

## **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 2”**

Members are invited to approve a new commitment of \$50.04 million for expanding the red light camera system to cover more signalised junctions over the territory.

#### **PROBLEM**

Red light jumping is a serious offence that can bring about grave consequences. It endangers the drivers and passengers of the vehicles concerned, pedestrians and other road users.

#### **PROPOSAL**

2. The Commissioner for Transport, with the support of the Secretary for the Environment, Transport and Works, proposes to procure 68 digital red light camera units and install camera housings at 20 new locations to combat red light jumping. 48 of the cameras will be installed in the existing housings, and the remaining 20 cameras will be installed in the 20 new housings. The total estimated cost is \$50.04 million.

#### **JUSTIFICATION**

3. Red light jumping remains a serious problem in Hong Kong. The number of prosecutions for this offence surged by 74% from 22 590 in 2003 to 39 376 in 2004. At present, there are on average 100 red light jumping offences

/and .....

and two casualties arising from red light jumping accidents<sup>1</sup> each day. In view of the prevalence of this driving offence and the grave consequences to which it can give rise, we see a pressing need to expand the red light camera system to enhance the deterrent effect.

4. Red light cameras have proved to be an effective means of deterring red light jumping<sup>2</sup>, as they put the signalised junctions under 24-hour surveillance. At present, we have 28 cameras operating on a rotational basis at 111 signalised junctions<sup>3</sup>. If the current proposal of procuring 68 digital red light camera units and installing camera housings at 20 new locations is approved, there will altogether be 96 cameras for 131 housings, representing some threefold increase in the number of cameras. The camera-to-housing ratio will increase from 1:4 to 1:1.4, or from 25% to 73%. For digital cameras, the camera-to-housing ratio will increase from 1:5 to 1:1, or from 20% to 100%. We consider that the increase in the camera-to-housing ratio will greatly enhance the deterrent effect. With more prosecutions using red light cameras, the proportion of “electronic prosecution” which currently stands at about 80% of all red light jumping prosecutions, will increase to some 97%.

5. The locations of the existing and proposed future camera housings are at Enclosure. The following criteria are used in selecting these locations –

- (a) accident records with particular emphasis on accidents caused by red light jumping;
- (b) prevalence of red light jumping activities at the junctions;
- (c) the need for an even distribution of red light camera housing locations to provide an area-wide deterrent effect; and
- (d) site conditions.

/6. ....

<sup>1</sup> Figures for the past three years are as follows –

Year	No. of accidents	No. of casualties	No. of prosecutions
2002	342	583	24 381
2003	362	598	22 590
2004	355	675	39 376

<sup>2</sup> There was a 58% reduction in the number of accidents caused by red light jumping after the red light camera housings were installed at the junctions concerned.

<sup>3</sup> We have 16 wet-film and 12 digital cameras operating at 51 wet-film and 60 digital red light camera housings. The configurations of wet-film and digital camera housing sites are different.

6. The red light camera system operates with a portable digital camera unit, a camera pole with housing and a central computer unit in an office of the Hong Kong Police Force. The camera pole with housing is installed on the footpath of a road about 15 metres upstream of the junction, with detection devices laid on the carriageway near the stop line. The camera unit will take photographs of red light jumping vehicles. The data will be stored in the storage device of the cameras and then downloaded onto the central computer unit for identification of the license plate numbers of the offending vehicles. The central computer unit will automatically print out the necessary photos, letters requesting offending drivers' information, fixed penalty tickets and summons applications.

## FINANCIAL IMPLICATIONS

### Non-recurrent Expenditure

7. We estimate that the proposed expansion of the red light camera system will cost some \$50.04 million, broken down as follows –

	<b>\$ million</b>
(a) Camera system with housing and ancillary equipment	31.36
(i) Digital camera units	29.36
(ii) Camera poles and housings	1.79
(iii) Power cubicles	0.21
(b) Computer system, software and ancillary equipment	2.83
(c) On-site installation (including civil works), testing, commissioning and training	5.30
(d) Electrical and Mechanical Services Trading Fund (EMSTF) project management charges	6.00
	<i>Subtotal</i>
	<u>45.49</u>
(e) Contingency [10% of (a) to (d)]	<u>4.55</u>
	<b>Total</b>
	<b><u>50.04</u></b>

8. On paragraph 7(a)(i) above, the estimate of \$29.36 million is for the procurement of 68 digital red light camera units, each of which consists of a camera and a microprocessor for processing and storage of data.

/9. ....

9. On paragraph 7(a)(ii) above, the estimate of \$1.79 million is for the procurement of 21 housings and camera poles (including one spare set) which are used to accommodate the camera units and to support the camera housings to appropriate elevated positions on site at the new locations.

10. On paragraph 7(a)(iii) above, the estimate of \$0.21 million is for the procurement of 21 power cubicles (including one spare set) which are used for storage of electrical devices for power supply at the new locations.

11. On paragraph 7(b) above, the estimate of \$2.83 million is for the setting up of a central computer unit with Optical Character Recognition and tailor-made software which is used for case investigation and prosecution by the Police.

12. On paragraph 7(c) above, the estimate of \$5.30 million is for the installation of poles and power cubicles; laying of detector devices on carriageways and cable ducting and associated concrete boxes underneath the footpaths at 20 sites; testing and commissioning of the expanded camera system after installation; and training of Police staff for the operation of the system.

13. On paragraph 7(d) above, the estimate of \$6.00 million is for payment to EMSTF for providing services in tendering, site supervision and testing and commissioning of electrical and mechanical works.

14. The estimated cash flow is as follows –

<b>Year</b>	<b>\$ million</b>
2005-2006	13.40
2006-2007	34.64
2007-2008	2.00
<b>Total</b>	<b>50.04</b>

### **Recurrent Expenditure**

15. We will hand over the camera sites to the Police for operation and future maintenance. We estimate that the recurrent expenditure arising from the project is \$9.61 million per annum-

	<b>\$ million</b>
(a) Equipment maintenance	3.44
(b) Staffing resources	6.17
<b>Total</b>	<b>9.61</b>

/16. ....

16. On paragraph 15(a) above, the estimated annual expenditure of \$3.44 million is for the maintenance of equipment, hardware and software.

17. On paragraph 15(b) above, the estimated annual expenditure of \$6.17 million is for engaging 33 number of staff, comprising four Sergeants, 15 Police Constables and 14 clerical staff in the Hong Kong Police Force to carry out investigation and prosecution of red light jumping cases generated by the additional 68 digital red light camera units.

### IMPLEMENTATION PLAN

18. We propose to implement the expansion of red light camera system according to the following timetable –

<b>Activity</b>	<b>Target completion date</b>
(a) Tendering process / Contract negotiation	August 2005
(b) Contract commencement	November 2005
(c) Commissioning of 1 <sup>st</sup> batch of cameras (24)	April 2006
(d) Commissioning of 2 <sup>nd</sup> batch of cameras (24)	July 2006
(e) Commissioning of the 20 cameras and housings at the new locations	October 2006

### BACKGROUND INFORMATION

19. The red light camera system was first introduced in Hong Kong in the 1990s to deter red light jumping. The last project for the expansion of the system was implemented six years ago, when the Finance Committee approved funding of \$16.2 million in July 1999 to acquire 12 additional red light camera units at signalised junctions making up a total of 28 cameras for use at 111 sites. Subsequent to a series of traffic incidents in late 2004, in particular those pertaining to red light jumping, there is increasing public concern about road safety in Hong Kong. We have consulted the Panel on Transport and the trade on various measures to enhance road safety during the last six months. There is a general understanding that the expansion of the red light camera system should be one of the measures to be put in place urgently to enhance the deterrent effect.

/20. ....

20. We issued an information paper on the present proposal to the Members of the Panel on Transport on 21 June 2005. Members noted the proposal and raised no questions at the [Panel Meeting on 24 June 2005](#).

-----

The Environment, Transport and Works Bureau  
June 2005

**Red Light Camera/Housing Locations**

(proposed new locations highlighted in italics)

**Hong Kong**

**Wet-film**

1. Hennessy Road / Fleming Road
2. House No. 137 Pokfulam Road
3. Java Road / Tong Shui Road
4. King's Road / Healthy Street Central
5. King's Road / Cheung Hong Street
6. King's Road / Tin Chiu Street
7. No. 126 Pokfulam Road
8. Pokfulam Road / Victoria Road

**Digital**

9. Connaught Road Central / Hillier Street
10. Des Voeux Road West (Wing Lok Street) / Connaught Road West
11. Queen's Road East / Queensway
12. Shing Sai Road / Sai Cheung Street North
13. Wing Hing Street / Electric Road
14. Hing Fat Street / Victoria Park Road
15. *Chai Wan Road (East Bound) / Sun Yip Street*
16. *Garden Road North Bound / Queensway West Bound*
17. *King's Road (East & West Bound) / Healthy Street East*
18. *Peak Road / Plantation Road*

**Kowloon**

**Wet-film**

19. Austin Road / Nathan Road
20. Boundary Street / La Salle Road

21. Boundary Street / Nathan Road
22. Boundary Street / Tai Hang Tung Road
23. Chatham Road South / Austin Road
24. Chatham Road / Granville Road
25. Cheung Sha Wan Road / Butterfly Valley Road
26. Hip Wo Street / Yuet Wah Street (Lower Junction)
27. Lai Chi Kok Road / Tonkin Street
28. Nathan Road / Humphreys Avenue
29. Nathan Road / Argyle Street
30. Nathan Road / Dundas Street
31. Nathan Road / Gascoigne Road
32. Nathan Road / Jordan Road
33. Nathan Road / Mongkok Road
34. Nathan Road / Waterloo Road
35. Princess Margaret Road / Argyle Street
36. Shanghai Street / Kansu Street
37. Tai Kok Tsui Road / Pok Man Street
38. Wang Chiu Road / Sheung Yee Road
39. Waterloo Road / Junction Road
40. Cheung Sha Wan Road / Tonkin Street
41. Prince Edward Road West / Sai Yee Street

**Digital**

42. Cha Kwo Ling Road / Lei Yue Mun Road
43. Choi Hung Road / Tseuk Luk Street
44. Clear Water Bay (lower) / New Clear Water Bay Road
45. Hong Ning Road / Shung Yan Street
46. New Clear Water Bay Road / Clear Water Bay (lower)
47. Wai Yip Street / Shun Yip Street
48. Wang Chiu Road / Cheung Yip Street (Hoi Bun Road)



49. Choi Hung Road / Sze Mei Street
50. Po Kong Village Road / Fung Tak Road
51. Sau Mau Ping Road / Sau Ming Road
52. Shun Lee Tsuen Road / Sau Mau Ping Road
53. Kwun Tong Road / Elegance Road
54. Lei Yue Mun Road / Wai Fat Street
55. Cheung Sha Wan Road / Cheung Wah Street
56. Argyle Street / Tin Kwong Road
57. Canton Road / Kansu Street
58. Chatham Road / San Lau Street
59. Cheung Sha Wan Road / Wong Chuk Street
60. Jordan Road / Cox's Road
61. Kowloon Park Drive / Canton Road
62. Prince Edward Road West / Lai Chi Kok Road
63. Nathan Road / Prince Edward Road West
64. To Kwa Wan Road / Lok Shan Road
65. Waterloo Road / Lancashire Road
66. Waterloo Road / Rutland Quadrant
67. Cheung Sha Wan Road / Cheung Wah Street
68. Sai Yee Street / Mong Kong Road
69. Ma Tau Wai Road / Chi Kiang Street
70. Nam Cheong Street / Un Chau Street
71. Nathan Road / Granville Road
72. Tai Po Road / Castle Peak Road
73. To Kwa Wan Road / Mok Cheong Street
74. Ma Tau Chung Road / Fu Ning Street
75. Wuhu Street / Gillies Avenue South
76. Argyle Street / Lomond Road
77. Jordan Road / Shanghai Street
78. To Kwa Wan Road / Chi Kiang Street

79. Ma Tau Wai Road / Tam Kung Road
80. Hung Hom Road / Tak Man Street
81. Prince Edward Road West / Junction Road
82. Berwick Street / Nam Cheong Street
83. Waterloo Road / Reclamation Street
84. Lai Chi Kok Road (West Bound) / Tonkin Street
85. *Austin Road / Chatham Road South*
86. *Austin Road (West Bound) / Canton Road (South Bound)*
87. *Argyle Street (West Bound) / Sai Yee Street*
88. *Nam Cheong Street (North Bound) / Cheung Sha Wan Road*
89. *Po Kong Village Road (South Bound) / Lung Cheung Road (near Shek On Building)*
90. *Nathan Road / Waterloo Road*
91. *Cheung Sha Wan Road (North Bound) / Nam Cheong Street*

### **New Territories West**

#### **Wet-film**

92. Castle Peak Road / Ma Wang Road / Wang Tat Road
93. Castle Peak Road / On Lok Road
94. Castle Peak Road / San Hui Path
95. Castle Peak Road / Tai Chung Road
96. Jockey Club Road / Lung Sum Avenue
97. Lung Mun Road / Access to San Shek Wan Village
98. Lung Mun Road / Wu Chui Road
99. Ming Kum Road / Ting King Road / Tsing Tin Road
100. Pui To Road / LRT Reserve near Nullah
101. Tsing Lun Road / Fu Tei Roundabout
102. Tsing Wun Road / Hing Choi Street
103. Tsing Wun Road / Ming Kum Road / Pui To Road
104. Tsun Wen Road / Tai Fong Street / Tsing Chung Koon Road
105. Tuen Mun Heung Sze Wui Road / Hoi Chu Road

- 106. Wu Shan Road / Wu King Road
- 107. Ming Kum Road / Shan King Estate Road
- 108. Castle Peak Road / Hung Shui Kiu Main Street
- 109. Castle Peak Road / Ping Ha Road
- 110. Castle Peak Road (Castle Peak Bay) / Tuen Hing Road
- 111. Tin Shui Road / Tin Wing Road

**Digital**

- 112. Wang Tat Road / Ma Miu Road
- 113. Castle Peak Road - Tai Lam / Lok Chui Street
- 114. Castle Peak Road - Castle Peak Bay / Hoi Wing Road
- 115. Hing Fong Road / Wing Fong Road
- 116. Sha Tsui Road / Ham Tin Street
- 117. *Cheung Wing Road (South Bound) / Castle Peak Road (North Bound)*
- 118. *Chuen Lung Street / Sha Tsui Road*
- 119. *Lei Muk Road / Wo Yi Hop Road*

**New Territories East**

**Digital**

- 120. Po Lam Road North / Yau Yue Wan Village Road
  - 121. Po Hong Road / Wan Hang Road
  - 122. Ting Kok Road / Ting Tai Road
  - 123. Ting Kok Road / Dai Kwai Street
  - 124. Tai Po Road - Tai Wai / Shing Chuen Road
  - 125. Tai Chung Kiu Road / Sha Tin Wai Road
  - 126. *Po Yap Road (East Bound & West Bound) / Tong Chun Street*
  - 127. *Tai Chung Kiu Road (both bounds) / On Lai Street / On King Street*
  - 128. *Nam Wan Road / Tai Po Tai Wo Road*
  - 129. *Po Shek Wu Road (North Bound approaching Man Kam To) / Po Wan Road*
  - 130. *Tai Chung Kiu Road (both bounds) / Siu Lek Yuen Road*
  - 131. *Ma On Shan Road (North Bound & South Bound) / On Chiu Street / Sai Sha Road*
-