

ITEM FOR FINANCE COMMITTEE

CAPITAL WORKS RESERVE FUND HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Transport Department

New Subhead “Expansion of Red Light Camera System, Phase 4”

Members are invited to approve a new commitment of \$48,135,000 for expanding the red light camera system to cover more signalised road junctions.

PROBLEM

We need to expand the red light camera system to deter red light jumping.

PROPOSAL

2. The Commissioner for Transport, with the support of the Secretary for Transport and Housing, proposes to create a new commitment of \$48,135,000 to expand the existing red light camera system by installing 40 additional digital red light cameras at 40 new locations throughout the territory.

JUSTIFICATION

3. To enhance road safety and deter red light jumping, legislative amendments were passed in July 2005 to increase the driving-offence points for failing to comply with traffic signals from three to five and the fixed penalty fine from \$450 to \$600. The new penalties took effect on 1 January 2006. In July 2007, we secured funding from the Finance Committee (FC) for the Phase 3 expansion of

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the red light camera system (FCR(2007-08)29). With the completion of the Phase 3 expansion project in 2010, there are now 155 signalised junctions installed with red light cameras¹.

4. The new penalties and the expansion of the red light camera system have proven to be effective in combating red light jumping, resulting in a reduction in the numbers of relevant traffic accidents and prosecutions starting from 2007². In 2010, the number of traffic accidents involving drivers disobeying traffic signals was 206, representing a reduction of nearly 31% when compared with 298 accidents in 2007. Despite the declining trend, the number of prosecutions, traffic accidents and casualties remains high. There are calls from Members of the Legislative Council (LegCo) and the public for more red light cameras to be installed. We consider it necessary to further expand the red light camera system to enhance the deterrent effect to further bring down the number of red light jumping and traffic accidents resulting from such behaviour.

5. Under the present proposal, each digital red light camera unit will be installed in a housing sitting on top of a camera pole normally planted on the footpath of a road at about 15 metres upstream of a signalised junction, with detection devices laid on the carriageway near the stop line. The digital camera will take photographs of red light jumping vehicles. The captured data will then be processed by a central computer system for identification of the offending vehicles and responsible drivers. Prosecution actions include issuance of fixed penalty tickets or summons.

6. We currently plan to install the additional red light cameras at the locations shown at the Enclosure. We have chosen the locations having regard to the following factors –

/(a)

Encl.

¹ Before Phase 3 expansion of the system, there were 131 red light camera housings with 96 cameras operating on a rotational basis. Under the Phase 3 expansion project completed in 2010, we procured 59 additional cameras and installed camera housings at 24 new junctions, so that each camera housing is equipped with a camera.

² Relevant accident, prosecution and casualty figures in the past five years are tabulated as follows –

Year	No. of accidents	No. of prosecutions*	No. of casualties
2006	256	42 916	434
2007	298	71 643	507
2008	274	54 598	526
2009	213	43 661	370
2010	206	32 847	455

* It is worth noting that with the completion of the Phase 2 expansion project in the 4th quarter of 2006 increasing the number of red light cameras from 28 to 96, the number of prosecutions in 2007 increased significantly. Since 2007, with the introduction of the new penalties and the expansion of the red light camera system, there has been a reduction in the numbers of traffic accidents and prosecutions.

- (a) accident records, with particular attention to accidents involving drivers disobeying traffic signals;
- (b) prevalence of red light jumping activities;
- (c) the need for an even distribution of red light camera locations to provide a territory-wide deterrent effect; and
- (d) preliminary assessment of the suitability of the location for installing red light camera.

These proposed locations, as well as the actual on-site installation of cameras, are subject to review when more information on site conditions, such as the presence of underground utilities, is obtained.

FINANCIAL IMPLICATIONS

Non-recurrent Expenditure

7. We estimate the capital cost of the project to be \$48,135,000, with the breakdown as follows –

	\$'000
(a) Camera system with housing and ancillary equipment	26,840
(b) Computer system, software and ancillary equipment	3,320
(c) On-site installation (including civil works), testing, commissioning and training	7,700
(d) Electrical and Mechanical Services Trading Fund (EMSTF) project management charges	5,899
	<i>Sub-total</i> <hr style="display: inline-block; width: 100px; vertical-align: middle;"/>
(e) Contingency (10% of items (a) to (d))	<hr style="display: inline-block; width: 100px; vertical-align: middle;"/> 4,376
	Total <hr style="display: inline-block; width: 100px; vertical-align: middle;"/>
	48,135

8. On paragraph 7(a) above, the estimated cost of \$26,840,000 is for the procurement of 40 digital red light cameras and related equipment such as microprocessors for processing and storage of data, camera housings, camera poles and power cubicles.

9. On paragraph 7(b) above, the estimated cost of \$3,320,000 is for the procurement of a central computer system and software for the processing of prosecution against offenders.

10. On paragraph 7(c) above, the estimated cost of \$7,700,000 is for the installation of equipment including camera poles and power cubicles; laying of detector devices on carriageways, cable ducting and associated concrete boxes underneath footpaths; testing and commissioning of the camera system after installation; and training of staff for operating the system.

11. On paragraph 7(d) above, the estimated cost of \$5,899,000 is for meeting the charges of EMSTF for providing services in tendering, site supervision, and testing and commissioning of electrical and mechanical works.

12. We intend to phase the expenditure as follows –

Year	\$'000
2012-2013	2,050
2013-2014	18,990
2014-2015	19,556
2015-2016	7,539
Total	48,135

Recurrent Expenditure

13. Upon completion, the new camera sites will be handed over to the Police for operation. The recurrent expenditure arising from the project is estimated to be \$10,111,000 per annum –

	\$'000
(a) Equipment maintenance	7,610
(b) Staffing resources	2,501
Total	10,111

14. On paragraph 13(a) above, the estimated annual expenditure of \$7,610,000 is for the maintenance of equipment, hardware and software.

15. On paragraph 13(b) above, the estimated annual expenditure of \$2,501,000 is for engaging ten staff, comprising one Police Sergeant, seven Police Constables and two clerical staff in the Hong Kong Police Force to handle investigation and prosecution of red light jumping cases generated by the 40 additional digital camera units. The advancement in technology may alter the work flow of the frontline as well as the back-end processes, which in turn would have a bearing on the actual staffing requirement.

IMPLEMENTATION PLAN

16. We plan to implement the proposal according to the following schedule –

	Activity	Target date
(a)	Tendering exercise	April to December 2012
(b)	Contract commencement	January 2013
(c)	Commissioning of the first batch of 20 cameras	February 2014
(d)	Commissioning of the second batch of 20 cameras	March 2015

PUBLIC CONSULTATION

17. We consulted the LegCo Panel on Transport on the proposal at its meeting on 5 January 2012. Members in general supported the proposal but asked whether the proposal has covered all the signalised road junctions which are classified as junction blacksites. We issued an information note to the Panel Members on 27 March 2012 to explain that junction blacksites are not solely determined by the number of accidents caused by red light jumping but rather a number of factors. There appears no direct correlation between red light jumping and junction blacksites. The locations of red light cameras are chosen having regard to the factors listed in paragraph 6 above, which we believe can effectively deter red light jumping. Members also suggested that the Administration should try to further expedite the implementation process. To this end, we have critically

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re-examined the proposed works programme and concluded that it would be difficult to further compress the timetable for various reasons, including the need to conduct further site inspections, that the works may have to be carried out during non-peak hours or even holidays to avoid traffic congestion, that the new system has to be tested and legal advice sought before commissioning, given the new and advanced technology deployed. Members also asked about the feasibility of using mobile detection device. As we have explained in the information note, the use of mobile detection devices would have several limitations. For example, it will be difficult to properly set up the sensors and the camera within a short period of time so that the camera can be accurately calibrated to capture clearly the images of the traffic signals and the red light jumping vehicle. We would, however, continue to monitor the development and availability of such equipment in the market.

BACKGROUND

18. The red light camera system was first introduced in Hong Kong in the 1990s, and has been proven to be effective in deterring red light jumping. Over the years, FC has approved funding on three occasions to expand the red light camera system. Currently, there are 155 signalised junctions installed with red light cameras, each installed in a proper housing sitting on a pole.

Transport and Housing Bureau
March 2012

Proposed Red Light Camera Locations

Hong Kong Island

1. Connaught Road Central / Hiller Street
2. Harbour Road / Fleming Road
3. Connaught Road Central / Pedder Street
4. Queen's Road East / Stubbs Road
5. Man Cheung Street / Man Yiu Street
6. Des Voeux Road Central / Queen Victoria Street
7. King's Road / Healthy Street Central
8. Connaught Road West / Eastern Street / Eastern Street North
9. Water Street / Connaught Road West

Kowloon

10. Kowloon Park Drive / Middle Road
11. Princess Margaret Road / Argyle Street
12. Pui Ching Road / Fat Kwong Street / Sheung Hing Street
13. Cheung Sha Wan Road / Tonkin Street
14. Kwun Tong Road / Hong Ning Road
15. Argyle Street / Yim Po Fong Street / Luen Wan Street
16. Lai Chi Kok Road / Tonkin Street
17. Tai Po Road / Nam Cheong Street
18. Canton Road / Austin Road / Austin Road West
19. Chatham Road South / Granville Road
20. Kowloon Park Drive / Peking Road
21. Lei Yue Mun Road / Ko Chiu Road
22. Waterloo Road / Shanghai Street
23. Gascoigne Road / Jordan Road
24. Choi Hung Road / Po Kong Village Road
25. Waterloo Road / Cornwall Street

26. Castle Peak Road / Tonkin Street
27. Cheung Sha Wan Road / Tai Nan West Street
28. Hung Hom Road / Tak On Street / Tak Man Street
29. Fung Tak Road / Po Kong Village Road
30. Kowloon City Road / Ma Tau Kok Road
31. Chatham Road North / Wuhu Street
32. Nathan Road / Mong Kok Road

New Territories West

33. Castle Peak Road / Tai Ho Road
34. Ma Wang Road / Ping Wui Street
35. Wang Tat Road / Fung Chi Road
36. Castle Peak Road / Hoi Wing Road
37. Yuen Long Tung Tai Street / Yuen Long On Lok Road

New Territories East

38. Kwong Fuk Road / Nam Wan Road / Tai Po Road
 39. Tai Po Road / Fo Tan Road / Lok King Street
 40. Yu Tung Road / Shun Tung Road
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