



## 5.14 ARCHEOLOGICAL RESOURCES

### 5.14.1 Formal Finding as to whether Historic Properties may be Affected

Effect under the National Historic Preservation Act (NHPA) means altering the characteristics of a historic property that qualify it for inclusion in or eligibility for the National Register of Historic Places 36 CFR 800.16(i)]. Two findings are possible, “no historic properties affected” or “historic properties affected.” A finding of no historic properties affected is appropriate when:

- The agency has determined during the identification and evaluation step that there are no historic properties in the area of potential effects, or
- The agency has determined that there are historic properties present but the undertaking would not have any effect on them. [36 CFR 800.4(d)(1)]

An effect does not have to be negative to be an effect. If the undertaking would change the relevant characteristics of the property at all, it would have an effect. The potential alteration of the qualifying characteristics of a historic property does not have to be a certainty; as long as the undertaking may alter the relevant characteristics, it must be found to have an effect. Finally, the agency should consider not only the changes that may occur at the time of the undertaking, but also those reasonably foreseeable effects that may occur later.

### 5.14.2 Finding of Effect

Archeological investigations conducted to date have resulted in finding no archeological sites or deposits within the current project corridor nor at any of the proposed station areas. However, given that much of the proposed corridor crosses portions of the current or pre-1930 flood plains of the Elm Fork of the Trinity or its tributaries, the potential for buried archeological deposits must be considered. Those portions of the corridor located within the current or pre-1930 flood plains of the Elm Fork or its tributaries or on fluvial terraces composed at least in part of terminal Pleistocene or younger sediments have potential for buried cultural materials.

However, given the extensive disturbance of the upper 3 to 4 meters of the existing sediments and/or the deposition of considerable amounts of foreign (fill) material on top of the natural, pre-existing surface, the chance of finding an undisturbed cultural site in the upper few meters of sediment is remote at best. Further, locating any sites that may be buried more than several meters would be extremely difficult. Thus, although the potential exists, it is felt that any sites that were initially shallowly buried and hence easier to find have in all likelihood already been destroyed, while those that are still intact but more deeply buried would be exceedingly difficult and expensive to locate. The only area of real concern is in the flood plain along Spur 482 where the line crosses the Elm Fork.

### 5.14.3 Determination of Adverse Effect

In a letter dated May 1, 2006 the SHPO concurred that, except for a need for deep mechanical testing in the floodplain along Spur 482, the proposed LRT line will not adversely affect archeological resources listed on or eligible for the National Register of Historic Places.

### 5.14.4 Mitigation Measures

DART will conduct geoarcheological backhoe trenching in the floodplain adjacent to Spur 482 prior to construction. If archeological deposits are discovered the SHPO will be consulted to determine appropriate action and mitigation.

## 5.15 PARKLANDS

This section identifies the proposed project's effect on parks and recreational areas. Four parks/recreational areas were identified within 700 feet of the proposed project alignment; three of these are publicly owned and one is privately owned. The locations and characteristics of these parks/recreational areas were described in Section 3.10 Parklands.



### 5.15.1 Evaluation Criteria

There are basically two types of impacts that can affect parklands. Direct impacts are those that will occur from acquisition of park property or the location of a transportation system element on park property. Indirect impacts are those, which arise from some feature or operation of a transportation system element. Examples of indirect impacts are noise or vibration, or changes in the visual environment, or changes in access. Where indirect impacts occur, an evaluation must be made as to whether the impact is of sufficient magnitude to have a substantial negative effect on a park, park function or park characteristic.

Most indirect impacts on parks or recreational facilities, such as changes in land use, air quality, noise and vibration, aesthetics, ecosystems, hydrology/water quality, or cultural/archeological resources have been addressed throughout Chapter 5 of this document. In addition to these considerations, the proposed project would result in an adverse impact if:

- The proposed project would permanently impair access to and from a park, recreational area, or wildlife/waterfowl refuge through the placement of barriers or other impediments to the local circulation pattern;
- The proposed project would increase demand for new or expanded parks, recreational areas, or wildlife/waterfowl refuges; or
- The proposed project would have indirect construction effects on the surrounding parks, recreational areas, or wildlife/waterfowl refuges that would be substantially greater in magnitude and/or longer in duration than is typical of similar construction projects in similar communities.

### 5.15.2 Impact Methodology

An assessment of the project pursuant to Section 4(f) is addressed in Chapter 6 of this Final EIS.

Most indirect impacts have been assessed throughout Chapter 5 of this document. Specific impact criteria established for this project are defined above. Broadly, the impacts are addressed under (a) disruption of access to and from the parks/recreational facilities, (b) increase in demand for new parks/recreational facilities, and (c) disproportionate indirect construction effects.

### 5.15.3 Direct Impacts

#### No-Build Alternative

The No-Build Alternative would have no direct impacts on any parklands.

#### LRT Alternative

Of the four parks/recreational areas within the study area of the proposed LRT project, two will be subject to direct impact. Parkland property will be used to install an aerial portion of the DART LRT line extending over the Elm Fork Greenbelt. DART recommends a determination that there is no prudent and feasible alternative to the use of the parkland and a detailed discussion of direct impacts is included in Chapter 6 of this Final EIS.

A small area, approximately 257 square feet, at the northwest corner of the Four Seasons TPC golf course would be required to construct the project. The location of the required land is at the edge of the property, away from areas of frequent or active use at the golf course. This acquisition would not disrupt any recreational activities at the golf course. Since this property is privately owned and is not open to use to the public without a fee or membership, Section 4(f) requirements do not apply to this property. Property acquisition will be made in conformance with the Uniform Relocation Act (URA).



#### 5.15.4 Indirect Impacts

##### **No-Build Alternative**

The No-Build Alternative would have no direct impacts on any parklands.

##### **LRT Alternative**

As indicated in **Table 5-21** the LRT Alternative does not appear to have any indirect effects on recreational facilities under the specific impact criteria established for this project. Additionally, no site-specific indirect impacts to parkland have been identified under various impact categories identified in Chapter 5 of this Final EIS.

#### 5.15.5 Parkland Mitigation

Mitigation for the direct use of the Elm Fork Greenbelt is discussed in Section 6.3.5 of this document. No other mitigation measures are proposed. Property acquisition will be made in conformance with the Uniform Relocation Act (URA).

### 5.16 ENVIRONMENTAL JUSTICE

This section analyzes potential environmental justice concerns of the Build Alternative determining if there would be low-income and minority populations that would suffer disproportionately high and adverse impacts.

#### 5.16.1 Overview

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" was signed in February 1994. It requires Federal agencies to ensure that disproportionately high and adverse human health or environmental effects of proposed Federal projects on minority and low-income communities are identified and addressed. The general principles required under EO 12898 are as follows:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations;
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process;
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

In addition to complying with EO 12898, the Department of Transportation is committed to Title VI of the Civil Rights Act, which provides that no person in the United States shall, on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance.

#### 5.16.2 Public Participation

Throughout the PE/EIS and prior planning phases, DART has made every effort to notify affected residents, business owners and stakeholders in the Project Corridor. Seven rounds of general public meetings were conducted (January, April, and November 2004; March, June, and November 2005; and March 2007). A special community forum to discuss the North Lake College Station (August 2005), and a public meeting on **The DART Transit System Plan** (August 2006) were also conducted. Each round of public meetings was held within the City of Irving. The project and related value engineering concepts were presented to the public in a series of city council and DART Board meetings held in from December 2007 through March of 2008. A public hearing to receive formal comments on the Draft EIS was held within the project Study Area on February 28, 2008. Several additional meetings and briefings were held and are documented as well.