

**For Discussion  
on 23 November 2007**

**Legislative Council Panel on Transport**

**825TH - Tuen Mun – Chek Lap Kok Link  
and Tuen Mun Western Bypass**

**PROPOSAL**

This paper seeks Members' views on our proposal of upgrading part of **825TH** to Category A to engage consultants to undertake the investigation and preliminary design (I&PD) for the Tuen Mun – Chek Lap Kok Link (TM-CLKL) and the Tuen Mun Western Bypass (TMWB).

**PROJECT SCOPE**

2. The scope of **825TH** includes –
  - (a) the construction of the TM-CLKL, which is a dual two-lane highway approximately 9 kilometres (km) long connecting the TMWB at the southern coast of Tuen Mun Area 40 in the north with the Hong Kong International Airport (the Airport) and Tung Chung in the south. About 4 km of the TM-CLKL is in the form of an immersed tube tunnel;
  - (b) the construction of the TMWB, which is a dual two-lane highway approximately 8.5 km long connecting the Kong Sham Western Highway in the north and the TM-CLKL in the south. About 5.8 km of the TMWB is in the form of land tunnels; and

- (c) the associated building, civil, structural, marine, electrical and mechanical, landscaping, and environmental protection and mitigation works.

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A plan showing the conceptual layout of the TM-CLKL and the TMWB (the Project) is at **Enclosure 1**.

3. The part of the Project we now propose to upgrade to Category A comprises –

- (a) an investigation study of the Project, comprising –
  - (i) a review of the findings of previous studies and examination of alignments and design options; and
  - (ii) impact assessments on environment, traffic, marine, aviation and other related aspects;
- (b) preliminary design of the works described in paragraph 2 above; and
- (c) associated site investigations and works supervision.

4. We plan to start the I&PD study of the Project in May 2008 for completion in May 2010. The cost of the construction works is about \$20 billion.

## **JUSTIFICATION**

5. On 9 July 2007, we updated the Legislative Council Panel on Transport (the Panel) on the Northwest New Territories (NWNT) Traffic and Infrastructure Review (the Review) conducted by the Transport Department. According to the findings of the Review, Tuen Mun Road, Ting Kau Bridge, Lantau Link and North Lantau Highway will be operating beyond capacity after 2016 due to the increase in cross boundary traffic, developments in the NWNT, and possible developments in North Lantau,

including the Airport developments, the Lantau Logistics Park and the Hong Kong-Zhuhai-Macao Bridge (HZMB). The projected volume to capacity (v/c) ratio<sup>1</sup> of the Base Network<sup>2</sup> in year 2016 and 2021 are shown in **Enclosure 2**. It is necessary to provide a new highway connection between the NWNT and Lantau to cope with the anticipated increase in traffic demand.

6. The Project is one of the possible highway options identified under the Review to meet the anticipated traffic demand of the NWNT and Lantau after 2016. The feasibility and advantages of the Project, as well as its competitive edges over the other options have been examined under previous engineering feasibility studies. The results of the studies concluded that the Project will provide the most direct route between the NWNT and Lantau, joining the Kong Sham Western Highway, the port back-up areas in the NWNT, the Tuen Mun River Trade Terminal, the proposed Ecopark, the Airport, the proposed Lantau Logistics Park, HZMB, North Lantau developments and possibly a new container terminal in Lantau. Upon completion, the new route will significantly reduce the journey time between the NWNT and Lantau.

7. The Project will also release some capacity of the existing roads for urban bound traffic, offer strong support to the logistics industry in Lantau and reinforce the Airport as an international and regional aviation hub through providing an alternative land access for the Airport. Compared with the other highway options, the Project will provide better planning flexibility for possible future expansion of the road network from the NWNT to the urban areas in the “very long-term”<sup>3</sup>.

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<sup>1</sup> A v/c ratio is normally used to reflect traffic situation during peak hours. A v/c ratio below 1.0 is considered acceptable. A v/c ratio above 1.0 indicates the onset of mild congestion and a v/c ratio between 1.0 and 1.2 would indicate a manageable degree of congestion. A v/c ratio above 1.2 indicates the onset of more serious congestion.

<sup>2</sup> The “Base Network” refers to the road network assumed to be in place in the NWNT and Lantau by 2016. At the time we presented the Review results to the Legislative Council Panel on Transport in July 2007, the “Base Network” comprises the North Lantau Highway Connection between HZMB and NLH, Lantau Road P1 from Tung Chung to Sham Shui Kok, widening of TMR at Tsing Tin Interchange, reconstruction and improvement to TMR expressway section, and widening of TMR from Yan Oi Square to Wong Chu Road.

<sup>3</sup> “Very long-term” stands for year 2023 and beyond.

8. The Panel showed across-the-board support for going ahead with the Project.

9. The proposed I&PD study is to determine the alignment, general layout, land requirement and impacts of the Project. We will carry out an environmental impact assessment (EIA) in association with the I&PD study in order to identify the environmental impacts and the mitigation measures required, including those related to heritage preservation. We will also carry out site investigation works to provide geotechnical and geological information for subsequent design works. As the Highways Department does not have the necessary in-house resources, we need to employ consultants to undertake the I&PD study and the associated site investigation.

## **FINANCIAL IMPLICATIONS**

10. We estimate the cost of the I&PD study to be \$88.6 million in money-of-the-day (MOD) prices, made up as follows –

	<b>\$ million</b>
(a) Consultants' fees	51.3
(i) review of the findings of previous studies on this Project, and examination of alignment and design options	4.5
(ii) impact assessments (environment, traffic, marine, aviation, etc.)	14.8
(iii) preliminary design	30.2

	<b>\$ million</b>	
(iv) supervision of site investigations	1.8	
(b) Site investigations	27.7	
(c) Contingencies	7.9	
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Sub-total:	86.9	(in September 2007 prices)
(d) Provision for price adjustment	1.7	
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Total:	88.6	(in MOD prices)
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11. We have derived the MOD estimate on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction input for the period 2008 to 2012. We will engage consultants to undertake the investigation and preliminary design study on a lump sum basis with provision for price adjustment as the duration of the consultancy agreements will exceed 12 months. The consultants will supervise the site investigation works under contracts to be awarded through competitive tendering.

12. The proposed I&PD and site investigations will have no recurrent financial implications.

## **PUBLIC CONSULTATION**

13. We reported the initial findings of the Review to the Panel in April 2005. As mentioned in paragraphs 5 and 8 above, at the Panel's meeting on 9 July 2007, we reported the findings of the Review and consulted the Panel on our plan to proceed with the I&PD study of the Project. The Panel supported the early implementation of the Project.

14. We consulted the Transport Advisory Committee on 6 July 2007 on the findings of the Review and our plan to proceed with the I&PD study of the Project. The Committee supported the early implementation of the Project.

15. We consulted the Islands District Council, the Traffic and Transport Committee (T&TC) of the Yuen Long District Council (YLDC) and the Tuen Mun District Council (TMDC) on 19, 21 and 25 September 2007 respectively. While Members generally supported the implementation of the Project, the YLDC T&TC and TMDC urged for the concurrent planning of the alternative routes linking the NWNT and the urban areas. We will continue to monitor the progress of the various major developments in the region and consider the need to take forward the other highway projects under the Review.

## **ENVIRONMENTAL IMPLICATIONS**

16. The TM-CLKL and TMWB is a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499). An environmental permit is required for the construction and operation of the projects. We will carry out an EIA study to address the potential environmental impacts of the projects in detail. We will submit the report to the Director of Environmental Protection under the EIAO for approval and will follow the statutory procedures of making the EIA report available for comments by the public and the Advisory Council on the Environment.

17. The I&PD study and site investigations will generate very little construction waste. We will require the consultants to fully consider measures to minimise the generation of such waste and to reuse/recycle them as much as possible in the future implementation of the Project.

## **LAND ACQUISITION**

18. The I&PD and site investigations do not require any land acquisition.

## **THE WAY FORWARD**

19. We intend to seek the funding support of the Public Works Sub-committee and the Finance Committee of the Legislative Council in December 2007 and January 2008 respectively to upgrade part of the Project to Category A for the I&PD study. Subject to funding approval, we plan to start I&PD works in May 2008 for completion in May 2010.

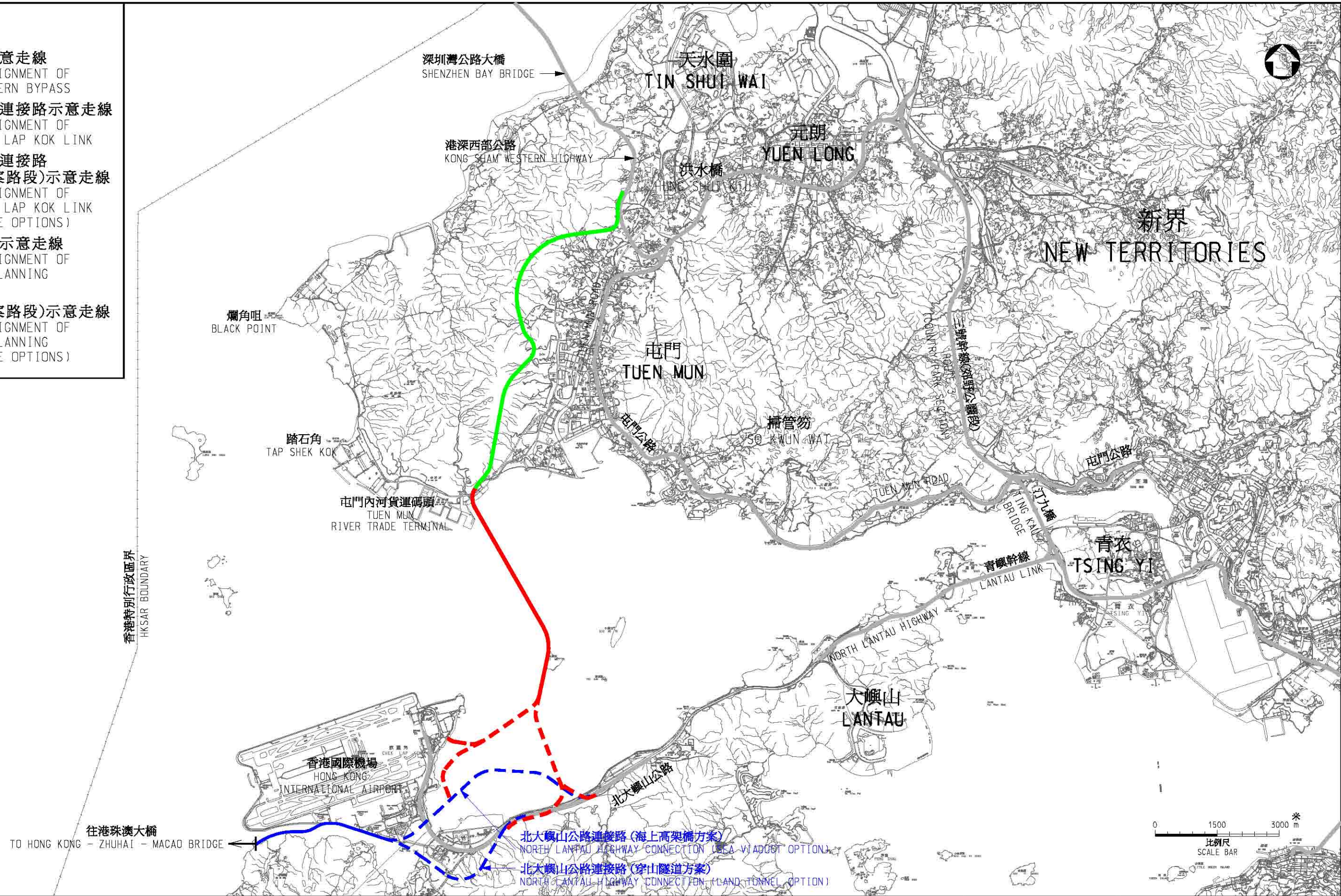
## **ADVICE SOUGHT**

20. Members are invited to comment on the Project.

Transport and Housing Bureau  
November 2007

圖例：  
LEGEND :

- 屯門西繞道示意走線  
INDICATIVE ALIGNMENT OF  
TUEN MUN WESTERN BYPASS
- 屯門至赤鱗角連接路示意走線  
INDICATIVE ALIGNMENT OF  
TUEN MUN-CHEK LAP KOK LINK
- - - 屯門至赤鱗角連接路  
(多於一個方案路段)示意走線  
INDICATIVE ALIGNMENT OF  
TUEN MUN-CHEK LAP KOK LINK  
(WITH MULTIPLE OPTIONS)
- 籌劃中的道路示意走線  
INDICATIVE ALIGNMENT OF  
ROADS UNDER PLANNING
- - - 籌劃中的道路  
(多於一個方案路段)示意走線  
INDICATIVE ALIGNMENT OF  
ROADS UNDER PLANNING  
(WITH MULTIPLE OPTIONS)

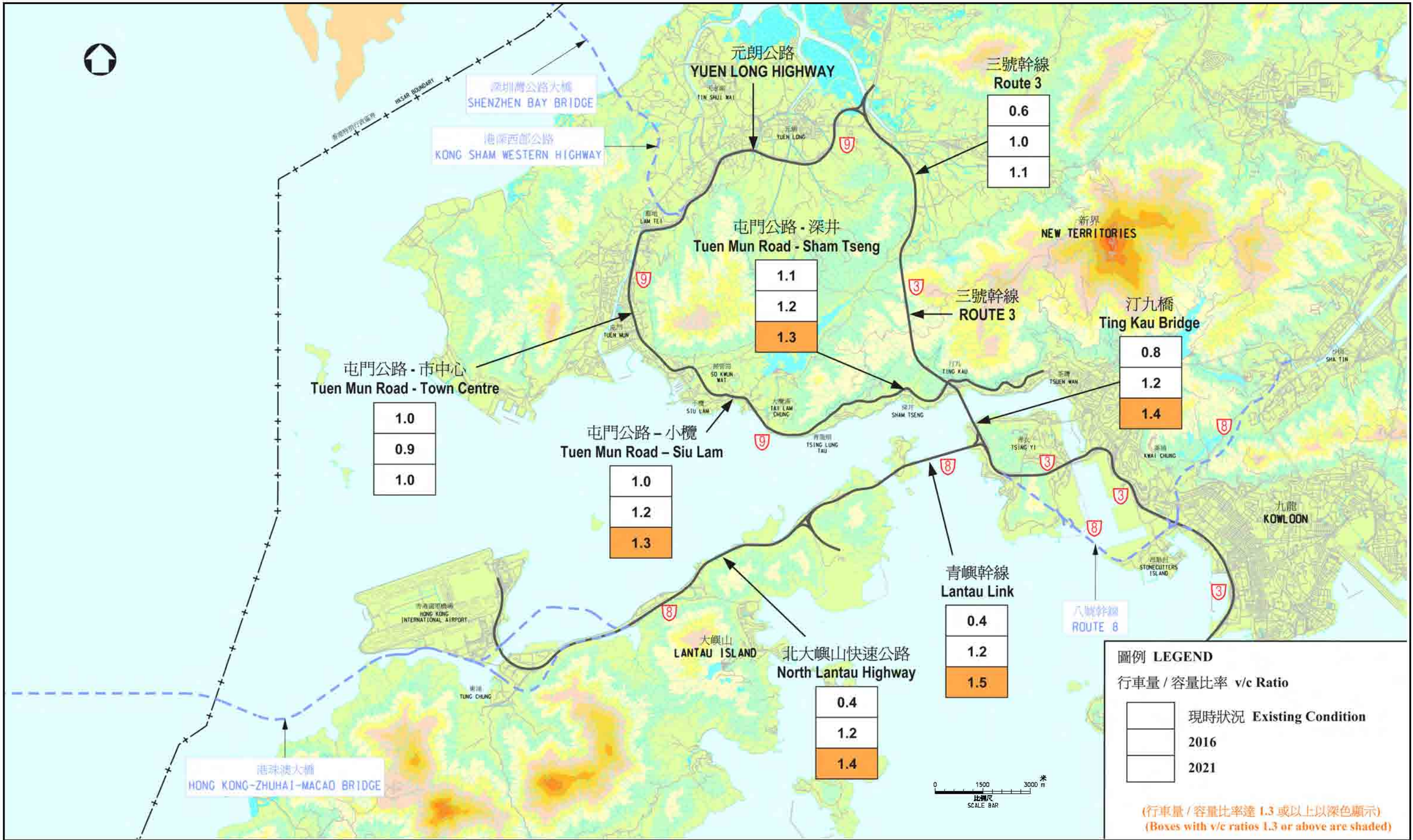


圖則名稱 drawing title

屯門至赤鱗角連接路及屯門西繞道  
TUEN MUN-CHEK LAP KOK LINK AND TUEN MUN WESTERN BYPASS

設計 designed	SIGNED	繪圖 drawn	SIGNED	圖則編號 drawing no.	比例 scale
W.W.LAM	13/11/07	H.S.CHAN	13/11/07	HZMN05004-SP0010	1:90000
覆核 checked	SIGNED	批准 approved	SIGNED	© 版權所有 COPYRIGHT RESERVED	
K.P.WONG	13/11/07	C.H.CHEUNG	13/11/07	<b>HIGHWAYS DEPARTMENT HONG KONG</b> 路政署	
港珠澳大橋香港工程管理局 HONG KONG - ZHUHAI - MACAO BRIDGE HONG KONG PROJECT MANAGEMENT OFFICE					





圖則名稱 drawing title

屯門至赤鱗角連接路及屯門西繞道  
基本公路網的交通狀況

TUEN MUN-CHEK LAP KOK LINK AND TUEN MUN WESTERN BYPASS  
TRAFFIC CONDITION UNDER BASE NETWORK

設計 designed SIGNED  
W. W. LAM 13/11/07

繪圖 drawn SIGNED  
H. S. CHAN 13/11/07

圖則編號 drawing no.  
HZMN05004-SP0011

比例 scale  
1:110000

覆核 checked SIGNED  
K. P. WONG 13/11/07

批准 approved SIGNED  
C. H. CHEUNG 13/11/07

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HONG KONG - ZHUHAI - MACAO BRIDGE  
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HIGHWAYS DEPARTMENT  
HONG KONG 路政署