Appendix B

Technical Memoranda and Reports

Disclaimer:

Technical memoranda and reports were prepared as independent documents to support the preparation of the Final Environmental Impact Statement (FEIS) for the Dallas CBD Second Light Rail Alignment (D2 Subway). Information from these documents was incorporated into the FEIS to provide information on existing conditions, and in some cases, assess potential impacts to the resources. Information contained in the FEIS is the most current and supersedes information in the technical memoranda and reports.

B-5

Visual Assessment Existing Conditions Technical Memorandum

MEMO

Date:	Tuesday, October 09, 2018
Project:	GPC6, C-2012668-02, Task Order #39 Dallas CBD Second Light Rail Alignment (D2 Subway)
To:	Kay Shelton, Project Manager, DART Capital Planning
From:	James Frye, GPC 6 Project Manager
Subject:	Downtown Dallas (D2) Subway Project, HDR PN 10024656

Introduction: The following is a review of the existing visual environment along an approximate 2.3-mile corridor in downtown Dallas. The Downtown Dallas (D2) Project would include 1.2 miles of subway, but would also include several surface level features which would be designed to fit in the urban context of downtown Dallas. There would be two tunnel portals; the North Portal would provide an urban design opportunity for development over the portal and pedestrian linkages between the Victory and West End areas. The East Portal would transition from underground to the surface along Swiss Avenue and would provide the opportunity for urban development and pedestrian linkages between downtown and the Deep Ellum area. The at-grade segment would utilize existing DART-owned right-of-way. Both the north terminus and the east terminus would provide connection to the existing DART light rail transit (LRT) system. Four new stations are proposed, three (Metro Center, Commerce and Central Business District (CBD) East stations) would be underground and one (Museum Way Station) would be at-grade. The Museum Way Station would be integrated into surrounding land uses near the intersection of North Griffin Street and McKinney Avenue.

Existing Visual Characteristics

The D2 Study Area is located within the heart of the Historic District in downtown Dallas and includes some of the more highly visible and recognizable features of the city. These include historic buildings, as well as architecturally unique buildings, parks, and public spaces. The D2 Study Area is characterized by high-rise office buildings, mixed-use buildings, new multi-family complexes; redeveloped warehouses, surface and structure parking facilities, vacant lots and various public uses.

Much of the D2 Study Area is already dedicated to transportation corridors and rights-of-way. As such, most viewers do not have an expectation of unrestricted views or open viewsheds. Rather, the general visual character of the D2 Study Area is varied and urban, and additional development is expected.

The D2 Study Area includes the high-rise commercial development that forms the downtown Dallas skyline. The relatively flat topography of the D2 Study Area allows man-made structures, such as elevated freeways and upper levels of high-rise buildings to provide the best views surrounding the area. As a result of the urbanized nature of the D2 Study Area, the primary vegetation is comprised of cultivated lawns, trees, shrubs, and flowers in parks and open spaces. The street system follows a grid pattern and mature shade trees line some of the arterials and adjoining streets.

Typical views in this urbanized area are multi-dimensional, combing a variety of man-made elements and different land uses. The quality of views within the corridor varies by location and relationship to existing transportation components and other man-made elements. In some places, views are restricted by intervening structures.

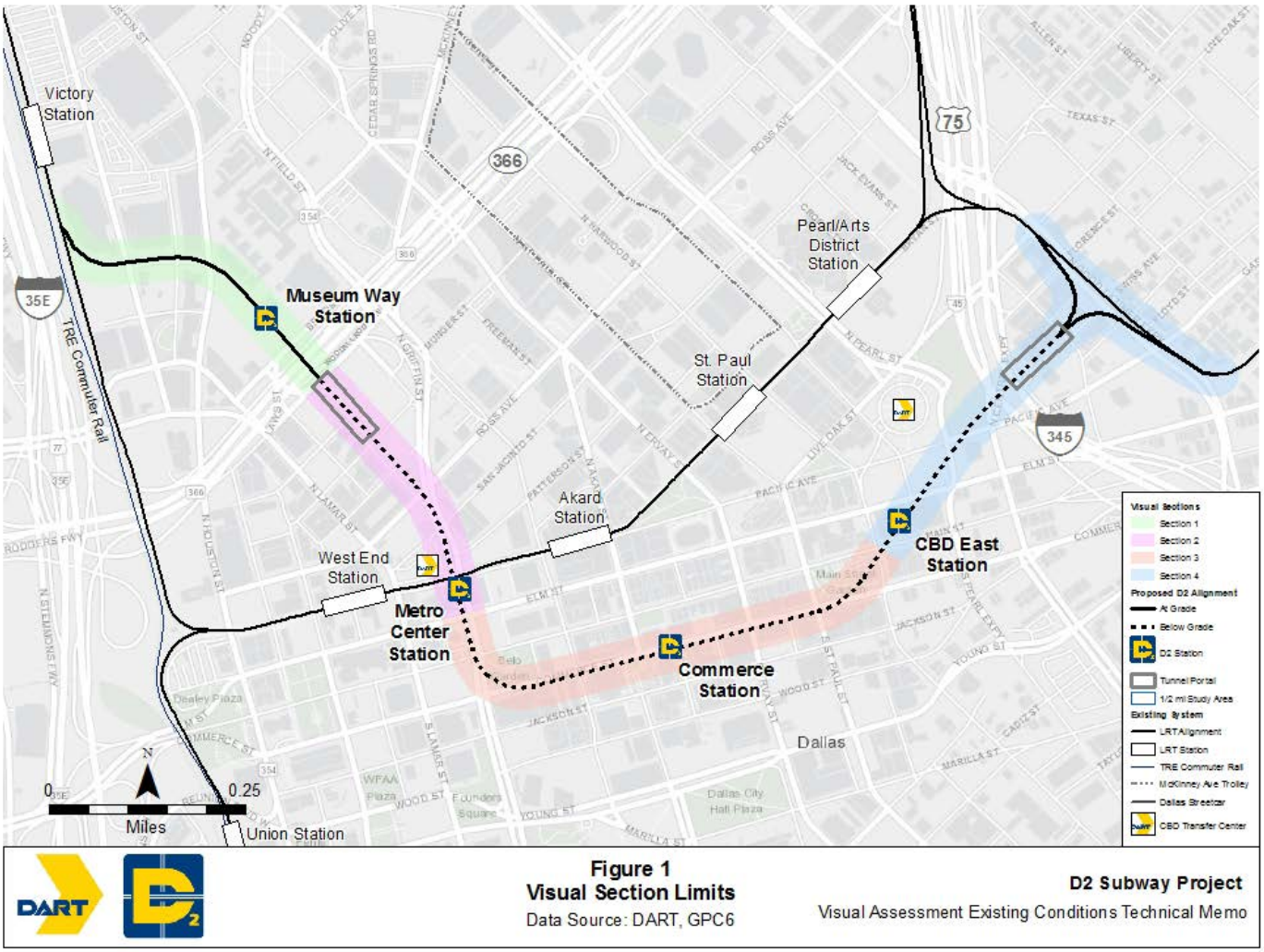
Pedestrian sidewalks and conventional steel tubular streetlights generally line the adjoining streets within downtown. Utility poles and wires have been placed underground for the majority of the D2 Study Area, providing an uncluttered appearance drawing sight lines to the architectural design of neighboring buildings as well as the numerous bars, restaurants, offices, and commercial retail frontage throughout the urban core.

Regulatory Context: The National Environmental Policy Act (NEPA) states the need to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings." Federal and state regulations require visual impacts to be addressed for Section 106 and Section 4(f) properties. There are no specific federal or state visual regulatory requirements that apply to properties that are not designated historic and/or eligible for listing in the National Register, or parkland; however, the City of Dallas reviews development plans to ensure compliance with zoning or development code requirements. These requirements relate to open storage, landscaping, lighting, screening, neighborhood protection and signage.

Methodology: Documenting the visual resources of the corridor included a field observation, geographic information system (GIS) data, aerial imagery and viewing images from different viewpoints on GoogleEarth. The visual resources were inventoried during a site visit to the D2 corridor on July 12, 2018, during which visual resources were photographed. Visual resources are considered to be components of the natural and constructed environment that are capable of being seen. Viewers are considered to be neighbors who can see the proposed project and travelers who would use the proposed transit facility. Neighbors are defined as civic neighbors and adjacent land uses including: residential, retail, commercial, industrial, agricultural, and recreational. Travelers are defined as transit system users, commuters, haulers, tourists, pedestrians, and the recreating public.

For the purpose of visual analyses, the width of the Study Area extends approximately 300 feet (the nominal length of a common city block) on either side of the D2 Corridor.

Figure 1
Visual Section Limits



Source: HDR, 2018.

Affected Environment

Overview: The experience of any visual landscape relies on inborn responses to form, pattern, and spatial relationships. But a broad-based visual aesthetic also places emphasis on personal experience, practice, and behavior. It is within this dual framework, ultimately, that a visual quality and aesthetic assessment should be based. The intent of this technical memorandum is to lay the foundation for such assessment by describing the existing conditions that could be affected by the proposed project.

The most striking visual characteristics of places derive from the landforms; the presence or absence of water (and its forms); the type of vegetation and its extent; climatic conditions; and, in the case of the D2 Project, man-made structures associated with an urban environment.

The at-grade portion of the proposed D2 Corridor would begin near Victory Station at Interstate Highway (IH) 35 and extend in a southeasterly direction within existing DART right-of-way. The corridor would extend behind the Arpeggio Victory Park apartment complex and run along Museum Way. The corridor would then pass through a parking area and under the Woodall Rogers Freeway to DART's West Transfer Center. A tunnel would begin near the southeast corner of North Griffin Street and the northeast bound frontage road of Woodall Rodgers Freeway and extend underground to the subway system. The D2 alignment would be underground for approximately 1.2 miles and would reach the surface through another portal exiting just west of North Central Expressway (aka US Highway 345), along Swiss Avenue.

The proposed D2 Corridor is in an urban environment dominated by parking lots, roadways, apartment buildings, and commercial buildings several of which extend over 500 feet into the sky. The views are of existing development. The corridor would meet up with an existing light rail station on the west side and would meet up with the existing light rail on the eastern end of the corridor, and the introduction of transit service as envisioned for the D2 Project would be a similar and compatible transportation use.

Underground construction would be accomplished using a variety of techniques including boring and open trench construction methods.

Natural Environment: Within a regional context, the D2 Corridor is located in the Blackland Prairies ecoregion of Texas. The project area is in the extreme southeast corner of a historically vast prairie extending through Middle America into Canada and westward to the high plains of the Rocky Mountains. Since Anglo-European settlement, the few prairie remnants that have not been cultivated or built upon are semi-arid open grasslands, mostly flat with gently rolling undulating hills, cut intermittently by snaking high cut-banked streams along which the relatively few large overstory trees found in the region are located (BluePlanet, 2018).

There are no streams, lakes, or other bodies of water located in the corridor. The corridor is within a heavily urban area within downtown Dallas and no native natural communities remain. Planted landscape trees and vegetation are present within medians and sidewalk areas.

Built Environment: Today's landscape along the D2 Corridor is all manmade. The western portion of the project area is northeast of the West End Historic District and the corridor is located adjacent to the Perot Museum of Nature and Science and nearby the Dallas World Aquarium. The landscape is dominated by streets, parking lots, and mid-rise buildings. The subway portion of the alignment would pass adjacent to One Main Place, a Dallas Landmark and National Register of Historic Places (NRHP)-listed building. One Main Place is located northeast of the intersection of N. Griffin St. and Main St. This Modernist style structure was built in 1965-1968 with the goals of reversing urban decay and stimulating growth in Downtown Dallas (NPS, 2018).

Commerce Street runs through the Dallas Downtown Historic District. Once completed, the project would be a subway under this portion of the district, however, due to utility constraints, open trench construction may be required in this area. The Dallas Downtown Historic District is approximately 91

acres designated as a historic district in 2006 to preserve the diverse architectural history of the area. This area is dominated by a variety of high rise buildings, pocket parks, and grid streets with landscaping.

The eastern portion of the project area exits the high-rise buildings, crosses under US Highway 345 and enters an area of mid-rise buildings, street art and murals, with a backdrop of the high rise structures of Dallas to the west. The Grand Lodge of Colored Knights of Pythias, a NRHP-listed structure, is located on the eastern portion of the project corridor, near the existing LRT line. This building was designed by noted African American architect William Sidney Pittman and completed in 1916. This structure served as a civic, business, and social center during a time when segregation offered few other alternatives (NPS, 2018).

D2 Corridor Sections and Station Areas

The D2 Study Area was divided into four sections in order to describe the affected environment. Visual quality and sensitivity are described in a general sense; assessments may not pertain to every specific location within a section. The following is a description of the general visual character of the corridor, starting with its westernmost section. Each section was assessed as to the existing nature of the visual quality and visual sensitivity to the dominant or highly sensitive type of land uses within the section. An inventory of the sensitive receptors and visual assets, if any, was also collected. **Table 1** provides the evaluation definitions and **Table 2** provides a general rating of each D2 section.

Table 1
Evaluation Rating Definitions

Primary Viewers	Visual Quality	Visual Sensitivity
A= Motorist B= Single-Family Resident C= Multi-Family Resident D= Recreational Users E= Commercial/Office Tenants F= Industrial Tenants G= Pedestrians H= Others	High = section or portions thereof is of significant visual quality to the primary viewers Moderate = section is of average visual quality to the primary viewers Low = section is of low visual quality to the primary viewers	High = Introduction of new elements could significantly impact the aesthetic quality of the section as observed by the primary viewers Moderate = Introduction of new elements may impact the aesthetic quality of the section or a portion thereof as observed by the primary viewers Low = Introduction of new elements is not likely to have an impact on the aesthetic quality of the section as observed by the primary viewers

Source: HDR, 2018

Table 2 General Rating of Corridor Visual Assessment Sections					
Section	**Name**	**Primary Viewers***	**Visual Quality***	**Visual Sensitivity***	**Sensitive Receptors/Assets**
1	DART Victory Station to Woodall Rodgers Freeway	A, C, E, H	Moderate	Moderate	Victory Park and Museum Way Multi-Family Residential, Perot Museum of Nature and Science
2	Woodall Rodgers Freeway to Proposed Metro Center Station (Elm Street)	A, E, H	Moderate	Low	Dallas World Aquarium, KDFW Television Studio
3	Proposed Metro Center Station to Proposed CBD East Station	A, C, E, G	High	High	Dallas Downtown Historic District, One Main Place, Belo Garden, The Adolphus Hotel, Main Street Garden, and the Statler Dallas Hi
4	Proposed CBD East Station to Eastern Project Termini	A, E	Moderate	Moderate	Majestic Theatre, DART's East Transfer Center, The Grand Lodge of the Colored Knights of Pythias, and the Lizard Lounge

Source: HDR, 2018.

**See Table 1 for definitions*

Section 1 – Victory Park to Woodall Rodgers Freeway

The proposed project would operate adjacent to IH 35 along an existing section of LRT line from south of Victory Station and then extends in an east-southeasterly direction to Woodall Rodgers Freeway within DART-owned right-of-way in the center of Museum Way and through the parking lot adjacent to the Perot Museum of Nature and Science. Both ends of this section are located adjacent to major transportation routes. The proposed project would be located north of the West End Historic District would pass adjacent to the architecturally-unique Perot Museum of Nature and Science.

Museum Way Station, a proposed at-grade LRT station, would be located adjacent to the Perot Museum of Nature and Science. The station area would be within an area that is currently a parking lot near Museum Way and North Houston Street.

Photo 1. Approximately 700 feet South-Southeast from Victory Station – Facing North

Photo 2: Approximately 700 Feet South-Southeast from Victory Station, near Rail Line – Facing East

Photo 3. Museum Way and Victory Park Lane – Facing East

Photo 4. Museum Way and Victory Park Lane – Facing West

Photo 5. Museum Way and North Houston Street – Facing Southeast

Section 2 - Woodall Rodgers Freeway to Proposed Metro Center Station (Elm Street)

After leaving Museum Way Station, the alignment would cross under Woodall Rodgers Freeway at-grade, and then begins its transition underground. The tunnel would be within an area currently

occupied by a parking lot. The alignment continues in a south-southeasterly direction to the Metro Center Station. Metro Center Station would be an underground station located between San Jacinto Avenue and Elm Street. Connections to the West Transfer Center and West End and Akard LRT stations would be available from Metro Center Station. Unique structures located along this route include the Dallas World Aquarium and KDFW Television Station.

Photo 6. North Griffin Street and Munger Avenue – Facing Southeast

Photo 7. North Griffin Street and Munger Avenue – Facing Northwest

Photo 8. North Griffin Street at Ross Avenue – Facing South

Photo 9. North Griffin Street at Elm Street – Facing South

Section 3 - Proposed Metro Center Station to Proposed CBD East Station

After leaving Metro Center Station, the alignment would cross under Main Street, turn east under Belo Garden, and continue under Commerce Street. Commerce Station is proposed along this route as an

underground station between Akard and Ervay streets. Due to extensive utilities in the downtown area, the D2 Subway and Commerce Station under Commerce Street would be constructed using an open trench construction technique. The alignment turns to the northeast under Main Street Garden Park and crosses diagonally under city blocks to another proposed underground station, CBD East Station. CBD East Station would be located between Main Street and Pacific Avenue in the subsurface area. Transfer to buses at the East Transfer Center could be accomplished at this station.

Unique features within Section 3 include One Main Place, Belo Garden, The Adolphus Hotel, Main Street Garden, and the Statler Dallas. This alignment along Commerce Street extends through the central business district and through a line of high rise buildings.

Photo 10. Belo Garden, from North Griffin Street– Facing East

Photo 11. The 1300 Block of Commerce Street – Facing East

Photo 12. At Commerce Street and Browder Street – Facing East

Photo 13. Main Street Garden Park on Commerce Street west of South Harwood Street – Facing Northwest

Section 4 - Proposed CBD East Station to Eastern Project Termini

Section 4 begins at the proposed CBD East Station and continues east. The alignment would begin the transition back to the surface east of Cesar Chavez Boulevard and would be at-grade under IH 345 along Swiss Avenue. After reaching the surface, the alignment would include a switch which would allow trains to move either north or south along rebuilt Good Latimer tracks. Unique features within Section 4 include the Majestic Theatre, DART's East Transfer Center, The Grand Lodge of the Colored Knights of Pythias, and the Lizard Lounge.

Photo 14. From North Pearl Street at John W. Carpenter Park – Facing Southwest

Photo 15. North Good Latimer Expressway at Florence Street – Facing Southeast

References

Blue Planet, 2018. North American Prairie. Accessed online http://www.blueplanetbiomes.org/prairie.htm on June 28, 2018.

HDR, 2018. Project Team Work.

National Park Service (NPS), 2018. Historic Preservation. Accessed online https://www.nps.gov/subjects/historicpreservation/index.htm on September 6, 2018.