For Information

Legislative Council Panel on Transport

7811TH – Ping Ha Road Improvement
– remaining works (Ha Tsuen Section)

PURPOSE

This paper informs Members of our proposal to upgrade the remaining part of **7811TH** – Ping Ha Road Improvement – remaining works (Ha Tsuen Section) to Category A in order to carry out the construction works for the improvement of the Ha Tsuen section of Ping Ha Road (PHR) between Sha Chau Lei and Tin Ying Road.

PROJECT SCOPE

2. The original **7811TH** is a combined project of **7794TH** – Ping Ha Road Improvement – Remaining Works (Northern Part of Ha Tsuen Section) and **7799TH** – Ping Ha Road Improvement – Remaining Works (Southern Part of Ha Tsuen Section). The full scope of works under the original **7811TH** comprises the improvement of the Ha Tsuen section of PHR between Tin Wah Road and Tin Ying Road, with a total length of about 2.5 kilometres (km), and the associated drainage works, waterworks, landscaping works and noise abatement measures.

3. On 6 July 2007, the Finance Committee approved the upgrading of part of **7811TH** at an approved project estimate (APE) of $170 million in money-of-the-day (MOD) prices. The part comprises the improvement of the Ha Tsuen section of PHR between Tin Wah Road and Sha Chau Lei of about 2 km long, as **7824TH** – Ping Ha Road

Improvement – remaining works (Ha Tsuen Section between Tin Wah Road and Sha Chau Lei). In December 2007, approval was given to increase the APE of **7824TH** from $170.0 million by $9.4 million to $179.4 million in MOD prices under the delegated authority of the Secretary for Financial Services and the Treasury in order to allow the award of the contract for the project. On 21 November 2008, we sought the approval from the Finance Committee on increasing the APE of **7824TH** from $179.4 million by $56.4 million to $235.8 million to meet the increase in contract price fluctuation payments. We commenced the works in December 2007 for completion in November 2010.

4. The scope of the remaining part of **7811TH** we now propose to upgrade to Category A comprises –

(a) widening and realignment of a section of PHR between Sha Chau Lei and Tin Ying Road of about 500 metres (m) long from a single two-lane carriageway to a single four-lane carriageway of 14.6m wide, including the widening of a vehicular bridge with a footpath and a cycle track with a total span of about 44.5m across an existing nullah;

(b) construction of associated footpaths, cycle tracks, retaining walls, drainage works, waterworks and landscaping works;

(c) construction of vertical/cantilever noise barriers of about 200m long; and

(d) implementation of necessary environmental mitigation measures and an Environmental Monitoring and Audit (EM&A) programme for the works mentioned in items (a) to (c) above.

A site plan showing the proposed works is at **Enclosure 1**. A drawing showing the perspective view of the noise barriers is at **Enclosure 2**.

5. We plan to start the construction works in March 2009 for completion by September 2011.

JUSTIFICATION

6. With the development of Tin Shui Wai and its peripheral areas, PHR has become a major access for local traffic as well as for container trucks gaining access to the nearby container yards. The section of the existing PHR to the south of Ha Tsuen Shi between Sha Chau Lei and Tin Ying Road is mainly a single two-lane carriageway of about 7m wide, operating at a traffic volume to capacity (v/c) ratio[1] of 1.05 during peak hours. Traffic congestion frequently occurs along this section of PHR especially during peak hours due to vehicles queuing back from the junction between Ping Ha Road and Tin Ha Road, and the slow turning movements of heavy vehicles at the junctions with the side roads along this section of PHR. The situation is worse during freight transport peak seasons as slow moving goods vehicles along this section of PHR queue for access to the sites in the vicinity.

7. With further developments in the area, it is expected this section will be working beyond its capacity by 2011 with a v/c ratio of 1.23 if no improvement works are to be carried out. It is therefore necessary to widen, realign and upgrade the Ha Tsuen section of PHR to relieve traffic congestion and to increase the capacity of the road in order to cope with the anticipated traffic growth. We expect that the v/c ratio for this section of PHR will become 0.35 to 0.5 after the completion of the proposed works.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the project to be $137.0 million in MOD prices, made up as follows –

[1] Volume to capacity (v/c) ratio is an indicator which reflects the performance of a road. A v/c ratio equal to or less than 1.0 means that a road has sufficient capacity to cope with the volume of vehicular traffic under consideration and the resultant traffic will flow smoothly. A v/c ratio above 1.0 indicates the onset of congestion; above 1.2 indicates more serious congestion with traffic speeds progressively deteriorating with further increase in traffic.

		$ million	
(a)	Road works	13.8	
(b)	Widening of vehicular bridge	32.9	
(c)	Drainage works	4.6	
(d)	Noise barriers	58.2	
(e)	Waterworks	1.7	
(f)	Landscaping works	4.9	
(g)	Environmental mitigation measures and EM&A programme	2.0	
(h)	Contingencies	7.9	
	Sub-total	126.0	(in September 2008 prices)
(i)	Provision for price adjustment	11.0	
	Total	137.0	(in MOD prices)

9. We estimate the annual recurrent expenditure arising from this project to be $267,000.

10. We estimate that the proposed works will create about 116 jobs (100 for labourers and another 16 for professional/technical staff) providing a total employment of 2 900 man-months.

PUBLIC CONSULTATION

11. We consulted the Ha Tsuen Rural Committee and the Traffic and Transport Committee of the Yuen Long District Council on

31 January 2007 and 8 March 2007 respectively. Both Committees supported the project and urged for its early implementation.

12. We also consulted the Advisory Committee on the Appearance of Bridges and Associated Structures[2] on the aesthetic design of the noise barriers and widening of the vehicular bridge with a footpath and a cycle track mentioned in paragraph 4(a) above on 20 March 2007 and 19 February 2008 respectively. The Committee accepted the proposed aesthetic design.

13. We gazetted the proposed works under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) (the Ordinance) on 29 February 2008. No objection to the proposed road scheme was received. The Permanent Secretary for Transport and Housing (Transport), under the delegated authority from the Secretary for Transport and Housing, authorised the proposed works under the Ordinance on 22 May 2008. The notice of authorisation was gazetted on 30 May 2008.

ENVIRONMENTAL IMPLICATION

14. The proposed works to be upgraded under **7811TH** is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499) and an environmental permit is not required for the construction and operation of the proposed work.

15. We completed an Environmental Impact Assessment (EIA) report on "Ping Ha Road Improvement – Ha Tsuen Section" in 1998 which includes the proposed works. The EIA report, which was endorsed by the Director of Environmental Protection in 1998, concluded that with the installation of purpose-built noise barriers, the traffic noise impacts to most of the noise sensitive receivers (NSR) could be reduced to the levels meeting the statutory requirements.

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[2] The Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS), which comprises representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, Architectural Services Department, Highways Department, Housing Department, Planning Department and Civil Engineering and Development Department, is responsible for vetting the design of bridges and other structures associated with the public highway system, including noise barriers and semi-enclosures, from the aesthetic and visual impact points of view.

16. In consideration of the latest traffic forecast, we conducted an environmental review (ER) based on the previous EIA report. The findings of the ER indicate that the project will not cause insurmountable long-term environmental impacts. In respect of noise impacts, we undertake to adopt all the required mitigation measures, including the provision of noise barriers, to be recommended by the ER and agreed by the Director of Environmental Protection.

17. We will incorporate the environmental mitigation measures recommended in the ER report into the works contract to control pollution arising from construction works within established standards and guidelines. These measures include frequent watering of the site and provision of wheel-washing facilities to reduce emission of fugitive dust, the use of quiet construction plant to reduce noise generation and other procedures as recommended in Environmental Protection Department's Recommended Pollution Control Clauses. Furthermore, we will implement the Environmental Monitoring and Audit (EM&A) programme recommended in the ER report. We have included $2.0 million in the project estimate for implementing the environmental mitigation measures and the EM&A programme.

18. We have considered the alignment and the designed level of road works at PHR in the planning and design stages to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated materials) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste to public fill reception facilities. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimise the generation of construction waste.

19. We will also require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at

appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities[3] and landfills respectively through a trip-ticket system.

20. We estimate that the project will generate in total about 12 000 tonnes of construction waste. Of these, we will reuse about 7 690 tonnes (64%) of inert construction waste on site and deliver 2 735 tonnes (23%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 1 575 tonnes (13%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be $270,720 for this project (based on an unit cost of $27/tonne for disposal at public fill reception facilities and $125/tonne[4] at landfills).

21. This project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

22. Of the 383 trees within the project boundary, 255 trees will be preserved. The proposed improvement works for PHR between Sha Chau Lei Road and Tin Ying Road will involve the removal of 128 trees, including 103 to be felled and 25 to be transplanted within the project site. All trees to be removed are not important trees[5]. We will incorporate

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[3] Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

[4] This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at $90/m^3), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

[5] An "important tree" refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria:-
(a) trees of 100 years old or above;
(b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
(c) trees of precious or rare species;
(d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
(e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 m.

planting proposals as part of the project, including estimated quantities of 115 trees and 14 704 shrubs. We will use hydroseeding to protect formed slopes as appropriate.

LAND ACQUISITION

23. We have to resume agricultural land of about 117.1 square metres (m^2) for the project. The clearance for the project affects 27 non-domestic structures. The estimated cost of land acquisition and clearance is about $0.55 million. The cost of land acquisition will be charged to **Head 701 – Land Acquisition**.

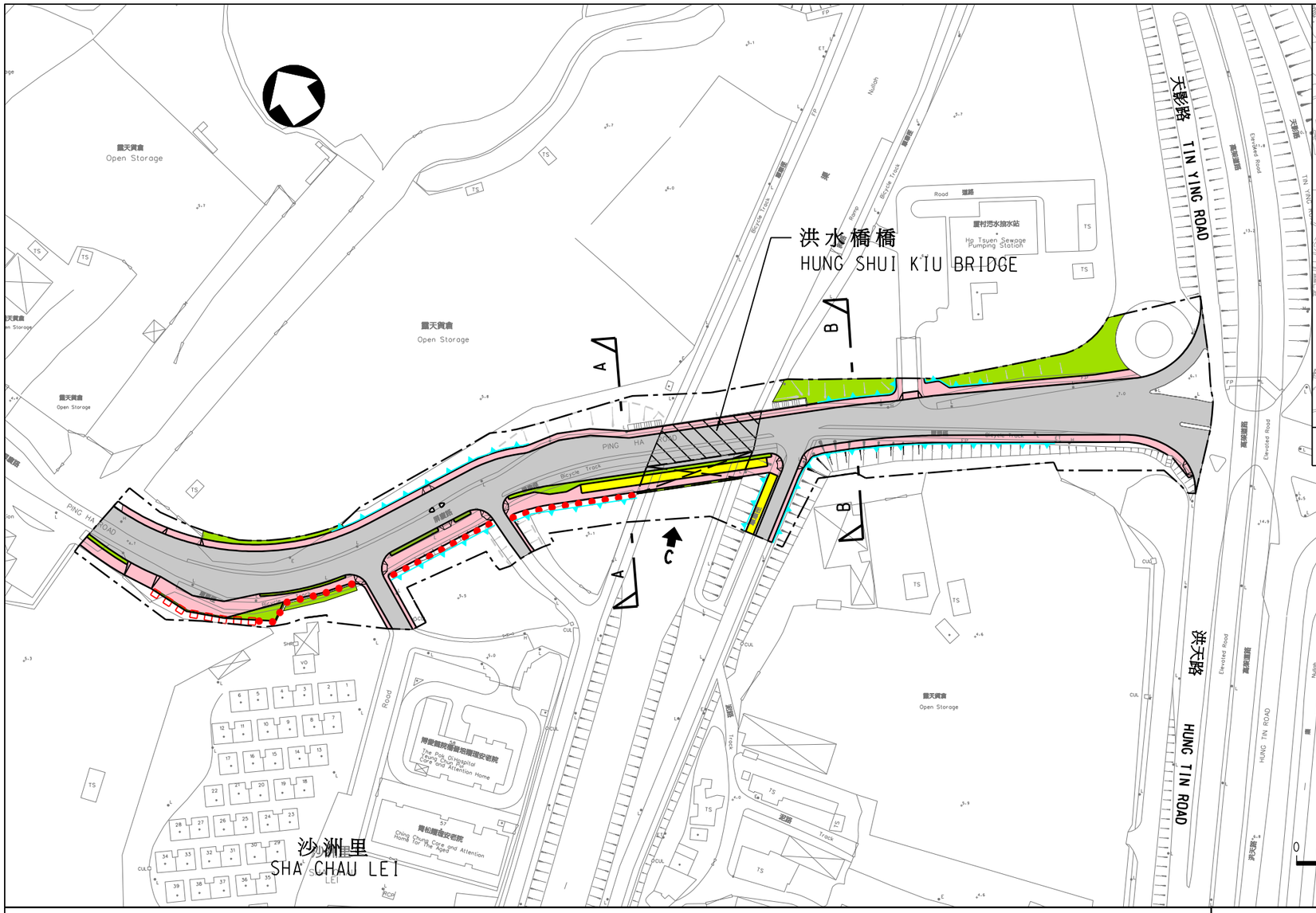
WAY FORWARD

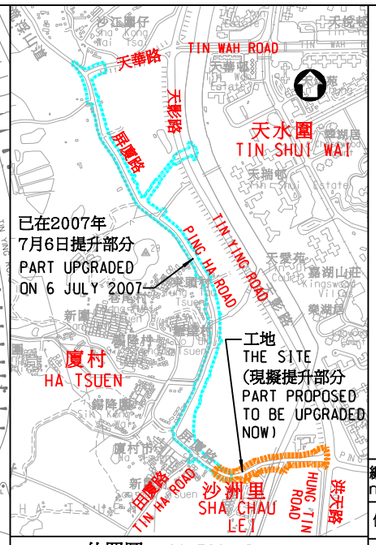
24. We intend to submit the project to the Public Works Sub-Committee and the Finance Committee of the Legislative Council in December 2008 and January 2009 respectively for upgrading **7811TH** to Category A. Subject to funding approval, we plan to start the construction works in March 2009 for completion by September 2011.

ADVICE SOUGHT

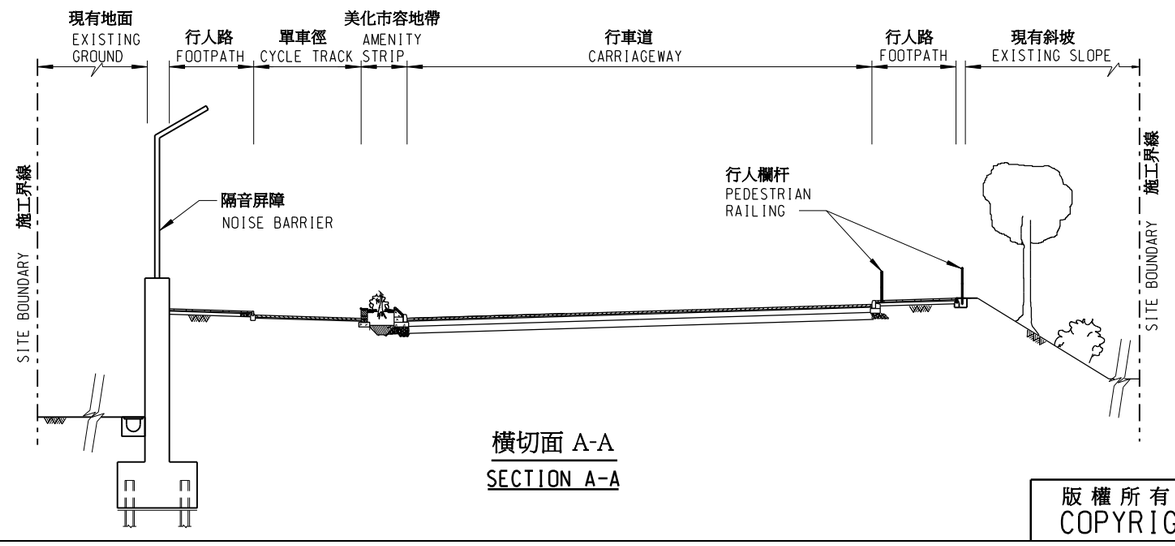
25. Members are invited to note the contents of this paper.

Transport and Housing Bureau
November 2008





位置圖 LOCATION PLAN
比例 SCALE 1:25 000



橫切面 A-A
SECTION A-A

圖例：
LEGEND ：

- 施工範圍 LIMIT OF WORKS AREA
- 擬建的14.6米行車道 PROPOSED 14.6m CARRIAGEWAY
- 擬建的行人路 PROPOSED FOOTPATH
- 擬建的單車徑 PROPOSED CYCLE TRACK
- 擬建的美化市容地帶 PROPOSED AMENITY STRIP
- 擬建的護土牆 PROPOSED RETAINING WALL
- 擬建的5米高隔音屏障 PROPOSED 5m HIGH NOISE BARRIER
- 擬建的5.5米高兼有3米懸臂隔音屏障 PROPOSED 5.5m HIGH WITH 3m CANTILEVER NOISE BARRIER

註釋 NOTES ：

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
修訂 REVISION				

	姓名 name	簽署 initial	日期date
設計designed	K.S.FAN	SIGNED	10/11/08
繪圖drawn	L.T.LAW	SIGNED	10/11/08
描摹traced			
核對checked	T.Y.LAU	SIGNED	10/11/08

核准approved

SIGNED
(Joseph C L YUNG)
Chief Engineer

日期date : 10/11/08

圖則名稱 drawing title

屏廈路改善工程 - 餘下部份
(廈村段)

PING HA ROAD IMPROVEMENT
- REMAINING WORKS
(HA TSUEN SECTION)

圖則編號 drawing no.
LW 8504

比例 scale
1:2000

辦事處 office
土木工程處 土地工程部
LAND WORKS DIVISION
CIVIL ENGINEERING OFFICE

CEDD 土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

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scale
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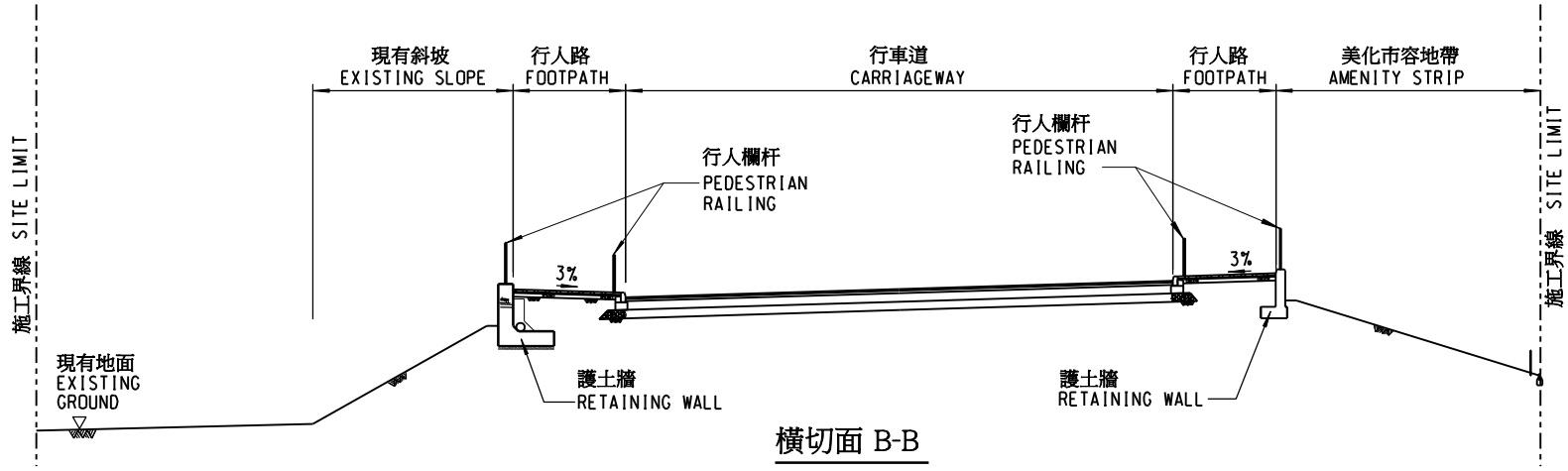
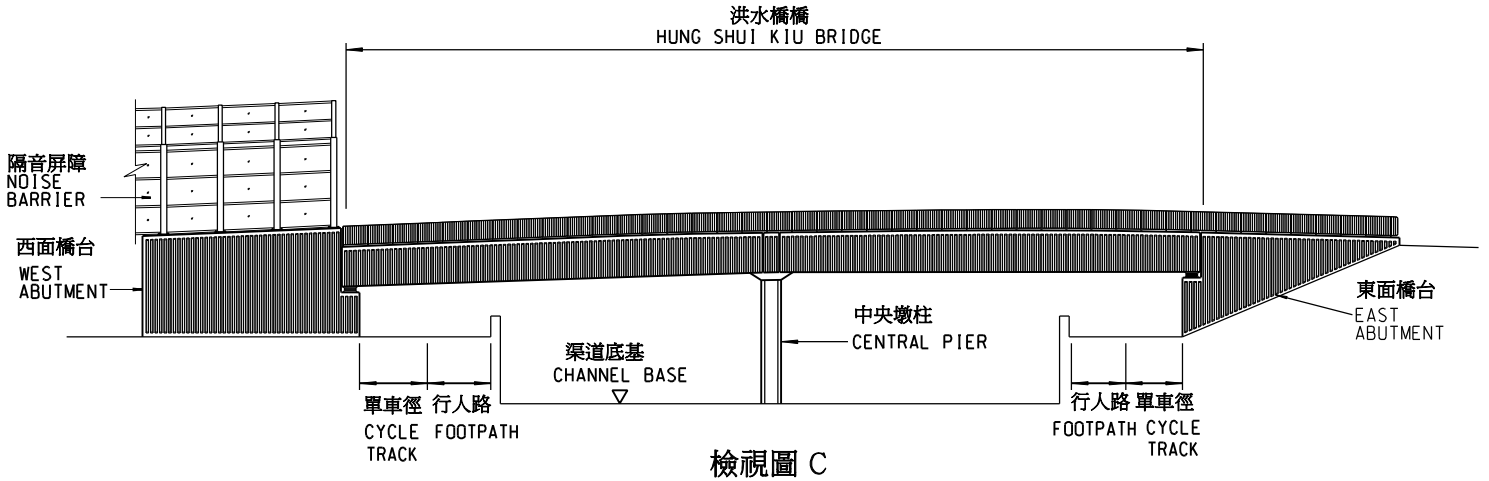
A3 420 x 297



橫切面 B-B
SECTION B-B



檢視圖 C
VIEW C
SCALE 1:400

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved

圖則名稱 drawing title

屏廈路改善工程 - 餘下部份 (廈村段)

PING HA ROAD IMPROVEMENT - REMAINING WORKS (HA TSUEN SECTION)

	姓名 name	簽署 initial	日期 date
設計 designed	K.S.FAN	SIGNED	10/11/08
繪圖 drawn	L.T.LAW	SIGNED	10/11/08
核對 checked	T.Y.LAU	SIGNED	10/11/08
核准 approved	C.L.YUNG	SIGNED	10/11/08

辦事處 office: 土木工程處 土地工程部 LAND WORKS DIVISION CIVIL ENGINEERING OFFICE

圖則編號 drawing no. LW 8559

比例 scale 1: 200

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

A4 210 x 297

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved

圖則名稱 drawing title

屏廈路改善工程 - 餘下部份 (廈村段)
擬建的隔音屏障透視觀景

PING HA ROAD IMPROVEMENT - REMAINING WORKS (HA TSUEN SECTION)
PERSPECTIVE VIEW OF PROPOSED NOISE BARRIERS

	姓名 name	簽署 initial	日期 date
設計 designed	K.S.FAN	SIGNED	10/11/08
繪圖 drawn	L.T.LAW	SIGNED	10/11/08
核對 checked	T.Y.LAU	SIGNED	10/11/08
核准 approved	C.L.YUNG	SIGNED	10/11/08

辦事處 office: 土木工程處 土地工程部
LAND WORKS DIVISION
CIVIL ENGINEERING OFFICE

圖則編號 drawing no.: LW 8558

比例 scale: 示意圖 DIAGRAM-MATIC

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

A4 210 x 297