For discussion **PWSC(2010-11)25**
on 17 January 2011

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 705 – CIVIL ENGINEERING
Support – Boundary facilities (other than road works)
13GB – Liantang/Heung Yuen Wai Boundary Control Point and associated works

Members are invited to recommend to Finance Committee –

(a) the upgrading of part of **13GB**, entitled "Liantang/Heung Yuen Wai Boundary Control Point and associated works – detailed design and ground investigation", to Category A at an estimated cost of $265.8 million in money-of-the-day prices; and

(b) to retain the remainder of **13GB** in Category B.

PROBLEM

We need to commission the detailed design and ground investigation to take forward the development of a new Boundary Control Point (BCP) at Liantang/Heung Yuen Wai in the North-eastern New Territories.

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PROPOSAL

2. The Director of Civil Engineering and Development (DCED), with the support of the Secretary for Development, proposes to upgrade part of **13GB** to Category A at an estimated cost of $265.8 million in money-of-the-day (MOD) prices to engage consultants to undertake the proposed detailed design and ground investigation for the development of the new BCP.

PROJECT SCOPE AND NATURE

3. The part of **13GB** that we propose to upgrade to Category A comprises –

(a) detailed design of the works described in paragraphs (i) to (viii) below, including review of the preliminary design and relevant impact assessments on environment, traffic, drainage, sewerage and geotechnical aspect –

(i) site formation of about 23 hectares of land for the development of the BCP;

(ii) provision of a perimeter road at the BCP together with the associated vehicular and pedestrian gates, fencing, etc.;

(iii) an approximately 11-kilometre (km) long dual two-lane connecting road (with about 1.0 km of at-grade road, 4.3 km of viaduct and 5.7 km of tunnels) connecting the BCP with Fanling Highway and the associated traffic control and surveillance system;

(iv) associated diversion/modification works at Lin Ma Hang Road;

(v) provision of sewage collection, treatment and disposal facilities for the BCP and the resite for Chuk Yuen Village;

(vi) widening of access road to the resite for Chuk Yuen Village;

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(vii) related improvement works for Shenzhen River; and

(viii) associated environmental mitigation measures, landscaping works, drainage/sewerage, waterworks, utilities and traffic engineering works;

(b) associated ground investigation and site supervision; and

(c) preparation of tender documents and assessment of tenders.

4. The remaining parts of **13GB** covers mainly construction of the works described in paragraphs 3(a)(i) to (viii) above; provision of passenger clearance and cargo processing facilities as well as transport and miscellaneous facilities; provision of accommodation and facilities for Government departments providing services at the BCP; and reprovisioning of boundary control road and associated security facilities for Shenzhen River. Funding for the above works will be sought separately at a later time when they are ready for upgrading to Category A.

5. Subject to the approval of the Finance Committee (FC), we plan to engage consultants in April 2011 to carry out the detailed design and ground investigation for the project for completion by October 2013.

6. A location plan showing the proposed BCP and the connecting road is at Enclosure 1. The conceptual layout of the BCP is at Enclosure 2.

JUSTIFICATION

7. The Hong Kong Special Administrative Region Government and the Shenzhen Municipal Government jointly announced at the second meeting of the Hong Kong-Shenzhen Joint Task Force on Boundary District Development on 18 September 2008 the implementation of the Liantang/Heung Yuen Wai BCP for operation in 2018.

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8. With the funding approval by the FC, the investigation and preliminary design of the project commenced in April 2009 for completion in December 2010. We have formulated the conceptual layout of the BCP, the alignment of the connecting road and the improvement scheme to the relevant section of Shenzhen River.

9. We have also studied the feasibility of implementing the connecting road in phases with a view to reducing the initial project outlay. However, the study concludes that the connecting road in the initial phase would not be able to cope with the projected BCP traffic, and that some of the BCP traffic would overflow to the existing road network (e.g. Man Kam To Road, Ping Che Road and Sha Tau Kok Road) in the New Territories. As the existing road network does not have spare capacity to take on additional traffic, phased implementation of the connecting road would create the need for considerable improvement to be made to the existing road network, which would in turn result in higher overall cost. Hence, we have decided to construct the entire connecting road in one go.

10. In view of the multi-disciplinary nature of the project and insufficient in-house resources, we propose to employ consultants to undertake the proposed detailed design and site supervision of the ground investigation works. In order to meet the target commissioning date of the BCP in 2018, subject to FC's approval, we plan to start the proposed detailed design in April 2011 and to conduct more ground investigation to provide further geotechnical and geological information for the detailed design.

FINANCIAL IMPLICATIONS

11. We estimate the cost of the proposed detailed design and ground investigation to be $265.8 million in MOD prices (please see paragraph 12 below), broken down as follows –

			$ million
(a)	Ground investigation		102.8
(b)	Consultants' fees		95.4
	(i) Detailed design	94.2	
	(ii) Contract administration for ground investigation	0.9	
	(iii) Management of resident site staff for ground investigation	0.3	

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		$ million	
(c)	Remuneration of resident site staff for ground investigation	10.4	
(d)	Electrical and Mechanical Services Trading Fund (EMSTF) charges[1]	10.9	
(e)	Contingencies	20.3	
	Sub-total	239.8	(in September 2010 prices)
(f)	Provision for price adjustment	26.0	
	Total	265.8	(in MOD prices)

A detailed breakdown of the estimates for consultant's fees and resident site staff costs by man-months is at Enclosure 3.

12. Subject to approval, we will phase the expenditure as follows –

Year	**$ million (Sept 2010)**	**Price adjustment factor**	**$ million (MOD)**
2011 – 2012	71.6	1.04250	74.6
2012 – 2013	109.6	1.09463	120.0
2013 – 2014	21.7	1.14936	24.9
2014 – 2015	17.2	1.20682	20.8
2015 – 2016	13.5	1.27169	17.2
2016 – 2017	6.2	1.34163	8.3
	239.8		265.8

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[1] Since the establishment on 1 August 1996 under the Trading Fund Ordinance, the EMSTF charges government departments for design and technical consultancy services provided by Electrical and Mechanical Services Department. The services rendered for this project include checking consultants' submissions on all electrical and mechanical (E&M) installations and providing technical advice to Government on all E&M works and their impact on the project.

13. We have derived the MOD estimate on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period 2011 to 2017. We will engage consultants to undertake the proposed detailed design and ground investigation (excluding the related improvement works for Shenzhen River) on a lump-sum basis with provision for price adjustment as the duration of the consultancy will exceed 12 months. The consultants will supervise the ground investigation works under a contract to be awarded through competitive tendering. The contract for ground investigation works is a standard re-measurement contract because the quantity of works involved may vary depending on actual ground conditions. We will also engage consultants jointly with the Shenzhen Municipality to carry out the detailed design and ground investigation for the related improvement works for Shenzhen River, the cost of which will be shared equally between Hong Kong and Shenzhen and paid on a lump sum basis without provision for price adjustment.

14. The proposed detailed design and ground investigation works will not give rise to any recurrent consequences.

PUBLIC CONSULTATION

15. We consulted the Concern Group on the Construction of Liantang Boundary Control Point of the North District Council on 24 June 2010 and members raised no objection to the proposal of carrying out detailed design and ground investigation.

16. We consulted the Traffic and Transport Committee of the Tai Po District Council on 17 September 2010. Members were in general supportive of the project and requested the Civil Engineering and Development Department to keep close liaison with District Councillors and Village Representatives on the detailed design.

17. We consulted the Rural Committees of Fanling, Sheung Shui, Sha Tau Kok, Ta Kwu Ling and Tai Po in August and September 2010. The Rural Committees generally supported the project.

18. We also consulted the Heung Yee Kuk on 21 September 2010. Members supported the project.

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19. During public consultation of the project, we have received requests for provision of park-and-ride facilities, pick-up and drop-off points for private cars at the BCP. Local villagers have also requested provision of facilities to enable their access to the BCP on foot. To address these demands, we have embarked on a study to look into the provision of such facilities for the convenience of the public. We will take on board the findings in the detailed design stage.

20. We consulted the Legislative Council Panel on Development on the proposed detailed design and ground investigation on 16 December 2010. Members supported the proposal.

ENVIRONMENTAL IMPLICATIONS

21. The project is a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499). The part of the project which involves construction and operation of the BCP and its connecting road is subject to an on-going Environmental Impact Assessment (EIA) study carried out by the DCED. Another part of the project which involves improvement works for Shenzhen River is subject to another on-going EIA study carried out by the Director of Drainage Services.

22. The proposed detailed design and ground investigation works are not a designated project under the EIAO and will not give rise to adverse environmental impacts. We will implement standard pollution control measures during the ground investigation works, as promulgated by the Director of Environmental Protection.

23. The proposed detailed design and ground investigation will only generate very little construction waste. We will require the consultants to fully consider measures to minimize the generation of construction waste and to reuse/recycle construction waste as much as possible in implementing the construction works in future.

HERITAGE IMPLICATIONS

24. The proposed detailed design and ground investigation 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.

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LAND ACQUISITION

25. The proposed detailed design and ground investigation will not require land acquisition.

BACKGROUND

26. We upgraded **13GB** to Category B in July 2008.

27. On 9 January 2009, we upgraded part of **13GB** to Category A as **14GB** "Liantang/Heung Yuen Wai Boundary Control Point and associated works – investigation and preliminary design" for carrying out investigation and preliminary design for the development of the BCP. The works commenced in April 2009 and was completed in December 2010. According to the outcome of the investigation and preliminary design, the total area of site formation should be increased from 18.3 hectares to 23 hectares to provide sufficient land for the development of the BCP and associated facilities. Also, the alignment of the connecting road should be revised and the total road length should be increased from 10 km to 11 km.

28. On 30 April 2010, we upgraded part of **13GB** to Category A as **16GB** "Liantang/Heung Yuen Wai Boundary Control Point and associated works – village reprovisioning works" to provide a village resite area with supporting infrastructure at Ta Kwu Ling for reprovisioning of the existing Chuk Yuen Village to allow for the construction of the BCP. The works commenced in August 2010 for completion by early 2012.

29. We gazetted relevant components of **13GB** under Foreshore and Seabed (Reclamations) Ordinance (Cap. 127) on 23 July 2010, and Roads (Works, Use and Compensation) Ordinance (Cap. 370) on 13 August 2010 and 12 November 2010.

30. The proposed detailed design and ground investigation will not directly involve any tree removal or planting proposals. We will require the consultants to take into consideration the need for tree preservation and planting proposal during the detailed design stage of the project.

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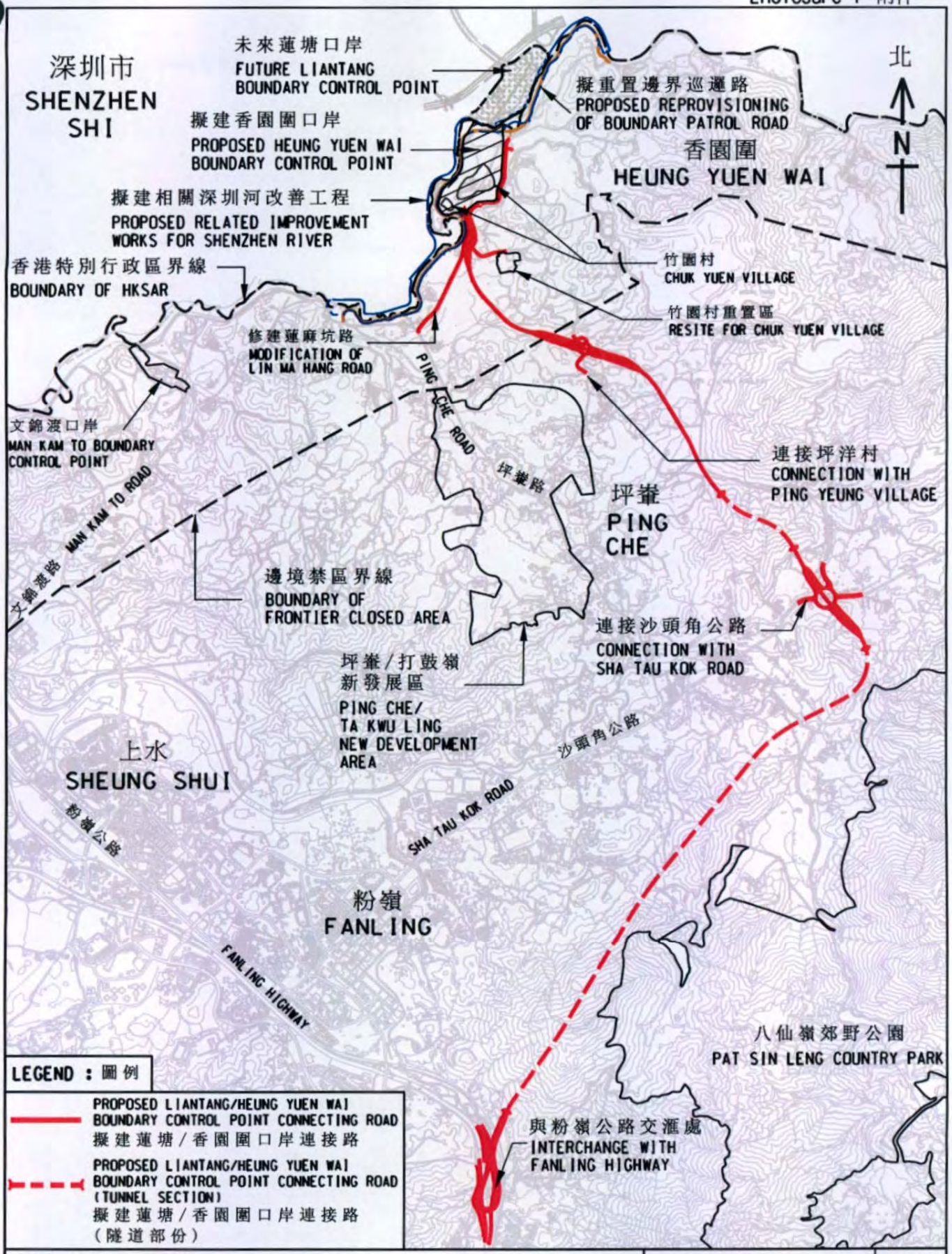
31. We estimate that the proposed detailed design and ground investigation will create about 135 jobs (74 for labourers and another 61 for professional/technical staff), providing a total employment of 2 160 man-months.

Development Bureau
January 2011

Enclosure 1 附件一



LEGEND : 圖例

- PROPOSED LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT CONNECTING ROAD
  擬建蓮塘/香園圍口岸連接路
- PROPOSED LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT CONNECTING ROAD (TUNNEL SECTION)
  擬建蓮塘/香園圍口岸連接路（隧道部份）

drawing title 圖則名稱

LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS - LAYOUT OF THE PROPOSED BOUNDARY CONTROL POINT AND CONNECTING ROAD

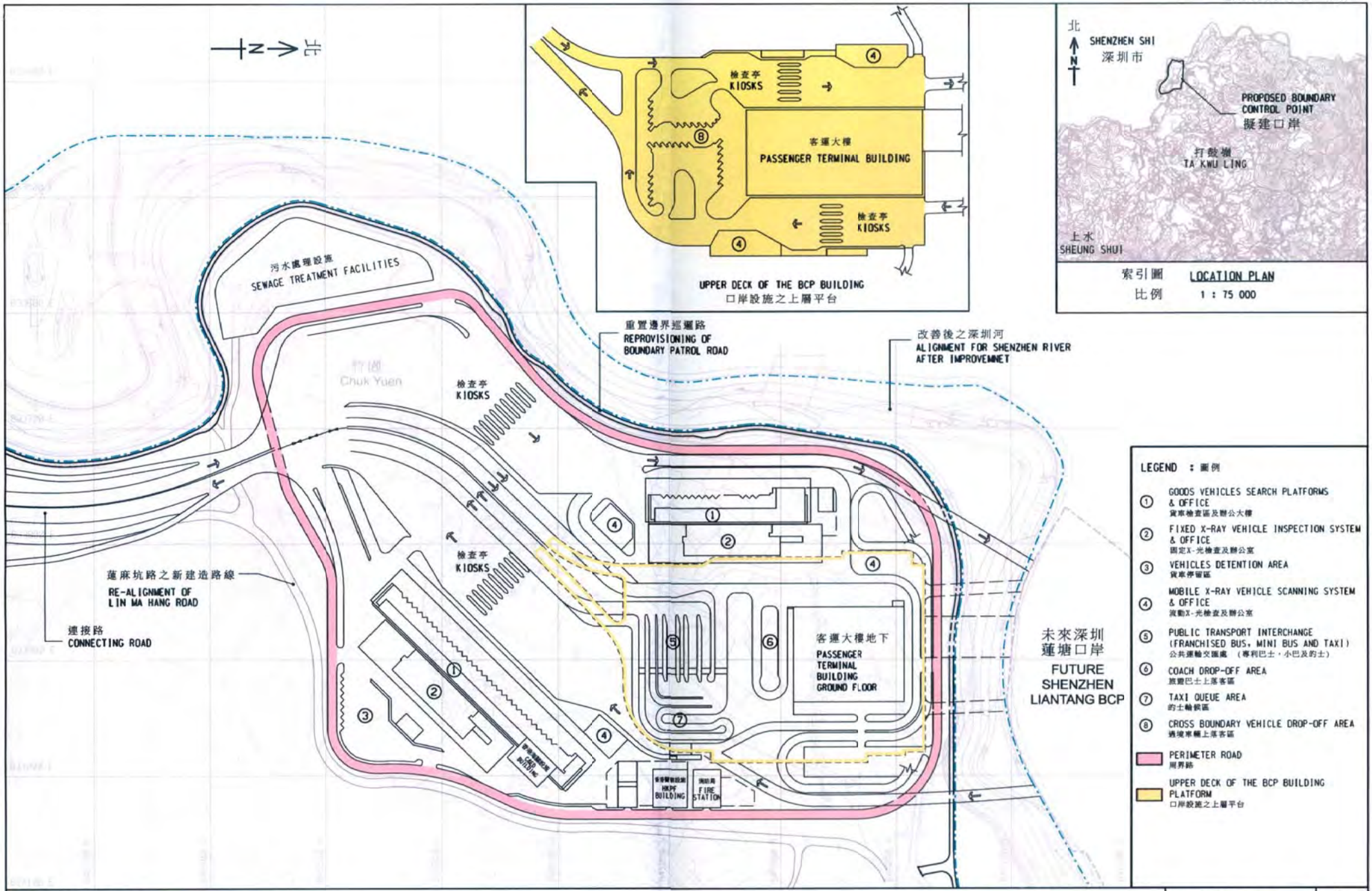
蓮塘/香園圍口岸與相關工程 - 擬建口岸及連接路平面圖

drawing no. 圖則編號: BCP - 039

scale比例: 1:40 000

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

A4 210 x 297



drawing title 圖則名稱

LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT - CONCEPTUAL LAYOUT
蓮塘/香園圍口岸—概念圖

drawing no. 圖則編號 BCP - 040

scale 比例 1 : 3 000

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

13GB (Part) – Liantang/Heung Yuen Wai Boundary Control Point and associated works – detailed design and ground investigation

Breakdown of the estimates for consultants' fees and resident site staff costs (in September 2010 prices)

			Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee ($million)
(a)	Consultants' fees for –					
	(i) Detailed design (Note 2)	Professional	523	38	2.0	60.9
		Technical	836	14	2.0	33.3
	(ii) Contract administration for ground investigation (GI) (Note 2)	Professional	4	38	2.0	0.5
		Technical	11	14	2.0	0.4
					Sub-total	95.1
(b)	Resident site staff (RSS) costs (Note 3)	Professional	57	38	1.6	5.3
		Technical	170	14	1.6	5.4
					Sub-total	10.7
	Comprising –					
	(i) Consultants' fee for management of RSS for GI					0.3
	(ii) Remuneration of RSS for GI					10.4
					Total	**105.8**

* MPS = Master Pay Scale

Notes

1. A multiplier of 2.0 is applied to the average MPS salary point to arrive at the full staff costs including the consultants' overheads and profit as the staff will be employed in the consultants' offices. A multiplier of 1.6 is applied to the average MPS salary point to arrive at the cost of resident site staff supplied by the consultants. (As at now, MPS salary point 38 = $58,195 per month and MPS salary point 14 = $19,945 per month.)

2. The figures given above are only estimates prepared by the Director of Civil Engineering and Development. The actual man-months and actual fees will only be known after we have selected the consultants through the usual competitive lump sum fee bidding system.

3. The actual man-months and actual costs will only be known after completion of the construction works.