RE-EVALUATION OF SUPPLEMENTAL FINAL ENVIRONMENTAL IMPACT STATEMENT

SH 161: FROM IH 20 TO SH 183

CSJ: 2964-01-013 (ENVIRONMENTAL)
2964-01-034 (MITIGATION)

CSJ: 2964-01-029, 004, 030, 009, 031, 010;
2374-04-054, 040; 1068-04-115, 129
(DESIGN AND CONSTRUCTION)

DALLAS COUNTY, TEXAS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
TEXAS DEPARTMENT OF TRANSPORTATION

FEBRUARY 2005

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1.0 INTRODUCTION

This document is a re-evaluation of the Supplemental Final Environmental Impact Statement (SFEIS) and Section 4(f) Statement (see **Appendix E**) prepared for State Highway (SH) 161 in Dallas County, Texas (FHWA-TX-EIS-93-01-FS). The limits of the SFEIS for the proposed improvements to SH 161 extend from Interstate Highway (IH) 20, in Grand Prairie, Texas, to SH 183 in Irving, Texas – a distance of approximately 10.8 miles (**Appendix A: Figure 1**). The SFEIS was approved by the Federal Highway Administration (FHWA) on October 11, 1996, and was the subject of a Record of Decision (ROD) issued by FHWA on April 7, 1997 (see **Appendix D**).

The purpose of this re-evaluation is to document changes in the SH 161 design and affected environment since approval of the SFEIS in 1997; assess impacts associated with those changes; and re-confirm the validity of the ROD and Section 4(f) Statement in light of those changes.

1.1 History and Public Involvement

The following is a chronology of events to briefly outline the history of the project and related events.

1971	FHWA approval of Final Environmental Statement for the western section of Loop 9 from IH 20 to Denton Tap Road (now SH 161) *(original document that included the entire limits of this re-evaluation)*
1983	Court injunction filed by Association Concerned about Tomorrow (ACT)
1985	Court injunction placed on SH 161 from Rock Island Road to IH 20
1989	FHWA approved a Draft Environmental Impact Statement (DEIS) for SH 161 from IH 20 to SH 183

Sept. 1994	Supplemental DEIS for SH 161 from IH 20 to SH 183 approved by FHWA (Supplemental prepared since three years had lapsed since prior approval and due to legislative changes in the Clean Air Act and Intermodal Surface Transportation Efficiency Act (ISTEA)
October 1994	Open House and Public Hearing held at Grand Prairie High School (public was informed that the SFEIS was based on a phased design year of 2015 and that the right-of-way was based on an ultimate 8 and 10 lane facility)
1996	SFEIS approved by the Texas Department of Transportation (TxDOT)/FHWA
1997	ROD issued by FHWA for SFEIS (FHWA-TX-EIS-93-01-FS)
1998	U.S. District Court, Northern District of Texas Court Opinion which upholds the previous ROD (dissolves the 1985 court injunction by ACT)
2000	U.S. Court of Appeals for the 5th Circuit upholds previous ROD Appeal from the U.S. District Court for the Northern District of Texas Civil Docket # 83-CV-585, ACT (Plaintiffs) vs. United States Department of Transportation (USDOT) (Defendants)
2002	FHWA signs Environmental Mitigation Agreement between City of Grand Prairie and TxDOT (Fee in Lieu/Functional Replacement)

Two public meetings were held in the City of Grand Prairie to inform the public of the current project status. These meetings were held at local elementary schools on November 18 and 20, 2003, with the same agenda at both meetings. Approximately 150 people attended the meetings. Drawings of the current design were available for public review during the open house period. The open house was followed by a presentation showing the proposed design and environmental changes to the project since the ROD. A question and answer session followed

the presentation. Questions and comments at the meetings covered tolls, noise levels and noise barrier locations, the construction schedule, and right-of-way acquisition. Of the fourteen written comments received, one was in opposition to the project.

1.2 Purpose and Need

Population increases and associated development have resulted in traffic increases that have created congestion in the study area and across the region. SH 161 is needed to help improve the transportation network and level of service in the study area and region. This purpose and need for SH 161 remains as stated in the SFEIS and Section 4(f) Statement. The proposed highway is an integral part of the Mobility 2025 - 2004 Plan Update. The plan is recognized and endorsed by the North Central Texas Council of Governments (NCTCOG) and is the successor to Mobility 2010: The Regional Transportation Plan for North Central Texas referred to in the SFEIS and Section 4(f) Statement.

The proposed project is in Dallas County, which has been designated in non-attainment of the 1-hour ozone standard by Environmental Protection Agency (EPA); therefore, the transportation conformity rule applies. Also, Dallas County was designated as non-attainment for the 8-hour ozone standard by EPA effective June 15, 2004. A demonstration of transportation conformity for added capacity projects to the 8-hour ozone standard is not required until the end of the one-year grace period (June 15, 2005). The proposed project is consistent with the area's financially constrained Metropolitan Transportation Plan known as Mobility 2025 - 2004 Plan Update, and the 2004-2006 TIP was found to conform to the Clean Air Act Amendments of 1990 by the U.S. DOT (FHWA/FTA) on April 8, 2004. Additionally, the project comes from an operational Congestion Management System (CMS) that meets all requirements of 23 CFR Highways, Parts 450 and 500. The proposed action is listed in the 2004-2006 TIP under the Control-Section-Job (CSJ) numbers found in **Table 1.2-1**.

Table 1.2-1: TIP Listing

CSJ Number	TIP Location
2374-04-054	2004-2006 TIP, Page VII-38 FY 2005
2374-04-040	2004-2006 TIP, Page D.7, FY 2030
2964-01-029	2004-2006 TIP, Page 32 FY 2005
2964-01-004	2004-2006 TIP, Page D.7, FY 2030
2964-01-030	2004-2006 TIP, Page 32, FY 2005
2964-01-009	2004-2006 TIP, Page D.8, FY 2030
1068-04-115	2004-2006 TIP, Page VII-32, FY 2005
1068-04-129	2004-2006 TIP, Page D.6, FY 2030
2964-01-031	2004-2006 TIP, Page D.8, FY 2030
2964-01-010	2004-2006 TIP, Page D.8 FY 2030

The design year for the SFEIS and this re-evaluation was the year 2015. The total estimated cost for the project is $424,130,000. Funding would be split between the state at 20 percent and the federal government at 80 percent.

1.3 Alternatives

The ROD dated April 7, 1997 approved the selection of Alternative 2A from 9 alternative routes and the no-build option studied in detail and presented in the SFEIS. Alternative 2A remains the preferred alternative and is the subject of this re-evaluation. **Appendix B** contains the Typical Sections and Proposed Schematics for this alternative.

2.0 APPROACH

This re-evaluation uses as its basis the SFEIS and Section 4(f) Statement approved by FHWA for proposed SH 161. The statements, studies, and conclusions documented in the SFEIS and Section 4(f) Statement have been examined and analyzed in three steps – the findings of each of the steps are documented in this re-evaluation.

Step 1 entailed identifying changes in the proposed design and right-of-way requirements of SH 161, between IH 20 and SH 183, occurring since approval of the SFEIS and Section 4(f) Statement. These changes are summarized in **Section 3.0**.

In Step 2, current environmental conditions were analyzed to identify changes occurring since issuance of the ROD in 1997. And, in Step 3, the environmental consequences of the proposed action, as described in the SFEIS and Section 4(f) Statement, were analyzed in light of the design/right-of-way and environmental changes which have occurred since the ROD. The validity of the conclusions drawn in the SFEIS and Section 4(f) Statement were tested against these changes to re-confirm the decision of the ROD. The findings of these analyses are documented in **Section 4.0** and **Section 5.0**. All resource categories addressed within the approved supplemental document are discussed. For ease of comparison, resource categories appear within this re-evaluation in the same general order in which they appear in the previously-approved document.

Section 6.0 documents the conclusions drawn from the re-evaluation process.

3.0 CHANGES IN DESIGN AND RIGHT-OF-WAY REQUIREMENTS

Minor changes to the preferred alternative have occurred since issuance of the ROD in 1997. Changes include items such as slope easements to avoid retaining wall construction, ramp alterations, and changes in access. The total amount of additional right-of-way required is 3.3 acres. The additional right-of-way required is undeveloped land, and no additional displacements would be necessary to accomplish these changes. **Table 3.0-1** lists the proposed design changes and the amount of additional right-of-way required, if any.

Table 3.0-1: Proposed Design Changes

Location	Description	Additional Right-of-Way Required (acres)	Schematic Page # (Exhibit B)
Southwest corner of Robinson Road	Slope easement	yes (0.1)	3 of 9
Oakdale	Add northbound exit	no	-
Lower Tarrant Road to Johnson Creek	Southbound lane drop/add to/from Lower Tarrant Road (Sunnyvale)	no	-
Southeast corner of IH 30/SH 161 Interchange	Moved driveway	no	-
Southwest corner of IH 30/SH 161 Interchange	Moved northbound exit ramp	no	-
Northeast corner of IH 30/SH 161 Interchange	Access issue – driveway with previous IH 30 access from TTA	no	-
Arkansas	Increase from 1 lane to 2 lane ramps – auxiliary lanes in both directions over Warrior Trail	no	-
Warrior Trail	Road moved approximately 70 feet north	yes (1.0)	2 of 9
Kirby Creek @ SH 161	Slope at Kirby Creek	yes (1.8)	2 of 9
IH 20/SH 161 Interchange (NW corner of Robinson and westbound frontage road)	Slope easement	yes (0.4)	1 of 9

3.1 Construction Schedule & Right-of-Way Acquired

Table 3.1-1 lists the construction sections of the proposed project and the estimated construction schedule of letting dates. These sections are identified on the Project Location Map shown in **Appendix A**.

Table 3.1-1: Construction Schedule

TxDOT Control #	Limits	Description	Letting Date
2374-04-054	IH 20/SH 161	interchange, phase 1	05/2005*
2374-04-040	IH 20/SH 161	interchange, phase 2 (DCs)	12/2013
2964-01-029	IH 20 to SP 303	frontage roads	05/2005*
2964-01-004	IH 20 to SP 303	mainlanes	12/2013
2964-01-030	SP 303 to IH 30	frontage roads	06/2005*
2964-01-009	SP 303 to IH 30	mainlanes	01/2014
1068-04-115	IH 30/SH 161	interchange, phase 1	08/2005*
1068-04-129	IH 30/SH 161	interchange, phase 2	09/2009
2964-01-031	IH 30 to SH 183	frontage roads	06/2006*
2964-01-010	IH 30 to SH 183	mainlanes	06/2010

*To be permitted under the Section 404 process. See Section 5.2, Waters of the U.S., including Wetlands.

The acquisition of right-of-way has been on-going since the ROD and is in various stages of completion by the sections listed in **Table 3.1-2**.

Table 3.1-2: Right-of-Way Acquisition

Limits	Percent Complete
IH 20/SH 161 Interchange	100%
IH 20 to Main	90%
Main to Hill	98%
IH 30/SH 161 Interchange	86%
IH 30 to Trinity River	100%
Trinity River to Rock Island	96%

The proposed project is a new location north-south four/six lane controlled access highway with three-lane frontage roads. The four lane highway is from IH 20 to IH 30, the six lane highway is from IH 30 to SH 183. This is consistent with the area's financially constrained MTP known as Mobility 2025 - 2004 Plan Update. The Mobility 2025 – 2004 Plan Update has identified the need for an eight/ten lane controlled access highway; therefore the SFEIS and this document preserved the right-of-way necessary for an eight/ten lane facility and addresses the impacts associated with this footprint. Before the project could be constructed with the additional lanes, the MTP and TIP would need to be amended and the project analyzed for any possible environmental impacts.

4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 Other Agency Actions

The following paragraphs describe major transportation projects that have been implemented, are under consideration, or have been proposed since the ROD.

Dallas Area Rapid Transit (DART) Trinity Rail Express (TRE)

DART opened the starter rail system in 1996, with the TRE beginning operation in December to Irving. The West Irving Station is located just east of the study area. Service was extended from Dallas to the Dallas-Fort Worth (DFW) airport in September 2000 and Fort Worth in December 2001. The TRE crosses the study area north of Rock Island Road.

SH 183/West Fork of the Trinity Parkway Major Investment Study (MIS)

In 2000, TxDOT performed a MIS for SH 183 and the West Fork of the Trinity Parkway. The study recommended improvements to SH 183 immediately and a future West Fork facility as traffic demand warrants. The future facility, which would cross SH 161 between Trinity Blvd. and IH 30, would be a 6-lane super-arterial.

SH 183 Preliminary Engineering/Environmental Assessment (EA)

As a result of the SH 183 MIS, in 2001 TxDOT began an EA on SH 183 from SH 360 to IH 35E. The proposed improvements include adding two main lanes (one in each direction) to SH 183.

4.2 Socio-economic Environment

The socio-economic studies conducted previously were based on 1990 census information. This re-evaluation presents updated 2000 census data for the SH 161 project area. In addition the discussion of Environmental Justice to satisfy the Executive Order 12898 has been added since the original document. Land use and right-of-way requirements have had only minor changes since the original document and are discussed as follows.

4.3 Land Use

The City of Grand Prairie has established a corridor for the proposed highway facility between IH 20 and SH 180. The zoning adjacent to the corridor is responsive to the development of a controlled access highway and setbacks have also been enforced to prevent new developments from encroaching on the corridor. The land use between SH 303 and SH 180 is primarily industrial or undeveloped and would benefit from the location of a highway on the proposed location. Large areas of undeveloped land south of SH 303 have been zoned and planned with the expectation that SH 161 would be constructed at the proposed location.

The remainder of the proposed project lies between SH 180 and SH 183. The location of a highway in this area would increase pressure on those land uses north of the West Fork of the Trinity River to develop more densely. The area north of North Carrier Parkway is currently sparsely developed in a variety of land uses. The facility north of the West Fork of the Trinity River would tend to intensify commercial and industrial development in this area. No major adverse land use impacts would be associated with the proposed design changes.

4.4 Population and Demographic Characteristics

The project study area for SH 161 is comprised of portions of the cities of Grand Prairie and Irving. These cities are located in far west Dallas County. Population data at the census tract level for the year 2000 from the U.S. Department of Commerce, Census Bureau, has been used in this socioeconomic analysis. Census tract data provides the appropriate level of detail for an area that is sufficiently small to characterize the area of impact. Census tracts are shown in **Appendix A: Figure 3**.

The Dallas Primary Metropolitan Statistical Area (PMSA) experienced substantial growth in population during the 1990's. The eight county area[1] grew by 842,928 persons during the decade, a 31.5 percent increase. During the same period, Dallas County was ranked second in growth among Texas counties, as measured by the increase in the number of people, growing by 366,089 persons. In 2000, Dallas County was the second most populous of the 254 counties in Texas, with 2,218,899 residents.

[1] Collin, Dallas, Denton, Ellis, Henderson, Hunt, Kaufman, and Rockwall counties.

The cities of Grand Prairie and Irving have experienced substantial growth over the past 30 years. Grand Prairie's population grew approximately 150 percent from 1970 to 2000, with a population of 50,904 in 1970, 71,462 in 1980, 99,606 in 1990, and 127,427 in 2000. NCTCOG estimates the city's 2004 population at 141,450 residents. The annual average rate of growth has been slowly decreasing over the period from 3.45 percent between 1970 and 1980 to 2.49 percent between 1990 and 2000. The estimated rate of growth between 2003 and 2004 was 2.50 percent. The NCTCOG projects the 2030 population of Grand Prairie will reach 231,011 residents, an additional 101,655 persons over the 30 year period. Population figures for 1990 and 2000 are shown in **Table 4.4-1**.

Table 4.4-1: Population Growth 1990-2000

Area	1990	2000	Change	
			Number	Percent
Dallas County	1,852,810	2,218,899	366,089	19.8
Grand Prairie	99,616	127,427	27,811	27.9
Irving	155,037	191,615	36,578	23.6
CT 141.16	4,048	3,871	-177	-4.4
CT 144.03	3,678	3,905	227	6.2
CT 144.07	3,636	4,225	589	16.2
CT 144.08	3,127	3,518	391	12.5
CT 153.03	1,586	1,842	256	16.1
CT 153.04	2,450	2,774	324	13.2
CT 154.01	4,701	5,319	618	13.1
CT 154.03	3,036	3,775	739	24.3
CT 154.04	3,151	3,556	405	12.9
CT 155.00	3,358	4,396	1,038	30.9
CT 161.00	2,362	2,466	104	4.4
CT 164.01	3,247	5,246	1,999	61.6
CT 164.10	1,831	2,896	1,065	58.2
Study Area	40,211	47,789	7,578	18.8

Source: North Central Texas Council of Governments. http://census.dfwinfo.com/. July 7, 2003.

As reported in *Census 2000,* there were 7,757 persons age 65 and older residing in Grand Prairie. They represented 6.1 percent of the total population. The median age of Grand Prairie residents is 30.5. Persons 5 years old and older listed as non-institutionalized disabled totaled 21,588, or 16.9 percent of the total population.

Irving's population grew approximately 97 percent from 1970 to 2000, from a population of 97,260 in 1970 to 191,615 in 2000. The estimated population in 2004 is 196,750 residents.

The maximum average annual rate of growth occurred between 1980 and 1990 (3.50 percent). It decreased to 2.14 percent between 1990 and 2000, and was estimated at 1.13 percent between 2003 and 2004. The NCTCOG projects the 2030 population of Irving will reach 225,714 residents, an additional 29,082 persons over the 30 year period.

There were 10,932 persons age 65 and older residing in Irving in 2000. They represented 5.7 percent of the total population. The median age of Irving residents is 30.3. Persons 5 years old and older listed as non-institutionalized disabled totaled 30,554, or 15.9 percent of the total population.

The racial and ethnic composition of the two cities as well as the census tracts that comprise the study area is shown in **Table 4.4-2**.

As shown in **Table 4.4-2**, four of the study area census tracts had a higher population percentage of Blacks than Dallas County. These were census tract 161.00 (southwest of SH 180 and Carrier Parkway) (46.5 percent), census tract 141.16 (north of SH 183 and east of Valley View Lane) (27.6 percent), census tract 144.03 (south of SH 183 and west of Hard Rock Road) (28.8 percent) and census tract 144.07 (south of SH 183 and west of Belt Line Road) (25.5 percent).

Four census tracts had high proportions of Hispanics in their populations. These were census tract 154.04 (north of SH 180 and east of the Tarrant County line) (51.8 percent), census tract 155.00 (between IH 30 and SH 180 and west of NE 5th Street) (44.9 percent), census tract 153.03 (south of West Rock Island Road and east of the Tarrant County line) (32.6 percent), and census tract 154.03 (south of IH 30 and west of Carrier Parkway) (38.8 percent).

The changes in design and right-of-way requirements, presented in this reevaluation, would not alter population growth trends within the study area.

As stated in the SFEIS and Section 4(f) Statement, an indirect impact of SH 161 would be an increase in the population of surrounding areas. SH 161 would improve access and help to better manage congestion within Grand Prairie and Irving. As access and mobility improve

within the study area, the area becomes more attractive for development; thus, stimulating future housing and commercial development and, in turn, generating additional population.

Table 4.4-2: Racial and Ethnic Composition of the Population – 2000

Area	Total Population	Not Hispanic or Latino							Hispanic or Latino of Any Race	Total Minority Population	
		Population of One Race						Two or More Races		Number	Percent
		White	Black or African American	Indian and Alaska Native	Asian	Pacific Islander	Other Race				
Dallas County	2,218,899 100.0%	983,317 44.3%	445,716 20.1%	8,106 0.4%	87,495 3.9%	926 0.0%	2,388 0.1%	28,222 1.3%	662,729 29.9%	1,235,582	55.68
Grand Prairie	127,427 100.0%	60,118 47.2%	16,948 13.3%	678 0.5%	5,574 4.4%	59 0.0%	157 0.1%	1,855 1.5%	42,038 33.0	67,309	52.82
Irving	191,615 100.0%	92,445 48.2%	19,254 10.0%	905 0.5%	15,674 8.2%	199 0.1%	247 0.1%	3,053 1.6%	59,838 31.2	99,170	51.75
CT 141.16	3,871 100.0%	1,554 40.1%	1,070 27.6%	23 0.6%	378 9.8%	11 0.3%	6 0.1%	107 2.8%	722 18.6%	2,317	59.86
CT 144.03	3,905 100.0%	1,517 38.8%	1,126 28.8%	18 0.5%	370 9.4%	6 0.1%	8 0.2%	94 2.4%	766 19.6%	2,388	61.15
CT 144.07	4,225 100.0%	1,641 38.8%	1,079 25.5%	38 0.9%	261 6.2%	4 0.1%	8 0.2%	68 1.6%	1,126 26.6%	2,584	61.16
CT 144.08	3,518 100.0%	1,903 54.1%	555 15.8%	14 0.4%	398 11.3%	1 0.0%	13 0.4%	75 2.1%	559 15.9%	1,615	45.91
CT 153.03	1,842 100.0%	1,036 56.2%	139 7.5%	8 0.4%	28 1.5%	0 0.0%	5 0.3%	25 1.4%	601 32.6%	806	43.76
CT 153.04	2,774 100.0%	1,818 65.5%	160 5.8%	28 1.0%	77 2.8%	3 0.1%	0 0.0%	40 1.4%	648 23.3%	956	34.46
CT 154.01	5,319 100.0%	3,865 72.7%	543 10.2%	28 0.5%	139 2.6%	4 0.1%	7 0.1%	69 1.3%	664 12.5%	1,454	27.34
CT 154.03	3,775 100.0%	1,676 44.4%	509 13.5%	21 0.6%	58 1.5%	0 0.0%	5 0.1%	41 1.1%	1,465 38.8%	2,099	55.60
CT 154.04	3,556 100.0%	1,303 36.6%	286 8.0%	31 0.9%	59 1.7%	4 0.1%	5 0.1%	26 0.7%	1,842 51.8%	2,253	63.36
CT 155.00	4,396 100.0%	1,809 41.1%	471 10.7%	22 0.5%	77 1.7%	1 0.0%	0 0.0%	40 0.9%	1,976 44.9%	2,587	58.85
CT 161.00	2,466 100.0%	626 25.4%	1,147 46.5%	5 0.2%	22 0.9%	0 0.0%	0 0.0%	33 1.3%	633 25.7%	1,840	74.61
CT 164.01	5,246 100.0%	2,439 46.5%	892 17.0%	31 0.6%	483 9.2%	4 0.1%	6 0.1%	93 1.8%	1,298 24.7%	2,807	53.51
CT 164.10	2,896 100.0%	1,636 56.5%	504 17.4%	7 0.2%	130 4.5%	1 0.0%	13 0.5%	80 2.8%	525 18.1%	1,260	43.51
Study Area	**47,789 100.0%**	**22,823 47.8%**	**8,481 17.7%**	**274 0.6%**	**2,480 5.2%**	**39 0.1%**	**76 0.2%**	**791 1.7%**	**12,825 26.8%**	**24,966**	**52.24**

Source: US Census Bureau. *Census 2000.* http://factfinder.census.gov./

4.5 Employment

Centrally located between Dallas and Fort Worth, the cities of Grand Prairie and Irving draw a workforce from an average distance of 25 to 50 miles. Both cities have a diverse employment base that includes manufacturers of transportation equipment, chemicals and allied

products, food and kindred products, printing and publishing, and rubber and miscellaneous products.[2] The number of people working in Grand Prairie in 1990 was 51,800. In 2000, there were 82,664 persons working in Grand Prairie, a 59.58 percent increase over the ten year period. Employment growth in Irving was just as dramatic. In 1990, there were 106,600 persons working in Irving. In 2000, employment had climbed to 165,435, a 55.19 percent increase. The NCTCOG employment estimate report included 71 cities within Collin, Dallas, Denton, Tarrant and Rockwall counties as well as portions of Ellis, Johnson, Kaufman and Parker counties. As a whole, employment in these 71 cities increased by 935,107 jobs or 45.93 percent.

Major employers in Grand Prairie include Lockheed Martin (2,700), Poly-America Incorporated (1,500), Lone Star Park (1,400) and Site Concrete Incorporated (1,000).

Major employers in Irving include NEC (3,610), Nokia (2,400), Microsoft (1,600) Baylor Healthcare System-Irving (1,500), Aegis Communications (1,500), Citigroup (1,430), Abbott Laboratories (1,400), VHA Incorporated (1,400), Central Freight Lines, Inc. (1,330), Allstate Insurance Company (1,200), Benemax I LP (1,200), Xerox Corporation (1,030), Neiman Marcus Mail Order (1,000), Marc Group (1,000), Verizon Communication (1,000), First Horizon Home Loans (1,000), Roadway Express Inc. (1,000) and Zale Corporation (1,000).

The NCTCOG projects employment in Grand Prairie to reach 125,866 by 2030, an average annual growth rate of 1.4 percent. Employment in Irving is expected to reach 276,941 by 2030, an average annual growth rate of 1.7 percent.

4.6 Income

According to *Census 2000,* median household income in 1999 within the study area ranged from $31,456 in census tract 155.00 to $73,750 in census tract 164.10 (see **Table 4.6-1**). The 2000 census reports 1999 income since when the census was taken on April 1, 1999 was the last full year for which annual income would be available. The median household income in Grand Prairie in that year was $46,816 and $44,956 in Irving. Median family income in Grand Prairie was $51,449 in 1999. The median family income in Irving was $50,172. There were 2,723 persons with 1999 incomes below the poverty level living within the study area. With few

[2] North Central Texas Council of Governments. *NCTCOG 2000 Employment by City.*

exceptions, the proportion of persons with incomes below the poverty level within the study area was lower than the proportion in Dallas County, Grand Prairie, or Irving.

Table 4.6-1: Median Household Income and Poverty Status - 1999

Area	Population[(a)]	Median Household Income	Persons Below Poverty Level	
			Number	Percent
Dallas County	2,183,570	43,324	293,267	13.43
Grand Prairie	126,197	46,816	14,018	11.11
Irving	190,004	44,956	20,231	10.65
CT 141.16	3,771	35,968	327	8.67
CT 144.03	3,896	37,290	415	10.65
CT 144.07	965	35,224	64	6.63
CT 144.08	932	44,494	12	1.29
CT 153.03	1,748	36,500	263	15.05
CT 153.04	2,761	39,464	314	11.37
CT 154.01	5,312	50,737	276	5.20
CT 154.03	3,564	36,438	470	13.19
CT 154.04	872	34,914	107	12.27
CT 155.00	1,071	31,456	253	23.62
CT 161.00	615	32,825	152	24.72
CT 164.01	1,422	58,385	53	3.73
CT 164.10	835	73,750	17	2.04
Study Area	27,764		2,723	9.81

[(a)] Population for whom poverty status has been determined. Source: US Census Bureau. *Census 2000.*

4.7 Community Cohesion

Community cohesion is a term that refers to an aggregate quality of a residential area. Cohesion is a social attribute that indicates a sense of community, common responsibility, and social interaction within a limited geographical area. It is the degree to which residents have a sense of belonging to their neighborhood or community or a strong attachment to neighbors, groups, and institutions as a continual association over time. No major changes to community cohesion since the ROD have occurred. The SFEIS stated that the Dalworth Park subdivision would be split and a small subdivision with the Dalworth subdivision, Houston's Addition, would be eliminated. Also a portion of Continental Estates and Camelot Acres would be displaced. The proposed design changes would not alter impacts to community cohesion.

Executive Order 13166 on Limited English Proficiency (LEP) ensures agencies provide federally conducted programs and activities which are meaningfully accessible to LEP individuals. Census tract data for "Ability to Speak English" for the population five years and over indicates 6.4 percent of the population within the census tracts in the study area speaks English "Not Well" or "Not at All." This number compares to 7.4 percent for Grand Prairie and 12.4 percent for Irving. The most detailed available information for this measure is at the census tract level. A field reconnaissance (windshield survey) indicated that English was the language used for building signage and other forms of posted information and advertisement along the project corridor. None of the LEP populations would be discriminated against as a result of the proposed project. The alternative selected resulted in the least number of residential displacements and ROW for this project has already been obtained. Reasonable steps would continue to be taken to ensure that such persons have meaningful access to the programs, services, and information that TxDOT provides. Therefore, the requirements of Executive Order 13166 appear to be satisfied. **Table 4.7-1** contains the percent LEP population for each census tract in the project limits.

Table 4.7-1: Percent Limited English Proficiency

Area/ Census Tract	Total Population 5 Years and Older	Total Number Who Speak English "Not Well" or "Not at All"	% LEP
Dallas County	2,038,325	229,147	11.2
Grand Prairie	115,998	8,671	7.4
Irving	176,341	21,940	12.4
CT 141.16	3,569	153	4.2
CT 144.03	3,610	160	4.4
CT 144.07	3,775	366	9.6
CT 144.08	3,403	155	4.5
CT 153.03	1,589	200	12.5
CT 153.04	2,583	175	6.7
CT 154.01	4,991	152	3.0
CT 154.03	3,235	293	9.0
CT 154.04	3,387	466	13.7
CT 155.00	4,031	403	9.9
CT 161.00	2,148	62	2.8
CT 164.01	4,775	179	3.7
CT 164.10	2,653	40	1.5
Study Area	43,749	2,804	6.4

Source: U.S. Census Bureau. *Census 2000. http://factfinder.census.gov*

4.8 Housing

A variety of housing exists in the study area. In 2000, the U.S. census reported 20,266 housing units within the study area (see **Table 4.8-1**). A total of 8,288 (40.9 percent) were owner occupied housing units, 11,001 (54.3 percent) were renter occupied, and 977 (4.8 percent) were vacant units. The median value of owner-occupied housing units in Grand Prairie was $84,100 and $94,200 in Irving. Within the study area, the median value of owner-occupied housing units ranged from $52,500 to $148,000. The median gross rent of the renter-occupied housing units ranged from $500 per month to $950 per month.

Table 4.8-1: Housing

Area	Total Housing Units	Owner Occupied Units	Renter Occupied Units	Vacant Housing Units	Median Gross Rent[(a)]	Median Value[(b)]
Dallas County	854,119	424,7887	382,833	46,498	$647	$92,700
Grand Prairie	46,261	26,742	16,876	2,643	$642	$84,100
Irving	80,315	28,439	47,823	4,053	$714	$94,200
CT 141.16	2,142	17	2,038	87	$675	$0
CT 144.03	1,987	106	1,791	90	$722	$85,000
CT 144.07	2,077	311	1,642	124	$676	$117,000
CT 144.08	1,673	644	945	84	$682	$148,000
CT 153.03	665	496	132	37	$583	$102,500
CT 153.04	1,192	984	114	94	$629	$104,400
CT 154.01	2,452	1,333	1,015	104	$706	$110,300
CT 154.03	1,481	466	952	63	$584	$79,700
CT 154.04	1,385	514	758	113	$588	$52,500
CT 155.00	1,609	600	902	107	$500	$86,700
CT 161.00	880	442	438	0	$565	$60,800
CT 164.01	1,753	1,452	259	42	$753	$88,400
CT 164.10	970	923	15	32	$950	$105,100
Study Area	20,266	8,288	11,001	977	N/A	N/A

[(a)] Renter-occupied housing units. [(b)] Owner-occupied housing units. Source: U.S. Census Bureau. *Census 2000.*

4.9 Relocations

Approximately 3.3 acres of additional right-of-way needs to be acquired for the construction of the proposed design changes to SH 161. No additional relocations or displacements are required as a result of the proposed design changes.

4.10 Economic Impacts

The recently released NCTCOG employment projections anticipate employment in the City of Grand Prairie to increase from 82,664 in 2000 to 125,866 in 2000, a 1.4 percent average annual rate of growth. The improved access afforded by SH 161 should enhance the anticipated commercial and industrial development that is represented by the increased employment.

Construction of SH 161 would increase highway capacity in the corridor. This would result in decreased travel time, reducing the cost to commuters and commercial users of the facility.

4.11 Environmental Justice

In response to Executive Order 12898, signed by President Clinton on February 11, 1994, the USDOT developed an environmental justice strategy that follows within the framework of the National Environmental Policy Act (NEPA) and Title IV of the Civil Rights Act. Executive Order 12898 requires that federally funded projects identify and address any disproportionately high and adverse human health effects from environmental impacts to minority and low-income people. FHWA Order 6640.23 defines a minority as a person who is:

1) Black (having origins in any of the black racial groups of Africa);

2) Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;

3) Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands, or;

4) American Indian and Alaska Native (having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).[3]

[3] U.S. Department of Transportation, Federal Highway Administration. *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 6640.23.* December 2, 1998.

Low income is defined as a household income at or below the Department of Health and Human Services poverty guidelines.[4] The U.S. Census Bureau uses a set of money income thresholds that vary by family size and composition to determine the low income threshold. The Bureau follows the Office of Management and Budget's (OMB) *Statistical Policy Directive 14* in establishing the thresholds. This is reflected in the data from Census 2000. The year 2004 poverty threshold for a four-person family was $18,850.

Disproportionately high and adverse effects on minority or low-income populations generally means an adverse effect that is predominantly borne by a minority population or low-income population or would be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the non-minority population and/or non-low-income population.[5] For purposes of this analysis, disproportionate adverse impacts to minority or low-income populations is likely to occur when the minority and/or low-income population percentage within a given census tract being adversely impacted is either 50 percent of the total population of that census tract or is more than double the percentage of the population that is minority and/or low-income within the same county.

Census tract 161.00 has the highest ratio of Blacks (46.5 percent) of the census tracts comprising the study area. This census tract extends from IH 20 to SH 303 and from Carrier Parkway west to the Tarrant/Dallas County line. Census tract 154.04 includes the Dalworth Park subdivision. This census tract has a substantial Hispanic population (51.8 percent). See **Table 4.4-2**. No additional displacements would be required due to the proposed design changes. There does not appear to be disproportionate adverse impacts to any minority and/or low-income populations as a result of the implementation of the proposed project.

While individual minority and/or low-income persons may be adversely affected by the proposed project, implementation of the proposed project would not result in disproportionately high and adverse impacts to minority or low-income populations. Over the long term, the entire corridor would benefit from the proposed project as a result of improved mobility and reduced traffic congestion.

[4] *Ibid.*
[5] U.S. Department of Transportation, Federal Highway Administration. *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations: 6640.23*. December 2, 1998.

4.12 Cultural Resources

4.12.1 Community Services

Community services in the Cities of Grand Prairie and Irving have experienced minor changes since the ROD. These include the planned growth and development of libraries, emergency services, hospitals, and community centers. No community service facilities have been constructed within the proposed right-of-way. No facilities would be impacted by the right-of-way required for the proposed design changes.

4.12.2 Schools

No schools have been constructed within the right-of-way proposed in the SFEIS or in the right-of-way required for the proposed design changes.

The proposed highway would be located within 100 feet of the Sam Houston Elementary School, bisecting the school's service area. As stated in the SFEIS, a pedestrian crossover would be constructed to provide safe access for Sam Houston Elementary School students.

4.12.3 Places of Worship

Two places of worship, the Westridge Baptist Church and St. Charles Anglican Church, were identified in the SFEIS as being displaced by the preferred alternative. No new places of worship were identified within the right-of-way proposed in the SFEIS or in the right-of-way required for the proposed design changes.

4.12.4 Historical Sites

All buildings, sites, objects, and structures in the proposed right-of-way and area of potential effect (APE) that date to or before 1958 were documented and their eligibility for listing on the National Register of Historic Places (NRHP) assessed. The APE consisted of 1,300 feet on both sides of, and included, the proposed right-of-way. In addition, the record and files in the Texas Historical Commission's (THC) NRHP and THC Historic Marker files were

examined for previously recorded historic buildings, sites, districts, and markers. Readily available historical and archival sources were used to determine the historical background of the area and historical maps and state agency resources were consulted for further references. Building construction dates in the online resources of the Dallas Central Appraisal District were consulted and provided dates of construction for most of the buildings included in the survey area (1).

A total of 474 properties in the area of potential effect (APE) appear to date from or prior to 1958. The APE for this project was determined to be 1,300 ft beyond the proposed ROW. Building construction dates range from 1846 to 1958, although all but an 1846 log house were twentieth century. One cemetery, Shady Grove Cemetery, which dates from the 1870s is located within the APE. Of the 474 properties, seven buildings and one site were located in Irving and the remainder of the sites were located in Grand Prairie.

No buildings, sites, structures, or objects in the study area have been listed on the NRHP. Site 478, Micajah Goodwin Log Cabin has a Texas Historical Marker and is a Registered Texas Historical Landmark (RTHL). Site 52 (Shady Grove Cemetery) has a Texas Historical Marker.

The period of historical significance for the survey area lies primarily in the last half of the nineteenth and first half of the twentieth centuries. With the exceptions noted below, none of the sites have sufficient historical significance and/or historical integrity to warrant placement on the NRHP.

The sites listed in **Table 4.12-1** merit further investigation and research to determine whether they meet the standards of significance and/or integrity for listing in the NRHP. None of the following sites are within the proposed right-of-way, but are within the APE of the proposed project.

Table 4.12-1: Historic Sites

Site Number	Description	Date	Schematic Sheet #
52	Shady Grove Cemetery	1877	7 of 9
244	Single Family Residence	1915 (estimated)	4 of 9
245	Single Family Residence	1915 (estimated)	4 of 9
418	Single Family Residence	1917 (estimated)	4 of 9
438	Single Family Residence	1928	4 of 9
444	Historic Anderson Building	1915	4 of 9
478	Micajah Goodwin Log Cabin	1846	3 of 9

It was determined that five of the sites listed in Table 4.12-1 would be recommended as eligible for inclusion on the National Register of Historic Places.

In regard to Site 52, the Shady Grove Cemetery, is not eligible to the register. It shows no significant planning, designed landscape features, or close association with figures of transcendent historical importance. Other pioneer family cemeteries in Dallas and adjacent counties better represent early settlement patterns in this area of the state.

Site 478, The Micajah Goodwin Log Cabin, although designated as a Recorded Texas Historic Landmark, was moved to the Cottonwood Park in 1975 from its original site, and, as such, we determine it is not eligible to the National Register.

The Criteria of Effect and the Criteria of Adverse Effect were applied to Sites 244, 245, 418, 438, and 444. It was determined that the proposed undertaking would have no effect on the historical associations for which these properties were found to be significant. On November 3, 2004, concurrence from THC stating, that there will be "no effect" on the eligible properties in this project was received and it has been cleared for standing historic properties (**Appendix D**).

4.12.5 Archeological Sites

A brief examination of the overall SH 161 project corridor looked at a footprint based on the proposed right-of-way of the project corridor. Two previously recorded sites exist within this footprint. These sites are 41DL353, a historic farmstead located just north of IH 20 along the Fish creek drainage, and 41DL354, a prehistoric open campsite of questionable context located adjacent to the Cottonwood Creek drainage. Neither site is considered significant.

A more in-depth examination was made of the four areas of new right-of-way within the overall project corridor. All other portions of the project are within existing right-of-way or have already been examined by a previous survey performed in 1993 by TxDOT. The four areas total approximately 3.3 acres. For the purposes of this investigation these four areas will be designated localities 1, 2, 3, and 4.

Locality 1

Locality 1 is the northernmost of the four new areas of right-of-way. It will be in the southwest corner of the intersection of Robinson Road and SH 161. It is a crescent shaped piece

of land approximately 220 feet long and 15 feet wide. It covers an area of 0.1 acres adjacent to the existing location of Robinson Road.

Based on the established factors, this locality has mixed archeological potential. It is within 160 feet of Cottonwood Creek and may be on a raised flood terrace. However the soils of the area, though moderately well drained, are predominantly deep, frequently flooded Ovan clay (Coffee, et al 1980). The previously recorded site 41DL354 (found during the 1993 survey) is less than 100 feet south of this locality in the same soil type and within the channel of Cottonwood Creek. However, the archeologist investigating this site determined that these deposits were most likely redeposited from somewhere upstream. No specific recommendations as to eligibility were made and the full extent of the site is uncertain.

In general, the small size and narrow shape of Locality 1, and the clay soils would suggest a low archeological potential. However, its close proximity to Cottonwood Creek and the previously recorded site 41DL354 indicate a moderate to high potential.

Locality 2

Locality 2 is at the proposed relocated crossing of Warrior Trail across the project corridor. This relocation involves moving the existing Warrior Trail approximately 70 feet to the north. New right-of-way will include 200-foot long approaches on either side of the proposed SH161. These will total 1.0 acre of new right-of-way.

Assessment of this locality indicates a low archeological potential. Although Kirby Creek runs approximately 820 feet to the south, this stream has been substantially modified by human activity. It appears to have been straightened to facilitate agricultural use. More importantly for this assessment, the soils at this locality are deep Burleson clay, primarily used for crops (Coffee, et al 1980). Examination of aerial photographs from the late 1990s and from 1975 confirm that this land is under cultivation. It is unlikely that any previously unrecorded sites within this area would remain intact.

Locality 3

Locality 3 is approximately 655 feet south of Locality 2 at the crossing of Kirby Creek. This location will involve the addition of two approximately 900 feet long by 40 feet wide segments, one either side of SH 161 where it crosses the stream. These two additions cover an area totaling 1.8 acres.

Assessment of Locality 3 indicates a low archeological potential. As with Locality 2, the area is within deep clay (Branyon), which is primarily used for agriculture (Coffee, et al 1980). Examination of available aerial photographs shows that it has been under cultivation since at least 1975. Although the location is astride the modern channel of Kirby Creek, the creek has been substantially modified, as previously mentioned. It is unlikely that previously unrecorded sites would have remained intact through the combined impacts of agriculture and the straightening of Kirby Creek.

Locality 4

Locality 4 is at the southernmost end of the Project Corridor and is actually part of modifications to IH 20 where the two highways will merge. This locality is approximately 700 feet by 40 feet and covers 0.4 acres.

This locality is of moderate to high archeological potential. The soils at Locality 4 are silty clays (Altoga and Frio) that are most commonly cropland, pasture, or urban use (Coffee, et al 1980). However, it also sits on the terminal slope of a ridge between Fish Creek (within 980 feet) and a tributary, the North Fork of Fish Creek (within 490 feet). Examination of available aerial photographs of this location show it as wooded, which suggests that there may have been little or no impact to the area by agriculture or urbanization.

There is a previously recorded site approximately 1,475 feet northwest of Locality 4. This site is a historic farmstead dating to the early 20th century. It is not considered within the right-of-way and does not affect the archeological potential of Locality 4.

Based on the results of the 1993 survey, an intensive archeology survey was to be conducted in January 2004. A pedestrian survey was completed and backhoe trenching was recommended at Fish Creek, Johnson Creek and the West Fork of the Trinity River. Due to the heavy rains in the Dallas area during the time the intensive survey was to be conducted, the trenching could not be completed. Conditional clearance was granted by THC on February 5, 2005 requiring that the archeological work would be conducted once trenching was possible (**Appendix D**).

If evidence of archaeological deposits is encountered during construction, work in the immediate area will cease and TxDOT archaeological staff will be contacted to initiate accidental discovery procedures under the provisions of the Programmatic Agreement between

TxDOT, THC, FHWA and the Advisory Council on Historic Preservation and the Memorandum of Understanding (MOU) between TxDOT and the THC.

4.12.6 Parks and Recreation

In addition to the C.P. Waggoner Park which was addressed in the Section 4(f) in the previous SFEIS, another park facility has been planned along the SH 161 route. The City of Grand Prairie has planned and developed Veteran's Park, a city park constructed adjacent to and west of SH 161 south of Arkansas Street. TxDOT has coordinated with the City of Grand Prairie and the City has planned for the location of SH 161. The park was considered in the updated noise study; however, the city was not in favor of noise mitigation for the park. The city of Grand Prairie is currently developing the site development plan for this park and will provide buffer areas for the park. A Section 4(f) was not prepared for this park since the City has planned for the presence of SH 161 and land was not acquired from this park.

4.12.7 Section 4(f) Considerations

The SFEIS contained a Section 4(f) evaluation for C.P. Waggoner Park. Approximately 10.1 acres of right-of-way were needed from this park for the construction of SH 161. None of the additional 3.3 acres required for the proposed design changes would impact Section 4(f) property, defined as a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site.

As mitigation for the Section 4(f) impacts, the SFEIS proposed the creation of 62.1 acres of new parkland, a recreation trail with amenities, extensive re-vegetation and landscaping, fishing ponds, and improvements to circulation roads and parking. The parkland would be comprised of two tracts of land: a park connector linking Waggoner Park to Mike Lewis Park (25.2 acres); and an expansion of existing Mike Lewis Park (36.9 acres). This proposal was reaffirmed in decisions by the United States District Court for the Northern District of Texas, Dallas Division, on August 18, 1998 and the United States Court of Appeals for the Fifth Circuit, on February 9, 2000.

Since the ROD and court decisions, TxDOT and the City of Grand Prairie have entered into an agreement concerning the implementation of the Section 4(f) mitigation. This agreement, for fee in lieu/functional replacement, states that TxDOT agrees to reimburse the City of Grand Prairie for acquiring the property for the proposed mitigation and the actual costs incurred in order to make the improvements proposed in the SFEIS, Section 4(f) statement, and ROD. This agreement was signed by both parties and approved by the FHWA on December 16, 2002. The agreement as well as the conceptual plans for the proposed park mitigation is included in **Appendix E**. Weekly meetings have been held to agree upon elements of park design and how to best address the decisions made by the U.S. Court of Appeals for the Fifth Circuit and meet the needs of Grand Prairie to provide a mitigation solution that they desire. Through a partnership with TxDOT and the City of Grand Prairie, development of detailed park design and associated construction documents to build the park elements listed above began in June 2004.

5.0 NATURAL ENVIRONMENT

5.1 Biotic Communities

There have been no major changes to the biotic communities in and near the study area, including the additional right-of-way required for the proposed design changes, since the ROD.

5.2 Waters of the U.S., including Wetlands

The SFEIS used desktop methods such as aerial photography and U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps to determine wetland and jurisdictional waters in the project area. This information was used for comparison purposes during the evaluation of alternatives. As part of this re-evaluation, a wetland delineation for the entire right-of-way (the SFEIS proposed right-of-way and the additional right-of-way proposed in this re-evaluation) has been performed and the results discussed in this section.

Pursuant to Executive Order 11990 (Protection of Wetlands) and Section 404 of the Clean Water Act (CWA), an investigation was conducted to identify jurisdictional wetlands and waters of the United States within the proposed project limits. According to the U.S. Army Corps of Engineers (USACE), the federal agency having authority over waters of the U.S., wetlands must possess three essential characteristics. Under normal circumstances, these characteristics include the presence of hydrophytic vegetation, wetland hydrology, and hydric soils.

A total of 22 areas within the proposed project ROW were identified, characterized, and delineated in order to evaluate the jurisdictional status of the sites. There were 14 areas that contained waters of the U.S. Three of those areas included associated wetlands. The total delineated area of waters of the U.S., excluding wetlands, within the right-of-way was 5.412 acres. Four additional areas were determined to contain jurisdictional wetlands, while four potential wetland areas (Wetlands 4, 12, 17, and 18), and waters associated with Areas 2, 16 and 19 (Water 19A and Water 19B), were determined to be uplands and/or non-jurisdictional and removed from **Table 5.2-1**. Some areas contained multiple wetland features. The delineated jurisdictional wetlands within the right-of-way totaled 9.265 acres. Wetland data forms for

jurisdictional areas are included in **Appendix C**. These areas are shown in **Table 5.2-1**. Wetlands and waters of the U.S. beyond the right-of-way of the proposed project were not delineated.

Table 5.2-1: Waters of the U.S., including Wetlands within the Proposed ROW

Area	Site	Type of Potential Impact	Stream Name	Crossing Type	Assoc. Observation Points	Acres Within Proposed ROW	Frtg Rd/Inter-change Perm. Impacts (ac.) & Proposed Permit	Frontage Road Permit Section	Mainlane Perm. Impacts (ac.) & Proposed Permit	Schematic Sheet Number
1	1	Water	Upper fork of Fish Creek	Single and complete	1	0.454	0 NWP 14 – no PCN	1	0 NWP 14 – no PCN	1
3 [2]	3	Water	Kirby Creek	Single and complete	1	0.143	0 NWP 14 – no PCN	1	0 NWP 14 – no PCN	2
4 [2]	4	Water	Branch of S. fork of Cottonwood Creek	Single and complete	1	0.521	0.329 NWP 14 – with PCN	1	0.073 NWP 14 – no PCN	2 and 3
5	5A	Water	S. fork of Cottonwood Creek	Associated with Water 5B	1	0.262	Water 5A - 0 Water 5B - 0.014 NWP 14 – no PCN	2	Water 5A - 0 Water 5B - 0 NWP 14 – no PCN	3
	5B	Water	Branch of S. fork of Cottonwood Creek	Associated with Water 5A	1	0.116		2		3
6	6	Water	Cottonwood Creek	Single and complete	1	0.278	0 NWP 14 – no PCN	2	0 NWP 14 – no PCN	3
7	7	Water	Unnamed tributary of Trinity River	Single and complete	1	0.061	0.014 NWP 14 – no PCN	2	0.037 NWP 14 – no PCN	4
8	8	Water	Forks of Dalworth Creek	Single and complete	1	0.556	0.062 NWP 14 – no PCN	3	0 NWP 14 – no PCN	4
9	9	Wetland	Unnamed wetland	Associated with Water 9	OP 9 UP, OP 9 WET	0.015	Wetland 9 – 0 Water 9 – 0 NWP 14 – no PCN	3	Wetland 9 – 0 Water 9 – 0 NWP 14 – no PCN	5
	9	Water	South fork of Johnson Creek	Associated with Water 9	1	0.269		3		5
10	10	Water	South fork of Johnson Creek	Single and complete	1	0.566	0.021 NWP 14 – no PCN	3	0 NWP 14 – no PCN	6
11	11	Wetland	Unnamed wetland	Associated with Water 11	OP 11 UP, OP 11 WET	0.121	Wetland 11 - 0 Water 11 - 0	4	Wetland 11 - 0 Water 11 - 0	6

Area	Site	Type of Potential Impact	Stream Name	Crossing Type	Assoc. Observation Points	Acres Within Proposed ROW	Frtg Rd/Inter-change Perm. Impacts (ac.) & Proposed Permit	Frontage Road Permit Section	Mainlane Perm. Impacts (ac.) & Proposed Permit	Schematic Sheet Number
	11	Water	Johnson Creek	Associated with Wetland 11	[1]	1.012	NWP 14 – no PCN	4	NWP 14 – no PCN	6
13 [2]	13A	Wetland	Trinity River floodplain	Associated complex	OP 13A UP, OP 13A WET	0.079	0 NWP 14 – no PCN	NA	0 NWP 14 – no PCN	6
	13B	Wetland			OP 13 UP, OP 13 WET	0.035		NA		6
	13C	Wetland			OP 13 UP, OP 13 WET	0.381		NA		6
	13D	Wetland			OP 13 UP, OP 13 WET	0.649		NA		6
	13E	Wetland			OP 13 UP, OP 13 WET	0.229		NA		6
14	14A	Wetland	Trinity River floodplain	Associated complex	OP 14A UP, OP 14A WET	0.365	0 NWP 14 – no PCN	NA	0 NWP 14 – no PCN	6
	14B	Wetland			OP 14A UP, OP 14A WET	0.062		NA		6
	14C	Wetland			OP 14A UP, OP 14A WET	0.558		NA		6
	14D	Wetland			OP 14 UP, OP 14 WET	0.067		NA		6
	14E	Wetland			OP 14 UP, OP 14 WET	0.058		NA		6
	14F	Wetland			OP 14A UP, OP 14A WET	0.207		NA		6
	14G	Wetland			OP 14A UP, OP 14A WET	2.872		NA		6
	14H	Wetland			OP 14 UP, OP 14 WET	1.275		NA		6
15	15	Wetland	Trinity River floodplain	Associated with Water 15	OP 15 UP, OP 15 WET	0.043	Wetland 15 - 0 Water 15 - 0 NWP 14 – no PCN	NA	Wetland 15 - 0 Water 15 - 0 NWP 14 – no PCN	6
	15	Water	West Fork of Trinity River	Associated with Wetland 15	[1]	0.580		NA		6
16 [2]	16	Wetland	Trinity River floodplain	Single and complete [3]	OP 16 UP, OP 16 WET	0.062	0 NWP 14 – no PCN	NA	0.062 NWP 14 – with PCN	7

Area	Site	Type of Potential Impact	Stream Name	Crossing Type	Assoc. Observation Points	Acres Within Proposed ROW	Frtg Rd/Inter-change Perm. Impacts (ac.) & Proposed Permit	Frontage Road Permit Section	Mainlane Perm. Impacts (ac.) & Proposed Permit	Schematic Sheet Number
19 [2]	19	Wetland	Unnamed wetland	Single and complete [3]	OP 19 UP, OP 19 WET	2.187	2.187 Individual Permit	NA	0 NWP 14 – no PCN	7
20	20	Water	Southern tributary of Bear Creek	Single and complete [3]	[1]	0.119	0 NWP 14 – no PCN	NA	0 NWP 14 – no PCN	8
21	21	Water	Bear Creek	Single and complete [3]	[1]	0.234	0 NWP 14 – no PCN	NA	0 NWP 14 – no PCN	8
22	22	Water	Northern tributary of Bear Creek	Single and complete [3]	[1]	0.241	0 NWP 14 – no PCN	NA	0 NWP 14 – no PCN	8

[1] Observation points are only associated with wetland areas.
[2] Features at Areas 2, 12, 17, and 18; and Wetland 4, Water 16, and Waters 19A and 19B, are not included in table due to non-jurisdictional status.
[3] Single and complete designations do not describe absence of adjacency for Section 404 purposes, but rather whether the wetland is associated with a jurisdictional feature within the ROW. All wetlands listed in the table are jurisdictional by virtue of either position in a floodplain or adjacency to jurisdictional waters, even though the waters may be outside the ROW.

Note: Impacts and permit types given for mainlanes are estimated, since final project design for these areas has not been completed.

The current nationwide permits expire in March, 2007, and there is the possibility that the 2007 reissuance may introduce different permit criteria or entirely different permits. To avoid permitting confusion and project delays caused by permit reissuance during the construction phasing, only portions of the roadway scheduled to let by 2007 are to be permitted and mitigated for under the Section 404 process. The frontage roads and portions of interchanges from IH 20 to Conflans Road (just south of SH 183) would be permitted under this plan, and separate permits for four sections, each having independent utility, will be submitted sequentially for this work. The mainlanes would be permitted in the future according to letting schedules and would conform to the conditions of the applicable reissued permits. For these reasons and because final mainlane design has not been completed, the impacts from and permitting requirements for mainlane construction that are given in Table 5.2-1 above are estimates only. It is anticipated that an NWP 14 Pre-Construction Notification (PCN) would be needed for Area 16 for mainlane impacts to wetlands. This should be further examined as the design process is more complete since impacts are minor and complete avoidance may be achieved. See Table 5.2-2: Construction Schedule, for exact limits and phases of construction as they apply to the Section 404 process for this project.

The interchange and frontage roads segments of the project would be authorized by USACE Nationwide Permit 14 in all but one area, in which a Section 404 Individual Permit would be required. Crossings where bridge construction would result in the placement of support structures in a waters of the U.S., including wetlands, might also be authorized by a NWP 25. A PCN to the USACE would be required for some of the NWPs since there would be discharges to wetlands, which are special aquatic sites, and because cumulative impacts in some areas exceed 0.1 acre, which is the NWP 14 acreage threshold for pre-construction notification. Construction of the mainlanes is expected to be authorized by NWP 14 for all crossings.

Channelization would not be required to construct the proposed project. Compensatory mitigation for Section 404 impacts would be coordinated with the USACE and performed in accordance with the terms of the approved permits.

This project crosses the Trinity River, which is considered a navigable waterway; therefore Section 9 and Section 10 of the Rivers and Harbors Act of 1899 are applicable. However, due to correspondence from the FHWA on other similar projects, it is anticipated that the proposed project would not subject to the permitting requirements imposed under Title 33 USC 401 and 525(b). It was also anticipated that the project is exempt from 33 CFR 118 which specifies navigational bridge permits and lighting requirements. This expectation is based on the

following facts: the waterway is not used or susceptible for use in its natural condition or by reasonable improvement as a means to transport interstate or foreign commerce; the waterway is non-tidal: and there is no significant nighttime navigation of the waterway. Concurrence with this assessment is expected through coordination with the USCG.

A statement in support of a 23 CFR 650.805 determination for bridges not requiring a USCG permit was submitted to FHWA in October 2004 and their concurrence with that determination was issued in December 2004. Coordination with the USCG for a lighting exemption was also completed and in January 2005 the USCG exempted this project from navigational lighting requirements. Coordination regarding navigational bridge permits and lighting requirements with the USCG is complete (**Appendix D**).

Impacts to jurisdictional areas were approximated based on the most current design included in **Appendix B.** Mitigation measures that may be conducted are as follows.

a. Avoid where practicable by spanning jurisdictional areas with bridges.
b. Impacts to the areas would be minimized regarding the amount of excavation and/or fill.
c. Compensation for impacts would occur, preferably onsite, if possible.

State water quality certification is required for all individual Section 404 permits. The Texas Commission on Environmental Quality (TCEQ) and the USACE have developed a tiered system of review for all Section 404 individual permit applications based on project size and the impacted area of regulated waters. Because one crossing in the northern section (Section 4) of the project would require a Section 404 Individual Permit, but the cumulative impacts in the permitted section containing this crossing do not exceed the three acre or equivalent Tier I/Tier II threshold, the section qualifies for Section 401 certification under Tier I guidelines. A Tier I checklist identifying the best management practices (BMPs) that would be used would be submitted as an attachment to the Individual Permit for this section.

As applicable to the three other sections (Sections 1-3), General Condition 9 of the Nationwide Permit Program requires applicants using Nationwide Permit 14 to comply with Section 401 of the Clean Water Act. Compliance with Section 401 requires the use of BMPs to manage water quality on construction sites. The Storm Water Pollution Prevention Plan would include at least one BMP from the 401 Water Quality Certification Conditions for Nationwide

Permits as published by the Texas Natural Resource Conservation Commission, April 12, 2002. These BMPs will address each of the following categories:

- Category I – Erosion Control
- Category II – Sedimentation Control
- Category III – Post-construction Total Suspended Solids Control

Category I would be addressed by applying temporary reseeding (native vegetation) and mulch to disturbed areas. Category II would be addressed by installing, silt fences combined with rock berms. Category III would be addressed by planting permanent native vegetation to create grass-lined ditches. These ditches would accept roadway runoff as sheet flow and filter it along the front slopes of the ditches as well as the bottom of the ditch. Other approved methods may be substituted if necessary, using one of the BMPs from the identical category. Section 401 certification requirements for mainlane construction would be determined when Section 404 permits are prepared.

5.3 U.S. Coast Guard Section 9 Permit

As stated in Section 5.2, the proposed project would not be subject to the permitting requirements imposed under Title 33 USC 401 and 525(b). The project is exempt from 33 CFR 118 which specifies navigational bridge permits and lighting requirements. All correspondence and coordination with the USCG regarding Section 9, navigational bridge permits and lighting requirements, is listed in **Appendix D**.

5.4 Riparian Woodlands

The SFEIS discussion on riparian woodlands identified seven sites, and determined that 27.4 acres of riparian woodlands would be impacted by the proposed project. However, the re-evaluation confirmed that the earlier estimate, which was apparently based solely on a review of aerial photographs, considerably underestimated the riparian woodland acreage in the ROW. Much more detailed data were collected for the re-evaluation, including on-site verification of all woodland areas, which accounts for much of the discrepancy between the acreage estimates. Also, woodland acreages in undeveloped areas increased during the time interval between the SFEIS and the re-evaluation, which further increased the re-evaluation estimate. Due to the

limited data available from the SFEIS, the amount of time that had elapsed, and the 1998 MOU/MOU between TxDOT and Texas Parks & Wildlife (TPWD), the entire project corridor was re-evaluated and individual woodlands data forms were completed for this document. Potential woodland impacts in the additional right-of-way required for the proposed design changes were also evaluated.

Mesquite woodlands can still be found throughout the project corridor. Dense stands can be found just north of IH 20 and south of SH 183. Large mature mesquites can be found north of IH 30 towards the middle of the project route. Since the SFEIS was approved, the extent and density of growth of mesquite has increased. Many of the open areas and fields scattered throughout the project corridor have not been maintained and mesquite has continued to methodically invade over the last seven years.

The proposed project lies within the Blackland Prairies Ecological Region. The vegetation in the area as indicated by the TPWD Vegetation Types of Texas (1984) map is not listed. Small grasslands can still be found scattered throughout the approved project corridor but they do show indications of decline from invasion of mesquite and continued expansion of local woodland species like Sugarberry (*Celtis laevigata*), Honey Locust (*Gleditsia tracanthos*), Cedar Elm (*Ulmus crassifolia*), and Eastern Red Cedar (*Juniperus virginiana*). Most new growth areas and edges being formed show extensive growth of Poison Ivy (*Rhus toxicodendron*) and other plants like American Beautyberry (*Callicarpa americana*), Peppervine (*Ampelopsis arborea*), and Virginia Creeper (*Parthenocissus quinquefolia*).

Approximately 15 scattered riparian sites were identified within the approved route corridor where tree removal would take place. Dominant tree species include Sugarberry, Cedar Elm, Black Willow (*Salix nigra*), Green Ash (*Fraxinus pennsylvanica*), Pecan (*Carya illinoensis*), and American Elm (*Ulmus americana*). These sites were considered to be in transitional zones between aquatic and upland environments in association with or pertaining to lotic systems like streams, creeks, ditches, and rivers, and lentic systems like ponds, pools and wetland areas. Approximately 58 acres of trees would be removed from riparian settings. All of these sites were considered to have functional riparian habitat and vegetation even though some sites were in a park type setting or may have been disturbed at some time in the past.

In order to properly facilitate the analysis and characterization of habitat and habitat impacts for this project, in accordance with the existing 1998 MOU and Memorandum of Agreement (MOA) between TxDOT and TPWD, a Vegetation Data Form and 17 TxDOT

Woodland Data Forms were completed (see **Appendix C**). The information provided on these data forms is based upon the requirements established by TPWD and TxDOT in the existing MOU and MOA to properly evaluate the impacts to and characterize the existing habitat or vegetative conditions. Generally dominant species for the project as a whole included Honey Mesquite and Sugarberry for the tree stratum, Rough-leafed Dogwood and Honey Locust in the shrub stratum, Poison Ivy and Mustang Grape for the vine stratum, Beggars Ticks (*Torilis arvensis*) at the forb stratum, and Johnsongrass (*Sorghum halpense*) at the grass stratum. The average tree height was approximately 40 feet and the diameter at breast height (dbh) ranged to 54 inches with an average of approximately 14 inches. The percent canopy cover was estimated to be approximately 35 percent for the whole project. The total amount of acreage for tree removal is estimated to be approximately 135 acres as indicated on the data forms and shown on the Tree Removal Map (**Appendix A: Figure 4**). Mitigation issues will be considered in coordination with the USACE for loss of any wetlands or waters of the U.S. and loss of riparian habitat will be considered by TxDOT in response to the 1998 MOU with TPWD.

The Vegetation Data Form and the TxDOT Woodland Data Forms (see **Appendix C**) indicate several sites where unusual vegetation features were found. These sites consisted of unmaintained vegetation, fenceline vegetation, riparian vegetation, unusually large trees, and an unusual stand of vegetation. The forms also indicate special habitat features like hardwoods, ponds, creeks, wetlands, rivers and snags and dead trees that were found at various sites throughout the project. Ultimately, construction of the approved facility may result in the removal of most of the trees, shrubs, unusual vegetation features, and special habitat features within the corridor. To minimize the impacts to vegetation, only those trees or features that are directly within the construction zone or within the safety zone will be removed.

The SFEIS indicated that a search of the Texas Natural Heritage Program (TNHP) data revealed no presently known occurrences of special species or natural communities in the immediate vicinity of the project. An updated search confirmed this finding. Three special natural communities, Pecan-Sugarberry Series, Little Bluestem-Indiangrass Series, and Sugarberry-Elm Series, may potentially exist within the approved project corridor. Five out of the 17 TxDOT Woodland Data Forms indicated sites with a Pecan-Sugarberry association of some extent. Not all of the five data forms indicate that Pecan and Sugarberry are the primary dominant species found at that site, reflecting that not all of these sites may be considered true associations as designated by TNHP. Ten of the 17 TxDOT Woodland Data Forms indicated sites with a Sugarberry-Elm association of some extent. Again, not all of these data forms indicate that Sugarberry and Elm are the dominant species found at each site. No sites were

found that indicated a Little Bluestem-Indiangrass association. The Pecan-Sugarberry Series and the Sugarberry-Elm Series are both ranked G4S4, which means they are secure both in the state and globally. The Little Bluestem-Indiangrass Series is ranked G2S2 and is imperiled globally and in the state. No vegetation communities listed as S1 or S2 were found within the proposed right-of-way.

This re-evaluation found an estimated 58.0 acres of impacts to riparian woodlands. Mitigation for the original estimate of 27.4 acres was proposed to be done in Cedar Hill State Park, at a 1:1 ratio. At a meeting in October, 2004, representatives from TxDOT and TPWD met and decided to perform the equivalent of 54.6 acres of mitigation at the Park. The terms and types of mitigation were also discussed at this meeting. TPWD representatives stated that riparian tree plantings were not needed at the Park, and that they would prefer that mitigation funds be invested in other types of habitat and cultural improvements at the Park. The proposed improvements consist of renovation of a children's fishing pond and aquatic research area that is designated by TPWD as a community fishing lake; biostabilization of approximately ¾-acre of shoreline at Joe Pool Lake that is currently eroding at the expense of landward native prairie; removal of invasive trees and their remaining stumps throughout the park that are competing with and harming growth patterns of established native prairie species; and, funds permitting, hydrilla control in access and other heavily-used areas of Joe Pool Lake. Mitigation for the remaining 3.4 acres would consist of planting a wooded riparian buffer zone, including native species that would normally be expected to occur in the area, along the West Fork of the Trinity River in Mike Lewis Park in the City of Grand Prairie. Coordination with TPWD is being conducted and more detailed plans for these mitigation proposals are currently being developed.

5.5 Invasive Species and Beneficial Landscape Practices

In accordance with Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping, landscaping would be limited to seeding and replanting the ROW according to TxDOT approved seeding specifications where possible.

5.6 Threatened and Endangered Species

The SFEIS addressed species that were historically found within Dallas County. The Ocelot (*Felis pardalis*) and the Red Wolf (*Canis rufus*) originally ranged well north of Dallas

County in Texas. Today, neither of these species is listed by the USFWS or TPWD for Dallas County, even though Dallas County is within their historic range.

The SFEIS also addressed the Arctic Peregrine Falcon (*Falco peregrinus tundrius*) as a listed species. Currently, the Arctic Peregrine Falcon has been de-listed, but the USFWS does request that all Peregrine Falcons be treated as a federally listed endangered species and a potential migrant.

Coordination with the USFWS during the development of the SFEIS determined that the only federally listed endangered species known to occur in Dallas County are the Black-capped Vireo (*Vireo atricapillus*) and the Interior Least Tern (*Sterna antillarum athalassos*). This is currently true as well. The information provided in the SFEIS was correct and current. However, no habitat was found for either species within the project limits.

Table 5.7-1 provides both federal and state species that are currently listed for Dallas County. No habitat was found within the approved project corridor for currently listed federal species. It is anticipated that this project would have no effect on any federally listed species. Habitat for two state listed species, the Wood Stork (*Mycteria americana*) and the Timber or Canebrake Rattlesnake (*Crotalus horridus*), that are listed as threatened may exist within the approved corridor

Table 5.7-1: Federal and State Listed Threatened/Endangered Species in Dallas County

Species	Federal Status	State Status	Description of Suitable Habitat	Habitat Present	Species Effect	Pertinent Project Information
Birds						
Arctic Peregrine Falcon *Falco peregrinus tundrius*	DL[(1)]	T[(2)]	Nests in tundra regions; migrates through Texas; winter inhabitant of coastlines and mountains from Florida to South America. Open areas, usually near water.	No	No	Potential migrant through area. . Mountain Creek Lake is located approx. 3.25 miles east of project.
Bald Eagle *Haliaeetus leucocephalus*	LT[(2)]-PDL[(1)]	T	Nests and winters near rivers, lakes and along coasts; nests in tall trees or on cliffs near large bodies of water.	No	No	Potential migrant and resident in area. Mountain Creek Lake is located approx. 3.25 miles east of project. Trees within project limits may be suitable for nesting and may be close enough to a large body of water. However, no nests were found or eagles spotted and no sighting reports were found for this area.

Species	Federal Status	State Status	Description of Suitable Habitat	Habitat Present	Species Effect	Pertinent Project Information
Black-capped Vireo *Vireo atricapillus*	LE[3]	E[3]	Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching ground level for nesting cover; return to same territory, or one nearby annually; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer.	No	No	No oak-juniper woodlands of sufficient area and composition were found within the project limits. No areas with suitable type vegetation to the ground were found.
Golden-cheeked Warbler *Dendroica chrysoparia*	E	E	Nest in mixed Ashe-juniper and oak woodlands in ravines and canyons	No	No	No oak-juniper woodlands of sufficient area and composition were found within the project limits. Area is relatively level with no ravines or canyons.
Interior Least Tern *Sterna anitllarum athalassos*	LE	E	Nests along sand and gravel bars within braided streams and rivers; also known to nest on man-made structures.	No	No	Man-made structures and gravel bars may exist in the general area along some of the West Fork of the Trinity River System. None appear to be present within the project limit.
Piping Plover *Charadrius melodus*	T		Sandy beaches and lakeshores.	No	No	Very small pockets of sandy areas along Trinity River. Not sufficient in size or number to support species.
Whooping Crane *Grus americana*	LE	E	Estuaries, prairie marshes savannah, grasslands, croplands pastures- winter resident at Aransas NWR, Aransas and Matagorda.	No	No	Potential migrant in area. This species normally does not utilize areas that are urbanized to any extent.
Wood Stork *Mycteria americana*	—	T	Forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, inhabits mud flats and other wetlands.	Yes	No	Isolated habitat areas exist in the general project area that may be suitable for use by the Wood Stork. However, these areas are surrounded by residential and commercial developments to the extent that the habitat areas are rendered non-functional for this species.

Species	Federal Status	State Status	Description of Suitable Habitat	Habitat Present	Species Effect	Pertinent Project Information
Reptiles						
Texas Horned Lizard *Phrynosoma cornutum*	—	T	Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; sandy to rocky soil.	No	No	This species has the capability of utilizing open areas that are dry with scattered vegetation. No areas were found within the project limits.
Timber/ Canebrake Rattlesnake *Crotalus horridus*	—	T	Swamps, floodplains, upland woodlands, riparian zones, abandoned farmland; prefers dense ground cover, i.e. grapevines or palmetto.	Yes	No	The Canebrake is not found to be numerous and resides mainly in the eastern portion of Texas. It is also not known to remain around urbanized areas to any great extent.

(1) DL, PDL - Federally Delisted/Proposed Delisted
(2) LT, T - Federally Listed Threatened, Threatened
(3) LE, E – Federally Listed Endangered, Endangered
(4) --- Species of Concern, but with no regulatory listing status
Sources: U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department and survey of project area.

Habitat Requirements:

Potential habitat for two state listed threatened species, the Wood Stork and the Timber/ Canebrake Rattlesnake, may exist within the project limits.

The Wood Stork is primarily associated with freshwater and estuarine habitats for nesting, foraging, and roosting. They typically forage in freshwater marshes, stock ponds, shallow seasonally flooded roadside or agricultural ditches, narrow tidal creeks or pools, or managed impoundments. Almost any shallow wetland depression that concentrates fish may be used as feeding habitat. The Wood Stork tends to avoid areas that are populated or well developed,

The Timber or Canebrake Rattlesnake favors densely vegetated wooded valleys, lowland thickets, and hilly woodlands near rivers, streams, and lakes in the eastern part of the state. They would occupy open upland pine and deciduous woods and the second growth pastures of unused farmland. The rattlesnake feeds on rodents and birds. Though the lowland riparian corridor found within the project limits are isolated, some areas do exhibit relatively dense understory and may be utilized by remnant populations or individuals of this species. This species is very secretive and tends to avoid urbanized areas.

These species were not seen during a local reconnaissance survey and it is anticipated that the proposed project would not adversely affect these two species. Due to the urbanization in the area it would be unlikely that the Wood Stork or Timber/Canebrake Rattlesnake would be

found in or utilize areas within the proposed ROW. Care should be taken during clearing and construction. If any listed federal or state species are found during construction or clearing, work should cease at that location the local TPWD or USFWS agent should be contacted.

Effects to habitat and wildlife species that exist within the project area should be minimal. Some very limited direct effects to small less mobile species may be anticipated. Some effects could also occur to larger mammalian species that seek refuge in holes or nest sites in trees that would be removed. These effects would be expected to be minimal if they occur at all. Migratory avian species are protected under the Migratory Bird Treaty Act (MBTA). The MBTA makes it unlawful to take, kill, possess, transport or harm migratory birds, their eggs, parts and nests. If construction or clearing is to take place during nesting season, which could extend from March through July, trees would need to be checked for active nests prior to the commencement of work. A qualified wildlife biologist should provide a brief survey of the area prior to construction to insure that no nests or colony sites exist within the project limits that may be effected or postpone construction.

5.7 Wild and Scenic Rivers

There has been no change to the designation of Wild and Scenic Rivers. There are no Wild and Scenic Rivers in the proposed project area.

5.8 Farmland Protection Policy Act

The proposed right-of-way is urbanized and/or zoned for urban use. Therefore the project is exempt from the requirements of the FPPA and requires no coordination with the Natural Resource Conservation Service (NRCS).

5.9 Physical Environment

5.9.1 Water Quality

5.9.1.1 Subsurface Waters

There has been no change in subsurface water conditions in the study area, including the additional right-of-way required for the proposed design changes, since the ROD.

5.9.1.2 Surface Waters

The Texas Surface Water Quality Standards (TSWQS) apply to all surface water features in the state. These standards are enumerated in Title 30, Chapter 307 of the Texas Administrative Code. The standards were approved by the Environmental Protection Agency (EPA) in accordance with Section 303 of the Federal Clean Water Act and are updated every three years. The standards are typically designed to protect the most sensitive beneficial use within a water body. The TCEQ, formerly known as the Texas Natural Resource Conservation Commission (TNRCC), distributes the information provided by the TSWQS and administers compliance with the standards. Four general categories for water use are defined in the TSWQS: aquatic life use, contact recreation, public water supply, and fish consumption.

The TCEQ carries out a regular program of monitoring and assessment to compare conditions in Texas surface waters to established standards and to determine which water bodies are meeting the standards set for their use and which are not. The results of the assessment are published periodically in the Texas Water Quality Inventory and 303(d) List, as required by Sections 305(b) and 303(d) of the federal Clean Water Act. The Texas Water Quality Inventory and 303(d) List is an overview of the status of surface waters of the state, including concerns for public health, fitness for use by aquatic species and other wildlife, and specific pollutants and their possible sources. The TCEQ monitoring program divides the state's surface water into river basin data and further divides this data into specific segments which are each allocated a segment identification number.

The stormwater runoff from this proposed construction will flow into the Lower West Fork Trinity River and several creeks which flow into the Lower West Fork Trinity River,

segment 0841, or into Mountain Creek Lake, segment 0841A, of the Trinity River Basin. The Lower West Fork Trinity River as listed in the TCEQ Water Quality Inventory is designated as not meeting the standard for bacteria and PCBs in fish tissue. The Mountain Creek segment is not listed on the Water Quality Inventory List.

Both Bear Creek and Johnson Creek flow into the Lower West Fork Trinity River, segment 0841. This segment is designated as threatened or impaired for not meeting the standard for bacteria and PCBs in fish tissue in the 2002 Clean Water Act Section 303(d) list and the project is within five miles upstream of the threatened or impaired segment.

Kirby Creek, Fish Creek, and Cottonwood Creek flow into Mountain Creek Lake. This segment is not designated as either threatened or impaired in the 2002 Clean Water Act Section 303(d) list and the project is not within five miles upstream of a threatened or impaired water segment.

5.9.2 Floodways and Floodplains

No additional floodplain impacts would occur as a result of the proposed design changes.

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) were reviewed to determine flood zones within the area for the proposed project (**Appendix A: Figure 2**). SH 161 crosses six areas which are designated as Zone AE, special flood hazard areas inundated by the 100-year flood with base elevations determined. **Table 5.9-1** lists the locations where SH 161 crosses the floodplain areas.

Table 5.9-1: Floodplain Crossings

Waterway	FEMA Map
West Fork Trinity River	FEMA Map Number 48113C0295J, August 23, 2001
Bear Creek	FEMA Map Number 48113C0285J, August 23, 2001
Johnson Creek	FEMA Map Number 48113C0295J, August 23, 2001
Cottonwood Creek	FEMA Map Number 48113C0435J, August 23, 2001
Kirby Creek	FEMA Map Number 48113C0435J, August 23, 2001
Fish Creek	FEMA Map Number 48113C0445J, August 23, 2001

Four of the areas in **Table 5.9-1** contain zones designated as Zone X (500): West Fork Trinity River, Bear Creek, Cottonwood Creek, and Kirby Creek. These are areas of the 500-year

floodplain; areas of the 100-year flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from 100-year flood.

The remaining areas are designated as Zone X, areas determined to be outside the 500-year floodplain. Dallas County and the Cities of Grand Prairie and Irving are participants in the National Flood Insurance Program (NFIP).

Two water crossings within the project corridor (Trinity River and Johnson Creek and their associated 100-year floodplains) will require coordination with the local floodplain administrator as part of the Corridor Development Certificate (CDC) process. The CDC process aims to stabilize flood risk along the Trinity River. The CDC process does not prohibit floodplain development, but ensures that any development that does occur in the floodplain will not raise flood water levels or reduce flood storage capacity. Under the CDC process, a CDC permit is required to develop land within a specific area of the Trinity floodplain called the Regulatory Zone, which is similar to the 100-year floodplain. Coordination with the local floodplain administrator (City of Grand Prairie) has been initiated. If it is determined that there are impacts to valley storage, letters of map amendment will likely be filed with FEMA to update the special flood hazard area (SFHA).

As stated in Section 5.2, the proposed project would not be subject to the permitting requirements imposed under Title 33 USC 401 and 525(b). The project is exempt from 33 CFR 118 which specifies navigational bridge permits and lighting requirements. All correspondence and coordination with the USCG regarding Section 9, navigational bridge permits and lighting requirements, is listed in **Appendix D**.

Nationwide Permit Regional Condition 4 for the Fort Worth District of the USACE mandates that all Section 404 NWP applicants working within the study area of the "Final Regional EIS, Trinity River and Tributaries" (TREIS, May 1986) meet the criteria and follow the guidelines specified in Section III of the Record of Decision (ROD) for the TREIS, including the hydraulic impact requirements. The ROD applies to all project actions requiring a permit under Section 10 or Section 404 within the Standard Project Flood (SPF) floodplain. In general, the criteria developed to reduce hydraulic impacts include the provision for no rise in the 100-year or SPF elevation from dredging and/or filling activities along the Mainstem, West Fork, and Elm Fork, and tributaries with drainage areas in excess of 100 square miles. The criteria require a maximum loss in storage capacity for the 100-year and SPF discharges of 0% and 5%, respectively, within the same area. For projects proposed on tributaries with drainage areas of

100 square miles or less, criteria allow up to 15% reduction of the valley storage within the 100-year floodplain and up to 20% reduction of the SPF floodplain valley storage. Further, requested projects on tributaries that would increase water surface elevations to a point of inducing additional flooding or damage to others are not to be permitted. The ROD also established guidelines for mitigation of environmental habitat losses caused by projects in floodplain areas covered by the TREIS. Since the proposed project would be authorized under the USACE NWP program, and parts of the ROW are within the study area of the TREIS, the proposed project would be subject to the provisions of NWP Regional Condition 4 and final project design would comply with the terms of the ROD.

The criteria in the TREIS ROD apply only to navigable waters under Section 10 and jurisdictional waters and wetlands of the United States under Section 404. They do not apply to projects for which the USACE has no regulatory authority. The TREIS raised awareness that a large area of floodplain lands within the Upper Trinity River could be developed outside the jurisdiction of the USACE and that if developed following only FEMA requirements, significant increases in flooding frequency and extent would continue to occur in adjacent and downstream areas. Subsequently, the Corridor Development Certificate (CDC) process was developed as a means to address those floodplain actions that were not within the jurisdictional areas administered by the USACE. The CDC process is a joint effort of the North Central Texas Council of Governments (NCTCOG), the USACE, and member NCTCOG cities with jurisdiction over the Trinity River floodplain. The program, as part of the Trinity River Common Vision, relies on member cities within the area to require developers to submit plans showing the impact of their proposed projects on floodplain hydraulic values. The proposed project would be in accordance with the conditions of the CDC and final design plans would be submitted to CDC constituent agencies before letting.

The hydraulic design practices would be in accordance with current TxDOT and FHWA design policies and standards. The proposed roadway expansion would permit the conveyance of design year flood, inundation of the roadway being acceptable, without causing significant damage to the highway, stream, or other property.

5.9.3 Soils, Geology and Topography

There have been no changes in soil, geology, and topography conditions in the study area, including the additional right-of-way required for the proposed design changes, since the ROD.

5.9.4 Hazardous Waste/Substances

The SFEIS analysis identified a total of 31 potential hazardous waste/substance sites in the project corridor. Twenty-nine were categorized as low risk and two, a closed landfill and an abandoned military base, were categorized as high risk. As part of the SFEIS, additional investigations were performed at the two high risk sites, with no evidence of severe chemical contamination being found at either site.

As part of this re-evaluation, a Phase I site assessment for the entire right-of-way (the SFEIS proposed right-of-way and the additional right-of-way proposed in this re-evaluation) has been performed and the results discussed in this section.

Pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA), an initial site assessment including a visual survey of the project limits and surrounding area, research of existing and previous land use, and limited review of federal and state regulatory databases/lists was performed by qualified professionals. This assessment was conducted in accordance with the American Society for Testing and Materials (ASTM) Practice E1527, with exceptions to accommodate the particular situations and needs of the TxDOT's roadway projects. The scope of the site assessment includes the following tasks:

- Review of the proposed route maps, aerial photographs, and available historical maps to establish current and former land use;
- Review regulatory agency listings of sites within the project study area using a consultant database service; and
- Conduct field reconnaissance to confirm and/or supplement information pertaining to the types of land use in the project study area.

A Federal and State environmental regulatory database review of the project study area, in accordance with TxDOT guidelines, was conducted to identify potential environmental concerns that could adversely affect the project study area. These databases were obtained directly from government sources and are updated on approximately quarterly intervals. The regulatory database lists reviewed are listed in **Table 5.9-2**.

Table 5.9-2: Hazardous Materials Regulatory Databases and Minimum Search Distances

Regulatory Database	Radius Search Distance
Environmental Protection Agency (EPA)	
National Priorities List (NPL)	1.00 mile
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), (Uncontrolled hazardous waste sites)	0.50 mile
Resource, Conservation and Recovery Information System (RCRIS) • Treatment, Storage and Disposal Facilities (TSDF) • Hazardous waste Generator Violations and Corrective Action Reports (CORRACT)	 1.00 mile 1.00 mile
Toxic Release Inventory System (TRIS)	0.25 mile
Emergency Response Notifications and Texas Spills (ERNS & TXSPILLS)	0.25 mile
Texas Commission on Environmental Quality (TCEQ)	
Texas State Superfund (TXSSF)	1.00 mile
Texas Leaking Underground Storage Tanks (TxLUST)	0.50 mile
Municipal Solid Waste & Landfills (Authorized & Unauthorized) (TXLF & LFUN)	1.00 mile
Texas Voluntary Cleanup Program (TXVCP)	0.50 mile
Texas Aboveground Storage Tanks (TXAST)	0.25 mile
Texas Underground Storage Tanks (TXUST)	0.25 mile

Sites considered likely to be contaminated and within the proposed right-of-way are categorized as "high risk." Examples of "high risk" sites include landfills and leaking underground storage tanks. Sites are categorized as "low risk" if available information indicates that some potential for contamination exists, but the site is not likely to pose a contamination problem to highway construction.

The database search determined that under the Federal ASTM Standard databases there are three CERCLIS-NFRAP sites, two CORRACTS sites, two RCRIS-TSD sites, nine RCRIS-LQG sites, 24 RCRIS-SQG sites, and two ERNS sites. Under the State ASTM Standard databases there are 34 TXLUST sites, 65 TXUST sites, and seven TXVCP sites. Under the Federal ASTM Supplemental databases there are 36 FINDS sites, two MINES sites, one PADS site, one TRIS site, and one FTTS site. Under the State or Local ASTM Supplemental databases there are six TXAST sites, two TXSPILL sites, 33 Industrial Hazardous Waste sites, and two

AIRS sites. All other Federal, State or Local databases did not list any sites within the proposed project limits.

A total of 232 listings were identified for the parameters specified within the search distances. A site reconnaissance survey was conducted to make visual observations of limited identified database sites and document their existing site conditions and activities. From these surveys no stained pavement, stressed vegetation, or unusual odors were encountered.

Based on distance, topographic gradient, historical information, and database information, 18 sites are categorized as high risk. These sites are summarized in **Table 5.9-3**.

The LUST sites are currently in various stages of corrective action. Site 14, located in the northeastern corner of Oakdale Road and Hardrock Drive, is an active LPST site (number 112188) currently undergoing remediation. The proposed ROW for SH 161 would clip the eastern portion of this site. An additional Phase II was conducted to determine if contaminated media might be encountered during construction. Soil and groundwater had been affected by petroleum hydrocarbon constituents. Groundwater was observed from depths of 10.5 to 13 feet below ground surface. Contaminated media would likely be encountered in surface soils. Coordination with the TCEQ has begun and would continue throughout the entire process. A copy of the document is filed at TxDOT, Dallas District, Advanced Planning Department. Coordination with property owners, tank owners, operators and TCEQ on each of the LUST sites would be an ongoing process up to and during construction.

The SFEIS identified two sites, a closed landfill and an abandoned military base, for additional investigation. TxDOT has already completed or would complete a Phase II Site Assessment on these locations. The following paragraphs contain the available information for these locations.

The unauthorized landfill is located north of the Trinity River, south of Oakdale Road and west of Hardrock Road. The alignment of SH 161 transects the landfill. This alignment was based on the approved SEIS. A Phase II is being conducted to assess the environmental impacts due to the fact the landfill was created pre-rule when containment measures were not used or enforced. Coordination with the TCEQ has already begun and will continue throughout the entire process. The landfill would be spanned and the bridge would begin south of the Trinity River and return to grade north of Oakdale Road.

The abandoned military base, known as Lockheed Martin/Missiles and Fire Control (LMMFC), is located at the corner of West Marshal Drive and West Freeway, just north of SH 303. This site was a historical industrial spill which is currently under remediation by LockheedMartin. This property is being acquired for SH 161. The highway will be above grade for most of the site except for approximately 700 feet that will be excavated to the proposed grade of 5.5 feet below ground surface north of the south branch of Cotton Wood Creek. Groundwater in existing monitoring wells has been measured approximately to 5 to 9 feet below ground surface. Coordination with the TCEQ has already begun and will continue throughout the entire process.

The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area. The use of construction equipment within sensitive areas would be minimized or eliminated entirely. All construction materials used for this project would be removed as soon as the work schedules permit. Any unanticipated hazardous materials and/or petroleum contamination encountered during construction would be handled according to applicable federal, state and local regulations per TxDOT Standard Specifications.

Table 5.9-3: Hazardous Materials High Risk Sites

Site No.	Site Name/Site Information	Type / Contamination Movement	Database Listing	Schematic Sheet No.
14	PM Fuel Service 1114 W. Oakdale Grand Prairie, TX 75050	Petroleum Products	TXLUST TXUST	6
15	Jones Truck Lines 1002 W. Oakdale Road Grand Prairie, TX	Petroleum Products	TXLUST	6
22	1174 N. Great Southwest Parkway Grand Prairie, TX	Unknown	TXVCP	5[(c)]
27	Tetco 741 1402 NW 19th Street Grand Prairie, TX 75050	Petroleum Products	RCRIS TXLUST TXUST	5
30[(a)]	The Ink Company 1139 N. Carrier Parkway Grand Prairie, TX	Unknown	TXVCP	5[(c)]
35	Berryman Products 3800 E. Randol Mill Road Arlington, TX 76011	Unknown	CERCLIS RCRIS TXLUST TXUST VCP	4[(c)]
36[(b)]	Big Three Industries 801 N. Carrier Parkway Grand Prairie, TX 75050	Unknown	TXLUST TXUST	4[(c)]

Site No.	Site Name/Site Information	Type / Contamination Movement	Database Listing	Schematic Sheet No.
39	Hill Street Fina and Automotive 1009 Hill Street Grand Prairie, TX 75050	Unknown	TXLUST TXUST	4[(c)]
43	Dalworth Texaco 1713 Dalworth Street Grand Prairie, TX 75050	Petroleum Products	TXLUST TXUST	4[(c)]
52	Texaco Station 1702 W. Main Street Grand Prairie, TX 75050	Petroleum Products	RCRIS ERNS TXUST	4[(c)]
54	Shamrock 2 2034 W. Main Grand Prairie, TX 75050	Unknown	TXLUST TXUST	4[(c)]
55	Rheaco, Inc. 1801 West Jefferson Grand Prairie, TX	Unknown	TXVCP	4[(c)]
62	Fina 701 Dickey Road Grand Prairie, TX 75050	Petroleum Products	TXLUST TXUST	3[(c)]
64	1821 West Freeway Grand Prairie, TX	Unknown	RCRIS TXUST TXSPILLS	3[(c)]
65	Carrier Parkway Texaco 1746 S. Carrier Parkway Grand Prairie, TX 75051	Petroleum Products	TXLUST TXUST	3[(c)]
70	Poly American Inc. 2000 W. Marshall Drive Grand Prairie, TX 75051	Unknown	RCRIS TXLUST TXUST	3[(c)]
82[(a)]	N & B Fina 1 802 W. Pioneer Parkway Grand Prairie, TX 75051	Unknown	TXLUST TXUST	3[(c)]
86	Whip In 101 3502 S. Carrier Parkway Grand Prairie, TX 75051	Petroleum Products	TXLUST TXUST	2[(c)]

[(a)] Site could not be located during the site reconnaissance.
[(b)] Site is a residential property.
[(c)] Site is off of topographical map – representative location only.

5.9.5 Air Quality

The proposed project is in Dallas County, which has been designated in non-attainment of the 1-hour ozone standard by Environmental Protection Agency (EPA) therefore, the transportation conformity rule applies.

Also, Dallas County was designated as non-attainment for the 8-hour ozone standard by EPA effective June 15, 2004. A demonstration of transportation conformity for added capacity projects to the 8-hour ozone standard is not required until the end of the one-year grace period (June 15, 2005). The proposed project is consistent with the area's financially constrained Metropolitan Transportation Plan known as Mobility 2025 - 2004 Plan Update, and the 2004-2006 TIP was found to conform to the Clean Air Act Amendments of 1990 by the U.S. DOT (FHWA/FTA) on April 8, 2004. Additionally, the project comes from an operational Congestion

Management System (CMS) that meets all requirements of 23 CFR Highways, Parts 450 and 500. The proposed action is listed in the 2004-2006 TIP under the Control-Section-Job (CSJ) numbers found in **Table 5.9-4**.

Table 5.9-4: TIP Listing

CSJ Number	TIP Location
2374-04-054	2004-2006 TIP, Page VII-38 FY 2005
2374-04-040	2004-2006 TIP, Page D.7, FY 2030
2964-01-029	2004-2006 TIP, Page 32 FY 2005
2964-01-004	2004-2006 TIP, Page D.7, FY 2030
2964-01-030	2004-2006 TIP, Page 32, FY 2005
2964-01-009	2004-2006 TIP, Page D.8, FY 2030
1068-04-115	2004-2006 TIP, Page VII-32, FY 2005
1068-04-129	2004-2006 TIP, Page D.6, FY 2030
2964-01-031	2004-2006 TIP, Page D.8, FY 2030
2964-01-010	2004-2006 TIP, Page D.8 FY 2030

The primary pollutants from motor vehicles are volatile organic compounds (VOCs), carbon monoxide (CO), and nitrogen oxides. Volatile organic compounds and nitrogen oxides can combine under the right conditions in a series of photochemical reactions to form ozone (O_3). Because these reactions take place over a period of several hours, maximum concentrations of ozone are often found far downwind of the precursor sources. Thus, ozone is a regional problem and not a localized condition.

The procedures for modeling ozone require long-term meteorological data and detailed area wide emission rates for all potential sources (industry, business, and transportation) and are normally too complex to be performed within the scope of an environmental analysis for a highway project. Therefore, concentrations of ozone for the purpose of comparing the results of the National Ambient Air Quality Standard (NAAQS) are modeled by the regional air quality planning agency for the SIP.

Topography and meteorology of the area in which the project is located do not seriously restrict dispersion of the air pollutants. The air quality was modeled at 15 locations along the corridor. The schematics in **Appendix B** show the air receiver locations. The traffic data used in the analysis was obtained from the TxDOT Transportation Planning and Programming (TPP) Division. The traffic volumes that gave the highest CO Emission readings are 18,300 vehicles per day for 1995, the Estimated Time of Completion (ETC) year, and 33,800 vehicles per day for 2015, the design year (ETC+20).

Using the CALINE3/MOBILE5A emission factors and the aforementioned traffic data, CO concentrations were determined in accordance with the TxDOT Air Quality Guidelines. Carbon monoxide concentrations for the proposed action were modeled using the worst-case scenario (adverse meteorological conditions and sensitive receptors at the right-of-way line) in accordance with the TxDOT Air Quality Guidelines. Local concentrations of CO are not expected to exceed national standards at any time.

5.9.5.1 Analysis Findings

Carbon monoxide background ambient concentrations of 3.7 ppm for one-hour average and 2.3 ppm for eight-hour average were used in all alternatives analyzed. The NAAQS for CO is 35 ppm for one-hour and 9 ppm for eight-hour. Carbon monoxide concentrations for this segment of SH 161 were modeled under the worst meteorological conditions. Station number 209+00 had the highest percent NAAQS for both the existing year (1995) and the projected year (2015) conditions. As shown in **Table 5.9-5**, the existing year CO concentration is 5.70 ppm (16.29 percent NAAQS) for the one-hour concentration. The existing year eight-hour concentration is 3.50 ppm (38.89 percent NAAQS). The projected year CO concentration is 7.10 ppm (20.29 percent NAAQS) for the one-hour concentration. The projected year eight-hour concentration is 4.34 ppm (48.22 percent NAAQS). Neither the existing nor the design year CO concentrations exceed NAAQS. For a complete listing of the CO concentrations modeled, please refer to **Appendix F**.

Table 5.9-5: Carbon Monoxide Concentrations

Year	Station Number	1HR CO (ppm)*	1 HR % NAAQS	8 HR CO (ppm)[(a)]	8 HR % NAAQS
1995	209+00	5.70	16.29	3.50	38.89
2015	209+00	7.10	20.29	4.34	48.22

[(a)] The National Ambient Air Quality Standard (NAAQS) for CO is 35 ppm for one hour and 9 ppm for eight hours. Analysis includes a one-hour background concentration of 3.7 ppm and an eight-hour background concentration of 2.3 ppm.

5.9.5.2 Congestion Management System (CMS)

The Congestion Management System (CMS) is a systematic process for managing traffic congestion. The CMS provides information on transportation system performance, alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. The SH 161 project was developed from the NCTCOG operational CMS, which meets all requirements of CFR500.109. The CMS was adopted by NCTCOG in May, 2001.

Operational improvements and travel demand reduction strategies are commitments made by the region at two levels: the program level and the project implementation level. Program level commitments are inventoried in the regional CMS and are included in the financially constrained MTP. Future resources are reserved for their implementation.

The CMS element of the plan carries an inventory of all project commitments detailing the type of strategy, implementation responsibilities, schedules, and expected costs. At the project implementation level, travel demand reduction strategies and commitments will be added to the regional TIP or included in the construction plans. The regional TIP provides for programming of these projects at the appropriate time with respect to the Single Occupancy Vehicle (SOV) facility implementation and project specific elements.

Committed congestion reduction strategies and operational improvements within the SH 161 study area would consist of new roadway and interchange construction, addition of lanes to existing roadways, bike/pedestrian trails, signalization and intersection improvements, and implementation of intelligent transportation systems (ITS). The TxDOT, under the Congestion Mitigation/Air Quality (CMAQ) program, would manage these projects, which are included in the regional CMS. Individual projects are listed in **Table 5.9-6**.

Table 5.9-6: Operational Improvements

Location	Type	Implementation Year	Funding Source	TIP #	Cost
Fish Creek Off-Street Trails & Bikeways – East Connection from Robinson Rd. to Matthew Rd.	Bike/ Pedestrian	2004	Grand Prairie	11072.0000	$2,607,463
Lakeridge Pkwy. Extension from I.H.20 to Polo Rd.	New Roadway	2005	Grand Prairie	11074.0000	$12,132,071
Dallas Co. Speed and Incident Reporting	ITS	2001	TxDOT - Dallas	11137.0000	$4,240,000
IH 20 at Lakeridge Pkwy. (Dorothy)/ S.H. 161 Int.	Interchange	2003	TxDOT - Dallas	11255.0000	$9,300,000

Location	Type	Implementation Year	Funding Source	TIP #	Cost
Various Locations Citywide – Carrier Pkwy. at Mayfield Rd., Warrior, Arkansas Ln., S.H. 303, Freetown, Marshall, Dickey, Conover, Jefferson St., Dalworth, Small Hill, Tarrant Rd., Egyptian, NW 19th St., and Roy Orr Blvd.; Marshall Dr at LTV W. & E. and W. Frwy., LTV at W. Frwy.; Main St. (S.H. 180) at Center, NW 2nd St., NW 4th St., and Dalworth; Jefferson St. at Center, SW 2nd St., SW 4th St., and SW 5th St.; Tarrant Rd. at NW 7th St.	Traffic Signal Improvement	2002	Grand Prairie	1497.00	$5,586,970
Corridor Traffic Signal System Timing - Carrier Pkwy. at Mayfield Rd., Warrior, Arkansas Ln., S.H. 303, Freetown, Marshall, Dickey, Conover, Jefferson St., Main St. (S.H. 180), Dalworth, Small Hill, Winn Dixie, Tarrant Rd., Egyptian, NW 19th St., Sunnyvale, and Roy Orr Blvd.; S.H. 303 at West Freeway, Robinson Rd., SW 3rd St.; Jefferson St. at SW 23rd St., Center, SW 2nd St., SW 5th St., SW 19th St., SW 14th St., and W. Frwy.; Main St. (S.H. 180) at Center, NW 2nd St., NW 4th St., NW 6th St., NW 19th St., and NW 14th St.	Traffic Signal Improvement	2002	Grand Prairie	11075.0000	$1,189,760
Various Locations – Freetown at S.W. 3rd St.; SW 23rd, 19th, and 14th Sts. at Jefferson St. to S.H. 180; Duncan Perry Rd. at Tarrant Rd.; Carrier Pkwy at Roy Orr Blvd.	Intersection Improvement	2003	Grand Prairie	1529.1000	$900,000
Lone Star Park Traffic Management Program	ITS	2001	Grand Prairie	4161.0000	$1,500,000
IH 30 at S.H. 161/NW 19th St.	Interchange	2003	TxDOT – Dallas	1068-04-115	$84,000,000
IH 30 0.379 mi. W. of Tarrant Co. Line	Interchange	2003	TxDOT – Ft. Worth	1068-02-115	$5,000,000
IH 30 from Tarrant Co. Line to E. of NW 7th St.	Addition of Lanes	2002	TxDOT – Dallas	1068-04-110	$31,500,001

Location	Type	Implementation Year	Funding Source	TIP #	Cost
Dallas County – IH 30, IH 35E, IH 635, US 67	ITS	2000	TxDOT – Dallas	2943.1000	$2,700,000

5.9.6 Traffic Noise

The SFEIS included a preliminary noise analysis, which identified potential noise mitigation locations and possible lengths and heights of noise barriers. The noise analysis summarized here is a more comprehensive and updated study based on the NCTCOG projected traffic for the year 2015, which was also used in the aforementioned SFEIS. Land use changes that have occurred since the SFEIS noise analysis were considered in this study. Sections 1 and 2 of the noise analysis study can be found in **Appendix F**.

Land use in the project area consists of undeveloped areas, business/commercial properties, retail centers, hotels, schools, churches, libraries, community centers, parks, and residential communities. Since the SFEIS, one additional park (Veteran's Park) has been planned and is being developed within the City of Grand Prairie adjacent to SH 161 along Arkansas Lane. Veteran's Park, would be for sports and recreational uses and contain various types of ball fields. As part of the noise analysis, coordination with the City of Grand Prairie was conducted and the City has planned on the construction of SH 161. The City has indicated that they will provide buffer areas as they develop site plans for the park. At this time site plans have not been completed.

Based on preliminary calculations, 9 noise barriers totaling 9,377 linear feet in length and varying in height from 12 to 18 feet will reduce noise levels by at least 5 dBA for 126 benefited receivers and Waggoner Park (see **Table 5.9-7**). Any subsequent project design changes may require a reevaluation of this proposal. The final decision to construct the proposed noise barriers will be made upon completion of the project design and public involvement process.

Table 5.9-7: Noise Barrier Proposal Summary (Preliminary)

Barrier	# Benefited Receivers	Length (feet)	Height (feet)	Total Cost	$/Benefited Receiver
Section 1(IH 20 to IH 30)					
Tree Top Apts	12	1236	12	$251,600	$20,970
4	6	643	12	$139,200	$23,200
6-7	13	1350	14	$321,300	$24,715
Section 2(IH 30 to S. of Rock Island Road)					
1-2	29	1,940	18	$628,400	$21,670
3	Waggoner Park	995	18	$322,500	4(f)
4-5	66	3,213	18	$ 1,487,200	$22,200

5.9.7 Utility Adjustments

As stated in the SFEIS, the existing utility lines are not expected to pose significant problems to the construction, operation, and maintenance of the proposed project. This also applies to the proposed design changes and the associated additional right-of-way.

5.9.8 Visual Impacts

Minor adjustments to the vertical alignment of the proposed roadway have occurred since the ROD. These changes are a result of continuing refinement of and progress in the design. The proposed design changes would not adversely affect visual conditions in the study area.

5.9.9 Construction Impacts

Because this project would disturb more than five acres, TxDOT would be required to comply with the TCEQ Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit for Large Construction Activity.

Construction activities would disturb more than five acres; therefore, TxDOT will be required to file a NOI. Prior to starting construction, the Engineer will initiate a Storm Water Pollution Prevention Plan (SW3P) and the contractor will agree to implement it. Temporary Erosion, Sediment and Water Pollution and control measures will be implemented. Where

appropriate, the temporary erosion and sedimentation control features shall be in place prior to construction.

5.9.10 Irreversible and Irretrievable Commitments of Resources

As stated in the SFEIS, because of the long-term nature of highways, the resources used in highway construction (land, materials, capital, labor, energy and productivity) may all be considered irreversibly and irretrievably committed. Implementation of the design changes addressed in this re-evaluation will increase the resources irreversibly and irretrievably committed to the highway – with the most notable being the additional 3.3 acres of additional right-of-way. Any adverse impacts associated with the irreversible and irretrievable commitment of these resources will be off-set by the increased efficiency of the transportation network and improved mobility resulting from the proposed project.

5.9.11 Relationship Between Local Short-term Uses of Man's Environment and the Maintenance and Enhancement of Long-term Productivity

Neither the land use changes occurring in the project area since approval of the previous document nor the design changes addressed in this re-evaluation alter the findings of the SFEIS with regard to relationship between local short-term use of man's environment and the maintenance and enhancement of long-term productivity.

6.0 CONCLUSION

Since the time of the last environmental documentation for this project, there have been changes in design and right-of-way requirements. These changes have been addressed in this re-evaluation. Two public meetings were held to inform the public about the proposed changes. While there were citizens in opposition to the project, a large majority of the participants were in favor of the project. The proposed changes to the project are not determined to be significant and do not warrant the preparation of an environmental impact statement. Therefore, no further environmental documentation or public involvement is required.