AUSTIN REGIONAL INTELLIGENT TRANSPORTATION SYSTEMS DEPLOYMENT PLAN

Prepared For:
Texas Department of Transportation
Austin District

Prepared By:

TRW
1900 Founders Drive, Suite 102
Kettering, OH 45420
Phone: (937) 259-4164
Fax: (937) 259-4885
www.trw.com

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Executive Summary

The primary mission of the Texas Department of Transportation (TxDOT) Austin District Intelligent Transportation Systems (ITS) initiative is to enhance the safety and efficiency of transportation throughout the Austin region. This will be accomplished by the application of traffic, transportation, and emergency management technology to reduce traveler frustrations associated with recurring (“peak”-type), non-recurring (“surprise”-type), and construction-related congestion. Additionally, TxDOT Austin District working with the City of Austin and Travis County to implement an integrated regional emergency communications and transportation management center for the Austin Region (The 9-1-1 RDMT Project). The project will also upgrade the communications systems (voice and data communications) and the dispatch system used by the project partners.

The 9-1-1 RDMT project presents a unique opportunity to integrate emergency management and traffic management. To guild the integration of these systems, a regional ITS architecture was developed based on the National ITS Architecture.

The primary focus of this document is to identify and prioritize the user needs of the region, existing and planned projects, and to describe a procedure for submitting additional projects within the scope of the regional architecture. This deployment plan will be used as a guide for implementation of the Austin Regional ITS Architecture.

The user needs, represented by market packages, were derived from initial interviews with stakeholders and prioritized through a Delphi survey. These market packages have a direct correlation with equipment used to perform tasks to satisfy a need. They therefore can be easily organized into projects to be implemented. The projects are prioritized for implementation using synergies from the market packages and available funding. A detailed listing of the projects is enclosed.

Finally, a procedure is presented for submitting new projects for the region. This procedure involves the Austin steering committee, their roles and responsibilities and how to become a member. A project approval process is set forth which includes the Capitol Area Metropolitan Planning Organization and TxDOT Austin District ensuring conformity to the architecture.

The companion document, “The Austin Region ITS Architecture,” documents the regional architecture the projects in this document support. The regional architecture was developed over a one-year period based on inputs of the Steering Committee. The projects identified in this document where obtain from the Capital Area Metropolitan Planning Organization, TxDOT Austin District, RDMT 911 Project documentation, and the City of Austin Signal Center.
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SECTION 1

INTRODUCTION

The primary mission of this Texas Department of Transportation (TxDOT) Austin District Intelligent Transportation System (ITS) initiative is to enhance the safety and efficiency of driving throughout the Austin region. This is to be accomplished by the application of traffic, transportation, and emergency management to existing and planned methods for reducing traveler frustrations associated with recurring (“peak”-type), non-recurring (“surprise”-type), and construction-related congestion.

The TxDOT’s Austin District is working with the local entities, including the City of Austin, Travis County, and Capital Metropolitan Transportation Authority (Capital Metro), to plan, design, construct, operate, and maintain an integrated regional emergency communications and transportation management center for the Austin Region. This new center will integrate public safety, transportation, and public service operations and systems. To guide the integration of all ITS systems, a regional ITS architecture was developed based on the National ITS Architecture.

1.1 DOCUMENT OVERVIEW

This document presents the Austin region’s Deployment Plan as expressed by its program partners, likely users, and related agencies. This deployment plan provides a plan to implement the Austin regional architecture (see Austin Regional Intelligent Transportation Systems Architecture & Operation Concept, ITS 2000(994)-1, August 2002). The Austin Regional ITS Architecture is the direct outcome of interviews with regional stakeholders. A Steering Committee was convened to select and prioritize a set of Market Packages. The results of the Steering Committee and the interviews were used to develop the architecture. Participants in the Steering Committee included regional law enforcement, Austin Fire Department, Austin Emergency Medical Service, TxDOT, the Capital Area Metropolitan Plan Organization (CAMPO), and others.

This document consists of the following sections:

- Section 2 – Prioritization of Market Packages. This section presents the Market Packages selected and prioritized by the Steering Committee. This section also identifies the projects that support implementation of the Market Package.
- Section 3 – Prioritization of Planned Projects. This section presents additional information on the projects presented in Section 2.
- Section 4 – Procedure for Submitting ITS Projects. This section documents the procedures for adding ITS projects to the Deployment plan.
1.2 Definition of the Austin Region

The region defined for the architecture includes the City of Austin, Round Rock, Travis County, and Williamson County (basically the area supported by the TxDOT Austin District office). Figure 1-1 shows a map of the Region.

![Figure 1-1 Austin Region](image)

1.3 Regional Stakeholders

The first step in the development of the Austin Regional ITS Architecture was to identify and schedule interviews with the stakeholders. The stakeholders were selected based on their involvement in transportation and public safety in the Austin region. Based on the results of the interviews, the members of the Steering Committee were selected from the group of stakeholders. Their knowledge and experience was key to the development of an effective Regional ITS Architecture for the Austin region. The Table 1-1 identifies the Steering Committee members and provides contact information.
<table>
<thead>
<tr>
<th>Name</th>
<th>Agency</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Belknap</td>
<td>Austin Fire Department</td>
<td>(512) 416-3323</td>
<td><a href="mailto:david.belknap@ci.austin.tx.us">david.belknap@ci.austin.tx.us</a></td>
</tr>
<tr>
<td>Charlie Brindell</td>
<td>TxDOT Traffic Operations Division</td>
<td>(512) 416-3268</td>
<td><a href="mailto:cbrinde@dot.state.tx.us">cbrinde@dot.state.tx.us</a></td>
</tr>
<tr>
<td>Brian Burk</td>
<td>TxDOT Austin District Transportation Operations</td>
<td>(512) 832-7014</td>
<td><a href="mailto:bburk@dot.state.tx.us">bburk@dot.state.tx.us</a></td>
</tr>
<tr>
<td>Carl Burklund</td>
<td>TxDOT Maintenance</td>
<td>(512) 385-0862</td>
<td><a href="mailto:cburklu@dot.state.tx.us">cburklu@dot.state.tx.us</a></td>
</tr>
<tr>
<td>Kelley Cook</td>
<td>Austin Police Department – 911</td>
<td>(512) 974-1697</td>
<td><a href="mailto:kelley.cook@ci.austin.tx.us">kelley.cook@ci.austin.tx.us</a></td>
</tr>
<tr>
<td>Sam Cox</td>
<td>TxDOT Austin District Courtesy Patrol</td>
<td>(512) 832-7310</td>
<td><a href="mailto:scox4@dot.state.tx.us">scox4@dot.state.tx.us</a></td>
</tr>
<tr>
<td>Michael Dutton</td>
<td>Capitol Area Metro Planning Org</td>
<td>(512) 974-2881</td>
<td><a href="mailto:michael.dutton@ci.austin.tx.us">michael.dutton@ci.austin.tx.us</a></td>
</tr>
<tr>
<td>David Gerard</td>
<td>City of Austin Public Works Signals</td>
<td>(512) 974-7022</td>
<td><a href="mailto:david.gerard@ci.austin.tx.us">david.gerard@ci.austin.tx.us</a></td>
</tr>
<tr>
<td>Mike Hooffstetter</td>
<td>Travis County Sheriff Dept.</td>
<td>(512) 974-6083</td>
<td><a href="mailto:mike.hooffstetter@ci.austin.tx.us">mike.hooffstetter@ci.austin.tx.us</a></td>
</tr>
<tr>
<td>John Lancaster</td>
<td>Capital Metro</td>
<td>(512) 389-7586</td>
<td><a href="mailto:john.lancaster@capmetro.org">john.lancaster@capmetro.org</a></td>
</tr>
<tr>
<td>Roland Merz</td>
<td>TxDOT Traffic Operations</td>
<td>(512) 416-3299</td>
<td><a href="mailto:rmerz@dot.state.tx.us">rmerz@dot.state.tx.us</a></td>
</tr>
<tr>
<td>Greg Middleton</td>
<td>City of Austin Emergency Medical Services</td>
<td>(512) 974-1695</td>
<td><a href="mailto:greg.middleton@ci.austin.tx.us">greg.middleton@ci.austin.tx.us</a></td>
</tr>
<tr>
<td>David Powell</td>
<td>TxDOT Texas Turnpike Authority</td>
<td>(512) 225-1357</td>
<td><a href="mailto:dpowel3@dot.state.tx.us">dpowel3@dot.state.tx.us</a></td>
</tr>
<tr>
<td>Teresa Reel</td>
<td>Travis County Justice and Public Safety</td>
<td>(512) 708-4416</td>
<td><a href="mailto:teresa.reel@co.travis-tx.us">teresa.reel@co.travis-tx.us</a></td>
</tr>
<tr>
<td>Tom Rioux</td>
<td>University of Texas</td>
<td>(512) 471-0513</td>
<td><a href="mailto:rioux@mail.utexas.edu">rioux@mail.utexas.edu</a></td>
</tr>
<tr>
<td>Russ Rumney</td>
<td>City of Austin Police Department – CAD</td>
<td>(512) 974-3323</td>
<td><a href="mailto:russ.rumney@ci.austin.tx.us">russ.rumney@ci.austin.tx.us</a></td>
</tr>
<tr>
<td>Geniva Simpson</td>
<td>Williamson County EMS</td>
<td>(512) 943-1399</td>
<td><a href="mailto:gsimpson@wilco.org">gsimpson@wilco.org</a></td>
</tr>
<tr>
<td>Scott Swearengin</td>
<td>Office of Emergency Management</td>
<td>(512) 370-8862</td>
<td><a href="mailto:scott.swearengin@ci.austin.tx.us">scott.swearengin@ci.austin.tx.us</a></td>
</tr>
<tr>
<td>David Walther</td>
<td>Round Rock Public Works Department</td>
<td>(512) 218-5566</td>
<td><a href="mailto:davidw@round-rock.tx.us">davidw@round-rock.tx.us</a></td>
</tr>
<tr>
<td>Catherine Wolff</td>
<td>TxDOT Planning/Programs</td>
<td>(512) 486-5124</td>
<td><a href="mailto:cwolff@dot.state.tx.us">cwolff@dot.state.tx.us</a></td>
</tr>
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</table>
SECTION 2

PRIORITIZATION OF MARKET PACKAGES

The market packages for the Austin Region were selected by a Steering Committee and prioritized using the Delphi Survey process (see Section 3.2. of the Austin Regional ITS Architecture and Operational Concept document). The Delphi Survey is a decision-making process used to help a group of experts move toward consensus on subjective decisions. Delphi is an attempt to elicit expert opinion in a systematic manner for useful results. It involves iterative rounds of questionnaires administered to individual experts in a manner protecting the anonymity of their responses. Feedback of results accompanies each round of the questionnaire, which continues until convergence of opinion, or a point of diminishing returns, is reached. The product is the consensus of experts, including their commentary, on each of the items, usually organized as a written report by the Delphi investigator(s).

The market packages are presented in the following sections in the order selected by the Steering Committee. Each market package is assigned a priority relating to the time frame for implementation by the Steering Committee. A priority of High indicates completion within 5 years. A priority of Medium is assigned for completion within 5 to 10 years. A priority of Low means completion date of 10 years or greater. Market packages assigned a priority of Low were not included in the Austin Regional ITS Architecture because of changes in technology and user needs that may occur in the next 10 years.

With each market package, a table shows the existing infrastructure related to the region. It includes the subsystems and terminators associated with the National ITS Architecture, the current status, the element name, and the owning stakeholder.

A list of planned projects related to the market package is presented. Finally an additional needs section is listed for those market packages that require projects that are not yet planned for the region.
2.1 **Network Surveillance (ATMS01)**

**Priority:**
High

**Existing Infrastructure:**

<table>
<thead>
<tr>
<th>Subsystem/ Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
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</thead>
<tbody>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Austin Maintenance System</td>
<td>City of Austin</td>
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<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Round Rock Maintenance System</td>
<td>City of Round Rock</td>
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<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>TxDOT Highway Maintenance Management System</td>
<td>TxDOT Maintenance</td>
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<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Map Update Provider</td>
<td>Existing</td>
<td>City of Austin GIS Agency</td>
<td>City of Austin</td>
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<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Flood Early Warning System</td>
<td>Austin Office of Emergency Management</td>
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<td>Roadway Subsystem</td>
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<td>Austin Sensors, Cameras, and HAR w/Flashers</td>
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<td>Roadway Subsystem</td>
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<tr>
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<tr>
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<td>TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers</td>
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<td>Existing</td>
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<td>TxDOT Austin District</td>
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<td>Various Ownership</td>
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<td>TxDOT Austin District</td>
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<td>Traffic Operations Personnel</td>
<td>Existing</td>
<td>TMC Operators/Dispatchers</td>
<td>TxDOT Austin District</td>
</tr>
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</table>

**Planned Projects:**

1. Extend network surveillance equipment along Loop1 from north of Gaines Creek to Slaughter Creek
2. Extend TxDOT Network Surveillance - IH35 from Colorado River Bridge to St. Elmo Street
3. Extend TxDOT Network Surveillance - IH35 from FM 1825 to Braker Lane
4. Extend TxDOT Network Surveillance - IH35 from St. Elmo Street to Slaughter Lane
5. Extend TxDOT Network Surveillance System - IH35 from Williamson County Line/SH 45 to FM 1825
6. Extend TxDOT Network Surveillance System - Loop 1 from Parmer Lane to Braker Lane
7. Extend TxDOT Network Surveillance System - Loop 1 from RM 2244 to Gaines Creek
8. Extend TxDOT Network Surveillance System - US 290 from East of Williamson Creek to Loop 360
9. Extend TxDOT Network Surveillance System - US 290 from SPRR to US 183
10. Extended the network surveillance system along US 290 from the Hays County Line (SH 45) to East of Williamson Creek.
11. Install conduit, detection equipment, and freeway management equipment along US 183 from FM 1625 to 0.2 miles south of FM
12. Install conduit, detection equipment, and freeway management equipment along US 183 from SH 71 to FM 1625.
13. Install conduit, detection equipment, and freeway traffic equipment along from Loop 1 from SH 45 to Travis County line.
14. Install Conduit, detection equipment, and Freeway Traffic Management - IH-35 from Slaughter Lane to the Hays County Line
15. Install conduit, detection equipment, and freeway traffic management equipment along Loop 1 from 35th Street to RM 2244
16. Install conduit, detection equipment, and freeway traffic management equipment along Loop 1 from Slaughter Creek to SH 45
17. Install Conduit, Detection, and Freeway Traffic Management - IH35 M.L.K Blvd (19th Street) to Colorado River Bridge
18. Install Conduit, Detection, and Freeway Traffic Management - IH35 from Braker Lane to Reinli Street
19. Install Conduit, Detection, and Freeway Traffic Management - IH35 from Reinli Street to M.L.K Blvd (19th Street)
20. Install freeway management equipment along SH 71 from RM 620/SH 45 to US 290 west of Austin
21. Install freeway traffic management equipment along Loop 1 from the Williamson County line to FM734
22. Install freeway traffic management equipment along SH 71 from South Congress Ave. to west of Dalton Ln.
23. Install freeway traffic management equipment along SH 71 from west of Dalton Lane to 1.3 miles east of FM 973/SH 45
24. Install freeway traffic management equipment along US 183 from east of IH-35 to US 290 East.
25. Install freeway traffic management equipment along US 183 from FM 969 to the Colorado River Bridge.
26. Install freeway traffic management equipment along US 183 from north of Lakeline Blvd to the Travis County line.
27. Install freeway traffic management equipment along US 183 from the north end of the Colorado River bridge to SH 71
28. Install freeway traffic management equipment along US 183 from US 290 East to FM 969
29. Install freeway traffic management equipment along US 290 from FM 3177 to SH 45/FM 973.
30. Install freeway traffic management equipment along US 290 from the west end of the US 183 over pass to FM 3177.
31. TxDOT CCTV Surveillance Cameras - IH35 from US 290 to Colorado River
32. TxDOT Detector Installation - IH35 from US 290 to Colorado River

**Additional Needs:**
TxDOT Austin District’s and the City of Austin’s implementations of this Market Package are in progress in the region. The Network Surveillance Market Package is a key to implementation of the regional architecture because it enables the following Market Packages:

- Freeway Control
- Surface Street Control
- Incident Management System
- Traffic Information Dissemination
- Traffic Forecast and Demand Management
2.2 **Freeway Control (ATMS04)**

Priority:
High

Existing Infrastructure:

Table 2-2. Freeway Control Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Austin Maintenance System</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Round Rock Maintenance System</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>TxDOT Highway Maintenance Management System</td>
<td>TxDOT Maintenance</td>
</tr>
<tr>
<td>Driver</td>
<td>Existing</td>
<td>Driver Operating A Vehicle</td>
<td>Individual</td>
</tr>
<tr>
<td>Other TM</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Sensors, Cameras, and HAR</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Signals</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic</td>
<td>Existing</td>
<td>Vehicles on the Road</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Operations Personnel</td>
<td>Existing</td>
<td>TMC Operators/Dispatchers</td>
<td>TxDOT Austin District</td>
</tr>
</tbody>
</table>

Planned Projects:

1. Construct centralized multi-agency Emergency Management Center and Traffic Management Center
2. Extend TxDOT Freeway Control – IH35 from 49TH Street to 12TH Street
4. Replace Lane Control Signals – IH35 from US 290 to Colorado River

Additional Needs:
This market package provides the communications and roadside equipment to support ramp control, lane controls, and interchange control for freeways. Coordination and integration of
ramp meters are included as part of this market package. To complete the implementation of this
Market Package, the following projects should be considered:\(^1\):

- Updating the TxDOT Austin ATMS software to manage ramp meters
- Implement the ramp meter status and control messages in the Center-to-Center software
- Implement interfaces between TxDOT Austin TMC and the region’s roadway
  maintenance agencies

\(^1\) Derived from the National ITS Architecture CD, Version 3
2.3 Emergency Response (EM 1)

Priority:
High

Existing Infrastructure:

Table 2-3. Emergency Response Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Existing</td>
<td>ABIA (Airport) Police</td>
<td>Austin Bergstrom International Airport</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Existing</td>
<td>Austin Police, Fire, EMS Responders</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Existing</td>
<td>Travis County Emergency Personnel</td>
<td>Travis County</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Planned</td>
<td>Turnpike Courtesy Patrol</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Existing</td>
<td>TxDOT Austin Courtesy Patrol</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Emergency System Operator</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatchers</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency System Operator</td>
<td>Planned</td>
<td>Emergency Call 911 Operator</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Telecommunications System</td>
<td>Planned</td>
<td>Emergency Call 911 PSAP</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Existing</td>
<td>3M Opticom Signal Preemption System</td>
<td>Austin Fire Department</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>ABIA (Airport) Vehicle Mobile Data Terminal</td>
<td>Austin Bergstrom International Airport</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>ABIA (Airport) Vehicle Radio Communications</td>
<td>Austin Bergstrom International Airport</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Austin Police, Fire, EMS Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Austin Police, Fire, EMS Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Travis County Emergency Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Travis County Emergency Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
</tr>
</tbody>
</table>
Table 2-3. Emergency Response Infrastructure (continued)

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
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</thead>
<tbody>
<tr>
<td>Emergency Vehicle</td>
<td>Planned</td>
<td>Turnpike Authority Courtesy Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Subsystem</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Vehicle</td>
<td>Planned</td>
<td>Turnpike Authority Courtesy Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Subsystem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Vehicle</td>
<td>Planned</td>
<td>TxDOT Austin Courtesy Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Subsystem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Vehicle</td>
<td>Planned</td>
<td>TxDOT Austin Courtesy Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Subsystem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Map Update Provider</td>
<td>Existing</td>
<td>City of Austin GIS Agency</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Other EM</td>
<td>Existing</td>
<td>Round Rock Dispatch System</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
</tbody>
</table>

Planned Projects:

1. CECC CAD System TxDOT ATMS Integration
2. City of Round Rock Communication Integration
3. Williamson County Communication Integration

Additional Needs:
Implementation of this Market Package for the TxDOT Austin TMC, City of Austin, and Travis County is progressing. The region needs to implement interfaces to the City of Round Rock, Williamson County EMS, and CapMetro. Implementation of the Emergency Response Market Package will simplify the implementation of the Transit Security Market Package.
2.4 INCIDENT MANAGEMENT SYSTEM (ATMS08)

Priority:
High

Existing Infrastructure:

Table 2-4. Incident Management System Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Austin Maintenance System</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Round Rock Maintenance System</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>Travis County Construction and Maintenance System</td>
<td>Travis County Natural Resources and Transportation</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>TxDOT Highway Maintenance Management System</td>
<td>TxDOT Maintenance</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>Williamson County Highway Maintenance System</td>
<td>Williamson County Road Department</td>
</tr>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency System Operator</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatchers</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency System Operator</td>
<td>Planned</td>
<td>Emergency Call 911 Operator</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>ABIA (Airport) Vehicle Mobile Data Terminal</td>
<td>Austin Bergstrom International Airport</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>ABIA (Airport) Vehicle Radio Communications</td>
<td>Austin Bergstrom International Airport</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Austin Police, Fire, EMS Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Austin Police, Fire, EMS Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Travis County Emergency Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Travis County Emergency Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
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</tbody>
</table>
Table 2-4. Incident Management System Infrastructure (continued)

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
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<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Turnpike Authority Courtesy Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Turnpike Authority Courtesy Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>TxDOT Austin Courtesy Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>TxDOT Austin Courtesy Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
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<tr>
<td>Event Promoters</td>
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<td>Special Event Sponsors and Promoters</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Map Update Provider</td>
<td>Existing</td>
<td>City of Austin GIS Agency</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Media</td>
<td>Existing</td>
<td>Traffic and Travel Information System</td>
<td>Various Ownerships</td>
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<tr>
<td>Other EM</td>
<td>Existing</td>
<td>Round Rock Dispatch System</td>
<td>City of Round Rock</td>
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<tr>
<td>Other EM</td>
<td>Existing</td>
<td>Texas Highway Patrol Dispatch Center</td>
<td>Texas Department of Public Safety</td>
</tr>
<tr>
<td>Other EM</td>
<td>Existing</td>
<td>Williamson County Dispatch Center</td>
<td>Williamson County EMS/EOC</td>
</tr>
<tr>
<td>Other TM</td>
<td>Existing</td>
<td>Austin Signal Control Center</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Other TM</td>
<td>Planned</td>
<td>Round Rock TMC</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Sensors, Cameras, and HAR</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic</td>
<td>Existing</td>
<td>Vehicles on the Road</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Operations Personnel</td>
<td>Existing</td>
<td>TMC Operators/Dispatchers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Weather Service</td>
<td>Existing</td>
<td>Weather Network Subscription</td>
<td>Various Ownerships</td>
</tr>
</tbody>
</table>

**Planned Projects:**
None.
**Additional Needs:**

This market package manages both predicted and unexpected incidents so that the impact to the transportation network and traveler safety is minimized. Requisite incident detection capabilities are included in the Freeway Control Market Package and through the regional coordination with the City of Austin Signal Control Center and the Austin CECC, weather service entities, and event promoters supported by this market package. Information from these diverse sources are collected and correlated by this market package to detect and verify incidents and implement an appropriate response. This market package provides Traffic Management Subsystem equipment that supports traffic operations personnel in developing an appropriate response in coordination with emergency management and other incident response personnel to confirmed incidents. The coordination with the City of Austin and Travis County emergency management will be through the CAD system. The region should look at implementing interfaces with the City of Round Rock and Williamson County CAD systems. Additional projects the region may consider are:

The Austin Region Construction and Maintenance Database. The Austin Region Construction/Maintenance database will allow the region's Transportation departments to coordinated construction and maintenance plans. The database will also allow the region's Public Safety agencies to track road closures. The system should meet the following functional and technical requirements:

1. The database should have a web interface.
2. Allow regional transportation departments create, update, and delete road maintenance/closure records.
3. Allow regional contractors to submit road closure requests.
4. Allow regional transportation departments to review, approve or disapprove closure requests.
5. Allow regional public safety agencies to view road maintenance/closure records.
6. Allow the public to view road maintenance/closure records.

Route Diversion Planning for Incident Management along IH-35. This project would establish alternate routes using US 79, FM 685 and FM 1825. It would determine the adequacy and appropriateness of each diversion route. The project would also establish the capacity and signal timing plans necessary to support the diverted traffic.

---

2 Derived from the National ITS Architecture CD, Version 3
### 2.5 Emergency Routing (EM 2)

**Priority:**
High

**Existing Infrastructure:**

Table 2-5. Emergency Routing Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/ Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Existing</td>
<td>ABIA (Airport) Police</td>
<td>Austin Bergstrom International Airport</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Existing</td>
<td>Austin Police, Fire, EMS Responders</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Existing</td>
<td>Travis County Emergency Personnel</td>
<td>Travis County</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Planned</td>
<td>Turnpike Courtesy Patrol</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Emergency Personnel</td>
<td>Existing</td>
<td>TxDOT Austin Courtesy Patrol</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Emergency System Operator</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatchers</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency System Operator</td>
<td>Planned</td>
<td>Emergency Call 911 Operator</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Existing</td>
<td>3M Opticom Signal Preemption System</td>
<td>Austin Fire Department</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Existing</td>
<td>ABIA (Airport) Vehicle Mobile Data Terminal</td>
<td>Austin Bergstrom International Airport</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Existing</td>
<td>ABIA (Airport) Vehicle Radio Communications</td>
<td>Austin Bergstrom International Airport</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Austin Police, Fire, EMS Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Austin Police, Fire, EMS Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Emergency Vehicles Equipped with AVL</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Travis County Emergency Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Travis County Emergency Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
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</tbody>
</table>
Table 2-5. Emergency Routing Infrastructure (continued)

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
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<tr>
<td>Emergency Vehicle Subsystem</td>
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<td>Turnpike Authority Courtesy Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>Turnpike Authority Courtesy Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>TxDOT Austin Courtesy Vehicle Mobile Data Terminal</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency Vehicle Subsystem</td>
<td>Planned</td>
<td>TxDOT Austin Courtesy Vehicle Radio Communications</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Map Update Provider</td>
<td>Existing</td>
<td>City of Austin GIS Agency</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Signals</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Signals</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Vehicle</td>
<td>Existing</td>
<td>System That Provides Accurate Position Information</td>
<td>City of Austin</td>
</tr>
</tbody>
</table>

Planned Projects:
The 911 RDMT project is implement most of this Market Package.

Additional Needs:
None.
2.6 **Surface Street Control (ATMS03)**

**Priority:**
High

**Existing Infrastructure:**

<table>
<thead>
<tr>
<th>Subsystem/ Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and</td>
<td>Existing</td>
<td>City of Austin Maintenance System</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Maintenance</td>
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<td></td>
</tr>
<tr>
<td>Construction and</td>
<td>Existing</td>
<td>City of Round Rock Maintenance System</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction and</td>
<td>Existing</td>
<td>TxDOT Highway Maintenance Management System</td>
<td>TxDOT Maintenance</td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driver</td>
<td>Existing</td>
<td>Driver Operating A Vehicle</td>
<td>Individual</td>
</tr>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Sensors, Cameras, and HAR</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>Texas Turnpike Authority Sensors, Cameras, DMS,</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and HAR w/Flashers</td>
<td></td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Sensors, Cameras, DMS, and HAR</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td></td>
<td></td>
<td>w/Flashers</td>
<td></td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Signals</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic</td>
<td>Existing</td>
<td>Vehicles on the Road</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Operations</td>
<td>Existing</td>
<td>TMC Operators/Dispatchers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Personnel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Planned Projects:**
The City of Austin is implementing most of this Market Package.

**Additional Needs:**
The Network Surveillance and Regional Traffic Control Market Packages share functionality with this Market Package. The cost of implementing the interfaces to Construction and Maintenance, and Emergency Management subsystems can be reduced by taking advantage of the common functions.
2.7 Traffic Information Dissemination (ATMS06)

Priority:
High

Existing Infrastructure:

Table 2-7. Traffic Information Dissemination Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Vehicle</td>
<td>Existing</td>
<td>Individual Vehicle Car Radio/CB-Radio</td>
<td>Individual</td>
</tr>
<tr>
<td>Driver</td>
<td>Existing</td>
<td>Driver Operating A Vehicle</td>
<td>Individual</td>
</tr>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Media</td>
<td>Existing</td>
<td>Traffic and Travel Information System</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Sensors, Cameras, and HAR</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Operations Personnel</td>
<td>Existing</td>
<td>TMC Operators/Dispatchers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
</tbody>
</table>

Planned Projects:

1. Capital Metro Transit Integration

Additional Needs:

This Market Package allows traffic information to be disseminated to drivers and vehicles using the dynamic message signs and highway advisory radios installed in the region. This package also covers the equipment and interfaces that provide traffic information from the TxDOT Austin...
TMC to the media (for instance via a direct tie-in between a traffic management center and radio or television station computer systems), transit management center, emergency management center, and information service provider. Projects the region may consider to support the implementation of this package are:\(^3\)

**The Austin Region Commodities Freight System.** This project would develop and deploy a private commodities freight system that would use traffic data collected by the TxDOT Austin District Advanced Traffic Management System (ATMS). Local companies such as IBM, Dell, Compaq, Samsung, etc. would use traffic information concerning to plan the timely delivery of goods and materials required to support business operations.

**TxDOT Austin TMC Traffic Information Dissemination.** This project supports the implementation of the Traffic Information Dissemination market package. The market package allows traffic information to be disseminated to drivers and vehicles using roadway equipment such as dynamic message signs (DMS) or highway advisory radio (HAR). The package provides the functionality that can be used to notify drivers of incidents; careful placement of the roadway equipment provides the information at points in the network where the drivers have recourse and can tailor their routes to account for the new information. This package also covers the equipment and interfaces that provide traffic information from a traffic management center to the media (for instance via a direct tie-in between a traffic management center and radio or television station computer systems), Transit Management, Emergency Management, and Information Service Providers.

Currently in the Austin region, TxDOT Austin District has deployed several HARs and DMSs. Therefore, this project is focused on implementing the interfaces to the media, and Information Service Providers. This project will implement the TMC Traffic Information Dissemination equipment package. The equipment package provides the software processes needed to automate the interfaces to the media, Information Service Providers, Emergency Management, and Transit Management. A similar project could be used to implement traffic information dissemination for the City of Austin Signals Center.

\(^3\) Derived from the National ITS Architecture CD, Version 3
2.8 **ITS D M A R T (AD 1)**

**Priority:**  
High

**Existing Infrastructure:**

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archived Data Administrator</td>
<td>Planned</td>
<td>TxDOT Austin CECC Archive System Administrator</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Archived Data Management Subsystem</td>
<td>Planned</td>
<td>Record Management System (Police, Fire, EMS)</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Archived Data Management Subsystem</td>
<td>Planned</td>
<td>TxDOT Austin Historical Incident Data Repository</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Archived Data Management Subsystem</td>
<td>Planned</td>
<td>TxDOT Austin Historical Traffic Data Repository</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Archived Data User Systems</td>
<td>Existing</td>
<td>Academic/Research Organizations</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Archived Data User Systems</td>
<td>Planned</td>
<td>Emergency Management Scenario Training</td>
<td>Austin Office of Emergency Management</td>
</tr>
<tr>
<td>Archived Data User Systems</td>
<td>Planned</td>
<td>TxDOT Researchers</td>
<td>TxDOT</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Austin Maintenance System</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Round Rock Maintenance System</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>Travis County Construction and Maintenance Management System</td>
<td>Travis County Natural Resources and Transportation</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>TxDOT Highway Maintenance Management System</td>
<td>TxDOT Maintenance</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>Williamson County Highway Maintenance Management System</td>
<td>Williamson County Road Department</td>
</tr>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
</tbody>
</table>
Table 2-8. ITS Data Mart Infrastructure (continued)

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Reporting Systems</td>
<td>Existing</td>
<td>Fatal Analysis Reporting System</td>
<td>Texas Department of Public Safety</td>
</tr>
<tr>
<td>Government Reporting Systems</td>
<td>Existing</td>
<td>Highway Performance Monitoring System</td>
<td>Federal Highway Administration</td>
</tr>
<tr>
<td>Other Archives</td>
<td>Planned</td>
<td>Record Management System (Police, Fire, EMS)</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Flood Early Warning System</td>
<td>Austin Office of Emergency Management</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Sensors, Cameras, and HAR</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>RWIS Network</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
</tbody>
</table>

Planned Projects:
None.

Additional Needs:
This market package provides a focused archive that houses data collected and owned by a single agency, district, private sector provider, research institution, or other organization. This focused archive typically includes data covering a single transportation mode and one jurisdiction that is collected from an operational data store and archived for future use. It provides the basic data quality, data privacy, and meta data management common to all ITS archives and provides general query and report access to archive data users. To implement this Market Package the region should consider the following project:

The ITS Data Mart Project. This project would develop a ITS Data Mart that provides for the storage and retrieval of ITS related data. It would also provide summary data views of related information (e.g., data pulled from various data sources to create reports on a particular subject). A view may involve simple calculations of data as well as correlation of records based on similar fields such as date and time.

---

4 Derived from the National ITS Architecture CD, Version 3
A high capacity SQL compliant database would be used for the data storage and retrieval. System integration will be necessary to setup and administer the database. Integrators will also be used to add new data requirements as requested by end users.

The data mart will initially store information on traffic, roadside, construction and maintenance, emergency data. It will also house Government reporting data. The information for each category is specified in the regional ITS architecture.
2.9 HAZMAT Management (CVO10)

Priority:
High

Existing Infrastructure:

Table 2-9. HAZMAT Management Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Fleet and Freight Management</td>
<td>Existing</td>
<td>Motor Carrier CVO System</td>
<td>Texas Department of Public Safety</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
</tbody>
</table>

Planned Projects:
None.

Additional Needs:
To improve the access to HAZMAT information, the TxDOT Austin District TMC should be interfaced to the Statewide CVO system.
2.10 Transit Security (APTS5)

Priority:
High

Existing Infrastructure:

Table 2-10. Transit Security Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Remote Traveler Support</td>
<td>Planned</td>
<td>Distress Signal Wireline Communications</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Remote Traveler Support</td>
<td>Planned</td>
<td>Transit Secure Area Monitoring System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Secure Area Environment</td>
<td>Planned</td>
<td>Transit Stops and Stations</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Driver</td>
<td>Existing</td>
<td>Transit Vehicle Drivers</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit User</td>
<td>Existing</td>
<td>Individual Using Transportation Services</td>
<td>Individual</td>
</tr>
<tr>
<td>Transit Vehicle Subsystem</td>
<td>Existing</td>
<td>Transit Vehicle Monitoring System</td>
<td>CapMetro</td>
</tr>
</tbody>
</table>

Planned Projects:

1. Capital Metro Public Security Integration

Additional Needs:
None.
2.11 Broadcast Traveler Information (ATIS1)

Priority:
High

Existing Infrastructure:

Table 2-11. Broadcast Traveler Information Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>ISP Operator</td>
<td>Existing</td>
<td>Travel and Traffic Information Operator</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Media</td>
<td>Existing</td>
<td>Traffic and Travel Information System</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Personal Information Access</td>
<td>Existing</td>
<td>Individual Cell- and Land-Line Telephones</td>
<td>Individual</td>
</tr>
<tr>
<td>Personal Information Access</td>
<td>Existing</td>
<td>Individual Fax</td>
<td>Individual</td>
</tr>
<tr>
<td>Personal Information Access</td>
<td>Existing</td>
<td>Individual Pagers</td>
<td>Individual</td>
</tr>
<tr>
<td>Personal Information Access</td>
<td>Existing</td>
<td>Internet Browser</td>
<td>Individual</td>
</tr>
<tr>
<td>Remote Traveler Support</td>
<td>Planned</td>
<td>Traveler Kiosk Network</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Toll Administration</td>
<td>Existing</td>
<td>TxDOT Texas Turnpike Authority Division</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Traveler</td>
<td>Existing</td>
<td>Pre-Trip Individual Using Transportation Services</td>
<td>Individual</td>
</tr>
</tbody>
</table>

Planned Projects:

1. City of Austin Web Page

Additional Needs:

Austin Region 511 Telephone System. This project would implement a 511 telephone service for the Austin region. The system would provide information to the public on traffic conditions in the region. The system would obtain the information it would need via interfaces with the
Austin District TMC and the City of Austin Signal Control Center. This project could be implemented by a commercial ISP.
2.12 Road Weather Information System (ATMS18)

Priority:
High

Existing Infrastructure:

Table 2-12. Road Weather Information System Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Austin Maintenance System</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Round Rock Maintenance System</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>Travis County Construction and Maintenance Management System</td>
<td>Travis County Natural Resources and Transportation</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>TxDOT Highway Maintenance Management System</td>
<td>TxDOT Maintenance</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>Williamson County Highway Maintenance Management System</td>
<td>Williamson County Road Department</td>
</tr>
<tr>
<td>Other TM</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Environment</td>
<td>Existing</td>
<td>Conditions that may Affect ITS Equipment Operations</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Environment</td>
<td>Existing</td>
<td>Conditions that will Impact Driving</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Flood Early Warning System</td>
<td>Austin Office of Emergency Management</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>RWIS Network</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Operations Personnel</td>
<td>Existing</td>
<td>TMC Operators/Dispatchers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Weather Service</td>
<td>Existing</td>
<td>Weather Network Subscription</td>
<td>Various Ownerships</td>
</tr>
</tbody>
</table>

Planned Projects:
None.
**Additional Needs:**

**Austin Region Roadway Weather Information System (RWIS).** The RWIS monitors current weather conditions using data collected from environmental sensors deployed on and about the roadway. The collected road weather information is monitored and analyzed to detect and forecast environmental hazards such as icy road conditions, dense fog, and approaching severe weather fronts. This information can be used to more effectively deploy road maintenance resources, issue general traveler advisories, and support location specific warnings to drivers.

This project would implement the TMC Road Weather Monitoring equipment package. The equipment package, located at the CECC, assimilates current and forecast road conditions and weather information using a combination of weather service information and an array of environmental sensors deployed on and about the roadway. The collected road weather information is monitored and analyzed to detect and forecast environmental hazards such as icy road conditions and dense fog. The system could be interfaced with the existing Austin Flood Warning System to monitor surface streets in the City of Austin.

The project would also implement the Roadway Environmental Monitoring equipment package. Each monitoring station measures environmental conditions and communicates the collected information back to the CECC where it can be monitored and analyzed. A broad array of general weather and road surface information may be collected. Weather conditions that may be measured include temperature, wind, humidity, precipitation, and visibility. Surface and sub-surface sensors can measure road surface temperature, moisture, icing, salinity, and other measures.
2.13 **REGIONAL TRAFFIC CONTROL (ATM S07)**

**Priority:**
Medium

**Existing Infrastructure:**

Table 2-13. **Regional Traffic Control Infrastructure**

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other TM</td>
<td>Existing</td>
<td>Austin Signal Control Center</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Other TM</td>
<td>Planned</td>
<td>Round Rock TMC</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Other TM</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Sensors, Cameras, and HAR</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Signals</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Operations Personnel</td>
<td>Existing</td>
<td>TMC Operators/Dispatchers</td>
<td>TxDOT Austin District</td>
</tr>
</tbody>
</table>

**Planned Projects:**

1. City of Austin IH35 Signal System Integration
2. City of Austin Signal System Integration
3. Texas Turnpike Authority Integration

**Additional Needs:**
None.
2.14 ITS Data Warehouse (AD2)

Priority:
Medium

Existing Infrastructure:

Table 2-14. ITS Data Warehouse Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archived Data Administrator</td>
<td>Planned</td>
<td>TxDOT Austin CECC Archive System Administrator</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Archived Data Management Subsystem</td>
<td>Planned</td>
<td>Record Management System (Police, Fire, EMS)</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Archived Data Management Subsystem</td>
<td>Planned</td>
<td>TxDOT Austin Historical Incident Data Repository</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Archived Data Management Subsystem</td>
<td>Planned</td>
<td>TxDOT Austin Historical Traffic Data Repository</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Archived Data User Systems</td>
<td>Existing</td>
<td>Academic/Research Organizations</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Archived Data User Systems</td>
<td>Planned</td>
<td>Emergency Management Scenario Training</td>
<td>Austin Office of Emergency Management</td>
</tr>
<tr>
<td>Archived Data User Systems</td>
<td>Planned</td>
<td>TxDOT Researchers</td>
<td>TxDOT</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Austin Maintenance System</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>City of Round Rock Maintenance System</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>Travis County Construction and Maintenance Management System</td>
<td>Travis County Natural Resources and Transportation</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>TxDOT Highway Maintenance Management System</td>
<td>TxDOT Maintenance</td>
</tr>
<tr>
<td>Construction and Maintenance</td>
<td>Existing</td>
<td>Williamson County Highway Maintenance Management System</td>
<td>Williamson County Road Department</td>
</tr>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
</tbody>
</table>
Table 2-14. ITS Data Warehouse Infrastructure (continued)

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Reporting Systems</td>
<td>Existing</td>
<td>Fatal Analysis Reporting System</td>
<td>Texas Department of Public Safety</td>
</tr>
<tr>
<td>Government Reporting Systems</td>
<td>Existing</td>
<td>Highway Performance Monitoring System</td>
<td>Federal Highway Administration</td>
</tr>
<tr>
<td>Other Archives</td>
<td>Planned</td>
<td>Record Management System (Police, Fire, EMS)</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Other Archives</td>
<td>Planned</td>
<td>TxDOT Austin Historical Incident Data Repository</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Other Archives</td>
<td>Planned</td>
<td>TxDOT Austin Historical Traffic Data Repository</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Flood Early Warning System</td>
<td>Austin Office of Emergency Management</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Sensors, Cameras, and HAR</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>RWIS Network</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
</tbody>
</table>

**Planned Projects:**
None.

**Additional Needs:**
This Market Package includes all the data collection and management capabilities provided by the ITS Data Mart, and adds the functionality and interface definitions that allow collection of data from multiple agencies and data sources spanning across modal and jurisdictional boundaries. It performs the additional transformations and provides the additional meta data management features that are necessary so that all this data can be managed in a single repository with consistent formats. The potential for large volumes of varied data suggests additional online analysis and data mining features that are also included in this market package in addition to the basic query and reporting user access features offered by the ITS Data Mart. To implement this Market Package, the region should consider the following projects:

5 Derived from the National ITS Architecture CD, Version 3
The ITS Data Warehouse Project. This project would develop an ITS Data Warehouse that provides for the storage and retrieval of ITS related data. It would also provide summary data views of related information (e.g., data pulled from various data sources to create reports on a particular subject). A view may involve simple calculations of data as well as correlation of records based on similar fields such as date and time.

A high capacity SQL compliant database would be used for the data storage and retrieval. System integration will be necessary to setup and administer the database. Integrators will also be used to add new data requirements as requested by end users.

Emergency Management Scenario Training. This subsystem of the ITS Data Warehouse would collect data from TxDOT Austin ATMS, Austin Police Department Record Management System, and the Austin Fire Department Record Management System to support the training of emergency management personnel.

Incident Command System. This subsystem would be a browser-based system that would enhance the exchange of data between TxDOT, the City of Austin, and Travis County. The subsystem would provide a common user interface to the data available from all the system in the Austin CECC.
2.15 MAYDAY SUPPORT (EM 3)

Priority:
Medium

Existing Infrastructure:

Table 2-15. Mayday Support Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Management</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatch System</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency System Operator</td>
<td>Planned</td>
<td>Austin CECC/TMC Dispatchers</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Emergency System Operator</td>
<td>Planned</td>
<td>Emergency Call 911 Operator</td>
<td>CECC/TMC Stakeholders</td>
</tr>
<tr>
<td>Other EM</td>
<td>Existing</td>
<td>Round Rock Dispatch System</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Other EM</td>
<td>Existing</td>
<td>Texas Highway Patrol Dispatch Center</td>
<td>Texas Department of Public Safety</td>
</tr>
<tr>
<td>Other EM</td>
<td>Existing</td>
<td>Williamson County Dispatch Center</td>
<td>Williamson County EMS/EOC</td>
</tr>
<tr>
<td>Personal Information Access</td>
<td>Existing</td>
<td>Individual Cell- and Land-Line Telephones</td>
<td>Individual</td>
</tr>
<tr>
<td>Remote Traveler Support</td>
<td>Planned</td>
<td>Distress Signal Wireline Communications</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Remote Traveler Support</td>
<td>Planned</td>
<td>Transit Secure Area Monitoring System</td>
<td>CapMetro</td>
</tr>
</tbody>
</table>

Planned Projects:
None.

Additional Needs:
Install Extended Mile Markers and Ramp Signs. This project would install extended mile markers every 2/10 of a mile along each freeway in the Austin Region. The project would also install signs identifying ramps and flyovers. The extended mile marker signs would assist motorist in identifying the location of an incident and assist public safety agencies in finding the incident.
2.16 Transit Traveler Information (APTS8)

Priority:
Medium

Existing Infrastructure:

Table 2-16. Transit Traveler Information Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Media</td>
<td>Existing</td>
<td>Traffic and Travel Information System</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Personal Information Access</td>
<td>Existing</td>
<td>Individual Cell- and Land-Line Telephones</td>
<td>Individual</td>
</tr>
<tr>
<td>Personal Information Access</td>
<td>Existing</td>
<td>Individual Fax</td>
<td>Individual</td>
</tr>
<tr>
<td>Personal Information Access</td>
<td>Existing</td>
<td>Internet Browser</td>
<td>Individual</td>
</tr>
<tr>
<td>Remote Traveler Support</td>
<td>Planned</td>
<td>Traveler Kiosk Network</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit User</td>
<td>Existing</td>
<td>Individual Using Transportation Services</td>
<td>Individual</td>
</tr>
<tr>
<td>Transit Vehicle Subsystem</td>
<td>Existing</td>
<td>Transit Vehicle Monitoring System</td>
<td>CapMetro</td>
</tr>
</tbody>
</table>

Planned Projects:

1. City of Austin Signal System Transit Integration

Additional Needs:
CapMetro Transit Traveler Information System. This project would implement the Transit Center Information Services equipment package. The equipment package collects the latest available information for a transit service and makes it available to transit customers and to Information Service Providers for further distribution. Customers are provided information at transit stops and other public transportation areas before they embark and on-board the transit vehicle once they are enroute. Information provided can include the latest available information on transit routes, schedules, transfer options, fares, real-time schedule adherence, current
incidents, weather conditions, and special events. In addition to general service information, tailored information (e.g., itineraries) could be provided to individual transit users.
2.17 Traffic Forecast and Demand Management (ATM S09)

Priority:
Medium

Existing Infrastructure:

Table 2-17. Traffic Forecast and Demand Management Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/ Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Promoters</td>
<td>Existing</td>
<td>Special Event Sponsors and Promoters</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Map Update Provider</td>
<td>Existing</td>
<td>City of Austin GIS Agency</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Other TM</td>
<td>Existing</td>
<td>Austin Signal Control Center</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Other TM</td>
<td>Planned</td>
<td>Round Rock TMC</td>
<td>City of Round Rock</td>
</tr>
<tr>
<td>Other TM</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Austin Sensors, Cameras, and HAR</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Planned</td>
<td>Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Toll Administration</td>
<td>Existing</td>
<td>TxDOT Texas Turnpike Authority Division</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Traffic Operations Personnel</td>
<td>Existing</td>
<td>TMC Operators/Dispatchers</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
</tbody>
</table>

Planned Projects:
None.

Additional Needs:
Traffic Forecast and Demand Management System. This project installs the equipment package needed to implement the Traffic Forecast and Demand Management mark package. The equipment package provides the capability to predict travel demand patterns to support traffic flow optimization, demand management, and incident management. The equipment package
requires the data collected by network surveillance equipment packages as well as input from other management subsystems including the ISP Subsystem.
2.18 Standard Grade Crossing (ATMS13)

Priority:
Low

Existing Infrastructure:

Table 2-18. Standard Grade Crossing Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver</td>
<td>Existing</td>
<td>Driver Operating A Vehicle</td>
<td>Individual</td>
</tr>
<tr>
<td>Multimodal Crossings</td>
<td>Existing</td>
<td>Rail Crossing Control Equipment</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Roadway Subsystem</td>
<td>Existing</td>
<td>Grade Crossing Warning System</td>
<td>Various Ownerships</td>
</tr>
<tr>
<td>Wayside Equipment</td>
<td>Existing</td>
<td>Train Interface Equipment</td>
<td>Various Rail Operations</td>
</tr>
</tbody>
</table>

Planned Projects:
None

Additional Needs:
This Market Package has been implemented in the Austin region on a limited basis. There are no plans to expand the implementation of this project.
2.19 Transient Passenger and Fare Management (APTS4)

Priority:
Low

Existing Infrastructure:

Table 2-19. Transit Passenger and Fare Management Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enforcement Agency</td>
<td>Existing</td>
<td>Austin Police Department</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Remote Traveler Support</td>
<td>Planned</td>
<td>Traveler Kiosk Network</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit System Operators</td>
<td>Existing</td>
<td>Transit Operators (Day-to-Day Activity Managers)</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit User</td>
<td>Existing</td>
<td>Individual Using Transportation Services</td>
<td>Individual</td>
</tr>
<tr>
<td>Transit Vehicle Subsystem</td>
<td>Existing</td>
<td>Transit Vehicle Monitoring System</td>
<td>CapMetro</td>
</tr>
</tbody>
</table>

Planned Projects:
None.

Additional Needs:
None.
2.20 **Demand Response Transit Operations** (APTS3)

**Priority:**
Low

**Existing Infrastructure:**

**Table 2-20. Demand Response Transit Operations Infrastructure**

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Transit Driver</td>
<td>Existing</td>
<td>Transit Vehicle Drivers</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Fleet Manager</td>
<td>Existing</td>
<td>CapMetro Fleet Operations Manager</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Vehicle Subsystem</td>
<td>Existing</td>
<td>Transit Vehicle Monitoring System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Weather Service</td>
<td>Existing</td>
<td>Weather Network Subscription</td>
<td>Various Ownerships</td>
</tr>
</tbody>
</table>

**Planned Projects:**
None.

**Additional Needs:**
This Market Package has been implemented in the Austin region on a limited basis.
2.21 **TRANSIT FIXED-ROUTE OPERATIONS (APTS2)**

**Priority:**
Low

**Existing Infrastructure:**

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Transit Driver</td>
<td>Existing</td>
<td>Transit Vehicle Drivers</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Fleet Manager</td>
<td>Existing</td>
<td>CapMetro Fleet Operations Manager</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit System Operators</td>
<td>Existing</td>
<td>Transit Operators (Day-to-Day Activity Managers)</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Vehicle Subsystem</td>
<td>Existing</td>
<td>Transit Vehicle Monitoring System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Weather Service</td>
<td>Existing</td>
<td>Weather Network Subscription</td>
<td>Various Ownerships</td>
</tr>
</tbody>
</table>

**Planned Projects:**
None.

**Additional Needs:**
This Market Package has been implemented in the Austin region on a limited basis.
2.22 Transit Vehicle Tracking (APTS1)

Priority:
Low

Existing Infrastructure:

Table 2-22. Transit Vehicle Tracking Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Location Data Source</td>
<td>Existing</td>
<td>Device That Provides Accurate Position Information</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Map Update Provider</td>
<td>Existing</td>
<td>City of Austin GIS Agency</td>
<td>City of Austin</td>
</tr>
<tr>
<td>Other TRM</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Vehicle</td>
<td>Existing</td>
<td>Vehicle Used for Transit</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Vehicle Subsystem</td>
<td>Existing</td>
<td>Transit Vehicle Monitoring System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Vehicle</td>
<td>Existing</td>
<td>System That Provides Accurate Position Information</td>
<td>City of Austin</td>
</tr>
</tbody>
</table>

Planned Projects:
1. City of Austin Transit Integration

Additional Needs:
None.
2.23 **Electronic Toll Collection (ATM S10)**

**Priority:**
Low

**Existing Infrastructure:**

Table 2-23. Electronic Toll Collection Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMV</td>
<td>Existing</td>
<td>Vehicle Title and Registration Division</td>
<td>TxDOT</td>
</tr>
<tr>
<td>Driver</td>
<td>Existing</td>
<td>Driver Operating A Vehicle</td>
<td>Individual</td>
</tr>
<tr>
<td>Enforcement Agency</td>
<td>Existing</td>
<td>Texas Traffic Law Enforcement</td>
<td>Texas Department of Public Safety</td>
</tr>
<tr>
<td>Financial Institution</td>
<td>Existing</td>
<td>Commercial Bank</td>
<td>Various Ownership</td>
</tr>
<tr>
<td>Information Service Provider</td>
<td>Existing</td>
<td>Travel and Traffic Information Provider</td>
<td>Commercial Information Provider</td>
</tr>
<tr>
<td>Payment Instrument</td>
<td>Planned</td>
<td>Transponder Card</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Toll Administration</td>
<td>Existing</td>
<td>TxDOT Texas Turnpike Authority Division</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Toll Administrator</td>
<td>Existing</td>
<td>TTA Controller</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Toll Collection</td>
<td>Planned</td>
<td>TxDOT TTA Division Customer Service Center</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Toll Operator</td>
<td>Planned</td>
<td>Toll Operator/Supervisor</td>
<td>Texas Turnpike Authority</td>
</tr>
<tr>
<td>Traffic Management</td>
<td>Existing</td>
<td>TxDOT Austin District TMC</td>
<td>TxDOT Austin District</td>
</tr>
<tr>
<td>Vehicle</td>
<td>Planned</td>
<td>Toll Tag Interface</td>
<td>Texas Turnpike Authority</td>
</tr>
</tbody>
</table>

**Planned Projects:**
The Texas Turnpike Authority is implementing this Market Package.

**Additional Needs:**
None.
2.24 **Transit Maintenance (APTS6)**

**Priority:**
Low

**Existing Infrastructure:**

Table 2-24. Transit Maintenance Infrastructure

<table>
<thead>
<tr>
<th>Subsystem/Terminator</th>
<th>Status</th>
<th>Element Name</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit Fleet Manager</td>
<td>Existing</td>
<td>CapMetro Fleet Operations Manager</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Maintenance Personnel</td>
<td>Existing</td>
<td>CapMetro Vehicle Maintenance</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Management</td>
<td>Existing</td>
<td>CapMetro Dispatch System</td>
<td>CapMetro</td>
</tr>
<tr>
<td>Transit Vehicle Subsystem</td>
<td>Existing</td>
<td>Transit Vehicle Monitoring System</td>
<td>CapMetro</td>
</tr>
</tbody>
</table>

**Planned Projects:**
None.

**Additional Needs:**
None.
SECTION 3

PRIORITIZATION OF PLANNED PROJECTS

The following sections provide information on each planned project that was identified in Section 2. The following information is provided for each project:

- Description – A brief description of the project.
- Priority – The priority assigned to the project. The project is assigned a priority based on the priority of the Market Package. A priority of High has been assigned to projects to be completed in 5 years. A priority of Medium has been assigned to projects to be completed in 5 to 10 years. A priority of Low has been assigned to projects to be completed in 10 years or greater.
- Responsible Agencies – Identifies the agencies responsible for implementing, operating, and maintaining the results of the project.
- Related Market Packages – Identifies the Market Packages the project supports.
- Prerequisite Projects – Identifies the projects that must be completed before implementing the project being described.
- Funding – Provides an estimated cost and possible sources of funding for a project.
3.1 Austin Region ITS MOU

This project will develop a Memorandum of Understanding between the members of the Steering Committee to do the following:
1). Agree to implement Austin Regional ITS Architecture.
2). Maintain and Update the Austin Regional ITS Architecture.
3). Maintain and Update the Austin Regional ITS Deployment Plan

<table>
<thead>
<tr>
<th>Priority</th>
<th>Implementing Agency</th>
<th>Project Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
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<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td></td>
<td>ITS Steering Committee</td>
<td></td>
</tr>
</tbody>
</table>

**Related Market Packages**

**Project Funding**

Project Duration: 3 months  
Project Cost: $0.00

**Funding Source**

Member agencies operating funds
3.2 EXTEND NETWORK SURVEILLANCE EQUIPMENT ALONG LOOP1 FROM NORTH OF GAINES CREEK TO SLAUGHTER CREEK

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**
High

**Implementing Agency Project Number**
3136-01-093

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 2 Yr.
- Project Cost: $3,018,000.00

**Funding Source**
Title V - ITS Deployment
3.3 Extend TxDOT Network Surveillance - IH35 from Colorado River Bridge to St. Elmo Street

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Implementing Agency Project Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0015-13-247</td>
</tr>
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</table>

**Responsible Agencies**

- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**

- Project Duration: 1 Year
- Project Cost: $2,276,250.00

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
3.4 Extend TxDOT Network Surveillance - IH35 from FM 1825 to Braker Lane

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Implementing Agency Project Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0015-13-244</td>
</tr>
</tbody>
</table>

**Responsible Agencies**

- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**

- Project Duration: 1 Year
- Project Cost: $31,147,500.00

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
3.5 EXTEND TxDOT NETWORK SURVEILLANCE - IH35 FROM ST. ELMO STREET TO SLAUGHTER LANE

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority: High
Implementing Agency Project Number: 0015-13-234

Responsible Agencies
Implementation: TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Austin District Traffic Operations Division
Maintaining Agency: TxDOT Austin District Traffic Operations Division

Related Market Packages
Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding
Project Duration: 1 Year
Project Cost: $2,603,250.00

Funding Source
Title I - National Highway System
Title V - ITS Deployment
3.6 EXTEND TxDOT NETWORK SURVEILLANCE SYSTEM - IH 35 FROM WILLIAMSON COUNTY LINE/SH 45 TO FM 1825

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority** | Implementing Agency Project Number
---|---
High | 0015-10-040

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 1 Year
- Project Cost: $2,359,500.00

**Funding Source**
- Title I - National Highway System
- Title V - ITS Deployment
3.7 EXTEND TxDOT NETWORK SURVEILLANCE SYSTEM - LOOP 1 FROM PARMER LANE TO BRAKER LANE

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority** | **Implementing Agency Project Number**
--- | ---
High | 3136-01-096

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 1 Year
- Project Cost: $2,173,500.00

**Funding Source**
- Title I - National Highway System
- Title V - ITS Deployment
3.8 Extend TxDOT Network Surveillance System - Loop 1 from RM 2244 to Gaines Creek

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority: High
Implementing Agency Project Number: 3136-01-099

Responsible Agencies
Implementation: TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Austin District Traffic Operations Division
Maintaining Agency: TxDOT Austin District Traffic Operations Division

Related Market Packages
Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding
Project Duration: 1 Year
Project Cost: $2,300,000.00

Funding Source
Title I - National Highway System
Title V - ITS Deployment
3.9 Extend TxDOT Network Surveillance System - US 290 from East of Williamson Creek to Loop 360

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority** High

**Implementing Agency Project Number** 0113-09-057

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 1 Year
- Project Cost: $2,500,000.00

**Funding Source**
- Title I - National Highway System
- Title V - ITS Deployment
3.10 **EXTEND TxDOT NETWORK SURVEILLANCE SYSTEM - US 290 FROM SPRR TO US 183**

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Implementing Agency Project Number</th>
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</thead>
<tbody>
<tr>
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**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 1 Year
- Project Cost: $2,031,000.00

**Funding Source**
- Title I - National Highway System
- Title V - ITS Deployment
3.11 Extends the network surveillance system along US 290 from the Hays County Line (SH 45) to east of Williamson Creek.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**                **Implementing Agency Project Number**
High                         0133-08-052

**Responsible Agencies**
Implementation: TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Austin District Traffic Operations Division
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

**Project Funding**
Project Duration: 1 Yr                     Project Cost: $4,757,250.00

**Funding Source**
Title I - National Highway System
Title V - ITS Deployment
3.12 **INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY MANAGEMENT EQUIPMENT ALONG US 183 FROM FM 1625 TO 0.2 MILES SOUTH OF FM 1327/SH 45**

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**
High

**Implementing Agency Project Number**
0152-01-053

**Responsible Agencies**

<table>
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<th>Role</th>
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<tbody>
<tr>
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<td>Operating Agency</td>
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</tr>
<tr>
<td>Maintaining Agency</td>
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</table>

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**

<table>
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<th>Duration</th>
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<tbody>
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<td>2 Yr</td>
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</table>

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
3.13 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY MANAGEMENT EQUIPMENT ALONG US 183 FROM SH 71 TO FM 1625.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**  
High

**Implementing Agency Project Number**  
0152-01-053

**Responsible Agencies**

Implementation: TxDOT Austin District Traffic Operations Division  
Operating Agency: TxDOT Austin District Traffic Operations Division  
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

Network Surveillance  
Freeway Control  
Incident Management System  
Traffic Information Dissemination

**Project Funding**

Project Duration: 2 Yr  
Project Cost: $4,067,250.00

**Funding Source**

Title I - National Highway System  
Title V - ITS Deployment
3.14 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY TRAFFIC EQUIPMENT ALONG FROM LOOP 1 FROM SH 45 TO TRAVIS COUNTY LINE.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority** | **Implementing Agency Project Number**
---|---
High | 3136-02-004

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 1 Yr
- Project Cost: $650,000.00

**Funding Source**
- Title V - ITS Deployment
3.15 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY TRAFFIC MANAGEMENT - IH-35 FROM SLAUGHTER LANE TO THE HAYS COUNTY LINE

This project will install conduit, traffic detection equipment, and video equipment along the identified corridor.

**Priority** | **Implementing Agency** | **Project Number**
--- | --- | ---
High | TxDOT Austin District Traffic Operations Division | 0016-01-086

**Responsible Agencies**

Implementation: TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Austin Courtesy Patrol
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

**Project Funding**

Project Duration: 1 Yr | Project Cost: $3,373,500.00

**Funding Source**

Title I - National Highway System
Title V - ITS Deployment
3.16 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG LOOP 1 FROM 35TH STREET TO RM 2244

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority** | **Implementing Agency Project Number**
---|---
High | 3136-01-098

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 2 Yr.  
- Project Cost: $2,779,347.00

**Funding Source**
- Title I - National Highway System
- Title V - ITS Deployment
3.17 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG LOOP 1 FROM SLAUGHTER CREEK TO SH 45

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority | Implementing Agency Project Number
--- | ---
High | 3136-01-100

**Responsible Agencies**

Implementation: TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Austin Courtesy Patrol
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

**Project Funding**

Project Duration: 1 Yr
Project Cost: $1,095,250.00

**Funding Source**

Title V - ITS Deployment
3.18 INSTALL CONDUIT, DETECTION, AND FREeway TRAFFIC MANAGEMENT - IH35 M.L.K BLVD (19TH STREET) TO COLORADO RIVER BRIDGE

This project will extend the freeway network surveillance system. The project installs traffic detectors and conduit along the project segment.

<table>
<thead>
<tr>
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<tbody>
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**Responsible Agencies**

- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**

- Project Duration: 1 Yr
- Project Cost: $1,147,500.00

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
3.19 Install Conduit, Detection, and Freeway Traffic Management - IH 35 from Braker Lane to Reinli Street

This project will extend the freeway network surveillance system. The project installs traffic detectors and conduit along the project segment.

Priority: High
Implementing Agency Project Number: 0015-13-235

Responsible Agencies
Implementation: TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Austin District Traffic Operations Division
Maintaining Agency: TxDOT Austin District Traffic Operations Division

Related Market Packages
Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding
Project Duration: Project Cost: $0.00

Funding Source
Title I - National Highway System
Title V - ITS Deployment
3.20 Install Conduit, Detection, and Freeway Traffic Management - IH 35 from Reinli Street to M.L.K Blvd (19th Street)

This project will extend the freeway network surveillance system. The project installs traffic detectors and conduit along the project segment.

<table>
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<tr>
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<tbody>
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**Responsible Agencies**

- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**

- Project Duration: 1 Year
- Project Cost: $2,727,000.00

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
3.21 INSTALL FREEWAY MANAGEMENT EQUIPMENT ALONG SH 71 FROM RM 620/SH 45 TO US 290 WEST OF AUSTIN

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**
High

**Implementing Agency Project Number**
0700-03-063

**Responsible Agencies**
Implementation: TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Austin District Traffic Operations Division
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
Project Duration: 2 Yr  
Project Cost: $3,550,000.00

**Funding Source**
Title V - ITS Deployment
3.22 **INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG LOOP 1 FROM THE WILLIAMSON COUNTY LINE TO FM 734**

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**
High

**Implementing Agency**

**Project Number**
3136-01-092

**Responsible Agencies**

**Implementation**
TxDOT Austin District Traffic Operations Division

**Operating Agency:**
TxDOT Austin District Traffic Operations Division

**Maintaining Agency:**
TxDOT Austin District Traffic Operations Division

**Related Market Packages**

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

**Project Funding**

**Project Duration:** 2 Yr

**Project Cost:** $1,925,000.00

**Funding Source**
Title V - ITS Deployment Plan
3.23 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG SH 71 FROM SOUTH CONGRESS AVE. TO WEST OF DALTON LN.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Implementing Agency</th>
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<tbody>
<tr>
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**Responsible Agencies**

- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**

- Project Duration: 1 Yr.
- Project Cost: $2,653,000.00

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
3.24 Install Freeway Traffic Management Equipment Along SH 71 From West of Dalton Lane to 1.3 Miles East of FM 973/SH 45

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**  
High

**Implementing Agency Project Number**  
0265-01-082

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 1 Yr  
- Project Cost: $2,261,750.00

**Funding Source**
- Title I - ITS Deployment
3.25 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 183 FROM EAST OF IH-35 TO US 290 EAST.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority Implementing Agency Project Number
High 0151-09-052

Responsible Agencies
Implementation TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Austin District Traffic Operations Division
Maintaining Agency: TxDOT Austin District Traffic Operations Division

Related Market Packages
Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding
Project Duration: 6 Months  Project Cost: $849,000.00

Funding Source
Title I - National Highway System
Title V - ITS Deployment
3.26 **INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 183 FROM FM 969 TO THE COLORADO RIVER BRIDGE.**

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**
High

**Implementing Agency Project Number**
0151-09-054

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 1 Yr.
- Project Cost: $1,646,000.00

**Funding Source**
- Title I - National Highway System
- Title V - ITS Deployment
3.27 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 183 FROM NORTH OF LAKELINE BLVD TO THE TRAVIS COUNTY LINE.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

<table>
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<th>Priority</th>
<th>Implementing Agency Project Number</th>
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<tbody>
<tr>
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**Responsible Agencies**

- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**

- Project Duration: 6 Months
- Project Cost: $102,006.00

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
3.28 Install Freeway Traffic Management Equipment Along US 183 from the North End of the Colorado River Bridge to SH 71

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**  
High

**Implementing Agency Project Number**  
0265-01-081

**Responsible Agencies**

Implementation: TxDOT Austin District Traffic Operations Division  
Operating Agency: TxDOT Austin District Traffic Operations Division  
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

Network Surveillance  
Freeway Control  
Incident Management System  
Traffic Information Dissemination

**Project Funding**

Project Duration: 1 Yr.  
Project Cost: $921,500.00

**Funding Source**

Title I - National Highway System  
Title V - ITS Deployment
3.29 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 183 FROM US 290 EAST TO FM 969

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**  
High

**Implementing Agency Project Number**  
0151-09-053

**Responsible Agencies**

- **Implementation**: TxDOT Austin District Traffic Operations Division
- **Operating Agency**: TxDOT Austin District Traffic Operations Division
- **Maintaining Agency**: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**

- **Project Duration**: 1 Yr
- **Project Cost**: $1,144,500.00

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
### 3.30 Install Freeway Traffic Management Equipment Along US 290 from FM 3177 to SH 45/FM 973.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Implementing Agency Project Number</th>
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<tbody>
<tr>
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</table>

#### Responsible Agencies
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

#### Related Market Packages
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

#### Project Funding
- Project Duration: 1 Yr.
- Project Cost: $2,023,500.00

#### Funding Source
- Title I - National Highway System
- Title V - ITS Deployment

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

**Priority**
High

**Implementing Agency Project Number**
0114-02-065

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin Courtesy Patrol
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 1 Yr.
- Project Cost: $2,255,000.00

**Funding Source**
- Title I - National Highway System
- Title V - ITS Deployment
3.32 TxDOT CCTV Surveillance Cameras - IH35 from US 290 to Colorado River

This project will extend the freeway network surveillance system. The project installs CCTV cameras along the project segment.

**Priority**
High

**Implementing Agency Project Number**
0015-13-300

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Network Surveillance
- Freeway Control
- Incident Management System
- Traffic Information Dissemination

**Project Funding**
- Project Duration: 6 Months
- Project Cost: $300,000.00

**Funding Source**
- Title I - National Highway System
- Title V - ITS Deployment
3.33 TxDOT Detector Installation - IH 35 from US 290 to Colorado River

This project will extend the freeway network surveillance system. The project installs traffic detectors along the project segment.

**Priority**

<table>
<thead>
<tr>
<th>Implementing Agency Project Number</th>
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<tr>
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</tbody>
</table>

**Responsible Agencies**

- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Network Surveillance
- Freeway Control
- ITS Data Mart
- Traffic Information Dissemination

**Project Funding**

- Project Duration: 6 Months
- Project Cost: $300,000.00

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
3.34 Construct Centralized Multi-Agency Emergency Management Center and Traffic Management Center

This project is TxDOT Austin District share of the combined City of Austin, Travis County, and TxDOT RDMT project.

**Priority**                     **Implementing Agency Project Number**
High                           0914-00-100

**Responsible Agencies**
Implementation: TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Austin District Traffic Operations Division
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
Freeway Control
Network Surveillance
Emergency Response
Emergency Routing
Traffic Information Dissemination

**Project Funding**
Project Duration: 2 Yr
Project Cost: $3,700,000.00

**Funding Source**
3.35 **EXTEND TxDOT Freeway Control - IH 35 from 49TH Street to 12TH Street**

This project will extend the freeway control system. The project installs ramp gates along the project segment.

**Priority**  
High

**Implementing Agency Project Number**  
0015-13-299

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Freeway Control
- Traffic Forecast and Demand Management

**Project Funding**
- Project Duration: 6 Months
- Project Cost: $300,000.00

**Funding Source**
- Title I - National Highway System
- Title V - ITS Deployment
3.36 **INSTALL RAMP METERING-FREeway TRAFFIC MANAGEMENT EXPANSION IH-35 FY2002**

This programmed project will install ramp metering along IH 35 from the Austin City Central Business District (CBD) to Cesar Chavez Street. This is an element in the Freeway Traffic Management System for the Austin District and Austin City.

**Priority**
High

**Implementing Agency**
TEX-35-10,11,12

**Responsible Agencies**

**Implementation**

Operating Agency: TxDOT Austin District Traffic Operations Division
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Freeway Control
- Network Surveillance

**Project Funding**

Project Duration: 6 Months
Project Cost: $300,000.00

**Funding Source**

- Title I - National Highway System
- Title V - ITS Deployment
3.37 REPLACE LANE CONTROL SIGNALS - IH 35 FROM US 290 TO COLORADO RIVER

This project will replace the Lane Control Signals along IH 35.

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<tr>
<th>Priority</th>
<th>Implementing Agency Project Number</th>
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<tbody>
<tr>
<td>High</td>
<td>0015-13-266</td>
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</tbody>
</table>

**Responsible Agencies**

- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: TxDOT Austin District Traffic Operations Division
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Freeway Control
- Network Surveillance

**Project Funding**

- Project Duration: 1 Yr
- Project Cost: $77,000.00

**Funding Source**
3.38 CECC CAD System TxDOT ATMS Integration

This project will provide the hardware and software to interface the CECC CAD system with the TxDOT Austin District ATMS system. The Center-to-Center system developed by TxDOT Traffic Operations Division will be used to implement the interface integrating the two systems. The two systems will exchange incident data, provide traffic data to the CAD system, and provide CECC Dispatchers access to TxDOT's CCTV system.

**Priority**
High

**Implementing Agency**
TxDOT Austin District Traffic Operations Division

**Operating Agency:**
RDMT 9-1-1 Project

**Maintaining Agency:**
TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Incident Management System
- Emergency Response
- Emergency Routing
- HAZMAT Management
- Transit Security
- ITS Data Warehouse
- Mayday Support

**Project Funding**
- **Project Duration:** 2 years
- **Project Cost:** $325,000.00

**Funding Source**
RDMT 9-1-1 Project Team Members
3.39 **CITY OF ROUND ROCK COMMUNICATION INTEGRATION**

Installation of conduit along IH 35 and US 79 from north Austin to Round Rock for communications between integrated systems. TxDOT advanced traffic management system and Round Rock emergency services computer aided dispatch system proposed to be integrated with FY01 ITS Integration Component funds.

**Priority**  
High

**Implementing Agency**  
Responsible Agencies  
Implementation: TxDOT Austin District Traffic Operations Division  
Operating Agency: City of Round Rock Police Department  
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**  
Incident Management System  
Emergency Response  
Mayday Support

**Project Funding**  
Project Duration: 1 year  
Project Cost: $500,000.00

**Funding Source**  
Title I - National Highway System, FY 2003  
Title V - ITS Deployment, FY 2003
3.40 Williamsson County Communication Integration

Installation of conduit along IH 35 and BI 35 from north Round Rock to Georgetown for communications between integrated systems. TxDOT advanced traffic management system and Williamson County emergency services computer aided dispatch system proposed to be integrated with FY01 ITS Integration Component funds.

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<th>Priority</th>
<th>Implementing Agency</th>
<th>Project Number</th>
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<tr>
<td>High</td>
<td>TxDOT Austin District Traffic Operations Division</td>
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</table>

**Responsible Agencies**

- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: Williamson County EMS
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**

- Mayday Support
- Incident Management System
- Emergency Response

**Project Funding**

- Project Duration: 1 year
- Project Cost: $500,000.00

**Funding Source**

- Title I - National Highway System, FY 2003
- Title V - ITS Deployment, FY 2003
3.41 **Capital Metro Transit Integration**

Integration of Capital Metropolitan Transportation Authority (Capital Metro) public transit management system with TxDOT advanced traffic management system (ATMS). Capital Metro needs timely and accurate traffic information concerning State roadways to provide efficient management of public transit operations.

**Priority**
High

**Implementing Agency Project Number**

**Responsible Agencies**

Implementation
Operating Agency: Capital Metro
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
Traffic Information Dissemination
Transit Traveler Information

**Project Funding**
Project Duration: 1 year
Project Cost: $500,000.00

**Funding Source**
Title I - National Highway System, FY 2003
Title III - Formula Grants, FY 2003
Title V - ITS Deployment, FY 2003
3.42 **Capital Metro Public Security Integration**

Integration of Capital Metropolitan Transportation Authority (Capital Metro) public transit management system with TxDOT advanced traffic management system (ATMS). Capital Metro needs video surveillance of transit centers near State roadways to provide public transportation security operations.

**Priority**
High

**Responsible Agencies**
Implementation
Operating Agency: Capital Metro
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
Transit Security

**Project Funding**
Project Duration: 1 year
Project Cost: $300,000.00

**Funding Source**
Title I - National Highway System, FY 2003
Title III - Formula Grants, FY 2003
Title V - ITS Deployment
3.43 City of Austin Web Page

Integration of City of Austin and TxDOT video and traffic flow (system detector data) with the city's web page. This project would provide traffic flow and congestion conditions to the general public. This information is valuable in selecting trip time, route selection, mode,

Priority: High

Implementing Agency Project Number

Responsible Agencies
Implementation: City of Austin Public Works/Signals Department
Operating Agency: City of Austin Public Works/Signals Department
Maintaining Agency: City of Austin Public Works/Signals Department

Related Market Packages
Broadcast Traveler Information
Traffic Information Dissemination

Project Funding
Project Duration: 1 year
Project Cost: $125,000.00

Funding Source
Title I - National Highway System, FY 2003
Title V - ITS Deployment, FY 2003
3.44 **CITY OF AUSTIN IH 35 SIGNAL SYSTEM INTEGRATION**

Integration of the TxDOT traffic signals with the COA computerized traffic signal system will enable TxDOT and the city to quickly respond to incidents on the main lanes of the freeway. Staff will be able to monitor traffic conditions in the freeway main lanes and make manual or automatic signal timing changes to accommodate detoured traffic.

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<th>Priority</th>
<th>Implementing Agency</th>
<th>Project Number</th>
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<tr>
<td>Medium</td>
<td>TxDOT Austin District Traffic Operations Division</td>
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</table>

**Responsible Agencies**
- Implementation: TxDOT Austin District Traffic Operations Division
- Operating Agency: City of Austin Public Works/Signals Department
- Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
- Regional Traffic Control

**Project Funding**
- Project Duration: 1 year
- Project Cost: $300,000.00

**Funding Source**
- Title I - National Highway System, FY 2003
- Title V - ITS Deployment, FY 2003
3.45 City of Austin Signal System Integration

Integration of city's traffic responsive system with TxDOT freeway incident response. This project would integrate the TxDOT freeway management system with the city's ATMS to utilize the traffic responsive capabilities of the city's system to respond to incidents. This would utilize TxDOT or city installed detectors at freeway exit/entrance ramps to trigger traffic signal timing plans.

Priority: Medium

Implementing Agency: TxDOT Austin District Traffic Operations Division
Operating Agency: City of Austin Public Works/Signals Department
Maintaining Agency: TxDOT Austin District Traffic Operations Division

Related Market Packages
Regional Traffic Control

Project Funding
Project Duration: 1 year
Project Cost: $300,000.00

Funding Source
Title I - National Highway System, FY 2003
Title V - ITS Deployment, FY 2003
3.46 **Texas Turnpike Authority Integration**

Integration of the Texas Turnpike Authority toll road system with TxDOT advanced traffic management system. The project would implement interfaces to electronically share information between systems to efficiently manage traffic flow and information. The Austin District TMC would be able to monitor traffic conditions on the Toll Road, verify and monitor incidents, dispatch the Toll Road Courtesy Patrol as required.

**Priority**
Medium

**Implementing Agency Project Number**

**Responsible Agencies**
Implementation: TxDOT Austin District Traffic Operations Division
Operating Agency: TxDOT Texas Turnpike Authority
Maintaining Agency: TxDOT Austin District Traffic Operations Division

**Related Market Packages**
Regional Traffic Control

**Project Funding**
Project Duration: 2 years
Project Cost: $500,000.00

**Funding Source**
Title V - ITS Deployment Program
3.47 CITY OF AUSTIN TRANSIT INTEGRATION

Integration of the city's ITS signal system 2070 advanced traffic controllers have the capability, with the added appropriate bus hardware/software, to track Capitol Metro bus location and on-time performance. These data are very valuable components in improving transit reliability and performance.

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</table>

**Responsible Agencies**

- Implementation: City of Austin Public Works/Signals Department
- Operating Agency: Capital Metro
- Maintaining Agency: Capital Metro

**Related Market Packages**

- Transit Traveler Information

**Project Funding**

- Project Duration: 1 year
- Project Cost: $250,000.00

**Funding Source**

- Title I - National Highway System, FY 2003
- Title III - Formula Grants, FY 2003
- Title V - ITS Deployment, FY 2003
SECTION 4

PROCEDURES FOR SUBMITTING ITS PROJECTS

The regional ITS architecture is not static. It must change as plans change, ITS projects are implemented, and the ITS needs and services evolve in the region. Much as ITS systems require planning for operations and maintenance, a plan should be put in place during the original development of the regional ITS architecture to keep it up to date.\(^6\)

The regional ITS architecture is described by an inventory of subsystems and terminators, user services (Market Packages), architecture flows, and process specifications. This section addresses the review and approval process for including additional stakeholders to the Steering Committee, maintaining and updating the Austin Regional ITS Architecture, and the process for submitting ITS projects for conformance review and inclusion in the Deployment Plan. This process is really one of Configuration Control and Change Management. Some of the key aspects of the process are:

- Determine who will be responsible for architecture maintenance
- Define the architecture baseline
- Define the change management process
- Document the process in a Maintenance Plan.

4.1 STEERING COMMITTEE

The Steering Committee provides guidance on the Austin Regional ITS Architecture and sets the priorities for implementing ITS Services in the Austin Region. The Steering Committee shall be responsible for:

- Reviewing and approving changes to the Austin Regional ITS Architecture
- Dissemination of information on ITS projects within a member organization
- Managing roles and responsibilities for implementing ITS Services in the Austin Region
- ITS Training and Education in the region.

Any stakeholder wishing to modify the regional architecture must obtain the approval of the Steering Committee for the change. The Steering Committee shall ensure that the stakeholders impacted by the change agree to the change. The Steering Committee shall ensure the sponsor of a change to the regional architecture provides all the data required by the maintainer to update the regional architecture.

Membership

Any Transportation or Public Safety related organization within the TxDOT Austin District’s area of responsibility is eligible to join the Steering Committee. Any organization joining the

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\(^6\) Derived from Regional Architecture Guidance; Developing, Using and Maintaining an ITS Architecture for Your Region; National ITS Architecture Team; October 12, 2001
Steering Committee must agree to the terms of the Steering Committee Memorandum of Understanding (MOU) and sign the MOU. If the organization joining the Steering Committee does not agree to the terms of the MOU, the Steering Committee may consider updating the terms of the MOU.

Meetings

The Steering Committee shall meet at least once a quarter to discuss ITS Services in the Austin Region. Subgroups of the Steering Committee may meet as required to discuss projects.

4.2 Project Planning and Approval

Since 8 April 2001, the Federal Highway Administration (FHWA) requires all projects with ITS elements to be reviewed against the regional ITS architecture. Depending on the source of funding, the Capitol Area Metropolitan Planning Organization (CAMPO) or TxDOT Austin District shall be responsible for ensuring a project conforms to the regional architecture.

CAMPO and/or TxDOT Austin District shall work with the Steering Committee and its members to help identify opportunities to reduce the cost of deploying/implementing ITS in the Austin region. For example, a road repair project could include the installation of sensors and communications equipment.

4.3 Project Conformity Approval

To support the approval process for an ITS related project, the project’s sponsoring agency shall submit to CAMPO and TxDOT Austin District for review the following data during the project’s definition phase (before the specifications and Request for Proposal or Quote are developed):

- An inventory report showing the subsystems and terminators the project will affect or add/delete to the regional architecture inventory.
- A Turbo Architecture project architecture that shows the architecture flows between the subsystems and terminators the project will affect or the pages from the regional architecture that shows where the project fits into the regional architecture.
- The market package(s) and process specification(s) the project will implement or enhance.
- A report detailing the differences, if any, between the project architecture and the existing regional architecture.
- A letter from the Steering Committee stating that the proposed changes (if any) to the regional architecture have been approved.
- The TxDOT Statement of Conformity (see Appendix A).
- Any other data required by CAMPO and/or TxDOT Austin District

The sponsoring agency is responsible for producing the data that will needed for the review. When the data has been reviewed, the reviewing agency shall inform the sponsoring agency and the Steering Committee if the proposed project conforms to the regional architecture. If the
project does not conform to the regional architecture, reviewing agency shall provide in writing details on why the project does not conform to the sponsoring agency and the Steering Committee.

When the project has been reviewed, CAMPO and the submitting agency should determine if the project should be added to the Transportation Improvement Program (TIP). TxDOT Austin District shall add the project to the Deployment Plan.

### 4.4 Regional Architecture and Deployment Plan Maintenance

TxDOT Austin District shall be responsible for maintaining the Austin Regional ITS Architecture, the Austin Regional ITS Deployment Plan, and the Turbo Architecture DB using TxDOT’s configuration management polices and procedures. TxDOT Austin District shall work with CAMPO in maintaining this document.

For example, changes to the regional architecture could occur for the following reasons:

- Changes to the National ITS Architecture
- The needs of the region change
- New user services (Market Packages) are planned for the region
- The rolls and responsibilities of a Stakeholder changes
- An ITS project changes the regional architecture

When a change to the regional architecture has been approved by the Steering Committee, the responsible stakeholder shall submit the required documentation to update the regional architecture to TxDOT Austin District. TxDOT Austin District shall update the regional architecture based on their polices and procedures. TxDOT Austin District shall provide changes pages to the Steering Committee on a quarterly basis and publish the entire regional architecture on a yearly basis.