I-35 Expansion Project
Central Texas

Traffic Safety Conference
Fort Worth, Texas
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TxDOT is committed to finishing the widening of Main Street Texas (I-35) to six lanes from San Antonio to Hillsboro.
• 45% of Texas population lives within 50 miles of I-35
• 30 million+ travelers per year use this corridor
• Approximately two-thirds travel through the corridor
• 1,000+ businesses on these 96 miles
Highlights

• 14 segments/17 projects
• 55,000–111,000 vehicles/day
• 25–30% trucks

Total Cost Approx. $2.1B
Highlights

- Complete: 1A, 3C, 6A, 6B
- Nearly complete: 5C
- Active today: 1B, 1C, 3A1, 3B, BRB, 5A, 5B
- Hill Co. safety rest areas
- Complete in early 2017

- **Completed**
- **Nearly completed**
- **Active**
- **Starting soon**
General Improvements

- 3 lanes in each direction on I-35
- Added I-35 crossings
- Added and relocated ramps
- 1-way continuous frontage roads
- U-turns at selected crossings
- Safety rest areas
- Technology / ITS
- Truck lane restrictions
- Aesthetics
- “Green” initiatives
Reducing Impacts - Construction

- I-35 lane closures limited to evenings
  - Sun 10:00pm - Mon 7:00am
  - Mon - Fri, 7:00pm - 7:00am
- Lane rental fees
- Lane closure blackout dates
- Advance notifications
- 6-day work week
- Incentives for completing construction ahead of schedule
Reducing Impacts - Communication

- 80+ outreach efforts
- Business community meetings
- www.My35.org
- I-35 newsletter
- Lane closure notifications
- No surprises!
I-35 Mobility Coordination Research
TTI Interagency Contract
Role

- Project ombudsman
- Engage and assist those impacted
- Keep internal/external stakeholders informed
- Coordinate across projects and districts
- Technical advisor
I-35 Mobility Coordination
I-35 Construction
Traveler
Information
Research
I-35 Real-Time Speed Monitoring

Current Travel Conditions

Bluetooth sensors
I-35 Construction Clearinghouse

Lane Closure Notifications

- E-mail
- My35.org
- Twitter
- Facebook
- Lane Closure Assessment
- DMSs
- Travel Delay Business Rules

Automatic Coordination
Automated Daily Emails

AT A GLANCE

HILLSBORO to WEST

- I-35 at US 77
- US 77 to 35W/35E Split
- I-35 before 35W/35E Split
- I-35 before 35W/35E Split

WEST to WACO

- EB/WB Hilltop St at I-35

I-35 at US 77

ROADWAY: I-35 Entrance Ramp (starting at MM 370.0)

CLOSED: Ramp closed

TIME: Continuously, 4/8 @ 7PM - 10/7 @ 7AM

ACTIVITY: The cloverleaf access ramp from eastbound US 77 to I-35N is closed for the duration of the US 77 bridge reconstruction project.

MAP: Click here to see closure map
Time Line

• 10/23/12 – 3rd fatality near I-35 work zone
• 10/25/12 – TxDOT DE/DPS Captain call for meeting
• 10/29/12 – Waco District Safety Summit held
• 11/5/12 – TxDOT/TTI prepare draft Recommendations
• 11/12 – TxDOT issues change order for End of Queue Warning System
• 11/15/12 – Meeting on Safety Summit Implementation
• 11/19/12 – 4th fatality near I-35 work zone (no closure)
• 11/27 -30/12 – Temporary Rumble Strips tested
Issues

• Speeding
• High Truck traffic
• Barriers mean limited or no shoulders
• Drowsy drivers
• Speed limits is currently 70 mph in most work zones
• Advance enforcement car procedures
• Trucks passing
• Nighttime construction
• Quick clearing of incidents / reopening to traffic
• Hot spots
  – I-35 SB near Lorena
  – MM 346 & 349
  – US 190 EB to NB I-35 (weaving traffic)
• Sight restrictions
• How are we educating the public?
• Distracted driving (computers, TVs, texting, etc.)
• How to inform non-local drivers?
• Bidding process sets construction means and methods (schedule driven)
• Need comprehensive safety analysis of crashes in the corridor
• Maintenance of barrier wall during winter
Ideas

• Can DPS attend weekly construction meetings?
• Rumble strips
• Use message boards to display other information, not just distance/time to next town
• 2-hour NHI safety training on work zone safety
• Advance enforcement vehicle
• No trucks in left lane / no passing / passing restrictions
• Additional law enforcement projects
• Reexamine speed limits in construction zones
• Lower speed limits during lane closures or 24/7?
• Real-time speed displays / portable units
• Radar units
• Public outreach
• RIMS? Regional incident management system? Transtar
• Billboards
• Additional work zone awareness campaigns
• Getting media more involved

• Work zone safety - YouTube video? What does sign, lights, etc. mean?
• CDL outreach
• AGC/TxDOT outreach video on work zones (Nov. meeting).
• Orange lane striping
• Advisory radio
• Call-in number for roadway conditions
• Local radio spots
• Message boards in DFW and Austin
• Getting inside the cab of the truck
• Temporary/portable rumble strips
• Get truck stops involved.
• CB radio messages
• Increased traffic fines
• No passing during merge conditions
• Meet with local JPs so they understand the issues and the importance
• Contractors use of DPS for WZ closures
• End of queue warning system
Ideas Categorized

• Enforcement

• Engineering

• Education
Recommendations - Enforcement

- Improve consistency in use of law enforcement for lane closures
  - TxDOT discussing at construction meetings
- Invite law enforcement to weekly construction meetings
  - TxDOT issued invitation
- Consistent use of advanced enforcement vehicle
  - TxDOT discussing at construction meetings
- Additional law enforcement projects
- Meet with Justices of the Peace
Recommendations - Engineering

- TxDOT re-examine speed limits in work zones
  - Minute Order approved for 60 MPH for certain project conditions
- Lower speed limits during lane closures
- Implement Real-time display of speed to motorists
  - Investigating systems
- Test rumble strip project for lane closure
  - TxDOT testing on 11/27-30/2012
- Expand incident management information system
Recommendations - Engineering
Recommendations - Engineering

- Implement End-of-Queue Detection System with Rumble Strips
Temporary Rumble Strips

**Rumble Strips on One-Lane Two-Way Application**
- 70 mph or Less

**Rumble Strips for Lane Closure on Conventional Roadway**
- 70 mph or Less

**General Notes**
- Signs are for illustrative purposes only. Signs and layout may vary depending on the specific application or project-specific details.
- Dimensions shown are illustrative.
- The use of temporary rumble strips should be considered in cases where it is necessary to redirect traffic or improve safety.
- The use of rumble strips should be in accordance with federal, state, and local regulations.
- Barrels, signs, and markers for temporary rumble strips should be handled by qualified personnel.
- The use of rumble strips is subject to state and local regulations.

**Sections**
- 35-1
- 35-1a

**LEGS**
- Type 3 (Reflective) - Black Reflective Devices
- Type 4 (Light-Activated) - Black Light-Activated Devices

**Dimensions**
- Length of Rumble Strips
- Width of Rumble Strips
- Height of Rumble Strips

**TYPICAL LAYOUT**
- Diagram showing typical layout of temporary rumble strips.
End-of-Queue Detection System

- Automated monitoring near a work zone
- Warning of slow speeds
- Warning location of stop and go traffic
End-of-Queue Detection System
Recommendations – Education / Public Outreach

- Expand Public Outreach on Work Zone Safety
  - TxDOT launch work zone safety campaign
    - Implement billboards with work zone safety message
    - Post work zone safety messages on permanent DMS along I-35
    - Distribute work zone safety information at Truck and Rest Stops
    - Distribute work zone safety video via social media
- Hold NHI Work Zone Safety Training Course
  - Session for TxDOT, Contractors, Law Enforcement
  - Session for public
    - Lane Construction/TxDOT Planning an event for January/February
- Implement CB Wizard test project
Subsequent Safety Summit Meetings

• Held quarterly or as needed
• Discuss Results of Efforts
• Discuss Crash Analysis
• Discuss New Issues and Ideas