



COTTON BELT

Cotton Belt Corridor Regional Rail

Parks and Recreational Facilities Impact Assessment

Technical Memorandum

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TABLE OF CONTENTS

| | |
|---|----|
| TABLE OF CONTENTS | i |
| 1.0 INTRODUCTION | 1 |
| 2.0 IMPACT ASSESSMENT METHODOLOGY | 1 |
| 3.0 IMPACT ASSESSMENT..... | 1 |
| 3.1 Long-Term Effects..... | 1 |
| 3.1.1 Base Alternative..... | 4 |
| 3.1.2 Cypress Waters Alternatives (<i>Section 1-2B</i>) | 6 |
| 3.1.3 North Dallas Profile Options..... | 6 |
| 3.1.4 Red Line Interface Alternatives | 7 |
| 3.2 Short-Term Construction Effects..... | 7 |
| 4.0 MITIGATION OPTIONS..... | 8 |
| 4.1 Base Alternative | 8 |
| 4.1.1 Land Acquisition | 8 |
| 4.1.2 Access | 8 |
| 4.1.3 Noise and Vibration..... | 8 |
| 4.1.4 Visual and Aesthetics..... | 8 |
| 4.2 Cypress Waters Alternatives | 9 |
| 4.3 North Dallas Profile Options..... | 9 |
| 4.4 Red Line Interface Alternatives | 9 |
| 4.4 Short-Term Construction..... | 10 |

LIST OF TABLES

| | | |
|-----------|---|---|
| Table 3-1 | Cotton Belt Alignment Impacts to Public Parks and Recreational Facilities | 3 |
| Table 3-2 | Cotton Belt Alignment Impacts to Private Parks and Recreational Facilities..... | 5 |

1.0 INTRODUCTION

This section contains impact analysis regarding parks and recreational facilities within the Cotton Belt Corridor Regional Rail (Cotton Belt Project) study area. Park and recreational facilities data were gathered through coordination with affected municipalities in conjunction with a review of city maps, parks and trails master plans, and GIS shapefiles from North Central Council of Governments (NCTCOG). Any park or recreational facility within a quarter-mile alignment buffer and a half-mile station area buffer was included in the analysis.

2.0 IMPACT ASSESSMENT METHODOLOGY

The following three regulations apply to the use of parks and recreational facilities for transportation projects:

- Section 4(f) of the Department of Transportation (DOT) Act of 1966;
- Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965; and
- Chapter 26 of the Texas Park and Wildlife Code.

The guiding principles of these regulations are to protect public parks and recreational facilities from any use or acquisition without the determination that there is no feasible and prudent alternative to the use or taking of such land, and to ensure the project includes all reasonable planning efforts to minimize harm to this land. The analysis of impacts to public parks and recreational facilities is consistent in all of these regulations; the funding source and initiating agency are defining criteria for the determination of what type of documentation is required for public park and recreational facility impact analysis.

This section summarizes the land acquisition, access impacts, noise and vibration impacts, and visual impacts as they relate to the parks and recreational trails within the study area.

3.0 IMPACT ASSESSMENT

3.1 Long-Term Effects

This section describes the potential impacts to parks and recreational facilities for each alternative and profile option. **Tables 3-1** and **3-2** provide summaries of the potential impacts to each public and private facility, respectively, within the project study area. All land acquisition impacts are preliminary and based on a visual assessment of right-of-way requirements using the Preliminary Engineering 5% Design. Short-term impacts, such as movement of access points during construction, are not listed in **Tables 3-1** and **3-2**. These impacts are discussed separately at the end of **Section 3**.

Public parks and recreational facilities listed in **Table 3-1** that may require land acquisition are subject to Section 4(f) regulations. Public properties with potential impacts related to access, noise and vibration, and visual effects may also be subject to Section 4(f) as a “constructive use.”

A constructive use is when a project does not incorporate any Section 4(f) land, but proximity impacts of the project substantially impairs activities, features, or attributes of the resource.

| Table 3-1 Cotton Belt Alignment Impacts to Public Parks and Recreational Facilities | | | | |
|--|-------------------------|---------------|----------------------------|---------------|
| Name | Land Acquisition | Access | Noise and Vibration | Visual |
| Section 1 | | | | |
| Grapevine Springs Park Preserve | No | No | No | No |
| Grapevine Creek Park | No | No | No | No |
| Section 2 | | | | |
| McInnish Park Sports Complex | No | No | No | No |
| R.E. Good Sports Complex | No | No | No | No |
| Dimension Tract | No | No | No | No |
| Elm Fork Nature Preserve | No | No | No | No |
| Elm Fork Nature Preserve Trail | No | No | No | No |
| Elm Fork Trail | No | No | No | No |
| Crosby Trail | No | No | No | No |
| Hutton Trail | No | No | No | No |
| Pioneer Park | No | No | No | No |
| City Square and Gazebo | No | No | No | No |
| Francis Perry Park | No | No | No | No |
| Gravelly Park | No | No | Yes | No |
| Gravelly Park Loop | No | No | Yes | No |
| A.W. Perry Homestead Museum | No | No | No | No |
| Thomas Park | No | No | No | No |
| Josey Ranch Lake Park | No | No | No | No |
| Hutton Branch Purple Trail | No | No | No | No |
| Kelly Athletic Facilities | Yes | No | No | No |
| Arapaho Pedestrian Trail | No | No | No | Yes |
| Addison Circle Park | No | No | Yes | No |
| Bosque Park | No | No | No | No |
| Parkview Park | No | No | No | No |

| Table 3-1 Cotton Belt Alignment Impacts to Public Parks and Recreational Facilities | | | | |
|--|-------------------------|---------------|----------------------------|---------------|
| Name | Land Acquisition | Access | Noise and Vibration | Visual |
| Beckert Park | No | No | Yes | No |
| Section 3 | | | | |
| Wagging Tail Dog Park | No | No | No | No |
| Keller Springs Park | No | No | No | No |
| City of Dallas Floodway Management Area 1 | No | No | No | No |
| Preston Ridge Trail | No | Yes* | No | Yes |
| City of Dallas Floodway Management Area 2 | Yes* | No | No | No |
| City of Dallas Public Use Area | Yes* | No | No | No |
| Preston Green Park | No | No | Yes | No |
| University Trail | No | No | No | No |
| Point North Park | No | No | No | No |
| Renner Trail | No | No | No | No |
| Custer Park and Trail | No | No | No | No |
| Spring Creek Trail | No | No | No | Yes |
| Spring Creek Nature Area | No | No | No | No |
| Central Trail | No | No | No | No |
| Haggard Park | No | No | No | No |
| Shoshoni Park | No | No | No | No |

Source: URS, 2013.

*The potential for impacts exists under the Trench and/or Tunnel Alternatives only.

Source: URS, 2013.

Note: All land acquisition impacts are preliminary and based on a visual assessment of ROW requirements using the 5% Design.

| Table 3-2 Cotton Belt Alignment Impacts to Private Parks and Recreational Facilities | | | | |
|---|-------------------------|---------------|----------------------------|---------------|
| Name | Land Acquisition | Access | Noise and Vibration | Visual |
| Section 1 | | | | |
| Future Carter Phase III Addition common area | No | No | No | No |
| Riverchase Golf Club | No | No | No | No |
| Yucatan Beach Club | No | No | No | No |

| Table 3-2 Cotton Belt Alignment Impacts to Private Parks and Recreational Facilities | | | | |
|---|-------------------------|---------------|----------------------------|---------------|
| Name | Land Acquisition | Access | Noise and Vibration | Visual |
| Bahama Beach Club | No | No | No | No |
| Section 2 | | | | |
| Dallas Pistol Club | No | No | No | No |
| Hilltop Memorial Park | No | No | Yes | No |
| Honors Golf Club | Yes | No | No | No |
| The Country Place | No | No | No | No |
| Section 3 | | | | |
| Prestonwood Country Club | No | No | No | No |
| Preston Trails Homeowners Association | No | No | No | No |
| Adventure Landing | Yes | No | No | No |
| Fairhill School | No | No | No | Yes |
| Somerset Amenity Center | No | No | No | No |
| The Practice Tee Golf Center | No | No | No | No |
| Canyon Creek Country Club | No | No | No | No |

Source: URS, 2013.

Note: All land acquisition impacts are preliminary and based on a visual assessment of ROW requirements using the Preliminary Engineering 5% Design.

3.1.1 Base Alternative

This section describes the impacts to parks and recreational facilities under the Base Alternative.

Potential Impacts to Public Parks and Recreational Facilities

Gravelly Park and Gravelly Park Loop – The Cotton Belt Project would result in a severe noise impact at the northern portion of the park, near the at-grade crossing at Perry Road. The noise impact is caused primarily by the sound of the train horns at the at-grade crossing, which is not an existing quiet zone crossing. Gravelly Park Loop would also be potentially impacted, as the facility is located near the noise impact.

Kelly Athletic Facilities – Preliminary engineering plans indicate that a small sliver of this facility's property could be required for the Cotton Belt Project. This impact could be diminished or eliminated during later stages of project development. Since the facility is public, use of this facility may be covered under Section 4(f) regulation if this property meets Section 4(f) criteria, including significance in meeting park or recreation objectives as determined by official with jurisdiction over the property.

Arapaho Pedestrian Trail – The Cotton Belt Project would result in a potential visual impact, due to the existing distinct nature of the Arapaho Bridge at Midway Road. The recommendation of a grade separation over Midway Road may potentially impact the existing visual quality of the Arapaho Bridge. As this bridge is an important visual marker to Addison, there would be a potential visual impact.

Addison Circle Park – The Cotton Belt Project would result in a severe noise impact at Addison Circle Park. The impact would be primarily caused by train horns sounding to alert pedestrians and drivers before crossing Addison Drive and Spectrum Drive.

Beckert Park – The Cotton Belt Project would result in a severe noise impact to Beckert Park. The at-grade crossing at Spectrum Drive is not an existing quiet zone, so the impact is caused primarily from the sound of the train horns when crossing Spectrum Drive. Park users would also experience a benefit from the proposed project. The existence of a station within walking distance would provide users with the benefit of a new transportation option that provides access to other areas connected to the rail network. This improved accessibility could encourage new park users.

Preston Green Park – The Cotton Belt Project would result in a severe noise impact to Preston Green Park. Most of the park is buffered from the alignment by trees. However, the southern portion of the park has no natural buffer.

Potential Impacts to Private and Recreational Facilities

Hilltop Memorial Park (Cemetery) – The Cotton Belt Project would result in a severe noise impact at the south eastern corner of the property. The impact is a result of the train horns at the Perry Road at-grade crossing. Since the community facility is private, the impacts to this facility are not covered under Section 4(f) regulation.

Honors Golf Club – Preliminary engineering plans indicate that a small sliver of this facility's property could be required for the Cotton Belt Project. This impact could be diminished or eliminated during later stages of project development.

Fairhill School – The proposed project would result in a visual impact. The impact would occur due to the Preston Road Station being located adjacent to the school and changing the existing visual quality. However, a new station would provide users with the benefit of a new transportation option that provides access to other areas connected to the rail network. Since the facility is private, the impacts to this facility are not covered under Section 4(f) regulation.

Adventure Landing – The Cotton Belt Project would result in a land acquisition impact. The impact would occur due to the Renner Village Station (Coit Road Option) displacing the theme park. Since the facility is privately owned, the impacts to this facility are not covered under Section 4(f) regulation.

3.1.2 Cypress Waters Alternatives (*Section 1-2B*)

The following sections describe impacts for the two alternatives which would interface with the proposed North Lake Station.

Cypress Waters Southwestern Boulevard Alternative

The Cypress Waters Southwestern Boulevard Alternative would not result in any impacts to parks and recreational facilities.

Cypress Waters South Alternative

The Cypress Waters South Alternative would not result in any impacts to parks and recreational facilities.

3.1.3 North Dallas Profile Options

The following sections describe impacts for the three profile options of the vertical alignment for the Cotton Belt Project extending from White Rock Creek to Coit Road. This includes Preston Road Station and both Renner Village Station options.

At-Grade Profile Option (Section 3-2A)

The At-Grade Profile Option has one severe noise impact to Preston Green Park. Since the At-Grade Profile Option is the Base Alternative, the impact is explained above in Section 3.1.1.

Trench Profile Option (Section 3-2B)

The Trench Profile Option would result in visual impacts and potential land acquisition impacts. The impacts are explained below.

Prestonwood Country Club – The Cotton Belt Project would result in a potential visual impact. The impact would be caused by the elevated section of the rail alignment. However, the rail alignment may not be visible to golfers due to the existing trees and vegetation blocking the view of the alignment. This facility is a private club, so any visual impact is not covered under Section 4(f) regulation.

Preston Green Park – The Cotton Belt Project would result in a potential visual impact at this park due to the visibility of the wall around the trench and the grade-separated intersection at Hillcrest Road. However, since the majority of the park is buffered by trees, the visibility of the trench walls or elevated roadway may not be seen by users of the park and there may be no significant impact.

Preston Ridge Trail – The proposed project would result in a significant visual impact at this trail due to the visibility of the wall around the trench and the grade separated intersection at Meandering Way. There are no existing natural or built buffers that would protect the sight lines of trail users from trench walls of the elevated roadway.

Under the Trench Profile Option, Preston Ridge Trail would no longer be able to cross the rail at-grade. This would result in an access impact for trail users.

Trail users would also experience a benefit from the proposed project. The existence of a station within walking distance would provide trail users with the benefit of a new transportation option that would provide access to other areas connected to the rail network. This improved accessibility could encourage new trail users.

City of Dallas Floodway Management Area 2 – The Cotton Belt Corridor could result in a land acquisition impact, because the Trench Profile Option would include reconstructing roadways to travel over the trenched rail corridor in North Dallas. Roadway overpasses would require additional land outside of the existing roadways. The roadway overpass that could impact the City of Dallas Floodway Management Area is Davenport Road (eastern rail crossing). Since the facility is public, use of this facility may be covered under Section 4(f) regulation if this property meets Section 4(f) criteria, including significance in meeting park or recreation objectives as determined by official with jurisdiction over the property.

City of Dallas Public Use Area – The proposed project could result in a land acquisition impact, because the Trench Profile Option would include reconstructing roadways to travel over the trenched Cotton Belt Corridor in north Dallas. Roadway overpasses would require additional land outside of the existing roadways. The roadway overpass that could impact the City of Dallas Public Use Area is Davenport Road (eastern rail crossing). Since the facility is public, use of this facility may be covered under Section 4(f) regulation if this property meets Section 4(f) criteria, including significance in meeting park or recreation objectives as determined by official with jurisdiction over the property.

Tunnel Profile Option (Section 3-2C)

The Tunnel Profile Option would not adversely impact existing parks or recreational facilities.

3.1.4 Red Line Interface Alternatives

The following sections describe impacts for the two alignment alternatives which would interface with the existing DART Red Line.

North Alternative (Section 3-4A)

The Red Line Interface North Alternative would not result in any impacts to parks and recreational facilities.

South Alternative with Aerial Station and Depressed Freight (Section 3-4B)

The Cotton Belt would result in a potential visual impact to Spring Creek Trail. The Red Line Interface South Alternative with its elevated, undulating track and elevated 12th Street Station, along with the depressed freight track and roadways, may significantly impact the existing landscape for the Spring Creek Trail. However, the existing Red Line and US 75 are currently elevated, so the users of the trail are already accustomed to elevated infrastructure.

3.2 Short-Term Construction Effects

Under the Base Alternative, there would be potential construction impacts due to recommended grade separations. Access at Arapaho Pedestrian Trail may be temporarily adjusted due to construction at Midway Road.

Under the Tunnel Profile Option, there would be temporary visual impacts due to construction. The parks and facilities that would be temporarily impacted are Prestonwood Golf Club, Keller Springs Park, Preston Green Park, and Preston Ridge Trail.

Temporary noise and vibration impacts could result from construction activities such as installation of new stations and tracks, utility relocation, grading, excavation, and demolition.

4.0 MITIGATION OPTIONS

4.1 Base Alternative

4.1.1 Land Acquisition

Common avoidance and mitigation strategies for land acquisition impacts include the following:

- Consider alternatives or methods to avoid use of Section 4(f) properties or select an alternative that causes the least harm
- Provide assistance to displaced households, businesses, farm operations, and non-profit organizations in finding replacement locations, including maintaining lists of replacement properties
- Provide payments (subject to upper limits) to households for moving costs, costs incurred when purchasing a dwelling, and supplemental payments to cover higher costs of new housing compared to old
- Provide payments (subject to upper limits) to businesses and non-profit organizations for moving costs; professional services to plan moves; reimbursement for unexpired licenses, permits, or certifications; replacement of stationary supplies; loss of tangible personal property that cannot be moved; and the cost of searching for a replacement location

4.1.2 Access

The Preston Ridge Trail access impact under the Trench Profile Option could be mitigated by constructing a pedestrian bridge over the trench. A pedestrian bridge would maintain the ability to move between the portion of the trail north and south of the Cotton Belt Corridor.

4.1.3 Noise and Vibration

Potential mitigation measures for reducing noise impacts could include installing noise barriers along the Cotton Belt Corridor, establishing quiet zones, building sound insulation into homes or buildings, and lubricating tracks and train wheels. Section 4.0 of the *Noise and Vibration Impact Assessment Technical Memorandum* provides more detail regarding the range of mitigation measures available to reduce noise impacts.

4.1.4 Visual and Aesthetics

The visual impacts at Arapaho Pedestrian Trail due to the grade separation at Midway Road could be mitigated by minimizing the proposed elevated structure to preserve the view or providing a complementary structure. Providing a vegetative buffer between the trail and the elevated guideway would also lessen the visual impact of the structure on trail users. Mitigation

strategies are discussed further in Section 4.0 of the *Visual and Aesthetic Resource Impact Assessment Technical Memorandum*.

4.2 Cypress Waters Alternatives

Cypress Waters Southwestern Boulevard Alternative

The Cypress Waters Southwestern Boulevard Alternative would not result in any impacts to parks and recreational facilities. Therefore, mitigation is not applicable to this alternative.

Cypress Waters South Alternative

The Cypress Waters South Alternative would not result in any impacts to parks and recreational facilities. Therefore, mitigation is not applicable to this alternative.

4.3 North Dallas Profile Options

At-Grade Profile Option

Possible mitigation options for the impacts within the At-Grade Profile Option would be the same as those described above in 4.1.

Trench Profile Option

The visual impacts of the trench walls would be mitigated through vegetative buffers that preserve the existing character of the area. The grade separation at Preston Ridge Trail could be architecturally designed to support a unified visual character and preserve the existing view. Mitigation strategies are discussed further in Section 4.0 of the *Visual and Aesthetic Resources Impact Assessment Technical Memorandum*.

Common mitigation strategies for land acquisition impacts under this profile option would be the same as those listed under the Basel Alternative. Additionally, some land acquisition impacts could be diminished or eliminated during later stages of project development.

Tunnel Profile Option

Common mitigation strategies for land acquisition impacts under this profile option would be the same as those listed under the Base Alternative.

4.4 Red Line Interface Alternatives

North Alternative (Section 3-4A)

The Red Line Interface North Alternative would not result in any impacts to parks and recreational facilities. Therefore, mitigation is not applicable to this alternative.

South Alternative with Aerial Station and Depressed Freight

The visual impact at Spring Creek Trail would be mitigated through vegetative buffers that preserve the existing character of the area. The grade separation at US 75 could be architecturally designed to support a unified visual character and preserve the existing view. Mitigation strategies are discussed further in Section 4.0 of the *Visual and Aesthetic Resources Impact Assessment Technical Memorandum*.

Common mitigation strategies for land acquisition impacts under this alternative would be the same as those listed under the Baseline Alternative.

4.4 Short-Term Construction

Short term access impacts would be mitigated on a case by case basis. Some facilities may see no change to access, while other facilities may have temporary access points installed during construction activity in the area.

Temporary adverse noise and vibration impacts related to the use of construction equipment along the project corridor would be minimized by performing most construction activities during the day. Any after-hours construction would be coordinated with local municipalities to ensure the site would not impact any nearby residential uses. Noise control measures that would be applied to reduce noise levels include the following:

- Avoiding nighttime construction in residential neighborhoods
- Using equipment with enclosed engines and/or high performance mufflers
- Locating stationary construction equipment as far as possible from noise-sensitive sites
- Constructing noise barriers, such as temporary walls or piles of excavated material between loud activities and noise-sensitive receivers
- Routing construction-related truck traffic along roadways which would cause the least disturbance to residents
- Avoiding impact pile driving near noise-sensitive areas, where possible

Visual impacts as a result of short-term construction could be mitigated using the following typical techniques:

- Landscape the perimeter and buffer views with vegetation to the extent practicable
- Construction staging areas would be confined to the proposed station locations to the extent practicable
- Only equipment and materials immediately necessary for the project would be stored at the construction site
- Construction contractors would be required to appropriately contain, remove, and dispose of all solid and hazardous waste from construction activities and employees
- Elevated areas established for equipment storage, refueling, and washing could also serve as visual buffers between the construction site and park users



Alliance Transportation Group
Arredondo, Zepeda & Brunz
Bowman Engineering
Connetics Transportation Group
Cox|McLain Environmental Consulting
CP&Y
Criado & Associates
Dunbar Transportation Consulting
HMMH
KAI Texas
K Strategies Group
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