For information

Legislative Council Panel on Transport

76TI – Bus-bus interchanges on Tuen Mun Road

PURPOSE

This paper informs Members of our proposal to upgrade 76TI – Bus-bus interchanges on Tuen Mun Road (the Project) to Category A for the construction of two bus-bus interchanges (BBIs) on Tuen Mun Road (TMR) to improve the efficiency of the bus network for the community along Castle Peak Road (CPR) and TMR.

PROJECT SCOPE AND NATURE

2. The scope of **76TI** comprises –

(a) construction of a BBI on TMR Kowloon bound near Siu Lam Interchange comprising mainly –

(i) a road of about 220 metres (m) long and 8.5m wide parallel to TMR ;

(ii) a bus drop-off facility and a passenger holding area with floor area of about 1 040 square metres (m^2) and 680 m^2 respectively;

(iii) modification of the signalised junction of CPR and the slip road from TMR Kowloon bound and the junction of CPR and an unnamed road;

(iv) widening of the unnamed road of about 150 m long to a two-lane carriageway to connect to the bus drop-off area mentioned in paragraph 2(a)(ii) above;

(v) realignment and widening of a section of CPR of about 300 m in length; and

(vi) reprovisioning of the single-lane road between CPR and TMR Kowloon bound;

(b) construction of a BBI on TMR Tuen Mun bound near Tai Lam Kok roundabout comprising mainly –

(i) a road about 280 m long and 8.5 m wide parallel to the TMR with a passenger holding area of about 560 m^2 in size;

(ii) a U-shaped road of a minimum width of 6 m at Tai Lam Kok roundabout together with a sheltered passenger holding area of about 250 m^2 in size;

(iii) construction of a link bridge of 2.5 m clear width and about 30 m long with two lifts to connect the two passenger holding areas mentioned in paragraphs 2(b)(i) and (b)(ii) above; and

(iv) widening of Brothers' Bridge by about 17 m to form part of the road mentioned in paragraph 2(b)(i);

(c) associated works including road reconstruction, provision of shelters, drainage, landscaping, traffic aids and street lighting, and slope works; and

(d) implementation of an environmental monitoring and audit (EM&A) programme for the works mentioned in paragraphs 2(a) to 2(c) above.

——— A plan showing the proposed works with cross sections is at **Enclosure 1**.

3. We have substantially completed the detailed design for the Project. We plan to commence construction works in April 2010 for completion in April 2013.

JUSTIFICATION

4. At present, there are 57 bus routes running along either CPR or TMR connecting Tuen Mun with other parts of Hong Kong. Residents of Tuen Mun, especially those living along CPR, have been repeatedly requesting for a long time a wider coverage of bus services to different parts of the territory. Instead of introducing additional bus routes, which will induce traffic increase and cause inefficient use of the existing bus network, we believe BBIs should be provided on TMR near Siu Lam to address the public's request. Indeed, during the consultation of the project on the "Reconstruction and Improvement of Tuen Mun Road" in November 2006, members of the Tuen Mun District Council (TMDC) also proposed to provide BBIs along the TMR to improve the efficiency of bus networks.

5. The Project will provide two BBIs, one on Kowloon bound and the other on Tuen Mun bound of TMR. The proposed BBIs aim at providing a convenient interchanging facility for passengers to switch amongst bus routes between CPR and TMR. This arrangement will not only provide the existing passengers with more choices of bus services at the BBIs, but also greatly enhance the overall efficiency of the bus network in the Northwest New Territories.

6. The widening of Brothers' Bridge will form part of the road to be constructed parallel to TMR (see paragraph 2(b) above) with a holding area allowing buses to drop off/pick up passengers at the holding area of the Tuen Mun bound BBI without affecting the existing traffic of TMR. There is a 7m level difference between the holding area of the Tuen Mun bound BBI at TMR and the holding area of the Tuen Mun bound BBI at Tai Lam Kok. The construction of the link bridge will allow passengers to travel on foot from the holding area at TMR to the holding area at Tai Lam Kok to switch buses. In this connection, two lifts will be constructed in connection with the link bridge above to provide access to people with disabilities.

FINANCIAL IMPLICATIONS

7. We estimate the cost of **76TI** to be $162.3 million in money-of-the-day (MOD) prices, made up as follows –

			$ million	
(a)	Roads and drains		27.6	
(b)	Earthworks and slopeworks		30.1	
(c)	Bridge widening works		34.2	
(d)	Passenger holding areas		19.2	
(e)	Link bridge with two lifts		14.5	
(f)	Landscaping		3.5	
(g)	Consultant's fees		1.1	
	(i) construction supervision and contract administration	0.4		
	(ii) management of resident site staff	0.1		
	(iii) EM&A programme	0.6		
(h)	Remuneration of resident site staff		13.0	
(i)	Contingencies		12.8	
		Sub-total	156.0	(in September 2009 prices)

		$ million	
(j)	Provision for price adjustment	6.3	
	Total	162.3	(in MOD prices)

8. We estimate that the proposed works will create about 184 jobs (34 for professional/technical staff and 150 for labourers) providing a total employment of about 3 187 man-months.

PUBLIC CONSULTATION

9. During the consultation of the project on the "Reconstruction and Improvement of Tuen Mun Road" in November 2006, members of the TMDC also proposed to provide BBIs along the TMR to improve the efficiency of bus networks. We consulted the TMDC Traffic and Transport Committee on 14 March 2008 and 12 September 2008 on the conceptual plan and preliminary design of the Project respectively. Members were generally supportive of the proposed road scheme and hoped that the Administration would take it forward as soon as possible. On the other hand, some of the members were concerned about the longer travelling time due to bus interchange arrangements, and requested the Transport Department to carefully consider the routes and the fares of the interchange bus services.

10. We consulted the Advisory Committee on the Appearance of Bridges and Associated Structures[1] on the aesthetic design of the proposed extension of Brothers' Bridge, as well as footbridge and lifts under the Project in March 2009. The Committee accepted the proposed aesthetic design.

[1] The Advisory Committee on the Appearance of Bridges and Associated Structures (which comprises representatives of the Hong Kong Institute of Architects; the Hong Kong Institution of Engineers; the Hong Kong Institute of Planners; an academic institution; Architectural Services Department; Highways Department; Housing 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 enclosures, from the aesthetic and visual impact points of view.

11. We gazetted the proposed works under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) (the Ordinance) on 16 January 2009 and received one objection. The details of the objection and the Administration's response are at **Enclosure 2**. No response was received from the objector after we provided our response to his second round of questions. The objection is thus considered unresolved.

12. Having considered the unresolved objection, the Chief Executive-in-Council authorised the proposed works under the Ordinance on 3 November 2009. The authorization notice was gazetted on 20 November 2009.

ENVIRONMENTAL IMPLICATIONS

13. The Project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We have nevertheless carried out an environmental review covering noise, air and water quality impacts during construction as well as landscape, visual and waste management issues. The review concluded that the Project would not cause long-term environmental impacts. We will implement all the recommended mitigation measures to mitigate environmental impacts to within the established standards and guidelines.

14. In particular, during construction, we will control noise, dust and site run-off nuisance to comply with established criteria through the implementation of appropriate mitigation measures in the works contract. We will implement an EM&A programme during the course of construction to ensure that suitable measures are adopted to avoid the occurrence of adverse environmental impacts on the public.

15. We will require the contractor to reuse inert construction waste (e.g. excavated rock and soil materials) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of construction waste to public fill reception facilities[2]. We will encourage the contractor to maximise the use of recycled or recyclable inert construction

[2] 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.

waste, as well as the use of non-timber formwork to further minimise the generation of construction waste.

16. 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 and landfills respectively through a trip-ticket system.

17. We estimate that the Project will generate in total about 59 120 tonnes of construction waste. Of these, we will reuse about 30 000 tonnes (50.8%) of inert construction waste on site and deliver 28 220 tonnes (47.7%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 900 tonnes (1.5%) 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 about $0.9 million for this Project (based on a unit cost of $27/tonne for disposal at public fill reception facilities and $125/tonne[3] at landfills).

HERITAGE IMPLICATIONS

18. The 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.

[3] This estimate has taken into account the cost of 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.

LAND ACQUISITION

19. The proposed works do not require any land acquisition.

TREE PROPOSAL

20. Of the 250 trees within the project boundary, 56 trees will be preserved while 194 trees will be removed (including 190 to be felled and four to be transplanted within the project site). None of the trees to be removed are important trees[4]. We will incorporate planting proposals as part of the Project, including an estimation of about 3 630 trees, 15 400 shrubs and 3 370 square metres of grassed area.

WAY FORWARD

21. We intend to submit a funding application to the Public Works Sub-committee and Finance Committee of the Legislative Council on 16 December 2009 and 8 January 2010 respectively to upgrade the Project to Category A. Subject to funding approval, we plan to start the construction works in April 2010 for completion by April 2013.

ADVICE SOUGHT

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

Transport and Housing Bureau
November 2009

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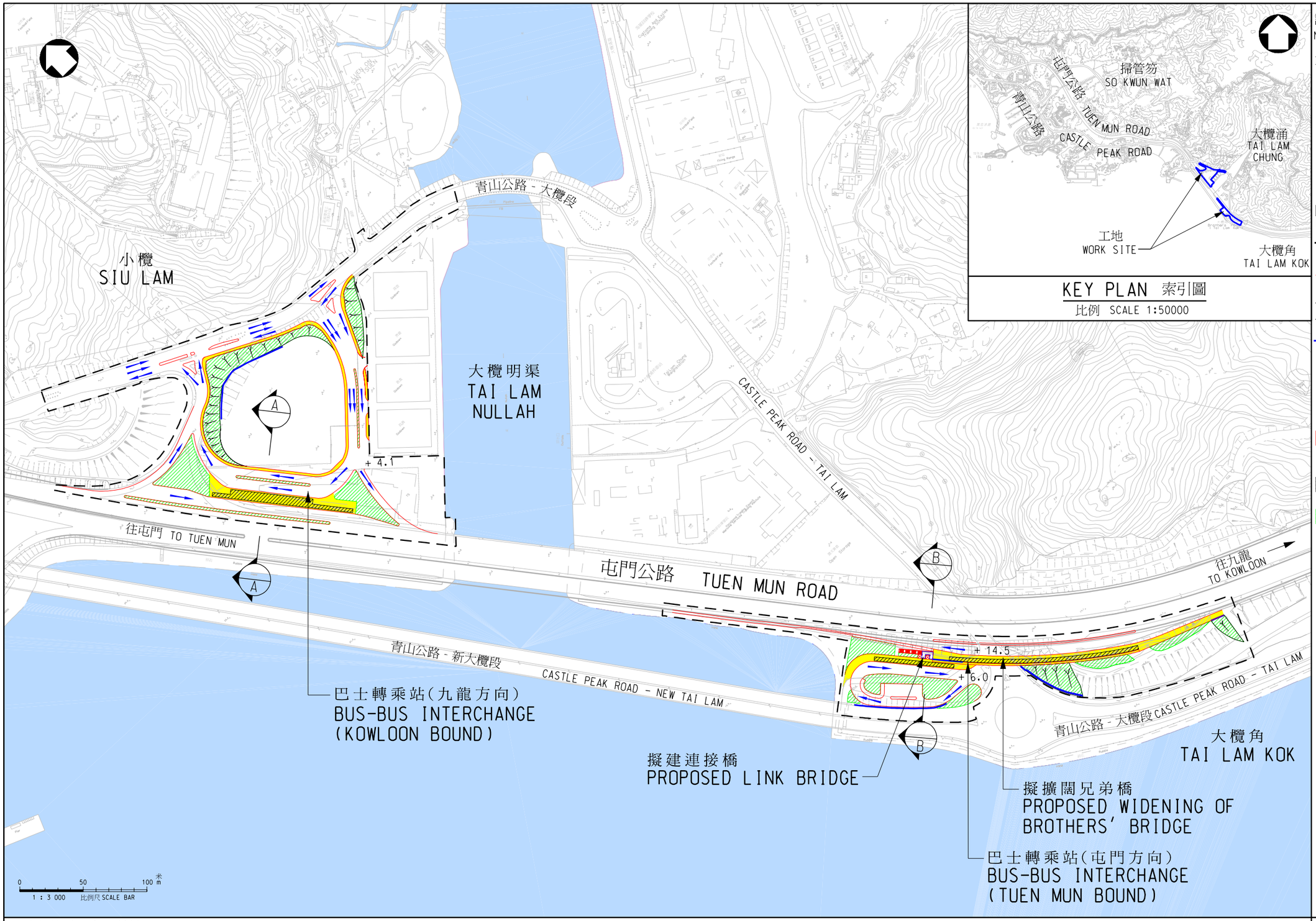
[4] "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

(a) trees of 100 years old or above;
(b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument and trees in memory of important persons or events;
(c) trees of precious or rare species;
(d) trees of outstanding form (taking account of overall tree size, 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 metres.



KEY PLAN 索引圖

比例 SCALE 1:50000

註釋：
NOTES:

1. 所有水平均以米為單位，並在香港主水平基準上。
   ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.

圖例:
LEGEND:

- 施工區界限 LIMIT OF WORKS AREA
- 擬修改的行車道路線 PROPOSED ROAD ALIGNMENT
- 擬建填土斜坡 PROPOSED FILL SLOPE
- 擬建擋土牆 PROPOSED RETAINING WALL
- 擬建升降機 PROPOSED LIFT
- 擬建樓梯 PROPOSED STAIRCASE
- 擬建乘客等候處 / 行人路 PROPOSED PASSENGER HOLDING AREA / FOOTPATH
- 擬建遮蔽處 PROPOSED SHELTER
- 擬建環境美化地帶 PROPOSED LANDSCAPING AREA
- 行車線數 NO. OF TRAFFIC LANE

圖則名稱 drawing title

工務計劃項目第76TI號 - 屯門公路巴士轉乘站 - 平面圖
PWP ITEM NO. 76TI - BUS-BUS INTERCHANGES ON TUEN MUN ROAD - LAYOUT PLAN

圖則編號 drawing no. HMW6076TI-SK0010

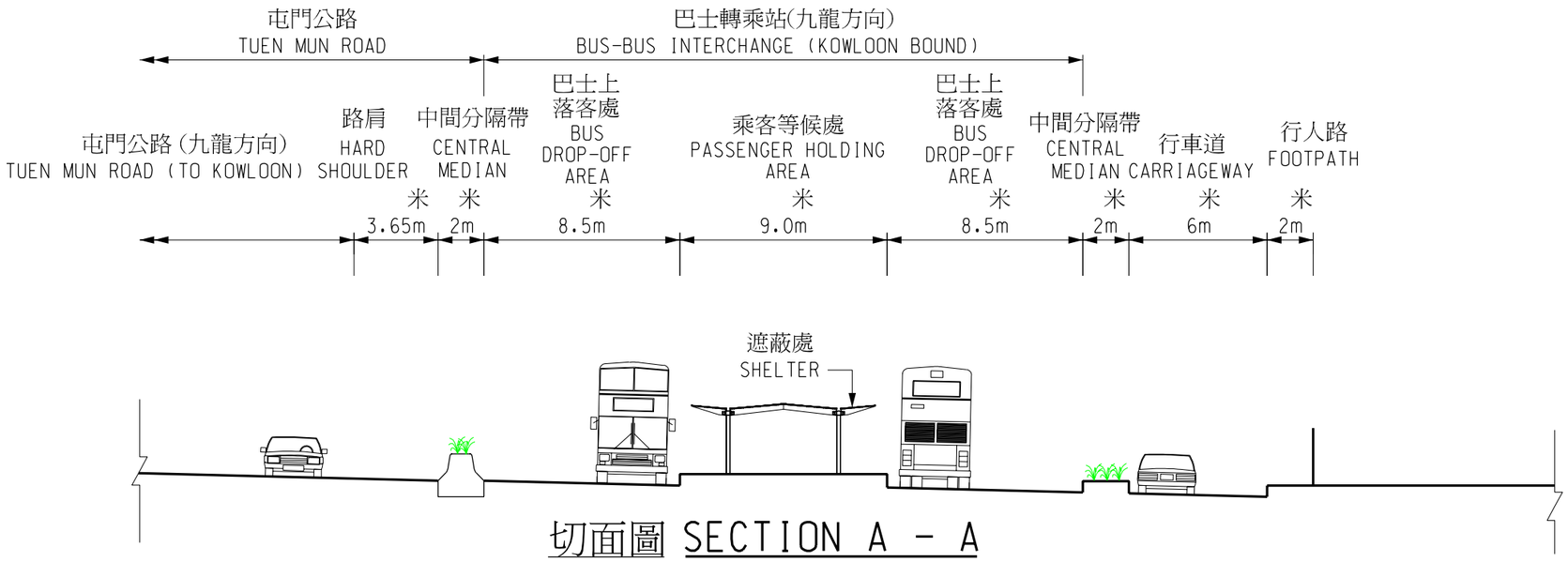
比例 scale 1:3000 OR AS SHOWN

HIGHWAYS DEPARTMENT HONG KONG 香港政府路政署

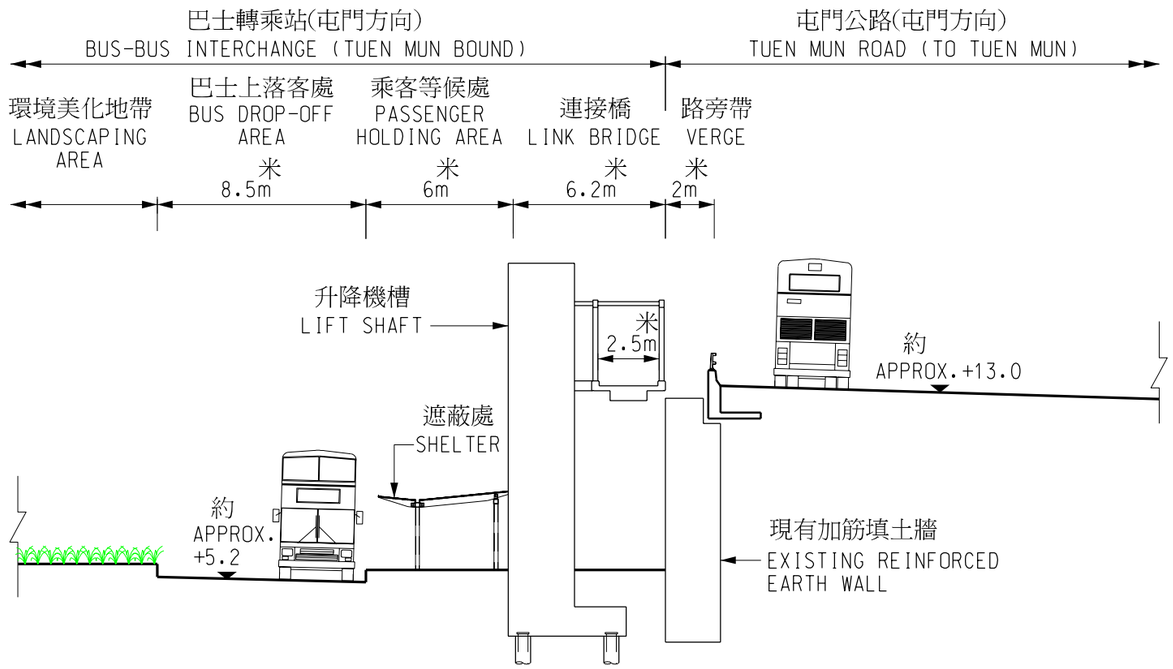
A3 420 x 297

註釋 NOTES：

1. 所有量度均以米為單位。
   ALL DIMENSIONS ARE IN METRES.
2. 所有水平均以米為單位，並在香港主水平基準上。
   ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.



切面圖 SECTION A - A



切面圖 SECTION B - B

圖則名稱 drawing title

工務計劃項目 第76TI號 - 屯門公路巴士轉乘站 - 切面圖
PWP ITEM NO. 76TI - BUS-BUS INTERCHANGES ON TUEN MUN ROAD - SECTIONS

圖則編號 drawing no. HMW6076TI-SK0011

比例 scale 1:250

HIGHWAYS DEPARTMENT HONG KONG 路政署 香港

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A3 420 x 297

Enclosure 2

Objection under the Roads (Works, Use and Compensation) Ordinance in respect of 76TI – Bus-bus interchanges on Tuen Mun Road

The objector is a resident of Tuen Mun and objected to the locations of the proposed BBIs. The objector considered that the proposed Tuen Mun bound BBI would affect the road safety and the public's leisure use of the waterfront at Tai Lam Kok. The objector counter-suggested that the proposed Tuen Mun bound BBI be located on the western side of the entry to Tai Lam nullah by reclamation of land.

2. The objector also objected to the location of the proposed Kowloon bound BBI which would be located near a dangerous goods warehouse. In addition to his concern over traffic safety, the objector considered that the proposed works would adversely affect the warehouse and create potential environmental impact. He suggested that the Government should review the land use of the warehouse.

3. We responded to the objector that the design of the proposed BBIs would comply with the current road standards to ensure smooth traffic circulation and road safety. The objector's counter-suggestion for the location of the proposed Tuen Mun bound BBI was not recommended due to its considerable engineering and environmental impacts. In particular, the reclamation works suggested by the objector would likely cause adverse impacts on the marine ecology.

4. For the proposed Kowloon bound BBI, we explained to the objector that the concerned dangerous goods warehouse was fenced off by cladding wall and its entrance are controlled and restricted to authorized vehicles and personnel only. The warehouse would not create additional risk to the Kowloon bound BBI. Notwithstanding the above, and that the objector's request for reviewing the land use of the warehouse would be outside the scope of the proposed works, HyD has referred the case to concerned departments for future consideration.

5. The objector subsequently expressed further concern on a weather radar station on a hill top near the proposed Tuen Mun bound BBI. He considered that the microwave to be emitted by the radar might impose health hazard on the passengers using BBI.

6. After consultation with the Hong Kong Observatory, it was confirmed that the proposed radar would only emit microwave in a horizontal or an upward direction. The radar would also be equipped with mechanical stops to prevent it from scanning downward. Hence, the microwave emission would not affect the health of the passengers using the proposed Tuen Mun bound BBI.

7. Despite our explanation, the objector maintained his objection and expressed further concern over the location of the proposed Kowloon bound BBI as a high-pressure gas main would be in its vicinity.

8. We explained to the objector that as advised by the gas company, the high-pressure gas main, which is connected to the gas main leading to the marine police station at Siu Lam, lies on the bed of the Tai Lam nullah. The gas main runs underneath water surface of the nullah and will not impose additional risk to the surrounding structures.

9. No further response was received from the objector to our further reply. The objection is, thus, considered unwithdrawn.