Chapter 3: Affected Environment and Environmental Consequences

This section briefly describes the relevant issues (resources) that would be affected if the No-Build or Build Alternative was implemented. This section predicts the changes that the alternatives would have on these issues and resources.

A. LAND USE

A.1. Existing Environment

The area traversed by IH 30 and IH 35E near downtown Dallas is intensively developed. Well-established industrial, commercial, and institutional properties are the most prevalent type of land use along the project corridor. Residential land uses are located adjacent to project corridor rights-of-way in only a few, sporadically distributed places. The corridor also features several city parks (discussed in the following section under B. Parkland), one place of worship (Grace Presbyterian Church located on SH 183 near the northern terminus of the project) and three public schools (City Park Elementary school located south of IH 30 near Old City Park Townview High School and Barbara M. Manns Academy & School Community Guidance Center, both at 912 Ervay). No other public schools or places of worship exist within the immediate project corridor. These locations along with a depiction of all other corridor land uses are shown on the figures in **Appendix A Corridor Land Use**.

New land development within the project corridor is primarily being redeveloped from existing land uses. The City of Dallas has approved conceptual plans for the redevelopment of the Dallas Design District (located on **Figure 3** of the land use maps in **Appendix A**) and the Cedars neighborhood area **(Figure 7**). Both of these areas consist primarily of commercial and warehouse space, and under the conceptual plans would be redeveloped into mixed-use districts. The City of Dallas has also approved the creation of a Tax Increment Financing District (TIF) to finance the development of approximately 60 acres around the American Airlines Center (**Figure 4**). The plans call for mixed-use development with approximately 450,000 square feet of retail space, 370,000 square feet of office space, 650 apartment units, a 350-room hotel, parkland, and parking structures. In addition, the City has plans to expand the Dallas Convention Center by over 800,000 square feet, with a proposal to expand to the access road along the north side of the IH 30/IH 35E interchange.

The following subsections address several factors that were used to assess potential land use impacts for each alternative, including regional land use effects, compatibility with local plans and policies, and direct conversion of land use.

A.2. Environmental Consequences of Implementing the No-Build Alternative

Under the No-Build Alternative, major changes in regional land use patterns are unlikely to occur. The Dallas-Fort Worth Metroplex features multiple business districts that continue to attract office, retail, hotel, and mixed-use projects. The effect of not building the proposed improvements may in the long-term diminish the ability of downtown Dallas to successfully compete for future regional growth as vehicle access to the Dallas CBD becomes increasingly congested. Within the project corridor, land use patterns under the No-Build Alternative would remain essentially the same while travel delays would increase and vehicle access would deteriorate. The No-Build Alternative does nothing to compliment or accommodate the City's land use plans described in A.1.

A.3. Environmental Consequences of Implementing the Build Alternative

Land use impacts can be direct and indirect. Direct impacts involve property acquisition at locations where additional right-of-way is needed for construction and operation of the IH 30 and IH 35E improvements. Indirect impacts could result from redevelopment of properties adjacent to the proposed improvements and from noise, visual, and access impacts. During development of the proposed improvements, the TxDOT Study Team worked to avoid or minimize the need for property acquisition. The minimization of noise, visual, and access effects was also a major consideration during project development. Noise and access effects are discussed later in sections E and F, respectively, of this chapter.

The Build Alternative would result in the conversion of 73 acres to transportation use. These 73 acres include two residences, one vacant residential lot, 18 commercial buildings, and one county-owned parking garage that would be displaced. The parking garage is associated with a county-owned correctional institution, not a major office building. For the most part, the proposed improvements can be accommodated within the existing IH 30 and IH 35E rights-of-way. The 73 acres is comprised of primarily narrow slivers of undeveloped land adjacent to the existing freeway facilities and scattered throughout the length of the project corridors. A complete listing of the commercial and residential displacements is provided in **Appendix D Potential Displacements**. The displacements are generally located in the following areas:

- At Akard Street just north of the Canyon area of IH 30 (commercial);
- In the vicinity of the IH 30/IH 35E interchange (commercial);
- On the east side of IH 35E south of the Trinity River (residential);
- Along the south side of IH 30 west of the Trinity River (commercial); and
- IH 35E between Oak Lawn and Commerce.

Any household or business that would be relocated or displaced would be eligible for assistance under the requirements of the Federal Uniform Relocation Act. Local municipalities and TxDOT may participate in right-of-way acquisition and relocation assistance. Inventories of replacement dwellings are to contain comparable, decent, safe, and sanitary dwellings. They must:

- Not be less desirable in regard to public utilities or public and commercial facilities;
- Offer adequate facilities to accommodate the displaces; and
- Be located in a neighborhood that is not subject to unreasonably adverse environmental factors.

The available housing is also to be within the financial means of the displaces, including low-income families, and open to all persons regardless of race, color, sex, religion, or national origin and consistent with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

Commercial buildings and residences similar to the ones that would be displaced are available within the project corridor. New land development within the project corridor is primarily being redeveloped from existing land uses. The City of Dallas has approved conceptual plans for the redevelopment of the Dallas Design District (located on **Figure 3** of the land use maps in **Appendix A**) and the Cedars neighborhood area (**Figure 7**). Both of these areas consist primarily of commercial and warehouse space, and under the conceptual plans would be redeveloped into mixed-use districts.

B. PARKLAND

B.1. Existing Environment

Six public parks are located either adjacent to or near IH 30 and IH 35E. In addition, there are five locations within the project limits where a proposed public hike-and-bike trail crosses IH 35E. The parks, which are all owned and maintained by the City of Dallas, are listed along with the figure number where they can be found in **Appendix A Corridor Land Use**:

- Pegasus Park – adjacent to IH 35E (**Figure 2**);
- Reverchon Park – near IH 35E (**Figure 3**);
- Stemmons Park – adjacent to IH 35E (**Figure 3**);
- Dealey Plaza – near IH 35E (**Figure 4**);
- Martyrs Park – adjacent to IH 35E (**Figure 4**); and
- Old City Park – adjacent to IH 30 (**Figure 7**).

The City of Dallas has proposed an approximately six-mile hike-and-bike trail along Lower Stemmons that follows Turtle Creek and the Old Trinity River Channel. The hike and bike trail is part of the Dallas County, City of Dallas and NCTCOG endorsed trail plan. The trail would be maintained by the City of Dallas Parks Department. The trails would be 12-foot wide concrete paths and would cross IH 35E at five locations (see **Appendix A**, **Figures 1** through **4**). The proposed hike-and-bike trail crossings of IH 35E are located at:

- Oak Lawn Avenue;
- Motor Street Avenue;
- Cedar's Branch Avenue;
- Knight's Branch Avenue; and
- Commonwealth Avenue.

B.2. Environmental Consequences of Implementing the No-Build Alternative

The No-Build Alternative would have no effect on the parks mentioned above. Most of the proposed hike-and-bike trails cannot be adequately accommodated under current freeway conditions without some form of design exception or modification of the freeways.

B.3. Environmental Consequences of Implementing the Build Alternative

Of the six parks that are near or adjacent to the project freeways, only one − Stemmons Park − would be partially converted to transportation use. Therefore, a Section 4(f) Evaluation has been prepared and is included in **Appendix C** of this Environmental Assessment. Stemmons Park is approximately 4.9 acres and the project would require approximately 0.7 acres to widen the freeway, provide access to Oak Lawn, provide access from Hi Line and Continental Avenue, and provide a continuous frontage road along IH 35E. These proposed improvements would also be designed to provide adequate horizontal and vertical clearance for all existing and proposed hike-and-bike trails that cross under IH 35E. The avoidance and minimization of adverse effects is further addressed in **Appendix C**.

C. HISTORIC RESOURCES

C.1. Existing Environment

An assessment was made of the potential for historic resources within the project area. Research has focused on the identification of properties listed in the NRHP, Texas Historical Markers, and cemeteries. Sources consulted included NRHP files, the Barker Library at the

University of Texas, early TxDOT Highway Maps, and the THC Library. Literature research has been conducted at the THC. In addition, a survey of historic resources was conducted (see *Historic Resources Survey Report*, dated March 2004, submitted under separate cover).

The APE was determined to be 150 feet beyond the existing/proposed right-of-way throughout the project area, except in two sections where it is extended to 500 feet beyond the existing/proposed ROW – IH 30 from the Trinity River west to Sylvan Avenue (south side only), and IH 35E from the Trinity River south to Eighth Street (both sides). The APE was established in consultation with the State Historic Preservation Officer (letter from TxDOT establishing the APE dated July 8, 2002, and the THC's concurrence with the APE dated July 11, 2002).

NRHP Listed and Eligible Resources

The surveyed properties in the APE (those determined to be 50 or more years old) include eight residences, eight transportation properties, four districts, 15 commercial buildings, three civic buildings, one park, one levee system, and one church/theater. **Table 3.1** provides a list of the surveyed properties and their potential eligibility for the NRHP; **Figure 3-1** depicts their location within the project area.

Table 3.1 Historic Properties Evaluation

Site No.	Site Name/Address	Property Type/Subtype	Potentially NRHP Eligible
1	Rock Island Railroad Bridge, IH 35E at Elm Fork Creek (This bridge was razed in Fall 2003)	Transportation	Not Applicable
2	IH 35E Components	Highway Overpasses, Underpasses and Bridges	No
3	Dupont Flooring Systems, 2451 Stemmons Expressway	Commercial	No
4	Dallas Trade Mart, 2100 Stemmons Expressway	Commercial	No
5	Stemmons Park Bridge, Stemmons Park, Frontage Road	Transportation	No
6	1330 Hi Line Drive	Commercial	No
7	La Cabana Hotel Parking Structure, Stemmons Expressway	Commercial	No
8	Greyhound Dallas Maintenance Center, Continental	Commercial	**Yes**
9	Dealey Plaza Historic District	Historic District	**Listed 1993**
10	Concrete road sign structures at IH 35E and West Commerce	Transportation	No
11	Trinity River Levees, Banks of Trinity River	N/A	No
12	Oak Cliff Mirror and Glass, Dallas-Fort Worth Turnpike	Commercial	Outside APE
13	903 Dallas-Fort Worth Turnpike	Residential	No
14	Kessler Park Historic District, 2nd Extension	Proposed Historic District	**Yes**
15	Houston Street Viaduct	Transportation	**Listed 1984**
16	Morrison Auto Sales, 319 R.L. Thornton Drive	Commercial	No

Table 3.1 Historic Properties Evaluation
- Continued –

Site No.	Site Name/Address	Property Type/Subtype	Potentially NRHP Eligible
17	920 Dale Street	Residence	No
18	921 Dale Street	Residence	No
19	Residence on 8th Street	Residence	No
20	Tenth Street Historic District, Oak Cliff	Historic District	**Listed 1994**
21	413 Eads	Residence	No
22	Kovandovitch House, 523 Eads	Residence	**Yes**
23	Trinity Bottoms Neighborhood	Proposed Historic District	No
24	Cadiz Pump Station, Cadiz Street	Civic	**Yes**
25	Cadiz Street Overpasses and Underpasses, Cadiz Street and Austin Railroad	Transportation	**Yes**
26	Central Wholesale Plumbing Supply, 969 Terminal Street	Commercial	No
27	Dallas Music Complex, Cadiz Street and Industrial Blvd.	Commercial	No
28	Good Luck Gas Station, Cadiz Street and Industrial Blvd.	Commercial/ Transportation	No
29	Dallas Life Foundation, Cadiz Street	Commercial	No
30	1201 W. Griffin	Residence	**No**
31	1423 W. Griffin	Residence	No
32	Ice Cream Plant, 1201 Ervay	Commercial	**Yes**
33	Old City Park, 1717 Gano Street	Park	No
34	IH 30	Highway Overpasses, Underpasses and Bridges	No
35	Ray's Delivery, 1526 Goode-Latimer	Commercial	No
36	Ruibal's Plants of Texas Nursery, IH 30 & Central Expwy	Commercial	No
37	Farmer's Market, IH 30, Harwood, and Pearl	Commercial	**Yes**
38	Millet the Printer, 1000 S. Ervay	Commercial	No
39	Sara Ellen & Samuel Weisfeld Center, 902 Browder	Church/Theater	**Yes**
40	Fire Station No. 4, Cadiz and Akard streets	Civic	No
41	Dallas Convention Center, 650 South Griffin	Civic	No
42	Railroad Bridge, IH 35E at Continental	Highway Overpasses, Underpasses and Bridges	No

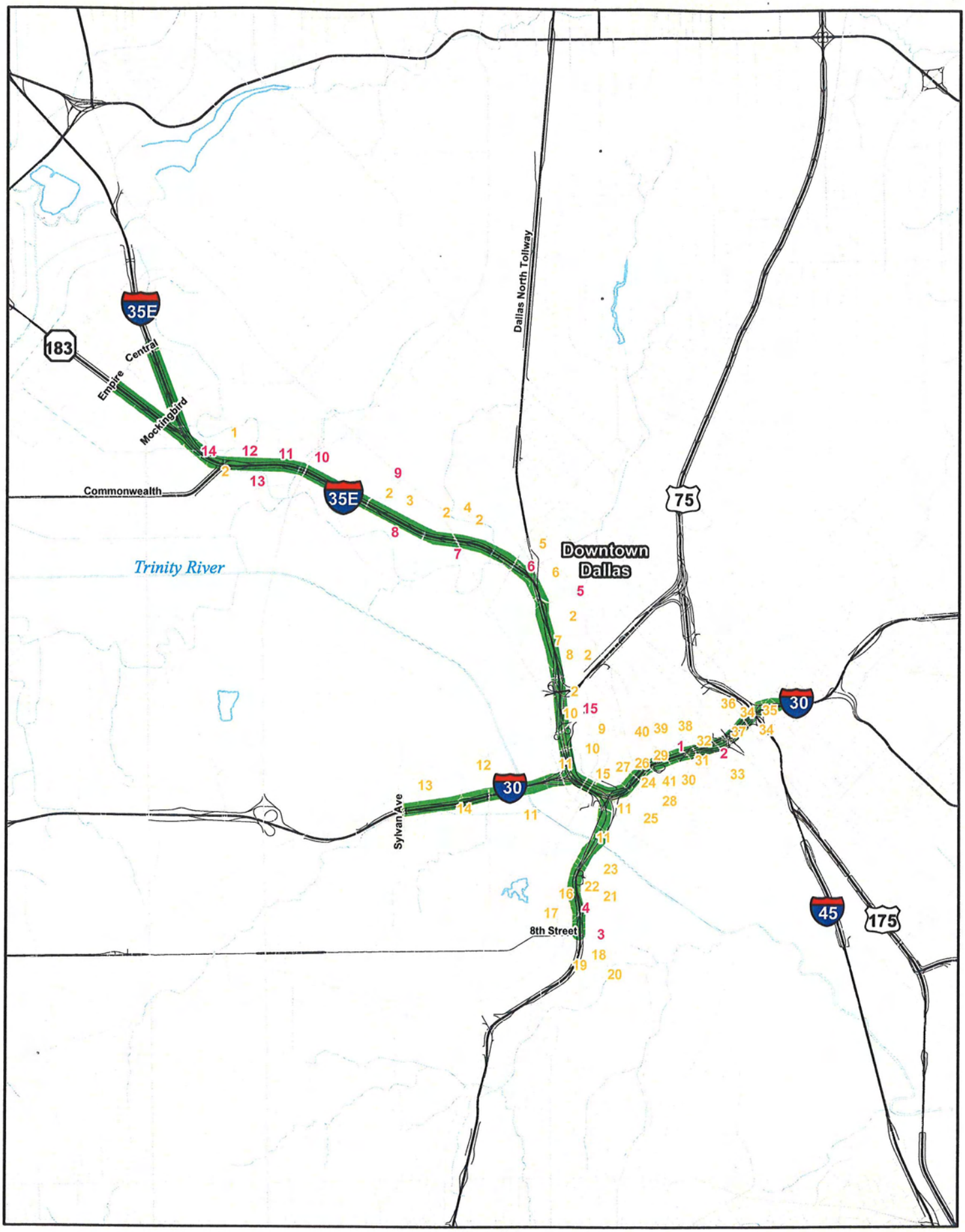

Figure 3-1
Location of Noise Receivers and
Historic Properties Survey Sites
IH 30 and IH 35E Reconstruction
CSJ: 0009-11-181, 0196-03-199
0196-03-205, 0442-02-132, 1068-04-023

Legend
Noise Receivers
Historic Properties
Project Area

PROJECT PEGASUS
Transforming the Downtown Freeways

Project historians applied the NRHP criteria for evaluating properties and have recommended that eight properties in the project area are eligible for NRHP listing. Site Nos. 8, 14, 22, 24, 25, 32, 37, and 39, retain sufficient integrity to convey their historical significance. Although the remaining resources appear to retain their historic locations and settings, more essential are the aspects of design, materials, and workmanship. Because these properties are not known to have significant historic associations, and due to a loss of integrity of design, materials, and workmanship, these resources were determined not eligible for the NRHP. More specific information pertaining to each historic-age site, including photographic documentation, is in the Historic Resources Survey Report, submitted under separate cover. In letters dated November 23, 2004, and December 14, 2004, the THC concurred with these eligibility findings (See **Appendix B**).

Three sites currently listed in the NRHP are present in the APE of the project. They include Site No. 9, the Dealey Plaza Historic District, Site No. 15, the Houston Street Viaduct, and Site No. 20, the Tenth Street Historic District.

Additionally, Site No. 23, the Trinity Bottoms Neighborhood, was initially recommended eligible for NRHP listing. However during the review process, additional consideration was given to the eligibility and boundaries of the district, and it was determined not to possess sufficient integrity to convey its historical significance.

Official State Historical Markers (OSHMs)
Five OSHMs were identified in the APE of the project. The markers are all located at Site No. 9, the Dealey Plaza Historic District, and commemorate the following people and events: the Kennedy Memorial Area; the Site of the First Ferry and Bridge; Alexander and Sarah Horton Cockrell; John Neely Bryan, 1810-1877 and Margaret Beeman Bryan, 1825-1919; and formerly the Texas School Book Depository Building. None of the markers meet the 50-year age requirement for NRHP eligible properties, and therefore all are considered not eligible for NRHP listing.

Cemeteries
No cemeteries were identified within the APE of the project.

C.2. Environmental Consequences of Implementing the No-Build Alternative
There would be no impacts to cultural resources related to the implementation of the No-Build Alternative.

C.3. Environmental Consequences of Implementing the Build Alternative
Eight sites, Site Nos. 8, 14, 22, 24, 25, 32, 37, and 39, within the APE are recommended eligible for listing in the NRHP, and three sites, Site Nos. 9, 15, and 20, are currently listed in the NRHP. No new right-of-way would be required from the NRHP boundaries of the properties. Since their contexts have long included highway traffic, the location, design, setting, feeling, materials, workmanship, and association of all of the properties would remain intact.

In addition, as mentioned in **Chapter 2, Section E**, TxDOT will rehabilitate the Houston Street viaduct (Site #15) under a 1996 Section 106 mitigation agreement with the THC. The mitigation agreement is included in **Appendix B**.

D. AIR QUALITY

Air quality is regulated by the EPA. The EPA delegates this authority to the Governor, who has delegated authority to the TCEQ for monitoring and enforcing air quality regulations in Texas. In compliance with the requirements of the federal Clean Air Act (CAA) of 1970 and the CAAA of 1977 and 1990, the EPA promulgated and adopted the National Ambient Air Quality Standards (NAAQS) in order to protect public health, safety, and welfare from known or anticipated effects of six criteria pollutants. These six criteria pollutants are ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter, and lead. **Table 3.2** lists the NAAQS for these six pollutants.

Table 3.2 National Ambient Air Quality Standards

Pollutant	Averaging Period	Standard	Primary NAAQS[1]	Secondary NAAQS[2]
Ozone	1-hr	Not to be at or above this level on more than three days over three years at one stationary monitor.	125 ppb	125 ppb
	8-hr	The average of the annual fourth highest daily eight-hour maximum over a three-year period is not to be at or above this level.	85 ppb	85 ppb
Carbon Monoxide	1-hr	Not to be at or above this level more than once per calendar year.	35.5 ppm	35.5 ppm
	8-hr	Not to be at or above this level more than once per calendar year.	9.5 ppm	9.5 ppm
Sulfur Dioxide	3-hr	Not to be at or above this level more than once per calendar year.	–	550 ppb
	24-hr	Not to be at or above this level more than once per calendar year.	145 ppb	–
	Annual	Not to be at or above this level.	35 ppb	–
Nitrogen Dioxide	Annual	Not to be at or above this level.	54 ppb	54 ppb
Respirable Particulate Matter (10 microns or less) (PM10)	24-hr	The three-year average of the annual 99th percentile for each monitor within an area is not to be at or above this level.	155 µg/m^3	155 µg/m^3
	Annual	The three-year average of annual arithmetic mean concentrations at each monitor within an area is not to be at or above this level.	51 µg/m^3	51 µg/m^3
Respirable Particulate Matter (2.5 microns or less) (PM2.5)	24-hr	The three-year average of the annual 98th percentile for each population-oriented monitor within an area is not to be at or above this level.	66 µg/m^3	66 µg/m^3
	Annual	The three-year average of annual arithmetic mean concentrations from single or multiple community-oriented monitors is not to be at or above this level.	15.1 µg/m^3	15.1 µg/m^3
Lead	Quarter	Not to be at or above this level.	1.55 µg/m^3	1.55 µg/m^3

Source: TNRCC, 2001
[1] Primary NAAQS: the levels of air quality that the EPA judges necessary, with an adequate margin of safety, to protect the public health.
[2] Secondary NAAQS: the levels of air quality that the EPA judges necessary to protect the public welfare from any known or anticipated adverse effects.
ppm = parts per million
ppb = parts per billion
µg/m^3 = microgram per cubic meter

The CAAA require all states to submit a listing identifying those air quality regions, or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions, which are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant, are designated non-attainment areas for that pollutant. The CAAA also establishes time schedules for the states to attain the NAAQS. To show compliance with the NAAQS an air quality analysis was performed. This analysis was completed in accordance with the TxDOT *Air Quality Guidelines*.

D.1. Existing Environment

The proposed project is located in Dallas County, which is designated as an ozone nonattainment area. Therefore, the conformity rules apply. The proposed project is consistent with the area's financially constrained MTP known as *Mobility 2025 Plan Update – 2004 Update*.[2] Additionally, the plan includes an operational Congestion Management System (CMS) that meets all requirements of 23 CFR Highways, Parts 450 and 500.

The proposed improvements have been reviewed by local and regional agencies and are consistent with other transportation projects and land use plans. **Table 3.3** shows the improvement listed in the current MTP and those in the proposed design.

Table 3.3 Comparison of *Mobility 2025 Update – 2004 Update* and the Proposed Design

Location	Mobility 2025 Update	Proposed Design
IH 30 from IH 45 to IH 35E	**Westbound** – 3 mainlanes & 3 lane collector-distributor roadway **Eastbound** – 3 mainlanes & 3 lane collector-distributor roadway **HOV/M** – 1 lane reversible HOV/M	12 main lanes with two reversible HOV/M lanes
IH 35 from SH 183 to IH 30	**Northbound** – 5 mainlanes **Southbound** – 5 mainlanes **HOV/M** – 2 lane reversible HOV/M	10 lanes with two reversible HOV/M lanes
IH 30 from LP 12 to IH 35E	**Westbound** – 4 mainlanes **Eastbound** – 4 mainlanes **HOV/M** – 1 lane reversible HOV/M	8 main lanes with one reversible HOV/M lanes

The primary pollutants from motor vehicles are volatile organic compounds (VOCs), carbon monoxide (CO), and nitrogen oxides (NOx). Volatile organic compounds and nitrogen oxides can combine under the right conditions in a series of photochemical reactions to form ozone (O_3). Since these reactions take place over a period of several hours, maximum concentrations

[2] Dallas County (along with Tarrant, Collin and Denton Counties) has been designated in nonattainment of the 1-hour ozone standard by EPA. The proposed improvements are included in the 2025 Mobility Plan - 2004 Update found to conform by US DOT (FHWA and the Federal Transit Administration) on April 8, 2004. Dallas County (along with Tarrant, Collin, Denton, Rockwall, Kaufman, Parker, Ellis and Johnson Counties) was designated nonattainment 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).

of ozone are often found far downwind of the precursor sources. Thus, maximum ozone is a regional problem and not a localized condition.

The modeling procedures of ozone require long-term meteorological data and detailed area-wide emission rates for all potential sources (industry, business, and transportation) and are too complex to be performed within the scope of an environmental analysis for a highway project. Accordingly, concentrations of ozone for this purpose of comparing the results of the NAAQS are modeled by the regional air quality planning agency for the State Implementation Plan. However, concentrations for carbon monoxide are readily modeled for highway projects and are required by federal regulations.

The traffic data used in the analysis was supplied by NCTCOG and Texas Transportation Institute and approved by the TxDOT Transportation Planning and Programming (TPP) Division. For the baseline year (2001), the estimated Average Daily Traffic (ADT) within the corridor ranges from approximately 124,500 to 210,600 vehicles per day. The design year (2026) ADT is estimated to range between approximately 160,800 and 305,200 vehicles per day. Neither the topography nor the meteorology of the project area would be expected to restrict the dispersion of air pollutants except for that below grade section of IH 30 east of IH 35E and west of IH 45 known as the Canyon. Current land use along the project area is predominately commercial with few residential locations. The heaviest traffic occurs near commercial receptors.

Traffic volumes for the IH 30 and IH 35E corridors contained in NCTCOG's *Mobility 2025 Plan – 2004 Update* were compared with volumes used in the design of IH 30 and IH 35E. *Mobility 2025 Plan – 2004 Update* includes new demographic sets based on the 2000 Census. Direct comparisons of the traffic volumes are not possible because the 2026 traffic volumes used for IH 30 and IH 35E were derived from the 2025 volumes in the original *Mobility 2025 Plan*. The 2026 volumes differ from the 2025 volumes due to some growth in traffic as well as some redistribution of traffic volumes due to relocation of ramps and connections to the proposed Trinity Parkway. **Table 3.4** shows the 2026 volumes used in the IH 30 and IH 35E analysis, along with the 2025 volumes from the *Mobility 2025 Plan* that they are based on. These 2025 volumes are then compared to the 2025 volumes from the *2004 Update* of the *Mobility 2025 Plan*.

Comparisons of 2025 traffic volumes for each segment of the corridor indicate that the volume differences range from –9.2 percent to 9.5 percent within the corridor segments. These differences would not have substantial adverse impacts on the environmental issues evaluated in the EA (such as air quality, traffic noise impacts, socio-economic discussions, etc.). IH 30 and IH 35E corridors are currently operating at poor levels of service and estimates show that latent demand is high for the corridor. Combined with the right-of-way constraints in the corridor, these traffic differences would not affect the recommendation of the preferred alternative contained in the EA nor change the conclusions of the EA.

Table 3.4 Corridor Traffic Volumes from Mobility 2025 (Original and Updated Plan)

Segment	2026 ADT in EA (based on Mobility 2025 and Adjusted by TTI) (vpd)	2025 ADT in Mobility 2025 (basis of 2026 EA volumes) (vpd)	2025 ADT in Mobility 2025 – 2004 Update using new demographics (vpd)	Percent Difference between Year 2025 Volumes
IH 35E				
Inwood to Motor	276,500	272,900	284,200	+4.1%
Wycliff to Market Center	259,900	262,100	280,100	+6.9%
Oaklawn to DNT	277,300	270,700	296,500	+9.5%
Hi Line to Woodall-Rodgers	333,000	343,600	360,900	+5.0%
Mixmaster to Colorado	283,600	267,400	242,900	-9.2%
IH 30				
Beckley to Mixmaster	183,600	170,100	179,000	+5.2%
Mixmaster to Griffin	224,500	222,600	220,900	-0.8%
Ervay to Harwood	260,200	238,200	254,700	+6.9%
Good-Latimer to IH 45	254,000	252,200	272,500	+8.0%

D.2. Environmental Consequences of Implementing the No-Build Alternative

As previously mentioned, the No-Build Alternative includes NCTCOG's adopted CMS, which is a systematic process for managing congestion. It provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. This project was developed from NCTCOG's operational CMS, which meets all requirements of CFR 500.109.

Operational improvements and travel demand reduction strategies are commitments made by the region at two levels: program level and project level implementation. Program level commitments are inventoried in the regional CMS; they are included in the financially constrained MTP, and future resources are reserved for their implementation. The CMS element of the plan carries an inventory of all project commitments (including those resulting from major investment studies) detailing type of strategy, implementing responsibilities, schedules, and expected costs. At the project programming stage, 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 single-occupant vehicle (SOV) facility implementation and project specific elements. Committed congestion reductions strategies and operational improvements within the IH 30 and IH 35E corridors will consist of signalization and intersection improvements. These projects, which are included in the regional CMS, will be managed under the Congestion Mitigation and Air Quality (CMAQ) program. In an effort to reduce congestion and the need for SOV lanes in the region, TxDOT and the NCTCOG will continue to promote appropriate congestion reduction strategies through the CMAQ program, the CMS, and the MTP. According to the NCTCOG, the congestion reduction strategies considered for this project will help alleviate congestion in the study area, but will not eliminate it. Therefore, the proposed improvements are justified. The CMS analysis for added SOV capacity projects is on file and available for review at the NCTCOG.

D.3. Environmental Consequences of Implementing the Build Alternative

The local concentrations of CO expected from the roadway project were modeled at the right-of-way for the baseline year 2001 and design year 2026, using the CALINE3 roadway air quality computer model and MOBILE6 emission factors. (See **Table 1.2** for the traffic volumes used in this analysis.) Worst-case meteorological conditions were used (i.e., wind speed of 1 m/s; wind bearing of zero degrees (due North); stability class of 6; surface roughness of 175 cm; mixing height of 1,000 m) along with roadway speeds of 50 and 60 miles per hour, as appropriate for each roadway section.

Based on the modeling results, local concentrations of CO are not expected to exceed national standards at any time. The worst-case one-hour CO concentration is not expected to exceed 16.3 parts per million (ppm) beyond the right-of-way in 2001 and 14.9 ppm in 2026. For the eight-hour CO concentration the worst-case is predicted to have been 7.3 ppm in 2001 and through roadway enhancements improve to 6.8 ppm in 2026. These values include background concentrations for Dallas of 3.7 ppm of CO for the one-hour average and 2.3 ppm for the eight-hour average. **Table 3.5** summarizes the results of the analysis.

Table 3.5 Predicted Carbon Monoxide Levels

	One-Hour Standard			Eight-Hour Standard		
Year	Concentration (ppm)	NAAQS (ppm)	Percent of NAAQS	Concentration (ppm)	NAAQS (ppm)	Percent of NAAQS
2001	16.3	35	47%	7.3	9	81%
2026	14.9	35	43%	6.8	9	76%

Neither the existing or design year CO concentrations exceed the NAAQS. Therefore, this project would not adversely impact CO levels. Beyond 100 feet of the right-of-way, the worst-case CO concentration plus the background level drops rapidly to 50 percent of the NAAQS.

E. NOISE

This analysis conforms to FHWA Regulation 23 CFR 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise," and TxDOT's July 1997 *Guidelines for Analysis and Abatement of Highway Traffic Noise*.

Sound from highway traffic is generated primarily from a vehicle's tires, engine and exhaust. It is commonly measured in decibels and is expressed as "dB." **Table 3.6** shows noise levels from typical day-to-day activities.

Sound occurs over a wide range of frequencies. However, not all frequencies are detectable by the human ear; therefore, an adjustment is made to the high and low frequencies to approximate the way an average person hears traffic sounds. This adjustment is called A-weighting and is expressed as "dBA."

Also, because traffic sound levels are never constant due to the changing number, type and speed of vehicles, a single value is used to represent the average or equivalent sound level and is expressed as "L_{eq}."

Table 3.6 Common Sound/Noise Levels

Outdoor	dBA	Indoor
Pneumatic hammer	100	Subway train
Gas lawn mower at 3.3 feet		
	90	Food blender at 3.3 feet
Downtown (large city)	80	Garbage disposal at 3.3 feet
		Shouting at 3.3 feet
Lawn mower at 98 feet	70	Vacuum cleaner at 9.8 feet
Commercial area		Normal speech at 3.3 feet
Air conditioning unit	60	Clothes dryer at 3.3 feet
Babbling brook		Large business office
Quiet urban (daytime)	50	Dishwasher (next room)
Quiet urban (nighttime)	40	Library

Source: TxDOT Guidelines for Analysis and Abatement of Highway Traffic Noise

A traffic noise analysis typically includes the following elements:

- Identification of land use activity areas that might be impacted by traffic noise.
- Determination of existing noise levels.
- Prediction of future noise levels.
- Identification of possible noise impacts.
- Consideration and evaluation of measures to reduce noise impacts.

The FHWA has established the following Noise Abatement Criteria (NAC) for various land use activity areas that are used as one of two means to determine when a traffic noise impact would occur (see **Table 3.7**).

Table 3.7 FHWA Noise Abatement Criteria (NAC)

Activity Category	dBA L_{eq}	Description of Land Use Activity Areas
A	57 (exterior)	Lands on which serenity and quiet are of extra-ordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72 (exterior)	Developed lands, properties or activities not included in categories A or B above.
D	--	Undeveloped lands.
E	52 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

NOTE: primary consideration is given to exterior areas (Category A, B or C) where frequent human activity occurs. However, interior areas (Category E) are used if these exterior areas are physically shielded from the roadway, or if there is little or no human activity in exterior areas adjacent to the roadway.

A noise impact occurs when either the absolute or relative criterion is met:

Absolute criterion: the predicted noise level at a receiver approaches, equals or exceeds the NAC. "Approach" is defined as one dBA below the NAC. For example, a noise impact would occur at a Category B residence if the noise level is predicted to be 66 dBA or above.

Relative criterion: the predicted noise level substantially exceeds the existing noise level at a receiver even though the predicted noise level does not approach, equal or exceed the NAC. "Substantially exceeds" is defined as a more than 10 dBA increase. For example, a noise impact would occur at a Category B residence if the existing level is 54 dBA and the predicted level is 65 dBA (11 dBA increase).

When a traffic noise impact occurs, noise abatement measures must be considered. A noise abatement measure is any positive action taken to reduce the impact of traffic noise on an activity area.

E.1. Environmental Consequences of Implementing the No-Build Alternative

The NAC is currently exceeded at several locations along the IH 30 and IH 35E corridors. The NAC at these and other receptors along the corridors would continue to be exceeded in the year 2026.

E.2. Environmental Consequences of Implementing the Build Alternative

The Traffic Noise Model (TNM) version 2.1 software was used to calculate existing and predicted traffic noise levels. The model primarily considers the number, type and speed of vehicles; highway alignment and grade; cuts/fills and natural berms; surrounding terrain features; and the locations of activity areas likely to be impacted by the associated traffic noise. Because this proposed project is located in a highly urbanized setting and sound levels are influenced by sources other than IH 30 and IH 35E, baseline sound levels were monitored using a Type 1 noise level meter. Monitoring was conducted throughout the day-time hours and not necessarily during peak hourly traffic volumes. Each of 15 locations throughout the project area was sampled for a 20-minute duration using FHWA and TxDOT recommended procedures.

The existing and predicted traffic noise levels were modeled at 14 Category B receivers and one Category C receiver (see **Figure 3-1** for a map of the receiver locations). These represent the properties near the project that might be impacted by traffic noise and that may potentially benefit from reduced noise levels. **Table 3.8** lists each representative receiver along the project, the results of the field sampling activity, and the resulting modeled noise levels. The NAC was approached, met or exceeded at seven of the 15 representative receivers; therefore, the project would result in a traffic noise impact.

The 2003 measured values and the 2026 predicted noise levels for the NAC Category E receivers shown in **Table 3.8** were adjusted by a reduction factor of 25 dBA to account for interior noise levels due to building construction type.

Table 3.8 Traffic Noise Levels, L_{eq} (dBA)

No.	Receiver Description	NAC Category	NAC Level	2003 Measured Values	Predicted 2026	Change (+/-)	Noise Impact
R1	Weisfeld Center	E	52	39	36	-3	No
R2	Old City Park	B	67	64	69	5	**Yes**
R3	Town View High School	E	52	34	38	4	No
R4	Residence on Eads Avenue	B	67	62	72	10	**Yes**
R5	Pike Park	B	67	63	65	2	No
R6	Stemmons Park	B	67	67	78	11	**Yes**
R7	Anatole Hotel	E	52	43	45	2	No
R8	Dallas County Health Services	E	52	47	53	6	**Yes**
R9	Children's Medical Center	E	52	37	31	-6	No
R10	UT Health Sciences Center	E	52	34	41	7	No
R11	Residence - Briar Cliff at Wayside	B	67	58	69	11	**Yes**
R12	Vacant Commercial Bldg.	C	72	60	68	8	No
R13	Pegasus Park	B	67	64	59	-5	No
R14	Residence at Sleepy Hollow Dr.	B	67	64	74	10	**Yes**
R15	Dealey Plaza Historic District	B	67	65	67	2	**Yes**

The following noise abatement measures were considered: traffic management, alteration of horizontal and/or vertical alignments, acquisition of undeveloped property to act as a buffer zone and the construction of noise barriers. Before any abatement measure can be incorporated into the project, it must be both feasible and reasonable. In order to be feasible, the measure should reduce noise levels by at least 5 dBA at impacted receivers; and to be reasonable it should not exceed $25,000 for each benefited receiver.

Traffic management: Control devices could be used to reduce the speed of the traffic; however, the minor benefit of 1 dBA per 5 mph reduction in speed does not outweigh the associated increase in congestion and air pollution. Other measures such as time or use restrictions for certain vehicles are prohibited on state highways.

Alteration of horizontal and/or vertical alignments: Any alteration of the existing alignment would displace existing businesses and residences, require additional right-of-way and not be cost effective/reasonable. IH 30 from IH 35E to IH 45 is proposed to remain a depressed freeway.

Buffer zone: The acquisition of sufficient undeveloped land adjacent to the highway project to preclude future development that could be impacted by highway traffic noise would not be cost effective/reasonable.

Noise barriers: Noise barriers are the most commonly used noise abatement measure. A noise barrier can severely restrict access to adjacent activity areas. Numerous gaps in the noise barrier could satisfy access requirements but could render the barrier ineffective (infeasible). Also, noise barriers could have a detrimental impact on nearby businesses by restricting views and access by potential customers. Finally, a noise barrier would not be cost effective for an individual receiver.

Because the land adjacent to this project is overwhelmingly commercial, many large gaps would be needed in any noise barrier placed at the right-of-way line to satisfy driveway access requirements for receivers such as the Dallas County Health Services (R8) and Dealey Plaza (R15). These gaps would render any noise barrier ineffective (infeasible). Barriers placed on the edge of pavement along the main traffic lanes would reduce visibility to commercial tenants along the roadways. The majority of the buildings along the project are multi-story commercial, and noise barriers are not effective for multi-story structures.

Noise barriers were considered for two impacted residences, Briar Cliff at Wayside (R11) and Sleepy Hollow Drive (R14). Noise barriers would not be reasonable for these individual locations. A noise barrier was also considered for Stemmons Park (R6). Noise at the park comes from a variety of sources, including IH 35E, the DART railroad lines, Harry Hines Boulevard and the DNT. To be feasible a noise wall for this receiver would need to be constructed around the perimeter of the park. This type of barrier would not be consistent with the City of Dallas's intention of using the park as a trailhead for its proposed hike-and-bike trail network, and could also pose public safety concerns. Additionally, a barrier for Stemmons Park would not be reasonable since its cost would exceed $25,000 per benefited receiver.

Noise barrier analyses were performed for Old City Park (R2) and the Eads Avenue neighborhood (R4). A noise barrier for the impacted residences along Eads Avenue (R4) would require a maximum height of 32 to 44 feet to achieve a substantial reduction (at least five dBA) in noise levels. The required height would not be feasible from an engineering perspective. In addition, the Eads Avenue barrier would not be reasonable since the total cost per benefitted receiver ($28,000) would exceed $25,000 per benefitted receiver. The noise barrier analysis for Old City Park (R2) showed that a proposed barrier would be feasible but not reasonable since the total cost would exceed $25,000 per benefitted receiver (see **Table 3.9**).

Table 3.9 Noise Barrier Analysis

Barrier Location	# of Benefitted Receivers	Length (feet)	Height (feet)	Total Cost*	$/Benefitted Receiver
Old City Park (R2)	13	1,480	10 to 20	$379,332	$29,179

* Based on estimated construction costs of $18 per square foot.

Some of the land use adjacent to the proposed project is currently undeveloped (Activity Category D). There is no NAC for undeveloped land; therefore the project would not result in any noise impacts in these undeveloped areas. However, the City of Dallas is considering the potential for land improvements at locations within the Trinity River greenbelt and the redevelopment of land immediately west of IH 35E between the levee and Colorado Boulevard. The 66 dBA and 71 dBA NAC contours were modeled for these locations so local officials can consider noise effects from IH 30 and IH 35E should they choose to pursue development of these adjacent lands. To avoid noise impacts on future development of properties adjacent to the project, local officials responsible for land use control programs should ensure, to the maximum extent possible, that any new activities and land uses are planned or constructed along or within the predicted 2026 noise impact contours shown in **Table 3.10**.

Table 3.10 Noise Impact Contour Limits

Location		Distance to 66 dBA Contour	Distance to 71 dBA Contour
IH 30 Across Trinity River	North Side	900 Feet	140 Feet
	South Side	830 Feet	150 Feet
IH 35E Across Trinity River	East Side	900 Feet	350 Feet
	West Side	900 Feet	360 Feet
IH 35E Between Trinity River and Colorado Boulevard	West Side Near Levee	800 Feet	275 Feet
	West Side Near Colorado	740 Feet	250 Feet

A copy of this traffic noise analysis will be provided to local officials to ensure, to the maximum extent possible, future developments are planned, designed and programmed in a manner that will avoid traffic noise impacts. On the date of approval of this document (Date of Public Knowledge), FHWA and TxDOT are no longer responsible for providing noise abatement for new development adjacent to the project.

Noise associated with the construction of the project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. However, construction normally occurs during daylight hours when occasional loud noises are more tolerable. None of the receivers are expected to be exposed to construction noise for a long duration; therefore, any extended disruption of normal activities is not expected. Provisions would be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

F. ACCESS

F.1. Existing Environment

The IH 30 and IH 35E corridors are home to nearly 100 employers that have 100 or more employees. These include The Children's Medical Center of Dallas (5,000 employees), Parkland Hospital (6,000 employees), and University of Texas Southwest Medical Center at Dallas (6,000 employees). The corridor also features several major civic (the Dallas Convention Center), tourist (the West End), and recreational destinations (American Airlines Center), as well as hundreds of commercial and retail businesses. The economic viability of these places depends heavily on the vehicular access provided by IH 30 and IH 35E and the 99 freeway entrance and exit ramps that are located within the project limits.

F.2. Environmental Consequences of Implementing the No-Build Alternative

The No-Build Alternative would not alter any of the existing entrance or exit ramps within the project limits. However, because this alternative fails to address the corridors' operational, safety and capacity deficiencies described in **Chapter 1**, overall accessibility to the numerous major employment, health, civic, tourist, and recreational destinations is likely to deteriorate over time.

F.3. Environmental Consequences of Implementing Build Alternative

The current pattern of freeway entrance and exit ramps would be affected by the proposed transportation improvements. The design requirements for achieving overall operational and safety improvements dictate that some ramps be relocated or eliminated. No property owner

that currently has access to IH 30 or IH 35E would be denied access under the Build Alternative. Because changes to the existing ramp and frontage road pattern could alter travel patterns to local businesses located along the corridor, efforts were made during Project Pegasus to contact and involve business and property owners in these areas.

Of the 99 freeway ramps within the project area, 12 would be eliminated, 16 would be combined with another ramp, 13 would be relocated, and 58 would be re-installed. **Table 3.11** lists the ramps that would be eliminated, combined or relocated, along with a brief comment about how access would be maintained. Although the control-of-access is subject to change and refinement during final design, all properties located along the freeways and currently having access to and from the freeways would continue to have access after the proposed improvements are constructed.

Table 3.11 Proposed Ramp Modifications

Ramp ID	Existing Ramp Location/Description	Proposed Modification	Comments
E1	Empire Central to IH 35E SB	Combined	Must go through Mockingbird
E5	IH 35E SB to Commonwealth	Combined	Must go through Mockingbird
E10	IH 35E SB to Wycliff	Combined	Must go through Motor
E11	Motor to IH 35E SB Entrance	Combined	Must go through Wycliff
E13	IH 35E SB to Oak Lawn	Combined	Must exit with Market Center traffic but bypasses signal
E14	Market Center to IH 35E SB	Combined	Access to HOV/M available in PM or must go through Oak Lawn
E16	Hi Line to IH 35E SB	Eliminated	Must go through Continental
E19	Spur 366 WB to IH 35E SB	Relocated	Relocated to frontage road. Does not require traffic to go through signal. Allows access to IH 30 WB without crossing 4 lanes of traffic
E20	Continental to IH 35E SB	Relocated	Access via CD road to either IH 30 WB/EB or IH 35E SB (no signals)
E21	Commerce WB to IH 35E SB	Relocated	Access via CD road to either IH 30 WB/EB or IH 35E SB (no signals)
E24	Reunion to IH 35E SB	Relocated	Access via CD road (no signals)
E26	IH 35E SB to Industrial	Eliminated	Use ramp to Commerce then Industrial
E28	IH 30 WB to IH 35E SB	Relocated	Access via CD road (no signals)
E29	SB IH 35E to Colorado	Relocated	Access via CD road (no signals)
E31	IH 35E SB to Fleming	Relocated	Access via CD road (no signals)
E32	SB IH 35E to Eighth	Relocated	Access via CD road (no signals)
E33	Eighth to IH 35E NB	Relocated	Access via CD road (no signals)
E34	Fleming to IH 35E NB	Eliminated	Fleming no longer goes under freeway
E37	IH 35E NB to Industrial	Combined	Access via CD road (no signals)
E39	IH 35E NB to Commerce EB	Combined	Access via P29 - no signals
E40	IH 30 WB to IH 35E NB	Relocated	Access via CD road (no signals)
E44	IH 35E NB to Spur 366 EB	Relocated	Access via CD road (no signals)
E48	Continental to IH 35E NB	Combined	Must go through Hi Line
E49	IH 35E NB to Hi Line	Combined	Must go through Continental
E51	IH 35E NB to Oak Lawn	Combined	Access via CD road (no signals)
E54	Market Center to IH 35E NB	Combined	Must go through Wycliff
E59	Inwood to IH 35E NB	Combined	Combined with Commonwealth (no signals), can also use HOV/M entrance in PM
E61	IH 35E NB to Mockingbird	Combined	Combined with Commonwealth (no signals)
E68	IH 30 EB to Industrial	Combined	Access Industrial via CD (no signals)
E73	IH 30 EB to Cadiz/Griffin	Combined	Combined with downtown/Lamar (no signals)
E75	St. Paul to IH 30 EB	Eliminated	St. Paul no longer crosses IH 30

Table 3.11 Proposed Ramp Modifications
- Continued –

Ramp ID	Existing Ramp Location/Description	Proposed Modification	Comments
E77	IH 30 EB to IH 30 EB HOV lane (PM only)	Eliminated	HOV/M continues through IH 30, access provide to/from Central
E82	IH 30 WB HOV to IH 30 WB (AM only)	Eliminated	HOV/M continues through IH 30, access provide to/from Central
E84	IH 45 to St. Paul	Eliminated	Use adjacent ramp or exit Live Oak from IH 45 SB
E85	IH 30 WB to St. Paul	Eliminated	Must go through Good-Latimer, Central & Harwood
E87	WB CD to IH 30 WB	Eliminated	IH 45 ties directly to IH 30
E90	IH 30 WB to IH 35E NB	Relocated	Combined with SB IH 35E exit
E92	Industrial to IH 30 WB	Relocated	Relocated to CD (no signals)
E94	IH 30 WB to Sylvan	Eliminated	Duplicate ramp
E97	SH 183 WB to Mockingbird	Eliminated	Use IH 35E NB exit to Mockingbird
E99	Mockingbird to SH 183 EB	Eliminated	Must go through Commonwealth

Notes: NB=northbound, SB=southbound, EB=eastbound, WB=westbound, AM=morning peak hours, PM=evening peak hours.

Access to hospitals for emergency vehicles is also an important consideration. IH 35E provides regional access to several hospitals within the Stemmons Freeway corridor, including:

- Saint Paul University Hospital – 5905 Harry Hines Boulevard;
- The University of Texas Southwest Medical Center at Dallas – 5323 Harry Hines Boulevard;
- Parkland Memorial Hospital – 5201 Harry Hines Boulevard; and
- The Children's Medical Center of Dallas – 1935 Motor Street.

The ramp modifications listed above would not diminish access to any of these hospitals. The overall program of safety, operational and congestion reduction improvements that constitutes the Build Alternative would help to improve access to these facilities in the future.

G. WETLANDS AND WATERS OF THE U.S.

G.1. Existing Environment

As noted previously, there are several potential wetlands/waters of the U.S. shown on NWI maps within approximately 500 feet of the existing freeway rights-of-way. Many of the features identified on NWI maps are associated with waters of the U.S. rather than wetlands. The jurisdictional width of these features ranges from as little as three feet for minor tributaries to as much as 120 feet or more for the Trinity River.

Wetland delineations completed in March 2002 and February 2004 identified 16 waters of the U.S., including 8 wetlands within the proposed right-of-way. All of the wetlands are associated with the Trinity River floodway. Six of the wetlands lie between the levees, one lies just east of the eastern levee beneath and alongside existing IH 30 and one lies north of the northern levee alongside existing IH 35E.

G.2. Environmental Consequences of the No-Build Alternative

The No-Build Alternative would involve no additional construction activities and would not result in any direct or indirect impacts to wetlands and waters of the U.S.

G.3. Environmental Consequences of the Build Alternative

Because the majority of the drainages cross beneath the freeways from one side to the other, expansion of the road to either side could result in impacts to these jurisdictional waters. The Build Alternative would involve the crossing of eight floodplain areas. These floodplain areas could be impacted by the placement of fill below the base floodplain elevation in order to raise the roadbed. Additional impacts would potentially result from the placement of certain structures (e.g., piers and abutments for bridge structures) within the floodplain.

The wetland delineation identified waters of the U.S. lying within the proposed project right-of-way. Minor permanent impacts as well as temporary placement of fill material during construction may be needed, and exact quantities would be determined during the design process. Impacts to waters of the U.S. have been avoided and minimized in the development of the alternatives by proposing bridge structures in numerous areas to minimize or eliminate the placement of fill. Impacts could be further reduced during the design phase through bridge design (i.e., placing columns in an environmentally sensitive manner, limiting the length of culverts, limiting placement of riprap, and other design features).

Construction of the Build Alternative could include impacts to waters of the U.S. Permanent impacts could include placement of culverts within stream channels, bridge footings, and pilings. Sixteen sites and eight crossings lie within the proposed project right-of-way (**Table 3.12**). Anticipated impacts to the eight crossings total approximately 1.16 acres. Crossings six and eight are to be bridged and impacts are limited to bridge footings and pilings, as they are for the existing roadways in those locations.

Table 3.12 Potential Build Alternative Impacts to Waters of the U.S.

Site Number	Description	Average Ordinary High Water Mark (feet)	Impact Area Within Right-of-Way	
			Length (feet)	Area (Acres)
1	Tributary to Elm Fork Trinity River	20	760	0.35
2	Elm Fork Trinity River	10	580	0.13
3	Knight's Branch	20	360	0.16
4	Cedar Branch	20	390	0.18
5	Turtle Creek	6	700	0.10
6A	Wetland east of Trinity River floodway at IH 30	NA	NA	0.061
6B	Wetland within floodway east of Trinity River at IH 30	NA	NA	
6C	Trinity River at IH 30	100	195	
6D	Wetland within floodway west of Trinity River at IH 30	NA	NA	
6E	Wetland within floodway west of Trinity River at IH 30	NA	NA	
11	Coomb's Creek	15	360	0.12
8A	Borrow pit wetland north of Trinity River floodway at IH 35E	NA	NA	0.058
8B	Wetland within floodway east of Trinity River at IH 35E	NA	NA	
8C	Wetland within floodway east of Trinity River at IH 35E	NA	NA	
8D	Trinity River at IH 35E	120	310	
8E	Wetland within floodway west of Trinity River at IH 35E	NA	NA	
	Total Impact Area Within Right-of-Way			**1.159**

Because impacts to each of these single and complete crossings are less than 0.5 acre an Individual Permit is not required. However, because there will be permanent impacts to wetlands, and impacts to several of the crossings exceed 0.1 acre, Pre-Construction Notification under Nationwide Permit 14 will be required.

Special flood hazard areas as defined by the Federal Emergency Management Agency (FEMA) are found within the subject freeway corridors. They are primarily associated with streams that cross underneath the existing freeways. According to the FEMA Flood Insurance Rate Maps (FIRM) for Dallas County (maps 48113C0330 J, 48113C340 J, 48113C0345 J, and 48113C0485 J) almost the entirety or the proposed project lies within the Zone X floodplain. In addition, the proposed project intersects or crosses Zone AE floodplains associated with the Elm Fork of the Trinity River, Knight's Branch, Cedar Branch, Turtle Creek, the Pumping Plant A Sump, the Trinity River floodway, and Coomb's Creek. Zone X floodplains are defined by FEMA as areas of 500-year flood or areas of 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. Zone AE floodplains are defined as special flood hazard areas inundated by 100-year flood with base flood elevations determined.

Under FEMA regulations, no alteration of flood zones can result in an increase in the 100-year base floodplain elevation or increase the velocity of floodwaters. The hydraulic design practices for this project would be in accordance with current TxDOT design policy and standards. The highway facility would permit conveyance of the 100-year flood levels, inundation of the roadway being acceptable, without causing significant damage to the highway, stream or other property. Dallas County and the City of Dallas are participants in the National Flood Insurance Program. The proposed project would be designed to not increase the base flood elevation to a level that would violate the applicable floodplain regulations or ordinances. Informal coordination with the local floodplain administrator would be required if floodplain impacts are expected to occur. The Trinity River was rechannelized in the 1920's between levees. The levees are 35-foot high flood control berms under the jurisdiction of the USACE. The USACE requires either three feet of clearance above the Standard Project Flood (800 year) elevation or two feet above the top of levee, whichever is higher. Reconstruction of the IH 30 and IH 35E bridges over the Trinity River would be designed to ensure compliance with USACE flood protection requirements.

Although the Trinity River is considered navigable at the IH 30 and IH 35E crossings, neither a US Coast Guard (USCG) Section 9 Permit nor a USACE Section 10 Permit would be required. At these locations, the river is not used and is not susceptible to use in its natural condition or by reasonable improvement as a means to transport interstate or foreign commerce. It is also non-tidal. Coordination with the USCG has been initiated (see correspondence in **Appendix B**). Future coordination with the USCG is required regarding exemption from the establishment, maintenance, and operation of Coast Guard required lights and signals on the IH 30 and IH 35E bridges over the Trinity River.

Prior to construction, the construction contractor would take appropriate measures to prevent, minimize and control the spill of fuels, lubricants, and hazardous materials in the construction staging area. All spills, including those of less than 25 gallons shall be cleaned immediately and any contaminated soil shall be immediately removed from the site and be disposed of properly. Designated areas shall be identified for spoils disposal and materials storage. These areas shall be protected from run-on and run-off. Materials resulting from the destruction of existing roads and structures shall be stored in these designated areas. The use of construction equipment within stream channels would be minimized. If work within a watercourse or wetland

is unavoidable, heavy equipment shall be placed on mats, if necessary, to protect the substrate from gouging and rutting. All construction equipment and materials used within the stream channel and immediate vicinity would be removed as soon as the work schedule permits and/or when not in use and shall be stored in an area protected from run-on and run-off. All materials being removed and/or disposed of by the contractor would be done so in accordance with state and federal laws and by the approval of the Project Engineer. Any changes to ambient water quality during construction of the proposed project shall be discouraged and may result in additional water quality control measures, shall be mitigated as soon as possible, and shall be reported to TCEQ within 24 hours of becoming aware of impacts. The contractor would practice "good housekeeping" measures, as well as, "grade management" techniques to help ensure that proper precautions are in place throughout construction of the proposed project. There are no public water supply intakes within the project limits or adjacent areas. No adverse effects are expected to this resource.

Stormwater runoff from this proposed construction would flow into several creeks which all flow into Upper Trinity River segment number 0805 of the Trinity River Basin. This feature, as listed in the Texas Commission on Environmental Quality (TCEQ) Water Quality Inventory, is designated as threatened or impaired for Polychlorinated Biphenyls (PCB) in fish tissue and bacteria in the 2002 Clean Water Act Section 303(d) list and the project is within five miles upstream of the threatened or impaired segment. The water quality of wetlands and waters in the State shall be maintained in accordance with all applicable provisions of the Texas Surface Water Quality Standards including the General, Narrative and Numerical Criteria.

Specific Best Management Practices (BMPs) used to control storm water discharges from the proposed project have not been finalized at this stage of project design; however, various standards and selection criteria recommended and practiced by TxDOT would be used. Some of the common BMPs for erosion control, sedimentation control, and post-construction total suspended solids (TSS) reduction include: interceptor swale, diversion dike, pipe slope drain, vegetation, mulching, erosion control mats, permanent structural controls, silt fence, straw bale dike, inlet protection, stabilized construction entry, and sandbag berm.

H. CONSIDERATIONS RELATING TO PEDESTRIANS AND BICYCLES

H.1. Existing Environment

The City of Dallas is implementing a system of hike and bike trails that cross IH 35E at several locations along Stemmons Freeway. See **Section B. Parkland** for more information.

H.2. Environmental Consequences of Implementing the No-Build Alternative

As previously noted, most of the proposed hike-and-bike trails cannot be adequately accommodated under current freeway conditions without some form of design exception or modification of the freeways.

H.3. Environmental Consequences of Implementing the Build Alternative

The proposed improvements would be designed to provide adequate horizontal and vertical clearance for all existing and proposed hike-and-bike trails that cross under IH 35E.

I. VISUAL IMPACTS

I.1. Existing Environment

The visual setting for the project corridor freeways is dominated by the Dallas CBD, the Trinity River and the densely developed, primarily commercial land uses that occur on both sides of the existing rights-of-way.

I.2. Environmental Consequences of Implementing the No-Build Alternative

The No-Build Alternative would leave the existing visual setting unchanged.

I.3. Environmental Consequences of Implementing the Build Alternative

A conceptual Urban Design Study is being performed as part of Project Pegasus to formulate potential landscaping and aesthetic plans for integrating the freeway design with adjacent communities. The implementation of some urban design elements would require participation and cost-sharing to fund the aesthetic improvements from the City of Dallas, property owners, or community-based organizations. An Executive Memorandum dated August 9, 1994 directed that on all federally assisted projects, agencies "shall wherever cost-effective and to the extent practicable": (1) use regionally native plants for landscaping; (2) design, use or promote construction practices that minimize adverse effects on the natural habitat; (3) seek to prevent pollution by, among other things, reducing fertilizer and pesticide use; and (4) implement water-efficient and runoff reduction practices. The landscaping included with this project would be in compliance with the Executive Memorandum and the guidelines for environmentally and economically beneficial landscape practices. In accordance with Executive Order 13112, which addresses invasive species, and the Executive Memorandum on beneficial landscaping, landscaping would be limited to seeding and replanting of the right-of-way with native species of plants where possible. Where project construction has removed existing vegetation, a mix of native grasses would be used to revegetate the right-of-way. These native grasses may include green spangletop (*Leptochloa dubia*), sideoats grama (*Bouteloua curtipendula*), blue grama (*B.gracilis*), and buffalograss (*Buchloe dactyloides*). Soil disturbance would be minimized to avoid the introduction or spread of invasive species as a result of the proposed project.

Other ideas include the possibility of constructing a deck over the canyon area of IH 30 in the vicinity of Old City Park that would enhance pedestrian access and continuity between City Hall, the Farmers Market, Old City Park, and the Cedars neighborhood area. Discussions also included the possibility of reconstructing the IH 30 and IH 35E bridges over the Trinity River as "signature" bridges. These potential developments − if pursued − would be funded locally by the City of Dallas and/or from additional funding sources other than state and federal transportation dollars. These potential measures could be implemented jointly during the construction of the proposed improvements or later if and when funding becomes available.

J. CONSTRUCTION IMPACTS

J.1. Existing Environment

Dallas' downtown freeways have benefited from numerous construction projects since they were initially constructed decades ago. No major work is currently underway.

J.2. Environmental Consequences of Implementing the No-Build Alternative

The No-Build Alternative does not include major reconstruction of IH 30 and IH 35E. Maintenance activities would continue however, and even under the No-Build Alternative, IH 30 and IH 35E would still be subject to temporary traffic delays, detouring, and other construction-related effects from time to time.

J.3. Environmental Consequences of Implementing the Build Alternative

Plans to ensure safe and efficient traffic and pedestrian flow during construction would be developed as part of the detailed construction plans for the proposed improvements. Other construction-related impacts (such as temporary air and noise effects, lane closures and detours) would be addressed in compliance with standard TxDOT policies and procedures. A public involvement and notification process would be conducted prior to and during construction to help inform drivers and businesses of construction activities.

K. SUMMARY AND COMPARISON OF POTENTIAL EFFECTS

Tables 3.13 and **3.14** compare the project alternatives in terms of 1) their ability to meet the stated project objectives, and 2) their effect on relevant issues and resources. The first table shows that the No-Build Alternative meets only two of the project objectives while the Build Alternative satisfies all objectives. The second table shows that both alternatives would result in adverse effects on the project's relevant issues and resources.

Table 3.13 Comparison of Alternatives: Ability to Attain Project Objectives

	Meets Project Objectives?										
Alternative	Maximize capacity	Minimize right-of-way	Improve Operation and Safety	Improve traffic detouring around accident and incident sites	Improve connections	Enhance access	Decrease traffic congestion	Enhance ETR programs	Enhance bicycle and pedestrian crossings	Integrate urban design elements	Technically and financially feasible
No-Build Alternative	***No***	Yes	***No***	***No***	***No***	***No***	***No***	***No***	***No***	***No***	Yes
Build Alternative	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 3.14 Comparison of Alternatives: Effect on Relevant Issues and Resources

Alternative	Adverse Effect on Issue or Resource?									
	Land Use	Parkland	Historic Resources	Air Quality	Noise	Access	Wetlands and Waters of the U.S.	Pedestrians and Bicycles	Visual	Construction
No-Build Alternative	No	No	No	***Yes*** because the existing freeways do not meet conformity requirements	***Yes*** because current and predicted noise levels exceed the national standards	***Yes*** due to gradually deteriorating operational, safety and capacity deficiencies	No	***Yes*** because the City's proposed hike-and-bike trails may not be adequately accommodated	No	No
Build Alternative	***Yes*** due to residential and commercial displacements (although right-of-way needs at South Central Expressway are reduced)	***Yes*** due to the need for a small portion of Stemmons Park	No	No	***Yes*** because noise abatement measures are not reasonable and feasible	No	No	No Hike-and-bike trails would be accommodated	No Possible inclusion of urban design elements would enhance visual quality	***Yes*** Traffic delays and other construction-related effects would require mitigation