Measures To Manage Road Usage

1. As announced by Mr Raymond Lim, the Minister for Transport, the Land Transport Authority (LTA) will be making changes to the Electronic Road Pricing (ERP) system to enhance its effectiveness in managing traffic congestion on the roads. With the changes, a total of 16 new ERP gantries will be activated this year, and this includes the 5 gantries which were announced in August 2007 last year but have not been activated.

2. The ERP changes will be phased in gradually, starting with the Central Business District (CBD) and Orchard Cordons in July 2008. This is to give time for motorists to adjust their travel plans and allow for the impact of the changes in the CBD and Orchard Cordon to work its way through the rest of the road network.

3. The enhancements to the ERP system, the implementation of new ERP gantries and how the new ERP criteria will take effect are outlined below.

Enhancements to the ERP System

4. The ERP system has essentially remained unchanged since its introduction in 1998. As traffic volumes today are far different from a decade ago, enhancements are necessary to ensure the ERP system's effectiveness. As part of the Land Transport Review, the LTA has studied and reviewed the matter carefully, and will be implementing the following changes to enhance the ERP system from July 2008:

a. Use the 85th Percentile Speed Measurement Method

The current threshold speeds (45 km/h on expressways and 20 km/h on arterial roads) were set 10 years ago. Today, the threshold speeds are close to the point where traffic flow can deteriorate rapidly into the unstable zone where 'stop-start' conditions become common. In order to create a buffer, LTA will use a more representative method of measuring actual traffic conditions for ERP rate reviews, with speeds determined using the 85th percentile speed measurement method, instead of using average speeds as is done currently. The 85th percentile speed measurement method is also an international traffic engineering practice for assessing traffic conditions. With the revised speed measurement method, motorists will be assured of smooth travel on ERP-priced roads at least 85% of the time;

b. Increase the Initial ERP Charge and Rate Increment

Motorists today are less sensitive to the rate structure which has remained unchanged since 1998. For ERP charges to remain effective in influencing motorists' behaviour, LTA will raise the incremental ERP charge from $0.50 to $1. In addition, the ERP base charge, which is the starting charge for a new ERP gantry point, will
be increased from the current $1 to $2. These changes will improve the effectiveness of the ERP system, so that each time ERP rates are adjusted, motorists who still choose to drive on these roads would see a visible improvement in traffic flows.

c. **Manage Congestion in the City Area**

To address the congestion in the city area, LTA will introduce the Singapore River Line, comprising 5 new ERP gantries that run roughly along the Singapore River to discourage through traffic from using the city for outbound trips, and Saturday traffic.

**New ERP Gantries**

5. LTA has been monitoring traffic conditions closely on the roads, and has assessed that 16 new ERP gantries are necessary to help manage congestion at the identified locations. The LTA will phase in the implementation of the 16 gantries as shown below.

**April 2008 - Operation of 5 gantries that were announced in Aug 2007**

6. In August 2007, LTA had announced that ERP gantries would be installed at 5 locations, namely (i) Upper Bukit Timah Road; (ii) Toa Payoh Lorong 6; (iii) Upper Boon Keng Road; (iv) Geylang Bahru Road; and (v) Kallang Bahru Road. These gantries would be activated only when traffic speeds fall below the optimal speed range. LTA has been monitoring the traffic conditions at these 5 locations closely, and has established that traffic speeds on all 5 roads have fallen below the optimal speed threshold based on the current speed criteria.1

7. Therefore, LTA will be activating these gantries from **7 April 2008**. The operating hours of these 5 gantries will be from **7.30am to 9.30am**. Please refer to **Annex A** for the location and ERP rates of these gantries.

**July 2008 - Operation of 5 new gantries along the Singapore River in the CBD**

8. The five gantries on the Singapore River Line will run roughly along the Singapore River from Clemenceau Ave to Fullerton Road, separating the commercial and shopping areas such as the Suntec area from the office-based areas such as Shenton Way/Robinson Road. These 5 gantries serve to reduce through traffic from using the city area for outbound trips in the evening, similar in concept to the Orchard Cordon where ERP was implemented to reduce through-traffic which would otherwise use Orchard Road to get to other areas. Traffic speeds on these roads are below the optimal speed range, based on the revised

[1] Using the average speed measurement method

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9. To better manage the speeds within the Orchard and CBD cordons, the ERP operation hours for the CBD will start from **7am to 8pm** on weekdays. The ERP for Orchard Cordon will start from **10am to 8pm** on weekdays.

10. The 5 gantries on the Singapore River Line will come into operation on **7 July 2008**, and will operate from **5pm to 8pm** on weekdays. Two of the new gantries - namely Eu Tong Sen Street and Fullerton Road (towards Esplanade Drive) - will operate on Saturday from **10am to 8pm**. The rate increase of $1 will be applied if the traffic conditions closer to July warrant it for each of the half-hour time slots.

11. Please refer to **Annex B** for the locations of these gantries.

12. On Saturdays, the gantries at Eu Tong Sen Street and Fullerton Road (towards Suntec City), together with the existing CBD gantries north of the Singapore River Line, will help to demarcate the Bugis-Marina Centre Cordon as traffic conditions within this cordon have deteriorated below the optimal speed threshold. The Bugis-Marina Centre Cordon and the existing Orchard Cordon will operate during the same hours on Saturdays and will help in managing traffic in the City area on Saturdays. [Please refer to **Annex C** for the location of the different cordons.]

**November 2008 - Operation of 6 new gantries on arterial roads and expressways**

13. Based on the new ERP criteria (i.e. 85th percentile speed measurement method), traffic speeds at 6 locations on arterial roads and expressways have fallen below the optimal speed range, and ERP is needed to manage the congestion that is building up at these areas. The new gantries will operate from **3 November 2008** onwards, and they are as shown below. Please refer to **Annex D** for the location of the 6 new gantries.

a. **3 new gantries on roads along the Outer Cordon in the morning.** LTA will be installing new gantries at the following 3 locations along the Outer Cordon to address the congestion on these roads, namely (i) Commonwealth Avenue; (ii) Jalan Bukit Merah; and (iii) Alexandra Road.

b. **2 new gantries on expressways in the morning.** One gantry is along AYE (westbound), near Alexandra Road, and the other is along PIE (westbound), near Eunos.

c. **New gantry on Serangoon Road in the evening.** To address the congestion on Serangoon Road during the evening peak hours, LTA will be installing a gantry there.

14. The operation hours and ERP rates at each of the 6 gantries above will be determined and announced closer to their implementation in November 2008. [Please refer to **Annex E** for a map showing the location of the Outer Cordon.]

**Implementation of New ERP Criteria and Rates on Existing ERP Gantries**

15. LTA will be phasing in the implementation of the new ERP criteria and new ERP
rates on existing ERP gantries to allow time for motorists to adjust their travel plans. The new criteria will first be applied to the CBD and Orchard Cordon in July 2008 before being extended to other roads progressively. This will also allow for the impact of changes in the city area to work its way through the rest of the road network. If the new ERP rates in the CBD and Orchard Cordon result in fewer motorists driving on the roads leading to the city, ERP rates need not be adjusted if speeds do not fall below the threshold speed.

16. The following is the schedule for the application of the new ERP criteria (i.e. 85th percentile speed measurement method and ERP rate increment of $1) on existing ERP gantries:

- July 2008 - to be implemented on gantries in CBD and Orchard Cordon (on weekdays) and Orchard and Marina Centre Cordon (on Saturdays).
- November 2008 - to be implemented on gantries on roads within and up to the Outer Cordon. Map showing the location of the Outer Cordon is given in Annex E
- February 2009 - to be implemented on all gantries islandwide

17. Before the new ERP criteria is applied to the respective areas, LTA will continue with using the existing ERP criteria in the quarterly ERP rate reviews.

Conclusion

18. "The main aim of the ERP changes is to keep our roads smooth flowing and ensure a high quality urban environment. We are putting a lot of effort into making public transport a viable alternative to driving and we hope that more motorists will give it a try." said Mr Yam Ah Mee, LTA Chief Executive.