

**TIGER DISCRETIONARY PROGRAM  
Project Application**

**Name of Project:** Interstate Highway (IH) 30 High Occupancy Vehicle (HOV)/Managed Lanes

**Agency Submitting Project:** North Central Texas Council of Governments (NCTCOG) and the Texas Department of Transportation (TxDOT) Dallas District

**Other Project Parties:** City of Dallas, City of Grand Prairie, Dallas Area Rapid Transit (DART), and the North Texas Tollway Authority (NTTA)

**Primary Contact:**

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**Type of Project:** Highway

**Project Location:**

**City:** Dallas/Grand Prairie

**County:** Dallas

**State:** Texas

**Congressional Districts:** 24 (Congressman Kenny Marchant), 30 (Congresswoman Eddie Bernice Johnson), and 32 (Congressman Pete Sessions)

**Rural/Urban:** Urban

**TIGER Funds Requested:** **\$ 76,252,705**

**DUNS Number:** 10-246-2256

**General Project Information**

**Submitting Agency/Grant Recipient:** North Central Texas Council of Governments

**Implementing Agency:** Texas Department of Transportation (TxDOT) – Dallas District

**Project Name:** Interstate Highway (IH) 30 High Occupancy Vehicle (HOV)/Managed Lanes

**Project Limits:** Dallas/Tarrant County Line (City of Grand Prairie) to Sylvan Avenue (City of Dallas)

**Project Scope or Description:** This project will provide two reversible, barrier-separated HOV/managed lanes on the IH 30 Tom Landry Freeway between the Dallas/Tarrant County Line in the City of Grand Prairie and Sylvan Avenue in the City of Dallas, a distance of approximately 13 miles. Additionally, this project will construct two pairs of elevated wishbone access/egress ramps, one at Belt Line Road in the City of Grand Prairie and the other at Westmoreland Road in the City of Dallas. The project will also include the addition of one general purpose lane in each direction between State Highway 161 (just east of the Dallas/Tarrant County Line) and Loop 12, a distance of approximately 8 miles. These project elements can be constructed without any additional right-of-way or any restriction of access to existing residences or businesses. The project would require no displacements or relocations, no substantial changes in the existing roadway alignment would occur, and no new drainage easements would be required.

A Toll Declaration Gantry for the HOV/managed lanes will be constructed between MacArthur Boulevard and Loop 12 in the City of Grand Prairie. The gantry area would consist of four 11-foot wide lanes separated by four-foot wide buffers with toll collection equipment located above on a structure and below in the pavement. The Toll Declaration Gantry would toll vehicles based on whether they are single-occupant vehicles (SOV) or high-occupant vehicles (HOV), and the proposed vehicle identification and tolling operations would not require a reduction in vehicle speeds through the gantry.

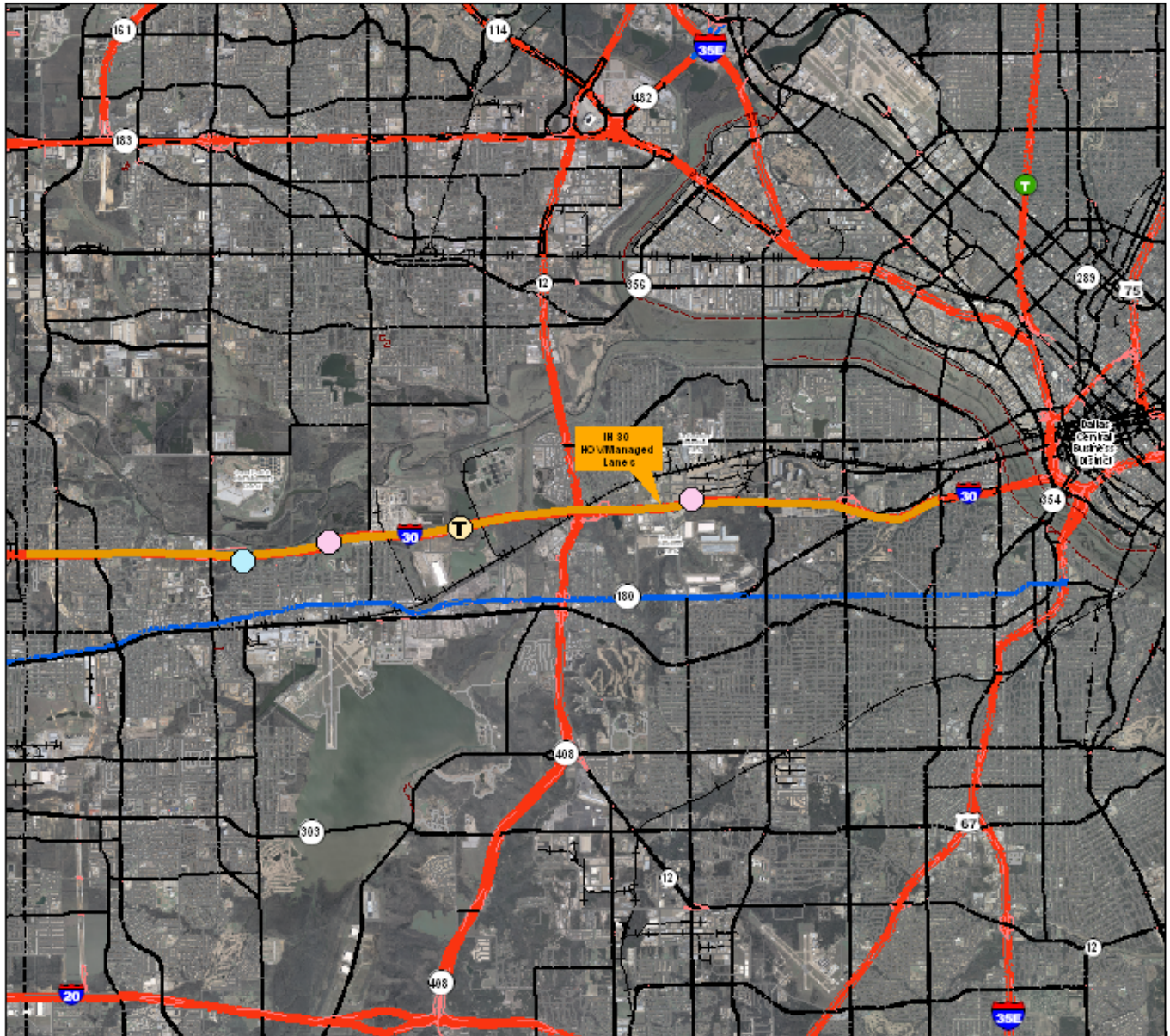
To encourage additional carpooling and transit use of the HOV/managed lanes, as well as provide a staging area for transit connections to/from special events at adjacent entertainment districts along the IH 30 corridor, this project will build a new 350-space Park-and-Ride facility in the City of Grand Prairie. The Park-and-Ride facility would be located on the south side of IH 30 within TxDOT right-of-way, east of Belt Line Road. To provide sufficient HOV/managed lane access to/from the new Park-and-Ride facility, as well as establish suitable local access and circulation, the following additional elements will also be constructed as part of this project:

- a. The eastbound entrance ramp and the westbound exit ramp to/from the IH 30 general purpose lanes will be relocated to the east (approximately 1,500 to 2,000 feet)
- b. Three-lane frontage roads in each direction will be provided between the relocated general purpose lane ramps and the Belt Line Road intersection.
- c. Northeast 15<sup>th</sup> Street, a local 2-lane roadway, will be extended north from East Tarrant Road to the new eastbound IH 30 frontage road.

Finally, for enhanced access, improved safety, and higher level of service (LOS) for weaving movements in and out of the IH 30 HOV/managed lanes, this project will build auxiliary general purpose lanes in each direction at two locations. The first location will be in the City of Dallas between the elevated wishbone access/egress ramps and the general purpose lanes to/from Westmoreland Road. The second location will be in the City of Grand Prairie between the elevated wishbone access/egress ramps and the relocated general purpose lane ramps to/from Belt Line Road.

A map displaying the project limits, including locations of the Belt Line Road Park-and-Ride facility, the elevated wishbone access/egress ramps, and the Toll/Declaration Gantry, is shown in Figure 1.










***IH 30 HOV/Managed Lanes, Dallas and Grand Prairie, Dallas County, Texas  
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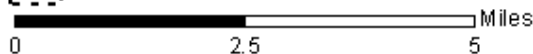


**IH 30  
HOV/Managed  
Lanes  
Dallas County  
State of Texas  
ARRA TIGER  
Application  
Project Location  
Figure 1**

**Legend**

Proposed Facilities

-  Belt Line Park & Ride
-  Elevated Wishbone Access/Egress Ramps
-  Tolling/Declaration Gantry
-  TIGER Recommended Project
-  Rail
-  Primary Highway
-  Secondary Highway
-  Major Arterial
-  Counties




**North Central Texas  
Council of Governments  
Transportation Department**

**Urban vs. Rural Need:** The IH 30 HOV/Managed Lanes Project is located in the City of Grand Prairie and in the City of Dallas in Dallas County, Texas. The project is in an urbanized area and is located west of the Dallas Central Business District.

Land uses near and adjacent to the project in the City of Grand Prairie is predominantly residential, but includes vacant land and scattered institutional (mostly schools), office, commercial, hotel, industrial, and utility uses. IH 30 also lies adjacent to the Grand Prairie Entertainment District which includes Lone Star Park (a 315-acre Class 1 horse racing venue), Nokia Theatre (an indoor performance arena with a capacity of 6,400 seats), QuikTrip Park (a 5,400-seat outdoor stadium for the Grand Prairie AirHogs of the American Association of Independent Professional Baseball), and Ripley's Believe It Or Not Museum.

Within the limits of the City of Dallas, industrial uses and vacant land are prevalent west of Hampton Road, with some residential uses. This area includes one of the southwestern United States' most successful infill developments, Pinnacle Park, which includes 900 acres of retail, office, and industrial buildings, and an employment base exceeding 7,000 jobs since its groundbreaking in the year 2000. East of Hampton Road, land use is predominantly residential, but also consists of commercial, industrial, and parks and recreational uses. Vacant land is zoned primarily for light industrial uses. Zoning in developed areas generally reflects existing uses.

With a connection and transition to a one-lane, buffer-separated, concurrent-flow HOV/managed lanes facility under construction between Cooper Street in the City of Arlington and the Dallas/Tarrant County Line, the length of the IH 30 HOV/managed lanes will be extended to approximately 18 miles, and the project will gain direct access to the Arlington Entertainment District. This district includes several important regional destinations such as Six Flags Over Texas, Six Flags Hurricane Harbor, the Arlington Convention Center, the Shops at Lincoln Square, the 49,000-seat Rangers Ballpark (home of Major League Baseball's Texas Rangers of the American League), and the recently opened 80,000-seat Cowboys Stadium (home of the National Football League's Dallas Cowboys of the National Football Conference). Numerous hotels, small retail outlets, office complexes, commercial and light industrial buildings also exist within the district.

**Targeted Transportation Challenges:** The IH 30 HOV/Managed Lanes Project creates a unique opportunity for the Dallas-Fort Worth region to implement an innovative and efficient means for addressing urban transportation needs, providing mutual respect to both cost and the environment. The project is anticipated to significantly relieve congestion, enhance mobility and regional air quality, and improve vehicle safety along the IH 30 corridor.

***Relieving Congestion:*** The IH 30 HOV/Managed Lanes Project is needed to facilitate traffic generated by rapid population and employment growth in the cities of Dallas and Grand Prairie. For the time period 1970 – 2000, the United States (U.S.) Census Bureau calculated that the population of the City of Dallas increased 41 percent from 844,401 to 1,188,580, and the population of the City of Grand Prairie increased 150 percent from 50,904 to 127,427. For the time period 1990 – 2000, data from U.S. Census indicates that employment in the City of Dallas increased 28 percent from 809,650 jobs to 1,038,314 jobs, and employment in the City of Grand Prairie increased 60 percent from 51,800 jobs to 82,664 jobs.

Along with much of North Central Texas, strong growth in population and employment for the cities of Dallas and Grand Prairie is expected to continue well into the future. Regionally approved projections prepared by the North Central Texas Council of Governments (NCTCOG) indicate that 2000 – 2030 population growth for the City of Dallas will be at 18 percent (1,188,580 to 1,404,847 persons), and at 81 percent (127,427 to 231,011 persons) for the City of Grand Prairie. Projected employment growth for the same time period estimates a 34 percent increase (1,038,814 to 1,390,219 jobs) for the City of Dallas and a 52 percent increase (82,664 to 125,866 jobs) for the City of Grand Prairie.

This growth, combined with associated residential, commercial, and industrial activities along the IH 30 corridor, will result in significant increases in traffic. Results from the NCTCOG Dallas-Fort Worth Regional Travel Model (DFWRTM) indicate that average daily traffic (ADT) in the City of Dallas will rise

from 174,150 vehicles per day (VPD) in 2009 to 204,970 VPD in 2030. ADT in the City of Grand Prairie will increase from 149,190 VPD in 2009 to 212,380 VPD in 2030. For the 8-lane to 10-lane freeway originally proposed for the IH 30 corridor in western Dallas County, these volumes would result in a failing level-of-service (LOS F).

The HOV/managed lanes proposed for the IH 30 corridor provide an ability to better maximize existing pavement so that additional capacity may be added to the peak flow of traffic. This project will add two reversible lanes to the facility, enabling greater eastbound travel in the morning and westbound travel in the evening. The extra capacity would accommodate projected travel demands through the year 2030, sufficiently improve overall level of service, and result in measurable daily savings of congestion delay throughout the regional roadway network, all without requirements for new right-of-way, displacements, drainage easements, or any significant changes to the existing roadway alignment. Table 1 displays 2030 DFWRTM performance data for the entire Metropolitan Planning Area, indicating that construction of the IH 30 HOV/Managed Lanes Project, including the new Park-and-Ride facility in the City of Grand Prairie, will produce a daily congestion delay savings of **3,029** hours for local commuters compared to the no-build condition.

**Table 1. Year 2030 DFWRTM Performance Data**

<b>IH 30 HOV/Managed Lanes</b>	<b>Build</b>	<b>No-Build</b>	<b>Difference</b>
Vehicle Miles of Travel	241,899,372.37	241,883,348.12	<b>+ 16,024.25</b>
Traffic Control Delay (hours)	598,692.61	599,598.61	<b>- 906.00</b>
Congestion Delay (hours)	1,067,351.43	1,070,380.18	<b>- 3,028.78</b>

To alleviate non-recurring congestion, the recent construction of the full pavement width for the IH 30 HOV/Managed Lanes Project has enabled full deployment of a comprehensive Intelligent Transportation System (ITS) package throughout the corridor. The current ITS coverage of the project corridor is extensive, allowing for improved incident detection, response and clearance times. The localized study area indicates that construction of the I.H. 30 HOV/Managed Lanes project will result in a travel time savings for non-recurring congestion of 77 hours per day. When the performance data is analyzed for the entire Metropolitan Planning Area, construction of the I.H. 30 HOV/Managed Lanes project produces a daily travel-time savings for non-recurring congestion of **909** hours to local commuters. Additional ITS devices such as dynamic message signs (DMS) and pavement speed sensors will be deployed upon activation of toll collection in the IH 30 HOV/Managed lanes. This equipment will further reduce congestion in the corridor by improving trip planning and driver expectancies.

*Enhancing Mobility and Regional Air Quality:* HOV/managed lanes are a vital component of this region's long-range transportation plan which will: 1) help address the area's current air quality nonattainment status; 2) reduce single-occupant vehicle travel by providing travel time and pricing incentives to high-occupancy vehicle and transit passengers; 3) make available high-speed reliable travel to all corridor users; 4) create opportunities to examine operation and pricing strategies for the region; and, 5) create revenue generation to pay for ongoing corridor operation and maintenance needs. While this type of improvement does add capacity, it promotes roadway use in a more efficient manner and is a more appropriate response to growing environmental and fiscal constraints in addressing transportation needs.

The IH 30 corridor is one of several Dallas-Fort Worth area corridors designated to include HOV/Managed Lanes. In 2006, the Texas Transportation Institute conducted a regional value pricing study that ranked the proposed HOV/managed lanes corridors in terms of priority for implementation, and the IH 30 corridor was determined to be the highest ranked corridor. In the following year, the IH 30 HOV/managed lanes was granted designation as a Test Corridor for the Value Pricing Pilot Program instituted by the United States (US) Department of Transportation. A new Park-and-Ride facility on the south side of IH 30 within TxDOT right-of-way, east of Belt Line Road in the City of Grand Prairie, is also provided with this project to further encourage the use of the HOV/managed lanes through transit, vanpools, and/or carpools.

These unique mobility opportunities, more efficient roadway use, and overall congestion reduction will generate positive effects on regional air quality. To calculate those benefits, performance measures such as vehicle hours of travel (VHT), average loaded speed, congestion delay, and traffic delay were analyzed between a build and no-build condition for the project. Fuel consumption and carbon dioxide (CO<sub>2</sub>) emissions were estimated from the reduction in vehicle hours of travel reduction between build and no-build scenarios based on the following assumptions:

- *Fuel Consumption:* 0.685 gallons/hour factor was utilized to calculate the fuel consumption from vehicle hours of travel (VHT).
- *CO<sub>2</sub> Emission:* 8,788 grams/gallon of gasoline emission factor was used to calculate the CO<sub>2</sub> emissions from fuel consumption.
- *Project Life:* 40 years is used as project life for all highway projects.
- *Global CO<sub>2</sub> Emission Benefits:* \$33/metric tons of CO<sub>2</sub> emissions was used to calculate the global CO<sub>2</sub> emission benefits.

Table 2 below displays the net and percentage change from build case to no-build case. Analyzing effects over the entire Dallas-Fort Worth Metropolitan Planning Area, the IH 30 HOV/Managed Lane Project reduces travel time by approximately **55 million hours**, CO<sub>2</sub> emissions by **0.4 million tons**, fuel usage by **38 million gallons**, and contains a CO<sub>2</sub> Global Benefit of **\$11 million** over its 40-year design life.

**Table 2. Year 2030 Air Quality Performance Data Comparison**

<b>Parameter</b>	<b>Build – No-Build</b>	<b>Percentage Change</b>
Vehicle Hours of Travel (hours)	-5,298.12	-0.084%
Speed (mph)	0.03	0.078%
Congested Delay (hours)	-3,028.75	-0.283%
Traffic Delay (hours)	-906.00	-0.151%
CO <sub>2</sub> Emission (tons/day)	-35.16	-0.084%
Fuel Consumed (gallons/day)	-3629.21	-0.084%

Fuel consumption and travel time reduction suggests that other criteria pollutants such as carbon monoxides (CO), volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), and particulate matters (PM) will also be reduced.

***Advancing Safety:*** In the IH 30 corridor between the Dallas/Tarrant County Line and Sylvan Avenue, there were 2,119 total crashes recorded between 2003 and 2008, including 17 fatalities. While this segment of IH 30 is not a designated Hazardous Material (HazMat) Route, data gathered for the 2003 – 2008 time period indicates, consequently, that two hazardous material spills occurred. According to the project bulletin “Managed Lane Ramp and Roadway Design Issues” published by Texas Transportation Institute, having an entrance or exit to/from an HOV facility without a dedicated ramp requires vehicles to weave across each of the general purpose lanes. This is the condition occurring at the present time. Direct access to the HOV/managed lanes, which will be accomplished via the two pairs of elevated wishbone access/egress ramps proposed with this project, eliminates the weaving maneuver and is estimated to reduce crash rates by 26 percent. The safety data indicates that the implementation of the IH 30 HOV/Managed Lanes Project in western Dallas County will result in 92 fewer crashes per year and **3,673 fewer crashes** over the 40-year design life of the project.

**Total Project Costs and Available Funding from Other Sources:** Table 3 below displays the estimated project costs and funding. Environmental approval has already been obtained for this project, so no additional funding for environmental review is required. No additional right-of-way or any significant utility relocation is required, so funds are also not requested for those elements. Monies have been previously identified for planning and engineering efforts with this project. The City of Grand Prairie has identified \$1,148,000 in local funds which have been allocated toward construction of the Park and Ride Facility and the Northeast 15<sup>th</sup> Street extension. This TIGER application is requesting **\$76,252,705** in

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funds to be directed fully toward construction of the IH 30 HOV/Managed Lanes project, which has a total estimated cost of \$77,400,705.

**Table 3. Total Project Costs and Available Funding from Other Sources**

Phase	Cost	Available Funding Amount	Funding Source	% Shares by Source	Costs Already Incurred?
Engineering	\$ 4,575,162	\$ 4,575,162	TxDOT – State Funds	100%	No
Environmental Review			TxDOT – State Funds	100%	Yes
Right-of-Way			Local Funds (City of Dallas, City of Grand Prairie, Dallas County)	100%	Yes
Utility Relocation			TxDOT – State Funds	100%	Yes
Construction	\$ 77,400,705	\$ 1,148,000	Local Funds (City of Grand Prairie)	~ 1.5%	No
			TIGER Request	~ 98.5%	No

**Project Schedule:** Table 4 below displays the proposed project schedule. The construction time for the project would be minimized because environmental clearance has been granted from the Federal Highway Administration (FHWA), no additional right-of-way acquisition would be required. A preliminary utility relocation study performed prior to environmental clearance of the project indicated that utility impacts would be minor and isolated, also allowing for more expedited construction. The pavement where the IH 30 HOV/managed lanes will be located is both available and well protected from traffic on the existing general purpose lanes. The available pavement width is sufficient enough to detour traffic (with the corridor’s current capacity) around potential staging areas for construction, equipment, and materials, including the locations where the elevated wishbone access/egress ramps will be built. Only minor outside shoulder widening would be required for space to build the Toll Declaration Gantry and approaches, and at locations where auxiliary lanes between the two elevated wishbone access/egress ramps pairs and successive upstream/downstream general purpose lane ramps will be provided (east of Belt Line Road and west of Westmoreland Road). The funds received to implement this project will be obligated by September 2011.

**Table 4. Project Schedule**

Phase	Estimated Start Date	Estimated Completion Date
Engineering	Spring 2009	Summer 2010
Construction	Fall 2010	Fall 2012

**Legislative Approvals Needed:** No additional legislative approvals are needed for this project. See *Supporting Documentation* (page 25) to view letters of support for the project from the following individuals and entities:

- Amadeo Saenz, Executive Director, Texas Department of Transportation
- Tom Hart, City Manager, City of Grand Prairie
- Congresswoman Kay Granger, United States House of Representatives – District 12

**State and Local Planning:**

**Local Planning:** This project is the result of a collaborative planning effort between the City of Dallas, City of Grand Prairie, Dallas County, Dallas Area Rapid Transit (DART), North Texas Tollway Authority (NTTA), Texas Department of Transportation (TxDOT) – Dallas District, and the North Central Texas Council of Governments (NCTCOG).

**TIP/STIP Status:** The IH 30 HOV/Managed Lanes Project, identified as Control Section Job (CSJ) #1068-04-147, is included in Appendix D of the *2008-2011 Transportation Improvement Program, Amended April 2009* (MPO Project ID Code 20195). Construction of the Park-and-Ride facility in the City of Grand Prairie, the eastbound frontage road between Belt Line Road and Northeast 15<sup>th</sup> Street, and the eastbound Belt Line Road entrance ramp relocation, which are identified together as CSJ #1068-04-142 (MPO Project ID Codes 11529, 11577, 11840, and 12005), is included in Chapter VII, page 112. Construction of the westbound Belt Line Road exit ramp relocation and the westbound frontage road east of Belt Line Road, identified together as CSJ #1068-04-145, is also listed in Chapter VII, page 112.

**Metropolitan Transportation Plan:** The project is consistent with the recommendations found in Mobility 2030: The Metropolitan Transportation Plan for the Dallas-Fort Worth Area, 2009 Amendment. The Metropolitan Transportation Plan identifies IH 30 in western Dallas County containing 8 to 10 general purpose lanes, 2 to 3 reversible HOV/managed lanes, and intermittent frontage roads between various cross streets. Because Dallas County is classified by the Environmental Protection Agency (EPA) in nonattainment for the pollutant ozone, transportation conformity applies. The project is included in a conforming Metropolitan Transportation Plan and the State Transportation Improvement Program.

**Statewide Transportation Plan:** This corridor was identified in the 2006 Texas Metropolitan Mobility Plan (TMMP) as a high priority project for the Dallas-Fort Worth Region. This project supports the major goals of the TMMP, including congestion relief, improved safety, air quality and quality of life, enhanced economic opportunities, and streamlined project delivery.

**Technical Feasibility:** Throughout much of the 1990s and 2000s, the entire IH 30 corridor between the Dallas/Tarrant County Line and Sylvan Avenue was widened from a 6-lane freeway to an 8/10-lane freeway. This widening was the result of a study concluded and approved in the 1980s to transform IH 30 from the aging Dallas-Fort Worth Turnpike, originally built in the 1950s, into a modern Interstate Highway corridor. As part of the project, a wide median was preserved for the future addition of a single, reversible, barrier-separated HOV lane. As reconstruction proceeded forward, additional planning both within the corridor and among connecting facilities, as well as recognition of new fiscal and environmental constraints throughout the Dallas-Fort Worth region, resulted in consensus for a revised project configuration. This configuration eliminated the single reversible HOV lane, and the typical roadway cross-section was instead comprised of four general purpose lanes in each direction and a two-lane reversible barrier-separated HOV/managed lanes facility (4-2R-4) in the median. The Texas Department of Transportation Dallas District prepared a Categorical Exclusion (CE) document for the Federal Highway Administration (FHWA) to approve the modification, and environmental clearance was obtained in December 2006. In 2007, the modified project was approved as part of FHWA's Value Pricing Pilot Program. The cross-section was also defined as the ultimate IH 30 recommendation in the region's long range transportation plan, Mobility 2030: The Metropolitan Transportation Plan for the Dallas-Fort Worth Area, 2009 Amendment.

It was evident during schematic development of the modified roadway cross-section that minimum design values for various elements of the project could not be attained with the pavement width being constructed. To meet minimum design values, the overall roadway would have to be widened by at least 16 feet. This would have incurred excessive additional costs including, but not limited to, additional pavement needs, reconstruction of new bridges, reconstruction of retaining walls, construction of additional retaining walls, and the acquisition of new right-of-way. TxDOT estimated that to fully construct



the 4-2R-4 cross-section in western Dallas County using minimum design values would exceed \$250 million, and the extra cost would result in a delay of at least 10 years to complete the necessary design and planning work, right-of-way acquisition, utility relocation, and ultimate construction. This realization prompted TxDOT, with concurrence by its regional partners, to consider using design exceptions. As TxDOT finalized its environmental documentation for the IH 30 HOV/Managed Lanes Project between the Dallas/Tarrant County Line and Sylvan Avenue, the agency prepared a total of seven Requests for Design Exception to be approved by FHWA. A Request for Design Exception is a formal document explaining the location, extent, and justification for designing a roadway that does not meet minimum design values. The seven Requests for Design Exception identify the following elements pertaining to the project identified in this TIGER application:

- 11-foot general purpose lanes
- 4-foot inside general purpose lane shoulders
- 11-foot reversible HOV/managed lanes
- Variable HOV/managed lanes shoulder widths at specific overpasses/underpasses and other constricted-width segments
- Width of slip ramps and shoulders at the Dallas/Tarrant County Line, west of Loop 12, and east of Sylvan Avenue
- Clearance of 15 feet 8 inches beneath the Fort Worth Avenue Bridge in the City of Dallas
- 2-foot outside shoulders for temporary widening of the existing Beckley Avenue and Trinity River Bridges to accommodate an additional travel lane in each direction between the HOV/managed lanes eastern project limit and the IH 35E interchange (also known as the Downtown Dallas "Mixmaster")

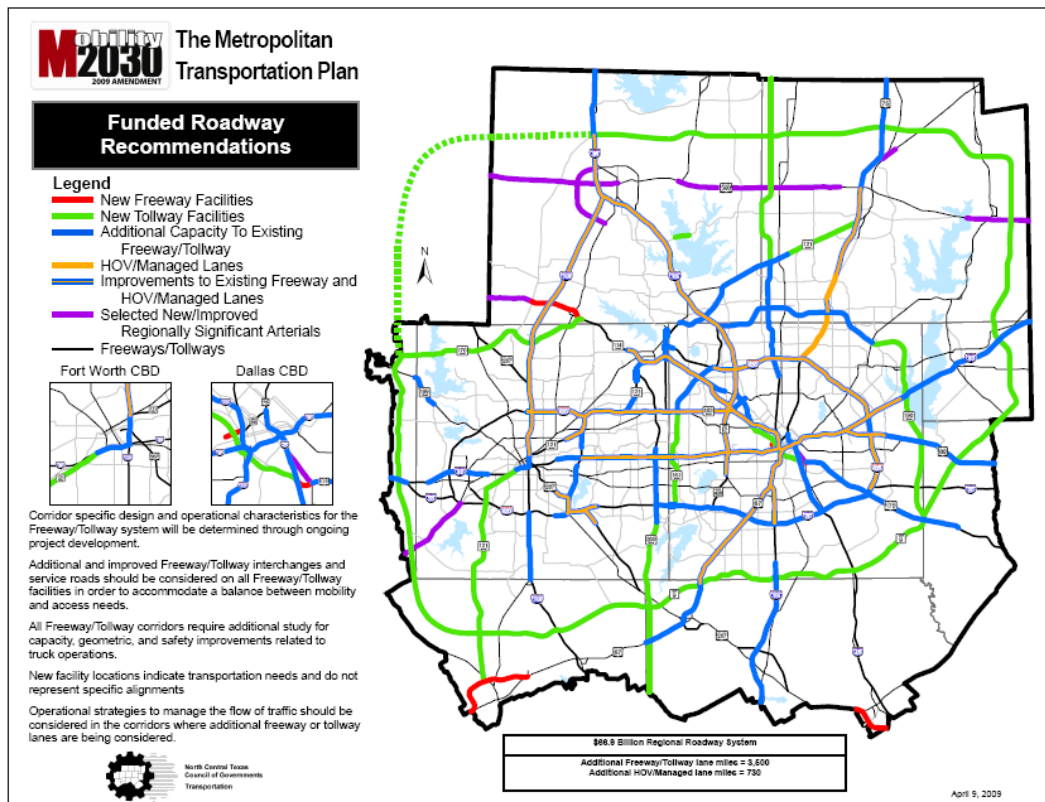
For each design exception, a summary and analysis of crash history over a 3-year period was conducted. TxDOT concluded that the requested design exceptions would not increase traffic crashes along the corridor compared to the existing facility. The overall geometric improvements were expected to improve the capacity and safety of the proposed roadway section. TxDOT also prepared descriptions of possible alternatives to the 4-2R-4 cross section and reasons why those alternatives were eliminated from further consideration. In every case, the recommended cross-section and its design exceptions accounted for significant cost and time savings in construction, and they were more complementary in transitions and connections to upstream/downstream projects along IH 30, as well as with connecting limited-access facilities such as State Highway (SH) 161, Loop 12, and IH 35E.

The most important aspect, however, in consideration of the design exceptions was the impact to consistency with long-range planning recommendations and the ability for the Dallas-Fort Worth region to meet air quality conformity requirements. The opening of an interim HOV-only facility on IH 30 by July 2007 was a Transportation Control Measure (TCM) commitment for the Environmental Protection Agency (EPA) as part of the Texas Ozone State Implementation Plan (SIP). The interim facility was planned in such a way that it would allow for a smooth, expedited, and cost-effective transition into an HOV/managed lanes facility upon receipt of additional funding. Continued consideration of alternatives other than the 4-2R-4 cross-section would have likely delayed the opening of the interim HOV-only facility, and the Dallas-Fort Worth region as a result would have been threatened with the loss of federal transportation funds. Any new alternative development may have also been identified as inconsistent with recommendations from the long range transportation plan, which could have levied additional sanctions on the region. As a result, each of the design exceptions were ultimately approved by FHWA, and the project has been incorporated as planned into the Value Pricing Pilot Program.

The awarding of funds through this TIGER application will allow for the evolution of the interim HOV-only facility into the ultimate 4-2R-4 configuration for the IH 30 HOV/managed lanes in western Dallas County. The funding will also enable construction of a long-awaited Park-and-Ride facility in the City of Grand Prairie which will not only encourage further utilization of the IH 30 HOV/managed lanes, but also improve accessibility, trip planning, local traffic management, and transit ridership for special events at venues within the Grand Prairie and Arlington Entertainment Districts. Implementation of this project will be a major step toward the development of a larger regional system of interconnected HOV/managed facilities, including direct HOV/Managed Lanes connections to/from the Dallas Central Business District

and the IH 35E Lower Stemmons Freeway corridor (Project Pegasus), exclusive direct connector ramp connections to/from the planned reversible HOV/managed lanes facility on Loop 12 (Loop 12/IH 35E Environmental Assessment), and the eventual westward extension of the IH 30 HOV/managed lanes to IH 820 on the east side of the City of Fort Worth. A map displaying the ultimate HOV/managed lanes regional system, as recommended in Mobility 2030: The Metropolitan Transportation Plan for the Dallas-Fort Worth Area, 2009 Amendment, is illustrated below in Figure 2.

**Figure 2. Mobility 2030 Plan – 2009 Amendment: Funded Roadway Recommendations**



**Financial Feasibility:** Construction of the IH 30 HOV/Managed Lanes Project is not currently funded. While the City of Dallas, City of Grand Prairie, DART, NTTA, TxDOT, and NCTCOG have spent a considerable amount of funds to develop the design and complete environmental studies, funding for construction has not been identified due to a transportation funding shortfall in Texas. No Category 2 funding is available for the TxDOT Dallas District until fiscal year 2015 (beginning September 1, 2014). No other Mobility Categories are available for TxDOT Dallas District funding.

The receipt of TIGER funds will complete funding requirements to fully implement this project. NCTCOG and TxDOT work together to implement projects through regional prioritization. One of the key components to combine implementation efforts is to look at the total cost of project delivery. This includes asset management techniques for the materials specified in design that will require less routine maintenance and will be easier to replace as life-cycle needs are addressed. The asset management program for TxDOT is a work in progress and is associated with the provided budgets on an annual basis.

In addition to the federal gas tax, the State of Texas collects a motor fuels tax of 20 cents per gallon, which raises approximately \$3 billion a year for the entire state. Three-quarters of the state gas tax helps fund new construction and maintenance of existing state and federal roadways such as IH 30, and the remaining one-quarter share is used to finance education.

NCTCOG currently manages federal, as well as state administered, grants that are in various stages of development, implementation, and closeout. In fiscal year 2008, NCTCOG facilitated expenditures of \$4.8 million from various multi-year grants including awards from the Department of Energy, Environmental Protection Agency, Federal Transit Administration, Federal Aviation Administration, U.S. Department of Housing and Urban Development, Department of Labor, and the Department of Defense. Also in fiscal year 2008, NCTCOG facilitated expenditures of \$113.7 million from various state administered grants including awards from the Texas Commission on Environmental Quality, Texas Department of Health, Texas State Energy Conservation Office, and TxDOT. The Transportation Department employs 18 fiscal and grant professionals who provide financial, legal and compliance support for projects funded from various grants

No adverse audit findings from standards used by states, local governments, and non-profit organizations expending federal awards (Circular A-133) have been found at this time. NCTCOG has not been required to comply with special "high risk" terms and conditions under agency regulations in the implementation of consistency and uniformity in the management of grants and cooperative agreements with state, local, and federally recognized Indian tribal governments (OMB Circular A-102).

**Certification of compliance with Subchapter IV of Chapter 31 of Title 40 (federal wage rate requirements) signed by applicant:** The original 1511 certification signed by Texas Governor Rick Perry for the ARRA projects is posted at the following website: [ftp://ftp.dot.state.tx.us/pub/txdot-info/stimulus/1511\\_certification\\_letter.pdf](ftp://ftp.dot.state.tx.us/pub/txdot-info/stimulus/1511_certification_letter.pdf). The attached listing of projects will be updated to include this project if a TIGER grant is awarded. Also, see *Supporting Documentation* (page 25) to view Certification of Compliance with Subchapter IV of Chapter 31 of Title 40 (federal wage rate requirements).

#### **Environmental Outcomes**

**NEPA Approval Date:** December 1, 2006

**Type of Environmental Documentation:** Categorical Exclusion (CE)

**Web link to final CE, ROD, or FONSI:** See *Supporting Documentation* (page 25).

**Web Links to Submitted Materials and/or Other Documents that Demonstrate Compliance with Other Federal, State, or Local Regulations:** See *Supporting Documentation* (page 25).

**Description:** This project is not anticipated to cause any significant negative impacts to the natural, social, or economic environments, primarily because the project does not require any additional right-of-way, displacements, relocations, or drainage easements. Community cohesion, quality of life, congestion, mobility, air quality, and safety will be substantially improved for the communities adjacent to the IH 30 corridor in western Dallas County upon implementation of this project. The project will also benefit commuters and the region by promoting a more efficient use of roadway capacity and additional trip choices along IH 30, which is the shortest regional highway route between the Central Business Districts of Dallas and Fort Worth. The project would provide increased economic vitality along the corridor through improved travel times and an increase in accessibility to numerous existing and future public facilities and services, as well as to major industrial activity centers and entertainment districts.

#### **Natural Environmental Effects:**

- a. *4(f) and 6(f) Properties:* City parks located within one-fourth mile of the IH 30 HOV/Managed Lanes Project include Turner Park and Lamar Park in the City of Grand Prairie, and Bishop Flores Park, Frances Rizo Park, Stevens Park Golf Course, Kessler Parkway, and the Trinity River Greenbelt in the City of Dallas. The proposed project would not require the use of publicly-owned land from a public park, recreation area, wildlife or waterfowl refuges, or any historic or archeological sites of local, state, or national significance. In addition, the project would not affect any areas of unique beauty or other lands of local, state, or national importance.

- b. *Lakes, Rivers, Streams, and Water Quality:* The proposed project area is located in the Trinity River Basin and its crossings include Mountain Creek and eight unnamed tributaries to the West Fork Trinity River. No other jurisdictional rivers, lakes, ponds, or streams are located within the project area. No wetlands or other special aquatic sites are located within the project area as well. None of the creeks or tributaries are navigable waterways; therefore, attainment of a navigational clearance under the General Bridge Act of 1946, Section 9 of the Rivers and Harbors Act of 1899 (administered by the U.S. Coast Guard), and Section 10 of the Rivers and Harbors Act of 1899 (administered by the U.S. Army Corps of Engineers) would not be required. The proposed project does not cross any water body designation in the 2002 Clean Water Act (CWA) Section 303(d) list of threatened or impaired water segments, but the project is within five miles upstream of a threatened or impaired water – Segment 0805 (Upper Trinity River). Segment 0805 is listed in the Draft *2004 Water Quality Inventory* as impaired due to bacteria, polychlorinated biphenyls (PCBs), and chlordane in fish tissue. No permanent water quality impacts are expected as a result of the proposed project. Existing surface drainage patterns would be maintained and no additional drainage easements would be required. The area's public water supply treatment facilities and water distribution systems would not be affected by the proposed project.
- c. *Floodplains:* The cities of Dallas and Grand Prairie, as well as Dallas County, are participants in the National Flood Insurance Program (NFIP). According to the Flood Insurance Rate Map (FIRM), panels 48113C0295 J, 48113C0315 J, 48113C0320 J, and 48113C0340 J (all dated August 23, 2001), the majority of the proposed improvements would occur within Zone X, which are determined to be outside of the 500-year floodplain. Portions of IH 30 in the study area occur within shaded portions of Zone X, which are areas determined to be inundated by a 500-year flood and other portions occur with Zone AE, which are special flood hazard areas inundated by a design-year flood, where base flood elevations have been determined. Areas with Zone AE occur where the IH 30 corridor crosses Mountain Creek and tributaries to the West Fork Trinity River. The hydraulic design of the proposed roadway improvements would be in accordance with the current TxDOT and Federal Highway Administration (FHWA) policy standards. The facility would permit the conveyance of a design-year flood, inundation of the roadway being acceptable, without causing substantial damage to the roadway or other property. The proposed project would not increase the base flood elevation to a level that would violate applicable floodplain regulations and ordinances.
- d. *Vegetation:* The IH 30 HOV/Managed Lanes Project lies within the Blackland Prairies Ecological Area of Texas as defined by the Texas Parks and Wildlife Department (TPWD). The proposed project site is within the maintained TxDOT right-of-way and consists of common grasses such as Johnson grass (*Sorghum halapense*) and Bermuda grass (*Cynodon dactylon*). No unusual vegetation features or special habitat features are identified within the project limits. Construction of this project will not require removal of any trees. According to field observation performed for the environmental documentation of this project, it was determined that no significant plant communities or native prairie remnants would be impacted. The proposed project would permanently impact approximately 0.04 acres of herbaceous vegetation consisting primarily of Bermuda grass. No compensatory mitigation is proposed due to the absence of any special or unusual habitat types in the project area, and in accordance with Executive Order (EO) 13112 on Invasive Species and the Executive Memorandum (EM) on Beneficial Landscaping, landscaping would be limited to seeding or replanting the right-of-way with TxDOT-approved seeding specifications.
- e. *Threatened and Endangered Species:* A review of the Natural Diversity Database (NDD) revealed that the Interior Least Tern (*Sterna antillarum athalassos*), if present, could be affected by proposed activities for the IH 30 HOV/Managed Lanes Project. Based on site reconnaissance conducted in 2004, 2005, and 2006 for purposes of environmental documentation, this project would have no effect on any other threatened or endangered species, their habitats, or designated critical habitats known to occur in Dallas County. The Migratory Bird Treaty Act (MBTA) states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part of, or in whole, without a federal permit issued in accordance with the MBTA's policies and regulations. Dallas County is within the migration route of the whooping crane and the arctic

peregrine falcon. Migrational patterns would not be affected by the proposed project. Prior to construction activities, bridges and overpasses would be surveyed for active nests to ensure preservation for species such as barn swallows, cliff swallows, and rough-winged swallows; therefore, the requirements of MBTA will be satisfied.

- f. *Air Quality:* The IH 30 HOV/Managed Lanes Project will reduce greenhouse gas emissions and improve regional air quality as a result of providing capacity for high-speed reliable travel to all users, as well as new pricing and travel time incentives for increased high-occupancy vehicle and transit use. As previously stated above under *Targeted Transportation Challenges* (page 6), the analysis of effects over the entire Dallas-Fort Worth Metropolitan Planning Area indicate that the IH 30 HOV/Managed Lane Project would reduce travel time by approximately 55 million hours, CO<sub>2</sub> emissions by 0.4 million tons, fuel usage by 38 million gallons, and contains a CO<sub>2</sub> Global Benefit of \$11 million over its 40-year design life. Fuel consumption and travel time reduction suggests that other criteria pollutants such as carbon monoxides (CO), volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), and particulate matters (PM) will also be reduced. The Federal Highway Administration (FHWA) has also determined that this project's air quality impacts cannot be linked with special concerns regarding Mobile Source Air Toxics (MSAT). Even after accounting for projected increases in vehicle miles of travel (VMT), FHWA predicts that additional Environmental Protection Agency (EPA) regulations for vehicle engines and fuels, combined with the proliferation of innovative roadway use strategies like the IH 30 HOV/managed lanes, will result in a 57 percent – 87 percent decline in MSAT emissions during the time period 2000 – 2020.

Social/Economic Environmental Effects:

- a. *Community Cohesion:* The proposed project would require no additional right-of-way and would not restrict access to existing residences or businesses. There would be no displacements or relocations. The proposed project would not affect, separate, or isolate any distinct neighborhoods, ethnic groups, or other specific groups. All possible contingencies would be enacted to minimize inconvenience to vehicles using the IH 30 corridor during the construction of this project. This project is consistent with local planning efforts, and therefore it is not anticipated that this project would substantially change area land use as it now exists or as planned for future development.
- b. *Quality of Life:* The Dallas-Fort Worth region has sustained a long period of strong economic growth because of three primary factors: a favorable business climate, attractive tax policies, and an abundance of available land. According to results of a cost-benefit model developed by NCTCOG staff, implementation of the IH 30 HOV/Managed Lanes Project should create a **net positive effect of \$32.1 million** annually for the economy, and generate **349 jobs** when completed. These jobs will be created by reducing congestion on a principal highway connection for commuters and freight traffic between Dallas and Fort Worth. During project implementation, the net benefit to the economy will be an influx of **\$60 million** and **326 jobs** over each of the two years anticipated for project construction. The 349 permanent jobs created by this project will be spread across a wide spectrum of businesses located along the IH 30 corridor, including several large industrial sites such as the Great Southwest Industrial District in the cities of Arlington and Grand Prairie, and Pinnacle Park in the City of Dallas. In addition, visitors to many of the large destination and special event centers located in the Grand Prairie and Arlington Entertainment Districts will benefit from the increased accessibility and reduced congestion. All of these quality of life benefits are further enhanced by the fact that the increased mobility and air quality improvements in the IH 30 corridor will be accomplished without any additional right-of-way or displacements. This ensures that neighborhoods and business locations directly adjacent to the corridor will enjoy all of the corridor benefits as those that will be realized throughout surrounding communities. Finally, numerous mitigation measures for noise impacts have already been conducted in the corridor as a result of previous IH 30 projects, and no additional noise walls will be required as a result of this project.
- c. *Congestion and Mobility:* The HOV/managed lanes proposed for the IH 30 corridor provide an opportunity to maximize existing pavement so that additional capacity may be added to the peak flow

of traffic. The extra capacity would accommodate projected travel demands through the year 2030, sufficiently improve overall level of service, and result in measurable daily savings of congestion delay throughout the regional roadway network, all without requirements for new right-of-way, displacements, drainage easements, or any significant changes to the existing roadway alignment. As previously stated above under *Targeted Transportation Challenges – Relieving Congestion* (page 5), construction of the IH 30 HOV/Managed Lanes Project will produce a daily congestion delay savings of 3,029 hours for local commuters compared to the no-build condition. Over 900 hours of non-recurring congestion will also be reduced throughout the region as a result of deployment of a comprehensive Intelligent Transportation System (ITS) package in the I.H. 30 corridor, as well as through use of additional devices upon activation of value pricing activities.

- d. **Safety:** Implementation of this project improves speed and reliability, not just for the HOV/managed lanes, but for the IH 30 corridor as a whole. Direct access to the HOV/managed lanes, which will be accomplished via the two pairs of elevated wishbone access/egress ramps proposed with this project, eliminates additional weaving on the general purpose lanes and is estimated to reduce crash rates by 26 percent. As previously stated above under *Targeted Transportation Challenges – Advancing Safety* (page 6), safety data indicates that implementation of the IH 30 HOV/Managed Lanes Project in western Dallas County will result in 92 fewer crashes per year and 3,673 fewer crashes over the assumed 40-year design life of the project compared to the no-build condition.

**Primary Criteria:**

**1. Long Term Outcomes**

- a. **State of Good Repair:** IH 30 in western Dallas County has been in the process of reconstruction over the past decade or more as funding has become available. Most recently the final component of the corridor, the new IH 30 bridges over Loop 12, was completed for full utilization. This action permitted the full opening of the IH 30 interim HOV-only facility between the Dallas/Tarrant County Line and Sylvan Avenue. By having recently replaced many of the existing features and by updating the facility to meet current design and safety standards, this will result in a minimum level of maintenance expense for several decades. The project design and bridges are based on a 50-year life cycle, and the pavement is based on a 30-year design.

This improved condition is reflected in the Texas Department of Transportation's (TxDOT) Pavement Management Information System (PMIS) report for IH 30 for the current year. The report includes scores for distress, ride, and condition. The roadway condition scores for the western Dallas County segment fall generally between 100 and the mid 80s in most of the sections. There are a few spot locations where the scores are below those levels, but none of a consistent and sustained length. TxDOT's goal is to maintain a PMIS condition score of 70 or better.

The IH 30 corridor is experiencing sustained economic growth and revitalization, which is likely a result of the recent reconstruction efforts. Without implementation of the IH 30 HOV/Managed Lanes Project, that growth may begin to slow in an area of the Dallas-Fort Worth region that has historically lagged behind other locations in terms of economic development activities. Improved infrastructure can continue to spur development, as well as lessen maintenance (life-cycle) costs.

State and federal roadways in Texas are maintained through a combination of state and federal funding sources. In addition to the federal gas tax, the State of Texas collects a motor fuels tax of 20 cents per gallon, which raises approximately \$3 billion a year for the entire state. Three-quarters of the state gas tax helps fund new construction and maintenance of existing state and federal highways such as IH 30. The remaining funds are used to finance education.

TxDOT has a fully implemented asset management plan for existing roads and bridges on the state system, which will include this project's capacity improvements upon completion. As part of

its asset management effort, TxDOT conducts an annual assessment and inspection program of its major assets, summarizes the findings and makes recommendations for maintenance efforts. TxDOT uses an inventory and condition assessment process to report condition ratings and replacement costs associated with its major assets. This assessment provides a basis for the prediction of costs needed to maintain assets and manage funding needs. Typical activities will include striping, pavement maintenance, pavement rehabilitation, landscaping rehabilitation, coated surface remediation, and bridge related maintenance activities such as bearing replacement, decking repairs and skid resistance texturing, and seal integrity. TxDOT's assets are maintained with a view of the "total" cost or "life" cost of the assets. Maintenance and rehabilitation is planned to prevent significant deterioration. This approach saves money over the life of the assets and provides the best experience for the roadway user. Industry practices are followed to assess the condition of the assets in order to plan and manage the maintenance activities.

- b. Economic Competitiveness:** The Dallas-Fort Worth region is a major economic, social, and political center of both Texas and the United States. Dallas-Fort Worth is the largest regional economy in Texas, comprising approximately 25 percent of the state's economy, 25 percent of the population, 31 percent of population growth, 34 percent of employment growth, 29 percent of employment, and 25 percent of retail sales. The area of the region is approximately 12,800 square miles, which is larger than nine states, and the population of the region is over 6.4 million, which is larger than 35 states. Based on 2008 population estimates, the Dallas-Fort Worth metropolitan area is the fourth most populous in the nation and one of the fastest-growing large urban areas in the nation. By the year 2030, the region is expected to attract over three million new residents and over two million new jobs.

The Dallas-Fort Worth region has sustained a long period of economic growth because of three primary factors: a favorable business climate, attractive tax policies, and an abundance of available land. The current economic downturn has slowed the rate of growth over the near term, but is expected to quickly return to previous levels of growth as the economy recovers. Historically, this has been the case with other downturns in the economy.

As stated previously above under *Environmental Outcomes – Quality of Life* (page 13), implementation of the IH 30 HOV/Managed Lanes Project should create a net positive effect of \$32.1 million annually for the economy, and generate 349 jobs when completed. These jobs will be created by reducing congestion on a principal highway connection for commuters and freight traffic between Dallas and Fort Worth. During project implementation, the net benefit to the economy will be an influx of \$60 million and 326 jobs over each of the two years anticipated for project construction. This project will have a long-term return on investment of 499 percent and generate 125 percent in taxes as the project cost (assuming a 25 percent capture rate) for the overall economy.

The 349 permanent jobs created by this project will be spread across a wide spectrum of businesses located along the IH 30 corridor, including several large industrial sites such as the Great Southwest Industrial District in the cities of Arlington and Grand Prairie, and Pinnacle Park in the City of Dallas. In addition, many of the large destination and special event centers located in the Grand Prairie and Arlington Entertainment Districts will realize improved economic vitality as well. The 326 jobs created during construction will be comprised primarily of construction workers and their vendors, but their incomes and spending will support the creation of ancillary retail and service jobs along the IH 30 corridor.

Toll revenue from the HOV/managed lanes will create additional value beyond the scope of the cost-benefit model described above. Users who value a faster commute more than the price of the toll will have an ability to move their monies toward higher value uses. This distinct ability for HOV/managed lanes to sort traffic by lane use and by value of time is a major source of appeal for this type of roadway improvement. The toll revenues also provide a separate funding stream

to pay for long-term rehabilitation and maintenance costs in the corridor. This allows for a wider distribution of limited general maintenance funds across a region or state so that more roads can be maintained in a shorter period of time, and with a higher quality, compared to other locations.

- c. Livability:** The IH 30 HOV/Managed Lanes Project promotes the livability of adjacent communities by placing priority on neighborhood cohesion, social interaction, safety, economic prosperity, and general quality of life. As previously stated above under *Environmental Outcomes – Community Cohesion* (page 13), the proposed project would require no additional right-of-way and would not restrict access to existing residences or businesses. There would be no displacements or relocations. The proposed project would not affect, separate, or isolate any distinct neighborhoods, ethnic groups, or other specific groups. Since this project is consistent with numerous local planning efforts, it is not anticipated that this project would substantially change area land use as it now exists or as planned for future development. The IH 30 HOV/Managed Lanes Project creates a unique opportunity to implement an innovative, cost-efficient, and environmentally-conscious means for addressing urban transportation needs.

In preparation of the environmental documentation for the IH 30 HOV/Managed Lanes Project, an investigation with respect to Executive Order (EO) 12898 entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” was conducted. The EO mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs on minority and low-income populations. “Disproportionally high and adverse effects” are defined as adverse effects that: 1) are predominantly borne by a minority population and/or a low-income population; or 2) would be suffered by the minor population and/or low-income population and would be appreciably more severe or greater in magnitude than the adverse effects suffered by non-minority and/or non-low-income populations.

The 2000 U.S. Census Block Group data indicated that residents living adjacent to, or near the IH 30 HOV/Managed Lanes Project were predominantly White Non-Hispanic (43.2 percent) and Hispanic or Latino (42.3 percent), and that an equal or lesser proportion of other minority residents lived in the study area than in the cities of Dallas and Grand Prairie, or in Dallas County. As displayed in Table 5, a proportionally higher percentage of the populations in the Census Block Groups encompassing the project are Hispanic or Latino compared to the cities of Dallas and Grand Prairie, or in Dallas County. In addition, the percent poverty level in the project area represents a higher percentage of total population than in the cities of Dallas and Grand Prairie, or in Dallas County. However, there would be no disproportionately high or adverse effects to either minority or low-income populations in the project area because although the HOV/managed lanes would contain a tolling element, the existing general purpose lanes (for which extra capacity would also be added) would not be tolled. Therefore, the requirements of EO 12898 on Environmental Justice appear to be satisfied.

**Table 5. Year 2000 Population by Race, Ethnicity, and Poverty**

Location	Population	White Non-Hispanic	Black or African-American	Hispanic or Latino	Other**	Poverty (1999)
<b>Study Area (Block Groups)*</b>	33,274	43.2%	10.3%	42.3%	4.2%	12.7%
<b>Grand Prairie</b>	127,427	47.2%	13.3%	33.0%	6.5%	8.7%
<b>Dallas</b>	1,188,580	34.6%	25.6%	25.6%	4.2%	14.9%
<b>Dallas County</b>	2,218,899	44.3%	20.1%	29.9%	5.7%	10.6%

Source: U.S. Census Bureau

\* 2000 Census Block Groups (BG) Data include Dallas County: Census Tract (CT) 20, BG 1; CT 42.01, BG 1; CT 43, BGs 1 and 3; CT 44, BGs 1, 2, and 3; CT 69, BG 1; CT 104, BG 2; CT 105, BG 4; CT 106.02, BGs 1, 2, and 3; CT 107.1, BG 1; CT 154.01, BGs 1 and 4; CT 154.01, BGs 5 and 6; CT 154.03, BGs 1 and 2; CT 155, BGs 1 and 2; CT 156, BG 1; CT 157, BG 1; CT 158, BGs 1 and 2.

\*\* “Other” includes American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander; Some other race; and Population of two or more races.



Despite the findings presented in the environmental documentation, it was imperative upon review of guidance for preparation of this TIGER application to examine livability effects of the IH 30 HOV/Managed Lanes Project over a wider area, specifically, at radii of 2 miles and 5 miles from the project limits. A review of the 2000 U.S. Census data identified that the median income within the two-mile radius of the project area was \$33,391, compared to the national average at \$41,994. The poverty rate within a five-mile radius of the project area was 18.4 percent compared to the regional average at 8.1 percent. Based on these figures, areas within a two-mile radius of the IH 30 HOV/Managed Lane Project within the City of Dallas can be classified as economically distressed areas (by definition in 42 USC 3161). Further evidence of this classification can be found in the fact that female-headed households comprise 11.8 percent of the two-mile radius population, and 6.8 percent of the population consists of disabled persons. Therefore, the need to implement this project, in order to secure the wide-ranging benefits such as substantial congestion relief, enhanced mobility options, improved air quality, and increased safety, is even more vital.

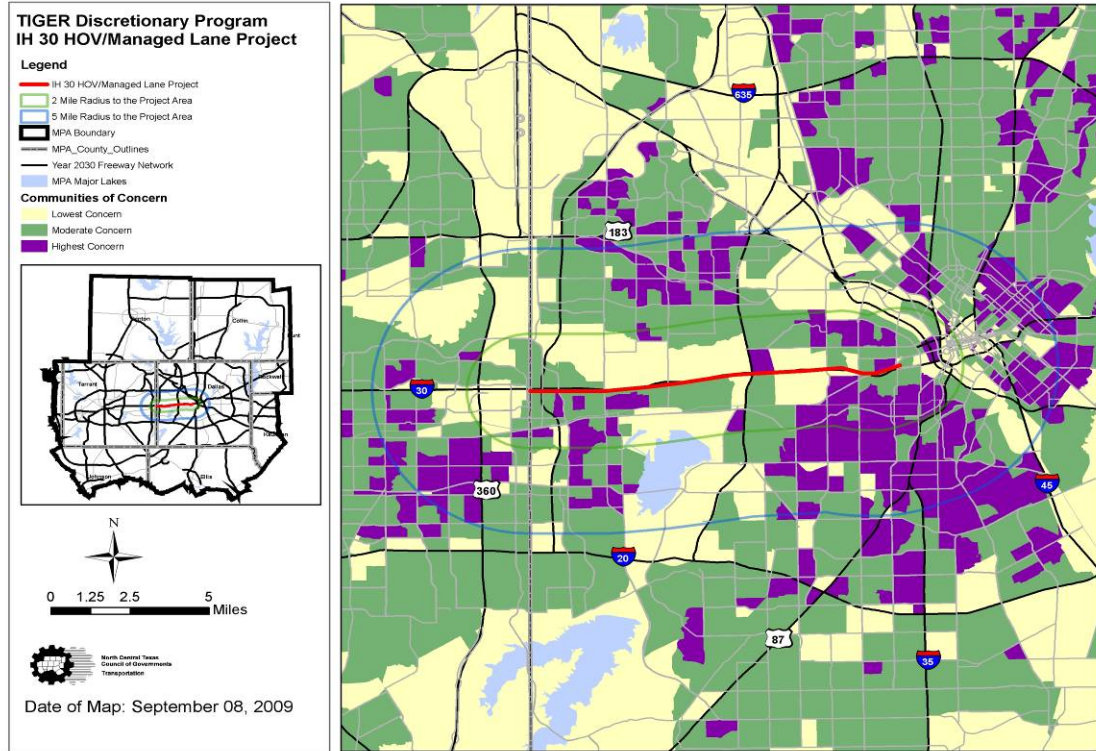
The IH 30 HOV/Managed Lane Project will be a significant component in both attracting and supporting new investment, expansion, and private sector production in this historically disadvantaged area of Dallas County. This conclusion can be supported by the official 2030 demographic forecasts prepared by the North Central Texas Council of Governments, which take into account local planning efforts and goals, trends in private sector activities and investments, and the location of developable (or redevelopable) land areas. According to NCTCOG's 2030 demographic estimates, the five-mile radius of the project area includes a population of 362,298 persons, 132,017 households, and 415,774 jobs in 2010. Projections indicate that the five-mile project area radius will increase to a population of 804,334 persons, 300,195 households, and 952,017 jobs by 2030. The population, employment, and household estimates for the two- and five-mile radius are displayed below in Table 6.

**Table 6. Year 2030 Demographic Forecasts – IH 30 HOV/Managed Lanes Project**

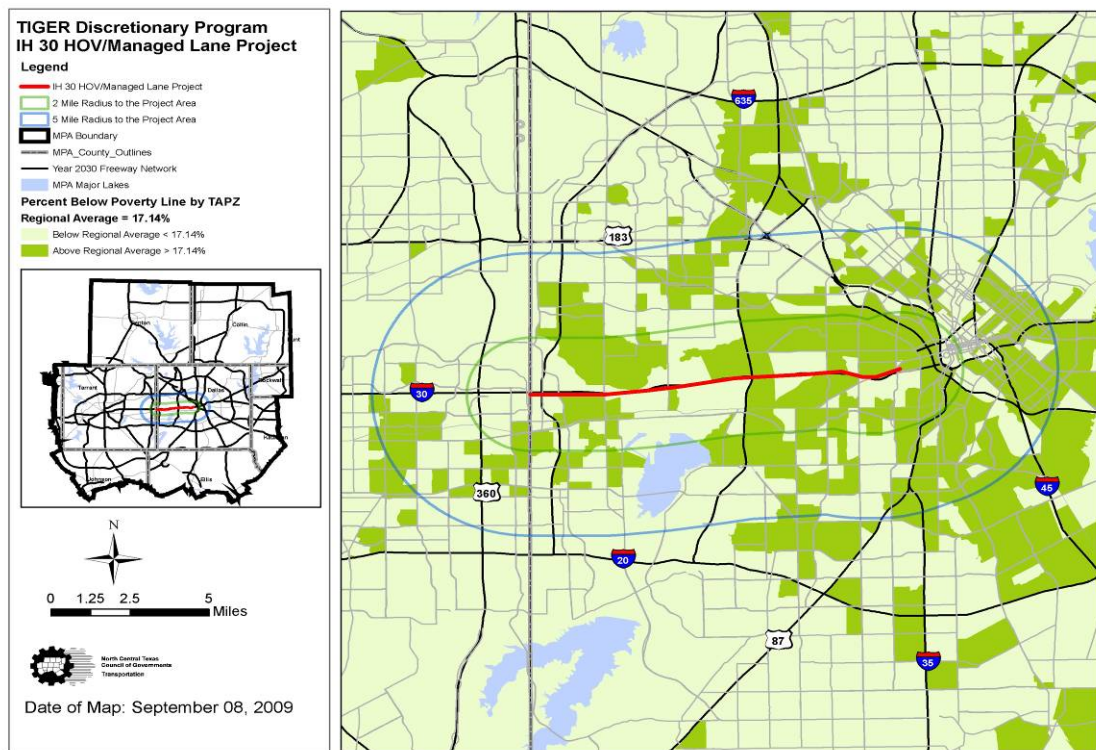
	2-Mile Radius				5-Mile Radius			
	2000	2010	2020	2030	2000	2010	2020	2030
<b>Population</b>	146,463	157,024	158,871	179,325	653,142	701,411	719,371	804,334
<b>Households</b>	46,243	50,349	51,445	58,655	234,436	255,395	263,959	300,195
<b>Employment</b>	161,337	183,095	190,275	213,612	751,063	833,704	861,646	952,017
<b>Basic</b>	72,197	81,936	85,126	94,635	247,678	275,122	284,154	312,859
<b>Retail</b>	24,417	27,645	28,599	30,797	117,419	134,210	139,860	155,945
<b>Service</b>	64,724	73,512	76,540	88,177	385,968	424,378	437,625	483,203

Figures 3 – 7 below provide additional visual representations of the spatial orientation of environmental justice areas, populations below the regional poverty rate, unemployed male and female populations, and major employers along the IH 30 corridor in western Dallas County.

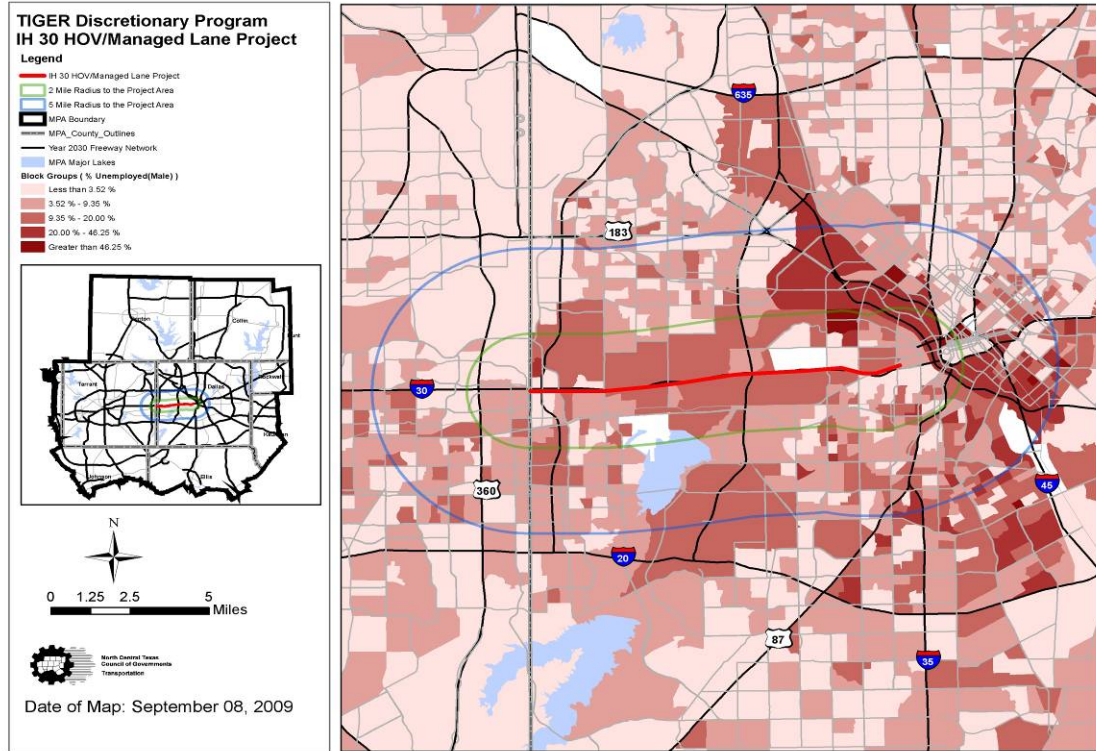
**Figure 3. Environmental Justice Areas**



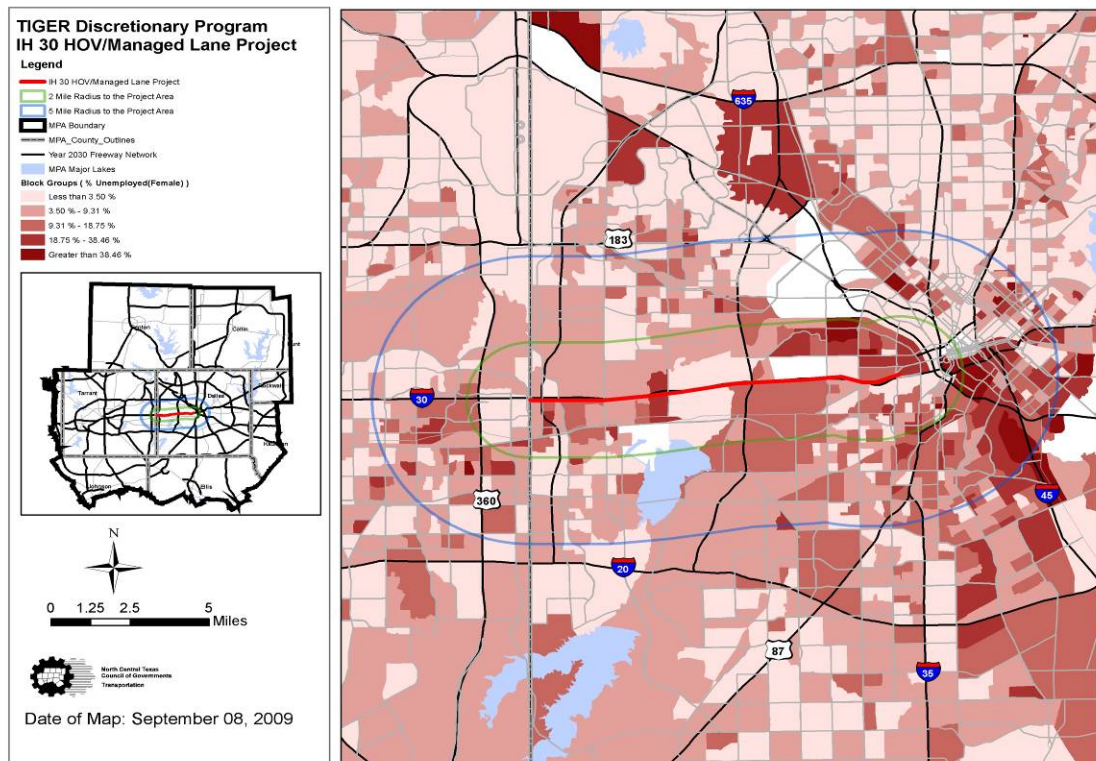
**Figure 4. Year 2000 – Poverty Areas**



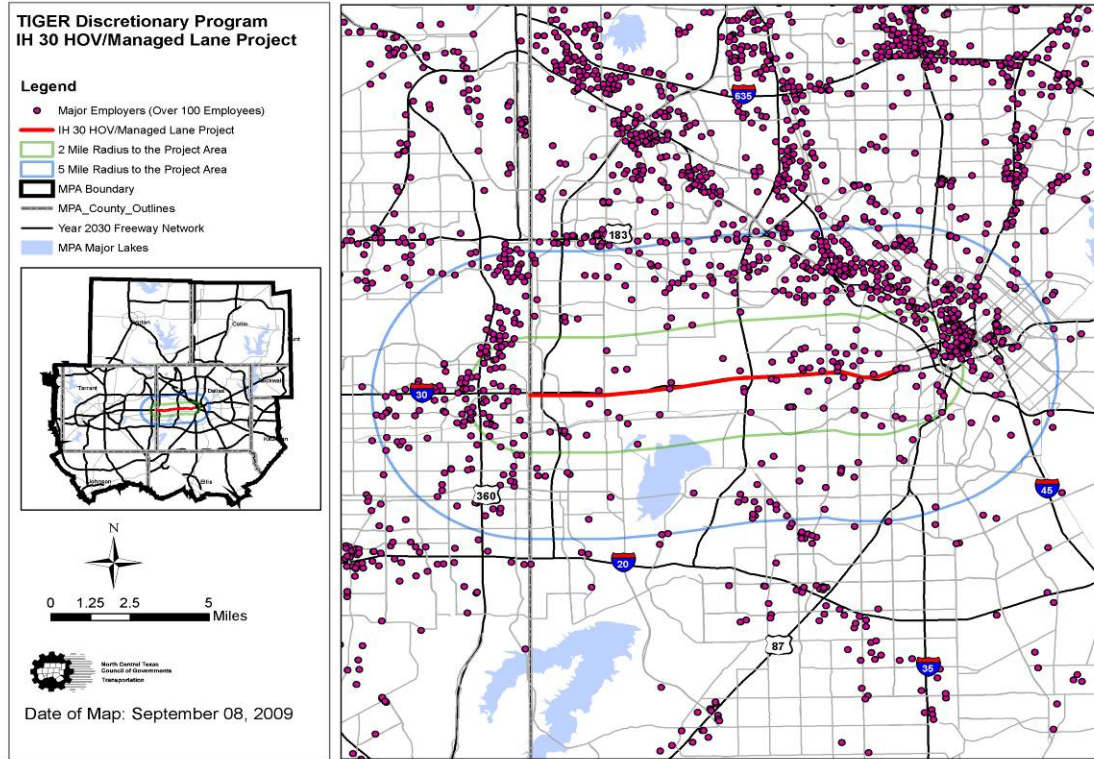
**Figure 5. Year 2000 – Male Unemployment Rates**



**Figure 6. Year 2000 – Female Unemployment Rates**



**Figure 7. Location of Major Employers**



It seems conceivable that with a large concentration of employment sources located in close proximity to the IH 30 corridor, a marked improvement in congestion and mobility options, particularly with transit, can provide new connections for economically distressed populations to job opportunities, education, services, and recreation, thus dramatically improving quality of life. IH 30 has and will continue to be the shortest route between the Central Business Districts of Dallas and Fort Worth, and with access to various intermediate employment centers, large industrial sites, and numerous entertainment venues, improvements to the corridor would generate wide-ranging livability benefits for both the surrounding communities and the region at-large.

- d. **Sustainability:** The IH 30 HOV/Managed Lanes Project will improve energy efficiency, reduce dependence on oil, and reduce greenhouse gas emissions as a result of providing capacity for high-speed reliable travel to all users, as well as new pricing and travel time incentives for increased high-occupancy vehicle and transit use. As previously stated above under *Targeted Transportation Challenges – Enhancing Mobility and Regional Air Quality* (page 6), the analysis of effects over the entire Dallas-Fort Worth Metropolitan Planning Area indicate that the IH 30 HOV/Managed Lane Project would reduce travel time by approximately 55 million hours, CO<sub>2</sub> emissions by 0.4 million tons, fuel usage by 38 million gallons, and contains a CO<sub>2</sub> Global Benefit of \$11 million over its 40-year design life. Fuel consumption and travel time reduction suggests that other criteria pollutants such as carbon monoxides (CO), volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), and particulate matters (PM) will also be reduced. These are substantial sustainability effects realized primarily through maximizing the use of existing pavement, as well as providing congestion and pricing incentives that would generate more efficient trip planning in the IH 30 corridor.
- e. **Safety:** As previously stated above under *Targeted Transportation Challenges – Advancing Safety* (page 6), there were 2,119 total crashes on IH 30 in western Dallas County during the

2003 – 2008 time period, including 17 fatalities. The current entry and exit points to/from the interim IH 30 HOV facility requires vehicles to weave across the general purpose lanes, operations which are known contributors to safety degradation. Direct access to the proposed HOV/managed lanes, which will be accomplished via the two pairs of elevated wishbone access/egress ramps associated with this project, eliminates the weaving maneuver and is estimated to reduce crash rates by 26 percent. The safety data indicates that the implementation of the IH 30 HOV/Managed Lanes Project in western Dallas County will result in 92 fewer crashes per year and 3,673 fewer crashes over the 40-year design life of the project.

It is also estimated that extra capacity provided by the HOV/managed lanes, as well as the additional general purpose lane in each direction between the Dallas/Tarrant County Line and Loop 12, will also eliminate vehicle collisions as a result of substantial congestion relief. High congestion levels leading to frequent stop-and-go conditions are known to be a common cause for many accident types.

- 2. Job Creation and Economic Stimulus:** As previously stated above under *Long Term Outcomes – Economic Competitiveness* (page 15), the IH 30 HOV/Managed Lanes Project is expected to create 349 permanent jobs throughout the corridor by relieving congestion, enhancing mobility options, and increasing accessibility. Large employment centers on either end of the project will be more accessible to people living on the other end. The reduced congestion will also cut costs to freight and industrial uses along the corridor by allowing more efficient movement of goods in/out of areas like the 77 million square foot Great Southwest Industrial Park. There will likely be additional employment beyond the 349 permanent jobs that move to Great Southwest Industrial Parks, other business parks, and/or office building along the corridor given their abilities to absorb significant expansion

Construction of the IH 30 Managed Lanes Project will preserve jobs and increase hours worked within construction and related services that have seen a softening in demand since the collapse of the real estate bubble. The project is predicted to sustain 326 jobs during construction. After construction is complete, lower levels of congestion will increase demand for housing and improve access to jobs in the cities of Arlington, Grand Prairie, and west Dallas. In addition, there is already over 100 million square feet of office and warehouse space between Great Southwest Industrial District, Pinnacle Park, LaReunion Industrial Park, and several others that will realize real benefits to their bottom lines as reduction in congestion may evolve cost savings into additional job opportunities.

TxDOT will be the implementing agency for the IH 30 HOV/Managed Lanes Project. All TxDOT projects that use federal money must include the following federal special provisions in all construction contracts.

- Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity, Special Provision 000-004. The goals for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade on all construction work in the covered area are as follows: there is a reference to a table for the minority goal and there is a percentage indicated for the female participation in each trade. These goals are applicable to all of the contractor's construction work to be in compliance with Equal Employment Opportunity guidelines.
- Disadvantaged Business Enterprise (DBE) in Federal-Aid Construction, Special Provision 000-461. All federal-aid projects are subject to a DBE goal. To become a certified DBE, a construction-bidding company must meet specific eligibility requirements.
- FHWA 1273, which contains several federal requirements for predetermined minimum wages, apprentice, and training programs, etc.

Additionally, TxDOT has a DBE program for all construction projects because the DBE provides a level playing field for small minority-and women-owned companies wanting to do business with TxDOT and other agencies receiving federal funds from the U.S. Department of Transportation (US DOT). Similarly, TxDOT also enacts the [Historically Underutilized Business \(HUB\) Program](#) on all

construction projects because it equally promotes full and equal procurement opportunities for small minority- and women-owned businesses. Companies interested in doing business with the state are encouraged to become HUB certified. Also, TxDOT utilizes the Texas Unified Certification Program; a certification process for the federal DBE Programs in Texas. A business' DBE certification is valid at any Texas entity that receives US DOT funds and has a DBE Program.

TxDOT participates in numerous activities to provide opportunities for small, disadvantaged, veteran owned, and disabled businesses.

- The TxDOT Business Outreach and Program Services branch conducts briefing conferences around the state for small, minority- and women-owned businesses providing contract opportunities and information on how to do business with TxDOT and the state. The briefings include general industry sessions and specific information on how to do business in the construction, goods and services, information technology, and professional engineering service industries.
- Learning, Information, Networking, Collaboration Mentor-Protégé Program: In this program, TxDOT mentors small and minority-owned businesses interested in doing business with TxDOT. The program focuses on construction, goods and services, information technology and professional services. The program goal is increasing business opportunities and the number of small and minority businesses bidding and performing on TxDOT contracts.
- [Small Business LINC Mentor-Protégé Application](#): The Technical Assistance Program provides free business development and technical industry training to DBEs in the highway construction industry to enhance the skills necessary to bid and perform on TxDOT contracts.
- One-on-one Business Appointment Program: TxDOT coordinates and arranges appointments between businesses interested in working with TxDOT and the appropriate agency purchasers and/or contract management employees.
- [Appointments with TxDOT Purchasers](#): DBE/HUB/SBE Industry Liaison Meetings provide a vital two-way communication link between the DBE/HUB/SBE community and TxDOT. These quarterly meetings provide an opportunity for the small and minority businesses development community to provide input and recommendations to TxDOT DBE/HUB/SBE Programs.
- Economic Opportunity Forums are held in different cities throughout the state and seek to attract businesses interested in finding contracting and procurement opportunities. Business Outreach and Program Services sponsors and attends many of these functions to provide information on TxDOT contracting and procurement opportunities.
- Texas Business Opportunity Development Program works to increase minority business participation in the highway construction industry.
- TxDOT Specialized Workshops provide an opportunity for small and minority-owned businesses to receive training on various business development and technical industry topics including bonding, construction management, developing a web site and/or a business plan, construction safety training and certification, and business financial management.

TxDOT will construct, operate, and maintain the project. TxDOT has a strong record of labor practice, federal labor compliance, and implementation of best practices with regards to national civil rights and equal opportunity laws. All TxDOT projects that involve federal money must include the previously discussed federal special provisions.

The construction of TxDOT roadway projects utilizes a bidding system through which a contractor is selected. Part of the contractor's responsibility is securing and utilizing specific manufactured goods and supplies per TxDOT specifications. The resulting suppliers selected by the contractor are typically dominated by basic roadway manufacturers and suppliers (i.e., concrete, steel, asphalt). Follow on indirect jobs can be expected at non-project site locations such as, but not limited to, quarries, concrete plants, lumber yards, service and supply shops, and eateries patronized by the workers.

To complete the project design and right-of-way acquisition, creation of private sector jobs for engineers, engineering technicians, surveyors, clerical, and management will occur when the TIGER grant is received for the project. Subsequently, the majority of jobs will be created when the project goes to construction in Fall 2010.

As previously stated above under *Long Term Outcomes – Livability* (page 17), the project is located in an economically distressed area. The populations most likely to benefit from this project during and following construction are economically distressed. During construction, existing local stores in the area would benefit from the patronage of the project's construction workers who have minimal time, if any, to drive to other similar stores, for the same products and services that might exist beyond the project site. In the long-term, this project is envisioned to help create additional retail and commercial establishments within the IH 30 corridor such as grocery, retail, and supply outlets, and food service industry stores, similar to the ones created in the Pinnacle Park area as a result of the opening of the IH 30/Cockrell Hill Road interchange in 2000.

**Secondary Criteria:**

- 1. Innovation:** Intelligent Transportation System (ITS) devices are currently deployed along the IH 30 corridor in western Dallas County. The type of traffic monitoring technology includes closed-circuit television cameras, vehicle detection devices, and dynamic message signs. Traffic monitoring technologies detect incidents in a timely manner to gain quicker responses from transportation and enforcement officials. The speed at which an incident is detected affects the amount of time in which it can be cleared and the amount of disruption the incident will cause to the remainder of the traffic. In addition, this type of equipment can help mitigate traffic while this corridor is under construction and provide information to the travelers.

The IH 30 HOV/Managed Lanes Project is located in three jurisdictions, all of which actively participate in the Freeway Incident Management (FIM) Training Program. The project area is also included in the Mobility Assistance Patrol (MAP) Program coverage area. Additionally there are 29 large employers (greater than 100 employees) located within the limits of this project area, one of which has reported an active Employee Trip Reduction program and is registered on the Try Parking It Web site.

The goal of the FIM training course is to initiate a common, coordinated response to traffic incidents that will build partnerships, enhance safety for emergency personnel, reduce upstream traffic accidents, improve the efficiency of the transportation system, and improve air quality in the Dallas-Fort Worth region. An essential element of the region's FIM program is the MAP Program, which provides assistance to motorists by helping them to move disabled vehicles from the main lanes of regional highway/freeways facilities and ultimately getting the vehicles operating or off the facility completely. The assistance is provided free of charge to the motorist and includes services like assisting with flat tires, stalled vehicles, and minor accidents. The MAP coverage is focused on congested roadway systems.

The goal of the Employer Trip Reduction Program is to plan and implement trip reduction and transportation demand management strategies such as subsidized transit pass programs; walking, bicycling, ridesharing programs; alternative work schedule arrangements; telecommuting programs; parking management; and other transportation incentive programs. The regional Try Parking It Web site is a commuter tracking application used in conjunction with the Employer Trip Reduction Program.

A more fundamentally innovative quality of the IH 30 HOV/Managed Lanes Project will come as a result of the implementation of Value Pricing. With limited space to build new roads, as well as numerous fiscal constraints of federal and state government investment to fund new road construction or add new capacity to the existing road infrastructure, this project accompanies a national trend to look for alternative means for addressing transportation needs, and to use roads in a

more efficient manner. As previously stated above under *Targeted Transportation Challenges – Enhancing Mobility and Regional Air Quality* (page 5), the IH 30 HOV/Managed Lanes Project was granted designation in 2007 as a Test Corridor for the Value Pricing Pilot Program instituted by the United States Department of Transportation (US DOT). Value Pricing is defined as a way to control congestion on a roadway by charging users a fee that varies depending on the level of congestion. In most cases, the objective is to keep the speed in a corridor above a certain level or not to exceed a predetermined traffic volume. As a result, value pricing better maximizes roadway use by incentivizing users to shift their trips to off-peak times, carpool, shift modes, or look for alternative routes. Through the US DOT's Value Pricing Pilot Program, the corridor will serve as a "test bed" to examine the efficacy of various operational strategies. The experience and knowledge gained from this project will become extremely useful for many future congestion pricing projects that will be deployed in the near future throughout the Dallas-Fort Worth region, the State of Texas, and throughout the nation. In addition, tolls collected in the IH 30 HOV/managed lanes generate a revenue stream to pay for ongoing rehabilitation and maintenance in the corridor, allowing for general maintenance funds from the state to be distributed over a wider area and serve a greater number of facilities over time.

**2. Partnership** – The following items detail collaboration among a broad range of participants and/or integration of transportation with other public service efforts regarding the IH 30 HOV/Managed Lanes Project.

**a. Jurisdictional and Stakeholder Collaboration:** The public consensus for the IH 30 HOV/Managed Lanes Project was achieved through the environmental documentation process that was completed in December 2006. While the process was led by the Texas Department of Transportation Dallas District, cooperation and input was incorporated by the North Central Texas Council of Governments, North Texas Tollway Authority, Dallas Area Rapid Transit, and the cities of Dallas and Grand Prairie. The residents and neighborhood leaders in this project area have been very active in community development and revitalization, as referenced especially by the success of Pinnacle Park, made possible by the achievement to add an IH 30 interchange at Cockrell Hill Road.

This project has and will continue to have strong support from elected officials, the cities of Dallas and Grand Prairie, and the community at large. Implementation of the IH 30 HOV/Managed Lanes Project can serve the city and community redevelopment goals by opening up a new generation of development opportunities.

**b. Disciplinary Integration:** The city and community are looking forward to the continued revitalization, enhanced mobility options, improved quality of life, and safety-related opportunities provided the implementation of the IH 30 HOV/managed lanes. They feel this highly innovative and effective project will benefit existing residents, encourage new residents, advance new business opportunities and job creation, and enhance neighborhood character.

Another illustration of the integration and partnership of stakeholders within the corridor is the cooperative approach by public-private partnerships to conduct traffic management for special events. As previously stated above under *Urban vs. Rural Need* (page 4), the IH 30 corridor is home to a large number of regional entertainment venues such as the new Cowboys Stadium, the Rangers Ballpark in Arlington, Six Flags Over Texas Amusement Park, Six Flags Hurricane Harbor Water Park, Lone Star Park, and Nokia Theatre. All of these venues attract significant crowds for many events held throughout each year, requiring complex and detailed traffic management planning. See *Supporting Documentation* (page 25) to view a Memorandum of Understanding (MOU) signed recently by representatives of the event venues in the Arlington Entertainment District.

**Performance Monitoring:** Based on the primary and secondary criteria presented in this application, Table 7 below lists performance measures for evaluating the success of this project.



**IH 30 HOV/Managed Lanes, Dallas and Grand Prairie, Dallas County, Texas  
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**Table 7. Performance Monitoring**

	<b>Short-Term (2 to 5 years) Performance Measures</b>	<b>Long-Term (5 to 40 years) Performance Measures</b>
<b>Primary</b>		
State of Good Repair		<ul style="list-style-type: none"> <li>• PMIS rating above 70</li> <li>• Lower maintenance costs</li> </ul>
Economic Competitiveness	Decrease in unemployment in the region and project area during construction	Within the project area: <ul style="list-style-type: none"> <li>• Increased median income compared to 2010 census data</li> <li>• Decrease in the poverty rate</li> <li>• Lower unemployment rate compared to 2009</li> </ul>
Livability	<ul style="list-style-type: none"> <li>• Stabilization of the community conditions and character</li> <li>• Increased availability of transit</li> </ul>	<ul style="list-style-type: none"> <li>• Increased community retail and commercial development</li> <li>• Increased community cohesion</li> <li>• Increased local pride and character</li> </ul>
Sustainability	<ul style="list-style-type: none"> <li>• Decreased VHT, traffic delay, fuel consumption, CO<sub>2</sub> emissions</li> <li>• Increased travel speeds</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased VHT, traffic delay, fuel consumption, CO<sub>2</sub> emissions</li> <li>• Increased travel speeds</li> </ul>
Safety	<ul style="list-style-type: none"> <li>• Decreased number/severity of accidents</li> <li>• Decreased number of fatalities</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased number/severity of accidents</li> <li>• Decreased number of fatalities</li> </ul>
Job Creation and Economic Stimulus	Decreased unemployment in the region and project area during construction	<ul style="list-style-type: none"> <li>• Decreased unemployment</li> <li>• Retail and commercial employment creation within the project area</li> </ul>
<b>Secondary</b>		
Innovation	<ul style="list-style-type: none"> <li>• Corridor deployment of Value Pricing Pilot Program</li> </ul>	<ul style="list-style-type: none"> <li>• Regional deployment of Value Pricing Pilot Program</li> </ul>
Partnership	<ul style="list-style-type: none"> <li>• Multi-jurisdictional trip reduction planning</li> <li>• Continued partnership in the redevelopment of the area</li> </ul>	<ul style="list-style-type: none"> <li>• Expansion of trip reduction planning</li> <li>• Continued partnership in the redevelopment of the area</li> </ul>

**Supporting Documentation**

To assist in the review and processing of the IH 30 HOV/Managed Lanes Project application, the following documents are available for viewing:

- Certification of Compliance with Subchapter IV of Chapter 31 of Title 40 (federal wage rate requirements) – <http://www.nctcog.org/trans/tip/private/FedWageRte.PDF>
- Letters of Support – <http://www.nctcog.org/trans/tip/private/30SLetter.pdf>
- IH 30 HOV/Managed Lanes Categorical Exclusion (CE) <http://www.nctcog.org/trans/tip/private/30CatExDoc.pdf>
- CE Environmental Approval Letter - <http://www.nctcog.org/trans/tip/private/30EnvApprv.pdf>
- IH 30 HOV/Managed Lanes Cost Estimates – <http://www.nctcog.org/trans/tip/private/30CostEst.pdf>
- IH 30 Value Pricing Project for the Dallas District – [http://www.nctcog.org/trans/tip/private/30VPPP\\_Rpt.pdf](http://www.nctcog.org/trans/tip/private/30VPPP_Rpt.pdf)
- 2009 Pass Through Toll Finance Program Application – <http://www.nctcog.org/trans/tip/private/30PassThru.pdf>
- IH 30 HOV/Managed Lanes Approved Schematics (Dallas/Tarrant County Line to Sylvan Avenue) – <http://www.nctcog.org/trans/tip/private/dfwmpotigerapps.asp>
- Belt Line Road Park and Ride Facility & Frontage Road Schematics – <http://www.nctcog.org/trans/tip/private/dfwmpotigerapps.asp>
- IH 30 HOV/Managed Lanes Requests for Design Exceptions – <http://www.nctcog.org/trans/tip/private/dfwmpotigerapps.asp>
- Method for Calculating Economic Impact – <http://www.nctcog.org/trans/tip/private/30EconImp.pdf>
- Calculation of Air Quality Benefits – [http://www.nctcog.org/trans/tip/private/IH30\\_ML\\_AQ.pdf](http://www.nctcog.org/trans/tip/private/IH30_ML_AQ.pdf)
- Arlington Entertainment District Memorandum of Understanding (MOU) – [http://www.nctcog.org/trans/tip/private/Arl\\_ED\\_MOU.pdf](http://www.nctcog.org/trans/tip/private/Arl_ED_MOU.pdf)