Austin Regional ITS Architecture
Stakeholder Workshop Meeting Minutes

MEETING DATE: November 1, 2018

MEETING TIME: 10:00 AM – 12:00 PM

MEETING LOCATION: CTRMA Board Room, 3300 N Interstate Hwy 35, Suite 300, Austin, Texas

ATTENDEES:

Nirav Ved, CAMPO
Stephanie McClintock, City of Austin CTECC
Jorge Riveros, City of Austin Transportation
Joshil Bhatpuria, City of Austin Transportation
Joshua Canter, City of Georgetown
Chad Wood, City of Pflugerville
Brian Kuhn, City of Round Rock
David Walther, City of Round Rock
Andy McKinney, City of Round Rock PD
Ben Hill, City of Round Rock PD
Sabas Avila, City of San Marcos
Stephen Ratke, FHWA Texas Division
Brian Burk, Travis County TNR
Adam Kaliszewski, TxDOT Austin District
John Nevares, TxDOT Austin District
Roxana Ene, TxDOT ATP
Joe Snyder, TxDOT CTECC (Serco)
Marco Cameron, TxDOT TRF
David McDonald, TxDOT TRF
Barbara Russell, TxDOT TRF
Jimmy Bailey, TxDOT Toll Operations Division
Linda Sexton, TxDOT Toll Operations Division
Brian Smallwood, TxDOT Toll Operations Division
Jason Nine, TxTag Austin
Robert Daigh, Williamson County
Tom Fowler, Kimley-Horn
Terrance Hill, Kimley-Horn
Caroline Bennighof, Kimley-Horn
Melissa Shebat, Kimley-Horn

SUBJECT: Austin Regional Intelligent Transportation Systems (ITS) Architecture Stakeholder Workshop

MEETING DISCUSSION

- Project Overview
  - Tom Fowler provided an overview of the Regional ITS Architecture.
  - Project Overview:
    - The Regional ITS Architecture is a long-range plan for the deployment, integration, and operation of ITS.
    - The architecture acts as a framework for ensuring institutional agreement and technical integration among stakeholders for the implementation of ITS projects in a particular region.
  - Project Purpose:
    - To provide a vision for ITS in the region
    - To identify key stakeholders and interagency relationships
    - To develop a blueprint for the integration of systems
    - To provide a framework for more detailed project design
    - To help identify project-level requirements
    - To demonstrate conformity for ITS projects using federal funding
  - History in the Austin Region:
    - 1996: Austin Area-Wide Intelligent Vehicle Highway System Plan and IH-35 Corridor Deployment Plan
    - 2002: The first Austin Regional ITS Architecture

        - 2007: Austin Regional ITS Architecture Update
        - 2015: Austin Regional ITS Architecture Update
        - 2019: Current Austin Regional ITS Architecture Update
    - Tom explained that the project team has updated the 2015 Austin Architecture to the National ITS Architecture Version 8.1, gathered stakeholder input through interviews with 18 agencies in the Region, and drafted the RAD-IT database and interactive architecture. Following today's workshop, the project team will draft the 2019 Regional ITS Architecture and Deployment Plan and interactive architecture and distribute them to stakeholders for review. The report and interactive architecture will then be finalized for this update.
    - Tom described the twelve service areas in the Regional ITS Architecture:
        - Traffic Management
        - Traveler Information
        - Public Safety
        - Maintenance and Construction
        - Commercial Vehicle Operations
        - Sustainable Travel
        - Public Transportation
        - Weather
        - Data Management
        - Support
        - Parking Management
        - Vehicle Safety
    - Tom explained the basic structure of ITS service packages contained in the architecture.
    - Tom outlined the Regional ITS Architecture and Deployment Plan report:
        - Stakeholder Agencies
        - Regional ITS Needs
        - Inventory of Existing and
        - Planned Components
        - ITS Service Packages
        - Standards
        - Deployment Plan
        - Use and Maintenance
- Stakeholder Interview Feedback
    - Tom described some of the key ITS needs in the Austin Region that have been identified by stakeholders during stakeholder interviews this fall:
        - Improved coordination and data sharing between agencies, including computer-aided dispatch (CAD) and incident status
        - Opportunities for consolidated regional traffic management
        - Increased interagency access to ITS resources (e.g., CCTV cameras and Dynamic Message Signs)
        - Ability to pay a single fare for a transit trip involving multiple transit providers
        - Readiness for industry advancements in Connected and Automated Vehicles
        - Expansion of emergency vehicle preemption and freeway safety service patrol
- Regional Needs and Level of ITS Deployment
    - Caroline Bennighof facilitated a group discussion on the 12 service areas in the Regional ITS Architecture. For each service area, stakeholders reviewed the preliminary current level of

deployment in the Region and level of regional interest in expanding ITS in that service area. Stakeholders also provided comments about regional needs in each service area as applicable.

- Service Area #1: Traffic Management
  - Example service packages: Traffic Signal Control, Traffic Incident Management System, Variable Speed Limit Signs, Ramp Metering
  - Level of Deployment: High
  - Level of Interest: High
- Service Area #2: Traveler Information
  - Example service packages: Broadcast Traveler Information, Dynamic Route Guidance, In-vehicle Signage
  - Level of Deployment: Medium
  - Level of Interest: High
  - Stakeholders asked about the longevity of traveler information improvements that have been created as a part of temporary construction initiatives like Mobility 35. John Nevares advised that the ITS Master Plan documents permanent planned ITS projects.
  - Jorge Riveros asked what constitutes a medium level of deployment for the Region. The project team clarified that a medium level of deployment could include some agencies operating at a high level, while other areas of the 11-county TxDOT Austin District have a low level of deployment.
  - Round Rock police officers asked what the best mechanism for is getting in touch with traffic management partners about incidents. TxDOT advised to always contact CTECC.
- Service Area #3: Public Safety
  - Example service packages: Emergency Vehicle Preemption, Roadway Service Patrols, Disaster Response and Recovery
  - Level of Deployment: Medium
  - Level of Interest: High
  - Joe Snyder mentioned David McDonald's work as the TxDOT Statewide Traffic Incident Management Coordinator. David's efforts to share public safety information and best practices to be shared from other parts of the state could help with the architecture effort.
  - Jorge Riveros asked whether Vehicle Safety would continue to be its own service area or would become more integrated with the others. The project team explained that we follow the National ITS Architecture, which breaks out Vehicle Safety separately, but that Connected Vehicle elements appear in service packages in other service areas, like Traffic Management.
- Service Area #4: Maintenance and Construction
  - Example service packages: Maintenance Vehicle and Equipment Tracking, Infrastructure Monitoring, Roadway Automated Treatment
  - Level of Deployment: Medium
  - Level of Interest: High
- Service Area #5: Commercial Vehicle Operations
  - Example service packages: Electronic Clearance, HAZMAT Management, Roadside and Virtual Weigh-in-Motion
  - Level of Deployment: Medium
  - Level of Interest: High
  - Stakeholders asked whether over-height vehicle detection was a part of the architecture. The project team responded that it is included in the architecture, but not within the Commercial Vehicle Operations service area because over-

height detection can apply to many other cases, like trailers pulled by personal vehicles.

- Service Area #6: Sustainable Travel
  - Example service packages: Electronic Clearance, HAZMAT Management, Roadside and Virtual Weigh-in-Motion
  - Level of Deployment: Low
  - Level of Interest: Medium
- Service Area #7: Public Transportation
  - Example service packages: Transit Vehicle Tracking, Transit Traveler Information, Transit Signal Priority
  - Level of Deployment: Medium
  - Level of Interest: High
- Service Area #8: Weather
  - Example service packages: Weather Data Collection, Weather Information Processing and Distribution, Spot Weather Impact Warning
  - Level of Deployment: Medium
  - Level of Interest: Medium
- Service Area #9: Data Management
  - Example service packages: ITS Data Warehouse, Performance Monitoring
  - Level of Deployment: Low
  - Level of Interest: High
- Service Area #10: Support
  - Example service packages: Map Management, Data Distribution, Security and Credentials Management
  - Level of Deployment: Medium
  - Level of Interest: Medium
- Service Area #11: Parking Management
  - Example service packages: Parking Space Management, Parking Electronic Payment, Smart Park and Ride System
  - Level of Deployment: Medium
  - Level of Interest: Medium
- Service Area #12: Vehicle Safety
  - Example service packages: Connected Vehicle Curve Speed Warning
  - Connected Vehicle Queue Warning
  - Automated Vehicle Operations
  - Level of Deployment: Low
  - Level of Interest: High
  - Jorge Riveros remarked that the City of Austin anticipates moving towards a hybrid of Connected Vehicle technologies in the future, including DSRC and 5G. They are testing various technologies now before making any heavy infrastructure investments.
  - Marco Cameron described the purchase specifications that TxDOT has developed for Connected Vehicle Roadside Units. TxDOT is conducting a pilot study to learn more about these technologies. TxDOT is also concerned with applications for the Texas Freight Corridors. The Traffic Safety Division has also developed Smart Work Zone standards with six service packages included. The purpose of these standards is to encourage more use of ITS in work zones and provide the Districts with guidance.

        - Stakeholder expressed concern that ITS deployments are often the first to get cut on a construction project with a tight budget. Marco Cameron said that the TxDOT TSMO projects include a big push for regions to complete ITS Master Plans and include ITS elements in the schematic phase to help mitigate this challenge.
        - Nirav Ved described CAMPO's new scoring process for ITS projects and mentioned that ITS projects tend to score well in the cost-benefit category.
- Potential Regional ITS Project and Operations Initiatives
    - Tom described the following potential regional ITS initiatives that regional stakeholders have expressed interest in:
        - Regional Platform for Camera and DMS Sharing
        - Regional Platform for Incident Information Sharing
        - Integrated Corridor Management
        - Regional Traffic Management Center Concepts
            - Travis County
            - Williamson County
        - Regional Transit Fare System
        - Data Management
    - Stakeholders from the Round Rock Police Department added that Computer Aided Dispatch (CAD) to CAD data sharing should be a regional objective. This is occurring well between public safety agencies, but there is still progress to be made with sharing this data with transportation agencies. The stringent CJIS standards for criminal background data are a significant hurdle to sharing CAD data.
    - Stakeholders also mentioned that regional systems should be put in place to manage advancements in Connected and Automated Vehicles.
- Use and Maintenance
    - Tom provided an overview of systems engineering:
        - Systems engineering is an interdisciplinary approach to enable the realization of successful systems. It focuses on defining customer needs and required functionality early in the development cycle, documenting requirements, then proceeding with design synthesis and system validation while considering the complete problem.
        - Using a systems engineering approach is required by the USDOT for ITS projects. The process includes demonstrating conformance to the Regional ITS Architecture.
        - The USDOT requires a Systems Engineering Analysis (SEA) for all ITS projects funded with highway trust funds and notes that the scale should be commensurate with the project scope. An SEA includes: identification of the part of the ITS architecture being implemented, agencies' roles and responsibilities, alternatives analysis, and standards.
        - The Federal Highway Administration has published a helpful document known as *Systems Engineering for Intelligent Transportation Systems*.
    - Tom introduced stakeholders to the National ITS Architecture Website at www.arc-it.net for more helpful information about architectures, including free downloads of the RAD-IT and SET-IT software packages.
    - Following finalization of the 2019 Austin Regional ITS Architecture, stakeholders can use the Architecture Maintenance Documentation Form to record any changes to the architecture that should be included in the next architecture update.
- Regional ITS Architecture Website
    - Terrance Hill provided a live demonstration of the Regional ITS Architecture website, located at www.AustinITSArchitecture.com.
    - Terrance described the pages on the website, including:
        - Overview

        - This page describes the Regional ITS Architecture and its history in the Austin Region.
    - Project Documents
        - Stakeholders can use this page to access documents from the current architecture update when they are posted, as well as documents from previous architecture updates for the Austin Region.
    - Interactive Architecture
        - Stakeholders can use this page to review elements and data flows listed in the architecture for their agency in a user-friendly way.
    - Use and Maintenance
        - This page contains the maintenance form that agencies can use to record updates to the architecture.
    - Agreements
        - John Nevares advised that dates should be listed next to each agreement.
    - Resources
        - This page is a place where related ITS documents for the Region can be housed.
        - The project team will add a link to the ITS Master Plan to this page.
    - Contacts
        - Terrance invited stakeholders to contact members of the project team with any comments or questions as they review the draft architecture.
  - Terrance invited stakeholders to review the website and provide comments using the "Send Comments" link at the bottom of every page.
- Next Steps
  - Tom outlined the following next steps:
    - Stakeholders are encouraged to continue to provide input into the architecture.
    - The project team will distribute the draft report and interactive architecture to stakeholders for review.
    - The project team will develop a draft report in June 2018.

ACTION ITEMS

- **Kimley-Horn** will distribute workshop presentation and summary to attendees.
- **Kimley-Horn** will distribute Draft Austin Regional ITS Architecture and Deployment Plan and Draft Interactive Architecture to stakeholders for review.