Operations-Based Planning for Managed Lanes Systems

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Session 10: Connecting the Projects: Moving to Managed Lane Systems

TRB 15th International Managed Land Conference

Grand Hyatt
Miami, Florida

May 6, 2016
9:00-10:15 a.m.

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Study Objectives

- Provide guidance and lessons learned on incorporating managed lanes systems into regional transportation plans
- Identify the elements of an integrated managed lane system
- Identify the steps required for a metro region to achieve such a systems

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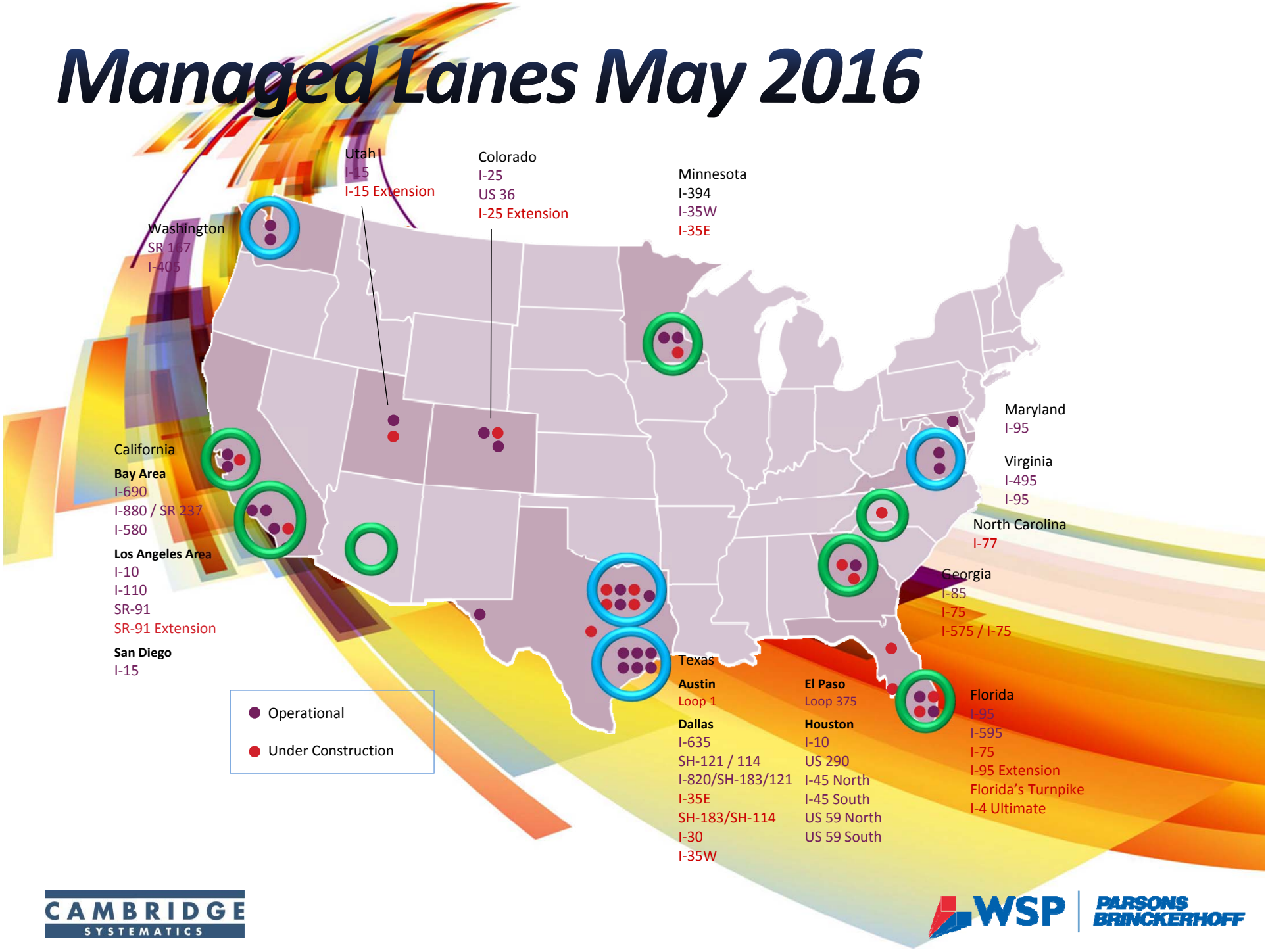
Managed Lanes May 2016



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Regional Managed Lane System Plans

Location	Regional Plan or ConOps	Included in MPO Long Range Plan	Included in State Long Range Plan	Included in Regional TIP	Included in State TIP (STIP)
Atlanta	Yes	√	√	√	
Charlotte	Yes	√		√	
Dallas	No	√		√	
Houston	No				
Miami	Yes			√	
Minneapolis	Yes	√	√	√	√
Northern VA	No				
Phoenix	Yes	√			
San Francisco	Yes	√		√	
Seattle	No				
Southern CA	Yes	√			

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Operational Elements & Challenges

- Toll Collection Technologies
- Signage and User Communication
- Managed Lane Access
- Vehicle Eligibility and Occupancy
- Planning for Enforcement and Incident Response
- Business Rules
- Funding and Cross Subsidies
- Performance Monitoring and Data Sharing

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Institutional and Policy Considerations Influence Managed Lane Network Pans

- **Institutional Contexts**
  - *Single or multiple project sponsors in a given region*
  - *Role of the MPO in managed lane network planning*
  - *Role of the state DOT, toll operators, transit agencies, and private developers*
- **Role of Long Range Plans in the Region**
- **Statutory and Policy Considerations**
- **Project Delivery Methods**

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Steps in the ML Network Planning Process

- **Feasibility / Planning Studies**
  - *Regional or Corridor-Specific*
- **Technical / Environmental Study Documents**
  - *Corridor Specific*
- **Concept of Operations**
  - *Regional or Corridor Specific – Often Iterative*
- **Traffic and Revenue Forecasts**
  - *Regional or Corridor Specific – Iterative*

- **MPO Long Range Transportation Plan Update**
  - *Conducted every 4-5 years*

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Details Are In the Studies Informing the LRTP

- **Feasibility / Planning Studies**
  - *Medium level of detail / granularity*
- **Technical / Environmental Study Documents**
  - *High level of detail / granularity*
  - *Focus on design and technical components*
- **Concept of Operations**
  - *Medium to high level of detail / granularity*
  - *Focus on policy and operational issues*
- **Traffic and Revenue Forecasts**
  - *Medium to high level of detail*
  - *Focus on revenue, funding and phasing*

- **MPO Long Range Transportation Plan Update**
  - *Low to no detail / granularity*
  - *Focus on regional policy and project funding and phasing*

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Research Report

- **Technical content largely derived from technical reports – supplemented by information from case study interviews**
- **Case studies of regional managed lane network planning practices**
- **The cases should**
  - *Provide a range of institutional structures*
  - *Show the linkages between institutional structures and the resolution of operational elements and issues*
  - *Illustrate the steps in the ML network planning process leading to the inclusion of ML networks in LRTPs*

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Candidate Case Study Regions

- **Bay Area**
  - *MPO is leading planning and will operate MLs in 3 counties.*
  - *Three other counties advancing their own ML projects*
- **Dallas-Fort Worth**
  - *TxDOT implements ML projects but delegates operational and maintenance responsibilities to NTTA and private operators*
  - *MPO developed regional managed lane policy that functions as a surrogate regional ConOps*
  - *MPO convenes quarterly ML Coordination Meetings*
- **Miami**
  - *FDOT policy that all new highway capacity is operated as ML*
  - *FDOT's successful Regional Concept of Operations process developed for South Florida is now being replicated in other parts of the state*
  - *FDOT collaborates closely with FTE / toll operators*

Candidate Case Study Regions

- **Minneapolis**
  - *MnDOT is the region's sole ML sponsor / operator*
  - *Actively engaged MPO engenders strong linkages between ConOps and LRTP*
- **Southern CA**
  - *MPO is leading regional ML planning*
  - *Four counties will implement/operate MLs independently*

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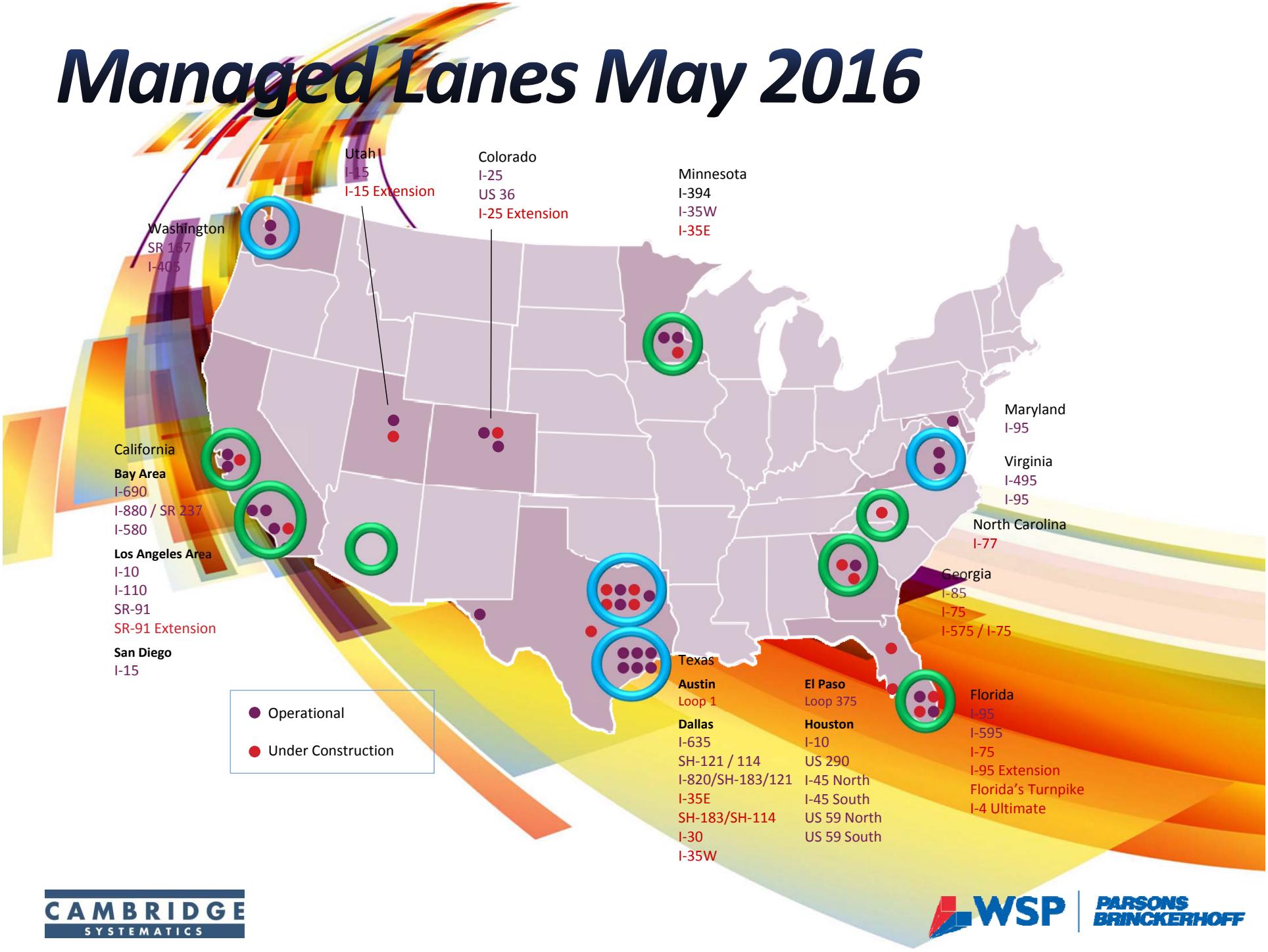

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