

**For discussion**  
**26 November 2004**

## **Legislative Council Panel on Transport**

### **Measures to Enhance Road Safety**

#### **Purpose**

This paper seeks Members' views on the proposed measures to enhance road safety in Hong Kong.

#### **Background**

2. Arising from a series of traffic incidents in recent weeks, there is increasing public concern about road safety in Hong Kong. In particular, there is a general concern about the driving behaviour of public light bus (PLB) drivers. In fact, statistics do show a rising trend in the number of traffic offences related to driving behaviour. Between January and September 2004, the number of speeding and red light jumping offences increased by 10% and 54% respectively, compared with those recorded in the same period in 2003<sup>1</sup>. The figures for PLBs for similar offences also increased by 20% and 47%<sup>2</sup> respectively.

3. We consider it necessary to put in place a whole range of measures covering legislation, enforcement, publicity, education, as well as technology application to combat poor driving behaviour and enhance road safety. The following paragraphs set out the measures that we have examined in considerable detail.

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All Vehicle Types	No. of offences 2004 (Jan – Sept)	No. of offences 2003 (Jan – Sept)	% Change
Speeding	147,591	134,368	+10%
Red Light Jumping	25,847	16,776	+54%

2

Public Light Bus	No. of offences 2004 (Jan – Sept)	No. of offences 2003 (Jan – Sept)	% Change
Speeding	1,538	1,279	+20%
Red Light Jumping	1,522	1,039	+47%

## **General Road Safety Measures**

### *(I) Driving Offence Points*

4. The Road Traffic (Driving-Offence Points) Ordinance (Cap. 375) stipulates that drivers who fail to comply with traffic signals shall incur 3 points<sup>3</sup>. However, in view of the high concentration of signal controlled junctions in Hong Kong, the potentially serious consequence of red light jumping and the increase in the number of such offences, we propose raising the penalty level to 8 driving offence points. We consider that this level will create a stronger deterrent effect.

5. There are comments from some quarters that an increase in the driving offence points from 3 to 8 would affect the livelihood of professional drivers. We consider that such impact should be minimal, given that the driving offence points would not be incurred if the drivers do not commit the offence, and the majority of drivers, including professional drivers, are law-abiding citizens. In addition, there is in place a mechanism for offenders to have 3 driving offence points deducted once within two years if they attend a Driving Improvement Course<sup>4</sup>. This, in effect, reduces the penalty to 5 driving offence points. For a repeat offender within two years and hence cannot benefit from such deduction of points the second time, we are of the view that the penalty should continue to apply.

### *(II) Fixed Penalty For Failing to Comply With Traffic Signals*

6. At present, a driver who fails to comply with traffic signals may be subject to a fixed penalty of \$450 under the Fixed Penalty (Criminal Proceedings) Ordinance (Cap. 240). We have reviewed this penalty level with that of other offences of similar severity. We note that for driving in excess of the speed limit by more than 30 km but less than 45 km, the fixed penalty is \$600. We consider that the fixed penalty for failing to comply with traffic signals should be at the same level, and hence, the penalty should be increased from \$450 to \$600 to offer greater deterrent effect.

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<sup>3</sup> Where 15 or more points have been incurred by a person for traffic offences that were committed within 2 years, he/she shall be disqualified from holding or obtaining a driving licence for 3 to 6 months

<sup>4</sup> Under section 6A of the Road Traffic (Driving-Offence Points) Ordinance, the Commissioner for Transport shall deduct 3 points from a person upon the latter's completion of a Driving Improvement Course, unless he/she has already incurred 15 driving offence points, or he/she has not incurred any driving offence points, or the Commissioner has already deducted 3 points for the same reason within 2 years.

(III) Enforcement of Three Common Traffic Offences through Fixed Penalty

7. We are particular concerned about several common traffic offences that could lead to severe consequences. They are -

- (a) using a handheld mobile telephone or telecommunication device while the vehicle is in motion<sup>5</sup> – This offence is of particular importance because researches show that the use of mobile phones while driving increases the risk of collision by four to six times, as it causes distraction and affects the driver's reaction in emergency situations;
- (b) failing to drive in the nearside lane of an expressway<sup>6</sup> – This offence is equally important because it increases the weaving movements amongst high speed vehicles on expressways, thereby increasing the risk of accidents; and
- (c) driving motorcycle or motor tricycle without the necessary lights illuminated<sup>7</sup> – The accident involvement rate of motorcycles is much higher than the average accident involvement rate of private cars<sup>8</sup>. Proper illumination will enable motorcycles to be more visible to other vehicles and road users, and help reduce the accident risk.

8. All the above offences are currently enforced by way of summons. We notice that the number of prosecutions for these offences have increased substantially in the past three years<sup>9</sup>, indicating that they are

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<sup>5</sup> This is an offence under Section 42(1)(g) of the Road Traffic (Traffic Control) Regulations.

<sup>6</sup> This is prohibited under Section 12(1) of the Road Traffic (Expressway) Regulations.

<sup>7</sup> This is prohibited under Section 47(1A) of the Road Traffic (Traffic Control) Regulations.

<sup>8</sup> The accident involvement rate of motorcycles over the past three years is about 101 per 1000 licensed motorcycles, and the accident involvement rate of private cars is about 21 per 1000.

<sup>9</sup>

Offence No of Prosecution	Using a handheld mobile phone or telecommunication device while the vehicle is in motion	Failing to drive in the nearside lane of the carriageway of an expressway	Driving motorcycle or motor tricycle without the necessary lights illuminated
2001	2,988	10	N/A
2002	3,818	322	86
2003	6,188	765	183

rather common offences. We therefore consider it necessary to simplify the means of prosecution so as to facilitate enforcement and enhance the deterrent effect on potential offenders. We recommend that these offences be included in the Schedule to the Fixed Penalty (Criminal Proceedings) Ordinance so that prosecution can be done by way of Fixed Penalty Ticket<sup>10</sup>.

9. In considering the levels of fixed penalty for the three offences, we have taken into account the level of fines set down by the court as well as the fixed penalty levels for similar offences that are already enforceable by Fixed Penalty Tickets. Currently, for using handheld mobile telephones while the vehicle is in motion, the majority of offenders<sup>11</sup> are fined \$400-\$500. We propose that the fixed penalty should be \$450. As for failing to drive in the nearside lane of an expressway, we also propose that the penalty should be \$450, in line with the offence of failing to comply with the restrictions in using the offside lane of an expressway. As for driving a motorcycle or motor tricycle without the necessary lights illuminated, we propose to set the fixed penalty level at \$320, as this is the current level for a similar offence for motor vehicles.

#### (IV) Red Light Cameras (RLC)

10. Currently, we have installed RLC housings at 111 signalised road junctions. We also have 28 cameras operating on a rotation basis<sup>12</sup>. The housing locations are selected using the following criteria –

- (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 RLC locations to provide an area-wide deterrent effect; and
- (d) availability of resources and site conditions.

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<sup>10</sup> The Tuen Mun Road Traffic Incident Independent Expert Panel has also made similar recommendations in its Report. The recommendations were accepted by the Administration and supported by the Legislative Council Panel on Transport.

<sup>11</sup> 60% of the cases in 2003 are given this level of fine.

<sup>12</sup> 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.

These RLC housings prove to be an effective means to deter red light jumping as there is a 58% reduction in the number of accidents caused by red light jumping after the RLC housings have been installed at the concerned junctions.

11. Although the present housing locations have already covered most of the red light jumping black spots, we propose to increase the housing locations to further expand the coverage of RLCs. Based on the selection criteria in para 10 above, we have identified 20 potential junctions for installation of RLC housings. They are listed at the **Annex**. We will examine the sites in detail and develop an implementation plan.

12. Currently, the ratio of RLCs to RLC housing locations in Hong Kong is around 1:4, or 25%. Such a ratio is broadly comparable to that of overseas cities<sup>13</sup>. Nevertheless, to enhance the deterrent effect, we plan to procure 68 digital cameras<sup>14</sup> for use at existing and new RLC housings. With this expansion programme, we will have 96 cameras at 131 housings, representing some three-fold increase in the camera-to-housing ratio from 1:4 to 1:1.4, or from 25% to 73%. We will proceed to secure the necessary funding for this expansion programme as soon as practicable.

(V) Speed Enforcement Cameras (SEC)

13. Speeding is one of the major contributory factors in traffic accidents. To deter speeding, we have installed SEC housings at 85 locations on major roads and expressways with 10 cameras operating on rotation. Similar to the RLCs, the accident rate related to speeding dropped by 23% after the installation of SEC housings.

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	No. of Cameras	No. of RLC Housing Sites	Camera-to-Housing Ratio
Australia, Melbourne	35	132	27%
UK, London	25	223	11%
Canada, Toronto	10	40	25%
Singapore	-	-	25%
Hong Kong	28	111	25%

14 By purchasing 68 additional digital cameras, we will ensure that all the existing and new digital housings will be equipped with cameras. We will replace the wet-film cameras and their housings at the end of their serviceable life.

14. To strengthen enforcement and the deterrent effect, we plan to improve the camera-to-housing ratio and install more SECs and SEC housings at other strategic roads. As the installation of SECs involve quite a number of technical issues such as site constraints and the availability of power supply, we need to examine each potential site in question before we can come up with a detailed expansion programme.

#### (VI) Enforcement

15. We have been working closely with the Police to combat inappropriate driving behaviour. For instance, in October, the Police carried out Operation 'Fossington'<sup>15</sup>. In early November, the Police launched another five-week publicity-cum-enforcement campaign to promote safety amongst public service vehicles. During the first week, the Police distributed leaflets to drivers of public service vehicles to remind them of the need for safe driving. Leaflets were also distributed to members of the public and passengers encouraging them to report any undesirable driving behaviour. A series of enforcement actions was then taken in the following weeks. The focus was speeding, red light jumping and dangerous driving. Blitz operations will continue to be carried out at black spots in the future.

#### (VII) Education and Publicity

16. Traffic offences involve primarily the driving attitude and behaviour of drivers. While the aforesaid measures that aim to raise the penalty levels and facilitate enforcement will no doubt offer strong deterrent effects against various traffic offences, especially speeding and red light jumping, the most fundamental measure is to instill in drivers a correct driving attitude through continuous education and publicity programmes.

17. In this connection, the Road Safety Council has been focussing on the cultivation of a responsible driving culture. For instance, it has launched the "Smart Driving" Campaign since 2001. We will continue to work closely with the Council to implement publicity campaigns. Television and radio announcements of public interest will be produced to remind drivers to drive safely and not to speed or jump red lights. The "Road Safety Vision and Symbol" will be used as a focus for future road safety activities.

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<sup>15</sup> Operation 'Fossington' is a one-month operation targeting speeding, dangerous driving, drink driving and failing to wear seat belts in October.

## **Specific Measures for PLBs**

### *(VIII) Installation of Speed Display Device (SDD)*

18. SDDs are small devices that can display the speed of the vehicle in motion. When the speed exceeds the pre-set limit, the SDD will produce a buzz sound and the indicator light will be lit up. SDDs enable the passengers to monitor the speed of the vehicle and help curb speeding. Some SDDs currently available in the market also have recording function and can record the speed of the vehicle for a certain period of time.

19. We started to install SDDs on green minibuses (GMBs) running overnight routes in late 2002. The programme was further extended in late 2003 to GMBs operating along expressways. At present, among the 4,350 PLBs in Hong Kong, 518 GMBs have installed SDDs. They cover all those running overnight routes and on expressways as well as 18 other GMB routes<sup>16</sup>. The feedback from passengers and GMB operators on the effectiveness of SDDs have been very positive, and most people consider that the SDDs are useful for monitoring the speed of PLBs and preventing drivers from speeding<sup>17</sup>. We therefore propose to make the installation of SDDs on PLBs mandatory.

20. As a first step, we plan to implement this requirement administratively. We are currently consulting the PLB trade on the details. In parallel, we will prepare legislative amendments to make SDDs a standard requirement on PLBs under the Road Traffic (Construction and Maintenance of Vehicles) Regulation, and that any misuse or malfunctioning of the SDDs would constitute an offence. We believe the legislative approach will facilitate more effective enforcement in the future.

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<sup>16</sup> Currently, the operators of the 518 install SDUs voluntarily or in compliance with the requirement of the Passenger Service Licences (PSLs) of new GMB routes.

<sup>17</sup> In a passenger opinion survey carried out in October 2003, 71% of the passengers on overnight routes found the SDDs useful in enhancing safe driving among GMB drivers. In another survey, 90% of the GMB operators that run overnight routes also considered the SDDs useful in monitoring the speed of their drivers and prevent the latter from speeding.

(IX) Display of PLB Driver Name Plate

21. At present, PLB drivers are required under the PSL conditions to display their name plates at the front of the vehicles while they are on duty. The licensees of the PLBs are responsible for ensuring that PLB drivers comply with this requirement. However, we note that some PLB drivers do not observe this requirement. Some PLB operators also consider it unfair for the licensees to be held responsible for the failure of their drivers to display the name plates. For more effective enforcement, we propose making the display of driver name plates a requirement under the Road Traffic (Public Service Vehicles) Regulations. To facilitate passengers to know the identity of the driver in question, we will require that the name plate, together with other relevant information such as the vehicle licence number, be prominently displayed near the SDD.

(X) Mandatory Display of the Complaints Hotline

22. There are constant complaints from passengers that some PLB drivers ignore their complaints or requests to reduce speed. In such cases, it would be most useful if the passengers can direct their complaints to the Transport Complaints Unit or report any improper driving behaviour of the PLB drivers immediately. Hence, we will require PLB licensees or operators to display the complaint hotline prominently inside the PLB. We would discuss the implementation details with the PLB trade as soon as possible.

(XI) Training for PLB Drivers

23. In August 2003, the Transport Department organized the “Public Light Bus Driver Training Course” to help improve the driving behaviour and service skills of PLB drivers. So far, 41 classes have been held and 500 drivers have attended the course. Separately, in April this year, the Department has also organized jointly with the Vocational Training Council “Advanced PLB Driver Training Course”. PLB drivers who attended the course will be given a subsidy amounting to 70% of the course fee. So far, 5 classes have been held and 120 PLB drivers have attended the course.

24. We consider that continuous in-service training, similar to the ones mentioned above, will help remind PLB drivers the importance of safe driving. We will continue to encourage PLB drivers to attend continuous training courses. We will also examine with the Driving Improvement Schools and the Vocational Training Council the feasibility of organizing refresher workshops or seminars for PLB drivers. We will also discuss with



the PLB trade whether and how PLB drivers could be required to attend such refresher courses, say, once every two to three years.

25. We aim to introduce in 2005 mandatory pre-service training that focuses on driving behaviour and attitude for applicants for the taxi driving licence. We will examine the feasibility of extending this requirement to new PLB drivers, taking into account the experience of the pre-training course for the taxi trade.

(XII) Road Safety Publicity Programme for PLB Drivers

26. To enhance the road safety awareness of PLB drivers, we plan to launch a series of PLB-oriented publicity programmes. These include the appointment of road safety ambassadors and the use of regular newsletters to disseminate road safety messages. Special campaigns, such as the launching of the PLB Safety Week and introducing the Safe Driving Award for PLB Drivers, will be organized, and publicity materials like stickers with safe driving messages will be distributed to PLB drivers regularly.

(XIII) Promulgation of PLB Driver Safety Charter

27. The PLB trade has proposed to promulgate a Safety Charter for PLB drivers. We understand the idea is to get PLB drivers to commit to safe driving as set out in the Charter. Those who are willing to comply with the rules will be requested to sign the Charter, and labels will be given to them for display on the concerned PLBs. We support this initiative from the PLB trade as it expressly demonstrates the commitment of the conscientious drivers and provide means to publicize their good behaviour. We will discuss with the PLB trade the details of their proposal.

(XIV) Tightening up the Conditions for Issuing PLB Driving Licence

28. Currently, a person is required to have held a full private car or light goods vehicle licence for at least three years before he/she is eligible to apply for a PLB driving licence. There are suggestions to raise this requirement from three to five years.

29. We have examined this proposal in detail. Statistics of PLB drivers who are involved in traffic accidents show that there is no direct correlation between the driving experience and accident involvement rate of PLB drivers<sup>18</sup>. It follows that the more important thing is perhaps the driving attitude and behaviour, which is not related to their driving experience.

### **Measures Requiring Further Investigation**

30. Apart from the above initiatives which we aim to implement as soon as possible, we will continue to explore the feasibility of the following longer-term measures.

#### *(XV) Installation of Vehicle Monitoring System (VMS)*

31. A VMS, commonly known as black box, records the operation data of the vehicle in question, such as the average speed, daily highest speed, distance traveled, number of driving hours, number of foot brake application and door opening, and whether the illumination/indication lights are switched on etc. It can be used for monitoring the drivers' performance, fleet management and accident investigation.

32. We have long planned to carry out a trial scheme on the use of the VMS on four GMBs with different operational characteristics<sup>19</sup>. However, at the moment, we still face some critical technical problems that would affect the accuracy of the data collected. As soon as the technical issues have been resolved, we will start the trial, and depending on the outcome of the trial, we will examine if the VMS should be installed on all new PLBs in the future.

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Yrs of holding PLB licence of drivers involving in accidents between 2001 & 03	No. of PLB drivers
Less than 1 year	125
1-2 years	156
2-3 years	143
3-4 years	143
over 4 years	2,463
Unknown	116
Total	3,146

19 The original plan was to start the trial scheme, which would last 6 months, in December 2003.

(XVI) Installation of Speed Limiters on PLBs

33. A speed limiter limits the vehicle speed to a specified level by controlling the fuel feed to the engine. It is an effective means to prevent speeding by locking the speed of the PLB at a pre-set level.

34. Technically, installing such a device is feasible. However, we need to consider the more fundamental question of whether PLBs should be subject to a speed limit territory-wide (e.g. 70 km per hour as in the case of buses and heavy goods vehicles), irrespective of the speed limit of the roads on which they run. As this will have implications on the overall operation of the PLB trade as well as the traffic flow in the territory, we need to examine the feasibility and impact of this measure in greater detail.

(XVII) Installation of External Indicator Lights

35. There are suggestions to install on PLBs external indicator lights that will be illuminated when the vehicle exceed the pre-set speed limit to facilitate enforcement. Similar to the speed limiter, we would need to consider whether PLBs should be subject to a particular speed limit, irrespective of the speed limit on the road, or else there would not be an objective yardstick to determine the pre-set speed limit. We would also need to consider the effectiveness of this device as well as the possible confusion and distraction that it may bring about to other drivers and roadusers.

(XVIII) Vehicular Countdown Device (VCDD)

36. VCDD is an advance warning device to inform drivers on upcoming changes of traffic signals through displaying a countdown of the green time. There are suggestions that such a device should be installed at the signal-controlled junctions in Hong Kong. We have in fact been examining this device for some time.

37. It must be noted that most large cities throughout the world, including large Mainland cities like Shanghai and Dalian, that have similar transport characteristics as those in Hong Kong do not have the VCDD system in place. We understand there are two fundamental concerns.

38. First, studies and trials have revealed that having a VCDD in place may significantly increase head-rear collision at the concerned junction due to different responses to the information displayed. For example, while one driver may decide to stop when the countdown has begun, another driver may consider the remaining seconds sufficient to cross the junction and hence decide to speed through the junction.

39. In addition, there are technical problems to reconcile the VCDD with modern traffic control systems. At present, the majority of traffic lights in large cities are controlled by computerized traffic control systems with traffic adaptive control function<sup>20</sup>. As the green time changes in response to the traffic flow on the ground, the VCDD would not be able to display the correct information. Even for the other traffic lights that are not controlled by such systems, their green time are often adjusted according to the traffic conditions during peak and non-peak hours and hence change frequently. Again, the VCDD that is currently available in the market would not be able to display the correct information.

40. We are aware that a few cities in the Mainland, such as Guangzhou, Shenzhen and Nanjing, have installed VCDDs in some parts of their cities. However, we also note that Guangzhou has dismantled these VCDDs at some 280 junctions since 2002 due to the system's incompatibility with their new traffic control system. For the same reason, Shenzhen has also disused some of these VCDDs and opined strongly against implementing the VCDD system in view of the technical problems they encounter.

41. Given the safety and technical problems mentioned above, we are hesitant to conclude hastily about installing the currently available VCDDs. Nevertheless, we would continue to monitor researches and technological development worldwide in this respect.

### **Summary of Recommendations**

42. To recap, we recommend to enhance road safety and improve the driving behaviour of drivers (especially PLB drivers) through the following measures:

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<sup>20</sup> With the support of either vehicle detectors beneath the road surface or traffic controllers at the control centre, modern traffic control systems will adjust the duration of the green time in response to the traffic flow on the ground. Such a traffic adaptive control function will render the VCDD which is based on a pre-set timing grossly inaccurate.

### Legislation

- increase the driving offence points for red light jumping from 3 to 8 (para 4-5);
- increase the level of fixed penalty of red light jumping from \$450 to \$600 (para 6);
- make the offence of using a handheld mobile telephone while the vehicle is in motion enforceable through fixed penalty tickets and set the penalty at \$450 (para 7-9);
- make the offence of not driving in the nearside lane of an expressway enforceable through fixed penalty tickets and set the penalty at \$450 (para 7-9);
- make the offence of driving motorcycle or motor tricycle without the necessary lights illuminated enforceable by fixed penalty ticket and set the penalty at \$320 (para 7-9);

### Enforcement

- carry out more enforcement operations against speeding and red light jumping (para 15);
- make the display of the PLB driver's name plate a legislative requirement (para 21);
- make the display of the complaints hotline a mandatory requirement (para 22);

### Application of Technology

- install red light camera housings at more signal-controlled junctions and procure more cameras (para 10-12);
- install more speed enforcement camera housings and procure more camera (para 13-14);
- make the installation of SDDs a mandatory requirement (para 18-20);

- carry out the trial scheme of the VMS on PLBs (para 31-32);

#### Education and Publicity

- carry out more education and publicity campaigns on safe driving (para 16-17);
- encourage PLB drivers to attend continuous in-service training (para 23-24);
- examine the feasibility of having refresher workshops or seminars for PLB drivers and require PLB drivers to attend such refresher courses regularly (para 23-24);
- examine the feasibility of making pre-service training a mandatory requirement for new PLB drivers (para 25);
- carry out specific publicity campaigns that are targeted at the PLB trade (para 26);
- promulgate the PLB Safety Charter (para 27);

43. In addition, we will further examine the technical feasibility and practicability of the following measures:

- set a speed limit for PLBs (para 33-34);
- install speed limiters on PLBs (para 33-34)
- install external speed indication lights on PLBs (para 35); and
- monitor the technological development and researches on the use of VCDDs (para 36-41).

#### **Advice Sought**

44. Members are invited to comment on the proposed measures.

**Potential Sites to Install Red Light Camera Housings**

**Hong Kong**

1. Chai Wan Road (East Bound) / Sun Yip Street
2. Connaught Road Central (West Bound) / Pedder Street (North Bound)
3. King's Road (East & West Bound) / Healthy Street East
4. Morrison Hill Road (straight ahead)(South Bound) / Sports Road

**Kowloon**

5. Austin Road / Chatham Road South
6. Austin Road (West Bound) / Canton Road (South Bound)
7. Argyle Street (West Bound) / Sai Yee Street
8. Nam Cheong Street (North Bound) / Cheung Sha Wan Road
9. Po Kong Village Road (South Bound) / Lung Cheung Road (near Shek On Building)
10. Nathan Road / Waterloo Road
11. Cheung Sha Wan Road (North Bound) / Nam Cheong Street

**New Territories East**

12. Po Yap Road (East Bound & West Bound) / Tong Chun Street
13. Tai Chung Kiu Road (both bounds) / On Lai Street / On King Street
14. Nam Wan Road / Tai Po Tai Wo Road
15. Po Shek Wu Road (North Bound approaching Man Kam To) / Po Wan Road
16. Tai Chung Kiu Road (both bounds) / Siu Lek Yuen Road
17. Ma On Shan Road (North Bound & South Bound) / On Chiu Street / Sai Sha Road

**New Territories West**

18. Cheung Wing Road (South Bound) / Castle Peak Road (North Bound)
19. Chuen Lung Street / Sha Tsui Road
20. Lei Muk Road / Wo Yi Hop Road