# Legislative Council Panel on Transport Expansion of the Red Light Camera System

#### **PURPOSE**

This paper informs Members of our proposal to procure 68 digital red light camera units and install 20 additional camera housings at red light jumping blackspots.

## **BACKGROUND**

- 2. Red light jumping is a serious offence that can bring about grave consequences. It endangers not only the driver and passengers of the vehicle concerned, but also other road users, especially vulnerable pedestrians whose lives will be at great risk in the event of accidents.
- 3. The red light camera system was first introduced in Hong Kong in the 1990s to deter red light jumping. Currently, we have installed camera housings at 111 signalised road junctions. We also have 28 cameras operating on a rotation basis<sup>1</sup>. The existing ratio between red light cameras and camera housings is around 1:4. Such a ratio is comparable to that of overseas cities<sup>2</sup>. However, 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. In view of the prevalence of such inappropriate driving behaviour and the grave consequences of traffic incidents, we see a

We currently have 16 wet-film and 12 digital cameras operating at 51 wet-film and 60 digital RLC housings. The configurations of wet-film and digital housing sites are different.

The camera-to-housing ratio of some overseas cities are as follows:

	No of Cameras	No of Housings	Camera-to-Housing Ratio
Melbourne	35	132	27%
London	25	223	11%
Toronto	10	40	25%
Singapore			25%
New York	50	250	20%

pressing need to expand the red light camera system to enhance the deterrent effect.

#### **PROPOSAL**

4. We propose to procure 68 digital red light camera units and install camera housings at 20 new locations. 48 of the cameras will be installed at the existing digital housings, and the remaining 20 cameras will be installed at the 20 new housings. The total estimated cost is \$50.04 million.

#### **JUSTIFICATION**

- 5. Red light jumping remains a significant problem in Hong Kong. The number of prosecutions against this offence increased from 22 590 in 2003 to 39 376 in 2004, representing a surge of 74%. At present, an average of 100 red light jumping offences are caught each day, and there is a daily average of 2 casualties arising from red light jumping accidents<sup>3</sup>.
- Red light cameras prove to be an effective means to deter red light jumping<sup>4</sup>, as they put the signalised junctions under 24-hour surveillance. In addition, when the subject of red light jumping was discussed at this Council<sup>5</sup>, the transport trades have expressed concern about the problems of subjectivity in cases of "manual" prosecution i.e. those carried out by police officers. Members generally agreed that prosecution based on photos from cameras

<sup>3</sup> Figures for the past three years are as follows:

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

There is a 58% reduction in the number of accidents caused by red light jumping after the red light camera housings have been installed at the concerned junctions.

The issue was discussed at the meetings of the Transport Panel on 14 December 2004 and 18 March 2005, and at the meetings of the Subcommittee on Proposed Resolutions under the Road Traffic (Driving-offence Points) Ordinance (Cap. 375) and Fixed Penalty (Criminal Proceedings) Ordinance (Cap. 240) held on 10 June 2005, 14 June 2005 and 16 June 2005.

should be more equitable, and have expressed support for an expansion of the red light camera system.

- 7. With the current proposal implemented, there will altogether be 96 cameras at 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%. The proportion of "electronic prosecution" which currently stands at about 80% of all red light jumping prosecutions, will increase to some 97% after all the cameras have been installed.
- 8. The locations of the existing and future cameras housings are at the **Annex**. 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.
- 9. 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 at 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 identifying the licensed plate numbers of the offending vehicles. It will automatically print out the necessary photos, letters requesting offending drivers' information, fixed penalty tickets, summons applications and notices of intended prosecution.

## IMPLEMENTATION PROGRAMME

10. We plan to start the tendering process<sup>6</sup> as soon as approval from the Finance Committee is available. The proposed programme is as follows -

Activity	<b>Target Completion Date</b>
Tender Process / Contract Negotiation	August 2005
Contract commencement	November 2005
Commissioning of 1 <sup>st</sup> batch of cameras (24)	April 2006
Commissioning of 2 <sup>nd</sup> batch of cameras (24)	July 2006
Commissioning of the remaining 20 cameras	October 2006
and new housings	

## FINANCIAL IMPLICATIONS

11. We estimate the cost of the proposed red light cameras and housings to be \$50.04 million, with the breakdown as follows:

		\$ million
(a)	Camera system with housing & ancillary equipment  (i) Digital camera units 29.36  (ii) Camera poles and housings 1.79  (iii) Power cubicles 0.21	31.36
(b)	Computer system, software & ancillary equipment	2.83
(c)	On-site installation (including civil works), testing, commissioning and training	5.30
(d)	Electrical and Mechanical Services Trading Fund project management charges	6.00
(e)	Contingencies	4.55
	Total	50.04

We may need to adopt single tender for the cameras from the supplier of the existing RLC housings so as to avoid compatability, synchronization and liability problems.

- 5 -

12. We estimate that the additional annual recurrent expenditure for operating the new red light cameras and housings would be about \$9.61 million.

#### **WAY FORWARD**

13. We will seek the Finance Committee's funding approval on 8 July 2005 to fund the acquisition of 68 red light cameras and 20 camera housings.

# **ADVICE SOUGHT**

14. Members are invited to note the proposal to acquire 68 red light cameras and install 20 camera housings to combat red light jumping.

Environment, Transport and Works Bureau June 2005

#### **Annex**

# **Red Light Camera/Housing Locations**

Hon	g K	ong

/1			
1	<b>\</b> \ /	Δtt1	lm '
١.	V V	etfi]	ш

- 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
- 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**

(Wetfilm)

- 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**

(Wetfilm)

- 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

(Locations in italics denote new locations)