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Ms Sophie LAU
Clerk to Legislative Council Panel on Transport
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong

24 May 2019

Dear Ms LAU,

**Legislative Council Panel on Transport**

**Operational safety of tram services and**
**"rail jacket technology" track replacement subsidy scheme**

Thank you for your letter dated 10 April 2019, enclosing Hon AU Nok-hin's views on the operational safety of tram services and the "rail jacket technology" track replacement subsidy scheme.

**Operational safety of tram services**

The Government has always attached great importance to the operational safety of tram services and is highly concerned about the two recent tram incidents. Regarding the tram derailment incident happened at the road section on Des Voeux Road Central (Westbound) near Ice House Street in Central on the afternoon of 6 March this year, the Hong Kong Tramways Limited ("HKTL") has conducted a preliminary investigation and examined the tramcar concerned. It was preliminarily suspected that a small-sized foreign metallic object on the track had caused the tramcar concerned to derail when passing through the section. The HKTL indicated that the object was not a component of the tramcar or the track,

and its size was difficult to be detected by the tram motorman. The Police is conducting a detailed investigation into the incident. As for the toppling over of a tramcar at the road section on Des Voeux Road West (Westbound) near Hill Road in Sai Wan in the small hours of 23 March this year, the tramcar concerned did not carry any passenger and the motorman was injured in the incident. The Police, in conjunction with the Electrical and Mechanical Services Department ("EMSD"), is conducting an investigation, including checking the electrical and mechanical equipment of the tramcar concerned. As the investigation into the cause of the incident is still underway, we are not in a position to compare the two incidents or make any comment at the moment. However, having regard to the findings of the investigation, the Government will discuss with the HKTL relevant improvement measures (including the feasibility of using technology) to further enhance the road safety of tram services.

According to HKTL's internal guidelines, the engineering personnel of the HKTL will carry out a comprehensive mechanical inspection of each tramcar every eight days. Tram motormen will also check the equipment including the signalling system and the braking system, etc. before commencement of service every day, in order to ensure proper functioning of all mechanical parts. The information provided by the HKTL showed that the engineering personnel had carried out routine maintenance and inspection of the two tramcars concerned on 4 March and 18 March this year respectively before the aforesaid two incidents. The inspection results showed that both tramcars were in normal operation.

Immediately after the aforesaid incidents, the HKTL has stepped up and enhanced the training and monitoring of the motormen (especially the motormen of night shifts), including stressing to the motormen the message of "safety-first" and reminding them of proper and safe driving attitudes as well as being vigilant while passing through road sections with bends and junctions, etc., through channels such as internal newsletters, circulars and briefings. The HKTL has also indicated that it will step up the monitoring of maintenance works of tram tracks to ensure the road safety of trams.

To ensure the operational safety of tram services, on the monitoring front, the EMSD regularly arranges staff to conduct inspection and testing of the electrical and mechanical equipment of the tramway system, including electrical installations, mechanical components, pneumatic system and braking system, etc. to ensure its operational safety. The EMSD will continue the inspection work in this regard, as well as review the causes of previous tram incidents with the HKTL and continue to monitor the implementation of the relevant improvement measures on electrical and mechanical equipment. As a road-based public transport mode,

on top of compliance with the general road traffic management measures, trams also have to comply with certain traffic management measures designed specifically for them. The TD will continue to closely monitor the tram services and discuss regularly with the HKTL the road safety and operational issues of tram services with a view to maintaining the operational efficiency of trams.

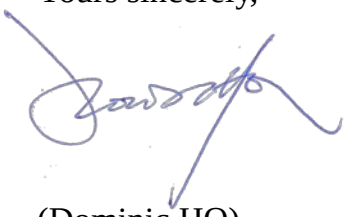
**"Rail jacket technology" track replacement subsidy scheme**

As announced in the 2017 Policy Address, the Government has earmarked $20 million, which will be provided on a matching basis in three years from 2017-18 to 2019-20, to subsidise the HKTL to expedite the track replacement of the key bends and junctions with the use of the "rail jacket technology". It is expected that a total of around 2.4 kilometres of tracks would be replaced.

Unlike the traditional technology of track replacement, the "rail jacket technology" makes use of a layer of eco-friendly elastic rubber material to wrap the tracks before the tracks are installed onto the concrete road surface. Subsequent replacement of the same section of tracks will only require removal of the worn out section wrapped in the rubber jacket through boring holes without the need to excavate and repave the road surface. This will help reduce the work duration and impact on the surrounding traffic. The new technology can also extend the track life, effectively enhance the tracks to absorb vibration and reduce the noise of tram operation.

In determining road sections suitable for using the "rail jacket technology", the TD and the HKTL will take into account different factors, including actual environmental constraints on individual locations, previous track repair records, and traffic flows at various major junctions, etc. The bends and junctions currently selected under the subsidy scheme are mainly road sections and bends which generate loud noises with busy road traffic and require frequent track replacement. The road section involved in the tram derailment incident happened on 6 March this year is a bend which generates loud noises and has been included in the subsidy scheme. The replacement works is expected to be completed by 2020. As for the road section involved in the incident happened on 23 March this year, it is not covered by the subsidy scheme. Nevertheless, the Government will base on the incident investigation report to examine the design of the road section and the relevant traffic signs, and request the HKTL to consider replacing the tracks on the road section when necessary.

Yours sincerely,



(Dominic HO)
*for* Secretary for Transport and Housing

c.c.: Commissioner for Transport (Attn.: Mr Gary LAI)
Director of Electrical and Mechanical Services (Attn.: Mr LAM Yue-kei)