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Austin Regional ITS Architecture  
and Deployment Plan Update

# ITS Architecture Workshop

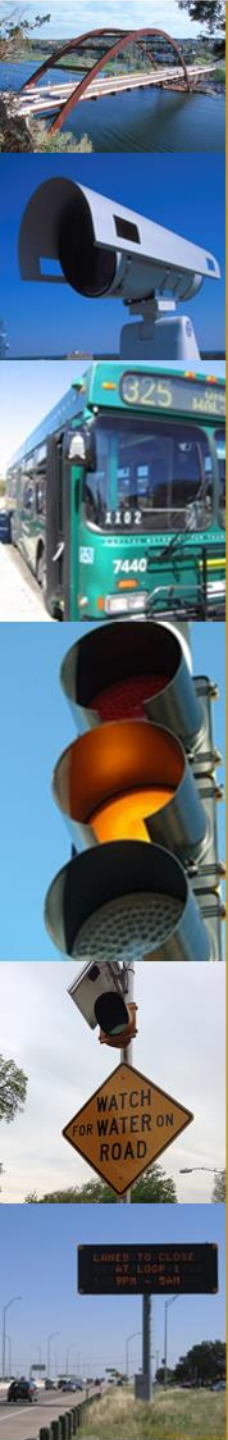
November 20, 2014

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# Workshop Overview

- ▶ Welcome and Introductions
- ▶ Presentation and Discussion on the Draft Regional ITS Architecture Document and Project Website
- ▶ Presentation and Discussion on the Regional ITS Deployment Plan
  - ▶ Review of Potential ITS Projects and Operations Initiatives to be Considered in the Austin Region
  - ▶ Selection of Regional ITS Projects and Operations Initiatives to Include in the Austin Regional ITS Deployment Plan
  - ▶ Prioritization of Regional ITS Projects and Operations Initiatives for the Austin Region
- ▶ Concluding Comments and Adjourn



# Project Overview

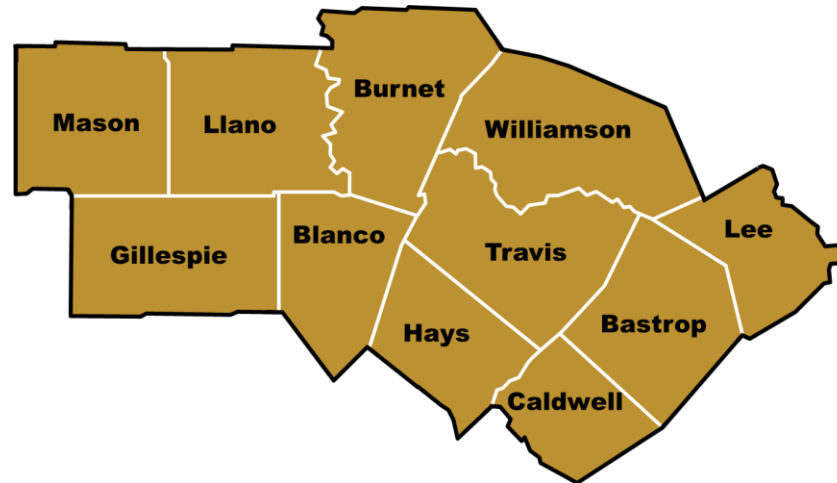
- ▶ Purpose: Update the 2007 Austin Regional ITS Architecture report and Deployment Plan
- ▶ Update goals:
  - ▶ Include participation from traffic, transit, and public safety stakeholders representing local, state, and federal agencies in the Austin Region
  - ▶ Provide a high level plan that documents the Region's vision for the deployment, integration, and operation of ITS in the Austin Region
  - ▶ Assist the Region in meeting the FHWA and FTA requirements for ITS architecture conformity



# Austin Regional Boundaries

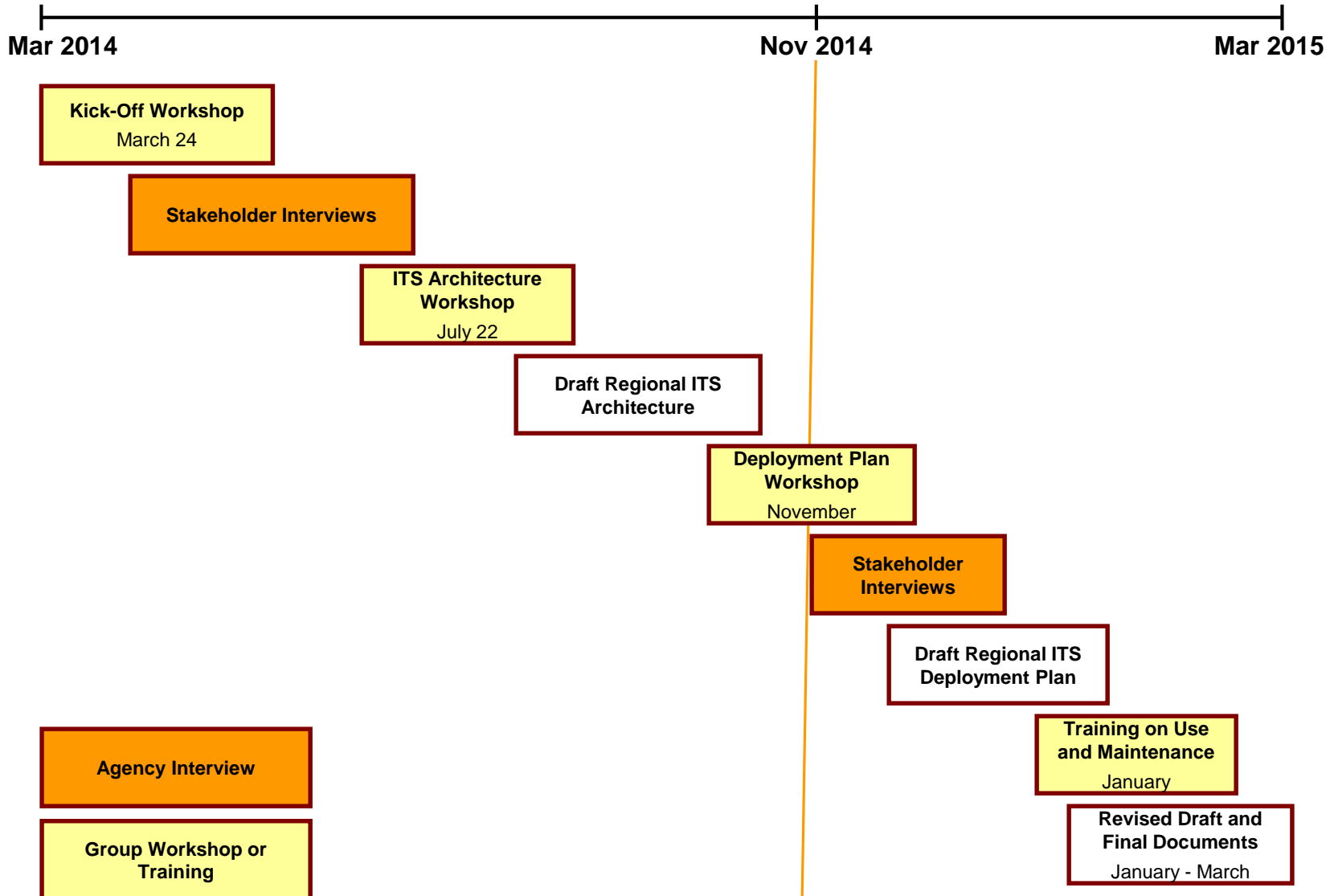
The regional boundaries have been defined as the boundaries of the TxDOT Austin District

Bastrop, Blanco, Burnet, Caldwell, Gillespie, Hays, Lee, Llano, Mason, Travis and Williamson



Connections will be added to all agencies outside the regional boundaries as appropriate

# Project Overview



# Deliverables

## (Completed)

- ▶ Draft Regional ITS Architecture
  - ▶ Available for review on project website
  - ▶ Comments requested by **December 5, 2014**
  - ▶ Contact project team if you would like a MS Word Version for review or need additional time
- ▶ Project Website
  - ▶ Includes draft documents, interactive architecture, use and maintenance section, contacts, etc.
  - ▶ Available at: **[www.AustinITSArchitecture.com](http://www.AustinITSArchitecture.com)**
- ▶ Turbo Architecture Database (Version 7.0)



# Deliverables

## (Remaining)

- ▶ Regional ITS Deployment Plan
  - ▶ Identifies ITS projects for the Region
  - ▶ Demonstrated project conformance to the Regional ITS Architecture
  - ▶ Draft prepared in December
- ▶ Regional ITS Architecture Use and Maintenance Training
  - ▶ Delivered in February/March
- ▶ Executive Summary



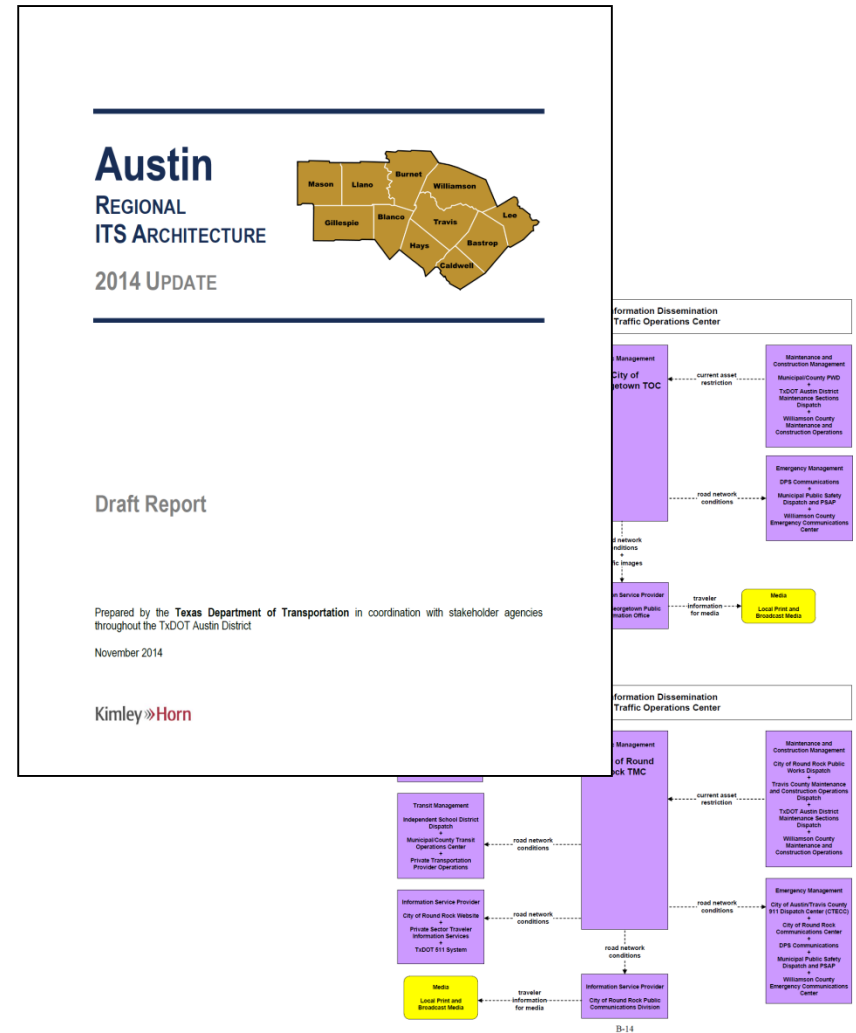


# Draft Regional ITS Architecture

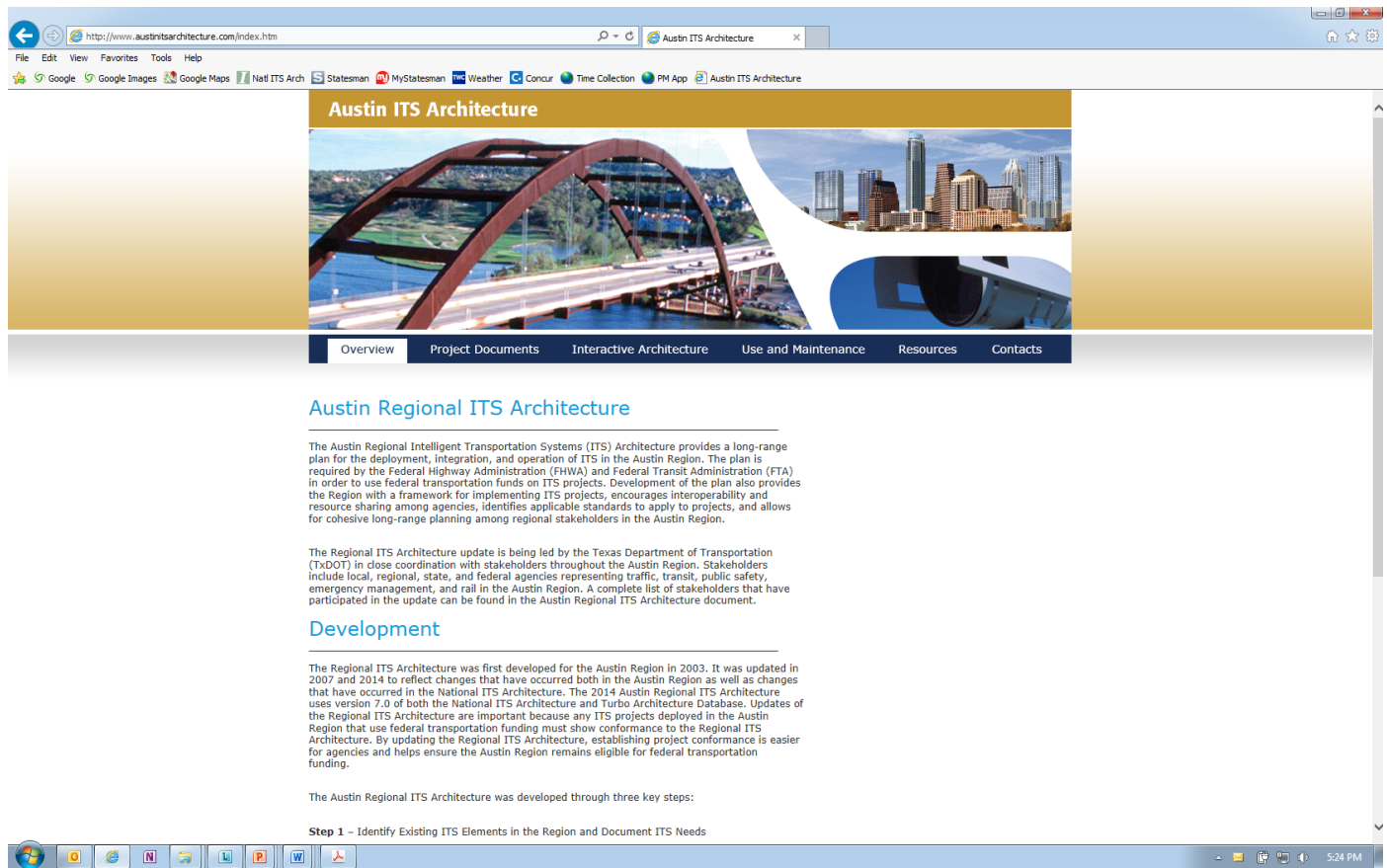


# Draft Regional ITS Architecture

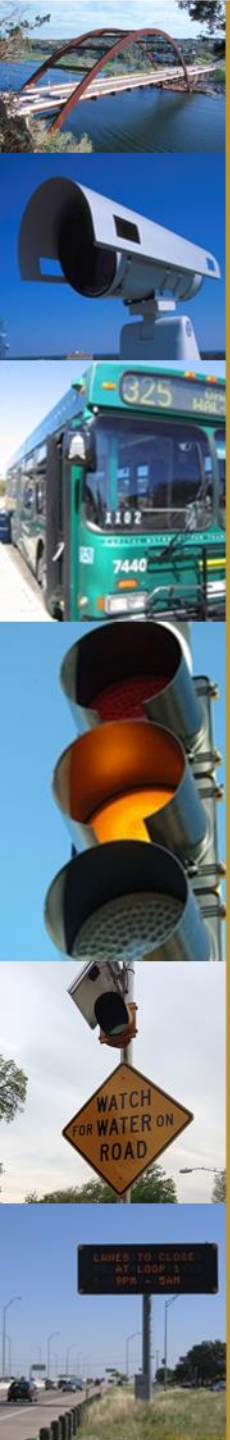
- ▶ Comments requested by **December 5**
- ▶ Submit in any format that is convenient
- ▶ Recommended Review Tables:
  - ▶ ITS Inventory
  - ▶ ITS Service Packages
  - ▶ Roles and Responsibilities
- ▶ Recommended Review Appendices:
  - ▶ Appendix B - ITS Service Package Diagrams



# Project Website



[www.AustinITSArchitecture.com](http://www.AustinITSArchitecture.com)

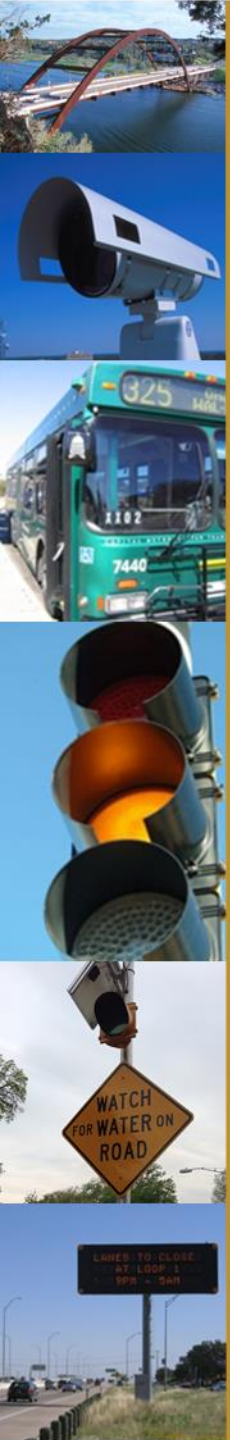


# ITS Deployment Plan

# ITS Deployment Plan

## Areas Where the Region is Doing Well

ITS Deployment	Freeway Status	Arterial Status
Traffic Management Centers	✓	✓
Vehicle Detection and Monitoring Systems	✓	✓
Coordinated Traffic Signals	NA	✓
Traffic Signal Preemption for Emergency Vehicles	NA	✓
Transit Signal Priority	NA	✓
Transit Traveler Information	✓	



# ITS Deployment Plan

## Areas Where Improvement is Needed

ITS Deployment	Freeway Status	Arterial Status
<b>Active Traffic Management</b> (Managed Lanes, Lane Control Signals, Variable Speed Limits, Ramp Meters)	Partial	Need
<b>Travel Times</b>	✓	Need
<b>Freeway Service Patrol</b>	Partial	NA
<b>Adaptive Signal Control</b>	NA	Need
<b>Road Weather Information</b>	✓	Need



# ITS Deployment Plan

## Areas Where Improvement is Needed

ITS Deployment	Freeway Status	Arterial Status
Traveler Information (Websites)*	Partial	Need
Traveler Information (Social Media)*	Partial	Need

\*Stakeholders identified need to combine freeway and arterial traveler information into a single location for all regional traveler information



# ITS Deployment Plan

## Areas Where Improvement is Needed

ITS Deployment	Regional Status
<b>Center-to-Center Communications</b> (TxDOT-to-TxDOT)	Partial
<b>Center-to-Center Communications</b> (TxDOT-to-Local)	Partial
<b>Center-to-Center Communications</b> (Local-to-Local)	Need



# ITS Deployment Plan

## Areas Where Improvement is Needed

ITS Deployment	Regional Status
<b>Traffic Incident Management</b> (Training, Policies and Procedures, CAD data sharing)	Partial
<b>Integrated Corridor Management</b>	Need
<b>Archived Data Warehouse</b>	Need
<b>Regional or Statewide Transit Payment System</b>	Partial
<b>Autonomous / Connected Vehicles</b>	TBD







# ITS Deployment Plan Project Discussion

# Regional Projects to Discuss

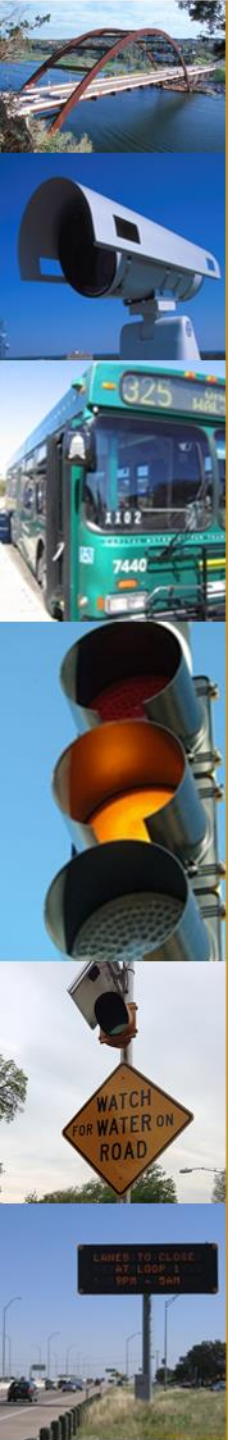
- ▶ Regional Traveler Information Improvements
- ▶ Traffic Incident Management Improvements
- ▶ Freeway Service Patrol Expansion
- ▶ Integrated Corridor Management
- ▶ Center-to-Center Communications (TxDOT-to-Local)
- ▶ Center-to-Center Communications (Local-to-Local)
- ▶ Regional or Statewide Transit Payment System
- ▶ Archived Data Warehouse Implementation



# Project Discussion

## Regional Traveler Information Improvements

Regional Traveler Information	
<b>Stakeholders</b>	TxDOT, CTRMA, CAMPO, Cities, CapMetro, CARTS
<b>Components</b>	Travel times and road conditions, transit information, customized information for travelers
<b>Status</b>	Limited information on arterials, information is currently spread out over many agencies in many locations, limited ability for travelers to customize information
<b>Priority</b>	High



# Project Discussion

## Traffic Incident Management Improvements

Traffic Incident Management	
<b>Stakeholders</b>	TxDOT, CTRMA, CAMPO, Counties, Cities
<b>Components</b>	AIMHigh Coalition, freeway and arterial monitoring, CAD incident data sharing, freeway service patrol, signal timing plans for incidents, training
<b>Status</b>	AIMHigh coalition meets on regular basis, freeway and arterial monitoring exists but should expand, limited CAD incident data sharing and freeway service patrol, signal timing plans for incidents are needed, signage possibly needed for detour routes  Are there training needs?
<b>Priority</b>	High

# Project Discussion

## Freeway Service Patrol Expansion

Freeway Service Patrol	
<b>Stakeholders</b>	TxDOT, CTRMA, CAMPO
<b>Components</b>	Freeway Service Patrol vehicles, dispatching, coordination with public safety
<b>Status</b>	Deployed only on I-35, need to expand coverage area and services provided
<b>Priority</b>	High



# Project Discussion

## Integrated Corridor Management Deployment

Integrated Corridor Management	
<b>Stakeholders</b>	TxDOT, CTRMA, Capital Metro, Austin  Other Cities?
<b>Components</b>	Freeway and arterial monitoring, travel time monitoring, regional traveler information
<b>Status</b>	Regional initiative currently in place to develop ICM
<b>Priority</b>	High



# Project Discussion

## Center-to-Center Communications (TxDOT-to-Local)

Center-to-Center Communications (TxDOT-to-Local)	
<b>Stakeholders</b>	TxDOT, Cities, CapMetro, CARTS
<b>Components</b>	Video sharing, CAD incident data sharing, other travel information
<b>Status</b>	Existing connections between TxDOT and City of Austin, Incident information through agencies at CTECC  Additional data sharing is needed for agencies not located at CTECC
<b>Priority</b>	High



# Project Discussion

## Center-to-Center Communications (Local-to-Local)

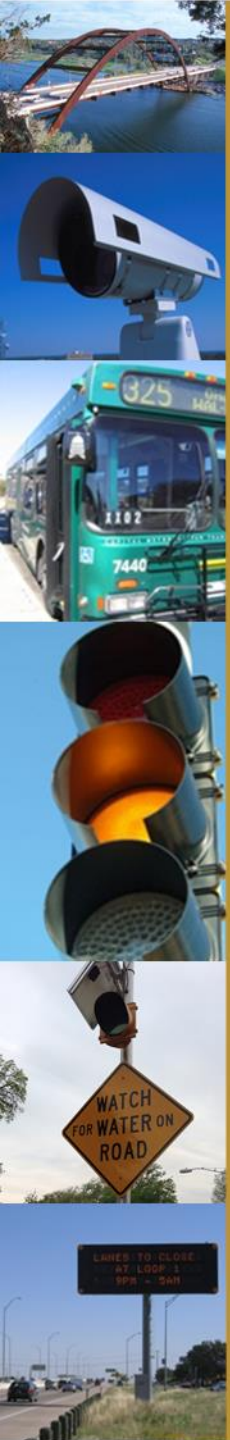
Center-to-Center Communications (Local-to-Local)	
<b>Stakeholders</b>	Cities, CapMetro, CARTS
<b>Components</b>	Traffic signal coordination, real-time and planned road closures
<b>Status</b>	<p>Limited signal coordination and information sharing, planned road closures often shared through email or fax but not in real time</p> <p>For signal coordination only Austin-Round Rock and Austin-Cedar Park were identified as needs. CapMetro and CARTS have a need for real-time closure information.</p>
<b>Priority</b>	Medium



# Project Discussion

## Regional or Statewide Transit Payment System

Regional or Statewide Transit Payment System	
<b>Stakeholders</b>	Capital Metro, CARTS
<b>Components</b>	Fare payment system that can be used on all transit modes in the region or statewide
<b>Status</b>	Separate fare payment systems for each agency
<b>Priority</b>	High



# Project Discussion

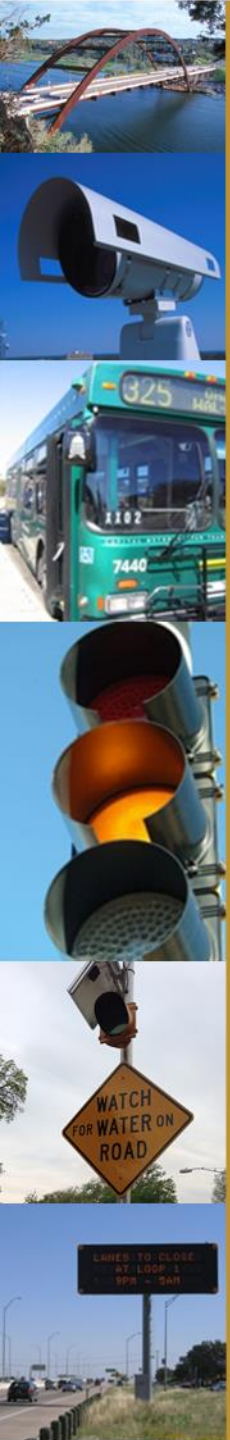
## Archived Data Warehouse Implementation

Archived Data Warehouse	
<b>Stakeholders</b>	TxDOT, CTRMA, CAMPO, Cities and Counties, Capital Metro, CARTS
<b>Components</b>	Data warehouse to store regional travel data. Could be a done virtually.
<b>Status</b>	Agencies store limited data but warehouse is not available
<b>Priority</b>	Medium



# Regional Projects to Discuss

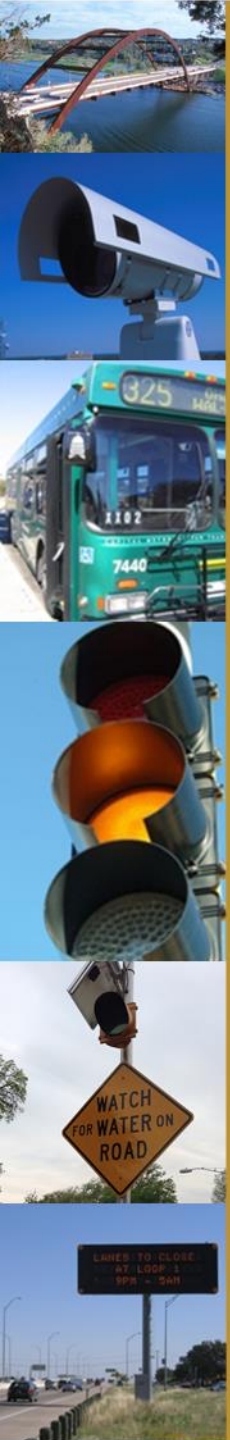
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- ▶ Traffic Incident Management Improvements
- ▶ Freeway Service Patrol Expansion
- ▶ Integrated Corridor Management
- ▶ Center-to-Center Communications (TxDOT-to-Local)
- ▶ Center-to-Center Communications (Local-to-Local)
- ▶ Regional or Statewide Transit Payment System
- ▶ Archived Data Warehouse Implementation
- ▶ **Other Projects**



# Next Steps

- ▶ Stakeholders to Provide Comments on Draft Regional ITS Architecture Document by **December 5, 2014**
- ▶ Develop Regional ITS Deployment Plan
- ▶ Upcoming Workshops
  - ▶ ITS Architecture Use and Maintenance Training in February/March





# Thank You!

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