For discussion **PWSC(2015-16)51**
on 23 December 2015

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 706 – HIGHWAYS
Transport –Railways
57TR – Hong Kong Section of Guangzhou – Shenzhen – Hong Kong Express Rail Link – construction of non-railway works

Members are invited to recommend to the Finance Committee that the approved project estimate of **57TR** be increased by $4,215 million from $11,800 million to $16,015 million in money-of-the-day prices.

PROBLEM

The approved project estimate (APE) of **57TR** is not sufficient to cover the cost of works under the project.

PROPOSAL

2. The Director of Highways, with the support of the Secretary for Transport and Housing, proposes to increase the APE of **57TR** by $4,215 million from $11,800 million to $16,015 million in money-of-the-day (MOD) prices.

/ **PROJECT** …..

PROJECT SCOPE AND NATURE

3. In January 2010, the Finance Committee (FC) of the Legislative Council (LegCo) approved the upgrading of **57TR** to Category (Cat) A at an estimated cost of $11,800 million in MOD prices. The approved project scope of **57TR** comprises –

(a) construction of essential public infrastructure works (EPIW) including –

(i) three footbridges linking to the Kowloon Station, two footbridges linking to the Austin Station, a footbridge linking to the public transport interchange at the north of Jordan Road and a footbridge above the new Road D1A near Man Cheong Street;

(ii) two subways linking to the Austin Station and the footpath located at the west of Lin Cheung Road;

(iii) construction of a depressed road system and associated at-grade roads and noise barriers or enclosures at Austin Road West and Lin Cheung Road; and

(iv) construction of new Road D1A and reconstruction of Wui Man Road and erection of associated noise barriers or enclosures.

(b) construction of the "reprovisioning, remedial and improvement works" (RRIW);

(c) construction of the enabling works –

(i) for the topside property development at Site A[1] (i.e. the site on top of WKT);

(ii) for the future West Kowloon Cultural District (WKCD) development above West Kowloon Terminus (WKT); and

(iii) for the future footbridges at Sham Mong Road;

/ (d) …..

[1] The site was zoned as Comprehensive Development Area (1) on the draft South West Kowloon Outline Zoning Plan No. S/K20/22A on top of the WKT for non-railway development.

(d) construction and provision of government facilities or equipment at the WKT including the boundary control facilities (BCF), special firefighting equipment for use in the Hong Kong section of the Guangzhou – Shenzhen – Hong Kong Express Rail Link (XRL) tunnel during the construction and operation phases and the other associated equipment; and

(e) fees for consultants appointed by the Government for monitoring and vetting the work of the MTR Corporation Limited (MTRCL) relating to the EPIW, RRIW, enabling works and the concerned government facilities or equipment.

The list of EPIW, RRIW and enabling works, together with the respective drawings are at Enclosures 1 to 3 respectively.

4. We propose to expand the approved scope of **57TR** to include consultancy services for engaging financial consultant to vet MTRCL's proposal on the service concession[2].

ENTRUSTMENT TO THE MTRCL

5. The construction of XRL project includes both railway and non-railway works[3]. The APE for the construction of the entire XRL project is $66,817.5 million in MOD prices.

/ 6. …..

[2] After review, it is considered that vetting of MTRCL's future proposal on the service concession will require expertise of external financial consultant, which cannot be provided in-house.

[3] In January 2010, FC approved the upgrading of **53TR** – Hong Kong Section of Guangzhou – Shenzhen – Hong Kong Express Rail Link – construction of railway works and **57TR** – Hong Kong Section of Guangzhou – Shenzhen – Hong Kong Express Rail Link – construction of non-railway works to Cat A at an estimated cost of $55,017.5 million (in MOD prices) and $11,800 million (in MOD prices) respectively.

6. On 22 April 2008, the Executive Council decided that the XRL would be undertaken under the concession approach[4]. Thereafter, the Government and the MTRCL entered into an Entrustment Agreement for entrusting the construction, testing and commissioning[5] of the XRL to the latter at a Project Control Total (PCT) of $65,000 million in MOD prices. The remaining fund of $1,817.5 million, which is under the management of the Highways Department (HyD) under the APEs of **53TR** and **57TR**, is the budget for the construction and provision of government facilities or equipment, consultancy for monitoring and verification (M&V) services, etc. As set out in PWSC(2009-10)68 and PWSC(2009-10)69, the original target commissioning date of the XRL project was 2015.

PROGRESS OF THE PROJECT

7. The MTRCL first notified the Government in April 2014 that the commissioning target of the XRL project would be delayed. It confirmed in May 2014 that the XRL project would only be commissioned by end 2017. In August 2014, the MTRCL announced that its revised Cost to Complete (CTC) for the XRL project would be $71.52 billion. Based on the information provided by the MTRCL at that time, HyD, with the assistance of its M&V consultant, completed an assessment on MTRCL's revised CTC and urged the MTRCL, in November 2014, to review again the revised CTC in the light of HyD's review findings and the reports of the MTRCL's Independent Board Committee.

8. On 30 June 2015, the MTRCL notified the Government of its latest review results regarding the revised Programme to Complete (PTC) and revised CTC of the XRL project. The commissioning target of the XRL was delayed further to the third quarter of 2018, including a six-month contingency period. The MTRCL advised that the CTC would have to be revised to $85.3 billion, including a sum of $2.1 billion for contingency.

/ 9. …..

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[4] Under the concession approach, the construction of the XRL will be funded by the Government under the Public Works Programme. The MTRCL has been entrusted with the design, construction, testing and commissioning of the XRL. Upon completion of the railway, MTRCL would be granted a service concession for the operation, and the Government would receive service concession payment.

[5] In July 2008, the FC approved a sum of $2,782.6 million (in MOD prices) for the design and site investigation of the project, which has been entrusted to MTRCL for implementation.

9. As at the end of September 2015, the XRL project was 73.7% completed. The overall tunnel excavation was 99% completed with about 430 metres remaining. Installation works were under way for the rail tracks, overhead lines, signaling systems and telecommunications systems inside the tunnels. The WKT was 57% completed. Blasting at the platform level of the WKT northern area was making good progress. The overall excavation of the WKT was then 95% completed, whilst 63% of the concrete structure had been cast and 32% of the roof structure erected at the WKT.

10. The construction of the non-railway works under **57TR** commenced in tandem with the railway works under **53TR**. The RRIW along the tunnel alignment and the enabling works on Sham Mong Road were substantially completed. The EPIW and enabling works at West Kowloon, including the enabling works for Site A and WKCD, were constructed in pace with the construction of WKT station structure. The seven footbridges and two subways at West Kowloon would be constructed at a later stage to tie in with the progress of the railway works thereby.

JUSTIFICATION

11. The Government has grave concern about the severe delay and cost overrun of the XRL project. HyD, assisted by its M&V consultant, has critically scrutinised the latest revised CTC submitted by the MTRCL and the impact on the financial position of the **53TR** and **57TR**.

12. Following the assessment by HyD and its M&V consultant and subsequent discussions with the MTRCL, the Government (on the advice of its M&V Consultant) has agreed that the net adjustment to the revised CTC should be $880 million, bringing down the revised CTC submitted by the MTRCL on 30 June 2015 from $85.3 billion to $84.42 billion. On the other hand, the government costs will also have to be increased from $1,817.5 million by $182.5 million to $2,000 million to cover additional costs including M&V consultancy services and other studies due to the delayed completion. It will be necessary to increase the APE of **57TR** accordingly by $4,215 million from $11,800 million to $16,015 million (in MOD prices). Based on MTRCL's advice, as supplemented by the verification of HyD and its M&V Consultant, the additional costs arise mainly from the following reasons –

(a) unfavourable ground conditions,

(b) disruption due to other causes,

/ (c) …..

(c) changes in design to suit actual site conditions and various unforeseen circumstances,

(d) price escalations,

(e) additional project management cost (PMC) and insurance,

(f) contingency for the remaining works, and

(g) additional government cost.

13. Details of the proposed increase in the APE of **57TR** are elaborated in paragraphs 14 to 28 below. A separate funding application for $15,387.5 million will be made for **53TR** vide PWSC(2015-16)50.

(a) Unfavourable ground conditions

14. As explained in PWSC(2015-16)50 for increasing the APE of **53TR**, unfavourable ground conditions are the primary cause of progress delay and cost overrun for the XRL project. It has affected the whole spectrum of works, including the non-railway works.

15. Some of the non-railways works, including the construction of depressed road system at Austin Road West and Lin Cheung Road, construction of Road D1A, reconstruction of Wui Man Road, enabling works for Site A and WKCD, are part and parcel of the construction of WKT. Therefore, the progress of WKT delayed by the discovery of extensive utilities and unfavourable ground conditions including uncharted large boulders, corestones and uneven bedrock at the site also affected that of the non-railway works. Time was taken to decommission, slew or divert utilities, involving substantial interface with the utility companies.

16. At Sham Mong Road, the enabling works, which included the foundation and piling works for the future footbridges, were also affected by the underground voids and obstructions encountered.

17. The above unfavourable ground conditions have contributed to a cost increase of **$792 million**, which is about **18.8%** of the proposed increase.

(b) Disruption due to other causes

18. The XRL project is implemented by 42 major contracts. Knock-on delay would be resulted in case of delay in other interfacing contracts. For example, the delay in the construction of diaphragm wall at Jordan Road had caused a knock-on delay in handing over of the site nearby for the excavation and construction of the terminus structure under another contract. The productivity of the latter was hindered by the limited working area available and the contractor had submitted claims for associated disruption.

19. We estimate that the disruption due to other causes has led to an additional cost of **$853 million**, which is about **20.2%** of the proposed increase.

(c) Changes in design to suit actual site conditions and various unforeseen circumstances

20. It is common and often unavoidable for a major infrastructure project to have variations and enhancements in construction methodologies during the construction stage to suit the actual site conditions and various unforeseen circumstances, thereby necessitating design changes. The XRL project is no exception.

21. For example, the WKT will encroach into the underground area of the WKCD. The topside property development at Site A and the relevant part of the future WKCD facilities will be located above and supported by the enabling works constructed at WKT. Since the design of WKCD facilities was only completed in 2012 after the commencement of the non-railway works under **57TR** in early 2011, changes in design of the WKT needed to be made to suit the design of WKCD facilities[6].

22. To enhance the convenience of XRL passengers interchanging with other road-based transport, the public transport interchange and parking spaces at the north of WKT were enlarged to accommodate more picking up and dropping off bays. In response to the request by local stakeholders, the design of the additional noise mitigation deck along Austin Road West was revised. Additional temporary traffic management schemes were implemented in Austin Road West and Lin Cheung Road to minimise the impact on road users and expedite the progress of the construction of the depressed road system thereat.

/ 23. …..

[6] For example, there had been changes in the design and locations of the WKT seawater cooling intake facilities and ventilation structures for the WKCD facilities which were integrated to the WKT. The resultant design is more costly than the original provision.

23. We estimate that the changes in design have contributed to an increase of **$1,248 million**, which accounts for about **29.6%** of the proposed increase.

(d) Price escalations

24. For the XRL project, in 32 of the 42 major contracts awarded by the MTRCL, the contractors are required to price in the expected price fluctuation within the respective contract periods when bidding for the contracts, while the remaining contracts are subject to price fluctuation. Due to the delayed completion of the XRL project, it is necessary to allow for inflationary adjustment for the extended periods, irrespective of the forms of contracts. It was assessed that a provision of about **$668 million**, contributing about **15.9%** of the proposed total increase, would need to be reserved in **57TR** to cater for these price escalation claims.

(e) Additional PMC and insurance

25. MTRCL's PMC for the XRL project includes staff and corporate costs for the project team and project headquarters team, as well as other support services for the teams. The project team is responsible for project planning and management, and supervision of construction activities. The project headquarters team provides support for project control, planning and programming, procurement, and contract administration, etc., while support services cover human resources, legal services, public relations, finance and information technology, etc. With the extended construction period of the XRL project, an additional PMC of $1,790 million is required in this connection. The additional PMC cost under **57TR** is **$345 million**, contributing about **8.2%** of the proposed increase.

26. An additional insurance of **$173 million** for **57TR** is required for increased insurance coverage due to extended construction period and increased cost of works. It contributes to about **4.1%** of the proposed increase.

/ **(f)** …..

(f) Contingency for the remaining works

27. The contingency under the original APE (i.e. $1,131.7 million) had been committed to cater for the additional costs arising from the above reasons. In the light of continuous challenges and risks which may arise as a result of past or future risks, an additional contingency provision of **$56 million** would be required under **57TR** for the remaining works under XRL project to provide further allowance for claims upon substantiation, and allowance for uncertainty associated with the current heated construction market with high cost escalation. It contributes to about **1.3%** of the proposed increase.

(g) Additional government cost

28. The increase in government costs is to cover the expanded scope of works for the M&V consultancy services and other studies over the extended construction period. Provision for the price escalation of the government facilities or equipment and other related public works. The additional cost under **57TR** is **$80 million**, contributing about **1.9%** of the proposed increase.

OTHER OPTIONS

29. There are some suggestions to suspend or even terminate the XRL contracts at this stage. The consequences of such a scenario, if materialised, are grave and must not be under-estimated.

Temporary suspension/termination of project

30. As explained in the LegCo paper CB(4)280/15-16(02) and supplementary information paper CB(4)333/15-16(02) submitted to the Subcommittee on Matters Relating to Railways (RSC) of the LegCo on 30 November and 11 December respectively this year, if the XRL contracts were suspended or even terminated, additional expenditure would be incurred to the project including costs for –

(a) settlement of contractors' claims;

(b) upkeeping of essential staff and plants on site as well as arranging regular maintenance and inspection for the unfinished works during suspension period;

/ (c) …..

(c) securing and protecting the unfinished works, tunnel and works sites, upkeeping the temporary traffic management scheme and monitoring of ground water to address safety concerns; and

(d) termination of all employment contracts, cancelling works subcontracts, compensation of rental agreements and demobilisation of plants.

31. If the application for additional funding for the XRL project cannot be approved by FC by end February 2016, as a responsible project manager, the MTRCL may need to issue a suspension notice to its contractors in order to keep the total cost (including suspension costs) within the amount allocated by the Government, i.e. $65 billion. The MTRCL assessed that the suspension cost would be about **$233 million** per month. If so, with each month passing from end-February 2016, instead of spending money on constructing the XRL, the money would be spent on suspension-related items. The XRL contracts between MTRCL and the contractors allow for a suspension period of a maximum of 180 days (about six months). If the XRL contracts are subsequently terminated after the 180 days of suspension, there will be another lump-sum cost to terminate, including settlement of historical claims and costs of protecting the works at about **$3.4 billion**. The total additional cost incurred above could therefore be in the region of **$4.8 billion (i.e. $233 million x 6 months + $3.4 billion)**. The M&V Consultant advises HyD that this estimation of additional cost incurred is reasonable. MTRCL also points out that should the works be suspended or terminated, the contractors may take a different view as to their entitlements for the cost of works completed, which would lead to a lot of disputes and a very high additional cost to the XRL project. The M&V Consultant concurs with this view.

Resumption after termination

32. If the existing XRL contracts were terminated, it might take two to three years before the contracts could be resumed because new tenders would have to be invited to engage new contractors to finish the remaining works. During the interim, it might be sufficient to provide minimum protection to the unfinished works. Under this scenario, the MTRCL (assuming that the Corporation will remain as the Project Manager) would need to arrange new contractors to proceed with the outstanding works. The construction costs may further escalate due to possible increase in labour and material costs. Furthermore, due to increase in difficulty and risk to the new contractors to work on the unfinished works, the returned tender price would very likely be much

/ higher …..

higher. Together with the additional costs for design review, project management, insurance and maintenance of the existing works during the waiting period, the M&V Consultant estimates, as a ballpark figure, that the resumption cost until completion of the project could be up to $28.2 billion. Together with the cost for suspension/termination of $4.8 billion, the cost estimated to be incurred under this scenario is about **$33 billion**. In other words, **by then, it will cost $93.2 billion (i.e. $65 billion (which includes the cost for suspension/termination of $4.8 billion) + $28.2 billion) to complete the XRL project.**

Abandonment of XRL project

33. The scenario depicted in paragraph 32 above assumes that the XRL project would eventually be resumed within two to three years after suspension and termination of existing XRL contracts. Hence, only minimum amount of protection, such as temporary stabilisation would be provided to the unfinished works. Part of the works will still rest on temporary support, and temporary roads would be maintained as their current status and would not be reinstated immediately.

34. However, if the XRL project were abandoned, the Entrustment Cost of $65 billion would **all be wasted**. On top of that, the Government would still need to complete most of the remaining works, including the remaining short section of railway tunnel, most of the civil and structural works at WKT (including excavation works, structural columns, slabs within the Terminus and the rooftop) and the permanent road network around WKT (including the road tunnel at Lin Cheung Road and Austin Road and the road network around Jordan Road) in order to ensure that the safety of the public would not be compromised and the public would not suffer from long-term traffic inconvenience. A very rough estimate by the M&V Consultant is that the cost for completing these essential works would be no less than $10.6 billion. Furthermore, the Government would need to continue maintaining these works until there is a new initiative for their use. Rough estimates of the maintenance cost could be as much as $0.1 billion per year. Separate approval from LegCo would have to be sought for the above additional amounts of money. Together with the loss of Entrustment Cost of $65 billion (which includes the cost for suspension/termination of $4.8 billion), the total cost estimated to be incurred under this scenario is at least $75.6 billion.

LIABILITIES

35. The Government deeply regrets the severe delay in, and the substantial cost overrun of, the XRL project. As the Government has publicly committed, we will ascertain the liabilities of the parties concerned and reserve all rights to pursue the warranties and obligations from MTRCL regarding project implementation, works delay and project cost overrun. The process of establishing a case against any particular party, including MTRCL or its agents, is likely to be protracted. In the meantime, we must not lose sight of the fact that the XRL is a major transport infrastructure which will bring significant benefits to Hong Kong. It is imperative for us to provide timely funding to complete the rest of the XRL project.

SUMMARY OF FINANCIAL POSITION

36. A breakdown of the proposed increase of $4,215 million is as follows –

	Factors	Proposed increased amount in MOD prices ($ million)	Percentage of the total increased amount (%)
	Increase due to –		
(a)	unfavourable ground conditions	792.0	18.8
(b)	disruption due to other causes	853.0	20.2
(c)	changes in design to suit actual site conditions and various unforeseen circumstances	1,248.0	29.6
(d)	price escalations	668.0	15.9
(e)	additional PMC and insurance	518.0	12.3
(f)	further contingency for the remaining works	56.0	1.3
(g)	additional government cost	80.0	1.9
(h)	Proposed increase (h) = (a) to (g)	4,215.0	

/ A …..

A comparison of the cost breakdown of the original APE and the latest project estimate of **57TR** is at Enclosure 4.

FINANCIAL IMPLICATIONS

37. Subject to funding approval, we will revise the phased expenditure as follows –

Year	$ million (in MOD prices)
Up to 31 March 2015	7,529.8
2015 – 16	1,850.9
2016 – 17	2,419.3
2017 – 18	2,040.0
2018 – 19	1,040.0
2019 – 20	810.0
2020 – 21	325.0
	16,015.0

38. The proposed increase in the APE will not give rise to any additional recurrent expenditure.

PUBLIC CONSULTATION

39. We consulted the RSC of the LegCo on the proposed increase in APE for the **53TR** and **57TR** on 4 December 2015 and 14 December 2015. Members supported submitting the funding proposal to the PWSC for examination.

ENVIRONMENTAL IMPLICATIONS

40. The proposed increase in the APE will not have any environmental implications.

/ ENERGY …..

ENERGY CONSERVATION MEASURES

41. The proposed increase in the APE will not lead to any energy conservation measures.

HERITAGE IMPLICATIONS

42. The proposed increase in the APE will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites or buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

43. The proposed increase in the APE will not require any land acquisition or clearance.

BACKGROUND INFORMATION

44. The FC approved the upgrading of **57TR** to Cat A in January 2010 at an estimated cost of $11,800 million in MOD prices. We have kept the LegCo informed of the progress of the XRL project, including delays and the reasons for these, delay recovery measures undertaken, as well as cost implications.

45. The proposed increase in the APE will not involve any additional tree removal.

46. The proposed changes in scope under **57TR** will create about five jobs for professional/technical staff providing a total employment of 150 man-months.

Transport and Housing Bureau
December 2015

List of Essential Public Infrastructure Works (EPIW)

Item	Location	Description	Drawing
1	West Kowloon	Three proposed footbridge links to Kowloon Station	Enclosure 1 (Sheet 2 of 2)
2	West Kowloon	Proposed subway link to the footpath at west of Lin Cheung Road	
3	West Kowloon	Reconstruction of part of Austin Road West and Lin Cheung Road, proposed Road D1A and reconstruction of Wui Man Road and proposed noise barriers/enclosures	
4	West Kowloon	Proposed footbridge above Road D1A near Man Cheong Street	
5	West Kowloon	Proposed footbridge link to public transport interchange at north of Jordan Road	
6	West Kowloon	Two proposed footbridge links to Austin Station	
7	West Kowloon	Proposed subway link to Austin Station	

項目（３）－ 重建部份柯士甸道西和連翔道，擬建D1A新道路，重建匯民路及擬建隔音屏障／隔音罩
ITEM (3)- RECONSTRUCTION OF PART OF AUSTIN ROAD WEST AND LIN CHEUNG ROAD, PROPOSED ROAD D1A AND RECONSTRUCTION OF WUI MAN ROAD AND PROPOSED NOISE BARRRIER / ENCLOSURE

項目（１）－ 擬建3條行人天橋至九龍站
ITEM (1) - PROPOSED 3 FOOTBRIDGES LINKING TO KOWLOON STATION

項目（２）－ 擬建行人隧道至連翔道西面行人路
ITEM (2) - PROPOSED SUBWAY LINKING TO THE FOOTPATH AT WEST OF LIN CHEUNG ROAD

項目（４）－ 近文昌街建造跨越行車路 D1A 的行人天橋
ITEM (4)- PROPOSED FOOTBRIDGE ABOVE ROAD D1A NEAR MAN CHEONG STREET

項目（５）－ 擬建行人天橋至佐敦道北公共運輸交滙處
ITEM (5)- PROPOSED FOOTBRIDGE LINKING TO PUBLIC TRANSPORT INTERCHANGE AT NORTH OF JORDAN ROAD

項目（６）－ 擬建2條行人天橋至柯士甸站
ITEM (6)- PROPOSED 2 FOOTBRIDGES LINKING TO AUSTIN STATION

項目（７）－ 擬建行人隧道至柯士甸站
ITEM (7)- PROPOSED SUBWAY LINKING TO AUSTIN STATION

D1A路
ROAD D1A

匯民路
WUI MAN ROAD

佐敦道

JORDAN ROAD

九龍站
KOWLOON STATION

連翔道
LIN CHEUNG ROAD

擬建的西九龍總站
PROPOSED WEST KOWLOON TERMINUS

柯士甸站

柯士甸道西 AUSTIN ROAD WEST

米 0 50 100 150 m
比例尺 1 : 4 000 SCALE BAR

圖例 LEGEND:

- 廣深港高速鐵路方案界線 BOUNDARY OF XRL SCHEME
- 擬建行人天橋 PROPOSED FOOTBRIDGE
- 擬建行人隧道 PROPOSED SUBWAY
- 擬建行車道／地下行車道 PROPOSED ROAD / DEPRESSED ROAD
- 擬建隔音屏障／隔音罩 PROPOSED NOISE BARRIER / ENCLOSURE

圖則名稱 drawing title
工務計劃項目第57TR號 － 廣深港高速鐵路香港段 － 非鐵路建造工程
主要基建工程
項目(1)、(2)、(3)、(4)、(5)、(6)及(7)
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS ESSENTIAL PUBLIC INFRASTRUCTURE WORKS
ITEM (1), (2), (3), (4), (5), (6) & (7)

S. H. LAM
總工程師 CHIEF ENGINEER
23/11/09
日期 DATE

設計 designed W. H. LIU 23/11/09
繪圖 drawn Y. L. MA 23/11/09
核對 checked W. H. LIU 23/11/09
核准 approved K. T. LI 23/11/09

圖號 drawing no. HRWXRL002-SP0001

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

A3 297X420

HRWXRL002-SP0001.DGN
HRWXRL002-SP0001.dgn 23-11-2009

List of Reprovisioning, Remedial and Improvement Works (RRIW)

(Item locations are shown in Enclosure 2 (Sheet 2 of 11))

Item	Location	Description	Drawing
1	West Kowloon	Proposed public transport interchange, parking spaces for coach and motorcycle, noise mitigation landscape deck and open space	Enclosure 2 (Sheet 3 of 11)
2	West Kowloon	Existing flyovers to be diverted and modified	
3	West Kowloon	Portions of existing culverts to be demolished and reprovided	
4	West Kowloon	Existing footbridge to be demolished and reprovided	
5	Sham Shui Po	Existing Box Culvert FS1 at Sham Mong Road to be diverted and reprovided	Enclosure 2 (Sheet 4 of 11)
6	Sham Shui Po	Existing Box Culvert YC2 at Sham Mong Road to be diverted and reprovided	Enclosure 2 (Sheet 5 of 11)
7	Sham Shui Po	Existing Box Culvert NC1 at Sham Mong Road to be diverted and reprovided	
8	Lai Chi Kok	Existing Box Culvert WD1 at Lai Po Road to be diverted and reprovided	Enclosure 2 (Sheet 6 of 11)
9	Tai Kok Tsui	Portions of existing footbridge KF118 near Sham Shing Road to be demolished and reprovided	Enclosure 2 (Sheet 7 of 11)
10	Sham Shui Po	Portions of existing footbridge KF119 near Hoi Fai Road to be demolished and reprovided	Enclosure 2 (Sheet 8 of 11)
11	Sham Shui Po	Portions of Nam Cheong Park to be used as temporary works site and reprovided	Enclosure 2 (Sheet 9 of 11)
12	Tsuen Wan	Existing Bus Terminus at Cheung Shan Estate to be relocated for ventilation building use	Enclosure 2 (Sheet 10 of 11)
13	Lai Chi Kok	Proposed Lai Chi Kok Interchange flyover underpinning works	Enclosure 2 (Sheet 11 of 11)
14	Tai Kok Tsui	Chui Yu Road planting area to be used as temporary works site and reprovided	Enclosure 2 (Sheet 9 of 11)

附件２（１１張中的第２張）
ENCLOSURE 2 (SHEET 2 OF 11)

荃灣
TSUEN WAN

葵涌
KWAI CHUNG

青衣
TSING YI

尖沙咀
TSIM SHA TSUI

項目(12) – 遷移象山邨現有巴士站給擬建通風大樓使用
ITEM (12) - EXISTING BUS TERMINUS AT CHEUNG SHAN ESTATE TO BE RELOCATED FOR VENTILATION BUILDING USE

項目(13) – 荔枝角交滙處天橋地基承托工程
ITEM (13) - PROPOSED LAI CHI KOK INTERCHANGE FLYOVER UNDERPINNING WORKS

項目(8) – 荔寶道現有箱型暗渠WD1將改道及重置
ITEM (8) - EXISTING BOX CULVERT WD1 AT LAI PO ROAD TO BE DIVERTED AND REPROVIDED

項目(9) – 部分近深盛路行人天橋編號KF118將拆卸及重置
ITEM (9) - PORTIONS OF EXISTING FOOTBRIDGE KF118 NEAR SHAM SHING ROAD TO BE DEMOLISHED AND REPROVIDED

項目(5) – 深旺道現有箱型暗渠FS1將改道及重置
ITEM (5) - EXISTING BOX CULVERT FS1 AT SHAM MONG ROAD TO BE DIVERTED AND REPROVIDED

項目(6) – 深旺道現有箱型暗渠YC2將改道及重置
ITEM (6) - EXISTING BOX CULVERT YC2 AT SHAM MONG ROAD TO BE DIVERTED AND REPROVIDED

項目(7) – 深旺道現有箱型暗渠NC1將改道及重置
ITEM (7) - EXISTING BOX CULVERT NC1 AT SHAM MONG ROAD TO BE DIVERTED AND REPROVIDED

項目(11) – 南昌公園內部分地方將作為臨時工地及重置
ITEM (11) - PORTIONS OF NAM CHEONG PARK TO BE USED AS TEMPORARY WORKS SITE AND REPROVIDED

項目(14) – 聚魚道休憩公園旁的種植區將作為臨時工地及重置
ITEM (14) - CHUI YU ROAD PLANTING AREA TO BE USED AS TEMPORARY WORKS SITE AND REPROVIDED

項目(10) – 部分近海輝道行人天橋編號KF119將拆卸及重置
ITEM (10) - PORTIONS OF EXISTING FOOTBRIDGE KF119 NEAR HOI FAI ROAD TO BE DEMOLISHED AND REPROVIDED

項目(2) – 現有行車天橋將會改道及修改
ITEM (2) - EXISTING FLYOVERS TO BE DIVERTED AND MODIFIED

項目(1) – 擬建公共運輸交滙處、旅遊車與電單車停車位、隔音綠化平台及公共空間
ITEM (1) - PROPOSED PUBLIC TRANSPORT INTERCHANGE, PARKING SPACES FOR COACH AND MOTORCYCLE, NOISE MITIGATION LANDSCAPE DECK AND OPEN SPACE

項目(3) – 現有部分暗渠將拆卸及重置
ITEM (3) - PORTIONS OF EXISTING CULVERTS TO BE DEMOLISHED AND REPROVIDED

項目(4) – 現有行人天橋將拆卸及重置
ITEM (4) - EXISTING FOOTBRIDGE TO BE DEMOLISHED AND REPROVIDED

米 0 1000 2000 m
比例尺 1 : 40 000 SCALE BAR

圖則名稱 drawing title
工務計劃項目第57TR號 – 廣深港高速鐵路香港段 – 非鐵路建造工程
重置、補救及改善工程
位置圖
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS
LOCATION PLAN

S. H. LAM 23/11/09
總工程師 CHIEF ENGINEER 日期 DATE

設計 designed K. K. LEI 23/11/09
繪圖 drawn Y. L. MA 23/11/09
核對 checked K. K. LEI 23/11/09
核准 approved C. W. YUNG 23/11/09

圖號 drawing no. HRWXRL002-SP0010

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

HRWXRL002-SP0010.DGN
HRWXRL002-SP0010.dgn 23-11-2009
A3 297X420

附件２（１１張中的第３張）
ENCLOSURE 2 (SHEET 3 OF 11)

項目（２）– 現有行車天橋將會改道及修改
ITEM (2) - EXISTING FLYOVERS TO BE DIVERTED AND MODIFIED

廣深港高速鐵路方案界線
BOUNDARY OF XRL SCHEME

項目（３）– 現有部分暗渠將拆卸及重置
ITEM (3) - PORTIONS OF EXISTING CULVERTS TO BE DEMOLISHED AND REPROVIDED

項目（１）– 擬建公共運輸交滙處、旅遊車與電單車停車位、隔音綠化平台及公共空間
ITEM (1) - PROPOSED PUBLIC TRANSPORT INTERCHANGE, PARKING SPACES FOR COACH AND MOTORCYCLE, NOISE MITIGATION LANDSCAPE DECK AND OPEN SPACE

項目（４）– 現有行人天橋將拆卸及重置
ITEM (4) - EXISTING FOOTBRIDGE TO BE DEMOLISHED AND REPROVIDED

佐敦道

JORDAN ROAD

米 0 50 100 150 m
比例尺 1 : 3 000 SCALE BAR

圖則名稱 drawing title
工務計劃項目第57TR號 – 廣深港高速鐵路香港段 – 非鐵路建造工程
重置、補救及改善工程
項目(1)、(2)、(3)及(4)
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS ITEM (1), (2), (3) & (4)

S. H. LAM
總工程師 CHIEF ENGINEER

日期 DATE 23/11/09

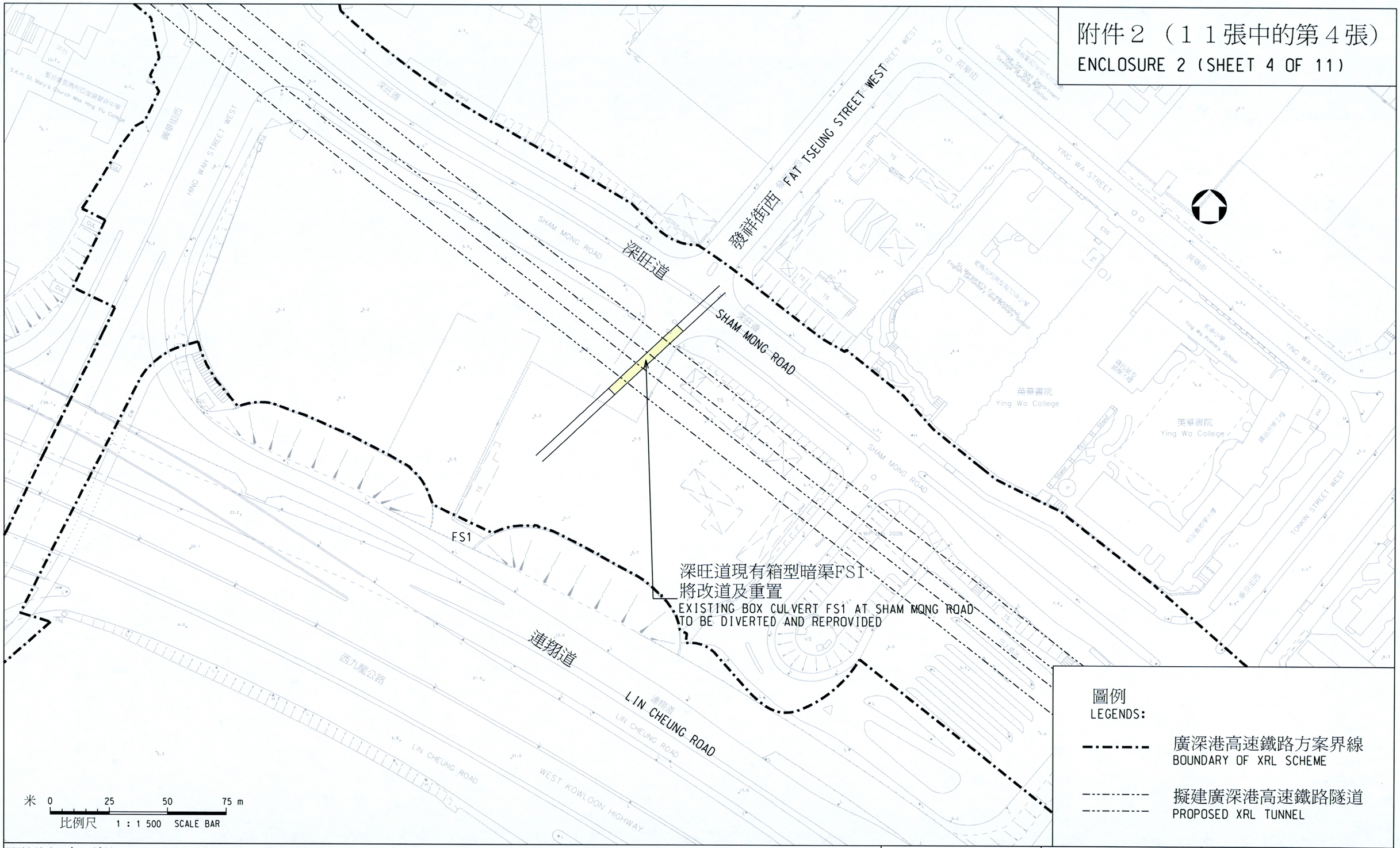
設計 designed W. H. LIU 23/11/09
繪圖 drawn Y. L. MA 23/11/09
核對 checked W. H. LIU 23/11/09
核准 approved K. T. LI 23/11/09

圖號 drawing no. HRWXRL002-SP0008

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

HRWXRL002-SP0008.DGN
HRWXRL002-SP0008.dgn 23-11-2009
A3 297X420

附件２（１１張中的第４張）
ENCLOSURE 2 (SHEET 4 OF 11)



圖例
LEGENDS:

- 廣深港高速鐵路方案界線
  BOUNDARY OF XRL SCHEME
- 擬建廣深港高速鐵路隧道
  PROPOSED XRL TUNNEL

圖則名稱 drawing title
工務計劃項目第57TR號 － 廣深港高速鐵路香港段 － 非鐵路建造工程
重置、補救及改善工程
項目(5) － 深旺道現有箱型暗渠FS1將改道及重置
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS
REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS
ITEM (5) - EXISTING BOX CULVERT FS1 AT SHAM MONG ROAD TO BE DIVERTED AND REPROVIDED

S. H. LAM
總工程師 CHIEF ENGINEER
日期 DATE 23/11/09

設計 designed K. WONG	23/11/09
繪圖 drawn Y. L. MA	23/11/09
核對 checked K. WONG	23/11/09
核准 approved K. H. WAN	23/11/09

圖號 drawing no.
HRWXRL002-SP0007

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

HRWXRL002-SP0007
HRWXRL002-SP0007.dgn 23-11-2009
A3 297X420

附件２（１１張中的第５張）
ENCLOSURE 2 (SHEET 5 OF 11)

欽州街西 YEN CHOW STREET WEST

深旺道現有箱型暗渠YC2
將改道及重置
EXISTING BOX CULVERT YC2 AT SHAM MONG ROAD
TO BE DIVERTED AND REPROVIDED

YC2

深旺道 SHAM MONG ROAD

聚魚道 CHUI YU ROAD

深旺道現有箱型暗渠NC1
將改道及重置
EXISTING BOX CULVERT NC1 AT SHAM MONG ROAD
TO BE DIVERTED AND REPROVIDED

NC1

米 0 50 100 m
比例尺 1 : 2 000 SCALE BAR

圖例
LEGENDS:

廣深港高速鐵路方案界線
BOUNDARY OF XRL SCHEME

擬建廣深港高速鐵路隧道
PROPOSED XRL TUNNEL

圖則名稱 drawing title
工務計劃項目第57TR號 — 廣深港高速鐵路香港段 — 非鐵路建造工程
重置、補救及改善工程
項目 (6)及(7) — 深旺道現有箱型暗渠YC2及NC1將改道及重置
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS
REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS
ITEM (6) & (7) - EXISTING BOX CULVERT YC2 AND NC1 AT SHAM MONG ROAD TO BE DIVERTED AND REPROVIDED

S. H. LAM
總工程師 CHIEF ENGINEER
日期 DATE 23/11/09

設計 designed K. WONG 23/11/09
繪圖 drawn Y. L. MA 23/11/09
核對 checked K. WONG 23/11/09
核准 approved K. H. WAN 23/11/09

圖號 drawing no. HRWXRL002-SP0006

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

A3 297X420

HRWXRL002-SP0006
HRWXRL002-SP0006.dgn 23-11-2009

附件２（１１張中的第６張）
ENCLOSURE 2 (SHEET 6 OF 11)

荔寶道現有箱型暗渠WD1
將改道及重置
EXISTING BOX CULVERT WD1 AT LAI PO ROAD
TO BE DIVERTED AND REPROVIDED

WD1

青沙公路 – TSING SHA HIGHWAY

深旺道 SHAM MONG ROAD

荔寶道 LAI PO ROAD

YUET LUN STREET

CHEUNG SHUN STREET

CHEUNG LAI STREET

CHEUNG MOU STREET

WEST KOWLOON CORRIDOR

BANYAN GARDEN

米 0 25 50 75 m
比例尺 1 : 1 500 SCALE BAR

圖例
LEGENDS:

廣深港高速鐵路方案界線
BOUNDARY OF XRL SCHEME

擬建廣深港高速鐵路隧道
PROPOSED XRL TUNNEL

圖則名稱 drawing title
工務計劃項目第57TR號 – 廣深港高速鐵路香港段 – 非鐵路建造工程
重置、補救及改善工程
項目 (8) – 荔寶道現有箱型暗渠WD1將改道及重置
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS
ITEM (8) - EXISTING BOX CULVERT WD1 AT LAI PO ROAD TO BE DIVERTED AND REPROVIDED

S. H. LAM
總工程師 CHIEF ENGINEER
日期 DATE 23/11/09

設計 designed K. WONG 23/11/09
繪圖 drawn Y. L. MA 23/11/09
核對 checked K. WONG 23/11/09
核准 approved K. H. WAN 23/11/09

圖號 drawing no. HRWXRL002-SP0015

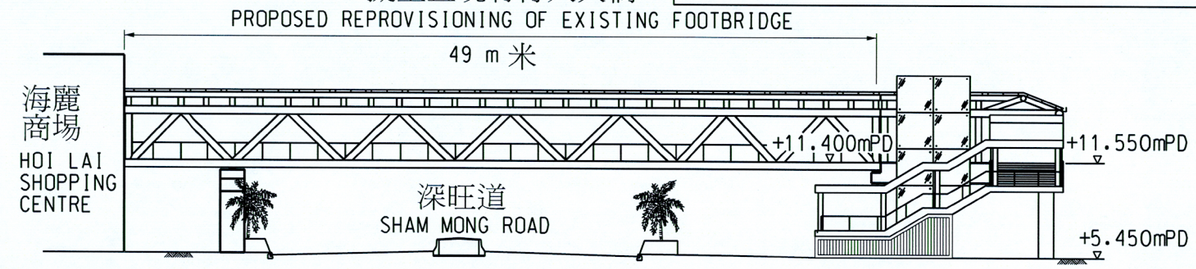
鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

HRWXRL002-SP0015
HRWXRL002-SP0015.dgn 23-11-2009
A3 297X420

附件２　（１１張中的第７張）
ENCLOSURE 2 (SHEET 7 OF 11)

香港專業教育學院
黃克競分校海傍校舍
HK I.V.E.HAKING WONG
WATERFRONT ANNEX

擬重置現有行人天橋
PROPOSED REPROVISIONING OF EXISTING FOOTBRIDGE



切面圖 SECTION

比例 SCALE 1:400

圖例 LEGEND:

+11.00mPD　香港主水平基準以上11米
11m ABOVE HONG KONG PRINCIPAL DATUM

深盛路
SHAM SHING ROAD

深水埗官立小學
SHAM SHUI PO
GOVERNMENT PRIMARY SCHOOL

海麗商場
HOI LAI
SHOPPING CENTRE

深旺道 SHAM MONG ROAD

(下層停車場)
(Car Park under)

米 0 10 20 m
比例尺 1 : 400 SCALE BAR

圖例
LEGENDS:

- 廣深港高速鐵路方案界線
  BOUNDARY OF XRL SCHEME
- 擬建廣深港高速鐵路隧道
  PROPOSED XRL TUNNEL
- 部份現有行人天橋將予臨時拆卸/移除並在廣深港高速鐵路隧道建成後重置
  PORTIONS OF EXISTING FOOTBRIDGE TO BE TEMPORARILY DEMOLISHED/REMOVED AND REPROVIDED UPON COMPLETION OF THE XRL TUNNELS

圖則名稱 drawing title
工務計劃項目第57TR號 － 廣深港高速鐵路香港段 － 非鐵路建造工程
重置、補救及改善工程
項目 (9) － 部分近深盛路行人天橋編號KF118將拆卸及重置
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS
REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS
ITEM (9) - PORTIONS OF EXISTING FOOTBRIDGE KF118 NEAR SHAM SHING ROAD TO BE DEMOLISHED AND REPROVIDED

S. H. LAM
總工程師
CHIEF ENGINEER

P.P. 23/11/09
日期
DATE

設計 designed	W. K. TSUI	23/11/09
繪圖 drawn	Y. L. MA	23/11/09
核對 checked	W. K. TSUI	23/11/09
核准 approved	K. H. WAN	23/11/09

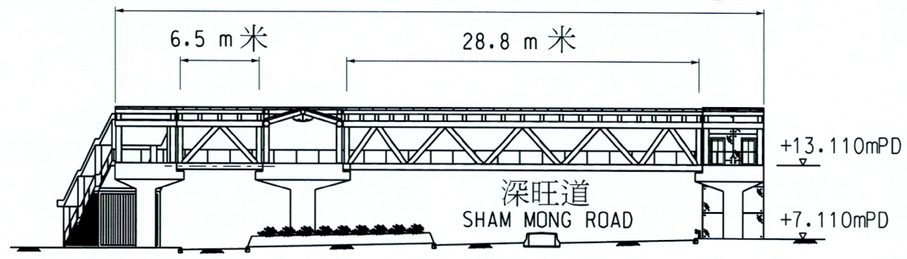
圖號 drawing no.
HRWXRL002-SP0002

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

HRWXRL002-SP0002
HRWXRL002-SP0002.dgn 23-11-2009
A3 297X420

附件２（１１張中的第８張）
ENCLOSURE 2 (SHEET 8 OF 11)

擬重置現有行人天橋
PROPOSED REPROVISIONING OF EXISTING FOOTBRIDGE



圖例 LEGEND:

+11.00mPD 香港主水平基準以上11米
11m ABOVE HONG KONG PRINCIPAL DATUM

切面圖 SECTION
比例 SCALE 1:500

圖例
LEGENDS:

- 廣深港高速鐵路方案界線
  BOUNDARY OF XRL SCHEME
- 擬建廣深港高速鐵路隧道
  PROPOSED XRL TUNNEL
- 部份現有行人天橋將予臨時拆卸/移除並在廣深港高速鐵路隧道建成後重置
  PORTIONS OF EXISTING FOOTBRIDGE TO BE TEMPORARILY DEMOLISHED/REMOVED AND REPROVIDED UPON COMPLETION OF THE XRL TUNNELS

圖則名稱 drawing title
工務計劃項目第57TR號 － 廣深港高速鐵路香港段 － 非鐵路建造工程
重置、補救及改善工程
項目(10) － 部分近海輝道行人天橋編號KF119將拆卸及重置
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS
ITEM (10) - PORTIONS OF EXISTING FOOTBRIDGE KF119 NEAR HOI FAI ROAD TO BE DEMOLISHED AND REPROVIDED

S. H. LAM
總工程師 CHIEF ENGINEER
P.P. 23/11/09
日期 DATE

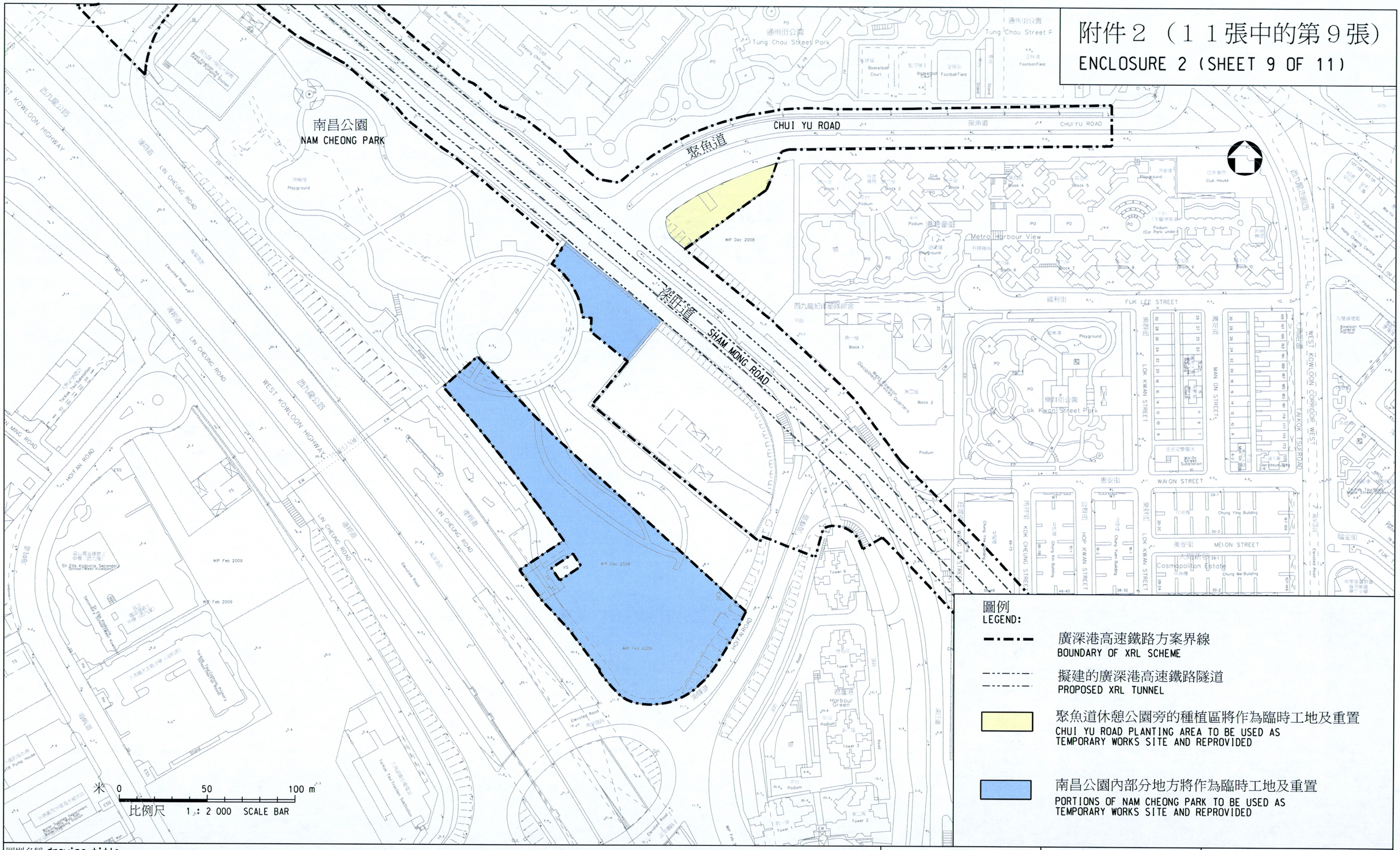
設計 designed	W. K. TSUI 23/11/09
繪圖 drawn	Y. L. MA 23/11/09
核對 checked	W. K. TSUI 23/11/09
核准 approved	K. H. WAN 23/11/09

圖號 drawing no.
HRWXRL002-SP0003

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

HRWXRL002-SP0003
HRWXRL002-SP0003.dgn 23-11-2009
A3 297X420

附件２（１１張中的第９張）
ENCLOSURE 2 (SHEET 9 OF 11)



圖例
LEGEND:

- 廣深港高速鐵路方案界線
  BOUNDARY OF XRL SCHEME
- 擬建的廣深港高速鐵路隧道
  PROPOSED XRL TUNNEL
- 聚魚道休憩公園旁的種植區將作為臨時工地及重置
  CHUI YU ROAD PLANTING AREA TO BE USED AS TEMPORARY WORKS SITE AND REPROVIDED
- 南昌公園內部分地方將作為臨時工地及重置
  PORTIONS OF NAM CHEONG PARK TO BE USED AS TEMPORARY WORKS SITE AND REPROVIDED

圖則名稱 drawing title
工務計劃項目第57TR號 － 廣深港高速鐵路香港段 － 非鐵路建造工程
重置、補救及改善工程
項目 (11)及(14) － 南昌公園內部分地方及聚魚道休憩公園旁的種植區將作為臨時工地及重置
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS
ITEM (11)&(14) - PORTIONS OF NAM CHEONG PARK & CHUI YU ROAD PLANTING AREA TO BE USED AS TEMPORARY WORKS SITE & REPROVIDED

S. H. LAM 23/11/09
總工程師 CHIEF ENGINEER 日期 DATE

設計 designed	K. WONG	23/11/09
繪圖 drawn	Y. L. MA	23/11/09
核對 checked	K. WONG	23/11/09
核准 approved	K. H. WAN	23/11/09

圖號 drawing no.
HRWXRL002-SP0005

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

A3 297X420

HRWXRL002-SP0005
HRWXRL002-SP0005.dgn 23-11-2009

圖例
LEGENDS:

- 廣深港高速鐵路方案界線
  BOUNDARY OF XRL SCHEME
- 擬建廣深港高速鐵路隧道
  PROPOSED XRL TUNNEL
- 擬建巴士掉頭處
  PROPOSED BUS TURNING AREA
- 將予重建的行人路
  FOOTPATH TO BE RE-CONSTRUCTED
- 擬建重置的巴士站
  PROPOSED RELOCATED BUS STOP
- 現有的巴士站將會遷移
  EXISTING BUS STOP TO BE RELOCATED

圖則名稱 drawing title
工務計劃項目第57TR號 － 廣深港高速鐵路香港段 － 非鐵路建造工程
重置、補救及改善工程
項目 (12) － 遷移象山邨現有巴士站給擬建通風大樓使用
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS
REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS
ITEM (12) - EXISTING BUS TERMINUS AT CHEUNG SHAN ESTATE TO BE RELOCATED FOR VENTILATION BUILDING USE

S. H. LAM
總工程師 CHIEF ENGINEER
23/11/09
日期 DATE

設計 designed C. T. CHAN 23/11/09
繪圖 drawn Y. L. MA 23/11/09
核對 checked C. T. CHAN 23/11/09
核准 approved Y. F. LEE 23/11/09

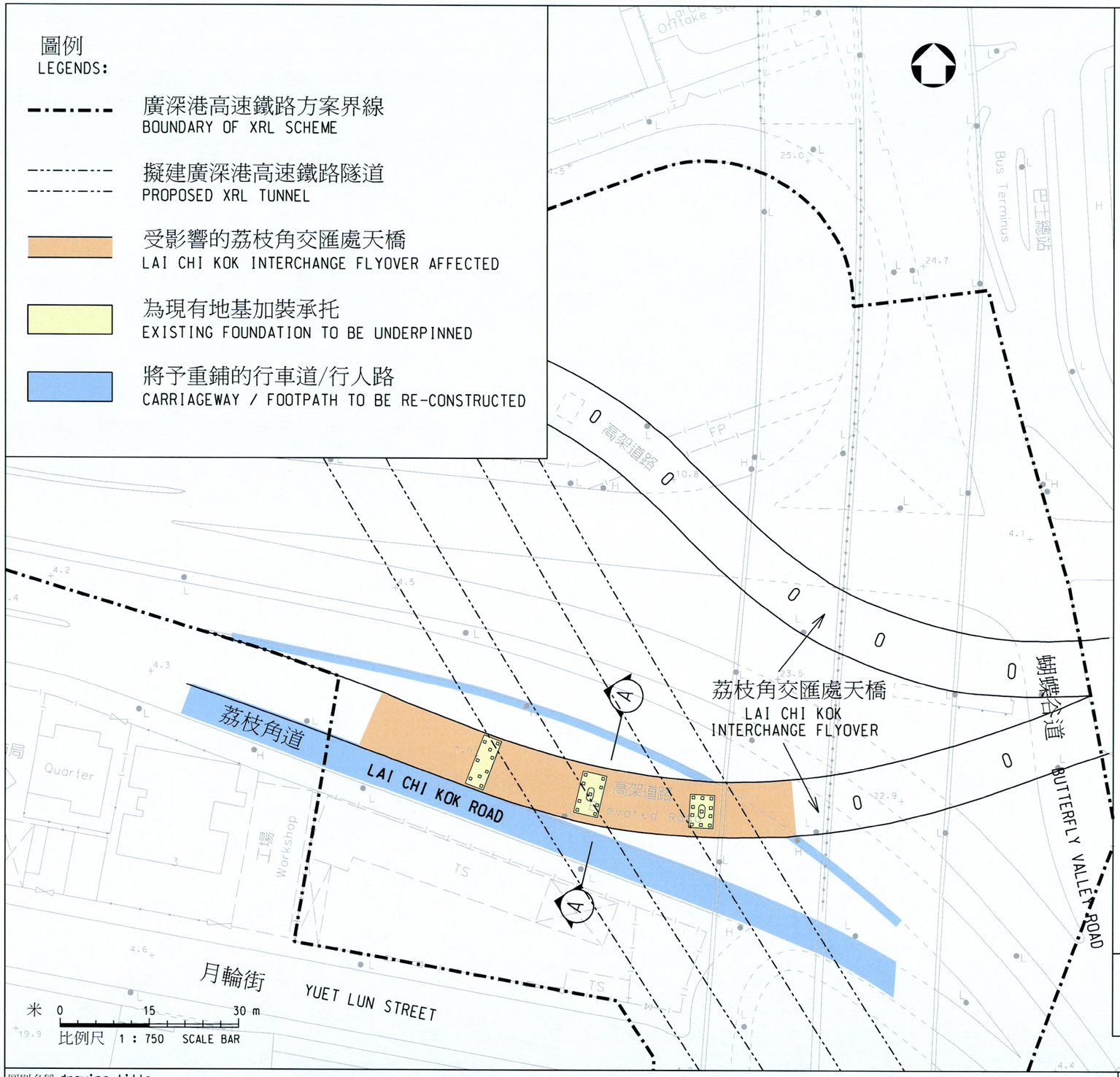
圖號 drawing no. HRWXRL002-SP0012

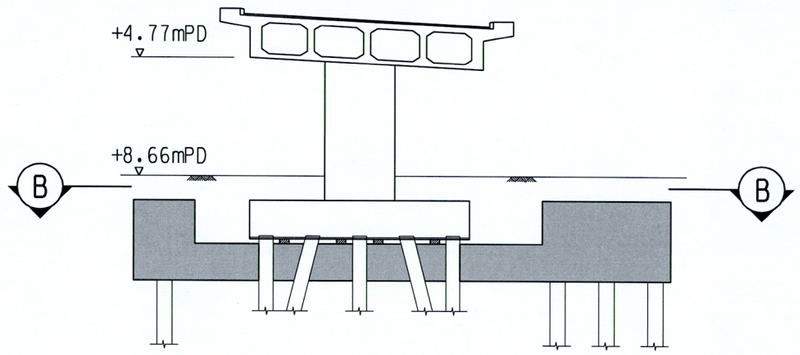
鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

HRWXRL002-SP0012
HRWXRL002-SP0012.dgn 23-11-2009
A3 297X420

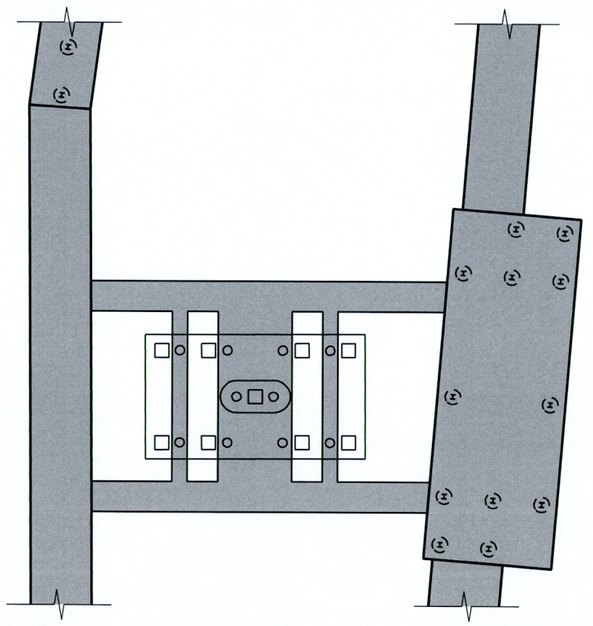
圖例
LEGENDS:

- 廣深港高速鐵路方案界線
  BOUNDARY OF XRL SCHEME
- 擬建廣深港高速鐵路隧道
  PROPOSED XRL TUNNEL
- 受影響的荔枝角交匯處天橋
  LAI CHI KOK INTERCHANGE FLYOVER AFFECTED
- 為現有地基加裝承托
  EXISTING FOUNDATION TO BE UNDERPINNED
- 將予重鋪的行車道/行人路
  CARRIAGEWAY / FOOTPATH TO BE RE-CONSTRUCTED





切面圖 SECTION A-A
比例 SCALE 1:200



切面圖 SECTION B-B
比例 SCALE 1:200

圖例 LEGEND:

+8.66mPD 香港主水平基準以上11米
8.66m ABOVE HONG KONG PRINCIPAL DATUM

圖則名稱 drawing title
工務計劃項目第57TR號 — 廣深港高速鐵路香港段 — 非鐵路建造工程
重置、補救及改善工程
項目(13) — 荔枝角交滙處天橋地基承托工程
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS REPROVISIONING, REMEDIAL AND IMPROVEMENT WORKS
ITEM (13) - PROPOSED LAI CHI KOK INTERCHANGE FLYOVER UNDERPINNING WORKS

P.P. S. H. LAM 23/11/09
總工程師 CHIEF ENGINEER 日期 DATE

設計 designed W. K. TSUI 23/11/09
繪圖 drawn Y. L. MA 23/11/09
核對 checked W. K. TSUI 23/11/09
核准 approved K. H. WAN 23/11/09

圖號 drawing no. HRWXRL002-SP0004

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

HRWXRL002-SP0004
HRWXRL002-SP0004.dgn 23-11-2009
A3 297X420

List of Enabling Works

Item	Location	Description	Drawing
1	West Kowloon	Enabling works for topside property development at Site A	Enclosure 3 (Sheet 2 of 3)
2	West Kowloon	Enabling works for West Kowloon Cultural District Development	
3	West Kowloon	Cooling Mains for topside property development at Site A	
4	Sham Shui Po	Proposed protection works for XRL tunnels along Sham Mong Road	Enclosure 3 (Sheet 3 of 3)

附件３ （３張中的第２張）
ENCLOSURE 3 (SHEET 2 OF 3)

圖例 LEGEND:

- 廣深港高速鐵路方案界線 BOUNDARY OF XRL SCHEME
- 項目（１）－ 用地A上蓋物業發展的備置工程範圍 ITEM (1) - EXTENT OF ENABLING WORKS FOR TOPSIDE PROPERTY DEVELOPMENT AT SITE A
- 項目（２）－ 將來西九文化區發展的備置工程範圍 ITEM (2) - EXTENT OF ENABLING WORKS FOR WEST KOWLOON CULTURAL DISTRICT DEVELOPMENT
- 項目（３）－ 用地A上蓋物業發展的冷卻喉管 ITEM (3) - COOLING MAINS FOR TOPSIDE PROPERTY DEVELOPMENT AT SITE A

圖則名稱 drawing title
工務計劃項目第57TR號 － 廣深港高速鐵路香港段 － 非鐵路建造工程
備置工程
項目 (1)、(2)及(3)
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS
ENABLING WORKS
ITEM (1), (2) & (3)

S. H. LAM 23/11/09
總工程師 CHIEF ENGINEER 日期 DATE

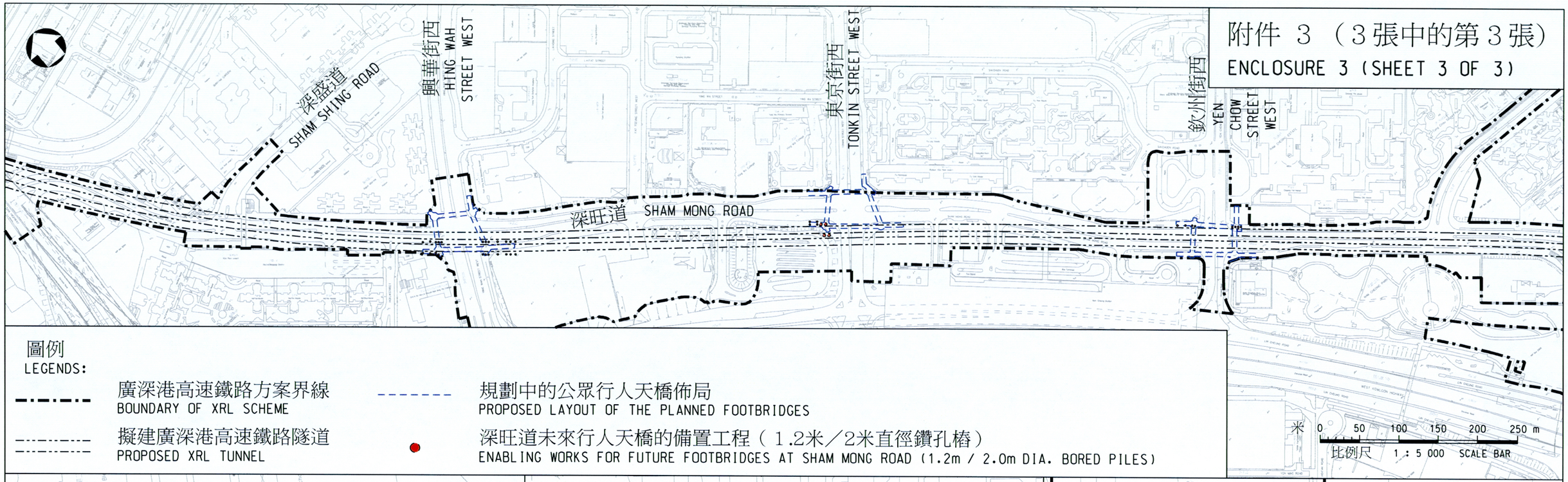
設計 designed W. H. LIU 23/11/09
繪圖 drawn Y. L. MA 23/11/09
核對 checked W. H. LIU 23/11/09
核准 approved K. T. LI 23/11/09

圖號 drawing no. HRWXRL002-SP0014

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT

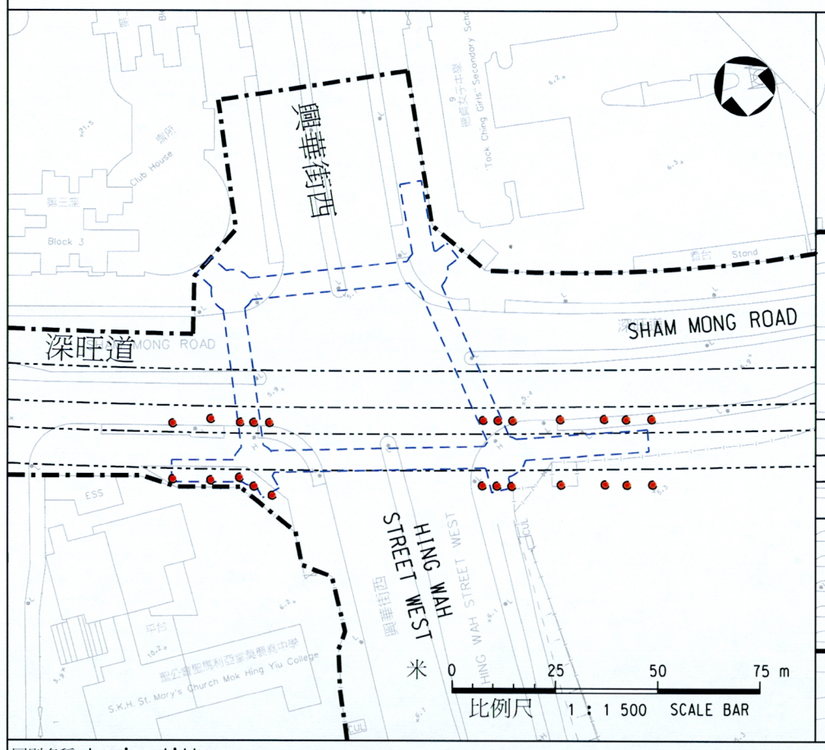
HRWXRL002-SP0014.DGN
HRWXRL002-SP0014.dgn 23-11-2009
A3 297X420

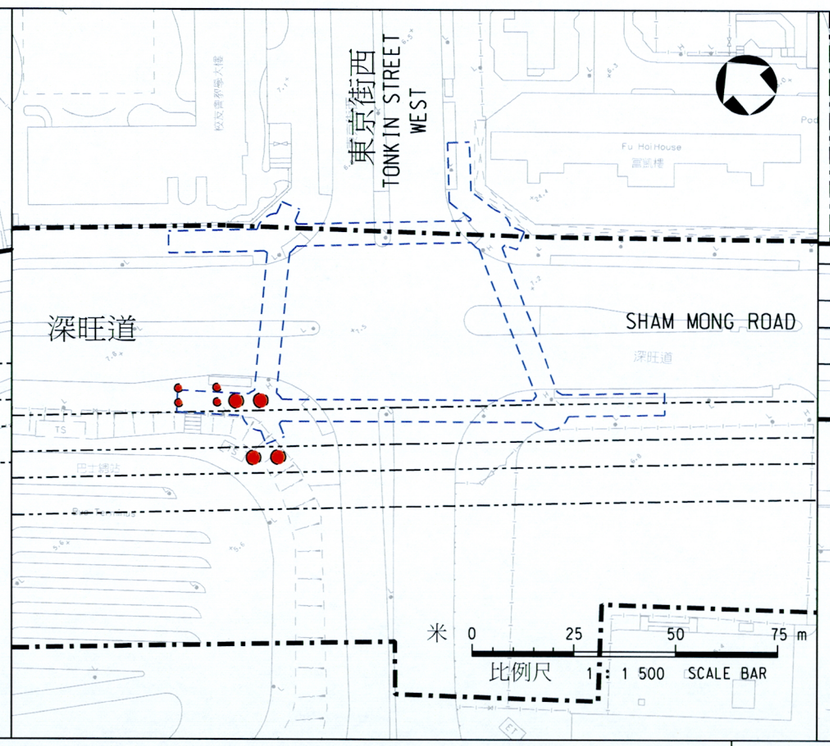
附件 3 （3張中的第3張）
ENCLOSURE 3 (SHEET 3 OF 3)

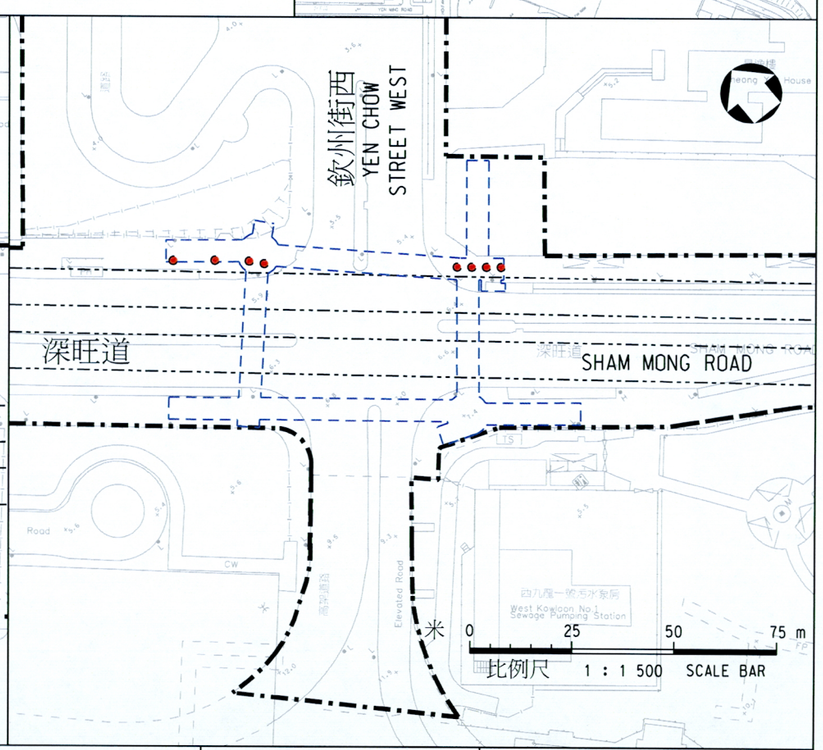


圖例
LEGENDS:

- 廣深港高速鐵路方案界線 BOUNDARY OF XRL SCHEME
- 擬建廣深港高速鐵路隧道 PROPOSED XRL TUNNEL
- 規劃中的公眾行人天橋佈局 PROPOSED LAYOUT OF THE PLANNED FOOTBRIDGES
- 深旺道未來行人天橋的備置工程（1.2米／2米直徑鑽孔樁） ENABLING WORKS FOR FUTURE FOOTBRIDGES AT SHAM MONG ROAD (1.2m / 2.0m DIA. BORED PILES)







圖則名稱 drawing title
工務計劃項目第57TR號 — 廣深港高速鐵路香港段 — 非鐵路建造工程
備置工程
項目（4） — 深旺道未來行人天橋的備置工程
PWP ITEM NO. 57TR - HONG KONG SECTION OF GUANGZHOU-SHENZHEN-HONG KONG EXPRESS RAIL LINK - CONSTRUCTION OF NON-RAILWAY WORKS ENABLING WORKS
ITEM (4) - ENABLING WORKS FOR FUTURE FOOTBRIDGES AT SHAM MONG ROAD

S. H. LAM
總工程師 CHIEF ENGINEER
23/11/09 日期 DATE

設計 designed	K. WONG	23/11/09
繪圖 drawn	Y. L. MA	23/11/09
核對 checked	K. WONG	23/11/09
核准 approved	K. H. WAN	23/11/09

圖號 drawing no.
HRWXRL002-SP0013

鐵路拓展處 RAILWAY DEVELOPMENT OFFICE
路政署 HIGHWAYS DEPARTMENT
A3 297X420

HRWXRL002-SP0013.dgn 23-11-2009

57TR - Hong Kong Section of Guangzhou – Shenzhen – Hong Kong Express Rail Link – Construction of Non-railway Works

Comparison between Approved Project Estimate and the latest project estimate

		(A) Approved Project Estimate ($ million)	(B) Latest Project Estimate ($ million)	(B) – (A) Difference ($ million)
(a)	Construction of EPIW	1,935.5	3,044.4	1,108.9
	(i) seven footbridges at WKT	299.6	513.0	213.4
	(ii) two subways at WKT	148.5	231.1	82.6
	(iii) depressed roads at part of Austin Road West and Lin Cheung Road, reconstruction of Wui Man Road and construction of Road D1A, and associated noise barriers / enclosures	1,487.4	2,300.3	812.9
(b)	Construction of RRIW	1,284.0	1,927.8	643.8
(c)	Enabling works	3,765.5	6,193.0	2,427.5
	(i) enabling works for Site A	2,011.7	3,138.6	1,126.9
	(ii) enabling works for WKCD	1,716.3	2,878.8	1,162.5
	(iii) enabling works for footbridges at Sham Mong Road	37.5	175.6	138.1
(d)	Construction of BCF	2,791.7	3,477.2	685.5
(e)	PMC payable to the MTRCL for planning, management and supervision of the project, covering overheads and management expenses of the MTRCL	611.0	956.0	345.0
(f)	Fees for consultants appointed by the Government for monitoring and vetting MTRCL's work including cost of the project and the financial consultancy studies, together with the associated contingency	40.7	43.5	2.8
(g)	Provision of Government facilities / equipment including fire-fighting equipment, and other furniture and equipment together with the associated contingency	239.9	317.1	77.2

		(A) Approved Project Estimate ($ million)	(B) Latest Project Estimate ($ million)	(B) – (A) Difference ($ million)
(h)	Contingencies	1,131.7	0.0	(1,131.7)
(i)	Contingencies for remaining works	0.0	56.0	56.0
	Total	11,800.0 (in MOD prices)	16,015.0 (in MOD prices)	4,215.0

The total difference of $4,865.7 million of construction of EPIW, RRIW, enabling works and BCF (i.e. sum of items (a) to (d) in above table) is attributed to (i) unfavourable ground conditions of $792 million, (ii) disruption due to other causes of $853 million, (iii) changes in design to suit actual site conditions and various unforeseen events of $1,248 million, (iv) price escalation of $668 million, (v) additional insurance of $173 million, and (vi) consumption of the original contingency amount of $1,131.7 million.

2. The reasons of the cost difference between the latest Project Estimate and the APE for each major section of the works are elaborated in the paragraphs below.

3. As regards **items (a)(i) to (a)(iii)** and **(c)(iii) (seven footbridges and two subways at WKT, depressed roads at part of Austin Road West and Lin Cheung Road, reconstruction of Wui Man Road and construction of Road D1A, and associated noise barriers/enclosures, enabling works for footbridges at Sham Mong Road)**, the increase in estimate of $1,247.0 million is mainly due to –

(a) the additional works due to unfavourable ground conditions encountered at WKT and Sham Mong Road;

(b) disruption caused by others;

(c) changes in design to suit actual site conditions, including the noise mitigation deck along Austin Road West; and

(d) additional allowance for price escalations over the extended construction period.

4. As regards **item (b) (construction of RRIW)**, the increase in estimate of $643.8 million is mainly for –

(a) the changes in design to suit the latest requirements, for example the enlargement of the public transport interchange and parking spaces at the north of WKT to further enhance the convenience to XRL passengers interchanging with other road-based transport; and

(b) additional allowance for price escalations over the extended construction period.

5. As regards **items (c)(i)** and **(d) (enabling works for Site A and construction of BCF)**, the increase in estimate of $1,812.4 million is mainly for –

(a) the additional works due to unfavourable ground conditions encountered at WKT;

(b) changes in design of the station box structure to suit the latest requirement; and

(c) additional allowance for price escalations over the extended construction period.

6. As regards **item (c)(ii) (enabling works for WKCD)**, the increase in estimate of $1,162.5 million is mainly for the changes in design of the station box structure to suit the latest requirement and additional allowance for price escalations over the extended construction period.

7. As regards **item (e) (PMC payable to the MTRCL for planning, management and supervision of the project, covering overheads and management expenses of the MTRCL)**, the increase in estimate of $345.0 million is mainly to cover the additional expenses on the staff, accommodation and corporate costs for the MTRCL project team and project headquarters team, as well as other support services for the extended construction period.

8. As regards **item (f) (Fees for consultants appointed by the Government for monitoring and vetting MTRCL's work (including cost) as well as the other consultancy studies together with the associated contingency)**, the increase in estimate of $2.8 million is mainly to cover the increase in expenses for the M&V consultancy services and other consultancy services over the extended construction period.

9. As regards **item (g) (Provision of Government facilities / equipment including fire-fighting equipment together with the associated contingency)**, the increase in estimate of $77.2 million is mainly to cover the increase in expense for the additional allowance for price escalations over the delayed procurement programme.

10. **Item (h) (contingencies)** under the APE has been committed to offset the increase in the cost of Items (a) to (d). Based on the proposal of MTRCL, **Item (i) (further contingencies for remaining works)** of $56.0 million is needed for the additional cost certainty in light of continuous challenges and risk which may arise as a result of past or future risk events. It mostly covers further allowance for contractors' claims which may increase on receipt of further substantiations from the contractors, and allowance for uncertainty associated with the current heated construction market with high cost escalation.