

# The Institution of Engineers, Malaysia

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Talk on Transportation Trends in California: Managed Freeway Lanes and Transit Systems (Organised by the Consulting Engineering Special Interest Group, IEM) **BEM Approved CPD/PDP Hours: 2** Ref No: IEM14/HQ/244/T

Date 24 July 2014 (Thursday)

Time

5.30 pm – 7.30 pm (Refreshments will be served at 5.00 pm)

Auditorium Tan Sri Prof. Chin Fung Kee, 3<sup>rd</sup> Floor, Wisma IEM, Petaling Jaya Venue

Mr. Loren Bloomberg, P.E and Ms. Huey Yann Ooi, P.E Speakers

### **SYNOPSIS**

In the 20th century, most of the transportation focus in the United States was on building new roads. While some large cities built fixed guide-way systems to and from their downtown cores, the vast majority of resources were for new roads. Freeway improvement projects were mostly to add pavement (lanes), often in growing suburban areas. Over the past 10 to 20 years, the focus has changed to improving (not expanding) the freeway system and to major enhancements of transit (rail and bus) systems. Planning and funding priorities are centred on system operations and transit network expansion/renewal in most metropolitan areas. This lecture will explore U.S. trends and examples in both freeway and transit systems.

Managed lanes are a focus area for many large transportation agencies in the U.S. The cost, time, and environmental impacts of building new freeway lanes are leading many agencies to focus on better management of their existing facilities. High-occupancy vehicle (HOV) lanes are commonly used in the U.S. – allowing carpools (cars with more than one person) exclusive use of a faster lane. However, priced managed lanes give agencies even more control over the capacity of these lanes, because dynamic pricing allows much more control and the ability to improve throughput and bring in revenue. The basic concept is to allow carpools in for free, but to charge a dynamic toll to single-occupancy (SOV) drivers who want a faster trip. The price depends on the congestion in the general purpose ("free" lanes) or the number of drivers in the managed lanes. Approximately 20 freeway corridors now have priced managed lanes in the U.S. and more are coming online every year. While they are generally viewed positively, there are challenges in planning, designing, and operating these lanes. The presentation will include some examples from managed lane systems in the U.S., and lessons learned from planning to

Public transit in the U.S. plays an essential role in the nation's economic vitality. It is an essential source of mobility to a third of the population who do not drive cars. From 1995-2013, public transit ridership rose by 37.2 percent, almost double the nation's increase in population of 20.3 percent, and even outpaced vehicle miles traveled (VMT) by 0.8% in 2013. Demand for public transportation will continue rising due to trends in population growth, demographics, metropolitan densification and urban renewal. The resurgence of interest in transit has come hand-in-hand with investment in transit infrastructure. Modernization of transit vehicles and facilities, service and access improvements, as well as intermodal passenger trip management/advisory tools are elements of a superior public transportation system that attracts ridership and influences land use planning and development strategies. Since 1991, several U.S. federal laws have been enacted to steer surface transportation planning and policy towards Intermodalism. The laws increase research and funding opportunities for the capital investment and maintenance of transit systems with the end goals of environmental and economic sustainability. Public transit project development challenges and opportunities will be presented using some examples of current transit projects in the U.S.

#### SPEAKER BIOGRAPHIES



Loren Bloomberg, P.E. is CH2M HILL's North America Director for Traffic Engineering. He has engineering degrees from the University of Virginia and the University of California, Berkeley. With more than 20 years of experience, he has led or played a key role in numerous large-scale planning and operations analyses, with a focus on freeway studies. Mr. Bloomberg's technical expertise is in traffic operations and modeling, with a particular focus on conceptual engineering and traffic analysis. He has conducted studies and developed plans for local areas, corridors, and entire regions including roadways, maritime facilities, and airports. He has worked on projects in 28 U.S. states, as well as internationally in New Zealand, Saudi Arabia, Abu Dhabi, Iraq, Dubai, Mexico, and Canada. Mr. Bloomberg was the consultant Project Manager on San Diego's Regional High-Occupancy-Vehicle/Managed Lanes Systems Planning and Implementation Guide. He has also directed CH2M HILL's work on the Caltrans State Managed Lanes Deployment Policy, the SR 241/SR 91 Express Lanes Connector Study in Orange County, California, and the U.S. national research project "Analysis of Managed Lanes on Freeway Facilities", which developed a new chapter on

managed lanes for the 2010 Highway Capacity Manual (HCM). Mr. Bloomberg is a member of the Highway Capacity Committee of the Transportation Research Board, where he chairs the Uninterrupted Flow Group, managing three subcommittees on Freeways, Active Traffic and Demand Management, and Two-Lane Highways. He has also taught transportation planning and operations concepts to over 400 agency staff throughout the U.S.



Huey Yann Ooi, P.E. is a Senior Project Manager in HDR's Southern California Rail and Transit Group. A British Chevening Scholar, Ms. Ooi obtained her Civil Engineering degree with honors from the University of Nottingham, England. She has over 18 years of design and construction experience, delivering a variety of large-scale transportation projects in Malaysia, Australia and America while employed with nationally and internationally acclaimed engineering firms such as Hyder Consulting, Zaidun-Leeng Sdn. Bhd. and CH2M Hill. Her portfolio of completed projects include the KL STAR LRT (Phase 1), Senari Deep Water Port, SPRINT Expressway, Damansara - Puchong Expressway, The Melbourne City Link, the SR-125 Toll Road and the San Diego MTS Trolley Renewal Program. Ms. Ooi is familiar with various methods of project delivery for transportation projects including traditional design-bid-build, design-build, CMGC and JOC. An advocate of advancing women in transportation, Ms. Ooi was President of Women Transportation Seminar (WTS) (San Diego Chapter) in

2010/2011 and she currently serves as Chair of its Professional Development committee.

Ir. Dr. Ooi Teik Aun Hon. F.I.E.M., P.Eng Advisor Consulting Engineering Special Interest Group, IEM

#### Announcement to note:

- Talk is STRICTLY for IEM members only (pre-registration and online registration are NOT required) (telephone and/or fax reservation will NOT be entertained)
- Non-members may also attend the talk and will be charged a registration fee of RM50 and an administrative fee of RM10.
- 3. For affiliate members, there will be no registration fee. However, they are requested to produce their membership card as proof of membership. For the list of affiliates, please refer www.myiem.org.my/content/mer erstanding-469.aspx.
- Limited seats available on a "first come first served" basis (maximum 110 participants)
- IEM members are required to produce your membership cards for confirmation of (CPD purpose).

  Latecomers will not be allowed to enter if the lecture hall is full nor be entitled to CPD. IEM members who fail to produce their membership cards will be charged a fee of RM20.00

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Kindly be informed that IEM will be charging participants RM10.00 administrative fee for talks organized by IEM. The fee would be used for overhead costs, building maintenance expenses as well as to support the purchase of the new building.

All contributions will be deeply appreciated by IEM Students are however exempted.

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