

## **Legislative Council Panel on Transport**

### **Reconstruction and improvement of Tuen Mun Road**

#### **PURPOSE**

This paper seeks Members' views on the implementation of the project "Reconstruction and improvement of Tuen Mun Road".

#### **BACKGROUND**

2. The existing section of TMR between Tsuen Wan and the Tuen Mun town is a 15.5 kilometres long expressway forming part of Route 2. This dual three-lane highway is mostly carried on at-grade roads with approximately 1.6 kilometres of it carried on bridge structures. The highway has been in service for almost 20 years. Most at-grade road sections are approaching the end of their service life<sup>1</sup> and are beyond economical repair. We have recently been keeping the road in a serviceable condition through frequent maintenance and resurfacing. The only cost-effective measure to extend the service life of the at-grade sections of TMR is by reconstruction.

3. The existing traffic lanes of TMR are 3.3 to 3.5 metres wide, which fall below the current standard lane width of 3.65 metres for an expressway. Moreover, there is no hardshoulder on most sections of the road to cater for broken down vehicles, unobstructed passage of emergency vehicles and maintenance works. Widening of the lane widths to the current standard and provision of hardshoulders are necessary to improve traffic operation and enhance safety. We also propose replacement of the existing metal crash barrier along TMR with concrete profile barrier to provide better vehicle containment and enhance road safety.

4. The current slip roads of the existing interchanges along TMR at Sham Tseng and Siu Lam are too short to meet the latest traffic engineering standards. Improvement of the merging/diverging arrangement at these two interchanges will enable motorists to enter and exit TMR via the interchanges more smoothly and safely.

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<sup>1</sup> The design life of at-grade road pavement is 20 years. The design life of highway bridge structures is 120 years. We propose reconstruction of the at-grade sections of the road.

5. The existing TCSS consists of closed circuit television (CCTV) cameras and emergency telephones. The Study on the provision, management and operation of TCSS facilities for the strategic road network completed by the Transport Department in September 1999 recommended the provision of a complete TCSS, which includes CCTV cameras, fibre optic communication cabling, speed enforcement cameras, variable message signs and lane control signals, for all new and existing highways in the strategic road network. As TMR is part of the strategic Route 2 in the Northwest New Territories, we propose to upgrade the TCSS along the road to enhance efficient and effective traffic management and incident management. We will retain the existing CCTV cameras as far as possible. We propose to remove the emergency telephones as they will not be required in the proposed system.

6. Unavoidably we will need to implement traffic diversions for the above works. We will reduce the speed limits along affected sections of the highway and carry out the works in a safe manner. We will implement appropriate traffic management measures and study ways to minimise traffic disruption. We will investigate the requirement to maintain three traffic lanes in each direction during the peak hours of weekdays during construction. We will also investigate, taking into account the programme of other projects in the vicinity, the phasing of works along the 15.5 kilometres highway so as to limit the extent of road affected at any one time.

7. We need to proceed now with the investigation and preliminary design for the proposed works under **746TH** to establish its land requirements, as well as the environmental, marine, drainage, traffic and other impacts on the areas concerned. Such information is essential for us to firm up the scope of the proposed project and will provide the necessary input for the subsequent detailed design stage. To facilitate the investigation and preliminary design of the project, we will also carry out associated ground investigations to obtain relevant site data. As we do not have the necessary in-house resources, we propose to employ consultants to undertake the investigation and preliminary design and to supervise the associated ground investigation works.

## **THE PROPOSAL**

8. We propose to proceed with the reconstruction and improvement to Tuen Mun Road with the following scope of works –

- (a) reconstruction of the at-grade sections of TMR;
- (b) improvement of the traffic lanes to standard width, provision of standard 3.3 metres wide hardshoulders, construction of emergency lay-bys in areas where the provision of a standard hardshoulder is not feasible, and replacement of existing metal crash barriers with concrete profile barriers;
- (c) improvement of the merging / diverging arrangement at the interchanges at Sham Tseng and Siu Lam;
- (d) upgrading of the traffic control and surveillance system (TCSS); and
- (e) associated civil, structural and slope upgrading works, and works on environmental mitigation, drainage, road lightings, water mains, traffic aids and electrical & mechanical installation.

9. The part of the project we now propose to upgrade to Category A comprises -

- (a) investigation and preliminary design of the proposed works described in paragraph 3 above; and
- (b) associated ground investigations.

The site plan is at Enclosure 1.

## **FINANCIAL IMPLICATIONS**

10. The total cost of the project is estimated to be \$2,641.6 million. We estimate that the cost of the part of the project to be graded to Category A to be \$40.8 million in MOD prices, made up as follows –

		<b>\$ million</b>	
(a)	Consultants' fees	18.1	
	(i) investigation and preliminary design	16.4	
	(ii) supervision of ground investigations	1.5	
	(iii) Electrical and Mechanical Services Trading Fund (EMSTF) charges <sup>2</sup>	0.2	
(b)	Ground investigations	16.9	
(c)	Contingencies	3.5	
	Sub-total	38.5	( at September 2000 prices )
(d)	Provision for price adjustment	2.3	
	Total	40.8	(in MOD prices )

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<sup>2</sup> Upon its establishment from 1 August 1996 under the Trading Funds Ordinance, the EMSTF charges government departments for design and technical consultancy services for electrical and mechanical (E&M) installation. The services rendered for this project include checking consultants' submissions on all E&M installations and providing technical advice to the government on all E&M works and their impacts on the project.

## **PUBLIC CONSULTATION**

11. We will consult the Tsuen Wan, Tuen Mun and Yuen Long District Councils at appropriate time before the completion of the preliminary design of the proposed road project.

## **ENVIRONMENTAL IMPLICATIONS**

12. We completed a Preliminary Environmental Review (PER) for the project in May 1999. The PER concluded and the Director of Environmental Protection agreed that an Environmental Impact Assessment would not be necessary. We shall include in relevant contracts standard pollution control clauses for dust, noise and site run-off nuisance during construction. The current proposed consultancy on the investigation and preliminary design of the reconstruction and improvement of TMR will not have any adverse environmental implications.

13. The proposed consultancy and site investigation works will only generate a very small amount of construction and demolition material (C&DM). We will require the consultant to fully consider measures to minimize the generation of C&DM and to reuse / recycle C&DM as much as possible in the future implementation of the construction projects.

## **LAND ACQUISITION**

14. The proposed investigation and preliminary design work does not require any land acquisition.

## **THE WAY FORWARD**

15. We plan to seek the approval of the Public Works Sub-Committee of the Finance Committee in May 2001 to upgrade the site investigation and preliminary design works to Category A. We plan to start the investigation and preliminary design works in December 2001 for completion in March 2003. We will then proceed with the detailed design of the proposed works in November 2003 for completion in March 2005. We intend to commence construction works in 2005 for completion in 2010.

**ADVICE SOUGHT**

16. Members are invited to provide comments on the project before we seek the approval of the Public Works Sub-Committee.

Transport Bureau  
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