



I-35 NEX Design Exceptions Memo

Bexar, Comal, Guadalupe Counties

CSJ: 0016-05-111, 0016-06-047, 0016-07-113, 0017-10-168

By Garver, LLC for TxDOT San Antonio District

Project Description

TxDOT proposes improvements to I-35 from the I-35/I-410 South interchange to FM 1103. Logical termini for the project are the I-35/I-410 South interchange to the south and FM 1103 to the north. The distance between the logical termini is approximately 15.4 miles. Construction limits, which account for transitions into the existing roadways, extend along I-35 from Walters Street to Freisenhahn Lane (north of FM 1103), I-410 North from Nacogdoches Road to I-35, I-410 South from I-35 to WW White Road, and Loop 1604 from Nacogdoches Road to I-35. The distance between the construction limits on I-35 is approximately 19.5 miles. The project also includes proposed direct connectors at the following interchanges with I-35: I-410 South, I-I-410 North, Loop 1604 (West).

The proposed project would expand the existing 6- to 10-lane I-35 facility to a 12- to 16-lane facility by constructing one HOV lane and two General Purpose (GP) lanes in each direction on elevated structure. In general, the proposed elevated lanes would have an overall width of approximately 54 feet, which includes a 4-foot wide inside shoulder, a 12-foot HOV lane, a 2-foot buffer, two 12-foot GP lanes and a 10-foot wide outside shoulder, with 1-foot bridge rail on each side. The desired design speed for the elevated HOV and GP lanes is 70 miles per hour (mph) with minimum design speed of 60 mph. Fifty (50)-foot wide, gated crossover structures between the northbound and southbound elevated HOV and GP lane structures are proposed north of Eisenhower Road, north of O'Connor Road, and near Retama Parkway to facilitate emergency responder access. Figure 1 shows the proposed typical section for the project.

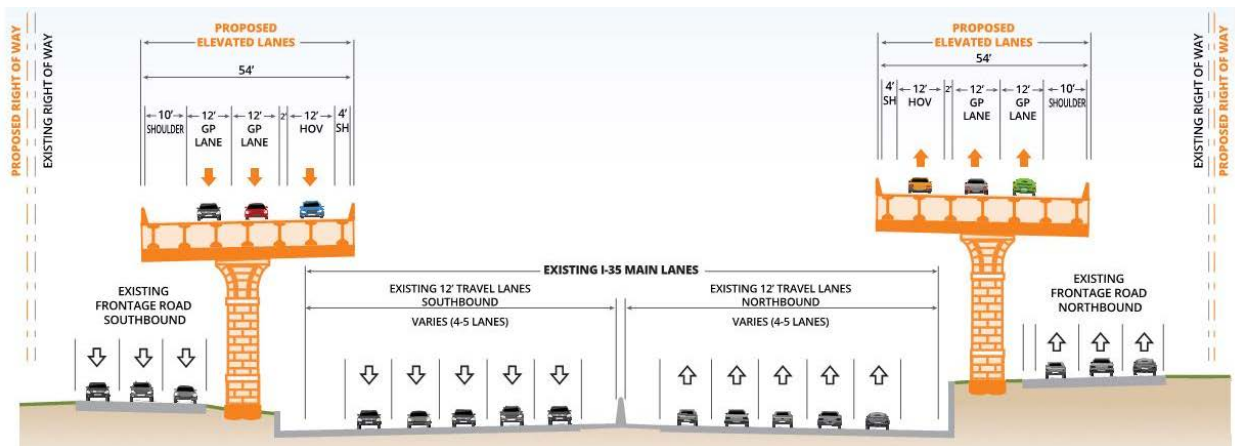


Figure 1: Proposed I-35 NEX Typical Section

The proposed direct connector fly-overs are generally two lanes and would have an overall width of approximately 38 feet, which includes a 4-foot wide inside shoulder, two 12-foot wide travel lanes, an 8-foot wide outside shoulder, with 1-foot bridge rail on each side. Some direct connectors have an increased inside shoulder width (10- to 12-feet) to help with sight distance. The desired design speed for the direct connectors at the major interchanges is 45 mph.

Proposed I-35 NEX Project Location and Phases

The I-35 NEX project is located in Bexar, Comal and Guadalupe counties and traverses through cities of San Antonio, Windcrest, Kirby, Live Oak, Cibolo, Schertz and Selma. The project is proposed for Letting/construction through Alternate delivery with the following limits:

- **BASE:** I-35 from I-410 North interchange to FM 3009 including improvements on I-410 North from Nacogdoches Road to I-35
- **DEFERRED WORK COMPONENT SOUTH:** I-35 from Walters Street to I-410 North interchange including improvements on I-410 South from WW White Road to I-35 and direct connectors to I-410 North
- **DEFERRED WORK COMPONENT NORTH:** I-35 from FM 3009 to Freisenhahn Lane including improvements to I-35 between Olympia Parkway to FM 3009.

Figure 2 shows the limits of Base and deferred work components.

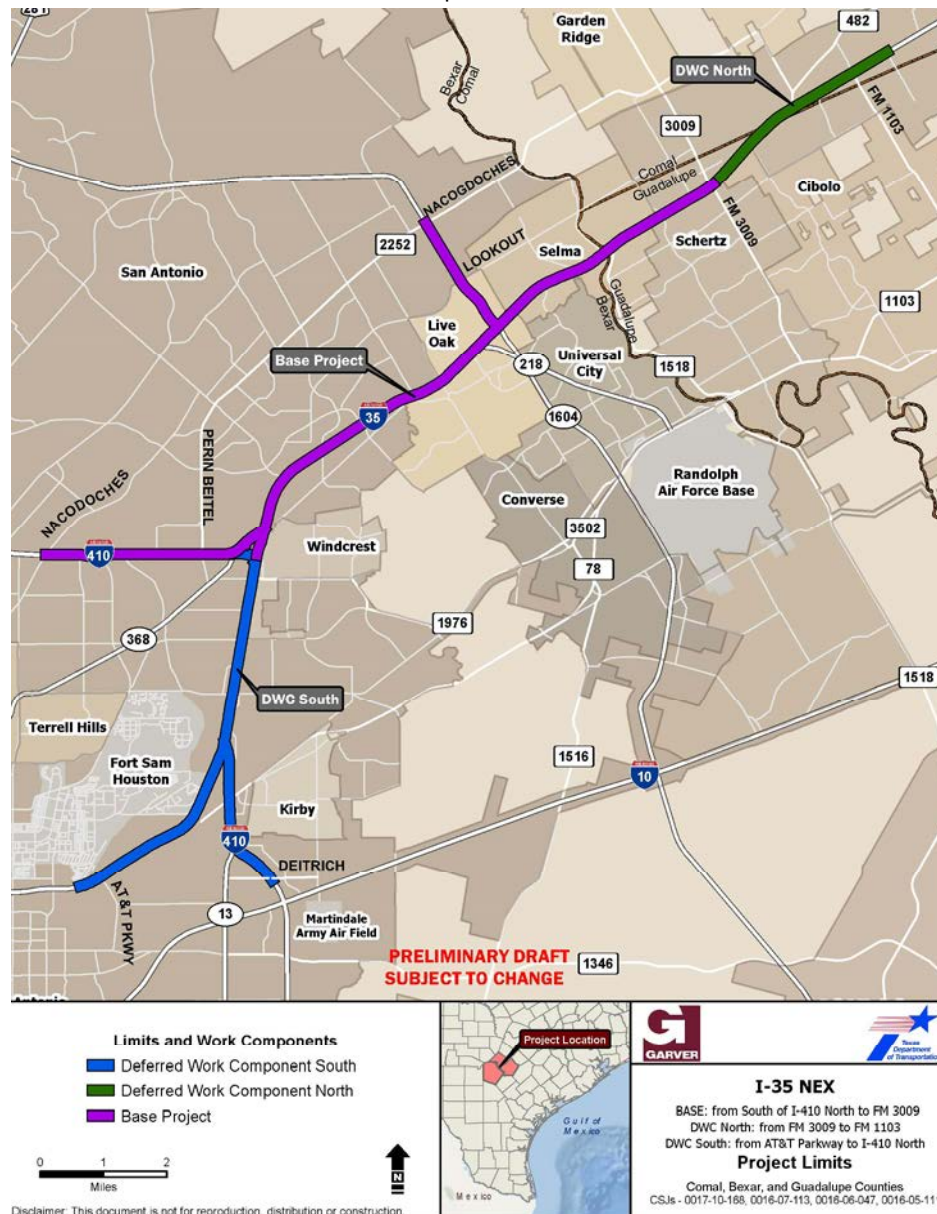


Figure 2: I-35 NEX Project Location Map

Proposed Design Exceptions

The project proposes the following design exceptions along the I-35 corridor on the existing mainlanes and ramps to facilitate accommodation of proposed elevated structures between mainlanes and frontage roads:

- Shoulder Width
- Lane Width

The design exceptions are proposed on the corridor to avoid and minimize (where unavoidable) impacts to right-of-way and environment; reduced impacts during construction and to preserve overall mobility and safety of the I-35 corridor as feasible.

1. Design Exception for Shoulder Width

Inside and outside shoulder width required per TxDOT RDM Table 3-18 is 10'.

Location	Need for Exception
I-35 Northbound and Southbound Mainlanes	Project proposes reduced shoulder width for inside and/or outside shoulders at 5 locations on mainlanes to accommodate improvements and column placement. Project proposes reduced inside shoulders at various locations on mainlanes to accommodate proposed OSBs in median.
Loop 1604 Eastbound and Westbound Mainlanes	Project proposes reduced inside shoulder width at various locations to accommodate proposed columns and OSBs in median.
I-410N Eastbound and Westbound Mainlanes	Project proposes reduced inside and/or outside shoulder width at 3 locations to accommodate proposed improvements and OSBs.
I-35 Northbound and Southbound On/Off Ramps	Project proposes reduced shoulder width for several on/off ramps between AT&T Parkway and FM 3009. Existing width for a 1-lane ramp on corridor is generally 22' (2' inside shoulder + 14' lane + 6' outside shoulder). To provide protection from columns being placed between mainlanes and frontage road along corridor, a 1' barrier is proposed on ramps as needed based on location and proximity of column to ramp. Placement of barrier on existing ramps modifies the applied criteria from a 2' inside shoulder width for roadway to a 4' inside shoulder width requirement for a structure per TxDOT Roadway Design Manual criteria, Table 3-18 Roadway Widths for Controlled Access Facilities. A design exception for reduced inside shoulder width is required at various locations along the corridor for on/off ramps.

2. Design Exception for Lane Width

Lane Width required for freeway facility per TxDOT RDM Table 3-18 is 12'.

Location	Need for Exception
I-35 Northbound Mainlanes	Existing mainlanes are 11' in width. Project proposes an additional 11' lane over Cibolo Creek in Base condition only. DWC North improvements eliminate the design exception providing a 12' lane.
I-35 Southbound Mainlanes	Project proposes an Auxiliary lane 11' width over Cibolo Creek.
I-410N Eastbound Mainlanes	Existing mainlanes on I-410N are 11' in width. Project proposes a 5 th lane on 410N between Haskin Drive (East of FM 2252) and Goldstar Drive (East of Starcrest Drive), 11' in width.

Summary

A Design Exceptions Report with safety analysis is being prepared for approval from TxDOT Design Division and FHWA during the Schematic/Environmental stage of the project.