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Metropolitan Transportation Authority

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**OPERATIONS COMMITTEE
SEPTEMBER 20, 2007**

SUBJECT: METRO ORANGE LINE EXPRESS BUS STUDY

ACTION: RECEIVE AND FILE

RECOMMENDATION

Receive and file report on Metro Orange Line Express bus study.

ISSUE

The Mayor's office requested staff to report back on the feasibility of reducing travel times and attracting new riders to the Metro Orange Line by introducing skip-stop or express type service. In July 2007, staff responded to a similar request received from the San Fernando Valley Governance Council. An evaluation of the Metro Orange Line express concept was produced and included goals and objectives, potential impact on passengers and limitations of the transitway and signal priority systems. Additional study is required to explore strategies for overcoming some of the operational obstacles and assessing the potential benefits and disadvantages of this proposal.

The purpose of the study will be to identify service options for improving operating speeds and attracting new long distance riders.

BACKGROUND

On October 30, 2005, service was inaugurated on the Metro Orange Line to better serve the communities of the west San Fernando Valley Warner Center and North Hollywood. The focal point of the North Hollywood terminus is the connection to the Metro Red Line subway.

The Metro Orange Line operates along a 14-1/2 mile dedicated bus transitway and serves 14 passenger stations and 7 park/ride lots. This dedicated transitway consists of one traffic lane in each direction. Within the station areas, one additional lane is provided to enable bus-passing movements. The station areas are the only areas where passing movements are possible.

In normal operations, significant travel time savings are realized through a traffic signal

priority system designed and installed under the direction of City of Los Angeles Department of Transportation staff. This computerized system tracks the location of Orange Line buses, compares the location to a predetermined schedule and, when conditions are right, extends busway signal green time as buses approach key intersections. Orange Line buses do not have signal preemption.

This feature relies heavily on signal timing and is based upon the scheduled travel times of Metro Orange Line buses. Due to the current design limitations, signal priority is granted to trips operating on intervals of 4 minutes or greater. During weekday peaks, Metro Orange trips are operating at or near the 4-minute threshold in each direction.

In June 2007, Metro Orange Line ridership increased to 25,475 average weekday boardings. This is far beyond the original system projections. Approximately 7% of existing passengers ride Orange Line trips from end to end and will be the primary beneficiaries of skip-stop or express service.

On June 14, 2007, a six-month demonstration was undertaken to determine the benefits or disadvantages of operating skip-stop or express type services on Metro Rapid Bus Lines 720 and 740. Lessons learned from that demonstration would be evaluated and considered by Metro San Fernando Valley staff for possible Orange Line application.

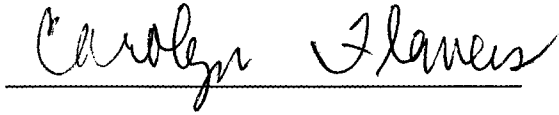
Travel time savings achieved through signal priority are essential to preserving Metro Orange Line popularity and growth. When considering limited or skip stop operation, care must be taken not to adversely impact short distance Metro Orange Line riders. To ensure that all Metro Orange Line passengers' needs are met, Metro and Los Angeles Department of Transportation may be required to consider the following mitigation measures:

- Establish signal pre-emption (absolute priority) along the transitway to protect and improve travel speeds.
- Establish additional safety measures to protect against collisions while achieving faster travel speeds.
- Resetting of loop detection devices to allow for greater signal system flexibility.
- Purchase and operate higher capacity buses to increase passenger capacity while maintaining existing headways.
- Maintain service levels comparable to weekday 4-minute peak intervals.

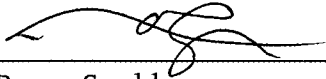
NEXT STEPS

Metro San Fernando Valley staff will further study the proposed introduction of skip-stop or express type service along the Metro Orange Line transitway. A more comprehensive study is necessary to develop and refine skip stop alternatives, to complete analyses of passenger impacts and explore signal pre-emption and other speed improvement opportunities. The proposed study would be completed by Metro staff with existing resources and presented to the Board with staff recommendations in six months.

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