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Panel on Transport

**Background Brief on
Reconstruction and Improvement of Tuen Mun Road**

Purpose

This paper sets out the background to the proposed reconstruction and improvement of Tuen Mun Road, and summarizes the major views and concerns expressed by members previously on the subject.

Tuen Mun Road

2. Tuen Mun Road comprises two major sections – the Expressway Section (Wong Chu Road to Tsuen Wan Road) and the Town Centre Section (Wong Chu Interchange to Lam Tei Interchange).

3. According to LC Paper No. CB(1) 848/03-04(03) provided by the Administration in January 2004, the design capacity of the Expressway Section is 118 000 vehicles. In 2003, the average daily traffic on the Expressway Section during weekdays was about 106 000 vehicles. The vehicle/capacity (v/c) ratio¹ was 1.1 during peak hours. As for the Town Centre Section, its design capacity is 78 000 vehicles. The v/c ratios of those busy sections, i.e. the southbound two-lane carriageways of the Tsing Tin Road Interchange section, the Town Plaza section and the Wong Chu Road Interchange section, during the morning peak period (7 a.m. – 9 a.m.) were 1, 0.9 and 1 respectively. During the off-peak and evening peak periods (5 p.m. – 7 p.m.), the v/c ratios of all sections in both directions were well below 1.

¹ v/c ratio is normally used to reflect traffic situation during peak hours. A v/c ratio equal to or less than 1.0 means that the road has sufficient capacity to cope with the volume of vehicular traffic under consideration. A v/c ratio below 1 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. Above 1.2 indicates more serious congestion with traffic speeds progressively deteriorating with further increase in traffic and such v/c ratios are considered unacceptable.

Traffic impact on Tuen Mun Road upon the commissioning of Hong Kong – Shenzhen Western Corridor

4. According to LC Paper No. CB(1) 1912/03-04(26) provided by the Administration in May 2004, upon the commissioning of Hong Kong – Shenzhen Western Corridor (HK–SWC) and Deep Bay Link (DBL), the v/c ratio for the peak period at the most critical section of the Expressway Section (i.e. the Sham Tseng Section) is projected to increase from 1.1 in 2002 to about 1.19. As for the Town Centre Section, the traffic flow is projected to increase by 10% – 15%. The v/c ratios of the critical sections, i.e. the southbound carriageways of Tuen Mun Road at Tsing Tin Interchange and Wong Chu Interchange, would range from 1.04 to 1.18. Further information about the implementation of HK-SWC, DBL, Route 10 and other supporting infrastructure is set out in **Annex A**.

5. In anticipation of an increase in traffic flow on Tuen Mun Road upon the commissioning of HK-SWC and DBL, the Administration had advised that it would introduce a number of improvement works to improve the traffic situation. These include the improvements to the Town Centre Section and the reconstruction of the Expressway Section. The long-term needs for transport infrastructure development in the North West New Territories and Lantau would be addressed under the North West New Territories Traffic and Infrastructure Review.

Funding proposal for the detailed design for the reconstruction and improvement of Tuen Mun Road

6. On 11 June 2004, the Finance Committee approved the Administration's funding proposal for the detailed design for the reconstruction and improvement of the section of Tuen Mun Road between Tsuen Wan and Sam Shing Hui and to carry out the associated site investigation works at an estimated cost of \$71.6 million. In considering the funding proposal, members requested the Administration to carry out a study to review the feasibility and the practicability of widening the existing dual 3-lane Tuen Mun Road to dual 4-lane during the detailed design of the project.

Feasibility of widening Tuen Mun Road to dual 4-lane configuration

7. On 22 April 2005, the Administration briefed the Panel on Transport on the findings of the feasibility study on widening the expressway section of Tuen Mun Road between Tsuen Wan and Sam Shing Hui from dual 3-lane to dual 4-lane, and the proposed short to medium term measures to improve the traffic conditions of Tuen Mun Road.

8. The Administration had pointed out that while widening Tuen Mun Road to dual 4-lane with a full-width hard shoulder would be technically feasible except for the sections at Ting Kau and Siu Lam Interchange, it had decided not to proceed with the

proposal, having regard to the following:

- (a) A dual 4-lane scheme would entail significant land implications in the So Kwun Wat and Sham Tseng areas. It was estimated that resumption of about 7,000 metre² of private land was likely to be required, with a total resumption cost of about \$200 million, not to mention the time required for the land resumption;
- (b) Widening of Tuen Mun Road to dual 4-lane configuration would increase traffic capacity and consequentially bring about additional noise impact, and hence, it would necessitate the provision of additional noise barriers at an estimated cost of about \$1,300 million;
- (c) The programme for widening Tuen Mun Road to dual 4-lane was expected to take at least 20 months longer than the planned reconstruction and improvement in the present dual 3-lane configuration; and
- (d) The cost of widening Tuen Mun Road to dual 4-lane was estimated to be about \$5,500 million, as compared to \$3,200 million for the reconstruction and improvement works in the present dual 3-lane configuration.

9. The Administration therefore concluded that it would proceed with its plan to reconstruct and improve Tuen Mun Road on the basis of a dual 3-lane configuration.

Other measures to improve the traffic conditions of Tuen Mun Road

10. The Administration also pointed out that while it would not widen Tuen Mun Road to dual 4-lane, the road would be upgraded to the prevailing expressway standard. As a result, the overall operation of the road would be improved. Moreover, the Administration had implemented/would implement the short to medium term measures as per the attached paper submitted by the Administration in **Annex B** to improve the traffic conditions of Tuen Mun Road.

Members' concerns

11. The Panel has along been concerned about the traffic impact on Tuen Mun Road, particularly upon the commissioning of HK-SWC and DBL. On 30 January 2004, the Panel held a meeting with the Administration to review the traffic impact on Tuen Mun Road upon the commissioning of HK-SWC and DBL, as well as the options being considered by the Administration to improve the traffic flow of Tuen Mun Road. The Panel held another meeting on 28 May 2004 to discuss measures to improve the traffic conditions of Tuen Mun Road and efforts to enhance the traffic distribution between Tuen Mun Road and Route 3 amongst other issues.

12. In the course of deliberation, the Panel cast doubt on the basis of the assessment that the existing highway network in the North West New Territories had adequate capacity to cope with the traffic demand arising from the commissioning of HK-SWC and DBL. Members called on the Administration to put in place adequate transport infrastructure to cope with the rising traffic demand in a timely manner.

13. In reviewing the long-term needs for transport infrastructure development in North West New Territories and North Lantau at the Panel meeting on 22 April 2005, the Panel passed a motion urging the Administration to expeditiously study the implementation of Tuen Mun Western Bypass and Tuen Mun – Chek Lap Kok Link so as to cope with the increasing traffic demand arising from the commissioning of HK-SWC.

14. To achieve a more balanced traffic distribution between Route 3 and Tuen Mun Road, the Panel had also reviewed with the Administration and Route 3 (CPS) Company on means to increase the utilization of Route 3 so as to relieve the traffic congestion on Tuen Mun Road. At the meeting on 19 December 2005, the Panel reminded the Administration to discuss with the franchisee of Route 3 possible measures to rationalize the utilization of Route 3 and the alternative, non-tolled routes. There was also a need to lower the tunnel tolls so as to achieve traffic diversion purpose.

15. Regarding the construction and improvement of Tuen Mun Road, the Panel had discussed the related issues at the meetings on 23 April 2004 and 22 April 2005. Members were concerned that the heavy traffic on Tuen Mun Road would be disrupted during the construction period and the congestion problem would be further aggravated with the commissioning of HK-SWC. In this regard, the Administration had pointed out that three traffic lanes would be maintained during peak hours, which were from 7.00 a.m. to 7.00 p.m. for the Kowloon-bound lanes and 2.00 p.m. to 9.00 p.m. for the Tuen Mun-bound lanes. During non-peak hours, at least two traffic lanes would be maintained. The Police and the Transport Department would work with contractors to implement appropriate traffic diversion plans to minimize impacts on traffic.

16. A list of papers is in the **Annex C**.

**Hong Kong-Shenzhen Western Corridor,
Route 10 and other supporting infrastructure**

Hong Kong – Shenzhen Western Corridor

The Panel recognizes the need for constructing the Hong Kong-Shenzhen Western Corridor (HK-SWC), which is a dual three-lane carriageway spanning across Deep Bay, linking the northwestern part of the New Territories with Shekou in Shenzhen.

Route 10

2. When consulted on the HK-SWC and its connecting road, the Deep Bay Link (DBL) in October 2001, the Panel raised concerns that the SWC and DBL traffic, upon opening, would cause unacceptable congestion at Tuen Mun town centre and Tuen Mun Road. Some members considered that the planning of the supporting infrastructure, especially Route 10 - North Lantau to Yuen Long Highway (Route 10 Northern Section), should be co-ordinated with the HK-SWC and DBL programme. At the same time, the Panel had received views from various bodies and members of the public regarding the proposed implementation of Route 10. Five public hearings on the HK-SWC, DBL and Route 10 were held between November 2001 and January 2002.

3. At the Panel meetings, Route 3 (CPS) Company indicated that there was still spare capacity at Route 3 and the route would not reach saturation until 2016. Route 10 Northern Section would not be required until then.

4. According to the Administration's forecasts in 2001, Route 3 would be saturated by 2010-11 during peak hours and Route 10 Northern Section would be required by then. However, in view of the concerns raised by members, the Tuen Mun District Council and the Yuen Long District Council, the Administration was prepared to start the detailed design of Route 10 Northern Section in 2002 to retain the flexibility of completing the project between 2007-08 and 2010-11.

5. As regards the suggestion that Route 10 be replaced with a link road between Tuen Mun and Chek Lap Kok, the Administration explained that such a route was already on its drawing board but its priority was lower than that of Route 10. That was because it related to future traffic demand arising from the further development on Lantau Island. This link could not perform the important functions of Route 10, such as providing a connection between the Northwest New Territories (NWNT) and the urban areas and container ports, and relieving Tuen Mun Road and Route 3 in the longer term.

6. In March 2002, the Finance Committee approved the funding proposal for the detailed design of the HK-SWC and DBL projects, but not the Route 10 Northern Section project. The Finance Committee's approval in respect of the HK-SWC and DBL projects was made on the requirement that the Administration would investigate and design an Easterly Link Road (ELR) as requested by some members. The ELR would serve as an additional access road connecting the HK-SWC and DBL to the existing road system to facilitate traffic heading east from DBL after landing at Ngau Hom Shek.

7. In December 2002, the Administration consulted the Panel again on the HK-SWC and DBL projects prior to seeking funding approval for their construction. The funding proposal for the construction of the HK-SWC and DBL was approved by the Finance Committee on 21 February 2003.

Northwest New Territories Traffic and Infrastructure Review

8. In August 2003, the Panel was briefed on the preliminary outcome of the NWNT Traffic and Infrastructure Review (the Review). The purpose of the Review is to develop a long-term strategy for the development of highway infrastructure in the NWNT and North Lantau region (the Strategy). In formulating the Strategy, a Highway Network Development Plan (the Plan) was developed which combined the existing highway network with possible future extensions. The Administration advised that it would formulate a development sequence of new highway infrastructure projects identified in the Plan and their implementation timeframe, taking into account the planning parameters (such as population, economic growth, new developments in Lantau and cross boundary traffic) so that the projects could be implemented in a timely manner to meet forecast demands.

9. In June 2004, the Panel revisited the item on the NWNT Traffic and Infrastructure Review. The Administration pointed out that a proposed implementation programme for the necessary infrastructure could only be drawn up when a clearer picture on the traffic demand arising from the Hong Kong-Zhuhai-Macao Bridge and the development programme for other major proposals on Lantau were available.

10. In March 2005, the Administration updated members on the latest findings of the NWNT Traffic and Infrastructure Review. The Panel passed a motion urging the Government to expeditiously study the implementation of Tuen Mun Western Bypass and Tuen Mun - Chek Lap Kok Link so as to cater for the traffic generated by the commissioning of HK-SWC.

Motion passed by the Council

11. On 8 March 2006, the Council passed a motion on "Expediently improving the traffic arrangements in the western and northwestern parts of the New Territories". The wordings of the motion are as follows:

"That, given the impending commissioning of the Hong Kong-Shenzhen Western Corridor at the end of this year, which will substantially increase the traffic load in the western and northwestern parts of the New Territories, this Council urges the Government to formulate as early as possible corresponding strategies, including:

- (a) buying out the ownership of Route 3 at a reasonable price and opening it up for use by motorists;
- (b) constructing the Easterly Link Road that connects the Deep Bay Link and Route 3, so as to divert the traffic flow from Tuen Mun Road;
- (c) expeditiously completing the extension of Tuen Mun Road;
- (d) implementing the Northern Link project as early as possible and expeditiously completing the Kowloon Southern Link project to perfect the railway network and encourage residents of the Northwest New Territories to make use of the railways for travelling to and from different districts, so as to alleviate the pressure on Tuen Mun Road and Route 3; and
- (e) setting reasonable fares that are acceptable to the public, so as to encourage them to use the railway transport system.

thereby alleviating the deteriorating traffic congestion in that district and avoiding causing great nuisance or inconvenience to local residents; furthermore, the Government may also lower the existing tolls by such means as extending the franchise period of Route 3; and should expeditiously construct the Tuen Mun Western Bypass, the Tuen Mun to Chek Lap Kok Link, as well as the Tuen Mun Eastern Bypass, while the environmental impact of the alignment of the relevant roads must be adequately assessed, with a view to reducing undesirable effects on the local environment; and expedite the various traffic improvements to the Tuen Mun town centre section of Tuen Mun Road."

**Short to Medium Term Measures to Improve
the Traffic Conditions of Tuen Mun Road (TMR)**

Improvements to the Town Centre Section (TCS) of TMR

(1) Lengthening of Bus Bays alongside TCS of TMR

Scope

The works, completed in February 2005, involved lengthening the existing bus bay on TMR southbound near Tseng Choi Street.

Traffic Benefits

2. The bus bay near Tseng Choi Street could accommodate at most three buses each time in the past before the improvement works. Due to the limited capacity of this bus bay, buses very often had to queue up when loading/unloading passengers, thus blocking traffic along TMR – TCS. Lengthening this bus bay by 13 metres has increased its capacity, which in turn has reduced obstruction to the main road traffic.

(2) Improvement of Merging Lane from Tuen Hi Road into TMR – TCS

Scope

3. The improvement works will lengthen the merging length and improve the road markings to facilitate a better traffic merging arrangement from Tuen Hi Road to TMR northbound. Works are scheduled to commence in mid 2005 for completion by end 2005.

Traffic Benefits

4. Tuen Hi Road is a service road parallel to TMR with a short merging lane to TMR northbound. As a result of the difficulties in merging into TMR, traffic queues often develop along Tuen Hi Road, especially during peak hours, thus blocking vehicles from TMR entering this service road for

loading/unloading activities. This blockage further leads to tailing back of vehicles to TMR – TCS, thus causing congestion. The proposed improvement works will improve both the local traffic and road safety conditions.

(3) Widening of TMR at Tsing Tin Road Interchange Section

Scope

5. The improvement works will widen TMR at Tsing Tin Road Interchange Section to a dual 3-lane carriageway. The feasibility study of the works is underway. The improvement works are scheduled to start tentatively in early 2007 for completion in mid 2008.

Traffic Benefits

6. The existing TMR at the Tsing Tin Road Interchange Section is a dual 2-lane carriageway with a v/c ratio of about 1.04. This is one of the most critical sections in the TMR – TCS. It is forecast that after the commissioning of the Hong Kong – Shenzhen Western Corridor (HK-SWC) and Deep Bay Link (DBL), the v/c ratio at this section will increase to 1.18. After widening this section of TMR to a dual 3-lane carriageway, the v/c ratio at this section is expected to be reduced to below 1. A layout plan of the proposed works is at Annex to this Enclosure.

(4) Modification of Directional Signs

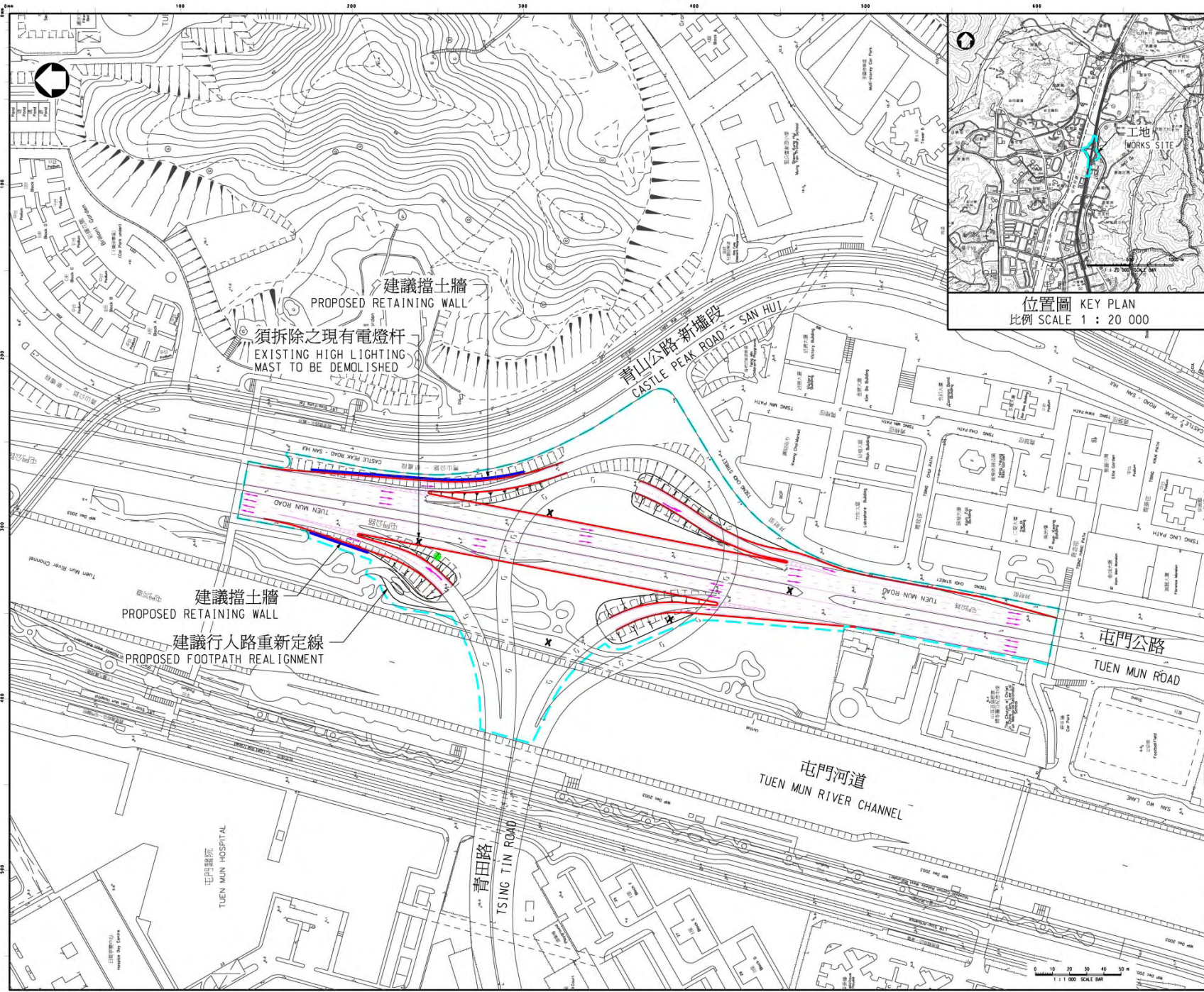
Scope

7. We will modify some of the existing directional signs in the Tuen Mun district and to provide additional directional signs within the town centre to encourage motorists in the Tuen Mun New Town to use parallel routes in lieu of TMR – TCS for their journeys to Tsuen Wan and Kowloon. The modification works are scheduled to be completed by the end of 2005.

Traffic Benefits

8. Ming Kum Road, Tsing Wun Road and Wong Chu Road are parallel routes to TMR – TCS. Diversion of traffic from TMR – TCS heading

Tsuen Wan and Kowloon to these parallel routes, which join TMR near Sam Shing Estate, will reduce traffic loading at TMR – TCS.



註明 NOTES:

圖例 LEGEND

- X 現有電燈杆
EXISTING HIGH LIGHTING MAST
- 擬建電燈杆
PROPOSED HIGH LIGHTING MAST
- Y 擬建填土斜坡
PROPOSED FILL SLOPE
- Y 擬建切削斜坡
PROPOSED CUT SLOPE
- 建議工程界限
PROPOSED PROJECT BOUNDARY
- 建議路線
PROPOSED ROAD ALIGNMENT
- 建議道路標記
PROPOSED ROAD MARKING

修訂日期 REV. DATE	修訂詳情 REVISION DESCRIPTION	修訂人 INITIAL
02/03/05	測量 SURVEYED	
02/03/05	設計 DESIGNED	K.H.HO
02/03/05	繪圖 DRAWN	T.K.KO
02/03/05	覆核 CHECKED	K.H.HO
批准 APPROVED		

合約編號
CONTRACT NO.
繪圖編號
DRAWING NO.
工程編號
PROJECT NO.

合約名稱
PROJECT CONTRACT
青田交匯處的屯門公路
擴闊工程
WIDENING OF TUEN MUN ROAD AT
TSING TIN INTERCHANGE

圖則名稱 drawing title
工程詳細藍圖
PROJECT LAYOUT PLAN

圖則編號 drawing no.
HWMP04003-SK0005
比例 scale
1:1000
OR
AS SHOWN

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主要工程管理處
MAJOR WORKS
PROJECT MANAGEMENT OFFICE

HIGHWAYS DEPARTMENT
HONG KONG 路政署 香港

Relevant documents on reconstruction and improvement of Tuen Mun Road

List of relevant papers (from September 2003 to October 2006)

Date of meeting	Meeting	Minutes/Paper	LC Paper No.
29 September 2003	Panel on Transport	Administration's paper on Northwest New Territories Traffic and Infrastructure Review	CB(1)2291/02-03(04) http://www.legco.gov.hk/yr02-03/english/panels/tp/papers/tp0801cb1-2291-4e.pdf
		Minutes of meeting	CB(1)174/03-04 http://www.legco.gov.hk/yr02-03/english/panels/tp/minutes/tp030929.pdf
30 January 2004	Panel on Transport	Administration's paper on traffic impact on Tuen Mun Road upon the commissioning of Hong Kong - Shenzhen Western Corridor and Deep Bay Link	CB(1)848/03-04(03) http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0130cb1-848-3e.pdf
		Minutes of meeting	CB(1)1146/03-04 http://www.legco.gov.hk/yr03-04/english/panels/tp/minutes/tp040130.pdf
23 April 2004	Panel on Transport	Administration's paper on reconstruction and improvement of Tuen Mun Road	CB(1)1556/03-04(04) http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0423cb1-1556-4e.pdf
		Administration's supplementary paper on reconstruction and improvement of Tuen Mun Road	CB(1)1756/03-04(01) http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0423cb1-1756-1e.pdf
		Minutes of meeting	CB(1)1911/03-04 http://www.legco.gov.hk/yr03-04/english/panels/tp/minutes/tp040423.pdf

Date of meeting	Meeting	Minutes/Paper	LC Paper No.
19 May 2004	Public Works Subcommittee	Administration's paper on reconstruction and improvement of Tuen Mun Road	PWSC(04-05)13 http://www.legco.gov.hk/yr03-04/english/fc/pwsc/papers/p04-13e.pdf
		Minutes of meeting	PWSC88/03-04 http://www.legco.gov.hk/yr03-04/english/fc/pwsc/minutes/pw040519.pdf
28 May 2004	Transport Panel	Administration's paper on improvement to traffic conditions of Tuen Mun Road and provision and operation of tunnels and tollways	CB(1)1912/03-04(26) http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0528cb1-1912-26e.pdf
		Minutes of meeting	CB(1)2408/03-04 http://www.legco.gov.hk/yr03-04/english/panels/tp/minutes/tp040528.pdf
11 June 2004	Finance Committee	Administration's paper on recommendations of the Public Works Subcommittee made on 5 May 2004 and 19 May 2004	FCR(2004-05)14 http://www.legco.gov.hk/yr03-04/english/fc/fc/papers/f04-14e.pdf
		Minutes of meeting	FC107/03-04 http://www.legco.gov.hk/yr03-04/english/fc/fc/minutes/fc040611.pdf
25 June 2004	Panel on Transport	Administration's paper on Hong Kong-Zhuhai-Macao Bridge and the Northwest New Territories Traffic and Infrastructure Review	CB(1)2180/03-04(02) http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0625cb1-2180-2e.pdf
		Administration's supplementary paper on Northwest New Territories traffic and infrastructure review	CB(1)2420/03-04(01) http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0625cb1-2420-1e.pdf

Date of meeting	Meeting	Minutes/Paper	LC Paper No.
		Minutes of meeting	CB(1)2501/03-04 http://www.legco.gov.hk/yr03-04/english/panels/tp/minutes/tp040625.pdf
22 April 2005	Panel on Transport	Administration's paper on Reconstruction and Improvement of Tuen Mun Road.	CB(1)1096/04-05(08) http://www.legco.gov.hk/yr04-05/english/panels/tp/papers/tp0318cb1-1096-8e.pdf
		Administration's paper on Northwest New Territories Traffic and Infrastructure Review 2004	CB(1)1096/04-05(07) http://www.legco.gov.hk/yr04-05/english/panels/tp/papers/tp0318cb1-1096-7e.pdf
		Minutes of the meeting	CB(1)1833/04-05 http://www.legco.gov.hk/yr04-05/english/panels/tp/minutes/tp050422.pdf

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