASH =			5	+	12	=	17						
		EP	3	MIN GREEN + FLASH =			15	+	14	=	29						

Notes:

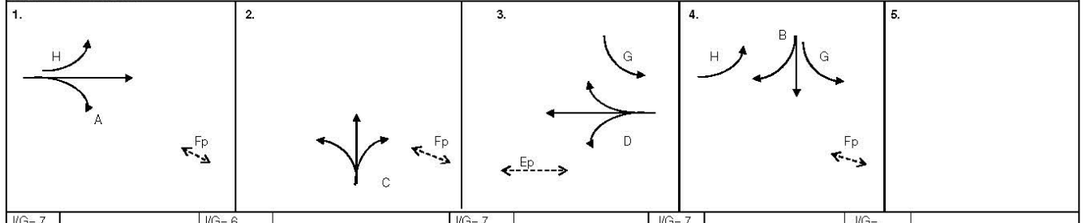
*Traffic flows are revised in the calculation to take into account the effect arising from the flared approach.

Traffic Flow (pcu/hr)



Group	A,C,G	A,C,D,B	Group	C,D,H$_L$,	A,C,D,B,
y	0.576	0.631	y	0.565	0.643
L (sec)	16	23	L (sec)	22	23
C (sec)	130	130	C (sec)	130	130
y pract.	0.789	0.741	y pract.	0.748	0.741
R.C. (%)	37%	17%	R.C. (%)	32%	15%

Stage / Phase Diagrams



I/G= 7		I/G= 6		I/G= 7		I/G=	
I/G= 7		I/G= 6		I/G= 7		I/G=	

Date: March, 2014 — **Junction:** Jordan Road / Road D1 — J40

Annex C Working Paper on West Kowloon Cultural District Car Parking Strategy and Response-to-Comment

C1 Introduction

This working paper reviews the car parking demand and investigates the probability of sharing car parks to effectively utilize the underground area for car parking in West Kowloon Cultural District (WKCD). The car parking strategy involves the examination of carparks sharing with WKCD, or even in West Kowloon Reclamation Area (WKRA). In response to TD's comments during the meeting with TD on 11 July 2011, data from previous surveys were added to substantiate the modal split of private car.

During the exercise of modifying the CP scheme, it was found that there were more constraints than expected in the underground of WKCD. As a result, the available underground area for car parking may not be able to achieve the proposed number in the CP.

In the light of this, it is necessary to review the car parking demand and how could effectively utilize the underground area for car parking in WKCD including the possibility of sharing of car parks in WKCD, or even in West Kowloon Reclamation Area (WKRA) should be examined. This brief note would investigate the probability of sharing car parks in several aspects, which include:

- Sharing among Performing Arts (PA) Venues
- Sharing among Visual Arts (VA) Venues
- Sharing among Piazzas
- Sharing among different land uses within WKCD
- Sharing among various developments within WKRA

C2 Methodology for Estimating Car Park Provision

Before going into details, it should be noted that there is currently no related standard in Hong Kong for estimating the car parking provisions for the performance and visual arts venues. The numbers of car parking spaces for the venues were estimated by the seating capacities / attendance and corresponding modal split of the venues.

For the other common land uses such as residential, office, hotel, retail, dinning and entertainment (RDE), the parking numbers were derived based on the Hong Kong Planning Standards and Guidelines (HKPSG) published by Planning Department.

The detailed assumptions and methodology for deriving the parking provisions, and the estimated numbers of parking spaces based on no sharing are shown in below **Attachment C1** for easy reference.

Sharing among PA venues

In view that it is unlikely to have all the PA venues holding performances concurrently, sharing among the PA venues maybe possible. The PA venues to be taken into account and the associated estimated number of car parking spaces are listed in **Table C1**.

Table C1 Parking Provisions for PA venues

Performing Arts Venue New Name	Seating Capacity	Car Parking No.
Mega Performance Venue	18,000	377
Great Theatre	1,600	95
Musical Theatre	2,000	116
Medium Theatre I	800	46
Medium Theatre II	600	25
Lyric Theatre	1,200	67
Centre for Contemporary Performance	1,000	26
Free Space	600	16
Music Centre	2,100	120
Xiqu Centre (Main Theatre and Tea House)	1,300	61
Xiqu Centre (Small Theatre)	400	
	Total	**949**

Since the programming strategy for the performances is not yet confirmed, it is not possible to define which PA venues would have the shows at the same night and what the attendance level might be. At this stage, it was assumed that 80% of venues are occupied, i.e. the parking spaces for PA venues would be 949 x 80% = 761.

Sharing among VA venues

The VA venues would include M+ and Exhibition Centre (EC). The estimated parking spaces for serving M+ and EC are listed in **Table C2**.

Table C2 Parking Provisions for VA venues

Visual Arts Venue	GFA (m^2)	Car Parking No.
M+	61,950	150
Exhibition Centre	21,495	129
	TOTAL	279

M+ would operate daily (except for selected major holidays) on a year-round basis, and would be opened from 10:00-18:00 (and till 22:00 on Thursday, Friday and Saturday). Hours of operation for EC would be dependent on the events and exhibitions, but typically exhibition could be open from 08:00 to 23:00. Therefore, the operation hours of M+ and EC are entirely overlapped, and it is not possible to share the car parks between these two VA venues.

Sharing among Piazzas

There are total 5 Piazzas in WKCD, of which the "Large Outdoor Venue" could accommodate more audience 5,000, while the others would provide less than 500 seats for each piazza. It is believed that the private cars generated by the small Piazzas would be minimal and could be absorbed by the car park for the large Piazza. The proposed numbers of car parking spaces for the Piazzas are presented in **Table C3**.

Table C3 Parking Provisions for Piazzas

Piazza Areas	No. of Venues	Seating Capacity	Car Parking No.
Large Outdoor Venue (OPV)	1	5,000	95
Small Outdoor Amphitheatre (SA)	1	200	---
Outdoor Cinema Spaces (M+OC)	1	200	---
ICAE – Outdoor Spaces	1	400	---
CCP – Live Performance Stage	1	200	---
		TOTAL	**95**

Sharing among Different Land Uses within WKCD

Apart from sharing car parks among PA venues and Piazzas, the parking spaces could be further reduced by sharing among different facilities / land uses within WKCD due to the difference in the travelling characteristics. The facilities / land uses and the corresponding parking provisions are listed in **Table C4**.

Table C4 Parking Provisions for Different Land Uses within WKCD

Land Use		Car Parking No.
CACF	PA Venues (Overall Seating Capacity = 29,600)	761 (shared among venues)
	VA Venues (Overall peak hour attendance = 3,363)	279
	Piazzas (Overall seating capacity = 6,000)	95
OACF	Arts Education Facilities (14,300m^2 GFA)	48
OACF Facilities (25,796m^2 GFA)		111-154
Office (107,618m^2 GFA)		384-563
RDE (119,309m^2 GFA)		398-597
Residential (145,791m^2 GFA, 1298 units)		613-920
Hotel (47,005m^2 GFA, 808 rooms)		8
	TOTAL	**2,697-3,425**

As mentioned, the difference in the travelling characteristics for various facilities / land uses is critical to determine whether the car parks could be shared. The travelling characteristics for each land use are further elaborated as follows:

PA venues

The shows are normally arranged at night-time, which are around 20:00-23:00. The audience would arrive 1-2 hours before the shows, which is more common at weekend, to have the dinner in the nearby restaurants, and would leave within half an hour after the shows end. Therefore, the car parks for the PA venues would start to be utilized at 18:00, and would be fully occupied during 20:00-23:00, and the occupancy would be minimal after 23:30.

VA venues

As aforementioned, M+ would be opened during 10:00-18:00 (for Sunday to Wednesday) and 10:00-22:00 (for Thursday to Saturday). For EC, the opening hours could vary according to the nature of the events, and typically between 08:00-23:00. Also, it is expected that the exhibitions or events would be held frequently in EC and only with some days being unoccupied throughout the year. Therefore, the car park for M+ and EC would be occupied daily for nearly full-day period.

Piazzas

It is known that the performances to be held at the Piazzas such as OPV would not be as frequent as that in PA venues. Around 70% of the whole-year period would be left as open park space. However, once there are events at the OPV, it is expected that the performance time and the travelling patterns of the audience would be similar to that of PA venues.

Other Arts and Cultural Facilities/GIC Facilities

Among the OACF/GIC, the "Arts Education Facility" would be treated as school-like facility which the parking spaces are for staff and are not for sharing. The remaining OACF facilities include "Arts & Crafts Studios", "Resident Companies Centres", "Pavilions/White Cubes" and "HK Literary Arts Promotion Centre", the travelling patterns would be treated as office and would be discussed in next section.

Office

In general, the office hours are 09:00-18:00 for weekdays, while some companies would open on Saturday with office hours of 09:00-13:00. The car park would be fully utilized during the office hours. After that, the utilization rate of the car park would be gradually reduced to minimal in around 2 hours. Furthermore, it should be noted that part of the car park for office would likely be assigned for monthly rental, and only those allocated for hourly parking could be shared with others. In general, there is no fix or preferred ratio between monthly and hourly parking as it is totally subject to the decision of the car park management companies.

Retail, Dining and Entertainment (RDE)

The peak periods of RDE would occur on weekday evenings, and weekend afternoons to evenings. During the peak time, car park for RDE is expected to be fully occupied; car park sharing seems to be impossible.

Residential

Since most of the parking spaces would be allocated for the residents, which cannot be shared with others. Only limited spaces would be provided for visitor use and would be paid in hourly basis. Since the available spaces for sharing are not significant, sharing of residential car park is not taken into account.

Hotel

The car parking spaces are for the use of hotel limousines and the operational needs of staff, which means that the spaces could not be shared with others. Hence, sharing of hotel car park is not taken into account.

The utilization of the car parks for various land uses within WKCD are summarized in **Table C5** for comparison.

Table C5 Utilization of Car Parks for Various Land Uses within WKCD

Land Use		Periods with Fully Utilization		Remarks
		Day	Time	
PA Venues		Sun-Sat	20:00-23:00	Assume daily performance
VA Venues	M+	Sun-Wed	10:00-18:00	Close on selected holidays
		Thu-Sat	10:00-22:00	
	EC	Sun-Sat	08:00- 23:00	Assume daily exhibition
Piazzas	OPV	N/A	20:00-23:00	Performance for 30% of a year
OACF/GIC Facilities		Mon-Fri	09:00-18:00	Treated as office (except Arts Education Facilities)
		Sat	09:00-13:00	
Office		Mon-Fri	09:00-18:00	1. Office close on Sunday
		Sat	09:00-13:00	2. Part of the car park is assigned for monthly rental
RDE		Mon-Fri	18:00-23:00	
		Sat & Sun	13:00-23:00	
Residential		N/A	N/A	No sharing
Hotel		N/A	N/A	No sharing

From the above table, there is no overlapping for the utilization periods between PA venues / RDE and office / OACF. Therefore, it is possible to share the car parks of PA venues / RDE with office / OACF. However, as mentioned before, only a portion of car park (i.e. hourly basis) for offices and OACF could be shared with others, and it is assumed that around 50% could be shared, i.e. minimum 247 and maximum 358 (50% of car parking spaces for office / OACF) as given in **Table C4**.

Other than sharing the car parks for office and OACF, it may also be possible to share the car parks for Piazzas due to the low performance rate (only 30% of the round year period would have performance). However, the parking provisions within WKCD would become tight if there are the performances at MPV as well as other PA venues.

Sharing among Various Development within WKRA

Apart from just sharing the car parks within WKCD, the parking strategy could be planning for the whole WKRA which includes the following developments:

- WKCD
- West Kowloon Terminus (WKT) and top side office and retail
- Kowloon Station (KOW) and top side office and retail

It is noted there are also residential developments on top of Kowloon Station and Austin Station, but the corresponding car parks are not taken into account as most of the spaces are assigned for monthly rental. The parking spaces for the WKT and KOW and its top side developments are shown in **Table C6**.

Table C6 Parking Provisions for WKT and KOW and Its Top Side Developments

Development		Car Parking No.
West Kowloon Terminus	Station	600
	Top Side Office	451
	Top Side Retail	99
Kowloon Station	Station	261
	Top Side Office (ICC)[(1)]	884
	Top Side Retail (Elements)	655

Remarks: (1) About 45 – 50% of total capacity spaces were assigned for monthly rental

The car parks serving the station of WKT and KOW are not able to share with others as there is no specific period of utilization. Based on recent site inventory, it was found that all the hourly car parking spaces provided at KOW ICC and Elements were fully occupied during the weekend (between 18:00 – 20:00). There is no surplus of car parking spaces provided in KOW. As a result, only 50% of the car parks (I.e. hourly basis) for WKT top side office could be shared, i.e. 451 x 50% = 225 parking spaces.

C3 Summary

Summarizing all the aforementioned possible car park sharing, the numbers of car parking spaces to be provided in WKCD are shown in **Table C7**.

Table C7 Parking Provisions for WKCD – Without and With Sharing

Land Use		Car Parking No. within WKCD	
		Without Sharing	With Sharing
CACF	PA Venues	949	761 (shared among venues)
	VA Venues	279	279
	Piazzas	95	95
OACF	Arts Education Facilities	48	48
OACF Facilities		111-154	111-154*
Office		384-563	384-563*
RDE		398-597	398-597
Residential		613-920	613-920
Hotel		8	8
Minus: Sharing within WKCD		---	*-247 (min.), -358 (max.)*
Minus: Sharing within WKR		---	*-225*
TOTAL		**2,885-3,613**	**2,225-2,842[#]**

Note:* 50% could be shared for CACF
[#] Cater for Piazzas demand

With the all the sharing strategy, the car park for WKCD could be reduced by 660-771 parking spaces, which is equivalent to around 28,500-33,000m2 (assuming average area per parking space including the area of parking space, aisles, driveways, ramps and columns is 45m^2). By excluding the piazzas demand (30% of the round year period), the parking supply could be further reduced by 95 parking spaces (around 4,300m^2).

Attachment C1 Assumptions and Methodology for Deriving Car Parking Provision in WKCD

Introduction

The parking provisions for various types of developments in WKCD were estimated by different standards, assumptions and methodologies.

For the residential, office, hotel, retail, dinning and entertainment (RDE), the provisions were calculated by reference to the standards stated in the Hong Kong Planning Standards and Guidelines (HKPSG) published by Planning Department. The Other Arts and Cultural Facilities (OACF/GIC) would include Arts Education Facilities, Arts & Crafts Studios, Resident Companies Centres, Pavilions/White Cubes and Hong Kong Literary Arts Promotion Centre, of which Arts Education Facilities was reference to the "Education" type while the remaining developments referred to "Office" of HKPSG.

In HKPSG, there is no standard for calculating the parking, PU/DO, L/UL provisions for arts venues. In view of this, the provisions for the CACF - Performing Arts (PA) Venues, CACF – Visual Arts (VA) Venues and Piazzas in WKCD should be estimated by the consultants, which were based on various venue parameters, assumptions and methodologies, and this information would be discussed in details in the following sections.

General

The parking provisions were basically designed to accommodate the vehicles generated by the venues, which was in turn calculated from the attendance of the venues, modal split of the visitors (i.e. the transport mode to be taken by the visitors), vehicle occupancy rates and dwell time.

To estimate the attendance, the seating capacities were adopted for PA venues (including Centre for Contemporary Performance-Theatre and Piazzas) for conservative reason. For M+ and Exhibition Centre (EC), it is assumed that the visitor would stay in the venues and other RDE facilities for total 4 hours, i.e. the peak hour visitor flows x 4 were adopted.

The details of modal split, vehicle occupancy rates, and detailed calculations for parking spaces for each type of venue/facility would be further elaborated in later sections.

Modal Split

Prior to the WKCD Conceptual and Development Plans, the project "TD54/2008 West Kowloon Reclamation Development Traffic Study (TD54/2008 Study)" had been commissioned by Transport Department to study the transport planning in the West Kowloon Reclamation Area. In the study, modal split for WKCD performance venues was provided. As a result, the modal split for the venues proposed in this WKCD DP are derived from that in TD54/2008 Study as listed in Table 1. Apart from that, a survey was also been carried out at Hong Kong Coliseum to determine the modal split of patrons. The results are also listed in Table 1. Since the modal split proposed in TD54/2008 Study was a general parameter applied to all the performance venues, to have a more accurate estimation, the modal split proposed in TD54/2008 Study have been further refined according to the travelling behaviour of the visitors and the characteristics of each venue.

Table 1 Modal Split of Patrons of Performance Venues

Sites	Venues	Modes Split (%)		
		Private Car	Taxi	Coach/Public Transport/Walk
Hong Kong City Hall[(1)]	Concert Hall[(2)]	17.3	14.5	68.2
Hong Kong Culture Centre[(1)]	Concert Hall[(3)]	1.4	2.1	95.7
Sha Tin Town Hall[(1)]	Auditorium[(4)]	16.5	3.8	79.7
Hong Kong Coliseum	Concert Hall[(5)]	7.0	10.0	83.0

Remarks: (1) Extracted from TD54/2008 WKRD traffic study
(2) Name of Performance: Midori plays Brahms by Hong Kong Philharmonic Orchestra (Ticket Prices: $580; $440; $300; $160)
(3) Name of Performance: KOI MING-FAI HKCO III (Ticket Prices: $300; $220; &160; $100)
(4) Name of Performance: Man of La Tiger (Ticket Prices: ($420; $360; $290; $220; $180)
(5) Name of Performance: 1/2 Century Tour Jacky Cheung (Ticket Price: $680, $300, $200)

The modal split for local and non-local visitors varies (As discussed with the Cultural Specialists, it is assumed that 90% are local residents and 10% are non-local residents for PA venues; 60% are local residents and 40% are non-local residents M+ and EC). The major difference between their travelling behaviour is that non-local visitors normally would not have a car available, and would take taxis or coaches instead. Therefore, it is assumed that non-local visitors' private car mode would be zero and taxi and coach modes would be higher than that of the locals.

The characteristics of the venues and audiences such as the type of shows, the ticket prices, the expected income classes of the audiences and car ownership should be taken into consideration. As shown in Table 1, the expected income and car ownership of those audiences of "Midori plays Brahms by Hong Kong Philharmonic Orchestra" would be high and the modal split rating for private car is close to 20%. For the "1/2 Century Tour Jacky Cheung", the income / car ownership of audience will be medium class and low car ownership rate and the modal split of private car rating is about 7%. In WKCD, pop music concert held in the Mega Performance Venue (MPV) would offer acceptable ticket prices and attract the audience with medium income class and low car ownership rate. Therefore, the private car and taxi modes would be low while the public transport mode would be high, and the modal split rating for MPV is classified as "C". By considering the above, every venue was rated "A", "B" or "C" ("A" – High Modal Split of Private Car, "B" – Medium Modal Split of Private Car, "C" Low Modal Split of Private Car).

The detailed modal split for PA and VA venues and Piazzas are shown in **Table 2**.

Table 2 Details of each Modal Split Rating

Venue	Audience / Visitor	Rating	Modal Split (%)		
			Private Car	Taxi	Coach/Public Transport/Walk
CACF Performance Arts Venues and Piazzas	Local Residents	A	20	20	60
		B	14	14	72
		C	7	7	86
	Non-Local Residents	A	0	40	60
		B	0	28	72
		C	0	14	86
CACF Visual Arts Venues	Local Residents	C	7	7	86
	Non-Local Residents	C	0	14	86

Vehicle Occupancy Rate

In the aforementioned TD 54/2008 Study, vehicle occupancy rates for different types of vehicles were also provided. Based on those figures obtained in the TD 54/2008 Study, the occupancy rate for private car is 3 people per car.

Methodology for Deriving the Provisions

Visitor Parking

This provision only serves the private cars driven by the visitors. To estimate the number of private cars using the car park, the total numbers of private cars are divided into three groups, namely:

(i) only pick-up/drop-off the passengers at the lay-by without parking inside WKCD;
(ii) drop-off the passengers and park the cars inside WKCD's car park, and pick-up the passengers at the lay-by again when finish the visit; and
(iii) directly park the car at the car park inside WKCD without using the lay-by.

From the above, car park would only be used by Group (ii) and (iii) private cars. It is assumed the parking (Group ii & iii) to non-parking (Group i) ratio for private car is 9:1.

Apart from the number calculated from the number of audience of PA and VA venues, there are particularly significant RDE inside Xiqu Centre and MPV and such parking provisions are calculated by the standards stated in HKPSG.

The parking spaces are divided into two types, i.e. for disabled persons and for others. The number of parking spaces designated for persons with disabilities is equal to 2% (same as American standard) of the total number of parking spaces or at least equal to 1. Therefore, the number of parking spaces for disabled persons and others are calculated as follows:

- Total No. of parking spaces = [(No. of attendance) x (private car mode %) / (private car occupancy) x (Group ii & iii private car %)] + [parking spaces for RDE] (for Xiqu Centre and MPV only).
- No. of parking spaces for disabled persons = (Total No. of parking spaces x 2%) OR 1, whichever is higher.
- No. of parking spaces for others (i.e. non disabled persons) = (Total No. of parking spaces) – (No. of parking spaces for disabled persons).

The average area required for one parking space for disabled persons and others are 50m2 and 45m2, respectively. The average area includes the area of parking space, aisles, driveways, ramps and columns.

Provisions for VIP Visitors, VIP Artists and Staff

The numbers of provisions for the VIP visitors and VIP artists parking spaces for PA and VA venues as well as staff parking spaces for PA venues are advised by the Consultant's specialist advisor.

The staff parking spaces for VA venues are calculated as follows:

- No. of parking spaces for staff of VA venues = numbers of staff x proportion of management level (assume 20%) x car ownership (assume 50%).
- No. of parking spaces for staff with disabilities = (Total No. of parking spaces x 2%) OR 1, whichever is higher.
- No. of parking spaces for non disabled staff = (Total No. of parking spaces) – (No. of parking spaces for staff with disabilities).

The average area required for one parking space for disabled persons and others are $50m^2$ and $45m^2$, respectively. The average area includes the area of parking space, aisles, driveways, ramps and columns.

The calculated numbers of car parking spaces for various land uses within WKCD are summarized in **Table 3**.

The calculation of Global Parking Standard adopted for residential development in WKCD is as follows:

Global Parking Standard Adopted for Residential Development in WKCD

Factors	Weight (A)	Relevant Values (B)	(A) X (B)
Development Density (Plot Ratio) - Plot Ratio: 1.81 (Between range 1 to 1.99)	25%	0.75	0.1875
Traffic Condition at Peak Hours - Traffic Condition at Canton Road / Austin Road / Jordan Road are congested at Peak Hours	25%	0.25	0.0625
Proximity and convenience for access to major transport corridors or pedestrian links (excluding rail) - Development is within 200m from Union Square PTI and China Ferry Terminal PTI. In addition comprehensive pedestrian network will also be proposed for WKCD linking with surrounding area. Thus it is considered as "Close and Easy Access"	20%	0	0
Availability of Public Car Parking Space in vicinity - Development is within 200m from public car parking facilities including Union Square, Elements and Austin Road West Public Car Park. Thus, it is considered as "Easily Available"	15%	0	0
Level of Illegal Parking - There are very few Illegal Parking within 200m Radius	15%	0.5	0.075
		Sum	**0.325**

GPS Index (GPS) is calculated according to the following formula:

GPSI = Sum [weight x relevant values] for all above factors

GPSI = 25% x 0.75 + 25% x 0.25 + 20% x 0 + 15% x 0 + 15% x 0.5

= 0.325 < 0.5

According to the GPS Guideline, a GPS value of 9 is adopted for a GPSI value of 0.5 or less.

Table 3 Summary of Car Parking Spaces

Land Use			Seating Capacity	Peak Hour Attendance	GFA (m^2)	No. of Unit	GFA for RDE inside PA and VA Venues	Modal Split Rating	Visitors Parking No.		Staff Parking No.		VIP Visitors Parking No.	VIP Artists Parking No.	Total
									Disabled	Others	Disabled	Others			
Core Arts and Cultural Facilities [1]	Performing Arts Venues	Mega Performance Venue	18,000				1,650	C	7	343	1	2	20	4	377
		Great Theatre	1,600				220	A	2	85	2	2	2	2	95
		Musical Theatre	2,000				275	A	3	105	2	2	2	2	116
		Medium Theatre I	800				110	A	1	43	1	1	–	–	46
		Medium Theatre II	600	–	–	–	165	B	1	22	1	1	–	–	25
		Lyric Theatre	1,200				110	A	2	63	1	1	–	–	67
		Centre for Contemporary Performance	1,000				220	C	2	18	3	3	–	–	26
		Free Space	600				187	C	2	10	2	2	–	–	16
		Music Centre	2100				165	A	3	107	2	4	2	2	120
		Xiqu Centre – Main Theatre and Tea House	1,300				3,872	C	2	51	2	2	2	2	61
		Xiqu Centre – Small Theatre	400												
	Visual Arts Venues	M+	–	1,923	61,950	–	–	C	2	95	1	47	5	–	150
		Exhibition Centre	–	1,440	21,495	–	–	C	3	119	1	4	2	–	129
	Piazzas	Large Outdoor Amphitheatre	5,000	–	–	–	–	C	2	93	–	–	–	–	95
								Sub-total	**32**	**1154**	**19**	**71**	**35**	**12**	**1323**
OACF	Arts Education Facilities [2]		–	–	14,300	–	–	–	–	–	–	–	–	–	48
OACF Facilities			–	–	25796	–	–	–	–	–	–	–	–	–	111-154
Office [4]			–	–	107,618	–	–	–	–	–	–	–	–	–	384-563
Retail, Dining and Entertainment [5]			–	–	119,309	–	–	–	–	–	–	–	–	–	398-597
Residential [6]			–	–	145,791	1,298	–	–	–	–	–	–	–	–	613-920
Hotel [7]			–	–	47,005	808	–	–	–	–	–	–	–	–	8
														Total	**2,885-3,613**

Notes:
(1) The car parking provision of Core Arts and Cultural Facilities is derived under the assumptions and methodology given in the "Assumptions and Methodology for Deriving Car Parking Provision in WKCD".
(2) It is calculated by making reference to Ch.8-Table 11-Section 2 in HKPSG. It is assumed that Arts Education belongs to the type of "Technical Institutes" and the size of each classroom is $100m^2$.
(3) It is assumed the type of development of these venues is "Office" and therefore the car parking provision of these developments is derived from HKPSG Ch.8-Table 11-Section 3-Office.
(4) The car parking provision is calculated by reference to HKPSG Ch.8-Table 11-Section 3-Office.
(5) The car parking provision is calculated by reference to HKPSG Ch.8-Table 11-Section 3-Retail.
(6) It is assumed that the average flat size is $112m^2$. The car parking provision is then calculated by reference to HKPSG Ch.8-Table 11-Section 1-Private Housing.
(7) It is assumed that the average room size is $60m^2$. The car parking provision is then calculated by reference to HKPSG Ch.8-Table 11-Section 3-Hotel.

Attachment C2 Response-to-Comment on Parking Strategy Paper submitted 14 July 2011

Comments	Responses
Transport Department, Jimmy KK Yan **Ref: By email dated 4 August 2011**	
1. Justification/basis of the following key assumptions should be provided, as each of these assumptions would affect the required parking spaces:	
(i) For Table 1, 80% of performing arts venues would be occupied.	It is unlikely to have all the PA venues holding performances concurrently. Since the programming strategy for the performance is not yet confirmed, 80% is the assumption agreed within the Design Team including Consultant's Cultural Specialist Advisors.
(ii) For the 2nd paragraph in p.7, 50% of car parking spaces for office/OACF could be shared.	Recent survey was carried out at Citic Tower (Office Development) in Admiralty. Based on the surveyed results, the occupancy of carparking spaces is about 10-15% between 18:00-20:00. By assuming 55% of carpark assigned into hourly carpark, it was estimated that 50% (55% x 0.9) can be shared and used by visitors for CACF venues.
(iii) For the 3rd paragraph in p.7, there would be performance at Piazzas for 30% of the round year period.	This was advised by the Consultant's Cultural Specialist Advisors.
(iv) For the 2nd paragraph in p.8, 50% of the car parks for WKT top side office could be shared.	Recent survey was carried out at Citic Tower (Office Development) in Admiralty. Based on the surveyed results, the occupancy of carparking spaces is about 10-15% between 18:00-20:00. By assuming 55% of carpark assigned into hourly carpark, it was estimated that 50% (55% x 0.9) can be shared and used by visitors for CACF venues. Nevertheless, this would further consult with MTRCL as mentioned in below reply.
(v) For the 1st bullet of section 5.2 of Appendix A, 20% of staff would be management level and 50% of management staff would be car owner.	This assumption has been further checked with Museum Specialist Advisors and are considered to be valid.
2. Please consult MTRCL regarding the proposed sharing of 50% car parks of WKT top side office.	Noted.
3. For Table 7, please advise whether you would adopt the higher or lower side of the range of the total car park spaces.	Taken into consideration the close proximity of MTRC Stations and PTI facilities, the carparking provision towards the lower side of the range would be adopted.

The parking provisions for various types of developments in WKCD were estimated by different standards, assumptions and methodologies.

Annex D Optimisation of Internal Transport Facility Provision

D1 INTRODUCTION

D1.1 Background

On 28 June 2013, the WKCDA announced that they are looking at generating additional gross floor area (GFA) through minor relaxation of GFA and/ or building height restriction under section 16 of the Town Planning Ordinance to optimize the development potential of the WKCD.

A consultant team led by Llewelyn-Davis Hong Kong Limited was thus appointed to facilitate the submission of plot ratio relaxation to Town Planning Board in 1st Quarter of 2014. MVA Hong Kong Limited is the project team traffic consultant and is responsible to assess the new requirements of the car park and goods vehicle loading/ unloading facility resulted from the increase in plot ratio.

It is expected that the increased in internal transport facilities as well as E&M plant rooms would have adverse implications on the extent of the integrated basement. In view of the severe site constraint at the basement and the current uncertainly of investigating potential basement areas for parking spaces and loading/ unloading facilities, alternative measure(s) to minimize the enlargement of the basement extent is essential to confirm the increase in development potential. It has been suggested sharing of car park and servicing facilities between the various land uses may be feasible as the demand profiles of the different land use would be different throughout the day. This technical paper is to enhance the sharing concepts in order to optimize the provision of car parking and goods vehicle servicing facilities within the basement of WKCD.

(i) **Car Parking** - to allow RDE (parking demand maximizes in weekday night time/ weekend afternoon peak) to share the car park of Office (parking peaks in weekday day time)

(ii) **Goods Vehicle Loading/ Unloading** - to apply sharing proposal to CACF and RDE/ Office uses.

D1.2 Development Schedule

The GFA distribution schedule of TR9A/ TR13A of the DP study; of the Scheme Design of Basement Zones 2B & 3A and of this "with" 15% prorate increase in GFA scheme is presented in **Table D1**.

Table D1 Development Schedules

Land Use	GFA Schedule (m^2)		% Change
	DP Scheme/ TPB Submission	"With" 15% GFA Increase	vs DP TPB Submission
CACF	252,240	252,240	0%
OACF	40,098	85,098	+112%
RDE	121,312	138,362	+14%
WKCDA Total	**413,650**	**475,700**	**+15%**
GIC	7,900	9,080	+15%
Hotel	56,000	64,400	+15%
Office	114,730	131,940	+15%
Residential	148,070	170,280	+15%
Government Total	**326,700**	**375,700**	**+15%**
All Total	**740,350**	**851,400**	**+15%**

D2 INTERNAL TRANSPORT FACILITIES REQUIREMENT AND PROVISION

D2.1 Internal Transport Facilities Requirement

Baseline Case: The car parking and goods vehicle servicing requirement estimated in TR9A/ TR13A of the DP study are replicated in **Table D2**.

Table D2 Parking and Servicing Requirements of DP Study

Land Use	DP Study – TR9A/ TR13A			
	GFA (m^2)	Car Parking Requirement		GV L/UL Requirement
		W/O Sharing (1)	With Sharing	
CACF	252,242	1,323	568	51
OACF	40,096	159	159	9
RDE	119,309	398	398	100
WKCDA Total	**411,647**	**1,880**	**1,125**	**160**
GIC	7,900	0	0	0
Hotel	56,000	8	8	4
Office	107,618	384	384	36
Residential	145,791	613	613	20
Government Total	**317,309**	**1,005**	**1,005**	**60**
All Total	**728,956**	**2,885**	**2,130**	**220**

(1) The total car parking provision as approved by the Town Planning Board are:

Arts related facilities	1,482 – 1,525	1,880 – 2,122
RDE	398 – 597	
Office	384 – 563	1,005 – 1,491
Hotel	8	
Residential	613 – 920	
Total Car Parking Provision	**2,885 – 3,613**	

Proposed 15% Pro-rata Increase Case: Whilst during the course of developing the Master Register under the Scheme Design of Basement Zones 2B & 3A Study, a more refined provision analysis which tally with the control scheme was developed. The parking and servicing requirements of the intensified scheme is calculated using the provision formulae/ methodology adopted in the Master Register, except which the requirement of private residential has been updated according to the new HKPSG promulgated by Planning Department on 3 March 2014, the results are presented in **Table D3**. The development zoning plan of WKCD is illustrated in **Figure D1**, below.

The comparison of the parking and servicing requirements between the proposed scheme and the approved DP scheme is summarized in **Table D4**. The loading/ unloading requirements broken down in development packages as in the control scheme are in **Table D5** and the development parcel plan is illustrated in **Figure D2.**

Figure D1 **Development Zoning Plan of WKCD**

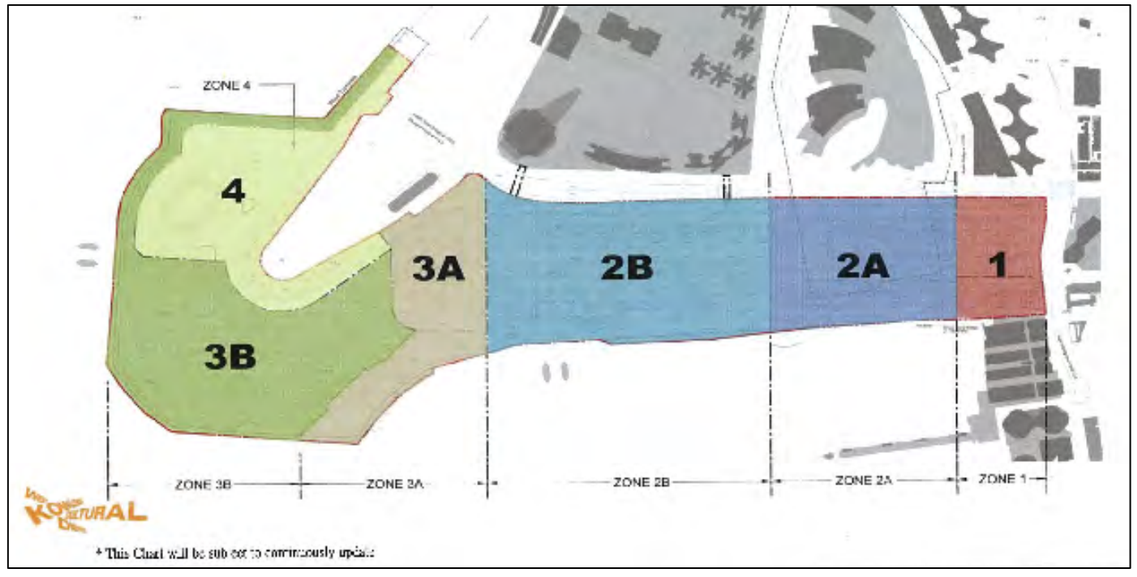


Figure D2 **Development Parcel Plan of WKCD**

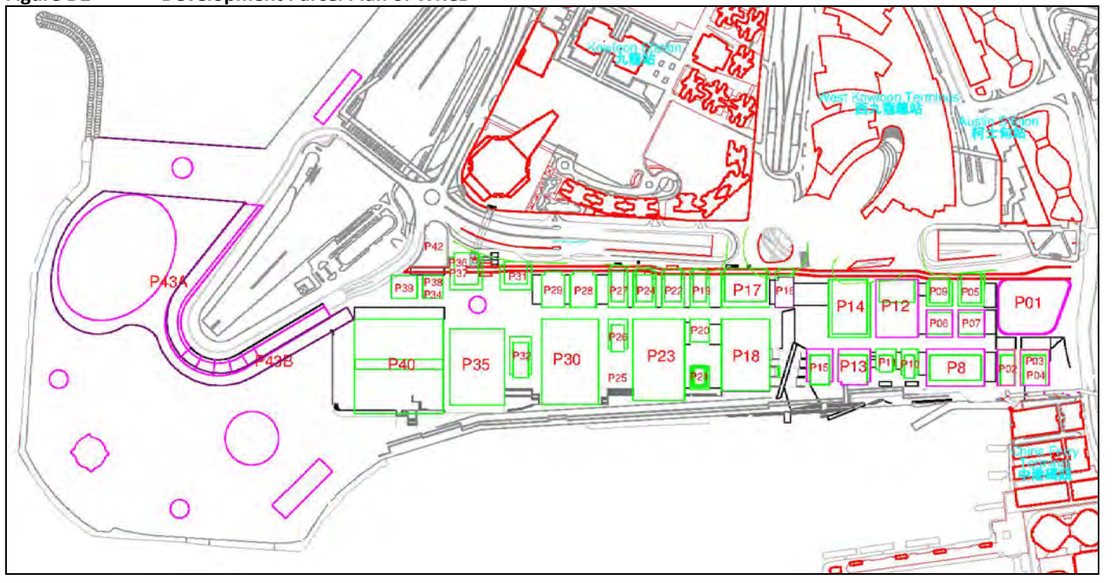


Table D3 **Parking and Servicing Requirements of With 15% Increase in GFA**

Land Use	GFA (m^2)	+15% Pro-rate Increase in GFA					
		Car Parking Requirement			GV L/UL Requirement		
		All	Zones 1, 2A, 2B & 3A	MPV & EC	All	Zones 1, 2A, 2B & 3A	MPV & EC
CACF	252,240	646	196	450	51	34	17
OACF	85,098	363	200	162	34	22	12
RDE	138,362	461	416	45	126	113	13
WKCDA Total	**475,700**	**1,470**	**813**	**658**	**211**	**169**	**42**
GIC	9,080	0	0	0	0	0	0
Hotel	64,400	11	2	8	6	1	5
Office	131,940	465	465	0	47	47	0
Residential	170,280	288	288	0	8	8	0
Government Total	**375,700**	**764**	**755**	**8**	**61**	**56**	**5**
All Total	**851,400**	**2,234**	**1,568**	**666**	**272**	**225**	**47**

Car parking space requirement is calculated using the "car sharing strategy" adopted in DP.

Total CP before sharing	A	2,055 + 819 = **2,874**
Non-sharable CP No.	B	902 + 300 = 1,202
PA CP No. (80% occupancy)	D	390 + 286 = 676
OACF + Office CP in WKCD	E1	665 + 162 = 827
WKT Office CP	E2	451 + 0 = 451
50% of (E) are sharable with PA	0.5x(E1+E2)	558 + 81 = 639
PA CP No. After Sharing	F = D - 0.5E	0 + 205 = 205
CP Requirement after Sharing	B + E1 + F	1,567 + 667 = **2,234**

PA: Performance Arts venues
CP: Car Park
2,055 + 819 = 2,874: 2,055 CP in zones 1, 2A, 2B & 3A + 819 CP in zones 3B & 4 = 2,874 CP in WKCD

Table D4 **Additional Parking and Servicing Requirements Due to Increase in 15% GFA – Of Entire WKCD**

Land Use	Requirements (no.)		Additional Requirement vs TR9A/ TR13A
	DP – TR9A/ 13A	+ 15% GFA Increase	
Car Parking			
CACF	568	646	+78
OACF	159	363	+204
RDE	398	461	+63
WKCDA Total	**1,125**	**1,470**	**+345**
GIC	0	0	+0
Hotel	8	11	+3
Office	384	465	+81
Residential	613	288	-325
Government Total	**1,005**	**764**	**-241**
All Total	**2,130**	**2,234**	**+104**
GV Loading/ Unloading			
CACF	51	51	+0
OACF	9	34	+25
RDE	100	126	+26
WKCDA Total	**160**	**211**	**+51**
GIC	0	0	+0
Hotel	4	6	+2
Office	36	47	+11
Residential	20	8	-12
Government Total	**60**	**61**	**+1**
All Total	**220**	**272**	**+51**

Table D5 Servicing Requirements (by Package) Due to Increase in 15% GFA

Package	Parcel	Requirement (no.)		Additional Requirement
		DP – TR9A/ 13A	+ 15% GFA	
Development Zones 1, 2A, 2B & 3A				
00	P41	0	0	0
01	P01 (Xiqu)	11	9	-3
02	P02, P03, P04	8	12	+4
03	P05, P06, P07, P09	12	17	+5
04	P08 (Proscenium)	6	9	+3
05	P10, P11, P13, P15	17	12	-5
	P16, P17	8	20	+12
06	P12 (Thrust), (CCP)	11	9	-2
07	P14	6	21	+15
08	P18 (Music)	9	7	-2
09	P19, P22	6	11	+5
	P24, P27	7	4	-3
10	P20	2	3	+1
11	P21	2	2	0
12	P23 (Musical), P25	10	10	0
13	P26	4	6	+2
14	P28, P29	7	6	-1
15	P30 (Great)	9	10	+1
16	P31	7	9	+2
17	P32	3	5	+2
18	P34, P36, P37, P38	13	14	+1
19	P35 (Lyric)	7	11	+4
20	P39, P40 (M+)	14	18	+4
25	P42	0	0	0
DZ 1, 2A, 2B & 3A Total:		**180**	**225**	**+45**
Development Zones 3B & 4				
21	P46 (MPV), P47	18	15	-3
22	P43A, P43B, P44	16	19	+3
23	P50, (Outdoor Theatre), P51 (Freespace), P48, P49, P52 – P56	6	8	+2
24	P33, P41, Basement Edge	0	5	+5
DZ 3B & 4 Total:		**40**	**47**	**+7**
Entire WKCD Total:		**220**	**272**	**+52**

D3 OPTIMIZATION OF PARKING AND SERVICING PROVISIONS

D3.1 Optimization Strategy

It was considered that the same sharing concept as adopted in the DP stage was feasible and can be further optimized if an average demand profile were to be acquired through surveys of established developments with similar nature in Hong Kong. The latest methodology elaborated on the principle that the peak demands generated by different land uses would occur at different times throughout a day. A series of traffic surveys to determine the hourly car park demand of weekdays and weekends for various land uses were undertaken. And the weighted average demand profile curves of office, RDE and PA venue uses measured from the survey were then superimposed together to ascertain the combined parking demands as well as the current refined car park optimization strategy. In order to provide a very conservative parking demand analysis, the peak of the surveyed demand profile of each type of land us, which less than the HKPSG requirement for all land use type under surveyed, were factored up such that the peak demands equate with the current HKPSG requirement.

A sensitivity test was also undertaken to study the effect of extending the car park peak demand period for office, RDE and PA venue use. A higher combined peak period was calculated with office peak parking demand extended one hour later while peak parking demands for RDE and PA venue extended one hour earlier.

D3.2 Car Parking

The DP assumed that PA performances are normally arranged in night time and audience would arrive 1-2 hours before the shows, hence the car parks for the PA venues would start to be utilized at 1800, and would be fully occupied during 2000-2300 and be minimal after 2330. Likewise, the peak periods of RDE would occur on weekday evening, and weekend afternoon to evening. Whilst the car park of office would be reduced to minimal in around 2 hours after the office hours 0900-1800. Hence, there is a staggering of the car par utilization periods between PA venues/ RDE and office/ OACF, and possible to share the car parks of PA venues and RDE with offices and OACF.

A traffic survey to determine the hourly parking demand profiles of CACF, RDE and Office/ OACF uses was undertaken in January 2014, the survey results are shown in **Attachment D1**. The combined occupancy profile for the WKCD was calculated based on the requirements suggested by HKPSG for each land use and the weighted average demand profile in percentage calculated for the relevant land use. The daily car parking/ loading profiles were used to calculate an average weekly profile for each survey location. The average weekly profiles of each survey location were used to calculate a weighted average demand profile according to land use (office/ RDE/ CACF). The weights were set based on the GFA of the corresponding development.

The following **Tables D6 and D7** summarize the hourly demands of the PA venue, RDE and Office/ OACF uses.

Table D6 Hourly Car Parking Demand (Percentage of Daily Peak)

Time of the Day	Hourly Car Parking Demand (% of the Daily Peak)					
	Weekday			Weekend		
	PA Venue Visitor	Office	RDE	PA Venue Visitor	Office	RDE
0700	0%	41%	11%	0%	38%	17%
0800	0%	63%	10%	0%	39%	17%
0900	0%	95%	15%	0%	44%	23%
1000	0%	99%	18%	0%	46%	31%
1100	0%	**100%**	22%	0%	47%	43%
1200	0%	99%	34%	0%	50%	61%
1300	0%	97%	50%	0%	52%	79%
1400	0%	98%	55%	0%	50%	83%
1500	0%	97%	48%	0%	41%	84%
1600	0%	96%	41%	0%	38%	82%
1700	4%	89%	39%	4%	37%	83%
1800	7%	72%	42%	7%	41%	86%
1900	25%	58%	55%	25%	46%	98%
2000	99%	49%	68%	99%	44%	**100%**
2100	**100%**	41%	65%	**100%**	38%	91%
2200	**100%**	37%	46%	**100%**	34%	69%
2300	54%	35%	22%	54%	32%	39%
2400	6%	34%	14%	6%	32%	30%

Table D7 Hourly Car Parking Demand (No. of Parking Space Required)

Time of the Day		Hourly Car Parking Demand (No. of Parking Space Required)							
		DZ 1, 2A, 2B & 3A				DZ 3B & 4			
		PA Venue Visitor	OACF	Office	RDE	PA Venue Visitor	OACF	Office	RDE
WEEKDAY	0700	0	82	192	47	0	55	0	5
	0800	0	126	292	40	0	84	0	4
	0900	0	189	440	61	0	126	0	7
	1000	0	198	459	74	0	131	0	8
	1100	0	**200**	**465**	93	0	**133**	0	10
	1200	0	197	458	141	0	131	0	15
	1300	0	194	452	207	0	129	0	22
	1400	0	196	457	230	0	131	0	25
	1500	0	195	453	200	0	130	0	22
	1600	0	192	447	171	0	128	0	18
	1700	16	178	413	162	12	118	0	18
	1800	26	144	335	177	19	96	0	19
	1900	97	116	270	228	71	77	0	25
	2000	387	97	226	283	284	65	0	31
	2100	**390**	82	190	271	**286**	54	0	29
	2200	**390**	73	170	190	**286**	48	0	21
	2300	210	69	161	92	154	46	0	10
	2400	24	68	158	59	17	45	0	6
WEEKEND	0700	0	75	175	70	0	50	0	8
	0800	0	78	181	72	0	52	0	8
	0900	0	87	203	97	0	58	0	10
	1000	0	92	215	130	0	62	0	14
	1100	0	94	219	181	0	62	0	20
	1200	0	100	233	254	0	67	0	27
	1300	0	105	243	327	0	70	0	35
	1400	0	100	232	344	0	67	0	37
	1500	0	83	192	351	0	55	0	38
	1600	0	77	179	340	0	51	0	37
	1700	16	73	170	347	12	48	0	37
	1800	26	81	189	357	19	54	0	39
	1900	97	91	212	407	71	61	0	44
	2000	387	88	205	**416**	284	58	0	**45**
	2100	**390**	77	178	377	**286**	51	0	41
	2200	**390**	67	156	287	**286**	44	0	31
	2300	210	64	149	163	154	43	0	18
	2400	24	64	149	126	17	43	0	14

VISITOR CAR PARK REQUIREMENTS

	Zones 1, 2A, 2B & 3A	Zones 3B & 4
PA Venue (80% full)	390	286
OACF	200	133
Office	465	0
RDE	416	45

The car park demand of WKCD of the increased GFA scenario is shown in **Tables D8 – D9**.

Table D8 **Hourly Car Parking Demand of Development Zones 1, 2A, 2B & 3A**

Time of the Day		Hourly Car Parking Demand (No. of Parking Space Required)								
		CACF								
		Staff + VIP + VA Venue Visitor	PA Venue Visitor	OACF	Office	RDE	Hotel	Resid.	WKT topside Office	TOTAL
		196	**390**	**200**	**465**	**416**	**2**	**288**	**451**	
WEEKDAY	0700	196	0	82	192	47	2	288	186	992
	0800	196	0	126	292	40	2	288	284	1,228
	0900	196	0	189	440	61	2	288	426	1,602
	1000	196	0	198	459	74	2	288	446	1,662
	1100	196	0	**200**	**465**	93	2	288	**451**	1,695
	1200	196	0	197	458	141	2	288	445	1,727
	1300	196	0	194	452	207	2	288	438	1,777
	1400	196	0	196	457	230	2	288	443	**1,812**
	1500	196	0	195	453	200	2	288	439	1,772
	1600	196	0	192	447	171	2	288	434	1,729
	1700	196	16	178	413	162	2	288	401	1,656
	1800	196	26	144	335	177	2	288	325	1,492
	1900	196	97	116	270	228	2	288	262	1,460
	2000	196	387	97	226	283	2	288	219	1,698
	2100	196	**390**	82	190	271	2	288	185	1,603
	2200	196	**390**	73	170	190	2	288	165	1,475
	2300	196	210	69	161	92	2	288	156	1,175
	2400	196	24	68	158	59	2	288	153	948
WEEKEND	0700	196	0	75	175	70	2	288	170	976
	0800	196	0	78	181	72	2	288	176	994
	0900	196	0	87	203	97	2	288	197	1,069
	1000	196	0	92	215	130	2	288	209	1,132
	1100	196	0	94	219	181	2	288	212	1,192
	1200	196	0	100	233	254	2	288	226	1,299
	1300	196	0	105	243	327	2	288	236	1,396
	1400	196	0	100	232	344	2	288	225	1,386
	1500	196	0	83	192	351	2	288	186	1,299
	1600	196	0	77	179	340	2	288	174	1,255
	1700	196	16	73	170	347	2	288	165	1,257
	1800	196	26	81	189	357	2	288	184	1,323
	1900	196	97	91	212	407	2	288	206	1,499
	2000	196	387	88	205	**416**	2	288	199	**1,780**
	2100	196	**390**	77	178	377	2	288	173	1,681
	2200	196	**390**	67	156	287	2	288	152	1,538
	2300	196	210	64	149	163	2	288	145	1,218
	2400	196	24	64	149	126	2	288	144	993

Table D9 **Hourly Car Parking Demand of Development Zones 3B & 4**

Time of the Day		Hourly Car Parking Demand (No. of Parking Space Required)							
		CACF							
		Staff + VIP + VA Venue Visitor	PA Venue Visitor	OACF	Office	RDE	Hotel	Resid.	TOTAL
		247	**286**	**133**	**0**	**45**	**8**	**0**	
WEEKDAY	0700	247	0	55	0	5	8	0	315
	0800	247	0	84	0	4	8	0	343
	0900	247	0	126	0	7	8	0	388
	1000	247	0	131	0	8	8	0	394
	1100	247	0	**133**	0	10	8	0	398
	1200	247	0	131	0	15	8	0	401
	1300	247	0	129	0	22	8	0	406
	1400	247	0	131	0	25	8	0	411
	1500	247	0	130	0	22	8	0	407
	1600	247	0	128	0	18	8	0	401
	1700	247	12	118	0	18	8	0	403
	1800	247	19	96	0	19	8	0	389
	1900	247	71	77	0	25	8	0	428
	2000	247	284	65	0	31	8	0	**635**
	2100	247	**286**	54	0	29	8	0	624
	2200	247	**286**	48	0	21	8	0	610
	2300	247	154	46	0	10	8	0	465
	2400	247	17	45	0	6	8	0	323
WEEKEND	0700	247	0	50	0	8	8	0	313
	0800	247	0	52	0	8	8	0	315
	0900	247	0	58	0	10	8	0	323
	1000	247	0	62	0	14	8	0	331
	1100	247	0	62	0	20	8	0	337
	1200	247	0	67	0	27	8	0	349
	1300	247	0	70	0	35	8	0	360
	1400	247	0	67	0	37	8	0	359
	1500	247	0	55	0	38	8	0	348
	1600	247	0	51	0	37	8	0	343
	1700	247	12	48	0	37	8	0	352
	1800	247	19	54	0	39	8	0	367
	1900	247	71	61	0	44	8	0	431
	2000	247	284	58	0	**45**	8	0	**642**
	2100	247	**286**	51	0	41	8	0	633
	2200	247	**286**	44	0	31	8	0	616
	2300	247	154	43	0	18	8	0	470
	2400	247	17	43	0	14	8	0	329

The above car park sharing demand assessment is illustrated in **Figures D3 to D6**

Figure D3 Combined Car Park Demand of Development Zones 1, 2A, 2B & 3A – Weekday

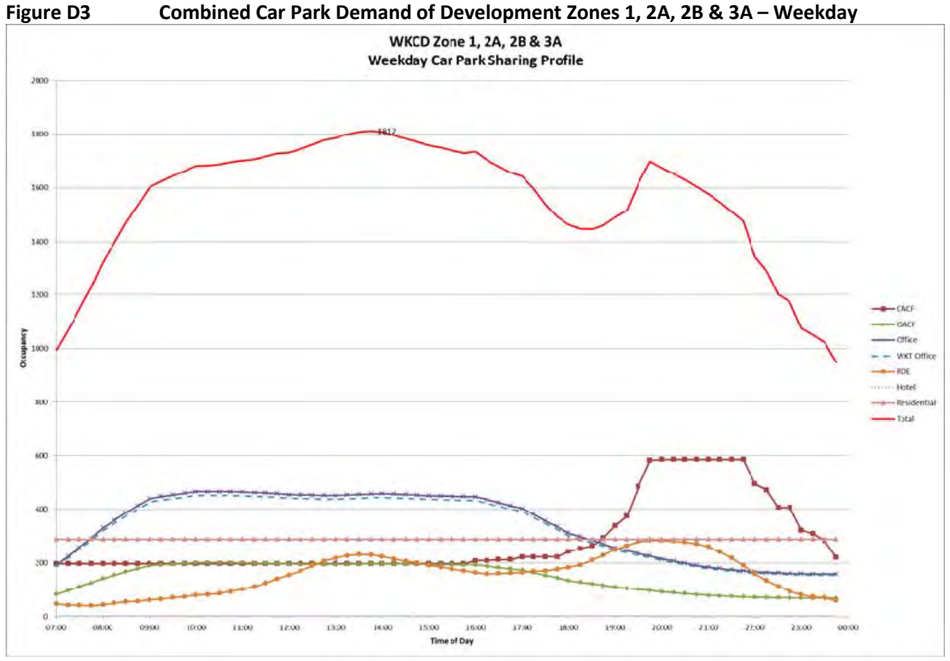


Figure D4 Combined Car Park Demand of Development Zones 1, 2A, 2B & 3A - Weekend

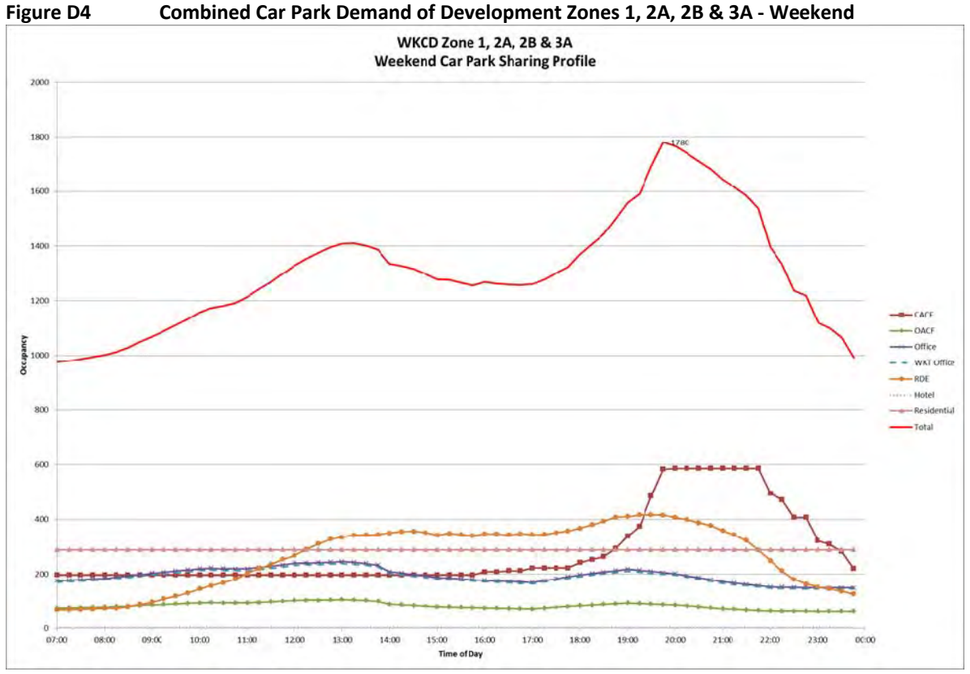


Figure D5 Combined Car Park Demand of Development Zones 3B & 4 - Weekday

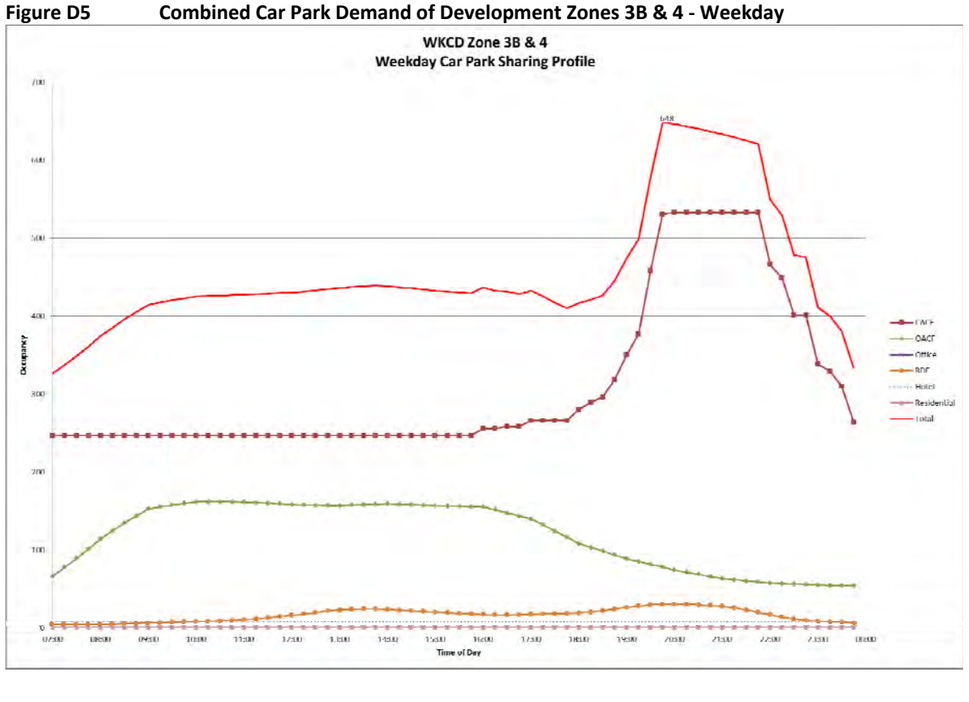
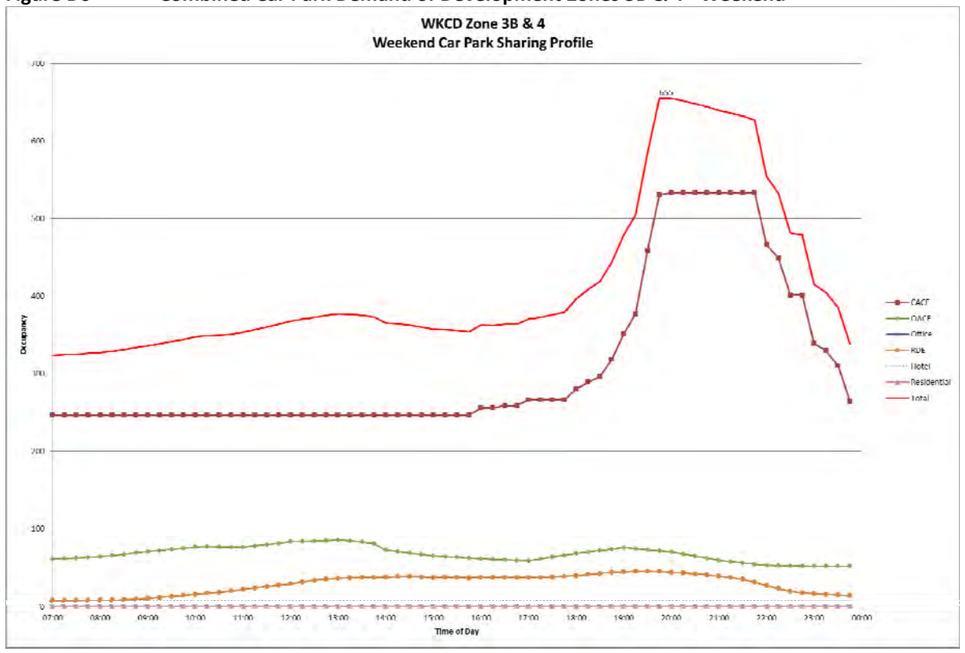


Figure D6 Combined Car Park Demand of Development Zones 3B & 4 - Weekend



D3.3 Sensitivity Analysis of Car Park Sharing Optimization Strategy – Varying Peak Period

In order to enhance the robustness of the strategy, a sensitivity test consists of varying peak demand periods for the different land use was undertaken. It involves bringing the peak demand of PA Venue and RDE earlier and postpones the peak of office/ OACF in weekday nighttime and weekend afternoon to extend the overlapping duration of the two peak periods to account for a worst of the worst case scenario. The estimation of the car parking requirement through bringing forward and postponement of peak periods are shown in **Table D10 and D11**.

The peak combined WKCD Development Zones 1, 2A, 2B and 3A and the WKT topside office development car parking demand resulted from the sensitivity test was calculated to have a total demand of 1,960 spaces on a normal weekday and 1,800 spaces on a normal weekend. With 451 spaces from WKT topside office development deducted from 1,960, the minimum provision of **1,509** car parking spaces within Zones 1, 2A, 2B and 3A would be recommended.

For Development Zones 3B & 4, the peak demand was calculated to be 666 and 647 spaces on a normal weekday and weekend respectively. The recommended minimum provision of car parking spaces at the basement of MPV would be **666** spaces.

Overall, the sensitivity test would suggest the total car park requirement for WKCD is **1,509 + 666 = 2,175 car parking spaces**, an addition of 180 car parking spaces when compared to the mean optimization calculation result. There is an equivalent of approximately 9% of buffer allowed for.

WKCDA is currently exploring feasibilities of locating more underground car parks such as (i) above the AEL tunnel box and (ii) under the Park (see **Figure D7**), where altogether can provide 300 nos. or more car parking spaces. Albeit the technical feasibility and the resultant no. of car parking spaces that can be provided at these areas are uncertain as of this submission, it is suggested that an upper end provision which is capped by the "without" sharing requirement can be imposed to allow future flexibility in planning the underground car parks in WKCD and the magnitude that the car sharing has to be adopted.

The recommended car park requirements based on the car sharing, optimization and sensitivity test is presented in **Table D12**. The breakdown of car parking provision by land use under the car park optimization, which is estimated in proportion to the HKPSG requirement before sharing, are also presented in **Table D12**.

Figure D7 **Possible Locations for Additional Car Park Facilities**

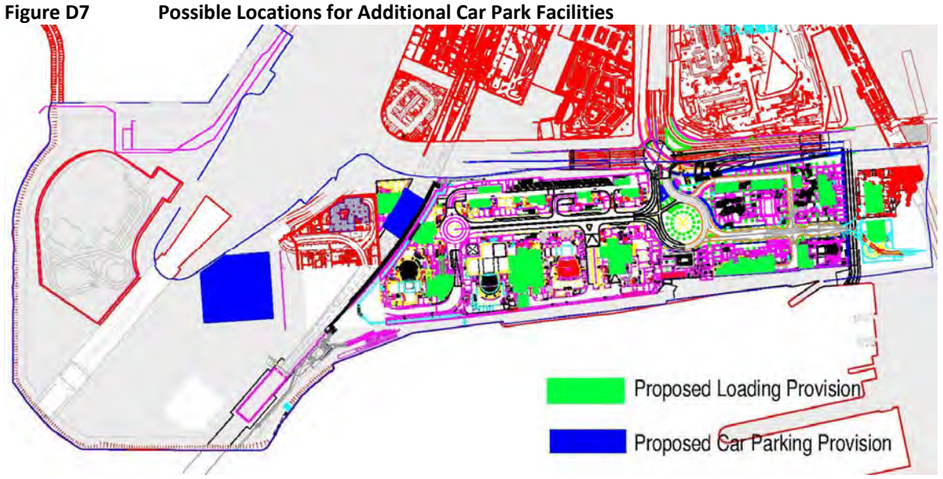


Table D10 **Sensitivity Test - Hourly Car Parking Demand of Development Zones 1, 2A, 2B & 3A**

Time of the Day		Hourly Car Parking Demand (No. of Parking Space Required)															
		CACF															
		Staff + VIP + VA Venue Visitor		PA Venue Visitor		OACF		Office		RDE		Hotel	Resid.	WKT topside Office		TOTAL	
		196		**390**		**200**		**465**		**416**		**2**	**288**	**451**			
WEEKDAY	0700	196		0		82		192		47		2	288	186		992	
	0800	196		0		126		292		40		2	288	284		1,228	
	0900	196		0		189		440		61		2	288	426		1,602	
	1000	196		0		198		459		74		2	288	446		1,662	
	1100	196		0		**200**		**465**		93		2	288	**451**		1,695	
	1200	196		0		197		458		141		2	288	445		1,727	
	1300	196		0		194		452		207		2	288	438		1,777	
	1400	196		0		196		457		230		2	288	443		**1,812**	
	1500	196		0		195		453		200		2	288	439		1,772	
	1600	196		0	**16**	192	**195**	447	**453**	171		2	288	434	**439**	1,729	1,760
	1700	196		16	**26**	178	**192**	413	**447**	162	**177**	2	288	401	**434**	1,656	1,762
	1800	196		26	**97**	144	**178**	335	**413**	177	**228**	2	288	325	**401**	1,492	1,803
	1900	196		97	**387**	116	**144**	270	**335**	228	**283**	2	288	262	**325**	1,460	**1,960**
	2000	196		387	**390**	97	**116**	226	**270**	283		2	288	219	**262**	1,698	1,807
	2100	196		**390**		82	**97**	190	**226**	271		2	288	185	**219**	1,603	1,689
	2200	196		**390**		73	**82**	170	**190**	190		2	288	165	**185**	1,475	1,523
	2300	196		210		69	**73**	161	**170**	92		2	288	156	**165**	1,175	1,196
	2400	196		24		68	**69**	158	**161**	59		2	288	153	**156**	948	955
WEEKEND	0700	196		0		75		175		70	**72**	2	288	170		976	978
	0800	196		0		78		181		72	**97**	2	288	176		994	1,018
	0900	196		0		87		203		97	**130**	2	288	197		1,069	1,103
	1000	196		0		92		215		130	**181**	2	288	209		1,132	1,183
	1100	196		0		94		219		181	**254**	2	288	212		1,192	1,265
	1200	196		0		100		233		254	**327**	2	288	226		1,299	1,372
	1300	196		0		105		243		327	**344**	2	288	236		1,396	1,414
	1400	196		0		100	**105**	232	**243**	344	**351**	2	288	225	**236**	1,386	1,421
	1500	196		0		83	**100**	192	**232**	351	**351**	2	288	186	**225**	1,299	1,394
	1600	196		0	**16**	77	**83**	179	**192**	340	**347**	2	288	174	**186**	1,255	1,310
	1700	196		16	**26**	73	**77**	170	**179**	347	**357**	2	288	165	**174**	1,257	1,299
	1800	196		26	**97**	81	**81**	189	**189**	357	**407**	2	288	184	**184**	1,323	1,444
	1900	196		97	**387**	91	**91**	212	**212**	407	**416**	2	288	206	**206**	1,499	1,798
	2000	196		387	**390**	88	**91**	205	**212**	**416**		2	288	199	**206**	**1,780**	**1,800**
	2100	196		**390**		77	**88**	178	**205**	377		2	288	173	**199**	1,681	1,745
	2200	196		**390**		67	**77**	156	**178**	287		2	288	152	**173**	1,538	1,591
	2300	196		210		64	**67**	149	**156**	163		2	288	145	**152**	1,218	1,234
	2400	196		24		64		149		126		2	288	144		993	

Parking demand which is brought forward is shown in **red**
Parking demand which is postponed is shown in **purple**
Sensitivity analysis is shown in color

Table D11 **Sensitivity Test - Hourly Car Parking Demand of Development Zones 3B & 4**

Time of the Day		Hourly Car Parking Demand (No. of Parking Space Required)											
		CACF				OACF		Office	RDE		Hotel	Resid.	TOTAL	
		Staff + VIP + VA Venue Visitor		PA Venue Visitor										
		247		**286**		**133**		**0**	**45**		**8**	**0**		
WEEKDAY	0700	247		0		55		0	5		8	0	315	
	0800	247		0		84		0	4		8	0	343	
	0900	247		0		126		0	7		8	0	388	
	1000	247		0		131		0	8		8	0	394	
	1100	247		0		**133**		0	10		8	0	398	
	1200	247		0		131		0	15		8	0	401	
	1300	247		0		129		0	22		8	0	406	
	1400	247		0		131		0	25		8	0	411	
	1500	247		0		130		0	22		8	0	407	
	1600	247		0	**12**	128	130	0	18		8	0	401	415
	1700	247		12	**19**	118	128	0	18	**19**	8	0	403	421
	1800	247		19	**71**	96	118	0	19	**25**	8	0	389	469
	1900	247		71	**284**	77	96	0	25	**31**	8	0	428	**666**
	2000	247		284	**286**	65	77	0	31		8	0	**635**	649
	2100	247		**286**		54	65	0	29		8	0	624	635
	2200	247		**286**		48	54	0	21		8	0	610	616
	2300	247		154		46	48	0	10		8	0	465	467
	2400	247		17		45	46	0	6		8	0	323	324
WEEKEND	0700	247		0		50		0	8	**8**	8	0	313	313
	0800	247		0		52		0	8	**10**	8	0	315	317
	0900	247		0		58		0	10	**14**	8	0	323	327
	1000	247		0		62		0	14	**20**	8	0	331	337
	1100	247		0		62		0	20	**27**	8	0	337	344
	1200	247		0		67		0	27	**35**	8	0	349	352
	1300	247		0		70		0	35	**37**	8	0	360	359
	1400	247		0		67		0	37	**38**	8	0	359	363
	1500	247		0		55		0	38	**38**	8	0	348	359
	1600	247		0	**12**	51	55	0	37	**37**	8	0	343	359
	1700	247		12	**19**	48	51	0	37	**39**	8	0	352	364
	1800	247		19	**71**	54	48	0	39	**44**	8	0	367	418
	1900	247		71	**284**	61	54	0	44	**45**	8	0	431	638
	2000	247		284	**286**	58	61	0	**45**		8	0	**642**	**647**
	2100	247		**286**		51	58	0	41		8	0	633	640
	2200	247		**286**		44	51	0	31		8	0	616	623
	2300	247		154		43	44	0	18		8	0	470	471
	2400	247		17		43		0	14		8	0	329	

Parking demand which is brought forward is shown in **red**
Parking demand which is postponed is shown in **purple**
Sensitivity analysis is shown in color

Table D12 **Proposed Car Parking Provision for WKCD**

		Development Zones		Total
		1, 2A, 2B & 3A	3B & 4	
DP car park requirement	without sharing	2,885		2,885
	with PA/Office/OACF sharing	2,130		2,130
Car Parking Requirement for GFA Increase	without sharing	2,055	790	2,845
	with PA/Office/OACF sharing	1,568	666	2,234
	with PA/Office/OACF/RDE sharing	1,361	642	2,003
	with PA/Office/OACF/RDE sharing & varying peak period	**1,509**	**666**	**2,175**
Proposed Car Parking Spaces Requirement		**1,509 - 2,055**	**666 - 790**	**2,175 – 2,845**
CACF	- Staff + VIP + VA Venue Visitor	196	247	443
	- PA Venue Visitor	0 - 487	233 - 357	233 – 844
OACF		189 - 200	133	322 – 333
Office		440 - 465	0	440 – 465
RDE		393 - 416	45	438 – 461
Hotel		3	8	11
Residential		288	0	288

(1) The proportionate amongst sharable car park is calculated:
IF ("Sharable" CP Number) – HKPSG CP requirement of (OACF + Office + RDE) ≥ 0;
THEN OACF/ Office/ RDE follows HKPSG CP requirement
AND PA Visitor CP = "Sharable" CP Number - HKPSG CP requirement of (OACF + Office + RDE)
For example see DZ 3B & 4
IF ("Sharable" CP Number) –HKPSG CP requirement of (OACF + Office + RDE] < 0;
THEN PA Visitor CP = 0
AND CP requirement of OACF/ Office/ RDE = "Sharable" CP Number x HKPSG CP requirement of that Landuse ÷ Total HKPSG CP Requirement
For example see DZ 1, 2A, 2B & 3A

DZ 1, 2A, 2B & 3A	No. of Car Parking			
Proposed Lower End	**1,509**	**--**	**1,509**	**1,509**
CACF Staff & VIP (non-sharable)	196	--	196	196
CACF PA Visitor (sharable)	1,509-196-3-288 = 1,022	1,022-200-465-416 = -59 < 0	0	0
OACF (sharable)			1,022	1,022x200÷(200+465+416)=189
Office (sharable)				1,022x465÷(200+465+416)=440
RDE (sharable)				1,022x416÷(200+465+416)=393
Hotel (non-sharable)	3	--	3	3
Residential (non-sharable)	288	--	288	288

DZ 3B & 4	No. of Car Parking		
Proposed Lower End	**666**	**--**	**666**
CACF Staff & VIP (non-sharable)	247	--	247
CACF PA Visitor (sharable)	= 666 - 247 - 8 - 0 = 411	411 – 133 – 45 = 233 ≥ 0	666 – 247 – 133 – 45 – 8 = 233
OACF (sharable)			133
Office (sharable)			0
RDE (sharable)			45
Hotel (non-sharable)	8	--	8
Residential (non-sharable)	0	--	0

D3.4 Goods Vehicle Loading/ Unloading Facility

The loading bay recommendations in DP is based on the theatre consultant's experience and practice in the United States and it is studied totally independently to the RDE requirements under HKPSG and assumed the two loading docks are to be operated independently. However, the design of the integrated basement for WKCD combined the loading docks for all the uses (CACF/ RDE/ OACF/ Office) within the same land parcel/ development package into one and it will be managed by one facility management. Under this assumption the loading bays of the CACF, RDE and Offices can be shared and hence the number of loading bays can be reduced. The theatre loading bays are only to be used for the hirer of Performance Venue, the hirer will need to book the theatre or rehearsal hall before gaining access to the loading bays on designated dates. Therefore the facility management can schedule the use and access to the loading bays and coordinate the uses between Theatre, RDE & Office.

With reference to Xiqu Centre, the theatre consultant and WKCDA advised the load in and load out time for performances are fairly standardised. The theatre and production materials load to the theatre in the morning to prepare for the performances in the evening. After performances, the theatre and production materials generally load into the trucks to leave the venue in the late evening. This will help scheduling and the shared use of the loading dock in CACF/ Performance Arts Venue parcels.

Traffic surveys to reveal the operational servicing hourly demand profile were undertaken at PA venue: City Hall and Cultural Centre, retail malls and office developments in Jan 2013. The survey report is enclosed in **Attachment D1**. Similar to car parking, the combined occupancy profile for the WKCD was calculated based on the requirements suggested by HKPSG for each land use and the weighted average demand profile in percentage calculated for the relevant land use.

The following **Table D13** summarizes the hourly demands of PA venue, RDE and Office/ OACF uses. And the hourly servicing demand of those development parcels/ packages where has the PA venue component and the optimization proposal is applicable are shown in **Table D14**.

Figures D8 – D15 illustrate the superimposed GV demand profiles of the concerned development parcels/ packages.

With adoption of the above optimization schemes, the adjusted GV loading/ unloading requirement of each development package is presented in **Table D15**.

As mentioned above, all of the loading and unloading areas in the integrated basement will be under a single facility management, hence more operational measures shall be formulated by WKCDA in order to help and manage the delivery activity in various loading docks so as to avoid queue outside the loading dock and block off the basement driveway. Measure may include providing real time information to assign trucks to waiting areas, coach parking or other loading/unloading bays within WKCD property if all the loading bays in a particular development package/ parcel are occupied.

Table D13 Hourly Goods Vehicle Servicing Demand (Percentage of Daily Peak)

Time of the Day	Hourly Goods Vehicle Servicing Demand (% of the Daily Peak)							
	Weekday				Weekend			
	PA Venue		Office	RDE	PA Venue		Office	RDE
	theatre	coliseum			theatre	coliseum		
0700	0%	39%	41%	25%	0%	39%	21%	39%
0800	0%	39%	41%	25%	0%	39%	21%	39%
0900	17%	22%	97%	68%	17%	22%	45%	49%
1000	0%	39%	**100%**	85%	0%	39%	51%	66%
1100	0%	39%	**100%**	85%	0%	39%	51%	66%
1200	0%	78%	83%	**100%**	0%	78%	37%	58%
1300	17%	59%	76%	**100%**	17%	59%	39%	53%
1400	50%	66%	75%	99%	50%	66%	0%	58%
1500	50%	**100%**	81%	91%	50%	**100%**	0%	49%
1600	**100%**	83%	72%	89%	**100%**	83%	0%	48%
1700	67%	84%	69%	70%	67%	84%	0%	41%
1800	33%	84%	55%	43%	33%	84%	0%	28%
1900	33%	78%	24%	35%	33%	78%	0%	25%
2000	33%	64%	4%	30%	33%	64%	0%	24%
2100	0%	59%	4%	25%	0%	59%	0%	24%
2200	0%	59%	4%	22%	0%	59%	0%	24%
2300	0%	59%	4%	16%	0%	59%	0%	20%
2400	0%	39%	1%	12%	0%	39%	0%	5%

Table D14 Hourly Goods Vehicle Servicing Demand (No. of Loading Bay Required for PA Parcels)

Time of the Day	Hourly Goods Vehicle Servicing Demand (No. of Loading Bay Required)									
	Weekday					Weekend				
	PA Venue	OACF	Office	RDE	Total	PA Venue	OACF	Office	RDE	Total
Development Package 04 (P08 Proscenium Theatre)										
0700	0	0	1	1	2	0	0	1	1	2
0800	0	0	2	1	4	0	0	1	1	2
0900	0	0	3	2	5	1	0	1	1	3
1000	0	0	3	2	5	0	0	2	2	4
1100	0	0	3	3	5	0	0	1	2	3
1200	0	0	2	3	5	0	0	1	2	3
1300	1	0	2	3	6	1	0	1	1	3
1400	2	0	2	3	7	2	0	0	2	3
1500	2	0	2	3	7	2	0	0	1	3
1600	3	0	2	2	7	3	0	0	1	4
1700	2	0	2	2	6	2	0	0	1	3
1800	1	0	2	1	4	1	0	0	1	2
1900	1	0	0	1	2	1	0	0	1	2
2000	1	0	0	1	2	1	0	0	1	2
2100	0	0	0	1	1	0	0	0	1	1
2200	0	0	0	1	1	0	0	0	1	1
2300	0	0	0	0	1	0	0	0	1	1
2400	0	0	0	0	0	0	0	0	1	1
Development Package 06 & 07 (P12 Proscenium Thrust Theatre, CCP, P14)										
0700	0	2	3	3	8	0	1	1	5	7
0800	0	4	5	6	14	0	2	2	5	9
0900	0	5	7	8	20	0	2	3	6	11
1000	0	5	7	9	21	0	3	4	8	14
1100	0	4	6	10	20	0	2	3	7	13
1200	0	4	6	12	21	0	2	3	7	11
1300	1	4	5	11	21	1	2	3	6	12
1400	3	4	5	12	23	3	0	0	7	10
1500	3	4	6	11	24	2	0	0	6	8
1600	6	3	5	9	24	6	0	0	5	11
1700	4	3	5	8	21	4	0	0	5	9
1800	1	3	4	5	13	2	0	0	3	5
1900	0	1	2	4	7	2	0	0	3	5
2000	2	0	0	4	6	2	0	0	3	5
2100	0	0	0	3	3	0	0	0	3	3
2200	0	0	0	3	3	0	0	0	3	3
2300	0	0	0	2	2	0	0	0	2	2
2400	0	0	0	1	2	0	0	0	1	1

Time of the Day	Hourly Goods Vehicle Servicing Demand (No. of Loading Bay Required)									
	Weekday					Weekend				
	PA Venue	OACF	Office	RDE	Total	PA Venue	OACF	Office	RDE	Total
Development Package 08 (P18 Music Centre)										
0700	0	0	0	1	1	0	0	0	2	2
0800	0	0	0	2	2	0	0	0	2	2
0900	1	0	0	2	3	1	0	0	2	2
1000	0	0	0	3	3	0	0	0	3	3
1100	0	0	0	3	3	0	0	0	2	2
1200	0	0	0	4	4	0	0	0	2	2
1300	1	0	0	4	4	1	0	0	2	2
1400	2	0	0	4	5	2	0	0	2	4
1500	2	0	0	4	5	2	0	0	2	3
1600	3	0	0	3	6	3	0	0	2	5
1700	2	0	0	3	5	2	0	0	2	4
1800	1	0	0	1	2	1	0	0	1	2
1900	1	0	0	1	2	1	0	0	1	2
2000	1	0	0	1	2	1	0	0	1	2
2100	0	0	0	1	1	0	0	0	1	1
2200	0	0	0	1	1	0	0	0	1	1
2300	0	0	0	1	1	0	0	0	1	1
2400	0	0	0	0	0	0	0	0	1	1
Development Package 12 (P23 Musical Theatre, P25)										
0700	0	0	0	1	2	0	0	0	2	3
0800	0	0	0	2	3	0	0	0	2	3
0900	1	0	0	3	5	1	0	0	2	4
1000	0	0	0	4	5	0	0	0	3	4
1100	0	0	0	4	5	0	0	0	3	4
1200	0	0	0	5	6	0	0	0	3	4
1300	1	0	0	5	6	1	0	0	2	4
1400	2	0	0	5	8	2	0	0	3	6
1500	2	0	0	5	8	2	0	0	2	5
1600	4	0	0	4	9	4	0	0	2	7
1700	3	0	0	4	7	3	0	0	2	6
1800	1	0	0	2	4	1	0	0	1	4
1900	1	0	0	2	4	1	0	0	1	4
2000	1	0	0	1	4	1	0	0	1	4
2100	0	0	0	1	2	0	0	0	1	2
2200	0	0	0	1	2	0	0	0	1	2
2300	0	0	0	1	2	0	0	0	1	2
2400	0	0	0	1	2	0	0	0	1	2

Time of the Day	Hourly Goods Vehicle Servicing Demand (No. of Loading Bay Required)									
	Weekday					Weekend				
	PA Venue	OACF	Office	RDE	Total	PA Venue	OACF	Office	RDE	Total
Development Package 15 (P30 Great Theatre)										
0700	0	0	0	2	2	0	0	0	2	2
0800	0	0	0	3	3	0	0	0	2	2
0900	1	0	0	3	4	1	0	0	2	3
1000	0	0	0	5	5	0	0	0	4	4
1100	0	0	0	5	5	0	0	0	3	3
1200	0	0	0	6	6	0	0	0	3	3
1300	1	0	0	6	6	1	0	0	3	4
1400	2	0	0	6	8	2	0	0	3	5
1500	2	0	0	5	7	2	0	0	2	4
1600	4	0	0	5	9	4	0	0	2	6
1700	3	0	0	4	7	3	0	0	2	5
1800	1	0	0	2	4	1	0	0	2	3
1900	1	0	0	2	3	1	0	0	1	3
2000	1	0	0	2	3	1	0	0	1	3
2100	0	0	0	2	2	0	0	0	1	1
2200	0	0	0	1	1	0	0	0	1	1
2300	0	0	0	1	1	0	0	0	1	1
2400	0	0	0	1	1	0	0	0	1	1
Development Package 19 (P35 Lyric Theatre)										
0700	0	1	0	1	2	0	1	0	2	3
0800	0	2	0	2	5	0	1	0	2	3
0900	0	3	0	3	6	0	1	0	2	4
1000	0	3	0	4	7	0	2	0	3	5
1100	0	3	0	4	7	0	1	0	3	4
1200	0	2	0	5	7	0	1	0	3	4
1300	1	2	0	5	8	1	1	0	2	4
1400	2	2	0	5	9	2	0	0	3	4
1500	2	2	0	5	8	1	0	0	2	3
1600	3	2	0	4	9	3	0	0	2	5
1700	2	2	0	4	8	2	0	0	2	4
1800	1	2	0	2	4	1	0	0	1	2
1900	1	0	0	2	3	1	0	0	1	2
2000	1	0	0	1	3	1	0	0	1	2
2100	0	0	0	1	1	0	0	0	1	1
2200	0	0	0	1	1	0	0	0	1	1
2300	0	0	0	1	1	0	0	0	1	1
2400	0	0	0	1	1	0	0	0	1	1

Time of the Day	Hourly Goods Vehicle Servicing Demand (No. of Loading Bay Required)									
	Weekday					Weekend				
	PA Venue	OACF	Office	RDE	Total	PA Venue	OACF	Office	RDE	Total
Development Package 21 (P46 MPV, P47)										
0700	6	0	0	0	6	6	0	0	0	6
0800	6	0	0	0	6	6	0	0	0	6
0900	3	0	0	0	3	3	0	0	0	3
1000	6	0	0	0	6	6	0	0	0	6
1100	3	0	0	0	3	3	0	0	0	3
1200	12	0	0	0	12	12	0	0	0	12
1300	9	0	0	0	9	9	0	0	0	9
1400	10	0	0	0	10	10	0	0	0	10
1500	15	0	0	0	15	15	0	0	0	15
1600	12	0	0	0	12	12	0	0	0	12
1700	13	0	0	0	13	13	0	0	0	13
1800	13	0	0	0	13	13	0	0	0	13
1900	12	0	0	0	12	12	0	0	0	12
2000	10	0	0	0	10	10	0	0	0	10
2100	9	0	0	0	9	9	0	0	0	9
2200	9	0	0	0	9	9	0	0	0	9
2300	9	0	0	0	9	9	0	0	0	9
2400	6	0	0	0	6	6	0	0	0	6
Development Package 23 (P51 Free Space, P48 – P50, P52 – P56)										
0700	0	0	0	1	2	0	0	0	2	2
0800	0	1	0	2	3	0	0	0	2	2
0900	0	1	0	3	4	0	0	0	2	3
1000	0	1	0	4	5	0	1	0	3	4
1100	0	1	0	4	5	0	0	0	3	3
1200	0	1	0	5	6	0	0	0	3	3
1300	0	1	0	5	6	0	0	0	2	3
1400	1	1	0	5	7	1	0	0	3	4
1500	1	1	0	5	6	1	0	0	2	3
1600	2	1	0	4	7	2	0	0	2	4
1700	1	1	0	4	6	1	0	0	2	3
1800	0	1	0	2	3	1	0	0	1	2
1900	1	0	0	2	2	1	0	0	1	2
2000	1	0	0	1	2	1	0	0	1	2
2100	0	0	0	1	1	0	0	0	1	1
2200	0	0	0	1	1	0	0	0	1	1
2300	0	0	0	1	1	0	0	0	1	1
2400	0	0	0	1	1	0	0	0	1	1

Figure D8 Combined GV Servicing Demand of Package 04/ P08 (Proscenium)

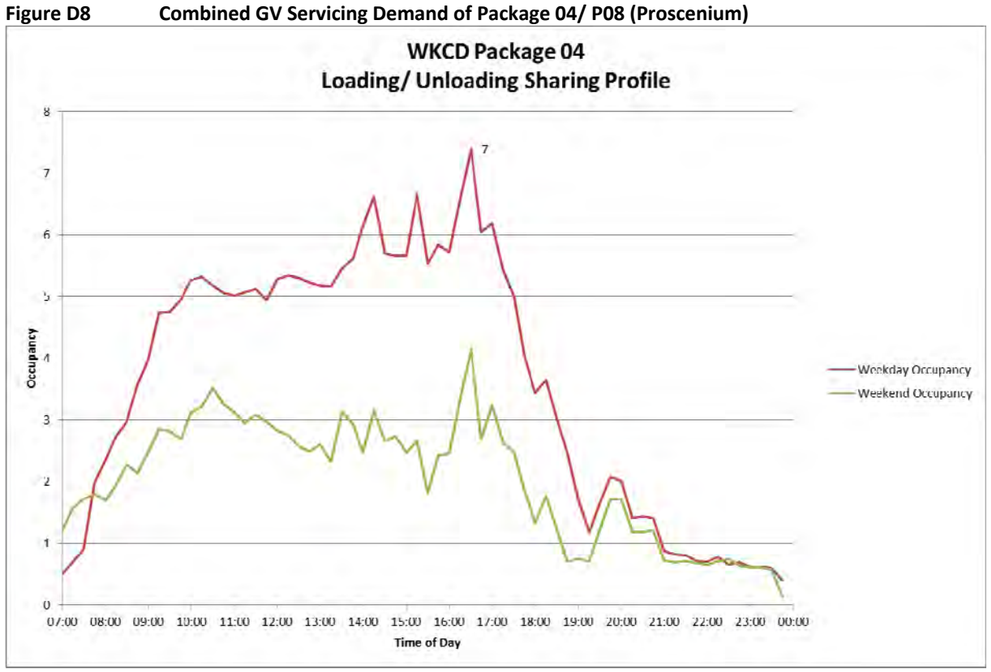


Figure D9 Combined GV Servicing Demand of Package 06 & 07/ P12 (Thrust & CCP) & P14

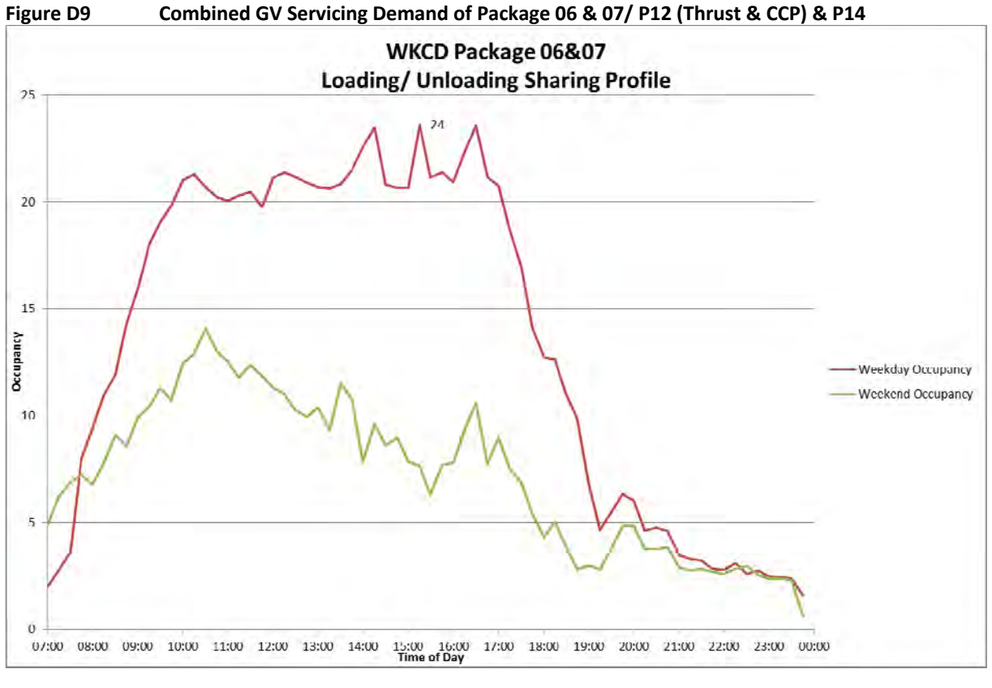


Figure D10 Combined GV Servicing Demand of Package 08/ P18 (Music Centre)

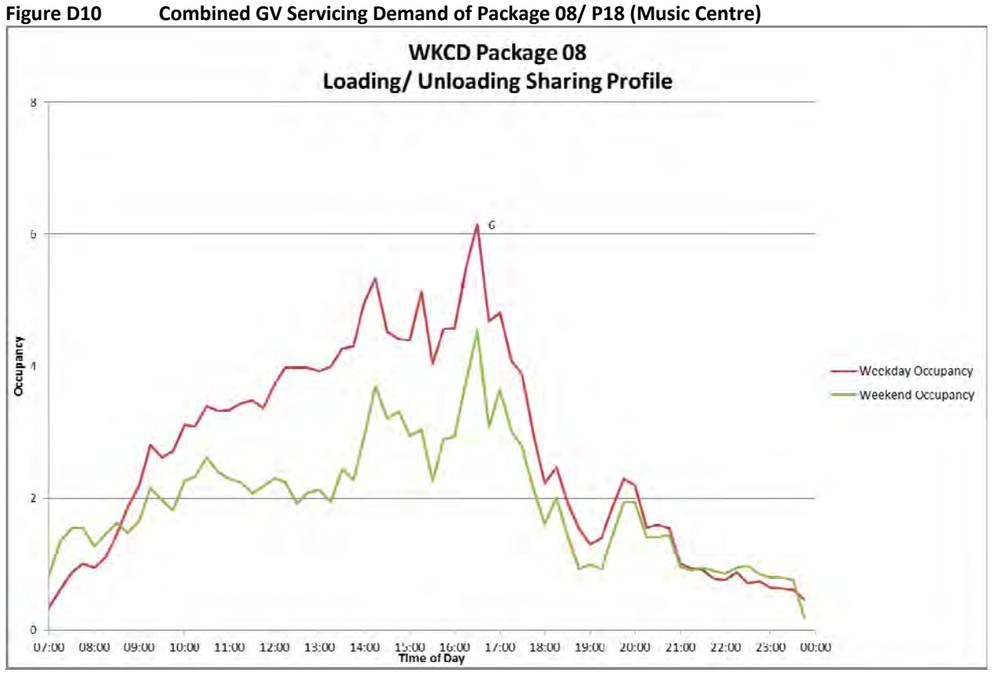


Figure D11 Combined GV Servicing Demand of Package 12/ P23 (Musical) & P25

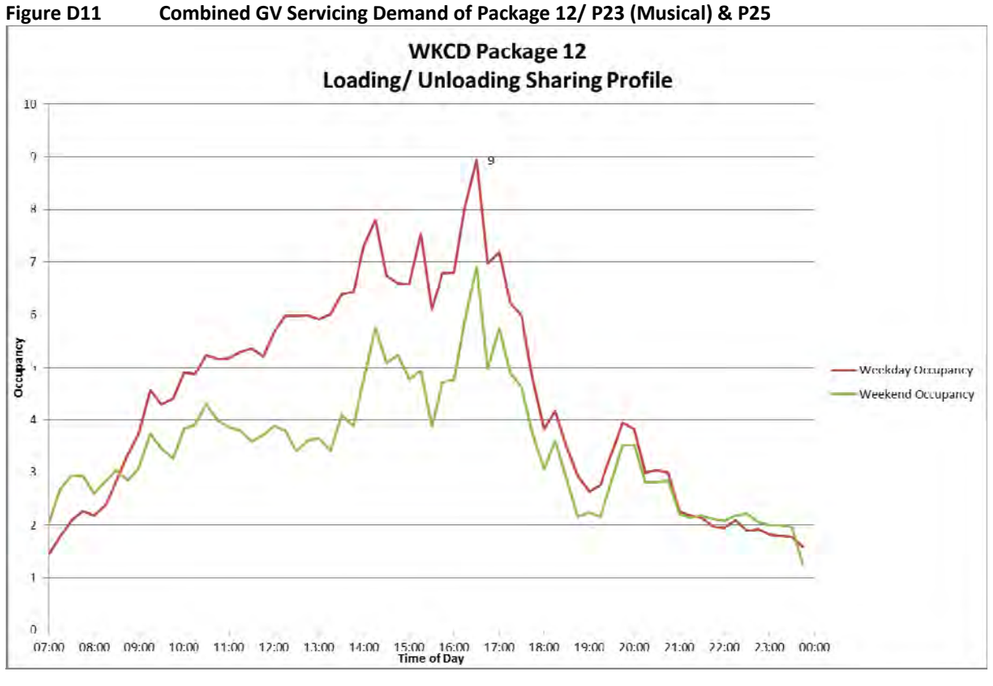


Figure D12 Combined GV Servicing Demand of Package 15/ P30 (Great Theatre)

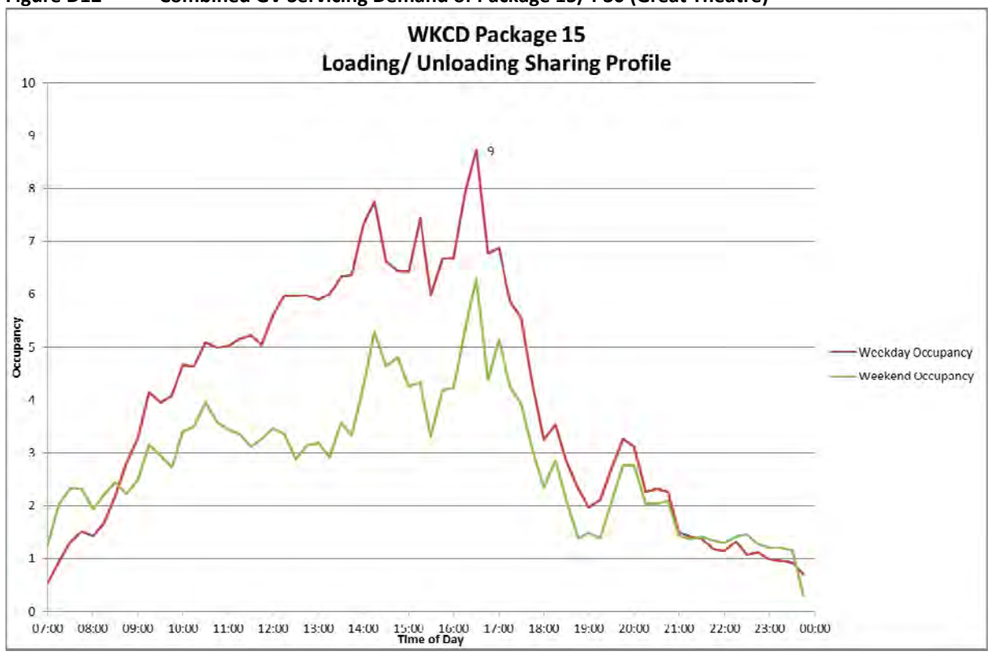


Figure D13 Combined GV Servicing Demand of Package 19/ P35 (Lyric)

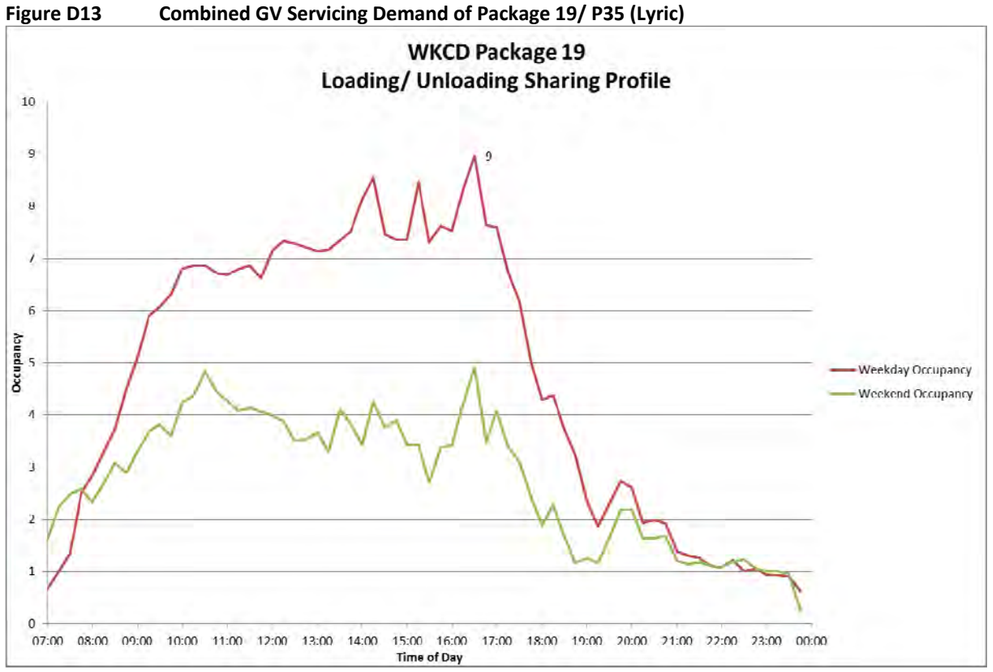


Figure D14 Combined GV Servicing Demand of Package 21/ P46 (MPV) & P47

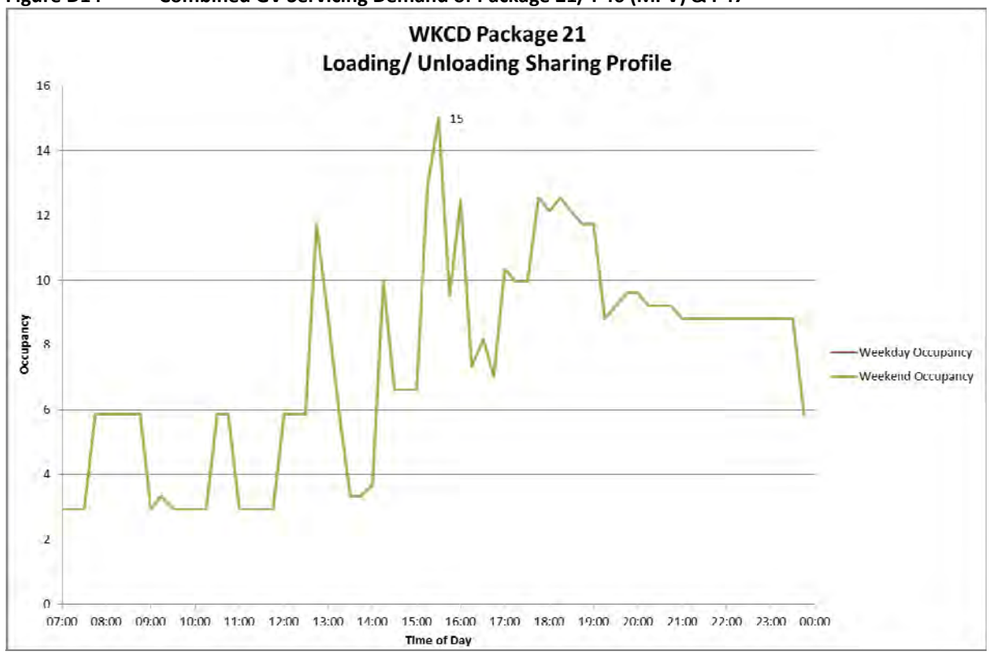


Figure D15 Combined GV Servicing Demand of Package 23/ P50 (Freespace), P48 – P49, P51 – P56



Table D15 Proposed GV Loading/ Unloading Facilities Provision for WKCD

DZ	Package	Parcels	Land Use of +15% GFA				GV Servicing Requirement		
							DP	+15% GFA	
			CACF	OACF	Office	RDE	Without Optimization	Without Optimization	With Optimization
1, 2A, 2B & 3A	00	P41				X	0	0	0
	01	P01 (Xiqu)	X	X		X	11	9	9 (1)
	02	P02, P03, P04			X	X	8	12	12
	03	P05, P06, P07, P09		X		X	12	17	17
	04	P08 (Proscenium)	X		X	X	6	9	**8**
	05	P10, P11, P13, P15				X	17	12	12
		P16, P17		X	X	X	8	20	20
	06	P12 (Thrust), (CCP)	X			X	11	9	**24**
	07	P14		X	X	X	6	21	
	08	P18 (Music)	X			X	9	7	**6**
	09	P19, P22		X	X	X	6	11	11
		P24, P27		X		X	7	4	4
	10	P20		X		X	2	3	3
	11	P21				X	2	2	2
	12	P23 (Musical), P25	X		X	X	10	10	**9**
	13	P26			X	X	4	6	6
	14	P28, P29		X		X	7	6	6
	15	P30 (Great)	X			X	9	10	**9**
	16	P31			X	X	7	9	9
	17	P32				X	3	5	5
	18	P34, P36, P37, P38			X	X	13	14	14
	19	P35 (Lyric)	X	X		X	7	11	**11**
	20	P39, P40 (M+)	X			X	14	18	18
	25	P42					0	0	0
3B & 4	21	P46 (MPV), P47	X				18	15	**15**
	22	P43A, P43B, P44		X		X	16	19	19
	23	P50, (Outdoor Theatre), P51 (Freespace), P48, P49, P52 – P56	X	X		X	6	8	**7**
	24	P33, P41, Basement Edge				X	0	5	5
						Total:	**220**	**272**	**261**
								261 - 272	

Various development packages highlighted with the same colour share the same loading dock

(1) Possible reduction in loading/ unloading facilities will be undertaken by the Designer of Xiqu Centre separately

Attachment D1

Car Parking and Goods Vehicle Loading/ Unloading Utilization Surveys

INTRODUCTION

Overview

As requested by TD, surveys were undertaken to determine the hourly parking and servicing demand profiles to ascertain the sharing proposal. This paper is to summarise the details of the surveys and to present finding for use to investigate whether the number of spaces available at the car park and West Kowloon Terminal would be sufficient for the combined demands for all land throughout a normal day of operation.

STUDY METHODOLOGY

Methodology

The most likely car parking and loading profile for the different land use types was calculated based on occupancy surveys of established developments. Survey data from three established developments were collected and an average weekday and an average weekend daily profile generated to calculate the most likely demand profile for WKCD.

The survey sites were selected according to the following criterions:

PA Venue – large and representing venues with performances undertaken by professional artists and tickets are sold to public.

Office – preferable located near West Kowloon; with high accessibility level or well served by public transport (rail + bus) that comparable with WKCD; with identifiable access and exclusive car park that the in/ out traffic count presents only the data of the target type of land use and not contaminate by other unrelated flow; for office and avoid prestige office building likes ICC/ IFC, which is mainly for international banking companies/ finance organization and not be the case in WKCD.

RDE - preferable located near West Kowloon, with high accessibility level or well served by public transport (rail + bus) that comparable with WKCD, with identifiable access and exclusive car park at the in/ out traffic count presents only the data of the target type of land use and not contaminate by other unrelated flow for RDE.

Also, the survey site to be selected is preferable to be of a larger scale development to reduce counting and arithmetic errors that would made during manual count surveys. Details of the locations selected are summarized in **Table 1**.

Survey Brief

All vehicles on access/ egress of the survey location were recorded. Each record documents the exact time of arrival/ departure, licence plate number, vehicle type and any other remarks available during survey. Two parking beat surveys were also undertaken throughout the day at each survey location where possible.

The survey period was between 11th and 23rd January 2014. **Table 2** provides further details of each survey undertaken.

Surveys for offices were undertaken for one work week and one Saturday. Surveys for RDE were undertaken for one full week including both Saturday and Sunday. There were three weekday and two weekend shows surveyed for PA venues.

Survey Constraints

The surveys were planned to provide the most likely demand profiles. However, there are few constraints identified which may affect the survey results.

There are few sole office or RDE use development with a dedicated car park in Hong Kong. Most of the car parks associated with such developments are operated by parking management companies. In order to generate the maximum income, these car parks are not exclusive for traffic generated by the development. It would be difficult to distinguish traffic generated by the development from those with other purpose. However, it was considered that the proportion of vehicles using these car parks for other purpose would be small compared to those generated by the development. This would still be the best way to generate the most likely demand profile for car parking and loading for a sole land use. Some general corrective measures are summarized below whilst other measure undertaken on a site-by-site basis is described in further details with the survey results.

1. Most of the surveyed sites share the same access to both the loading area and the car park. It was assumed that vehicle types of van/ LGVs/ HGVs would be there for loading and unloading purpose. Vehicle type of cars would be there for car parking purpose. Motorcycles recorded were not taken into account for this study.
2. Some car parks offer monthly/ overnight parking facilities and it was difficult to filter these from the database. As the main purpose was to establish an arrival/ departure profile, it was considered appropriate to account for those vehicles access/ egress through the barrier only.
3. The arrival and departure of vehicles with same or similar registration number but with different vehicle types were identified and corrected. The correction criteria was set so that any dwell time of 20 minutes or more would be there for parking and those with dwell time of less than 20 minutes would be there for loading/ unloading.
4. A small proportion of data entry did not include a registration number. These were left in the database untouched.

There are no dedicated car park provided for the established Performing Arts (PA) facility locations of similar scale to those proposed for the WKCD. Questionnaires were used instead to establish the most likely car parking demands. The sample size was set to be 10% of all seats available for the venue. The questionnaire surveys were undertaken by interviewers outside the venue at the beginning of each performance. The arrival and departure times were stated by the interviewee which may not be the exact time of arrival and departure. However, it would be impossible to anticipate which vehicle would arrive for the performance and where these vehicles would park, the questionnaire survey was the best option to obtain the car parking demand profile for PA venue.

Loading/ unloading demands for PA venue locations were established by undertaking surveys on the first day of a show to generate the maximum demand. During the survey period, none of the shows started during the weekend. The loading/ unloading surveys for PA venue were therefore only undertaken on weekdays. For completeness, the same averaged loading/ unloading demand profile was used for the calculations for weekdays and weekends.

Data Analysis

The occupancy percentage was calculated using the maximum occupancy recorded at each survey location. This is considered to be the most realistic approach for the purpose of this study.

The average weekday/ weekend demand profile in percentage for each survey location was calculated based on the 5-day/ weekend occupancy profile weighted to achieve a peak occupancy of 100%.

The weighted average demand profile for each land use was calculated based on the combined weighted average weekday/ weekend demand profiles for all location of the same land use surveyed with each location weighted by its development size.

Table 1 Summary of Survey Locations Details

Land Use	Location	Seating Capacity or GFA (m^2)
Performing Arts	City Hall - Concert Hall	1,434
	Cultural Centre - Grand Theatre	1,734
	Hong Kong Coliseum	12,500
Office	Taikoo Place	217,700
	HSBC Centre	77,100
	Shui On Centre	51,500
	Bank of China Centre	33,400
Retail, Dining, Entertaining	Isquare	57,900
	Hollywood Plaza	52,200
	The One	37,200
	Olympian City 1	18,600

Table 2 Summary of Surveys Undertaken

Land Use	Location	Survey Type		Date (Day)	Time	Remarks
		Car Park	L/UL			
PA	City Hall 大會堂	√		11 Jan (Sat)	19:00 - 20:00 22:00 - 23:00	港樂四十周年復刻音樂會 (20:00, 2 hrs)
		√		21 Jan (Tue)	19:00 - 20:00	The 5th Hong Kong International Chamber Music Festival 2014 - Vadim Repin & Friends: Russian Masterworks (2000, 2 hrs)
			√	21 Jan (Tue)	07:00 - 00:00	The 5th Hong Kong International Chamber Music Festival 2014 - Vadim Repin & Friends: Russian Masterworks (2000, 2 hrs)
	Cultural Centre 文化中心	√		16, 18 Jan (Thu, Sat))	18:30 - 19:30	再世紅梅記 (19:30, 4 hrs)
			√	16 Jan (Thu)	07:00 - 00:00	再世紅梅記 (19:30, 4 hrs)
	Hong Kong Coliseum 香港紅磡體育館		√	23 Jan (Thu)	07:00 - 00:00	麥當勞麥麥嘻麥麥哈軟硬嘻哈 Opera 2014 (2015, 2hrs)
Office	HSBC Centre	√	√	16, 17, 18, 20, 21, 22 Jan (Thu, Fri, Sat, Mon, Tue, Wed)	07:00 - 00:00	*九龍大角咀深旺道 1 號*
	Shui On Centre	√		16, 17, 18, 20, 21, 22 Jan (Thu, Fri, Sat, Mon, Tue, Wed)	07:00 - 00:00	*港灣道 6-8 號*
	Bank of China Centre		√	16, 17, 18, 20, 21, 22 Jan (Thu, Fri, Sat, Mon, Tue, Wed)	07:00 - 19:00	*西九龍海輝道 11 號奧海城中銀中心*
RDE	Isquare	√	√	16 - 22 Jan (Thu – Wed)	07:00 - 00:00	*尖沙咀彌敦道 63 號*
	The One	√	√	16 - 22 Jan (Thu – Wed)	07:00 - 00:00	*彌敦道 100 號*
	Hollywood Plaza	√	√	16 - 22 Jan (Thu – Wed)	07:00 - 00:00	*鑽石山龍蟠街三號*
	Olympian City 1		√	16 - 22 Jan (Thu – Wed)	07:00 - 00:00	*西九龍海輝道 11 號*

CAR PARKING SURVEY AND ANALYSIS

Office Development

Taikoo Place

Survey data for Taikoo Place was acquired to support this study. A two weeks car park utilization survey and one-week loading/ unloading utilization survey were undertaken at Devon House, Dorset House and Lincoln House. These three buildings provide a combined office space of 217,693 m^2. The car parking profiles are shown in **Figure 1**.

HSBC Centre

The HSBC Centre comprises of 77,110 m^2 office space. The car parking profiles for the week are shown in **Figure 2**.

The car park and the loading/ unloading facilities are both located within the two basement levels.

There are monthly and night parking available at this car park. For the purpose of this study, only vehicles arriving and departing were included as part of the survey. Vehicles arriving after 20:00 and departing before 09:00 were considered to be using the car park not for office use.

Vehicles failed to access/ egress the car park during the surveyed period or those arrived after 20:00 and departed before 09:00 were omitted from the calculations.

Shui On Centre

Shui On Centre comprises of 55,100 m^2 office space. There is a dedicated car park and the car parking profiles during the surveyed period are shown in **Figure 3**.

The survey showed a declining trend in parking demand at this location from late afternoon and then another surge in parking demand in the evening. The car park is operated as a public car park and does not provide exclusive use for the offices. The demand observed in the evening may be generated by venues including the Hong Kong Convention and Exhibition Centre, the Hong Kong Academy of Performing Arts and various hotels in the vicinity. It would be difficult to distinguish the purpose of these trips from those generated purely by the office. It was considered that by including these trips, the results would represent a higher demand than those generated by the office block only, representing a worst case scenario which would be acceptable for the purpose of this study.

Office Car Parking Profile

The most likely office car parking occupancy profile for a normal weekday and a normal weekend was analyzed and shown in **Figures 4 and 5** respectively.

Figure 1 **Taikoo Place Car Parking Profiles**

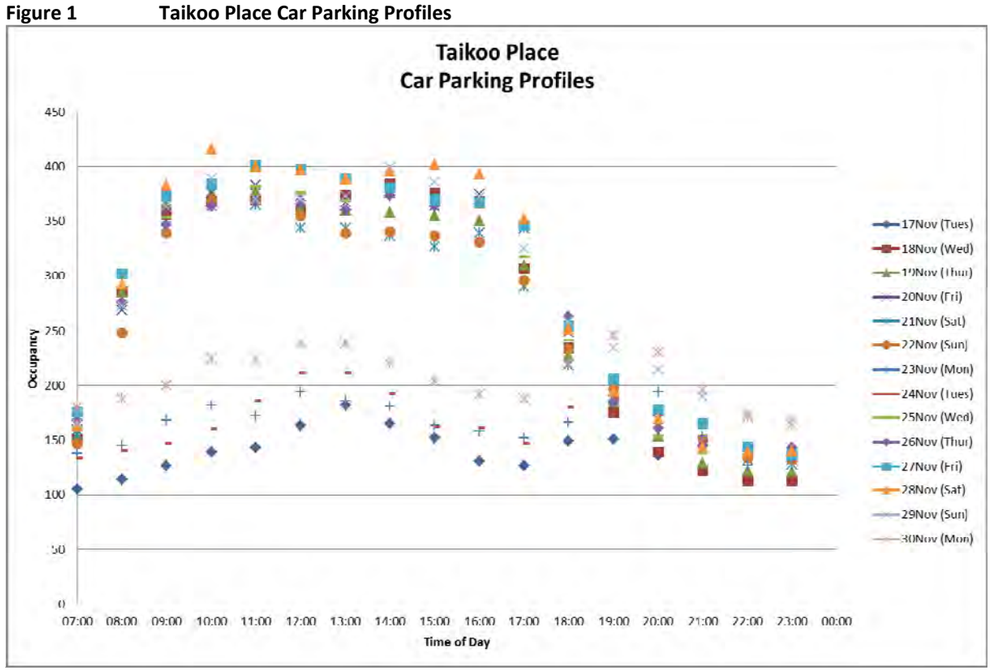


Figure 2 **HSBC Centre Car Parking Profiles**

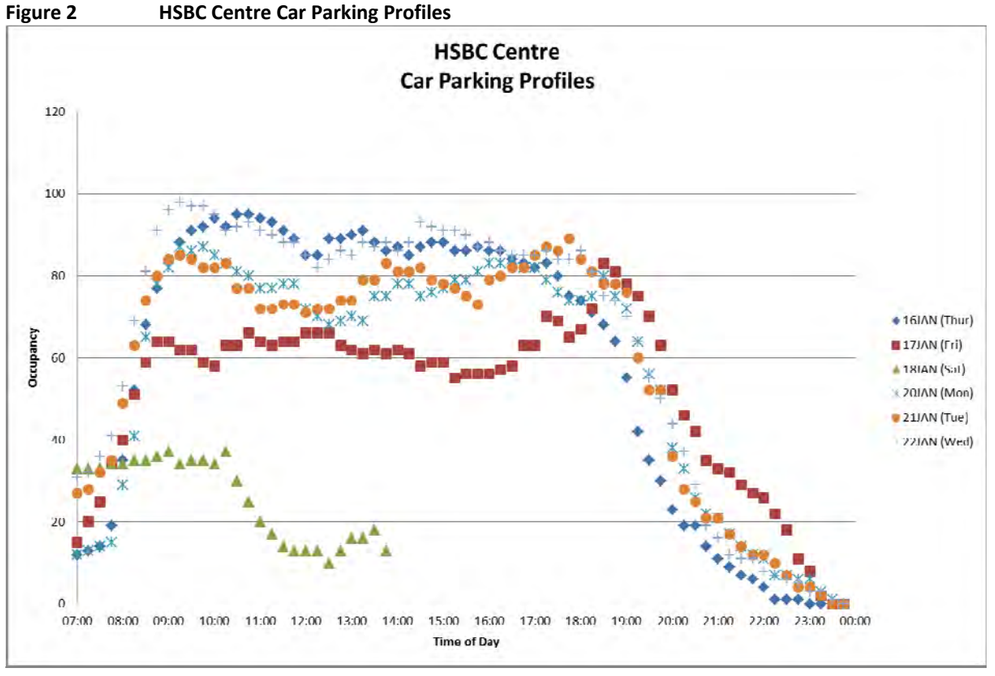


Figure 3 **Shui On Centre Car Parking Profiles**

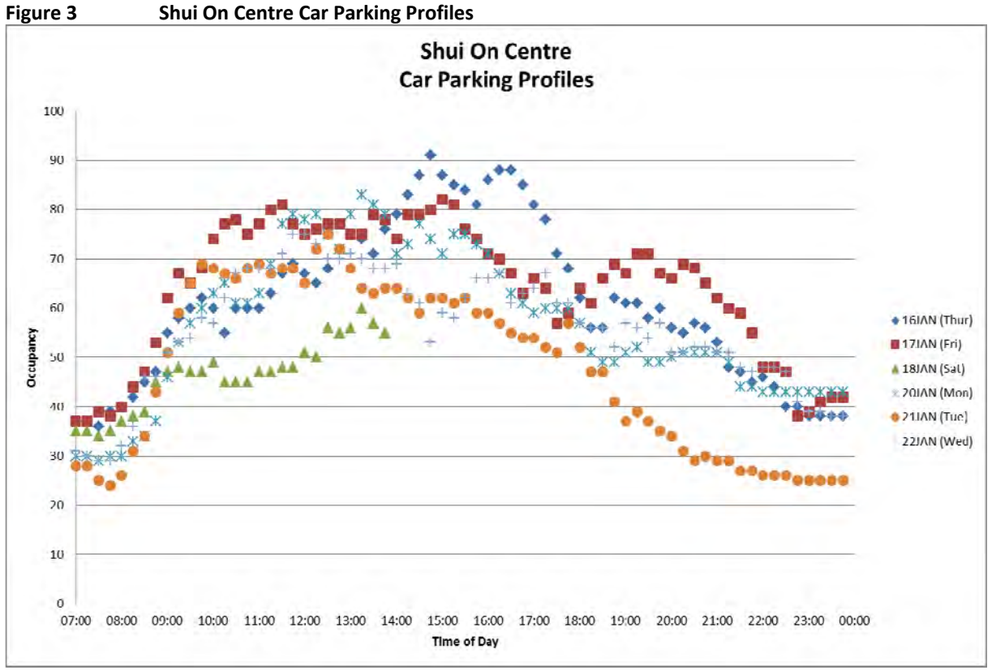


Figure 4 **Office Weekday Car Parking Profiles**

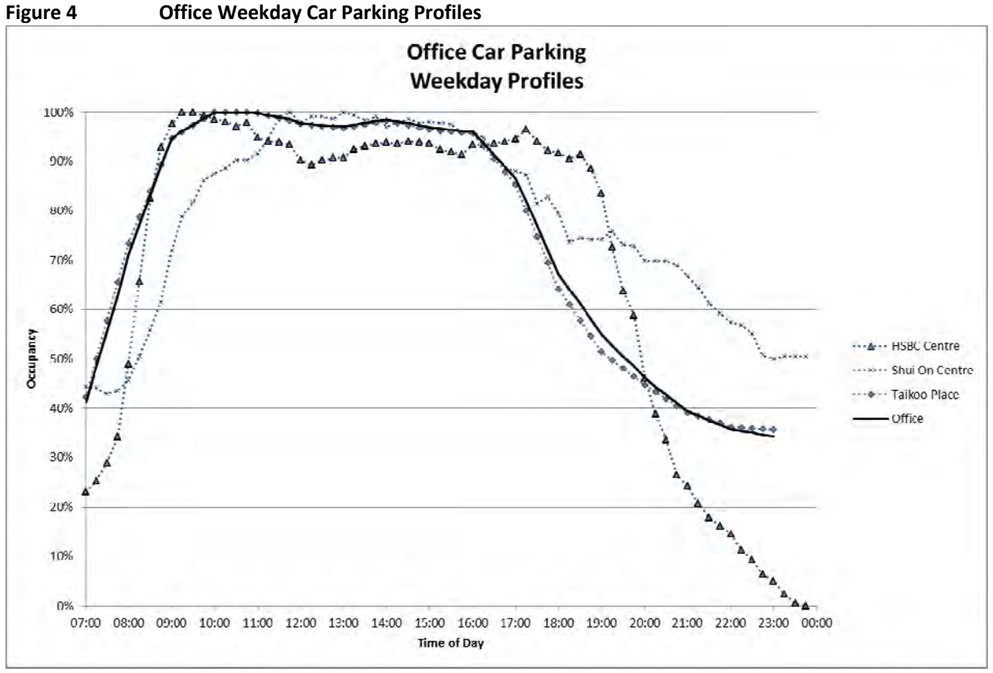
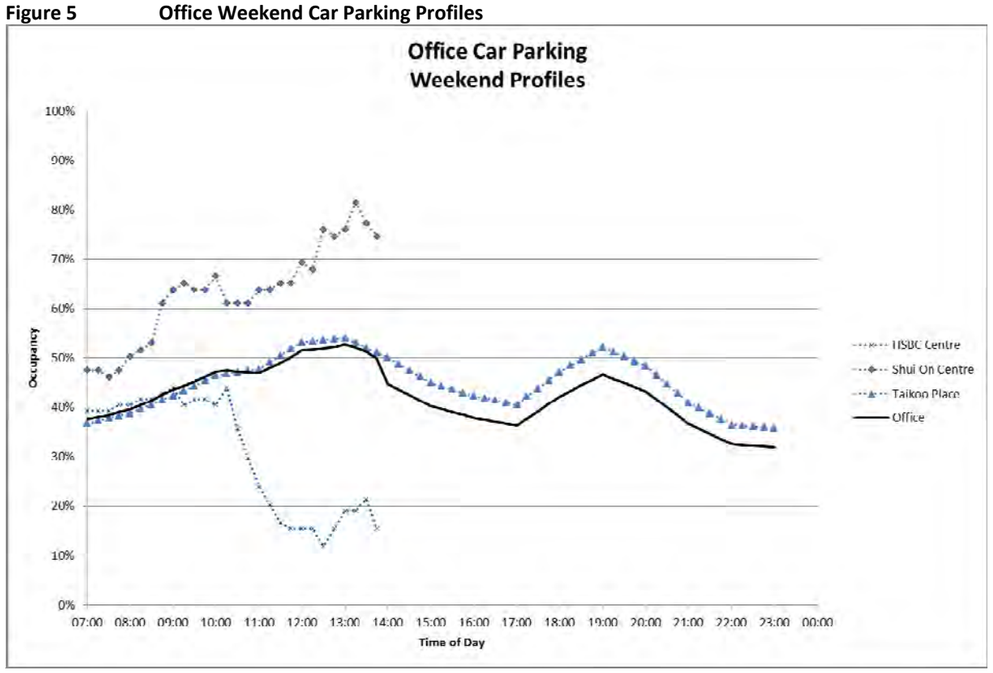


Figure 5 **Office Weekend Car Parking Profiles**



Retail, Dining and Entertaining Development

The One

The One is a 23-storeys building comprises of 37,161 m^2 RDE space. The car parking profiles for The One are shown in **Figure 6**.

ISquare

ISquare is a 30-storeys building comprises of 57,882 m^2 RDE space. There is one basement level at ISquare for both car parking and loading/ unloading activities. There is a valet parking only option in operation for the car park. The car parking profiles for ISquare are shown in **Figure 7**.

Hollywood Plaza

Hollywood Plaza is a 4-storeys shopping complex comprises of 51,551 m^2 RDE space. The car parking profiles for Hollywood Plaza are shown in **Figure 8**.

RDE Car Parking Profile

The most likely RDE car parking occupancy profile for a normal weekday and a normal weekend was analyzed and shown in **Figures 9 and 10** respectively.

Figure 6 The One Car Parking Profiles

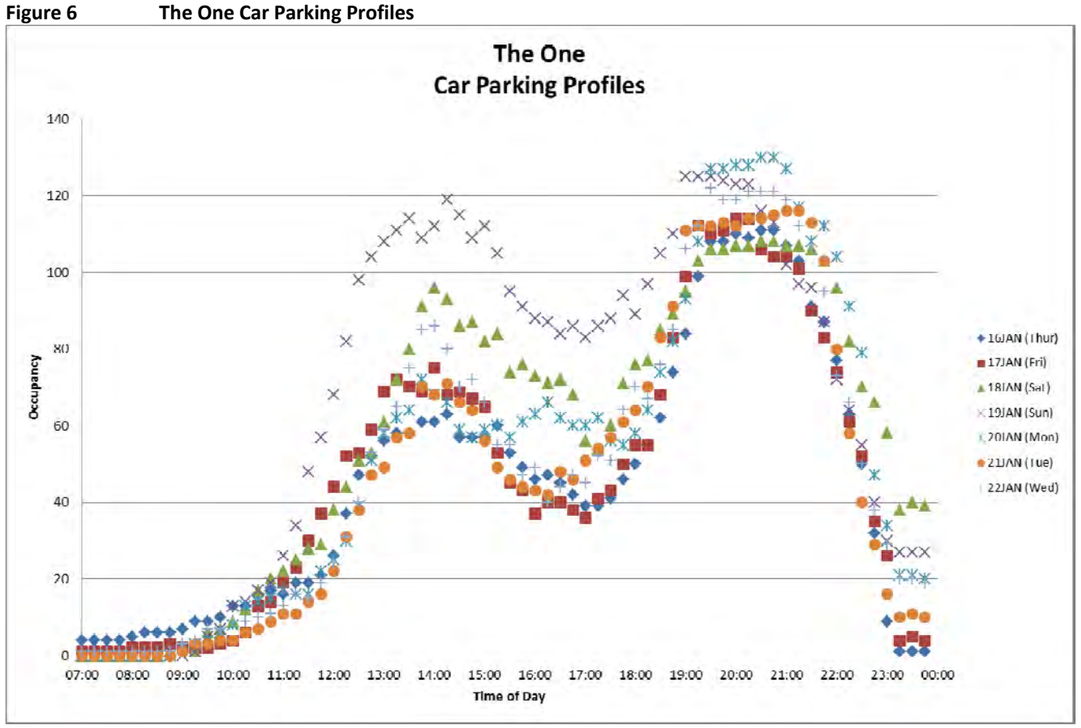


Figure 7 ISquare Car Parking Profiles

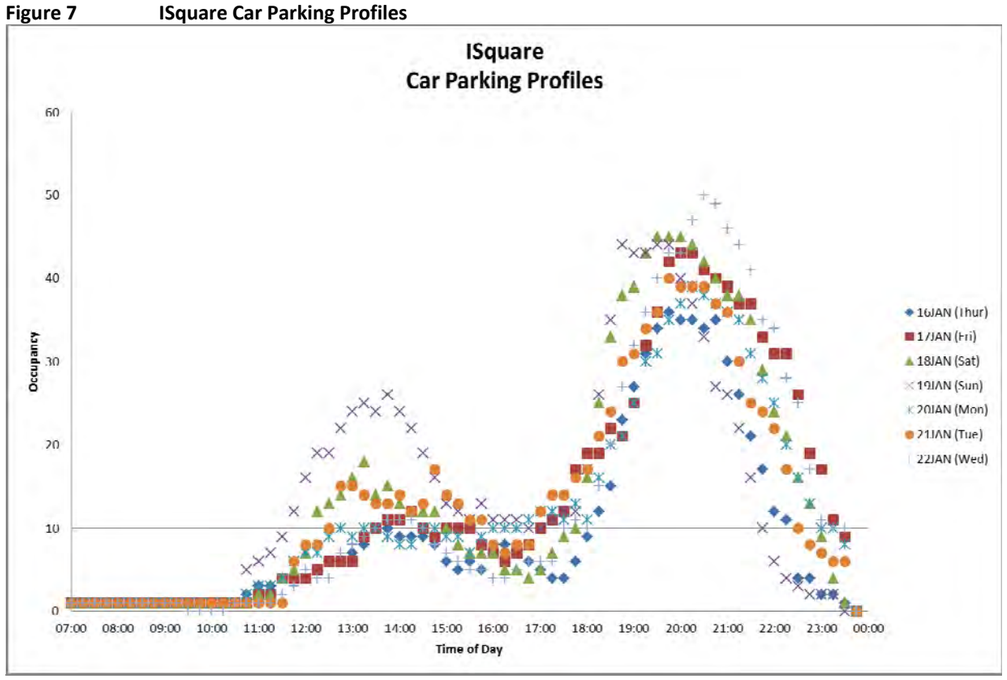


Figure 8 Hollywood Plaza Car Parking Profiles

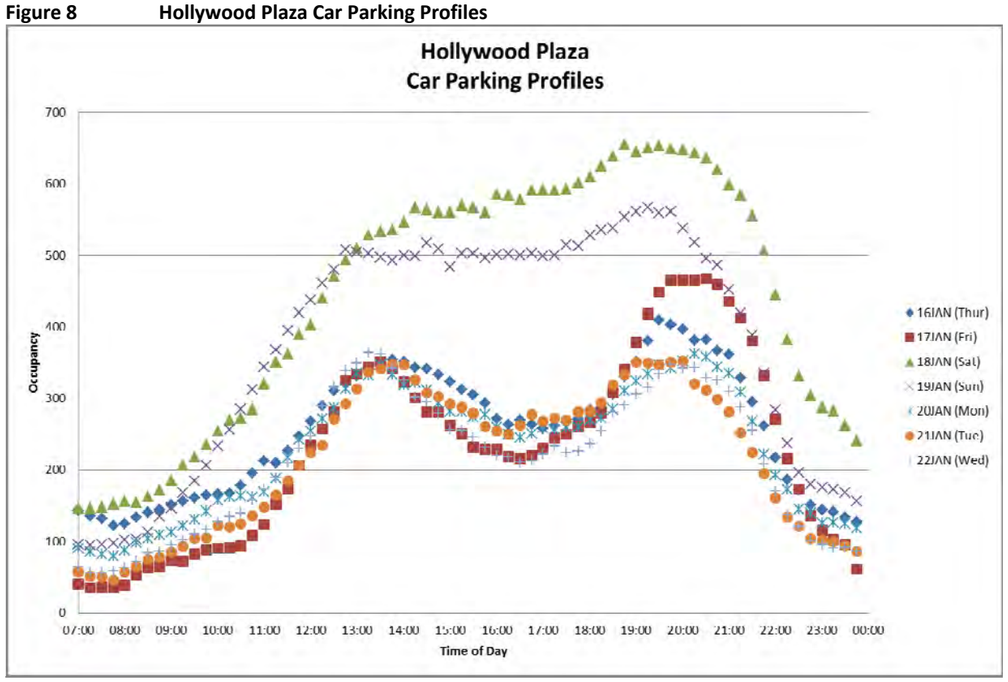


Figure 9 **RDE Weekday Car Parking Profiles**

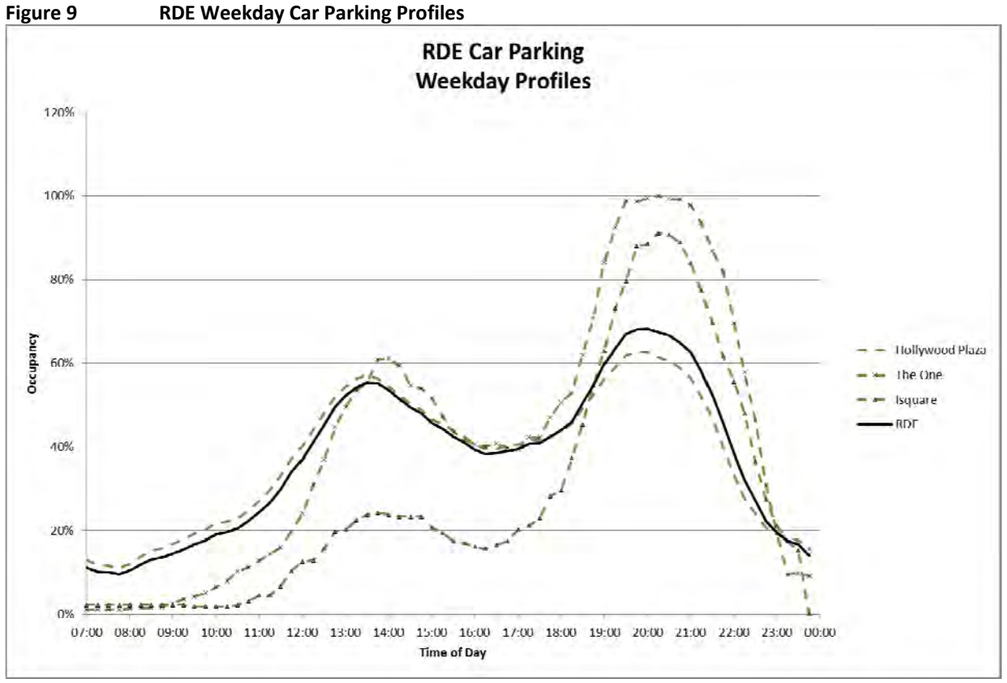
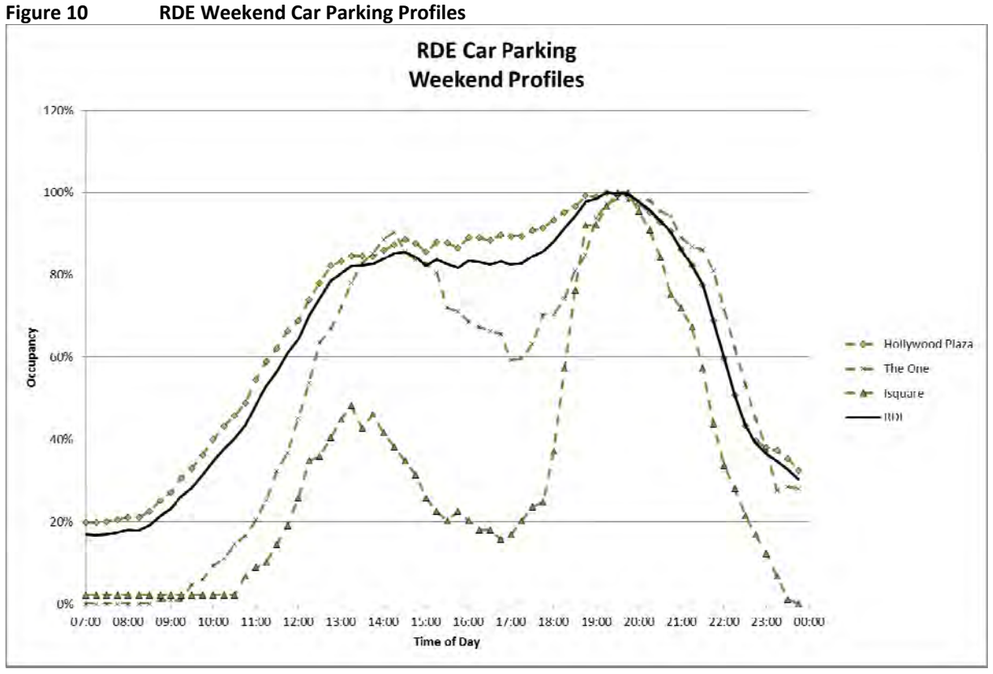


Figure 10 **RDE Weekend Car Parking Profiles**



Performing Arts Venue

Hong Kong City Hall

The Hong Kong City Hall Concert Hall (音樂廳) has a seating capacity of 1,434. The following two shows were undertaken during the survey period. The car parking profiles for Hollywood Plaza are shown in **Figure 11**.

1. Questionnaire survey of the 港樂四十周年復刻音樂會 on 11 Jan 2014 (Saturday) ; and
2. Questionnaire survey of the 第五屆香港國際室內樂音樂節 2014 - 列賓與友共樂：俄羅斯巨匠 on 21 Jan 2014 (Tuesday).

Hong Kong Cultural Centre

The Hong Kong Cultural Centre Grand Theatre (大劇院) has a seating capacity of 1,734. The following two performances of 再世紅梅記 were undertaken during the survey period. The car parking profiles for Hollywood Plaza are shown in **Figure 12**.

1. Questionnaire survey on 16 Jan 2014 (Thursday) ; and
2. Questionnaire survey on 18 Jan 2014 (Saturday).

PA Venue Car Parking Profile

The most likely PA Venue car parking occupancy profile for a normal weekday and a normal weekend was analyzed and shown in **Figure 13**.

Figure 11 **HK City Hall Car Parking Profiles**

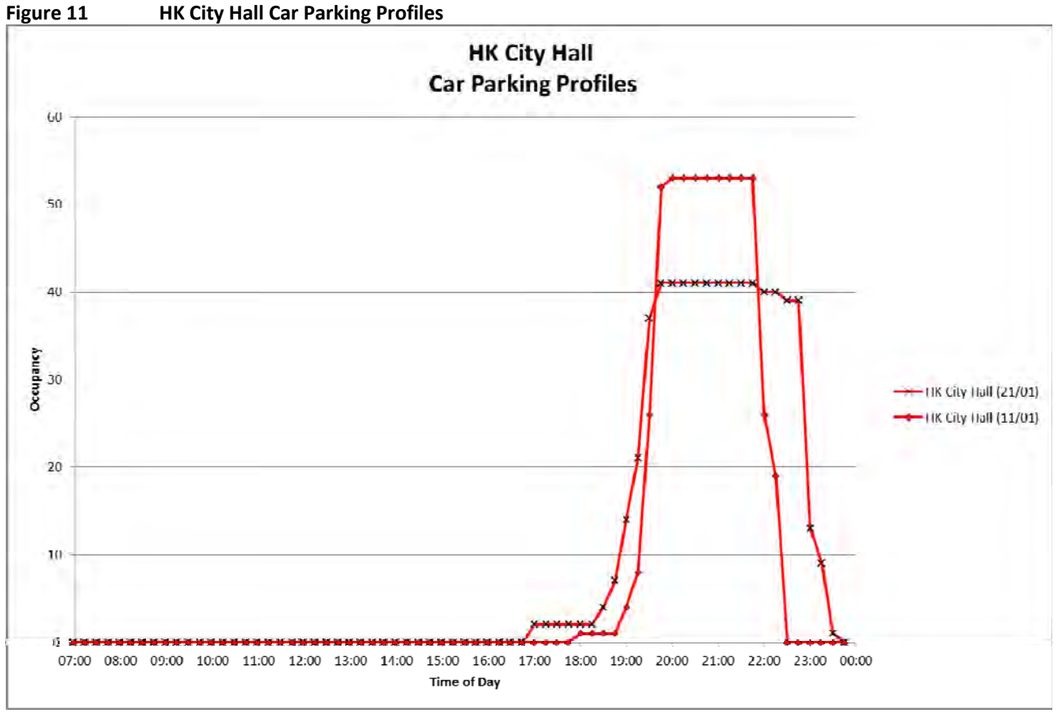


Figure 12 HK Cultural Centre Car Parking Profiles

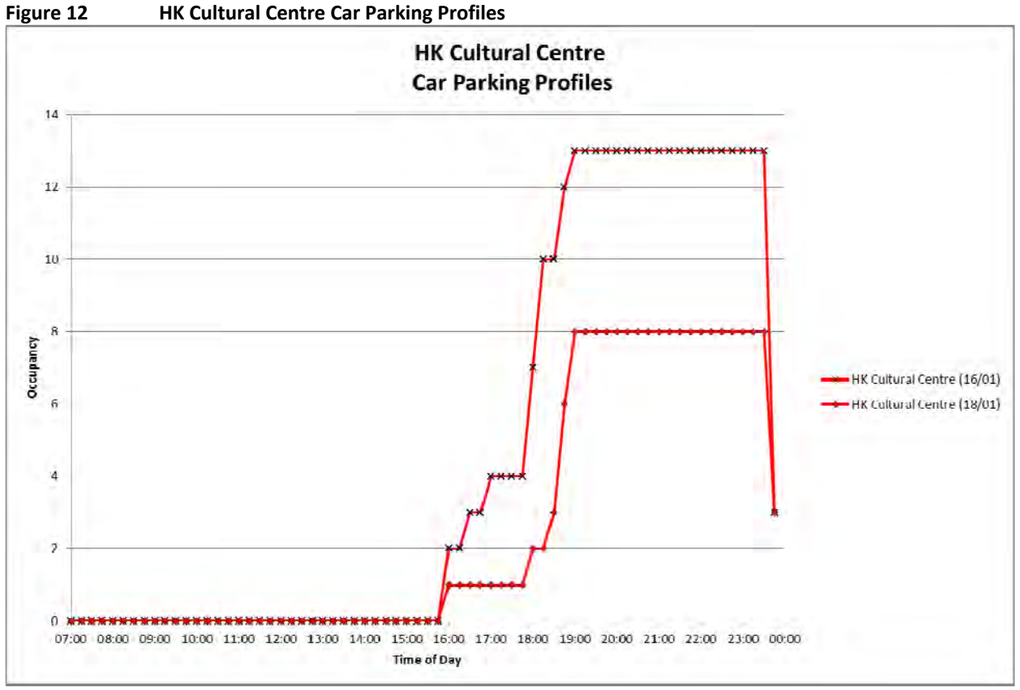
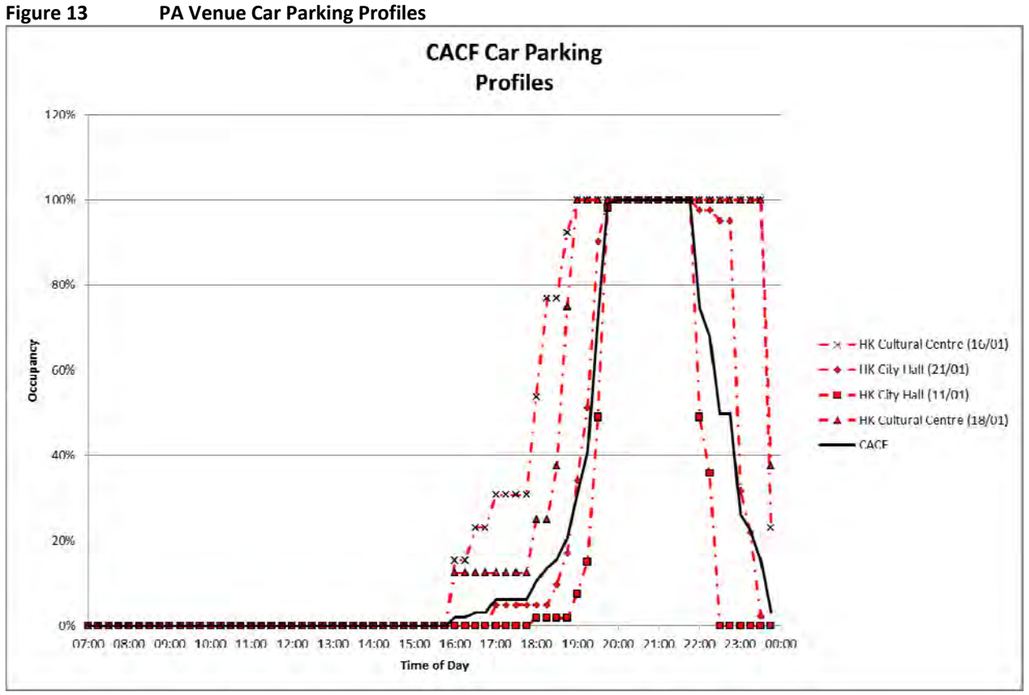


Figure 13 PA Venue Car Parking Profiles



LOADING/ UNLOADING SURVEY AND ANALYSIS

Office Development

Taikoo Place

The loading/ unloading survey data for Taikoo Place were also acquired to support this study. A one-week loading/ unloading utilization survey were undertaken at Devon House, Dorset House and Lincoln House. These three buildings provide a combined office space of 217,693m^2. The loading/ unloading profiles are shown in **Figure 14**.

HSBC Centre

The HSBC Centre comprises of 77,110 m^2 office space. The loading/ unloading profiles for the week are shown in **Figure 15**.

Bank of China Centre

The Bank of China Centre comprises of 33,445 m^2 office space. At the time of survey, the dedicated car park was not in use. Only the loading/ unloading survey was undertaken of which the profiles are shown in **Figure 16**.

Office Loading/ Unloading Profile

The most likely office loading/ unloading occupancy profile for a normal weekday and a normal weekend was analyzed and shown in **Figure 17 and Figure 18**.

Figure 14 Taikoo Place Loading/ Unloading Profiles

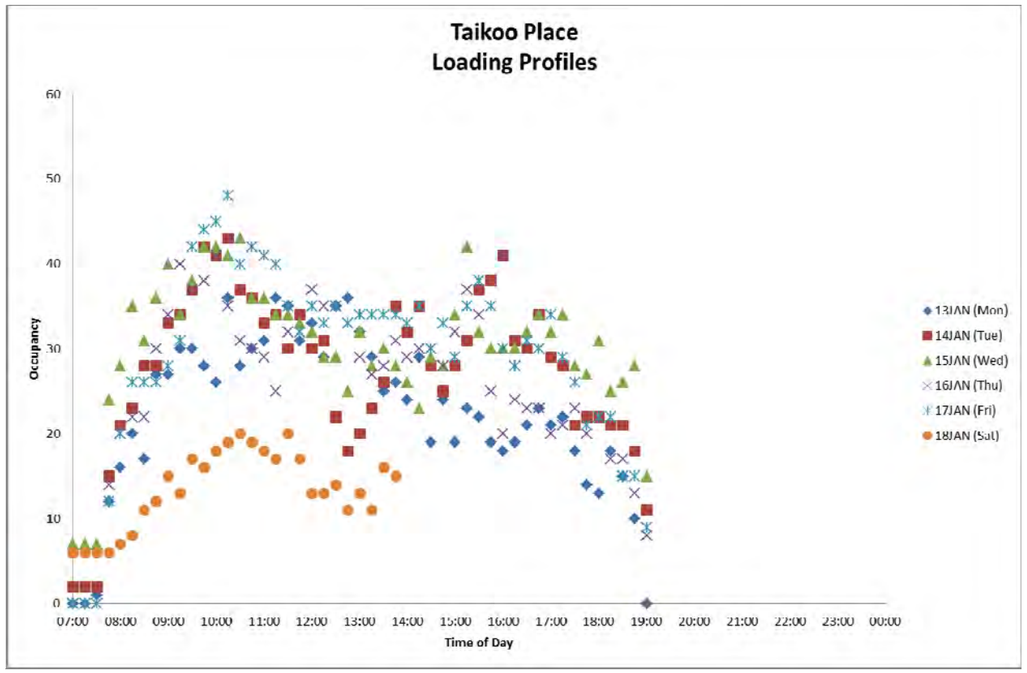


Figure 15 **HSBC Centre Loading/ Unloading Profiles**

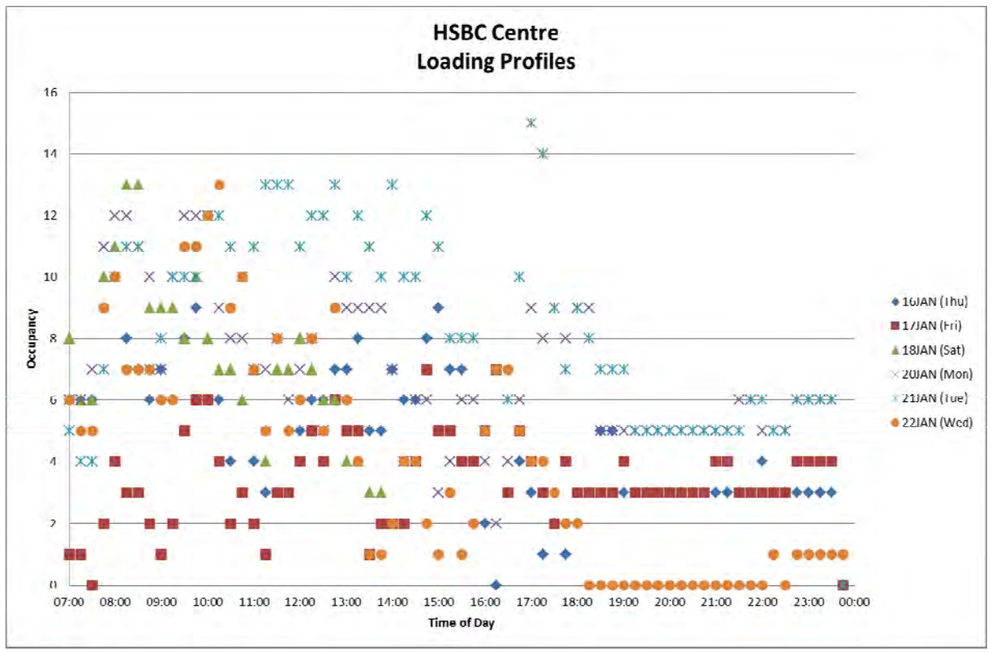


Figure 16 **Bank of China Loading/ Unloading Profiles**

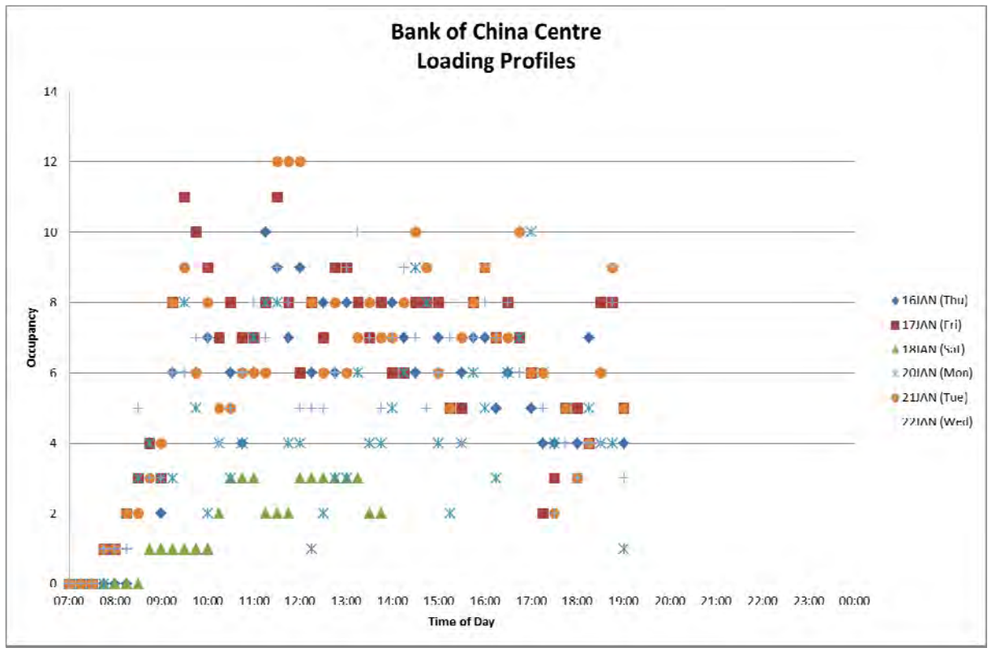


Figure 17 **Office Weekday Loading/ Unloading Profiles**

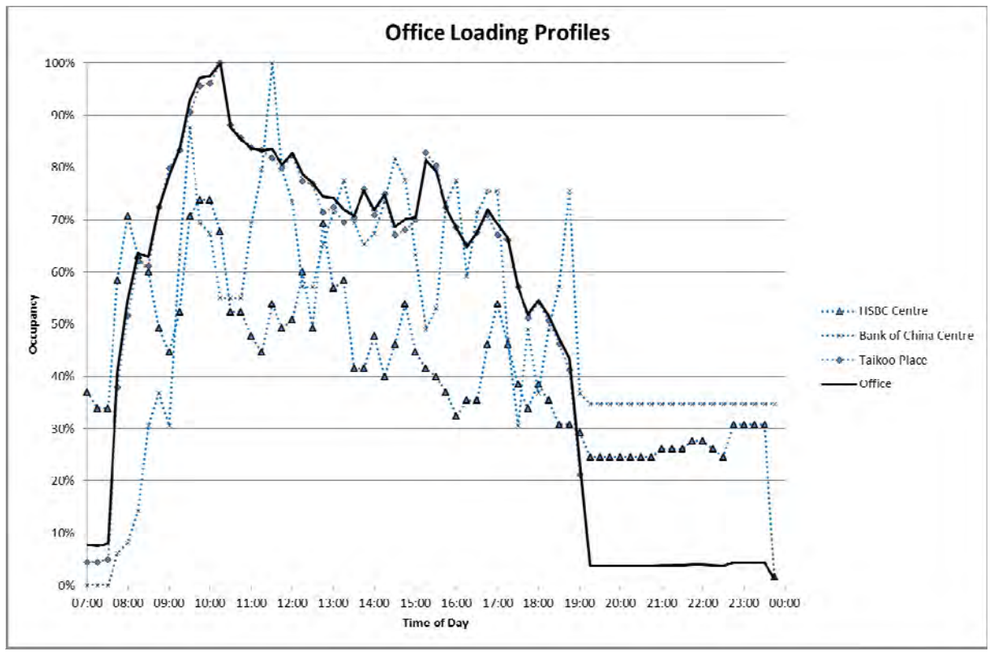
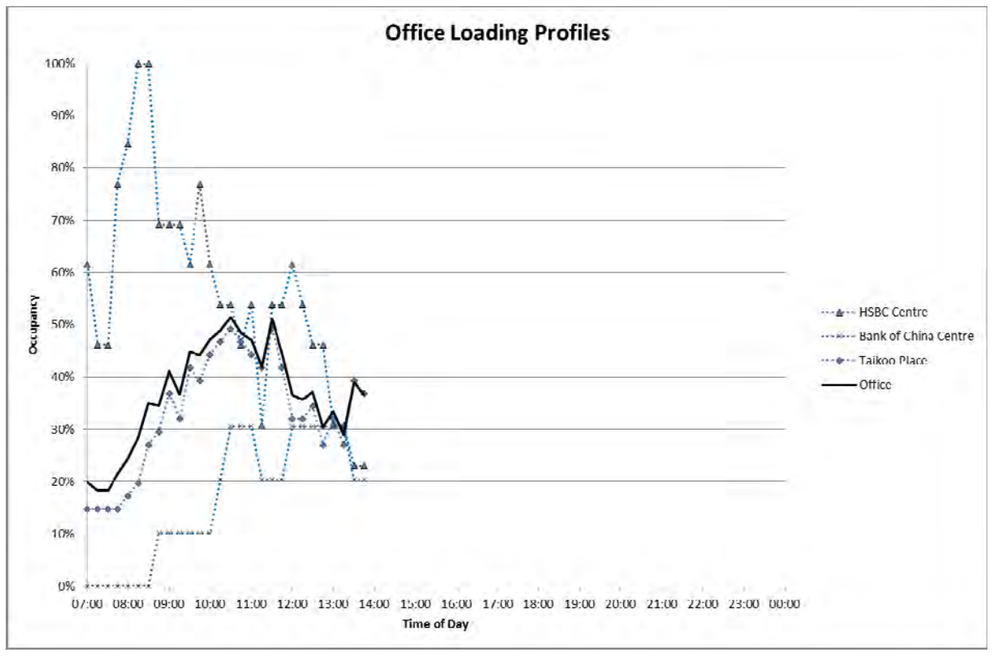


Figure 18 **Office Weekend Loading/ Unloading Profiles**



Retail, Dining and Entertaining Development

The One

The One is a 23-storeys building comprises of 37,161 m^2 RDE space. The loading/ unloading profiles for The One are shown in **Figure 19**.

ISquare

ISquare is a 30-storeys building comprises of 57,882 m^2 RDE space. The loading/ unloading profiles for ISquare are shown in **Figure 20**.

Hollywood Plaza

Hollywood Plaza is a 4-storeys shopping complex comprises of 51,551 m^2 RDE space. The loading/ unloading profiles for Hollywood Plaza are shown in **Figure 21**.

Olympian City 1

The Olympian City Phase 1 comprises of 18,581 m2 of RDE space. The dedicated car park is also used for subsidized park and ride in association with the MTR. The car parking profile may contribute to a misrepresentation of the most likely demand profile for this study. Therefore only the loading/ unloading survey was undertaken and the profiles are shown in **Figure 22**.

RDE Loading/ Unloading Profile

The most likely RDE loading/ unloading occupancy profile for a normal weekday and a normal weekend was analyzed and shown in **Figure 23 and Figure 24**.

Figure 19 The One Loading/ Unloading Profiles

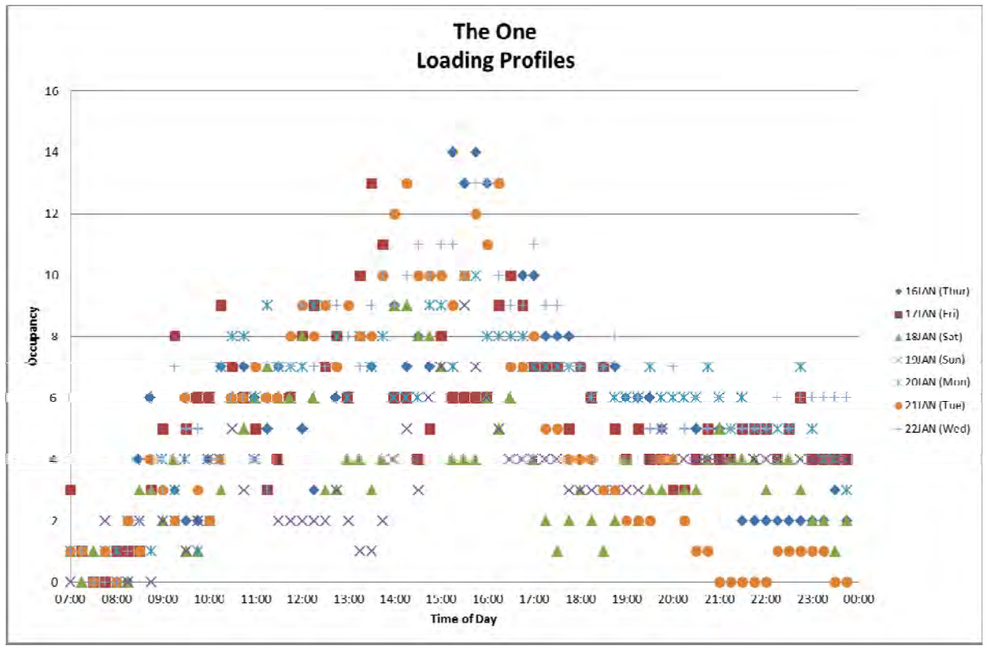


Figure 20 I Square Loading/ Unloading Profiles

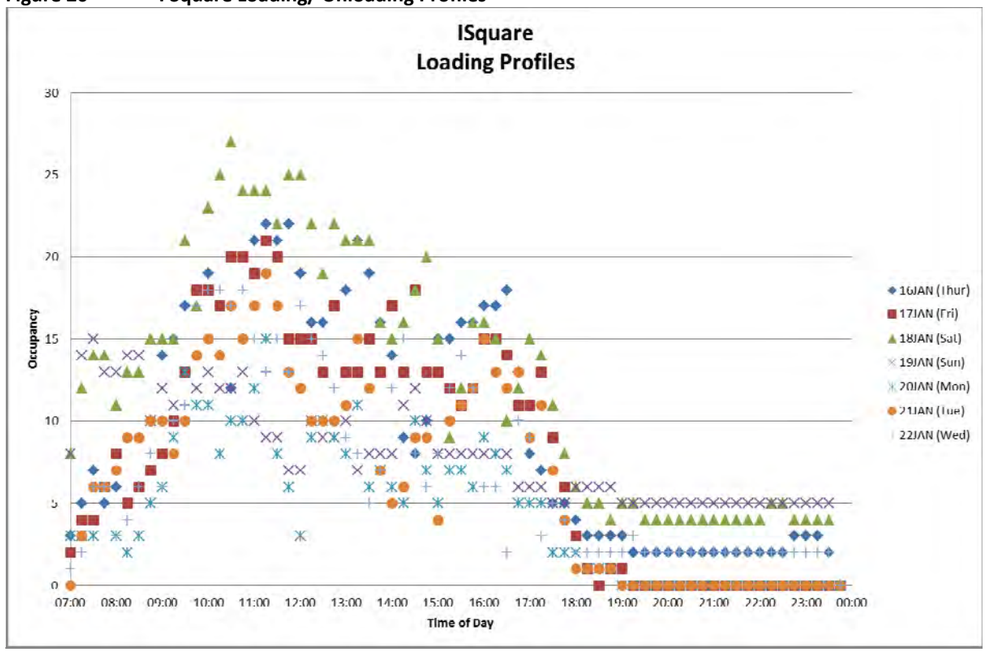


Figure 21 Hollywood Plaza Loading/ Unloading Profiles

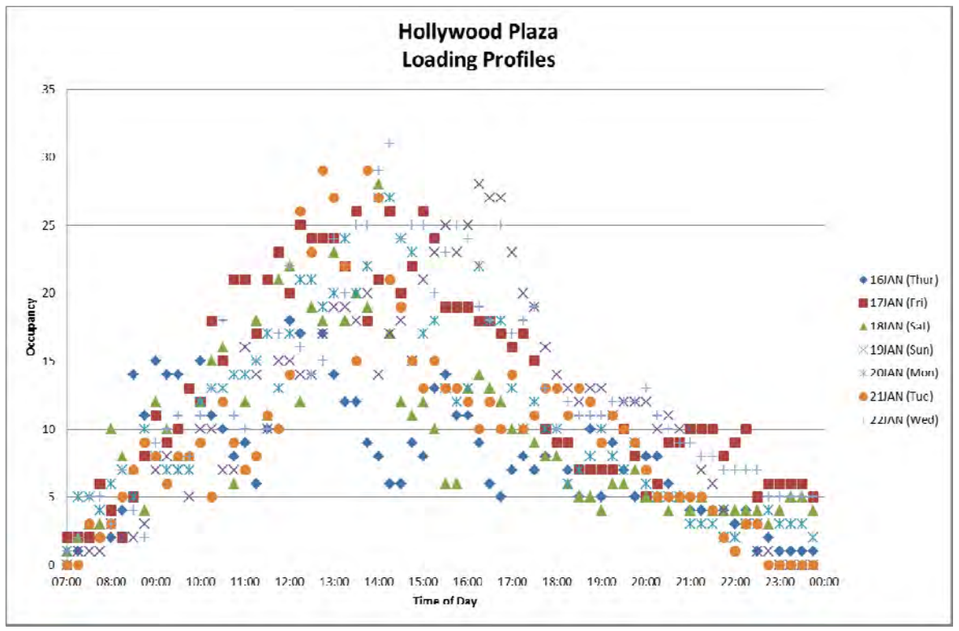


Figure 22 Olympian City I Loading/ Unloading Profiles

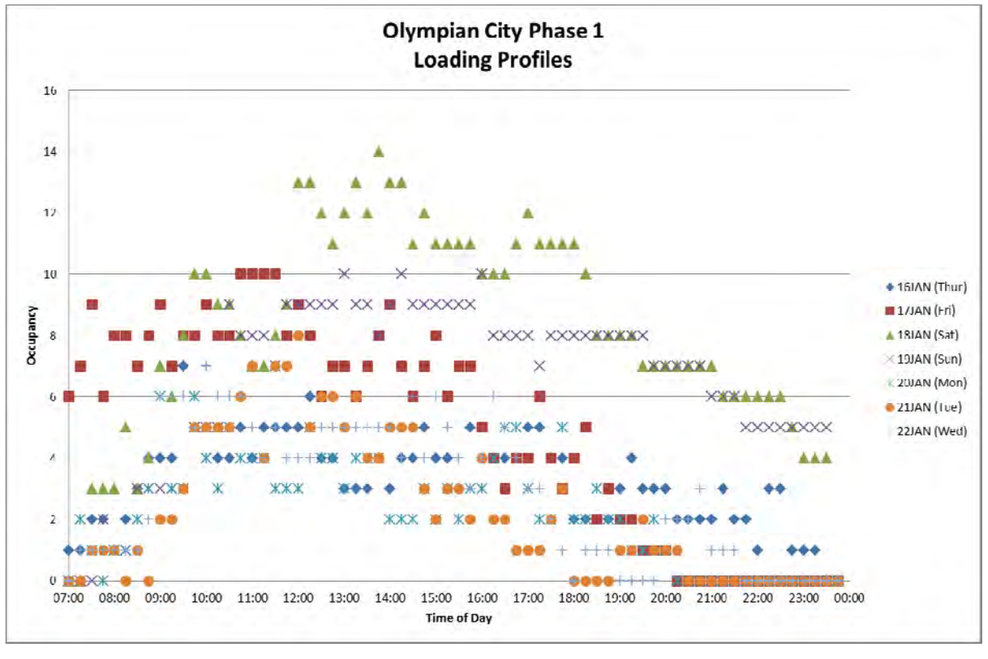


Figure 23 RDE Weekday Loading/ Unloading Profiles

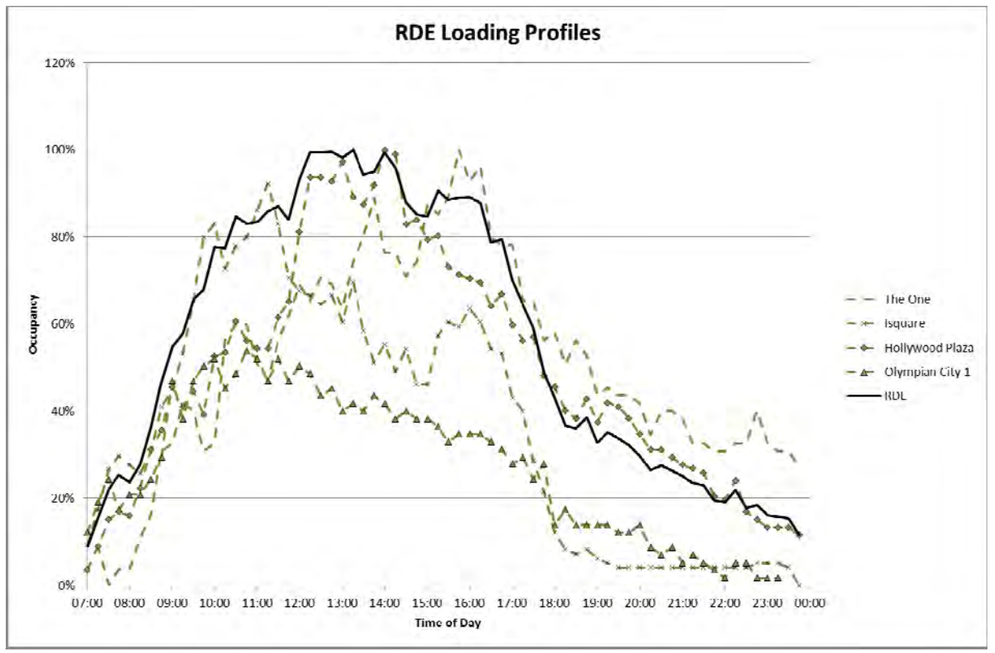
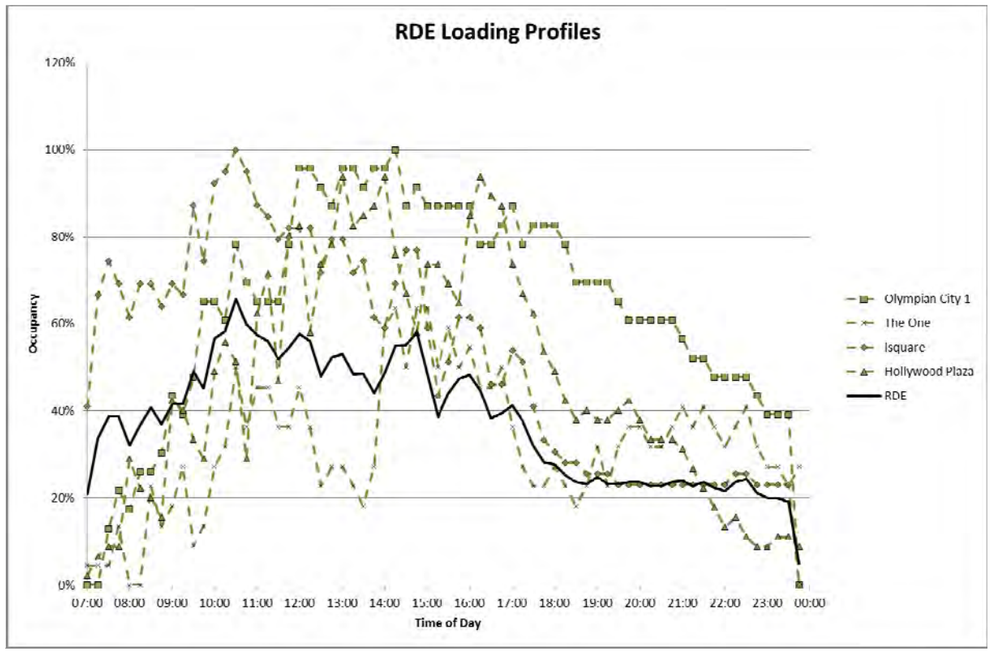


Figure 24 RDE Weekend Loading/ Unloading Profiles



Performing Arts Venue

Hong Kong City Hall

The Hong Kong City Hall Concert Hall (音樂廳) has a seating capacity of 1,434. The following two shows were undertaken during the survey period. The loading/ Unloading survey of the 第五屆香港國際室內樂音樂節 2014 - 列賓與友共樂：俄羅斯巨匠 was undertaken on 21 Jan 2014 (Tuesday). The loading profile is shown in **Figure 25**.

Hong Kong Cultural Centre

The Hong Kong Cultural Centre Grand Theatre (大劇院) has a seating capacity of 1,734. The following loading/ unloading survey for the first day of 再世紅梅記 was undertaken on 16 Jan 2014 (Thursday). The loading profile is shown in **Figure 26.**

Hong Kong Coliseum

The Hong Kong Coliseum has a seating capacity between 10,400 to 12,500. The loading/ unloading survey of the 麥當勞麥麥嘻麥麥哈軟硬嘻哈 Opera 2014 was undertaken on 23 Jan 2014 (Thursday). The loading profile is shown in **Figure 27**.

PA Venue Loading/ Unloading Profile

The most likely CACF loading/ unloading occupancy profile for a normal weekday and a normal weekend was analyzed and shown in **Figure 28**.

Figure 25 HK City Hall Loading Profile

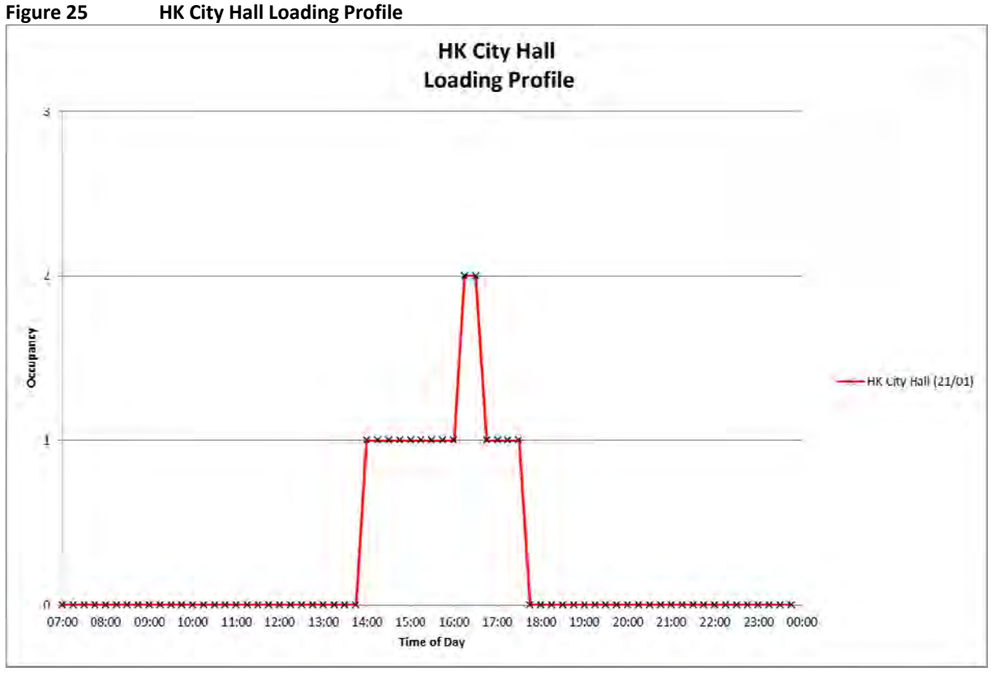


Figure 26 HK Cultural Centre Loading Profile

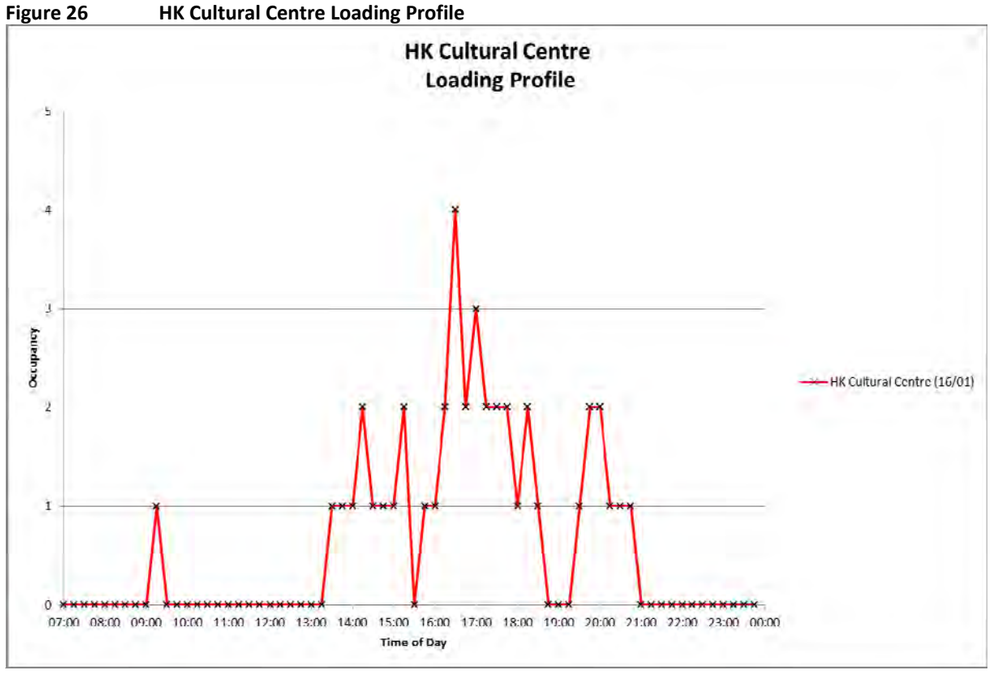


Figure 27 HK Coliseum Loading Profile

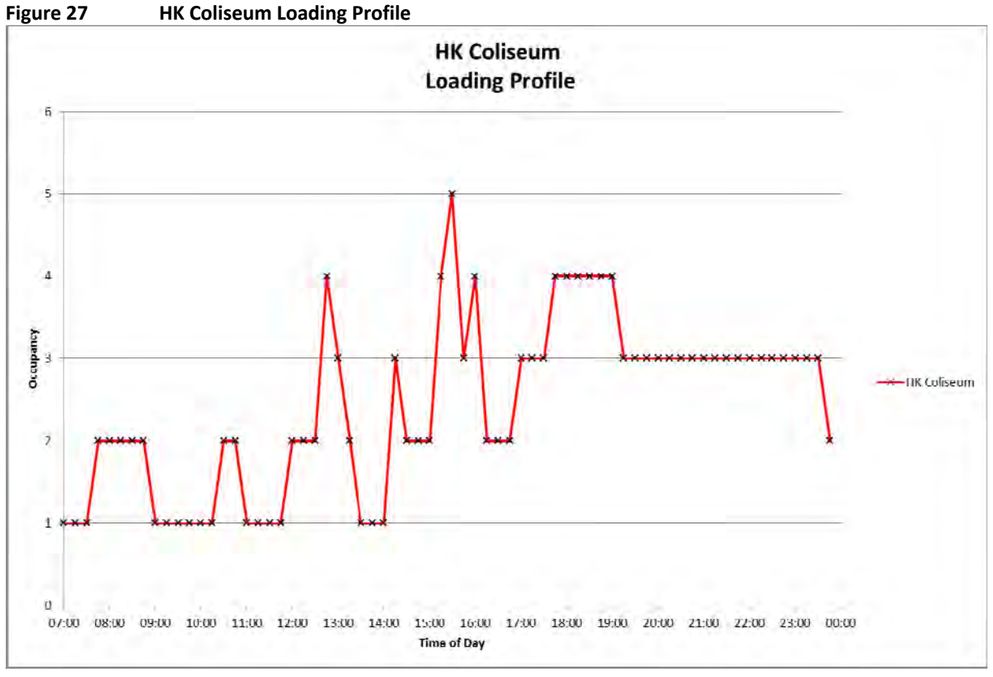
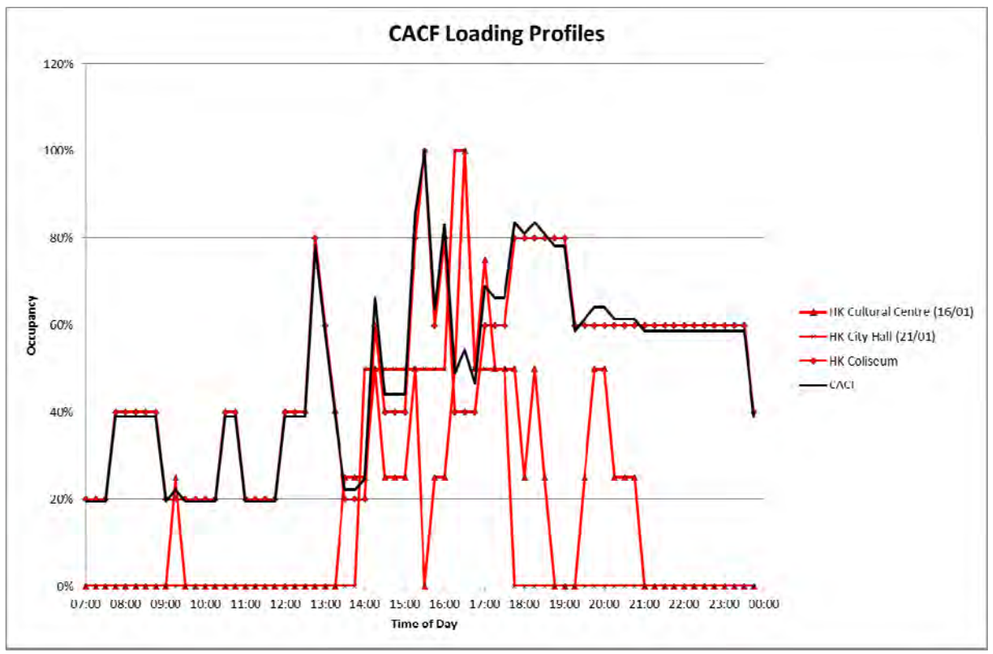


Figure28 **PA Venue (Theatre Type) Loading/ Unloading Profiles**



Annex E Vehicular Dispersal Analysis for Year 2031

E1 INTRODUCTION

The purpose of this Working Paper is to discuss the dispersal situation for WKCD during the shows end on weekends.

E2 TRAFFIC FORECAST

As extracted from the TIA Report (Table 8.1), it was estimated that about 15,552 pedestrians would be generated from Mega Performance Venue (MPV)/Exhibition Centre (EC) (located at the western portion of WKCD) during the shows end on weekends. For other CACF and RDE Developments located at the eastern and middle portions of WKCD, it was estimated that about 17,820 pedestrians would be generated during the shows end.

Based on the modal split (Table 7.3 of TIA Report), the occupancy rates (Table 4.9 of TIA Report), the amount of vehicle trips for WKCD during the shows end were estimated and summarised in **Table E1**.

Table E1 WKCD Vehicle Trips During Shows End on Weekends

Facilities	Transport Modes	Modal Split	Person Trips	Vehicle Trips [(1)]
MPV / EC	Private Car	8%	1,244	415
	Taxi	10%	1,555	622
	Coach	7%	1,089	31
Others	Private Car	8%	1,426	475
	Taxi	10%	1,782	849
	Coach	7%	1,247	36

Remarks: (1) The assumed occupancy rates are 3 persons/car, 2.1 persons/taxi except MPV, 2.5 persons/taxi for MPV and 35 persons/coach

The assumptions applied in deriving the WKCD development traffic during the shows end are listed as follows:

- All WKCD generated traffic would disperse out of WKCD within 30 minutes.
- The departure time for each of the taxi and coaches are assumed to be 0.5 mins and 5 mins respectively (Table 4.9 of TIA Report).
- All taxi trips for MPV/EC would be generated/attracted to/from WKCD.
- The total taxi pick up layby required for CACF facilities (except MPV/EC) is about 140m. Attached **Figures E1** & E**2** show the preliminary locations of the three taxi stands serving the demand. The length of the two taxi stand provided at basement road is about 35m. The length of the taxi stand provided at West Gate is about 70m. Based on length of taxi stand provided, it is assumed only 50% taxi trips from others would generated/attracted to/from WKCD basement while the remaining 50% would use the taxi stand provided in West Gate. It should be on conservative side as some people may use the taxi stands provided in Kowloon Station, China Ferry Terminal etc.
- All private car/coach trips would be generated/attracted to/from WKCD.

Based on the aboves, the traffic generations to/from WKCD during the shows end were calculated and summarised in **Table E2**.

Table E2 WKCD Traffic Generations During Shows End on Weekends

Facilities	Transport Modes	Traffic Generations (pcus/30 mins)	
		Into WKCD	Out of WKCD
MPV/EC	Private Car	-	415
	Taxi	622	622
	Coach	62[(1)]	62[(1)]
	Sub-total	684	1,099
Others	Private Car	-	475
	Taxi	425	425
	Coach	72[(1)]	72[(1)]
	Sub-total	497	972
	Total	**1,181**	**2,071**

Remarks: (1)Based on pcu factor of 2 for coach

As shown in **Table E2**, it was estimated that about 3,252 pcus (two-way) would be generated to/from WKCD within peak 30-minutes during the shows end on weekends.

Due to the uncertain relocation progamme of TST Fire Station, the Canton Road Access is not included for conservative assessment. Attached **Figure E3** shows the 2031 forecasted traffic flows during the shows end (around 11pm) on weekends.

E3 OPERATIONAL ASSESSMENT

Based on the 2031 forecasted traffic flows, the operational performances of various WKCD accesses and critical road junctions within WKCD internal road network (see **Figure E4**) were assessed and the results are summarised in **Table E3**.

Table E3 Junction Assessments During Shows End on Weekends In Year 2031

Junction[(1)]	Junction Type	RC/RFC
		2031
J16 – Austin Road West/Nga Cheung Road (At Grade)	R	0.90
J17 – Lin Cheung Road/Austin Road West	S	10%
WK1 – Austin Road West/Nga Cheung Road (Elevated)	R	0.85
WK3	R	0.46
WK4	R	0.53
WK5	S	24%
A	P	0.35
B	P	0.73
C	P	0.25

Remarks: (1) Locations refer to Figure 2
(2) S – Signal Controlled Junction, R – Roundabout, P – Priority Controlled Junction

As shown in **Table E3**, all the WKCD development accesses and critical road junctions within the WKCD internal road network would be operated within capacity during the shows end on weekends.

Based on the 2031 forecasted traffic flows, **Table E4** summarises the volume/capacity ratio for the identified key road sections within the WKCD internal road network. All key road sections within the WKCD internal road network would be operated within capacity during the shows end on weekends.

Table E4 Road Link Assessments on WKCD Internal Road Network During Show Ends on Weekends in Year 2031

Road Link[(1)]	Direction	Capacity (C) (pcus/30 mins)	2031 Traffic Flow (V) (pcu/30 mins)	V/C Ratio
Basement Road (Section I) (10.3m wide single 2 lane carriageway)	EB	650	230	0.35
	WB	650	230	0.35
Basement Road (Section II) (6.75m dual 2 lane carriageway)	EB	1150	780	0.68
	WB	1150	440	0.38
Basement Road (Section III) (10.3m wide single 2 lane carriageway)	EB	650	140	0.22
	WB	650	85	0.13
At-grade Road (Section IV) (6.75m dual 2 lane carriageway)	NB	1150	1120	0.97
	SB	1150	705	0.61

Note:
(1)Locations refer to Figure 5.9 of the main text.

E4 CONCLUSION

Based on the assessment results, it is concluded that the dispersal situation for WKCD during the shows end is acceptable from traffic view point.

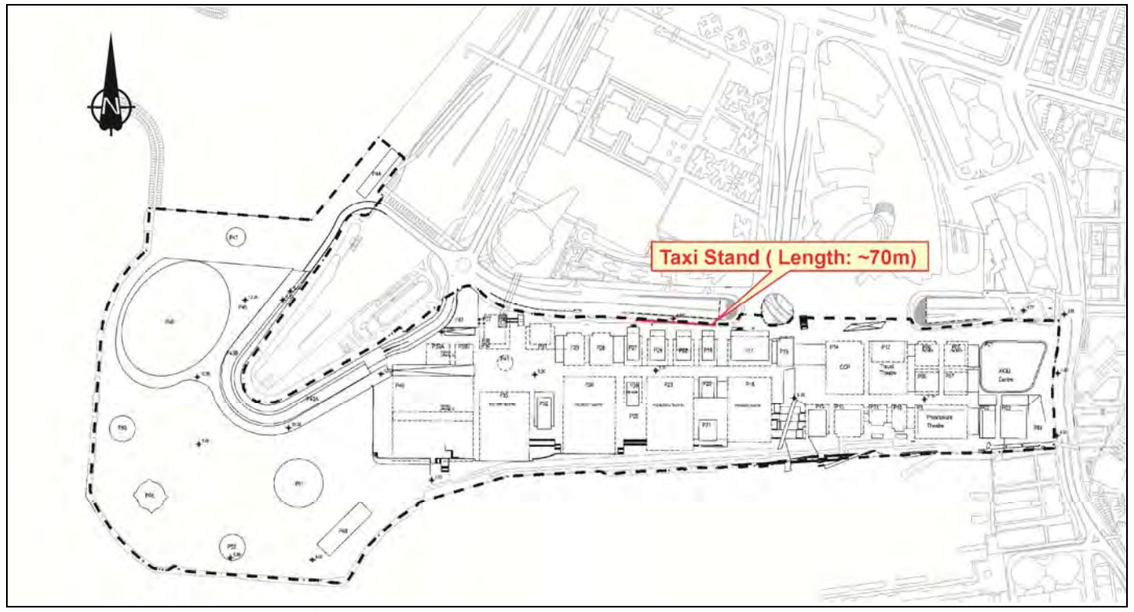


Figure E1 Location of Taxi Stand 1

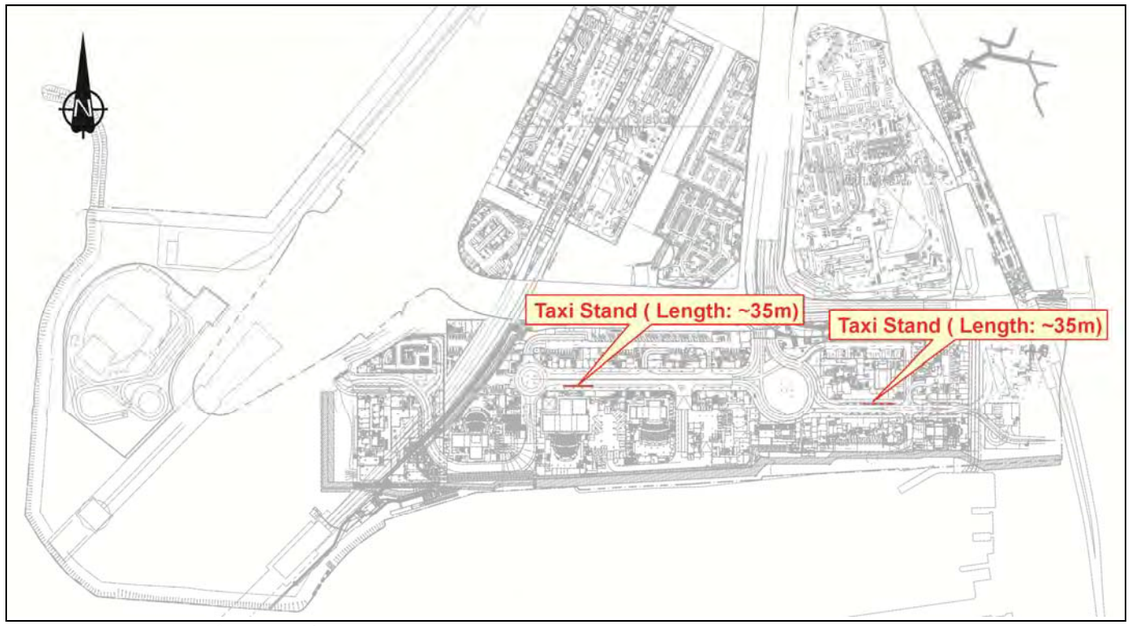


Figure E2 Location of Taxi Stand 2

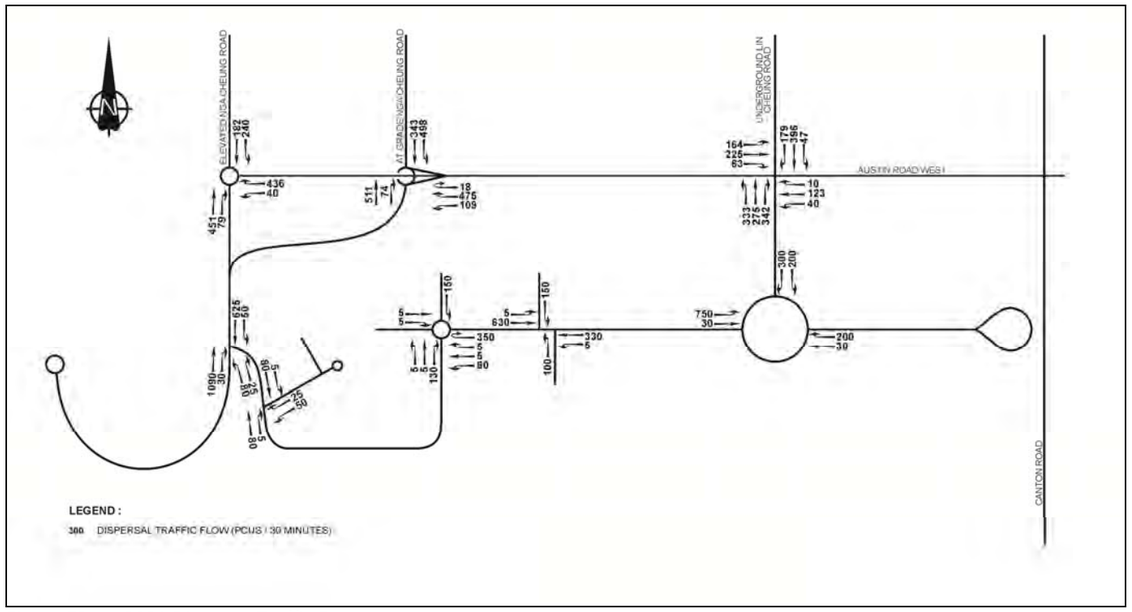


Figure E3 2031 Dispersal Traffic Flows

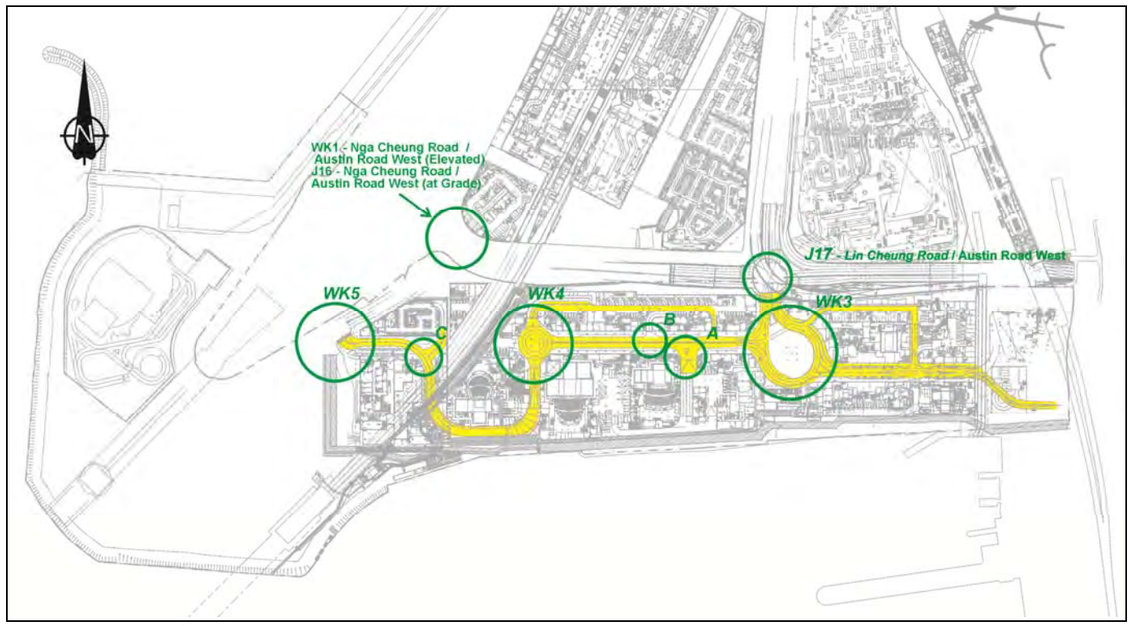


Figure E4 Critical Junctions

Annex F Operational Traffic Analysis for Year 2020 (with At-grade Nga Cheung Road Access Only)

F1 INTRODUCTION

The purpose of this technical note is to determine from traffic capacity point of view whether providing only the basement driveway in zone 3 and one vehicular access at at-grade Nga Cheung road for WKCD by 2020 could accommodate the envisaged traffic generated from the Batch 1 developments plus the Lyric Thetare.

F2 TRAFFIC FORECAST

Tables F1 and **F2** show the vehicular trip generations during the dispersal scenario using the same methodology put forward in the Dispersal Analysis in Appendix E of this S16 submission.

Table F1 2020 WKCD Vehicle Trips During Shows End on Weekends

PA Facilities	Person Trips (pp30mins)	Transport Modes	Modal Split	Person Trips (pp30mins)	Vehicle Trips (veh/30mins)[1]
Lyric Theatre, Freespace, Outdoor Amphitheatre (~6,800 seats)	5,440	Private Car	8%	435	146
		Taxi	10%	544	260
		Coach	7%	381	11

(1)The assumed occupancy rates are 3 persons/car, 2.1 persons/taxi, 35 persons/coach

Table F2 2020 WKCD Traffic Generations During Shows End on Weekends

PA Facilities	Transport Modes	Traffic Generations (pcus/30 mins)	
		In	Out
Lyric Theatre, Freespace, Outdoor Amphitheatre (~6,800 seats)	Private Car	---	146
	Taxi	130	130
	Coach	22[1]	22[1]
	Total	**152**	**298**

(1)pcu factor of 2 for coach

Table F3 below summarises the distribution of WKCD trip generations in design year 2020.

Table F3 2020 WKCD Trip Generations

Access	2020 WKCD Trip Ends (pcu/hr)					
	AM		PM		Weekends Dispersal	
	In	Out	In	Out	In	Out
Lin Cheung Rd	201	130	454	325	---	---
Nga Cheung Rd – elevated	50	120	101	246	---	---
Nga Cheung Rd – At grade	78	20	191	53	---	---
Total	**329**	**270**	**746**	**624**	**304**	**596**
	599		**1,370**		**900**	

The above reveals that the peak traffic generation of WKCD would happen at the PM peak hour in a normal weekday.

The design traffic forecast for 2020 – Full Batch 1 as shown in Figure 5.3 of the TIA for current S16 submission were reassigned to take into account (i) the above trip ends at various peak periods in 2020 and (ii) both the Lin Cheung Road underground access and elevated Nga Cheung Road access are not available by 2020. The 2020 traffic forecast is shown in **Figure F1**.

F3 OPERATIONAL ASSESSMENT

Based on the forecasted traffic flows as in Figure F1, the operational performances are summarised in **Tables F4 and F5**.

Table F4 Junction Assessments for Operating Year 2020 (with At-grade Nga Cheung Road Access Only)

Junction		Jcn Type [1]	Reserve Capacity or RFC [2]		
			Batch 1		
			2020		
			AM	PM	Dispersal
J5	YCR/Ferry St/Kansu St	S	12%	45%	102%
J7	JOR/Hoi Po Rd [3]	S	95%	112%	334%
J8	JOR/NCR (Elevated) [3]	S	44%	83%	251%
J9	JOR/NCR (At Grade)	R	0.72	0.59	0.45
J11	LCR/JOR	S	26%	47%	151%
J12	JOR/Ferry St	S	12%	22%	134%
J14	WCR/WMR	S	92%	103%	263%
J15	CAR/WCR (w/o CAR underpass)	S	53%	44%	92%
J15	CAR/WCR (with CAR underpass)	S	-	-	-
J16	AURW/NCR (At-Grade)	R	0.57	0.47	0.41
J17	LCR/AURW	S	112%	83%	293%
J18	CAR/AUR/AURW (w/o CAR underpass)	S	29%	42%	83%
J18	CAR/AUR/AURW (with CAR underpass)	S	-	-	-
J20	CAR/Kowloon Park Drive	S	23%	26%	118%
J39	YCR/Rd D1A(N)/Hoi Wang Rd	S	39%	79%	261%
J40	JOR/Rd D1A(S)/Rd D1A(N)	S	40%	25%	121%
WK1	AURW/NCR (Elevated)	R	0.50	0.40	0.27
WK2	CAR Entrance	P	-	-	-
WK5	Internal Junction Entrance to Underground Road	P	+210%	+37%	+142%

Note:
(1) S – Signal Controlled Junction; R – Roundabout; P – Priority Controlled Junction
(2) Expressed in Reserve Capacity for signal controlled junction, Expressed in Ratio of Flow to Capacity (RFC) for roundabout and Priority controlled junction
(3) Based on cycle time increased to 90 sec

Table F5 Basement Driveway Capacity Assessments by Year 2020

Road	Dir.	Capacity (C) (pcu/hr)	AM		PM		Dispersal	
			Flow (V) (pcu/hr)	V/C Ratio	Flow (V) (pcu/hr)	V/C Ratio	Flow (V) (pcu/hr)	V/C Ratio
Basement Drievway (10.3m S2 lane)	EB	1,440	329	0.23	746	0.52	304	0.21
	WB	1,440	270	0.19	624	0.43	596	0.41

E4 CONCLUSION

The results conclude that even with only one vehicular access at Nga Cheung Road serving the Batch 1 development + Lyric Theatre, the critical junctions and the basement road in concern would still be operated within capacity.

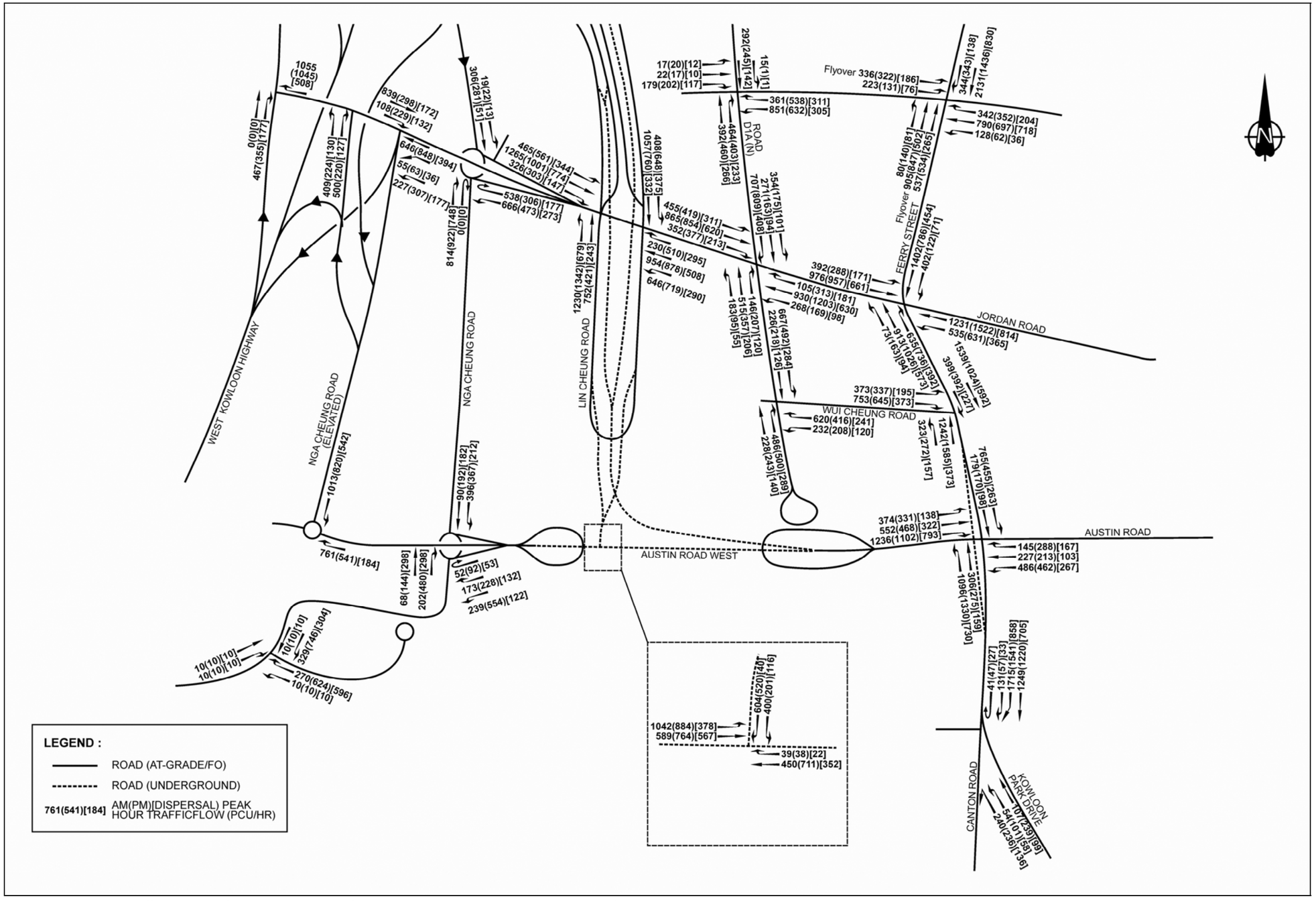
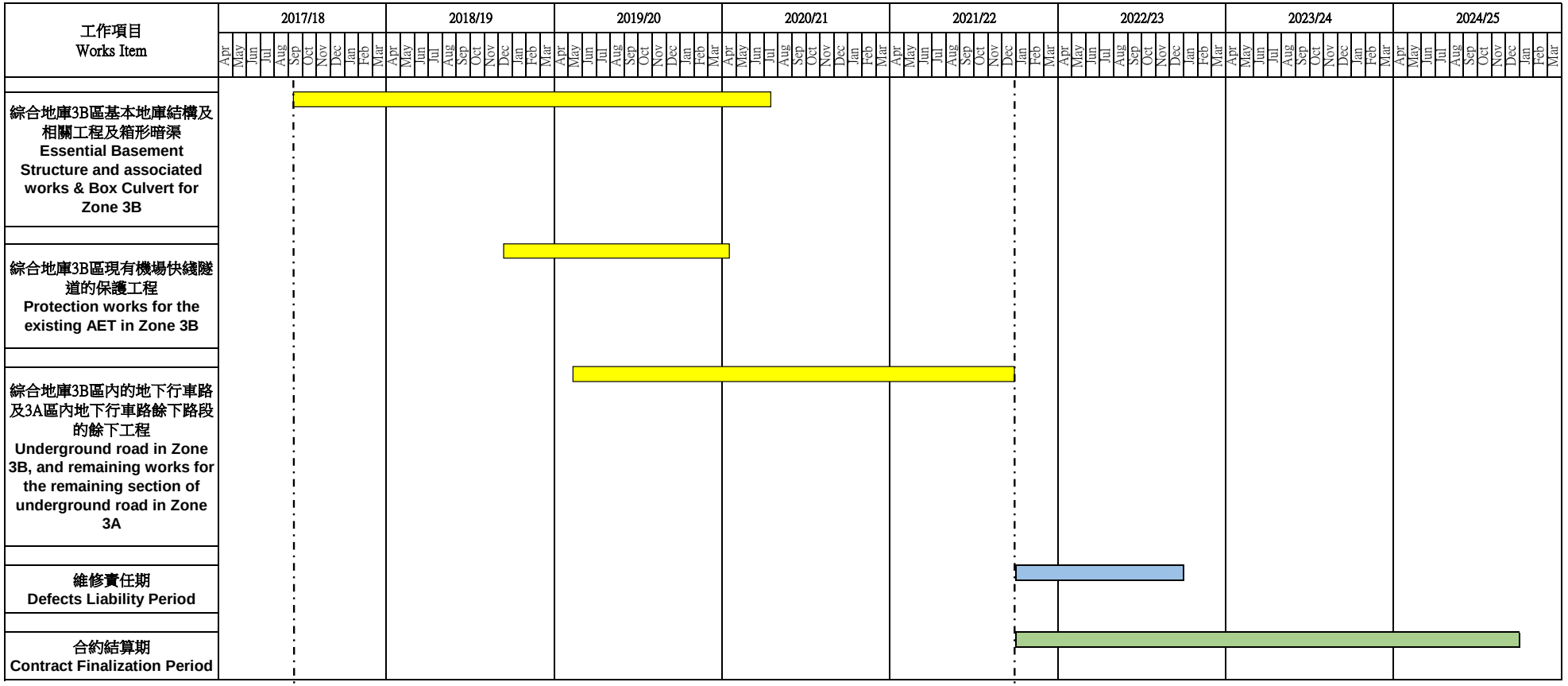


Figure F1 Design Traffic Forecasts for 2020-Full Batch 1 (with At-grade Nga Cheung Road Access only)

西九文化區綜合地庫－第三階段建造工程
Integrated Basement for West Kowloon Cultural District - third stage of construction works

計劃建造工程時間表[1]
Planned Construction Works Programme[1]



註
Remarks

◇ 工程開展
Commencement of Works

◆ 工程大致完成
Substantial Completion of Works

[1]根據工務小組委員會PWSC(2017-18)12號文件
Based on Public Works Subcommittee PWSC Paper No. PWSC(2017-18)12

Annex 4
附件四

16 November 2016

WEST KOWLOON CULTURAL DISTRICT AUTHORITY

GENERAL CONDITIONS OF CONTRACT

FOR BUILDING AND CIVIL ENGINEERING WORKS

GENERAL CONDITIONS OF CONTRACT

FOR BUILDING AND CIVIL ENGINEERING WORKS

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GENERAL CONDITIONS OF CONTRACT

FOR BUILDING AND CIVIL ENGINEERING WORKS

DEFINITIONS AND INTERPRETATION

1.1 Definitions

In the Contract, the following words and expressions shall have the meaning hereby assigned to them:

"**Arbitration Rules**" means the rules for reference of Disputes to arbitration in accordance with Clause 78, as contained in **Schedule 15**;

"**Articles of Agreement**" means the articles of agreement prepared by the Authority and executed by the parties in accordance with Clause 13;

"**Authorised Person**" has the same meaning as under Section 2 of the Buildings Ordinance;

"**Authority**" means West Kowloon Cultural District Authority established under the West Kowloon Cultural District Authority Ordinance contained in Chapter 601 of the laws of Hong Kong, and its successors and assignees;

"**Buildings Ordinance**" means the Buildings Ordinance contained in Chapter 123 of the laws of Hong Kong and all amendments thereto or statutory re-enactments thereof from time to time;

"**Clause**" means a clause of these General Conditions, unless the context otherwise requires;

"**Contract**" means the Articles of Agreement, the Tender, the Letter of Acceptance, the Drawings, the Specification, the General Conditions and the Special Conditions;

"**Contract Administrator**" means the person identified as such in the Letter of Acceptance or any replacement appointed from time to time by the Authority and notified to the Contractor to act as the Contract Administrator for the purposes of the Contract;

"**Contract Administrator's Representative**" means a person appointed from time to time by the Contract Administrator, pursuant to Clause 3.1;

"**Contractor**" means the person or parties referred to in the Letter of Acceptance as having submitted the Tender, including his or their permitted assignees;

"**Contract Rate of Interest**" means the rate equivalent to 1% above the rate per annum from time to time published by The Hong Kong and Shanghai Banking Corporation Limited to be its prime lending rate for Hong Kong Dollars or, if such rate ceases to be

published as the prime lending rate, the nearest equivalent rate for the lending of Hong Kong Dollars by the Bank of China Limited;

"**Contractor's Drawings**" means all drawings, design calculations, software, specifications, samples, patterns, models, written procedures and all other documents and things which are:

(a) prepared by or on behalf of the Contractor;

(b) required by the Contract to be submitted by the Contractor to the Contract Administrator for review; and

(c) reviewed without objection,

provided that this definition shall exclude the Works Programme and insurance policies, to be submitted for review by the Contractor pursuant to Clauses 16 and 33, respectively;

"**Contractor's Equipment**" means all equipment of every kind (including, without limitation, vehicles, plant, marine vessels, tools and other things) and the constituent parts forming or intended to form part thereof, required for the execution of the Works, but excluding the Permanent Works and the Temporary Works;

"**Cost**" means expenditure wholly and necessarily incurred by the Contractor in connection with the Works, including, without limitation, overheads, whether on or off the Site, finance charges (which shall be limited to simple interest calculated at the Contract Rate of Interest) and depreciation in value of any Contractor's Equipment owned by the Contractor, but excluding profit;

"**Cost Centre**" means a group of activities identified as such in the Pricing Document;

"**Cost Centre Value**" means the value allocated to each Cost Centre as set out in the Pricing Document, as the same may be revised from time to time by the Contract Administrator pursuant to Clause 66;

"**Date for Commencement of the Works**" means the date stated in the Particular Specification included in the Specification for the commencement of the Works;

"**Defects Liability Certificate**" means the certificate issued pursuant to Clause 71;

"**Defects Liability Period**" means:

(a) in respect of any Section or any other part of the Works for which a Practical Completion Certificate is issued pursuant to Clause 49, the period calculated from the date of practical completion thereof identified in the relevant Practical Completion Certificate until 12 (twelve) months after the date of practical completion of the Works, as identified in the Practical Completion Certificate for the Works;

(b) in respect of the Works, the period of 12 (twelve) months calculated from the date of practical completion of the Works identified in the Practical Completion Certificate for the Works; and

(c) in respect of work executed pursuant to Clauses 52.1 and 53.1(a), the expression means 12 (twelve) months from the date of completion of such work;

"**Dispute**" means a dispute or difference of any kind whatsoever between the Authority and the Contractor arising under, out of or in connection with the Contract or the execution of the Works, including, without limitation, a dispute concerning any decision, opinion, instruction, notice, order, direction, withholding of permission or consent, determination, certificate, statement of objection, assessment or valuation of the Contract Administrator, whether pursuant to Clause 78 or otherwise, and whether during the execution of the Works, or thereafter, and whether before or after any termination, abandonment or breach of the Contract or the termination of the Contractor's employment under the Contract;

"**Drawings**" means:

(a) the drawings or other documents included in the Contract and identified as "Drawings" (but excluding any drawing or other document identified as "for information") and listed in the Specification;

(b) any drawing or other document identified as a "Drawing" issued by the Contract Administrator to the Contractor from time to time during the execution of the Works; and

(c) any amendment made to the drawings or other documents in (a) and/or (b) above from time to time and issued by the Contract Administrator to the Contractor;

"**Enactment**" means any Ordinance or statutory provision, proclamation, rule, regulation, order, resolution, notice, rules of court, by-law, or other instrument having the force of law from time to time in Hong Kong;

"**Final Certificate**" means the certificate issued by the Contract Administrator pursuant to Clause 69 stating the Final Contract Sum;

"**Final Contract Sum**" means the sum to be ascertained by the Contract Administrator and stated in the Final Certificate, to be paid by the Authority to the Contractor pursuant to Clause 69 in consideration of the execution of the Works in accordance with the Contract;

"**Form of Tender**" means the document identified as such, duly completed and signed by the Contractor and included in the Tender;

"**General Conditions**" means the Clauses of these general conditions of contract, together with all Schedules;

"**General Holiday**" means every Sunday and every other day which is prescribed as a general holiday by the Holidays Ordinance (Cap. 149);

"**Government**" means the Government of Hong Kong;

"**Handing Over Certificate**" means a certificate issued by the Contract Administrator pursuant to Clause 50.2;

"**Hong Kong**" means the Hong Kong Special Administrative Region of the People's Republic of China;

"**Independent Checking Engineer**" means the person, firm or company identified as such in the Letter of Acceptance or any replacement thereof from time to time appointed by the Contractor in accordance with Clause 6;

"**Interim Payment Schedule**" means the schedule as completed by the Contractor and included in the Pricing Document to be used for the calculation of interim payments to be made in respect of each Cost Centre, subject to the other provisions of the Contract, as such schedule may be revised from time to time pursuant to Clause 66;

"**Key Date**" means a date identified as such in the Specification as the same may be extended by the Contract Administrator pursuant to Clause 45 or adjusted by agreement, pursuant to Clause 47;

"**Key Domestic Sub-Contractor**" means a sub-contractor identified as such in the Letter of Acceptance, which the Contractor shall be obliged to engage and retain for the purposes of executing the respective part of the Works referred to in the Letter of Acceptance, in accordance with Clause 5.2. References in the Contract to "sub-contractor" shall include Key Domestic Sub-Contractors;

"**Letter of Acceptance**" means the letter from the Authority to the Contractor accepting the Tender, subject to the terms contained therein or in any attachment thereto;

"**Master Programme**" means the programme issued to the Contractor prior to the date of the Letter of Acceptance showing the intended sequence and timing of the activities to be undertaken by the Contractor and Project Contractors, as the same may be revised from time to time and issued to the Contractor pursuant to Clause 16;

"**Mediation Rules**" means the rules for reference of Disputes to mediation in accordance with Clause 78, as contained in **Schedule 13**;

"**Milestone**" means an event or a degree of completion of a part of the Works as described, and for which a date for achievement is specified, in the Schedule of Milestones;

"**Monthly Progress Report**" means the report to be prepared and submitted by the Contractor monthly in accordance with the Specification;

"**Nominated Sub-Contractor**" means any sub-contractor executing a part of the Works appointed by the Contractor in accordance with Clause 65B and references in the Contract to "sub-contractor" shall include Nominated Sub-Contractors;

"**Option**" means any item of work described as such in the Specification or Pricing Document the scope of which is quantified and defined but which is not included in the Works at the time of acceptance of the Tender but which may be so included by the unilateral instruction of the Option by the Contract Administrator, within the period specified in the Contract or such extended period as may be agreed between the Authority and the Contractor, pursuant to Clause 65A;

"**Permanent Works**" means all permanent works of every kind to be executed by the Contractor in accordance with the Contract and which are to become a permanent part of the Project, including, without limitation, all goods, materials and other constituent parts forming or intended to form part thereof;

"**Practical Completion Certificate**" means a certificate issued pursuant to Clause 49 when the Works or any Section or any other part of the Works is practically complete, and the date of practical completion of any Section or any part of the Works shall be the date identified in the relevant Practical Completion Certificate;

"**Practical Completion Certificate for the Works**" means the Practical Completion Certificate issued pursuant to Clause 49 when the Works are practically completed and, if the Works are divided into Sections which together comprise the whole of the Works, means the Practical Completion Certificate issued in respect of the last Section to be practically completed and the date of practical completion of the Works shall be the date identified in either of the said certificates, as appropriate;

"**Pricing Document**" means the document, including the preamble thereto, identified as such, completed by the Contractor and contained in **Appendix 2** to the Form of Tender;

"**Pricing Schedule**" means the schedule included in the Pricing Document containing Cost Centre descriptions and Cost Centre Values, as such schedule may be revised from time to time by the Contract Administrator pursuant to Clause 66;

"**Prime Cost Sum**" means a sum so designated in the Pricing Document for work to be executed by a Nominated Sub-Contractor;

"**Project**" means Phase I and Phase II of the West Kowloon Cultural District as described in the Specification;

"**Project Contractors**" means any of the following whose activities or the works they are engaged to carry out in any way or at any time affect or are affected by the Works:

(a) contractors and design or specialist consultants engaged on the Project from time to time by the Authority or the Government;

(b) utility providers;

(c) developers or franchisees appointed on the Project from time to time by the Authority;

(d) sub-contractors of any tier of the contractors within category (a) above, and contractors and sub-contractors of any tier of utility providers, developers and franchisees within categories (b) and (c) above;

provided that the definition shall exclude the Contractor and his sub-contractors of any tier both as Contractor or sub-contractor of any tier in relation to the Works and in any other capacity which would otherwise fall within categories (a) to (d) above in relation to other works;

"**Project Site**" means the lands and places at, on, under, over, in or through which the Project is to be constructed and identified as such in the Specification and/or the Drawings;

"**Provisional Item**" means any item of work described as such in the Specification or the Pricing Document the scope of which is quantified and defined but which is not included in the Works at the time of acceptance of the Tender but which may be so included by the issue of a unilateral instruction by the Contract Administrator pursuant to Clause 65.1;

"**Provisional Sum**" means a sum so designated in the Pricing Document for the execution of works or expenditure which is not quantified and/or defined at the date of the Letter of Acceptance, which sum may be expended by the Contract Administrator pursuant to Clause 65;

"**Registered Structural Engineer**" has the same meaning as under Section 2 of the Buildings Ordinance;

"**Relevant Authority**" means any Government Department or public body (other than the Authority) having jurisdiction in relation to the Works;

"**Retention Moneys**" means the sums withheld by the Authority by way of retention pursuant to Clause 68;

"**Schedule**" means a schedule to these General Conditions;

"**Schedule of Milestones**" means the schedule included in the Pricing Document describing the Milestones and stipulating the dates by which Milestones are to be achieved in order to maintain interim payments by the Authority to the Contractor in accordance with the Interim Payment Schedule, as such schedule may be revised from time to time by the Contract Administrator pursuant to Clause 66;

"**Section**" means any part of the Works identified as such in the Specification to which a Key Date is allocated and in respect of which a Practical Completion Certificate is to be issued;

"**Site**" means the lands and other places within the Project Site under, over, on, in or through which the Works are to be executed, as identified in the Specification, and/or the Drawings together with such other lands and places as may be designated by the Contract Administrator from time to time as forming part of the Site;

"**Special Conditions**" means the special conditions of contract, if any, identified as such and either issued by the Authority prior to the submission of the Tender by the Contractor and/or agreed by the Authority and the Contractor after submission of the Tender and referred to in the Letter of Acceptance;

"**Specification**" means the documents identified as such and issued by or on behalf of the Authority, subject to any amendment thereof or addition thereto or omission therefrom as may from time to time be issued by the Contract Administrator;

"**Stage**" means a degree of achievement in the execution of the Works by the Contractor identified as such in the Specification to which a Key Date is allocated and in respect of which a Stage Certificate is to be issued;

"**Stage Certificate**" means a certificate issued pursuant to Clauses 49.4 or 49.6 in respect of the achievement of any Stage or any part of a Stage and the date of achievement of any Stage or any part of a Stage shall be the date identified in the relevant Stage Certificate;

"**Temporary Works**" means all works of a temporary nature of every kind required for the execution of the Works, including, without limitation, false work, temporary structures and buildings and temporary earth works (including the goods, materials and other constituent parts forming or intended to form part thereof);

"**Tender**" means the Form of Tender and the appendices thereto prepared and/or completed by the Contractor in the form accepted by the Authority and subject to the terms of the Letter of Acceptance;

"**Tender Total**" means the total of the Cost Centre Values as referred to in the Letter of Acceptance;

"**Works**" means the Permanent Works and the Temporary Works and all operations and activities expressly or impliedly required by the Contract in relation to and including the provision and completion of the Permanent Works; and

"**Works Programme**" means the programme showing the sequence, method and timing of the execution of the Works including all accompanying narratives and ancillary information, in the form and detail prescribed by the Specification, submitted by the Contractor and reviewed without objection and subject to any amendment thereof from time to time reviewed without objection.

1.2 **Interpretation**

Singular and Plural etc.

1.2.1 In the Contract, where the context so requires:

(a) words importing the singular only shall include the plural, and vice versa;

(b) words importing persons or entities shall include corporations, partnerships and other entities, corporate or unincorporated having legal capacity;

(c) words importing the masculine shall be construed as including the feminine, and vice versa; words importing the neuter shall include the masculine or feminine and vice versa;

(d) "manufacture" shall include preparation, assembly and fabrication;

(e) "sub-contractor" shall include supplier; and

(f) "test" (and grammatical variations thereof) shall include, without limitation, commissioning and any commissioning test.

Headings, Marginal Notes etc.

1.2.2 Unless otherwise expressly provided elsewhere in the Contract, the indices, headings and marginal notes contained in any document included in the Contract shall not be taken into consideration in the interpretation and construction of the Contract.

Joint and Several Liability

1.2.3 All references to the Contractor in the Contract shall have effect, if the Contractor comprises more than one legal entity, so that all entities comprising the Contractor shall be jointly and severally liable for any breach of the Contractor's obligations. In the event that the same was not submitted with his Tender, the Contractor shall, within 14 (fourteen) days of the date of the Letter of Acceptance, provide to the Contract Administrator, a copy of all joint venture or consortium (or any other association) agreements in the forms agreed or executed by the entities comprising the Contractor, relating to the execution of the Works. The provisions of any such agreements shall not be amended, varied or waived by any of the entities comprising the Contractor, including, without limitation, in respect of any change in the parties comprising the joint venture, consortium or other association, without the prior consent of the Authority.

Time

1.2.4 Subject to any express provision to the contrary contained elsewhere in the Contract, any period of time fixed or decided in accordance with the Contract for doing any act or thing shall be calculated subject to and in accordance with the following:

(a) "day" shall mean a calendar day according to the Gregorian calendar;

(b) General Holidays shall be included in any such period of time;

(c) "month" shall mean calendar month;

(d) where the act or thing is required to be done within or not less than a specified period before a specified date, the period shall end immediately before that date;

(e) where the act or thing is required to be done within a specified period after or from a specified date, the period shall begin immediately after that date; and

(f) where the act or thing is required to be done within a specified period, the period shall end at the conclusion of the last day of the period.

Liability, Obligations and Duties of the Contractor

1.2.5 In the Contract, the following words (and grammatical variations thereof) shall, unless the context in which they appear otherwise require, be construed in the following manner:

"liability" shall include responsibility under or in connection with the Contract, at law (in contract and tort (including negligence)) or otherwise, for damages, costs, charges, proceedings, losses and expenses;

"obligations" shall mean obligations under or in connection with the Contract and at law; and

"duty" shall mean obligations under the Contract and not obligations in tort.

Costs and Expense of Performance

1.2.6 Unless otherwise expressly stated in the Contract, the Contractor shall bear the costs and expense of performing all obligations and discharging all liabilities and duties.

Execute

1.2.7 Where the word "execute" (and grammatical variations thereof) is used in the Contract, it shall (unless the context in which it appears otherwise requires) mean carry out and complete.

Practical Completion

1.2.8 Where the words "practical completion" (and grammatical variations thereof) are used in relation to the Works, any Section, or any other part of the Works, they shall mean practical completion excluding any work required to be executed by the Contractor in the Defects Liability Period, including, without limitation, any outstanding work, work of defect rectification, testing after completion of the Works, training of the Authority's personnel or maintenance of any part of the Permanent Works.

1.2.9 **Submission for Review**

All references in the Contract to the term "submission for review" or "review by the Contract Administrator" (and any grammatical variations thereof) shall mean submission for review to the Contract Administrator subject to and in accordance with Clause 10 and any Contractor's Drawings or other thing to which a notice of no objection is given under Clause 10 shall be referred to in the Contract as having been "reviewed without objection". Any reference in any correspondence or other document emanating from the Contract Administrator to the "approval", "agreement" or "acceptance" (or grammatical variations thereof) by the Contract Administrator of any submission by the Contractor of any document or thing shall be interpreted and construed for all purposes of the Contract as reviewed without objection by the Contract Administrator.

Documents in Writing

1.3 Unless the context in which it appears otherwise requires, where provision is made for the giving or issue of any notice, consent, permission, certificate, instruction, determination, direction, request, proposal, authorisation, endorsement, opinion or decision by any person, or the agreement of any person, unless otherwise specified, the same (and any grammatical variations of such terms) shall be construed as:

(a) being required to be given in writing; and

(b) to be given or issued by the Contract Administrator.

Communications in Writing and in English

1.4 Any communications and documents under the Contract required to be in writing shall be handwritten, typed or printed in the English language including, without limitation, all notices, consents, permissions, certificates, instructions, determinations, directions, requests, proposals, authorisations, endorsements, opinions, decisions, design information, drawings, test reports and documents of any kind.

Governing Law

1.5 The Contract shall be interpreted according to and all Disputes shall be governed by, the laws for the time being in force in Hong Kong.

THE CONTRACT ADMINISTRATOR

2. Duties and Powers of the Contract Administrator

2.1 The Contract Administrator shall carry out those duties and may exercise those powers specified in or necessarily to be implied from the Contract. The Contract Administrator may be an employee of the Authority or a consultant or contractor.

2.2 The Contract Administrator is obliged to act at the direction of the Authority in respect of the matters referred to in **Appendix 1 to the Form of Tender** by reference to this Clause.

Save as aforesaid, the Contract Administrator shall act fairly and reasonably within the provisions of the Contract.

2.3 The Contractor's rights under the Contract shall not be prejudiced in any way by any failure on the part of the Contract Administrator to comply with the requirements of his appointment by the Authority including, without limitation, to act at the direction of the Authority in respect of those matters referred to in Clause 2.2. The Contractor shall not be obliged to make any enquiry of the Contract Administrator as to whether the Contract Administrator has sought and/or received any direction of the Authority in respect of any of the matters referred to in Clause 2.2

2.4 Except as expressly provided in the Contract, the Contract Administrator shall not have any power to amend any provision of the Contract.

2.5 The Contract Administrator:

(a) shall issue instructions which in his opinion are necessary for the execution of the Works; and

(b) may issue any other instruction which in his opinion is desirable in connection with the Works and/or the Project,

provided that (except as required by any other provision of the Contract) the Contract Administrator shall not be obliged to issue any instruction relating to any matter which, in his opinion, is the responsibility of the Contractor under the Contract in the absence of the instruction.

2.6 The instructions referred to in Clause 2.5 may be issued pursuant to that Clause or pursuant to any other provision of the Contract as, in the Contract Administrator's opinion, shall be appropriate.

2.7 Subject to the provisions of Clause 3, the Contractor shall take instructions only from the Contract Administrator.

2.8 The Contractor shall give reasonable notice to the Contract Administrator of any instruction which the Contractor considers is necessary for the execution of the Works to enable the Contract Administrator to issue the instruction without delaying the progress of the Works. Without prejudice to the generality of Clause 2.5, the Contract Administrator shall not be bound to issue any instruction which, in his opinion, is unnecessary.

2.9 If, as a result of an instruction pursuant to Clause 2.5, or as a result of any failure or inability of the Contract Administrator to issue, or delay in issue of, an instruction pursuant to Clause 2.5(a) which was the subject of a notice in accordance with Clause 2.8, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date, or incurs Cost which the Contractor did not and had no reason to anticipate, then if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or, in respect of an instruction pursuant to Clause 2.5, Clause 56 and/or 57 and, in respect of

failure, inability or delay as aforesaid, Clause 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

3. The Contract Administrator's Representatives and his Assistants

3.1 The Contract Administrator shall notify the Contractor of the appointment of any Contract Administrator's Representative and of any replacement thereof from time to time. The duties and powers of the Contract Administrator's Representative shall be:

(a) without prejudice to the Contractor's obligations, to watch and inspect the Works;

(b) where deemed necessary by the Contract Administrator, to test and examine any material to be used and workmanship employed by the Contractor in connection with the Works; and

(c) to carry out such other duties and exercise such other powers vested in the Contract Administrator which are delegated to him by the Contract Administrator pursuant to Clause 3.2.

3.2 The Contract Administrator may, from time to time, delegate to any Contract Administrator's Representative, any of the duties and powers vested in him. Any such delegation shall be in writing, signed by the Contract Administrator and shall specify the duties and powers delegated. No such delegation shall take effect until a signed copy thereof has been delivered to the Contractor. Any instruction or decision given by any Contract Administrator's Representative to the Contractor within the terms of such delegation (but not otherwise) shall be deemed to have been given by the Contract Administrator, provided that if the Contractor is dissatisfied with any instruction or decision of any Contract Administrator's Representative, the Contractor may, within 14 (fourteen) days of receipt of notification of such instruction or decision, refer the matter to the Contract Administrator who shall confirm, reverse or vary the instruction or decision.

3.3 The Contract Administrator or any Contract Administrator's Representative may appoint and replace any person to act as assistant to any Contract Administrator's Representative in carrying out his duties and exercising his powers. Upon any such appointment or replacement, the Contract Administrator, or the Contract Administrator's Representative, as the case may be, shall notify the Contractor of the names of each such person and their duties and powers.

3.4 In respect of any assistants appointed pursuant to Clause 3.3:

(a) such assistants shall have no authority to issue any instruction or decision to the Contractor save insofar as such instruction or decision may be necessary to enable them to carry out their duties and exercise their powers. Any such instruction or decision given by any assistant shall be deemed to have been given by the Contract Administrator's Representative for whom he acts; and

(b) if the Contractor is dissatisfied with any instruction or decision of any assistant, he may, within 14 (fourteen) days of receipt of notification of such instruction or

decision, refer the matter to the Contract Administrator's Representative for whom the assistant acts, who shall confirm, reverse or vary the instruction or decision.

3.5 Until the Contract Administrator, or as the case may be, any Contract Administrator's Representative, confirms, reverses or varies any instruction or decision pursuant to the proviso to Clause 3.2, or pursuant to Clause 3.4 (b), the Contractor shall remain bound by the instruction or decision and if, as a result of any reversal or variation, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date, or incurs Cost which the Contractor did not and had no reason to anticipate, then if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

3.6 If for any reason the Contract Administrator or any Contract Administrator's Representative or any assistant to any Contract Administrator's Representative considers it necessary to give any instruction or decision orally, he may do so, and the Contractor shall comply with such instruction or decision. The oral instruction or decision shall be confirmed in writing by the Contract Administrator, the Contract Administrator's Representative or assistant to any Contract Administrator's Representative, as the case may be, as soon as practicable after the instruction or decision was given provided that if the Contractor, within 7 (seven) days of the date of receipt of the oral instruction or decision, confirms in writing to the Contract Administrator the oral instruction or decision and if the confirmation is not contradicted in writing within 7 (seven) days of receipt of the confirmation, it shall be deemed to be an instruction or decision of the Contract Administrator.

3.7 The Contract Administrator's Representatives and his assistants may be employees of the Authority or consultants or contractors.

3.8 Notwithstanding any other provision of the Contract:

(a) no act or omission by the Contract Administrator or any Contract Administrator's Representative or the assistants to any Contract Administrator's Representative, including, without limitation, the issuance of any notice of no objection or certificate, or the giving of any permission or consent shall:

(i) relieve the Contractor in whole or in part from any obligation or liability or give rise to any waiver or estoppel in relation to any of his obligations or liabilities; or

(ii) constitute a warranty by the Authority in relation to the Contractor's performance of the Contract or any part thereof; or

(iii) otherwise create any obligation or liability on the part of the Authority unless the act or omission occurs in the performance of duties or the exercise of powers pursuant to the Contract;

(b) no failure by the Contract Administrator, any Contract Administrator's Representative or any assistant to any Contract Administrator's Representative to reject any work, drawing or document which is not in accordance with the Contract shall prejudice the power of any such persons subsequently to reject the work, drawing or document, nor shall the Authority incur any obligation or liability to the Contractor arising out of such failure; and

(c) neither the Contract Administrator, any Contract Administrator's Representative nor any assistant to any Contract Administrator's Representative shall have any personal liability to the Contractor for their acts and omissions in the performance of their duties or exercise of their powers pursuant to the Contract.

ASSIGNMENT AND SUB-CONTRACTING

4. Assignment

4.1 The Contractor shall not, subject to Clause 4.2, assign or otherwise transfer the benefit of the Contract or any part thereof or any interest or right therein or thereunder without the prior consent of the Authority and any assignment shall be upon terms and in a form approved by the Authority.

4.2 The Contractor may, with the prior consent of the Authority, such consent not to be unreasonably withheld:

(a) grant a charge on any moneys due or to become due to the Contractor under the Contract in favour of his bankers or a third party providing finance to the Contractor for the Works; and

(b) assign to his bankers or the third party the right to receive any moneys due or to become due under the Contract to the Contractor.

4.3 The Authority shall be fully entitled at any time, without the consent of the Contractor, to assign or otherwise transfer:

(a) the benefit of the Contract (or any part thereof) and any interest therein or right thereunder to any third party; and

(b) the burden of the Contract including accrued liabilities (or any part thereof) and any interest therein to the Government or to a corporation wholly owned by the Government, or to any bank or financial institution providing finance to the Authority in respect of the Project,

provided that the Authority shall notify the Contractor following any assignment or transfer by the Authority in accordance with this Clause 4.3.

5. Sub-Contracting

5.1 The Contractor shall not sub-contract the whole of the Works.

5.2 The Contractor shall sub-contract the performance of his design checking obligations subject to and in accordance with Clause 6 and shall enter into sub-contracts with all Key Domestic Sub-Contractors. The Contractor shall not terminate the appointment of any Key Domestic Sub-Contractor or any sub-contract under which a Key Domestic Sub-Contractor is engaged without the prior consent of the Contract Administrator. The Contract Administrator may make consent to the replacement of any Key Domestic Sub-Contractor conditional upon reasonable conditions with which the Contractor shall comply.

5.3 Save as provided by Clause 5.2, the Contractor shall not sub-contract any part of the Works without prior consent.

5.4 If the Contractor wishes to sub-contract part of the Works (other than pursuant to Clause 5.2) he shall submit to the Contract Administrator:

(a) the identity of the sub-contractor proposed to be employed;

(b) particulars of the part of the Works to be sub-contracted;

(c) the proposed terms upon which the sub-contractor is to be employed;

(d) address, telephone and facsimile numbers of the proposed sub-contractor;

(e) description of the proposed sub-contractor's management structure;

(f) details of previous and current projects of a similar nature undertaken by the proposed sub-contractor, giving the names of the employer/client, architect/engineer, description of work performed and contract value;

(g) number of personnel on the proposed sub-contractor's payroll and descriptions of their respective occupation/trade;

(h) any work the proposed sub-contractor intends to further sub-contract to others;

(i) details of design capability, if the proposed sub-contractor is required to carry out design for the Works;

(j) details of design, fabrication and manufacturing facilities of the proposed sub-contractor;

(k) details of the site management arrangements of the proposed sub-contractor;

(l) details of safety personnel currently employed by the proposed sub-contractor and past accident records; and

(m) details of quality management personnel currently employed by the proposed sub-contractor and quality management system in use,

unless the Contract Administrator notifies the Contractor that any information listed in Clause 5.4(a) to (m) is not required in respect of the sub-contracting of any part of the Works. Such information shall be supplied by the Contractor in sufficient time to enable the Contract Administrator to evaluate the capacity and ability of the proposed sub-contractor to execute the part of the Works to be sub-contracted and to enable the Contractor to select an alternative party in the event that the Contract Administrator withholds his consent to the proposed sub-contracting.

5.5 The Contractor shall ensure that the terms of any sub-contract (including, without limitation, those made pursuant to Clause 6) impose on the sub-contractor such of the terms of the Contract as are applicable and appropriate to the part of the Works to be sub-contracted so as to enable the Contractor to comply with his obligations in respect of such part.

5.6 The Contractor shall use all reasonable endeavours to incorporate in any of the sub-contracts referred to in Clauses 5.2 and 5.4, such terms and conditions as the Contract Administrator may request the Contractor to so incorporate.

5.7 The Contractor shall ensure that the proposed terms and conditions of sub-contract referred to in Clause 5.5 shall include a provision by which the sub-contractor is obliged to provide a warranty executed as a deed in favour of the Authority, in the form appearing in **Schedule 1**, unless the Authority notifies the Contractor that no such warranty is required in respect of any sub-contract. The Contractor shall submit a warranty, duly executed, in the said form to the Authority within 28 (twenty eight) days of the Contractor's appointment of each relevant sub-contractor in accordance with this Clause 5.

5.8 The Contractor shall, after receiving consent to any sub-contracting, supply to the Contract Administrator such copies of the terms and conditions (including, without limitation, rates and prices) of the sub-contract as the Contract Administrator may instruct, and the Contractor shall not after entering into the sub-contract, amend, vary or waive the terms and conditions thereof in any respect material to compliance by the Contractor with his obligations, without prior consent.

5.9 The Contract Administrator shall be entitled to communicate directly with the Contractor's sub-contractors of any tier, keeping the Contractor informed of any significant communication, provided that the Contract Administrator shall not be entitled to issue directly to any sub-contractor, any instruction or decision affecting the Contractor's obligations or liabilities to a sub-contractor of any tier.

5.10 No sub-contracting shall relieve the Contractor from any obligation or liability nor create any obligation or liability on the part of the Authority. The Contractor shall be liable for the acts and omissions of his sub-contractors of any tier as if they were the acts and omissions of the Contractor. Without prejudice to the foregoing, the Contractor shall provide all necessary superintendence to ensure that the part of the Works to be executed by his sub-contractors shall comply with the requirements of the Contract.

5.11 The Contract Administrator may, notwithstanding previous consent pursuant to Clause 5.3, instruct the Contractor to discontinue the participation in the Works of any of the Contractor's sub-contractors of any tier if, in the opinion of the Contract Administrator, the

sub-contractor causes or contributes to a material breach by the Contractor of any term of the Contract. Following the issue of any such instruction, the Contractor shall ensure that the relevant sub-contractor does not participate in the Works again without prior consent.

5.12 If a sub-contractor of any tier provides to the Contractor a warranty in connection with the Works, and if the Authority so instructs, the Contractor shall assign the benefit of the warranty to the Authority, provided that in the event of any such assignment, the Authority shall use reasonable endeavours to enforce the said warranty against the relevant sub-contractor before enforcing the Contract against the Contractor in respect of any matter for which a cause of action exists against the sub-contractor under the said warranty.

5.13 If the Contractor is in breach of any of the provisions of this Clause 5 in respect of any sub-contractor appointed by the Contractor, the Authority may, without prejudice to any other rights or remedies it may have, withhold all interim payments in relation to the Cost Centre under which the Contractor is to receive payment in respect of that part of the Works sub-contracted, until the breach is remedied.

6. **Appointment of Independent Checking Engineer**

6.1 Within 30 (thirty) days of the date of the Letter of Acceptance, the Contractor shall appoint the Independent Checking Engineer from the Authority's list of approved independent checking engineers contained in the Specification to perform the Contractor's design checking obligations.

6.2 The terms of appointment of the Independent Checking Engineer shall provide that the Independent Checking Engineer is required:

(a) to provide persons of the qualifications and experience appropriate to and consistent with the nature and scope of the services to be undertaken;

(b) to perform the duties ascribed to him with reasonable skill, care and diligence;

(c) to perform his duties in a manner compatible and consistent with the Contractor's obligations;

(d) to be represented in Hong Kong at all times throughout the execution of the Works by staff of suitable seniority and experience;

(e) not to sub-contract any part of his obligations, save with the written consent of the Contractor and the Contract Administrator; and

(f) to provide in favour of the Authority a warranty duly executed as a deed in the form appearing in **Schedule 2**.

The Independent Checking Engineer shall be (and shall be required by his terms of appointment with the Contractor to be) independent of the Contractor and not be associated in any way with any person undertaking the design of any part of the Permanent Works or the Temporary Works.

6.3 The Contractor shall supply to the Authority the warranty referred to in Clause 6.2(f) above, duly executed, within 14 (fourteen) days of the appointment of the Independent Checking Engineer by the Contractor.

6.4 The Contractor shall supply to the Contract Administrator one copy of the terms and conditions of appointment of the Independent Checking Engineer within 7 (seven) days of being instructed so to do by the Contract Administrator. The Contractor shall not, after entering into an agreement with the Independent Checking Engineer, amend, vary or waive the terms and conditions thereof in any respect material to compliance by the Independent Checking Engineer, with the Independent Checking Engineer's obligations, without prior consent.

6.5 The Contract Administrator may instruct the termination of the appointment of the Independent Checking Engineer if, in the Contract Administrator's opinion, the Independent Checking Engineer fails to properly discharge his duties in accordance with the terms and conditions of his appointment. If the Independent Checking Engineer's appointment is so terminated, he shall not again participate in the Works without prior consent.

6.6 In the event of the termination of the appointment of the Independent Checking Engineer for any reason by the Contractor, the Contractor shall give notice thereof to the Contract Administrator and shall submit for review details of the identity, qualifications, experience and terms and conditions of appointment of the proposed replacement. On receiving a notice of no objection thereto, the Contractor shall appoint the replacement as soon as practicable.

CONTRACT DOCUMENTS

7. Precedence of Documents

7.1 The documents forming the Contract are to be taken as mutually explanatory. In the event of any inconsistency between the documents comprising the Contract, the documents shall be interpreted by reference to the following order of precedence unless a contrary intention is expressed by any other provision of the Contract:

(a) the Letter of Acceptance shall prevail over any other document forming the Contract;

(b) subject to Clause 7.1(a), the provisions of any Special Conditions shall prevail over those of any other document forming the Contract; and

(c) subject to Clauses 7.1(a) and (b), the provisions of these General Conditions shall prevail over those of any other document forming the Contract.

7.2 In the event that the Contractor shall find any ambiguity or discrepancy in or between the documents comprising the Contract, the Contractor shall forthwith notify the Contract Administrator who shall, as soon as practicable, issue such instructions to the Contractor which are necessary, in the Contract Administrator's opinion, to resolve the ambiguity or

discrepancy. If in compliance with an instruction issued pursuant to Clause 7.2, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date, or incurs Cost which the Contractor did not and had no reason to anticipate then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or Clause 56 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

8. Entire Agreement and Rights of Third Parties

8.1 Notwithstanding anything to the contrary expressed in or to be implied from the Contract, the documents referred to in the definition of "Contract" in Clause 1.1 as comprising the Contract contain the entire agreement between the parties which supersede any previous agreement and understanding between the parties in relation to the Works or any part thereof. The Contractor acknowledges that by entering into the Contract, he has not relied on any statement, representation, warranty, undertaking or qualification to, or clarification of, his Tender, which is not expressly set out in the documents comprising the Contract and that the Authority shall have no liability to the Contractor in respect of the same in the absence of fraud.

8.2 Except in respect of any rights arising by means of an assignment pursuant to Clause 4.3, any person who is not a party to the Contract shall not have any right or entitlement under any Enactment to enforce or enjoy the benefit of any term or condition of the Contract and any such right or entitlement is hereby expressly excluded.

9. Provision of Drawings and Specification

9.1 Within 7 (seven) days of the date of the Letter of Acceptance, the Contract Administrator shall issue to the Contractor, free of charge, 4 (four) copies of the Specification, together with 2 (two) copies and 1 (one) CD-ROM of the Drawings.

9.2 The Contract Administrator shall issue to the Contractor from time to time during the progress of the Works 1 (one) negative and 2 (two) positive sets of such further or amended Drawings and 2 (two) copies of such further or amended Specification (excluding drawings and documents which the Contractor is expressly or impliedly obliged to produce under the Contract) as shall in the Contract Administrator's opinion be necessary for the execution of the Works and the Contractor shall be bound by the same. The Contract Administrator shall not be bound to issue any Drawing or Specification relating to any matter which, in his opinion, is the responsibility of the Contractor under the Contract in the absence of the Drawing or Specification.

9.3 The Contractor shall give reasonable notice to the Contract Administrator of any further or amended Drawings or Specification which the Contractor considers is necessary for the execution of the Works to enable the Contract Administrator to issue the Drawings or Specification without delaying the progress of the Works, but the Contract Administrator shall not in any event be obliged to issue the Drawings or Specification in advance of dates for their issue identified in the Works Programme.

9.4 If, as a result of any failure or inability of the Contract Administrator to issue pursuant to

Clause 9.2 at a time reasonable in all the circumstances, further or amended Drawings or Specification which were the subject of a notice by the Contractor in accordance with Clause 9.3, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date, or incurs Cost which the Contractor did not and had no reason to anticipate, then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or Clause 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

10. Submission and Review Procedure

10.1 The Contractor shall submit to the Contract Administrator for review all proposed Contractor's Drawings and all other documents and things required by the Contract to be submitted for review. Each submission shall be made in accordance with the procedure for submission set out in the Specification and in any event:

(a) in time to enable the Contract Administrator to examine the proposed Contractor's Drawings or other document or thing submitted by the Contractor without delaying the progress of the Works; and

(b) not later than any relevant date identified in the Works Programme.

10.2 The Contract Administrator shall notify the Contractor of the outcome of his review pursuant to the procedure for submission set out in the Specification within such period as may be expressly stipulated in the Contract, or in the absence of any stipulation, within a reasonable time. The Contractor shall, subject to any other provision of the Contract to the contrary, execute the Works in accordance with the Contractor's Drawings.

10.3 If the Contract Administrator notifies the Contractor, or if the Contractor discovers at any time that any of the Contractor's Drawings is not in accordance with the Contract, or any part of the Contractor's Drawings is inconsistent or incompatible with another part, the Contractor shall make such amendments as are necessary to remedy the non-compliance and shall submit all amended Contractor's Drawings to the Contract Administrator for review.

10.4 The Contractor shall not be entitled to receive any extension of time for achievement of a Stage or practical completion of the Works or any Section, or to receive any valuation or Cost pursuant to Clauses 56 and 57 respectively, or any further or additional payment of whatsoever nature by reason of any amendment reviewed without objection pursuant to Clause 10.3, and the Contractor shall be liable for any loss and expense incurred by the Authority arising out of any amendment reviewed without objection pursuant to Clause 10.3.

10.5 The Contractor shall have an on-going obligation to monitor and review the Contractor's Drawings in addition to the Drawings and the Contractor shall propose amendments to the Drawings and/or Contractor's Drawings and submit them for review by the Contract Administrator if the Contractor becomes aware that any of the designs contained in the Drawings or Contractor's Drawings is inconsistent with the Specification or is not in accordance with the Contract, or is inconsistent with any other obligation of the Contractor

or if the Contract Administrator notifies the Contractor of such inconsistency or incompatibility. If such an inconsistency or incompatibility is discovered, the Contractor will not be obliged to execute the works in accordance with the inconsistent design.

10.6 If the Contractor wishes to modify any part of the design contained in the Drawings or Contractor's Drawings which has been reviewed without objection by the Contract Administrator, the Contractor shall submit the Contractor's Drawings containing the modified design for review by the Contract Administrator with details of:

(a) the proposed amendment; and

(b) the reasons for the proposed amendment,

together with any other information and supporting documentation that the Contract Administrator requires. Such modification will not amount to a variation for the purposes of Clause 54, but if the modification is consequent upon or caused by a variation issued by the Contract Administrator, then the cost of performing the modification to the Drawings or the Contractor Drawings may be the subject of a claim for additional time or payment therefor by the Contractor under Clause 54.

GENERAL OBLIGATIONS

11. Contractor's General Responsibilities

11.1 Save insofar as it is legally or physically impossible, the Contractor shall, without prejudice to his other obligations:

(a) execute the Works in accordance with the Contract and, subject thereto, to the satisfaction of the Contract Administrator;

(b) comply with the Contract Administrator's instructions;

(c) provide all staff, labour, goods, materials, Contractor's Equipment, work, transport to and from and about the Site and the Project Site, accommodation, storage and disposal facilities, consumables and everything, whether of a temporary or permanent nature, required in and for the execution of the Works, so far as the necessity for providing the same is identified in the Contract or could reasonably be inferred therefrom by a competent contractor experienced in the execution of works of a similar nature and scope to the Works; and

(d) discharge his obligations with the skill and care to be expected of a competent contractor experienced in the execution of works of a similar nature and scope to the Works.

12. **Responsibility for Design**

12.1 The Contractor shall, subject to and in accordance with the Contract, design:

(a) the Temporary Works, save to the extent expressly provided to the contrary in the Contract; and

(b) any part of the Permanent Works expressly required by the Contract to be designed by the Contractor,

and the design shall include the selection and specification of the kinds and standards of goods, materials and workmanship to be used in the Permanent Works and the Temporary Works, or in relation thereto, so far as is not described or stated in the Specification.

12.2 The Contractor shall be entirely responsible for the Contractor's design of the Temporary Works and any part of the Permanent Works required by the Contract to be designed by the Contractor, including, without limitation, the Contractor's Drawings, and shall be, and shall remain, liable for any mistake, inaccuracy or discrepancy contained therein or any omission therefrom. Nothing contained in the Contractor's design shall relieve the Contractor from his obligations or liabilities pursuant to Clause 12.3.

12.3 To the extent of his design obligations pursuant to Clauses 12.1 and 12.2, the Contractor warrants to the Authority that:

(a) he has exercised and shall continue to exercise in his design of the Temporary Works and the relevant part of the Permanent Works, all the skill and care to be expected of a professionally qualified and competent designer experienced in undertaking the design of works of a similar nature and scope to the Works;

(b) the Temporary Works and the relevant part of the Permanent Works shall comply in all respects with the Contract and the Contractor's Drawings;

(c) the Temporary Works and the relevant part of the Permanent Works have been and will be designed and constructed by the Contractor using proven up to date good practice and standards available at the date hereof which are consistent with the scope of the Works and to standards which are consistent with the Contract;

(d) the relevant part of the Permanent Works shall, when completed, comply with the Enactments;

(e) no goods or materials generally known to be deleterious or otherwise not in accordance with good architectural practice have been or will be specified or selected by the Contractor or any one acting on his behalf;

(f) no goods or materials which, after their specification or selection by or on behalf of the Contractor but before being incorporated into the Permanent Works, become generally known to be deleterious or otherwise not in accordance with sound architectural practice, will be incorporated into the Permanent Works; and

(g) the Contractor's design of the relevant part of the Permanent Works has taken and/or will take full account of the construction methods, Temporary Works, and Contractor's Equipment intended to be used by the Contractor and all sub-contractors of any tier.

12A. **Alternative Design**

12A.1 If at any time during the execution of the Works, the Contractor wishes to propose to the Contract Administrator an alternative design of any part of the Permanent Works the design of which is contained in the Specification and/or the Drawings, he shall submit to the Contract Administrator for review a proposal for such alternative design which shall contain, without limitation:

(a) details of the technical and aesthetic aspects of the proposal;

(b) the anticipated impact of the proposal on the Works Programme and any time savings offered by the Contractor;

(c) details of any cost savings to be derived from the proposal (including the cost of maintenance of the Permanent Works);

(d) particulars of any alternative products included in the proposal, with catalogues and technical data;

(e) evidence of compliance with equivalent standards referred to in the Specification;

(f) particulars of local examples of the design included in the proposal; and

(g) evidence, where relevant, of the unavailability of materials specified in the Drawings and/or the Specification in respect of that part of the Permanent Works to which the Contractor's proposal relates.

12A.2 Following receipt of any proposal from the Contractor in accordance with Clause 12.A.1, and following consultation with the Authority, the Contract Administrator shall review the Contractor's proposal subject to and in accordance with the procedures set out in the Specification and shall notify the Contractor of any costs and/or expenses which will be charged to the Contractor including, without limitation:

(a) the charges of the Contract Administrator in reviewing the Contractor's proposal and undertaking any additional design; and

(b) additional costs of supervising the Contractor's alternative design.

12A.3 Within 7 (seven) days of receipt of any notice of no objection from the Contract Administrator pursuant to clause 12.A.2, the Contractor shall inform the Contract Administrator whether or not he intends to proceed with his proposal for the alternative design of a part of the Permanent Works.

12A.4 In the event that the Contractor wishes to proceed with any alternative design proposal which has been reviewed without objection by the Contract Administrator, the Contractor shall, for all purposes of the Contract, be responsible for the design of that part of the Permanent Works referred to in the Contract Administrator's notice of no objection and all the provisions of the Contract in respect of the Contractor's design of the Works shall apply to such part of the Permanent Works to be designed by the Contractor. Without prejudice to the foregoing, for the purpose of Clause 12.1(b), that part of the Permanent Works referred to in the Contract Administrator's notice of no objection issued pursuant to Clause 12A.2 shall be deemed to be expressly required by the Contract to be designed by the Contractor.

12A.5 Any proposal submitted by the Contractor in accordance with Clause 12A.1 shall be made at such time as to enable the Contract Administrator to consider the proposal without delaying the progress of the Works or incurring any abortive design costs. The Contractor shall, notwithstanding the submission of any proposal to the Contract Administrator pursuant to Clause 12A.1, continue with the execution of the Works subject to and in accordance with the Contract.

12A.6 In relation to the alternative design of any part of the Permanent Works reviewed without objection by the Contract Administrator, the Authority will appoint the Authorised Person and Registered Structural Engineer (if required) to fulfil the statutory requirements under the Buildings Ordinance in respect of the Contractor's alternative design. The said appointment of an Authorised Person and a Registered Structural Engineer in respect of the Contractor's alternative design of any part of the Permanent Works shall not relieve the Contractor in whole or in part of any obligation or liability, nor shall the Contractor claim any waiver or estoppel in relation to any obligation or liability by reason of any act or omission of the Authorised Person or any person acting as Registered Structural Engineer under the Buildings Ordinance, notwithstanding that such persons may be appointed by the Authority pursuant to Section 4(1) of the Buildings Ordinance in respect of the Contractor's design of any part of the Permanent Works.

12A.7 In relation to the Contractor's alternative design of any part of the Permanent Works, the Contractor shall appoint the Independent Checking Engineer to check the Contractor's alternative design in accordance with the Contract. The Contractor's alternative design shall be certified by a person who is registered as an Authorised Person and, if required, by a person who is registered as a Registered Structural Engineer, prior to submission to the Contract Administrator for review, notwithstanding that the Authority will appoint the Authorised Person and Registered Structural Engineer (if required) in respect of the Contractor's alternative design, pursuant to Clause 12A.6.

12A.8 Notwithstanding any other provision of the Contract, the Contractor shall not be entitled to receive any extension of time for completion of the Works or any Section or for the achievement of any Stage by reason of any failure by the Contract Administrator to issue a notice of no objection in respect of any proposal submitted by the Contractor for the alternative design of any part of the Permanent Works. Unless otherwise expressly agreed by the Contract Administrator, the issue of any notice of no objection by the Contract Administrator to any proposal for an alternative design of any part of

the Permanent Works shall not entitle the Contractor to receive any further or additional payment by reason thereof, or by reason of any disruptive effect on the remainder of the Works, whether pursuant to Clauses 56 and/or 57 or by way of damages howsoever arising.

13. Articles of Agreement

13.1 The Contractor shall, when requested by the Authority, execute the Articles of Agreement, in the form appearing in **Schedule 3**, as a deed, which shall be prepared at the expense of the Authority.

13.2 If the Contractor, or any of the entities comprising the Contractor, is incorporated outside of Hong Kong, the Contractor shall, if requested by the Authority, obtain prior to the execution of the Articles of Agreement, an opinion in writing by an established and qualified lawyer (who is not an employee of the Contractor or any such entity) in the country where the Contractor or such entity is incorporated, in substantially the same form as the draft contained in **Schedule 4** and acceptable to the Authority, confirming that the proposed manner of execution of the Articles of Agreement by the Contractor or such entity will result in a legal, valid and binding instrument in and under the laws of the country in which the Contractor or any such entity is incorporated.

14. Bonds and Parent Company Guarantees

Bonds and Guarantees

14.1 The Contractor shall, within 14 (fourteen) days of the date of the Letter of Acceptance, obtain and provide to the Authority:

(a) a bond for the amount stated in **Appendix 1 to the Form of Tender**, in the form appearing in **Schedule 5**, duly executed as a deed by the bank or other financial institution which is identified in the Letter of Acceptance. Such bond shall remain in full force and effect until the issuance of the Defects Liability Certificate (save to the extent that payment thereunder is received by the Authority in full prior thereto), and save that the amount of the bond shall be reduced by 50% on the issuance of the Practical Completion Certificate for the Works. The Authority shall return the bond to the Contractor within 28 (twenty-eight) days of its expiry. Within 7 (seven) days of the submission of the bond in the form required, the Authority shall release any tender bond submitted by the Contractor with the Tender; and

(b) a parent company guarantee in the form appearing in **Schedule 6**, duly executed as a deed by such of the parent companies' shareholders or holding companies of the Contractor as is identified in the Letter of Acceptance. If the Contractor comprises more than one legal entity, this provision shall apply to each such entity. If any Parent Company sells, transfers, assigns or otherwise disposes of or deals with the ownership of the whole or any part of the shareholding or other interest in the Contractor or any company comprised in the Contractor, which affects the beneficial ownership and control in the Contractor or any company comprising the Contractor, the Contractor shall obtain and provide to the Authority within 14

(fourteen) days of the date of such sale, transfer, assignment, disposal or dealing a replacement Parent Company Guarantee in the form appearing in **Schedule 6**, duly executed as a deed, from the new Parent Company of the Contractor or the company comprised in the Contractor.

(c) The Contractor shall obtain and provide to the Authority a parent company guarantee in the form appearing in **Schedule 7**, duly executed as a deed, by the parent companies, shareholders or holding companies of any sub-contractor identified as being required to provide a guarantee to the Authority in the Letter of Acceptance, within 14 (fourteen) days of the appointment of any such sub-contractor by the Contractor.

Off-shore Manufacturing Bonds

14.2 The Contractor shall submit to the Authority, at the times required by the preamble to the Pricing Document, bonds required by the said preamble as security for and as a condition precedent to payment for any part of the Permanent Works manufactured offshore, in the form appearing in **Schedule 8**, duly executed as a deed by the bank or financial institution identified in the Letter of Acceptance or such other bank or financial institution as may be reviewed without objection.

Legal Opinions

14.3 The provisions of Clause 13.2 in respect of the provision of a legal opinion for the execution of the Articles of Agreement by the Contractor shall apply mutatis mutandis to the execution of a bond by any bank or financial institution and the execution of a parent company guarantee by any company pursuant to Clauses 14.1(a), 14.1(b), 14.1(c) and 14.2, as appropriate, where they are incorporated outside of Hong Kong, save that the legal opinion shall be in practically the same form as the relevant draft contained in **Schedule 9**.

Withholding Interim Payments

14.4 The Contractor's compliance with Clause 14.1 shall be a condition precedent to receipt of any payment by the Contractor under the Contract. Without prejudice to any other right or remedy of the Authority, until the Contractor has complied with Clause 14.1, the Authority shall be entitled to withhold all payments otherwise due to the Contractor under the Contract.

15. Inspection of the Project Site, the Site and Information, Sufficiency of Tender and Physical Conditions and Artificial Obstructions

15.1 The Contractor shall be deemed prior to the date of the Letter of Acceptance to have:

(a) inspected the Project Site and the Site and its surroundings and examined all information in connection with the Works made available to the Contractor by or on behalf of the Authority prior to the said date, including, without limitation, the information on the nature of the ground, sub soil and sub strata of the Site obtained by or on behalf of the Authority and listed in the Specification, which the Contractor shall be responsible for interpreting;

(b) obtained for himself all other necessary information in connection with the execution of the Works and his other obligations; and

(c) satisfied himself as to:

(i) the form, nature and general condition of the Site including, without limitation, the form and nature of the ground, sub soil and sub strata of the Site, and all geological, geo-environmental, geotechnical and hydrological conditions affecting the Site;

(ii) the form and nature of materials, whether natural or otherwise, to be excavated from the Site;

(iii) the means of communication with and access to and through the Project Site and the Site;

(iv) the climatic and environmental conditions affecting the Project Site and the Site;

(v) the risk of damage to property adjacent to the Site and injury to occupiers of such property;

(vi) the possibility of interference by persons other than the Authority who will also have access to or use of the Project Site and the Site from time to time;

(vii) the interfaces with Project Contractors and other works relating to the Project;

(viii) the nature and extent of the Works and the materials necessary for the execution of the Works;

(ix) the description of the Cost Centres and item descriptions and quantities, if any, contained in the Pricing Schedule and that the same are consistent with the scope of the Works ascertainable in accordance with the Contract, apart from those descriptions and quantities; and

(x) all other matters whatsoever affecting his obligations.

15.2 The Contractor shall be deemed prior to the date of the Letter of Acceptance on the basis indicated in Clause 15.1 and generally, to have allowed a correct and sufficient Tender Total and rates and prices included in the Pricing Document to cover all his obligations and to have allowed the necessary resources and allocated the necessary time to enable him to practically complete the Works and any Section and to achieve any Stage by the relevant Key Dates. Except insofar as otherwise provided in the Contract, the Tender Total and the said rates and prices shall cover all the Contractor's obligations and, except as aforesaid, the periods ending on the Key Dates shall be deemed sufficient for the Contractor to practically complete the Works and any Section and to achieve any Stage.

15.3 The Authority shall have no obligation to make any additional payment to the Contractor, and the Contract Administrator shall have no obligation to grant any extension of time on the ground of:

(a) any misunderstanding or misapprehension in respect of the matters referred to in Clause 15.1; or

(b) except as otherwise provided in the Contract (including, without limitation, pursuant to Clauses 15.4, 15.5 and 15.6), incorrect or insufficient information being given to the Contractor by any person whether or not in the employ of the Authority; or

(c) the Contractor failing to obtain correct and sufficient information,

nor shall the Contractor be relieved from any of his obligations or liabilities on any such ground or, subject to Clauses 76 and 77, on the ground that he did not or could not foresee any matter which may in fact affect or have affected his obligations, provided that the foregoing shall not affect the Contractor's rights or obligations pursuant to Clauses 15.4 to 15.7, or Clause 24.1.

15.4 If, during the execution of the Works, the Contractor shall encounter physical conditions at the Site (other than weather conditions or conditions due to weather conditions) or artificial obstructions at the Site which could not, in his opinion, reasonably have been foreseen by an experienced contractor at the date of the Letter of Acceptance, the Contractor shall, as soon as practicable thereafter, and in any event within 28 days of encountering such conditions, give notice thereof to the Contract Administrator. Without prejudice to Clauses 45, 56, 57 and 58, such notice shall specify the physical condition or artificial obstruction at the Site, the effects thereof, the measures the Contractor has taken or is proposing to take to overcome the physical condition or artificial obstruction at the Site, their estimated cost, and the extent of the anticipated delay in, or interference with, the execution of the Works.

15.5 Following receipt of any notice served by the Contractor in accordance with Clause 15.4, and without prejudice to any other power which the Contract Administrator may have under the Contract, the Contract Administrator may:

(a) instruct the Contractor to investigate and report upon the practicability and cost and timing effects of the Contractor taking measures which may be available to overcome the physical condition or artificial obstruction at the Site;

(b) consent to the measures notified by the Contractor in accordance with Clause 15.4, with or without modification;

(c) give an instruction as to how the physical condition or artificial obstruction at the Site is to be dealt with; and/or

(d) order a suspension under Clause 51 or a variation under Clause 54.

15.6 If by reason of:

(a) the presence of the physical condition or artificial obstruction at the Site notified by the Contractor in accordance with Clause 15.4 which in the Contract Administrator's opinion could not have been reasonably foreseen by an experienced contractor at the date of the Letter of Acceptance; and

(b) the measures taken by the Contractor to overcome the physical condition or artificial obstruction at the Site notified by the Contractor in accordance with Clause 15.4 and made the subject of the Contract Administrator's consent pursuant to Clause 15.5(b); or

(c) instructions issued by the Contract Administrator pursuant to Clauses 15.5(a) or (c),

the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clauses 45 and/or 56 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

15.7 If the Contract Administrator shall decide that the physical condition or artificial obstruction the subject of a claim for additional time and/or payment, could in whole or in part have been reasonably foreseen by an experienced contractor at the date of the Letter of Acceptance, he shall so notify the Contractor in writing as soon as he shall have reached that decision. Notwithstanding such notification, any claim by the Contractor for additional time and/or payment in respect of any suspension or variation previously instructed by the Contract Administrator shall be decided in accordance with Clauses 45 and/or 56 and/or 57.

16. **Programmes and Progress Reports**

16.1 The Contractor shall submit to the Contract Administrator in accordance with the Specification:

(a) the Works Programme;

(b) the Monthly Progress Reports; and

(c) such other programmes, schedules and reports as may be identified in the Specification or instructed.

16.2 The review without objection of any of the documents referred to in Clause 16.1 (or any amendment thereof from time to time) shall not:

(a) if the document indicates that a Key Date has not or will not be met, constitute any form of acknowledgement that the Contractor is or may be entitled to an extension of time in relation to the Key Date; and

(b) without prejudice to the generality of any other provision of the Contract, imply that any programme is feasible, suitable or appropriate.

16.3 The Contract Administrator shall issue the Master Programme to the Contractor and may from time to time issue the Contractor with revised versions of the Master Programme if, in the Contract Administrator's opinion, the effect of the revisions are relevant to the programming and/or execution of the Works. The Master Programme shall not be binding on the Authority or otherwise:

(a) release the Contractor of any of his obligations or liabilities or give rise to any waiver or estoppel in relation to any of his obligations or liabilities; or

(b) constitute a warranty by the Authority in relation to the Contractor's execution of the Works; or

(c) create any obligation or liability on the part of the Authority.

16.4 The Contract Administrator shall issue the Contractor with the Co-ordinated Installation Programme and such other programmes to be issued by the Contract Administrator as referred to in, and in accordance with, the Specification.

16.5 No provision or reference in any of the documents referred to in Clause 16.1 shall constitute a notice for the purpose of any of the provisions of the Contract.

16.6 Any failure by the Contractor to work in accordance with the Works Programme shall be deemed to be a breach of Clause 42.1 unless the Contractor can prove to the contrary.

17. **Method Statement**

17.1 The Contractor shall submit to the Contract Administrator for review, all drawings and other documents as may be identified in the Specification, or as instructed, relating to the methods by which the Contractor shall execute the Works, including, without limitation, the use of Contractor's Equipment and Temporary Works and the places where the Contractor shall execute the Works.

17.2 The Contractor warrants to the Authority that the methods of delivery, assembly and construction (including the use of Contractor's Equipment and Temporary Works) and the Contractor's Equipment and Temporary Works themselves shall be consistent with the requirements of the Contract and that the Contractor shall not change any proposed method of construction previously reviewed without objection by the Contract Administrator, without making a further submission for review.

18. **Contractor's Superintendence and Staff**

18.1 The Contractor shall provide all necessary superintendence during the execution of the Works.

18.2 The Contractor shall employ or cause to be employed in connection with the Works on the

Site or off-Site at any place of manufacture or source of material and in the superintendence thereof only such technical personnel as are skilled and experienced in their respective trades and callings and such sub-agents, foremen, leading hands and labour as are competent to carry out their respective duties in connection with the Works.

18.3 The Contract Administrator may instruct the Contractor to remove or cause to be removed from the Works, the Site and the Project Site any person employed thereon without stating any reason if, in the Contract Administrator's opinion, the person misconducts himself, is incompetent, is negligent in the performance of his duties, fails to conform with any provision in the Contract with regard to safety or persists in any conduct which is prejudicial to safety or health. Such person shall not again be employed in connection with the Works or on the Site or the Project Site without prior consent.

18.4 Any person removed from the Works or the Site pursuant to Clause 18.3 shall be replaced by the Contractor as soon as practicable by a competent substitute.

18.5 The Contractor shall indemnify the Authority in respect of liability under the Immigration Ordinance (Cap 115) to the extent that such liability arises from the presence on or off the Site of any employee, agent or representative of the Contractor or of his sub-contractors of any tier.

19. Setting-out and Dimensions

19.1 The Contractor shall be responsible for the setting out of the Works relative to the data contained in the Drawings and the Specification or notified by the Contract Administrator and for the correctness of the position, level, dimensions and alignment of all parts of the Works and for the provision of all necessary instruments, appliances and labour in connection therewith.

19.2 If at any time during the execution of the Works any error shall appear or arise in the position, level, dimension or alignment of the Works or any part thereof, the Contractor shall forthwith give notice of the same to the Contract Administrator and shall, on being instructed so to do, rectify the error to the satisfaction of the Contract Administrator. Provided that if, in the Contract Administrator's opinion, the error is the result of incorrect data contained in the Drawings and/or the Specification or notified by the Contract Administrator and if, in compliance with an instruction pursuant to this Clause 19.2, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or Clause 56 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

19.3 The Contractor shall carefully protect and preserve all bench-marks, sight-rails, pegs and other things used in setting out the Works.

20. Safety

20.1 The Contractor shall throughout the execution of the Works take full responsibility for:

(a) the adequacy, stability and safety of the Works;

(b) the safety of the Contractor's Equipment;

(c) the safety of all persons on or in the vicinity of the Site; and

(d) providing and maintaining all necessary lights, guards, fences, warning signs and storage areas.

20.2 The Contractor shall:

(a) submit to the Contract Administrator for his review, in accordance with the Specification, a safety plan which shall set out details of the safety measures to be implemented by the Contractor to comply with his obligations under or in connection with the Contract. Any supplemental submission to the Contract Administrator for his review of amendments, variations or additions to the safety plan shall be made not less than 28 (twenty-eight) days before commencement of any work which is the subject of the submission;

(b) appoint a competent English speaking agent or representative who has been reviewed without objection and who is not otherwise involved in the Works to act as the manager and supervisor of the safety plan;

(c) adhere to the principles and procedures contained in the safety plan and in any amendment, variation or addition thereto which have been reviewed without objection; and

(d) ensure that sufficient personnel are dedicated to the implementation of the safety plan and all safety procedures contained therein.

20.3 If at any time:

(a) the safety plan is, in the Contract Administrator's opinion, insufficient or requires revision or modification to ensure the security of the Works and the safety of all workmen upon and visitors to the Site; or

(b) the level of accidents on any part of the Site exceeds any level laid down in Government proposals for safety,

the Contract Administrator may instruct the Contractor to revise the safety plan and the Contractor shall, within 14 (fourteen) days, submit the revised plan to the Contract Administrator for review.

20.4 Without prejudice to the generality of this Clause 20, the Contractor shall provide all facilities, access and assistance to the Contract Administrator to enable him to monitor and verify that the safety plan is being properly and fully implemented.

21. **Care of the Works etc.**

21.1 The Contractor shall, subject to Clauses 21.3, 21.5 and 50.3, be fully responsible for the care of:

(a) the Works, or any part thereof, (whether on the Site or elsewhere); and

(b) all Contractor's Equipment and consumables on the Project Site or being delivered to the Project Site in connection with the Works,

from the Date for Commencement of the Works until 28 (twenty-eight) days after the date of issue of the Practical Completion Certificate for the Works whereupon the responsibility for the care of the Works shall pass to the Authority.

21.2 The Contractor shall be fully responsible for the care of any work which he undertakes to finish or which he otherwise carries out during any Defects Liability Period until the work has been completed, whereupon the responsibility for the care of the work shall pass to the Authority.

21.3 If a Practical Completion Certificate is issued for any Section or any other part of the Works, the Contractor shall:

(a) execute the remainder of the Works in such a manner as not to prejudice the care, maintenance and condition of the Section or other part; and

(b) cease to be responsible, under Clause 21.1, for the care of the Section or other part 28 (twenty-eight) days after the date of issue of such Practical Completion Certificate, whereupon the responsibility for the care of the Section or other part shall pass to the Authority.

21.4 Except to the extent caused by any of the Excepted Risks defined in Clause 21.5, if any loss or damage occurs to:

(a) the Works; or

(b) Contractor's Equipment or consumables

while the Contractor is responsible for the care thereof, the Contractor shall, with all possible speed, rectify the loss or damage so that the Works are executed in accordance with the Contract. The Contractor shall also be liable for any loss or damage to the Works occasioned by him in the course of any operation carried out by him for the purpose of complying with his obligations under Clause 53.

21.5 "Excepted Risks" for the purposes of this Clause are:

(a) outbreak of war (whether war be declared or not) in which Hong Kong shall be actively engaged;

(b) invasion of Hong Kong;

(c) act of terrorists in Hong Kong;

(d) civil war, rebellion, revolution, insurrection or military or usurped power in Hong Kong;

(e) riot, commotion or disorder in Hong Kong otherwise than amongst the employees of the Contractor, or any of his sub-contractors of any tier currently or formerly engaged on the Works;

(f) ionising radiation or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof, unless the source or cause of the radiation, radioactivity or other hazard is brought to or near the Project Site by the Contractor or any of his sub-contractors of any tier;

(g) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;

(h) a cause due to use or occupation of the Permanent Works or any part thereof by the Authority (which shall not include or be deemed to include the execution of works by Relevant Authorities or Project Contractors or the provision of access thereto over the Project Site, the Site or the Permanent Works or any parts thereof); and

(i) the neglect or default by or on behalf of the Authority, including, without limitation, in the preparation of any design of the Permanent Works or Temporary Works included in the Drawings and/or the Specification, insofar as damage, loss or injury is the direct consequence thereof, or any default of Relevant Authorities or Project Contractors.

21.6 If and to the extent that there is any loss or damage to the Works, Contractor's Equipment or consumables caused by any of the Excepted Risks, the Contractor shall, if and to the extent instructed, rectify the loss or damage. If, in compliance with an instruction issued pursuant to this Clause 21.6, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or Clause 56 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

22. **Damage to Property and Injury to Persons - Indemnities**

22.1 The Contractor shall be liable for and indemnify the Authority against all losses and claims of whatsoever nature in respect of:

(a) the death or illness of or injury to any person; and

(b) the loss of or damage to any property other than the Works,

arising out of or in connection with the Works or the execution thereof by the Contractor.

22.2 The scope of the Contractor's liability and indemnity pursuant to Clause 22.1 shall be reduced proportionately to the extent that any neglect or default of the Authority or Project Contractors caused or contributed to the death, illness, injury, loss or damage.

22.3 The Authority shall be liable for and indemnify the Contractor against liability in connection with death, illness, injury, loss and damage referred to in Clause 22.1 arising out of or connected with:

(a) the use or occupation of land provided by the Authority by the Permanent Works or for the purposes of the execution of the Works or interference, whether temporary or permanent, with any right of way, navigation, light, air or water or other easement or quasi easement;

(b) the right of the Authority to execute the Works on, over, under, in or through any land, sea or foreshore;

(c) damage that is the inevitable consequence of the execution of the Works; and

(d) neglect or default of the Authority or Project Contractors.

22.4 The scope of the Authority's liability and indemnity pursuant to Clause 22.3 shall be reduced proportionately to the extent that the act or neglect of the Contractor or his sub-contractors of any tier caused or contributed to the death, illness, injury, loss or damage.

23. Giving of Notices and Payment of Fees etc

23.1 The Contractor shall give all notices and pay all fees required to be given or paid by any Enactment in connection with the execution of the Works and by the rules and regulations of any Relevant Authority whose property or rights are or may be affected in any way by the Works or their execution. If any new fee is imposed or if any existing fee is increased, after the date of the Letter of Acceptance, the new fee or increase shall be paid by the Contractor. Such fees shall include, but not be limited to, any customs or import duties required to be paid for the importation of any part of the Works into Hong Kong.

23.2 Except where otherwise stated in the Contract, the Contractor shall pay any royalty, rent and other payment or compensation in relation to any Contractor's Equipment or Temporary Works required in connection with the Works.

24. Compliance with Enactments and Obtaining Permits and Consents

24.1 The Contractor shall, in connection with the execution of the Works, comply in all respects with:

(a) the provisions of all Enactments;

(b) any condition attached to any permit or exemption issued pursuant to any Enactment; and

(c) the rules and regulations of Relevant Authorities,

and any addition or amendment made thereto after the date of the Letter of Acceptance and the Contractor shall indemnify the Authority against any liability and/or penalty to the extent arising from breach by the Contractor of any Enactment, condition, rule or regulation. In the event that, after the date of the Letter of Acceptance, any addition or amendment is made to any Enactment, any condition attached to any permit or exemption issued pursuant to any Enactment or to the rules and regulations of Relevant Authorities which renders it necessary for the Contractor to alter the design of any part of the Permanent Works expressly required by the Contract to be designed by the Contractor, if, in the opinion of the Contract Administrator, such addition or amendment could not reasonably have been foreseen by an experienced contractor at the date of the Letter of Acceptance, then, without prejudice to Clause 15.3, any amendment to any Contractor's Drawings rendered necessary by such addition or amendment shall, for all purposes of the Contract, be deemed to be a variation instruction issued by the Contract Administrator pursuant to Clause 54.1.

24.2 (a) The Contractor shall:

(i) obtain all statutory registrations, approvals and consents required for the execution of the Works including, where relevant, but without limitation, obtaining registration as a registered contractor, and all approvals and consents under the Buildings Ordinance which are necessary for the execution of the Works; and

(ii) co-operate with all relevant parties, complete such certificates and forms, make such applications, and, to the extent that the same are within the control of the Contractor, do all such other things as may be necessary to enable occupation permits to be issued under the Buildings Ordinance and any other Enactment so that the Authority may occupy and use the Permanent Works.

(b) Notwithstanding any other provision of the Contract, neither the Works nor any Section shall be (nor shall be deemed to be) practically complete until all necessary statutory approvals, consents and occupation permits have been obtained to enable the Authority to occupy and use the Permanent Works or the relevant part thereof.

24.3 If there is a delay in obtaining any of the occupation permits referred to in Clause 24.2 (a) (ii) which is caused by any person other than the Contractor and for which the Contractor is not responsible, and such delay is the sole reason preventing the Contractor from practically completing the Works, or any Section, as the case may be, by the relevant Key Date therefor, then if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or Clause 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

25. **Language of Notices etc**

25.1 Any notice which the Contractor is required to exhibit either for the benefit of the public or his employees and all written and printed matter, affixed to the Works or otherwise required for operation and maintenance shall be in English and in Chinese characters and such other language as may be required by any Enactment and/or the Specification.

26. **Interference and Nuisance**

26.1 The Works shall, so far as compliance with the requirements of the Contract permit, be executed so as to avoid unnecessary or improper nuisance or disturbance to or interference with the public or the access to or use or occupation of public roads, footpaths, waterways, anchorages, navigation channels or properties whether in the possession of the Authority or of any other person.

26.2 The Contractor shall be liable for and indemnify the Authority against liability in connection with any breach of Clause 26.1 provided that such liability and indemnity shall be reduced proportionately to the extent that the act or neglect of the Authority or Project Contractors caused or contributed to the breach.

27. **Intellectual Property Rights**

27.1 In this Clause, intellectual property rights shall include, but not be limited to, patents, utility models, rights to inventions, copyright and neighbouring and related rights, trademarks, trade names, service marks and domain names, goodwill rights to sue for passing off, design rights, database rights and know-how and confidential information and all similar or equivalent rights or forms of protection which subsist or will subsist now or in the future anywhere in the world.

27.2 The Contractor shall indemnify and keep indemnified the Authority against liability in Hong Kong or in any country in connection with the infringement of any intellectual property right existing anywhere in the world in respect of anything used in or required for the Works or the operation, and maintenance in service of the Permanent Works (except to the extent that infringement was unavoidable as a result of the Drawings, the Specification or any instruction, save insofar as such instruction incorporated any Contractor's Drawings).

27.3 The Contractor shall, at the Authority's request and in accordance with the Authority's directions, defend any claim or proceeding against the Authority in connection with any alleged infringement referred to in Clause 27.2.

27.4 In so far as the intellectual property rights existing anywhere in the world in respect of anything used in or required for the Works or the operation, repair, maintenance, replacement or extension of the Permanent Works shall be vested in the Contractor, the Contractor grants to the Authority, his successors and assigns a royalty-free, perpetual, unrestricted, exclusive, freely assignable and irrevocable worldwide licence (carrying the right to grant sub-licences) to use, reproduce, modify, adapt and translate any of the works, designs or inventions incorporated or referred to in anything used or required as aforesaid

for all purposes relating to the Project. To the extent that beneficial ownership of any such intellectual property right is vested in anyone other than the Contractor, the Contractor shall use his best endeavours (save in respect of and to the extent of the things excepted from Clause 27.2, as to which the Contractor shall use reasonable endeavours) to procure that the beneficial owner thereof shall as soon as possible grant a like licence to the Authority. Any licence pursuant to this Clause 27.4 shall not be determined if the Contractor shall for any reason cease to be employed in connection with the Works and the Contractor shall execute such documents and do all other things as may be necessary to give effect to and protect the licence including, without limitation, notifying purchasers of any right of the existence of the licence.

27.5 If the Contractor uses proprietary software for the purpose of storing or utilising records, the Contractor shall procure the grant of a licence or sub-licence to use, reproduce, modify, adapt and translate the software in favour of the Authority and shall pay such licence fee or other payment as the grantor of the licence may require provided that the licence may be restricted to use, reproduction, modification, adaptation and translation relating to the Project.

28. Co-ordination

28.1 The Contractor acknowledges that the Project involves a number of separate design and/or construction contracts and that it is necessary for the design and construction of the Permanent Works and the Temporary Works to be co-ordinated with the design and construction of that part of the Project being undertaken by Relevant Authorities and Project Contractors.

Design

28.2 The Contractor shall, in performing his design obligations pursuant to Clause 12, consult, liaise and co-operate with Relevant Authorities and Project Contractors and use his best endeavours to ensure, utilising the expertise to be expected of a contractor experienced in undertaking the design of works similar in scope and complexity to the Temporary Works and the relevant part of the Permanent Works to be designed by the Contractor in accordance with the Contract, that the Contractor's design of the Temporary Works and the relevant part of the Permanent Works to be designed by the Contractor is consistent, compatible, integrated and co-ordinated with the design of that part of the Project designed by Relevant Authorities and Project Contractors. Without prejudice to the foregoing, the Contractor shall, in discharging such obligations:

(a) request Relevant Authorities and Project Contractors to supply all drawings and design information in their possession which the Contractor reasonably requires;

(b) supply Relevant Authorities and Project Contractors promptly with all drawings and design information in his possession which they may reasonably require to co-ordinate the design of their works with the Contractor's design of the Temporary Works and the relevant part of the Permanent Works;

(c) request the Contract Administrator to supply all drawings and design information in his possession, or in the possession of the Authority, which the Contractor

reasonably requires, and the Contract Administrator shall provide such drawings and design information to the Contractor as soon as is practicable; and

(d) comply with the procedures set out in the Specification in respect of the co-ordination of the Contractor's design of the Temporary Works and the relevant part of the Permanent Works,

and the Contractor shall attend all meetings necessary for the Contractor to devise, or assist in devising, design solutions to achieve the co-ordination of the Contractor's design of the Temporary Works and the relevant part of the Permanent Works with the design of that part of the Project designed by Relevant Authorities and Project Contractors.

28.3 The Contractor shall notify the Contract Administrator forthwith in the event that, notwithstanding the discharge of his obligations in accordance with Clause 28.2, the Contractor considers that a conflict has arisen between the Contractor's design of the Temporary Works and/or the relevant part of the Permanent Works and the design of any part of the Project designed by Relevant Authorities and/or Project Contractors which it has not been possible for the Contractor to resolve. Each such notice shall be accompanied by details of the alleged conflict, an explanation of why it has not been possible for the Contractor to resolve such conflict and the Contractor's proposals as to the manner in which he believes that such conflict can and should be resolved.

28.4 Without prejudice to Clause 28.3, the Contractor shall keep the Contract Administrator fully informed of all communications with Relevant Authorities and Project Contractors relating to the co-ordination of the Contractor's design of the Temporary Works and the relevant part of the Permanent Works with the design of that part of the Project designed by Relevant Authorities and Project Contractors and shall supply the Contract Administrator promptly with all information requested by him in respect thereof including, without limitation, any information concerning any conflict notified by the Contractor in accordance with Clause 28.3.

Construction

28.5 The Contractor shall, in executing the construction of the Works, consult, liaise and co-operate with Relevant Authorities and Project Contractors and use his best endeavours to ensure, utilising the expertise to be expected of a contractor experienced in undertaking the construction of works similar in scope and complexity to the Works, that the most efficient means are used to co-ordinate the Contractor's construction activities with the construction activities carried out (contemporaneously or otherwise) by Relevant Authorities and Project Contractors in respect of works not included in the Contract but forming part of the Project ("**Project Works**"), and shall devise programming and construction related solutions to achieve such objective. Without prejudice to the foregoing, the Contractor shall, in discharging such obligations:

(a) supply promptly to the Contract Administrator all information in the Contractor's possession relating to the co-ordination of the construction activities of the Contractor in the execution of the Works with the construction activities of Relevant Authorities and Project Contractors in respect of Project Works;

(b) attend meetings necessary to devise solutions to achieve the co-ordination of the construction activities of the Contractor in respect of the Works with the construction activities of Relevant Authorities and Project Contractors in respect of Project Works, including, without limitation, attending meetings convened by the Contract Administrator in relation thereto;

(c) provide access to Relevant Authorities and Project Contractors to the Site and the Permanent Works and the Temporary Works to execute Project Works;

(d) provide facilities and services to Relevant Authorities and Project Contractors to execute Project Works, to the extent stated in the Specification; and

(e) comply with the procedures set out in the Specification in relation to the co-ordination of the construction activities of the Contractor in respect of the Works and the construction activities of Relevant Authorities and Project Contractors in respect of Project Works.

28.6 The Contractor shall notify the Contract Administrator forthwith upon identifying any actual or potential conflict that may arise or which has arisen between the Contractor's construction activities in respect of the Works, and the construction activities of Relevant Authorities and/or Project Contractors in respect of Project Works. Each such notice shall be accompanied by details of the alleged conflict, an explanation of why it has not been possible for the Contractor to resolve the conflict and the Contractor's proposals as to the manner in which he believes that such conflict can and should be resolved. Without prejudice to the foregoing, the Contractor shall supply the Contract Administrator promptly with all information requested by him in respect of any alleged conflict notified by the Contractor.

General

28.7 Without prejudice to any other provision of the Contract, the Contractor shall employ, and shall ensure that his sub-contractors of any tier employ in respect of the Works, a sufficient number of staff suitably skilled and experienced in the co-ordination of works of a similar scope and complexity to the Works to enable his obligations under this Clause 28 to be performed effectively and efficiently.

28.8 The Contractor shall (independent of any liability pursuant to Clause 48 in respect of delay in the practical completion of the Works or any Section or the achievement of any Stage) be liable for any loss and expense incurred by the Authority arising from any breach by the Contractor of his obligations under this Clause 28.

28.9 If:

(a) in compliance with his obligations pursuant to this Clause 28; or

(b) otherwise as a result of the design or construction activities of Relevant Authorities or Project Contractors in respect of Project Works,

the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

29. **Publicity and Disclosure**

29.1 The Contractor shall not publish or otherwise circulate, alone or in conjunction with any other person, any article, photograph or other material relating to the Works, the Contract, any Dispute, the Site or the Project or any part thereof, nor impart to the press or any radio or television station any information relating thereto, nor allow any representative of the media access to the Site except with consent. The Contractor shall ensure that each of his sub-contractors of any tier and each parent company or shareholder of each entity comprising the Contractor is bound by a like obligation and the Contractor shall enforce the same.

29.2 The Contractor may disclose relevant information to bankers or third parties taking a charge or assignment, or having the bona fide intention thereof, pursuant to Clause 4.2, and to discharge any statutory or judicial obligation provided that:

(a) he first obtains the Contract Administrator's consent; and

(b) he shall use his reasonable endeavours to procure that the bankers and third parties shall keep the information confidential.

29.3 In any event, the Contractor shall disclose all confidential information that the Contract Administrator reasonably instructs in respect of the Project, the Works or the Contract.

29.4 The Authority and any third party referred to in Clause 4.3 may use any information provided by the Contractor in accordance with the Contract, and the Authority shall use reasonable endeavours to procure that any third party referred to in Clause 4.3 shall not, divulge that information except for any purpose connected with the Project or in order to comply with the directions or requirements of a Government body, judicial authority or Relevant Authority.

30. **Offering Gratuities**

30.1 If the Contractor shall be found to have offered or given any advantage, excessive hospitality, gratuity, bonus, discount, bribe or loan of any sort to any agent or employee of the Government, to the Authority or to any member of the Authority's staff or to any other person acting on behalf of the Government or the Authority in respect of or in connection with the Project, the Contractor shall be liable for any loss or expense incurred by the Authority and the provisions of Clause 74 shall apply. The Contractor shall ensure that each of his sub-contractors of any tier is bound by a like obligation and the Contractor shall enforce the same.

31. Disclosure of Costs by the Authority

31.1 Without prejudice to the generality of Clause 29.3, the Contractor agrees that the Authority may, whenever it considers appropriate, without further reference to the Contractor, disclose to any person in such form and manner as the Authority deems fit, details and particulars of:

(a) the costs, expenses and fees payable by the Authority to the Contractor under the Contract; and

(b) the Tender including the Tender Total and all rates and prices contained in the Pricing Document.

31.2 The Contractor shall have no right or entitlement to claim or receive any loss, damages, costs or charges by reason of any disclosure by the Authority of the details or particulars referred to in Clause 31.1.

INSURANCE

32. Authority's Insurance

32.1 Without limiting the Authority's other obligations or the Contractor's obligations, the Authority shall take out and maintain insurance for the benefit of and in the joint names of the Authority, the Contractor and his sub-contractors of any tier in respect of:

(a) the Works, including, without limitation, all unfixed goods, materials and other constituent parts forming or intended to form part thereof and consumables delivered to the Site; and

(b) liability for the death of or injury to any person (other than in the employment of the Contractor or any of his sub-contractors) or loss of or damage to property (other than the Works and/or consumables) arising out of the execution of the Works,

in the terms contained in the policy contained in **Schedule 10**, subject to any amendment required by the insurers.

32.2 The Contractor shall comply with the terms of the policy referred to in Clause 32.1 and shall:

(a) notify insurers and the Authority forthwith if an event giving rise to an insurance claim under such policy occurs;

(b) prepare and submit to insurers particulars of all claims and do all things necessary to obtain proper settlement of all insurance claims under such policy (including, without limitation, those of its sub-contractors of any tier) provided that if in the opinion of the Authority, the Contractor fails to pursue a claim with due diligence, the Authority shall have the right, exercisable on 14 (fourteen) day's notice, to

assume control over the preparation, submission and settlement of any claim, subject always to having due regard to the interests of the Contractor; and

(c) comply with any procedures issued by the Authority to the Contractor in respect of the preparation and/or submission of any insurance claim in respect of such policy.

32.3 All moneys payable under Section 1 of the policy referred to in Clause 32.1 (Contractor's All Risks Insurance) exceeding HK[$20,000,000 (Hong Kong Dollars twenty million)] shall be, and the Contractor shall procure that they shall be, paid to the Authority who shall release any part thereof relating to claims of the Contractor to the Contractor within a reasonable time having regard to the progress of rectification of the loss or damage to which the claim relates.

32.4 If and to the extent that the Authority receives money from the insurers in respect of any claim made by or on behalf of the Contractor or its sub-contractors of any tier, the Authority shall make payment to the Contractor or the relevant sub-contractor, without unreasonable delay, of such moneys or the appropriate proportion thereof having regard to the extent to which the relevant loss or damage to which such insurance moneys relate has been rectified in accordance with Clause 21.4 or 21.6.

32.5 Any amounts not insured or not recovered under the policy referred to in Clause 32.1 including, without limitation, the amount of any deductibles, shall be borne by the Contractor or the Authority in accordance with their respective responsibilities in accordance with Clause 21.

32.6 All moneys payable under the policy referred to in Clause 32.1 shall be paid in Hong Kong Dollars.

33. **Contractor's Insurance**

33.1 Without limiting his other obligations or the obligations of the Authority, the Contractor shall:

(a) in the joint names of the Authority, the Contractor and his sub-contractors of any tier, during the manufacture thereof, insure and keep insured the Permanent Works, Temporary Works and Contractor's Equipment being manufactured for use in the execution of the Works for their full replacement value against all perils usually and reasonably insurable provided that the Authority may accept a policy of insurance notwithstanding it is not in the joint names of the Authority and the Contractor, if the Authority's interest is notified to and accepted in writing by the insurer;

(b) in the joint names of the Authority, the Contractor and his sub-contractors of any tier, within 30 days from the Date for Commencement of the Works, which obligation shall not be subcontracted by the Contractor pursuant to Clause 5, insure and keep insured, the Permanent Works, the Temporary Works and Contractor's Equipment during transit by land, sea or air from commencement of loading at the place of manufacture in the country of origin to the delivery to and unloading at the Project Site and the Site or any off-Site place of storage,

fabrication or assembly within Hong Kong and including whilst at any intermediate place of storage, fabrication or assembly outside Hong Kong during the period of such transit, for a sum not less than their full replacement value plus 10 (ten) per cent of such value and the costs of transit against all perils which are usually and reasonably insurable, provided that the Authority may accept such a policy of insurance placed by the Contractor (but not by any sub-contractor) notwithstanding that the Authority is not named as a joint assured, if the Authority's interest is notified to and accepted in writing by the Contractor's insurer;

(c) in the joint names of the Authority, the Contractor and his sub-contractors of any tier, insure and keep insured the Contractor's Equipment (to the extent not insured by the Authority under Section 1 of the policy referred to in Clause 32.1 (Contractor's All Risks Insurance)) for its full replacement value, while on or off the Site or in transit, against all perils usually and reasonably insurable provided that the Authority may accept a policy of insurance notwithstanding it is not in the joint names of the Authority and the Contractor, if the Authority's interest is notified to and accepted in writing by the insurer;

(d) take out and maintain in respect of his design obligations under Clause 12, professional indemnity insurance for a limit of cover of not less than the levels stated in **Appendix 1 to the Form of Tender** for each occurrence or series of occurrences arising out of one event for a period commencing on the date of the Letter of Acceptance and expiring not before 6 (six) years from the date of the issue of the Practical Completion Certificate for the Works provided that if the Contractor considers that such cover is not available at reasonable rates, the Contractor shall forthwith inform the Contract Administrator and the level of cover or terms for the purposes of this Clause 33.1(d) shall be the maximum level or best terms which are obtainable in the international insurance market at rates which are, in the Contract Administrator's opinion, reasonable; and

(e) take out and maintain on his own behalf and on behalf of his sub-contractors of any tier, insurance in respect of claims for the death of or bodily injury to any person under a contract of service or apprenticeship with the Contractor or any of his sub-contractors of any tier and arising out of and in the course of the person's employment in respect of the Works in the terms and with the insurers referred to in **Schedule 11**.

33.2 Insurance in accordance with Clause 33.1 (a) to (e) shall be effected with insurers and on terms approved by the Authority and shall cover all risks usually covered by such insurance and shall, to the extent of the cover, indemnify the Authority in respect of loss, expense and liability in connection with the Works.

33.3 The Contractor shall procure that all insurance in respect of vehicles and marine vessels used in connection with the Works as required by any Enactment shall be endorsed to note the interests of the Authority.

33.4 The Contractor shall, in respect of the insurance referred to in Clause 33.1(b), procure loading and unloading surveys in relation to each shipment made of any part of the

Permanent Works or Temporary Works, and shall procure stowage and towage surveys in the event of the lighterage of the same.

34. General Insurance Obligations

34.1 If the Authority fails to comply with the terms of the policies of insurance effected by him pursuant to Clause 32.1 or if the Contractor fails to comply with the terms of any of the insurance policies effected in connection with the Works, the party that is in default shall indemnify the other party against all loss, expense and liability arising from the failure.

34.2 If the Authority or the Contractor fails to effect and keep in force any of the insurance policies referred to in Clauses 32 and 33 respectively, the party that is not in default may effect and keep in force that insurance and may recover from the party in default a sum equivalent to the premium or premiums paid.

34.3 The Contractor shall be deemed to have satisfied himself and to have caused his sub-contractors of any tier to have satisfied themselves with regard to the extent of the cover provided by the policy referred to in Clause 32.1 and the terms referred to in Clause 33.1(e).

34.4 The Contractor shall promptly supply to insurers all documentation and information which they may reasonably require to effect and maintain the policies effected in connection with the Works. In the case of policies effected by the Authority pursuant to Clause 32.1, the Contractor shall supply all documentation and information requested by the Contract Administrator for onward transmission to insurers by the Authority.

34.5 The Authority shall, whenever reasonably required, produce to the Contractor confirmation from his insurers, or their duly authorised agents, that the policies effected by him pursuant to Clause 32.1 remain current together with evidence of payment of the last premium due.

34.6 The Contractor shall, whenever instructed to do so by the Authority, produce any relevant policy of insurance effected by him in connection with the Works, together with a certificate from the insurers, or their duly authorised agents, certifying that the insurance has been effected and the last premium due has been paid.

34.7 The Contractor shall not do anything or cause or permit any of his sub-contractors of any tier to do anything, whether on or off-Site, which would or might render voidable any policy of insurance required by the Contract.

LABOUR

35. Labour

35.1 Without prejudice to the generality of any other provision of the Contract, the Contractor shall be responsible for providing such skilled and unskilled labour as may be required for the execution of the Works.

35.2 As far as practicable, all skilled and unskilled labour shall be engaged in Hong Kong and

subject to and in accordance with general local usage.

35.3 The Contractor shall, in respect of labour located in Hong Kong and engaged in the execution of the Works, pay rates of wages and observe hours and conditions for labour which are not less favourable than the level of wages, hours and conditions observed by other employers in Hong Kong engaged in the architecturing/construction industry and which are in compliance with the Enactments.

QUALITY OF PERMANENT WORKS AND WORKMANSHIP, DEFECTS AND TESTS

36. Quality System

36.1 The Contractor shall:

(a) establish, maintain and implement a quality system in accordance with the Specification; and

(b) comply with the requirements of the quality system including, without limitation, the submission for review by the Contract Administrator of fully detailed quality plans and other documents referred to in the quality system.

37. Permanent Works and Workmanship

37.1 All goods, materials and all consumables forming part of the Permanent Works and the results of any workmanship shall:

(a) be of the respective character, standard or kind required by the Contract;

(b) subject as aforesaid, be of a standard consistent with the requirements of the Contract; and

(c) where specified or selected by the Contractor, be fit for the purpose expressed in or to be implied from the Contract; and

unless expressly provided to the contrary in the Contract, all goods, materials and the constituent parts of the Permanent Works (save in respect of any fill or naturally occurring material to be used in the Permanent Works) and all consumables shall be new. Subject to the foregoing requirements concerning the specification of goods, materials and consumables, nothing within this clause or contained elsewhere in the Contract shall deem any design obligation to be subject to a fitness for purpose obligation.

38. Access and Inspection

38.1 The Contractor shall provide, and where relevant shall procure, access to and reasonable facilities at all places (on or off the Site) where the Works, or any part thereof, are being executed to enable the Contract Administrator and others authorised by him to watch and inspect the Works and to exercise and perform the powers and duties of the Contract Administrator.

39. Covering and Uncovering Parts of the Works

39.1 The Contractor shall give notice to the Contract Administrator, in sufficient time, which shall in no case be less than 24 hours, to enable the Contract Administrator to carry out an inspection without delaying the progress of the Works, before covering up any part of the Works or putting it out of view.

39.2 The Contractor shall uncover or make openings in any part of the Works as may be instructed at any time during the progress of the Works and shall reinstate the part in accordance with the Contract.

39.3 If, as a result of any instruction pursuant to Clause 39.2, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate, then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate, and provided further that this Clause 39.3 shall not apply if part of the Works to which the instruction related was found not to comply with the Contract or if the instruction resulted from breach of Clause 39.1.

40. Removal of Unsatisfactory Parts of the Works

40.1 The Contract Administrator may at any time give instructions to the Contractor to:

(a) remove from the Site and the Project Site, within such time or times specified in the instruction, any part of the Works which, in the opinion of the Contract Administrator, does not comply with the Contract;

(b) replace such part of the Works with a part which does so comply and to re-execute any part of the Works; and

(c) remove and replace (notwithstanding any previous test) any work in respect of:

(i) materials or workmanship; or

(ii) design by the Contractor,

which does not, in the opinion of the Contract Administrator, comply with the Contract.

41. Testing

41.1 (a) The Works shall be subjected from time to time during the execution of the Works to such tests (including the provision of samples and procuring and permitting third party inspections) as are:

(i) specified in the Contract; or

(ii) instructed or reviewed without objection

at such places on or off the Site as are specified or instructed or reviewed without objection.

(b) The Contractor shall propose to the Contract Administrator any test which is not specified in the Contract but which a competent contractor experienced in operations of a similar nature and scope to the Works would regard as appropriate or desirable to demonstrate that the Works comply with the Contract including, without limitation, after any instruction varying the Works has been issued by the Contract Administrator pursuant to Clause 54.1. Any proposal shall be made at a reasonable time in advance of the proposed test, shall specify by whom the test is to be carried out which should, wherever reasonably possible, be the Contractor and if the proposal receives consent the proposed test shall be carried out in accordance with the provisions of this Clause 41.

41.2 The Contractor shall carry out such tests, and provide such assistance, facilities, labour, equipment and other things for all tests, as are required of the Contractor in accordance with the Contract.

41.3 The Contractor shall comply with the testing procedures set out in the Specification and shall submit to the Contract Administrator for review all documents required by those procedures or otherwise necessary in advance of testing.

41.4 The Contractor shall submit to the Contract Administrator for his information test data as follows:

(a) at the beginning of each week, or at such other interval as the Contract Administrator may instruct, a written report summarising the outcome of all tests undertaken during the preceding week or interval, identifying the results, certificates and other data relating to the tests which have been archived in accordance with Clause 59 and identifying, in the case of failed tests, the remedial measures being taken and the provisions for re-testing; and

(b) without delay following the request, any other information relating to tests requested by the Contract Administrator.

41.5 If, in the Contract Administrator's opinion, any of the tests is being unduly delayed or is or has been improperly performed, he may by instruction fix a date by which the Contractor shall make or facilitate the tests or properly perform them. If the Contractor fails to make or facilitate the tests or properly perform them by the date instructed, the Contract Administrator may make the tests or cause them to be made by others at the risk of the Contractor. The Contractor shall be liable to the Authority for all loss and expense incurred in relation thereto.

41.6 If, in the Contract Administrator's opinion, the Works, or any part thereof, fails any test, the Contractor shall submit such proposals and carry out or facilitate such investigations and further or repeat tests as may be instructed and the Contractor shall be liable to the

Authority for all loss and expense incurred in relation thereto including the costs of re-testing the works of Project Contractors. The Contractor shall also execute all necessary repairs, replacement and making good.

41.7 If, as a result of any test instructed pursuant to Clause 41.1(a)(ii), the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate, then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or Clause 56 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate and provided further that this Clause 41.7 shall not apply:

(a) if the test indicates that any part of the Works was not in accordance with the Contract; or

(b) to any repeat test carried out in accordance with the Contract.

COMMENCEMENT, COMPLETION AND DELAY

42. Commencement

42.1 The Contractor shall commence the Works on the Date for Commencement of the Works. The Contractor shall from the Date for Commencement of the Works proceed with the execution of the Works with due diligence and expedition. The Contractor shall not commence the execution of the Works before the Date for Commencement of the Works.

43. Rights of Access to the Site

43.1 The Authority shall give to the Contractor, from time to time, access to as much of the Site as may be required to enable the Contractor to execute the Works in accordance with the Works Programme provided that the Authority shall not be required to give access contrary to any limitation identified in the Contract.

43.2 Unless the Contract expressly provides otherwise, the Contractor shall not be entitled to uninterrupted access to or an exclusive right to occupation of any part of the Project Site or the Site or any part thereof.

43.3 The Contractor shall give notice to the Contract Administrator of the access which the Contractor requires to execute the Works. The Contractor shall give such notice in sufficient time for the Authority to arrange for access to be given without delaying the progress of the Works. The Authority shall not in any event be obliged to give access in advance of dates for access identified in the Works Programme.

43.4 If, as a result of any failure or inability to provide or delay in providing access pursuant to Clause 43.1 following a notice in accordance with Clause 43.3, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate then, if the Contractor claims additional time and/or payment therefor, the

Contract Administrator shall give a decision pursuant to Clause 45 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

44. Time for Completion

44.1 The Contractor shall practically complete the Works and any Section and achieve any Stage by the respective Key Dates therefor.

45. Extension of Time

45.1 The Contractor shall give notice to the Contract Administrator as soon as the Contractor can reasonably foresee any event occurring which is liable to cause any delay to practical completion of the Works or any Section or to the achievement of any Stage. The notice shall in any event be given within 28 (twenty-eight) days after commencement of the event, and shall state the likelihood and probable extent of the delay and specify whether the Contractor considers he is or may become entitled to an extension of time in respect of the effects of the event. If so, the Contractor shall cite the provision of Clause 45.3 which the Contractor considers to be applicable identifying, in the case of Clause 45.3(a), the relevant Clauses.

45.2 The Contractor shall use and continue to use all reasonable endeavours to avoid or reduce the effects of the event on practical completion of the Works or any Section or the achievement of any Stage and shall as soon as practicable but in any event within 28 (twenty-eight) days of notification pursuant to Clause 45.1 submit by further notice to the Contract Administrator:

(a) full and detailed particulars of the cause, effect and actual extent of the delay to practical completion of the Works or any Section or to the achievement of any Stage; or

(b) where an event has a continuing effect or where the Contractor is unable to determine whether the effect of any event will actually cause delay to practical completion of the Works or any Section or the achievement of any Stage, such that it is not practicable for the Contractor to submit full and detailed particulars pursuant to Clause 45.2(a), a statement to that effect with reasons together with interim written particulars (including details of the likely consequences of the event on progress of the Works and an estimate of the likelihood or likely extent of the delay); the Contractor shall thereafter submit to the Contract Administrator at intervals of not more than 28 (twenty-eight) days, further interim written particulars until the actual delay caused (if any) is ascertainable, whereupon the Contractor shall as soon as practicable but in any event within 28 (twenty-eight) days submit to the Contract Administrator full and detailed particulars of the cause, effect and actual extent of the delay; and, in any event:

(c) details of the documents that will be maintained to support the claim in accordance with Clause 59; and

(d) details of the measures which the Contractor has adopted and/or proposes to adopt to avoid or reduce the effects of the event upon practical completion of the Works or any Section or achievement of any Stage.

45.3 If the event notified by the Contractor pursuant to Clause 45.1 is the subject of a claim for extension of time by reason of:

(a) (i) the issue of an instruction, or the failure or inability to issue or delay in issue of an instruction, pursuant to Clause 2.9;

(ii) the reversal or variation of an instruction or decision by the Contract Administrator, or the Contract Administrator's Representative, pursuant to Clause 3.5;

(iii) ambiguities or discrepancies in or between the documents comprising the Contract, pursuant to Clause 7.2;

(iv) the failure or inability to issue or delay in issue of further or amended Drawings or Specification by the Contract Administrator which was the subject of a notice in accordance with Clause 9.3, pursuant to Clause 9.4;

(v) the presence of unforeseeable physical conditions or artificial obstructions at the Site and measures taken to overcome them and/or instructions issued by the Contract Administrator in respect thereof, pursuant to Clause 15.6;

(vi) errors in setting out due to incorrect data, pursuant to Clause 19.2;

(vii) an instruction for the rectification of loss or damage due to Excepted Risks, pursuant to Clause 21.6;

(viii) delay in obtaining any occupation permit under the Buildings Ordinance or any other Enactment, which is caused by any person other than the Contractor and which is the sole reason preventing the practical completion of the Works, pursuant to Clause 24.3;

(ix) the activities of Relevant Authorities or Project Contractors, pursuant to Clause 28.9;

(x) the uncovering of acceptable work, pursuant to Clause 39.3;

(xi) ad hoc successful tests, pursuant to Clause 41.7;

(xii) access constraints, pursuant to Clause 43.4;

(xiii) an instruction issued by the Contract Administrator for the handing over of the Works or any part thereof, pursuant to Clause 50.4;

(xiv) suspension of the Works, pursuant to Clause 51.2;

(xv) the issue of a variation instruction, pursuant to Clause 54.8;

(xvi) the instruction of work included as a Provisional Sum or a Provisional Item, pursuant to Clause 65.6;

(xvii) the instruction to engage a Nominated Sub-Contractor notwithstanding a notice of objection issued under Clause 65B.2, pursuant to Clause 65B.7;

(xviii) making good the destruction or damage to the Permanent Works and/or the Temporary Works by reason of a special risk, pursuant to Clause 77.4(b); or

(b) any other cause of disturbance to the progress of the Works for which the Authority or the Contract Administrator is responsible whether pursuant to or in breach of any provision of the Contract or otherwise including, but not limited to, any act of prevention or delay by the Authority or the Contract Administrator,

then the Contract Administrator shall assess and decide whether the Contractor may fairly be entitled to an extension of any of the Key Dates.

45.4 Notwithstanding the powers of the Contract Administrator pursuant to this Clause 45 to assess and decide whether the Contractor is fairly entitled to an extension of time, the Contractor shall not in any circumstance be entitled to an extension of time if and to the extent that, in the Contract Administrator's opinion, the relevant delay is caused directly or indirectly by breach of the Contract or other default of the Contractor, by the Contractor's failure to make the proper time allowance which he is deemed to have made pursuant to Clause 15.2, or by an event which is not expressly described in Clause 45.3. Without prejudice to the generality of the foregoing, the Contractor shall not be entitled to an extension of time if the cause of the delay is:

(a) non-availability or shortage of Contractor's Equipment, Temporary Works, labour (whether or not imported), utility services or any part of the Permanent Works;

(b) an increase in the quantity of any item of work except to the extent that the increase is the consequence of a variation instructed pursuant to Clauses 2 or 54;

(c) any instruction in relation to matters which are the responsibility of the Contractor under the Contract in the absence of the instruction;

(d) inclement weather conditions adversely affecting the progress of the Works (including without limitation the hoisting of any storm warning or strong wind signal);

(e) delay in issuing or failure to issue to the Contractor any approval or consent in respect of the Works by any Relevant Authority;

(f) delay in obtaining any occupation permit under the Buildings Ordinance or any other Enactment referred to in Clause 24.2 (a) (ii), which is caused by the Contractor; or

(g) defective design prepared by or on behalf of the Contractor, whether contained in the Contractor's Drawings or otherwise.

45.5 If, pursuant to Clause 45.3, the Contract Administrator considers that the Contractor may fairly be entitled to an extension of any of the Key Dates, the Contract Administrator shall within 28 (twenty-eight) days, or such further time as may be reasonable in the circumstances of:

(a) receipt of full and detailed particulars of the cause and actual effect of any delaying factor; or

(b) where an event has a continuing effect or where the Contract Administrator anticipates a significant delay before the actual effect of an event becomes ascertainable and the Contract Administrator considers an interim extension of time should be granted, receipt of such particulars as in the Contract Administrator's opinion are sufficient for him to decide the interim extension of time,

assess, decide, grant and notify the Contractor of the extension. The Contract Administrator in assessing and deciding any extension shall take into account all the circumstances known to him at that time, including the effect of any omission of work or substantial decrease in the quantity of work.

45.6 The Contract Administrator may at any time following notification of an event pursuant to Clause 45.1 assess, decide and notify the Contractor whether or not the event constitutes a potential ground upon which an extension of time may be granted pursuant to this Clause 45.

45.7 Notwithstanding that the Contractor is not otherwise entitled to an extension of time (whether as a consequence of a failure to comply with the provisions of Clauses 45.1 and 45.2 or otherwise), the Contract Administrator may assess and decide the delay that he considers has been suffered by the Contractor as a result of any of the events described in the Clauses to which Clause 45.3(a) refers or any of the events described in Clause 45.3(b), in which case he shall grant and notify the Contractor of the extensions to any Key Date which he decides upon.

45.8 If the Contract Administrator decides that the Contractor is not entitled to an extension of time, the Contract Administrator shall, as soon as reasonably practicable, notify the Contractor accordingly.

45.9 (a) Without prejudice to the Contract Administrator's powers pursuant to Clause 45.5(b), the Contractor shall not be entitled to an extension of time by reason of any delay unless the delay actually affects practical completion of the Works or any Section or the achievement of any Stage by the relevant Key Date;

(b) whether or not the Contractor fails to achieve any Milestone by reason of any delay shall not of itself be material to the issue of the Contractor's entitlement to an extension of time; and

(c) any extension to one Key Date shall not of itself entitle the Contractor to an extension to any other Key Date.

45.10 The Contract Administrator shall within 56 (fifty-six) days of the issue of the Practical Completion Certificate for the Works review and finally decide and certify the overall extensions of time (if any) to which he considers the Contractor is entitled in respect of the Works, any Section or any Stage. The final review shall not result in a decrease in any extension of time already granted by the Contract Administrator pursuant to Clause 45.5 or in any period of suspension of liquidated damages for delay assessed and decided pursuant to Clause 48.8(c).

45.11 Any extension of time granted by the Contract Administrator to the Contractor shall, except as provided elsewhere in the Contract, be deemed to be in full compensation and satisfaction for any loss or injury sustained or sustainable by the Contractor in respect of any matter or thing in connection with which the extension shall have been granted and every extension shall exonerate the Contractor from any claim or demand on the part of the Authority for the delay during the period of the extension but not for any delay prior to or continued beyond such period.

45.12 It shall be a condition precedent to the Contractor being granted extensions of time under this Clause 45 that he complies strictly with the terms of Clauses 45.1 and 45.2.

46. **Rate of Progress**

46.1 If, in the opinion of the Contract Administrator, the progress of the Works is too slow to ensure the achievement of any Stage or the practical completion of the Works or any Section by the relevant Key Date and the Contractor is not entitled to an extension of time pursuant to Clause 45, the Contract Administrator may notify the Contractor and the Contractor shall forthwith suggest and, subject to consent, take such steps as are necessary to expedite progress.

46.2 If the Contract Administrator considers that the Contractor's suggestions submitted in accordance with Clause 46.1 will not ensure the achievement of any Stage or the practical completion of the Works or any Section by the relevant Key Date then the Contractor shall take such other steps as the Contract Administrator may instruct. If any step taken by the Contractor involves the Authority in additional costs, the costs shall be assessed and decided by the Contract Administrator and shall be recoverable by the Authority from the Contractor.

47. **Recovery of Delay and Acceleration of the Works**

47.1 In this Clause 47, the term "Recover Delay" shall mean extinguishing or reducing a delay to the Works, or any part thereof, for which the Contractor would otherwise be entitled to receive an extension of time pursuant to Clause 45 and "Accelerate the Works" shall mean achieving any Stage or practically completing the Works or any Section, or any parts thereof, earlier than the Key Date specified for such Stage, the Works or the Section.

47.2 If, in the opinion of the Contract Administrator, it might be possible for the Contractor, by taking certain measures, to Recover Delay or Accelerate the Works, the Contract Administrator may notify the Contractor of the nature of such measures and request the Contractor to submit proposals in respect thereof.

47.3 Within 14 (fourteen) days of receipt by the Contractor of a notice and request pursuant to Clause 47.2, the Contractor shall supply to the Contract Administrator his proposals for adopting measures to Recover Delay or Accelerate the Works which shall include, but not necessarily be limited to:

(a) a description of the measures which the Contractor proposes to adopt;

(b) an estimate of any saving of time which could be made by the adoption of the measures;

(c) the proposed price for the measures; and

(d) any other terms proposed by the Contractor.

47.4 Within 14 (fourteen) days of receipt of any proposals supplied by the Contractor pursuant to Clause 47.3, the Contract Administrator may instruct the Contractor:

(a) to provide such further information in connection with the proposals as the Contract Administrator may request; and

(b) if in his opinion, it is necessary, to submit revised proposals.

47.5 The Contract Administrator may, but shall not be obliged so to do, instruct the Contractor to take any measures agreed between the Contract Administrator and the Contractor to Recover Delay or Accelerate the Works.

47.6 The Contract Administrator may, whether or not the procedure set out in Clauses 47.2 to 47.4 has been followed, instruct the Contractor to take such measures which, in the opinion of the Contract Administrator, it is feasible for the Contractor to take to Recover Delay or Accelerate the Works and the Contractor shall carry out the measures so instructed with due diligence.

47.7 Subject to the terms of any agreement between the Contract Administrator and the Contractor pursuant to this Clause 47, if by adopting measures instructed to Recover Delay or Accelerate the Works, the Contractor does not extinguish delays, despite exercising due diligence, for which he would have been entitled to an extension of time in the absence of the measures, the Contractor shall nevertheless be granted an extension of time of the duration of the unextinguished delay.

47.8 The price to be paid for the measures instructed by the Contract Administrator to Recover Delay or Accelerate the Works, if the price is not agreed between the Contract Administrator and the Contractor, shall be assessed and decided by the Contract Administrator.

48. **Liquidated Damages for Delay**

48.1 The obligations to achieve any Stage and to practically complete the Works and any Section by the relevant Key Dates are separate obligations of the Contractor.

48.2 **Appendix 1 to the Form of Tender** attributes to each Key Date a sum which represents or is less than the Authority's genuine pre-estimate (at a daily rate) of the damages likely to be suffered by the Authority if the Works are not, or any Section is not, practically complete, or any Stage is not achieved by the relevant Key Date. The sum shall constitute liquidated damages and not a penalty.

48.3 The Contractor acknowledges that the liquidated damages have been estimated by the Authority on the basis of damages likely to be suffered as a result of failure to meet any relevant Key Date irrespective of and independently from any damages which are likely to be suffered as a result of failure to meet any other Key Date. Liquidated damages attributed to separate Key Dates may, therefore, run concurrently.

48.4 If the Contractor does not achieve any Stage or practically complete the Works or any Section by the relevant Key Date the Contractor shall pay or allow to the Authority liquidated damages calculated using the rates referred to in Clause 48.2 (as reduced by any certificate issued pursuant to Clause 48.5) until the date when the Works are or the Section is practically completed or the Stage is achieved.

48.5 In the event that:

(a) a Practical Completion Certificate is issued in respect of any part of the Works (such part not being a Section) before the practical completion of the Works; or

(b) a Practical Completion Certificate is issued in respect of any part of a Section before the practical completion of the whole of the Section; or

(c) a Stage Certificate is issued in respect of any part of a Stage before the achievement of the whole of the Stage,

the rate of liquidated damages specified in **Appendix 1 to the Form of Tender** in respect of the Works, the Section or Stage, as the case may be (or any rate previously calculated in accordance with this Clause 48.5) shall be reduced by the proportion which the value of the part completed or achieved bears to the value of the Works, the Section or the Stage (or the remainder thereof) as appropriate, as the same is assessed by the Contract Administrator. The Contract Administrator shall issue a certificate to the Contractor identifying the reduced rate of liquidated damages which shall be payable by the Contractor in the event that the remainder of the Works or the Section is not practically completed or the remainder of the Stage is not achieved, by the relevant Key Date.

48.6 The total amount of liquidated damages for delay in respect of the Works, any Section and any Stage shall be limited in aggregate to the sum identified as such limit in **Appendix 1 to the Form of Tender**.

48.7 The Authority may:

(a) deduct and retain the amount of any liquidated damages becoming due pursuant to this Clause 48 from any sum due or which becomes due to the Contractor; or

(b) require the Contractor to pay such amount to the Authority forthwith,

provided that if upon any subsequent review the Contract Administrator:

(c) grants a relevant extension or further extension of time or issues a suspension notice pursuant to Clause 48.8(c), the Authority shall no longer be entitled to liquidated damages in respect of the period of such extension or suspension; or

(d) issues a certificate pursuant to Clause 48.5 reducing the rate of the liquidated damages, the Authority shall no longer be entitled to liquidated damages at the previous rate for any period after the date on which the reduced rate became applicable,

any sum in respect of any of the said periods in excess of the Authority's entitlement which may already have been recovered pursuant to this Clause 48 shall be reimbursed forthwith to the Contractor together with interest at the Contract Rate of Interest from the date on which the sum was recovered from the Contractor.

48.8 Without prejudice to Clause 45, if an event as described in Clause 45.3 occurs after liquidated damages have become payable in respect of the Works, any Section or any Stage:

(a) the Contractor shall as soon as reasonably practicable so notify the Contract Administrator and shall provide such particulars and details of the type described in Clause 45.2 as may be requested by the Contract Administrator;

(b) the Contractor shall use and continue to use his reasonable endeavours to avoid or reduce delay to the Works, any Section or any Stage;

(c) if, in the Contract Administrator's opinion, the event has resulted in further delay to the Works, any Section or any Stage, the Contract Administrator shall so notify the Contractor and the Authority's entitlement to liquidated damages in respect of the Works, the Section or the Stage shall be suspended for the period from commencement of the further delay (the date of which shall be assessed by the Contract Administrator and stated in the said notice) until the further delay has either come to an end or, as the case may be, should have come to an end had the Contractor used his reasonable endeavours (the date of which shall be assessed by the Contract Administrator and stated in a notice to be issued to the Contractor as soon as reasonably practicable thereafter);

(d) any such suspension shall not invalidate any entitlement to liquidated damages before the period of further delay started to run or after it ceases; and

(e) the Contract Administrator may take the steps described in Clause 48.8(c) notwithstanding the absence of any or any timely notification from the Contractor pursuant to Clause 48.8(a).

48.9 The payment of any liquidated damages pursuant to this Clause 48 shall not relieve the Contractor of any obligation or liability (including, without limitation, to complete the Works) save in relation to the payment of damages for delay in practically completing the Works or any Section or achieving any Stage.

PRACTICAL COMPLETION, STAGE AND HANDING OVER CERTIFICATES

49. Practical Completion and Stage Certificates

49.1 When the Contractor considers that the Works have been practically completed, including, without limitation:

(a) the passing of the tests prescribed by the Contract (if any); and

(b) the provision to the Contract Administrator of the documents required by the Contract to be provided prior to practical completion,

he may give notice to that effect to the Contract Administrator together with:

(i) a list of the items of work that, in the Contractor's opinion, are outstanding; and

(ii) an undertaking to finish those items referred to in sub-paragraph (i) above and all other outstanding works, during the relevant Defects Liability Period,

in a form acceptable to the Contract Administrator.

49.2 The Contract Administrator shall within 21 (twenty one) days of the date of delivery of the notice, list and undertaking in accordance with Clause 49.1, either:

(a) issue to the Contractor the Practical Completion Certificate stating the date on which in his opinion the Works were practically completed in accordance with the Contract; or

(b) issue instructions to the Contractor specifying the items of work which in the Contract Administrator's opinion need to be executed before the Practical Completion Certificate may be issued, in which event the Contractor shall be entitled to receive the Practical Completion Certificate within 21 (twenty-one) days of completion to the satisfaction of the Contract Administrator of the items of work specified by the instructions, provided that if at any time after the instructions but before the issue of the Practical Completion Certificate, the Contract Administrator discovers other items of work which in his opinion need to be executed before the issue of the Practical Completion Certificate, he may issue further instructions pursuant to this Clause 49.2(b).

49.3 Following the same procedure as that described in Clause 49.1 for the Works, the Contractor may request, and the Contract Administrator may issue, a Practical Completion Certificate for any Section, provided that the references to tests and to documents in Clause 49.1 shall be deemed to be references to any test prescribed by the Contract to be completed and any document required by the Contract to be supplied, prior to practical completion of the Section.

49.4 Following the same procedure as that described in Clause 49.1 for the Works, the Contractor may request, and the Contract Administrator may issue, a Stage Certificate, when any Stage has been achieved, provided that for any Stage, the references to tests and to documents in Clause 49.1 shall be deemed to be references to any test prescribed by the Contract to be completed and any document required by the Contract to be supplied prior to achievement of the Stage, and the undertaking to finish outstanding items of work shall be to do so as soon as is practicable, but within no more than 42 (forty-two) days from the date of issue of the Stage Certificate.

49.5 If, in the Contract Administrator's opinion, the Works have been or any Section or any other part of the Works has been practically completed he may issue a Practical Completion Certificate in respect of the Works, the Section or the other part of the Works and upon the issue of the certificate, the Contractor shall be deemed to have undertaken to complete all outstanding items of work during the relevant Defects Liability Period by dates to be instructed.

49.6 If, in the Contract Administrator's opinion, any Stage or any part of any Stage has been achieved or achieved subject to certain outstanding items (including, without limitation, tests) he may issue a Stage Certificate in respect of the Stage or the part of the Stage and upon the issue of the certificate, the Contractor shall be deemed to have undertaken to complete all outstanding items of work by dates to be instructed.

49.7 Achievement of any Stage shall not of itself constitute completion or practical completion of any Section or any other part of the Works for the purposes of Clauses 49.3 and 49.5.

50. **Handing Over Certificates**

50.1 In the event that the Authority wishes to use the Works, or any part thereof or any Section, prior to the issue of the Practical Completion Certificate for the Works or the issue of a Practical Completion Certificate for any part or any Section, the Contract Administrator may instruct the Contractor to allow the Authority to make use of the Works or the part or Section referred to in the instruction and to take such steps as may be necessary to allow such use and the Contractor shall take such steps and allow the Authority to have the use of the Works or such part or Section provided always that the execution of works by Relevant Authorities or Project Contractors, or the provision of access thereto over the Site or the Works, or any part thereof, shall not amount to use of the Works or any part thereof by the Authority for the purposes of this provision.

50.2 At the time that the Authority's use commences pursuant to Clause 50.1, the Contract Administrator shall issue a Handing Over Certificate to the Contractor and the Authority which shall contain details of the part of the Works to be used by the Authority and the

works which, in the opinion of the Contract Administrator, are required to be executed by the Contractor before the Contract Administrator will be able to issue the Practical Completion Certificate in respect of the Works, or the Section, or if appropriate, the part of the Works. The Authority and the Contractor shall notify the Contract Administrator within 7 (seven) days of receipt of any Handing Over Certificate if they disagree with any details contained therein.

50.3 Without prejudice to any other provision of the Contract including, without limitation, the Contractor's obligations pursuant to Clauses 21.2, 44.1 and 52, the Authority shall assume responsibility for the care of the Works or any part or Section in respect of which a Handing Over Certificate is issued by the Contract Administrator in accordance with Clause 50.2, 28 (twenty eight) days after the date of issue of any such certificate.

50.4 If, in compliance with any instruction issued pursuant to Clause 50.1, the Contractor is prevented from achieving any Stage, or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

SUSPENSION

51. Suspension

51.1 The Contractor shall, on the Contract Administrator's instruction, suspend the execution of the Works, any Section or any other part of the Works for such time or times and in such manner as the Contract Administrator may consider necessary. During the suspension, the Contractor shall properly protect and secure the Works or the Section or other part of the Works which is subject to that instruction.

51.2 If, as a result of compliance with an instruction pursuant to Clause 51.1, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall, except to the extent that the suspension is:

(a) instructed pursuant to Clause 51.3;

(b) necessary by reason of weather conditions affecting the safety or quality of the Works; or

(c) necessary for the proper execution or for the safety of the Works,

give a decision pursuant to Clause 45 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

51.3 The Contract Administrator may issue instructions to suspend the Works, any Section or any other part of the Works if, in the Contract Administrator's opinion, the Contractor is in

breach of any of his obligations.

51.4 If, when an instruction has been given pursuant to Clause 51.1, there has not been an instruction to resume work within a period of 3 (three) months from the date of the instruction to suspend work, then the Contractor may, unless the suspension is otherwise provided for in the Contract or continues to be necessary by reason of some breach of the Contract or other default on the part of the Contractor, serve a notice on the Contract Administrator requesting him, within 28 (twenty-eight) days from the receipt of the notice, to issue an instruction to resume work. If within the said 28 (twenty-eight) days the Contract Administrator does not issue the instruction or give notice that, in his opinion, the suspension continues to be necessary by reason of some breach or default as aforesaid, the Contractor, by a further notice, may elect to treat the suspension, where it affects part only of the Works, as an omission of the part pursuant to Clause 54 or, where it affects the Works, as a termination of the Contract by the Authority which shall be deemed to have occurred pursuant to the proviso to Clause 77.1 and in such event, Clauses 77.2 to 77.4 shall apply.

OUTSTANDING WORK AND DEFECTS

52. Outstanding Work

52.1 The Contractor shall execute any outstanding work relating to the Works, any Section or any other part of the Works, as the case may be, and shall deliver up to the Authority the Works, any Section or any other part of the Works to which the work outstanding relates, in the condition required by the Contract (fair wear and tear excepted) as soon as practicable after the issuance of the relevant Practical Completion Certificate in respect thereof and in any event prior to the expiry of the relevant Defects Liability Period.

52.2 If the outstanding work is of such a character as may affect the validity of the results of any of the tests required by the Contract, the Contract Administrator may within 1 (one) month of the completion of outstanding work instruct the Contractor to repeat such tests in which case the tests shall be carried out as provided in Clause 41.

52.3 Where the execution of any outstanding work by the Contractor could interfere with work by Project Contractors, with the use of the Project or the Works or any part thereof, or any Section by the Authority, the Contractor shall execute the outstanding work in the manner and at or by the times instructed by the Contract Administrator so as to avoid or, if it cannot be avoided, minimise interference.

53. Work of Repair and Additional Work during the Defects Liability Period and Investigating Defects

53.1 The Contractor shall as soon as practicable after the expiry of the relevant Defects Liability Period, deliver up the Works, any Section or any part of the Works to the Authority in the condition required by the Contract (fair wear and tear excepted). The Contractor shall, in accordance with any instruction issued during any Defects Liability Period or within 14 (fourteen) days after its expiration:

(a) execute maintenance work including any work of redesign, replacement, repair, rectification and making good any defect, imperfection settlement or other fault (whether intermittent or otherwise) identified during the Defects Liability Period. The work shall be executed within such period as instructed, or in the absence of such instruction, as soon as is practicable; and

(b) execute any other work in connection with the Permanent Works, not referred to in the Drawings and/or the Specification, including the supply of goods and materials which, in the Contract Administrator's opinion, it is reasonable for the Contractor to so supply.

53.2 At any time prior to the issuance of the Defects Liability Certificate, the Contractor shall, if instructed by the Contract Administrator, investigate the cause of any defect, imperfection or fault under the directions of the Contract Administrator.

53.3 If, in the Contract Administrator's opinion, the defect, imperfection or fault investigated pursuant to Clause 53.2 or the work executed pursuant to Clause 53.1(a) is not the result of any breach of the Contract or other default on the part of the Contractor then, if the Contractor claims additional payment therefor, the Contract Administrator shall give a decision pursuant to Clause 57.

53.4 In relation to any work executed pursuant to Clause 53.1(b), the Contract Administrator shall give a decision pursuant to Clause 57, which, notwithstanding the definition of Cost contained in Clause 1.1, shall include a reasonable allowance for profit by the Contractor.

53.5 Where any work is carried out pursuant to Clause 53.1(a) and is not work to which Clause 53.3 applies, then the terms of this Clause 53 shall apply to the work for the extended Defects Liability Period and similarly to outstanding work executed pursuant to Clause 52.1.

53.6 If the work carried out by the Contractor in accordance with Clause 53.1(a) is such that it may affect the validity of any of the tests required by the Contract, the Contract Administrator may instruct, within 28 (twenty-eight) days after completion of the work, that the tests be repeated to the extent necessary. The tests shall be carried out in accordance with Clause 41 and the maintenance work shall not be considered as completed until satisfactory completion of the repeat tests.

53.7 Within 14 (fourteen) days of completion of the maintenance work in accordance with Clause 53.1(a), the Contractor shall, where applicable, submit to the Contract Administrator for review appropriate revisions to the documents referred to in Clause 49.1.

VARIATIONS

54. Variations

54.1 The Contract Administrator may instruct any variation to the Works that is in his opinion desirable in connection with the Works or the Project. The variation may include, but shall not be limited to:

(a) additions, omissions, substitutions, alterations, changes in quality, form, character, kind, position, dimension, level or line;

(b) changes to any sequence, method or timing of construction specified in the Contract other than changes in programming requirements necessary for the Contractor to comply with his obligations apart from this Clause 54.1(b); and

(c) changes to access to the Site.

54.2 The Contractor may propose any variation to the Contract Administrator which he considers may have financial, timing, quality or interface/co-ordination benefits for the Authority. The proposal shall, in detail, describe the proposed variation and identify the benefits to be obtained and all other financial, timing, quality or interface/co-ordination effects of the proposed variation upon the Works. If the Contract Administrator accepts the proposal (which he shall be under no obligation to do) he shall instruct the variation pursuant to this Clause 54.2 within 14 (fourteen) days of receipt of the proposal.

54.3 The Contract Administrator may give details to the Contractor of any proposed variation which he is considering and request the Contractor to submit an estimate providing details of the financial, timing, quality and interface/co-ordination effects of the proposed variation upon the Works. The Contractor shall submit the estimate, which shall be based on the rates and prices contained in the Pricing Document, within 14 (fourteen) days of receipt of the request and if the Contract Administrator accepts the estimate (which he shall be under no obligation to do) he shall so notify the Contractor and instruct the variation pursuant to this Clause 54.3 within 14 (fourteen) days of receipt of the estimate. If the Contract Administrator does not accept the estimate he may nevertheless instruct the variation at any time thereafter pursuant to Clause 54.1.

54.4 The Contractor shall, in respect of any variation ordered pursuant to Clause 54.1, amend any Contractor's Drawings affected by such variation and shall submit such amendments to the Contract Administrator for review.

54.5 No variation shall be made by the Contractor without an instruction by the Contract Administrator.

54.6 No variation instructed pursuant to this Clause 54 shall in any way vitiate or invalidate the Contract, which shall continue to apply to the Works as varied, but the value (if any) of all variations shall be taken into account by the Contract Administrator in assessing and deciding revisions to the Cost Centre Values in accordance with Clause 56 or in valuing the variation as dayworks pursuant to Clause 55.

54.7 The Authority may procure that work omitted as a variation to the Works by instruction pursuant to Clause 54.1, be executed by another contractor provided always that:

(a) upon such omitted work being let to another contractor, the Contract Administrator shall assess and decide a fair amount in respect of the profit reasonably anticipated by the Contractor in respect of such omitted work as at the time of issue of the relevant instruction and shall make such revision to the

relevant Cost Centre Value, as may be appropriate, pursuant to Clause 56 and/or to the then current total of the Cost Centre Values and other amounts previously decided to be due; and

(b) if the effect of the omission of such work would be to reduce an extension of time to which the Contractor would otherwise have been entitled had no such variation been instructed, the Contract Administrator shall take the effect of the omission into account and, subject to the provisions of Clause 45, grant such extension of time (if any) so as to put the Contractor in no better and no worse position than if the said variation had not been instructed.

54.8 If, in compliance with an instruction pursuant to Clause 54.1, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or becomes entitled to an extension of time pursuant to Clause 54.7(b) or incurs Cost which the Contractor did not and had no reason to anticipate and is not recoverable pursuant to Clauses 55 or 56 then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

55. **Daywork**

55.1 The Contract Administrator may instruct that any work to be executed as a result of an instruction given pursuant to Clauses 54.1 or 65.1(b) shall be executed on a daywork basis under the conditions and valued at the rates set out in the Pricing Document. Unless the work instructed is required to commence immediately, the Contractor shall give the Contract Administrator notice before starting the work.

55.2 The Contractor shall furnish to the Contract Administrator such receipts or other vouchers as may be necessary to prove the amounts paid by the Contractor in executing the work and before ordering work shall submit to the Contract Administrator quotations for the same for review.

55.3 In respect of all work executed on a daywork basis the Contractor shall, during the continuance of such work, deliver each day to the Contract Administrator a list of the names and occupations of and time worked by all workmen employed on such work and a statement showing the descriptions and quantities of all work executed the previous day. One copy of each list and statement shall, if correct or when agreed, be signed by or on behalf of the Contract Administrator and returned to the Contractor.

55.4 At the end of each month, the Contractor shall deliver to the Contract Administrator a detailed priced statement of the work executed (separately identifying labour and things supplied) and the Contractor shall not be entitled to any payment unless the lists and statements required in accordance with this Clause 55 have been fully and punctually rendered. Provided always that if the Contract Administrator shall consider that for any reason the sending of such list or statement by the Contractor in accordance with the foregoing provisions was impracticable, he shall nevertheless be entitled to authorise payment for such work either under the conditions set out in the Pricing Document (on being satisfied as to the details of the work executed) or at such value therefor as he shall

consider fair and reasonable.

VALUATION

56. Valuation

56.1 Subject to Clause 58, the Contract Administrator shall assess and decide the sum which, in his opinion, is due to the Contractor as a result of:

(a) an instruction pursuant to Clauses 54.1 or 65.1(a); or

(b) matters claimed by reason of the following, insofar as, in the Contract Administrator's opinion, some or all of the claim relates to work equivalent to a variation as described in Clause 54.1:

(i) the issue of an instruction, or the failure or inability to issue or delay in issue of an instruction, pursuant to Clause 2.9;

(ii) ambiguities or discrepancies in or between the documents comprising the Contract, pursuant to Clause 7.2;

(iii) the presence of unforeseeable physical conditions or artificial obstructions at the Site and measures taken to overcome them and/or instructions issued by the Contract Administrator in respect thereof, pursuant to Clause 15.6;

(iv) errors in setting out due to incorrect data, pursuant to Clause 19.2;

(v) an instruction for rectification of loss or damage due to Excepted Risks, pursuant to Clause 21.6;

(vi) ad hoc successful tests, pursuant to Clause 41.7; or

(vii) making good the destruction or damage to the Permanent Works and/or the Temporary Works by reason of special risks, pursuant to Clause 77.4(b).

56.2 The Contract Administrator's assessment and decision pursuant to Clause 56.1 shall be made as follows:

(a) where work added or omitted is, in the Contract Administrator's opinion, of similar character and executed under similar conditions to work for which there is a rate or price in the Pricing Document, it shall be valued at that rate or price; or

(b) where work added or omitted is, in the Contract Administrator's opinion, not of a similar character or is not executed under similar conditions, it shall be valued at a rate or price based on any of the rates or prices contained in the Pricing Document so far as may be reasonable, failing which a fair valuation shall be made; and

(c) if the nature or extent of the work added or omitted relative to the nature or extent of the Works or any part thereof shall be such that, in the Contract Administrator's

opinion, any rate or price contained in the Pricing Document for any other work is by reason of such variation rendered unreasonable or inapplicable, then a new rate or price shall be agreed between the Contract Administrator and Contractor for that work, using the rates and prices contained in the Pricing Document as the basis for decision; or

(d) if the Contract Administrator and the Contractor fail to reach agreement on any rate or price pursuant to Clause 56.2(c), the Contract Administrator shall assess and decide a rate or price and shall notify the Contractor accordingly,

and following such a decision the Contract Administrator shall make, pursuant to Clause 66, revisions (if any and if appropriate) to the Pricing Schedule and/or the Schedule of Milestones and/or the Interim Payment Schedule and shall notify the Contractor accordingly.

56.3 Insofar as, in the Contract Administrator's opinion, any balance of the Contractor's claim pursuant to the provisions referred to in Clause 56.1(a) or (b) relates to disturbance to the progress of the Works or any part thereof, he shall assess and decide the balance pursuant to Clause 57.

56.4 In respect of any instruction pursuant to Clauses 54.2, 54.3 or 65.2, the amount due to the Contractor shall be the amount accepted by the Contract Administrator pursuant to those clauses and the Contract Administrator shall make, pursuant to Clause 66, revisions (if any and if appropriate) to the Pricing Schedule and/or the Schedule of Milestones and/or the Interim Payment Schedule and shall notify the Contractor accordingly.

56.5 The Contractor shall not be entitled to any payment pursuant to this Clause 56 to the extent, in the Contract Administrator's opinion, connected with:

(a) any breach of the Contract or other default on the part of the Contractor;

(b) any instruction in relation to matters which, in the Contract Administrator's opinion, are the responsibility of the Contractor in the absence of the instruction; or

(c) failure by the Contractor to make the proper allowance in the Tender Total and the rates and prices in the Pricing Document which he is deemed to have made pursuant to Clause 15.2.

56.6 The Contractor shall supply all information and documents requested by the Contract Administrator to facilitate the performance of the Contract Administrator's duties under this Clause 56 including, without limitation, details or further details of:

(a) the rates and prices in the Pricing Document; and/or

(b) amounts claimed by relevant sub-contractors

and the details or further details shall include a make-up of the relevant rate, price or amount to identify allowance for labour, Permanent Works, Contractor's Equipment,

Temporary Works and other types of expenditure and any mark-up for inflation, overheads and profit (if any).

57. Cost and Disturbance to the Progress of the Works

57.1 If, in the Contract Administrator's opinion, the Contractor has incurred or is likely to incur Cost for which the Contractor would not be reimbursed by a payment made pursuant to any other provision in the Contract and a claim is made by reason of:

(i) the issue of an instruction, or the failure or inability to issue or delay in issue of an instruction, pursuant to Clause 2.9;

(ii) the reversal or variation of an instruction or decision by the Contract Administrator, or the Contract Administrator's Representative, pursuant to Clause 3.5;

(iii) ambiguities or discrepancies in or between the documents comprising the Contract, pursuant to Clause 7.2;

(iv) the failure or inability to issue or delay in issue of further or amended Drawings or Specification by the Contract Administrator which was the subject of a notice in accordance with Clause 9.3, pursuant to Clause 9.4;

(v) the presence of unforeseeable physical conditions or artificial obstructions at the Site and measures taken to overcome them and/or instructions issued by the Contract Administrator in respect thereof, pursuant to Clause 15.6;

(vi) errors in setting out due to incorrect data, pursuant to Clause 19.2;

(vii) an instruction for the rectification of loss or damage due to Excepted Risks, pursuant to Clause 21.6;

(viii) delay in obtaining any occupation permit under the Buildings Ordinance or any other Enactment, which is caused by any person other than the Contractor and which is the sole reason preventing the practical completion of the Works, pursuant to Clause 24.3;

(ix) the activities of Relevant Authorities or Project Contractors, pursuant to Clause 28.9;

(x) the uncovering of acceptable work, pursuant to Clause 39.3;

(xi) ad hoc successful tests, pursuant to Clause 41.7;

(xii) access constraints, pursuant to Clause 43.4;

(xiii) an instruction issued by the Contract Administrator for the handing over of the Works, or any part thereof, pursuant to Clause 50.4;

(xiv) suspension of the Works, pursuant to Clause 51.2;

(xv) the investigation of any defect, imperfection or fault or the execution of maintenance work not the result of any breach or default by the Contractor in accordance with Clause 53.1(a), pursuant to Clause 53.3;

(xvi) the execution of work not included in the Drawings and/or the Specification in accordance with Clause 53.1(b), pursuant to Clause 53.4;

(xvii) the issue of a variation instruction, pursuant to Clause 54.8;

(xviii) the instruction of work included as a Provisional Sum or Provisional Item, pursuant to Clause 65.6;

(xix) the instruction to engage a Nominated Sub-Contractor, notwithstanding a notice of objection issued under Clause 65B.2, pursuant to Clause 65B.7;

(xx) the insolvency, receivership or liquidation of any Nominated Sub-Contractor or of any guarantor of the Nominated Sub-Contractor, pursuant to Clause 65B.8; or

(xxi) making good the destruction or damage to the Permanent Works and/or the Temporary Works by reason of special risks, pursuant to Clause 77.4(b),

then, subject to Clause 58, the Contract Administrator shall as soon as reasonably practicable assess the sum in respect of the Cost incurred and give a decision of the sum to the Contractor.

57.2 The Contractor shall not be entitled to any payment pursuant to this Clause 57 due, in the Contract Administrator's opinion, to:

(a) any breach of the Contract or other default on the part of the Contractor;

(b) any instruction in relation to matters which, in the Contract Administrator's opinion, are the responsibility of the Contractor in the absence of such instruction; or

(c) failure by the Contractor to make the proper allowance in the Tender Total and the rates and prices in the Pricing Document which he is deemed to have made pursuant to Clause 15.2.

58. **Notice of Claims for Additional Payment**

58.1 (a) Notwithstanding any other provision of the Contract, but subject to Clause 58.1(b), if the Contractor at any time intends to claim payment additional to the then current total of the Cost Centre Values and other amounts previously decided to be due, or damages under or for breach of or otherwise in connection with the Contract he shall give notice to the Contract Administrator of his intention within 21 (twenty-one) days after the event giving rise to the claim became, or ought reasonably to have become, apparent to the Contractor.

(b) The Contractor shall be entitled to payment following the issuance of instructions pursuant to Clauses 47.6, 54.1 and 65.1 in which it is expressly stated that they will be subject to valuation in accordance with the Contract Administrator's decisions as to the value thereof pursuant to Clauses 47.8, 56.1 or 65.1, as the case may be, without being required to give notice in accordance with Clause 58.1(a), but if the Contractor seeks payment in excess of the value so decided or any other payment in respect of the said instructions or in respect of instructions in which it is not expressly stated that they will be subject to valuation, notice in accordance with Clause 58.1(a) shall be required. In addition, no notice shall be required in respect of any price to be assessed by the Contract Administrator pursuant to Clause 47.8 or any amount accepted by the Contract Administrator pursuant to Clauses 54.2, 54.3 or 65.2.

58.2 Within 28 (twenty-eight) days, or such other reasonable time as may be permitted by the Contract Administrator, after the date of a Contractor's notice pursuant to Clause 58.1, the Contractor shall send to the Contract Administrator detailed particulars of the amount claimed and the grounds and/or contractual provisions upon which the claim is based, together with the documents which support the claim. Where the event giving rise to the claim has a continuing effect, the account shall be considered an interim account and the Contractor shall, at such intervals as the Contract Administrator may reasonably instruct, send further interim accounts giving the current amount of the claim and specifying any further ground or evidence in support of the claim. The Contract Administrator may, if in his opinion he has sufficient information for the purpose, give an interim decision. The Contractor shall, within 28 (twenty-eight) days of the continuing effect coming to an end, submit final particulars.

58.3 Unless otherwise expressly provided in the Contract, the Contractor shall not be entitled to any decision or to any revision of Cost Centre Values or to any payment, damages or other relief in respect of the event giving rise to his claim unless he shall have first complied with the terms of this Clause 58 and in default of compliance, the Contractor shall not be entitled to receive any such payment, damages or other relief, to which he might have become entitled either under the Contract or as a result of any breach of the Contract by the Authority, and the Contractor shall be deemed to have waived all his rights and entitlements in respect thereof .

59. **Maintenance of Records**

59.1 The Contractor shall establish at the Site, and may establish at other places which have been reviewed without objection, records offices containing an archive of all documents in connection with and arising out of the Contract and a complete record of all transactions (with copies of all relevant documents) entered into by the Contractor in connection with the Contract. Such offices and the archive shall, in accordance with the Specification, be established and maintained by the Contractor subject to any take-over of the archive by the Authority in accordance with the Contract.

59.2 If the Contractor serves a notice pursuant to Clauses 45.1 or 58.1 or if an event occurs in respect of which the Contractor may subsequently make a financial claim, the Contractor shall keep such contemporary records as may reasonably be necessary to support any claim he may subsequently wish to make.

59.3 Without admitting the Authority's liability, the Contract Administrator may instruct the Contractor to keep such further contemporary records as he reasonably considers desirable or material to any claim of which notice pursuant to Clauses 45.1 or 58.1 has been given.

59.4 To the extent that the records of the Contractor are to be created and/or maintained on a computer or other electronic storage device, the Contractor shall submit to the Contract Administrator for review a procedure for back-up and storage at other locations of copies of the records and shall adhere, and shall cause his sub-contractors of any tier to adhere, to the agreed procedures and to demonstrate compliance with the agreed procedure as and when requested by the Contract Administrator.

59.5 The Contractor shall, at all reasonable times, either before or after the issue of the Final Certificate, allow the Contract Administrator and any representative of the Authority, access to the records offices and the archive established by the Contractor pursuant to Clause 59.1 and procure such access to the records offices of any sub-contractor (including, without limitation, any consultant engaged by the Contractor), to inspect and take copies of, at the cost of the Authority, any document relating to the Works or the Project including, without limitation, any documents relating to the breakdown, calculation or analysis of the Tender.

59.6 Without prejudice to any other provision of the Contract, including, without limitation, Clause 5, the Contractor shall ensure that any sub-contract entered into by the Contractor shall contain such provisions which enable the Contractor to comply with the provisions of this Clause 59.

PROPERTY IN THE PERMANENT WORKS, TEMPORARY WORKS AND CONTRACTOR'S EQUIPMENT

60. Vesting of Contractor's Equipment and Temporary Works

60.1 Contractor's Equipment (excluding, for the purposes of this Clause 60.1 only, marine vessels), Temporary Works and consumables which are owned by the Contractor shall, on delivery to the Site become the property of the Authority.

60.2 Contractor's Equipment, Temporary Works and consumables shall not be removed from the Site or taken out of use for the Works without prior consent.

60.3 Upon the practical completion of the Works or the taking out of use or removal as aforesaid or pursuant to Clause 77.2, the Contractor's Equipment, Temporary Works and surplus consumables which have vested in the Authority shall re-vest in the Contractor.

61. Vesting of Permanent Works

61.1 Any part of the Permanent Works:

(a) which is delivered to the Project Site shall:

(i) become the property of the Authority (unless property in the part has already passed to the Authority pursuant to Clause 61.1(b)); and

(ii) not be removed from the Site or the Project Site without prior consent;

(b) which is manufactured or obtained off-Site shall become the property of the Authority upon property in the part vesting in the Contractor or otherwise passing unconditionally to the Contractor or his agent or nominee and the Contractor shall, and shall procure that any of his sub-contractors supplying any part of the Permanent Works to the Contractor shall:

(i) upon property in the part vesting in the Contractor, provide to the Contract Administrator such documentary or other evidence thereof as may be appropriate or as the Contract Administrator may request;

(ii) upon the part being practically ready for delivery to the Project Site, suitably mark or otherwise plainly identify it so as to show that its destination is the Project Site, that it is the property of the Authority and (where it is not stored at the premises of the Contractor) to whose order it is held, and set aside and store the part so marked or identified to the satisfaction of the Contract Administrator;

(iii) send to the Contract Administrator a schedule listing and giving the value of every part so marked, identified, set aside and stored and inviting him to inspect them; and

(iv) if so instructed by the Contract Administrator, provide to the Contract Administrator an opinion in writing by an established and qualified lawyer in the country where the part is situated that the actions taken by the Contractor are sufficient to show an intention to vest the property in it in the Authority and to protect it against seizure by a third party (including any liquidator, receiver or similar officer of the Contractor),

provided that the operation of this Clause 61 shall not be deemed to imply any acceptance of any part of the Permanent Works or prevent its rejection by the Contract Administrator at any time.

61.2 The parts of the Permanent Works referred to in Clause 61.1(b) shall be in the possession of the Contractor or his sub-contractors for the sole purpose of delivering them to the Authority for the execution of the Works and shall not be within the ownership, control or disposition of the Contractor or his sub-contractors and save only as stated in Clause 21, the Contractor shall be responsible for any loss or damage to such parts and for the expense involved in storing, handling and transporting the same.

61.3 The Contractor shall ensure that there shall be no lien whether in equity, common law or otherwise on any part of the Permanent Works which has vested in the Authority pursuant to Clause 61.1 for any sum due to the Contractor, his sub-contractors or any other person and the Contractor shall ensure that the title of the Authority and the exclusion of any lien are brought to the notice of his sub-contractors and other persons dealing with or

transporting any part.

61.4 If the Contract or the Contractor's employment thereunder is terminated before the practical completion of the Works, the Contractor shall deliver to the Authority any part of the Permanent Works owned by the Authority by virtue of Clause 61.1, and if the Contractor shall fail to do so the Authority may enter any premises of the Contractor, and the Contractor shall procure that the Authority may enter any premises of any of his sub-contractors, to remove the part and the Authority may recover the cost of so doing from the Contractor.

62. Use of Contractor's Equipment

62.1 The Contractor shall not, without prior consent, bring onto the Site or the Project Site or use in connection with the Works at any place whatsoever, any item of Contractor's Equipment which is not solely owned by the Contractor. Consent may be withheld unless:

(a) the owner of the item enters into a written collateral agreement with the Authority under which the owner undertakes to the Authority that:

(i) the owner shall, and shall procure that the beneficiary of any relevant charge, other security interest or reservation of title (of whatever nature) shall, without payment, execute any deed or document in favour of the Authority to assign to the Authority the benefits under any lease, charter-party, hiring, hire-purchase, supply, operation or other agreement made with the Contractor in respect of the item in the event of the termination of the Contract or of the employment of the Contractor thereunder;

(ii) the agreement shall permit the Authority, or any third party employed by the Authority, to use the item until completion of the Works upon the same terms as those enjoyed by the Contractor prior to the assignment; and

(iii) the owner shall not, without first giving the Authority not less than 21 (twenty-one) day's prior notice, exercise any right the owner may have to terminate the lease, charter-party, hiring, hire-purchase, supply, operation or other agreement, or treat the same as having been repudiated by the Contractor or terminated, howsoever otherwise, or withhold performance of the owner's obligations thereunder or remove the item from Hong Kong; and

(b) the Contractor provides, or procures the provision of, any information that the Contract Administrator by instruction requests in relation to any charge, other security interest or reservation of title (of whatever nature) that may subsist in the item.

62.2 All sums paid by the Authority under the provisions of any agreement, deed or document referred to in this Clause 62 and all cost or expense incurred by him in entering into the agreement, deed or document shall be recoverable by the Authority from the Contractor.

62.3 The Contract Administrator may instruct the Contractor to produce all documents evidencing title to, or the contractual basis of the Contractor's right to use, any item of Contractor's Equipment.

62.4 Without prejudice to any other provision of the Contract, including without limitation, Clause 5, the Contractor shall ensure that any sub-contract entered into by the Contractor shall contain such provisions which enable the Contractor to comply with the provisions of this Clause 62.

62.5 If the Contractor fails to comply with his obligations pursuant to this Clause 62, without prejudice to any other right or remedy available to the Authority, the Authority may withhold from interim payments due to the Contractor an amount equivalent to the value of the Contractor's Equipment concerned until such time as the failure is rectified or remedied to the satisfaction of the Contract Administrator.

63. **Removal of Contractor's Equipment and Temporary Works**

63.1 Within a reasonable time after the issue of any Practical Completion Certificate, the Contractor shall clear away and remove from the relevant part of the Site and the Project Site any item of Contractor's Equipment, Temporary Works and surplus consumables (except those required to discharge the Contractor's other obligations under or in connection with the Contract) for which consent has been given pursuant to Clause 60.2 and all other items of equipment, whether or not belonging to the Contractor, and the Contractor shall leave the Works, or the Section or other part of the Works to which the Practical Completion Certificate relates, and the Site, or the relevant part thereof as appropriate, in a clean and tidy condition.

63.2 If at any time throughout the period in which the Works are executed, it appears to the Contract Administrator that the Contractor has abandoned any item of Contractor's Equipment, Temporary Works or surplus consumables on any part of the Site and that the Contractor does not intend to use the same again in the execution of the Works, the Contract Administrator may issue a notice to that effect to the Contractor requiring him to confirm within 7 (seven) days of receipt of the notice whether the item has been abandoned or whether he intends to use it in the execution of the Works. In the event either that the Contractor confirms the abandonment or fails to respond to the Contract Administrator's notice within the said 7 (seven) day period, the Contract Administrator may, without prejudice to the generality of the Contract Administrator's powers under Clause 2, issue an instruction requiring the Contractor to remove the relevant item from the Site and the Project Site within a period of 7 (seven) days of receipt of the Contract Administrator's instruction.

63.3 If the Contractor fails to comply with Clauses 63.1 or 63.2, the Authority may, without prejudice to any other rights or remedies it may have under the Contract, and without prejudice to Clause 72.1:

(a) remove the relevant item from the Site and the Project Site and dispose of the same in any manner as he sees fit, and if the Authority sells the said item, after deducting from any proceeds of sale the charges and expense incurred by the Authority in connection with such sale, the Authority shall pay the balance, if any, to the

Contractor but, to the extent that the proceeds of sale are insufficient to meet all such charges and expenses incurred by the Authority, the excess shall be recoverable by the Authority from the Contractor; or

(b) return the item (if hired or the subject of a hire-purchase, supply or operation agreement, charter-party or lease) to the owner from whom it was so hired, chartered or leased, and recover the charges and expenses of and in connection with such return from the Contractor.

64. Liability for Loss or Damage to Permanent Works, Contractor's Equipment, etc

64.1 The Authority shall not at any time be responsible for the care of, nor be liable for the loss of or damage to the Permanent Works, Contractor's Equipment, Temporary Works or consumables which have become the property of the Authority pursuant to Clauses 60 and 61 except as provided in Clause 21.

PROVISIONAL SUMS, PROVISIONAL ITEMS, OPTIONS AND NOMINATED SUB-CONTRACTORS

65. Provisional Sums, Provisional Items and Prime Cost Sums

65.1 Any work in relation to which a Provisional Sum or Provisional Item is stated in the Pricing Document shall only be executed in whole or in part upon the issue of an instruction by the Contract Administrator pursuant to this Clause 65.1 or Clause 65.2. If the Contract Administrator issues no such instruction in respect of a Provisional Sum or a Provisional Item, the said work shall not form part of the Works and the Contractor shall not be entitled to any payment for or in connection with such work. The Contract Administrator may instruct any work contained in a Provisional Sum or a Provisional Item pursuant to this Clause 65.1:

(a) to be executed by the Contractor, but not as daywork, in which case its value shall be assessed and decided pursuant to Clause 56; save to the extent that a price is stated in the Pricing Document in respect of a Provisional Item which price shall be applicable;

(b) to be executed by the Contractor as daywork, in which case its value shall be assessed and decided pursuant to Clause 55; or

(c) to be executed by a Nominated Sub-Contractor, in which case the provisions of Clause 65B shall apply.

65.2 The Contract Administrator may, when considering whether or not to instruct any Provisional Sum, request the Contractor to submit an estimate detailing the financial, timing and quality effects upon the Works of executing the work in relation to which the Provisional Sum is stated in the Pricing Document. The Contractor shall submit the estimate within 14 (fourteen) days of receipt of the request and if the Contract Administrator accepts the estimate (which he shall be under no obligation to do) he shall so notify the Contractor and instruct the work pursuant to this Clause 65.2 within 14

(fourteen) days of receipt of the estimate. If the Contract Administrator does not accept the estimate he may nevertheless instruct the work at any time pursuant to Clause 65.1.

Prime Cost Sums

65.3 Any work in relation to which a Prime Cost Sum is stated in the Pricing Document shall be carried out by a Nominated Sub-Contractor upon the Contract Administrator's instruction pursuant to this Clause 65.3.

65.4 Without prejudice to Clause 15.2, the Contractor shall be deemed to have allowed the necessary time and resources (including without limitation establishment and supervisory charges and all other costs) to enable the work in relation to which Prime Cost Sums, Provisional Sums and Provisional Items are stated in the Pricing Document to be executed by the relevant Key Dates and within the Tender Total insofar as, without prejudice to Clause 15.3, the scope and nature of the work was reasonably foreseeable on the basis of the deeming provisions of Clause 15.1.

65.5 The Contractor shall, when instructed by the Contract Administrator, obtain and submit any quotation which the Contract Administrator may reasonably request and produce all invoices, vouchers and accounts or receipts in connection with expenditure in respect of Provisional Sums and Prime Cost Sums.

65.6 If in compliance with any instruction pursuant to Clause 65.1 (a) or (b), the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate and which is not recoverable pursuant to Clauses 55 or 56 then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clauses 45 and/or Clause 57 provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

65A **Options**

65A.1 The Contract Administrator may, at any time within the relevant period from the Date for Commencement of the Works referred to in the Specification or the Pricing Document (or any extended period agreed by the Authority and the Contractor), instruct any Option by instructing the Contractor to execute the work comprised therein, as such work is described in the Specification or the Pricing Document.

65A.2 If the Contract Administrator instructs any Option in accordance with Clause 65A.1, the Contractor shall carry out the work comprised therein subject to and in accordance with the Contract as if it had at all times formed part of the Works and any provision of the Contract which is stated as being conditional upon the instruction of the Option shall apply.

65A.3 The Contractor shall not be entitled to receive any extension of time for completion of the Works or any Section or for the achievement of any Stage pursuant to Clause 45 of the General Conditions by reason of the instruction of any Option by the Contract Administrator, in accordance with Clause 65A.1 or to receive any further or additional payment, whether pursuant to Clauses 56 or 57 of the General Conditions, beyond the sum

referred to in the Pricing Document in respect of such Option, which shall be payable to the Contractor by the Authority.

65A.4 If the Contract Administrator does not exercise any Option pursuant to Clause 65A.1, such Option shall not form part of the Works and the Contractor shall not be entitled to any payment for or in connection with such Option.

65B. Nominated Sub-Contractors

65B.1 Upon receipt of an instruction to enter into a sub-contract with a Nominated Sub-Contractor pursuant to Clause 65.1(c) or Clause 65.3, the Contractor shall, subject to Clause 65B.2, forthwith enter into a sub-contract with the Nominated Sub-Contractor identified in the instruction in the form of the sub-contract identified in the instruction, which shall be based upon the form contained in **Schedule 12**, with such amendments as may be identified in the instruction, and the Contractor shall not thereafter amend or waive any of the terms of the sub-contract without prior consent nor shall the Contractor accept any repudiation or otherwise terminate the sub-contract or terminate or suspend the Nominated Sub-Contractor's employment thereunder without prior consent. The Contractor shall procure that the Nominated Sub-Contractor shall provide to the Authority and to the Contractor all bonds, warranties and guarantees required by the sub-contract and, without prejudice to any other right or remedy of the Authority, the Authority shall be entitled to withhold from interim payments due to the Contractor an amount equivalent to the value of the sub-contract until all bonds, warranties and guarantees have been provided.

65B.2 Subject to Clause 65B.3, the Contractor shall be entitled to object to an instruction to sub-contract with a Nominated Sub-Contractor pursuant to Clause 65 on the ground:-

(a) that the sub-contract completion dates are inconsistent with the progress of the Works; or

(b) that any amendment to the form of sub-contract contained in **Schedule 12** is inconsistent with the Contractor's obligation under the Contract,

and the objection shall be made in writing forthwith upon receipt of the instruction and shall explain the inconsistency in reasonable detail and, until the Contractor shall receive further instruction, he shall not enter into a sub-contract with the Nominated Sub-Contractor.

65B.3 Upon receipt of any objection in accordance with Clause 65B.2, the Contract Administrator shall either:-

(a) re-issue the original instruction pursuant to Clause 65.1(c) or Clause 65.3, as appropriate, in which case the Contractor shall have no rights of objection under Clause 65B.2 and shall forthwith enter into the sub-contract with the Nominated Sub-Contractor; or

(b) issue a revised instruction pursuant to Clause 65.1(c) or Clause 65.3, as appropriate, or

(c) issue any other instruction, including an instruction pursuant to Clause 54 to omit part of the Works.

65B.4 In accordance with Clause 67.2, the Contract Administrator shall assess and decide the amount to be added to the relevant Cost Centre Value in relation to any Nominated Sub-Contractor which shall be:-

(a) the total amount paid or payable by the Contractor to the Nominated Sub-Contractor under the sub-contract between the Contractor and the Nominated Sub-Contractor, less:-

(i) all discounts;

(ii) amounts excluded pursuant to Clauses 65B.5 and 65B.6;

(iii) amounts paid or payable by the Contractor under the relevant sub-contract as a result of breach of the sub-contract or other default on the part of the Contractor or any of his other sub-contractors of any tier;

(iv) amounts paid or payable by the Contractor under the relevant sub-contract which are recoverable by the Contractor pursuant to any other provision of the Contract; and

(b) in respect of attendance on the Nominated Sub-Contractor and all other charges and profit related thereto:-

(i) any sum included in that regard in the Pricing Document together with the product of the percentage quoted by the Contractor in the Pricing Document and the actual sum added to the relevant Cost Centre Value pursuant to Clause 65B.4(a); or

(ii) if no sum or percentage is included as aforesaid, a reasonable amount assessed and decided by the Contract Administrator.

65B.5 No revision shall be made to any relevant Cost Centre Value and the Contractor shall not otherwise be entitled to any payment in respect of any increase in excess of the total sum payable to a Key Sub-Contractor or Nominated Sub-Contractor at the time the relevant sub-contract was entered into unless before taking the action which led to the increase the Contractor gave notice of the action to the Contract Administrator and obtained consent to it.

65B.6 If any sub-contractor or the Nominated Sub-Contractor's employment thereunder shall be terminated for any reason, the Contract Administrator shall as soon as reasonably practicable either:

(a) issue a further instruction pursuant to Clause 65.1(c) or Clause 65.3, as appropriate; or

(b) issue any other instruction, including an instruction pursuant to clause 54 to omit part of the Works,

provided that where a further instruction is issued as referred to in Clause 65B.6(a), the relevant Cost Centre Value shall not be adjusted except only by the addition of any amount which would have been paid or payable upon the proper completion of the sub-contract between the Contractor and the Nominated Sub-Contractor first employed and the Contractor shall not be entitled to any further or other adjustment to the relevant Cost Centre Value or to make any other claim for payment or extension of time, subject however to Clause 65B.8.

65B.7 If in compliance with any instruction pursuant to Clause 65.1(c) or Clause 65.3 (other than a further instruction as referred to in Clause 65B.6(a) to engage a Nominated Sub-Contractor reissued pursuant to Clause 65B.3(a)), the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost which the Contractor did not and had no reason to anticipate and which is not recoverable pursuant to Clause 65B.4, or from the Nominated Sub-Contractor and the prevention or Cost results from the grounds of objection made pursuant to Clause 65B.2 in relation to the Nominated Sub-Contractor then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate.

65B.8 If as a result of the insolvency, receivership or liquidation of any Nominated Sub-Contractor and of any guarantor of the Nominated Sub-Contractor, the Contractor incurs Cost (including any liquidated or other damages payable to the Authority) which the Contractor did not and had no reason to anticipate and because of the insolvency, receivership or liquidation, the Contractor cannot recover the Cost from the Nominated Sub-Contractor nor from any guarantor of the Nominated Sub-Contractor, if the Contractor claims additional payment (to the extent of the irrecoverable Cost) therefor, the Contract Administrator shall give a decision pursuant to Clause 57, provided that the Contractor has complied with his obligations pursuant to Clause 58.

65B.9 Sub-Clause 5.4 shall apply to Nominated Sub-Contractors, subject only to the express provisions of this Clause 65B to the contrary.

CERTIFICATES AND PAYMENT

66. Interim Payment Schedule, Cost Centre Values and Milestones

66.1 The Interim Payment Schedule sets out the maximum accumulative percentage of each Cost Centre Value in relation to each month for which the Contractor may apply for payment, subject to the achievement of Milestones and to application for payment in accordance with Clause 67.

66.2 The Cost Centres and / or Cost Centre Values shall be revised by the Contract Administrator:

(a) upon issue of the Letter of Acceptance to the Contractor, by the deduction of all Provisional Sums and Provisional Items from the Cost Centre Values, and

(b) upon:

(i) an agreement or instruction pursuant to Clauses 47.5 or 47.6, respectively (Recovery of Delay and Acceleration of the Works), by adding to the Cost Centres or a Cost Centre Value the amount as agreed or decided by the Contract Administrator pursuant to Clause 47.8;

(ii) a decision pursuant to Clause 56 (valuation), by adding to or deducting from the Cost Centres or a relevant Cost Centre Value the value as decided;

(iii) a decision to instruct any Provisional Sum, Provisional Item or Option by adding to or deducting from the Cost Centres or a Cost Centre Value, the amount specified in the Pricing Schedule in respect thereof; or

(iv) any other decision of the Contract Administrator of an amount or allowance due to the Contractor under the Contract (including, without limitation, in respect of any remeasurement of any quantity of work executed by the Contractor if permitted by the Pricing Document) which has not been or will not otherwise be the subject of an interim payment pursuant to Clause 67.2(b), by adding to, or, in respect of any remeasurement of any quantity of work executed by the Contractor if permitted by the Pricing Document, by deducting from, the Cost Centres or a Cost Centre Value, as appropriate, the amount or allowance as decided.

66.3 (a) The Contract Administrator may decide which Cost Centre is to be the relevant Cost Centre for the purpose of Clause 66.2 if and in so far as the same is not identified in the Pricing Schedule, and shall notify the Contractor upon making any such decision.

(b) Notwithstanding Clause 66.2, the Contract Administrator may decide not to include a sum payable to the Contractor pursuant to the Contract in a Cost Centre Value or to create a new Cost Centre and amend the Pricing Schedule accordingly, in which case the Contract Administrator shall notify the Contractor of the decision and the Contractor may apply for payment of the sum in accordance with Clause 67.1(b).

66.4 If a Milestone is not achieved by the end of the month in which it is scheduled to be achieved, the Contract Administrator shall follow the procedure set out below when certifying payments:

(a) all payments relating to the Cost Centre in which the Milestone in question has not been achieved shall be suspended at the amount determined by reference to the percentage appearing for that Cost Centre in the Interim Payment Schedule

applicable to the month prior to the month in which the Milestone was due to have been achieved;

(b) payments suspended pursuant to Clause 66.4(a) shall be resumed by being included in the next application for interim payment made after the Milestone is achieved or where the Contract Administrator determines, in his absolute discretion, that payment to the Contractor should be resumed notwithstanding the non-achievement of the Milestone, and the Contract Administrator has notified the Contractor of such determination, at the percentage of the Cost Centre Value for the relevant Cost Centre appearing in the Interim Payment Schedule applicable to the month in which the Milestone was due to have been achieved; and

(c) in relation to the relevant Cost Centre, the Interim Payment Schedule shall be revised by the Contract Administrator within 21 (twenty-one) days of receipt of an application for resumption of payments pursuant to Clause 66.4(b) to take account of:

(i) the date by which, in the Contract Administrator's opinion, the Milestone next following the non-achieved Milestone is likely to be achieved;

(ii) any subsequent Milestone which, in the Contract Administrator's opinion, is not likely to be achieved by its stipulated date; and

(iii) the earliest subsequent Milestone which, in the Contract Administrator's opinion, is likely to be achieved by its stipulated date,

and the Contract Administrator shall notify the Contractor accordingly.

66.5 In addition to the procedure for revision of the Interim Payment Schedule pursuant to Clause 66.4, if:

(a) the Contract Administrator reviews without objection a revised Works Programme containing a change to the sequence and timing of the execution of the Works;

(b) the Contract Administrator grants an extension of time pursuant to Clause 45;

(c) the Contractor adopts recovery of delay or acceleration measures pursuant to Clause 47;

(d) the Contract Administrator instructs a suspension of the Works or any part thereof pursuant to Clause 51;

(e) the Contract Administrator instructs a variation pursuant to Clause 54;

(f) the Contract Administrator instructs the expenditure of a Provisional Sum, Provisional Item, Option or Prime Cost Sum, pursuant to Clauses 65, 65A or 65B, respectively;

(g) following the suspension of payment pursuant to Clause 66.4(a) the relevant Milestone shall not have been achieved within 3 (three) months of the date stipulated in the Schedule of Milestones;

(h) there shall be a significant change in a Cost Centre Value by reason of a decision of the Contract Administrator in accordance with the Contract; or

(i) the Contract Administrator is of the opinion that the Contractor's negative cashflow is adversely affecting the execution of the Works,

the Contract Administrator may carry out a detailed examination and review of the Interim Payment Schedule, the Milestones and the dates stipulated for their achievement in the Schedule of Milestones and an assessment of the extent to which the Works have been carried out up to the date of the review.

66.6 The Contractor shall co-operate with and, to the best of the Contractor's ability, assist the Contract Administrator in making any detailed examination pursuant to Clause 66.5 and shall provide all such information as the Contract Administrator may reasonably request in connection therewith. If as a result of this detailed examination, the Contract Administrator is of the opinion that, in relation to any Cost Centre, the relationship between:

(a) interim payments; and

(b) the progress of the Works,

established by the Interim Payment Schedule as at the date of the Letter of Acceptance has not been or will not be maintained, then the Contract Administrator may give 14 (fourteen) days' notice to the Contractor of his intention to prepare a revised Interim Payment Schedule and/or a revised Schedule of Milestones which will in his opinion restore, so far as reasonably practicable, the said relationship. On the expiration of the said notice and after considering any representation the Contractor may have made in the meantime, the Contract Administrator shall if he is still of the opinion that a revision ought to be made, revise the Interim Payment Schedule and the Schedule of Milestones in any manner which he sees fit based on the rate of progress of the Works which he anticipates and with the objective of restoring, so far as reasonably practicable, the said relationship.

66.7 When making any revision to the Interim Payment Schedule in accordance with the Contract, the Contract Administrator may reduce or extend the period over which interim payments may be made.

67. **Payment Statements**

67.1 At the beginning of each month the Contractor may apply to the Contract Administrator for an interim payment in relation to the preceding month. Each application shall state:

(a) the amount claimed to be payable pursuant to Clause 67.2(a) setting out the percentage of each Cost Centre Value claimed according to the Interim Payment Schedule; and

(b) any other amount claimed to be payable pursuant to a decision of the Contract Administrator identifying the relevant decision.

As a condition precedent to consideration by the Contract Administrator of any such application for payment submitted by the Contractor, each application shall be accompanied by the Monthly Progress Report for the month to which the application relates.

67.2 Within 30 (thirty) days following receipt of an application in accordance with Clause 67.1, the Contract Administrator shall issue to the Authority, with a copy to the Contractor, an interim payment certificate showing the amount payable by the Authority to the Contractor by way of interim payment. The interim payment shall be the sum of:

(a) the amounts shown to be due for the month in respect of which the application is made by reference to the Interim Payment Schedule in accordance with Clause 66; and

(b) the amounts assessed and decided by the Contract Administrator to be due in respect of:

(i) Cost incurred, pursuant to Clause 57;

(ii) work executed on a daywork basis, pursuant to Clause 55; and

(iii) any other amount or allowance to which the Contractor is entitled under the Contract save insofar as account has been or will be taken of the amount or allowance by way of a revision of a Cost Centre Value pursuant to Clause 66.2;

less:

(c) the Retention Moneys as provided for in Clause 68; and

(d) any amount certified for payment on interim payment certificates previously issued.

67.3 Subject to any deduction, withholding or condition precedent pursuant to the Contract, amounts from time to time certified by the Contract Administrator (including, without limitation, pursuant to Clause 68) shall be paid in Hong Kong by the Authority to the Contractor within 30 (thirty) days after the date of issue of the relevant certificate in accordance with the Contract. Unless otherwise expressly provided, all payments (including, without limitation, in respect of decisions of the Contract Administrator pursuant to Clauses 56 and 57 or otherwise) shall be made in Hong Kong Dollars. No adjustment shall be made to any payment or to the Final Contract Sum on account of any variation in the exchange rate between the Hong Kong Dollar and any other currency.

67.4 If either the Authority or the Contractor fails to make payment of amounts due in accordance with the Contract within 30 (thirty) days after the date of issue of the relevant

certificate, the Authority shall pay to the Contractor, or the Contractor shall pay to the Authority as the case may be, simple interest upon any payment overdue at the Contract Rate of Interest.

67.5 The Contract Administrator shall have power to omit from any certificate the value of any work with which he may for the time being be dissatisfied and for that purpose, or if he considers that the Contractor has been overpaid under any interim payment certificate, he may by any certificate delete, correct or modify any sum previously certified by him.

67.6 Without prejudice to Clause 3.8, no payment certificate issued by the Contract Administrator shall be conclusive evidence that the quality of materials or the standard of workmanship used by the Contractor in the execution of the Works are in accordance with the Contract.

68. **Retention Moneys**

68.1 (a) Up to 10 per cent. of any amount due to the Contractor from time to time and identified as payable to any Nominated Sub-Contractor shall be retained by the Authority until there shall be a reserve equal to 5 per cent. of the total for the time being of the amounts added to the Cost Centre Values pursuant to Clause 65B.4 in respect of Nominated Sub-Contractors; and

(b) up to 10 per cent. of any other amount due to the Contractor from time to time shall be retained by the Authority until there shall be a reserve equal to 5 per cent. of the total for the time being of the Cost Centre Values excluding amounts added to that total pursuant to Clause 68.1(a) in respect of Nominated Sub Contractors.

68.2 The Retention Moneys retained pursuant to Clause 68.1 shall be held by the Authority without obligation to invest it or account for interest thereon or to place it in a designated account.

68.3 (a) Within 7 (seven) days of the date of issue of any Practical Completion Certificate for any Section or part of the Works, the Contract Administrator shall issue to the Authority with a copy to the Contractor, a retention release certificate, entitling the Contractor to be paid by the Authority one half of that part of the Retention Moneys which bears the same proportion to the whole of the Retention Moneys as the value of the Section or part at the date of the Letter of Acceptance bears to the Tender Total and identifying any part thereof payable to any Nominated Sub-Contractor. Provided that the aggregate of all sums certified pursuant to this Clause 68.3(a) shall not exceed one half of the whole of the Retention Moneys.

(b) On the date of issue of the Practical Completion Certificate for the Works, the Contract Administrator shall issue to the Authority, with a copy to the Contractor, a retention release certificate entitling the Contractor to be paid by the Authority one half of the whole of the Retention Moneys (less any sums already certified for release pursuant to Clause 68.3(a)) and identifying any part thereof payable to any Nominated Sub-Contractor.

(c) Within 28 (twenty-eight) days of the expiry of 12 (twelve) months from the date of issue of the Practical Completion Certificate for the Works, the Contract Administrator shall:

(i) make a bona fide estimate of the total value of:

(a) the works required to be repaired or replaced by the Contractor; and/or

(b) the works which are still subject to a Defects Liability Period; and/or

(c) all outstanding works,

(together, the "Value of Residual Works") and

(ii) issue to the Authority, with a copy to the Contractor, a retention release certificate entitling the Contractor to be paid by the Authority the balance of the Retention Moneys, less a sum which is equivalent to 5 (five) percent of the Value of Residual Works ("Residual Retention Moneys"), identifying any part thereof payable to any Nominated Sub-Contractor.

68.4 On the date of issue of the Defects Liability Certificate, the Contract Administrator shall issue to the Authority, with a copy to the Contractor, a retention release certificate entitling the Contractor to be paid by the Authority one half of the Residual Retention Moneys and the remainder of the Residual Retention Moneys shall be included with the Final Certificate, in each case identifying any part thereof payable to any Nominated Sub-Contractor.

69. **Final Certificate**

69.1 Not later than 3 (three) months after the date of issue of the Defects Liability Certificate, the Contractor shall submit to the Contract Administrator a statement of final account and supporting documentation showing in detail the total amount payable in respect of the Works in accordance with the Contract together with all further sums which the Contractor considers to be due to him under the Contract up to the date of the Defects Liability Certificate and identifying any part of the final account payable to any Nominated Sub-Contractor. Within 3 (three) months after receipt of this statement of final account and of all information reasonably required for its verification, but in no circumstances earlier than the date of issue of the Defects Liability Certificate, the Contract Administrator shall issue the Final Certificate. The Final Certificate shall state the Final Contract Sum, which shall be the sum of the Cost Centre Values following their final adjustment and of the amounts finally decided by the Contract Administrator to be due in respect of the matters identified in Clause 67.2(b) and the Final Certificate shall identify any part of the Final Contract Sum due to any Nominated Sub-Contractor. From such sum there shall be deducted all amounts previously certified by the Contract Administrator and all amounts which, in the Contract Administrator's opinion, are due to the Authority pursuant to, or a result of breach of, the Contract and the Final Certificate shall state the balance, if any, due from the Authority to the Contractor or from the Contractor to the

Authority as the case may be. The balance of any payment shall be paid to the Contractor and the balance of any over-payment shall be paid by the Contractor

69.2 Without prejudice to Clause 3.8, the Final Certificate shall not amount to, or be deemed to be, conclusive evidence that the quality of materials or the standard of workmanship used by the Contractor in the execution of the Works are in accordance with the Contract.

70. Default of Authority to Pay

70.1 If the Authority fails to pay the Contractor any amount due to be paid to the Contractor by the Authority within 30 (thirty) days of the last date upon which the same ought to have been paid in accordance with the Contract then provided that after the expiry of the said 30 (thirty) days period the Contractor shall have given the Authority notice requesting the payment to be made and the Authority shall have remained in default for a further 14 (fourteen) days, the Contractor shall be entitled, without prejudice to any other right or remedy, to suspend the execution of the Works or to terminate the Contract by giving further notice to the Authority. The bona fide exercise or purported exercise by the Authority of either a right of set-off or counter-claim or a right under or in connection with the Contract to deduct amounts from moneys otherwise due shall not be treated as a failure by the Authority to make a payment for the purposes of this Clause 70.1.

70.2 Upon the Contractor giving such further notice of suspension or termination in accordance with Clause 70.1, the property in all Contractor's Equipment and Temporary Works brought upon the Site by the Contractor shall thereupon re-vest in the Contractor and the Contractor shall with all reasonable despatch remove the same from the Site.

70.3 In the event of such termination, the Authority shall be under the same obligations to the Contractor in regard to payment as if the Contract had been terminated pursuant to the provisions of Clause 77.1 (and the same provision shall survive) but in addition to the payments specified in Clause 77.3, the Authority shall pay to the Contractor the amount of any loss or damage to the Contractor arising out of or in connection with or by consequence of such termination.

DEFECTS LIABILITY CERTIFICATE

71. Defects Liability

71.1 Upon the expiry of the Defects Liability Period, or where there is more than one Defects Liability Period, upon the expiry of all of the Defects Liability Periods and when all outstanding work referred to in Clause 52 and all maintenance work referred to in Clause 53 shall have been completed and any warranty required to be assigned pursuant to Clause 5.12 shall have been so assigned and provided always that the Contractor shall have supplied to the Contract Administrator all documents in compliance with the requirements of the Contract, the Contract Administrator shall issue the Defects Liability Certificate stating the date on which the Contractor shall have completed his obligations in respect of the correction of defects the subject of instructions pursuant to Clause 53.

71.2 Without prejudice to Clause 3.8, the Defects Liability Certificate shall not amount to, or be deemed to be, conclusive evidence that the quality of materials or the standard of workmanship used by the Contractor in the execution of the Works are in accordance with the Contract.

REMEDIES AND POWERS

72. Work by Others

72.1 If the Contractor shall fail to execute any work required under or in connection with the Contract or refuse to comply with any instruction in accordance with the Contract within a reasonable time, without prejudice to any other right or remedy of the Authority, the Contract Administrator may give the Contractor 14 (fourteen) days' notice to execute the work or comply with the instruction. If the Contractor fails to comply with the notice, the Authority shall be entitled to execute the work or implement the instruction by the Authority's own workmen or by third parties. Without prejudice to any other right or remedy, all additional expenditure properly incurred by the Authority in having such work executed or such instruction implemented shall be recoverable by the Authority from the Contractor.

72.2 If by reason of any accident, failure, emergency or other event occurring to, in or in connection with the Project, the Works or any part thereof either during the execution of the Works or during any Defects Liability Period, any remedial or other work or repair shall in the Contract Administrator's opinion be urgently necessary, and the Contractor is unable or unwilling at once to do the work or repair, the Authority may by his own or other work people do the work or repair.

72.3 If the work or repair so done by the Authority is work which, in the Contract Administrator's opinion, the Contractor was liable to do at his own expense under or in connection with the Contract, all costs properly incurred by the Authority in so doing shall on demand be paid by the Contractor to the Authority or may be deducted by the Authority from any moneys due or which may become due to the Contractor.

73. Insolvency or Change in Control

73.1 If the Contractor (which, without prejudice to Clause 1.2.3, means for the purposes of this Clause 73.1, any of the entities comprising the Contractor) shall be in default in that the Contractor:

(a) becomes insolvent or has a receiving order made against the Contractor or makes an arrangement or assignment or composition with or in favour of the Contractor's creditors or agrees to carry out the Contract under a committee of inspection of the Contractor's creditors, or goes into liquidation or commences to be wound up, not being a members' voluntary winding up for the purpose of amalgamation or reconstruction to which the Authority has given his prior consent, such consent not to be unreasonably withheld, or has a receiver, liquidator, trustee or similar officer appointed over all or any part of the Contractor's undertaking or assets or if distress, execution or attachment is levied on, or if an encumbrancer takes possession of

any of the Contractor's assets, or any proceeding or step is taken which has an effect comparable to the foregoing in any relevant jurisdiction;

(b) without the prior consent of the Authority, becomes a subsidiary, within the meaning of the Companies Ordinance (Cap 622) or any Enactment or any legislation in any relevant jurisdiction, of a company of which the Contractor was not a subsidiary on the date of the Letter of Acceptance or if by virtue of any agreement, offer or scheme, the Contractor comes under the control of two or more firms or companies acting in concert so that if they were one company the Contractor would be the company's subsidiary; or

(c) is in breach of Clause 4,

then the Authority may give notice to the Contractor pursuant to Clause 74.1.

74. **Forfeiture**

74.1 If the circumstances of default referred to in Clause 73 occur or if the Contract Administrator shall have certified to the Authority that, in the Contract Administrator's opinion, the Contractor:

(a) has abandoned the Contract;

(b) without reasonable excuse has failed to commence the Works pursuant to Clause 42 or has suspended the execution of the Works, any Section or any other part of the Works for 14 (fourteen) days after receiving from the Contract Administrator notice to proceed;

(c) has failed to remove work from the Site or to pull down and replace work for 14 (fourteen) days after receiving from the Contract Administrator notice that the said work has been rejected by the Contract Administrator;

(d) despite a written warning by the Contract Administrator, is failing, in the Contract Administrator's opinion, to proceed with the Works with due diligence or is persistently or significantly in breach of his obligations;

(e) has sub-let the Works or has sub-let any Section or any other part of the Works without consent; or

(f) is in breach of Clauses 14 or 30,

then the Authority may:

(g) in the circumstance of default referred to in Clause 73, forthwith by the service of a notice to the Contractor; or

(h) in the circumstance of default referred to in this Clause 74.1(a) to (f), after giving not less than 7 (seven) day's notice to the Contractor, by the service of a written further notice,

terminate the Contractor's employment under the Contract and, if the Contractor is on the Site, enter upon the Site and expel the Contractor from the Project Site and the Site, or any part thereof, without thereby avoiding the Contract or releasing the Contractor from any of his obligations or liabilities or affecting the rights and powers conferred on the Authority or the Contract Administrator by the Contract. Thereafter, the Authority may execute the Works or any part thereof or may employ any third party to execute the same and the Authority or such third party may use, to execute the Works, any of the Contractor's Equipment, Temporary Works and Permanent Works which have become the property of the Authority pursuant to Clauses 60 and 61 and the Authority may at any time sell any of the said Contractor's Equipment, Temporary Works and Permanent Works and apply the proceeds of sale in or towards the satisfaction of any sum due or which may become due to the Authority from the Contractor under or in connection with the Contract.

74.2 If the Authority terminates the Contractor's employment pursuant to this Clause 74, the Contractor shall forthwith assign to the Authority, as instructed by the Authority, the benefit of any agreement for the execution of any work for the purposes of the Contract which the Contractor may have entered into and, if so instructed by the Authority, shall enter into novation agreements, in such form as the Authority may reasonably require, in respect of the said agreements.

74.3 If the Authority terminates the Contractor's employment pursuant to this Clause 74 the Authority shall not be liable to pay to the Contractor any money on account of the Contract until the expiration of the Defects Liability Period or the last Defects Liability Period and thereafter until the cost of completion of the Works pursuant to Clause 74.1, maintenance, damages for delay in completion (if any) and all other expenses incurred by the Authority have been ascertained and the amount thereof certified by the Contract Administrator. The Contractor shall then be entitled to receive only such sum or sums (if any) as the Contract Administrator may certify which would have been due to the Contractor upon completion of the Works by him after deducting the said amount. If such amount exceeds the sum which would have been payable to the Contractor on completion of the Works by him then the Contractor shall upon demand pay to the Authority the amount of the excess and it shall be deemed to be a debt due by the Contractor to the Authority and shall be recoverable accordingly.

74.4 As soon as may be practicable after any such termination by the Authority, the Contract Administrator shall assess and decide:

(a) the amount (if any) which had been earned by or would accrue to the Contractor in respect of work actually done by him under or in connection with the Contract; and

(b) the value of any unused or partially used parts of the Permanent Works and any Contractor's Equipment and Temporary Works which had become the property of the Authority pursuant to Clauses 60 and 61,

and shall give notice of his decision to the Authority and the Contractor.

75. **Recovery of Money due to the Authority**

75.1 All damages, costs, charges, expenses, debts or sums for which the Contractor is liable to the Authority in accordance with any provision of the Contract, as a result of a breach of any such provision may be deducted by the Authority from moneys (including, without limitation, Retention Moneys) due to the Contractor in accordance with the Contract. The Authority shall have the power to recover any balance by deducting it from moneys due to the Contractor in accordance with any other contract between the Authority and the Contractor.

75.2 All damages, costs, charges, expenses, debts or sums for which the Contractor is liable to the Authority pursuant to any term of any other contract between the Contractor and the Authority, as a result of a breach of any such provision may be deducted by the Authority from moneys due to the Contractor in accordance with the Contract.

75.3 If, in the Contract Administrator's opinion, the Authority may claim any deduction pursuant to this Clause 75, the Contract Administrator shall issue a certificate stating his bona fide estimate of amounts deductible and the estimate certified shall bind the Contractor until otherwise agreed between the Authority and the Contractor or resolved pursuant to Clause 78, provided that such estimate shall not prejudice such resolution. The Contract Administrator shall, upon request from the Contractor, give to the Contractor in writing the grounds upon which the Contract Administrator's opinion was based and reasonable details of the quantification of the estimate certified.

FRUSTRATION, TERMINATION AND SPECIAL RISKS

76. Frustration

76.1 In the event that either party considers that the Contract has been frustrated by any event recognised by law as amounting to frustration, such party shall give notice to that effect to the other party ("the notice of frustration"). The party receiving a notice of frustration shall, within 14 (fourteen) days of receipt, issue a notice to the other party either accepting the notice of frustration (in which case the Contract shall be deemed to have been frustrated on the date of the notice of frustration) or challenging the same. If the party receiving the notice of frustration challenges the same, or fails to respond thereto within 14 (fourteen) days of receipt, a Dispute shall be deemed to have arisen.

76.2 In the event of the Contract being frustrated, the sum payable by the Authority to the Contractor in respect of that part of the Works executed up to the date of frustration shall be the same as that which would have been payable pursuant to Clause 77 if the Contract had been terminated thereunder.

77. Special Risks

77.1 If, before the Defects Liability Certificate shall have been issued pursuant to Clause 71, there shall be:

(a) an outbreak of war (whether war be declared or not) in any part of the world which, whether financially or otherwise, materially affects the execution of the Works;

(b) an invasion of Hong Kong;

(c) acts of terrorists in Hong Kong;

(d) civil war, rebellion, revolution, insurrection or military or usurped power in Hong Kong;

(e) riot, commotion or disorder in Hong Kong otherwise than amongst the employees of the Contractor or any of his sub-contractors of any tier currently or formerly engaged on the Works;

(f) ionising radiation, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive, toxic, explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component thereof, unless the sources or cause of the radiation, radioactivity or other hazard is brought to or near the Site by the Contractor or any of his sub-contractors of any tier; or

(g) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,

(referred to in this Clause 77 as the "special risks"), the Contractor shall, unless and until the Contract is terminated pursuant to this Clause 77, use his best endeavours to:

(i) continue with the execution of the Works in accordance with the Contract;

(ii) submit for review, proposals setting out the manner in which the Contractor proposes to complete the execution of the Works; and

(iii) if the proposals are reviewed without objection, complete the execution of the Works in accordance therewith,

provided that the Authority shall be entitled, at any time after occurrence of any of the special risks, to terminate the Contract (with the exception of the provisions of Clauses 27, 29, this Clause 77 and Clause 78 and any other provision which is expressly stated to survive termination of the Contract or is necessary for interpretation of the aforesaid Clauses or in relation to work executed prior to termination) by giving notice to the Contractor. Upon the notice being given, the Contract shall terminate but without prejudice to the claims of either party in respect of any antecedent breach thereof.

77.2 If there is a termination pursuant to the proviso to Clause 77.1, the Contractor shall make safe the Site and with all reasonable despatch remove all Contractor's Equipment and Temporary Works.

77.3 If there is a termination in accordance with the proviso to Clause 77.1, the Contractor shall be paid by the Authority, in so far as such items have not already been covered by interim payments made to the Contractor:

(a) the total of the value of all work executed prior to the date of termination;

(b) the Cost of any part of the Permanent Works or services properly ordered for the Works for which the Contractor shall have paid or for which the Contractor is legally bound to pay and on such payment by the Authority the part of the Permanent Works or product of the services so paid for shall become the property of and shall be delivered to the Authority; and

(c) a sum to be certified by the Contract Administrator in respect of the Cost incurred by the Contractor in the expectation of completing the Works in so far as the Cost shall not have been paid in accordance with any other provision of this Clause 77.

77.4 Whether the Contract shall be terminated pursuant to this Clause 77 or not, the following provisions shall apply, or be deemed to have applied, as from occurrence of any of the special risks, notwithstanding anything expressed in or implied by the other provisions of the Contract:

(a) the Contractor shall have no liability whatsoever, by way of indemnity or otherwise, for or in respect of damage to parts of the Permanent Works on the Project Site or to property (other than parts of the Permanent Works off the Project Site, property of the Contractor including property temporarily vested in the Authority pursuant to Clause 60 or property hired by the Contractor for the purposes of executing the Works) whether of the Authority or of third parties or for or in respect of injury or loss of life to persons which damage, injury or loss is the consequence whether direct or indirect of the occurrence of any of the special risks and the Authority shall indemnify the Contractor against all liability whatsoever in relation thereof or in relation thereto;

(b) if the Permanent Works or Temporary Works are destroyed or damaged by reason of any of the special risks, the Contractor shall nevertheless make good the destruction or damage so far as may be instructed by the Contract Administrator or as may be necessary for the execution of the Works or for safety. If, in compliance with his obligations pursuant to this Clause 77, the Contractor is prevented from achieving any Stage or practically completing the Works or any Section by the relevant Key Date or incurs Cost in making good under this Clause 77.4(b) which the Contractor did not and had no reason to anticipate then, if the Contractor claims additional time and/or payment therefor, the Contract Administrator shall give a decision pursuant to Clause 45 and/or (in relation to the said making good only) Clause 56 and/or 57, provided that the Contractor has complied with his obligations pursuant to Clause 45 and/or Clause 58, as appropriate; and

(c) destruction, damage, injury or loss of life caused by the explosion or impact, whenever and wherever occurring, of any mine, bomb, shell, grenade or other projectile, missile or munition of war shall be deemed to be a consequence of the special risks.

DISPUTE RESOLUTION

78. Dispute Resolution

Notice of Dispute

78.1 Any and all Disputes shall be dealt with in accordance with this Clause 78.

78.2 Upon any Dispute arising, the aggrieved party shall serve on the other party (with a copy to the Contract Administrator) a notice stating the nature of the Dispute and on the service of any such notice, a Dispute shall be deemed to have arisen. A Dispute shall be deemed not to have arisen in the absence of the service of such a notice.

Decision of the Contract Administrator

78.3 Within 28 (twenty eight) days of a Dispute being notified under Clause 78.2, either:

(a) the Contract Administrator shall decide the Dispute and give notice of his decision to the Authority and the Contractor; or

(b) in the case of a Dispute arising from a decision of the Contract Administrator in accordance with a direction of the Authority pursuant to the provisions referred to in Clause 2.2, the Contract Administrator shall notify the Contractor and the Authority that his decision was the subject of such a direction.

78.4 Unless the Contract has been terminated or abandoned or the Authority has exercised its rights pursuant to Clause 74, the Contractor shall, notwithstanding the reference of a Dispute to the Authority and the Contract Administrator in accordance with Clause 78.2, continue with the execution of the Works in accordance with the Contract regardless of the nature of the Dispute and the Authority and the Contractor shall give effect forthwith to every decision of the Contract Administrator in accordance with Clauses 78.3(a) and (b), which shall be final and binding on the Contractor and the Authority except and to the extent that it is revised by:

(a) a settlement agreement (whether or not arising out of mediation); or

(b) an arbitral award.

Reference to Mediation

78.5 If:

(a) the Contract Administrator fails to give a decision or notice in accordance with Clause 78.3; or

(b) either the Contractor or the Authority is dissatisfied with a decision of the Contract Administrator pursuant to Clause 78.3,

then within 28 (twenty-eight) days of:

(i) the expiry of the period referred to in Clause 78.3; or

(ii) receipt of the decision or notice of the Contract Administrator,

but not otherwise, either the Contractor or the Authority, as appropriate, may give notice to the other requiring the Dispute to be referred to mediation ("**Request for Mediation**") in accordance with the Mediation Rules.

78.6 Upon service of a Request for Mediation, the Dispute shall be considered in accordance with and subject to the Mediation Rules and the Contractor and the Authority shall attempt bona fide to resolve the Dispute by mediation in accordance with the Mediation Rules with which the Authority and the Contractor shall both comply. The Contractor shall continue with the execution of the Works in accordance with the Contract notwithstanding the reference of a Dispute to mediation in accordance with this provision, regardless of the nature of the Dispute.

78.7 **Not Used**

78.8 **Arbitration**

If a Dispute is not settled by an agreement resulting from a mediation conducted in accordance with Clause 78.6, the Authority or the Contractor, as the case may be, may within 90 (ninety) days of the date of termination of the mediation pursuant to the Mediation Rules, but not otherwise, give notice to the other requiring the Dispute to be referred to arbitration subject to the following provisions of this Clause 78.

78.9 No step shall be taken in any reference of a Dispute to arbitration until after the practical completion or alleged practical completion of the Works unless with the written consent of the Authority and the Contractor provided that:

(a) the giving of a Practical Completion Certificate shall not be a condition precedent for the taking of any step in such reference; and

(b) no decision given by the Contract Administrator in accordance with the foregoing provisions of this Clause 78 shall disqualify him from being called as a witness and giving evidence before an arbitrator on any matter whatsoever relevant to a Dispute referred to arbitration in accordance with this Clause 78.

78.10 In the case of any Dispute as to the exercise of the Contract Administrator's powers under Clause 74.1, the reference to arbitration may proceed notwithstanding that the Works shall not then be or be alleged to be practically complete.

78.11 Save as otherwise provided by this Clause 78, it shall be a condition precedent that the commencement of any reference of a Dispute to arbitration that the issues arising under the Dispute shall have been the subject of a reference to mediation pursuant to the provisions of this Clause 78.

78.12 The reference of a Dispute to arbitration shall be conducted in accordance with the Arbitration Rules and in accordance with the Arbitration Ordinance (Cap 609) or any statutory modification or re-enactment thereof and the matters listed in Schedule 2 (except Paragraphs 1 and 2 of Schedule 2) of the Arbitration Ordinance (Cap 609) shall apply to the arbitration.

78.13 Save as otherwise provided, an arbitrator appointed pursuant to this Clause 78 shall have full power to direct such valuation as may, in his opinion, be desirable in order to determine the rights of the parties and to ascertain and award any sum which ought to have been the subject of or included in any certificate and to open up, review and revise any notice, opinion, determination, decision, request, withholding of permission or consent, certificate or instruction of the Contract Administrator relating to the Dispute. An arbitrator appointed pursuant to this Clause 78 shall also have full power to order the rectification of the Contract, subject to any rule of law which would restrict this power.

Consolidation

78.14 The Authority may by notice to the Contractor require that:

(a) any Dispute referred to arbitration pursuant to this Clause 78 shall be referred to the arbitrator appointed or to be appointed in the arbitration of any dispute or difference in connection with the Project (whether or not relating to issues similar to those in the Dispute) between the Authority and any party other than the Contractor; or

(b) any dispute or difference in connection with the Project (whether or not relating to issues similar to those in the Dispute) between the Authority and any party other than the Contractor shall be referred to the arbitrator appointed or to be appointed in the arbitration of any Dispute referred pursuant to this Clause 78,

and any Dispute, dispute or difference as aforesaid shall be so referred and the Contractor shall accept the reference. Any such arbitrator shall have full power to give such orders and directions as he shall think fit in relation to the conduct of any Dispute, dispute or difference including, but not limited to, the power to order consolidation and hearing together, sequentially or separately.

Jurisdiction of the Courts of Hong Kong

78.15 Subject to the foregoing provisions of this Clause 78, the Contractor and the Authority agree to submit to the non-exclusive jurisdiction of the Courts of Hong Kong. Without prejudice to the generality of their powers, the Courts of Hong Kong shall have power to direct such valuations as may, in their opinion, be desirable in order to determine the rights of the parties and to ascertain and award any sum which ought to have been the subject of or included in any certificate and to open up, review and revise any notice, opinion, determination, decision, request, withholding of permission or consent, certificate or instruction of the Contract Administrator relating to the Dispute and to determine all matters in dispute in the same manner as if no such notice, opinion, determination, decision, request, withholding of permission or consent, certificate or instruction had been given, issued or made.

NOTICES

79. **Service of Notices**

79.1 Any document arising under, out of or in connection with the Contract shall be served

on the Authority or the Contractor at the address stated in the Articles of Agreement, or such other address in Hong Kong as may be notified to the other party expressly for the purpose of service of documents. Service of documents may be by hand or by post or, subject to Clause 79.2, by facsimile.

79.2 Documents may be served by facsimile only if the recipient has previously notified the other party that he is prepared to accept service of documents or a document in that fashion. It shall be a condition of valid service by facsimile that a hard copy be served on the recipient pursuant to Clause 79.1 within 7 (seven) days.

SCHEDULE 1

FORM OF SUB-CONTRACTOR WARRANTY

SCHEDULE 1

FORM OF SUB-CONTRACTOR WARRANTY

THIS AGREEMENT is made the day of 201[ ] **[SEE NOTE 1].**

BETWEEN:

1. **[Insert name of Company]** a company incorporated in and in accordance with the laws of **[Insert Jurisdiction of Incorporation]** of **[Insert Registered Address of Company] [SEE NOTE 2]** ("the Sub-Contractor"); and

2. **WEST KOWLOON CULTURAL DISTRICT AUTHORITY** of Units 608-613, Level 6, Core C, Cyberport 3, 100 Cyberport Road, Pokfulam, Hong Kong (together with its successors and assigns, "the Authority").

WHEREAS:

(A) By a contract dated **[Insert date of Letter of Acceptance issued by the Authority]** (Contract No. **[Insert Contract Number] – [Insert Contract Name]**) ("the Contract") made between the Authority and the Contractor, the Contractor agreed to execute the Works upon the terms contained in the Contract.

(B) The Sub-Contractor has had an opportunity of reading and noting the provisions of the Contract (other than details of the Contractor's prices and rates).

(C) Pursuant to the Contract, the Contractor wishes to enter into an agreement with the Sub-Contractor ("the Sub-Contract") for the Sub-Contractor to carry out and complete a part of the Works as more particularly described in the Sub-Contract ("the Sub-Contract Works").

(D) The Contract stipulates that the Contractor shall obtain the consent of the Contract Administrator (as identified in the Contract) before entering into the Sub-Contract, and that the Contractor shall procure that the Sub-Contractor executes a warranty in favour of the Authority.

NOW IT IS HEREBY AGREED as follows:

1. Where applicable, words and expressions used in this Warranty shall have the meaning assigned to them in the Contract.

2. In consideration of the Authority accepting this Warranty pursuant to the Contract and the Contract Administrator consenting to the Contractor and the Sub-Contractor entering into the Sub-Contract, the Sub-Contractor warrants and undertakes to the Authority that:

   (a) he shall execute the Sub-Contract Works, and has carried out and will carry out each and all of the obligations, duties and undertakings of the Sub-Contractor under the Sub-Contract when and if such obligations, duties and undertakings

shall become due and performable, in accordance with the terms of the Sub-Contract (as the same may from time to time be varied or amended with the consent of the Contract Administrator); and

(b) he shall supply the Contract Administrator with all information which the Contract Administrator may reasonably require from time to time in relation to the progress of the Sub-Contract Works.

3. The Sub-Contractor undertakes to indemnify the Authority against each and every liability which the Authority may have to any person whatsoever and against any claims, demands, proceedings, loss, damages, costs and expenses sustained, incurred or payable by the Authority to the extent arising from breach of this Warranty by the Sub-Contractor provided that the Sub-Contractor shall have no greater liability to the Authority by virtue of this clause 3 than the liability of the Contractor to the Authority under the Contract to the extent that the same shall have arisen by reason of any breach by the Sub-Contractor of his obligations under the Sub-Contract.

4. No allowance of time by the Authority hereunder or by the Contractor under the Sub-Contract nor any forbearance or forgiveness in or in respect of any matter or thing concerning this Warranty or the Sub-Contract on the part of the Authority or the Contractor, nor anything that the Authority or the Contractor may do or omit or neglect to do, shall in any way release the Sub-Contractor from any liability under this Warranty.

5. The Sub-Contractor agrees that he will not, without first giving the Authority not less than 21 (twenty-one) days' prior notice in writing, exercise any right he may have to terminate the Sub-Contract or his employment thereunder or withhold performance of his obligations under the Sub-Contract.

6. (a) Notwithstanding anything to the contrary in the Sub-Contract, if the Contract or the employment of the Contractor under the Contract is terminated for any reason whatsoever and if so requested by the Authority in writing within 21 (twenty-one) days of such termination, the Sub-Contractor shall enter into a novation agreement with the Authority and the Contractor in which the Sub-Contractor will undertake, inter alia, to perform the Sub-Contract and be bound by its terms as if the Authority had originally been named as a contracting party in place of the Contractor and as if neither the Contract or the Contractor's employment thereunder nor the Sub-Contract or the Sub-Contractor's employment thereunder had been terminated. The said novation agreement will be in such form as the Authority may reasonably require.

(b) If the Authority does not require the Sub-Contractor to enter into a novation agreement as required by clause 6(a) above, the Sub-Contractor shall have no claim whatsoever against the Authority for any damage, loss or expense howsoever arising out of or in connection with this Warranty.

7. Insofar as the copyright or other intellectual property rights (in Hong Kong or any country) in any plans, calculations, drawings, documents, materials, know-how and information relating to the Sub-Contract Works shall be vested in the Sub-Contractor,

the Sub-Contractor grants to the Authority, his successors and assigns a royalty free, perpetual, unrestricted, exclusive, irrevocable, worldwide, freely assignable licence (carrying the right to grant sub-licences) to use, reproduce, modify, adapt and translate any of the works, designs or inventions incorporated and referred to in such documents or materials and any such know-how and information for all purposes relating to the Works or the Project (including without limitation the design, construction, reconstruction, completion, maintenance, reinstatement, extension, repair and operation of the Works or any part of the Project). To the extent that beneficial ownership of any such copyright or other intellectual property right is vested in anyone other than the Sub-Contractor, the Sub-Contractor shall use his best endeavours to procure that the beneficial owner thereof shall grant a like licence to the Authority. Any licence granted pursuant to this clause 7 shall not be determined if the Sub-Contractor shall for any reason cease to be employed in connection with the Sub-Contract Works and the Sub-Contractor shall execute all documents and take all such other steps as may be necessary to effect and protect the licences (including, without limitation, registration and notification to purchasers of the Sub-Contractor's or other owner's rights).

8. If there is any ambiguity or conflict between the terms of the Sub-Contract and this Warranty, the terms of this Warranty shall prevail.

9. The provisions of this Warranty shall be without prejudice to and shall not be deemed or construed so as to limit or exclude any right or remedy which the Authority may have against the Sub-Contractor whether in tort or otherwise.

10. (a) The Authority shall be entitled at any time, without the consent of the Sub-Contractor, to assign or transfer the benefit of this Warranty or any part thereof, any interest thereon or thereunder and any right thereunder, whether past, existing or future, to any third party.

(b) In the event of any such assignment or transfer by the Authority in accordance with clause 10(a) above, such assignee or transferee shall from the date thereof have the same rights, powers and remedies as it would have had if it had at all times been the Authority under this Warranty. Without prejudice to the generality of the foregoing, all losses, costs, demands, claims proceedings or any other rights or benefits whatsoever, (whether past, present or future) of the Authority related to or in any way connected with or arising out of this Warranty, shall be deemed to be those of any assignee or transferee of the Authority.

11. All documents arising out of or in connection with this Warranty shall be served:

(a) upon the Authority at **[Insert Address]**; and

(b) upon the Sub-Contractor, at **[Insert Address]**, Hong Kong **[SEE NOTE 3].**

12. The Authority and the Sub-Contractor may change their respective nominated addresses for service of documents to another address in Hong Kong by providing not less than five business days' written notice to each other. All demands and notices shall be in writing and in English.

13. Any dispute or difference of any kind whatsoever between the Authority and the Sub-Contractor arising under, and out of or in connection with this Warranty shall be referred to arbitration. The reference to arbitration shall be conducted in accordance with the Arbitration Rules. References in such rules to "Dispute" shall be deemed to include any dispute or difference between the Authority and the Sub-Contractor.

14. The arbitrator shall have full power to open up, review and revise any decision, opinion, instruction, notice, order, direction, withholding of approval or consent, determination, certificate, statement of objection, assessment or valuation of the Contract Administrator or the Contractor relating to the dispute or difference.

15. The Authority may by notice to the Sub-Contractor require that:

(a) any dispute or difference to be referred to arbitration pursuant to clause 13 shall be referred to the arbitrator appointed or to be appointed in the arbitration of any dispute or difference in connection with the Project between the Authority and any party other than the Sub-Contractor; or

(b) any dispute or difference in connection with the Project between the Authority and any party other than the Sub-Contractor shall be referred to the arbitrator appointed or to be appointed in the arbitration of any dispute or difference referred pursuant to clause 13,

and any dispute or difference as aforesaid shall be so referred and the Sub-Contractor shall accept such reference. Any such arbitrator shall have full power to give such orders and directions as he shall think fit in relation to the conduct of any disputes or differences including, but not limited to, the power to order consolidation and hearing together, sequentially or separately.

16. This Warranty and all disputes arising under, out of or in connection therewith shall be governed by and construed according to the laws for the time being in force in Hong Kong and, subject to clause 13, the Sub-Contractor agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

IN WITNESS whereof this Warranty has been executed as a deed on the date first before written.

THE CORPORATE SEAL of	)
WEST KOWLOON CULTURAL	)
DISTRICT AUTHORITY is hereunto	)
affixed by authority of the Board; and	)
authenticated by:	)

_____ _____

Member of the Board Chief Executive Officer

THE COMMON SEAL of	)
[Insert name of Company]	)
was affixed hereto	)
in the presence of:	)
	)

_____

(Authorised Signature)

(Witness)

OR

SIGNED, SEALED AND DELIVERED	)
by Mr [ ]	)
for and on behalf of **[Insert name of Company]**	)
as lawful attorney of the Sub-Contractor under	)
Power of Attorney dated [ ]	)
in the presence of **[Insert name of Witness]**	)
as Witness	)

_____

[SEE NOTE 4]

NOTES FOR GUIDANCE IN PREPARATION OF WARRANTY BY SUB-CONTRACTOR

These notes are prepared in order to assist the Sub-Contractor in the preparation of the Warranty and cross refer to the note references contained in the draft Warranty. The note references contained in the draft Warranty shall be deleted from the engrossment of the Warranty when prepared by the Sub-Contractor.

NOTE 1

At the time of preparation of the Warranty by the Sub-Contractor, the date should be left blank. The date will be inserted by the Authority at the time of execution of the Warranty by him.

NOTE 2

The name, place of incorporation and registered address of the Sub-Contractor shall be inserted.

NOTE 3

The address for service shall be in Hong Kong.

NOTE 4

The Sub-Contractor shall execute the warranty under seal.

This may be done either by:

(a) affixing the Corporate Seal of the Sub-Contractor in the presence of authorised signatories in accordance with the Articles of Association or other constitutional documents of the Sub-Contractor; or

(b) by execution under seal by an attorney appointed by a valid and binding Power of Attorney given by the Sub-Contractor in accordance with its Articles of Association or other constitutional documents.

The following documents shall be submitted with the executed warranty:

1. if executed by affixing the Corporate Seal:

(a) an extract from the Sub-Contractor's Articles of Association or other constitutional documents dealing with the execution of documents by use of the Corporate Seal of the Sub-Contractor; and

(b) a copy of the Board Resolution or a copy of the minutes of the meeting of the Board of the Sub-Contractor by which the execution of the Warranty was approved;

2. if executed by an attorney on behalf of the Sub-Contractor:

(a) a copy of the Power of Attorney by which the attorney is appointed by the Sub-Contractor to execute documents on its behalf; and

(b) evidence of the authority of the person providing the Power of Attorney to delegate powers to the attorney e.g. copy of the Board Resolution authorising the appointment of the attorney or extracts from the Sub-Contractor's Articles of Association or other constitutional documents dealing with the appointment of attorneys, together with confirmation of the position or office held by the person giving the Power of Attorney; and

3. if the Sub-Contractor is incorporated outside of Hong Kong, a legal opinion, if required by the Authority, in a form that shall be provided to the Sub-Contractor confirming the validity of the execution of the Warranty and of any Power of Attorney.

SCHEDULE 2

FORM OF INDEPENDENT CHECKING ENGINEER WARRANTY

SCHEDULE 2

FORM OF INDEPENDENT CHECKING ENGINEER WARRANTY

THIS AGREEMENT is made the day of 201[ ] **[SEE NOTE 1]**.

BETWEEN:

(1) **[Insert name of Independent Checking Engineer]** a company incorporated in and in accordance with the laws of **[Insert Jurisdiction of Incorporation]** **[SEE NOTE 2]** of **[Insert Registered Address of Independent Checking Engineer]** ("the Independent Checking Engineer"); and

(2) **WEST KOWLOON CULTURAL DISTRICT AUTHORITY** of Units 608-613, Level 6, Core C, Cyberport 3, 100 Cyberport Road, Pokfulam, Hong Kong (together with its successors and assigns, "the Authority").

WHEREAS:

(A) By a contract dated **[Insert date of Letter of Acceptance issued by the Authority]** ("the Contract") made between the Authority and **[Insert name of Contractor]** ("the Contractor"), the Contractor has agreed to execute the Works upon the terms contained in the Contract.

(B) The Contractor and the Independent Checking Engineer have entered into an agreement ("the Design Check Agreement") by which the Independent Checking Engineer has undertaken the design checking obligations specified in the Contract.

(C) The Design Check Agreement stipulates that the Independent Checking Engineer is obliged to provide the Authority with an executed warranty in the terms hereof.

NOW IT IS HEREBY AGREED as follows:

1. In this Warranty, words and expressions shall have the meanings assigned to them in the Contract, except where the context otherwise requires.

2. The Independent Checking Engineer warrants and undertakes to the Authority that it has exercised and will in carrying out the duties and functions ascribed to it in the Design Check Agreement, continue to exercise all the skill and care to be expected of a professionally qualified and competent Independent Checking Engineer experienced in carrying out services which are of a similar nature and scope as the services to be performed under the Design Check Agreement.

3. The Independent Checking Engineer undertakes to indemnify the Authority against each and every liability which the Authority may have to any person whatsoever and against any claims, demands, proceedings, loss, damages, costs and expenses sustained, incurred or payable by the Authority to the extent arising from breach of this Warranty by the Independent Checking Engineer, provided that the Independent Checking Engineer shall have no greater liability to the Authority by virtue of this clause 3 than

the liability of the Independent Checking Engineer to the Contractor under the Design Check Agreement to the extent that the same shall have arisen by reason of any breach by the Independent Checking Engineer of his obligations under the Design Check Agreement.

4. No allowance of time by the Authority under the Contract or by the Contractor under the Design Check Agreement nor any forbearance or forgiveness in or in respect of any matter or thing concerning this Warranty or the Design Check Agreement on the part of the Authority or the Contractor nor anything that the Authority or the Contractor may do or omit or neglect to do, shall in any way release the Independent Checking Engineer from any liability under this Warranty.

5. The Independent Checking Engineer agrees that he will not without first giving the Authority not less than 21 (twenty one) days' prior notice in writing exercise any right he may have to terminate the Design Check Agreement or his employment thereunder or withhold performance of his obligations under the Design Check Agreement.

6 . (a) Notwithstanding anything to the contrary in the Design Check Agreement, if the Contract or the employment of the Contractor under the Contract is terminated for any reason whatsoever and if so requested by the Authority in writing within 21 (twenty one) days of such termination, the Independent Checking Engineer shall enter into a novation agreement with the Authority and the Contractor in which the Independent Checking Engineer will undertake, inter alia, to perform the Design Check Agreement and be bound by its terms as if the Authority had originally been named as the contracting party in place of the Contractor and as if neither the Contract or the Contractor's employment thereunder had been terminated. The said novation agreement will be in such form as the Authority may reasonably require.

(b) If the Authority does not require the Independent Checking Engineer to enter into a novation agreement as required by clause 6(a) above, the Independent Checking Engineer shall have no claim whatsoever against the Authority for any damage, loss or expense howsoever arising out of or in connection with this Warranty.

7. Except to the extent (if any) expressly permitted by the Design Check Agreement, the Independent Checking Engineer shall not sub-contract any of his obligations under the Design Check Agreement without the prior written consent of the Authority.

8. The Independent Checking Engineer acknowledges that the Authority shall be entitled to assign the benefit of this Warranty at any time without the consent of the Independent Checking Engineer being required.

9. The Independent Checking Engineer undertakes that no material variation or amendment to or waiver of the terms of the Design Check Agreement shall be agreed with the Contractor without the prior written consent of the Authority.

10. Nothing in this Warranty shall be taken as diminishing or increasing any liability on the part of the Independent Checking Engineer under the Design Check Agreement.

11. The Independent Checking Engineer acknowledges that it has not relied on any information relating to the Project, the Site or the Works provided directly or indirectly by the Authority and that the Authority shall have no liability or responsibility to the Independent Checking Engineer for any such information in the absence of fraud.

12. (1) Insofar as the patent, copyright or other intellectual property rights in any plans, calculations, drawings, documents, materials, know-how and information relating to the execution of the Works shall be vested in the Independent Checking Engineer, the Independent Checking Engineer grants to the Authority a royalty-free, perpetual, unrestricted, exclusive, irrevocable, worldwide, freely assignable licence (carrying the right to grant sub-licences) to use, reproduce, modify, adapt and translate any of the works, designs or inventions incorporated and referred to in such documents or materials and any such know-how and information for all purposes relating to the Works (including, without limitation, the design, construction, reconstruction, completion, maintenance, reinstatement, extension, repair and operation of the Works). To the extent beneficial ownership of any such patent, copyright or other intellectual property right is vested in anyone other than the Independent Checking Engineer, the Independent Checking Engineer shall use its reasonable endeavours to procure that the beneficial owner thereof shall grant a like licence to the Authority. Any such licence granted shall not be determined if the Design Check Agreement shall be revoked or expire or if the Design Check Agreement shall be terminated.

(2) In the event of the Independent Checking Engineer ceasing to be employed under the Design Check Agreement for any reason whatsoever, the Independent Checking Engineer shall provide to the Authority for the retention and use by it, all drawings, diagrams, specifications, calculations and other data and information which the Independent Checking Engineer has prepared or are within its possession or control relating to the Works whether or not previously provided.

13. All documents arising out of or in connection with this Warranty shall be served:

(1) upon the Authority at **[Insert Address]**; and

(2) upon the Independent Checking Engineer at [**Insert Address]**, Hong Kong. [**SEE NOTE 3]**

14. The Authority and the Independent Checking Engineer may change their respective nominated addresses for service of documents to another address in Hong Kong but only by prior written notice to each other. All demands and notices must be in writing.

15. This Warranty shall be governed by and construed according to the laws for the time being in force in Hong Kong and, subject to clause 16, the Independent Checking Engineer agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

16. (1) Any dispute or difference of any kind whatsoever between the Authority and the Independent Checking Engineer arising under, out of or in connection with this Warranty shall be referred to arbitration in accordance with the Arbitration Rules.

References to "Dispute" in such arbitration rules are deemed to include any such dispute or difference between the Authority and the Independent Checking Engineer.

(2) In the event that the Authority is of the opinion that the issues in such a dispute or difference will or may touch upon or concern a dispute or difference arising under, out of or in connection with the Contract ("the Contract Dispute") then provided that an arbitrator has not already been appointed pursuant to clause 16(1), the Authority may by notice in writing to the Independent Checking Engineer require and the Independent Checking Engineer shall be deemed to have consented to the referral of such dispute or difference to the arbitrator to whom the Contract Dispute has been or will be referred.

(3) Save as expressly otherwise provided, the arbitrator shall have full power to open up, review and revise any decision, opinion, instruction, notice, order, direction, withholding of approval or consent, determination, certificate, statement of objection, assessment or valuation of the Authority or the Contract Administrator under the Contract and the Independent Checking Engineer or the Contractor relating to the dispute or difference.

IN WITNESS whereof this Warranty has been executed as a deed on the date first above written.

THE CORPORATE SEAL of
WEST KOWLOON CULTURAL DISTRICT AUTHORITY
is hereunto affixed by authority of the Board and authenticated by
by:

Member of the Board

Chief Executive Officer

THE COMMON SEAL of)
[**Insert name of Independent Checking Engineer]**)
was affixed hereto)
in the presence of:)
)

(Authorised Signature)

(Witness)

OR

SIGNED, SEALED AND DELIVERED)
by Mr [ ])
for and on behalf of **[Insert name of Independent** **)**
Checking Engineer])
as lawful attorney of the Independent Checking Engineer)
under Power of Attorney dated [ ])
in the presence of **[Insert name of Witness]**)
as Witness)

_____

[SEE NOTE 4]

NOTES FOR GUIDANCE IN PREPARATION OF WARRANTY BY INDEPENDENT CHECKING ENGINEER

These notes are prepared in order to assist the Independent Checking Engineer in the preparation of the Warranty and cross refer to the note references contained in the draft Warranty. The note references contained in the draft Warranty shall be deleted from the engrossment of the Warranty when prepared by the Independent Checking Engineer.

NOTE 1

At the time of preparation of the Warranty by the Independent Checking Engineer, the date should be left blank. The date will be inserted by the Authority at the time of execution the Warranty by him.

NOTE 2

The jurisdiction in which the Independent Checking Engineer is incorporated shall be inserted.

NOTE 3

The address for service shall be in Hong Kong.

NOTE 4

The Independent Checking Engineer shall execute the warranty under seal.

This may be done either by:

(a) affixing the Corporate Seal of the Independent Checking Engineer in the presence of authorised signatories in accordance with the Articles of Association or other constitutional documents of the Independent Checking Engineer; or

(b) by execution under seal by an attorney appointed by a valid and binding Power of Attorney given by the Independent Checking Engineer in accordance with its Articles of Association or other constitutional documents.

The following documents shall be submitted with the executed warranty:

1. if executed by affixing the Corporate Seal:

(a) an extract from the Independent Checking Engineer's Articles of Association or other constitutional documents dealing with the execution of documents by use of the Corporate Seal of the Independent Checking Engineer; and

(b) a copy of the Board Resolution or a copy of the minutes of the meeting of the Board of the Independent Checking Engineer by which the execution of the warranty was approved;

2. if executed by an attorney on behalf of the Independent Checking Engineer:

(a) a copy of the Power of Attorney by which the attorney is appointed by the Independent Checking Engineer to execute documents on its behalf; and

(b) evidence of the authority of the person providing the Power of Attorney to delegate powers to the attorney e.g. copy of the Board Resolution authorising the appointment of the attorney or extracts from the Independent Checking Engineer's Articles of Association or other constitutional documents dealing with the appointment of attorneys together with confirmation of the position or office held by the person giving the Power of Attorney; and

3. if the Independent Checking Engineer is incorporated outside of Hong Kong, a legal opinion, if required by the Authority, in a form that shall be provided to the Independent Checking Engineer, confirming the validity of the execution of the Warranty and of any Power of Attorney.

SCHEDULE 3

ARTICLES OF AGREEMENT

SCHEDULE 3

ARTICLES OF AGREEMENT

THIS AGREEMENT is made the day of 201[ ] .

BETWEEN:

(1) **WEST KOWLOON CULTURAL DISTRICT AUTHORITY** of Units 608-613, Level 6, Core C, Cyberport 3, 100 Cyberport Road, Pokfulam, Hong Kong (together with its successors and assigns, "the Authority"); and

(2) [ ] a company incorporated in and in accordance with the laws of [ ] of [ ] [and [ ] a company incorporated in and in accordance with the laws of [ ] of [ ]]* ("the Contractor").

WHEREAS:

(A) The Authority requires the Works to be executed as part of the Project and has accepted the Tender.

(B) The Contractor has [jointly and severally]* agreed to execute the Works.

NOW IT IS HEREBY AGREED as follows:

1. In consideration of the payments to be made by the Authority to the Contractor as hereinafter mentioned, the Contractor hereby [jointly and severally]* covenants with the Authority to execute the Works in accordance with the Contract.

2. The Authority hereby covenants to pay to the Contractor in consideration of the execution of the Works the Final Contract Sum or such other sums as may be payable to the Contractor in accordance with the Contract at the times and in the manner prescribed by the Contract.

3. The Contract comprises the entire agreement between the parties hereto relating to the transactions provided for therein and supersedes any previous agreements between the parties relating thereto or any part thereof. Save to the extent that any statement, condition, qualification, warranty, representation or undertaking made in the Tender, or in any discussion or correspondence thereon or relating thereto, is expressly incorporated in the Contract, the same is not so incorporated and is hereby withdrawn.

4. The Authority's address for service of documents shall be the address first referred to above and the Contractor's address for service of documents shall be [ ] Hong Kong**.

5. Words and expressions used in these Articles of Agreement shall have the same meaning as are respectively assigned to them in Clause 1 of the General Conditions attached hereto.

* *To be retained if Contractor comprises more than one legal entity.*

** *Address for Service of documents shall be in Hong Kong.*

IN WITNESS whereof this Agreement has been executed as a deed the day and year first above written.

THE CORPORATE SEAL of
WEST KOWLOON CULTURAL DISTRICT AUTHORITY
is hereunto affixed by authority of the
Board and authenticated by:

_____ _____
Member of the Board Chief Executive Officer

THE COMMON SEAL of)
[ ])
was affixed hereto)
in the presence of:)

_____
(Authorised Signature)

_____
(Witness)

OR

SIGNED, SEALED AND DELIVERED)
by Mr [ ])
for and on behalf of **[Insert name of Company]**)
as lawful attorney of the Contractor under)
Power of Attorney dated [ ])
in the presence of **[Insert name of Witness]**)
as Witness)

_____

*** *Each legal entity shall execute these Articles of Agreement under Seal by affixing the Corporate Seal of each company or by execution under seal by an attorney appointed by the Contractor.*

SCHEDULE 4

FORM OF DRAFT LEGAL OPINION

(FOR ARTICLES OF AGREEMENT)

SCHEDULE 4

LEGAL OPINION

[To be prepared on headed notepaper of legal adviser]

We write this letter in our capacity as legal adviser to **[Insert name of Contractor or entity included in the Contractor]** ("the Company"). We have examined the following documents:

1. a certified copy of the Memorandum and Articles of Association (or equivalent) of the Company;

2. a certified copy of the Power of Attorney dated **[Insert date of Power of Attorney]** appointing Mr. **[Insert name of attorney]** as the true and lawful attorney of the Company in Hong Kong for the purposes specified in the said Power of Attorney;

3. a certified copy of the resolution of the Board of Directors of the Company authorising the appointment of Mr. **[Insert name of attorney]** as the true and lawful attorney of the Company in Hong Kong as aforesaid; and

4. such other records and documents as we have deemed necessary or appropriate for the purposes of this opinion.

Based upon such examination we are of the opinion that:

1. the Company is a company duly incorporated and validly existing under the laws of **[Insert country of incorporation of the Company]** and has full power and authority to carry on its business as it is now being conducted;

2. the Company has the corporate power to enter into and perform contracts with **West Kowloon Cultural District Authority** and has taken all necessary corporate and legal action in that regard;

3 . the Company may by its nominated attorney execute contracts as deeds and the Company may accept and undertake all the consequences arising therefrom as if it had been able to affix a seal to such contracts in accordance with the laws of Hong Kong; and

4. the Power of Attorney confers, under the laws of **[Insert the proper law of the Power of Attorney]** a valid and binding authority on the nominated attorney to execute contracts as deeds by attaching his personal seal thereto in Hong Kong in accordance with the laws of Hong Kong, and such legal, valid and binding obligations of the Company as arise under the Contract under the laws of Hong Kong will constitute legal, valid and binding obligations of the Company in and under the laws of **[Insert country of incorporation of the Company]**.

Notwithstanding the foregoing we make the following provisos to this opinion:

(i) we express no opinion with regard to any laws other than the laws of **[Insert country of incorporation of the Company]**.

(ii) we have assumed that all documents examined by us are genuine and are signed by the persons by whom they are purported to be signed.

This opinion is given in connection with a contract to be entered into by the Company with West Kowloon Cultural District Authority and may be relied on solely by West Kowloon Cultural District Authority and its successors and assigns. It is not made available for any other purpose and may not be relied upon by any other persons.

SCHEDULE 5

FORM OF CONTRACTOR'S BOND

SCHEDULE 5

FORM OF CONTRACTOR'S BOND

[To be prepared on headed notepaper of the Bondsman]

BY THIS BOND dated the day of 201[ ] .

[Insert name of Bondsman] a company incorporated in and in accordance with the laws of **[Insert Jurisdiction of Incorporation] of [Insert Registered Address and Place of Business in Hong Kong of Bondsman] [SEE NOTE 1]** ("the Bondsman") is irrevocably and unconditionally bound to **WEST KOWLOON CULTURAL DISTRICT AUTHORITY** of Units 608-613, Level 6, Core C, Cyberport 3, 100 Cyberport Road, Pokfulam, Hong Kong (together with its successors and assigns, "the Authority") in the sum of **[Insert amount of Bonded Sum in words]** Hong Kong Dollars (HK$**[Insert amount of Bonded Sum in figures]**) ("the Bonded Sum") for payment of which sum the Bondsman binds himself in accordance with the provisions of this Bond.

WHEREAS:

(A) By a contract dated **[Insert date of Letter of Acceptance issued by the Authority]** (Contract No. **[Insert Contract number]** – **[Insert Contract name]**) ("the Contract") made between the Authority and the Contractor, the Contractor has agreed to execute the Works upon the terms contained in the Contract.

(B) Pursuant to the terms of the Contract, the Contractor agreed to procure the provision to the Authority of a Bond in the terms hereof.

NOW THE TERMS of this Bond are:

1. Where applicable, words and expressions used in this Bond shall have the meaning assigned to them in the Contract.

2. If, in the Authority's opinion, the Contractor is or has been in default in respect of any of his obligations under the Contract, the Bondsman shall upon demand made by the Authority in writing and without conditions or proof of the said default or amount demanded, pay the amount identified in the demand in respect of the damages, losses, charges, costs or expenses sustained by the Authority by reason of the default, up to the amount of the Bonded Sum.

3. The liability of the Bondsman under this Bond shall remain in full force and effect and shall not be affected or discharged in any way by, and the Bondsman hereby waives notice of:

   (a) any suspension of the Works or variation to or amendment of the Works or the Contract (including without limitation extension of time for performance and adjustment to the amount payable to the Contractor under the Contract);

(b) the termination of the Contract or of the employment of the Contractor under the Contract;

(c) any forbearance or waiver of any right of action or remedy the Authority may have against the Contractor, or negligence by the Authority in enforcing any such right of action or remedy;

(d) any other bond, security or guarantee held or obtained by the Authority for any of the obligations of the Contractor under the Contract or any release or waiver thereof;

(e) any act or omission of the Contractor pursuant to any other arrangement with the Bondsman;

(f) the issue of any Stage Certificate, Handing Over Certificate or Practical Completion Certificate in respect of any part of the Works or any Section or the Practical Completion Certificate for the Works;

(g) any breach of the Contract by or other default of the Authority; and

(h) any provision of the Contract being or becoming illegal, invalid, void, voidable or unenforceable.

4. The Bonded Sum shall be reduced to Hong Kong Dollars (HK$[**insert amount which is equivalent to 50% of the Bonded Sum in figures**], on the issuance of the Practical Completion Certificate for the Works.

5. The liability of the Bondsman under this Bond shall cease on whichever of the following events first occurs:

(a) payment by the Bondsman of the Bonded Sum in full to the Authority;

(b) issuance of the Defects Liability Certificate; or

(c) return of the Bond by the Authority to the Contractor.

6. The Bondsman acknowledges that the Authority shall be entitled to assign the benefit of this Bond or any part thereof, any interest therein or thereunder and any right thereunder, whether past, existing or future, at any time without the consent of the Bondsman or the Contractor being required.

7. All documents arising out of or in connection with this Bond shall be served upon the Bondsman, at **[Insert Address]** Hong Kong in English **[SEE NOTE 2].**

8. The Bondsman may change his nominated address for service of documents to another address in Hong Kong but only by prior written notice to the Authority.

9. This Bond shall be governed by and construed according to the laws for the time being in force in Hong Kong and the Bondsman agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

IN WITNESS whereof this Bond has been executed as a deed on the date first above written.

THE COMMON SEAL of)
[Insert name of Bondsman])
was affixed hereto in)
the presence of:)
)

OR

SIGNED, SEALED AND DELIVERED)
by Mr [ ])
for and on behalf of **[Insert name of**)
Bondsman] as lawful attorney of the)
Bondsman under Power of Attorney)
dated [ ] in the)
presence of **[Insert name of Witness]**)
as Witness)

_____

[SEE NOTE 3]

NOTES FOR GUIDANCE IN PREPARATION OF BOND BY BONDSMAN

These notes are prepared in order to assist the Bondsman in the preparation of the Contractor's Bond and cross refer to the note references contained in the draft Bond. The note references contained in the draft Bond shall be deleted from the engrossment of the Bond when prepared by the Bondsman.

NOTE 1

The place of incorporation of the Bondsman shall be inserted together with:

(a) its registered address in the place of incorporation; and

(b) the address of its place of business in Hong Kong.

NOTE 2

The address for service of notices and demands on the Bondsman shall be in Hong Kong and, preferably, at the Bondsman's place of business in Hong Kong.

NOTE 3

The Contractor's Bond shall be executed under seal by the Bondsman.

This may be done either by:

(a) affixing the Corporate Seal of the Bondsman in the presence of authorised signatories in accordance with the Articles of Association or other constitutional documents of the Bondsman; or

(b) by execution under seal by an attorney appointed by a valid and binding Power of Attorney given by the Bondsman in accordance with its Articles of Association or other constitutional documents.

The following documents shall be submitted with the executed Bond:

1. if executed by affixing the Corporate Seal:

(a) an extract from the Bondsman's Articles of Association or other constitutional documents dealing with the execution of documents by use of the Corporate Seal of the Bondsman; and

(b) a copy of the Board Resolution or a copy of the minutes of the meeting of the Board of the Bondsman, by which the execution of the Bond was approved; and

2. if executed by an attorney on behalf of the Bondsman:

(a) **a copy of the Power of Attorney by which the attorney is appointed by the Bondsman to execute documents on its behalf; and**

(b) **evidence of the authority of the person providing the Power of Attorney to delegate the powers to the attorney e.g. copy of the Board Resolution authorising the appointment of the attorney or extracts from the Bondsman's Articles of Association or other constitutional documents dealing with the appointment of attorneys, together with confirmation of the position or office held by the person giving the Power of Attorney.**

SCHEDULE 6

FORM OF PARENT COMPANY GUARANTEE OF THE CONTRACTOR

SCHEDULE 6

FORM OF PARENT COMPANY GUARANTEE OF THE CONTRACTOR

THIS GUARANTEE is made the day of 201[ ] .

BY:

[Insert name of Parent Company] a company incorporated in and in accordance with the laws of **[Insert Jurisdiction of Incorporation]** of **[Insert Registered Address]** [and **[Insert name of Second Parent Company if appropriate]** a company incorporated in accordance with the laws of **[Insert Jurisdiction of Incorporation]** of **[Insert Registered Address]**, jointly and severally,] **[SEE NOTE 1]** ("the Guarantor");

IN FAVOUR OF:

WEST KOWLOON CULTURAL DISTRICT AUTHORITY of Units 608-613, Level 6, Core C, Cyberport 3, 100 Cyberport Road, Pokfulam, Hong Kong (together with its successors and assigns, "the Authority").

WHEREAS:

(A) By a contract dated **[Insert date of Letter of Acceptance issued by the Authority]** (Contract No. **[Insert Contract number]** – **[Insert Contract name]**) ("the Contract") made between the Authority and the Contractor, the Contractor has agreed to execute the Works upon the terms contained in the Contract.

(B) Pursuant to the terms of the Contract, the Contractor agreed to procure the provision of a guarantee in the terms hereof. [**SEE NOTE 2]**

(C) At the request of the Contractor, the Guarantor has [jointly and severally] **[SEE NOTE 1]** agreed to guarantee performance of the Contract by the Contractor [**SEE NOTE 3]** as set out herein.

IT IS HEREBY AGREED as follows:

1. Where applicable, words and expressions used in this Guarantee shall have the meaning assigned to them in the Contract.

2. In consideration of the Authority accepting this Guarantee, the Guarantor [jointly and severally] **[SEE NOTE 1]** irrevocably and unconditionally guarantees to the Authority, as a primary obligation and not as a surety, due performance by the Contractor of all of his obligations and liabilities under and arising out of the Contract save that nothing herein shall be construed as imposing greater obligations or liabilities on the Guarantor than are imposed on the Contractor by the Contract.

3. The obligations of the Guarantor under this Guarantee shall remain in full force and effect and shall not be discharged in any way by and the Guarantor hereby waives notice of:

(a) any suspension of the Works or variation to or amendment of the Works or the Contract (including, without limitation, extension of time for performance and adjustment to the amount payable to the Contractor under the Contract);

(b) any provision of the Contract being or becoming illegal, invalid, void, voidable or unenforceable;

(c) the termination of the Contract or of the employment of the Contractor under the Contract;

(d) any forbearance or waiver of any right of action or remedy the Authority may have against the Contractor or negligence by the Authority in enforcing any such right of action or remedy;

(e) any bond, security or other guarantee held or obtained by the Authority for any of the obligations of the Contractor under the Contract or any release or waiver thereof; and

(f) any breach of the Contract or other default of the Authority.

4. This Guarantee shall extend to any variation of or amendment to the Contract and to any agreement supplemental thereto agreed between the Authority and the Contractor and the Guarantor hereby authorises the Authority and the Contractor to make any such amendment, variation or supplemental agreement without notice to or consent of the Guarantor.

5. This Guarantee is a continuing guarantee and accordingly shall cover all of the obligations and liabilities of the Contractor under and arising out of the Contract and shall remain in full force and effect until all the said obligations and liabilities of the Contractor have been carried out, completed and discharged in accordance with the Contract. This Guarantee is in addition to any other security which the Authority may at any time hold and may be enforced without first having recourse to any such security or taking any steps or proceedings against the Contractor.

6. Until the date of issue of the Defects Liability Certificate, the Guarantor shall not on any ground whatsoever make any claim or threaten to make any claim whether by proceedings or otherwise against the Contractor nor, if the Contractor comprises more than one entity, against any such entity for the recovery of any sum paid by the Guarantor pursuant to this Guarantee. Any such claim shall be subordinate to any claims (contingent or otherwise) which the Authority may have against the Contractor and/or any entity as aforesaid arising out of or in connection with the Contract until such time as the Authority's claims shall be satisfied by the Contractor and/or any entity as aforesaid or the Guarantor as the case may be. To that intent, the Guarantor shall not claim or have the benefit of any security which the Authority holds or may hold for any monies or liabilities due or incurred by the Contractor and/or any entity as aforesaid to the Authority and, in case the Guarantor receives any sum from the Contractor and/or any entity as aforesaid in respect of any payment by the Guarantor hereunder, the Guarantor shall hold such sum in trust for the Authority for so long as any sum is payable (contingently or otherwise) under this Guarantee.

7. The Authority shall be entitled at any time, without the consent of the Guarantor to assign or transfer the benefit of this Guarantee or any part thereof, any interest therein or thereunder and any right thereunder, whether past, existing or future, to any third party. In the event of any assignment or transfer by the Authority as aforesaid, the assignee or transferee shall from the date thereof have the same rights, powers and remedies as it would have had if it had at all times been the Authority under this Guarantee.

8 All documents arising out of or in connection with this Guarantee shall be served upon the Guarantor, at **[Insert Address]**, Hong Kong **[SEE NOTE 4].**

9. The Guarantor may change its nominated address for service of documents to another address in Hong Kong by providing not less than five business days' written notice to the Authority. All demands and notices shall be in writing and in English.

10. This Guarantee shall be governed by and construed according to the laws for the time being in force in Hong Kong and the Guarantor agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

IN WITNESS whereof this Guarantee has been executed as a deed on the date first before written.

THE COMMON SEAL of)
[**Insert name of Parent Company**])
was affixed hereto in)
the presence of:)

OR

SIGNED, SEALED AND DELIVERED)
by Mr [ ])
for and on behalf of **[Insert name of Parent Company]**)
as lawful attorney of the Guarantor under)
Power of Attorney dated [ ])
in the presence of **[Insert name of Witness]**)
as Witness)

_____

[SEE NOTES 1 AND 5]

NOTES FOR GUIDANCE IN PREPARATION OF GUARANTEE BY GUARANTOR

These notes are prepared in order to assist the Guarantor in the preparation of the Guarantee and cross refer to the note references contained in the draft Guarantee. The note references contained in the draft Guarantee shall be deleted from the engrossment of the Guarantee when prepared by the Guarantor.

NOTE 1

If more than one company executes this Guarantee in respect of the Contractor or any entity comprising the Contractor (e.g. because the Contractor or any entity has more than one parent company) the Guarantors under the Guarantee shall have joint and several liability and the square brackets shall be deleted.

If only one party is acting as Guarantor under the Guarantee, the square brackets and the words within, relating to the second Parent Company and joint and several liability, should be deleted.

NOTE 2

If the Contractor comprises more than one legal entity, a Guarantee in this form shall be provided in respect of each entity.

NOTE 3

If the circumstances referred to under Note 2 apply, and the Contractor comprises more than one legal entity, the Guarantor shall guarantee the performance of the Contractor as a whole because each entity comprising the Contractor shall have joint and several liability for the acts and omissions of the Contractor as a whole.

NOTE 4

The address for service shall be in Hong Kong.

NOTE 5

Each entity comprising the Guarantor shall execute the Guarantee under seal.

This may be done either by:

(a) affixing the Corporate Seal of the Guarantor in the presence of authorised signatories in accordance with the Articles of Association or other constitutional documents of the Guarantor; or

(b) by execution under seal by an attorney appointed by a valid and binding Power of Attorney given by the Guarantor in accordance with its Articles of Association or other constitutional documents.

The following documents shall be submitted with the executed Guarantee:

1. if executed by affixing the Corporate Seal:

(a) an extract from the Guarantor's Articles of Association or other constitutional documents dealing with the execution of documents by use of the Corporate Seal of the Guarantor; and

(b) a copy of the Board Resolution or a copy of the minutes of the meeting of the Board of the Guarantor by which the execution of the Guarantee was approved; and

2. if executed by an attorney on behalf of the Guarantor:

(a) a copy of the Power of Attorney by which the attorney is appointed by the Guarantor to execute documents on its behalf; and

(b) evidence of the authority of the person providing the Power of Attorney to delegate powers to the attorney e.g. copy of the Board Resolution authorising the appointment of the attorney or extracts from the Guarantor's Articles of Association or other constitutional documents dealing with the appointment of attorneys together with confirmation of the position or office held by the person giving the Power of Attorney.

SCHEDULE 7

FORM OF PARENT COMPANY GUARANTEE OF SUB-CONTRACTORS

SCHEDULE 7

FORM OF PARENT COMPANY GUARANTEE OF SUB-CONTRACTORS

THIS GUARANTEE is made the day of 201[ ] .

BY:

[Insert name of Parent Company] a company incorporated in and in accordance with the laws of **[Insert Jurisdiction of Incorporation]** of **[Insert Registered Address]** [and **[Insert name of Second Parent Company if appropriate]** a company incorporated in accordance with the laws of **[Insert Jurisdiction of Incorporation]** of **[Insert Registered Address]**, jointly and severally,] **[SEE NOTE 1]** ("the Guarantor");

IN FAVOUR OF:

WEST KOWLOON CULTURAL DISTRICT AUTHORITY of Units 608-613, Level 6, Core C, Cyberport 3, 100 Cyberport Road, Pokfulam, Hong Kong (together with its successors and assigns, "the Authority").

WHEREAS:

(A) By a contract dated **[Insert date of Letter of Acceptance issued by the Authority]** (Contract No. **[Insert Contract number]** – **[Insert Contract name]**) ("the Contract") made between the Authority and the Contractor, the Contractor has agreed to execute the Works upon the terms contained in the Contract.

(B) By a Sub-Contract between the Contractor and [**insert name of Sub-Contractor**] ("the Sub-Contractor") dated [**insert date of Sub-Contract**] ("the Sub-Contract"), the contractor sub-contracted a part of the Works to the Sub-Contractor ("the Sub-Contract Works") and pursuant to the terms of the Sub-Contract, the Sub-Contractor provided a Sub-Contract Warranty to the Authority dated [**insert date of warranty**] ("the Warranty").

(C) Pursuant to the provisions of the Contract, the Contractor is required to procure the provision of a Parent Company Guarantee in favour of the Authority in respect of the Warranty provided by the Sub-Contractor. The Guarantor has [jointly and severally] **[SEE NOTE 1]** agreed to guarantee the obligations and liabilities of the Sub-Contractor under the Warranty [**SEE NOTE 3]** as set out herein.

IT IS HEREBY AGREED as follows:

1. Where applicable, words and expressions used in this Guarantee shall have the meaning assigned to them in the Contract.

2. In consideration of the Authority accepting this Guarantee pursuant to the Contract, the Guarantor [jointly and severally] **[SEE NOTE 1]** irrevocably and unconditionally guarantees to the Authority, as a primary obligation and not as a surety, due performance by the Sub-Contractor of all of his obligations and liabilities under and arising out of the

Warranty save that nothing herein shall be construed as imposing greater obligations or liabilities on the Guarantor than are imposed on the Sub-Contractor by the Warranty.

3. The obligations of the Guarantor under this Guarantee shall remain in full force and effect and shall not be discharged in any way by and the Guarantor hereby waives notice of:

   (a) any suspension of the Works or the Sub-Contract Works or variation to or amendment of the Works, the Sub-Contract Works or the Sub-Contract or the Warranty (including, without limitation, extension of time for performance and adjustment to the amount payable to the Sub-Contractor under the Sub-Contract);

   (b) any provision of the Sub-Contract or the Warranty being or becoming illegal, invalid, void, voidable or unenforceable;

   (c) the termination of the Sub-Contract or of the employment of the Sub-Contractor under the Sub-Contract;

   (d) any forbearance or waiver of any right of action or remedy the Authority may have against the Contractor under the Contract or the Sub-Contractor under the Warranty or otherwise or negligence by the Authority in enforcing any such right of action or remedy; and

   (e) any bond, security or other guarantee held or obtained by the Authority for any of the obligations of the Sub-Contractor under the Warranty or the Sub-Contract or any release or waiver thereof.

4. This Guarantee shall extend to any variation of or amendment to the Sub-Contract and to any agreement supplemental thereto agreed between the Contractor and the Sub-Contractor.

5. This Guarantee is a continuing guarantee and accordingly shall cover all of the obligations and liabilities of the Sub-Contractor under and arising out of the Warranty and shall remain in full force and effect until all the said obligations and liabilities of the Sub-Contractor have been carried out, completed and discharged in accordance with the Warranty. This Guarantee is in addition to any other security which the Authority may at any time hold and may be enforced without first having recourse to any such security or taking any steps or proceedings against the Sub-Contractor.

6. Until the date of issue of the Defects Liability Certificate, the Guarantor shall not on any ground whatsoever make any claim or threaten to make any claim whether by proceedings or otherwise against the Sub-Contractor nor, if the Sub-Contractor comprises more than one entity, against any such entity for the recovery of any sum paid by the Guarantor pursuant to this Guarantee. Any such claim shall be subordinate to any claims (contingent or otherwise) which the Authority may have against the Sub-Contractor and/or any entity as aforesaid arising out of or in connection with the Sub-Contract until such time as the Authority's claims shall be satisfied by the Sub-Contractor and/or any entity as aforesaid or the Guarantor as the case may be. To that intent, the Guarantor shall not claim or have the benefit of any security which the Authority holds or may hold for any monies or liabilities due or incurred by the Sub-Contractor and/or any entity as aforesaid to the Authority and,

in case the Guarantor receives any sum from the Contractor and/or any entity as aforesaid in respect of any payment by the Guarantor hereunder, the Guarantor shall hold such sum in trust for the Authority for so long as any sum is payable (contingently or otherwise) under this Guarantee.

7. The Authority shall be entitled at any time, without the consent of the Guarantor to assign or transfer the benefit of this Guarantee or any part thereof, any interest therein or thereunder and any right thereunder, whether past, existing or future, to any third party. In the event of any assignment or transfer by the Authority as aforesaid, the assignee or transferee shall from the date thereof have the same rights, powers and remedies as it would have had if it had at all times been the Authority under this Guarantee. Without prejudice to the generality of the foregoing, all losses, costs, demands, claims, proceedings or any other right or benefit whatsoever, (whether past, present or future) of the Authority related to or in any way connected with or arising out of this Guarantee, shall be deemed to be those of any assignee or transferee of the Authority.

8 All documents arising out of or in connection with this Guarantee shall be served upon the Guarantor, at **[Insert Address]**, Hong Kong **[SEE NOTE 4].**

9. The Guarantor may change its nominated address for service of documents to another address in Hong Kong by providing not less than five business days' written notice to the Authority. All demands and notices shall be in writing and in English.

10. This Guarantee shall be governed by and construed according to the laws for the time being in force in Hong Kong and the Guarantor agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

IN WITNESS whereof this Guarantee has been executed as a deed on the date first before written.

THE COMMON SEAL of)
[ ])
was affixed hereto in)
the presence of:)

OR

SIGNED, SEALED AND DELIVERED)
by Mr [ ])
for and on behalf of **[Insert name of Parent Company]**)
as lawful attorney of the Guarantor under)
Power of Attorney dated [ ])
in the presence of **[Insert name of Witness]**)
as Witness)

_____

[SEE NOTES 1 AND 5]

NOTES FOR GUIDANCE IN PREPARATION OF GUARANTEE BY GUARANTOR

These notes are prepared in order to assist the Guarantor in the preparation of the Guarantee and cross refer to the note references contained in the draft Guarantee. The note references contained in the draft Guarantee shall be deleted from the engrossment of the Guarantee when prepared by the Guarantor.

NOTE 1

If more than one company executes this Guarantee in respect of the Sub-Contractor or any entity comprising the Sub-Contractor (e.g. because the Sub-Contractor or any entity has more than one parent company) the Guarantors under the Guarantee shall have joint and several liability and the square brackets shall be deleted.

If only one party is acting as Guarantor under the Guarantee, the square brackets and the words within, relating to the second Parent Company and joint and several liability, should be deleted.

NOTE 2

If the Sub-Contractor comprises more than one legal entity, a Guarantee in this form shall be provided in respect of each entity.

NOTE 3

If the circumstances referred to under Note 2 apply, and the Sub-Contractor comprises more than one legal entity, the Guarantor shall guarantee the performance of the Sub-Contractor as a whole because each entity comprising the Sub-Contractor shall have joint and several liability for the acts and omissions of the Sub-Contractor as a whole.

NOTE 4

The address for service shall be in Hong Kong.

NOTE 5

Each entity comprising the Guarantor shall execute the Guarantee under seal.

This may be done either by:

(a) affixing the Corporate Seal of the Guarantor in the presence of authorised signatories in accordance with the Articles of Association or other constitutional documents of the Guarantor; or

(b) by execution under seal by an attorney appointed by a valid and binding Power of Attorney given by the Guarantor in accordance with its Articles of Association or other constitutional documents.

The following documents shall be submitted with the executed Guarantee:

1. if executed by affixing the Corporate Seal:

(a) an extract from the Guarantor's Articles of Association or other constitutional documents dealing with the execution of documents by use of the Corporate Seal of the Guarantor; and

(b) a copy of the Board Resolution or a copy of the minutes of the meeting of the Board of the Guarantor by which the execution of the Guarantee was approved; and

2. if executed by an attorney on behalf of the Guarantor:

(a) a copy of the Power of Attorney by which the attorney is appointed by the Guarantor to execute documents on its behalf; and

(b) evidence of the authority of the person providing the Power of Attorney to delegate powers to the attorney e.g. copy of the Board Resolution authorising the appointment of the attorney or extracts from the Guarantor's Articles of Association or other constitutional documents dealing with the appointment of attorneys together with confirmation of the position or office held by the person giving the Power of Attorney.

SCHEDULE 8

FORM OF OFF-SHORE MANUFACTURING BOND

SCHEDULE 8

FORM OF OFF-SHORE MANUFACTURING BOND

[To be prepared on headed notepaper of Bondsman]

BY THIS BOND dated the day of 201[ ] **[Insert name of Bondsman]** a company incorporated in and in accordance with the laws of [**Insert Jurisdiction of Incorporation]** of **[Insert Registered Address and Place of Business in Hong Kong of Bondsman]** **[SEE NOTE 1]** ("the Bondsman") is irrevocably and unconditionally bound to **WEST KOWLOON CULTURAL DISTRICT AUTHORITY** of Units 608-613, Level 6, Core C, Cyberport 3, 100 Cyberport Road, Pokfulam, Hong Kong, (together with its successors and assigns, "the Authority") for payment of a sum not exceeding the sum stated in Clause 2 below in accordance with the provisions of this Bond.

WHEREAS:

(A) By a contract dated **[Insert date of Letter of Acceptance issued by the Authority]** (Contract No. **[Insert Contract number]** – **[Insert Contract name]**) ("the Contract") made between the Authority and the Contractor, the Contractor has agreed to execute the Works upon the terms contained in the Contract.

(B) Pursuant to the terms of the Contract, the Authority is obliged to pay the Contractor the sum of **[Insert amount in words]** Hong Kong Dollars (HK$**[Insert amount in figures]**) [**SEE NOTE 2]** ("the Off-shore Payment") by instalments in accordance with the Interim Payment Schedule for the activities described in Cost Centre [No.] **[SEE NOTE 3]**.

(C) Pursuant to the said activities, certain components of the Works falling within Cost Centre [No.] **[SEE NOTE 3]** ("the Manufactured Goods") as identified in the Schedule of Goods Manufactured Offshore contained in the Pricing Document, are to be manufactured offshore Hong Kong for subsequent delivery to and installation at the Site.

(D) Pursuant to the terms of the Contract, the Contractor, as a condition precedent to his entitlement to receive any payment instalment under Cost Centre [No.] **[SEE NOTE 3]** is obliged to provide a bond in the terms hereof.

NOW THE TERMS of this Bond are:

1. Where applicable, words and expressions used in this Bond shall have the meaning assigned to them in the Contract.

2. The Bondsman hereby irrevocably and unconditionally undertakes to pay to the Authority an amount not exceeding **[Insert amount in words]** Hong Kong Dollars (HK$**[Insert amount in figures]**) **[SEE NOTE 4]** upon receipt from the Authority of a written demand practically in the form of the Schedule to this Bond signed on behalf of the Authority stating:

(a) either that the Contractor is in default of his obligations under the Contract or that the Authority is entitled to terminate or has terminated the Contract or the employment of the Contractor under the Contract; and

(b) the amount due and payable under this Bond in accordance with Clause 4 below.

3. The Bondsman shall pay to the Authority the amount thus demanded without requiring further evidence or proof of:

(a) the default of the Contractor;

(b) the Authority's entitlement to terminate the Contract or the employment of the Contractor under the Contract;

(c) any termination of the Contract or the employment of the Contractor under the Contract; or

(d) the amount due and payable under this Bond.

4. The amount payable under this Bond shall be the aggregate of the instalments of the Off-shore Payment (net of Retention Moneys) prior to the date of the written demand referred to in Clause 2 above less the aggregate as certified by the Contract Administrator of any and all sums in respect of the Manufactured Goods delivered to Hong Kong in accordance with the terms of the Contract provided always that the liability of the Bondsman under this Bond shall not exceed the sum stated in Clause 2 above.

5. The liability of the Bondsman under this Bond shall remain in full force and effect and shall not be affected or discharged in any way by, and the Bondsman hereby waives notice of:

(a) any suspension of the Works or variation to, or amendment of the Contract or the Works (including without limitation extension of time for performance and adjustment to the amount payable under the Contract);

(b) the termination of the Contract or of the employment of the Contractor under the Contract;

(c) any forbearance or waiver of any right of action or remedy the Authority may have against the Contractor or negligence by the Authority in enforcing any such right of action or remedy;

(d) any other bond, security or guarantee held or obtained by the Authority for any of the obligations of the Contractor under the Contract or any release or waiver thereof;

(e) any act or omission of the Contractor pursuant to any other arrangement with the Bondsman;

(f) any breach of the Contract or other default of the Authority; and

(g) any provision of the Contract being or becoming illegal, invalid, void, voidable or unenforceable.

6. The liability of the Bondsman under this Bond shall cease on whichever of the following events first occurs:

(a) payment in full by the Bondsman to the Authority of a sum demanded under Clause 2 above;

(b) receipt of written notification from the Contract Administrator that all of the Manufactured Goods have been delivered to Hong Kong and inspected by him; or

(c) **[Insert date]** **[SEE NOTE 5]**

7. The Authority shall be entitled at any time, without the consent of the Bondsman, to assign or transfer the benefit of this Bond or any part thereof, any interest therein or thereunder and any right thereunder, whether past, existing or future, to any third party. In the event of any assignment or transfer by the Authority as aforesaid, the assignee or transferee shall from the date thereof have the same rights, powers and remedies as it would have had if it had at all times been the Authority under this Bond.

8. Any documents arising out of or in connection with this Bond shall be served upon the Bondsman, at **[Insert Address]** Hong Kong **[SEE NOTE 6]**.

9. The Bondsman may change his nominated address for service of documents to another address in Hong Kong but only by prior written notice to the Authority. All demands and notices shall be in writing and in English.

10. This Bond shall be governed and construed according to the laws for the time being in force in Hong Kong and the Bondsman agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

IN WITNESS whereof this Bond has been executed as a deed on the date first before written.

THE COMMON SEAL of)
[Insert name of Bondsman])
was affixed hereto in)
the presence of:)

OR

SIGNED, SEALED AND DELIVERED)
by Mr [ ])
for and on behalf of **[Insert name of**)
Bondsman]as lawful attorney of the)
Bondsman under a Power of Attorney)
dated [ ] in the)
presence of **[Insert Name of Witness]**)
as Witness:)

_____

[SEE NOTE 7]

SCHEDULE TO BOND

FORM OF DEMAND

To: [ ]
Hong Kong

For the attention of: [ ]
[ ], 201[ ]

Dear Sirs,

Contract No.
Bond for Offshore Manufacture No.[ ]

1. We refer to the Bond for Off-shore Manufacture No. [ ] dated [ ], 201[ ].

2. Terms defined in the above Bond have the same meaning when used in this demand.

3. We confirm [EITHER] (that the Contractor is in default of his obligations under the Contract) [OR] (that the Authority is entitled to terminate or has terminated the Contract or the employment of the Contractor under the Contract).

4. We now demand payment of HK$[figures] ([words] Hong Kong Dollars) by [ ], 201[ ], being the amount due in accordance with Clause 4 of the above Bond.

5. We confirm that the signatories of this letter are authorised by the Authority to make this demand on behalf of the Authority.

6. This demand is governed by Hong Kong law.

Yours faithfully,

(Authorised Signatory)
.....
for and on behalf of
WEST KOWLOON CULTURAL DISTRICT AUTHORITY

NOTES FOR GUIDANCE IN PREPARATION OF OFF-SHORE MANUFACTURING BOND

These notes are prepared in order to assist the Bondsman in the preparation of the Off-shore Manufacturing Bond(s) and cross refer to the note references contained in the draft of the Bond. The note references contained in the draft Bond shall be deleted from the engrossments of the Bonds when prepared by the Bondsman.

NOTE 1

The place of incorporation of the Bondsman should be inserted together with:

(a) its registered address in the place of incorporation; and

(b) the address of its place of business in Hong Kong.

NOTE 2

This amount shall be the Cost Centre Value of the relevant Cost Centre which is to be paid for offshore goods or, where relevant, the part of the Cost Centre Value.

NOTE 3

Insert relevant Cost Centre numbers as referred to in the Pricing Document contained in the Contract.

NOTE 4

The amount to be inserted shall be 95% of the figure referred to in Recital (B).

NOTE 5

The date to be inserted shall be in accordance with the Preamble to the Pricing Document.

NOTE 6

The address for service shall be in Hong Kong.

NOTE 7

The Bond shall be executed under seal by the Bondsman.

This may be done either by:

(a) affixing the Corporate Seal of the Bondsman in the presence of authorised signatories in accordance with the Articles of Association or other constitutional documents of the Bondsman; or

(b) by execution under seal by an attorney appointed by a valid and binding Power of Attorney given by the Bondsman in accordance with its Articles of Association or other constitutional documents.

The following documents shall be submitted with the executed Bond:

1. if executed by affixing the Corporate Seal:

(a) an extract from the Bondsman's Articles of Association or other constitutional documents dealing with the execution of documents by use of the Corporate Seal of the Bondsman; and

(b) a copy of the Board Resolution or a copy of the minutes of the meeting of the Board of the Bondsman, by which the execution of the Bond was approved; and

2. if executed by an attorney on behalf of the Bondsman:

(a) a copy of the Power of Attorney by which the attorney is appointed by the Bondsman to execute documents on its behalf; and

(b) evidence of the authority of the person providing the Power of Attorney to delegate the powers to the attorney e.g. copy of the Board Resolution authorising the appointment of the attorney or extracts from the Bondsman's Articles of Association or other constitutional documents dealing with the appointment of attorneys together with confirmation of the position or office held by the person giving the Power of Attorney.

SCHEDULE 9

FORM OF DRAFT LEGAL OPINIONS

Part A - For Parent Company Guarantees

Part B - For Bonds

SCHEDULE 9

PART A - DRAFT LEGAL OPINION FOR PARENT COMPANY GUARANTEES

[To be prepared on headed notepaper of legal adviser]

We write this letter in our capacity as legal adviser to **[Insert name of Parent Company]** ("the Parent Company"). We have examined the following documents:

1. a certified copy of the Memorandum and Articles of Association (or equivalent) of the Parent Company;

2. a certified copy of the Power of Attorney dated **[Insert date of Power of Attorney]** appointing Mr. **[Insert name of attorney]** as the true and lawful attorney of the Parent Company in Hong Kong for the purposes specified in the said Power of Attorney;

3. a certified copy of the resolution of the Board of Directors of the Parent Company authorising the appointment of Mr. **[Insert name of attorney]** as the true and lawful attorney of the Parent Company in Hong Kong as aforesaid; and

4. such other records and documents as we have deemed necessary or appropriate for the purposes of this opinion.

Based upon such examination we are of the opinion that:

1. the Parent Company is a company duly incorporated and validly existing under the laws of **[Insert country of incorporation of the Parent Company]** and has full power and authority to carry on its business as it is now being conducted;

2. the Parent Company has the corporate power to provide a Guarantee in favour of West Kowloon Cultural District Authority and has taken all necessary corporate and legal action in that regard;

3 . the Parent Company may by its nominated attorney execute instruments as deeds and the Parent Company may accept and undertake all the consequences arising therefrom as if it had been able to affix a seal to such instruments in accordance with the laws of Hong Kong; and

4. the Power of Attorney confers, under the laws of **[Insert the proper law of the Power of Attorney]** a valid and binding authority on the nominated attorney to execute instruments as deeds by attaching his personal seal thereto in Hong Kong in accordance with the laws of Hong Kong, and such legal, valid and binding obligations of the Parent Company as arise under the Guarantee under the laws of Hong Kong will constitute legal, valid and binding obligations of the Parent Company in and under the laws of **[Insert country of incorporation of the Parent Company]**.

Notwithstanding the foregoing, we make the following provisos to this opinion:

(i) we express no opinion with regard to any laws other than the laws of **[Insert country of incorporation of the Parent Company]**; and

(ii) we have assumed that all documents examined by us are genuine and are signed by the persons by whom they are purported to be signed.

This opinion is given in connection with the provision of a Guarantee by the Parent Company in favour of West Kowloon Cultural District Authority and may be relied on solely by West Kowloon Cultural District Authority and its successors and assigns. It is not made available for any other purpose and may not be relied upon by any other persons.

SCHEDULE 9

PART B - DRAFT LEGAL OPINION FOR BONDS

[To be prepared on headed notepaper of legal adviser]

We write this letter in our capacity as legal adviser to **[Insert name of Bank]** ("the Bank"). We have examined the following documents:

1. a certified copy of the Memorandum and Articles of Association (or equivalent) of the Bank;

2. a certified copy of the Power of Attorney dated **[Insert date of Power of Attorney]** appointing Mr. **[Insert name of attorney]** as the true and lawful attorney of the Bank in Hong Kong for the purposes specified in the said Power of Attorney;

3. a certified copy of the resolution of the Board of Directors of the Bank authorising the appointment of Mr. **[Insert name of attorney]** as the true and lawful attorney of the Bank in Hong Kong as aforesaid; and

4. such other records and documents as we have deemed necessary or appropriate for the purposes of this opinion.

Based upon such examination we are of the opinion that:

1. the Bank is a company duly incorporated and validly existing under the laws of **[Insert country of incorporation of the Bank]** and has full power and authority to carry on its business as it is now being conducted;

2. the Bank has the corporate power to provide a bond in favour of West Kowloon Cultural District Authority and has taken all necessary corporate and legal action in that regard;

3. the Bank may by its nominated attorney execute instruments as deeds and the Bank may accept and undertake all the consequences arising therefrom as if it had been able to affix a seal to such instruments in accordance with the laws of Hong Kong; and

4. the Power of Attorney confers, under the laws of **[Insert the proper law of the Power of Attorney]** a valid and binding authority on the nominated attorney to execute instruments as deeds by attaching his personal seal thereto in Hong Kong in accordance with the laws of Hong Kong, and such legal, valid and binding obligations of the Bank as arise under the Bond under the laws of Hong Kong will constitute legal, valid and binding obligations of the Bank in and under the laws of **[Insert country of incorporation of the Bank]**.

Notwithstanding the foregoing, we make the following provisos to this opinion:

(i) we express no opinion with regard to any laws other than the laws of **[Insert country of incorporation of the Bank]**; and

(ii) we have assumed that all documents examined by us are genuine and are signed by the persons by whom they are purported to be signed.

This opinion is given in connection with the provision of a bond by the Bank in favour of West Kowloon Cultural District Authority and may be relied on solely by West Kowloon Cultural District Authority and its successors and assigns. It is not made available for any other purpose and may not be relied upon by any other persons.

SCHEDULE 10

INSURANCE POLICY

SCHEDULE 10

INSURANCE POLICY

CONSTRUCTION "ALL RISKS"

AND

THIRD PARTY LIABILITY

INSURANCE

FOR

West Kowloon Cultural District Project

Dated 31 July 2014

CONSTRUCTION "ALL RISKS"

AND

THIRD PARTY LIABILITY

INSURANCE

FOR

West Kowloon Cultural District Project

Dated 31 July 2014

Construction "All Risks" and Third Party Liability Insurance

For West Kowloon Cultural District Project

Endorsement 01

It is hereby noted and agreed that the following Territorial Limits are added to the Schedule with effect from 9 August 2014:

Territorial Limits:

Section 1 - Construction "All Risks"

Anywhere in the Hong Kong Special Administrative Region and/or the People's Republic of China (in respect of off-site fabrication and off-site storage)

Section 2 - Third Party Liability

Worldwide excluding the United States of America, Canada and Australia

Endorsement 02

Construction "All Risks" and Third Party Liability Insurance
West Kowloon Cultural District Project

Date of Issue : 5 February 2016

Policy No. : 1ECA14-00097-00

Insured : West Kowloon Cultural District Authority (as Employer) (Details as per Policy)

Period of Insurance : 9 August 2014 to 31 December 2020 (Details as per Policy)

Endorsement attached to and forming part of the above mentioned Policy:-

It is hereby noted and agreed that **with effective from 11 January 2016**:-

Section 1 – Contractors' All Risks

1. **Deductible for Hot Works / Welding of HKD750,000** is deemed to be deleted for all other damage or loss other than the lifting works for the Xiqu Centre.

2. **Mold and Fungi Exclusion** is deemed to be deleted in its entirety.

3. **LEG 3/96 model 'improvements' defects exclusion** is deemed to be deleted and replaced by **DE5 – Design Improvement Exclusion** as follows:-

   DE5 – Design Improvement Exclusion

   The Insurer shall not be liable in respect of:-

   a) The cost necessary to replace, repair or rectify any Insured Property which is defective in design, plant, specification, materials, or workmanship
   b) Loss or damage to the Insured Property caused to enable replacement, repair or rectification of such defective Property Insured

   But should damage to the Insured Property (other than damage as defined in b) above) result from such a defect, this exclusion shall be limited to the costs of additional work resulting from and the additional costs of improvements to the original design, plan, specification, materials, or workmanship.

   For the purpose of the Policy and not merely this exclusion, the Insured Property shall not be regarded as lost or damaged solely by virtue of the existence of any defect in design, plan, specification, materials, or workmanship in the Insured Property or any part thereof.

4. the following Memoranda are deemed to be added:-

   Ground Subsidence

   The cover provided under this Policy shall extend to include the cost of reinstating and/or consolidating subsidence or collapse of ground or surfaces surrounding the works whether on or offsite in consequence of loss of or destruction or damage to works or temporary works insured under this policy.

Insurers liability under this memorandum shall not exceed HKD50,000,000 any one Occurrence.

Testing and Commissioning

Cover during testing and commissioning

In the event that performance or acceptance testing or commissioning of late delivered property extends beyond the commencement of operation of a subsisting Insured item, such property shall continue to be covered subject to Construction Period of Insurance coverage terms and conditions until final completion of such testing or commissioning of each item individually but in any case not later than 4 weeks from commencement of such testing or commissioning.

Repeated Tests

If as a result of loss or damage insured against hereunder it becomes necessary to repeat any test and/or commissioning or to carry out subsequent test(s) and/or commissioning, the Insurer hereon will bear the cost of any such repeated and/or subsequent test(s) or commissioning subject to the Policy limit and it being within the framework of the cover afforded by this section of the Policy and which forms part of the Sum Insured.

Contractors Overheads

Allowance for reasonable margin of overheads in the amount of the claim provided that such allowances have been included in the Contractor's or Sub-contractors' or Supplier's or Manufacturer's or Consultant's original contract prices but not increasing the total liability of the Insurer in respect of the loss occurrence beyond the Sum Insured.

Insurers liability in respect of Contractors Overheads any one Occurrence shall not exceed 10% of adjusted loss.

Insured Property in Use

Subject always to the conditions and exceptions of the Policy, in the event that the Insured Property or any part of the Insured Property under Section 1 is handed over to and/or taken into use by the Employer, but not being used for public operations, cover shall continue until the expiry date of the construction Period of Insurance specified in the Schedule for each Insured Contract (or any extension thereof agreed by the Insurers), at terms to be agreed.

Undamaged Property

In the event of loss insured by this Policy and if the Property Insured is undamaged or damaged in part then:

(a) if due to the actions or requirements of Municipal or Local Authorities, Statutory, Ad Hoc or Government bodies, replacement cannot be carried out on the same site, or

(b) if due to damage to other property insured such Property Insured is rendered unsuitable or unusable or of no further value,

their loss shall be deemed to be total and the Insured will be indemnified according.
It is further agreed that the Insured will be indemnified for the costs of any necessary removal of such Property Insured. If the presence of the abandoned Property Insured increases the resale value of the original building site then such increase in resale value shall be regarded as salvage and the amount thereof shall accordingly be payable to the Insurer by the Insured.

Insurers liability under this memorandum shall not exceed HKD50,000,000 any one Occurrence.

Costs Clause

Insurers shall indemnify the Insured for:

(a) Customs and excise duties, import taxes, freight, insurance and similar charges as the Insured may become liable to pay in respect of the procurement of goods, materials and services for reinstatement replacement repair restoration or recommissioning providing that these have been taken into account in the Estimated Construction Value.

(b) Allowance of a reasonable margin of profit and overheads in the amount of the claim provided that such allowances have been included in the original Estimated Construction Value.

(c) Reasonable head office and administrative service costs of any of the Insured's incurred in connection with repair, reinstatement or replacement of the Insured Property shall be added to each claim.

Insurers liability under this Memorandum shall not exceed HKD50,000,000 any one Occurrence.

Section 2 – Third Party Liability

5. the following item is added under insuring clause:-

To indemnify the Insured in respect of all sums which the Insured shall become legally liable to pay for compensation (including claimants costs and expenses) in respect of:-

i) Personal Injury
ii) physical loss or destruction of or damage to material property including the loss of use (total or partial) or consequential loss resulting therefrom
iii) obstruction, loss of amenities, trespass, nuisance, interference, denial of access or any like cause

6. **Redoing / Making Good Contracted Work exclusion** is deemed to be deleted in its entirety.

7. **Vibration, Removal or Weakening of Support** is deemed to be deleted and replaced by the following clause:-

Vibration Removal or Weakening of Support

This section shall cover liability in respect of the collapse of any building, property or structure or any part thereof or any Damage which impairs the structural stability of any building, property, E&M service or structure or which endangers its users caused by or resulting from vibration or removal or weakening of support provided that:

a) prior to the occurrence of such collapse or Damage the condition of such building, property or structure was sound and all reasonable safety precautions had been taken;

b) upon discovery of Damage which does not immediately result in the collapse of any building, property or structure or any part thereof or any Damage which impairs the structural stability of any building, property or structure or which endangers its users which is caused by or alleged to be caused by or resulting from vibration or removal or weakening of support arising out of any operations in connection with the execution of

the works the Insured shall immediately suspend such operations or shall at their own expense take all reasonable safety precautions;

c) the Insurers shall not indemnify the Insured in respect of Damage caused by or resulting from vibration or removal or weakening of support to any building, property or structure under demolition or declared by the relevant public authority to be unsafe prior to such Damage occurring.

Insurers liability in respect of damage caused by vibration or removal or weakening of support shall not exceed the overall policy limit during the Period of Insurance.

8. the following Memoranda are deemed to be:-

Insured's Existing Property

Notwithstanding the ownership by the named insured of the existing West Kowloon Cultural District Authority property, operations or business activities relating to buildings owned and/or managed by the Insured, this existing property, operations or business activities shall be deemed to be third party for purposes of this policy.

Contractual Liabilities

Without prejudice to the cover afforded by Section 2 and subject otherwise to the Exceptions contained therein, the indemnity provided in respect of the Insured's legal liability shall extend to include legal liability for Injury or Damage imposed under construction or erection contracts or under any contract or agreement necessarily and reasonably entered into for the hire of constructional plant and equipment (always excluding liability for loss of or damage to the plant and equipment itself or liability for continuing hire charge arising therefrom) for the supply of materials or otherwise to be agreed.

General Memoranda

9. the following Memoranda are deemed to be added:-

Permits and Privileges

The Insured or any other party acting on behalf of the Insureds is permitted to effect contracts or agreements customary or necessary to the conduct of Construction Projects (including those for projects similar to the Project insured by this Policy) under which the insured may assume liability or grant release therefrom without prejudice to this Policy, provided such contracts or agreements, oral or written insofar as they affect any loss hereunder are concluded prior to such loss and the rights and obligations of the Insured shall be governed by the terms of such contracts or agreements but subject to their terms, exemptions and conditions of the Policy.

Uncertified Works

In the event that in the Schedule as the expiration of the Construction Period of Insurance a Certificate of Practical Completion has not been issued in respect of any parts of the Contract Works then this insurance shall remain in full force in respect of such parts while they remain at the risk and responsibility of the Contractor. If the certification is subsequently backdated then for purposes of this insurance the date of termination of coverage hereunder shall be deemed to be the date on which the Certificate of Practical Completion is physically issued to the Contractor and the Employer undertakes to pay

such additional premium as may be required for such extension in accordance with policy conditions but not exceeding pro-rata of the originally agreed premium rate.

Fraudulent Claims

If any claim is in any respect fraudulent or if any fraudulent means or devices are used by the Insured or by anyone acting on his behalf to obtain any benefit under this Policy or if any loss or damage is occasioned with the support of the Insured, all benefit under this Policy shall be forfeited in respect of that fraudulent party only.

Property Being Worked Upon

Any existing property of the Insured Employer which is taken over by a Contractor under an Insured Project shall be deemed to be Insured Property hereunder but only to the extent that such item or portion of property is being worked upon and arising out of such work.

Claims Preparation Costs

Reasonable costs and expenses as may be payable by the Insured and not otherwise recoverable in connection with or incidental to preparing, collating, auditing or qualifying actual or imminent Damage being claimed.

Insurers liability under this memorandum shall not exceed HK$5,000,000 any one Occurrence.

Work Stoppage

Should the work on any insured contract, or any part thereof, be entirely stopped by any cause whatsoever, the risk under the Policy shall continue without interruption.

Entrusted Works

This Policy shall cover any works constructed renovated or repaired by the Insured under entrustment from the Government of the Hong Kong Special Administrative Region. It is agreed that advice will be provided to insurers regarding such entrusted works within a reasonable period and the additional value declaration at the end of the project as part of the actual value declaration.

Insurers liability under this memorandum shall not exceed HKD50,000,000 any one Occurrence.

All other terms and conditions remain unchanged.

Dated 5 February 2016

Insurers	Participation	Company Chop & Signature
Allianz Global Corporate & Specialty SE – Hong Kong Branch (as lead insurer)	24.5% of 100%	
Asia Insurance Company Limited	28% of 100%	

ACE Insurance Limited	20% of 100%	
Zurich Insurance Company Limited	15% of 100%	
Sun Hung Kai Properties Insurance Limited	5% of 100%	
HDI-Gerling Industrie Vesicherung-AG (Hong Kong)	7.5% of 100%	

Endorsement 03

Construction "All Risks" and Third Party Liability Insurance
West Kowloon Cultural District Project

Date of Issue : 8 April 2016
Policy No. : 1ECA14-00097-00
Insured : West Kowloon Cultural District Authority (as Employer) (Details as per Policy)
Period of Insurance : 9 August 2014 to 31 December 2020 (Details as per Policy)

Endorsement attached to and forming part of the above mentioned Policy:-

It is hereby noted and agreed that the Territorial Limits of this Policy is amended to read as below with effect from 22 March 2016:-

Territorial Limits:
Anywhere in the Hong Kong Special Administrative Region and/or the People's Republic of China (in respect of off-site storage, off-site fabrication and inland transit)

All other terms and conditions remain unchanged.

Dated 8 April 2016

Insurers	Participation	Company Chop & Signature
Allianz Global Corporate & Specialty SE – Hong Kong Branch (as lead insurer)	24.5% of 100%	
Asia Insurance Company Limited	28% of 100%	
ACE Insurance Limited	20% of 100%	

Zurich Insurance Company Limited	15% of 100%	
Sun Hung Kai Properties Insurance Limited	5% of 100%	
HDI-Gerling Industrie VesicherungAG (Hong Kong)	7.5% of 100%	

Endorsement 04

Construction "All Risks" and Third Party Liability Insurance

West Kowloon Cultural District Project

Date of Issue : 8 September 2016
Policy No. : 1ECA14-00097-00
Insured : West Kowloon Cultural District Authority (as Employer) (Details as per Policy)
Period of Insurance : 9 August 2014 to 31 December 2020 (Details as per Policy)

Endorsement attached to and forming part of the above mentioned Policy:-

1. It is hereby noted and agreed that the Insured 5. is amended to read as below with effect from 11 January 2016:-

   Insured: 5. Suppliers, vendors, architects, surveyors, engineers, consultants **including their subcontractors of any tier** and all others engaged to provide goods or services in connection with the Insured Project for site activities only.

2. It is hereby noted and agreed that the following Deductibles are added under this Policy with effect from 10 August 2016:-

2. Section 1 - Contractors' All Risk

For Fitting-out Works Contracts

Act Of God / Fire / Vibration or Weakening or Removal of Support / Water Damage	HKD 50,000 any one Occurrence
Defective Design Materials and Workmanship (DE5)	HKD 50,000 any one Occurrence
All Other losses	HKD 25,000 any one Occurrence

3. Section 2 – Third Party Liability

For Fitting-out Works Contracts

Vibration Removal or Weakening of Support / Water Damage	HKD 50,000 any one Occurrence
Third Party Property Damage	HKD 25,000 any one Occurrence
Third Party Bodily Injury	HKD 10,000 any one Occurrence

All other terms and conditions remain unchanged.

Dated 8 September 2016

Insurers	**Participation**	**Company Chop & Signature**
Allianz Global Corporate & Specialty SE – Hong Kong Branch (as lead insurer)	24.5% of 100%	
Asia Insurance Company Limited	28% of 100%	
ACE Insurance Limited	20% of 100%	
Zurich Insurance Company Limited	15% of 100%	
Sun Hung Kai Properties Insurance Limited	5% of 100%	
HDI-Gerling Industrie VesicherungAG (Hong Kong)	7.5% of 100%	

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THE SCHEDULE

POLICY NO.	:	**1 ECA14 – 00097 - 00**
TYPE	:	**Contractor's "All Risks" and Third Party Liability Insurance**
FORM	:	To follow the terms, limits and conditions of JLT Broad Form wording including amendments as attached.
INSURED	:	1. West Kowloon Cultural District Authority (as Employer) and the Employer's Representatives 2. The Main Contactors for each Contract 3. All Contractors and Sub-contractors of any tier engaged by Insured (1) and (2) 4. The Government of the Hong Kong Special Administrative Region 5. Suppliers, vendors, architects, surveyors, Engineers, Consultants and all others engaged to provide goods or services in connection with the Insured Project for site activities only. 6. Any other party having an insurable interest (and not mentioned above) to the extent that Insured (1) is required by contract or agreement to provide Contractors All Risks and/or Third Party Liability insurance to such party(ies) The Insured shall be deemed to include all directors, partners, employees and agents of the above named (even if their names are not specifically mentioned in the Contract of Insurance) in respect of their site activities only All for their respective rights and interests and/or as may be more fully defined in this Policy.
INSURED PROJECT	:	The design, engineering, procurement, construction, erection, testing and commissioning and defects liability period for all contracts forming part of **Batch 1** and **Batch 2** of the West Kowloon Cultural District Project and all ancillary and associated works and services in connection therewith This policy is arranged on an "Attachment Basis" i.e. contracts declared are covered until completion plus 12 months Defect Liability Period (subject to Run Off Clause)

PERIOD OF INSURANCE

From the commencement of Batch 1 works on 9 August 2014 to the date of Practical Completion of Batch 2 works which is anticipated to be 31 December 2020 (both days inclusive Local Standard Time at the Project Site)

Maximum contract period per individual contract attaching is 48 months followed by 12 months defects liability period.

Extensions to the Period of Insurance for the attached contracts (up to 3 months) are automatically covered at Nil additional premium. Any further extensions are automatically covered at terms to be agreed and an additional premium not to exceed pro-rata charge.

Run Off Clause (Memoranda 10 Applicable to Sections 1 & 2):

(1) No new contracts to commence after 31 December 2019 and

(2) 36 month run-off cover commences from 31 December 2020

INTEREST INSURED : **Section I – Material Damage**

Indemnify the Insured in respect of all risks of Damage to the Property Insured occurring during the Period of Insurance arising from any cause whatsoever other than as specified in the General Exclusions and the Exclusions to Section I and pursuant and subject to the other terms and conditions of this Policy.

Sum Insured Construction All Risks

The combined Contract Values estimated at

Item 1

The permanent and Temporary Works including electrical and mechanical plant, services, materials, spares, and any other property or equipment of whatsoever nature (excluding Contractors Plant and Equipment) to be incorporated into the Project and any property of the Insured or for which they are or hold themselves responsible and which are for use or intended for use in connection with the Insured Project including temporary buildings and contents on site

The property described is insured whilst in storage or in transit within the Territorial Limits (including transit by water) but excluding other ocean or air transit or such transits as may be insured by any Marine Cargo or Transit Insurance

INTEREST INSURED INTER ALIA

Section II – Third Party Liability

To indemnify the Insured in respect of all sums which the Insured shall become legally liable to pay for compensation (including claimants costs and expenses) in respect of: -

(i) Personal Injury to any person

(ii) Property Damage

happening or consequent upon a cause occurring during the Period of Insurance and arising out of or in connection with the Insured Project anywhere within the Territorial Limits

Provided always that Insurers' liability for compensation payable to any number of claimants in respect of or arising out of any one Occurrence or shall not exceed the Limit of Indemnity.

The Insurers will however pay in addition to the Limit of Indemnity stated in the Schedule the following:

(a) all costs and expenses incurred with the written consent of the Insurers in the defence of claims against the Insured

(b) all fees and legal representation at any coroners inquest, fatal accident enquiry, court summary jurisdiction in respect of proceedings arising out of alleged breach of statutory duty or other similar judicial enquiry into circumstances relating to any accident claim or potential claim which would have been the subject of indemnity under this Policy

Limit of Indemnity

HKD50,000,000 any one Occurrence unlimited in all during the Period of Insurance

DEDUCTIBLES

Section 1 – Contractors' All Risk

For Contracts over HKD1,500,000,000

Act Of God / Fire / Theft / Vibration or Weakening or Removal of Support	HKD400,000 any one Occurrence
Defective Design Materials and Workmanship	HKD500,000 (LEG3/06) any one Occurrence
Hot Works / Welding	HKD750,000

DEDUCTIBLES INTER ALIA

Works	
Temporary Works	HKD300,000 or subject to 50% of the loss whichever is the greater
Water Damage	HKD300,000 or subject to 20% of the loss whichever is the greater
All Other losses	HKD200,000 any one Occurrence

For all Contracts under HKD1,500,000,000

Act Of God / Fire / Theft / Vibration or Weakening or Removal of Support	HKD200,000 any one Occurrence
Defective Design Materials and Workmanship	HKD500,000 (LEG3/06) any one Occurrence
Hot Works / Welding Works	HKD750,000 any one Occurrence
Temporary Works	HKD200,000 or subject to 50% of the loss whichever is the greater
Water Damage	HKD200,000 or subject to 20% of the loss whichever is the greater
All Other losses	HKD150,000 any one Occurrence

Section 2 TPL

For all Contracts

Third Party Property Damage	HKD200,000 any one Occurrence
Vibration Removal or Weakening of Support	HKD200,000 or 20% of loss whichever is the greater
Damage to Fibre Optic Cables and/or Underground Services	HKD750,000 any one Occurrence
Third Party property caused by Water Damage / Employer's	20% of the loss or HKD200,000 whichever is

Property in the care custody and control of contractors	the greater
Bodily Injury	HKD200,000 any one Occurrence

Note:

(1) Deductibles to be applied separately to each attached Contract in accordance to its price on the date of award

(2) In the event of more than one deductible applying to a single event/occurrence of loss the highest deductible shall apply.

APPLICABLE JURISDICTION AND/OR LAW AND/OR PRACTICE : This insurance shall be governed by and construed in accordance with the law of Hong Kong Special Administrative Region and each party agrees to submit to the exclusive jurisdiction of the Courts of the Hong Kong Special Administrative Region

ADJUSTABLE PREMIUM RATE : As agreed

ESTIMATED PREMIUM : As agreed

INSURER :	The Insurers	Participation	Date/Stamp
	Allianz Global Corporate of Specialty SE (lead)	24.5% of 100%	
	Asia Insurance Company Limited	28% of 100%	
	ACE Insurance Limited	20% of 100%	
	Zurich Insurance Company Limited	15% of 100%	
	Sun Hung Kai Properties Insurance Limited	5% of 100%	
	HDI-Gerling Industrie Vesicherung-AG (Hong Kong)	7.5% of 100%	

THE INSURING AGREEMENT

WHEREAS the Insured named in the Schedule hereto has applied to the Insurers named herein and has paid or agreed to pay the Premium stated in the Schedule as consideration of the indemnity hereinafter contained

NOW THIS CONTRACT WITNESSETH THAT subject to the Terms, Exclusions, Conditions and Memoranda contained herein or endorsed hereon the Insurers will indemnify the Insured in respect of loss, Damage or liability as detailed in the Wording attached hereto (which Wording is declared to be incorporated in and to form part of this Contract) arising from any cause not hereinafter excluded occurring during the Period of Insurance or during any subsequent period for which the Insurers provide indemnity.

PROVIDED ALWAYS THAT

(1) the liability of the Insurers shall in no case exceed the amount of the indemnity set out in the Schedule hereto or contained elsewhere in this Contract or endorsed hereon

(2) the liability of each of the Insurers individually in respect of such loss, Damage or liability shall be limited to the proportion set against its name

GENERAL DEFINITIONS

DAMAGE – means:

i) physical loss or destruction of or damage to material property including the loss of use (total or partial) or consequential loss resulting therefrom

ii) obstruction, loss of amenities, trespass, nuisance, interference, denial of access or any like cause

PERSONAL INJURY – includes, but is not limited to:

(i) death, bodily injury, sickness, disease, disability, shock, fright, assault and battery, mental anguish or mental injury;

(ii) false or wrongful arrest, wrongful detention, discrimination, molestation, wrongful imprisonment, malicious prosecution or malicious humiliation;

(iii) the publication or utterance of libel or slander or of other defamatory or disparaging material;

(iv) wrongful entry or eviction or other invasion of the right occupancy or possession of land;

(v) loss of consortium, loss of servitium, and any loss of dependency or support.

(vi) assault and battery not committed by or at the direction of the Insured unless committed for the purpose of preventing or eliminating danger to persons or property.

NORMAL ACTION OF THE SEA - is defined as behaviour of tide current and wave action suggested by available marine, wave height and meteorological data from the Hong Kong Observatory for the relevant month and location of the risk as having a return period of 10 years or less

OCCURRENCE - is defined for the purpose of the application of either the Limits of Indemnity or Deductibles to mean any one loss, disaster or casualty consequent upon or attributable to one source, event or original cause

CONTRACT SITE - is defined as any location within Hong Kong and Guangdong Province

TEMPORARY WORKS - is defined as all structures and their materials which are not intended to form part of the permanent works but which are intended to provide working access to the site of the Insured Project or to the permanent works or which are intended to provide support to the permanent works under construction but shall not mean accommodation and contents. It is specifically agreed that shuttering formwork scaffolding cofferdams sheet steel piling temporary fabrication yards temporary bridges and temporary roads on or around the Project Site for the purpose of performing the Insured Project and not being permanent works shall be regarded as Temporary Works

THE INSURED PROPERTY - is defined as:

Item 1: The permanent and Temporary Works including electrical and mechanical plant, services, materials, spares, and any other property or equipment of whatsoever nature to be incorporated into the Project and any property of the Insured or for which they are or hold themselves responsible and which are for use or intended for use in connection with the Insured Project including temporary buildings and contents on site

Item 2: Construction Plant and equipment – NOT INSURED

CONTRACT WORKS - is defined as all works, temporary works, temporary buildings, campsites, materials, spares, office equipment and all other property or equipment of whatsoever nature or description the property of the Insured or for which they may be responsible at the site of the Insured Project or elsewhere in the Territorial Limits including whilst in transit in connection with the Insured Project

SECTION I – CONSTRUCTION "ALL RISKS"

The Insurers will indemnify the Insured in respect of Physical Loss, Destruction or Damage (hereinafter referred to as "Damage") of or to the Property Insured arising from any cause whatsoever whilst on or about the Contract Site, or during the course of any transits by road, rail or inland waterway (including coastal waters), offsite storage and/or fabrication and all loading and unloading incidental thereto anywhere within the Situation described in the Schedule, subject to the exclusions and conditions hereinafter stated and not exceeding the sums herein insured.

EXCLUSIONS TO SECTION I

The Insurers shall not be liable for:

(1) Damage of or to:

a) aircraft, waterborne vessels or craft other than work boats, safety boats or non- power driven vessels or craft not exceeding 12 metres in length;

b) cash, banknotes, cheques, postal orders, money orders or stamps.

(2) Normal upkeep or normal making good.

(3) The cost of replacing, repairing or rectifying that part of the Property Insured rendered necessary by its own wear, tear, rust, corrosion or gradual deterioration provided always that this Exclusion shall not apply to other parts of the Property Insured damaged as a result of such wear, tear, rust corrosion or gradual deterioration.

(4) LEG 3/96 model 'improvements' defects exclusion:

The Insurer(s) shall not be liable in respect of:

All costs rendered necessary by defects of material workmanship design plan or specification and should damage occur to any portion of the Insured Property (Contract Works) containing any of the said defects the cost of replacement or rectification which is hereby excluded is that cost incurred to improve the original material workmanship design plan or specification.

For the purpose of this policy and not merely this exclusion it is understood and agreed that any portion of the Insured Property shall not be regarded as damaged solely by virtue of the existence of any defect of material workmanship design plan or specification.

(5) Damage of pile casings arising during driving and/or extraction and/or in the case of pile casings not intended to form part of the permanent works, whilst in position.

(6) Damage of Contract Works after a completion certificate has been issued by the Insured's Principal except to the extent that the Insured may be liable or responsible under the conditions of the contract.

Notwithstanding the terms of this exclusion, coverage shall apply in full for the first 28 days beyond issuance of completion certificate, takeover or taking into use, whichever is the later. Thereafter maintenance and/or defects liability coverage as required by contract conditions to apply for the remaining maintenance and/or defects liability period.

(7) Penalties, liquidated damages and/or any consequential loss of whatsoever nature for delays, non-completion or non-compliance with contract conditions.

(8) The amounts stated in the Excess Clause in the Schedule.

(9) Damage of the Property Insured by disappearance or shortage revealed or found during normal stocktaking or inventory checking where the Damage cannot be traced to an insured event.

(10) Damage to constructional plant and equipment

Special Exclusions to apply to Marine Works

The Insurers shall not be liable for: -

(11) Any costs of dredging or redredging unless necessitated by indemnifiable Damage to other parts of the Property Insured

(12) Any Damage arising out of the Normal Action of the Sea

(13) Any loss of fill unless such follows from a breach of the permanent works

MEMORANDA TO SECTION I

1. Basis of Indemnity

In the event of any Damage to the item 1 of Insured Property – Contract Works, the basis of any settlement under this Policy shall be as follows :

The basis of indemnity under this Policy shall be the full cost of repairing, reinstating or replacing property lost or damaged, even though such costs may vary from original construction costs. In respect of total loss or destruction, the cost of reconstruction or replacement of the Property Insured by property substantially the same as, that lost or destroyed, less the value of any salvage

In the event of any claim Insurers may at their option have the necessary work of repair or replacement carried out or provide indemnity by way of cash payment. In the latter event and upon the Insurers establishing Damage which is insured hereunder, the Insurers shall make such payments on account from time to time to the Insured as the repair or replacement progresses as are reasonable having regard to normal contracting practice and the likely quantum of the final settlement hereunder

Upon the payment of any claim hereunder Insurers shall become subrogated to all rights and remedies available to the Insured in obtaining indemnity or reimbursement from other parties not insured hereby and the Insured shall at all times at the expenses of Insurers do and concur in doing and permit to be done all such acts in their own name or in the name of Insurers as may reasonable be required to enforce such rights and remedies

2. Professional Fees Clause

The insurance includes in addition to the Sum Insured Architects', Surveyors' and Consulting Engineers' fees or other professional fees necessarily incurred by the Insured in the reinstatement of the Insured Property consequent upon its Damage but not for preparing any claim.

The limit of Insurers' liability under this Memorandum shall not exceed 20 per cent of the loss with maximum HKD150,000,000 any one Occurrence unlimited. The sub-limit being in addition to the Sums Insured.

3. Debris Removal Clause

The insurance includes the costs and expenses necessarily incurred by the Insured (including such costs incurred to satisfy the requirements of any competent statutory body) in

(a) removing debris

(b) dismantling and/or demolishing any part of the Property Insured

(c) in shoring up and/or propping and/or protecting Property Insured whether damaged or not following the action of a peril not excluded by this Policy causing Damage to the Property Insured or property adjacent to the Property Insured

(d) the cost of repairing or cleaning drains, sewers, service mains and the like and/or dewatering resulting from Damage to the Property Insured

(e) marking, lighting, removal, destruction, salvage or recovery of wreck of vessel, craft, plant, equipment, materials or other things for which the Insured has responsibility

The limit of Insurers' liability under this Memorandum shall not exceed 20 per cent of the loss with maximum HKD150,000,000 any one Occurrence unlimited.

4. Plans and Specifications

The insurance extends to indemnify the Insured, in addition to the Sum Insured, in respect of the cost of rewriting or re-drawing plans or specifications of the Property Insured hereunder when such plans or specifications are lost or damaged by any cause not excluded by this Policy and the Insured needs to have them re-drawn or re-written in order to complete the Contract or to obtain payment for work already carried out.

Sub-Limit HKD10,000,000 any one occurrence.

5. Reinstatement

In the event of a claim or claims under this Policy it is mutually agreed to reinstate the full Sums Insured stated herein from the time of the loss, accident or occurrence up to the expiry of the Policy but nevertheless the Insurers shall never be liable for more than the respective Sums Insured stated herein in respect of any one Contract.

Additionally the Insured undertakes to pay an additional premium at the Policy rate on the amount of any settled claim exceeding HKD15,000,000 pro-rata from the date of such loss or damage to the expiry of this Policy.

6. Marine/CAR 50/50 Clause

Notwithstanding anything contained herein to the contrary, where separate marine insurance has been effected by the Insured it is agreed that in the event of Damage to the Property Insured due to a peril insured against being discovered after risk has terminated under the marine insurance and, if after proper investigation it is not possible to ascertain whether the cause of such Damage happened prior to the termination of the marine venture or subsequently, it is understood and agreed that the Insurers hereon shall contribute 50% of the properly adjusted claim provided the marine insurers also agree to contribute 50% of the claim, such contribution to be without prejudice to subsequent final apportionment of the claim as may be agreed between the Insurers hereon and the marine insurers in the light of the terms and conditions of the respective policies.

It is further agreed that in the event of a claim being adjusted under the terms of this clause Insurers shall deduct 50% of its appropriate excess from its 50% share of the adjusted claim.

7. Expediting Expenses

It is hereby noted and agreed that this Policy is extended to indemnify the Insured following loss or Damage insured hereunder in respect of additional expenses reasonably incurred to expedite repairs or reconstruction including but not limited to extra charges for overtime work, night work, work on public holidays and express freight including air freight.

Provided always

(a) that such extra charges are incurred in connection with Damage to the Property Insured for which indemnity is granted under this Policy;

(b) that such extra charges are limited to 250% of normal costs subject to a maximum limit of HKD100,000,000 any one claim, in addition to the Sum Insured is allowed;

(c) the Insurer shall not indemnify the Insured for costs to expedite completion of a Contract at a faster rate than would have obtained if no Damage had occurred.

8. Time Adjustment Clause

It is agreed that any Damage to the Insured Property arising during any one period of 72 consecutive hours, caused by typhoon, storm, tempest, flood or earthquake shall be deemed as a single occurrence and therefore to constitute one occurrence with regard to the Excesses provided for herein. For the purpose of the foregoing the commencement of any such 72 hours period shall be decided at the discretion of the Insured it being understood and agreed, however, that there shall be no overlapping in any two or more such 72 hour periods in the event of Damage occurring over a more extended period of time.

9. Escalation Clause

If during the Period of Insurance the value of insured contracts shall be in excess of the Estimated Project Value, the Item 1 Sum Insured shall be increased automatically by such excess amount but not exceeding in all 20 per cent of the Item 1 Sum Insured provided that a declaration of the actual total contract value shall be made to Insurers in accordance with General Memoranda 9 (Adjustment of Premium) of this Contract of Insurance.

10. Local Authorities Reinstatement

This Policy extends to indemnify the Insured in respect of such additional cost of reinstatement of the Property Insured lost or damaged as may be incurred solely by reason of the necessity to comply with building and other regulations under or

framed in pursuance of any Government Act or with bye-laws of any municipal or local authority provided that:

(A) the amount recoverable under this Memorandum shall not include:

(a) the cost incurred in complying with any of the aforesaid regulations or bye-laws

(i) in respect of Damage not insured by this Policy

(ii) under which notice has been served on the Insured prior to the occurrence of the Damage

(iii) in respect of undamaged property or undamaged portions of property other than foundations of the portion of the property lost or damaged

(b) the amount of any rate tax duty development or other charge or assessment arising out of capital appreciation which may be payable in respect of the property by the owner thereof by reason of compliance with any of the aforesaid regulations or bye-laws

(B) the work of reinstatement must be commenced and carried out with reasonable despatch and may be carried out wholly or partially upon another site subject to the liability of the Insurers under this Memorandum not being thereby increased.

(C) the total amount recoverable under this policy shall not exceed HKD100,000,000 any one occurrence, in addition to the Sum Insured.

(D) the terms of this Policy except insofar as they may be hereby expressly varied shall apply as if they had been incorporated herein.

11. Munitions

General Exclusion 2 hereof will not apply to Damage occasioned by the presence of munitions of war in or about the vicinity of the Property Insured, provided that the

presence of such munitions does not result from a state of war current at the time of such Damage.

12. Notice of Claim

The Insured shall give notice as soon as possible to Cunningham Lindsey Hong Kong Ltd, on behalf of the Insurers of any occurrence likely to give rise to a claim under this Policy, together with such information and assistance as may be reasonably practicable.

It is noted and agreed that Cunningham Lindsey Hong Kong Ltd will automatically act as loss adjusters on all claims where the original estimate of loss exceeds the relevant amount stated as the Excesses in the Schedule. Cunningham Lindsey Hong Kong Ltd agree to pass on advice of claims to [Aon Hong Kong Limited]* if the estimate falls below the Excesses stated in the Schedule.

13. Claims Settlement Agreement

Insurers subscribing to this policy agree that any decision regarding policy liability (excluding ex-gratia or without prejudice payment) made by the Leading Insurer is binding on all Insurers for losses up to HKD2,000,000 net of policy excess.

Insurers further agree that where the Leading Insurer has agreed the settlement amount of any claim, that settlement of an Insurer's individual proportion of any final adjusted loss, interim loss payment, adjusters fee or professional fee or like cost or disbursement will be made to [Aon Hong Kong Limited]*, or as they may direct, within 60 days of receipt of notification of such Leading Insurer's agreement.

14. Uninsured Deductible

Insurers will be liable to pay any indemnifiable loss amount in excess of

(for Contracts over HKD1,500,000,000)

Act Of God / Fire / Theft / Vibration or Weakening or Removal of Support	HKD400,000 any one Occurrence

[*Note: Details subject to amendment by WKCDA.]

Defective Design Materials and Workmanship	HKD500,000 (LEG3/06) any one Occurrence
Hot Works / Welding Works	HKD750,000 any one Occurrence
Temporary Works	HKD300,000 or subject to 50% of the loss whichever is the greater any one Occurrence
Water Damage	HKD300,000 or subject to 20% of the loss whichever is the greater any one Occurrence
All Other losses	HKD200,000 any one Occurrence

(for all Contracts under HKD1,500,000,000)

Act Of God / Fire / Theft / Vibration or Weakening or Removal of Support	HKD200,000 any one Occurrence
Defective Design Materials and Workmanship	HKD500,000 (LEG3/06)
Hot Works / Welding Works	HKD750,000 any one Occurrence
Temporary Works	HKD200,000 or subject to 50% of the loss whichever is the greater any one Occurrence
Water Damage	HKD200,000 or subject to 20% of the loss whichever is the greater any one Occurrence
All Other losses	HKD150,000 any one Occurrence

15. Mold and Fungi Exclusion

This Policy shall not pay for damage or expense caused directly or indirectly and/or contributed to, in whole or in part, by any of the following excluded perils:

A. Fungi resulting directly or indirectly from any cause;

B. the cost to test for, monitor, or assess the existence, concentration, or effects of Fungi; or

C. the costs to clean up, remove or re-mediate against Fungi.

This exclusion shall apply regardless of any other cause or event that contributes concurrently or in any sequence to the damage, cost, claim or expense.

For the purposes of this Exclusion Fungi shall mean any form of Fungus, including but not limited to yeast, mold, mildew, rust, smut, mushrooms, spores, mycotoxins, odors, or any other substances, products or by products produced by, released by, or arising out of the current or past presence of Fungi. Fungi does not include a Fungus that was deliberately grown for Human consumption.

16. Employees' Personal Effects Belongings Tools of Trade and other Property

This Policy is extended to cover, in addition to the Sum Insured, damage to personal effects belongings tools of trade and other property of the contractor's employees. The liability of Insurers in respect of any one occurrence shall be limited to HKD500,000 for each employee.

The cover provided by this Memorandum does not apply to any damage sustained which is insured by or but for the existence of this Policy would be insured by any other existing policy or policies except in respect of any excess beyond the amount which would have been payable under such policy or policies had this Policy not been effected. For the avoidance of doubt, the policy Excess is not applicable to this coverage, however an Excess of HKD75,000 per claim is applicable.

17. Engineer's Staff Personal Effects Belongings Tools of Trade and other Property

Where the Contractor is required by agreement to insure the personal effects belongings tools of trade and other property of staff of the Architect Surveyor Consulting Engineer or other professionals or equivalent reasonably required for the carrying out of their duties in connection with the Contract whilst these are on site against damage such cover shall be automatically provided hereunder, in addition to the Sum Insured, but only to the extent required under any such agreement, and the liability of Insurers in respect of any one occurrence shall be limited to HKD500,000 for each employee.

The cover provided by this Memorandum does not apply to any damage sustained which is insured by or but for the existence of this Policy would be insured by any other existing policy or policies except in respect of any excess beyond the amount which would have been payable under such policy or policies had this Policy not been effected. For the avoidance of doubt, the Policy Excess is not applicable to this coverage, however an Excess of HKD75,000 per claim is applicable.

18. Temporary Repairs

The Insurers will indemnify the Insured in respect of the cost of effecting temporary repairs following Damage insured hereby in order that work on the Project may continue subject to a sublimit of HKD5,000,000.

19. Inland Transit

Insurers will indemnify the Insured against Damage while Insured Property is being transported by any conveyance (including loading and unloading) to the Project Site or temporary off-site storage facilities, other than during ocean marine (coastal shipments not to be considered as ocean marine transits) or air transit, provided that:

(a) the indemnity provided by this Memorandum shall only apply to the extent that such Damage is not recoverable under any other insurance;

(b) such Property Insured is procured and/or fabricated within the Territorial Limits;

(c) the liability of the insurers under this Memorandum shall not exceed HK$100,000,000 any one conveyance.

20. Off Site Fabrication

This Contract of Insurance extends to cover Damage to the Insured Property while being worked upon or fabricated or prefabricated within the Territorial Limits but excluding any manufacturer's premises in respect of electrical and mechanical works only. The maximum liability of Insurers in respect of Off-Site Fabrication shall not exceed HKD100,000,000 for any one Occurrence per location

21. Off-site Storage

This Contract of Insurance extends to cover Damage to the Insured Property whilst in storage within the Territorial Limits. The maximum liability of Insurers in respect of Off-Site Storage shall not exceed HKD100,000,000 for any one Occurrence per location

22. Preventative Measures

If during the Period of Insurance the Insured incur reasonable and additional cost and/or expenses to prevent reduce minimise or protect actual or imminent loss or damage covered by this Policy such costs will be met by Insurers provided that:

(a) It can be proven or shown that such costs and/or expenses were incurred within reasonable levels of the normal acceptance of diligence of an Insured.

(b) Costs and expenses incurred or paid by the Insured should be notified to Insurers as soon as practicable after implementation of the measures taken.

(c) Insurers liability for preventive measures under this clause shall not exceed 20% of loss subject to a maximum of HKD15,000,000 any one Occurrence in addition to the Sum Insured, and HKD30,000,000 in the aggregate during the Period of Insurance.

(d) Such costs are reasonable having regard to the value of the Property Insured at risk.

23. Strike Riot and Civil Commotion

It is agreed and understood that otherwise subject to the Terms of this Contract of Insurance this Policy shall be extended to cover Damage due to riot, strike or civil commotion which for the purpose of this Memoranda shall mean (subject always to the Special Conditions hereinafter contained) Damage to the Insured Property directly caused by

1. the act of any person taking part together with others in any disturbances of the public peace (whether in connection with a strike or lock-out or not) not being an Occurrence mentioned in condition 2 of the Special Conditions hereof,

2. the action of any lawfully constituted authority in suppressing or attempting to suppress any such disturbance or in minimizing the consequences of any such disturbance,

3. the wilful act of any striker or locked-out worker done in furtherance of a strike or in resistance to a lock - out,

4. the action of any lawfully constituted authority in preventing or attempting to prevent any such act or in minimizing the consequences of any such act.

Provided that it is hereby further expressly agreed and declared that:-

1. all the Terms of this Contract of Insurance shall apply in all respects to the insurance granted by this Memorandum save in so far as the same are expressly varied by the following Special Conditions and any reference to Damage in the wording of the Policy shall be deemed to include the perils hereby insured against,

2. the following Special Conditions shall apply only to the insurance granted by this Memorandum and the wording of the Policy shall apply in all respects to the insurance granted by the Policy as if this Memorandum had not been made thereon.

24. Free Issue Materials

The reference to materials in this Contract of Insurance shall extend to include free issue materials. Where such materials are to be insured under this Contract of Insurance the value of such materials must be declared in accordance with General Memoranda 7 (Adjustment of Premium) of this Contract of Insurance

SECTION 2 - THIRD PARTY LIABILITY

To indemnify the Insured in respect of all sums which the Insured shall become legally liable to pay for compensation (including claimants costs and expenses) in respect of: -

(i) Personal Injury

(ii) Damage

happening or consequent upon a cause occurring during the Period of Insurance and arising out of or in connection with the Insured Project anywhere within the Territorial Limits

Provided always that Insurers' liability for compensation payable to any number of claimants in respect of or arising out of any one Occurrence or shall not exceed the Limit of Indemnity.

The Insurers will however pay in addition to the Limit of Indemnity stated in the Schedule the following:

(a) all costs and expenses incurred with the written consent of the Insurers in the defence of claims against the Insured

(b) all fees and legal representation at any coroners inquest, fatal accident enquiry, court summary jurisdiction in respect of proceedings arising out of alleged breach of statutory duty or other similar judicial enquiry into circumstances relating to any accident claim or potential claim which would have been the subject of indemnity under this Policy

SECTION 2 - EXCLUSIONS

The Insurer(s) shall not be liable for:

1. EMPLOYERS' LIABILITY RISKS

a) liability in respect of death of or bodily injury (including illness or disease or disease) to any person under a contract of employment or apprenticeship with any person, company or firm engaged on the Insured Project in respect of an incident arising out of and in the course of employment with any person, company or firm engaged in work on or incidental to the Insured Project

b) liability in respect of death or bodily injury, of self-employed persons and sole proprietors

c) liability in respect of death of or bodily injury to any person arising out of and in the course of employment with any person company or firm engaged in work on or incidental to the same Insured Project for which insurance against such liability (whether the insurance is limited in amount or not) is or would have been provided under a contract of insurance in a form prescribed or approved under or issued in pursuance of any Employees' Compensation legislation applicable to any person, company or firm engaged on the same Insured Project or any extension of such contract of insurance granted on request as a matter of usual practice by Insurers authorised to issue such policies

d) liability imposed by the provisions of any Employees' Compensation legislation or industrial award or agreement or determination, which would not otherwise have attached

e) claims brought by one party comprising a person, company or firm engaged on the same Insured Project against another person, company or firm also engaged on the Insured Project work arising out of death of or bodily injury to any person employed by any person, company or firm engaged in work on or incidental to the Insured Project occurring in the course of their employment with the Insured in connection with the Insured Project

2. AIRCRAFT, WATERBORNE VESSELS

liability resulting from, attributable to or caused by the ownership or possession of or use by the Insured of any aircraft or the navigation of any waterborne vessel or craft but this Exclusion shall not apply to

a) non power driven vessels or craft

b) powered work boats, safety boats, personnel boats, working rafts or other vessels or craft up to 12 metres in length

c) floating Works, floating Temporary Works and their associated lowering pontoons

d) Loading and unloading of any such vehicle described in a), b) and c) insofar as indemnity is not provided under any other insurance policy

3. CARE, CUSTODY AND CONTROL

Property belonging to or in the care or custody of or under the control of the Insured, or any servant or agent of the Insured, but this Exclusion shall not apply to:

(a) employees and visitors effects

(b) premises (and its contents) of any Employer temporarily occupied by the Insured for the purposes of carrying out any contract

(c) premises including their fixtures and fittings leased, rented or provided to the Insured except the cost of repair, replacement or reinstatement of Property Damage to the extent that the tenancy lease or agreement stipulates that the Insured must effect insurance against such property damage.

4. REDOING / MAKING GOOD CONTRACTED WORK

Expenditure incured in doing or re-doing or making good work which the Insured has contracted to do but this Exclusion shall apply only to that part which is itself defective.

5. SEEPAGE, POLUTION OR CONTAMINATION

(a) Personal injury or Damage directly or indirectly caused by seepage, pollution or contamination, provided always that this paragraph (a) shall not apply to liability for personal Injury or Damage where such seepage, pollution or contamination is caused by a sudden, unintended and unexpected happening during the Period of lnsurance.

(b) The cost of removing, nullifying or cleaning-up seeping, polluting or contaminating substances unless the seepage, pollution or contamination is caused by a sudden, unintended and unexpected happening during the Period of Insurance.

(c) Fines, penalties, punitive or exemplary damages.

(d) The actual, alleged or threatened discharge, dispersal, release, seepage, migration or escape of pollutants anywhere in the world (for the avoidance of doubt this includes in the United States of America or Canada or in any country to which the laws of the United States of America or Canada apply) where a (the) claim/ allegation may be/ is brought against the Insured (even if such claim/ allegation is groundless or false) in the United States of America or Canada or in any country to which the laws of the United States of America or Canada apply

This Exclusion shall not extend this Insurance to cover any liability which would not have been covered under this insurance had this Exclusion not been attached.

6. POLICY DEDUCTIBLE

The amount stated in the Policy Schedule.

7. PROFESSIONAL RISKS

Any sums in respect of any act, error or omission relating to the performance of professional services or the failure to perform professional services by any Insured or by any person for whom any Insured is responsible, but this Exclusion does not apply to liability on account of personal Injury or property Damage (other than damage to the Works) arising therefrom.

8. FINES, PENALITIES, DAMAGES

Fines and/or Penalties and/or Exemplary and/or Punitive and/or Liquidated Damages and/or any additional damages resulting from the multiplication of compensatory damages.

9. Road Traffic Act Risk

liability in respect of death or bodily injury or Damage in connection with or arising from:-

a) the use of mechanically propelled passenger or goods carrying vehicles used on the public highway not being constructional plant primarily intended for use in the Insured's construction activities on site or otherwise used as a tool of trade

b) Occurrences in respect of which liability is compulsorily insurable under any Road Traffic Act or similar legislation governing the use of motor vehicles

MEMORANDA TO SECTION 2

1. CLAIM PROCEDURE

The Insured shall upon the discovery of an event likely to give rise to indemnity under this Policy:

(a) give through [Aon Hong Kong Limited]* to the Company as soon as reasonably practicable notice in writing, with full particulars of the happening of any occurrence likely to give rise to a claim under this policy, on the receipt by the Insured of notice of any claim and of the institution of any proceedings against the Insured

(b) send to the Company on receipt any writ, summons or other proceedings which may be commenced against the Insured

(c) give to the Company all information and assistance to enable the Company to settle or resist any claim or institute proceedings

It is agreed that Cunningham Lindsey Hong Kong Ltd, will act as assessors of all claims where the original estimate by the Company exceeds HK$50,000 gross, and that the Company will forward copies of such reports as are provided by Cunningham Lindsey Hong Kong Ltd, to [Aon Hong Kong Limited]* if the resulting estimate is below this HK$50,000 gross.

The Insured shall not admit liability for or offer or agree to settle any claim without the written consent of the Company who shall be entitled to take over and conduct in the name of the Insured the defence of any claim and to prosecute in the Insured's name for Company's benefit any claim for indemnity or damage or otherwise against any third party and shall have full discretion in the conduct of any negotiations and proceedings and the settlement of any claim. The Insured shall give to the Company such information and assistance as the Company may reasonably require.

2. INDEMNITY TO OTHER PARTIES

The Insurer(s) will also indemnify

(i) any director, parter or person under a contract of service or apprenticeship with the Insuredin respect of liability for which the Insured would have been entitled to indemnity under this Policy if the claim had been made directly against the Insured.

[*Note: Details subject to amendment by WKCDA.]

(ii) the officers, committees and members of the Insured's canteen, social sports and welfare organisations and first aid, fire and ambulance services for their respective capacities as such who shall as though the Insured be subject to the terms, exclusions, conditions and limitations of this Policy so far as they can apply.

3. VIBRATION, REMOVAL OR WEAKENING OF SUPPORT

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon and subject to the Insured having paid the agreed extra premium, Section 2 of this insurance shall be extended to cover liability consequent upon loss or damage caused by vibration or by the removal or weakening of support.

Provided always that

- the Insurers indemnify the Insured in respect of liability for loss or damage to any property or land or building only if such loss or damage results in the total or partial collapse,

- the Insurers indemnify the Insured in respect of liability for loss or damage to any property or land or building only if prior to the commencement of construction its condition is sound and the necessary loss prevention measures have been taken,

- if required, the Insured, before commencement of construction and at his own expense, prepares a report on the condition of any endangered property or land or building.

The Insurers shall not indemnify the Insured in respect of liability for

- loss or damage which is foreseeable having regard to the nature of the construction work or the manner of its execution,

- superficial damage which neither impairs the stability of the property, land or buildings nor endangers their users,

- the costs of loss prevention or minimization measures which become necessary during the period of insurance.

GENERAL EXCLUSIONS

The Indemnity provided by this Contract of Insurance shall not apply to nor include:-

1. HAZARDOUS GOODS, RADIOACTIVE AND NUCLEAR RISK

(a) loss or destruction of or damage to any property whatsoever or any loss or expense whatsoever resulting or arising therefrom or any consequential loss

(b) any legal liability of whatsoever nature

directly or indirectly caused by or contributed to by or arising from

(i) ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel

(ii) the radioactive toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof.

2. WAR AND TERRORISM

any liability, loss, Damage, cost or expense of whatsoever nature directly or indirectly caused by, resulting from or in connection with any of the following regardless of any other cause or event contributing concurrently or in any other sequence to the loss

a) war, invasion, acts of foreign enemies, hostilities or warlike operations (whether war be declared or not), civil war, rebellion, revolution, insurrection, civil commotion assuming the proportions of or amounting to any uprising, military or usurped power; or

b) any act of terrorism

For the purpose of this Exclusion an act of terrorism means an act, including but not limited to use of force or violence and the threat thereof, of any person or group(s) of persons, whether acting alone or on behalf of or in connection with any organisation(s) or government(s), committed for political, religious, ideological or similar purposes including the intention to influence any government and to put the public, or any section of the public, in fear

This Exclusion also excludes loss, Damage, cost or expense of whatsoever nature directly or indirectly caused by, resulting from or in connection with any action taken in controlling, preventing, suppressing or in any way relating to a) and b) above

If the Insurers allege that by reason of this Exclusion, any loss, Damage, cost or expense is not covered by this insurance the burden of proving the contrary shall be upon the Insured

In the event any portion of this Exclusion is found to be invalid or unenforceable, the remainder shall remain in full force and effect.

Notwithstanding this War Exclusion, the insurance shall cover loss or Damage:-

a) caused by missiles and mines and bombs and other explosives not discovered at the moment of commencement of the work on any part of the Insured Project hereunder, so long as no state of war exists in which the country where the subject matter insured will be erected is involved;

b) caused by strikes, locked-out workmen or persons taking part in labour disturbances, riots or civil commotions or persons acting maliciously

c) caused by shells and other missiles fired from military training grounds and dropped from military planes (in peacetime)

3. ELECTRONIC DATA

1) Electronic Data Exclusion

Notwithstanding any provision to the contrary within the Policy or any endorsement thereto, it is understood and agreed as follows:

(a) this Policy does not insure Damage, distortion, erasure, corruption or alteration of Electronic Data from any cause whatsoever (including but not limited to Computer Virus) or loss of use, reduction in functionality, cost, expense of whatsoever nature resulting therefrom, regardless of any other cause or event contributing concurrently or in any other sequence to the loss.

Electronic Data means facts, concepts and information converted to a form useable for communications, interpretation or processing by electronic and electromechanical data processing or electronically controlled equipment and includes programmes, software and other coded instructions for the processing and manipulation of data or the direction and manipulation of such equipment.

Computer Virus means a set of corrupting, harmful or otherwise unauthorised instructions or code including a set of maliciously introduced unauthorised instructions or code, programmatic or otherwise, that propagate themselves through a computer system or network of whatsoever nature. Computer Virus includes but is not limited to 'Trojan Horses', 'worms' and 'time or logic bombs'.

(b) However, in the event that a peril listed below results from any of the matters described in paragraph (a) above, this Policy, subject to all its terms, Conditions and Exclusions, will cover physical Damage occurring during the Policy period to Property Insured by this Policy directly caused by such Listed Peril.

Listed Perils
Fire
Explosion

2) Electronic Data Processing Media Valuation

Notwithstanding any provision to the contrary within the Policy or any endorsement thereto, it is understood and agreed as follows:

Should electronic data processing media insured by this Policy suffer Damage insured by this Policy, then the basis of valuation shall be the cost of the blank media plus the costs of copying the Electronic Data from back-up or from originals of a previous generation. These costs will not include research and engineering nor any costs of recreating, gathering or assembling such Electronic Data. If the media is not repaired, replaced or restored the basis of valuation shall be the cost of the blank media. However this Policy does not insure any amount pertaining to the value of such Electronic Data to the Insured or any other party, even if such Electronic Data cannot be recreated, gathered or assembled.

4. ASBESTOS, SILICA

ASBESTOS

Directly or indirectly caused by or alleged to be caused by or contributed to, in whole or in part, by or arising out of the manufacture of, mining of, use of, sales of, installation of, survey or investigation of, management of, removal of, distribution of, existence of or exposure to asbestos products, asbestos fibers or asbestos dust, or property or materials containing any of the foregoing, including without limitation all liability to pay claimants' or

the Insured's legal costs and expenses or any other costs and expenses, howsoever incurred in the investigation, defense and/or settlement of any claim or legal proceeding against the Insured.

Provided always that this Exclusion shall not apply to liability unrelated to the known or suspected harmful injurious or damaging effects of asbestos products or fibres or dust for which this section would apply but for this exclusion.

SILICA

Directly or indirectly caused by or alleged to be caused by or contributed to, in whole or in part, by or arising out of the presence, ingestion, inhalation or absorption of or exposure to silica products, silica fibers, silica dust or silica in any form, or to any obligation of the insured to indemnify any party because of Bodily Injury or Property Damage arising out of the presence, ingestion, inhalation or absorption of or exposure to silica products, silica fibers, silica dust or silica in any form.

GENERAL MEMORANDA

1. INTERPRETATION

This Contract of Insurance and the Schedule attaching hereto shall be read together as one contract and any word or expression to which specific meaning has been attached in any part of this contract shall bear such specific meaning wherever it may appear

2. COMMENCED PROJECT WORKS

This Policy extends to include Damage occurring during the Period of Insurance to Project related works carried out prior to the inception of the Period of Insurance – subject to declaration of such works prior to policy inception

3. MATERIAL ALTERATION

If the risk as agreed by Insurers shall be materially altered or increased, the Insured shall give information in writing as soon as practically possible of such alteration or increase to the Insurers

4. PRIMARY INSURANCE

It is expressly understood and agreed that the insurance provided by this Contract of Insurance is the primary insurance for the Insureds shown in this contract. If at the time any claim arises under this contract, should there be any other insurance covering the same loss, Damage or liability such other insurance shall only apply as an excess coverage and non-contributing herewith

5. NON CANCELLATION

This Policy may be cancelled by the Insured in the event of the Project being abandoned by written notice or by surrender of this Policy. This Policy may also be cancelled by or on behalf of the Insurers but only in respect of non-payment of premium, by delivering to the Insured or by mailing to the Insured by registered or certified mail to the Insured's address written notice stating when not less than 90 days thereafter the cancellation shall be effective.

The mailing of such notice as aforesaid shall be sufficient proof of notice and this insurance shall terminate at the date and hour specified in such notice.

If this insurance is cancelled by or on behalf of the Insured the Insurers shall retain the pro rata proportion of the premium. Payment or tender of any unearned premium by the

Insurers shall not be a condition precedent to the effectiveness of cancellation but such payment shall be made as soon as practicable.

If the period of limitation relating to the giving of any notice is prohibited or made void by any law or endorsement to this Policy then such period shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by law or specified in such endorsement.

6. DEFECTS LIABILITY CLAUSE

Cover shall remain in full force and effect under this Contract of Insurance in respect of the Insured Property until the putting into commercial operation of the Insured Project or the completion date shown in the Contract of Insurance whichever is the sooner. From the end of the construction period, being defined as the putting into commercial operation of the Insured Project, Damage to Works occurring before the expiry of the defects liability period shall be limited to Damage

a) arising from a defect originating on site during the construction period in respect of building and civil works

b) arising from a defect originating at site during the construction erection period for electrical and mechanical works.

c) caused by Contractors arising out of any operations carried out by them for the purpose of complying with their obligations under the contract

d) during test running or trial running

Individual electrical and mechanical manufacturers, suppliers or sub-contractors shall not following the completion and taking over the plant supplied by them be entitled to the benefit of insurance under this Contract of Insurance in respect of Damage to such plant which is directly caused by its own fault, defect or error in design or manufacture

7. ADJUSTMENT OF PREMIUM

Upon expiry the Principal shall as soon as possible after the expiration of the Period of Insurance declare to the Insurers value of work executed during the Period of Insurance and the Premium shall be recalculated at the agreed rate an Additional Premium being paid by the Insured or a Return Premium being allowed by the Insurers, equating to the difference between the Premium and the earned Premium as calculated

8. MULTIPLE INSURED CLAUSE

i. It is noted and agreed that if the Insured described in the Schedule comprises more than one insured party each operating as a separate and distinct entity then (save as provided in this Multiple Insured Clause) cover hereunder shall apply in the same manner and to the same extent as if individual policies had been issued to each such insured party provided that the total liability of the Insurers to all of the Insured parties collectively shall not exceed the Sums Insured and Limits of Indemnity including all inner limits set by Memorandum or Endorsement stated in the Contract of Insurance

ii. It is understood and agreed that any payments by Insurers to any one or more such insured parties shall reduce to the extent of that payment Insurers' liability to all such parties arising from any one event giving rise to a claim under this Contract of Insurance and (if applicable) in the aggregate

iii. It is further understood that the insured parties will at all time preserve the various contractual rights and agreements entered into by the insured parties and the contractual remedies of such parties in the event of loss or Damage.

iv. It is further understood and agreed that Insurers shall be entitled to avoid liability to or (as may be appropriate) claim damages from any of the insured parties in circumstances or fraud, material misrepresentation, material non disclosure or breach of any warranty or condition of this Contract of Insurance each referred to in this clause as a "Vitiating Act"

v. It is however agreed that (save as provided in this Multiple Insured Clause) a Vitiating Act committed by one insured party shall not prejudice the rights to indemnity of any other insured party who has an insurable interest and who has not committed a Vitiating Act

vi. Insurers hereby agree to waive all rights of subrogation which they may have or acquire against any insured party except where the rights of subrogation or recourse are acquired in consequence of or otherwise following a Vitiating Act in which circumstances Insurers may enforce such rights notwithstanding the continuing or former status of the vitiating party as an Insured.

9. PAYMENTS ON ACCOUNT

For a loss covered by this Contract of Insurance, it is understood and agreed the Insurers shall allow a partial payment(s) of claim subject to the Contract of Insurance provisions. To obtain said partial claim payment, the Insured shall submit a partial proof of loss with supporting documentation for Insurers agreement and approval. It is further agreed that the applicable Contract of Insurance Deductible must be satisfied before said partial payment(s) are allowable

10. REASONABLE PRECAUTIONS

The Insured shall take all reasonable precautions in the selection of labour and in the maintenance in efficient condition of all plant and appliances used in connection with the Insured Project and the Insurers shall at all reasonable times have by its representatives access to examine any such plant and appliances.

The Insured shall also take and cause to be taken all reasonable precautions to prevent loss, Damage or accident and shall ensure that all such precautions are carried out and maintained during the Period of Insurance.

11. APPLICATION OF TERMS CONDITIONS AND EXCEPTIONS

All the terms, exceptions and conditions contained herein or endorsed hereon are:

a) incorporated in and form part of this Contract of Insurance

b) to be deemed conditions precedent to any liability on the part of the Insurers so far as they relate to anything to be done by the Insured

12. MORTGAGEE CLAUSE

It is noted and agreed that this Policy extends to include Mortgagee Clause at wordings to be agreed by the Insurer on case by case basis.

13. NOMINATED LOSS ADJUSTER

Cunningham Lindsey (Hong Kong) Limited

14. BANKRUPTCY, INSOLVENCY OR TERMINATION

In the event of the bankruptcy, insolvency or termination of any party claiming to be indemnified as an Insured hereunder, the Insurers shall not be relieved hereby of the payment of any claim hereunder because of such bankruptcy, insolvency or termination

15. SOCIAL FUNCTIONS / ACTIVITIES / SITE VISITORS

It is noted and agreed that this Policy will indemnify the Insured in respect of attendance at and / or arrangement of corporate social and other social activities arranged in connection with the Project. Further this Policy shall also indemnify the Insured in respect of its legal liability to visitors to the Project Site and other premises of the Insured who are not directly involved in the performance of the contract works.

16. SUE AND LABOUR CLAUSE

In the event of Damage insured under Section I of this Contract of Insurance or in the event of an Occurrence under Section 2, the Insurers will indemnify the Insured for any expense or sacrifice incurred as a result of immediate action taken, reasonable at the time of the Damage or Occurrence to minimise such Damage or liability being incurred, provided such expenses or sacrifices made are reasonable having regard to the value of the Insured Property at risk and the limit under Sections 1 and 2

In the event the action taken was also to prevent Damage to property of the Insured not indemnifiable under this Contract of Insurance, the Insurers' indemnification under this provision shall be proportionate to the value of the Insured Property hereunder which was immediately and directly endangered by the Occurrence

Nothing in this Clause, however, shall increase Insurers' total liability for any one Occurrence or claim beyond the Limits of Liability stated in the Schedule

17. CLAIMS NOTIFICATION

The Insured shall upon the discovery of any event likely to give rise to a claim under this Contract of Insurance

a) give notice in writing thereof as soon as possible to the Insurers and at his own expense as soon as practicable supply full particulars in the form required by the Insurers,

b) send to the Insurers on receipt any writ, summons or other proceedings which may be commenced against the Insured,

c) give to the Insurers all information and assistance to enable the Insurers to settle or resist any claim or institute proceedings.

The Insured shall take all practical steps, including in the case of goods lost or stolen, or of wilful Damage thereto, to give notice to the police as soon as possible for the purpose of recovering any property lost and in the case of theft or wilful Damage to discover the guilty person or persons and to have him, her or them prosecuted.

The Insured shall not negotiate, pay, settle, admit or repudiate any claim under this Contract of Insurance without the written consent of the Insurers.

The Insured shall not in any case be entitled to abandon any property to the Insurers whether taken possession of by the Insurers or not

18. PROTECTION OF INTERESTS

The Insured shall at the expense of the Insurers do and concur in doing and permit to be done all such acts and things as may be necessary or reasonably be required by the Insurers for the purpose of enforcing any rights and remedies or of obtaining relief or indemnity from other parties to which the Insurers shall be or would become entitled or subrogated upon their paying for or making good any loss or Damage under this Contract of Insurance whether such acts and things shall be or become necessary or required before or after this indemnification by the Insurers

19. ARBITRATION

All differences arising out of this Policy as to amount of the indemnity, liability being otherwise admitted, shall be referred to the decision of an arbitrator to be appointed in writing by the parties in difference or if they cannot agree upon a single arbitrator to the decision of two arbitrators one to be appointed by each of the parties in writing or in the case of disagreement of an Umpire appointed by the arbitrators in writing before entering upon the reference. The costs of the reference and of the award shall be at the discretion of the arbitrators or Umpire making the award whose award shall be a condition precedent to any liability of the Insurers or any right of action against the Insurers in respect of any claim. Such arbitration shall take place in Hong Kong.

20. MEDIATION

If any dispute or difference of whatsoever nature arises out of or in connection with this Contract of Insurance, including any question regarding its existence, validity or termination, hereafter termed as dispute, the parties undertake that, prior to a reference

to arbitration in accordance with they will seek to have the dispute resolved amicably by mediation

All rights of the parties in respect of the dispute are and shall remain fully reserved and the entire mediation including all documents produced or to which reference is made, discussions and oral presentations shall be strictly confidential to the parties and shall be conducted on the same basis as without prejudice negotiations, privileged, inadmissible, not subject to disclosure in any other proceedings whatsoever and shall not constitute any waiver of privilege whether between the parties or between either of them and a third party

The mediation may be terminated should any party so wish by written notice to the appointed mediator and to the other party to that effect. Notice to terminate may be served at any time after the first meeting or discussion has taken place in the mediation.

If the dispute has not been resolved to the satisfaction of either party within 90 days of service of the notice initiating mediation, or if either party fails or refuses to participate in the mediation, or if either party serves written notice terminating the mediation under this condition, then either party may refer the dispute to arbitration in accordance with General Condition 19 (Arbitration)

Unless the parties otherwise agree, the fees and expenses of the mediator and all other costs of the mediation shall be borne equally by the parties and each party shall bear their own respective

21. AGCS SANCTIONS CLAUSE

No (re)insurer shall be deemed to provide cover and no (re)insurer shall be liable to pay any claim or provide any benefit hereunder to the extent that the provision of such cover, payment of such claim or provision of such benefit would expose that (re)insurer to any sanction, prohibition or restriction under United Nations resolutions or the trade or economic sanctions, laws or regulations of the European Union, United States of America and/or any other applicable national economic or trade sanction law or regulations.

22. BURNING AND WELDING CLAUSE

the Insured shall take the following precautions to prevent loss, damage or accident due to burning and welding:

1. General

- The areas in which the operation is to be carried out must be clear and free from combustible materials before operations commence.

- Before carrying out any work on one side of a wall or partition, an inspection must be made to the opposite side to the work to ensure that no combustible materials are in danger of ignition either directly or indirectly by condition of heat

- Except or plumbing or painting contractors involving one man only, at least one responsible official must be present at commencement of the operation and two or more employees must be present during the whole period of the operation.

- A thorough examination must be made in the vicinity after termination of each period of work

- Portable fire extinguishing appliances must be kept available for immediate use.

2. Oxy-Acetylene and Other Welding & Cutting Equipment

- The areas in which the work is to be carried out must be shielded adequately by the use of fire-resistant material.

- Combustible floors in the area must be covered with sand or protected with overlapping sheets of non-combustible material.

3. Blow Lamps and Blow Torches

- Blow lamps must be filled only in the open.
- Blow lamps must be lighted immediately before work commences and extinguished immediately after works ceases.
- Lighted blow lamps must not be left unattended.

4. A "permit to work" system is implemented for all contractors engaged in 'hot work' of any kind such as but not limited to:

- Grinding, cutting or welding operations
- Use of blow lamps and torches
- Application of hot bitumen

Or any other heat producing operation.

'Hot work' is carried out only in the presence of at least one worker equipped with a fire extinguisher and trained in fire-fighting.

23. RUN-OFF CLAUSE

It is noted and agreed that no new contracts are to attach to this Policy after 31 December 2019.

On expiry of this Policy, coverage shall continue at Policy terms and conditions for contracts which have attached before 31 December 2019 for a period of 36 months plus 12 months defects liability period.

West Kowloon Cultural District Authority Project

1st Excess Liability Insurance Policy

Schedule

Policy Number: 1-L0050018-PLB

Insured Parties

1. West Kowloon Cultural District Authority (as Employer) and the Employer's Representatives

2. The Main Contractor

3. All Contractors and all sub-contractors of any tier engaged by Insured (1) and (2)

4. The Government of the Hong Kong Special Administrative Region

5. Suppliers, Vendors, Architects, Surveyors, Engineers, Consultants and all others engaged to provide goods or services in connection with the Insured Project for site activities only

6. Any other party having an insurable interest (and not mentioned above) to the extent that Insured 1 is required by contract or agreement to provide insurance to such party(ies)

The Insured shall be deemed to include all directors, partners, employees and agents of the above named (even if their names are not specifically mentioned in the Contract of Insurance) in respect of their site activities only

All for their respective rights and interests and/or as may be more fully defined in this Policy.

The Insured Project:	The design, engineering, procurement, construction, erection, testing and commissioning and defects liability period for all contracts forming part of Batch 1 and Batch 2 of the West Kowloon Cultural District Project and all ancillary and associated works and services in connection therewith This policy is arranged on an "Attachment Basis" i.e. contracts declared are covered until completion plus 12 months Defect Liability Period.
The Interest:	To indemnify the Insured in respect of all sums which the Insured shall become legally liable to pay for compensation (including claimants costs and expenses) in respect of: - (i) Personal Injury to any person (ii) Property Damage happening or consequent upon a cause occurring during the Period

	of Insurance and arising out of or in connection with the Insured Project anywhere within the Territorial Limits and covered by the Underlying Policy(ies) shown in the schedule issued to the Insured by the Underlying Insurer(s) Provided that: a. The liability of the Insurers in respect of each and every occurrence (and in the aggregate for all occurrences in the Period of Insurance where the Underlying Policy(ies) contain an aggregate limit for all occurrences in the Period of Insurance) shall only be for the excess of loss over the Ultimate Nett Loss specified in the Schedule as the "Underlying Limit" and then only up to the Ultimate Net Loss specified in the Schedule as the "Limit Hereon" b. Underlying Policy(ies) shall be those shown in the Schedule c. The term "Ultimate Nett Loss" shall mean the sum actually paid in the settlement of the liability of the Insured after making deduction for all recoveries and all other valid and collectible insurances excepting however the policies of the Underlying Insurers and shall exclude all Costs and Expenses except to the extent that such Costs and Expenses payable by Underlying Insurers are included within the Underlying Limit.
Territorial Limits:	Worldwide including 'drop down' of cover in respect of the primary TPL placement subject to the primary TPL applicable Deductible
Limit Hereon:	HKD450,000,000 any one Occurrence or series of Occurrences arising out of one event unlimited in all during the Period of Insurance
Underlying limits:	HKD50,000,000 any one Occurrence or series of Occurrences arising out of one event unlimited in all during the Period of Insurance
The Period of Insurance:	From the commencement of Batch 1 works 9 August 2014 to the date of Practical Completion of Batch 2 works which is estimated to be 31 December 2020 (both days inclusive Local Standard Time at the Project Site) Maximum contract period per individual contract attaching is 48 months followed by 12 months defects liability period. Extensions to the Period of Insurance for the attached contracts (up to 3 months) are automatically covered at Nil additional premium. Any further extensions are automatically covered at

	terms to be agreed and an additional premium not to exceed pro rata. Run-off clause to apply: (1) No new contracts to commence after 31 December 2019 and 36 month run-off cover commences from 31 December 2020
Premium:	As agreed. **To be charged as and when contracts attach.**
Notice Of Loss	To Be Given To: <u>Appointed Loss Adjusters:</u> Cunningham Lindsey Hong Kong Limited Mr Alan McConkey / Mr James Grima Address: Unit 2301, Citicorp Centre, 18 Whitfield Road, Hong Kong Telephone: +852 2529 0123 / +852 9082 0832
Underlying Policy(ies):	Construction All Risks: <u>1 ECA14-00097-00</u>

Operative Clause:	The Insured named in the schedule having applied to the Insurers for the Insurance hereinafter expressed Now therefore in consideration of the payment of or promise to pay the premium by the Insured and subject to the General Terms Exceptions Conditions and Schedule contained herein or endorsed hereon (hereinafter collectively referred to as "the terms of this Policy") the Insurers will indemnify the Insured against all sums which the Insured shall become legally liable to pay for compensation (including claimants costs and expenses) in respect of:- a) Personal Injury b) Damage happening or consequent upon a cause occurring during the Period of Insurance and arising out of or in connection with the Insured Project anywhere within the Territorial Limits and covered by the Underlying Policy(ies) shown in the schedule issued to the Insured by the underlying insurer(s) Provided that

	(i) the liability of the Insurers in respect of each and every occurrence (and in the aggregate for all occurrences in the Period of Insurance where the Underlying Policy(ies) contain an aggregate limit for all occurrences in the Period of Insurance) shall only be for the excess of loss over the Ultimate Nett Loss specified in the Schedule as the "Underlying Limit" and then only up to the Ultimate Nett Loss specified in the Schedule as the "Limit Hereon" (ii) Underlying Policy(ies) shall be those shown in the Schedule. (iii) the term "Ultimate Nett Loss" shall mean the sum actually paid in the settlement of the liability of the Insured after making deduction for all recoveries and all other valid and collectible insurances excepting however the policies of the Underlying Insurers and shall exclude all Costs and Expenses except to the extent that such Costs and Expenses payable by Underlying Insurers are included within the Underlying Limit.
General Terms Exceptions and Conditions:	This Policy to follow Underlying Policy(ies) This Policy is subject to the same warranties terms exceptions and conditions (except as regards the premium the obligation to investigate and defend the amount and limits of liability and the renewal agreement if any and except as otherwise provided for herein) as are contained in or as may be added to the Policy(ies) of the Underlying Insurer(s). Attachment of liability The Insurers will not indemnify the Insured under this Policy unless and until the Insurer(s) on the Underlying Policy(ies) shall have admitted liability under their policy or policies and the Insured has been adjudged liable or in the opinion of the Underlying Insurer(s) will be adjudged liable to pay a sum which exceeds the Underlying Limit. Maintenance of Underlying Policy(ies) and step down provision It is a condition of this Policy that the Underlying Policy(ies) shall be maintained in full force and effect during the currency of this insurance provided that (a) in the event of reduction or exhaustion of any aggregate limit(s) under any Underlying Policy(ies) by reason of losses paid there under this Policy shall (i) in the event of reduction, indemnify the Insured in excess of such reduced Underlying Limit or (ii) in the event of exhaustion, continue in force in the terms of the Underlying Policy(ies) without any

	self-insured excess. (b) where the Period of Insurance of the Underlying Policy(ies) to which this Policy applies in excess is or may be non-concurrent with the Period of Insurance of this Policy then in the event of reduction or exhaustion of any aggregate limit or limits contained in such Underlying Policy(ies) solely by payments made within the terms and conditions of the Underlying Policy(ies) this Policy shall apply in excess of the reduced Underlying Limit or if such limit is exhausted shall apply as underlying insurance subject always to the Terms of this Policy. Costs and expenses Definition "Expenses" shall mean expenses incurred by Insurers or by the Insured with the consent of Insurers (which consent shall not be unreasonably withheld) in defence investigation and adjustment of any claim (but excluding all office expenses of the Insured and all expenses for salaried employees of the Insured). "Costs" shall mean all costs taxed against the Insured in any suit defended with Insurers' consent (which consent shall not be unreasonably withheld) and interest accruing after entry of any judgement against the Insured.

Apportionment

If the Underlying Policy(ies) provide for costs and expenses to be payable in addition to the Underlying Limit the liability of the Insurers hereunder for such costs and expenses shall be limited to that proportion which the amount payable under this Policy excluding such costs and expenses bears to the total sum payable under all contributing policies excluding such costs and expenses.

If however a settlement of any loss hereby insured be practicable prior to taking a case into court whether by compromise or otherwise for a sum not exceeding the Underlying Limit no costs or expenses shall be payable by the Insurers hereunder other than expenses incurred with Insurers specific consent.

Appeal

In the event of the Underlying Insurers electing not to appeal a judgement or contest a loss in excess of the Underlying Limit(s) the Insurers hereon shall accept the total costs and expenses of the defence should they elect to appeal or contest such loss.

Consent to settlement

No settlement of a loss by agreement shall be effected by the Insured for a sum in excess of the Underlying Limit without the consent of the Insurers hereon.

Application of recoveries

All recoveries or payments recovered or received subsequent to a loss settlement under this Policy shall be applied as if recovered or received prior to such settlement and all necessary adjustments shall then be made between the Insured and the Insurers provided always that nothing in this Policy shall be construed to mean that losses under this Policy are not payable until the Insured's Ultimate Nett Loss has been finally ascertained.

Notification of Claims

The Insured upon knowledge of any occurrence or loss likely to give rise to a claim hereon which for the purposes of this Policy shall be deemed to be any claim which in the opinion of or to the knowledge of the Insured is reasonably likely to exceed a total settlement cost of HKD25,000,000 must give immediate written notice to Cunningham Lindsey Hong Kong Limited, Unit 2301, Citicorp Centre, 18 Whitfield Road, Hong Kong.

Inadvertent failure to comply with this Condition because the Insured could not reasonably have anticipated that occurrence or loss would give rise to a claim under this Policy will not be construed as a breach of this Condition.

Law and jurisdiction

This insurance shall be governed by and construed in accordance with the law of Hong Kong Special Administrative Region and each party agrees to submit to the exclusive jurisdiction of the Courts of the Hong Kong Special Administrative Region Interpretation

It is hereby noted and agreed that all wordings incorporated in this Policy and all subsequent endorsement are accepted by Insurers as their own.

Insurers' Liability, Several not Joint

The liability of an Insurer under this contract is several and not joint with other Insurers party to this contract. A Insurer is liable only for the proportion of liability it has underwritten. An Insurer is not jointly liable for the proportion of liability underwritten by any other Insurer. Nor is a Insurer otherwise responsible for any liability of any other Insurer that may underwrite this contract.

The proportion of liability under this contract underwritten by a Insurer (or, in the case of a Lloyd's syndicate, the total of the proportions underwritten by all the members of the syndicate taken together) is shown next to its stamp. This is subject always to the provision concerning "signing" below.

In the case of a Lloyd's syndicate, each member of the syndicate (rather than the syndicate itself) is a Insurer. Each member has underwritten a proportion of the total shown for the syndicate (that total itself being the total of the proportions underwritten by all the members of the

syndicate taken together). The liability of each member of the syndicate is several and not joint with other members. A member is liable only for that member's proportion. A member is not jointly liable for any other member's proportion. Nor is any member otherwise responsible for any liability of any other Insurer that may underwrite this contract. The business address of each member is Lloyd's, One Lime Street, London EC3M 7HA. The identity of each member of a Lloyd's syndicate and their respective proportion may be obtained by writing to Market Services, Lloyd's, at the above address.

Proportion of Liability

Unless there is "signing" (see below), the proportion of liability under this contract underwritten by each Insurer (or, in the case of a Lloyd's syndicate, the total of the proportions underwritten by all the members of the syndicate taken together) is shown next to its stamp and is referred to as its "written line".

Where this contract permits, written lines, or certain written lines, may be adjusted ("signed"). In that case a schedule is to be appended to this contract to show the definitive proportion of liability under this contract underwritten by each Insurer (or, in the case of a Lloyd's syndicate, the total of the proportions underwritten by all the members of the syndicate taken together). A definitive proportion (or, in the case of a Lloyd's syndicate, the total of the proportions underwritten by all the members of a Lloyd's syndicate taken together) is referred to as a "signed line". The signed lines shown in the schedule will prevail over the written lines unless a proven error in calculation has occurred.

Although reference is made at various points in this clause to "this contract" in the singular, where the circumstances so require this should be read as a reference to contracts in the plural.

Security Default Cancellation Clause

Notwithstanding anything contained in this Certificate to the contrary, in the event of a 'Default Event' occurring (as hereinafter described) in relation to any Insurer, the Insured shall have the right to give notice of cancellation of the participation of such Insurer in this Certificate. Such cancellation shall be effective as at the date of the Default Event or, at the sole discretion of the Insured (and always subject to any other cancellation date imposed by any relevant law or statute governing insolvency and liquidation generally in the country in which the Insurer has its place of incorporation or domicile), such date thereafter during the period of this Certificate as the Insured may stipulate in its notice of cancellation. To be effective, any notice of cancellation by the Insured under this Clause must be delivered in writing to the Insurer whose participation is being cancelled.

A "Default Event" shall be deemed to have occurred if an Insurer or any entity owning directly or indirectly more than 40% of its issued share capital (and with respect to an Insurer which is a Lloyd's Syndicate also its managing agent):

(a) fails for whatever reason to pay any claim which has been determined and agreed by the Insurer under this Certificate within 30 days of the date when the same falls due for payment, or fails to meet any other obligation under this Certificate; or

(b) becomes unable for whatsoever reason to pay its debts in their entirety as the same fall due for payment; or

(c) is placed into voluntary or involuntary liquidation, rehabilitation, bankruptcy, receivership, chapter 11, administration or is dissolved or is the subject of any similar relief or state of affairs for the protection of some or all of the creditors of the Insurer or is the subject of any application, resolution or petition for or with a view to effecting any of the foregoing; or

As used in this Clause, "Insurer" means each insurance company, Reinsurance Company, Lloyd's Syndicate or other risk bearing entity subscribing to this Certificate. "Insured" may mean Insured under a Certificate of direct insurance or Reinsured under a Certificate of reinsurance, as the case may be.

(d) makes or proposes any composition with its creditors or makes any assignment for the benefit of its creditors or otherwise acknowledges its insolvency; or

(e) has any relevant license to conduct business suspended, removed or impaired by any order or decree of any judicial or regulatory authority; or

(f) has its Financial Strength Rating or its Financial Performance rating, as published by Standard & Poor's or A M Best, downgraded below A- or A minus respectively; or

In relation to a Lloyd's Syndicate, the published rating, as referenced in sub-paragraph (f) above, shall be that which applies to Lloyd's as a whole, provided Lloyd's continues to be rated as a single entity by Standard & Poor's or A M Best.

Any Insurer whose participation in this Certificate is cancelled by the Insured in accordance with this Clause shall return to the Insured, forthwith upon cancellation, its share of unearned premium, unless any claim/circumstance has been notified in which case the premium will be deemed fully earned. The unearned premium shall be calculated on a pro-rata daily basis or, where the premium is adjustable, it shall be calculated on a pro-rata basis on that proportion of the amount to which the premium rate is applied, which has not yet been incurred, completed, earned or expended (as the case may be) by the Insured at the date of cancellation. It is further agreed that either party shall be entitled to set-off any monies which are owed by the other party as at the date of cancellation. Cancellation hereunder shall be without prejudice to the rights of the parties accrued as at the date notice of cancellation given hereunder takes effect.

ASBESTOS EXCLUSION 2003 (XOL) 7/03

It is agreed that this Policy shall not apply to

a) liability directly or indirectly caused by or alleged to be caused by or contributed to in whole or in part by or arising from the existence of or exposure to asbestos and/or any asbestos containing materials;

b) any obligation to defend any claim or suit against the Insured alleging liability resulting from (a) above nor to Underwriters' liabilities for any costs fees or expenses arising there from.

Worldwide Territorial Limits

Notwithstanding Section II of The Underlying Policy, this Policy will respond as Difference in Conditions to cover

i) claims made and actions instituted within the United States of America, Canada or Australia and their respective territories and protectorates, and any other territory coming within the jurisdiction of the courts of the United States of America, Canada or Australia; or

ii) claims and actions to which the laws of the United States of America, Canada or Australia and their respective territories and protectorates apply.

But subject always otherwise to the terms, conditions, exclusions and definitions of the Underlying Policy and this Policy.

Security:

Re Insurers	Signed Line
QBE Hongkong & Shanghai Insurance Limited	80%
Catlin Hong Kong Limited	20%

West Kowloon Cultural District Authority Project

2nd Excess Liability Insurance Policy

Schedule

Policy Number: 1-L0050019-PLB

Insured Parties

1. West Kowloon Cultural District Authority (as Employer) and the Employer's Representatives

2. The Main Contractor

3. All Contractors and all sub-contractors of any tier engaged by Insured (1) and (2)

4. The Government of the Hong Kong Special Administrative Region

5. Suppliers, Vendors, Architects, Surveyors, Engineers, Consultants and all others engaged to provide goods or services in connection with the Insured Project for site activities only

6. Any other party having an insurable interest (and not mentioned above) to the extent that Insured 1 is required by contract or agreement to provide insurance to such party(ies)

The Insured shall be deemed to include all directors, partners, employees and agents of the above named (even if their names are not specifically mentioned in the Contract of Insurance) in respect of their site activities only

All for their respective rights and interests and/or as may be more fully defined in this Policy.

The Insured Project:	The design, engineering, procurement, construction, erection, testing and commissioning and defects liability period for all contracts forming part of Batch 1 and Batch 2 of the West Kowloon Cultural District Project and all ancillary and associated works and services in connection therewith This policy is arranged on an "Attachment Basis" i.e. contracts declared are covered until completion plus 12 months Defect Liability Period. The Interest: To indemnify the Insured in respect of all sums which the Insured shall become legally liable to pay for compensation (including claimants costs and expenses) in respect of: - (i) Personal Injury to any person (ii) Property Damage happening or consequent upon a cause occurring during the Period of

	Insurance and arising out of or in connection with the Insured Project anywhere within the Territorial Limits and covered by the Underlying Policy(ies) shown in the schedule issued to the Insured by the Underlying Insurer(s) Provided that: a. The liability of the Insurers in respect of each and every occurrence (and in the aggregate for all occurrences in the Period of Insurance where the Underlying Policy(ies) contain an aggregate limit for all occurrences in the Period of Insurance) shall only be for the excess of loss over the Ultimate Nett Loss specified in the Schedule as the "Underlying Limit" and then only up to the Ultimate Net Loss specified in the Schedule as the "Limit Hereon" b. Underlying Policy(ies) shall be those shown in the Schedule The term "Ultimate Nett Loss" shall mean the sum actually paid in the settlement of the liability of the Insured after making deduction for all recoveries and all other valid and collectible insurances excepting however the policies of the Underlying Insurers and shall exclude all Costs and Expenses except to the extent that such Costs and Expenses payable by Underlying Insurers are included within the Underlying Limit.
Territorial Limits:	Worldwide including 'drop down' of cover in respect of the primary TPL placement subject to the primary TPL applicable Deductible
Limit Hereon:	HKD500,000,000 any one Occurrence or series of Occurrences arising out of one event unlimited in all during the Period of Insurance
Underlying limits:	HKD500,000,000 any one Occurrence or series of Occurrences arising out of one event unlimited in all during the Period of Insurance
The Period of Insurance:	From the commencement of Batch 1 works 9 August 2014 to the date of Practical Completion of Batch 2 works which is estimated to be 31 December 2020 (both days inclusive Local Standard Time at the Project Site) Maximum contract period per individual contract attaching is 48 months followed by 12 months defects liability period. Extensions to the Period of Insurance for the attached contracts (up to 3 months) are automatically covered at Nil additional premium. Any further extensions are automatically covered at terms to be agreed and an additional premium not to exceed pro rata. Run-off clause to apply: (1) No new contracts to commence after 31 December 2019 and

	(2) 36 month run-off cover commences from 31 December 2020
Premium:	As agreed. **To be charged as and when contracts attach.**
Notice Of Loss	To Be Given To: Appointed Loss Adjusters: Cunningham Lindsey Hong Kong Limited Mr Alan McConkey / Mr James Grima Address: Unit 2301, Citicorp Centre, 18 Whitfield Road, Hong Kong Telephone: +852 2529 0123 / +852 9082 0832
Underlying Policy(ies):	Construction All Risks: 1 ECA14-00097-00 and 1-L0050018-PLB

Operative Clause:	The Insured named in the schedule having applied to the Insurers for the Insurance hereinafter expressed Now therefore in consideration of the payment of or promise to pay the premium by the Insured and subject to the General Terms Exceptions Conditions and Schedule contained herein or endorsed hereon (hereinafter collectively referred to as "the terms of this Policy") the Insurers will indemnify the Insured against all sums which the Insured shall become legally liable to pay for compensation (including claimants costs and expenses) in respect of:- a) Personal Injury b) Damage happening or consequent upon a cause occurring during the Period of Insurance and arising out of or in connection with the Insured Project anywhere within the Territorial Limits and covered by the Underlying Policy(ies) shown in the schedule issued to the Insured by the underlying insurer(s) Provided that (i) the liability of the Insurers in respect of each and every occurrence (and in the aggregate for all occurrences in the Period of Insurance where the Underlying Policy(ies) contain an aggregate limit for all occurrences in the Period of Insurance) shall only be for the excess of loss over the Ultimate Nett Loss specified in the Schedule as the "Underlying Limit" and then only

	up to the Ultimate Nett Loss specified in the Schedule as the "Limit Hereon" (ii) Underlying Policy(ies) shall be those shown in the Schedule. (iii) the term "Ultimate Nett Loss" shall mean the sum actually paid in the settlement of the liability of the Insured after making deduction for all recoveries and all other valid and collectible insurances excepting however the policies of the Underlying Insurers and shall exclude all Costs and Expenses except to the extent that such Costs and Expenses payable by Underlying Insurers are included within the Underlying Limit.
General Terms Exceptions and Conditions:	This Policy to follow Underlying Policy(ies) This Policy is subject to the same warranties terms exceptions and conditions (except as regards the premium the obligation to investigate and defend the amount and limits of liability and the renewal agreement if any and except as otherwise provided for herein) as are contained in or as may be added to the Policy(ies) of the Underlying Insurer(s). Attachment of liability The Insurers will not indemnify the Insured under this Policy unless and until the Insurer(s) on the Underlying Policy(ies) shall have admitted liability under their policy or policies and the Insured has been adjudged liable or in the opinion of the Underlying Insurer(s) will be adjudged liable to pay a sum which exceeds the Underlying Limit. Maintenance of Underlying Policy(ies) and step down provision It is a condition of this Policy that the Underlying Policy(ies) shall be maintained in full force and effect during the currency of this insurance provided that (a) in the event of reduction or exhaustion of any aggregate limit(s) under any Underlying Policy(ies) by reason of losses paid there under this Policy shall (i) in the event of reduction, indemnify the Insured in excess of such reduced Underlying Limit or (ii) in the event of exhaustion, continue in force in the terms of the Underlying Policy(ies) without any self-insured excess. (b) where the Period of Insurance of the Underlying Policy(ies) to which this Policy applies in excess is or may be non-concurrent with the Period of Insurance of this Policy then in the event of reduction or exhaustion of any aggregate limit or limits contained in such Underlying Policy(ies) solely by payments made within the terms and conditions of the Underlying Policy(ies) this Policy shall apply in excess of the reduced Underlying Limit or if such limit is exhausted shall apply as underlying insurance subject

	always to the Terms of this Policy. Costs and expenses Definition "Expenses" shall mean expenses incurred by Insurers or by the Insured with the consent of Insurers (which consent shall not be unreasonably withheld) in defence investigation and adjustment of any claim (but excluding all office expenses of the Insured and all expenses for salaried employees of the Insured). "Costs" shall mean all costs taxed against the Insured in any suit defended with Insurers' consent (which consent shall not be unreasonably withheld) and interest accruing after entry of any judgement against the Insured.

Apportionment

If the Underlying Policy(ies) provide for costs and expenses to be payable in addition to the Underlying Limit the liability of the Insurers hereunder for such costs and expenses shall be limited to that proportion which the amount payable under this Policy excluding such costs and expenses bears to the total sum payable under all contributing policies excluding such costs and expenses.

If however a settlement of any loss hereby insured be practicable prior to taking a case into court whether by compromise or otherwise for a sum not exceeding the Underlying Limit no costs or expenses shall be payable by the Insurers hereunder other than expenses incurred with Insurers specific consent.

Appeal

In the event of the Underlying Insurers electing not to appeal a judgement or contest a loss in excess of the Underlying Limit(s) the Insurers hereon shall accept the total costs and expenses of the defence should they elect to appeal or contest such loss.

Consent to settlement

No settlement of a loss by agreement shall be effected by the Insured for a sum in excess of the Underlying Limit without the consent of the Insurers hereon.

Application of recoveries

All recoveries or payments recovered or received subsequent to a loss settlement under this Policy shall be applied as if recovered or received prior to such settlement and all necessary adjustments shall then be made between the Insured and the Insurers provided always that nothing in this Policy shall be construed to mean that losses under this Policy are not payable until the Insured's Ultimate Nett Loss has been finally ascertained.

Notification of Claims

The Insured upon knowledge of any occurrence or loss likely to give rise to a claim hereon which for the purposes of this Policy shall be deemed to be any claim which in the opinion of or to the knowledge of the Insured is reasonably likely to exceed a total settlement cost of HKD25,000,000 must give immediate written notice to Cunningham Lindsey Hong Kong Limited, Unit 2301, Citicorp Centre, 18 Whitfield Road, Hong Kong.

Inadvertent failure to comply with this Condition because the Insured could not reasonably have anticipated that occurrence or loss would give rise to a claim under this Policy will not be construed as a breach of this Condition.

Law and jurisdiction

This insurance shall be governed by and construed in accordance with the law of Hong Kong Special Administrative Region and each party agrees to submit to the exclusive jurisdiction of the Courts of the Hong Kong Special Administrative Region Interpretation

It is hereby noted and agreed that all wordings incorporated in this Policy and all subsequent endorsement are accepted by Insurers as their own.

Insurers' Liability, Several not Joint

The liability of an Insurer under this contract is several and not joint with other Insurers party to this contract. A Insurer is liable only for the proportion of liability it has underwritten. An Insurer is not jointly liable for the proportion of liability underwritten by any other Insurer. Nor is a Insurer otherwise responsible for any liability of any other Insurer that may underwrite this contract.

The proportion of liability under this contract underwritten by a Insurer (or, in the case of a Lloyd's syndicate, the total of the proportions underwritten by all the members of the syndicate taken together) is shown next to its stamp. This is subject always to the provision concerning "signing" below.

In the case of a Lloyd's syndicate, each member of the syndicate (rather than the syndicate itself) is a Insurer. Each member has underwritten a proportion of the total shown for the syndicate (that total itself being the total of the proportions underwritten by all the members of the syndicate taken together). The liability of each member of the syndicate is several and not joint with other members. A member is liable only for that member's proportion. A member is not jointly liable for any other member's proportion. Nor is any member otherwise responsible for any liability of any other Insurer that may underwrite this contract. The business address of each member is Lloyd's, One Lime Street, London EC3M 7HA. The identity of each member of a Lloyd's syndicate and their respective proportion may be obtained by writing to Market Services, Lloyd's, at the above address.

Proportion of Liability

Unless there is "signing" (see below), the proportion of liability under this contract underwritten

by each Insurer (or, in the case of a Lloyd's syndicate, the total of the proportions underwritten by all the members of the syndicate taken together) is shown next to its stamp and is referred to as its "written line".

Where this contract permits, written lines, or certain written lines, may be adjusted ("signed"). In that case a schedule is to be appended to this contract to show the definitive proportion of liability under this contract underwritten by each Insurer (or, in the case of a Lloyd's syndicate, the total of the proportions underwritten by all the members of the syndicate taken together). A definitive proportion (or, in the case of a Lloyd's syndicate, the total of the proportions underwritten by all the members of a Lloyd's syndicate taken together) is referred to as a "signed line". The signed lines shown in the schedule will prevail over the written lines unless a proven error in calculation has occurred.

Although reference is made at various points in this clause to "this contract" in the singular, where the circumstances so require this should be read as a reference to contracts in the plural.

Security Default Cancellation Clause

Notwithstanding anything contained in this Certificate to the contrary, in the event of a 'Default Event' occurring (as hereinafter described) in relation to any Insurer, the Insured shall have the right to give notice of cancellation of the participation of such Insurer in this Certificate. Such cancellation shall be effective as at the date of the Default Event or, at the sole discretion of the Insured (and always subject to any other cancellation date imposed by any relevant law or statute governing insolvency and liquidation generally in the country in which the Insurer has its place of incorporation or domicile), such date thereafter during the period of this Certificate as the Insured may stipulate in its notice of cancellation. To be effective, any notice of cancellation by the Insured under this Clause must be delivered in writing to the Insurer whose participation is being cancelled.

A "Default Event" shall be deemed to have occurred if an Insurer or any entity owning directly or indirectly more than 40% of its issued share capital (and with respect to an Insurer which is a Lloyd's Syndicate also its managing agent):

(a) fails for whatever reason to pay any claim which has been determined and agreed by the Insurer under this Certificate within 30 days of the date when the same falls due for payment, or fails to meet any other obligation under this Certificate; or

(b) becomes unable for whatsoever reason to pay its debts in their entirety as the same fall due for payment; or

(c) is placed into voluntary or involuntary liquidation, rehabilitation, bankruptcy, receivership, chapter 11, administration or is dissolved or is the subject of any similar relief or state of affairs for the protection of some or all of the creditors of the Insurer or is the subject of any application, resolution or petition for or with a view to effecting any of the foregoing; or

As used in this Clause, "Insurer" means each insurance company, Reinsurance Company, Lloyd's Syndicate or other risk bearing entity subscribing to this Certificate. "Insured"

may mean Insured under a Certificate of direct insurance or Reinsured under a Certificate of reinsurance, as the case may be.

(d) makes or proposes any composition with its creditors or makes any assignment for the benefit of its creditors or otherwise acknowledges its insolvency; or

(e) has any relevant license to conduct business suspended, removed or impaired by any order or decree of any judicial or regulatory authority; or

(f) has its Financial Strength Rating or its Financial Performance rating, as published by Standard & Poor's or A M Best, downgraded below A- or A minus respectively; or

In relation to a Lloyd's Syndicate, the published rating, as referenced in sub-paragraph (f) above, shall be that which applies to Lloyd's as a whole, provided Lloyd's continues to be rated as a single entity by Standard & Poor's or A M Best.

Any Insurer whose participation in this Certificate is cancelled by the Insured in accordance with this Clause shall return to the Insured, forthwith upon cancellation, its share of unearned premium, unless any claim/circumstance has been notified in which case the premium will be deemed fully earned. The unearned premium shall be calculated on a pro-rata daily basis or, where the premium is adjustable, it shall be calculated on a pro-rata basis on that proportion of the amount to which the premium rate is applied, which has not yet been incurred, completed, earned or expended (as the case may be) by the Insured at the date of cancellation. It is further agreed that either party shall be entitled to set-off any monies which are owed by the other party as at the date of cancellation. Cancellation hereunder shall be without prejudice to the rights of the parties accrued as at the date notice of cancellation given hereunder takes effect.

ASBESTOS EXCLUSION 2003 (XOL) 7/03

It is agreed that this Policy shall not apply to

a) liability directly or indirectly caused by or alleged to be caused by or contributed to in whole or in part by or arising from the existence of or exposure to asbestos and/or any asbestos containing materials;

b) any obligation to defend any claim or suit against the Insured alleging liability resulting from (a) above nor to Underwriters' liabilities for any costs fees or expenses arising there from.

Worldwide Territorial Limits

Notwithstanding Section II of The Underlying Policy, this Policy will respond as Difference in Conditions to cover

i) claims made and actions instituted within the United States of America, Canada or Australia and their respective territories and protectorates, and any other territory coming within the jurisdiction of the courts of the United States of America, Canada or Australia; or

ii) claims and actions to which the laws of the United States of America, Canada or Australia and their respective territories and protectorates apply.

But subject always otherwise to the terms, conditions, exclusions and definitions of the Underlying Policy and this Policy.

Security:

Re Insurers	Signed Line
QBE Hongkong & Shanghai Insurance Limited	34%
Allied Word Assurance Company Ltd	24%
Catlin Hong Kong Limited	22%
Starr International Insurance (Asia) Limited	20%
	100%

SCHEDULE 11

EMPLOYEE'S COMPENSATION INSURANCE

SCHEDULE 11

EMPLOYEE'S COMPENSATION INSURANCE

1. The Authority shall facilitate the establishment of a Project Wrap-Up Employee's Compensation Master Policy (PWEC) with an Insurance Company duly licensed by the Insurance Authority of Hong Kong and in terms acceptable to the Authority.

2. In accordance with the provisions of Clause 33.1 (e) of the General Conditions, the Contractor shall procure insurance for itself and for its sub-contractors of every tier from the Date for Commencement of the Works until the date of issue of the Defects Liability Certificate through the PWEC under procedures to be promulgated by the Authority before the Date for Commencement of the Works and through the Authority's appointed insurance broker which shall be notified to the Contractor by the Authority.

3. The Contractor shall pay the premium and the Statutory Employee's Compensation Levy, and any adjustment thereof as determined by the PWEC Insurer, on production of an invoice by the Authority's appointed broker and in any event the Contractor shall provide a premium receipt issued by the Authority's appointed broker within 30 days from the Date for Commencement of the Works or within 30 days of the date of the invoice for any adjustment. Such amount of premium and Statutory Employee's Compensation Levy, as evidenced by the aforesaid premium receipts, will be reimbursed to the Contractor by the Authority which, notwithstanding any other provision of the Contract, shall be made without the deduction of Retention Moneys, by the instruction by the Contract Administrator of the expenditure of the applicable Provisional Sum contained in the Pricing Document, pursuant to Clause 65.1(a) of the General Conditions. Without prejudice to any other provision of the Contract, a certificate certifying the reimbursement shall be issued by the Contract Administrator within 7 days of the Contractor presenting the said receipts to the Contract Administrator. Notwithstanding any other provision of the Contract, the Contractor shall not be entitled to receive any overhead or profit from the Authority on the premium and Statutory Employee's Compensation Levy reimbursed by the Authority to the Contractor in accordance with the foregoing.

4. The Contractor shall provide to the Authority's appointed broker a statement of final account confirmed by the Contract Administrator stating the Final Contract Sum excluding adjustment for the PWEC Premium. The PWEC Premium will be adjusted by the PWEC Insurer based on the statement of final account, and

    4.1 in the event that the adjusted PWEC Premium is greater than the amounts paid therefor pursuant to Paragraph 3 above (or otherwise prior to the statement of final account confirmed by the Contract Administrator), then the Contractor shall pay to the PWEC Insurer the amount of the difference within thirty (30) days of the date of an invoice therefor; or

    4.2 in the event that the adjusted PWEC Premium is less than the amounts paid therefor pursuant to Paragraph 3 above (or otherwise prior to the statement of final account confirmed by the Contract Administrator), then the Contractor

shall not be entitled to any refund. Such monies as may be due as refund premium under the policy shall be paid by the PWEC Insurer to the Authority; or

4.3 the final PWEC Premium after adjustment in Paragraph 4.1 above shall be included in the Final Certificate stating the Final Contract Sum.

5. The insurance coverage provided by the PWEC shall follow the standard Accident Insurance Association of Hong Kong Employee's Compensation policy wording to indemnify the obligations of the Contractor and its sub-contractors of every tier and shall additionally include enhancements and extensions as set out in the following Policy, subject to any amendment required by the PWEC Insurers.

EMPLOYEES COMPENSATION INSURANCE

Policy Schedule

This Policy Schedule should be read in conjunction with the Policy Terms, Conditions, Definitions and Exclusions as detailed in the enclosed policy wording.

Date Issued	**:**	1 August 2014
Type of Insurance	**:**	Employees' Compensation Insurance – Project Wrap Up Cover
Policy No.	**:**	1-W0125128-WCA
Insured	**:**	(1) West Kowloon Cultural District Authority (as Employer) and the Employer's Representatives (2) The Main Contractor for each contract (3) All Contractors and Sub-Contractors of any tier engaged by Insured (1) and (2) (4) The Government of the Hong Kong Special Administrative Region For the purposes of this policy and for the avoidance of doubt the term "sub-contractors" shall be deemed to be any organisations, consultants or suppliers whether corporate or sole proprietors who fall within the scope of sub-contractors under the Contract.
Insured Project	**:**	The design, engineering, procurement, construction, erection, testing and commissioning and defects liability period for all contracts forming part of **Batch 1** and **Batch 2** of the West Kowloon Cultural District Project and all ancillary and associated works and services in connection therewith
Insured Contracts	**:**	Each individual contract let separately within the Insured Project and including any supply and/or works orders issued in conjunction therewith and including such additional works and entrusted works as may be incorporated and all enabling works.
Period of Insurance	**:**	From the commencement of the works to the date of practical / substantial completion for each Insured Contract. (first contract expected to commence 9 August 2014 and last contract expected to complete 31 December 2020) (both days inclusive, Local Standard Time at the Project Site including testing and commissioning followed by 12 months Defects Liability Period) All dates inclusive at local standard time. Extensions in Period of Insurance not exceeding 3 months are automatically covered at Nil Additional Premium. Extensions in Period of Insurance beyond 3 months are automatically held covered at pro-rata additional Premium.

Coverage	:	To indemnify the Insured's liability at law (including liability under the Employees' Compensation Ordinance of Hong Kong) to pay compensation and claimants costs and expenses in respect of Hong Kong Employees whose contracts are engaged in Hong Kong in respect of death, bodily injury by Accident or Disease caused during the Period of Insurance and arising out of and in the course of their employment by the Insured in connection with the Insured Project.
Policy Limit of Indemnity	:	In accordance with the Employees' Compensation Ordinance and/or Common Law – HKD200,000,000 any one event / Unlimited in the Period of Insurance under each contract declaration
Employees	:	All Employees whilst engaged in the Insured Project but this Policy does not insure any employees of: (a) West Kowloon Cultural District Authority; (b) consultants or sub-consultants directly contracted to West Kowloon Cultural District Authority; (c) suppliers while such employees are involved in the manufacture of the suppliers' proprietary products outside the Site of the Insured Projects; (d) The Government of the Hong Kong Special Administrative Region.
The Site	:	Anywhere in the Hong Kong Special Administrative Region in connection with the Project.
Territorial Limits	:	Hong Kong Special Administrative Region and also including staff and workers working temporarily outside the Hong Kong SAR.
Premium Rate	:	As agreed.
Minimum Premium	:	This minimum premium is subject to 90% of awarded contract values declared to be charged as and when contracts attach
Premium Payment	:	Premiums to be charged to contractors on award of each individual contract and payable to QBE in full within 30 days

Policy No. 1-W0125128-WCA

ENDORSEMENT

This Policy is subject to the following Clauses/Warranties/Endorsements printed and/or attached hereto:

- AEC / DOC / 9506A POLICY LIMIT OF INDEMNITY
- EE03 DEFINITION OF "THE INSURED"
- EL60 Absolute Asbestos Exclusion
- ELVZ 10.8% Levies
- Terminology and Interpretation
- Coverage until Final Completion (W550)
- Joint Insureds Clause (W551)
- Primary Insureds Clause
- Waiver of Subrogation Rights Against All Joint Insureds
- Non-Cancellation
- Cancellation on Abandonment (W555)
- Future Amendments to Statutory Provisions (W556)
- Sub-Contractors Clause (W204)
- Witnessing Clause (W348)
- Jurisdiction Clause
- Titles of Paragraphs
- Declarations to Master Policy
- Held Covered
- Terrorism Endorsement (ALL0000003)
- Transit Clause
- Meal and Lunch Time Clause
- Premium Memorandum
- Long Term Agreement Clause

Terminology and Interpretation
The words "Company" and "Insurers" wherever they appear in the printed Policy wording or these Special Conditions shall be interchangeable and identical meaning.

Coverage until Final Completion (W550)
In the event that any work of defects rectification, minor uncompleted works, additional works or variations ordered by the Engineer is uncompleted at the termination of the Defects Liability Period described in the Schedule, then the Policy shall extend to cover the undertaking of such work until it is completed and the contractor or sub-contractor of any tier vacates the Contract Site. Subject to any additional work being included in the total rateable CV and subject to the Period of Insurance.

Joint Insureds Clause (W551)
It is noted and agreed that the Insured under this Policy comprises more than one party, each operating as separate and distinct entities and that cover hereunder shall apply in the same manner and to the same extent as if individual insurances had been issued to each such party. The Insurer hereby agrees to waive all rights of subrogation which it may have or acquire against any of the parties comprising the Insured.

The rights and indemnity of any of the parties who are not guilty of any fraud mis-representation non-disclosure or breach of conditions shall not be prejudiced or affected by fraud, mis-representation, non-disclosure or breach of condition by any of the other parties comprising the Insured.

Nothing in this Clause shall be deemed to increase the Policy Limit of Indemnity in respect of any one Accident as stated in the Schedule irrespective of the number of persons or Insureds claiming to be indemnified.

Primary Insureds Clause
It is expressly understood and agreed that the insurance provided by this Policy is the primary insurance for the Insureds shown in the Schedule. If at the time any claim arises under the Policy, should there be any other insurances covering the same loss, damage or liability such other insurance shall only apply as an excess coverage and non-contributing herewith.

Waiver of Subrogation Rights Against All Joint Insureds
It is hereby noted and agreed that the Insurer waives all rights of subrogation against all Insured parties as named in the Schedule and their respective subsidiaries, affiliates, directors, officers and employees.

Notwithstanding the foregoing, the Insured shall, at the expense of the Insurer, do and concur in doing and permit to be done all such acts and things as may be necessary or required by the Insurer in the interest of any rights or remedies or of obtaining relief or indemnity from parties (other than those insured under this Policy) to which the Insurer shall be or would become entitled or subrogated upon their paying for or making good any loss or damage under this Policy whether such acts and things shall be or become necessary or required before or after the Insured's indemnification by the Insurer.

Non-Cancellation
It is expressly understood and agreed that this Policy may not be cancelled by the Company or the Insured and shall remain in full force and effect for the full duration of the construction and work activities including all Defects Liability Periods other than for non payment of premiums on specific contracts or in the event of cancellation or abandonment of the Project by the West Kowloon Cultural District Authority.

Cancellation on Abandonment (W555)
In the event of non-commencement or abandonment of an Insured Project or part of an Insured Project for any reason, the Insured may at their option cancel the Policy or that part of the Policy relative to the non-commenced or abandoned project or non-commenced or abandoned part of a Project. The premium payable in the event of cancellation in whole or in part shall be limited to the rate payable applied to the value of the completed works under such Project or part of such Insured paying any additional premium required or being entitled to a refund.

Future Amendments to Statutory Provisions (W556)
It is expressly understood and agreed that all amendments to any statutory benefits and provisions by which this policy is governed due to modification or substitution of the Employees' Compensation Ordinance in whole or in part, and all subsidiary legislation made thereunder as well as any modification or substitution thereof, in whole or in part shall be automatically covered by this Policy and an additional premium shall be payable representing 100% of increases recommended by the Accident Insurance Association of Hong Kong or any successor body to the Accident Insurance Association of Hong Kong applied to the outstanding portion of the Construction Period of Insurance under each contract as at the date of such amendments.

In the event that the Accident Insurance Association of Hong Kong or any successor body as mentioned in the preceding paragraph is unable to or unwilling to provide any recommendation of rate increase an independent qualified actuary mutually agreed to by the Insured and the Insurer shall be appointed to decide on the extent of the appropriate premium increase.

Sub-Contractors Clause (W204)
It is hereby understood and agreed that this Policy is extended to indemnify the Insured against liability at law (including liability under the Legislation set out in the Schedule of this Policy) to Employees in the employ of sub-contractors performing work for the Insured while engaged in the Insured Project in respect of which this Policy is granted.

It is further understood and agreed that Exception (a) of this Policy is deleted.

It is noted and agreed that the sole proprietors of sub-contractors of any tier and/or self-employed persons and/or independent contractors engaged in the Contract are regarded as Employees in the contemplation of Exception (e) and covered under this Policy.

For the purpose of the cover provided by this Policy, the amount of compensation shall follow the rules set out in the Employees' Compensation Ordinance as if such person were Employees of the Insured, and their monthly earnings at the time of Accident shall be calculated solely according to the prevailing market rate for local works of the same occupation/trade.

In the event of the death of an Employee of the Insured, the Insurers shall indemnify the legal representatives of the Insured in respect of liability incurred by the Insured provided that such representatives shall, as though they were the Insured, observe, fulfill and be subject to the terms of this Policy so far as they can apply.

Witnessing Clause (W348)
It is hereby understood and agreed that the Witnessing Clause of this Policy is deemed to be deleted and replaced by the following:

"Now this Policy witnesseth that if any Employee in the immediate service of any of the parties jointly

described as the Insured shall sustain bodily injury or death by Accident or Disease caused during the Period of Insurance and arising out of and in the course of his employment by the Insured in the Insured Project".

It is further understood and agreed that Exception (a) of this Policy is deleted.

Jurisdiction Clause
The indemnity provided by this Policy shall not apply in respect of judgements which are not in the first instance delivered by or obtained from a court of competent jurisdiction within Hong Kong nor the orders obtained in the said court for the enforcement of judgements made outside Hong Kong whether by way of reciprocal or otherwise.

Titles of Paragraphs
The several titles of the various paragraphs of this policy (and of any Endorsement attached to the Policy or which may be attached in the future) are inserted solely for convenience of reference and shall not be deemed in any way to limit or affect the provisions to which they relate.

Declarations to Master Policy
This Master Policy will accept declarations in respect of all contracts awarded by West Kowloon Cultural District Authority in respect of the Authority's Insured Project. Each Declaration shall be deemed to be a contract of insurance between the Insurer and the respective declaring contractor.

Held Covered
All employees of the Insured employed about the Business are insured under this Policy notwithstanding that their wages salaries and other earnings may not have been included in the estimated amount of wages salaries and other earnings on which the Premium is based as recorded in the Schedule. The wages salaries and other earnings of such employees shall be advised to the Insurer at a time to be mutually agreed between Insured and Insurer but not later than one month from the expiry date of any Period of Insurance when the premium will be adjusted in accordance with the Policy Conditions.

Terrorism Endorsement (ALL0000003)
Notwithstanding any provision to the contrary in the Policy or any endorsement thereto, it is hereby agreed that in respect of any injury or death arising as a result of an event of terrorism that would otherwise be covered by the Policy ("the Loss"):

(a) the Policy Limit of Indemnity in respect of the Loss shall be limited to such amount which the Insurer actually receives from the Government of the Hong Kong Special Administrative Region of the People's Republic of China ("the Government") in respect of the Loss pursuant to an Agreement for Provision of Facility dated 11th January 2002 between the Government and the Insurer under which the Government agreed to make available to the Insurer and other direct insurance companies authorized to underwrite Employees' Compensation insurance business in Hong Kong a facility to enable them to meet claims under Employees' Compensation insurance policies in respect of death and injury arising out of an event of terrorism ("the Facility Agreement");

(b) the Insurer will only be required to make payment in respect of the Loss after it has received from the Government (i) an approval letter confirming that the Insurer should settle the claim and (ii) payment under the Facility Agreement in respect of the Loss; and

(c) for the avoidance of doubt, the Insurer shall have no obligation to make payment in respect of the Loss if for whatever reason it does not receive payment from the Government under the Facility Agreement in respect of the Loss, whether or not due to the Government's contention that the Loss does not fall within the scope of the Facility Agreement or the Insurer's breach of the Facility Agreement.

For the purpose of the above, an act of terrorism means the use of force or violence or other means or the threat thereof, of any person or persons, whether acting alone or on behalf of or in connection with any organization or government, for political, religious, or ideological purposes with an intention to influence any government and/or to put the public, or any section of the public, in fear.

If the Company alleges that the Loss falls within the scope of this Endorsement, the burden of proving the contrary shall be upon the Insured.
In the event any part of this Endorsement is found to be invalid or unenforceable, the remainder shall remain in full force and effect.
Words and phrases in this Endorsement shall have the same meaning as in the Policy.

Transit Clause
It is hereby noted and agreed that if an Employee is injured in an Accident whilst travelling from his/her home directly to his/her office or his/her place of employment or a function organized by the Insured and vice versa.

Such accident will be considered as arising out of and in the course of the Employee's employment for the purposes of the indemnity granted by this Policy to the Insured named in the Schedule.

For the purpose of this extension, cover will only be provided in the following circumstances:

(A) Where an Accident happens to an Employee while he / she is traveling with the express or implied permission of the Insured;

(B) Where an Accident happens to an Employee while he / she is traveling if he / she is instructed to execute duties for the Insured outside his / her normal hours of work.

(C) Where an Accident happens to an Employee while he / she is traveling if his / her attendance at his / her place of work is required by the Insured during extra-ordinary weather conditions.

For the purpose of this extension, the definition of extra-ordinary weather condition is:

(i) the hoisting of the Red and Black Rainstorm Signal; and

(ii) the hoisting of the no. 8 Typhoon Signal or above.

In respect of this extension the word "travelling" means "travelling by any method, including (inter alia) walking, cycling, own transportation (passenger or driver) and travel by any means of transport service including Public Transport Service".

Meal and Lunch Time Clause
It is hereby understood and agreed that, in the event of any Employee of the Insured sustaining death or bodily injury during meal and lunch time and rest periods, such bodily injury shall be deemed to have arisen out of and in the course of the Employees' employment.

Premium Memorandum
Should any additional works, variations or alterations increase the declared contract value, an additional premium at the policy rate shall be charged thereon, Any additional premium due shall be paid under as set out below:

(a) The contractor shall declare the value of any Variation Order or Supplement Agreement amounting to HKD10,000,000 or more within 30 days of such order or agreement.
(b) The contractor shall declare the value of all contractual payments made, or due up to the date the Engineer issues the Certificate of Substantial Completion.
(c) The contractor shall declare the value of all contractual payments, including the value of any retention sum, made or due up to the date the Engineer issues the Defects Liability Certificate.
(d) The contractor shall declare the final contract sum following the issue of the Final Certificate by the Engineer, and additionally declare any subsequent values after contractual claims are settled.

Long Term Agreement Clause
In consideration of the granting of this Employees' Compensation Policy for a period in excess of 12 months, it is agreed by both the Insurer and the Insured that on the 31 December 2017 the Insurer will continue insurance coverage under this policy until Final Completion at the same premium rate and subject to the same terms and conditions, except if any of the following factors applies as the agreed Review Date of 31 December 2017 (in which case the Insurer is entitled to review the premium rate according to the pre-agreed premium loadings):

1. There has been a change in law which has the impact of increasing the Insurer's exposure.
2. The Incurred Claims ratio as at review date exceeds 75% of the Gross Earned Premium in respect of the period of insurance up to 31 December 2017 to which this Clause relates.
3. There has been a change in legal regulations relating to insurance contracts which oblige the Insurers to alter any terms or conditions of the Policy.

The term "Incurred Claims" means the total cost of claims including actual payments (including medical, legal and other costs and expenses) and reserves set by the Insurers on outstanding claims (also including such costs and expenses).

"Gross Earned Premium" means the Actual Contract Value completed as at the agreed Review Date multiplied by policy rate net of tax.

Nothing in this Clause shall prejudice any rights the Insurer or Insured may have to cancel this policy in accordance with (i) any cancellation condition, or the like, which may be contained in the Policy or (ii) in accordance with any general principle of contract law (including but not limited to misrepresentation).

Pre – Agreed Premium loading if Incurred Claims ratio exceeds 75%
75% to 100% = 10% premium loading (1.375% on final declared Contract Value)
101% to 110%= 20% premium loading (1.50%)
111% + = 25% premium loading (1.5625%)

West Kowloon Cultural District Authority

Employees' Compensation Insurance – Policy Endorsement

Date of Issue **:** 1 March 2016

Insured **:** West Kowloon Cultural District Authority (as more fully described in the Schedule)

Policy No. **:** 1-W0125128-WCA

Period of Insurance: From 09 August 2014 to 31 December 2020 (Both Dates Inclusive)

Endorsement No. **:** 01

Endorsement attached to and forming part of the above mentioned Policy:-

1. It is hereby noted and agreed that this this policy is extended to apply in respect of the increase in the levels of compensation under the Employees' Compensation Ordinance with effect from 5 March 2015.

   In consideration of the above, the Premium Rate of this Policy is revised from 1.25% to 1.27%, computed in accordance with the Endorsement of "Future Amendments to Statutory Provision (W556)".

   The Insurer further agreed to waive the levy related additional premium for adjustment on existing contracts declared under this Policy. To clarify all contracts that commence after the implementation of the increased benefits will be subject to a policy adjustment based on the revised premium rate of 1.27%. All contracts that commence prior to the implementation of the increased benefits will be subject to a policy adjustment based on the premium rate of 1.25%.

   It is hereby noted and agreed that with effect from 26 September 2015 the following Endorsements are applied to this policy:-

   Extra-ordinary Weather Conditions

   In the event of any Employee of the Insured whose attendance at his place of employment is required by the Insured during extraordinary weather conditions being injured or killed whilst proceeding directly to his place of employment or returning therefrom, such death or injury shall be deemed to have arisen out of and in the course of the Employees' employment or in such other circumstances as the Court thinks reasonable for the purposes of this Policy.

   Extension to Cover Employees of Named/Nominated Sub-Contractors and Specialist Contractors or Suppliers or Direct Contractors of any tier as declared and included in the calculation of the insurance premium

   It is noted and agreed that the Named/Nominated sub-contractors and Specialist Contractors or Suppliers or Direct Contractors of any tier engaged in the Project are regarded as Employees in the contemplation of Exception (e) and covered under this Policy, The Insured shall provide their contract value for the purpose of the calculation of the insurance premium.

Emergency Transportation as a result of serious injury (Limit: HK$100,000 each and every loss)

This Policy is extended to indemnify the Insured for the cost of any emergency transportation required as a result of serious injury sustained by the Insured's Employees including helicopter services if required, subject to a maximum limit of HK$100,000 each and every loss.

Emergency Fatality Payment

In the event of the death of an employee of any party covered under this policy then subject to identification of the deceased the Insurer shall pay an immediate cash relief to the verified dependents up to a limit of HK$100,000 for each deceased Employee. Such payment shall be deemed to be a partial loan advance for the purpose of financial assistance to the bereaved dependents.

Sports & Social Activities Clause

This Policy is extended to cover employees directly employed by the Insured for bodily injury or death by Accident or Disease while participating in social/sporting activities organized by or on behalf of the Insured. Provided always that:

(a) The activity is incidental to the employee's employment;
(b) The activity takes place in Hong Kong;
(c) This extension does not cover participation in professional sporting events;
(d) This extension does not cover social events aboard vessels including ferries and high risk sporting activities including but not limited to racing in any form of motorized vehicle or boat, mountaineering, polo, rock climbing, water-skiing, wake boarding, any kinds of parachuting, any kinds of diving, balloon riding, speedboat or jet boat riding and white water rafting.

Cover for Employees Temporarily Working Outside the Hong Kong Special Administrative Region (W527)

It is hereby declared and agreed that the Territorial Limits in the Schedule of this Policy are amended to read 'worldwide'.

It is further declared and agreed that if any employee is an 'employee' within the meaning of the Employees' Compensation Ordinance, the Company will not deny liability on the grounds that the Ordinance is not applicable outside Hong Kong in the event of an accident arising out of and in the course of his employment to such employee whilst engaged in the Insured Project of the Insured as set forth in the Schedule.

It is further declared and agreed that the Jurisdiction Clause is deemed to be deleted and replaced by the following:

Jurisdiction Clause
The indemnity provided by the Policy shall not apply in respect of judgments which are not in the first instance delivered by or obtained from a court of competent jurisdiction within Hong Kong nor the orders obtained in the said court for the enforcement of judgments made outside Hong Kong whether by way of reciprocal or otherwise.

3. It is hereby noted and agreed that with effect from 26 September 2015 Endorsement "Premium Memorandum" is deleted and replaced by "Premium Adjustment" as follows:-

Premium Adjustment

It is hereby understood and agreed that the Owner shall declare the Final Contract Value of the Insured Project to the company upon completion of the overall project defects liability period and the final policy premium shall be calculated at the agreed rate on the Final Contract Value and the premium shall be adjusted accordingly.

All other terms and conditions remain unchanged.

Signed for and on behalf of
QBE Hongkong & Shanghai Insurance Ltd.

Authorized Signature

SCHEDULE 12

FORM OF NOMINATED SUB-CONTRACT

FORM OF SUB-CONTRACT

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THIS SUB-CONTRACT AGREEMENT is made the day of 201[ ]

BETWEEN

(1) [ ] a company incorporated in accordance with the laws of [ ] of [ ] (together with his successors and assigns "**the Contractor**"); and

(2) [a company incorporated in accordance with the laws of [ ] of [ ] (the "**Sub-Contractor**")

WHEREAS

(1) The Contractor has entered into the Contract.

(2) The Sub-Contractor has had the opportunity to examine the provisions of the Contract (other than details of the Contractor's prices and rates) and has agreed to execute the Sub-Contract Works (which form part of the Works) upon the terms of the Sub-Contract.

IT IS AGREED AS FOLLOWS:

1. **Definitions and Interpretation**

1.1 In the Sub-Contract (including the Recitals) the following words and expressions shall (except to the extent that the context in which they appear otherwise requires) have the meanings hereby assigned to them:

(a) "**Clause**" means a clause of this Form of Sub-Contract, unless the context otherwise requires;

(b) "**Cost**" means expenditure wholly and necessarily incurred by the Sub-Contractor in connection with the Sub-Contract Works including, without limitation, overheads whether on or off the Site, finance charges (limited to simple interest at the Contract Rate of Interest) and depreciation in value of Contractor's Equipment owned by the Sub-Contractor but excluding profit;

(c) "**Contract**" means the contract made between the Authority and the Contractor particulars of which are set out in the **Sub-Contract Schedule 1**;

(d) "**Contract Dispute**" means a Dispute as defined in the Contract;

(e) "**Authority**" means West Kowloon Cultural District Authority established under the West Kowloon Cultural District Authority Ordinance contained in Chapter 601 of the laws of Hong Kong, and its successors and assigns;

(f) "**Sub-Contract**" means this agreement and such other documents as are specified in **Sub-Contract Schedule 2** but excluding any standard printed conditions that may be included in the other documents where the standard printed conditions originate from the Sub-Contractor;

(g) "**Sub-Contract Completion Schedule**" means the schedule setting out the time or times for execution of the Sub-Contract Works or parts thereof appearing in **Sub-Contract Schedule 3** hereto;

(h) "**Sub-Contract Dispute**" means a dispute or difference of any kind whatsoever between the Contractor and the Sub-Contractor arising under, out of or in connection with the Sub-Contract whether during the execution of the Sub-Contract Works or thereafter and whether before or after the termination, abandonment or breach of the Sub-Contract;

(i) "**Sub-Contract Payment Schedule**" means the schedule to be used for the calculation of interim payments appearing in the **Sub-Contract Schedule 4** as the same may be amended from time to time in accordance with clause 27;

(j) "**Sub-Contract Schedule of Prices**" means the schedule appearing in the **Sub-Contract Schedule 5** hereto showing the build-up of the Sub-Contract Sum fully priced with appropriate quantities and completed by the Sub-Contractor;

(k) "**Sub-Contract Sum**" means the sum identified as such in the Sub-Contract Schedule of Prices;

(l) "**Sub-Contract Tender**" means the tender submitted by the Sub-Contractor in respect of the Sub-Contract Works as accepted by the Contractor and subject to the terms of acceptance;

(m) "**Sub-Contract Value**" means the amount to be paid to the Sub-Contractor in accordance with the Sub-Contract Payment Schedule as the same may be revised from time to time in accordance with clause 20;

(n) "**Sub-Contract Works**" means the works described in the documents identified in the **Sub-Contract Schedule 2**, such works to include all operations expressly or impliedly required by the Sub-Contract in relation to, and including the provision of, the plant and structures to form a permanent part of the Project and also means the plant and structures themselves and/or the Temporary Works to be provided by the Sub-Contractor; and

(o) "**Works**" means the Works as defined in the Contract.

1.2 The indices, headings and marginal notes in the Sub-Contract shall not be taken into consideration in the interpretation thereof.

1.3 Unless otherwise expressly provided, all payments shall be made in Hong Kong Dollars and no adjustment shall be made to any payment under the Sub-Contract on account of any variation in the exchange rate between the Hong Kong Dollar and any other currency.

1.4 Where the Contract assigns a meaning to any term or expression used in the Sub-Contract the same meaning shall, except to the extent that the context in which it appears otherwise requires, be given to it in the Sub-Contract and, except as aforesaid,

where the Contract meaning relates to the Works in the Sub-Contract it shall relate to the Sub-Contract Works.

1.5 All instructions and decisions and confirmation thereof, notices, consents and the like to be given by the Contractor or the Sub-Contractor shall be in writing.

2. Assignment and Sub-Letting

2.1 The Sub-Contractor shall not assign or otherwise transfer the benefit of the Sub-Contract or any part thereof or any interest or right therein or thereunder without the prior consent of the Contractor provided that the Sub-Contractor may without such consent assign either absolutely or by way of charge any sum which is or may become due and payable to him under the Sub-Contract.

2.2 The Sub-Contractor shall not sub-contract the Sub-Contract Works or any part thereof without the prior consent of the Contractor. If consent is given to any such further sub-contracting, the Sub-Contractor shall enter into agreements with others only on terms which are not inconsistent with the terms of the Contract and the Sub-Contract. The giving of consent by the Contractor shall not in any way relieve the Sub-Contractor of any of his obligations or liabilities under the Sub-Contract and the Sub-Contractor shall be liable for the acts and omissions of his sub-contractors of any tier as if they were his own acts and omissions.

2.3 The Sub-Contractor shall procure that the benefit of each warranty supplied and each continuing obligation undertaken by others in connection with the Sub-Contract Works in favour of the Sub-Contractor or his sub-contractors of any tier is capable of assignment and the Sub-Contractor shall assign or procure assignment of any such benefit if so required by the Contractor.

3. General Obligations of the Sub-Contractor

3.1 The Sub-Contractor shall execute the Sub-Contract Works in accordance with the Sub-Contract and, subject thereto, to the satisfaction of the Contractor and of the Contract Administrator; and

3.2 Subject to clause 9, the Sub-Contractor shall provide all staff, labour, work, consumables, transport to and from and about the Project Site and everything whether of a permanent or temporary nature required in and for the execution of the Sub-Contract Works.

3.3 Unless the Sub-Contract expressly provides elsewhere to the contrary, the Sub-Contractor shall be fully responsible for the design of the Sub-Contract Works and all references in the Sub-Contract to the Sub-Contractor's obligation to execute the Sub-Contract Works shall be construed to include such design responsibility.

4. Contract

4.1 The Sub-Contractor shall be deemed to have full knowledge of the provisions of the Contract (other than details of the Contractor's prices and rates) and the Contractor shall

if so requested by the Sub-Contractor provide to the Sub-Contractor a true copy of the Contract (less such details) at the Sub-Contractor's expense.

4.2 Save where the provisions of the Sub-Contract expressly require otherwise, the Sub-Contractor shall:

(a) execute the Sub-Contract Works:

(i) so that no act or omission by the Sub-Contractor in relation thereto shall constitute, cause or contribute to any breach by the Contractor of any of his obligations under the Contract or to any failure by the Contractor to achieve Milestones in accordance with the Schedule of Milestones; and

(ii) so as to enable the Contractor to discharge his obligations under the Contract; and

(b) assume and perform all the obligations and observe and comply with all the terms of the Contract on the part of the Contractor to be assumed, performed, observed and complied with so far as they relate and apply to the Sub-Contract Works or any part thereof.

4.3 The Sub-Contractor hereby acknowledges that any breach by him of the Sub-Contract may result in the Contractor:

(a) committing breaches of and becoming liable in damages under the Contract and other contracts made by the Contractor in connection with the Works; and

(b) failing to achieve Milestones in accordance with the Schedule of Milestones; and may thereby occasion loss or expense to the Contractor in connection with the Contract and the other contracts referred to in clause 4.3(a). All such damages, loss and expense are hereby agreed to be within the contemplation of the parties as being probable results of any such breach by the Sub-Contractor and recoverable by the Contractor accordingly.

5. **Warranty and Guarantees**

5.1 If the Sub-Contractor shall not already have done so, the Sub-Contractor shall within fourteen days of notification of acceptance of the Sub-Contract Tender provide to the Contractor:

(a) a guarantee in the form appearing in the **Sub-Contract Schedule 9** duly executed as a deed by the shareholders, parent company or holding company of the Sub-Contractor identified in the Contractor's acceptance of the Sub-Contract Tender;

(b) a warranty in the form appearing in the **Sub-Contract Schedule 10** duly executed as a deed together with a guarantee in the form appearing in the **Sub-Contract Schedule 11** duly executed as a deed by the entity or entities referred to in clause 5.1(a); and

(c) a bond for the amount stated in the **Sub-Contract Schedule 2** in the form appearing in the **Sub-Contract Schedule 12** duly executed as a deed by the insurance company or bank identified in the Contractor's acceptance of the Sub-Contract Tender.

5.2 The Sub-Contractor shall provide to the Contractor bonds in the form appearing in the **Sub-Contract Schedule 13** duly executed as a deed by the insurance company or bank identified in the Contractor's acceptance of the Sub-Contract Tender as security for and as a condition precedent to payment for any part of the Sub-Contract Works manufactured off-shore at such times as enable the Contractor to obtain payment under the Contract for the part so manufactured.

5.3 If the Sub-Contractor fails to provide any bond, warranty or guarantee in accordance with clauses 5.1 and 5.2 and without prejudice to any other rights or remedies available to him, the Contractor shall at the request of the Authority either suspend the Sub-Contract Works or terminate the Sub-Contract by notice pursuant to clause 29 to that effect, notwithstanding that the Sub-Contractor may have been permitted to proceed with the Sub-Contract Works, and the Sub-Contractor shall not be entitled to any compensation whatsoever as a consequence of such suspension or termination.

6. Information

6.1 Prior to the date of acceptance of the Sub-Contract Tender, the Sub-Contractor shall be deemed to have satisfied himself as to all matters, things and conditions (physical or otherwise) which may affect the Project Site and the execution of the Sub-Contract Works (whether on or off the Site). The Sub-Contractor shall have no entitlement to additional payment or extension of time on the ground of any lack of understanding or foresight on the part of the Sub-Contractor.

6.2 The Sub-Contractor expressly acknowledges and accepts that any information given to him prior to the date of acceptance of the Sub-Contract Tender by the Contractor, the Authority, the Contract Administrator or any other person employed or retained by the Authority (other than information expressly stated in the Sub-Contract) has been given to the Sub-Contractor for background information only, and that the Sub-Contractor has not relied upon any such information in preparing and submitting the Sub-Contract Tender. The Sub-Contractor further acknowledges that the Sub-Contract comprises the whole agreement between the parties and that any change or amendment thereto shall be in writing signed for and on behalf of the parties.

7. Provision of Documents and Information

7.1 Without prejudice to the generality of clause 4.2, the Sub-Contractor shall submit to the Contractor all documents and information relating to the execution of the Sub-Contract Works or to any claim under the Contract relating to the Sub-Contract Works (including, without limitation, all returns, accounts, notices, programmes, staff schedules, statements of construction methods, estimates and pricing information) in sufficient time so as to enable the Contractor to comply punctually with his obligations under the Contract, provided that the Sub-Contractor shall be excused any non-compliance with

this clause 7 for so long as the Sub-Contractor neither knew nor ought to have known of the Contractor's need for any such documents or information.

8. **Instructions to Sub-Contractor**

8.1 The Sub-Contractor shall in relation to the Sub-Contract Works comply with all instructions and decisions of the Contract Administrator which are confirmed to the Sub-Contractor by the Contractor, irrespective of whether such instructions and decisions were validly given under the Contract.

8.2 The Contractor shall have the like powers in relation to the Sub-Contract Works to give instructions and make decisions as the Contract Administrator has in relation to the Works under the Contract. The Sub-Contractor shall have the like obligations to comply with such instructions and decisions and all procedures incidental thereto prescribed under the Contract and shall have the like rights in relation thereto as the Contractor has under the Contract. The said powers of the Contractor shall be exercisable in any case irrespective of whether the Contract Administrator has exercised like powers in relation thereto under the Contract. The references to the like powers, like obligations and like rights shall be interpreted mutatis mutandis to reflect differences between the Contract and the Sub-Contract.

8.3 The Sub-Contractor shall not act upon an unconfirmed instruction of the Authority, the Contract Administrator or any person other than the Contractor when such instruction is given directly. If the Sub-Contractor shall receive any such direct instruction, the Sub-Contractor shall forthwith inform the Contractor's site agent and shall supply him with a copy of such direct instruction, if given in writing. Upon receipt of the copy the Contractor shall with all reasonable speed issue an instruction to the Sub-Contractor confirming, withdrawing or otherwise dealing with the direct instruction.

9. **Site Facilities**

9.1 The Contractor shall provide at the Site the Temporary Works and Contractor's Equipment ("the facilities") specified in **Sub-Contract Schedule 7** and shall permit the Sub-Contractor in common with such other persons as the Contractor may allow to have the use thereof for the purpose of executing and completing but not of maintaining the Sub-Contract Works upon such terms if any as are specified in the said **Sub-Contract Schedule 7**. The Contractor shall have no liability to the Sub-Contractor in respect of any failure to provide the facilities if such failure is due to circumstances outside the Contractor's control nor in respect of any inadequacy or unfitness for the Sub-Contractor's purposes of any facilities so provided.

9.2 The Sub-Contractor shall notify the Contractor of the time or times that the Sub-Contractor shall require the facilities so as to enable the Contractor to programme for the same. The Sub-Contractor shall as soon as reasonably practicable notify the Contractor of any anticipated changes to the Sub-Contractor's requirements for the facilities but nothing shall require the Contractor to keep the facilities available if that would interfere with timely completion of the Works or any Section or the achievement of any Stage and in such event the Sub-Contractor shall procure at his own cost the facilities or such of them as he shall require.

9.3 If the Contractor shall provide to the Sub-Contractor any services, facilities or things additional to those stated in **Sub-Contract Schedule 7** then the Contractor shall be entitled to stipulate upon what terms the same are provided and to make a reasonable charge for the provision of the same and shall be entitled to deduct the charge from any payment which is or shall become due from the Contractor to the Sub-Contractor.

10. Site Cleanliness

10.1 Without prejudice to the generality of clause 4.2:

(a) the Sub-Contractor shall keep the Sub-Contract Works clean and tidy as work proceeds, and shall regularly remove from the Project Site rubbish and surplus goods and materials arising from the execution of the Sub-Contract Works; and

(b) if the Sub-Contractor fails to comply with any obligation imposed by this clause 10.1 the Contractor may, after giving notice to the Sub-Contractor, have the work of cleaning and tidying-up carried out by other persons and the expense so incurred by the Contractor may be recovered as a debt due from the Sub-Contractor, or may be deducted by the Contractor from any monies which may then be or thereafter become payable to the Sub-Contractor.

11. Laws and Regulations

11.1 Without prejudice to the generality of clause 4.2, the Sub-Contractor shall in performing the Sub-Contract comply with all Enactments applicable to the performance of the Sub-Contract (including but not limited to those relating to working hours, noise, nuisance, pollution and safety) and with any applicable regulation or requirement of any Relevant Authority. If there shall be any divergence between that which is stated in the Sub-Contract or is to be reasonably inferred therefrom and that which the Sub-Contractor has to do to comply with this clause 11.1 resulting from the Sub-Contractor's overriding obligation to comply with this clause 11.1 then the Sub-Contractor shall have the like right to payment, mutatis mutandis, (if any) against the Contractor as the Contractor has against the Authority under the Contract.

11.2 The Contractor shall have the right from time to time and without prior notice to make or change regulations governing the Site and the Sub-Contractor shall comply therewith and procure compliance therewith by his servants, agents, sub-contractors of any tier and others for whom he is responsible. Without limiting the generality of the foregoing, the intention is that the regulations shall deal with such matters as access to and egress from the Site or the Project Site, use of the Temporary Works and Contractor's Equipment, safety of the Works (including the Sub-Contract Works) and persons present on the Site or near thereto, security, welfare and fire precautions. When making or changing any regulation the Contractor shall notify the Sub-Contractor by letter or by posting a conspicuous notice on the Site.

11.3 The Sub-Contractor acknowledges his duty to maintain good relations with his workforce and with the workforces of others present on the Site or engaged in the Works or any other works forming part of the Project and shall constantly use reasonable

endeavours to avoid or overcome any difficulties which may or might otherwise arise in this respect.

12. Confidentiality

12.1 Without prejudice to the generality of clause 4.2, the Sub-Contractor shall not use or divulge to anyone for any purpose whatsoever, except for the purpose of the Sub-Contract or with the written permission of the Authority, any information relating to the Works or the Project provided in or pursuant to the Contract or the Sub-Contract or otherwise howsoever by the Authority, the Contractor, the Contract Administrator or any third party to whom any interest of the Authority under the Contract is transferred. The Sub-Contractor shall ensure that his sub-contractors of any tier and his shareholders and parent companies shall be bound by a like confidentiality undertaking and shall enforce the same.

13. Co-ordination with others

13.1 The Sub-Contractor shall make available to the Contractor the benefit of all his experience, technical knowledge and skill to ensure that the Sub-Contract Works are executed in co-ordination with the other works on and in the vicinity of the Site and are completed timeously.

13.2 Without prejudice to the generality of clause 4.2, the Sub-Contractor shall:

(a) fully co-operate with the Contractor and with all other sub-contractors of any tier employed by the Contractor and with Project Contractors in relation to co-ordination of the Works and of the Works with other works within the Project; and

(b) plan and execute the Sub-Contract Works taking into account the degree of interference with progress which an experienced contractor should reasonably anticipate by reason of the access and other requirements of the other sub-contractors of any tier employed by the Contractor and of Project Contractors.

14. Commencement

14.1 Within the periods respectively stated in the Sub-Contract Completion Schedule the Contractor shall instruct the Sub-Contractor:

(a) to commence the Sub-Contract Works and the Sub-Contractor shall do so within five days of receipt of such instruction; and

(b) to enter upon the Site and the Sub-Contractor shall do so within ten days of receipt of such instruction.

14.2 Nothing in this clause 14 shall be construed as preventing the Sub-Contractor entirely at his own risk from commencing any off-Site work, or ordering things necessary for the

execution of the Sub-Contract Works at any time before receipt of the Contractor's instruction referred to in clause 14.1(a).

15. Completion

15.1 The Sub-Contractor shall complete the Sub-Contract Works and each part thereof within the time or times stated in the Sub-Contract Completion Schedule or such extended time or times as may be determined in accordance with clause 17 or such other time or times as may be agreed in writing between the Contractor and the Sub-Contractor.

16. Damages for Non-Completion

16.1 If the Sub-Contractor shall fail to complete the Sub-Contract Works or any part thereof within the time or times prescribed under clause 15, the Contractor shall give to the Sub-Contractor notice to that effect and shall be entitled to recover from the Sub-Contractor such loss and expense as may be incurred by the Contractor as a result.

17. Delay and Extension of Time

17.1 If the Sub-Contractor shall be delayed in the execution of the Sub-Contract Works, otherwise than as a result of breach of the Sub-Contract or other default on the part of the Sub-Contractor:

(a) by any circumstance or occurrence in respect of which the Contractor is entitled to receive an extension of time for completion of the Works or any Section or for the achievement of any Stage under the Contract;

(b) by the ordering of any variation to the Sub-Contract Works to which clause 17.1(a) does not apply; or

(c) by any breach of the Sub-Contract by the Contractor,

then the Contractor shall grant such extension to the time or times prescribed under clause 15 for completion of the Sub-Contract Works or any part thereof as may in all the circumstances be fair and reasonable, provided that:

(d) it shall be a condition precedent to the Sub-Contractor's right to an extension of time that the Sub-Contractor shall have given notice to the Contractor as soon as the Sub-Contractor can reasonably foresee an event occurring which is liable to cause any delay to completion of the Sub-Contract Works or of any part thereof for which a time for completion is stated in the Sub-Contract Completion Schedule. In any case to which clause 17.1(a) may apply and without prejudice to the generality of clauses 4.2 and 7, the Sub-Contractor shall provide to the Contractor all such documents and information at such times as shall enable the Contractor to fulfil the requirements of the Contract and in any such case the extension shall be consistent with the extension of time to which the Contractor is entitled under the Contract;

(e) the Sub-Contractor shall constantly use his reasonable endeavours and shall do things reasonably required by the Contractor to preclude or mitigate delay and to secure the timely completion of the Sub-Contract Works; and

(f) where different periods are stated in the Sub-Contract Completion Schedule for different parts of the Sub-Contract Works, an extension of time granted in relation to one such period shall not as a necessary consequence entitle the Sub-Contractor to an extension of time for any other period.

18. **Rate of Progress**

18.1 Without prejudice to the generality of clause 4.2:

(a) in circumstances where the Sub-Contractor is not entitled to an extension of time the Contractor may, if he considers that progress in the execution of the Sub-Contract Works is too slow to ensure completion of the Sub-Contract Works or any part thereof by the time or times prescribed under clause 15, so notify the Sub-Contractor and the Sub-Contractor shall forthwith propose and, subject to the written consent of the Contractor, take such steps as are necessary to speed up progress or the Sub-Contractor shall take such steps as the Contractor may reasonably instruct pursuant to clause 8.2 to expedite progress so as to complete the Sub-Contract Works or any part thereof by the prescribed time. If any such step taken by the Sub-Contractor involves the Contractor in additional costs, the costs shall be assessed and decided by the Contractor and shall be recoverable by the Contractor from the Sub-Contractor; and

(b) the Sub-Contractor shall adopt such acceleration measures in relation to the Sub-Contract Works as the Contract Administrator may instruct pursuant to the terms of the Contract upon confirmation thereof by the Contractor in accordance with clause 8.1 or as the Contractor may instruct pursuant to clause 8.2.

19. **Variations**

19.1 Without prejudice to the generality of clause 8, the Sub-Contractor shall make such variations to the Sub-Contract Works, whether by way of addition, modification or omission, as may be:

(a) instructed by the Contract Administrator under the Contract and confirmed to the Sub-Contractor by the Contractor; or

(b) instructed by the Contractor.

19.2 Any instruction relating to the Sub-Contract Works which is validly given by the Contract Administrator under the Contract and constitutes a variation thereunder shall for the purposes of this clause 19 be deemed to constitute a variation of the Sub-Contract Works upon confirmation thereof by the Contractor in accordance with clause 19.1(a).

19.3 Save as aforesaid the Sub-Contractor shall not make any addition or modification to or omission from the Sub-Contract Works.

20. Valuation

20.1 The Sub-Contractor shall have the like rights, mutatis mutandis, (if any), to payment against the Contractor in respect of compliance with instructions and decisions of the Contract Administrator notified and confirmed to the Sub-Contractor in accordance with clause 8.1 or clause 19.1 as the Contractor has against the Authority under the Contract provided that the Sub-Contractor shall not be entitled to any payment in relation to attendance on the Sub-Contractor or other such payments which reflect the role of the Contractor compared to that of the Sub-Contractor.

20.2 In particular, but without prejudice to the generality of clause 20.1, if the Contract Administrator shall revise the Cost Centre Value of any relevant Cost Centre by reason of a decision under the Contract affecting the Sub-Contract Works, the Contractor shall revise the Sub-Contract Value in a manner consistent with the revision of the Cost Centre Value.

20.3 If any instruction or decision of the Contract Administrator confirmed in accordance with clauses 8.1, 8.3 or 19.1 is invalidly or incorrectly given by the Contract Administrator, then the Sub-Contractor shall be entitled to recover from the Contractor such Cost as may be reasonable (if any) of complying therewith after finally complying with his obligations under clause 26 provided that such Cost was not caused or contributed to by any breach of the Sub-Contract by the Sub-Contractor.

20.4 Subject to clause 22, if the Contractor makes a decision or gives an instruction (including, without limitation, the ordering of a variation) otherwise than by way of confirmation of a decision or instruction of the Contract Administrator, the Sub-Contractor shall be entitled in respect of compliance with such decision or instruction to payment of such sum as the Contractor shall in consultation with the Sub-Contractor determine to be fair and reasonable in all the circumstances having regard, where appropriate, to the rates and prices contained in the Sub-Contract Schedule of Prices and applying mutatis mutandis the principles set out in clauses 54 and 55 of the General Conditions.

21. Disturbance to progress

21.1 Subject to clauses 7 and 22 and to the Sub-Contractor having afforded the Contractor in sufficient time all information and assistance which the Contractor may reasonably have required, the Contractor shall use all reasonable endeavours to secure from the Authority such financial compensation (other than that provided for elsewhere in the Sub-Contract), if any, as may be claimable in accordance with the Contract in relation to the Sub-Contract Works. On the Authority accounting to the Contractor in respect of any such financial compensation, the Contractor shall in turn allow to the Sub-Contractor such proportion thereof as may in all the circumstances be fair and reasonable.

21.2 Subject to clause 22, if and to the extent that the Contractor is of the opinion that the Sub-Contractor has been or is liable to be involved in expenditure for which the Sub-Contractor will not receive any financial compensation pursuant to any other provision of the Sub-Contract by reason of delay or disruption to the Sub-Contract

Works caused by any wrongful act or default of the Contractor, his servants, agents or other subcontractors of any tier the Contractor shall ascertain and pay to the Sub-Contractor the Cost incurred.

21.3 Save as aforesaid and subject to any other express provision of the Sub-Contract allowing the Sub-Contractor payment or extension of time the Contractor shall have no liability to the Sub-Contractor in respect of any condition, obstruction or circumstance that may affect the execution of the Sub-Contract Works and the Sub-Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Sub-Contract Sum and of the periods in the Sub-Contract Completion Schedule to cover the provision and doing by him of all things necessary for the performance of his obligations under the Sub-Contract.

22. Notice of Claims for additional payment

22.1 Without prejudice to the generality of clauses 4.2 and 7, if the Sub-Contractor intends to claim payment additional to the then current Sub-Contract Value and other amounts previously accepted by the Contractor as due or damages under or for breach of or otherwise in connection with the Sub-Contract he shall give written notice to the Contractor of his intention within 21 (twenty-one) days of the date when the event (including any instruction) giving rise to the claim occurred or, if later, when the Sub-Contractor ought reasonably to have realised that the event was liable to give rise to a claim.

22.2 Within 28 (twenty-eight) days, or such other reasonable time as may be approved by the Contractor, after the date of a Sub-Contractor's notice pursuant to clause 22.1, the Sub-Contractor shall send to the Contractor detailed particulars of the amount claimed and the grounds and/or contractual provisions upon which the claim is based and the documents to support the claim. Where the event giving rise to the claim has a continuing effect the account shall be considered an interim account and the Sub-Contractor shall at such intervals as the Contractor may reasonably instruct, send further interim accounts giving the current amount of the claim and specifying any further ground or evidence in support of the claim. The Contractor may, if in his opinion he has sufficient information for the purpose, give an interim decision. The Sub-Contractor shall, within twenty-one days of the continuing effect coming to an end, submit final particulars.

22.3 Notwithstanding any other provision of the Sub-Contract the Sub-Contractor shall not be entitled to any decision or to any revision of the Sub-Contract Value or to any payment, damages or other relief in respect of the event giving rise to his claim unless he shall have first complied with the terms of this clause 22 and in default of compliance the Sub-Contractor shall be deemed to have waived all rights, claims and damages to which he might have become entitled either under the Sub-Contract or as a result of its breach by the Contractor.

23. Property and Risk

23.1 Property in each part of the Sub-Contract Works shall pass from the Sub-Contractor to the Contractor:-

(a) upon the part of the Sub-Contract Works being substantially ready for delivery to the Project Site;

(b) upon delivery to the Project Site; or

(c) when and to the extent that the same is paid for by the Contractor,

whichever shall be the earliest.

23.2 In relation to each part of the Sub-Contract Works which is to be manufactured off-Site (including, without limitation, the items listed in the **Sub-Contract Schedule 6**) the Sub-Contractor shall upon property passing to the Contractor in accordance with clause 23.1:

(a) provide to the Contractor such documentary evidence of the transfer of ownership thereof as may be appropriate in the opinion of the Contract Administrator;

(b) suitably mark or otherwise plainly identify the part of the Sub-Contract Works so as to show that its destination is the Project Site, that it is the property of the Authority and (where it is not stored at the premises of the Sub-Contractor) to whose order it is held, and set aside and store the same so marked or identified to the satisfaction of the Contract Administrator;

(c) send to the Contractor a schedule listing and giving the value of every item so marked, identified, set aside and stored; and

(d) if so instructed by the Contractor provide to the Contractor an opinion in writing by an established and qualified lawyer in the country where the part of the Sub-Contract Works is situated that the actions taken by the Sub-Contractor are sufficient to show an intention to vest the property in the part in the Authority, and to protect it against seizure by a third party (including any liquidator, receiver or similar officer of the Sub-Contractor).

23.3 After each part of the Sub-Contract Works has become the property of the Contractor in accordance with clause 23.1, the same shall not be moved without the prior consent of the Contractor except for the purpose of delivery to the Site or the Project Site.

23.4 All risk in each part of the Sub-Contract Works shall remain with the Sub-Contractor until the issue of any Practical Completion Certificate under the Contract in which the part of the Sub-Contract Works is comprised.

23.5 Where it is provided by the Contract that property in Contractor's Equipment, Temporary Works or consumables owned by the Contractor shall in certain events vest in the Authority or revest in the Contractor, then insofar as Contractor's Equipment, Temporary Works or consumables are to be provided by the Sub-Contractor for the purposes of the execution of the Sub-Contract Works the property therein shall pass from the Sub-Contractor to the Contractor immediately before it is due to vest in the Authority in accordance with the Contract and shall revert to the Sub-Contractor immediately after it

has revested in the Contractor in accordance with the Contract. Notwithstanding the foregoing, all risk therein shall remain with the Sub-Contractor.

23.6 Without prejudice to the generality of clause 4.2, the Sub-Contractor shall comply with the requirements of the Contract as to the bringing on to and removal from the Project Site of Contractor's Equipment, Temporary Works and consumables, and insofar as any such items are leased, hired, hire-purchased or chartered by the Sub-Contractor, he shall comply with all the requirements of the Contract as to the terms of such hiring and other agreements and as to the giving of information to the Contract Administrator in relation thereto.

24. **Indemnity**

24.1 The Sub-Contractor shall at all times indemnify the Contractor against every liability which the Contractor may incur to any other person whatsoever (including, without limitation, the servants and agents of the Authority, the Contractor and the Sub-Contractor) for bodily injury or death, damage to property or other loss to the extent arising out of or in consequence of the execution of the Sub-Contract Works and against all damages, costs and expenses that may be occasioned to the Contractor by reason of the claims of such persons to the extent arising as aforesaid provided that the Contractor shall not be entitled to be so indemnified:

(a) in respect of any liability, damages, costs or expenses to the extent that the Contractor is entitled by the terms of the Contract to be indemnified by the Authority; and

(b) to the extent that any liability, damages, costs or expenses shall arise out of or shall have been contributed to by any wrongful act or omission of the Contractor, his servants, agents or other sub-contractors of any tier.

25. **Insurance**

25.1 Without prejudice to his other obligations and liabilities under the Sub-Contract, the Sub-Contractor shall maintain such policies of insurance:

(a) against such risks and in such sums and for the benefit of such persons as may be specified in the **Sub-Contract Schedule 8**; unless the **Sub-Contract Schedule 8** otherwise provides, the Sub-Contractor shall maintain such insurance from the date the Sub-Contractor commences the Sub-Contract Works until completion of his obligations under clause 26 and thereafter for as long as may be necessary to cover any liability or claim of the Sub-Contractor of the type described in any such policy of insurance; and

(b) as the Sub-Contractor may be required by law to maintain.

25.2 Upon reasonable notice in writing to do so, the Sub-Contractor shall produce for inspection to the Contractor a copy of any policy of insurance referred to in clause 25.1 and the latest receipt for premiums paid thereunder and in default thereof the Contractor may effect the same and recover the cost thereof as a debt from the Sub-Contractor.

25.3 Without prejudice to the Contractor's or the Sub-Contractor's other obligations and liabilities under the Sub-Contract, the Contractor shall maintain or procure the maintenance of all such policies of insurance (if any) required under the Contract for the periods required insofar as such policies are relevant to the Sub-Contract Works. If the Sub-Contract Works or any Contractor's Equipment belonging to the Sub-Contractor are destroyed or damaged during such periods in such circumstances that a claim is established in respect thereof under the said policies, then the Sub-Contractor shall be paid the amount of such claim, or the amount of his loss, whichever is the less, and shall apply such sum in replacing or repairing that which was destroyed or damaged.

26. **Maintenance and Defects**

26.1 If the Sub-Contractor shall complete the Sub-Contract Works or any part thereof before the completion of the Works, the Sub-Contractor shall maintain the Sub-Contract Works or the part thereof in the condition required by the Contract to the satisfaction of the Contractor and the Contract Administrator until the date of issue of any Practical Completion Certificate in which the Sub-Contract Works are or the part thereof is comprised and shall make good every defect therein arising from whatever cause. The Sub-Contractor shall not be entitled to any additional payment for so doing (other than any proceeds from insurers) unless and to the extent that such defect or damage is caused by the wrongful act or omission of the Contractor or the Authority, of their respective servants, agents or subcontractors of any tier or of other Contractors.

26.2 Upon receipt of a Practical Completion Certificate in respect of the Works, any Section or other part of the Works, or a Stage Certificate in respect of any Stage, in which the Sub-Contract Works or any part thereof are comprised, the Contractor shall supply a copy of the relevant Practical Completion Certificate or Stage Certificate to the Sub-Contractor. Without prejudice to the generality of clause 4.2, the Sub-Contractor shall have the like obligations for the like period to carry out maintenance work in relation to the Sub-Contract Works as the Contractor has under the Contract.

26.3 If the Sub-Contractor is required to carry out any work under this clause 26 in circumstances where the Contractor is not entitled to any payment under the Contract and where such work is necessitated by the wrongful act or omission of the Contractor, his servants, agents or other sub-contractors of any tier, the Contractor shall ascertain and pay to the Sub-Contractor the Cost of carrying out such work.

27. **Payment Procedure**

27.1 At the beginning of each month the Sub-Contractor may submit to the Contractor an application for interim payment in relation to the preceding month setting out:

(a) full details of all work carried out pursuant to the Sub-Contract;

(b) the amount claimed to be payable in respect of such work in accordance with the Sub-Contract Payment Schedule; and

(c) any other amount claimed to be payable pursuant to a determination of the Contractor or otherwise under the Sub-Contract, identifying the relevant determination or provision as the case may be,

and in such form and containing such further or other details as the Contractor may reasonably require.

27.2 The Contractor shall:

(a) from time to time make prompt applications for payment in accordance with the Contract and subject to the Sub-Contractor having complied with clause 27.1 shall state in each such application the amount payable by the Contractor to the Sub-Contractor. The Contractor shall use all reasonable endeavours to obtain prompt payment from the Authority of all such amounts; and

(b) within seven days of the Authority accounting to the Contractor in respect of amounts payable to the Sub-Contractor, pay to the Sub-Contractor such amounts subject to the deduction of any sums which may be deducted or which may be recovered by the Contractor in accordance with the express terms of the Sub-Contract or of the Contract or at law.

27.3 The Sub-Contractor acknowledges that Retention Monies shall be retained by the Authority in accordance with the terms of the Contract until the limit of retention (if any) therein specified has been reached and thereafter until its release in accordance with the Contract. Within 7 (seven) days of the Authority accounting to the Contractor in respect of any amounts by way of release of monies retained by the Authority under the Contract in respect of the Sub-Contract Works, the Contractor shall pay to the Sub-Contractor such amounts subject to any deductions as referred to in clause 27.2(b).

27.4 Within 7 (seven) days after the Authority has accounted in full to the Contractor in respect of all sums payable to the Sub-Contractor and provided that the Sub-Contractor has then fulfilled all his obligations under the Sub-Contract and none of his liabilities to the Contractor under the Sub-Contract are outstanding the Contractor shall pay to the Sub-Contractor or the Sub-Contractor shall pay to the Contractor, as the case may be, the difference between the total of all sums payable to the Sub-Contractor in accordance with the terms of the Sub-Contract and the total of such sums as have already been received by the Sub-Contractor.

27.5 If the Contractor shall not achieve any Milestone by the due date stipulated in the Schedule of Milestones by reason of a breach by the Sub-Contractor of the Sub-Contract, the following procedures will apply:

(a) all payments otherwise payable in accordance with the Sub-Contract Payment Schedule shall be suspended by the Contractor at the amount determined by reference to the percentage appearing in the Sub-Contract Payment Schedule applicable to the month prior to the month in which the Milestone was due to have been achieved;

(b) payments suspended under clause 27.5(a) shall be resumed by being included by the Contractor in the next payment application under the Contract after the Milestone is achieved at the amount determined by reference to the percentage appearing in the Sub-Contract Payment Schedule applicable to the month in which the Milestone was due to be achieved; and

(c) upon amendments being made by the Contract Administrator to the relevant Interim Payment Schedule under the Contract, the Contractor shall amend the Sub-Contract Payment Schedule to the extent appropriate to be consistent with the amendments made by the Contract Administrator.

27.6 If the Contractor does not achieve any Milestone by the due date stipulated in the Schedule of Milestones in circumstances where the Sub-Contractor is not in breach of the Sub-Contract, the Contractor shall pay or continue to pay amounts due to the Sub-Contractor in accordance with the Sub-Contract Payment Schedule notwithstanding any suspension of interim payments under the Contract.

27.7 If the Contract Administrator revises the relevant Interim Payment Schedule pursuant to Clause 66 of the General Conditions of contract included in the Contract for any reason other than a failure to achieve a Milestone in the circumstances described in clause 27.6, the Contractor may revise the Sub-Contract Payment Schedule to the extent appropriate to be consistent with the revisions to the relevant Interim Payment Schedule.

27.8 If the Contractor is in breach of any requirement under the Contract to provide to the Authority or to procure that the Sub-Contractor provides to the Authority any warranty or any undertaking as to the completion or maintenance of the Sub-Contract Works or any manufacturer's warranty or the like, and if any act or omission of the Sub-Contractor shall have constituted, caused or contributed to such breach, the Sub-Contractor shall not be entitled to further payment under the Sub-Contract until it has rectified such act or omission.

28. **Termination of the Contract**

28.1 If the Contract or the Contractor's employment thereunder is determined for any reason whatsoever before the Sub-Contractor has fully performed his obligations under the Sub-Contract, the Contractor may at any time thereafter by notice to the Sub-Contractor forthwith determine the Sub-Contractor's employment under the Sub-Contract. The Sub-Contractor shall make the Sub-Contract Works safe and with all reasonable despatch remove his workmen and all Contractor's Equipment if and insofar as property in such Contractor's Equipment has re-vested in the Sub-Contractor in accordance with clause 23.5.

28.2 Upon such a determination of the Sub-Contractor's employment, subject to clause 28.3, the Sub-Contractor shall be paid by the Contractor, in so far as such items have not already been covered by interim payments made to the Sub-Contractor:

(a) the total of the value of all work executed prior to the date of termination, calculated by reference to the Sub-Contract Schedule of Prices;

(b) the Cost of any parts of the Sub-Contract Works properly ordered for which the Sub-Contractor shall have paid or for which the Sub-Contractor shall be legally bound to pay and on such payment by the Contractor the part of the Sub-Contract Works shall become the property of and shall be delivered to the Contractor; and

(c) a sum to be certified by the Contractor in respect of the Cost incurred by the Sub-Contractor in the expectation of completing the Sub-Contract Works in so far as such Cost shall not have been paid in accordance with any other provision of this clause 28,

provided that nothing herein shall affect the rights of either party in respect of any breach of the Sub-Contract committed by the other prior to such determination, nor any right which may have accrued to the Sub-Contractor prior to such determination to receive any payment which is not in respect of the Sub-Contract Value.

28.3 If the Contract or the Contractor's employment thereunder is determined by the Authority in consequence of any breach of the Sub-Contract by the Sub-Contractor, then the provisions of clause 28.2 as to payment shall not apply. The rights of the Contractor and the Sub-Contractor under the Sub-Contract shall be the same as if the Sub-Contractor had by such breach repudiated the Sub-Contract and the Contractor had by his notice of determination under clause 28.1 elected to accept such repudiation.

29. **Termination of the Sub-Contract**

29.1 If a receiving order shall be made against the Sub-Contractor or the Sub-Contractor shall make an arrangement with or assignment in favour of his creditors or shall agree to carry out the Sub-Contract under a committee of inspection of his creditors or an administrator or administrative receiver or if the Sub-Contractor shall go into liquidation (other than a voluntary liquidation for the purposes of amalgamation or reconstruction to which the Contract Administrator shall have given his approval which shall not be unreasonably withheld) or if a receiver, administrator, administrative receiver, trustee, liquidator, or like person is appointed over any substantial part of the Sub-Contractor's assets under any jurisdiction or law relating to the reorganisation, arrangement or adjustment of debts or the dissolution, administration or liquidation of corporations or if the Sub-Contractor shall assign the benefit of the Sub-Contract without the consent in writing of the Contractor or shall have execution levied on his goods or if the Contract Administrator shall order the removal of the Sub-Contractor from the Site or if in the opinion of the Contractor the Sub-Contractor:

(a) has abandoned the Sub-Contract;

(b) without reasonable excuse has failed to commence the Sub-Contract Works or enter upon the Site in accordance with clause 14 or has suspended the execution of the Sub-Contract Works for 14 (fourteen) days after receiving from the Contractor notice to proceed;

(c) has failed to remove work from the Site or the Project Site or to pull down and replace work for fourteen days after receiving from the Contractor notice that the work had been rejected;

(d) despite a written warning by the Contractor is failing to proceed with the Sub-Contract Works with due diligence or is persistently or significantly in breach of his obligations under the Sub-Contract;

(e) has sub-let the whole of the Sub-Contract Works or any part thereof without the consent of the Contractor; or

(f) is in breach of clause 5,

then the Contractor may after giving not less than 7 (seven) days' notice to the Sub-Contractor terminate, by further notice, the Sub-Contractor's employment under the Sub-Contract and, if the Sub-Contractor is still on the Site, enter upon the Site and expel the Sub-Contractor from the Project Site without thereby avoiding the Sub-Contract or releasing the Sub-Contractor from any of his obligations or liabilities under the Sub-Contract or affecting the rights and powers conferred on the Contractor or the Contract Administrator by the Sub-Contract. Thereafter, the Contractor may execute the Sub-Contract Works or any part thereof, and may employ any third party to execute the Sub-Contract Works, and the Contractor or such third party may use to execute the Works any of the Contractor's Equipment, Temporary Works and Sub-Contract Works which have become the property of the Contractor under clause 23 as the Contractor may think proper and may at any time sell any of the said Contractor's Equipment, Temporary Works and Sub-Contract Works and apply the proceeds of sale in or towards the satisfaction of any sum due or which may become due to the Contractor from the Sub-Contractor under or in connection with the Sub-Contract.

29.2 Upon such a determination, the rights and liabilities of the Contractor and the Sub-Contractor shall, subject to clause 29.1, be the same as if the Sub-Contractor had repudiated the Sub-Contract and the Contractor had by his notice of determination under clause 29.1 elected to accept such repudiation.

29.3 The Contractor may in lieu of giving a notice of determination under clause 29.1 take part only of the Sub-Contract Works out of the hands of the Sub-Contractor by giving equivalent notice under this clause 29.3 specifying the relevant part and the Contractor may himself or by a third party execute such part and in such event the Contractor may recover his reasonable costs of so doing from the Sub-Contractor, or deduct such costs from monies otherwise becoming due to the Sub-Contractor.

30. **Service of Notices**

30.1 Any document arising under out of or in connection with the Sub-Contract may be served :

(a) in the case of the Contractor, at [ ]; and

(b) in the case of the Sub-Contractor, at [ ] above,

or at such other address in Hong Kong as may be notified from time to time by either party to the other expressly for the purpose of service of documents.

31. **Dispute Resolution Procedure**

31.1 Any Sub-Contract Dispute shall be settled in accordance with the provisions of this clause 31.

31.2 For the purpose of this clause 31, a Sub-Contract Dispute shall be deemed to arise when one party serves on the other party a notice (hereinafter called a "notice of dispute") stating the nature of the Sub-Contract Dispute.

31.3 Unless the Sub-Contract or the Sub-Contractor's employment thereunder has already been terminated, the Sub-Contractor shall continue to execute the Sub-Contract Works with all due diligence regardless of the nature of any Sub-Contract Dispute and shall give effect forthwith to every instruction of the Contractor except and to the extent that the same shall have been revised by arbitral award.

31.4 Without prejudice to the generality of clause 7, the Sub-Contractor shall provide the Contractor with all such assistance and support as the Contractor may reasonably require in relation to the resolution of any Contract Dispute.

31.5 No steps shall be taken in any reference of a Sub-Contract Dispute to arbitration until:

(a) after the completion or alleged completion of the Works unless with the consent of the Contractor and the Sub-Contractor; or

(b) the termination of the Contract or of the Contractor's employment under the Contract.

31.6 A Sub-Contract Dispute may be referred to arbitration by either party. The place of arbitration shall be Hong Kong. Subject to clause 31.7, the reference of a Sub-Contract Dispute shall be conducted before a sole arbitrator, in Hong Kong and in the English language and in accordance with the Arbitration Rules applicable under the Contract and in accordance with the Arbitration Ordinance (Cap. 609) or any statutory modification or re-enactment thereof. The matters listed in Schedule 2 (except Paragraphs 1 and 2 of Schedule 2) of the Arbitration Ordinance (Cap.609) shall apply to the arbitration.

31.7 If the Contractor is of the opinion that the issues in any Contract Dispute will or may touch upon or concern a Sub-Contract Dispute, then provided that an arbitrator has not already been appointed pursuant to clause 31.6, the Contractor may by notice in writing to the Sub-Contractor require and the Sub-Contractor shall be deemed to have consented to the referral of such Sub-Contract Dispute to the arbitrator to whom the Contract Dispute has been or will be referred.

31.8 Save as expressly otherwise provided, the arbitrator shall have full power to open up, review and revise any notice, consent, approval, certificate, instruction, request, decision or agreement of the Contract Administrator or the Contractor relating to the

Sub-Contract Dispute and to order the rectification of the Sub-Contract subject to any rule of law which would restrict this power.

32. **Proper Law**

32.1 The Sub-Contract and all Sub-Contract Disputes shall be governed by and construed in all respects according to the law for the time being in force in Hong Kong and, subject to clause 31, the parties agree to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

WITNESS whereof this Sub-Contract has been executed as a deed the day and year first above written.

THE COMMON SEAL OF)
)
was affixed hereto)
in the presence of:)

_____

THE COMMON SEAL OF)

was affixed hereto)
in the presence of)

_____

SUB-CONTRACT SCHEDULE 1

PARTICULARS OF THE CONTRACT

A. Parties;

B: Date:

C: Brief description of the Works:

SUB-CONTRACT SCHEDULE 2

PARTICULARS OF THE SUB-CONTRACT

A. Documents forming the Sub-Contract:

B: Brief description of the Sub-Contract Works:

C: If the Sub-Contract Works are divided into parts for the purpose of the Sub-Contract Completion Schedule, brief description of such part:

Part A:

Part B:

Part C:

etc.

D. Amount of bond:

SUB-CONTRACT SCHEDULE 3

SUB-CONTRACT COMPLETION SCHEDULE

1. Latest date for instruction to commence the Sub-Contract Works

   after acceptance of the Sub-Contract Tender

2. Latest date for instruction to enter upon the Site

   after entry upon the Site

3. Time for completion

   EITHER

   For the Sub-Contract Works:

   after entry upon the Site

   OR

   For parts of the Sub-Contract Works:

   Part A:

   Part B:

   Part C:

   etc. after entry upon the Site

SUB-CONTRACT SCHEDULE 4

SUB-CONTRACT PAYMENT SCHEDULE

SUB-CONTRACT SCHEDULE 5

SUB-CONTRACT SCHEDULE OF PRICES

SUB-CONTRACT SCHEDULE 6

GOODS AND MATERIALS TO BE MANUFACTURED OFF-SITE

SUB-CONTRACT SCHEDULE 7

SITE FACILITIES

SUB-CONTRACT SCHEDULE 8

SUB-CONTRACTOR'S INSURANCE

SUB-CONTRACT SCHEDULE 9

FORM OF PARENT COMPANY GUARANTEE TO THE CONTRACTOR

SUB-CONTRACT SCHEDULE 9

FORM OF PARENT COMPANY GUARANTEE TO THE CONTRACTOR

THIS GUARANTEE is made the day of 201 .

BETWEEN:

(1) [ ] a company incorporated in and in accordance with the laws of [ ] of [ ] [See Note 1] ("the Guarantor"); and

(2) [ ] a company incorporated in and in accordance with the laws of [ ] of [ ] (together with its successors and assigns, "the Contractor").

WHEREAS

(A) By a Sub-Contract dated [ ] ("the Sub-Contract") made between the Contractor and the Sub-Contractor, the Sub-Contractor has agreed to execute the Sub-Contract Works upon the terms contained in the Sub-Contract.

(B) Pursuant to the terms of the Sub-Contract, the Sub-Contractor agreed to procure the provision of a guarantee in the terms hereof.

(C) At the request of the Sub-Contractor, the Guarantor has agreed to guarantee performance of the Sub-Contract by the Sub-Contractor as set out herein.

IT IS HEREBY AGREED AS FOLLOWS:

1. Where applicable, words and expressions used in this Guarantee shall have the meaning assigned to them in the Sub-Contract.

2. In consideration of the Contractor accepting this Guarantee pursuant to the Sub-Contract, the Guarantor irrevocably and unconditionally guarantees to the Contractor as a primary obligation and not as a surety due performance by the Sub-Contractor of all of his obligations and liabilities under and arising out of the Sub-Contract save that nothing herein shall be construed as imposing greater obligations or liabilities on the Guarantor than are imposed on the Sub-Contractor by the Sub-Contract.

3. The obligations of the Guarantor under this Guarantee shall remain in full force and effect and shall not be discharged in any way by and the Guarantor hereby waives notice of

   (a) any suspension of the Sub-Contract Works or variation to or amendment of the Sub-Contract Works or the Sub-Contract (including without limitation extension of time for performance and adjustments to the amount payable to the Sub-Contractor under the Sub-Contract);

   (b) any provision of the Sub-Contract being or becoming illegal, invalid, void,

voidable or unenforceable;

(c) the termination of the Sub-Contract or of the employment of the Sub-Contractor under the Sub-Contract;

(d) any forbearance or waiver of any right of action or remedy the Contractor may have against the Sub-Contractor or negligence by the Contractor in enforcing any such right of action or remedy;

(e) any bond, security or other guarantee held or obtained by the Contractor for any of the obligations of the Sub-Contractor under the Sub-Contract or any release or waiver thereof; and

(f) any breach of the Sub-Contract or other default of the Contractor.

4. This Guarantee shall extend to any variation of or amendment to the Sub-Contract and to any agreement supplemental thereto agreed between the Contractor and the Sub-Contractor and the Guarantor hereby authorises the Contractor and the Sub-Contractor to make any such amendment, variation or supplemental agreement.

5. This Guarantee is a continuing guarantee and accordingly shall cover all of the obligations and liabilities of the Sub-Contractor under and arising out of the Sub-Contract and remain in full force and effect until all the said obligations and liabilities of the Sub-Contractor shall have been carried out, completed and discharged in accordance with the Sub-Contract. This Guarantee is in addition to any other security which the Contractor may at any time hold and may be enforced without first having recourse to any such security or taking any steps or proceedings against the Sub-Contractor.

6. Until the date of issue of the Defects Liability Certificate, the Guarantor shall not on any ground whatsoever make any claim or threaten to make any claim whether by proceedings or otherwise against the Sub-Contractor for the recovery of any sum paid by the Guarantor pursuant to this Guarantee. Any such claim shall be subordinate to any claims (contingent or otherwise) which the Contractor may have against the Sub-Contractor arising out of or in connection with the Sub-Contract until such time as the Contractor's claims shall be satisfied by the Sub-Contractor or the Guarantor as the case may be. To that intent the Guarantor shall not claim or have the benefit of any security which the Contractor holds or may hold for any monies or liabilities due or incurred by the Sub-Contractor to the Contractor and, in case the Guarantor receives any sum from the Sub-Contractor in respect of any payment by the Guarantor under this Guarantee, the Guarantor shall hold such sum in trust for the Contractor for so long as any sum is payable (contingently or otherwise) under this Guarantee.

7. (a) The Contractor shall be entitled at any time, without the consent of the Guarantor to assign or transfer the benefit of this Guarantee or any part thereof, any interest therein or thereunder and any right thereunder, whether past, existing or future, to any third party.

(b) In the event of any assignment or transfer by the Contractor in accordance with clause 7(a) above, the assignee or transferee shall from the date thereof have the same rights, powers and remedies as it would have had if it had at all times been the Contractor under this Guarantee. Without prejudice to the generality of the foregoing, all losses, costs, demands, claims proceedings or any other right or benefit whatsoever, (whether past, present or future) of the Contractor related to or in any way connected with or arising out of this Guarantee, shall be deemed to be those of any assignee or transferee of the Contractor.

8. All documents arising out of or in connection with this Guarantee shall be served upon the Guarantor, at [ ], Hong Kong [See Note 2].

9. The Guarantor may change its nominated address for service of documents to another address in Hong Kong by providing not less than five business days' written notice to the Contractor. All demands and notices shall be in writing and in English.

10. This Guarantee shall be governed by and construed according to the laws for the time being in force in Hong Kong and the Guarantor agrees to submit to the non-exclusive jurisdiction of the courts of Hong Kong.

IN WITNESS whereof this Guarantee has been executed as a deed on the date first before written.

THE COMMON SEAL of)
[ ])
was affixed hereto in the presence of:)

[See Notes 1 and 3]

Notes (for preparation of but not Inclusion in the engrossment of this Guarantee):

1. If more than one shareholder, parent company, or holding company executes this Guarantee, the guarantors shall be jointly and severally liable and appropriate amendments shall be made. Foreign corporations shall be described appropriately.

2. The address for service shall be in Hong Kong.

3. Copies of relevant Board resolutions authorising the execution under seal of this document shall be provided. If execution is to be by an Attorney, appropriate amendments shall be made and a copy of the Power of Attorney and relevant Board resolution shall be provided. In the case of a foreign corporation, a legal opinion in the form required by the Contractor shall be produced confirming the validity of the execution of this document and of any Power of Attorney.

SUB-CONTRACT SCHEDULE 10

FORM OF SUB-CONTRACTOR WARRANTY TO THE AUTHORITY

THIS AGREEMENT is made the day of 201[ ] **[SEE NOTE 1].**

BETWEEN:

1. **[Insert name of Company]** a company incorporated in and in accordance with the laws of **[Insert Jurisdiction of Incorporation]** of **[Insert Registered Address of Company] [SEE NOTE 2]** ("the Sub-Contractor"); and

2. **WEST KOWLOON CULTURAL DISTRICT AUTHORITY** of Units 608-613, Level 6, Core C, Cyberport 3, 100 Cyberport Road, Pokfulam, Hong Kong (together with its successors and assigns, "the Authority").

WHEREAS:

(A) By a contract dated **[Insert date of Letter of Acceptance issued by the Authority]** (Contract No. **[Insert Contract Number]** – **[Insert Contract Name]**) ("the Contract") made between the Authority and the Contractor, the Contractor agreed to execute the Works upon the terms contained in the Contract.

(B) The Sub-Contractor has had an opportunity of reading and noting the provisions of the Contract (other than details of the Contractor's prices and rates).

(C) Pursuant to the Contract, the Contractor wishes to enter into an agreement with the Sub-Contractor ("the Sub-Contract") for the Sub-Contractor to carry out and complete a part of the Works as more particularly described in the Sub-Contract ("the Sub-Contract Works").

(D) The Contract stipulates that the Contractor shall obtain the consent of the Contract Administrator (as identified in the Contract) before entering into the Sub-Contract, and that the Contractor shall procure that the Sub-Contractor executes a warranty in favour of the Authority.

NOW IT IS HEREBY AGREED as follows:

1. Where applicable, words and expressions used in this Warranty shall have the meaning assigned to them in the Contract.

2. In consideration of the Authority accepting this Warranty pursuant to the Contract and the Contract Administrator consenting to the Contractor and the Sub-Contractor entering into the Sub-Contract, the Sub-Contractor warrants and undertakes to the Authority that:

   (a) he shall execute the Sub-Contract Works, and has carried out and will carry out each and all of the obligations, duties and undertakings of the Sub-Contractor under the Sub-Contract when and if such obligations, duties and undertakings shall become due and performable, in accordance with the terms of the

Sub-Contract (as the same may from time to time be varied or amended with the consent of the Contract Administrator); and

(b) he shall supply the Contract Administrator with all information which the Contract Administrator may reasonably require from time to time in relation to the progress of the Sub-Contract Works.

3. The Sub-Contractor undertakes to indemnify the Authority against each and every liability which the Authority may have to any person whatsoever and against any claims, demands, proceedings, loss, damages, costs and expenses sustained, incurred or payable by the Authority to the extent arising from breach of this Warranty by the Sub-Contractor provided that the Sub-Contractor shall have no greater liability to the Authority by virtue of this clause 3 than the liability of the Contractor to the Authority under the Contract to the extent that the same shall have arisen by reason of any breach by the Sub-Contractor of his obligations under the Sub-Contract.

4. No allowance of time by the Authority hereunder or by the Contractor under the Sub-Contract nor any forbearance or forgiveness in or in respect of any matter or thing concerning this Warranty or the Sub-Contract on the part of the Authority or the Contractor, nor anything that the Authority or the Contractor may do or omit or neglect to do, shall in any way release the Sub-Contractor from any liability under this Warranty.

5. The Sub-Contractor agrees that he will not, without first giving the Authority not less than 21 (twenty-one) days' prior notice in writing, exercise any right he may have to terminate the Sub-Contract or his employment thereunder or withhold performance of his obligations under the Sub-Contract.

6. (a) Notwithstanding anything to the contrary in the Sub-Contract, if the Contract or the employment of the Contractor under the Contract is terminated for any reason whatsoever and if so requested by the Authority in writing within 21 (twenty-one) days of such termination, the Sub-Contractor shall enter into a novation agreement with the Authority and the Contractor in which the Sub-Contractor will undertake, inter alia, to perform the Sub-Contract and be bound by its terms as if the Authority had originally been named as a contracting party in place of the Contractor and as if neither the Contract or the Contractor's employment thereunder nor the Sub-Contract or the Sub-Contractor's employment thereunder had been terminated. The said novation agreement will be in such form as the Authority may reasonably require.

(b) If the Authority does not require the Sub-Contractor to enter into a novation agreement as required by clause 6(a) above, the Sub-Contractor shall have no claim whatsoever against the Authority for any damage, loss or expense howsoever arising out of or in connection with this Warranty.

7. Insofar as the copyright or other intellectual property rights (in Hong Kong or any country) in any plans, calculations, drawings, documents, materials, know-how and information relating to the Sub-Contract Works shall be vested in the Sub-Contractor, the Sub-Contractor grants to the Authority, his successors and assigns a royalty free, perpetual, unrestricted, exclusive, irrevocable, worldwide, freely assignable licence

(carrying the right to grant sub-licences) to use, reproduce, modify, adapt and translate any of the works, designs or inventions incorporated and referred to in such documents or materials and any such know-how and information for all purposes relating to the Works or the Project (including without limitation the design, construction, reconstruction, completion, maintenance, reinstatement, extension, repair and operation of the Works or any part of the Project). To the extent that beneficial ownership of any such copyright or other intellectual property right is vested in anyone other than the Sub-Contractor, the Sub-Contractor shall use his best endeavours to procure that the beneficial owner thereof shall grant a like licence to the Authority. Any licence granted pursuant to this clause 7 shall not be determined if the Sub-Contractor shall for any reason cease to be employed in connection with the Sub-Contract Works and the Sub-Contractor shall execute all documents and take all such other steps as may be necessary to effect and protect the licences (including, without limitation, registration and notification to purchasers of the Sub-Contractor's or other owner's rights).

8. If there is any ambiguity or conflict between the terms of the Sub-Contract and this Warranty, the terms of this Warranty shall prevail.

9. The provisions of this Warranty shall be without prejudice to and shall not be deemed or construed so as to limit or exclude any right or remedy which the Authority may have against the Sub-Contractor whether in tort or otherwise.

10. (a) The Authority shall be entitled at any time, without the consent of the Sub-Contractor, to assign or transfer the benefit of this Warranty or any part thereof, any interest thereon or thereunder and any right thereunder, whether past, existing or future, to any third party.

(b) In the event of any such assignment or transfer by the Authority in accordance with clause 10(a) above, such assignee or transferee shall from the date thereof have the same rights, powers and remedies as it would have had if it had at all times been the Authority under this Warranty. Without prejudice to the generality of the foregoing, all losses, costs, demands, claims proceedings or any other rights or benefits whatsoever, (whether past, present or future) of the Authority related to or in any way connected with or arising out of this Warranty, shall be deemed to be those of any assignee or transferee of the Authority.

11. All documents arising out of or in connection with this Warranty shall be served:

(a) upon the Authority at **[Insert Address]**; and

(b) upon the Sub-Contractor, at **[Insert Address]**, Hong Kong **[SEE NOTE 3].**

12. The Authority and the Sub-Contractor may change their respective nominated addresses for service of documents to another address in Hong Kong by providing not less than five business days' written notice to each other. All demands and notices shall be in writing and in English.

13. Subject to clause 15, any dispute or difference of any kind whatsoever between the Authority and the Sub-Contractor arising under, and out of or in connection with this

Warranty shall be referred to arbitration. The reference to arbitration shall be conducted in accordance with the Arbitration Rules. References in such rules to "Dispute" shall be deemed to include any dispute or difference between the Authority and the Sub-Contractor.

14. The arbitrator shall have full power to open up, review and revise any decision, opinion, instruction, notice, order, direction, withholding of approval or consent, determination, certificate, statement of objection, assessment or valuation of the Contract Administrator or the Contractor relating to the dispute or difference.

15. The Authority may by notice to the Sub-Contractor require that:

(a) any dispute or difference to be referred to arbitration pursuant to clause 13 shall be referred to the arbitrator appointed or to be appointed in the arbitration of any dispute or difference in connection with the Project between the Authority and any party other than the Sub-Contractor; or

(b) any dispute or difference in connection with the Project between the Authority and any party other than the Sub-Contractor shall be referred to the arbitrator appointed or to be appointed in the arbitration of any dispute or difference referred pursuant to clause 13,

and any dispute or difference as aforesaid shall be so referred and the Sub-Contractor shall accept such reference. Any such arbitrator shall have full power to give such orders and directions as he shall think fit in relation to the conduct of any disputes or differences including, but not limited to, the power to order consolidation and hearing together, sequentially or separately.

16. This Warranty and all disputes arising under, out of or in connection therewith shall be governed by and construed according to the laws for the time being in force in Hong Kong and, subject to clause 13, the Sub-Contractor agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

IN WITNESS whereof this Warranty has been executed as a deed on the date first before written.

THE CORPORATE SEAL of	)
WEST KOWLOON CULTURAL	)
DISTRICT AUTHORITY is hereunto	)
affixed by authority of the Board; and	)
authenticated by:	)

_____
Member of the Board

_____
Chief Executive Officer

THE COMMON SEAL of	)
[Insert name of Company]	)
was affixed hereto	)
in the presence of:	)
	)

_____
(Authorised Signature)

(Witness)

OR

SIGNED, SEALED AND DELIVERED	)
by Mr [ ]	)
for and on behalf of **[Insert name of Company]**	)
as lawful attorney of the Sub-Contractor under	)
Power of Attorney dated [ ]	)
in the presence of **[Insert name of Witness]**	)
as Witness	)

_____

[SEE NOTE 4]

NOTES FOR GUIDANCE IN PREPARATION OF WARRANTY BY SUB-CONTRACTOR

These notes are prepared in order to assist the Sub-Contractor in the preparation of the Warranty and cross refer to the note references contained in the draft Warranty. The note references contained in the draft Warranty shall be deleted from the engrossment of the Warranty when prepared by the Sub-Contractor.

NOTE 1

At the time of preparation of the Warranty by the Sub-Contractor, the date should be left blank. The date will be inserted by the Authority at the time of execution of the Warranty by him.

NOTE 2

The name, place of incorporation and registered address of the Sub-Contractor shall be inserted.

NOTE 3

The address for service shall be in Hong Kong.

NOTE 4

The Sub-Contractor shall execute the warranty under seal.

This may be done either by:

(a) affixing the Corporate Seal of the Sub-Contractor in the presence of authorised signatories in accordance with the Articles of Association or other constitutional documents of the Sub-Contractor; or

(b) by execution under seal by an attorney appointed by a valid and binding Power of Attorney given by the Sub-Contractor in accordance with its Articles of Association or other constitutional documents.

The following documents shall be submitted with the executed warranty:

1. if executed by affixing the Corporate Seal:

(a) an extract from the Sub-Contractor's Articles of Association or other constitutional documents dealing with the execution of documents by use of the Corporate Seal of the Sub-Contractor; and

(b) a copy of the Board Resolution or a copy of the minutes of the meeting of the Board of the Sub-Contractor by which the execution of the Warranty was approved;

2. if executed by an attorney on behalf of the Sub-Contractor:

(a) a copy of the Power of Attorney by which the attorney is appointed by the Sub-Contractor to execute documents on its behalf; and

(b) evidence of the authority of the person providing the Power of Attorney to delegate powers to the attorney e.g. copy of the Board Resolution authorising the appointment of the attorney or extracts from the Sub-Contractor's Articles of Association or other constitutional documents dealing with the appointment of attorneys, together with confirmation of the position or office held by the person giving the Power of Attorney; and

3. if the Sub-Contractor is incorporated outside of Hong Kong, a legal opinion, if required by the Authority, in a form that shall be provided to the Sub-Contractor confirming the validity of the execution of the Warranty and of any Power of Attorney.

SUB-CONTRACT SCHEDULE 11

FORM OF PARENT COMPANY GUARANTEE TO THE AUTHORITY

THIS GUARANTEE is made the day of 201[ ] .

BY:

[Insert name of Parent Company] a company incorporated in and in accordance with the laws of **[Insert Jurisdiction of Incorporation]** of **[Insert Registered Address]** [and **[Insert name of Second Parent Company if appropriate]** a company incorporated in accordance with the laws of **[Insert Jurisdiction of Incorporation]** of **[Insert Registered Address]**, jointly and severally,] **[SEE NOTE 1]** ("the Guarantor");

IN FAVOUR OF:

WEST KOWLOON CULTURAL DISTRICT AUTHORITY of Units 608-613, Level 6, Core C, Cyberport 3, 100 Cyberport Road, Pokfulam, Hong Kong (together with its successors and assigns, "the Authority").

WHEREAS:

(A) By a contract dated **[Insert date of Letter of Acceptance issued by the Authority]** (Contract No. **[Insert Contract number]** – **[Insert Contract name]**) ("the Contract") made between the Authority and the Contractor, the Contractor has agreed to execute the Works upon the terms contained in the Contract.

(B) By a Sub-Contract between the Contractor and [**insert name of Sub-Contractor**] ("the Sub-Contractor") dated [**insert date of Sub-Contract**] ("the Sub-Contract") the contractor sub-contracted a part of the Works to the Sub-Contractor ("the Sub-Contract Works") and, pursuant to the terms of the Sub-Contract, the Sub-Contractor provided a Sub-Contract Warranty to the Authority dated [**insert date of warranty**] ("the Warranty").

(C) Pursuant to the provisions of the Contract, the Contractor is required to procure the provision of a Parent Company Guarantee in favour of the Authority in respect of the Warranty provided by the Sub-Contractor. The Guarantor has [jointly and severally] **[SEE NOTE 1]** agreed to guarantee the obligations and liabilities of the Sub-Contractor under the Warranty [**SEE NOTE 3]** as set out herein.

IT IS HEREBY AGREED as follows:

1. Where applicable, words and expressions used in this Guarantee shall have the meaning assigned to them in the Contract.

2. In consideration of the Authority accepting this Guarantee pursuant to the Contract, the Guarantor [jointly and severally] **[SEE NOTE 1]** irrevocably and unconditionally guarantees to the Authority, as a primary obligation and not as a surety, due performance by the Sub-Contractor of all of his obligations and liabilities under and arising out of the

Warranty save that nothing herein shall be construed as imposing greater obligations or liabilities on the Guarantor than are imposed on the Sub-Contractor by the Warranty.

3. The obligations of the Guarantor under this Guarantee shall remain in full force and effect and shall not be discharged in any way by and the Guarantor hereby waives notice of:

   (a) any suspension of the Works or the Sub-Contract Works or variation to or amendment of the Works, the Sub-Contract Works or the Sub-Contract or the Warranty (including, without limitation, extension of time for performance and adjustment to the amount payable to the Sub-Contractor under the Sub-Contract);

   (b) any provision of the Sub-Contract or the Warranty being or becoming illegal, invalid, void, voidable or unenforceable;

   (c) the termination of the Sub-Contract or of the employment of the Sub-Contractor under the Sub-Contract;

   (d) any forbearance or waiver of any right of action or remedy the Authority may have against the Contractor under the Contract or the Sub-Contractor under the Warranty or otherwise or negligence by the Authority in enforcing any such right of action or remedy; and

   (e) any bond, security or other guarantee held or obtained by the Authority for any of the obligations of the Sub-Contractor under the Warranty or the Sub-Contract or any release or waiver thereof.

4. This Guarantee shall extend to any variation of or amendment to the Sub-Contract and to any agreement supplemental thereto agreed between the Contractor and the Sub-Contractor.

5. This Guarantee is a continuing guarantee and accordingly shall cover all of the obligations and liabilities of the Sub-Contractor under and arising out of the Warranty and shall remain in full force and effect until all the said obligations and liabilities of the Sub-Contractor have been carried out, completed and discharged in accordance with the Warranty. This Guarantee is in addition to any other security which the Authority may at any time hold and may be enforced without first having recourse to any such security or taking any steps or proceedings against the Sub-Contractor.

6. Until the date of issue of the Defects Liability Certificate, the Guarantor shall not on any ground whatsoever make any claim or threaten to make any claim whether by proceedings or otherwise against the Sub-Contractor nor, if the Sub-Contractor comprises more than one entity, against any such entity for the recovery of any sum paid by the Guarantor pursuant to this Guarantee. Any such claim shall be subordinate to any claims (contingent or otherwise) which the Authority may have against the Sub-Contractor and/or any entity as aforesaid arising out of or in connection with the Sub-Contract until such time as the Authority's claims shall be satisfied by the Sub-Contractor and/or any entity as aforesaid or the Guarantor as the case may be. To that intent, the Guarantor shall not claim or have the benefit of any security which the Authority holds or may hold for any monies or liabilities due or incurred by the Sub-Contractor and/or any entity as aforesaid to the Authority and, in case the Guarantor receives any sum from the Contractor and/or any entity as aforesaid in

respect of any payment by the Guarantor hereunder, the Guarantor shall hold such sum in trust for the Authority for so long as any sum is payable (contingently or otherwise) under this Guarantee.

7. The Authority shall be entitled at any time, without the consent of the Guarantor to assign or transfer the benefit of this Guarantee or any part thereof, any interest therein or thereunder and any right thereunder, whether past, existing or future, to any third party. In the event of any assignment or transfer by the Authority as aforesaid, the assignee or transferee shall from the date thereof have the same rights, powers and remedies as it would have had if it had at all times been the Authority under this Guarantee. Without prejudice to the generality of the foregoing, all losses, costs, demands, claims, proceedings or any other right or benefit whatsoever, (whether past, present or future) of the Authority related to or in any way connected with or arising out of this Guarantee, shall be deemed to be those of any assignee or transferee of the Authority.

8 All documents arising out of or in connection with this Guarantee shall be served upon the Guarantor, at **[Insert Address]**, Hong Kong **[SEE NOTE 4].**

9. The Guarantor may change its nominated address for service of documents to another address in Hong Kong by providing not less than five business days' written notice to the Authority. All demands and notices shall be in writing and in English.

10. This Guarantee shall be governed by and construed according to the laws for the time being in force in Hong Kong and the Guarantor agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

IN WITNESS whereof this Guarantee has been executed as a deed on the date first before written.

THE COMMON SEAL of)
[ ])
was affixed hereto in)
the presence of:)

(Authorised Signature)

_____

(Witness)

OR

SIGNED, SEALED AND DELIVERED)
by Mr [ ])
for and on behalf of **[Insert name of Parent Company]**)
as lawful attorney of the Guarantor under)
Power of Attorney dated [ ])
in the presence of **[Insert name of Witness]**)
as Witness)

_____

[SEE NOTES 1 AND 5]

NOTES FOR GUIDANCE IN PREPARATION OF GUARANTEE BY GUARANTOR

These notes are prepared in order to assist the Guarantor in the preparation of the Guarantee and cross refer to the note references contained in the draft Guarantee. The note references contained in the draft Guarantee shall be deleted from the engrossment of the Guarantee when prepared by the Guarantor.

NOTE 1

If more than one company executes this Guarantee in respect of the Sub-Contractor or any entity comprising the Sub-Contractor (e.g. because the Sub-Contractor or any entity has more than one parent company) the Guarantors under the Guarantee shall have joint and several liability and the square brackets shall be deleted.

If only one party is acting as Guarantor under the Guarantee, the square brackets and the words within, relating to the second Parent Company and joint and several liability, should be deleted.

NOTE 2

If the Sub-Contractor comprises more than one legal entity, a Guarantee in this form shall be provided in respect of each entity.

NOTE 3

If the circumstances referred to under Note 2 apply, and the Sub-Contractor comprises more than one legal entity, the Guarantor shall guarantee the performance of the Sub-Contractor as a whole because each entity comprising the Sub-Contractor shall have joint and several liability for the acts and omissions of the Sub-Contractor as a whole.

NOTE 4

The address for service shall be in Hong Kong.

NOTE 5

Each entity comprising the Guarantor shall execute the Guarantee under seal.

This may be done either by:

(a) affixing the Corporate Seal of the Guarantor in the presence of authorised signatories in accordance with the Articles of Association or other constitutional documents of the Guarantor; or

(b) by execution under seal by an attorney appointed by a valid and binding Power of Attorney given by the Guarantor in accordance with its Articles of Association or other constitutional documents.

The following documents shall be submitted with the executed Guarantee:

1. if executed by affixing the Corporate Seal:

(a) an extract from the Guarantor's Articles of Association or other constitutional documents dealing with the execution of documents by use of the Corporate Seal of the Guarantor; and

(b) a copy of the Board Resolution or a copy of the minutes of the meeting of the Board of the Guarantor by which the execution of the Guarantee was approved; and

2. if executed by an attorney on behalf of the Guarantor:

(a) a copy of the Power of Attorney by which the attorney is appointed by the Guarantor to execute documents on its behalf; and

(b) evidence of the authority of the person providing the Power of Attorney to delegate powers to the attorney e.g. copy of the Board Resolution authorising the appointment of the attorney or extracts from the Guarantor's Articles of Association or other constitutional documents dealing with the appointment of attorneys together with confirmation of the position or office held by the person giving the Power of Attorney.

SUB-CONTRACT SCHEDULE 12

FORM OF SUB-CONTRACTOR'S BOND

BY THIS BOND dated the day of 20[ ]

[ ] a company incorporated in and in accordance with the laws of [ ] of [ ] [See Note 1] ("the Bondsman") is irrevocably and unconditionally bound to **WEST KOWLOON CULTURAL DISTRICT AUTHORITY** (together with its successors and assigns, "the Authority") in the sum of [ ] Hong Kong Dollars (HK$[ ]) ("the Bonded Sum") for payment of which sum the Bondsman binds himself in accordance with the provisions of this Bond.

WHEREAS

(A) By a sub-contract dated [ ] ("the Sub-Contract") made between the Contractor and the Sub-Contractor, the Contractor has agreed to execute the Sub-Contract Works upon the terms contained in the Sub-Contract.

(B) Pursuant to the terms of the Sub-Contract, the Sub-Contractor agreed to procure the provision to the Authority of a Bond in the terms hereof.

NOW THE TERMS of this Bond are:

1. Where applicable, words and expressions used in this Bond shall have the meaning assigned to them in the Sub-Contract.

2. If the Sub-Contractor shall be in default in respect of any of his obligations under the Sub-Contract the Bondsman shall upon demand made by the Authority in writing and without proof of the said default or conditions satisfy and discharge the amount identified in the demand of any damages, losses, charges, costs or expenses sustained by the Authority by reason of the default up to the amount of the Bonded Sum.

3. The liability of the Bondsman under this Bond shall remain in full force and effect and shall not be affected or discharged in any way by, and the Bondsman hereby waives notice of:

   (a) any suspension of the Sub-Contract Works or variation to or amendment of the Sub-Contract Works or the Sub-Contract (including without limitation extension of time for performance and adjustment to the amount payable to the Sub-Contractor under the Sub-Contract);

   (b) the termination of the Sub-Contract or of the employment of the Sub-Contractor under the Sub-Contract;

   (c) any forbearance or waiver of any right of action or remedy the Authority or the Contractor may have against the Sub-Contractor, or negligence by the Authority or the Contractor in enforcing any such right of action or remedy;

(d) any other bond, security or guarantee held or obtained by the Authority or the Contractor for any of the obligations of the Sub-Contractor under the Sub-Contract or any release or waiver thereof;

(e) any act or omission of the Sub-Contractor pursuant to any other arrangement with the Bondsman;

(f) the issue of any Stage Certificate or Practical Completion Certificate;

(g) any breach of the Sub-Contract by the Contractor or other default of the Contractor or the Authority; and

(h) any provision of the Sub-Contract being or becoming illegal, invalid, void, voidable or unenforceable.

4. The liability of the Bondsman under this Bond shall cease on whichever of the following events first occurs:

(a) payment by the Bondsman of the Bonded Sum in full to the Authority;

(b) issue of the Defects Liability Certificate; or

(c) return of the Bond by the Authority to the Sub-Contractor.

5. The Bondsman acknowledges that the Authority shall be entitled to assign the benefit of this Bond or any part thereof, any interest therein or thereunder and any right thereunder, whether past, existing or future, at any time without the consent of the Bondsman or the Sub-Contractor being required.

6. All documents arising out of or in connection with this Bond shall be served upon the Bondsman, at [ ] Hong Kong [See Note 2].

7. The Bondsman may change his nominated address for service of documents to another address in Hong Kong but only by prior written notice to the Authority. All demands and notices served by the Authority shall be in writing and in English.

8. This Bond shall be governed by and construed according to the laws for the time being in force in Hong Kong and the Bondsman agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

IN WITNESS whereof this Bond has been executed as a deed on the date first above written.

THE COMMON SEAL of)
[ ])
was affixed hereto in)
the presence of:)

[See Note 3]
Notes (for preparation of but not inclusion in the engrossment of this Bond):

1. Foreign corporations shall be described appropriately.

2. The address for service shall be in Hong Kong.

3. Copies of relevant Board resolutions authorising the execution under seal of this document shall be provided. If execution is to be by an Attorney, appropriate amendments shall be made and a copy of the Power of Attorney and relevant Board resolution shall be provided. In the case of a foreign corporation, a legal opinion in the form required by the Authority shall be produced confirming the validity of the execution of this document and of any Power of Attorney.

SUB-CONTRACT SCHEDULE 13

FORM OF BOND FOR OFF-SHORE MANUFACTURE

No.[ ]

BY THIS BOND dated the day of 201[ ] a company incorporated in accordance with the laws of [ ] of [ ] [See Note 1 , ("the Bondsman") is irrevocably and unconditionally bound to **WEST KOWLOON CULTURAL DISTRICT AUTHORITY** (together with its successors and assigns, "the Authority") for payment of a sum not exceeding the sum stated in clause 2 below in accordance with the provisions of this Bond.

WHEREAS:

(A) By a sub-contract dated [ ] ("the Sub-Contract") made between the Contractor and the Sub-Contractor, the Sub-Contractor has agreed to execute the Sub-Contract Works upon the terms contained in the Sub-Contract.

(B) Pursuant to the terms of the Contract, the Authority is obliged to pay the Contractor the sum of [ ] Hong Kong Dollars (HK$ [ ]) [See Note 2] ("the Off-shore Payment") by instalments in accordance with the Interim Payment Schedule for the activities described in (Part A of) [See Note 3] Cost Centre [No. I.

(C) Pursuant to the said activities, certain components of the Works falling within [Part A of] [See Note 3] Cost Centre [No.] ("the Manufactured Goods") as identified in the Schedule of Goods Manufactured Offshore contained in the Pricing Document, are to be manufactured offshore Hong Kong for subsequent delivery to and installation at the Site.

(D) Pursuant to the terms of the Contract and the Sub-Contract, the Sub-Contractor, as a condition precedent to the Contractor's entitlement to receive any payment instalment under [Part A of] [See Note 3] Cost Centre [No.], is obliged to provide a bond in the terms hereof.

NOW THE TERMS of this Bond are :

1. Where applicable, words and expressions used in this Bond shall have the meaning assigned to them in the Sub-Contract.

2. The Bondsman hereby irrevocably and unconditionally undertakes to pay to the Authority an amount not exceeding [ ] Hong Kong dollars (HK$ [ ]) [See Note 4] upon receipt from the Authority of a written demand substantially in the form of the Schedule to this Bond signed on behalf of the Authority stating:

   (a) either that the Contractor is in default of his obligations under the Contract or that the Authority is entitled to terminate or *has* terminated the Contract or the employment of the Contractor under the Contract; and

   (b) the amount due and payable under this Bond in accordance with clause 4 below.

3. The Bondsman shall pay to the Authority the amount thus demanded without requiring further evidence or proof of :

   (a) the default of the Contractor;

   (b) the Authority's entitlement to terminate the Contract or the employment of the Contractor under the Contract;

   (c) any termination of the Contract or the employment of the Contractor under the Contract; or

   (d) the amount due and payable under this Bond.

4. The amount payable under this Bond shall be the aggregate of the instalments of the Off-shore Payment (net of Retention Money) prior to the date of the written demand referred to in clause 2 above less the aggregate as certified by the Contract Administrator of any and all sums in respect of the Manufactured Goods delivered to Hong Kong in accordance with the terms of the Contract provided always that the liability of the Bondsman under this Bond shall not exceed the sum stated in clause 2 above.

5. The liability of the Bondsman under this Bond shall remain in full force and effect and shall not be affected or discharged in any way by, and the Bondsman hereby waives notice of :

   (a) any suspension of the Works or the Sub-Contract Works or variation to, or amendment of the Contract, the Sub-Contract, the Works or the Sub-Contract Works (including without limitation extension of time for performance and adjustment to the amount payable under the Contract or the Sub-Contract);

   (b) the termination of the Contract or the Sub-Contract or of the employment of the Contractor under the Contract or the Sub-Contractor under the Sub-Contract;

   (c) any forbearance or waiver of any right of action or remedy the Authority or the Contractor may have against the Contractor or the Sub-Contractor or negligence by the Authority or the Contractor in enforcing any such right of action or remedy;

   (d) any other bond, security or guarantee held or obtained by the Authority or the Contractor for any of the obligations of the Sub-Contractor under the Sub-Contract or any release or waiver thereof;

   (e) any act or omission of the Sub-Contractor or the Contractor pursuant to any other arrangement with the Bondsman;

   (f) any breach of the Sub-Contract by the Contractor or of the Contract by the Authority or other default of the Contractor or the Authority; and

   (g) any provision of the Contract or the Sub-Contract being or becoming illegal,

invalid, void, voidable or unenforceable.

6. The liability of the Bondsman under this Bond shall cease on whichever of the following events first occurs:

   (a) payment in full by the Bondsman to the Authority of a sum demanded under clause 2 above;

   (b) receipt of written notification from the Contract Administrator that all of the Manufactured Goods have been delivered to Hong Kong and inspected by him; or

   (c) [ ], 201[ ].

7. The Authority shall be entitled to assign the benefit of this Bond or any part thereof, any interest therein or thereunder and any right thereunder, whether past, existing or future, at any time without the consent of the Bondsman, the Sub-Contractor or the Contractor being required.

8. Any documents arising out of or in connection with this Bond shall be served upon the Bondsman, at [ ] Hong Kong [See Note 5].

9. The Bondsman may change his nominated address for service of documents to another address in Hong Kong but only by prior written notice to the Authority. All demands and notices shall be in writing and in English.

10. This Bond shall be governed and construed according to the laws for the time being in force in Hong Kong and the Bondsman agrees to submit to the non-exclusive jurisdiction of the Courts of Hong Kong.

IN WITNESS whereof this Bond has been executed as a deed on the date first before written.

THE COMMON SEAL of)
)
was affixed hereto)
in the presence of:)

[See Note 6]

Notes (for preparation of but not inclusion in the engrossment of this Bond):

1. Foreign corporations shall be described appropriately.

2. This amount shall be the Cost Centre Value of the relevant Cost Centre, or where appropriate of Part A of the relevant Cost Centre Value.

3. Delete the bracketed words if the Cost Centre is undivided and in all cases insert the Cost Centre number.

4. This amount shall be 95% of the figure entered in Recital (B).

5. The address for service shall be in Hong Kong.

6. Copies of relevant Board resolutions authorising the execution under seal of this document shall be provided. If execution is to be by an Attorney, appropriate amendments shall be made and a copy of the Power of Attorney and relevant Board resolution shall be provided. In the case of a foreign corporation, a legal opinion in the form required by the Authority shall be produced confirming the validity of the execution of this document and of any Power of Attorney.

SCHEDULE

FORM OF DEMAND

To: [ ]
Hong Kong

For the attention of: [ ]

[ ], 201[ ]

Dear Sirs

Contract No. [ ]
Bond for Offshore Manufacture No. [1

1. We refer to the Bond for Off-shore Manufacture No. [ ] dated [ ], 201[ ].

2. Terms defined in the above Bond have the same meaning when used in this demand.

3. We confirm [EITHER] (that the Contractor is in default of his obligations under the Contract) [OR] (that the Authority is entitled to terminate or has terminated the Contract or the employment of the Contractor under the Contract) [See Note 1].

4. We now demand payment of HK$[figures] ([words] Hong Kong Dollars) by [ ], 201[ ], being the amount due in accordance with clause 4 of the above Bond.

5. We confirm that the signatories of this letter are authorised by the Authority to make this demand on behalf of the Authority.

6. This demand is governed by Hong Kong law.

Yours faithfully,

(Authorised Signatory)

for and on behalf of
West Kowloon Cultural District Authority

Note (for preparation of but not inclusion in the demand):

1. Delete whichever bracketed words are inappropriate.

SCHEDULE 13

MEDIATION RULES

SCHEDULE 13

MEDIATION RULES

PREAMBLE

Where any agreement provides for mediation under the Authority's Mediation Rules, the parties shall be taken to have agreed that the mediation shall be conducted in accordance with the following Rules. The Rules are subject to such modification as the parties may agree in writing at any time.

Notwithstanding Clause 1.2.4 of the General Conditions, for the purposes of these Mediation Rules, any reference to "days" for the calculation of time limits shall refer to working days, excluding Saturdays, Sundays and Public Holidays. Any specified time limits referred to in these Mediation Rules may be extended by agreement of the parties with the approval of the mediator as defined in Paragraph 1.1 below.

Paragraph 1: Mediation

1.1 Mediation under these Mediation Rules is a private dispute resolution process in which a neutral person ("the mediator") jointly appointed by the parties helps the parties to reach a negotiated settlement. Mediation should be entered, into by both parties with an open mind in an attempt to settle the Dispute amicably. In the event that the parties are unable to agree on the appointment of the mediator, either party may request that the mediator be appointed by the Hong Kong International Arbitration Centre (HKIAC), whose current address is:

38th Floor
Two, Exchange Square
8 Connaught Place
Central
Hong Kong
Telephone: (852) 2525 2381
Fax: (852) 2524 2171
Email: adr@hkiac.org

In the event that the HKIAC is requested to appoint the mediator, it will do so having due regard to the subject matter of the Dispute and the parties proposed criteria for the selection of the mediator.

1.2 Either party may require the other party to participate in a mediation process in accordance with these Mediation Rules, as provided for in the General Conditions of Contract, but neither party shall be bound by an opinion, report, direction or order of the mediator. The General Conditions of Contract require that all issues arising in a Dispute shall have been the subject of a reference under these Mediation Rules as a condition precedent to taking any step in arbitration proceedings.

1.3 Words and expressions used in these Mediation Rules shall have the meaning assigned to them in the General Conditions of Contract.

Paragraph 2: Initiation of Mediation Process

2.1 In relation to any Dispute which has been referred to the Contract Administrator in accordance with Clause 78 of the General Conditions of Contract, either party may within 28 (twenty-eight) days of the expiry of the period referred to in Clause 78.3 or receipt of the decision or notice of the Contract Administrator, initiate a mediation by delivering a written request for mediation ("the Request for Mediation") to the other party with copies to the Contract Administrator and to the HKIAC.

2.2 The Request for Mediation shall:

2.2.1 contain a brief self-explanatory statement of the nature of the Dispute, the quantum in dispute (if any), and the relief or remedy sought; and

2.2.2 state the name of a person who is willing and able to act as the mediator, his current fee rates and any other conditions of appointment.

Paragraph 3: The Mediator

3.1. Mediation under these Mediation Rules will be conducted by a single mediator appointed in accordance with Paragraph 4. The mediator shall have no authority under the Contract to bind the parties in relation to the Dispute.

Paragraph 4: Response to Request for Mediation

4.1 The party who receives a Request for Mediation may, within 7 (seven) days of service of the Request for Mediation, serve written notice of objection to the person nominated as the mediator. Any such notice of objection shall put forward the names of at least two other persons willing and able to act as the mediator and their current fee rates and any other conditions of appointment. Copies of such notice of objection shall be sent to the Contract Administrator and to HKIAC.

4.2 Subject to Paragraph 6, in the absence of service of a notice of objection in accordance with Paragraph 4.1, the person nominated in the Request for Mediation shall be deemed to be acceptable to the party receiving a Request for Mediation.

4.3 In the event of service of a notice of objection, the parties shall attempt to agree a person willing and able to act as the mediator and, failing agreement within fourteen 14 (fourteen) days of service of the notice of objection, either party may request the HKIAC to nominate a mediator.

4.4 Within 14 (fourteen) days of receipt of a request for nomination, the HKIAC shall nominate a suitable mediator who is prepared to serve and is not disqualified under Paragraph 6.

Paragraph 5: Commencement of the Mediation

5.1 Subject to Paragraph 6, the mediation shall be deemed for the purposes of these Mediation

Rules to commence on the date ("the Mediation Commencement Date") of appointment of a person willing and able to act as mediator, being the date upon which:

5.1.1 the person nominated as such in the request for mediation is deemed acceptable under Paragraph 4.2; or

5.1.2 the parties agree the identity of the mediator under Paragraph 4.3 or otherwise; or

5.1.3 the HKIAC makes a nomination under Paragraph 4.4; or

5.1.4 the HKIAC makes a nomination under Paragraph 6.

5.2 The party who served the Request for Mediation shall notify the Contract Administrator and the HKIAC in writing of the identity of the mediator upon receipt of confirmation from that person of his acceptance of the appointment.

Paragraph 6: Disqualification of the Mediator

6. No person shall serve as mediator in any Dispute in which that person has any financial or personal interest in the result of the mediation except by written consent of the parties. Prior to accepting an appointment, the proposed mediator shall disclose to the parties and / or the HKIAC, as appropriate, any circumstances, including any prior relations or dealings with either of the parties, likely to create a presumption of bias or prevent a prompt resolution of the Dispute. Upon receipt of the information, if any party serves a written objection to the proposed mediator within 7 (seven) days of receipt of such communication, he shall not be appointed and other candidates shall be considered for the appointment. In such a case, if the appointment is being made by the HKIAC, within 14 (fourteen) days of such written objection, the HKIAC shall nominate a further mediator in accordance with the terms of Paragraph 4.4.

Paragraph 7: Conduct of the Mediation

7.1. The mediator shall enter upon the mediation as soon as possible after his appointment and shall use his best endeavours to conclude the mediation as expeditiously as possible, but in any event the mediation process shall not continue for more than 50 (fifty) days from the Mediation Commencement Date unless the parties agree otherwise.

7.2. The parties shall at all times give assistance to the mediator to enable the mediation to proceed.

7.3 The parties may be represented by whomever they consider appropriate. Within 7 (seven) days of the Mediation Commencement Date, the parties shall inform the mediator and the other party of the names and addresses of the individuals who will represent them in the mediation.

7.4 The mediator shall inform himself in any way he thinks fit of the nature and facts of the Dispute including requiring the Contract Administrator to see him.

7.5 The mediator shall conduct the mediation in such a manner as will permit full and expeditious presentation to him by the parties of their views. The mediator may see the parties together or separately for the purpose of informing himself of the nature and facts of the Dispute.

7.6 If the mediator considers it appropriate, or if he is requested by the parties, he may express preliminary views orally or in writing on the matters in dispute during the mediation. The mediator may, and shall if requested by the parties, seek legal or other advice from third parties not connected with the Dispute.

7.7 During the course of the mediation, the mediator may attempt various compromise solutions with the parties in an informal manner. Should a solution be agreed it will be accepted by both parties in accordance with Paragraph 7.9.

7.8 Notwithstanding Paragraph 7.1, the mediator may abandon the mediation whenever in his judgement further efforts at mediation would not lead to a settlement of the Dispute and he shall notify the parties in writing.

7.9 The mediation shall be a private and confidential matter between the parties to the Contract and the procedures of the mediation should be so conducted. In the event that the mediation is successful, neither party shall be bound until the terms of the settlement have been recorded in writing and signed by both parties. The parties shall inform the HKIAC that the Dispute has been settled.

7.10 Nothing that transpires during the course of the mediation (other than a signed settlement agreement) shall affect the rights or prejudice the position of the parties to the Dispute under the Contract or in any subsequent arbitration or litigation, and, without prejudice to the foregoing:

(a) no opinion given, report produced and terms of settlement recommended by the mediator shall be disclosed to the arbitrator or court;

(b) the fact that information of whatsoever nature was made available to the mediator shall not mean that privilege or confidentiality is waived for any subsequent arbitration or litigation; and

(c) the fact that the accuracy of information or the validity or meaning of documents was not challenged during the mediation shall not preclude a challenge in subsequent arbitration or litigation.

Paragraph 8: Costs

8.1 Each party shall bear its own costs in relation to the preparation and conduct of the mediation.

8.2 The parties will be jointly and severally liable for payment of the mediator's fees and those of any legal or other advisors appointed pursuant to Paragraph 7.6 for the purpose of the mediation, together with any jointly incurred administrative costs including venue hire costs and ancillary expenses for the conduct of the mediation.

8.3 The parties will be jointly and severally liable for any fees that may be incurred by the HKIAC in the conduct of the mediation if any.

Paragraph 9: Mediator not subsequently to act as Arbitrator

9.1 The mediator shall not be appointed as arbitrator in any subsequent arbitration between the parties, whether arising out of the Dispute or otherwise arising out of the Contract unless the parties agree otherwise in writing. Neither party shall be entitled to call the mediator as a witness in any subsequent arbitration or litigation arising out of the Contract. Any communications whether oral or written which either party shall have with the mediator or with other parties in connection with the mediation shall be absolutely privileged.

Paragraph 10: Written Record

10.1 No formal written record shall be kept of the mediation process. Any written view expressed under Paragraph 7.6, and any notes or record made by the mediator, and/or the parties, shall remain private and confidential and not subject to disclosure in any subsequent proceedings.

Paragraph 11: Exclusion of Liability

11.1 It is agreed that the mediator and the HKIAC shall not be liable to any party for any act or omission in connection with any mediation conducted under these Mediation Rules, save for the consequences of fraud or dishonesty.

Paragraph 12: Language

12.1 The language of the mediation shall be English and all written communications and hearings shall be conducted in the English language unless the parties and the mediator otherwise agree.

SCHEDULE 14

NOT USED

SCHEDULE 15

ARBITRATION RULES

SCHEDULE 15

ARBITRATION RULES

Preamble

Where any agreement provides for arbitration under the Authority's Arbitration Rules, the parties shall be taken to have agreed that the arbitration shall be conducted in accordance with the following Rules. The Rules are subject to such modification as the parties may agree in writing at any time.

Notwithstanding Clause 1.2.4 of the General Conditions, for the purposes of these Arbitration Rules, any reference to "days" for the calculation of time limits shall refer to working days, excluding Saturdays, Sundays and Public Holidays. Any specified time limits referred to in these Arbitration Rules may be extended by agreement of the parties with the approval of the Arbitrator.

Paragraph 1: Commencement of Arbitration

1.1 Any party wishing to commence an arbitration under these Rules ("the Claimant") shall send to the other party ("the Respondent") a written notice requiring the Respondent to appoint or to concur in appointing an Arbitrator (the "Notice of Arbitration") which shall include, or be accompanied by:

(a) the names and addresses (and telephone and fax numbers and email addresses as appropriate) of the parties to the Dispute and, where the parties choose to be represented by a Representative (under Paragraph 7) and wish to have communications sent to their Representative, the Representative's name and address (and telephone and fax numbers and email addresses);

(b) reference to the principal contractual documents in which the arbitration clause is contained or under which the arbitration arises;

(c) a brief statement describing the nature and circumstances of the Dispute, and specifying in outline the relief claimed; and

(d) subject to Paragraph 1.4, a list of up to three names of persons who are willing to act as the Arbitrator from which the Respondent may choose an Arbitrator or a proposal that the Hong Kong International Arbitration Centre (HKIAC) appoint the Arbitrator.

The arbitration shall be deemed to commence on the date of receipt by the Respondent of the Notice of Arbitration.

1.2 A copy of the Notice of Arbitration shall be sent to the Secretary General of the HKIAC ("the Secretary General") at the same time that it is sent to the Respondent.

1.3 For the purpose of facilitating the choice of an arbitrator, within 28 (twenty-eight) days of receipt of the Notice of Arbitration, the Respondent shall send to the Claimant a Response containing:

(a) confirmation or denial of his willingness to arbitrate and, if denial, the grounds relied upon; and

(b) subject to Paragraph 1.4 :-

(i) confirmation or denial of all or part of the claims;

(ii) a brief statement of the nature and circumstances of any envisaged counterclaims;

(iii) details of its Representative, if appropriate; and

(iv) a response to any proposal under Paragraph 1.1(d), including confirmation of agreement to the appointment of one of the nominated candidates as the Arbitrator or a list of up to three names of other persons who are willing and able to act as the Arbitrator from which the Claimant may choose an Arbitrator.

1.4 If the parties' agreement provides that no steps shall be taken in any reference of a Dispute to arbitration until after the practical completion or alleged practical completion of the Works or any other identified point in time and the Notice of Arbitration is served before such time:

(a) the Claimant need not include in the Notice of Arbitration the details identified in Paragraph 1.1(d);

(b) the Respondent need not include in the Response the details identified in Paragraph 1.3(b); and

(c) if either party wishes to take steps in the reference after the time restriction has passed, he shall serve written notice to that effect upon the other party and:

(i) if the Claimant serves such notice, he shall include in it the details identified in Paragraph 1.1(d);

(ii) if the Respondent serves such notice, he shall include in it the details identified in Paragraph 1.3(b)(i) - (iii) and a list of up to three names of other persons who are willing and able to act as the Arbitrator from which the Claimant may choose an Arbitrator; and

(iii) the recipient of such notice shall respond accordingly within 28 (twenty-eight) days of receiving it; in the case of the Respondent in accordance with Paragraph 1.3(b) (insofar as he has not previously responded) and in the case of the Claimant by confirmation of agreement to a name in the Respondent's list or by submitting a list of up

to three names of other persons who are willing and able to act as the Arbitrator from which the Respondent may choose an Arbitrator; and

(iv) for the purposes of Paragraph 3.3 only, the commencement of the arbitration shall be deemed to be the date of receipt of such notice under Paragraph 1.4(c) above.

1.5 A copy of the Response shall be sent to the Secretary General at the same time that it is sent to the Claimant.

1.6 Failure to send a Response shall not preclude the Respondent from denying the claim nor from setting out a counterclaim in its Statement of Defence.

Paragraph 2: Appointing Authority

2.1 Unless the Arbitrator is agreed and appointed by the parties, the Appointing Authority shall be the HKIAC whose current address is:

38th Floor
Two, Exchange Square
8, Connaught Place
Central
Hong Kong

Tel: (852) 2525 2381
Fax: (852) 2524 2171
Email: adr@hkiac.org

2.2 Any application to the Appointing Authority to act in accordance with the Rules shall be accompanied by:

(a) copies of the Notice of Arbitration and Response and any other related correspondence;

(b) confirmation in writing that a copy of the application has been sent to or received by the other party; and

(c) particulars of any method or criteria of selection of the arbitrator agreed by the parties.

Paragraph 3: Appointment of Arbitrator

3.1 There shall be a sole Arbitrator.

3.2 (a) The Arbitrator shall be and remain at all times wholly independent and impartial and shall not act as advocate for any party.

(b) Prior to and after appointment, the Arbitrator shall disclose to the parties any circumstances likely to give rise to justifiable doubts as to his impartiality or independence or prevent a prompt resolution of the Dispute.

3.3 The Arbitrator may be appointed by agreement of the parties. Failing such agreement within 42 (forty-two) days of the commencement of the arbitration in accordance with Paragraph 1, the Arbitrator shall upon the application of either party be appointed by the Appointing Authority.

Paragraph 4: Communication between Parties and the Arbitrator

4.1 Where the Arbitrator sends any communication to one party, he shall send a copy to the other party.

4.2 Where a party sends any communication (including Statements and documents under Paragraph 6) to the Arbitrator, it shall be copied to the other party and be indicated to the Arbitrator to have been so copied.

4.3 The addresses of the parties for the purpose of all communications arising under the Rules shall be those set out in the Notice of Arbitration, or as either party may at any time notify the Arbitrator and the other party.

4.4 Unless the contrary is proved, any communication by post shall be deemed to be received in the ordinary course of mail and any instantaneous means of communication (e.g. facsimile or email) shall be deemed to be received on the same day as transmitted. It shall be a condition of valid service by facsimile that the hard copy is subsequently sent forthwith to the recipient by hand or post.

4.5 No communications between the parties and the Arbitrator (and vice versa) nor any other information concerning the arbitration shall be disclosed to third parties without the agreement of all parties, except as permitted by Section 18(2) of the Arbitration Ordinance (Cap. 609) of the Laws of Hong Kong ("Arbitration Ordinance") or common law, provided that the Authority shall always be allowed to use any information or documents (except confidential pricing information) obtained from the arbitration where disclosure is necessary:

(i) for the legitimate business interests of the Authority; or

(ii) to protect, pursue, defend or enforce the Authority's legal rights or interests in relation to any other contracts entered into by the Authority in relation to the Project; or

(iii) for the making of any claim against, or to defend any claim brought by, any party.

Paragraph 5: Equal Treatment and Conduct of the Proceedings

5.1 The parties must be treated with equality by the Arbitrator.

5.2 When conducting arbitral proceedings or exercising any of the powers conferred on the Arbitrator by the Arbitration Ordinance, these Rules or by the parties to any of those proceedings, the Arbitrator is required to use procedures that are appropriate to the particular case but which avoid unnecessary delay or expense, so as to provide a fair means for resolving the Dispute to which the arbitral proceedings relate.

5.3 The arbitrator shall have the power to adopt whenever possible a simplified or expedited procedure and in any case shall have the widest discretion allowed by law to conduct the proceedings so as to ensure the just, expeditious, economical and final determination of the Dispute. Any party wishing the Arbitrator to adopt a simplified or expedited procedure should apply to the Arbitrator as soon as is reasonably practicable after the Arbitrator's acceptance of his appointment.

5.4 The Arbitrator should, and shall, if requested by any party, hold a preliminary meeting with the parties as soon as possible after accepting his appointment.

Paragraph 6: Submission of Written Statements and Documents

6.1 Subject to any procedural rules agreed by the parties or determined by or requested from the Arbitrator under Paragraph 5, the written stage of the proceedings shall be as set out in this Paragraph (and in accordance with Paragraph 4).

6.2 Within 30 days of receipt by the Claimant of notification of the Arbitrator's acceptance of the appointment, the Claimant shall send to the Arbitrator a Statement of Claim setting out a full description in narrative form of the nature and circumstances of the Dispute specifying all factual matters and, if necessary for the proper understanding of the claim, a summary of any propositions of law relied upon.

6.3 Within 40 days of receipt of the Statement of Claim, the Respondent shall send to the Arbitrator a Statement of Defence setting out a full description in narrative form which of the factual matters and propositions of law in the Statement of Claim he admits or denies, on what grounds, and specifying any other factual matters and, if necessary for the proper understanding of the defence, a summary of any propositions of law relied upon. Any Counterclaims shall be submitted with the Statement of Defence in the same manner as claims are set out in the Statement of Claim.

6.4 Within 20 days of receipt of the Statement of Defence, the Claimant may send to the Arbitrator a Statement of Reply which, where there are Counterclaims, shall include a Defence to Counterclaim.

6.5 If the Statement of Reply contains a Defence to Counterclaim, the Respondent may within a further 20 days send to the Arbitrator a Statement of Reply regarding Counterclaims.

6.6 All Statements referred to in this Paragraph shall be accompanied by copies (or, if they are especially voluminous and by leave of the Arbitrator, lists) of all essential documents on which the party concerned relies and which have not previously been submitted by any party, and (where appropriate) by any relevant samples.

6.7 The Arbitrator may order the parties to produce any additional documents he may specify.

6.8 As soon as practicable following completion of the submission of the Statements specified in this Paragraph, the Arbitrator shall proceed in such manner as has been agreed by the parties, or pursuant to his authority under the Rules.

Paragraph 7: Representation

7.1 A party may conduct his case in person or be represented throughout or in part by lawyers or other advisers or representatives of his choice (the Representative). A party shall notify the Arbitrator and the other parties of the name of his Representative and his address (and telephone and fax numbers and email address) and of any change therein as soon as practicable after any such change.

Paragraph 8: Hearings

8.1 Subject to Paragraph 13, each party has the right to be heard before the Arbitrator, unless the parties have agreed to a "documents only" arbitration under Paragraph 23.

8.2 The Arbitrator shall fix the date, time and place of any meetings and hearings in the arbitration, and shall give the parties reasonable notice thereof.

8.3 The Arbitrator may in advance of hearings provide the parties with a list of matters or questions to which he wishes them to give special consideration.

8.4 The Arbitrator may order opening and closing statements to be in writing and shall fix the periods of time for communicating such statements and any replies that may be necessary.

8.5 The Arbitrator may also order a transcript of any hearing or part of any hearing.

8.6 All meetings and hearings shall be in private unless the parties agree otherwise.

Paragraph 9: Witnesses

9.1 The Arbitrator may require each party to give notice of the identity of witnesses he intends to call. Before a hearing, the Arbitrator may also require the exchange of witness statements and of expert reports.

9.2 The Arbitrator has discretion to allow, limit, or refuse to allow the appearance of witnesses, whether witnesses of fact or expert witnesses.

9.3 Any witness who gives oral evidence may be questioned by each party or its Representative, under the supervision of the Arbitrator, and may be required by the Arbitrator to testify under oath or affirmation in accordance with the Arbitration Ordinance. The Arbitrator may put questions at any stage of the examination of the witnesses.

9.4 The testimony of witnesses may be presented in written form, either as signed statements or by duly sworn affidavits, as the Arbitrator may order and the Arbitrator may also order that such statements or affidavits shall stand as evidence-in-chief. Subject to Paragraph 9.2, any party may request that such a witness should attend for oral examination at a hearing. If the witness fails to attend, the Arbitrator may place such weight on the written testimony as he thinks fit, or may exclude it altogether.

Paragraph 10: Assessor Appointed by the Arbitrator

10.1 Unless otherwise agreed by the parties, the Arbitrator:-

(a) may appoint an Assessor to assist him; and

(b) may require a party to give any such Assessor any relevant information or to produce, or to provide access to, any relevant documents, goods or property for inspection by the Assessor.

Paragraph 11: Interim Measures

11.1 Unless otherwise agreed by the parties, the Arbitrator may, at the request of a party, grant interim measures.

11.2 An interim measure is any temporary measure, whether in the form of an interim award or in another form, by which, at any time prior to the issuance of the award by which the Dispute is finally decided, the Arbitrator orders a party to:

(a) maintain or restore the status quo pending determination of the Dispute;

(b) take action that would prevent, or refrain from taking action that is unlikely to cause current or imminent harm or prejudice to the arbitral process itself;

(c) provide a means of preserving assets out of which a subsequent award may be satisfied; or

(d) preserve evidence that may be relevant and material to the resolution of the Dispute.

11.3 The power of the Arbitrator to grant interim measures shall be exercised in accordance with Sections 35 to 42 of the Arbitration Ordinance.

Paragraph 12: Powers and Jurisdiction of the Arbitrator

12.1 Without prejudice to the generality of Paragraph 5.1, and unless the parties at any time agree otherwise, the Arbitrator shall have the power and/or jurisdiction to:-

(a) allow any party, upon such terms (as to costs and otherwise) as he shall determine, to amend any document submitted under Paragraph 6;

(b) extend or abbreviate any time limits provided by these Rules or by his directions;

(c) conduct such enquiries as may appear to the Arbitrator to be necessary or expedient;

order the inspection, photographing, preservation, custody, detention or sale of any relevant property or thing;

(d) order samples to be taken from, observations to be made of or experiments to be conducted on any relevant property or thing;

(e) order any party to produce to the Arbitrator, and to the other parties for inspection, and to supply copies of any documents or classes of documents in their possession, custody or power which the Arbitrator determines to be relevant;

(f) order the delivery of interrogatories and answers thereto;

(g) order the rectification of any written agreement of any mistake which he determines to be common to the parties;

(h) rule on the existence, validity or termination of the Contract;

(i) rule on his own jurisdiction, including any objections with respect to the existence or validity of the arbitration agreement or to his terms of reference;

(j) determine any question of law arising in the arbitration;

(k) receive and take into account such written or oral evidence as he shall determine to be relevant, whether or not strictly admissible in law;

(l) proceed in the arbitration and make an award notwithstanding the failure or refusal of any party to comply with the Rules or with the Arbitrator's written orders or written directions, or to exercise its right to present its case, but only after giving that party written notice that he intends to do so;

(m) order any party to provide security for the legal or other costs of any other party by way of deposit or bank guarantee or in any other manner the Arbitrator thinks fit; and

(n) order any party to provide security for all or part of any amount in dispute in the arbitration,

provided that nothing in this Paragraph shall have the effect of derogating from the powers and / or jurisdiction given to the Arbitrator by Section 56 of the Arbitration Ordinance

Paragraph 13: Default by a Party

13.1 If the Claimant fails to attend any hearing of which due notice has been given, the Arbitrator may make an award on the substantive issues and an award as to costs, with or without a hearing. If the Respondent fails to submit a Statement of Defence or to attend any hearing after due notice has been given, the Arbitrator may conduct the hearing in the absence of the Respondent and make an award on the evidence.

Paragraph 14: Place of Arbitration

14.1 The place of the arbitration will be Hong Kong but the Arbitrator may decide for the purpose of expediting any hearing or saving costs to hear witnesses or oral argument or consult with an Assessor (if appointed) at any place the Arbitrator deems appropriate having regard to the circumstances of the arbitration.

Paragraph 15: Language

15.1 The language of the arbitration shall be English and all written communications and statements and all hearings shall be conducted in the English language unless the parties and the Arbitrator otherwise agree.

15.2 The Arbitrator may order that any documents other than written statements which are produced in the course of the arbitration in their original language shall be accompanied by a translation into the language of the arbitration, such translation to be appropriately certified if not agreed.

15.3 Unless the Arbitrator otherwise orders, witnesses shall be entitled to give their evidence in the language of their choice and the Arbitrator may order the translation of that evidence into the language of the arbitration by a suitably qualified person.

Paragraph 16: Deposits and Security

16.1 The Arbitrator may direct the parties, in such proportions as he deems just to make one or more deposits to secure the Arbitrator's fees and expenses. Such deposits shall be made to and held by the Arbitrator, the HKIAC or some other person or body to the order of the Arbitrator, as the Arbitrator may direct, and may be drawn from as required by the Arbitrator. Interest on sums deposited, if any, shall be accumulated to the deposits.

Paragraph 17: The Award

17.1 The Arbitrator shall make his award in writing and, unless all the parties agree otherwise, shall state the reasons upon which his award is based. The award shall state its date and the place of arbitration and shall be signed by the Arbitrator.

17.2 The Arbitrator shall be responsible for delivering the award or certified copies thereof to the parties provided that the Arbitrator has been paid his fees and expenses.

17.3 The Arbitrator may make interim awards or separate awards on different issues at different times.

17.4 If, before the award is made, the parties agree on a settlement of the Dispute, the Arbitrator shall either issue an order for termination of the reference to arbitration or, if requested by both parties and accepted by the Arbitrator, record the settlement in the form of a consent award. The Arbitrator shall then be discharged and the reference to arbitration concluded, subject to payment by the parties of any outstanding fees and expenses of the Arbitrator.

Paragraph 18: Correction, interpretation of award and additional award

18.1 Within 14 (fourteen) days of receipt of the award a party (with written notice to the other party) may:

(a) request the Arbitrator to correct in the award any errors in computation, any clerical or typographical errors or any errors of similar nature;

(b) if so agreed by the other party, request the Arbitrator to give an interpretation of a specific point or part of the award.

If the Arbitrator considers the request to be justified, he shall make the correction or give the interpretation within 30 (thirty) days of receipt of the request. The interpretation shall form part of the award.

18.2 The Arbitrator may correct any error of the type referred to in Paragraph 18.1(a) on his own initiative within thirty days of the date of the award.

18.3 A party (with written notice to the other party) may request, within 30 (thirty) days of receipt of the award, the Arbitrator to make an additional award as to claims presented in the arbitration but omitted from the award. If the Arbitrator considers the request to be justified, he shall make the additional award within 60 (sixty) days.

18.4 The Arbitrator may extend, if necessary, the period of time within which he shall make a correction, interpretation or an additional award under Paragraph 18.1 or 18.3.

18.5 The provisions of Paragraph 17 shall apply to a correction or interpretation of the award or to an additional award.

18.6 The Arbitrator has the power to make other changes to the award which are necessitated by, or consequential on, the correction of any error in the award or the interpretation of any point or part of the award under this Paragraph.

18.7 The Arbitrator may review an award of costs within 30 (thirty) days of the date of the award if, when making the award, the Arbitrator was not aware of any information relating to costs (including any offer for settlement) which he should have taken into account.

18.8 On a review under Paragraph 18.7, the Arbitrator may confirm, vary or correct the award of costs.

Paragraph 19: Costs

19.1 The Arbitrator may include in the award directions with respect to the costs of the arbitration.

19.2 The Arbitrator may, having regard to all relevant circumstances (including the fact if appropriate that a written offer of settlement of the Dispute has been made), direct in the award to whom and by whom and in what manner the costs are to be paid.

19.3 The Arbitrator may also, in his discretion, order costs to be paid by a party in respect of a request made by any of the parties for an order or direction (including an interim measure).

19.4 The Arbitrator may direct that the costs ordered under Paragraph 19.3 are to be paid within 30 days or at such other time as the Arbitrator may otherwise specify.

19.5 The Arbitrator shall assess the amount of costs to be awarded or ordered to be paid (other than the fees and expenses of the Arbitrator) and award or order those costs (including the fees and expenses of the Arbitrator).

19.6 The Arbitrator shall only allow costs that are reasonable having regard to all the circumstances, and may allow costs incurred in preparing for the arbitration prior to its commencement.

19.7 The term 'costs' when used in this Article shall, unless expressly provided otherwise, include the legal or other costs incurred by either party, the fees and expenses of the Arbitrator and any other costs or disbursements incurred relating to the conduct of the arbitration.

Paragraph 20: Interest

20.1 The Arbitrator may order that interest be paid in accordance with Section 79 of the Arbitration Ordinance, subject to and in accordance with any written Agreement between the parties.

Paragraph 21: Exclusion of Liability

21.1 Without prejudice to any existing rule of law, it is agreed that the Arbitrator shall not be liable to any party for any act or omission in connection with any arbitration conducted under the Rules, save for the consequences of fraud or dishonesty.

21.2 The Appointing Authority and its Secretary General shall not be liable to any party for any act or omission in connection with any arbitration conducted under the Rules, save for the consequences of fraud or dishonesty.

21.3 After the award has been made and the possibilities of interpretation, correction and additional awards referred to in Paragraph 18 have lapsed or been exhausted, the Arbitrator shall not be under any obligation to make any statement to any person about any matter concerning the arbitration, and no party shall seek to make the Arbitrator a witness in any legal proceedings arising out of the arbitration.

Paragraph 22: Waiver

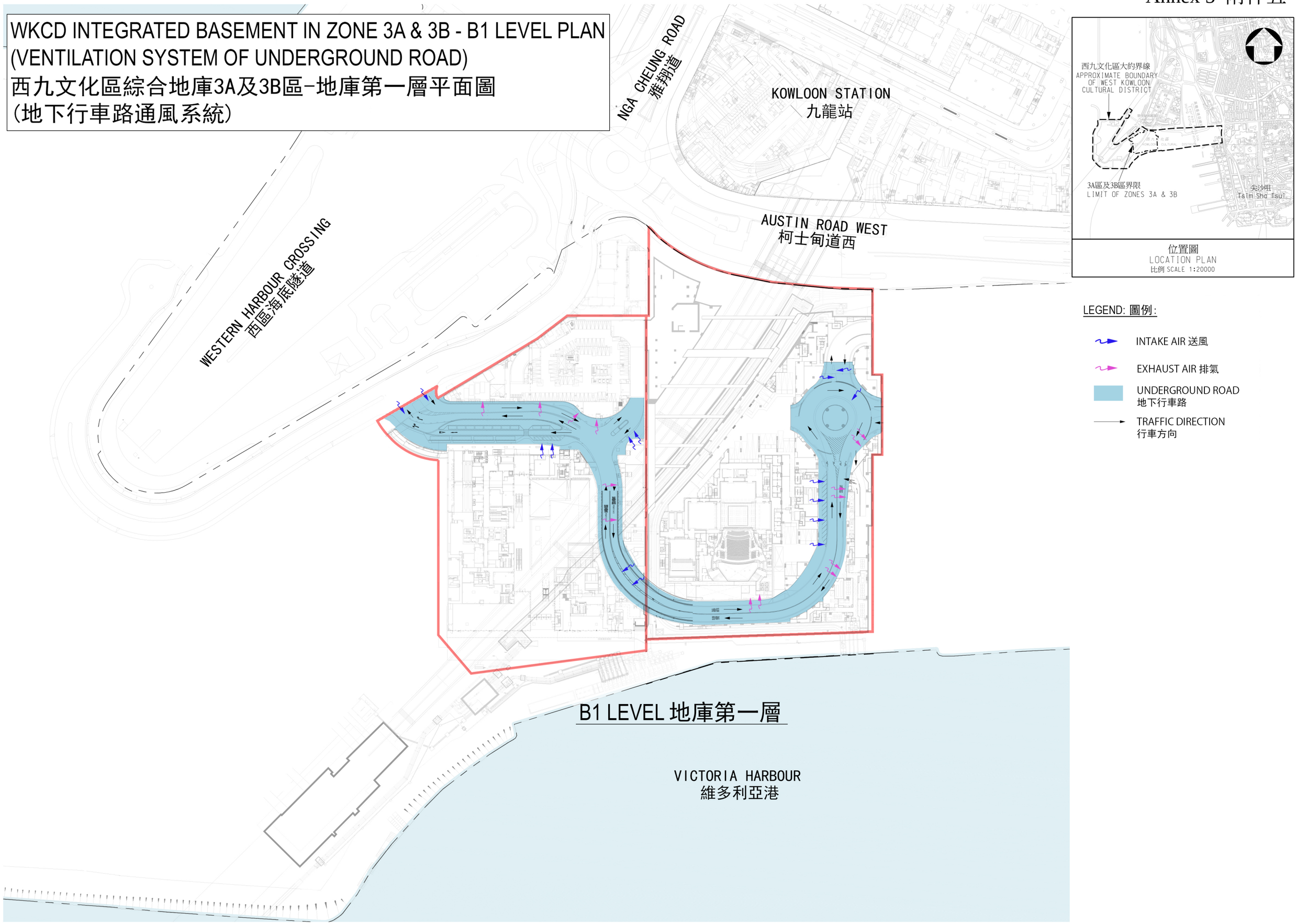
22.1 A party which knew or ought to have known of non-compliance with the Rules and yet proceeds with the arbitration without promptly stating its objection to such non-compliance, shall be deemed to have waived its right to object. The Arbitrator shall determine any issue which may arise as to whether a party has waived the right to object to the non-compliance by any other party with the Rules.

Paragraph 23: Documents-Only Arbitration

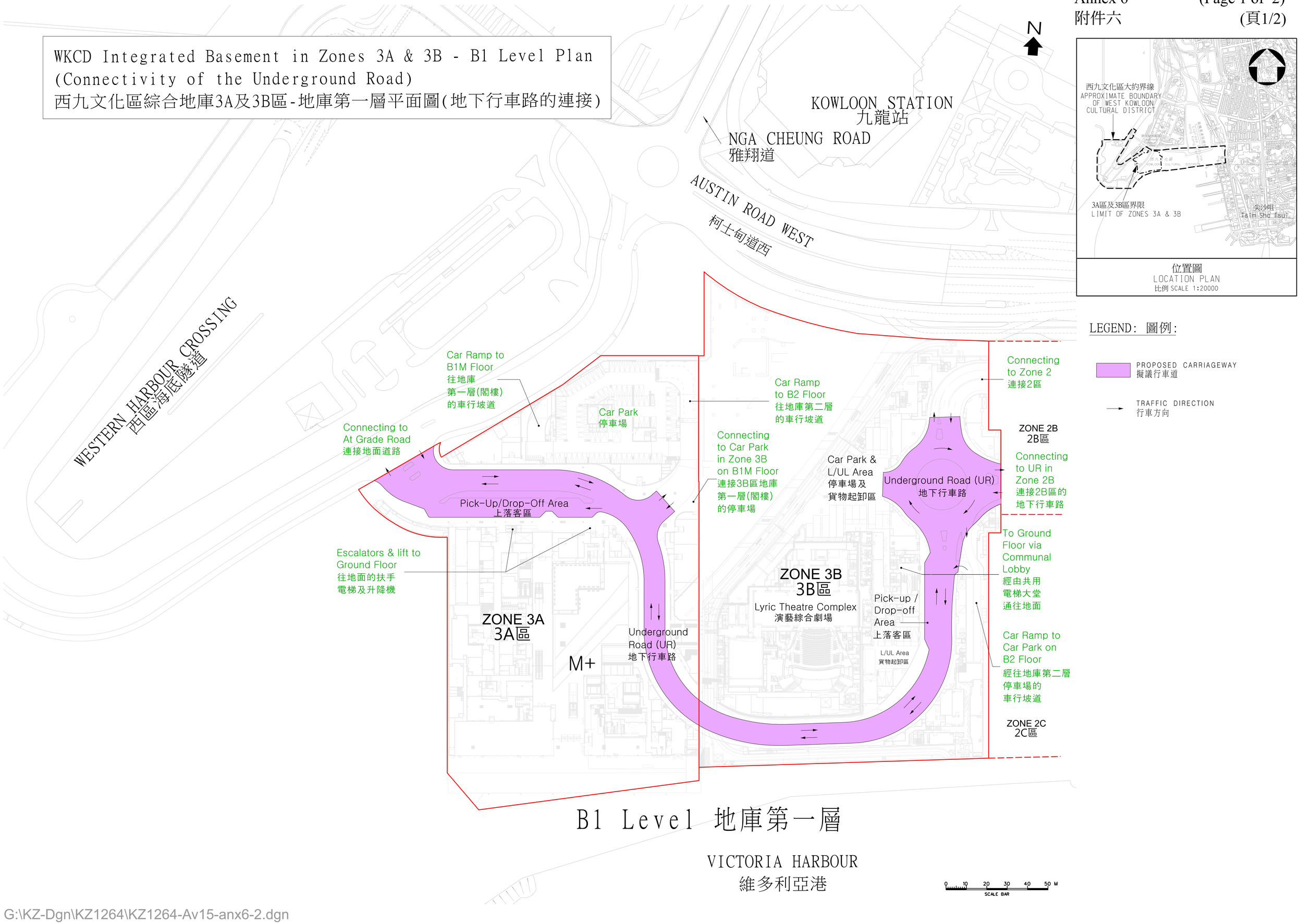
23.1 If the Parties agree in writing at any time that a documents-only arbitration procedure shall be adopted, the parties shall not be entitled to a hearing and the testimony of any witness shall be presented in written form and shall be submitted in accordance with Paragraph 6.6. If the Arbitrator feels unable to make an award on the basis of the documents submitted, he shall be entitled to require further evidence or submissions whether oral or in writing,

23.2 If a party fails to submit any statement in accordance with Paragraph 6, the Arbitrator may make an award on the substantive issues and an award as to costs without a hearing.

WKCD INTEGRATED BASEMENT IN ZONE 3A & 3B - B1 LEVEL PLAN (VENTILATION SYSTEM OF UNDERGROUND ROAD)
西九文化區綜合地庫3A及3B區-地庫第一層平面圖 (地下行車路通風系統)



WKCD Integrated Basement in Zones 3A & 3B - B1 Level Plan (Connectivity of the Underground Road)
西九文化區綜合地庫3A及3B區-地庫第一層平面圖(地下行車路的連接)

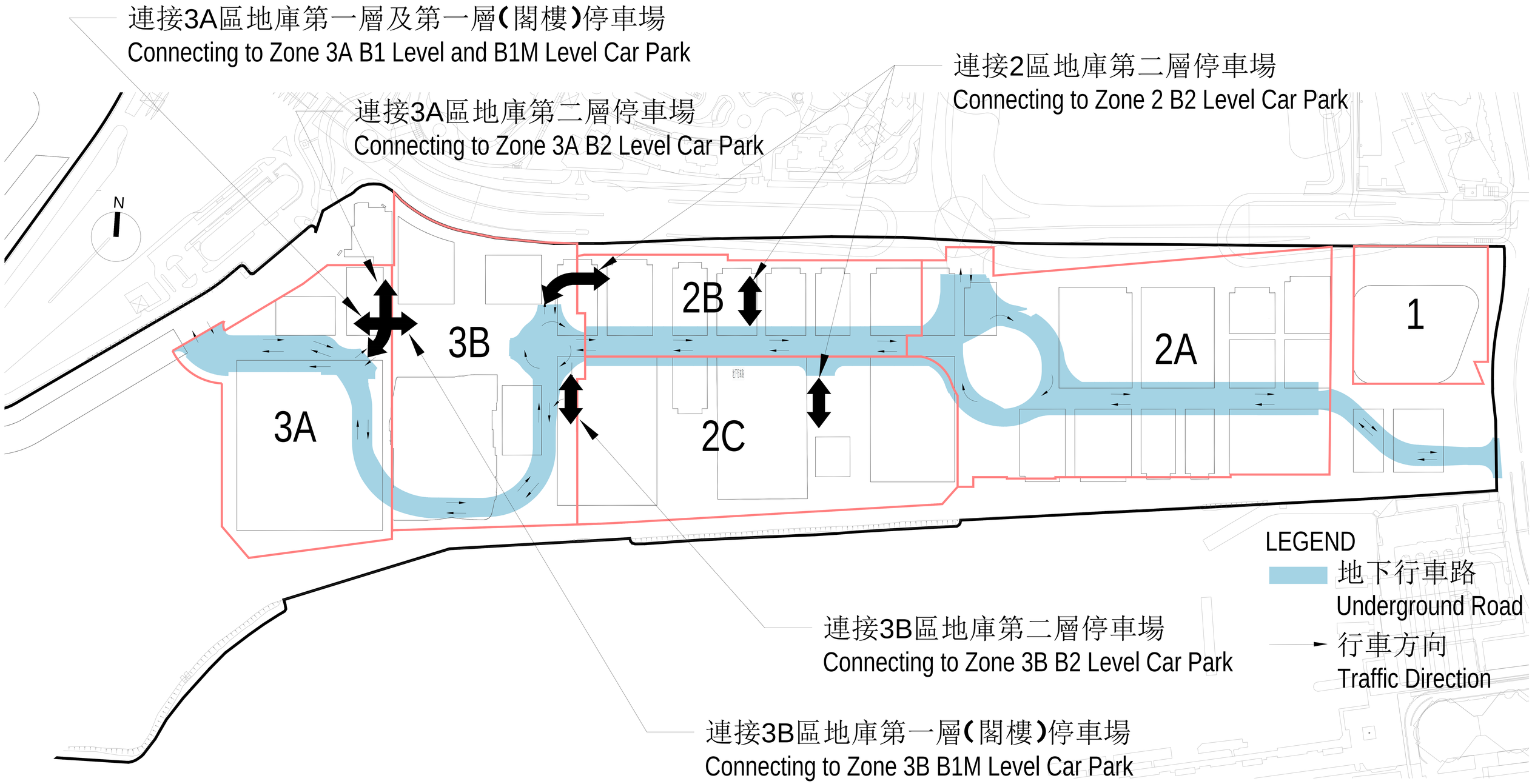


B1 Level 地庫第一層

LEGEND: 圖例:

- PROPOSED CARRIAGEWAY 擬議行車道
- TRAFFIC DIRECTION 行車方向

Underground Road Layout and Connections to Car Park at Integrated Basement
綜合地庫地下行車路平面圖及與停車場的連接



註:綜合地庫 2A ,2B及2C區的初步設計現正進行中, 停車場位置待定

Note: The preliminary design of Integrated Basement in Zones 2A, 2B and 2C is in progress.
The location of car park in Zone 2 will be finalized after completion of the design work.

PWSC(2015-16)30

財務委員會
工務小組委員會討論文件

（日期待定）

總目 707－新市鎮及市區發展
土木工程－土地發展
763CL－西九文化區綜合地庫

請各委員向財務委員會建議－

(a) 把 **763CL** 號工程計劃的一部分提升為甲級，稱為「西九文化區綜合地庫－首階段及第二階段的設計、工地勘測及建造工程」；按付款當日價格計算，估計所需費用為 29 億 1,950 萬元；以及

(b) 把 **763CL** 號工程計劃的餘下部分保留為乙級。

問題

我們需要將西九文化區(下稱「西九」)綜合地庫首階段設計及前期工程的相關費用轉予西九文化區管理局(下稱「管理局」)，以確認管理局進行有關工程。我們亦需要進行綜合地庫第二階段的設計、工地勘測及建造工程，以銜接西九計劃的分階段推展及支援早期發展項目的啟用，特別是 M+及演藝綜合劇場。

建議

2. 土木工程拓展署署長建議把 **763CL** 號工程計劃的一部分提升為甲級；按付款當日價格計算，估計所需費用為 29 億 1,950 萬元，用以進行西九綜合地庫首階段及第二階段的設計、工地勘測及建造工程。民政事務局局長支持這項建議。

工程計劃的範圍和性質

3. 我們建議把 **763CL** 號工程計劃提升為甲級的部分稱為首階段及第二階段工程，包括－

(a) 綜合地庫的首階段設計及前期工程，涵蓋以下主要項目－

(i) 建造綜合地庫 3A 區地下行車路的地基和現有機場快綫隧道保護工程的地基，以及所需的緩解環境影響措施和相關的監察及審核工作；以及

(ii) 綜合地庫 3B 區基本地庫結構[1]及相關工程的設計，包括擬備建造工程的招標文件及評審標書。

(b) 綜合地庫的第二階段設計、工地勘測及建造工程，涵蓋以下主要項目－

(i) 建造綜合地庫 3A 區長約 140 米的地下行車路、相關附屬工程包括行人路、上落客區、機電工程、機房、走火通道／消防救援通道，以及綜合地庫 3A 區地下行車路餘下路段的基本備置工程[2]；

(ii) 綜合地庫 3A 區現有機場快綫隧道的保護工程[3]；

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[1] 基本地庫結構大致包括綜合地庫的結構構件，例如牆壁、地板、天花板、柱和樑，以及其他相關工程。

[2] 3A 區的基本備置工程主要涵蓋基本地庫結構，以利便該區的地下行車路餘下路段及相關附屬工程施工。

[3] 現有機場快綫隧道的保護工程主要包括跨越隧道的結構構件，避免有關隧道承受由綜合地庫及上蓋發展項目帶來的額外負重。

(iii) 建造綜合地庫 3B 區地基[4]，包括現有機場快綫隧道保護工程的地基；

(iv) 綜合地庫 2A 區基本地庫結構及相關工程的設計及工地勘測，包括擬備建造工程的招標文件及評審標書；

(v) 綜合地庫 2B 及 2C 區基本地庫結構及相關工程的初步設計及工地勘測；以及

(vi) 為上文第(i)至(v)分段的建造工程及工地勘測進行所需的緩解環境影響措施和相關的監察及審核工作。

—— 首階段及第二階段工程的工地平面圖載於附件 1。

4. 如獲財務委員會(下稱「財委會」)在本屆立法會會期內批准撥款，政府會將綜合地庫首階段設計及前期工程的相關費用轉予管理局，並會在 2015 年第四季或之前展開第二階段工程，以期在 2019 年第一季大致完成。

5. 我們會把 **763CL** 號工程計劃的餘下部分保留為乙級。工程計劃餘下部分的範圍主要包括－

(a) 建造 3A 區地下行車路餘下路段及相關工程；

(b) 3B 區的餘下地基工程及主要工程，包括地下行車路、機場快綫隧道保護工程及基本地庫結構；

(c) 建造 2A 區地下行車路及基本地庫結構；及

(d) 2B 區基本地庫結構的詳細設計、工地勘測和建造及地下行車路的建造。

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[4] 地基是用作支撐位於 3B 區的綜合地庫及上蓋發展項目。

理由

最新的西九推展時間表

6. 立法會監察西九文化區計劃推行情況聯合小組委員會(下稱「聯合小組委員會」)的委員早前已獲悉管理局因應最新的財務狀況，會以務實、適時及具成本效益的安排推展西九計劃，分批完成其設施。管理局建造的第一及第二批設施當中包括公園(設有小型藝術展館)、自由空間(設有黑盒劇場和戶外舞台)、戲曲中心、M+及演藝綜合劇場，有關工程預計在 2015 年下半年[5]至 2020 年年底分階段完成。

7. 管理局採納 Foster + Partners 的概念圖則作為擬備西九發展圖則的基礎。綜合地庫是上述概念圖則的主要組成部分，而且是一項重要特色，對西九發展須提供至少 23 公頃休憩用地，以符合《西南九龍分區計劃大綱圖》的法定要求，更是不可或缺。綜合地庫的設計將行車交通置於地底，以騰出地面空間作文化藝術用途，供市民享用，並改善地面步行環境。由於管理局在 2008 年獲批撥款[6]時並沒有綜合地庫的構思，因此政府在 2013 年 6 月宣布，如獲財委會批出撥款，政府將負擔主綜合地庫建造工程的全部資本成本，作為支持發展西九計劃的基本備置工程，讓管理局可專注建設文化藝術設施。在 2014 年 5 月 28 日舉行的聯合小組委員會會議上，委員獲悉綜合地庫會以務實方法分階段推展[7]。

8. 藝術廣場四周地區，包括位於綜合地庫 3A 及 3B 區上蓋的 M+、演藝綜合劇場和部分酒店、辦公室及住宅發展用地(下稱「藝術廣場發展區」)，有助促使發展為「小型西九」的良好機遇。藝術廣場發展區預計約在 2020 年完成，將形成一個均衡土地用途組合的專區，包括核心文化藝術設施、辦公室及住宅發展項目、其他文化藝術設施及零售／餐飲／消閒設施。藝術廣場發展區內的公共空間，包括與公園鄰接的地區、藝術廣場的休憩用地及海濱長廊，將會為公眾締造空間感及為該區帶來活力。

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[5] 臨時苗圃公園將在 2015 年下半年完成。

[6] 2008 年 7 月，財委會向西九文化管理局批出 216 億元的一筆過撥款，以落實西九文化區的發展，包括興建文化藝術設施、零售／餐飲／消閒設施、公眾休憩用地及一些交通設施。

[7] 政府及私人發展商將會大致依據西九文化管理局及政府設施(包括公共基礎建設工程)，以及酒店、辦公室及住宅發展項目的樓面面積比例分擔綜合地庫的成本。

9. 在廣深港高速鐵路(高鐵)項目完成後，綜合地庫 2A 區及其上蓋發展項目將會分階段推展，包括當代表演中心、一些其他文化藝術設施和酒店、辦公室及住宅用地。綜合地庫 2B 區會由未來上蓋的酒店、辦公室及住宅用地的發展商負責發展。綜合地庫 2C 區及其上蓋發展項目，包括核心文化藝術設施(即第三批設施)和酒店、辦公室及住宅用地的實施時間表，將於適當時候作出檢討。

綜合地庫首階段設計及前期工程

10. 我們在 2014 年 6 月向工務小組委員會提交 **763CL** 號工程計劃下於綜合地庫 3A 及 3B 區進行首階段設計及前期工程(即上文第 3(a)段詳述的工程範圍)的撥款申請，建議把工程計劃提升為甲級，按付款當日價格計算，估計所需的費用為 3 億 450 萬元。惟至 2014 年年底該項撥款申請仍待工務小組委員會進行審議。由於有關撥款申請未能如期獲財委會批出，間接地對 M+及演藝綜合劇場的建造成本和推展時間表造成嚴重的影響。有見及此，管理局董事局同意採取一次性的特別安排，由管理局的撥款承擔首階段設計及前期工程的費用。因此，政府在 2015 年 1 月 5 日撤回有關撥款申請(請參閱工務小組委員會第 PWSC(2014-15)37 號文件)。

11. 在 2015 年 1 月 12 日舉行的聯合小組委員會會議上，政府向委員匯報西九綜合地庫發展的最新進展及相關撥款申請時間表。最新的時間表載於附件 2。委員亦備悉上文第 10 段所述管理局就綜合地庫首階段設計及前期工程所採取的資金替代安排，以及政府計劃在 2015 年年中提交下一次撥款申請時，尋求財委會批准將綜合地庫首階段設計及前期工程的相關費用轉予管理局，以確認管理局是為政府進行有關工程。

綜合地庫第二階段設計、工地勘測及建造工程

3A 區的建造工程

12. 管理局計劃在 2015 年第 3 季展開 M+的主要建造工程，並預計在 2018 年完成。為配合 M+的建造時間表，我們有需要同步推展上文第 3(b)(i)及 3(b)(ii)段所述與 M+構築物高度融合的擬議工程。這些工程包括建造綜合地庫 3A 區地下行車路及相關的行人路、上落客區、機電工程、機房、走火通道／消防救援通道等附屬工程，以及 3A 區餘下地下行車路段的基本備置工程[8]。這些工程亦包括 3A 區現有機場快綫隧道的保護工程。

3B 區的地基工程

13. 由管理局負責建造的演藝綜合劇場，與綜合地庫 3B 區高度融合。為配合演藝綜合劇場在 2020 年年底前的目標完工日期，我們有需要在 2015 年第四季展開綜合地庫 3B 區的擬議地基工程，以預留足夠時間進行綜合地庫 3B 區和演藝綜合劇場的主體建造工程。

2A、2B 及 2C 區的設計及工地勘測

14. 為配合西九設施最新的分階段推展計劃，並讓區內的酒店、辦公室及住宅用地可盡早出售，主綜合地庫 2A 至 2C 區將分階段推展如下－

2A 區

(a) 2A 區的地庫將由政府在高鐵項目完成後發展。該地庫連同上蓋發展項目，包括當代表演中心、一些其他文化藝術設施和酒店、辦公室及住宅用地，視乎高鐵項目的進度，可望由 2022 年起分階段落成。我們暫定有需要在 2015 年第四季前開展綜合地庫 2A 區的擬議設計及工地勘測工作。

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[8] 3A 區餘下一段地下行車路的建造工程計劃於稍後階段連同綜合地庫 3B 區的主體工程同步進行。

2B 區

(b) 2B 區的地庫(包括該段位於南面部分的主要林蔭大道及地下道路)將由其上蓋酒店、辦公室及住宅用地發展項目的準發展商負責發展。我們有需要進行上文第 3(b)(v)段所載綜合地庫 2B 區擬議初步設計及工地勘測，以作規管及費用估算。該初步設計將成為綜合地庫 2B 區上蓋酒店、辦公室及住宅用地發展項目的設計基礎，有關項目的準發展商須予遵照。政府及私人發展商將會大致依據管理局及政府設施(包括公共基礎建設工程)，以及酒店、辦公室及住宅發展項目的樓面面積比例分擔綜合地庫的成本。

2C 區

(c) 鑑於管理局目前未有資金及具體計劃推展第三批設施(包括音樂中心、音樂劇院及大劇院)，因此該部分綜合地庫及上蓋發展項目的推展，將於適當時候作出檢討。我們需要進行上文第 3(b)(v)段所載綜合地庫 2C 區的擬議初步設計及工地勘測，以作費用估算及確保將來可與分階段推展的綜合地庫 2A 區和 2B 區互相兼容。

15. 本工程計劃於 3A 及 3B 區進行的擬議工程將會與 2A、2B 及 2C 區以後的發展互相兼容，而 2A、2B 及 2C 區的設計將符合西九發展圖則核准圖。

16. 鑑於綜合地庫內各類設施需要非常高度融合，政府計劃委託管理局進行綜合地庫 3A 及 3B 區內的首階段及部分第二階段工程(如上文第 3(a)及第 3(b)(i)、(ii)、(iii) 段，以及第 3(b)(vi)段相關部分所述)(下稱「擬議委託工程」)，與 M+及演藝綜合劇場的建造工程同步進行。由於有大量的配合事宜，一方面由管理局設計及建造 M+和演藝綜合劇場，另一方面則由政府另行設計及建造位於同一工地的擬議委託工程的做法不切合實際。這個各自進行建造的方法不僅會增加擬議委託工程的設計及建造所需的費用和時間，亦會引致各種配合上的問題，並令 M+及演藝綜合劇場的推展計劃受到延誤。為避免上述潛在問題，我們認為委託管理局負責擬議委託工程的設計及建造，並一併連同 M+及

演藝綜合劇場以整體方式同步進行，實有必要且具成本效益。

17. 我們會向管理局償付該局的顧問及承建商就管理、監督、設計及建造擬議委託工程所引致的實際費用(即第三者費用)，有關費用已納入下文第 19(a)、(b)、(c)、(d)段的預算，以及(f)、(g)、(h)段相關部分的預算。由於擬議委託工程將分別與管理局的 M+及演藝綜合劇場有關的顧問合約和工程合約同時進行，我們不建議就此等工程向管理局支付內部管理費用。

18 由於土木工程拓展署沒有足夠內部資源，我們建議委聘顧問，就綜合地庫 2A、2B 及 2C 區的基本地庫結構及相關工程進行設計及工地勘測的監督工作(即第 3(b)(iv)及(v)段所述的工程)。

對財政的影響

19. 按付款當日價格計算，我們估計首階段及第二階段工程的費用為 29 億 1,950 萬元(見下文第 20 段)，分項數字如下－

		百萬元
首階段設計及前期工程		
(a) 3A 區前期建造工程		221.7
(i) 地下行車路的地基	30.7	
(ii) 現有機場快綫隧道保護工程的地基	164.9	
(iii) 所需的緩解環境影響措施和相關的監察及審核工作	2.8	
(iv) 監督綜合地庫 3A 區前期工程的顧問費	7.0	
(v) 駐工地人員的薪酬	16.3	
(b) 3B 區設計及招標的顧問費		29.7

		百萬元		
第二階段設計、工地勘測及建造工程				
(c)	3A 區建造工程		534.4	
	(i) 地下行車路、相關附屬工程及基本備置工程	335.1		
	(ii) 現有機場快綫隧道保護工程	199.3		
(d)	3B 區地基建造工程		1,081.8	
(e)	2A、2B 及 2C 區的工地勘測工作		37.5	
(f)	必要的緩解環境影響措施和相關的監察及審核工作		21.5	
(g)	顧問費 –		168.1	
	(i) 工程監督	59.5		
	(ii) 2A 區的設計及招標	47.3		
	(iii) 2B 及 2C 區的初步設計	61.3		
(h)	駐工地人員薪酬		131.7	
(i)	應急費用		222.7	
	小計		2,449.1	(按2014年9月價格計算)
(j)	價格調整準備		470.4	
	總計		2,919.5	(按付款當日價格計算)

—— 按人工作月數估計的顧問費的分項數字載於附件 3。

20. 如撥款建議獲得批准，我們會作出分期開支安排如下－

年度	百萬元 (按 2014 年 9 月價格計算)	價格調整因數	百萬元 (按付款當日價格計算)
2015-2016	102.2	1.05725	108.1
2016-2017	870.4	1.12069	975.4
2017-2018	930.0	1.18793	1,104.8
2018-2019	165.3	1.25920	208.1
2019-2020	177.9	1.33475	237.5
2020-2021	203.3	1.40483	285.6
	2,449.1		2,919.5

21. 我們按政府對 2015 至 2021 年期間公營部門樓宇和建造工程產量價格的趨勢增減率所作的最新一組假設，制訂按付款當日價格計算的預算。

22. 我們估計擬議工程引致的每年經常開支約為 850 萬元。

公眾諮詢

23. 我們在 2014 年 4 月 24 日、2014 年 8 月 21 日和 2015 年 2 月 26 日就首階段及第二階段工程諮詢油尖旺區議會。有關建議獲區議會普遍支持。

24. 我們在 2015 年 2 月 13 日根據《道路(工程、使用及補償)條例》(第 370 章)就綜合地庫 3A 及 3B 區的擬議地下行車路刊登憲報。在法定期內沒有收到反對意見。授權公告已在 2015 年 4 月 30 日刊憲。

25. 我們在 2015 年 5 月 19 日就首階段及第二階段工程諮詢聯合小組委員會。委員沒有就建議提出反對意見。在回答議員的提問時，我們確認即使綜合地庫其他區域因為某種或其他原因最終無法推展，綜合地庫 3A 及 3B 區是可以獨立運作的。

對環境的影響

26. 西九發展的工程可行性研究，屬《環境影響評估條例》(下稱「《環評條例》」)附表 3 的指定工程項目，有關環評報告須按《環評條例》核准。首階段及第二階段工程是西九發展的一部分，其中地下行車路屬《環評條例》附表 2 的指定工程項目，其建造及運作均須取得環境許可證。西九發展的環評報告(涵蓋首階段及第二階段工程)已在 2013 年 11 月根據《環評條例》獲有條件批准，而地下行車路的建造及運作亦取得環境許可證。環評報告的結論是，首階段及第二階段工程對環境的影響，均可控制在《環評條例》及《環境影響評估程序技術備忘錄》所訂的標準範圍內。我們會實施核准環評報告建議的緩解措施，主要包括在施工階段採用靜音設備及活動隔音屏障或隔音物料，以盡量減低建築噪音的影響；並定期在工地灑水，以及提供車輪清洗設施以控制塵土飛揚的情況。我們已在工程預算費內預留 2,430 萬元(按 2014 年 9 月價格計算)，以推行所需的緩解環境影響措施和監察及審核工作。

27. 在策劃和設計階段，我們已考慮首階段及第二階段工程的設計水平和建造方法，以盡量減少產生建築廢物。此外，我們會要求承建商盡可能在工地或其他合適的建築工地再用惰性建築廢物(例如挖掘所得的泥土和混凝土碎塊)，以盡量減少須棄置於公眾填料接收設施[9]的惰性建築廢物。為進一步減少產生建築廢物，我們會鼓勵承建商盡量利用已循環使用或可循環使用的惰性建築廢物，以及使用木材以外的物料搭建模板。

28. 在施工階段，我們會要求承建商提交計劃書，列明廢物管理措施，供政府批核。計劃書須載列適當的緩解措施，以避免和減少產生惰性建築廢物，並把這些廢物再用和循環再造。我們會確保工地的日常運作符合經核准的計劃書，並會要求承建商在工地把惰性與非惰性建築廢物分開，以便運送到適當的設施棄置。我們會以運載記錄制度，監管惰性建築廢物和非惰性建築廢物分別運送到公眾填料接收設施和堆填區棄置的情況。

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[9] 公眾填料接收設施列載於《廢物處置(建築廢物處置收費)規例》附表 4，任何人士均須獲得土木工程拓展署署長發出牌照，才可在公眾填料接收設施棄置惰性建築廢物。

29. 我們估計首階段及第二階段工程合共會產生 158 200 公噸建築廢物，其中 101 380 公噸(64%)惰性建築廢物會在工地再用，另外 55 620 公噸(35%)惰性建築廢物會在其他建築工地再用。我們會把餘下的 1 200 公噸(1%)非惰性建築廢物棄置於堆填區。就這項工程計劃而言，把建築廢物運送到堆填區處置的費用，估計總額約為 15 萬元(金額是根據《廢物處置(建築廢物處置收費)規例》所訂明，以單位成本計算，在堆填區棄置的物料每公噸收費 125 元)。

對文物的影響

30. 首階段及第二階段工程不會影響任何文物地點，即所有法定古蹟、暫定古蹟、已評級文物地點或歷史建築，具考古價值的地點，以及古物古蹟辦事處界定的政府文物地點。

土地徵用

31. 首階段及第二階段工程無須徵用任何私人土地。

背景資料

32. 西九發展是行政長官在 2007-08 年的施政報告提出的 10 大主要基建項目之一，以促進香港文化藝術的長遠發展，並支持香港成為創意經濟及亞洲國際都會。

33. 2013 年 1 月，財委會批准把 **753CL** 號工程計劃「西九文化區基礎建設工程第一期－設計及工地勘測」提升為甲級，按付款當日價格計算，估計費用為 4 億 7,800 萬元。綜合地庫 3A 及 3B 區的政府基礎建設工程(有關地下行車路及相關工程)的設計及工地勘測為 **753CL** 號工程計劃下委託管理局進行的工程的一部分，現正分期進行，以配合綜合地庫的分階段推展。

34. 我們在 2013 年 6 月 28 日把 **763CL** 號工程計劃提升為乙級。

35. 2014 年 3 月，我們在**分目 7100CX**「為工務計劃丁級工程項目進行新市鎮及市區工程、研究及勘測」內，開立了 1 個丁級工程項目，按付款當日價格計算，估計所需費用為 2,730 萬元，以支付綜合地庫 3B 區前期工程的設計及工地勘測的費用。基於與上文第 16 段述明的相同原因，這丁級項目的工程已委託予管理局進行，並已大致完成。

36. 上文第 3(a)(i)、3(b)(i)、3(b)(ii)及 3(b)(iii)段所述的首階段及第二階段工程涉及在工程地盤內砍伐 36 棵樹。須砍伐的樹木全非珍貴樹木[10]。我們會把種植樹木建議納入工程計劃，估計會補償種植 85 棵樹。上文第 3(a)(ii)、3(b)(iv)及 3(b)(v)所述的擬議設計及工地勘測，不會直接涉及移走樹木或種植樹木建議。在工程計劃的規劃及設計階段，我們會顧及保育樹木的需要。日後在施工期間，我們會盡可能加入種植樹木建議。

37. 我們估計為進行首階段及第二階段工程而開設的職位約有 460 個(380 個工人職位和另外 80 個專業／技術人員職位)，共提供 15 700 個人工作月的就業機會。

民政事務局
2015 年 6 月

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[10] 珍貴樹木指《古樹名木冊》載列的樹木或符合下列最少一項準則的其他樹木－

(a) 樹齡達一百年或逾百年的古樹；

(b) 具有文化、歷史或重要紀念意義的樹木，例如風水樹、可作為寺院或文物古蹟地標的樹木和紀念偉人或大事的樹木；

(c) 屬貴重或稀有品種的樹木；

(d) 樹形出眾的樹木(顧及樹的整體大小、形狀和其他特徵)，例如有簾狀高聳根的樹木、生長於特別生境的樹木；或

(e) 樹幹直徑等於或超逾 1.0 米的樹木(在地面以上 1.3 米的位置量度)，或樹木的高度／樹冠覆蓋範圍等於或超逾 25 米。

未來數年至 2017 年綜合地庫及相關公共基礎建設工程撥款申請時間表

	受影響的 西九文化區設施／發展	擬申請撥款的 粗略成本估算 (按付款當日價格計算) 綜合地庫及相關 公共基礎建設工程	暫定撥款申請 時間表
(i) 首階段的設計及前期工程主要包括－ (a) 為綜合地庫 3A 區地下行車路和現有機場快綫隧道保護工程建造地基；以及 (b) 綜合地庫 3B 區基本地庫結構及相關工程的設計。	3A 區的 M+； 3B 區的演藝綜合劇場、藝術廣場以及酒店、辦公室及住宅用地，包括零售／餐飲／消閒設施；以及 2A 和 2B 區的酒店、辦公室及住宅用地，包括零售／餐飲／消閒設施以及西九管理局的文化藝術設施。	約 29 億元	2015 年年中 (本次撥款申請)
(ii) 第二階段的設計、工地勘測及建造工程主要包括－ (a) 建造綜合地庫 3A 區地下行車路、相關附屬工程以及基本備置工程*； (b) 綜合地庫 3A 區現有機場快綫隧道的保護工程； (c) 建造綜合地庫 3B 區地基，包括現有機場快綫隧道保護工程的地基；			

未來數年至 2017 年綜合地庫及相關公共基礎建設工程撥款申請時間表

	受影響的 西九文化區設施／發展	擬申請撥款的 粗略成本估算 **(按付款當日價格計算)** 綜合地庫及相關 公共基礎建設工程	暫定撥款申請 時間表
(d) 綜合地庫 2A 區^基本地庫結構及相關工程的設計及工地勘測；以及 (e) 綜合地庫 2B 及 2C 區基本地庫結構及相關工程的初步設計及工地勘測。			
(iii) 建造 3B 區的地庫結構、地下行車路及相關公共基礎建設工程，以及 3A 區地下行車路的餘下路段。	3B 區的演藝綜合劇場、藝術廣場	約 30 億元	2016-17 年度
(iv) 建造 2B 區的地庫結構，地下行車路及相關公共基礎建設工程。	2B 區的酒店、辦公室、住宅用地，包括零售／餐飲／消閒設施以及西九管理局的文化藝術設施。	約 40 億元	2016-17 年度

** 由於在法定反對期內沒有收到反對意見，我們建議把 3A 區的公共基礎建設工程納入本撥款申請第二階段的項目範圍內。*

^ 2A 區的地庫將由政府在高鐵項目完成後發展。視乎高鐵項目的進度，該地庫連同上蓋發展項目可望由 2022 年起分階段落成。

763CL(部分)－西九文化區綜合地庫－
首階段及第二階段的設計、工地勘測及建造工程

估計顧問費的分項數字(按 2014 年 9 月價格計算)

		預計的人工作月數	總薪級平均薪點	倍數 (註1)	估計費用(百萬元)
(a)	**建造綜合地庫 3A 區前期工程**				
(i) 監督綜合地庫 3A 區前期工程的顧問費(註2)	專業人員	42	38	2.0	6.0
	技術人員	20	14	2.0	1.0
(ii) 駐工地人員的薪酬(註3)	專業人員	85	38	1.6	9.7
	技術人員	170	14	1.6	6.6
				小計	23.3
(b)	**設計綜合地庫 3B 區的顧問費**				
(i) 設計及招標(註2)	專業人員	130	38	2.0	18.5
	技術人員	230	14	2.0	11.2
				小計	29.7
(c)	**綜合地庫 3A 區建造工程、3B 區地基工程，以及 2A、2B 及 2C 區工地勘測工程**				
(i) 監督綜合地庫 3A 區建造工程、3B 區地基工程，以及 2A、2B 及 2C 區工地勘測工程的顧問費(註2)	專業人員	359	38	2.0	51.3
	技術人員	169	14	2.0	8.2
(ii) 駐工地人員的薪酬(註3)	專業人員	687	38	1.6	78.5
	技術人員	1 365	14	1.6	53.2
				小計	191.2

		預計的人工作月數	總薪級平均薪點	倍數 (註 1)	估計費用 (百萬元)
(d) 設計綜合地庫 2A 區的顧問費					
(i) 設計及招標 (註 2)	專業人員	205	38	2.0	29.3
	技術人員	370	14	2.0	18.0
				小計	47.3
(e) 初步設計綜合地庫 2B 及 2C 區的顧問費					
(i) 初步設計 (註 2)	專業人員	265	38	2.0	37.8
	技術人員	482	14	2.0	23.5
				小計	61.3
				總計	**352.8**

註

1. 我們採用倍數 2.0 乘以總薪級平均薪點估計員工開支總額(包括受聘在顧問辦事處工作的員工的管理費用和利潤)。至於由顧問提供的駐工地人員開支,則採用倍數 1.6 乘以總薪級平均薪點作估算(截至現時為止,總薪級第 38 點的月薪為 71,385 元,總薪級第 14 點的月薪為 24,380 元) 。

2. 我們須待選定顧問後,才可得知實際的人工作月數和實際所需的開支。

3. 我們須待建造工程完成後,才可得知實際的人工作月數和實際所需的開支。

立法會CB(2)1492/12-13(02)號文件

二零一三年七月三日
資料文件

立法會民政事務委員會與發展事務委員會
監察西九文化區計劃推行情況聯合小組委員會

西九文化區計劃的財務狀況及安排

目的

本文件旨在向委員滙報有關西九文化區（西九）的最新財務狀況、策略和安排，以按適時落成和具成本效益的方式，實施有關計劃。

背景

向西九文化區管理局提供一筆過撥款

2. 2008 年 7 月，立法會財務委員會向西九文化區管理局（管理局）批出 216 億元（以 2008 年淨現值計算）的一筆過撥款，以落實西九計劃。主要分項數字可見於申請撥款的立法會 PWSC(2008-09)31 號文件，載列如下—

	按2008 年淨現值計算	所佔百分比
西九的規劃及項目管理（管理局所需的費用）	$13 億	6%
設計及建造各項設施	$157 億	73%
M+購置藏品費用和相關費用	$17 億	8%
在50 年項目期內各項設施的大型維修及翻新工程	$29 億	13%
總計	**$216 億**	**100%**

3. 當局已告知委員政府將負責提供其他共用設施和政府設施，以及進行相關的工程，例如修建道路、排水系统、消防局、公眾碼頭等，以支援整個西九（包括住宅、商業及酒店發展項目），並另行就這些工程向立法會申請撥款。

西九發展圖則

4. 管理局於 2009 年至 2011 年期間進行三個階段的公眾參與活動，以擬備西九的發展圖則。經全面分析公眾的意見後，管理局於 2011 年 3 月選取由 Foster + Partners 設計的「城市中的公園」概念圖則為主體方案，作為擬備西九發展圖則的基礎。

5. 根據 Foster + Partners 的概念，西九將包括一個大型海濱公園，並將車輛交通、泊車和上落客貨設施置於地底，以騰出地面空間作文化藝術用途，並締造方便行人的環境，供公眾享用。西九將包括多元化的零售、餐飲和消閒設施及酒店、辦公室和住宅發展，結合文化藝術設施，以豐富訪客的體驗，並為文化區帶來活力。這些零售、餐飲和消閒設施亦會提供收入來源，以填補文化藝術設施的營運虧損。為回應公眾與文化藝術界的訴求，個別文化藝術設施將加入教育設施，用作藝術教育、專業發展和拓展觀眾羣的用途。整個西九亦預計會落實環保措施及資訊和通訊科技措施，以作為香港實施類似措施的先導者。

6. 經過廣泛的公眾諮詢及法定規劃程序後，行政長官會同行政會議於 2013 年 1 月核准根據 Foster + Partners 概念而擬備的西九發展圖則（見**附件一**）。政府承諾依照發展圖則推展西九計劃。

管理局的財務狀況

7. 為落實西九計劃的 216 億港元一筆過撥款取得了一定的投資回報，於扣除過去幾年的營運開支（如規劃和管理項目的費用、節目成本、租金、員工開支等）和資本開支後，已於本年 3 月滾存至 236 億港元。在管理局的開支中，其中一個重要部分用於發展文化軟件，以配合西九計劃的推展，例如籌辦開幕前節目，以提升管理局的知名度及能力、培訓藝術人才和拓展觀眾羣。一些旗艦活動如西九大戲棚、M+進行和自由野等，以及培訓計劃和公眾研討會／論壇，將藝術帶進社羣，同時將社羣帶進西九，對管理局未來活動有先導作用。管理局也正進行研究，以制訂各個設施的管治和營運模式。除了發展硬件外，這些措施對西九的規劃和發展均相當重要。

項目的成本估算

8. 考慮到 Foster + Partners 的設計建議的新元素，包括大型綜合地庫、藝術教育設施和環保措施，均並非出自西九龍文娛藝術區核心文化藝術設施諮詢委員會作出的建議（諮詢委員會建議），而是因應公眾訴求而增加，加上自諮詢委員會建議發表以來建築成本上升[1]，管理局曾粗略估算[2]設計和興建所有設施的成本約為 471 億元（按付款當日價格計算）。值得留意的是，上述的粗略估算並非根據個別核心文化藝術設施的實際設計而作出，也未有考慮各個項目進行價值工程時可以節省的成本。故此，不能把這個數字當作評估最終整體建築成本的根據。

9. 考慮到西九計劃的規模，以及持份者和社會對有機發展模式的支持，西九發展將跨越一段頗長的時間。期間，經濟方面的轉變、設施的最終設計、以及個別項目的建築時間表和融資模式，均會影響建築成本。在現階段若要估計整個西九計劃的開支，只能基於一系列的假設。根據過往的經驗，於橫跨二十年的期間內，建築成本的上升和下降幅度均存在十分大的變數。**附件二**的圖表根據公共和私人界別的投標價格指數，反映香港建造業由 1991 年至 2012 年的成本趨勢，而**附件三**則顯示建築材料的成本趨勢。由此可見，政府建築署和私人界別在過去均經歷類似的投標價格指數波動，惟建築署的投標價格指數上升波幅較大。然而，投標價格指數在過去數年急劇上升，並不意味指數在未來數年必然會持續上揚。視乎環球的經濟狀況，投標價格指數的升幅可能減慢，就如部分建築材料的成本一樣，趨於平穩甚至呈現下降趨勢。

10. 管理局只有在確定設施的詳細設計和建築時間表後，才有可能作出更可靠的成本估算。故此而言，約 471 億元的粗略估算只不過是根據另一系列成本上升假設而機械化地作出的數字更新；這肯定不是西九計劃修訂的預算。

推展西九計劃的方式

11. 縱使面對計劃成本上漲的壓力，政府和管理局均致力將西九發展為世界級的文化藝術區，並會採用務實的方式發展切合用途的設施。政府建議而管理局接納西九計劃應按下列原則推展—

[1] 建築工程投標價格指數由 2006 年第三季 751，上升至 2013 年第一季的 1 516。

[2] 有關估算是基於 2011 年 9 月由項目顧問於第六號技術報告提出的粗略數字，並由管理局管理人員於 2012 年 11 月取得戲曲中心工料測量師的資料後作出更新。

- 嚴格控制每一設施的成本，盡可能接近原來諮詢委員會預算的水平；

- 着重設施的內容而不是外形；及

- 盡快落成公園和一些文化藝術設施，供公眾享用。

12. 因應上述原則，管理局已展開／籌備下列工作，以推展西九計劃—

甲、成本控制

一、戲曲中心的價值工程

13. 戲曲中心的建築設計比賽於 2012 年 12 月完成後，管理局董事局批准約 27 億元（按付款當日價格計算）包括顧問費用的預算以建設戲曲中心及相關設施，上述情況已於 2013 年 4 月向立法會滙報。管理局正與獲聘設計團隊緊密合作，按照選定的設計以制訂場地的詳細設計。項目預算包括興建零售、餐飲和消閒設施的成本，以提供經常性收入支持文化藝術設施的營運，以及因應公眾和藝術界的意見而增設藝術教育設施和公眾休憩用地的成本。

14. 為了控制包括顧問費用的整體項目成本，以符合核准的預算，管理局進行了嚴格的價值工程，務求在不影響設施的整體功能和質素的前提下，減省建築成本。截至 2013 年年中，戲曲中心包括顧問費用的整體項目成本預計約 25 至 26 億港元（按付款當日價格計算）。這個預算已計及精簡建築結構、劇院設備與外牆設計、優化樓面面積的使用、縮減零售、餐飲和消閒設施的樓面面積，以及優化地下停車場的安排。戲曲中心項目的最新進度載列於**附件四**。管理局承諾會繼續進行價值工程，在切實可行的情況下進一步減省項目成本。

二、與 M+的獲選設計團隊磋商，以降低項目成本

15. Herzog & de Meuron + TFP Farrells （HdM）已獲選為 M+的優勝設計團隊。評審團認為其概念設計在六個呈交方案中最為優秀，且預計建築成本最低，為 54 億 1,300 萬港元（按付款當日價格計算）。比賽結果已於 2013 年 6 月 28 日公布。管理局已與 HdM 展開密切磋商，以進一步控制成本，目標是把管理局需承擔的開支（連顧問費用）控制在 50 億港元（按付款當日價格計算）的預算內。優勝設計和設計團隊的詳情載於**附件五**。管理局會繼續與設計團隊緊密合作，於詳細設計階段探討各種措施，在可能的情況下降低項目成本。

三、重新審視大型表演場地和展覽中心

16. 過往，大型表演場地和展覽中心均確認為需視乎其他資金安排而建設的場地。管理局計劃探討由私人全面注資發展這兩個場地的可行性，並因應持份者的意見、市場需求、具興趣私人投資者的多寡，以及香港經濟發展等因素檢討這兩個設施的發展模式，再決定其未來路向。

乙、着重設施的內容而不是外形

17. 繼聘請世界級的設計團隊參與戲曲中心和 M+這兩個主要項目，並計劃為具潛質的本土建築師和設計師進行小型展覽館的設計比賽後，管理局考慮以功能為先的務實方式設計和興建其他設施，特別着重建築物如何發揮其功能和配合使用者，而卓越出眾的設計則較為次要，務求盡可能貼近諮詢委員會建議的項目預算。管理局會與文化藝術界的持份者合作，發展優質、創新和多元化的節目，培育本地藝術人才和相關人員，並為文化藝術區拓展觀眾羣，將香港帶引至世界舞台。

丙、盡快落成公園和其他文化藝術設施

18. 管理局正探討採用創新方式興建公園和有關設施，以符合成本效益，並盡可能提前完工。經審慎檢討公園的發展後，管理局正探討以另一途徑將原來有大量園境設計的公園，轉化為優質的公共空間，輔以組裝設計的文化藝術設施和搭建的餐飲設施，以大幅縮短施工期，供公眾和藝術界早日享用。

19. 除了供舉行小規模活動和展覽的小型藝術展館外，園內還計劃設置黑盒劇場供不同藝術界別以「自由空間」的模式進行演出，並安裝隔音罩，為藝術工作者和團體提供所需的表演場地。這些擬議場地會採取較簡約的設計，也只需要較短的建造時間，能減少公園相關地點的封閉時間，詳情見**附件六**。

20. 早前，管理局接獲一間公司有關組裝劇院的建議書，該劇院可容納約 1 650 名觀眾，作為音樂劇的演出場地[3]。管理局正探討興建一個容納約 1 200 至 1 500 人的組裝劇院的可能性，以較低的成本預算和較短的時間，提供質素合理的音樂、舞蹈和戲劇表演場地。組裝劇院的主要部分由預先建造的組件構成，使建造工程得以迅速進行，並較具靈活性，能於不同發展階段因應場地開放／封閉安排，設置於西九區內不同地方。管理局計劃邀請有興趣人士提交意

[3] 組裝建築的例子有 2012 年倫敦奧運採用的國際廣播中心。

向書以展開有關工作。考慮到西九用地的狀況，以及將公園化身為充滿生氣的活動場地的目標，組裝劇院可以先放置於公園範圍內，及後再移至西九其他地方。

丁、探討其他資金來源

21. 除了嚴格控制成本外，管理局正積極探討捐贈和贊助等其他資金來源，如透過給予設施或設施部分的命名權，以籌集資金。管理局會擬備籌集資金的工作計劃，以鼓勵捐獻，建立社會對西九的歸屬感，提倡支持文化藝術的風氣。

公共基礎建設工程

22. 一如第 3 段所述，政府將承擔及資助共用設施和政府設施，以及進行相關的工程。在 2013 年 1 月，立法會財務委員會已批出 4 億 7,800 萬港元（按付款當日價格計算）的撥款進行有關公共基礎建設工程的設計和工地勘測，以支持西九的第一期計劃。為配合西九的發展，政府已開展有關設計和工地勘探工作。

23. Foster + Partners 建議的綜合地庫是發展圖則的重要部分，對符合西南九龍分區計劃大綱圖中須提供至少 23 公頃公眾休憩用地的法定規限，更是不可或缺的一環[4]。鑑於這個綜合地庫並非涵蓋在諮詢委員會的建議內，亦是西九項目成本上升的主要因素之一，視乎立法會是否批出撥款，政府準備負擔綜合地庫建造工程的全部開支，以作為支持整個西九計劃發展的基本備置工程。

24. 鑑於綜合地庫在設計和建造方面將涉及複雜的技術和建築接合問題，也會影響各類設施的管理、營運和維修，即公共基礎建設項目（包括公共道路、供水系統、污水系統等）、管理局的設施，以及為發展上蓋酒店、辦公室和住宅項目而設的設施，政府將視乎批出的人手資源，準備邀請發展局／土木工程拓展署負責進行綜合地庫的建築工程。這可讓管理局專注於建設文化藝術設施。

25. 政府將會另行向立法會提出基礎建設工程的撥款申請，當中包括建造地庫的建築成本和人手資源。

[4] 三個西九的概念圖則均有地庫設計。

落實時間表

26. 因應建設核心文化藝術設施和公園的最新方式，我們預計管理局第一批建成的設施至少有五個，包括戲曲中心、M+、公園面向海濱的東面部分（包括小型展覽館）、自由空間（設有黑盒劇場和隔音罩的戶外舞台）和一個組裝表演場地。第二批設施將是位於綜合地庫東、西兩端，有機會早於綜合地庫其他部分興建的設施。這些設施包括演藝劇場、中型劇場 I、當代表演中心及表演藝術團體需求甚殷的一些駐場藝團設施。第三批設施則是只能待綜合地庫預計於 2020 年完工後才可興建的設施。在 2008 年的一筆過撥款中，設計及建造管理局各項設施的部分（157 億港元），再加上相關的投資回報（21 億港元），合共 178 億港元。當中 90 億港元已留作發展第一批五個設施之用，而其餘約 88 億港元將用於建設第二和第三批設施。管理局將就落實時間表諮詢相關持份者，並因應情況轉變和管理局持續控制成本的成果，適時檢討是否需要尋求額外撥款。管理局將會適時向立法會滙報其財務狀況和項目進展。

增加西九選址的地積比率

27. 除了上述措施外，管理局正考慮按照《城市規劃條例》第 16 條，申請略為放寬總樓面面積及／或建築物高度限制，以充分發揮西九選址的發展潛力。增加的總樓面面積可能用作興建更多零售、餐飲和消閒設施，以增加管理局的經常性收入，或將部分收益資助建築成本，以及為訪問的藝術家提供可負擔的服務式公寓。

28. 概述前因，根據 2011 年 6 月刊憲的西南九龍分區計劃大綱圖，規定西九選址的最高地積比率為 1.81 倍，以及建築物高度限制為主水平基準上 50 米至 100 米。管理局擬備的西九發展圖則已符合西南九龍分區計劃大綱圖上述的規劃參數。按照發展圖則，各個土地用途地帶的發展限制均以最大總樓面面積和最高建築物高度限制釐定。

29. 由於管理局只計劃根據《城市規劃條例》第 16 條申請略為放寬總樓面面積及／或建築物高度限制，預計不會對西九計劃的落實時間表產生重大延誤。若這個建議得以推展，管理局將進行交通影響評估和環境影響評估，以確認有關建議不會對鄰近地區產生不能接受的影響。

下一步工作

30. 管理局的管理層會進行所需的研究，就上述措施擬定詳細安排，並適當地諮詢有關持份者。除了在不影響西九設施的功能和質素的前提下，嚴格控制項目成本外，管理局也會繼續嚴格監控其他非資本開支，並積極探討不同的資金來源，如透過命名權取得捐贈和贊助等。

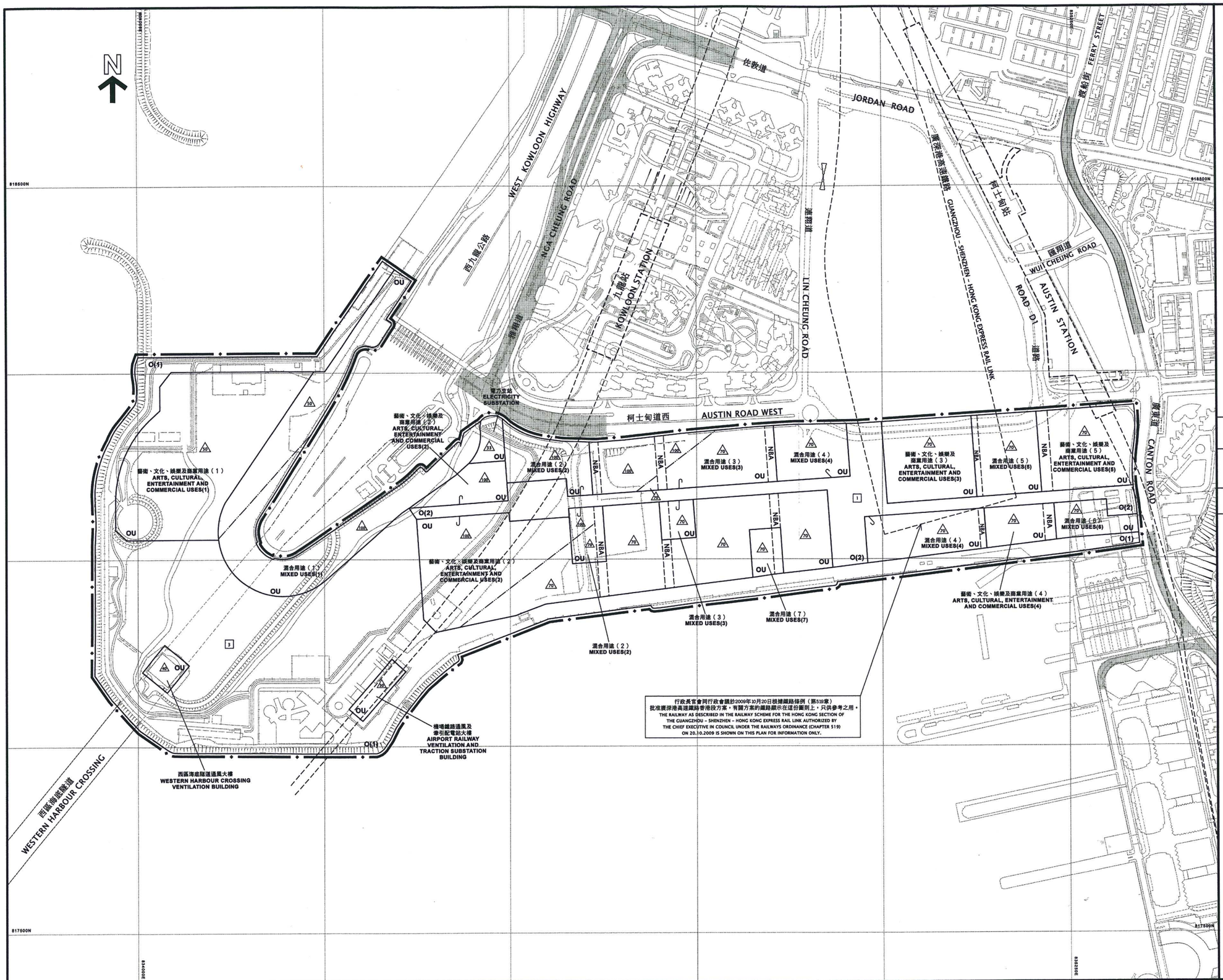
31. 現階段，政府和管理局沒有計劃向立法會申請額外撥款，以補充原有的一筆過撥款。

討論

32. 請議員備悉並就計劃的財務狀況、策略和安排發表意見。

民政事務局
西九文化區管理局
2013 年 7 月

Annex 1
附件1



圖例 NOTATION

ZONES		**地帶**
OPEN SPACE	O	休憩用地
OTHER SPECIFIED USES	OU	其他指定用途
COMMUNICATIONS		**交通**
RAILWAY AND STATION (UNDERGROUND)	WKS STATION	鐵路及車站（地下）
ELEVATED ROAD		高架道路
MISCELLANEOUS		**其他**
BOUNDARY OF PLANNING SCHEME		規劃範圍界線
BUILDING HEIGHT CONTROL ZONE BOUNDARY		建築物高度管制區界線
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)	70	最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)	1	最高建築物高度（樓層數目）
NON-BUILDING AREA	NBA	非建築用地

土地用途及面積一覽表 SCHEDULE OF USES AND AREAS

USES	大約面積及百分率 APPROXIMATE AREA & %		用途
	公頃 HECTARES	% 百分率	
OPEN SPACE	17.23	42.12	休憩用地
OTHER SPECIFIED USES	23.68	57.88	其他指定用途
TOTAL PLANNING SCHEME AREA	40.91	100.00	規劃範圍總面積

夾附的《註釋》屬這份圖則的一部分
THE ATTACHED NOTES ALSO FORM PART OF THIS PLAN

行政長官會同行政會議於２０１３年１月８日 根據城市規劃條例第９（１）（ａ）條核准的圖則
APPROVED BY THE CHIEF EXECUTIVE IN COUNCIL UNDER SECTION 9(1)(a) OF THE TOWN PLANNING ORDINANCE ON 8 JANUARY 2013

Ms Kinnie WONG 黃潔怡女士
CLERK TO THE EXECUTIVE COUNCIL 行政會議秘書

香港城市規劃委員會根據城市規劃條例擬備的西九文化區發展圖則
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
WEST KOWLOON CULTURAL DISTRICT DEVELOPMENT PLAN

SCALE 1:2500 比例尺

米 METRES 50 0 100 200 300 400 METRES 米

依據西九文化區管理局條例第２１（２）（ａ）條擬備
PREPARED UNDER SECTION 21(2)(a) OF THE WEST KOWLOON CULTURAL DISTRICT AUTHORITY ORDINANCE

圖則編號 PLAN No. S/K20/WKCD/2

附件二

摘自利比有限公司
季度建築成本更新—香港報告
（2013 年 3 月）

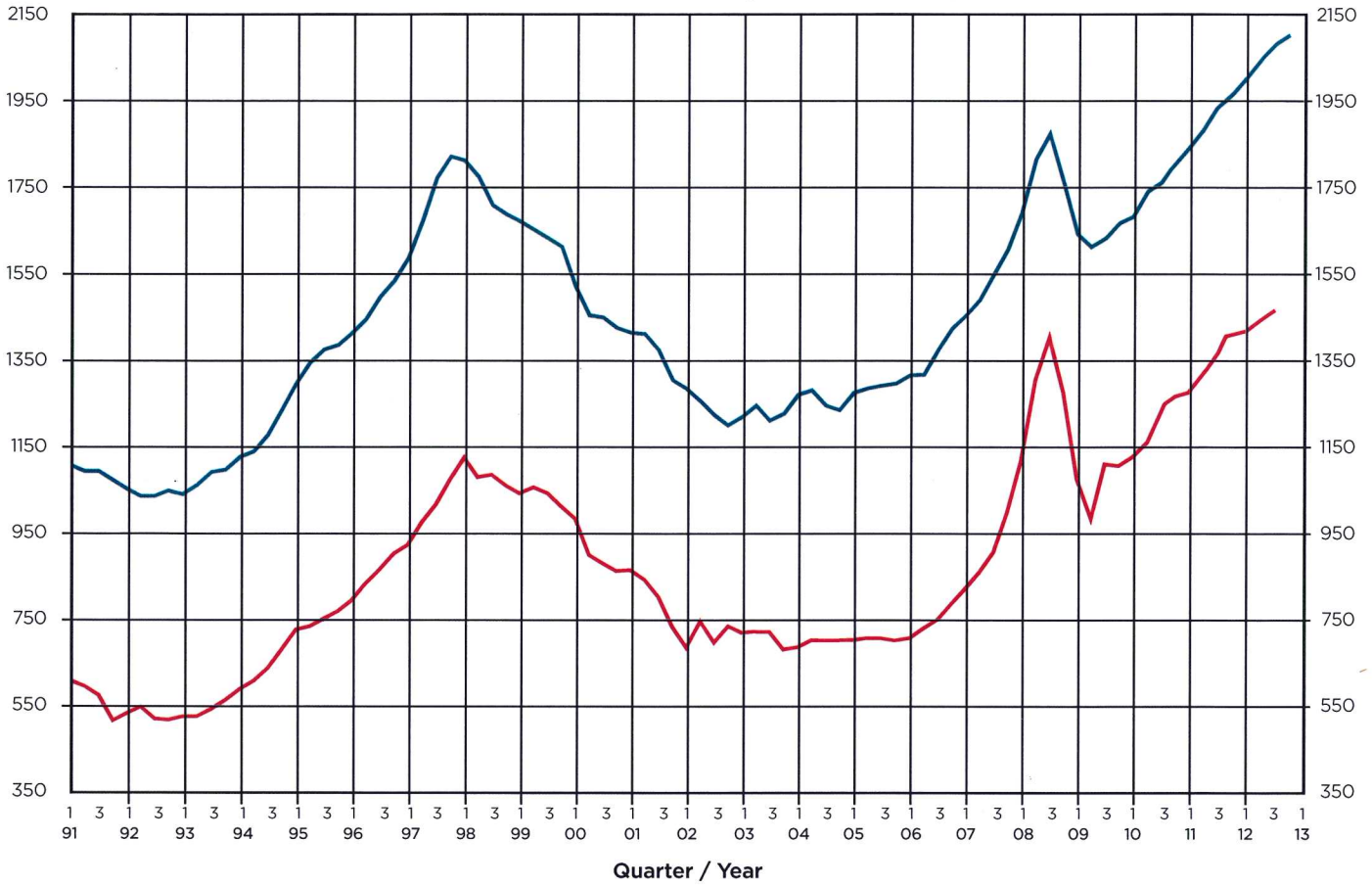
香港的投標價格指數

（只提供英文版本）

（獲利比有限公司的許可而複製）

TENDER PRICE INDICES IN HONG KONG

RLB = Rider Levett Bucknall (Private Sector)
ASD = Architectural Services Department (Public Sector)


2150
1950
1750
1550
1350
1150
950
750
550
350
1 3 1 3 1 3

附件三

摘自利比有限公司
季度建築成本更新—香港報告
（2013 年 3 月）

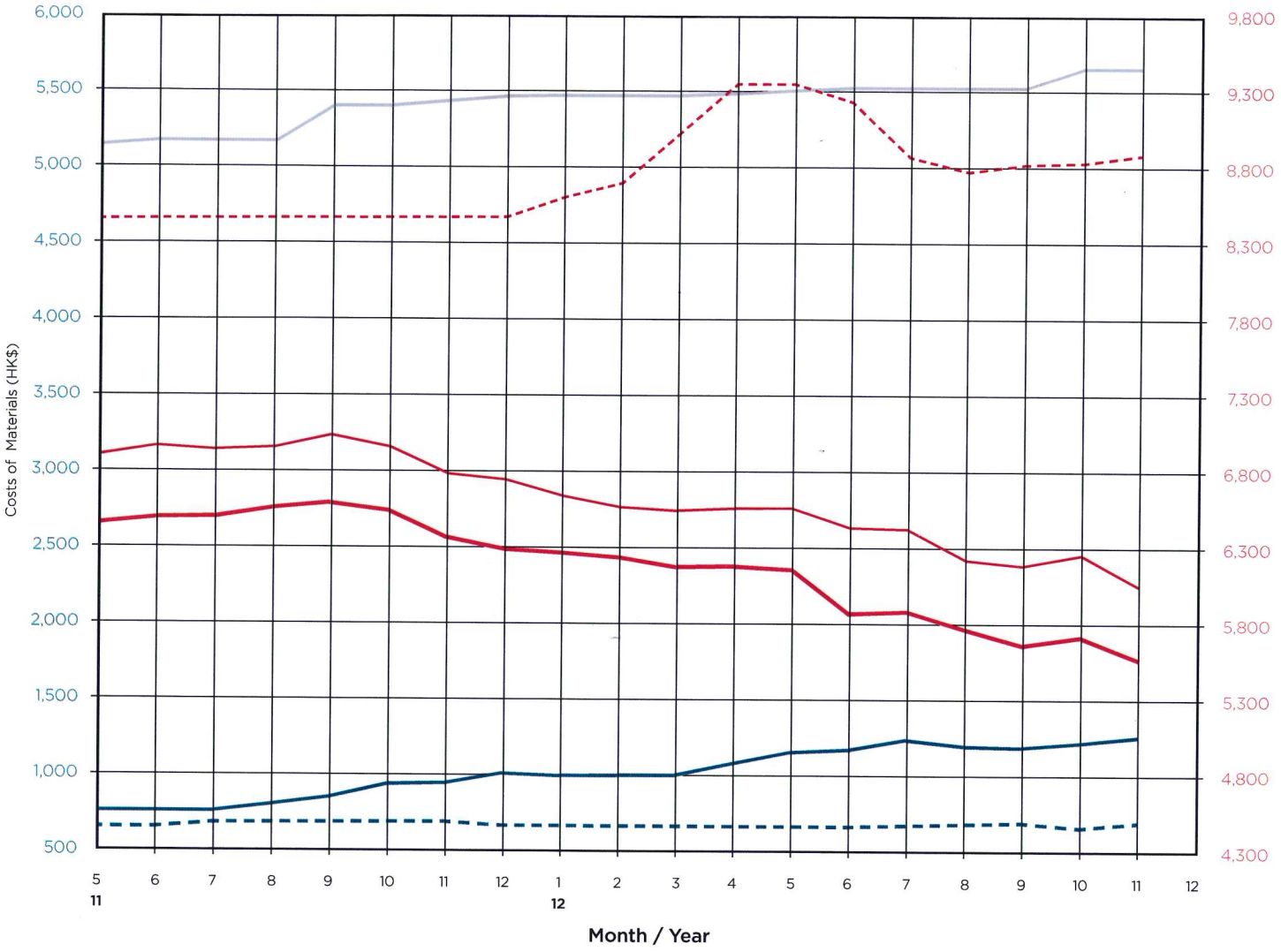
材料成本的發展趨勢

（只提供英文版本）

（獲利比有限公司的許可而複製）

MATERIAL COST TRENDS

AVERAGE WHOLESALE PRICES OF SELECTED BUILDING MATERIALS



Average Wholesale Prices of Selected Building Materials

Building Materials	2011								2012											
	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Sand ($/10 t)	760	760	760	800	840	930	940	1,010	990	1,000	1,000	1,080	1,150	1,170	1,230	1,190	1,210	1,210	1,240	
Bitumen ($/t)	8,450	8,450	8,450	8,450	8,450	8,450	8,450	8,483	8,600	8,700	9,120	9,330	9,330	9,230	8,863	8,780	8,813	8,830	8,880	
Portland Cement ($/t)	656	658	677	677	677	678	678	677	681	683	685	685	685	684	692	698	698	695	699	
Sawn Hardwood 50x75 ($/m3)	5,153	5,171	5,171	5,171	5,406	5,406	5,441	5,470	5,476	5,476	5,476	5,499	5,499	5,511	5,511	5,511	5,654	5,654	5,654	
Mild Steel Round Bars ($/t)	6,909	6,958	6,935	6,948	7,021	6,955	6,781	6,747	6,630	6,577	6,550	6,560	6,557	6,443	6,433	6,227	6,190	6,245	6,060	
High Tensile Steel Bars ($/t)	6,431	6,482	6,489	6,555	6,595	6,571	6,361	6,288	6,268	6,219	6,183	6,189	6,174	5,865	5,883	5,761	5,667	5,712	5,563	

(Source: Census and Statistics Department, HKSAR Government)

附件四

戲曲中心項目的最新進度

繼戲曲中心建築設計比賽於 2012 年 12 月完成後，優勝設計團隊譚秉榮建築事務所及呂元祥建築師事務所有限公司（下簡稱團隊）獲委聘為戲曲中心項目的建築顧問。隨文夾附優勝設計的模擬圖。團隊現正制訂詳細設計，並展開了法定的建築圖則審批程序，期間並諮詢戲曲界的持份者，以優化有關設計。

2. 戲曲中心的項目範圍包括：

- 戲曲劇場（1 100 個座位）；
- 茶館；
- 藝術教育設施；
- 排練及製作空間；
- 零售、餐飲和消閒設施；
- 公眾休憩用地；及
- 相關設施包括上落客貨設施和停車場。

3. 在制訂設計的過程中，團隊進行了一系列的價值工程以減省成本。在不影響設施功能的前提下，團隊建議作出下列各項主要的調整以降低成本：

- 縮減零售、餐飲和消閒設施的面積；
- 減少停車場的車位數目；
- 刪除水景及置於屋頂的太陽能電池板；
- 修訂建築結構，以達致較具經濟效益的結構設計；及
- 修訂劇場設備、外牆及屋頂設計、屋宇裝備裝置及飾面。

4. 西九文化區管理局即將批出戲曲中心的地基工程合約。項目現時進度良好，期望將於 2016 年完成。



從廣東道所見的戲曲中心外觀

附件四



中庭內部



戲曲劇場內部



從戲曲劇場舞台所見的景觀

附件五

M+建築設計比賽的優勝設計及設計團隊詳情

M+位處約 14 公頃的公園邊陲，臨近維港海濱，將是西九文化區首批落成的文化藝術設施之一。M+的建築設計將配合其核心價值，旨在成為一所為香港人而設的博物館，牢牢紮根於本土，並且建基於本地的獨特文化，從香港的角度出發，配合全球性的視野來發展，再向外發展至國內其他地區、亞洲及世界各地。M+會為藝術家提供交流、展覽及實驗的地方，並設置世界級的視覺文化永久館藏。

2. 整個大樓將設有充足的空間用作展覽、藏品保護和存儲、教育中心、檔案館及書店、演講廳及屏幕設施、藝術家工作室及戶外綠化空間，具體設計則有待落實。

3. M+建築設計比賽的獲勝隊伍 Herzog & de Meuron + TFP Farrells 由兩所世界和香港頂尖的建築師事務所聯合組成。主導的建築師事務所 Herzog & de Meuron 是 1978 年成立的國際性建築師事務所，目前由 Jacques Herzog、Pierre de Meuron 及其他合夥人領導，其總部設於瑞士巴塞爾，並於香港、紐約、倫敦、馬德里及漢堡設置分支辦公室。

4. Herzog & de Meuron 屢獲獎項，包括 2001 年美國的普立茲克建築獎、2007 年英國的 "RIBA Royal Gold Medal" 和日本的 "Praemium Imperiale"，其設計項目涵蓋私人居所至大型城市規劃。部分廣備認受的公共項目包括北京國家體育館－「鳥巢」、巴塞爾／明興施泰因的 Laurenz Foundation Schaulager 博物館、三藩市的迪洋博物館，以及現正擴建的倫敦泰特現代藝術館。

5. 是次設計獲 M+建築設計比賽的國際評審團一致選出。評審團形容優勝設計的優點在於設計概念簡約明確，同時令人產生深刻印象，並且在六個入圍設計中最具成本效益。隨文夾附優勝設計的模擬圖。



從公園所見的博物館外觀

附件五



從維港所見的博物館夜景

附件五



從維港所見的博物館日景



從藝術廣場所見的博物館外觀

附件五

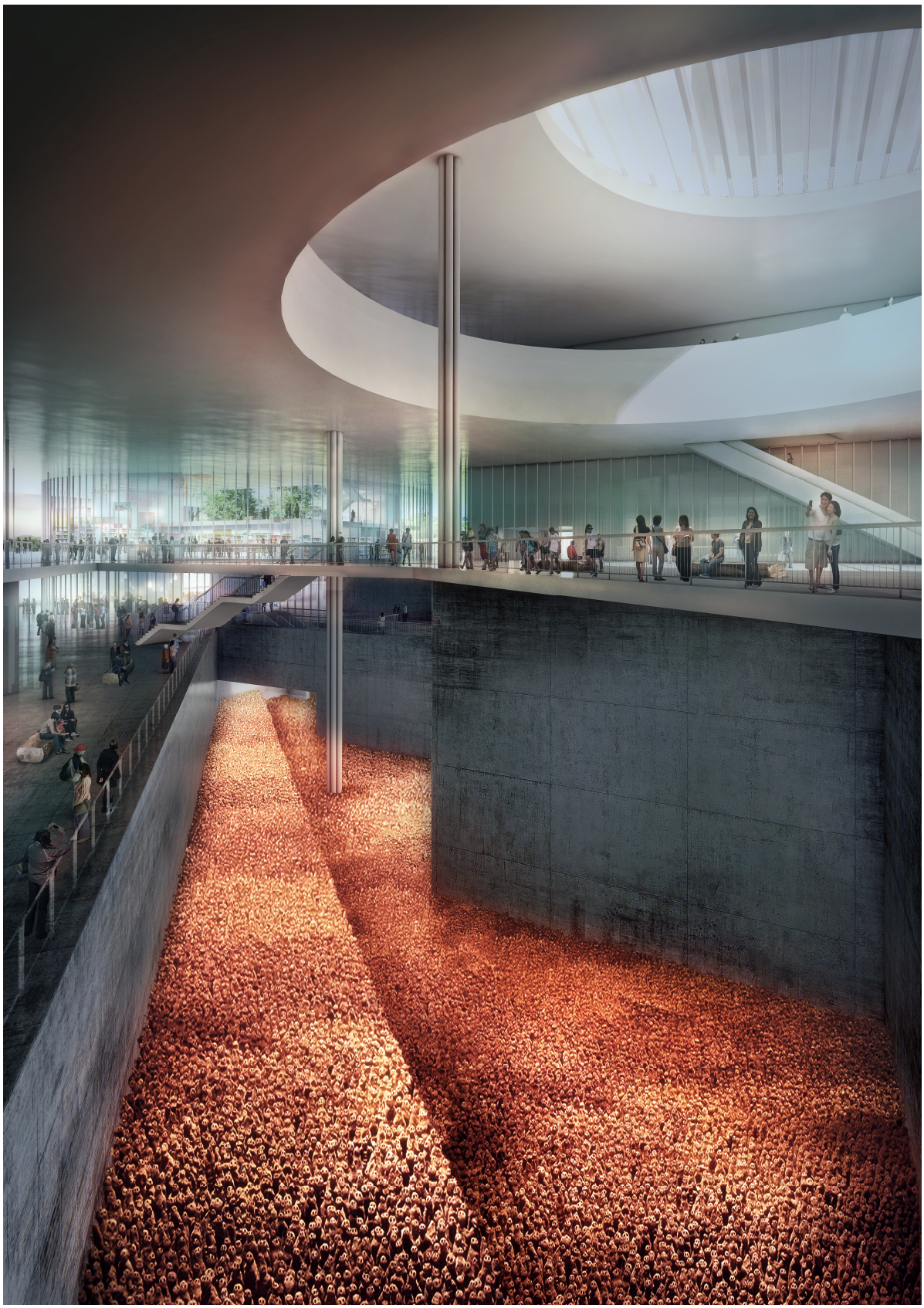


內部展覽空間

附件五



內部展覽空間



大堂

附件六

公園發展的替代方案

根據 Foster + Partners 構思的概念圖則發展而成的公園（第一期）佔地約 75 000 平方米，包括下列主要設施：

- 小型藝術展館；
- 自由空間（包括音樂盒和劇場）；
- 戶外劇場；
- 零售、餐飲和消閒設施；
- 單車徑／行人徑／單車租用處／輔助設施；
- 海濱長廊及步行徑；
- 船隻停泊／上落設施；及
- 其他康樂及休憩設施。

2. 在 2012 年 11 月 29 日的董事局會議上匯報的公園（第一期）的發展項目預算為 18 億 6,500 萬元（以付款當日價格計算），包括顧問費用等。公園的設計顧問招標工作於 2012 年 7 月展開，以甄選入圍設計團隊進行投標。同時，項目管理的顧問招標工作於 2012 年 10 月展開。

3. 在 2013 年 5 月 23 日舉行的發展委員會會議上，發展委員會通過採用替代方案的建議，採納簡約設計，將公園轉化為優質的公共空間，同時暫停公園的設計顧問和項目管理顧問的招標工作。西九文化區管理局將根據此修訂方案，以較低的 10 億元預算（以付款當日價格計算）（包括顧問費用等）加快公園發展，並按需要就設計顧問進行招標。

4. 公園暫定設置的主要設施如下：

- 小型藝術展館；
- 黑盒劇場，以自由空間形式運作，可進行不同界別的演出；
- 設置隔音罩的戶外舞台；
- 可容納約 1 200 至 1 500 個座位的組裝劇場（有關成本並不納入上述的 10 億元（以付款當日價格計算）公園預算）；
- 零售、餐飲和消閒設施；
- 單車徑／行人徑／單車租用處／輔助設施；
- 海濱長廊及步行徑；
- 船隻停泊／上落設施；及
- 其他康樂及休憩設施。

5. 小型藝術展館的概念設計比賽將會另行舉辦。

立法會
民政事務委員會與發展事務委員會
監察西九文化區計劃推行情況聯合小組委員會

2015 年 12 月 14 日會議的跟進事宜

進一步討論西九文化區與鄰近地區的融合和連接

監察西九文化區計劃推行情況聯合小組委員會（「聯合小組委員會」）要求政府當局／西九文化區管理局(「西九管理局」)提供下述資料 –

(a) 政府當局與西九管理局就委託西九管理局負責的工程所簽訂的協議中，有關在所委託工程出現超支情況時保障政府及公眾的利益的條款。

政府和西九管理局高度重視採取有效措施監察和控制委託工程成本的需要，以盡量減低出現超支情況。已納入現有政府與西九管理局簽訂的委託協議的相關措施分類如下 –

(A) 西九管理局的定期匯報

(B) 政府和西九管理局的聯合監察

(C) 授權開支的成本控制

(D) 西九管理局所提更改的成本控制

(E) 申索評估／建議的成本控制

(F) 延遲／中止的成本控制

(G) 調解爭議

各措施分類下主要條文的摘要載於**附錄 I**。

(b) 為連接西九文化區（西九）與鄰近各項發展（例如柯士甸站、西九龍總站和九龍站／圓方購物中心）而提供／計劃提供的行人通道，以及在該等發展項目提供無障礙設施的情況。

民政事務局聯同西九管理局已定期向聯合小組委員會匯報由鄰近地區前往西九的行人通道系統建議的詳情和進度等事宜。有關現有和規劃的行人連接的詳情載於立法會CB(2)1952/13-14(01)號文件的附件A和

B，並於2014年7月7日舉行的聯合小組委員會會議上討論。上述附件載於**附錄II**。我們已於2015年1月12日和11月24日舉行的聯合小組委員會會議上匯報進一步的進展。

在規劃的行人連接建議中，擬議的藝術廣場行人天橋已進入最後設計階段，並已於2016年1月29日根據《道路（工程、使用及補償）條例》（第370章）刊憲以作公眾諮詢。於刊憲期內並沒有收到反對，而授權公告已於2016年4月15日在憲報上刊登。該行人天橋屬公共基礎設施工程項目。在尋求財務委員會批准撥款前，我們會於2017年第一季就撥款申請諮詢聯合小組委員會。進一步的詳情載於立法會文件「西九文化區硬件發展的進度匯報」，供聯合小組委員會於2016年5月30日會議上討論。

按照政府的常規／指引和建築物規例，西九鄰近各項發展，例如柯士甸站、西九龍總站和九龍站／圓方購物中心，以及擬議的西九發展項目和行人通道均提供／已計劃提供無障礙設施。

民政事務局
西九文化區管理局
2016 年 5 月

附錄 I

各措施分類下主要條文的摘要

(A) 西九管理局的定期匯報
(a) 西九管理局須按月向政府提供委託工程進度及時間表的進度報告。 (b) 西九管理局須依照成本控制／成本匯報程序，按月提供各委託工程項目的財務報表。 (c) 西九管理局須提交資料說明如何建議按照基準時間表或與政府議定的更新時間表進行委託工程。 (d) 西九管理局須根據委託協議按季檢討基準時間表，並因應委託工程範圍及時間表所作出的任何更改，更新基準時間表。

(B) 政府和西九管理局的聯合監察
(a) 按需要成立一個由政府和西九管理局代表組成的聯絡委員會，以獲取進一步資料及監察所關注事宜的進展。

(C) 授權開支的成本控制
(a) 委託協議訂明委託工程的授權開支。 (b) 在委託工程授權開支的範圍內，西九管理局可按照每項協議及合約相關期間的現金流量預算批核款項，惟須符合成本控制／成本匯報的程序。 (c) 委託工程有關的每項協議及合約的授權開支及相關現金流量預算須由政府和西九管理局在批出每項協議及合約前議定。如對授權開支及現金流量預算(包括每項協議及合約的授權開支及現金流量預算)有任何擬議更改，須得到政府和西九管理局的同意。 (d) 授權開支及相關現金流量預算(包括每項協議及合約的授權開支及現金

流量預算)不可作出調整以支付任何因西九管理局本身的延遲、遺漏或失責及／或並非屬委託工程組成部分的工程延誤所引至顧問和承建商的申索。

(D) 西九管理局所提更改的成本控制

(a) 除以安全理由或在緊急情況下，西九管理局就委託工程提出的任何更改須事先獲得政府同意。西九管理局在合理可行情況下須按成本控制／成本匯報程序盡早向政府提交有關更改建議，和為實施更改建議所需的圖則及計算。

(b) 就西九管理局所提更改而呈交的更改表格文件，政府會按照政府程序作出審批。

(c) 若西九管理局就委託工程所提更改的估值超過港幣 50 萬元，審批程序如下 -

(i) 如獲納入任何合約的委託工程需要作出更改，且估值高於港幣 50 萬元時，西九管理局須呈交更改表格文件，以尋求政府批准有關更改。如需以安全或緊急情況為由發出更改指令，則毋需事先批准。

(ii) 更改表格文件建議須提供下列資料 –

- 更改的詳細說明，包括圖則或草圖(如適用)；
- 擬議更改的理由，包括對其他經研究替代方案的意見(如適用)；
- 評估對合約時間表的可能影響；
- 批准／拒絕擬議更改的時段；
- 詳細的成本估算，清楚說明成本估算的參考資料來源和任何相關假設及限制；以及
- 風險評估及策略性考慮因素。

(iii) 為尋求政府批准有關更改，西九管理局向政府呈交的更改表格文

件建議須交代由政府支付所需攤分費用的詳情。

(iv) 政府經內部審批程序後會通知西九管理局有關更改是否獲批准。

(v) 如更改建議獲政府批准，西九管理局會向顧問／承建商發出更改指令，並把有關指令副本送交政府。

(vi) 如獲批准更改的最終估值或最終定價與原本獲批准的預算有顯著差別，或分攤費用方法需作修訂，西九管理局須向政府呈交更改表格文件的修訂本，以匯報定價的更改。

(vii) 如政府對更改建議的成本分擔責任有異議，會直接向西九管理局提出有關決定，並根據委託協議相關條文解決。

(viii) 當有關事項解決後確定政府需作出分擔，西九管理局會如上文第(c)(v)項所述方式處理更改表格文件。

(d) 若西九管理局就委託工程所提更改的估值少於或等於港幣 50 萬元，審批程序如下–

(i) 如個別更改的估值少於或等於港幣 50 萬元，西九管理局無需事先尋求批准，惟須於事後向政府匯報有關更改以及累積價值，但累積價值不得超過經政府與西九管理局議定有關協議或合約的現金流量預算。

(ii) 為符合上文(i)項所述規定，西九管理局須監察工地指令及更改指令的估價，並按照上文所述條款呈交更改表格文件。

(e) 西九管理局就委託工程所提更改的匯報要求

(i) 西九管理局須於委託工程每月財務報表中匯報任何因更改引至政府和西九管理局需分攤的估計成本，並會視作潛在成本。

(ii) 當與委託工程相關的更改獲批准後，其估計成本會轉撥至西九管理局報告內的獲授權成本。

(E) 申索評估／建議的成本控制

(a) 申索程序

(i) 由顧問／承建商就有關委託工程提出的所有申索通知，除非全因西九管理局的行為、遺漏或失責而導致的，不論是否已有足夠資料去確立可能引致的成本／時間的影響，西九管理局(或其合約管理人)須在登記申索時知會政府有關申索通知。

(ii) 西九管理局須在委託工程相關的申索評估期間，將西九管理局(或其合約管理人)與顧問／承建商全部有關往來書信的副本送交政府，以供參考。

(iii) 就委託工程相關的申索，西九管理局在回覆合約管理人之前須呈交更改表格文件建議，包括西九管理局(或其合約管理人) 的申索評估報告及西九管理局的建議，以供政府審批。

(iv) 如政府認為西九管理局(或其合約管理人)的評估或西九管理局的建議不恰當，政府須陳述其不同意的理由，並與西九管理局根據委託協議條款解決有關事項。

(v) 當決定西九管理局與其顧問／承建商需就申索進行談判，西九管理局會代表政府進行，政府將不會直接參與有關談判。西九管理局須向政府匯報談判進展及任何擬議的和解協議書。

(vi) 所有西九管理局在合約基礎以外同意就申索有關的補償處理，須訂立補充協議。西九管理局在擬備補充協議時，須就與委託工程相關的內容諮詢政府。政府應有的補償權益不得在未經政府書面同意的情況下，因補充協議的條款致使喪失。而政府不可在無合理原因下拒絕同意。

(vii) 如西九管理局(或其合約管理人)就申索有關的最終建議與任何早前滙報的中期預算或獲授權款額有顯著差別，西九管理局須與顧問／承建商達成協議前，向政府匯報並呈交更改表格的修訂本。

(viii) 西九管理局按月會向政府提交財務報表，列明西九管理局(或其合約執行人)就每宗申索可能引致的額外費用及／或延長工期的最新估算。

(b) 滙報申索的規定

(i) 與委託工程相關的申索附表，須納入西九管理局按月向政府提交的財務報表內。

(ii) 由顧問／承建商申索的款額，及西九管理局(或其合約執行人)根據西九管理局的《管理修訂程序》獲批准的需分攤申索估算款額，以及獲授權的款額，須按月更新。

(F) 延遲／中止的成本控制

(a) 委託工程或其任何部分均可藉西九管理局與政府的相互協定以協議形式延遲或中止，該相互協定須訂明雙方將來由合約責任所引起的一切費用的責任。這些合約責任，是指如委託工程遭中止或延遲，與委託工程相關的任何建造合約及／或協議當中本應屬西九管理局須履行的部分責任；不過，有關費用不包括已經由委託協議支付的款項。

(b) 如有上文(a) 段所指的任何中止，則西九管理局及政府在委託協議下的任何與這些中止直接相關的責任，在作出中止協議後 28 天即告失效，但委託協議另有條文訂明者則屬例外。

(G) 調解爭議

(a) 當出現與委託協議相關或由委託協議引致的任何爭議或分歧，須成立一個委員會，成員包括西九管理局的項目推展行政總監及政府代表(以下稱為「高級行政人員委員會」) 。

(b) 所有爭議須轉交「高級行政人員委員會」，由其成員透過協商並訂立書面相互協定解決有關爭議，並告知西九管理局及政府有關相互協定。

(c) 如「高級行政人員委員會」在接獲上文第(b) 段的要求而未能於 28 天內達成相互決定，可就該等爭議轉交香港國際仲裁中心，根據當時生效的香港國際仲裁中心《調解規則》進行調解。如政府或西九管理局不欲就有關爭議進行調解，或調解人放棄調解，或調解在結束或被終止時爭議尚未解決，該等爭議須交由香港國際仲裁中心根據《本地仲裁規則》(2014)經由仲裁決定。《仲裁條例》(第 609 章) 附表 2 所有條文，一律適用於按本條文所述的任何仲裁。